

# Solenoid Valves

The Ultimate Valve Catalogue

Issue 4



**ACS**  
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ISO 9001



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Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

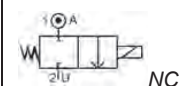
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – light oil – vacuum  
Pressure range: 0 to 20 Bar max  
Media temperature: -40°C to +80°C max  
Ambient temperature: -10°C to +50°C max  
Media viscosity: 40 centistokes max  
Mounting: any position  
Weight (including coil): 175 g, 255g, 475g  
Opening or Closing time: 20 mSec Max



# 2/2 Brass

## 1/8 – 3/8

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 20 Bar

### TYPE PU220AR®



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Coil	Pressure Rating (Bar)			Seals	Max Media Temp °C	Part Number	List Price
				Min	AC Max	DC Max				
1/8	1.5	1.2	22001	0	8.5	7	NBR EPDM FKM	80 160 130	PU22001A + voltage PU22001AE + voltage PU22001AV + voltage	£31.44 £38.25 £38.25
	0.8	0.5	22001	0	20	13	NBR EPDM FKM	80 160 130	PU220011A + voltage PU220011AE + voltage PU220011AV + voltage	£34.57 £42.08 £42.08
	1.2	0.7	22001	0	16	10	NBR EPDM FKM	80 160 130	PU220012A + voltage PU220012AE + voltage PU220012AV + voltage	£34.57 £42.08 £42.08
1/4	2.3	2.0	22001	0	8.5	7	NBR EPDM FKM	80 160 130	PU22002A + voltage PU22002AE + voltage PU22002AV + voltage	£31.44 £38.25 £38.25
	1.2	0.7	22001	0	20	13	NBR EPDM FKM	80 160 130	PU220021A + voltage PU220021AE + voltage PU220021AV + voltage	£34.57 £42.08 £42.08
	1.5	1.2	22001	0	16	10	NBR EPDM FKM	80 160 130	PU220022A + voltage PU220022AE + voltage PU220022AV + voltage	£34.57 £42.08 £42.08
3/8	8.0	19.0	22003	0.1	10	7	NBR EPDM FKM	80 160 130	PU22003A + voltage PU22003AE + voltage PU22003AV + voltage	£44.02 £59.29 £59.29
	8.0	19.0	22005	0.1	16	16	NBR EPDM FKM	80 160 130	PU22003A + voltage + 18W PU22003AE + voltage + 18W PU22003AV + voltage + 18W	£52.27 £67.54 £67.54

#### OPTIONS

IP65 Coil & Connector PG9 – (DIN 43650 B 1/8 & 1/4 Ports) (DIN 43650A 3/8 Port)	Included +£67.16 +£101.68 +10%
ATEX 22001EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C	
ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C	
NPT thread	

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	22001	11.6 VA	8.5 VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48(DC)		4.5 Watts				
~	12 - 24 - 48 - 110 - 230 -380 (50/60Hz)	22003	23VA	17VA	H 180°C		
=	12 - 24 - 48 (DC)		15 watts				
~	24 - 48 - 110 - 230 (50/60 Hz)	22005	33VA	24VA			
=	12 - 24 - 48 - 110 - 220 (DC)		18.5 Watts				

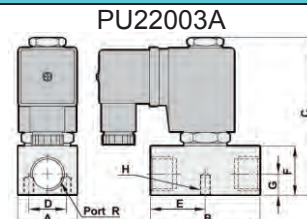
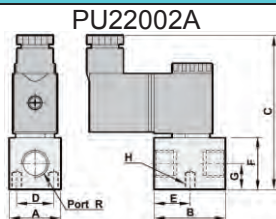
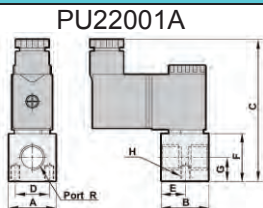
#### CONSTRUCTION

Body: Brass, Tube and internal parts: stainless steel  
Seals and gaskets: NBR (Optional EPDM, FKM or HNBR), Moulded Coil: ThermoSet Resin

#### REPAIR KIT

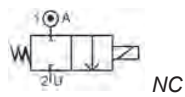
Coil	Coil size (22001 or 22003 or 22005) + voltage
Complete plunger assembly	Coil size + seal material

#### OVERALL DIMENSIONS



Model	R	A	B	C	D	E	F	G	H
PU22001	1/8	22	22	72	15	11	22	7.5	M4xP0.7xL6.5
PU22002	1/4	25.4	35	75	18	17.5	25.4	12.7	M5xP0.8xL7.0
PU22003	3/8	30	55	79	18	27.5	25	11	M5xP0.8xL7.0

Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 15 bar max  
 Media temperature: 120°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Opening / Closing time: 20 mSec Max



# 2/2 Brass

## 1/8 – 1/2

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 15 Bar

## TYPE AD612



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Coil	Flow	Pressure Rating (Bar) ΔP			Seals	Part Number	List Price
			Kv Ltr/min	Min	Max AC	Max DC			
1/8	3.0	WPG1	4	0	10	7	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C  *PTFE +120°C *VST +120°C	AD6A + seal + voltage	£39.08
	4.0		5.5	0	7	5		AD6B + seal + voltage	
	5.0		7.2	0	5	3.5		AD6C + seal + voltage	
1/4	3.0		4	0	10	7		AD8A + seal + voltage	
	4.0		5.5	0	7	5		AD8B + seal + voltage	
	5.0		7.2	0	5	3.5		AD8C + seal + voltage	
3/8	4.0	WPG2	5.5	0	10	7		AD10A + seal + voltage	£69.15
	6.0		10.5	0	5	3.5		AD10B + seal + voltage	
	8.0		16.2	0	2	1.4		AD10C + seal + voltage	
	4.0	WPA3C	5.5	0	15	10		AD10A-C3 + seal + voltage	£79.52
	6.0		10.5	0	7	5		AD10B-C3 + seal + voltage	
	8.0		16.2	0	3	2		AD10C-C3 + seal + voltage	
1/2	6.0	WPG2	10.5	0	5	3.5		AD12A + seal + voltage	£75.16
	8.0		16.2	0	2	1.4		AD12B + seal + voltage	
	6.0	WPA3C	10.5	0	7	5		AD12A-C3 + seal + voltage	£85.54
	8.0		16.2	0	3	2		AD12B-C3 + seal + voltage	

#### OPTIONS

IP66 (EN60529:1991+A1:2000) CSA + UL Approved Coil & IP65 LED Connector PG11 – DIN 43650 A  
 ATEX 22003EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C (Pressure rating 70% of WPG2 DC rated coil)  
 \* PTFE, VST, CR, ECO, HNBR or Hypalon Seals  
 Silver shading ring (ADxxS)  
 Manual Over Ride  
 NPT Thread  
 Other custom made options available upon request

Included  
 +£101.68  
 +£15.37  
 +£30.06  
 +£45.10  
 +10%

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	WPG1	11.2VA	8.2VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 (DC)		12 Watts				
~	24 - 110 - 230 (50 or 60 Hz)	WPG2	18.7VA	15.3VA			
=	12 - 24 (DC)		18 Watts				
~	24 - 110 - 230 (50 or 60 Hz)	WPA3C	88VA	57VA	N 200°C	IP 54	30cm flying lead wire
=	12 - 24 (DC)		33.6 Watts				

#### CONSTRUCTION

Body: Brass  
 Tube and Spring: 304 Stainless/ Brass Armature: 430F Stainless Other internal parts: Stainless  
 Shading ring: copper (optional Silver)  
 Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon)  
 Moulded coil: Resin

#### REPAIR KIT

Coil	Coil size (WPG1 or WPG2 or WPA3C) + voltage
Armature + Seal	SP210 + Valve Part Number

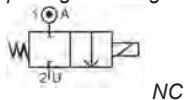
#### OVERALL DIMENSIONS

Item	Part No	Description	Model	A	B	C	F*	G	H	Kg
1	SP201-*	Nut	AD6	41	19	85	63	15	10.5	0.47
2	SP202-*	Washer	AD8	41	19	89	63	15	10.5	0.47
3	SP203-*	Nameplate	AD10	50	25	90	65	15	11.7	0.73
5	WPG*	Coil	AD12	55	27	91	65	17	13	0.78
6	SP206-*	Gasket								
7	SP207-*	Connector								
9	SP209-*	Core Tube								
10	SP210-*	Armature Assembly								
17	SP211-*	Valve Body								

\* = Valve Part Number

Brass	2/2	N/Closed	0 Rated
Brass	2/2	N/Closed	Pilot

Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 150 Bar max  
 Media temperature: 120°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Opening / Closing time: 20 mSec Max



# 2/2 Brass

## 1/4

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 150 Bar

## TYPE AD8000



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Coil	Flow	Pressure Rating (Bar) ΔP			Seals	Part Number	List Price
			Kv Ltr/min	Min	Max AC	Max DC			
1/4	1.2	WPG1	1.1	0	60	42	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C *VST +180°C (30 Bar Max)  *PTFE +180°C (150 Bar)	AD8012 + seal + voltage	£51.12
	1.6		1.5	0	40	28		AD8016 + seal + voltage	
	2.0		1.8	0	20	14		AD8020 + seal + voltage	
	1.2	WPG2	1.1	0	120	84		AD8112 + seal + voltage	£72.16
	1.6		1.6	0	60	42		AD8116 + seal + voltage	
	2.0		1.8	0	30	21		AD8120 + seal + voltage	
	3.0		4.3	0	20	14		AD8130 + seal + voltage	
	4.0		9.7	0	12	8.4		AD8140 + seal + voltage	
	5.0		10.7	0	10	7		AD8150 + seal + voltage	
	1.2	WPA3C	1.1	0	150	105		AD8212 + seal + voltage	£75.16
	1.6		1.5	0	80	56		AD8216 + seal + voltage	
	2.0		1.8	0	60	42		AD8220 + seal + voltage	
	3.0		4.3	0	40	28		AD8230 + seal + voltage	
	4.0		9.7	0	20	14		AD8240 + seal + voltage	
	5.0		10.7	0	15	10.5		AD8250 + seal + voltage	

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A (Except WPA3C coil IP54)  
 ATEX EExmIIT4 II 2G & 2D IP65 T130°C coil (Pressure rating WPG1 same, WPG2 70% of DC rating, WPA3C not available)  
 \* PTFE, VST, CR, ECO, HNBR or Hypalon Seals  
 Silver shading ring (ADxxS)  
 Manual Over Ride  
 NPT Thread  
 Other custom made options available upon request

Included  
 +£101.68  
 +£15.37  
 +£30.06  
 +£45.10  
 +10%

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	WPG1	11.2VA	8.2VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 (DC)		12 Watts				
~	24 - 110 - 230 (50 or 60 Hz)	WPG2	18.7VA	15.3VA			
=	12 - 24 (DC)		18 Watts				
~	24 - 110 - 230 (50 or 60 Hz)	WPA3C	88VA	57VA		IP54	30 cm flying lead wires
=	12 - 24 (DC)		33.6 Watts				

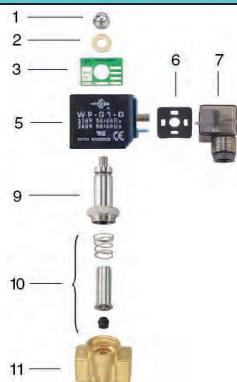
#### CONSTRUCTION

Body: Brass  
 Tube and Spring: 304 Stainless/ Brass Armature: 430F Stainless Other internal parts: Brass  
 Shading ring: copper (optional Silver)  
 Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon)  
 Moulded coil: Resin

#### REPAIR KIT

Coil	Coil size (WPG1 or WPG2 or WPA3C) + voltage
Armature + Seal	SP210 + Valve Part Number

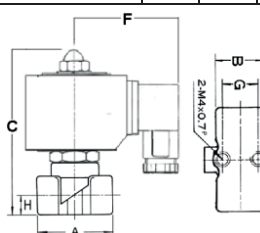
#### OVERALL DIMENSIONS



Item	Part No	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Nameplate
5	WP*	Coil
6	SP206-*	Gasket
7	SP207-*	Connector
9	SP209-*	Core Tube
10	SP210-*	Armature Assembly
17	SP211-*	Valve Body

\* = Valve Part Number

Model	A	B	C	F*	G	H	Kg
8012-8020	41	19	85	63	15	10.5	0.47
8112-8150	41	19	88	65	15	10.5	0.66
8212-8250	41	19	94	47	15	10.5	0.66



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Open

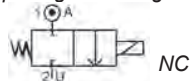
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: vacuum - air - water - light oil  
Pressure range: 0 to 200 Bar max  
Media temperature: -10°C +100°C max  
Ambient temperature: -20° to +50°C  
Media viscosity: 50 centistokes max  
Mounting: coil upright  
Weight 450g  
Opening & Closing time: 20mSec Max



## 2/2 Brass

### 1/8 – 1/4

## NORMALLY CLOSED

## 2 WAY DIRECT ACTING

### 0 – 200 Bar

## TYPE W



### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar)		Seals	Part Number	List Price
		Kv Ltr/ min	Min	Max			
1/8 or 1/4	0.6	0.2	0	200	NBR FKM EPDM	W0.6 + seal + port + voltage	£228.64
	0.8	0.3	0	120		W0.8 + seal + port + voltage	
	1.0	0.5	0	50		W1.0 + seal + port + voltage	
	1.2	0.67	0	40		W1.2 + seal + port + voltage	£154.08
	1.5	0.95	0	30		W1.5 + seal + port + voltage	
	2.0	1.6	0	20		W2.0 + seal + port + voltage	
	2.5	2.3	0	13		W2.5 + seal + port + voltage	
	3.0	3.0	0	10		W3.0 + seal + port + voltage	
	4.0	5.0	0	5		W4.0 + seal + port + voltage	
	5	7	0	3		W5.0 + seal + port + voltage	
	6	9.7	0	2		W6.0 + seal + port + voltage	

### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A NPT Thread 1/8 or 1/4 High Temperature coil PTFE Seals Explosion Proof Enclosure ATEX II 2 G/D EExdIICt6, IP65 85°C (Ambient T° from -20°C to +40°C)	Included +£36.04 +£7.52 +£36.04 +£404.78
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### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12 - 24 - 48 - 110 - 230 (50 or 60 Hz)	10065	48VA	24VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 - 190 (DC)		14 - 20 Watts				

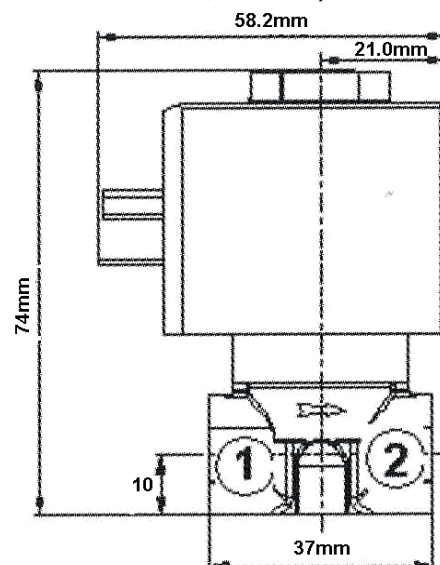
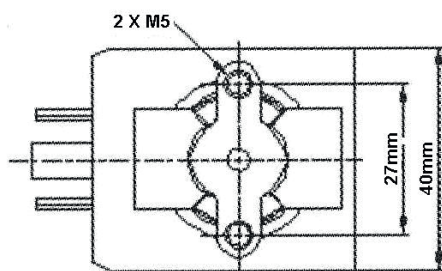
### CONSTRUCTION

Body: Brass  
Tube and internal parts: Stainless steel  
Seals and gaskets: NBR (Optional EPDM & FKM & PTFE)  
Moulded coil: Resin

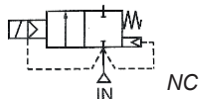
### REPAIR KIT

Coil	10065 + voltage
Complete plunger	KIT + valve part number

### OVERALL DIMENSIONS



Media: air – water – light oil - vacuum  
 Pressure range: 0 to 10 Bar max  
 Media temperature: +90°C max  
 Ambient temperature: -20°C to +60°C max  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing Time: 50 mSec Max



## 2/2 Brass WRAS

3/8 – 1

NORMALLY CLOSED  
 2 WAY ZERO RATED

0 – 10 Bar

TYPE PU220D®



### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP				Max Working Pressure	Part Number	List Price
		Kv Ltr/ min	Min	AC	DC	DC			
				15 Watt	15 Watt	18.5 Watt			
3/8	13	59	0	7	6	-	10	PU220D-03A + voltage	£74.36
1/2	13	59	0	7	6	-	10	PU220D-04A + voltage	£74.36
3/4	20	125.5	0	7	5	-	10	PU220D-06A + voltage	£91.93
1	25	170.5	0	7	5	-	10	PU220D-08A + voltage	£114.75
3/8	13	59	0	10	-	10	10	PU220D-03A + voltage + 18.5W	£82.61
1/2	13	59	0	10	-	10	10	PU220D-04A + voltage + 18.5W	£82.61
3/4	20	125.5	0	10	-	10	10	PU220D-06A + voltage + 18.5W	£100.18
1	25	170.5	0	10	-	10	10	PU220D-08A + voltage + 18.5W	£123.00

### OPTIONS

22003 IP65 CE Approved Coil & Connector PG9 – DIN 43650 A Connector

ATEX 22003EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C (Max ΔP 3 Bar)

22005 18.5 Watt high power coil for 7 bar DC

NPT Thread

Included  
 +£101.68  
 +£8.25  
 +10%

### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12-24-48-110-240-380 (50/60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 -220 (DC)		15 Watts				
=	12 - 24 - 48 - 110 -220 (DC)	22005	18.5 Watts				

### CONSTRUCTION

Body: Brass

Tube and internal parts: Stainless steel

Seals and gaskets: EPDM WRAS Certified

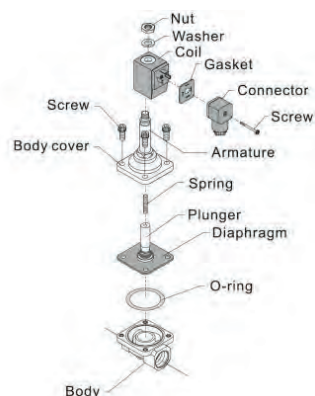
Nass Magnet Moulded coil: ThermoSet Resin

WRAS certified and pressure tested to 10.5 bar 90°C hot and cold water 200,000 cycles. Approval no 1704353

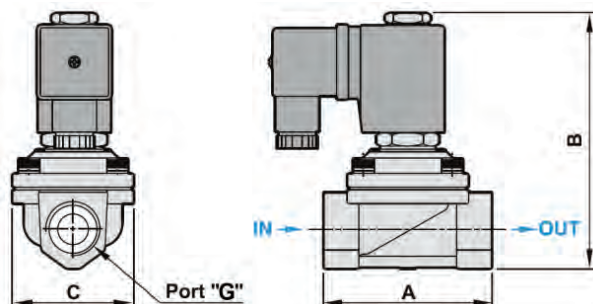
### REPAIR KIT

Diaphragm seal	PU220D + port + diaphragm
Coil	22003 or 22005 + voltage
Complete plunger assembly	PU220D - armature

### OVERALL DIMENSIONS



Model	PU22003	PU22004A	PU22006A	PU22008A
Port R	3/8	1/2	3/4	1
A	66.5	66.5	71.0	96.0
B	101.0	101.0	107.0	120.5
C	48.0	48.0	58.0	70.0
Kg	0.74	0.715	0.945	1.485



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
3/2  
N/Closed

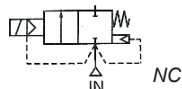
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – light oil - vacuum  
Pressure range: 0 to 5 or 0 to 16 Bar max  
Media temperature: -40°C to +150°C max  
Ambient temperature: -20°C to +60°C max  
Media viscosity: 50 centistokes max  
Mounting: coil upright  
Opening / Closing Time: 50 mSec Max



## 2/2 Brass 3/8 – 1 NORMALLY CLOSED 2 WAY ZERO RATED 0 – 5 or 16 Bar TYPE PU220®



### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar)					Seals	Max Media Temp. °C	Part Number	List Price
		Min	DC Coil		AC Coil						
			15 Watt	18.5 Watt	15 Watt	18.5 Watt					
3/8	13	35	0	5		8.5		NBR	80	PU22003 + voltage	£74.36
								FKM	120	PU22003V + voltage	£91.81
								EPDM	150	PU22003E + voltage	£91.81
1/2	13	35	0	5		8.5		NBR	80	PU22004A + voltage	£74.36
								FKM	120	PU22004AV + voltage	£91.81
								EPDM	150	PU22004AE + voltage	£91.81
3/4	20	72	0	5		8.5		NBR	80	PU22006A + voltage	£91.93
								FKM	120	PU22006AV + voltage	£98.75
								EPDM	150	PU22006AE + voltage	£98.75
1	25	183	0	5		7		NBR	80	PU22008A + voltage	£114.75
								FKM	120	PU22008AV + voltage	£124.96
								EPDM	150	PU22008AE + voltage	£124.96
3/8	13	35	0		12		12	NBR	80	PU22003 + voltage +18W	£82.61
								FKM	120	PU22003V + voltage+18W	£100.06
								EPDM	150	PU22003E + voltage+18W	£100.06
1/2	13	35	0		12		12	NBR	80	PU22004A + voltage+18W	£82.61
								FKM	120	PU22004AV + voltage+18W	£100.06
								EPDM	150	PU22004AE + voltage+18W	£100.06
3/4	20	72	0		16		16	NBR	80	PU22006A + voltage+18W	£100.18
								FKM	120	PU22006AV + voltage+18W	£107.00
								EPDM	150	PU22006AE + voltage+18W	£107.00
1	25	183	0		16		16	NBR	80	PU22008A + voltage+18W	£123.00
								FKM	120	PU22008AV + voltage+18W	£133.21
								EPDM	150	PU22008AE + voltage+18W	£133.21

### OPTIONS

22003 IP65 CE Approved Coil & Connector PG9 – DIN 43650 A Connector ATEX 22003EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C (Max ΔP 3 Bar) NPT Thread	Included +£101.68 +10%
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### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12 -24-48-110-240-380 (50/60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 (DC)		15 Watts				
~	24-48-110-240- 380 (50/ 60 Hz)	22005	33VA	24VA			
=	12 - 24 - 48 - 110 (DC)		18.5 Watts				

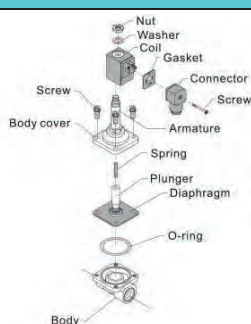
### CONSTRUCTION

Body: Brass, Tube and internal parts: Stainless steel  
Seals and gaskets: NBR (Optional EPDM, FKM or HNBR), Nass Magnet Moulded coil: DuroPlast / ThermoSet Resin

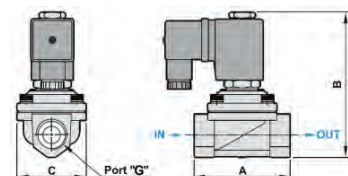
### REPAIR KIT

Diaphragm seal	22004, 22006 or 22008 + seal material
Coil	Coil size (22003 or 22005) + voltage
Complete plunger assembly	225320 + seal material

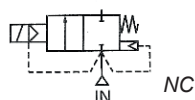
### OVERALL DIMENSIONS



Model	PU22003	PU22004A	PU22006A	PU22008A
Port R	3/8	1/2	3/4	1
A	66.5	66.5	71.0	96.0
B	101.0	101.0	107.0	120.5
C	48.0	48.0	58.0	70.0
Kg	0.74	0.715	0.945	1.485



Media: air – water – light oil - vacuum  
 Pressure range: 0 to 10 bar max  
 Media temperature: 155°C max  
 Ambient temperature: -20°C to +60°C max  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing Time: 50 mSec Max



# 2/2 Brass

## 3/8 – 2

### NORMALLY CLOSED

### 2 WAY ZERO RATED

### 0 – 10 Bar

## TYPE AD14-50



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/min	Pressure Rating (bar)			Seals	Max Media Temp. °C	Part Number	List Price
			Min	DC Coil	AC Coil				
3/8	13	35	0	7	10	NBR FKM EPDM	80 120 155	AD14N + voltage AD14V + voltage AD14E + voltage	£108.24 £119.06 £119.06
1/2	13	35	0	7	10	NBR FKM EPDM	80 120 155	AD15N + voltage AD15V + voltage AD15E + voltage	£108.24 £119.06 £119.06
3/4	20	72	0	7	10	NBR FKM EPDM	80 120 155	AD20N + voltage AD20V + voltage AD20E + voltage	£123.28 £135.60 £135.60
1	25	183	0	7	10	NBR FKM EPDM	80 120 155	AD25N + voltage AD25V + voltage AD25E + voltage	£180.40 £198.44 £198.44
1 1/4	35	400	0	7	10	NBR FKM EPDM	90 120 120	AD35N + voltage AD35V + voltage AD35E + voltage	£267.60 £294.36 £294.36
1 1/2	35	400	0	7	10	NBR FKM EPDM	90 120 120	AD40N + voltage AD40V + voltage AD40E + voltage	£267.60 £294.36 £294.36
2	51	580	0	5	7	NBR FKM EPDM	90 120 120	AD50N + voltage AD50V + voltage AD50E + voltage	£535.18 £588.71 £588.71

#### OPTIONS

WPG IP67 Coil (EN60529:1991+A1:2000) UL & CSA Approved Coil + IP65 LED Connector PG11 DIN 43650A	Included +£101.68 +10% +£90.20
ATEX 22003EX Coil: ATEX EExmIT4 II 2G & 2D IP65 T130°C (Max ΔP 3 Bar)	
NPT Thread Manual Over Ride (Base Mounted Screw T Bar for AD Series)	

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 240 - 380 (50 or 60 Hz)	WPG2	18.7VA	15.3VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 (DC)		18 Watts				

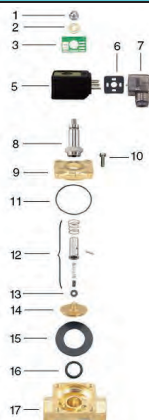
#### CONSTRUCTION

Body: Brass  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR (Optional EPDM or FKM or Silicone)  
 Moulded coil: Resin

#### REPAIR KIT

Diaphragm seal	SP215 + valve part number
Coil	WPG2 + voltage

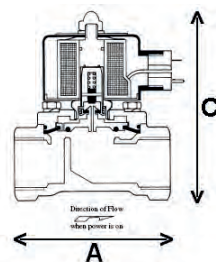
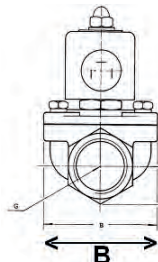
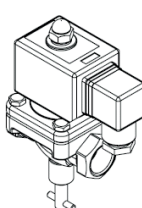
#### OVERALL DIMENSIONS



No.	Part No	Description
1	SP201*	Nut
2	SP202*	Washer
3	SP203*	Nameplate
5	SP205*	Coil
6	SP206*	Gasket
7	SP207*	Connector
8	SP208*	Core Tube
9	SP209*	Valve Bonnet
10	SP210*	Bolt
11	SP211*	Bonnet O Ring
12	SP212*	Armature Assembly
13	SP213*	Diaphragm Base Kit
14	SP214*	Diaphragm Base
15	SP215*	Diaphragm
16	SP216*	Base O Ring
17	SP217*	Valve Body

\* = Valve Part Number

Model	AD14 AD15	AD20	AD25	AD35 AD40	AD50
Port R	1/2	3/4	1	1 1/2	2
A	75	85	100	120	150
B	52	60	70	90	120
C	103	114	120	140	160
Kg	1.03	1.24	1.51	2.77	4.81



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

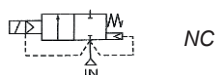
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – light oil - vacuum  
Pressure range: 0 to 10 Bar max  
Media temperature: 120° C max  
Ambient temperature: -20°C to +60°C max  
Media viscosity: 50 centistokes max  
Mounting: coil upright  
Opening / Closing Time: 50 mSec Max



NC

# 2/2 Brass Flanged

## DN15 – DN50

### NORMALLY CLOSED

### 2 WAY ZERO RATED

### 0 – 10 Bar

## TYPE ADF15-50



#### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP			Max Working	Seals Temp °C	Part Number	List Price
		Kv Ltr/ min	Min	Max AC	Max DC				
1/2	15	75	0	10	7	10	NBR 80°C FKM 120°C EPDM 120°C Silicone 130°C	AD15PF + seal + voltage	£330.74
3/4	20	155	0	10	7	10		AD20PF + seal + voltage	£354.78
1	25	220	0	10	7	10		AD25PF + seal + voltage	£375.84
1 1/4	35	433	0	10	7	10		AD35PF + seal + voltage	£712.58
1 1/2	35	433	0	10	7	10		AD40PF + seal + voltage	£712.58
2	51	800	0	7	5	10		AD50PF + seal + voltage	£1250.78

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A ATEX 22003EX Coil: ATEX EExmIT4 II 2G & 2D IP65 T130°C (Max ΔP 3 Bar) ANSI150Lb, JIS10K or other flange Manual Over Ride (Bottom entry mounted turn T bar) VST, CR, ECO, HNBR, Silicone or Hypalon Seals Other custom made options available upon request	Included +£101.68 +20% +£90.20 +10%
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#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	WPG2	18.7VA	15.3VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 (DC)		18 Watts				

#### CONSTRUCTION

Body: Forged Brass  
Tube and Spring: 304 Stainless Armature: 430F Stainless other internal parts Brass  
Seals and gaskets: NBR (Optional EPDM, FKM, Silicone, VST, CR, ECO, HNBR or Hypalon)  
Moulded coil: Resin

#### REPAIR KIT

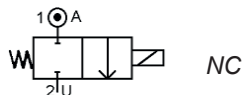
Coil	WPG2 + voltage
Diaphragm	SP215 + valve part number

#### OVERALL DIMENSIONS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
No.	Part No	Description														
1	SP201*	Nut														
2	SP202*	Washer														
3	SP203*	Nameplate														
5	WPG2*	Coil														
6	SP206*	Gasket														
7	SP207*	Connector														
8	SP208*	Core Tube														
9	SP209*	Valve Bonnet														
10	SP210*	Bolt														
11	SP211*	Bonnet O Ring														
12	SP212*	Armature Assembly														
13	SP213*	Diaphragm Base Kit														
14	SP214*	Diaphragm Base														
15	SP215*	Diaphragm														
16	SP216*	Base O Ring														
17	SP217*	Valve Body														
* = Valve Part Number																

Model	A	B	C	D	G	H	Kg
AD15F	110			40			
AD20F	120			40			
AD25F	132	125	162	40	19	14	5.35
AD35F	160	135	174	40	19	16	7.75
AD40F	160	140	177	40	19	16	8.00
AD50F	200	155	195	40	19	16	11.0

Media: vacuum - air – water  
 Pressure range: 0 to 2 Bar max  
 Media temperature: -10°C +60°C  
 Ambient temperature: -20°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Open: 250-500 Close: 500-1000 mSec



## 2/2 Bronze + Cast Iron

DN65 – DN100  
 NORMALLY CLOSED  
 2 WAY ZERO RATED  
 0 – 2 Bar  
 TYPE LK



### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow	Pressure Rating (Bar)		Seals	Body Material	Part Number	List Price
		Kv Ltr/ min	Min	Max				
21/2	80	1367	0	2	NBR	Bronze	LK65B-NBR + voltage	£1974.12
3	80	1616	0	2	NBR	Bronze	LK80B-NBR + voltage	
4	100	2833	0	1	NBR	Cast Iron	LK100C-NBR + voltage	£1231.34

### OPTIONS

IP65 Coil + Connector PG9 – DIN 43650 A  
 ANSI150Lb, JIS10K or other flange  
 FKM Seals

Included  
 +10%  
 +£315.70

### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	110 – 230v (50/60 Hz) (Rectified)	22007	30VA		F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	24 – 96 – 196v (DC)		30 Watts				

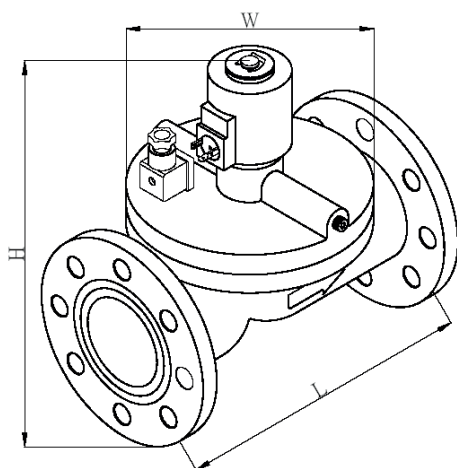
### CONSTRUCTION

Body: Bronze or Cast Iron  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR  
 Moulded coil: Resin

### REPAIR KIT

Diaphragm Seal	SP + Valve Part Number – DIAPHRAGM
Coil	22007 + voltage
Armature	SP + Valve Part Number – ARMATURE

### OVERALL DIMENSIONS



Model	LK65	LK80	LK100
Port	65	80	100
L	290	290	340
H	336	336	391
W	210	210	270
Kg	21Kg	21Kg	36Kg

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

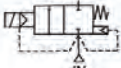

Plastic  
2/2  
N/Open

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

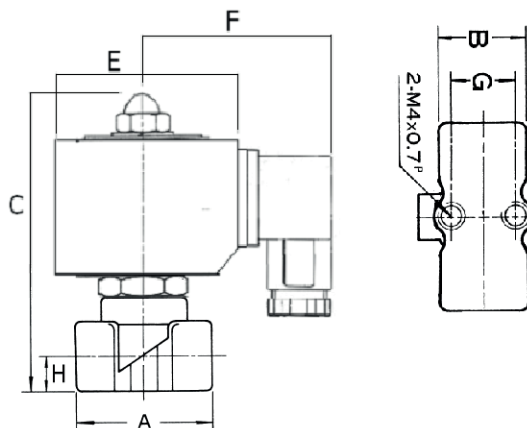
EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

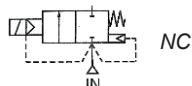
<p>Media: air – water – gas – light oil Pressure range: 1 to 100 Bar max Media temperature: -30°C +120°C max Ambient temperature: -20°C to +60°C Media viscosity: 50 centistokes max Mounting: coil upright Weight: 660g Opening / Closing time: 100 mSec Max</p> 			<p><b>2/2 Brass</b> <b>1/8 – 3/8</b> <b>NORMALLY CLOSED</b> <b>2 WAY SERVO ASSISTED</b> <b>1 – 100 Bar</b> <b>TYPE SAP</b></p>					
PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar) ΔP		Part Number	List Price		
			Min	Max				
1/8	5.0	7.2	1	100	SAP6150 + voltage	£117.56		
1/4	5.0	7.2	1	100	SAP8150 + voltage			
3/8	5.0	7.2	1	100	SAP10150 + voltage	£124.30		
OPTIONS								
IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A EPDM, NBR, SILICONE, VST, CR, ECO, HNBR and Hypalon seals (40 Bar Max) NPT Thread Silver Shading Ring Other custom made options available upon request						Included +10% +10% +£30.06		
ELECTRICAL DATA								
Voltage (-10% + 10%) Continuous duty 100%			Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
				Inrush	Holding			
~	24 - 48 - 110 - 230 (50 or 60 Hz)		WPG2	18.7VA	15.3VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 – 24 - 48 (DC)			18 Watts				
CONSTRUCTION								
Body: Brass Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless steel Seals and gaskets: PTFE (Optional EPDM, NBR, SILICONE, VST, CR, ECO, HNBR and Hypalon) Moulded coil: Resin								
REPAIR KIT								
Coil					WPG2 + voltage			
Complete plunger + O' ring Assembly					SP210 + Valve Part Number			
OVERALL DIMENSIONS								



Part Number	A	B	C	D	E	F	G	H
SAP 6150	41	19	88	-	58	65	15	10.5
SAP 8150	41	19	88	-	58	65	15	10.5
SAP 10150	41	19	88	-	58	65	15	10.5



Media: air – water – gas – light oil  
 Pressure range: 0.5 to 15 Bar max  
 Media temperature: -40°C +160°C max  
 Ambient temperature: -20°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing time: 50 mSec Max



# 2/2 Brass

## 3/8 – 3"

### NORMALLY CLOSED

### 2 WAY SERVO ASSISTED

### 0.5 – 15 Bar

### TYPE PU225®



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Coil	Pressure Rating (Bar) ΔP		Max Working	Seals	Max Media Temp. °C	Part Number	List Price
		Kv Ltr/ min		Min	Max					
3/8	13	40.0	22003	0.5	10	15	NBR FKM EPDM	80 130 160	PU22503 + voltage PU22503V + voltage PU22503E + voltage	£61.26 £68.08 £68.08
1/2	13	40.0	22003	0.5	10	15	NBR FKM EPDM	80 130 160	PU22504A + voltage PU22504AV + voltage PU22504AE + voltage	£61.26 £68.08 £68.08
3/4	25	165.0	22003	0.5	10	15	NBR FKM EPDM	80 130 160	PU22506A + voltage PU22506AV + voltage PU22506AE + voltage	£91.65 £98.78 £98.78
1	25	165.0	22003	0.5	10	15	NBR FKM EPDM	80 130 160	PU22508A + voltage PU22508AV + voltage PU22508AE + voltage	£109.75 £119.97 £119.97
1 1/4	38	367	22003	0.5	10	15	NBR FKM EPDM	80 130 160	PU22512A + voltage PU22512AV + voltage PU22512AE + voltage	£211.02 £227.71 £227.71
1 1/2	38	500	22003	0.5	10	15	NBR FKM EPDM	80 130 160	PU22514A + voltage PU22514AV + voltage PU22514AE + voltage	£211.02 £227.71 £227.71
2	50	600	22003	0.5	10	15	NBR FKM EPDM	80 130 160	PU22520A + voltage PU22520AV + voltage PU22520AE + voltage	£297.51 £351.69 £351.69
2 1/2	65	1050	16W	0.3	10	15	NBR FKM EPDM	80 140 120	PU22524A + voltage PU22524AV + voltage PU22524AE + voltage	£1200.78 £1260.82 £1260.82
3	80	1380	16W	0.3	10	15	NBR FKM EPDM	80 140 120	PU22528A + voltage PU22528AV + voltage PU22528AE + voltage	£1244.62 £1306.84 £1306.84

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A	Included +10% +£101.68 +£404.78
NPT Thread (Not available 2 1/2" & 3")	
ATEX EEExmIT4 II 2G & 2D IP65 T130°C	
Explosion proof enclosure ATEX II 2 G/D EEExdIICT6 IP65 +85°C	

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12-24-48-110-220-240-380 (50/60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 – 24 – 48 -110- 220 (DC)		15 Watts				
~	24-48-110-230 (50/60 Hz)	16W	25VA	15VA	F 155°C		
=	12 – 24 – 48 (DC)		16 Watts				

#### CONSTRUCTION

Body: Forged Brass SS41, Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR (Optional EPDM, FKM & HNBR)  
 Moulded coil: 16 W Resin / 22003 DuroPlast ThermoSet Resin

#### REPAIR KIT

Diaphragm Seal	225 + Size code (03-28) + seal material
Coil	Coil type (22003 or 16W) + voltage
Armature assembly (Normally Closed)	225320VNC

#### OVERALL DIMENSIONS

Coil

Connector

Armature

Spring

Plunger

Screw

Top cover

Spring

Diaphragm

Body

Port "G"

C

IN

OUT

A

B

Port	A	B	C	Kg
3/8 1/2	66.5	106.5	48	0.725
3/4 1	96	126.5	70	1.565
1 1/4 1 1/2	131	145.5	96	2.56
2	130	160.5	112	3.9
2 1/2	245	186	184	9.5
3	250	196	184	11.23

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

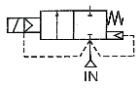
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – fluid  
Pressure range: 0.5 to 15 Bar max  
Media temperature: -40°C to +160°C max  
Ambient temp: -20° to +60° C max  
Media viscosity: 50 centistokes  
Mounting: coil upright  
Opening / Closing: 50 mSec Max



# 2/2 Brass Flanged


## DN10 – DN50

### NORMALLY CLOSED

### 2 WAY SERVO ASSISTED

### 0.5 – 15 Bar

## TYPE PU225F®



PRESSURE									
Ø Port PN16	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP		Max Working	Seals	Max Media Temp. °C	Part Number	List Price
		Kv Ltr/min	Min	Max					
DN10	13	40	0.5	10	15	NBR	80	PU22503F4 + voltage	£182.61
						FKM	130	PU22503F4V + voltage	£196.25
						EPDM	160	PU22503F4E + voltage	£196.25
DN15	13	40	0.5	10	15	NBR	80	PU22504F4 + voltage	£182.61
						FKM	130	PU22504F4V + voltage	£196.25
						EPDM	160	PU22504F4E + voltage	£196.25
DN20	25	165	0.5	10	15	NBR	80	PU22506F4 + voltage	£245.07
						FKM	130	PU22506F4V + voltage	£252.22
						EPDM	160	PU22506F4E + voltage	£252.55
DN25	25	165	0.5	10	15	NBR	80	PU22508F4 + voltage	£245.07
						FKM	130	PU22508F4V + voltage	£252.22
						EPDM	160	PU22508F4E + voltage	£252.55
DN32	40	450	0.5	10	15	NBR	80	PU22512F4 + voltage	£377.31
						FKM	130	PU22512F4V + voltage	£394.00
						EPDM	160	PU22512F4E + voltage	£394.00
DN40	40	450	0.5	10	15	NBR	80	PU22514F4 + voltage	£377.31
						FKM	130	PU22514F4V + voltage	£394.00
						EPDM	160	PU22514F4E + voltage	£394.00
DN50	50	600	0.5	10	15	NBR	80	PU22520F4 + voltage	£541.20
						FKM	130	PU22520F4V + voltage	£595.39
						EPDM	160	PU22520F4E + voltage	£595.39

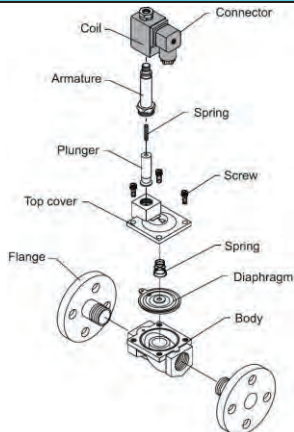
OPTIONS								
IP65 Coil & Connector PG9 – DIN 43650 A ATEX 22003EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C Explosion Proof Enclosure: EExdIICT6 ATEX II 2 G/D IP65 (Custom made) ANSI150Lb(F3), JIS10K (F) or other flange								<b>Included</b> <b>+£101.68</b> <b>+£404.78</b> <b>+10%</b>

ELECTRICAL DATA							
Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12-24-48-110-220-240-380 (50/60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 – 48-110-220 (DC)		15 Watts				

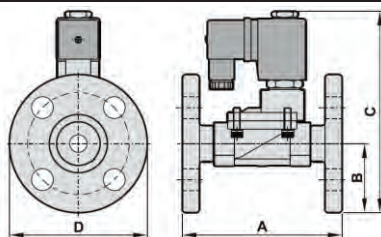
CONSTRUCTION	
Body: Forged Brass SS41, Flanges: Stainless steel, Tube and internal parts: Stainless steel Seals and gaskets: NBR (Optional EPDM, FKM or HNBR) Moulded coil: DuroPlast / ThermoSet Resin	

REPAIR KIT	
Diaphragm seals	225 + size code (03-20) + material
Coil	22003 + voltage
Complete armature assembly	225320NC + seal material

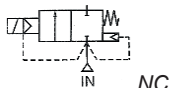
OVERALL DIMENSIONS							
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Model	PU225 03F	PU225 04F	PU225 06F	PU225 08F	PU225 12F	PU225 14F	PU225 20F
Flange	3/8	1/2	3/4	1	1 1/4	1 1/2	2
A	110.0	110.0	120.0	150.0	180.0	180.0	210.0
B	45.0	47.5	50.0	62.5	67.5	70.0	77.5
C	136.0	138.5	157.5	165.5	173.0	182.5	209.5
Kg	2.13	2.1	2.43	2.41	3.34	3.32	7.55



Media: air – water – gas – light oil  
 Pressure range: 0.5 to 25 Bar max  
 Media temperature: -10°C to +90°C max  
 Ambient temperature: -10° to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing time: 50 mSec Max



## 2/2 Brass

### 3/8 - 1

### NORMALLY CLOSED

### 2 WAY SERVO ASSISTED

### 0.5 – 25 Bar

## TYPE PU225H®



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP		Seals	Part Number	List Price
		Kv Ltr/ min	Min	Max			
3/8	8	19.0	0.5	25	NBR	PU225HB03 + voltage	£70.86
					EPDM	PU225HE03 + voltage	£71.76
					FKM	PU225HV03 + voltage	£75.68
1/2	8	19.0	0.5	25	NBR	PU225HB04A + voltage	£70.86
					EPDM	PU225HE04A + voltage	£71.76
					FKM	PU225HV04A + voltage	£75.68
3/4	13	40.0	0.5	25	NBR	PU225HB06A + voltage	£123.73
					EPDM	PU225HE06A + voltage	£126.04
					FKM	PU225HV06A + voltage	£130.85
1	13	40.0	0.5	25	NBR	PU225HB08A + voltage	£123.73
					EPDM	PU225HE08A + voltage	£126.04
					FKM	PU225HV08A + voltage	£130.85

#### OPTIONS

IP65 Coil & Connector PG9 DIN 43650 AI ATEX 22003EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C NPT Thread	<b>Included</b> +£101.68 + 10%
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#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12-24-48-110-220- 240-380 (50/60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12-24-48-110-220 (DC)		15 Watts				

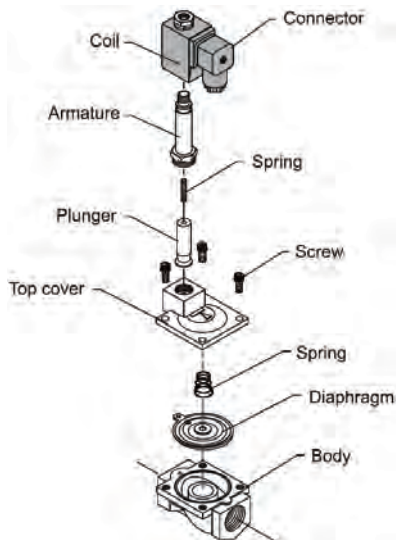
#### CONSTRUCTION

Body: Forged Brass SS41 (Test Pressure 30 Bar)  
 Tube and Internal Parts: Stainless steel  
 Diaphragm: Nylon reinforced EPDM

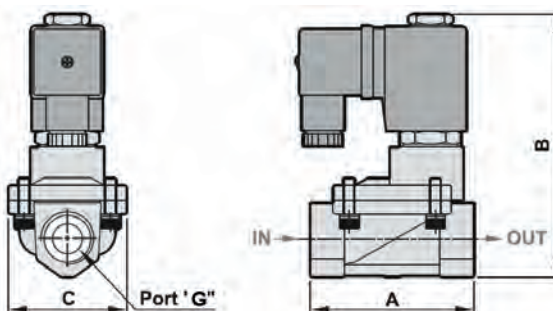
#### REPAIR KIT

Diaphragm Seal	225H + size code (03-08) + seal material
Coil	22003 + voltage
Armature assembly	225320VNC + seal material

#### OVERALL DIMENSIONS



Model	PU225H03	PU225H04	PU225H06	PU225H08
Port	3/8	1/2	3/4	1
A	66.5	66.5	96.0	96.0
B	106.5	106.5	126.5	126.5
C	48	48	70	70
Kg	0.775	0.755	1.55	1.5



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

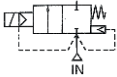


Plastic  
3/2  
N/Closed

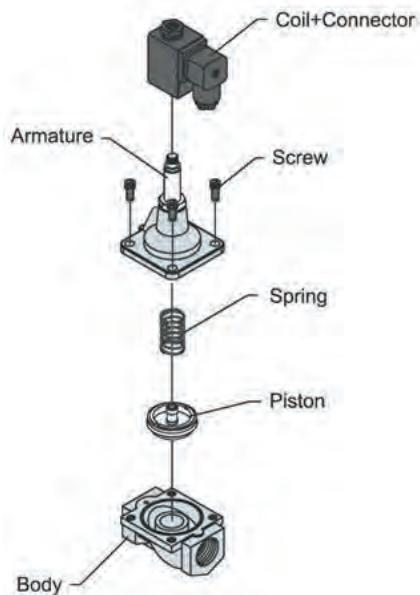
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

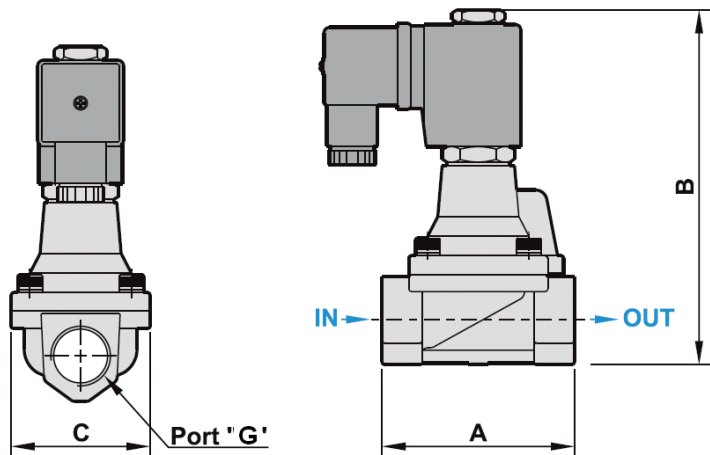
EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

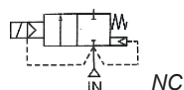
<div>Media: air – water – light oil- gas - fluid</div> <div>Pressure range: 0.5 to 50 Bar</div> <div>Media temperature: -10 °C to +90 °C Max</div> <div>Ambient temperature: -10 °C to +60 °C</div> <div>Media viscosity: 50 centistokes max</div> <div>Mounting: Coil upright</div> <div>Opening/Closing time: 500 mSec Max</div> <div></div> <div>NC</div>			<div>2/2 Brass</div> <div>3/8 – 1</div> <div>NORMALLY CLOSED</div> <div>2 WAY SERVO ASSISTED</div> <div>0.5 – 50 Bar</div> <div>TYPE PU225X®</div>				
PRESSURE							
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar) ΔP		Part Number	List Price	
			Min	Max			
3/8	13	75	0.5	50	PU225X03 + voltage	£147.99	
1/2	13	75	0.5	50	PU225X04 + voltage		
3/4	25	200	0.5	50	PU225X06 + voltage	£160.79	
1	25	200	0.5	50	PU225X08 + voltage		
OPTIONS							
IP65 Coil & Connector PG9 – DIN 43650 A ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C  NPT Thread Other custom made options available upon request						Included +£101.68 +10%	
ELECTRICAL DATA							
Voltage (-10% + 10%) Duty rating 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12-24-48-110-220-240-380 (50/60 Hz)	22003	23VA	17VA	H 180 °C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12-24-48-110-220 (DC)		15 Watts				
CONSTRUCTION							
Body: Forged Brass Tube, Piston and internal parts: Stainless steel Seals and gaskets: PTFE + NBR Moulded coil: Resin Test Pressure: 75 bar							
REPAIR KIT							
Coil				22003 + Voltage			
Complete Armature assembly				SP + Valve Part Number -ARMATURE			
Piston Set				SP + Valve Part Number -PISTON			
OVERALL DIMENSIONS							



Model	Port	A	B	C	Kg
PU225X03	3/8	66.5	106.5	48	0.86
PU225X04	1/2	66.5	106.5	48	0.84
PU225X06	3/4	100	126.5	70	1.8
PU225X08	1	100	126.5	70	1.75



Media: air – water – light oil - steam  
 Pressure: 0.5 to 120 Bar max  
 Media temperature: +180°C Max  
 Ambient temperature: -30°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing 200 mSec Max



# 2/2 Brass

## 3/8 – 2

### NORMALLY CLOSED

### 2 WAY SERVO ASSISTED

### 0.5 – 40, 80 & 120 Bar

## TYPE SAH HH & HHH



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar) ΔP			Part Number	List Price
			Min	Max Steam	Max Air/ Water		
3/8	15	75	0.5	12	40	SA14H + voltage	£219.48
1/2	15	75	0.5	12	40	SA15H + voltage	
3/4	20	155	0.5	12	40	SA20H + voltage	
1	25	220	0.5	12	40	SA25H + voltage	£282.62
1 1/4	35	433	0.5	12	40	SA35H + voltage	£541.20
1 1/2	35	433	0.5	12	40	SA40H + voltage	
2	50	800	0.5	12	40	SA50H + voltage	
3/8	15	75	0.5	12	80	SA14HH + voltage	£369.82
1/2	15	75	0.5	12	80	SA15HH + voltage	
3/4	20	155	0.5	12	80	SA20HH + voltage	
1	25	220	0.5	12	80	SA25HH + voltage	£547.22
1 1/4	35	433	0.5	12	80	SA35HH + voltage	£902.00
1 1/2	35	433	0.5	12	80	SA40HH + voltage	
2	50	800	0.5	12	80	SA50HH + voltage	

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA approved Coil + IP65 LED Connector PG11 DIN43650A  
 NPT Thread  
 ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C (Custom Made 25 Bar Max)  
 120 Bar SAHHH (2x SAHH 80 Bar price)

**Included**  
**+10%**  
**TBA**  
**See note**

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 – 110 – 230 (50/60 Hz) DIN	WPG2	18.7VA	15.3VA	H 180°C	IP 65 With Connector	3 spades DIN 43650 DIN 40050 VDE0110
=	12 – 24 DC DIN		18 Watts				

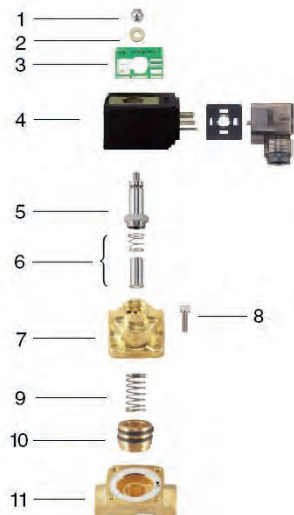
#### CONSTRUCTION

Body: Brass, Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless steel  
 Seals and gaskets: PTFE, Moulded coil: Resin

#### REPAIR KIT

Coil	WPG2 + voltage
Piston	SP210 + Valve Part Number

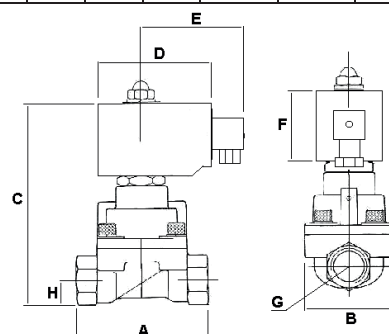
#### OVERALL DIMENSIONS



Model	A	B	C	D	E	F	G	H	Kg
SA14	67	48	123	67	52	42	1/2	15	1.1
SA15	67	48	123	67	52	42	1/2	15	1.1
SAH20	96	72	149	67	52	42	3/4	25	1.53
SAH25	96	72	149	67	52	42	1	25	1.85
SA35	120	90	168	52	45	41	1 1/4	33	3.3
SA40	120	90	168	52	45	41	1 1/2	33	3.25
SA50	150	122	203	52	45	41	2	40.5	6.8

Item	Part No:	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Name Plate
4	SP204-*	Coil
5	SP205-*	Core Tube
6	SP206-*	Armature Core
7	SP207-*	Valve Bonnet
8	SP208-*	Bolt
9	SP209-*	Piston Spring
10	SP210-*	Piston
11	SP211-*	Valve Body

-\* = Model Number



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

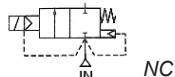
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: Air, Water, Gas or Liquid  
Pressure range: 0.3 to 16 bar max\*  
Media temperature: -5°C to +100°C  
Ambient temperature: 0°C to +60°C  
Media viscosity: 50 centistokes max  
Cycle life: 500,000 cycles  
Opening / Closing Time: 3 – 5 Sec



## 2/2 Ductile Iron

### DN50 – DN500

### 2 WAY NORMALLY CLOSED

### SERVO ASSISTED

### 0.3 – 16\* Bar

## TYPE BFE-DE



#### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Cv	Pressure Rating (Bar) ΔP		Seals	Part Number	List Price	
			Min	Max*			Seals NBR	Seals Viton
DN50	50	37	0.3	10*	NBR (80°C)	BFE50D + seal + voltage	£645.23	£744.45
DN65	65	85	0.3	10*		BFE65D + seal + voltage	£852.69	£951.91
DN80	80	110	0.3	10*		BFE80D + seal + voltage	£1126.29	£1225.51
DN100	100	150	0.3	10*		BFE100D + seal + voltage	£1493.11	£1619.39
DN125	125	230	0.3	10*		BFE125D + seal + voltage	£2115.49	£2265.82
DN150	150	450	0.3	10*		BFE150D + seal + voltage	£2340.99	£2491.32
DN200	200	580	0.3	10*		BFE200D + seal + voltage	£5198.05	£5510.75
DN250	250	910	0.3	10*	FKM (100°C)	BFE250D + seal + voltage	£10576.25	£10888.94
DN300	300	1300	0.3	10*		BFE300D + seal + voltage	£13820.44	£14133.14
DN350	350	1800	0.3	10		BFE350D + seal + voltage	POA	POA
DN400	400	2300	0.3	10		BFE400D + seal + voltage	POA	POA
DN450	450		0.3	10		BFE450D + seal + voltage	POA	POA
DN500	500		0.3	10		BFE500D + seal + voltage	POA	POA

#### OPTIONS

IP65 Coil & Connector PG11 – DIN 43650 A

Manual Over ride lever valve

\*16 Bar rated solenoid controller and pipework with M17 high power coil

ATEX 22003EX Coil: ATEX EExmIT4 II 2G & 2D IP65 T130°C

Flange options JIS10K, JIS20K, ANSI150Lb

Other custom flanges, larger sizes, seals, media and pressures available upon request

Included  
Included  
+£8.40  
+£101.68  
+10%

#### ELECTRICAL DATA

Voltage (-10% +10%) Continuous Duty 100%		Coil	Power Consumption		Insulation Class	Enclosure	Electrical Connections
			Inrush	Holding			
~	24 – 110 – 230 (50 or 60 Hz)	M16	70 VA	35 VA	F 155°C	IP65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 – 24 – 48 - 125		26 Watts				
~	110 – 230 (50 or 60 Hz)	*M17	35VA	26VA	N 200°C		
=	24		19 Watts				

#### CONSTRUCTION

Body: Ductile Iron with Epoxy Coating (Pressure tested to 16 bar)

Piston, Seat & Shaft: Bronze

Bolts: Brass

Spring: Stainless steel

Ports: Flanged PN16 RF

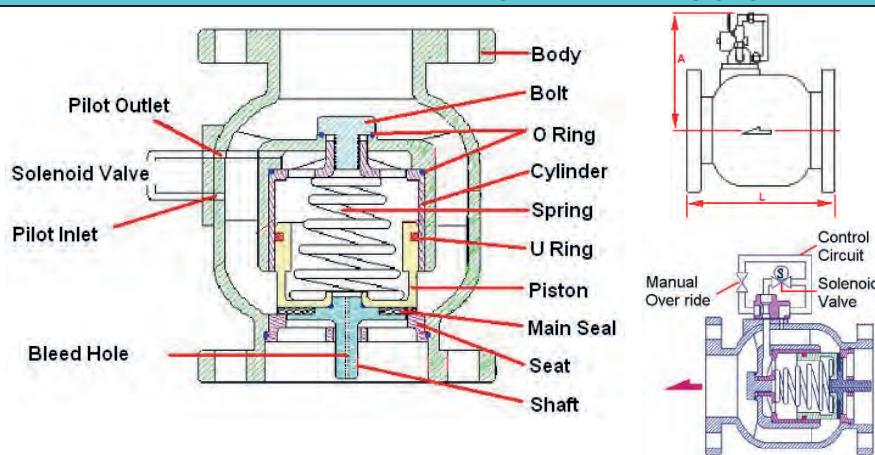
Seals and gaskets: NBR (+80°C max), Viton (+100°C max)

Control pipe work circuit & fittings: Copper & Brass

#### REPAIR KIT

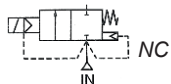
Piston U Ring seal	SP + Valve Part Number – PISTON U RING
External Control Pipework + Solenoid	BFE - NC + seal – PIPEWORK + voltage

#### OVERALL DIMENSIONS



Port	L	A	Kg
DN50	190	187	12
DN65	210	192	15
DN80	225	210	18
DN100	250	222	24
DN125	280	235	32
DN150	310	260	44
DN200	420	300	87
DN250	470	335	152
DN300	530	370	202
DN350	600	415	285
DN400	600		
DN450	750		
DN500	750		

Media: air, water, fluid, gas  
 Pressure range: 0.3 to 16 Bar max\*  
 Media temperature: -5°C to +100°C  
 Ambient temperature: 0°C to +60°C  
 Media viscosity: 50 centistokes max  
 Cycle life: 500,000 cycles  
 Opening / Closing Time: 3 – 5 Sec



# 2/2 Bronze

## DN50 – DN300

### NORMALLY CLOSED

### 2 WAY SERVO ASSISTED

### 0.3 – 16\* Bar

## TYPE BFE-B



#### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Cv	Pressure Rating (Bar) ΔP		Seals	Part Number	List Price	
			Min	Max			Seals NBR	Seals Viton
DN50	50	37	0.3	10*	NBR (80°C)	BFE50B + seal + voltage	£1393.89	£1493.11
DN65	65	85	0.3	10*		BFE65B + seal + voltage	£1393.89	£1493.11
DN80	80	110	0.3	10*		BFE80B + seal + voltage	£1700.57	£1799.79
DN100	100	150	0.3	10*		BFE100B + seal + voltage	£2566.49	£2692.77
DN125	125	230	0.3	10*		BFE125B + seal + voltage	£3179.85	£3330.18
DN150	150	450	0.3	10*		BFE150B + seal + voltage	£4307.35	£4457.68
DN200	200	580	0.3	10*		BFE200B + seal + voltage	£8958.66	£9271.36
DN250	250	910	0.3	10*		BFE250B + seal + voltage	£15684.57	£15997.27
DN300	300	1300	0.3	10*	*FKM (100°C)	BFE300B + seal + voltage	£18576.99	£18889.68

#### OPTIONS

IP65 Coil & Connector PG11 – DIN 43650 A

Manual Over ride lever valve

\*16 Bar rated solenoid controller with M17 high power coil

ATEX EExmIT4 II 2G & 2D IP65 T130°C coil. ☺

Other flange options JIS10K, JIS20K, ANSI150Lb

Other custom flange types, sizes, seals and media applications available upon request

Included  
 Included  
 +£8.40  
 +£101.68  
 +10%

#### ELECTRICAL DATA

Voltage (-10% +10%) Continuous Duty 100%		Coil	Power Consumption		Insulation Class	Enclosure	Electrical Connections
			Inrush	Holding			
~	24 – 110 – 230 (50 or 60 Hz)	M16	70 VA	35 VA	F 155°C	IP65 with connector	3 spades DIN 43650A DIN40050 VDE0110
=	12 - 24		16 Watts				
~	110 – 230 (50 or 60 Hz)	*M17	35VA	26VA	N 200°C		
=	24		19 Watts				

#### CONSTRUCTION

Body: Bronze (Pressure tested to 21 bar)

Piston, Seat & Shaft: Bronze

Bolts: Brass

Spring: Stainless steel

Ports: Flanged PN16 RF

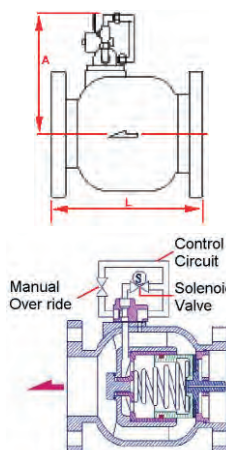
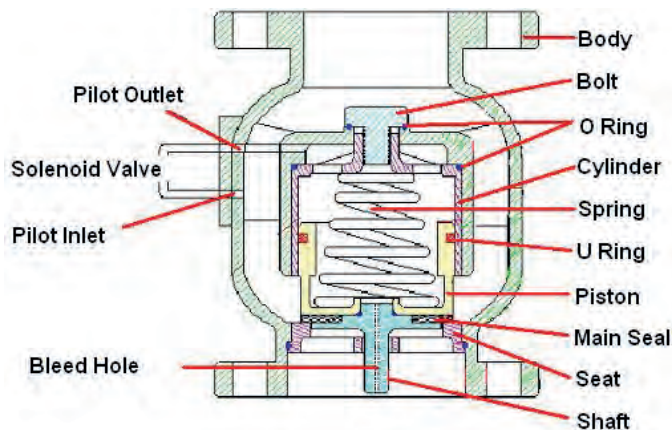
Seals and gaskets: NBR (+80°C) or Viton (+100°C)

Control pipe work circuit & fittings: Copper & Brass

#### REPAIR KIT

Piston U Ring Seal	SP + Valve Part Number – PISTON U RING
External Control Pipework + Solenoid	BFE-NC + seal - PIPEWORK + voltage

#### OVERALL DIMENSIONS



Port	L	A	Kg
DN50	190	187	12
DN65	210	192	15
DN80	225	210	18
DN100	250	222	24
DN125	280	235	32
DN150	310	260	44
DN200	420	300	87
DN250	470	335	152
DN300	530	370	202

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

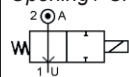
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – light oil – vacuum  
Pressure range: 0 to 10 Bar max  
Media temperature: 120°C max  
Ambient temperature: -10°C to +50°C max  
Media viscosity: 50 centistokes max  
Mounting: any position  
Opening / Closing time: 20 mSec Max



NO

## 2/2 Brass

### 1/8 – 1/2

### NORMALLY OPEN

### 2 WAY DIRECT ACTING

### 0 – 10 Bar

## TYPE NOAD612



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/min	Pressure Rating (Bar)			Seals	Part Number	List Price
			Min	Max AC	Max DC			
1/8	3.0	4	0	10	7	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C  *PTFE +120°C *VST +120°C	NOAD6A + seal + voltage	£90.20
	4.0	9.7	0	6	4		NOAD6B + seal + voltage	
	5.0	10.7	0	5	3.5		NOAD6C + seal + voltage	
1/4	3.0	4.3	0	10	7		NOAD8A + seal + voltage	
	4.0	9.7	0	6	4.2		NOAD8B + seal + voltage	
	5.0	10.7	0	4	2.8		NOAD8C + seal + voltage	
3/8	4.0	9.7	0	6	4		NOAD10A + seal + voltage	£105.24
	6.0	13.2	0	2	1.4		NOAD10B + seal + voltage	
1/2	6.0	13.2	0	2	1.4		NOAD12A + seal + voltage	£126.28

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A * VST, CR, ECO, HNBR or Hypalon Seals * PTFE seals 1/8 to 3/8 * PTFE seals 1/2 NPT Thread Other custom made options available upon request	Included +£15.37 +£60.13 +£75.16 +10%
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#### ELECTRICAL DATA

ELECTRICAL DATA							
Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	WPG2	18.7VA	15.3VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 (DC)		18 Watts				

#### CONSTRUCTION

Body: Brass  
Tube 304 stainless steel, armature 430F stainless steel  
Shading ring: copper (optional Silver)  
Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon)  
Moulded coil: Resin

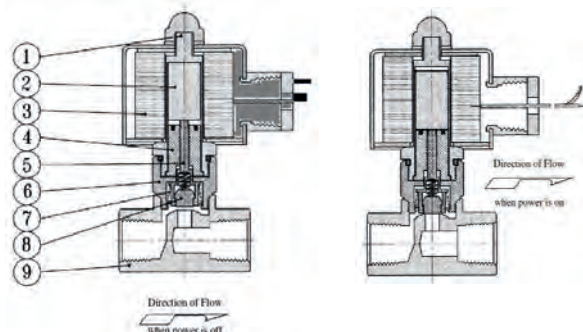
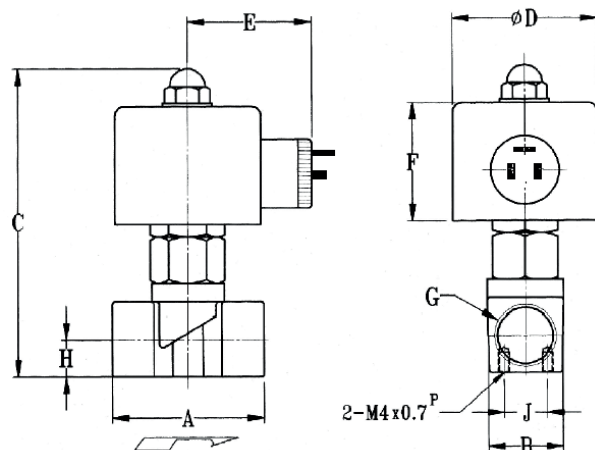
#### REPAIR KIT

Coil	WPG2 + voltage
Complete Armature Assembly	SP + Valve Part Number -ARMATURE

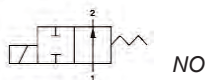
#### OVERALL DIMENSIONS

Model	A	B	C	D / E	F*	G	H	Kg
NOAD 6/8	41	19	108	40/65	38	15	10.5	0.52
NOAD 10	50	25	110	40/65	38	15	11.7	0.8
NOAD 12	55	27	112	40/65	38	-	13	0.95

Item	Article	Material
1	Solenoid Tube	Stainless
2	Slide Core	Stainless
3	Coil	Brass Wire
4	Armature Core	Stainless
5	Operating Spindle	Brass
6	Joint Sleeve	Stainless
7	Spring	Stainless
8	Seat	NBR, Silicone, EPDM, FKM
9	Valve Body	Forged Brass



Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 20 Bar max  
 Media temperature: +120°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Open or Close Time: 6-20 mSec Max



# 2/2 Brass

## 1/8 – 1/4

### NORMALLY OPEN

### 2 WAY DIRECT ACTING

### 0 – 20 Bar

### TYPE RB



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar)		Seals	Part Number	List Price
		Kv Ltr/min	Min	Max			
1/8	1.3	0.8	0	14	6 Watt Coil NBR +80°C FKM +80°C EPDM +80°C	RB031 + seal + voltage + 6W	£51.36
	1.5	1.5	0	10		RB032 + seal + voltage + 6W	
1/4	1.3	0.8	0	14		RB061 + seal + voltage + 6W	
	1.5	1.5	0	10		RB062 + seal + voltage + 6W	
1/8	1.3	0.8	0	20	6.8 Watt Coil NBR +90°C FKM +120°C EPDM +120°C	RB031 + seal + voltage + 6.8W	£52.39
	1.5	1.5	0	15		RB032 + seal + voltage + 6.8W	
1/4	1.3	0.8	0	20		RB061 + seal + voltage + 6.8W	
	1.5	1.5	0	15		RB062 + seal + voltage + 6.8W	

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A Explosion Proof 22001EX Coil: EExmIT4 II ATEX IP65 T 135°C (Pressure rating 50% as 6.8 Watt coil) NPT Thread Stainless 316 body (RSXXX + seal + S1 + voltage + watt)	Included +£67.14 +10% TBA
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#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12 -24 – 48 – 110 – 230 (50/60Hz)	822P5	15 VA	9.3 VA	F 155°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	24 – 48 – 110 – 240 (DC)		6 Watts				
~	24 - 48 - 110 - 230 (50/ 60Hz)	830P6	17 VA	10.5 VA			
=	12 - 24 (DC)		6.8 Watts				

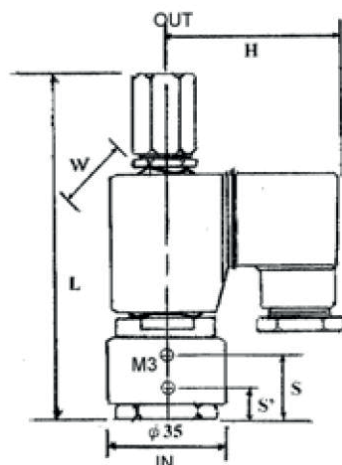
#### CONSTRUCTION

Body: Brass  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR or FKM or EPDM  
 Moulded coil: Duroplast / Thermo set resin

#### REPAIR KIT

Coil	822P5 or 830P6 + voltage
Complete plunger + O 'rings	SP + Valve Part Number -ARMATURE

#### OVERALL DIMENSIONS



	L	H	W	S	S'	Kg
RB03	70	55	22/30	-	-	0.2
RB06	70	55	22/30	-	-	0.2

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

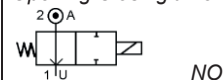
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – light oil - vacuum  
Pressure range: 0 to 20 Bar max  
Media temperature: 100°C max  
Ambient temperature: -10° to +50°C max  
Media viscosity: 40 centistokes max  
Mounting: any position  
Weight (including coil): 300 g  
Opening Closing time: 20 mSec Max



# 2/2 Brass

## 1/8 – 1/4

### NORMALLY OPEN

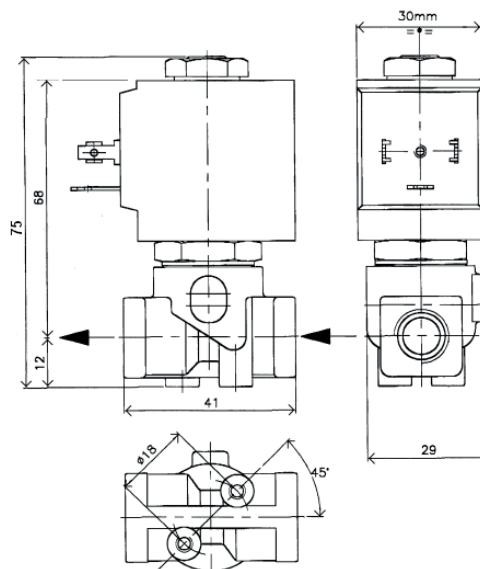
### 2 WAY DIRECT ACTING

### 0 – 20 Bar

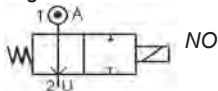
## TYPE 200201NO



PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar)			Part Number	List Price	
		Kv L/min	Min	AC Max 10 Watt Coil	DC Max 18 Watt Coil			
1/8	1.5	0.65	0	20	20	215201 + seal + 0180 + voltage	£94.27	
	2	1	0	16	16	220201 + seal + 0180 + voltage		
	2.5	1.4	0	12	12	225201 + seal + 0180 + voltage		
	3.5	2.1	0	5	5	235201 + seal + 0180 + voltage		
1/4	1.5	1.2	0	20	20	215201 + seal + 0140 + voltage		
	2	1.5	0	16	16	220201 + seal + 0140 + voltage		
	2.5	2.2	0	12	12	225201 + seal + 0140 + voltage		
	3.5	4.9	0	5	5	235201 + seal + 0140 + voltage		
	4.5	6.2	0	3	3	245201 + seal + 0140 + voltage		
	5.2	7.9	0	1.5	1.5	252201 + seal + 0140 + voltage		
OPTIONS								
IP65 Coil & Connector PG9 – DIN 43650 A High power 18 – 20 watt coil (higher DC pressure ratings) NPT Thread							Included +£8.39 +£36.04	
ELECTRICAL DATA								
Voltage (-10% + 15%) Continuous duty 100%			Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
				Inrush	Holding			
~	24 - 48 - 110 - 230 (50 or 60 Hz)		11630	26 VA	14 VA	F 155°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 – 48 – 80 – 190 (DC)		11630	10 Watts				
			31400	14 – 20 Watts				
CONSTRUCTION								
Body: Brass Tube and internal parts: 304 stainless steel, armature 430F stainless steel Seals and gaskets: NBR (Optional EPDM or FKM) Moulded coil: Resin								
REPAIR KIT								
Coil				Coil size (11630 or 31400) + voltage				
Complete armature assembly				SP + Valve Part Number -ARMATURE				
OVERALL DIMENSIONS								



Media: air - water - light oil- vacuum  
 Pressure range: 0 to 200 Bar max  
 Media temperature: 100°C max  
 Ambient temperature: -10° to +50°C max  
 Media viscosity: 40 centistokes max  
 Mounting: Vertical position coil up  
 Weight (including coil): 500 g  
 Opening or closing time: 20 m/sec max



## 2/2 Brass

### 1/8 – 1/4

### NORMALLY OPEN

### 2 WAY DIRECT ACTING

### 0 – 200 Bar

### TYPE WF



#### PRESSURE

Ø Port	Ø seat (mm)	Kv L/mn	Min	Pressure (Bar)	seals	Part Number	List Price
1/8 or 1/4 BSP	0.6	0.20	0	200	NBR FKM	WF0.6NBR + port + voltage WF0.6FKM + port + voltage	£260.67
	0.8	0.30	0	130	NBR FKM	WF0.8 NBR + port + voltage WF0.8 FKM + port + voltage	
	0.9	0.40	0	100	NBR FKM	WF0.9 NBR + port + voltage WF0.9 FKM + port + voltage	
	1	0.50	0	70	NBR FKM EPDM	WF1 NBR + port + voltage WF1 FKM + port + voltage WF1 EPDM + port + voltage	£185.66
	1,2	0.67	0	50	NBR FKM EPDM	WF1.2 NBR + port + voltage WF1.2 FKM + port + voltage WF1.2 EPDM + port + voltage	
	1,5	0.95	0	35	NBR FKM EPDM	WF1.5 NBR + port + voltage WF1.5 FKM + port + voltage WF1.5 EPDM + port + voltage	
	2	1.60	0	20	NBR FKM EPDM	WF2 NBR + port + voltage WF2 FKM + port + voltage WF2 EPDM + port + voltage	
	2,2	1.80	0	15	NBR FKM EPDM	WF2.2 NBR + port + voltage WF2.2 FKM + port + voltage WF2.2 EPDM + port + voltage	
	2,5	2.30	0	12	NBR FKM EPDM	WF2.5 NBR + port + voltage WF2.5 FKM + port + voltage WF2.5 EPDM + port + voltage	

#### OPTIONS

Connector DIN 43650 A & IP65 connector	Included
NPT thread	+£26.05
Seals and gaskets in PTFE	+£36.04
Explosion Proof Enclosure ATEX II 2 G/D EEx d IIC T6, IP65 85°C (Ambient T° from -20°C to +40°C)	+£429.08

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24-48-110-230 (50 / 60 Hz)	10065	48 VA	24 VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12-24-48		14 W - 20 W				

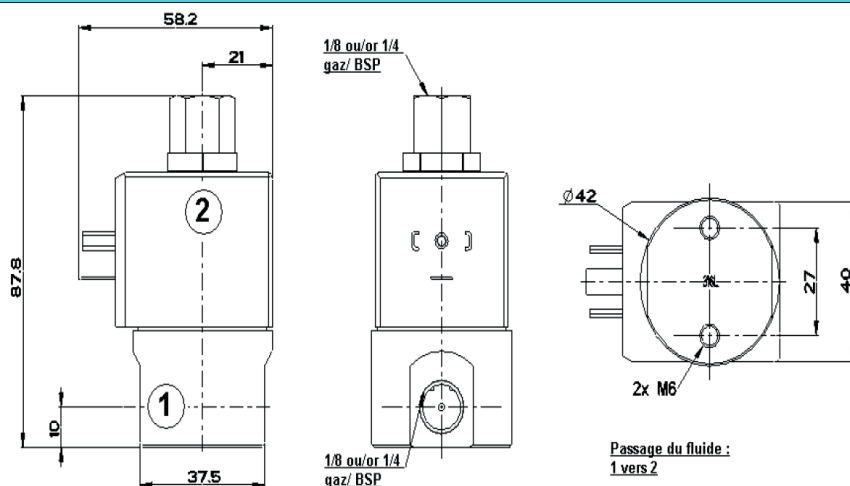
#### CONSTRUCTION

Body, tube and internal parts: stainless steel  
 Seals and gaskets: NBR-FKM-EPDM  
 Moulded coil: resin

#### REPAIR KIT

Coil	10065 + voltage
Complete plunger	KIT + valve part number

#### OVERALL DIMENSIONS



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
N/Closed

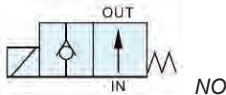
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – light oil - vacuum  
Pressure range: 0 to 7 or 12 Bar max  
Media temperature: -40°C to +150°C max  
Ambient temperature: -20°C to +60°C max  
Media viscosity: 50 centistokes max  
Mounting: coil upright  
Opening / Closing Time: 50 mSec Max



# 2/2 Brass

## 3/8 – 1"

### NORMALLY OPEN

### 2 WAY ZERO RATED

### 0 - 7 or 0 - 12 Bar

## TYPE NOPU220



PRESSURE										
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Min	Pressure Rating (Bar)			Seals	Max Media Temp. °C	Part Number	List Price
				AC Coil		DC Coil				
				15 Watt	18.5 Watt	18.5 Watt				
3/8	13	35	0	7			NBR FKM EPDM	80 120 150	NOPU22003 + voltage NOPU22003V + voltage NOPU22003E + voltage	£100.60 £119.79 £119.79
1/2	13	35	0	7			NBR FKM EPDM	80 120 150	NOPU22004A + voltage NOPU22004AV + voltage NOPU22004AE + voltage	£100.60 £119.79 £119.79
3/4	20	72	0	7			NBR FKM EPDM	80 120 150	NOPU22006A + voltage NOPU22006AV + voltage NOPU22006AE + voltage	£127.81 £135.31 £135.31
1	25	183	0	7			NBR FKM EPDM	80 120 150	NOPU22008A + voltage NOPU22008AV + voltage NOPU22008AE + voltage	£147.85 £159.08 £159.08
3/8	13	35	0		12	12	NBR FKM EPDM	80 120 150	NOPU22003 + voltage +18W NOPU22003V + voltage+18W NOPU22003E + voltage+18W	£109.67 £128.87 £128.87
1/2	13	35	0		12	12	NBR FKM EPDM	80 120 150	NOPU22004A + voltage+18W NOPU22004AV + voltage+18W NOPU22004AE + voltage+18W	£109.67 £128.87 £128.87
3/4	20	72	0		12	12	NBR FKM EPDM	80 120 150	NOPU22006A + voltage+18W NOPU22006AV + voltage+18W NOPU22006AE + voltage+18W	£136.88 £144.35 £144.35
1	25	183	0		12	12	NBR FKM EPDM	80 120 150	NOPU22008A + voltage+18W NOPU22008AV + voltage+18W NOPU22008AE + voltage+18W	£156.93 £168.16 £168.16

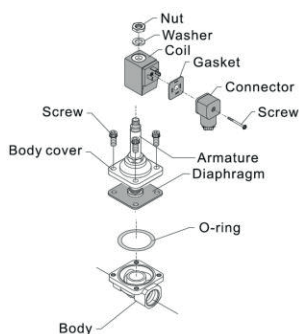
OPTIONS									
22003 IP65 CE Approved Coil & Connector PG9 – DIN 43650 A Connector ATEX 22003EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C (Max ΔP 3 Bar) NPT Thread Seals: NBR, (Optional FKM, EPDM or HNBR)									Included +£101.68 +10%

ELECTRICAL DATA								
Voltage (-10% + 10%) Continuous duty 100%			Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
				Inrush	Holding			
~	12 - 24 - 48 - 110 - 240 - 380 (50/ 60 Hz)		22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 – 220 (DC)			15 Watts				
~	24 - 48 - 110 - 240 - 380 (50/ 60 Hz)		22005	33VA	24VA			
=	12 - 24 - 48 - 110 (DC)			18.5 Watts				

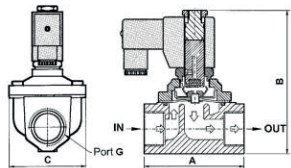
CONSTRUCTION									
Body: Forged Brass SS41 Tube and internal parts: Stainless steel Seals and gaskets: NBR (Optional EPDM , FKM or HNBR) Nass Magnet Moulded coil: DuroPlast / ThermoSet Resin									

REPAIR KIT									
Diaphragm seal					22004, 22006 or 22008 + seal material				
Coil					Coil size (22003 or 22005) + voltage				
Complete plunger assembly					225320 + seal material				

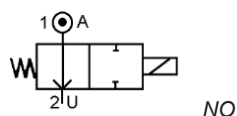
OVERALL DIMENSIONS									
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Model	NOPU22003	NOPU22004A	NOPU22006A	NOPU22008A
Port R	3/8	1/2	3/4	1
A	66.5	66.5	71.0	96.0
B	101.0	101.0	107.0	120.5
C	48.0	48.0	58.0	70.0
Kg	0.74	0.715	0.945	1.485



Media: air – water – light oil – vacuum 10<sup>-3</sup>  
 Pressure range: 0 to 10 bar max  
 Media temperature: 130° C max  
 Ambient temperature: -5° to +60° C max  
 Media viscosity: 20 centistokes max  
 Mounting: coil upright



# 2/2 Brass

## 3/8 – 2"

### NORMALLY OPEN

### 2 WAY ZERO RATED

### 0 – 10 Bar

## TYPE UWNO



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure Rating (bar) ΔP			Max Working	Seals	Max Media Temp. °C	Part Number	List Price
			Min	Max DC	Max AC					
3/8	15	75	0	5	7	10	NBR FKM SILICONE	80 120 130	UW10NON + voltage UW10NOV + voltage UW10NOS + voltage	£157.74
1/2	15	75	0	5	7	10	NBR FKM SILICONE	80 120 130	UW15NON + voltage UW15NOV + voltage UW15NOS + voltage	£157.74
3/4	20	143	0	5	7	10	NBR FKM SILICONE	80 120 130	UW20NON + voltage UW20NOV + voltage UW20NOS + voltage	£184.23
1	25	200	0	5	7	10	NBR FKM SILICONE	80 120 130	UW25NON + voltage UW25NOV + voltage UW25NOS + voltage	£250.50
1 1/4	35	400	0	5	7	10	NBR FKM SILICONE	80 120 130	UW35NON + voltage UW35NOV + voltage UW35NOS + voltage	£397.62
1 1/2	40	460	0	5	7	10	NBR FKM SILICONE	80 120 130	UW40NON + voltage UW40NOV + voltage UW40NOS + voltage	£410.87
2	50	800	0	5	7	10	NBR FKM SILICONE	80 120 130	UW50NON + voltage UW50NOV + voltage UW50NOS + voltage	£708.93

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A NPT + BSPT	Included +10%
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#### ELECTRICAL DATA

Voltage (AC -10% + 10%) (DC -1% + 1%) Continuous duty 90%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	110 – 230 (50 or 60 Hz)	WPC2	60VA	36VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	24 (DC)		29 Watts				

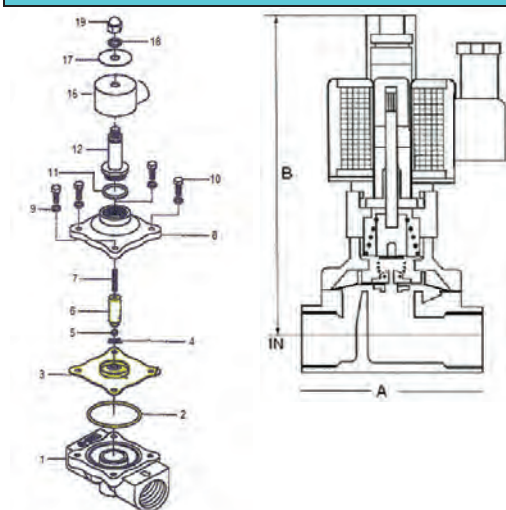
#### CONSTRUCTION

Body: up to 1" Forged Brass 1 1/4 – 2" Cast Bronze body  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR (Optional FKM or Silicone)  
 Moulded coil: Resin

#### REPAIR KIT

Diaphragm seal	UW + orifice + seal material
Coil	WPC2 + voltage
Armature assembly	SP + Valve Part Number -ARMATURE

#### OVERALL DIMENSIONS



Model	UW10	UW15	UW20	UW25	UW35	UW40	UW50
Port R	3/8	1/2	3/4	1	1 1/4	1 1/2	2
A	70	70	73	93	125	125	167
B	126	132	139	154	156	175	175
Width	56.5	56.5	78	78	94	94	120
Kg	1.1	1.1	1.2	1.8	3.2	3.5	5.4

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

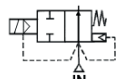

Plastic  
N/Closed

Plastic  
Acids/  
Alkali

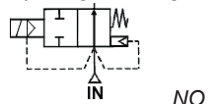
2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

<div>Media: air – water – gas – light oil</div> <div>Pressure range: 0.5 to 15 Bar max</div> <div>Media temperature: -40°C to +90°C max</div> <div>Ambient temperature: -40°C to +60°C</div> <div>Media viscosity: 50 centistokes max</div> <div>Mounting: coil upright</div> <div>Opening / Closing time: 50 mSec Max</div> <div></div> <div>NO</div>				<div>2/2 Brass</div> <div>3/8 – 3"</div> <div>NORMALLY OPEN</div> <div>2 WAY SERVO ASSISTED</div> <div>0.5 – 15 Bar</div> <div>TYPE NOPU225®</div>							
PRESSURE											
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Coil	Pressure Rating (Bar) ΔP		Max Working	Seals	Max Media Temp. °C	Part Number	List Price	
				Min	Max						
3/8	13	40.0	22003	0.5	10	15	NBR FKM EPDM	80 120 120	NOPU22503 + voltage NOPU22503V + voltage NOPU22503E + voltage	£95.80 £102.62 £102.62	
1/2	13	40.0	22003	0.5	10	15	NBR FKM EPDM	80 120 120	NOPU22504A + voltage NOPU22504AV + voltage NOPU22504AE + voltage	£95.80 £102.62 £102.62	
3/4	25	165.0	22003	0.5	10	15	NBR FKM EPDM	80 120 120	NOPU22506A + voltage NOPU22506AV + voltage NOPU22506AE + voltage	£126.19 £133.32 £133.32	
1	25	165.0	22003	0.5	10	15	NBR FKM EPDM	80 120 120	NOPU22508A + voltage NOPU22508AV + voltage NOPU22508AE + voltage	£144.29 £154.51 £154.51	
1 1/4	38	367	22003	0.5	10	15	NBR FKM EPDM	80 120 120	NOPU22512A + voltage NOPU22512AV + voltage NOPU22512AE + voltage	£245.56 £262.25 £262.25	
1 1/2	38	500	22003	0.5	10	15	NBR FKM EPDM	80 120 120	NOPU22514A + voltage NOPU22514AV + voltage NOPU22514AE + voltage	£245.56 £262.25 £262.25	
2	50	600	22003	0.5	10	15	NBR FKM EPDM	80 120 120	NOPU22520A + voltage NOPU22520AV + voltage NOPU22520AE + voltage	£332.05 £386.23 £386.23	
2 1/2	65	1050	16W	0.3	10	15	NBR FKM EPDM	80 120 120	NOPU22524A +voltage NOPU22524AV + voltage NOPU22524AE + voltage	£1235.32 £1295.36 £1295.36	
3	75	1380	16W	0.3	10	15	NBR FKM EPDM	80 120 120	NOPU22528A +voltage NOPU22528AV + voltage NOPU22528AE + voltage	£1279.16 £1341.38 £1341.38	
OPTIONS											
IP65 Coil & Connector PG9 – DIN 43650 A ATEX 22003EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C ☺ (21/2 + 3" Custom made) NPT Thread (Not available 21/2 + 3")										Included +£101.68 +10%	
ELECTRICAL DATA											
Voltage (-10% + 10%) Continuous duty 100%				Coil	Power Consumption		Insulation class	Enclosure	Electrical connections		
~	12 -24 - 48 – 110 – 240 – 380 (50/ 60 Hz)			22003	Inrush	Holding	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110		
=	12 – 24 – 48 – 110 - 220 (DC)				23VA	17VA					
~	24 – 48 – 110 – 220 – 380 (50/ 60 Hz)			16W	15 Watts		F 155°C				
=	12 – 24 – 48 (DC)				25VA	15VA					
CONSTRUCTION											
Body: Forged Brass SS41 Tube and internal parts: Stainless steel Seals and gaskets: NBR (Optional EPDM & FKM & HNBR) Moulded coil: 16 W Resin / 22003 DuroPlast ThermoSet Resin											
REPAIR KIT											
Diaphragm Seal						225 + size code (03-28) + seal material					
Coil						Coil size (22003 or 16W) + voltage					
Armature assembly (Normally Open)						225320VNO (not 21/2 + 3")					
OVERALL DIMENSIONS											
Port	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3		
A	66.5		96		131		160	243	250		
B	106.5		126.5		145.5		160.5	178	188		
C	48		70		96		112	184	184		
Kg	0.725		1.565		2.56		3.9	9.4	11.4		

Media: air – water – gas – light oil  
 Pressure range: 0.5 to 25 Bar max  
 Media temperature: -10°C +90°C max  
 Ambient temperature: -10°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing time: 50 mSec Max



# **2/2 Brass** **3/8 – 1"** **NORMALLY OPEN** **2 WAY SERVO ASSISTED** **0.5 – 25 Bar** **TYPE NOPU225H®**



## **PRESSURE**

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/min	Pressure Rating (Bar) ΔP		Seals	Part Number	List Price
			Min	Max			
3/8	8	19.0	0.5	25	NBR	NOPU225HB03 + voltage	£113.65
					EPDM	NOPU225HE03 + voltage	£114.55
					FKM	NOPU225HV03 + voltage	£118.47
1/2	8	19.0	0.5	25	NBR	NOPU225HB04A + voltage	£113.65
					EPDM	NOPU225HE04 + voltage	£114.55
					FKM	NOPU225HV04 + voltage	£118.47
3/4	13	40.0	0.5	25	NBR	NOPU225HB06 + voltage	£166.52
					EPDM	NOPU225HE06 + voltage	£168.83
					FKM	NOPU225HV06 + voltage	£173.64
1	13	40.0	0.5	25	NBR	NOPU225HB08 + voltage	£166.52
					EPDM	NOPU225HE08 + voltage	£168.83
					FKM	NOPU225HV08 + voltage	£173.64

## **OPTIONS**

IP65 PG9 – DIN 43650 A Connector and Coil  
 ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C (20 Bar Max)  
 NPT Thread  
 Flange JIS10K ANSI150Lb or PN16

**Included**  
**+£101.68**  
**+ 10%**  
**POA**

## **ELECTRICAL DATA**

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 – 110 – 240 – 380 (50 or 60 Hz)	22005	33VA	24VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 – 24 -110 – 220 (DC)		18.5 Watts				

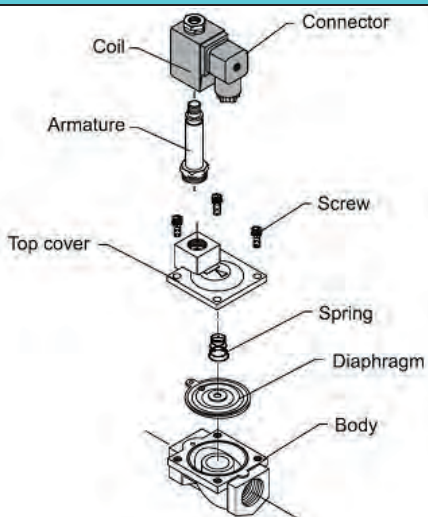
## **CONSTRUCTION**

Body: Forged Brass SS41 (Test Pressure 30 Bar)  
 Tube and Internal Parts: Stainless steel  
 Diaphragm: Nylon reinforced NBR, FKM or EPDM

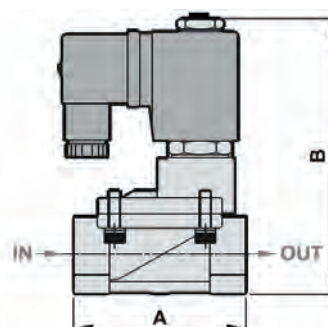
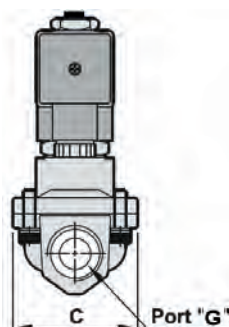
## **REPAIR KIT**

Diaphragm Seal	225H + (size code 03-08) + seal material
Coil	22005 + voltage
Armature assembly	0543-83.6-00

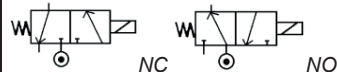
## **OVERALL DIMENSIONS**



Model	PU225H03	PU225H04	PU225H06	PU225H08
Port	3/8	1/2	3/4	1
A	66.5	66.5	96.0	96.0
B	106.5	106.5	126.5	126.5
C	48	48	70	70
Kg	0.775	0.755	1.55	1500



Media: air – water – light oil - vacuum  
 Pressure range: 0 to 8 bar max  
 Media temperature: 60°C max  
 Ambient temperature: -10°C to +50°C  
 Media viscosity: 40 centistokes max  
 Mounting: any position  
 Weight (including coil): 155 g  
 Opening / Closing Time: 20 mSec Max



# 3/2 Aluminium

## 1/8 – 1/4

### N/OPEN + N/CLOSED

### 3 WAY DIRECT ACTING

### 0 – 8 Bar

## TYPE PU320/300



#### PRESSURE

Ø Port BSP	Exhaust	Orifice (mm) Ø	Flow Kv Ltr/ min	Pressure (bar) ΔP		Seals	Max Media Temp °C	Part Number	List Price
				Min	Max				
1/8 N/CLOSED	M5	1.4	1	0	8	NBR	80	PU32001A + voltage	£37.10
						EPDM	160	PU32001E + voltage	£43.91
						FKM	130	PU32001V + voltage	£43.91
1/4 N/CLOSED	M5	1.4	1	0	8	NBR	80	PU32002A + voltage	£37.10
						EPDM	160	PU32002AE + voltage	£43.91
						FKM	130	PU32002AV + voltage	£43.91
1/8 N/OPEN	1/8 BSP	1.4	1	0	8	NBR	80	PU30001A + voltage	£37.10
						EPDM	160	PU30001AE + voltage	£43.91
						FKM	130	PU30001AV + voltage	£43.91
1/4 N/OPEN	1/4 BSP	1.4	1	0	8	NBR	80	PU30002A + voltage	£37.10
						EPDM	160	PU30002AE + voltage	£43.91
						FKM	130	PU30002AV + voltage	£43.91

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A (optional 30cm flying lead wire coil)	Included £2.79 +10% £67.14
Manifold kit (2 X nuts + washers + bolts + O Ring)	
NPT thread	
ATEX 22001EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C	

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12 - 24 – 48 - 110 - 220 (50/60 Hz)	22001	11.6 VA	8.5 VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 – 24 - 48 – 110 (DC)		4.8 W				

#### CONSTRUCTION

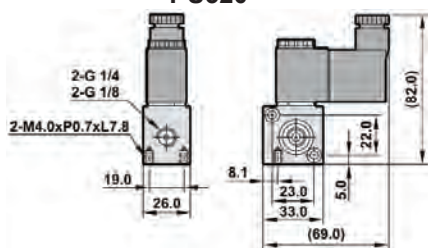
Body: Anodised Aluminium  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR (Optional EPDM & FKM)  
 Moulded coil: Resin  
 Test pressure: 10 Bar  
 For normally open Inlet in through the top brass fitting.

#### REPAIR KIT

Coil	22001 + voltage
Complete plunger + O' rings	32001+ seal material

#### OVERALL DIMENSIONS

PU320



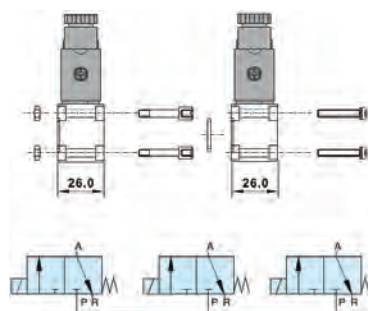
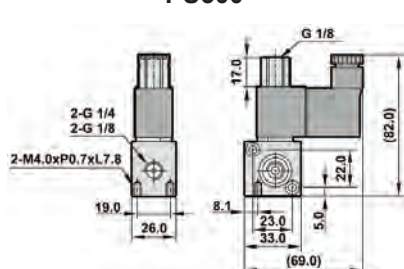
Manifold



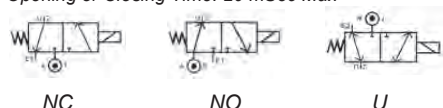
Mounting Kit



PU300



Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 15 bar max  
 Media temperature: 100°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 40 centistokes max  
 Mounting: any position  
 Weight (including coil): 280 g  
 Opening or Closing Time: 20 mSec Max



# 3/2 Brass

## 1/8 – 1/4

### N/C, N/O & UNIVERSAL

### 3 WAY DIRECT ACTING

## 0 – 15 Bar

# TYPE 300201



#### PRESSURE

Type	Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (bar) ΔP				Part Number	List Price
			Kv Ltr/Min	Min	AC 10 Watt Coil	DC 10 Watt Coil	DC 14 - 20Watt Coil		
3/2 NC	1/8	1.5	1.2	0	15	15	-	315201 + seal + 0181 + voltage	£73.73
		2	1.7	0	13	13	-	320201 + seal + 0181 + voltage	
		2.5	2.2	0	10	10	-	325201 + seal + 0181 + voltage	
	1/4	1.5	1.2	0	15	15	-	315201 + seal + 0141 + voltage	
		2	1.7	0	13	13	-	320201 + seal + 0141 + voltage	
		2.5	2.2	0	10	10	-	325201 + seal + 0141 + voltage	
3/2 NO	1/4	1.5	1.2	0	15	15	-	315201 + seal + 0140 + voltage	
		2.5	2.2	0	9	9	-	325201 + seal + 0140 + voltage	
		3	2.8	0	6.5	6.5	-	330201 + seal + 0140 + voltage	
3/2 U	1/4	1.5	1.2	0	9	-	10*	315201 + seal + 0142 + voltage + coil	£74.53
		2.5	2.2	0	6	-	6*	325201 + seal + 0142 + voltage + coil	
		3	2.8	0	2	-	3*	330201 + seal + 0142 + voltage + coil	

#### OPTIONS

Connector PG9 – DIN 43650 A  
 NBR, EPDM or FKM seals  
 Manual Over ride  
 NPT Thread

\*High Power 14 – 20 Watt coil for DC

Explosion Proof Enclosure ATEX II 2 G/D EexdIICT6, IP65 85°C

ATEX EExmIIT4 according to ATEX II 2G T4 IP65 130C (10 watts)

Included  
 Included  
 +£8.67  
 +£36.04  
 +£8.39  
 +£429.08  
 +£101.68

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 230 - 380 (50/ 60Hz)	11630	26 VA	14 VA	F 155°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 – 48 – 80 – 190 (DC)	11630	10 Watts				
		31400	14 - 20 Watts				

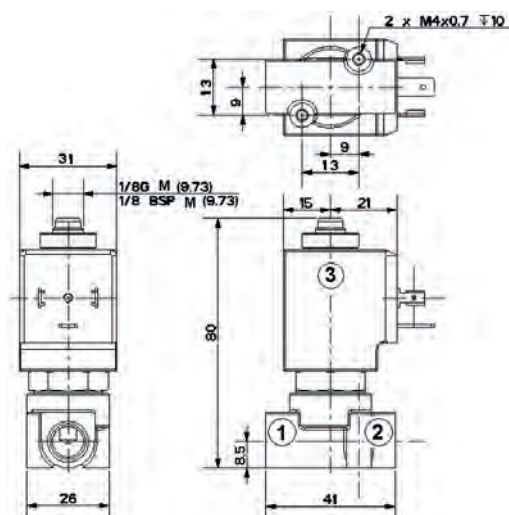
#### CONSTRUCTION

Body: Brass Exhaust: 1/8 BSPM  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR or EPDM or FKM  
 Moulded coil: Polyamide

#### REPAIR KIT

Coil	Coil size (11630 or 31400) + voltage
Armature + Seal	SP + Valve Part Number -ARMATURE

#### OVERALL DIMENSIONS



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
3/2  
N/Closed

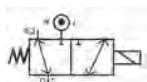
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – light oil  
Pressure range: 0 to 11 Bar max  
Media temperature: -10°C +80°C max  
Ambient temperature: -20° to +60°C  
Media viscosity: 50 centistokes max  
Mounting: any position  
Weight: 460g / 670g



Universal

# 3/2 Brass 1/4 UNIVERSAL 3 WAY DIRECT ACTING 0 – 11 Bar TYPE VX



## PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Coil	Pressure Rating (Bar)				Part Number	List Price
				Min	Max AC	Max DC	Seal		
1/4	1.6	1.5	WPG1	0	7	4.9	NBR	VX3121N + voltage	£51.12
							FKM	VX3121V + voltage	
	2.2	2.7	WPG1	0	5	3.5	NBR	VX3122N + voltage	£54.12
							FKM	VX3122V + voltage	
	1.6	1.5	WPG2	0	11	7.7	NBR	VX3221N + voltage	£54.12
							FKM	VX3221V + voltage	
	2.2	2.7	WPG2	0	7	4.9	NBR	VX3222N + voltage	£54.12
							FKM	VX3222V + voltage	

## OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil + IP65 Connector PG11 with LED – DIN 43650 A  
NPT Thread

Included + 10%

## ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 230 - 380 (50 or 60	WPG1	11.2VA	8.2VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 (DC)		12 Watts				
~	24 - 48 - 110 - 230 - 380 (50 or 60	WPG2	18.7VA	15.3VA			
=	12 - 24 - 48 (DC)		18 Watts				

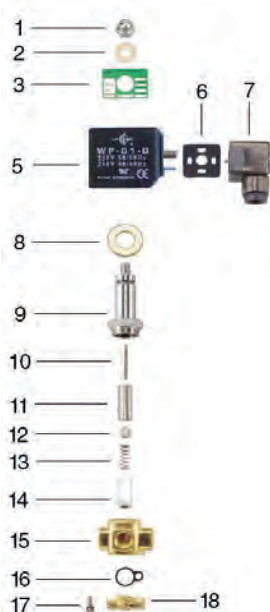
## CONSTRUCTION

Body : Brass  
Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless  
Seals and gaskets: NBR or FKM  
Moulded coil: Resin

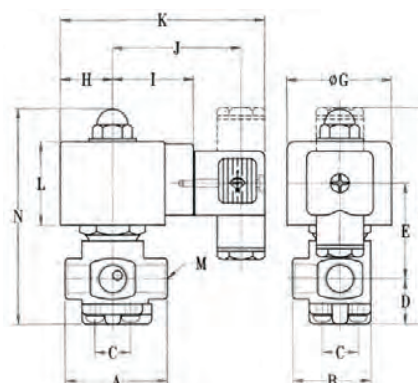
## REPAIR KIT

Coil	Coil (WPG1 or WPG2) + voltage
Armature Assembly	SP + Valve Part Number -ARMATURE

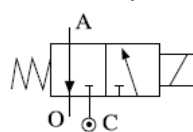
## OVERALL DIMENSIONS



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
VX31	43	33	15	19	46	96	35	20	33	54	86	33	1/4	92
VX32	43	33	15	19	48	98	40	23	35	56	89	38	1/4	95

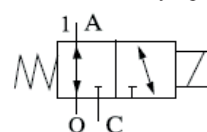


Inlet C= Normally Closed



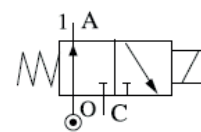
Normally closed

Inlet O= Normally Open



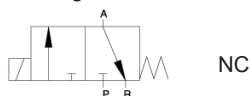
Universal

Inlet A= Universal



Normally open

Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 7 bar max  
 Media temperature: +100°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 40 centistokes max  
 Mounting: any position  
 Weight (including coil): 270/370g  
 Opening or Closing time: 20 mSec Max




# 3/2 Aluminium N/CLOSED (M5 Exhaust) 3 WAY DIRECT ACTING TYPE AM325



## PRESSURE

Ø Port	Ø Orifice (mm)	Flow Rate	Pressure Rating (Bar)		Part Number	List Price
		Cv Ltr/ min	Min	Max		
1/4 BSP	2.2	2.3	0	6	AM325-02S + voltage	£48.65
3/8 BSP	2.3	2.5	0	6	AM325-03S + voltage	

## OPTIONS

IP65 Coil + Connector PG9 – DIN 43650 A  
 ATEX EExmIIT4 II 2G & 2D IP65 T130°C   
 NPT Thread

**Included**  
**+£101.68**  
**+10%**

## ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil Size	Power		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12-24-48-110-220-240-380 (50/60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12-24-48-110-220 (DC)		15 Watts				

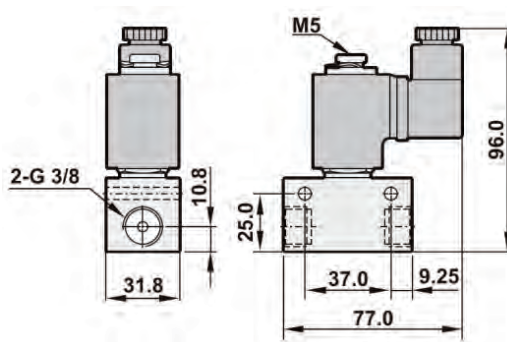
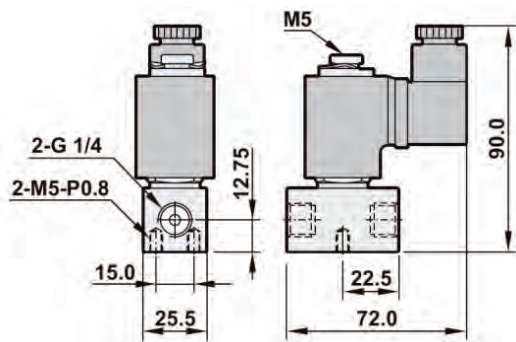
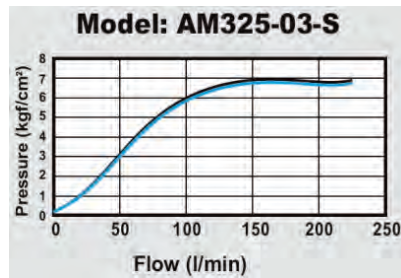
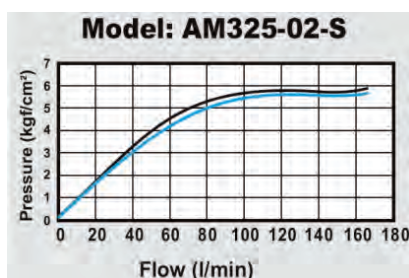
## CONSTRUCTION

Body: Anodised Aluminium Alloy  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR  
 Moulded coil: Resin

## REPAIR KIT

Coil	11630 + voltage
Complete plunger + O' rings	KIT325 + port + seal material

## OVERALL DIMENSIONS



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

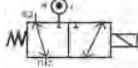



Plastic  
2/2  
N/Closed

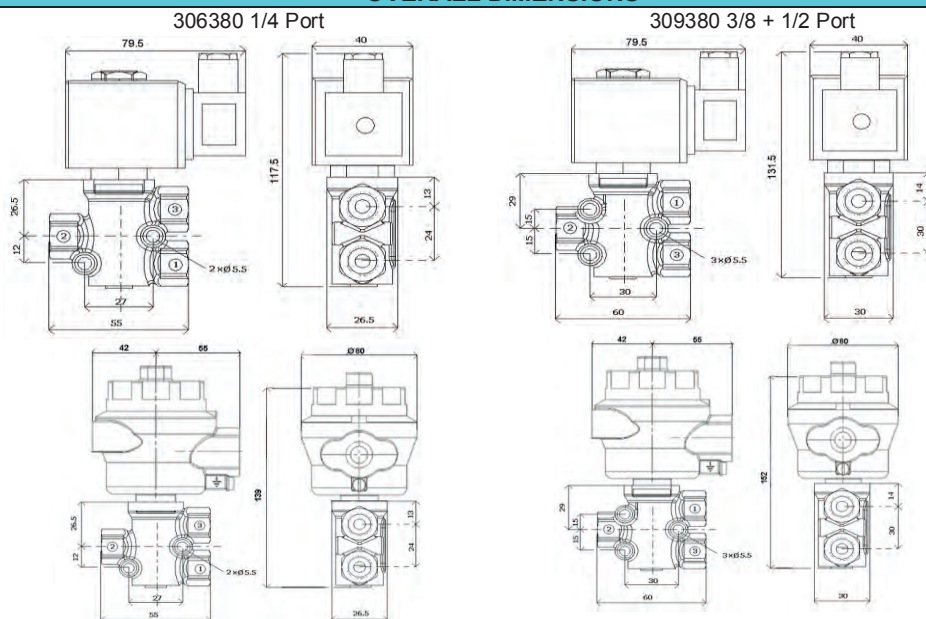
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

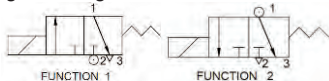
EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

<p>Media: compressed air – Inert Gas Pressure range: 0 to 10 Bar max Media temperature: 100°C max Ambient temperature: -10°C to +50°C max Media viscosity: 40 centistokes max Opening or Closing time: 50 mSec Max Mounting: any position Weight: 2200g / 2500g</p> <div><div>Universal</div></div>			<div>3/2 Brass 3/8 – 1/2 UNIVERSAL DIRECT ACTING 0 – 10 Bar TYPE 380</div>			<div></div>		
PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure (Bar) MinMax		Seals	Media Temp. Max °C	Part Number	List Price
1/4	6	5	0	10	NBR FKM	60 100	30638010 + 0142 + voltage 30638020 + 0142 + voltage	£213.38
3/8 1/2	9	13	0	10	NBR FKM	60 100	30938010 + port + voltage 30938020 + port + voltage	£362.55
OPTIONS								
IP65 Coil & Connector PG9 – DIN 43650 A Manual override or manual reset NPT thread Explosion Proof Enclosure ATEX II 2 G/D EEx d IIC T6, IP65 85°C  Other custom made options available upon request							1/4 306 Series	Included +£75.26 +£36.04 +£404.77
IP65 Coil & Connector PG9 – DIN 43650 A Manual override NPT thread Explosion Proof Enclosure ATEX II 2 G/D EEx d IIC T6, IP65 85°C  Other custom made options available upon request – EExmIIT4							3/8 & 1/2 309 Series	Included +£25.10 +£84.07 +£404.77
ELECTRICAL DATA								
Voltage (-10% + 15%) Continuous duty 100%			Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
				Inrush	Holding			
~	24 – 48 – 110 - 230 (50 or 60 Hz) (With bridge rectifier to DC)		31037	14 W		F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 – 24 - 48							
CONSTRUCTION								
Body: brass Tube and internal parts: stainless steel Seals and gaskets: NBR or FKM Moulded coil: resin								
REPAIR KIT								
Coil					31037 + voltage			
Complete plunger + O'ring + complete piston					KIT + valve part number			
OVERALL DIMENSIONS								



Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 13 Bar max  
 Media temperature: +120°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Weight (including coil) 280 g  
 Opening / Closing time: 15- 40 mSec Max



# 3/2 Stainless

## 1/8 – 1/4

### NORMALLY CLOSED

### 3 WAY DIRECT ACTING

### 0 – 13 Bar

## TYPE ST03/06



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)		Flow	Pressure Rating (Bar)					Seals	Part Number	List Price
			Kv Ltr/Min	Min	Coil 22001 Max		Coil 830 Max				
	Body	Top			F 1	Function 2	F 1	Function 2			
1/8	0.8	1.0	0.3	0	10	10	13	13	Coil 22001 4.8 Watt -5 +80°C  Coil 830 *6.8 Watt NBR +80°C *FKM +120°C *Kalrez +120°C	ST031F + seal + voltage + coil	£57.12
	1.0		0.5	0	7		10			ST032F + seal + voltage + coil	
	1.2		0.8	0	5		7			ST033F + seal + voltage + coil	
	1.6	1.2	1.5	0	4	7	5	10		ST034F + seal + voltage + coil	
	2.0		2.3	0	3		4			ST035F + seal + voltage+ coil	
	2.4	1.5	3	0	1	5	3	7		ST036F + seal + voltage + coil	
	3.0		3.8	0	0.5		1			ST037F + seal + voltage + coil	
1/4	0.8	1.0	0.3	0	10	10	13	13		ST061F + seal + voltage + coil	
	1.0		0.5	0	7		10			ST062F + seal + voltage + coil	
	1.2		0.8	0	5		7			ST063F + seal + voltage + coil	
	1.6	1.2	1.5	0	4	7	5	10		ST064F + seal + voltage + coil	
	2.0		2.3	0	3		4			ST065F + seal + voltage + coil	
	2.4	1.5	3	0	1	5	3	7		ST066F + seal + voltage + coil	
	3.0		3.8	0	0.5		1			ST067F + seal + voltage + coil	

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650B  
 NPT Thread  
 \*830PL6 6.8 Watt High Power 30mm coil  
 Silver Shading Ring for AC voltages  
 ATEX 22001EX Coil: ATEX EExII T4 II 2G & 2D IP65 T130°C (Pressure same as coil 22001)  
 \*FKM Seals  
 \*Kalrez Seals  
 Exhaust Accessories ST0\*\*F= BSP Exhaust – blank=M5 female – P= 1/8 PT Male - C=Anti Dust Silent Cap

Included  
 +10%  
 +£8.25  
 +£10.45  
 +£67.16  
 +£7.11  
 +£60.69

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 230 - 380 (50 or 60 Hz)	22001	12VA	6.9VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 – 24 - 48 (DC)		4.8 Watts				
~	24 - 48 - 110 – 230 (50 or 60 Hz)	830PL6	15VA	10.5VA			
=	12 - 24 (DC)		6.8 Watts				

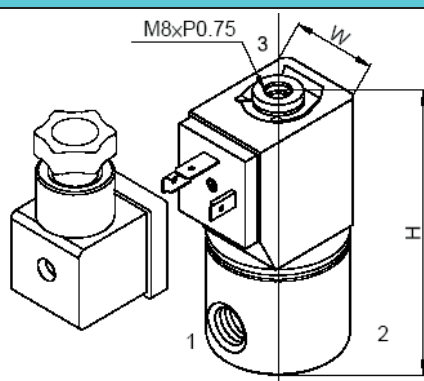
#### CONSTRUCTION

Body: AISI303 Stainless steel  
 Tube and internal parts: AISI304 stainless steel  
 Head & plunger: AISI 430Fr Stainless steel  
 Seals and gaskets: NBR (Optional FKM, FFKM and Kalrez)  
 Moulded coil: Duroplast / Thermo set resin  
 Exhaust 1/8 BSP Female (See options above)

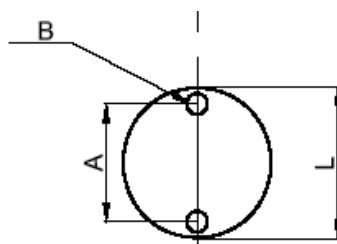
#### REPAIR KIT

Coil	Coil size (coil 22001 or coil 830PL6) + voltage
Complete plunger + O' rings	SP + Valve Part Number - ARMATURE

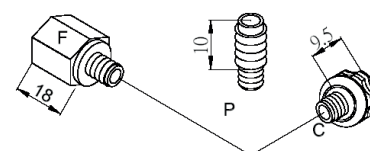
#### OVERALL DIMENSIONS



Port	L	W 22001 Coil	W 830 Coil	H	A	B
1/8	25	22	30	61	18	M4x0.7
1/4	30	22	30	65	23	M4x0.7



EXH.ACCESS.



Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 16 Bar max  
 Media temperature: -5°C to +145°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Weight (including coil) 510g  
 Opening / Closing time: 6- 20 mSec Max



# 3/2 Stainless

## 1/4 - 3/8

### NORMALLY CLOSED

### 3 WAY DIRECT ACTING

## 0 – 16 Bar

# TYPE ST08/10



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)		Flow	Pressure Rating (Bar)					Seals	Part Number	List Price
			Kv Ltr/Min	Min	Max 22003 Coil		Max 22005 Coil				
	Body	Top			F 1	Function 2	F 1	Function 2			
1/4	1.3	1.6	1.2	0	10	13	13	16	NBR -5 +80°C  *FKM -10 +145°C  *Kalrez -10 +145°C	ST081F + seal + voltage + coil	£84.94
	1.6		1.7	0	7		10			ST082F + seal + voltage + coil	
	2.0		2.5	0	5		7			ST083F + seal + voltage + coil	
	2.5	2.0	3.3	0	4	10	5	13		ST084F + seal + voltage + coil	
	3.0		5.1	0	3		4			ST085F + seal + voltage + coil	
	4.0		9	0	2		3			ST086F + seal + voltage + coil	
	5.0	2.8	13	0	1	7	2	10		ST087F + seal + voltage + coil	
3/8	1.3	1.6	1.2	0	10	13	13	16		ST101F + seal + voltage + coil	
	1.6		1.7	0	7		10			ST102F + seal + voltage + coil	
	2.0		2.5	0	5		7			ST103F + seal + voltage + coil	
	2.5	2.0	3.3	0	4	10	5	13		ST104F + seal + voltage + coil	
	3.0		5.1	0	3		4			ST105F + seal + voltage + coil	
	4.0		9	0	2		3			ST106F + seal + voltage + coil	
	5.0	2.8	13	0	1	7	2	10		ST107F + seal + voltage + coil	

#### OPTIONS

IP65 Coil and Connector PG9 DIN43650A  
 NPT Thread  
 22005 18.5 Watt High Power coil  
 ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C (Pressure same as 15 Watt 22003 coil)  
 FKM (V) seal  
 Kalrez (Z) seal  
 Exhaust Accessories ST0\*\*F= BSP Exhaust – blank=M5 female – P= 1/8 PT Male - C=Anti Dust Silent Cap  
 Other custom made options available upon request

Included  
 +10%  
 +£8.25  
 +£101.68  
 +£7.11  
 +£60.69

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12-24-48-110-220-240-380 (50/60 Hz)	22003	30VA	22VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12-24-48-110-220 (DC)		15 Watts				
~	24 - 48 - 110 – 230 (50 or 60 Hz)	22005	33VA	24VA			
=	12 - 24 - 48 – 110 - 220(DC)		18.5 Watts				

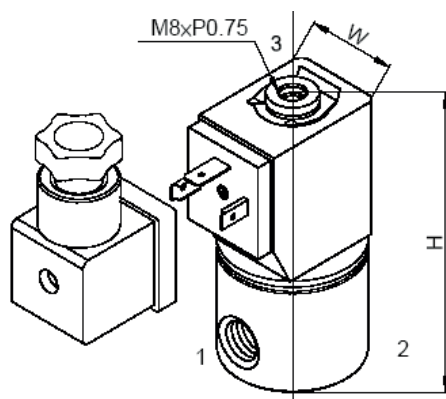
#### CONSTRUCTION

Body: AISI303 Stainless steel  
 Tube and internal parts: AISI304 stainless steel  
 Head & plunger: AISI 430Fr Stainless steel  
 Seals and gaskets: FKM (Optional NBR)  
 Moulded coil: Duroplast / Thermo set resin  
 Exhaust 1/8 BSP Female (F) see options above

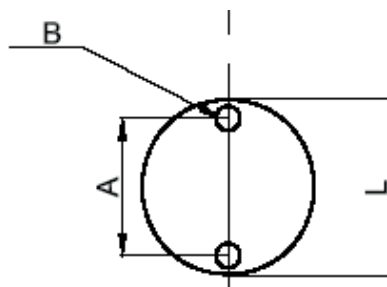
#### REPAIR KIT

Coil	Coil size (22003 or 22005) + voltage
Complete plunger + O' rings	SP + Valve Part Number -ARMATURE

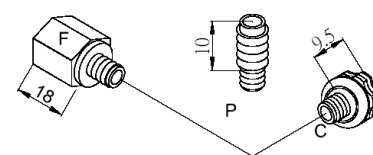
#### OVERALL DIMENSIONS



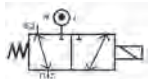
Port	L	W 22003	W 22005	H	A	B
1/4	40	30	36	85.5	31	M5x0.8
3/8	40	30	36	85.5	31	M5x0.8



EXH.ACCESS.



Media: air – water – gas – light oil  
 Pressure range: 0 to 11 Bar max  
 Media temperature: -10°C +80°C max  
 Ambient temperature: -20° to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Weight: 460g / 670g



Universal

# 3/2 Stainless Steel

## 1/4

### UNIVERSAL

### 3 WAY DIRECT ACTING

### 0 – 11 Bar

## TYPE VXS



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Coil	Pressure Rating (Bar)				Part Number	List Price
				Min	Max AC	Max DC	Seal		
1/4	1.6	1.5	WPG1	0	7	4.9	NBR	VXS3121N + voltage	£114.10
							FKM	VXS3121V + voltage	
	2.2	2.7		0	5	3.5	NBR	VXS3122N + voltage	£117.11
							FKM	VXS3122V + voltage	
1/4	1.6	1.5	WPG2	0	11	7.7	NBR	VXS3221N + voltage	£117.11
							FKM	VXS3221V + voltage	
	2.2	2.7		0	7	4.9	NBR	VXS3222N + voltage	£117.11
							FKM	VXS3222V + voltage	

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil + IP65 Connector PG11 with LED – DIN 43650 A  
 NPT Thread

Included  
+ 10%

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 230 - 380 (50 or 60 Hz)	WPG1	11.2VA	8.2VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 (DC)		12 Watts				
~	24 - 48 - 110 - 230 - 380 (50 or 60 Hz)	WPG2	18.7VA	15.3VA			
=	12 - 24 - 48 (DC)		18 Watts				

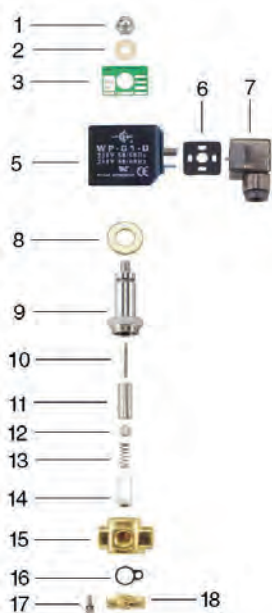
#### CONSTRUCTION

Body : 316 stainless steel  
 Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless  
 Seals and gaskets: NBR or FKM  
 Moulded coil: Resin

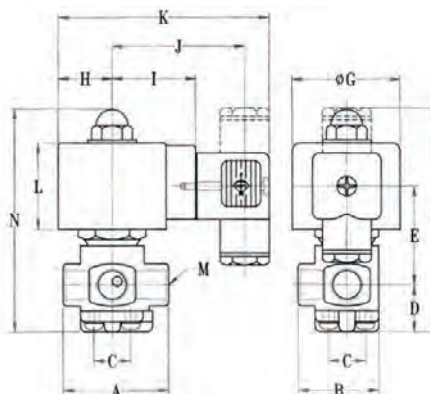
#### REPAIR KIT

Coil	Coil (WPG1 or WPG2) + voltage
Armature Assembly	SP + Valve Part Number -ARMATURE

#### OVERALL DIMENSIONS



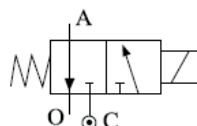
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
VXS31	43	33	15	19	46	96	35	20	33	54	86	33	1/4	92
VXS32	43	33	15	19	48	98	40	23	35	56	89	38	1/4	95



Inlet C= Normally Closed

Inlet O= Normally Open

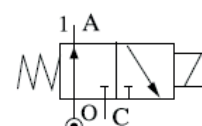
Inlet A= Universal



Normally closed



Universal



Normally open

Media: air 40 Micron or better  
 Pressure range: 2 to 8 Bar max  
 Mounting: any position  
 Seals: NBR+ HNBR  
 Opening & Closing: 50mSec Max  
 Cycles per sec: 8 Max  
 Temp: -20°C to +60°C (-40°C +150°C\*)  
 Cycle life: 1,000,000+



# **EExd IIC T6 3/2** **Namur + 1/4" BSP** **NORMALLY CLOSED** **Direct Acting** **TYPE SV12-10F/P**



## **Single Direct Acting Normally Closed**

Ø Port	Ø Orifice mm	Function	Working Temp °C	Pressure Rating (Bar)		Protection	Body Material	Part Number	List Price
				Min	Max				
1/4BSP + Namur	1.3	3/2	-20 to +60	0	8	EExdIIC T6	Aluminium	SV110FP1C5 + voltage	£132.30
							AISI316	SV210FP1C4 + voltage	£440.47

## **OPTIONS**

EExdIIC T6 Conduit entry M20x1.5mm(M20) option 1/2"NPTF (N12)

EExdIIC T6 ATEX explosion proof certified

Manual Over Ride (screwdriver slot)

Thread & Namur mount with same body

NPT Thread (N)

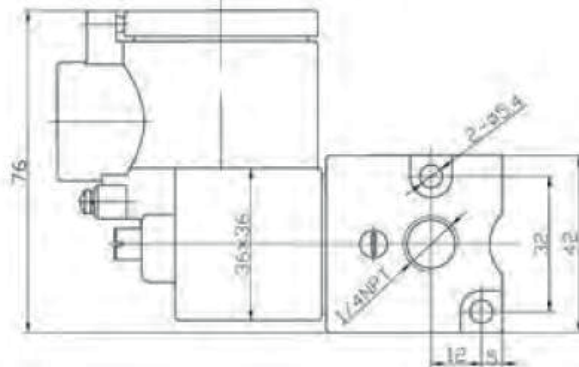
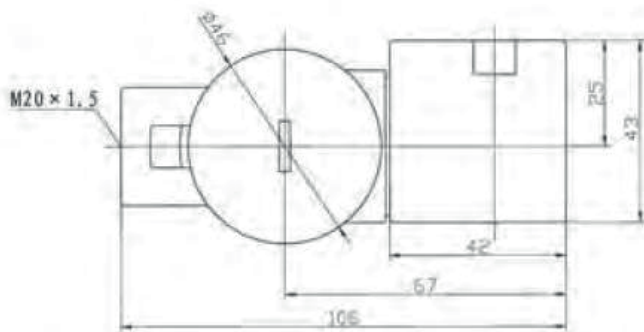
\*Special working temperature: -40°C +80°C (+150°C custom option), 1/8" port

**Included**  
**Included**  
**Included**  
**+10%**  
**TBA**

## **ELECTRICAL DATA**

Voltage (-10% + 10%) Continuous duty 100%		ATEX Coil	Power Consumption	Insulation class	Enclosure	
~ 110 - 230 (50 or 60 Hz)		EEx d Coil C4 316 Stainless	4VA	F 155°C	IP 66 M20x1.5 or 1/2NPTF	
= 24 (DC)			3.5 Watts			
~ 110 - 230 (50 or 60 Hz)		EEx d Coil C5 Aluminium Epoxy Coated	4VA			
= 24 (DC)			3.5 Watts			

## **OVERALL DIMENSIONS**

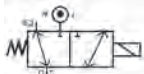


**SV210F/P1C4**



**SV110F/P1C5**

Media: compressed air  
 Pressure range: 0 to 10 bar max  
 Media temperature: 100°C max  
 Ambient temperature: -10° to +50°C max  
 Media viscosity: 40 centistokes max  
 Opening or Closing time: 50 mSec Max  
 Mounting: any position  
 Weight: 2200g / 2500g



Universal

# 3/2 Stainless

## 1/4 - 1/2

### UNIVERSAL

### DIRECT OPERATED

### 0 – 10 Bar



### TYPE 390



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure (bar) ΔP		Seals	Media Temp. Max °C	Part Number	List Price
			Min	Max				
1/4	6	5	0	10	NBR FKM	60 100	30639010 + 0142 + voltage 30639020 + 0142 + voltage	£326.36
3/8 1/2	9	13	0	10	NBR FKM	60 100	30939010 + port + voltage 30939020 + port + voltage	£454.78

#### OPTIONS

<b>1/4 306 Series</b> IP65 Coil & Connector PG9 – DIN 43650 A Manual override or manual reset NPT thread Explosion Proof Enclosure ATEX II 2 G/D EEx d IIC T6, IP65 85°C  Other custom made options available upon request - EExmII T4 ATEX II 2G T4 IP65 T130C								<b>Included</b> +£138.07 +£36.04 +£404.77
<b>3/8 &amp; 1/2 309 Series</b> IP65 Coil & Connector PG9 – DIN 43650 A Manual override NPT thread Explosion Proof Enclosure ATEX II 2 G/D EExd IIC T6, IP65 85°C  Other custom made options available upon request – EExmII T4 ATEX II 2G T4 IP65 T130C								<b>Included</b> +£144.82 +£84.07 +£511.93

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous Duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 – 48 – 110 - 230 (50 or 60 Hz) (With bridge rectifier to DC)	31037	14 W		F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 – 24 - 48						

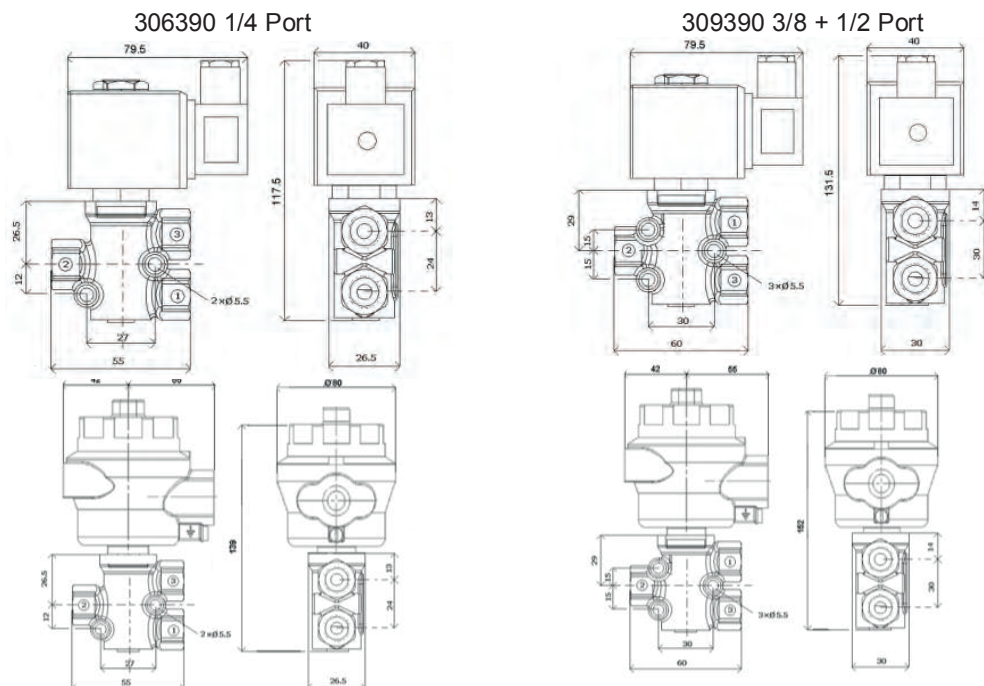
#### CONSTRUCTION

Body: 316 Stainless steel  
 Tube and internal parts: stainless steel  
 Seals and gaskets: NBR or FKM  
 Moulded coil: resin

#### REPAIR KIT

Coil	31037 + voltage
Complete plunger + O'ring + complete piston	KIT + valve part number

#### OVERALL DIMENSIONS



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

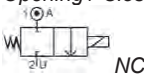


Plastic  
2/2  
N/Closed

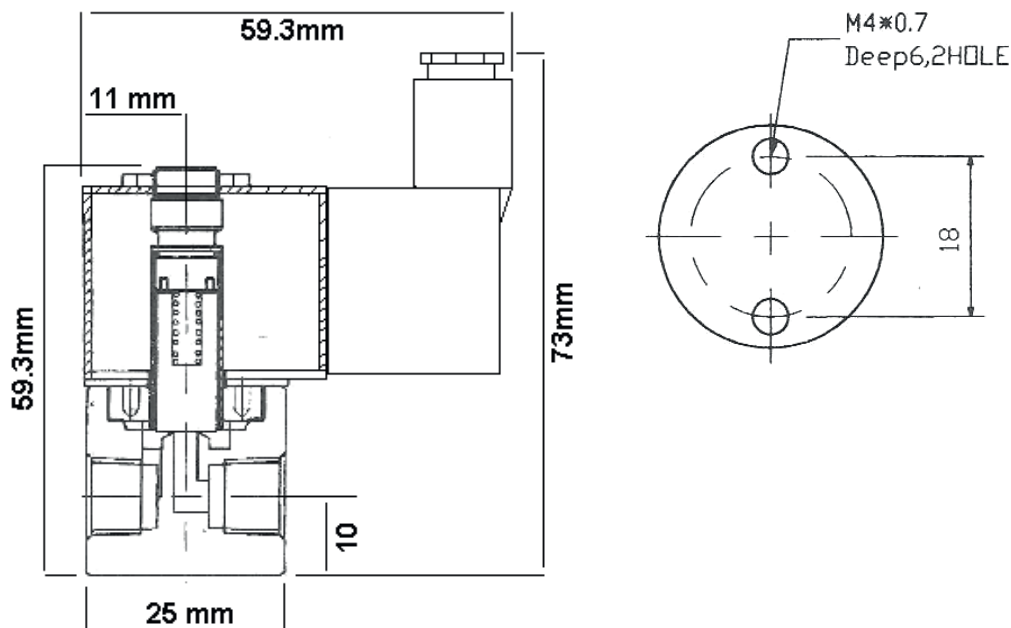
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

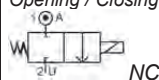
EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

<p>Media: air – water – gas – light oil - vacuum Pressure range: 0 to 15 Bar max Media temperature: 120°C max Ambient temperature: -10°C to +50°C max Media viscosity: 40 centistokes max Mounting: any position Weight (including coil) 125 g Opening / Closing: 10-20 mSec Max</p> <div></div>			<p><b>2/2 Stainless</b> <b>1/8</b> <b>NORMALLY CLOSED</b> <b>2 WAY DIRECT ACTING</b> <b>0 – 15 Bar</b> <b>TYPE HA</b></p>						
PRESSURE									
Ø Port BSPT	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP			Seals	Max Media Temp °C	Part Number	List Price
		Kv Ltr/Min	Min	AC Max	DC Max				
1/8	1.6	1.6	0	15	10	VITON NBR EPDM	80 50 120	HA1B-VITON + voltage HA1B-NBR + voltage HA1B-EPDM + voltage	£36.48 £42.65 £42.65
	2.4	2.0	0	9	5	VITON NBR EPDM	80 50 120	HA1C-VITON + voltage HA1C-NBR + voltage HA1C-EPDM + voltage	£36.48 £42.65 £42.65
OPTIONS									
IP65 Coil & Connector PG9 – DIN 43650 B IP65 Coil with 30 cm Flying lead NPT Thread ATEX 22001EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C (50%Reduction in Working Pressure) 									Included +5% +10% +£67.14
ELECTRICAL DATA									
Voltage (-10% + 15%) Continuous duty 100%			Coil	Power Consumption		Insulation class	Enclosure	Electrical connections	
				Inrush	Holding				
~	12 - 24 - 48 - 110 - 230 - 415 (50 or 60 Hz)		22001	11.6 VA	8.5 VA	F 155°C	IP 65 with connector	3 spades DIN 43650B DIN 40050 VDE 0110	
=	6 - 12 - 24 - 48 - 110 (DC)			4.8 Watts					
CONSTRUCTION									
Body: AISI303 Stainless steel Tube and internal parts: AISI 304 stainless steel Head & plunger: 430Fr Stainless steel Shading ring: Copper Seals and gaskets: Viton (Optional EPDM & NBR) Moulded coil: Resin									
REPAIR KIT									
Coil					22001 + voltage				
Complete plunger + O' rings					KIT + valve part number				
OVERALL DIMENSIONS									



Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 30 Bar max  
 Media temperature: 120°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 40 centistokes max  
 Mounting: any position  
 Weight (including coil) 280 g  
 Opening / Closing time: 10-20 mSec Max



# 2/2 Stainless

## 1/8 – 1/4

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 30 Bar

### TYPE JA



#### PRESSURE

Ø Port BSPT	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP					Seals	Max Media Temp °C	Part Number	List Price	
		Kv Ltr/Min	Min	10 Watt Coil		18 Watt Coil						
				Max AC	Max DC	Max AC	Max DC					
1/8	1.6	1.6	0	20	15	30	20	NBR EPDM FKM	50 120 80	JA1BN + voltage + coil JA1BE + voltage + coil JA1BV + voltage + coil	£55.44	
	2.4	2	0	10	9	20	15	NBR EPDM FKM	50 120 80	JA1CN + voltage + coil JA1CE + voltage + coil JA1CV + voltage + coil		
	3.2	2.8	0	7	6	15	10	NBR EPDM FKM	50 120 80	JA1DN + voltage + coil JA1DE + voltage + coil JA1DV + voltage + coil		
	4	4	0	5	4	10	8	NBR EPDM FKM	50 120 80	JA1EN + voltage + coil JA1EE + voltage + coil JA1EV + voltage + coil		
1/4	1.6	1.6	0	20	15	30	20	NBR EPDM FKM	50 120 80	JA2BN + voltage + coil JA2BE + voltage + coil JA2BV + voltage + coil		
	2.4	2	0	10	9	20	15	NBR EPDM FKM	50 120 80	JA2CN + voltage + coil JA2CE + voltage + coil JA2CV + voltage + coil		
	3.2	2.8	0	7	6	15	10	NBR EPDM FKM	50 120 80	JA2DN + voltage + coil JA2DE + voltage + coil JA2DV + voltage + coil		
	4	4	0	5	4	10	8	NBR EPDM FKM	50 120 80	JA2EN + voltage + coil JA2EE + voltage + coil JA2EV + voltage + coil		
	5	7.1	0	4	3	6	5	NBR EPDM FKM	50 120 80	JA2FN + voltage + coil JA2FE + voltage + coil JA2FV + voltage + coil		

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A  
 NPT and BSPT Thread  
 31400 High Power 14 – 20 Watt coil  
 PTFE Seals

Included  
 +10%  
 +£8.39  
 +£37.25

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 230 - 415 (50 or 60 Hz)	11630	26 VA	14 VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 – 24 - 48 (DC)		10 Watts				
~	24 - 48 - 110 - 230 - 415 (50 or 60 Hz)	31400	48VA	26VA			
=	12 - 24 – 48 – 80 – 190 (DC)		14 – 20 Watts				

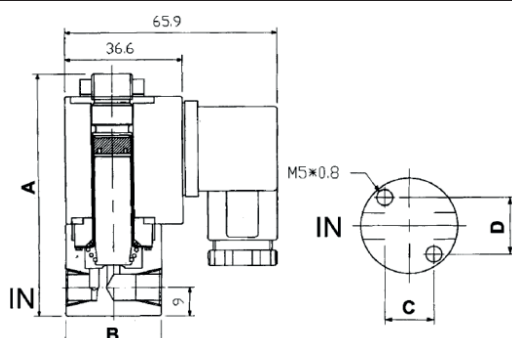
#### CONSTRUCTION

Body: AISI303 Stainless steel  
 Tube and internal parts: AISI304 stainless steel, Head & plunger: AISI 430Fr Stainless steel  
 Seals and gaskets: FKM (Optional EPDM & NBR), Moulded coil: Resin

#### REPAIR KIT

Coil	Coil size (11630 or 31400) + voltage
Armature + seal	SP + Valve Part Number -ARMATURE

#### OVERALL DIMENSIONS



Port	A	B	C	D
1/8	76	30	15.2	17.8
1/4	77	35	16	22

Port	A	B	C	D
1/8	76	30	15.2	17.8
1/4	77	35	16	22

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
N/Open

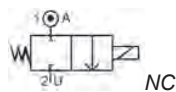
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – light oil - vacuum  
Pressure range: 0 to 15 bar max  
Media temperature: 185°C max  
Ambient temperature: -10°C to +50°C max  
Media viscosity: 50 centistokes max  
Mounting: any position  
Opening / Closing time: 20 mSec Max



# 2/2 Stainless

## 1/8 - 1/2

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 15 Bar

## TYPE ADS612



PRESSURE									
Ø Port BSP	Ø Orifice (mm)	Coil	Flow Kv Ltr/min	Pressure Rating (bar) ΔP			Seals	Part Number	List Price
				Min	Max AC	Max DC			
1/8	3.0	WPG1	4	0	10	7	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C  *PTFE +185°C *VST +185°C	ADS6A + seal + voltage	£87.19
	4.0		5.5	0	7	5		ADS6B + seal + voltage	
	5.0		7.2	0	5	3.5		ADS6C + seal + voltage	
1/4	3.0	WPG1	4	0	10	7		ADS8A + seal + voltage	
	4.0		5.5	0	7	5		ADS8B + seal + voltage	
	5.0		7.2	0	5	3.5		ADS8C + seal + voltage	
3/8	4.0	WPG2	5.5	0	10	7		ADS10A + seal + voltage	£132.29
	6.0		10.5	0	5	3.5		ADS10B + seal + voltage	
	8.0		16.2	0	2	1.4		ADS10C + seal + voltage	
	4.0	WPA3C	5.5	0	15	10		ADS10A-C3 + seal + voltage	£142.66
	6.0		10.5	0	7	5		ADS10B-C3 + seal + voltage	
	8.0		16.2	0	3	2		ADS10C-C3 + seal + voltage	
1/2	6.0	WPG2	10.5	0	5	3.5		ADS12A + seal + voltage	£150.33
	8.0		16.2	0	2	1.4		ADS12B + seal + voltage	
	6.0	WPA3C	10.5	0	7	5		ADS12A-C3 + seal + voltage	£160.70
	8.0		16.2	0	3	2		ADS12B-C3 + seal + voltage	

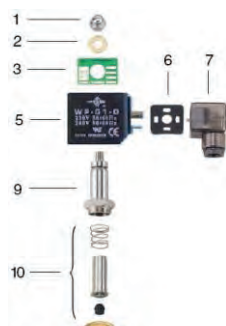
OPTIONS									
IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil + IP65 Connector PG11 with LED – DIN 43650 A ATEX EExmIT4 II 2G & 2D IP65 T130°C coil. (Pressure rating WPG1 same, WPG2 70% of DC rating, WPA3C not available) Silver shading ring (ADSxxxS) * PTFE, VST, CR, ECO, HNBR or Hypalon Seals Manual Over Ride (ADS8 – 10) NPT Thread									<b>Included</b> <b>+£101.68</b> <b>+£30.06</b> <b>+£15.03</b> <b>+£45.10</b> <b>+10%</b>

ELECTRICAL DATA							
Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	WPG1	11.2VA	8.2VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 (DC)		12 Watts				
~	24 - 110 - 230 (50 or 60 Hz)	WPG2	18.7VA	15.3VA			
=	12 - 24 (DC)		18 Watts				
~	24 - 110 - 230 (50 or 60 Hz)	WPA3C	88VA	57VA	N 200°C	IP54	30cm flying lead wire
=	12 - 24 (DC)		33.6 Watts				

CONSTRUCTION							
Body: Forged 316 stainless steel (CF8M) Tube 304 stainless steel, armature 430F stainless steel Shading ring: copper (Optional Silver) Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon) Moulded coil: Resin							

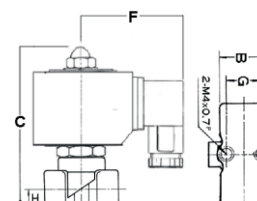
REPAIR KIT	
Coil	Coil (WPG1 or WPG2 or WPA3C) + voltage
Armature + Seal assembly	SP210 + Valve Part Number

### OVERALL DIMENSIONS

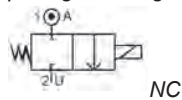


Item	Part No	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Nameplate
5	WPG*	Coil
6	SP206-*	Gasket
7	SP207-*	Connector
9	SP209-*	Core Tube
10	SP210-*	Armature Assembly
17	SP211-*	Valve Body
* = Valve Part Number		

Model	A	B	C	F	G	H	Kg
ADS8	41	19	89	63	15	10.5	0.47
ADS10	50	25	90	65	15	11.7	0.73
ADS12	55	27	91	65	17	13	0.78



Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 150 Bar max  
 Media temperature: 180°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Opening / Closing time: 20 mSec Max



## 2/2 Stainless 1/8 NORMALLY CLOSED 2 WAY DIRECT ACTING 0 – 150 Bar TYPE ADS6000



### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Coil	Flow				Seals	Part Number	List Price
			Kv Ltr/min	Min	Max AC	Max DC			
1/8	1.2	WPG1	1.1	0	60	42	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C *VST +180°C (30 Bar Max)  *PTFE +180°C (150 Bar)	ADS6012 + seal + voltage	£102.22
	1.6		1.5	0	40	28		ADS6016 + seal + voltage	
	2.0		1.8	0	20	14		ADS6020 + seal + voltage	
	1.2	WPG2	1.1	0	120	84		ADS6112 + seal + voltage	£126.28
	1.6		1.6	0	60	42		ADS6116 + seal + voltage	
	2.0		1.8	0	30	21		ADS6120 + seal + voltage	
	3.0		4.3	0	20	14		ADS6130 + seal + voltage	
	4.0		9.7	0	12	8.4		ADS6140 + seal + voltage	
	5.0	WPA3C	10.7	0	10	7		ADS6150 + seal + voltage	£150.34
	1.2		1.1	0	150	105		ADS6212 + seal + voltage	
	1.6		1.5	0	80	56		ADS6216 + seal + voltage	
	2.0		1.8	0	60	42		ADS6220 + seal + voltage	
	3.0		4.3	0	40	28		ADS6230 + seal + voltage	
	4.0		9.7	0	20	14		ADS6240 + seal + voltage	
	5.0		10.7	0	15	10.5		ADS6250 + seal + voltage	

### OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A  
 ATEX EExmIIT4 II 2G & 2D IP65 T130°C coil. (Pressure rating WPG1 same, WPG2 70% of DC rating, WPA3C not available)  
 \* PTFE, VST, CR, ECO, HNBR or Hypalon Seals  
 Silver shading ring (ADS6xxxS)  
 Manual Over Ride  
 NPT Thread  
 Other custom made options upon request

Included  
 +£101.68  
 +£15.37  
 +£30.06  
 +£45.10  
 +10%

### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	WPG1	11.2VA	8.2VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 (DC)		12 Watts				
~	24 - 110 - 230 (50 or 60 Hz)	WPG2	18.7VA	15.3VA			
=	12 - 24 (DC)		18 Watts				
~	24 - 110 - 230 (50 or 60 Hz)	WPA3C	88VA	57VA		IP54	30 cm flying lead wires
=	12 - 24 (DC)		33.6 Watts				

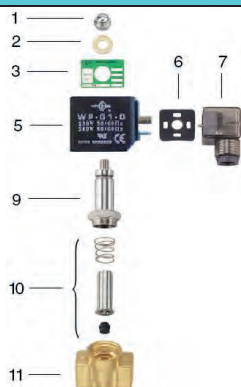
### CONSTRUCTION

Body: 316 Stainless steel  
 Tube 304 stainless steel, armature 430F stainless steel  
 Shading ring: copper (optional Silver)  
 Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon)  
 Moulded coil: Resin

### REPAIR KIT

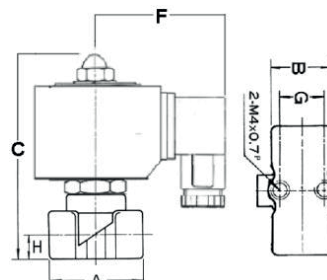
Coil	Coil size (WPG1 or WPG2 or WPA3C) + voltage
Armature	SP210 + Valve Part Number

### OVERALL DIMENSIONS



Item	Part No	Description	Model	A	B	C	F	G	H	Kg
1	SP201-*	Nut	6012-6020	41	19	85	63	15	10.5	0.47
2	SP202-*	Washer	6112-6150	41	19	88	65	15	10.5	0.66
3	SP203-*	Nameplate	6212-6250	41	19	94	47	15	10.5	0.66
5	WP*	Coil								
6	SP206-*	Gasket								
7	SP207-*	Connector								
9	SP209-*	Core Tube								
10	SP210-*	Armature Assembly								
17	SP211-*	Valve Body								

\* = Valve Part Number



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
N/Closed

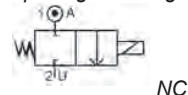
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – fluid - vacuum  
Pressure range: 0 to 150 Bar max  
Media temperature: 180°C max  
Ambient temperature: -10°C to +50°C max  
Media viscosity: 50 centistokes max  
Mounting: any position  
Opening / Closing time: 20 mSec Max



# 2/2 Stainless

## 1/4

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 150 Bar

### TYPE ADS8000



PRESSURE									
Ø Port BSP	Ø Orifice (mm)	Coil	Flow	Pressure Rating (bar) ΔP			Seals	Part Number	List Price
			Kv Ltr/min	Min	Max AC	Max DC			
1/4	1.2	WPG1	1.1	0	60	42	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C *VST +180°C (30 Bar Max)  *PTFE +180°C (150 Bar)	ADS8012 + seal + voltage	£102.22
	1.6		1.5	0	40	28		ADS8016 + seal + voltage	
	2.0		1.8	0	20	14		ADS8020 + seal + voltage	
	1.2	WPG2	1.1	0	120	84		ADS8112 + seal + voltage	£126.28
	1.6		1.6	0	60	42		ADS8116 + seal + voltage	
	2.0		1.8	0	30	21		ADS8120 + seal + voltage	
	3.0		4.3	0	20	14		ADS8130 + seal + voltage	
	4.0		9.7	0	12	8.4		ADS8140 + seal + voltage	
	5.0	WPA3C	10.7	0	10	7		ADS8150 + seal + voltage	£150.34
	1.2		1.1	0	150	105		ADS8212 + seal + voltage	
	1.6		1.5	0	80	56		ADS8216 + seal + voltage	
	2.0		1.8	0	60	42		ADS8220 + seal + voltage	
	3.0		4.3	0	40	28		ADS8230 + seal + voltage	
	4.0		9.7	0	20	14		ADS8240 + seal + voltage	
	5.0		10.7	0	15	10.5		ADS8250 + seal + voltage	

OPTIONS									
IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil (Not WPA3C) & IP65 LED Connector PG11 – DIN 43650 A ATEX EExmIT4 II 2G & 2D IP65 T130°C Coil. (Pressure rating WPG1 same, WPG2 70% of DC rating, WPA3C not available) * PTFE, VST, CR, ECO, HNBR or Hypalon Seals Silver shading ring (ADSxxxS) Manual Over Ride NPT Thread Other custom made options upon request									Included +£101.68 +£15.37 +£30.06 +£45.10 +10%

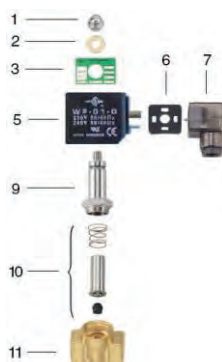
Other custom made options upon request.

ELECTRICAL DATA								
Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections	
			Inrush	Holding				
~ 24 - 110 - 230 (50 or 60 Hz)	WPG1		11.2VA	8.2VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110	
= 12 - 24 (DC)			12 Watts					
~ 24 - 110 - 230 (50 or 60 Hz)	WPG2		18.7VA	15.3VA				
= 12 - 24 (DC)			18 Watts					
~ 24 - 110 - 230 (50 or 60 Hz)	WPA3C		88VA	57VA		IP54	30 cm flying lead wires	
= 12 - 24 (DC)			33.6 Watts					

CONSTRUCTION							
Body: 316 Stainless steel Tube 304 stainless steel, armature 430F stainless steel Shading ring: copper (optional Silver) Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon) Moulded coil: Resin							

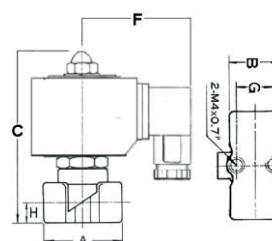
REPAIR KIT	
Coil	Coil size (WPG1 or WPG2 or WPA3C) + voltage
Armature + Seal	SP210 + Valve Part Number

OVERALL DIMENSIONS							
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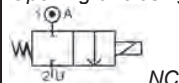


Item	Part No	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Nameplate
5	WP*	Coil
6	SP206-*	Gasket
7	SP207-*	Connector
9	SP209-*	Core Tube
10	SP210-*	Armature Assembly
17	SP211-*	Valve Body
* = Valve Part Number		

Model	A	B	C	F	G	H	Kg
8012-8020	41	19	85	63	15	10.5	0.47
8112-8150	41	19	88	65	15	10.5	0.66
8212-8250	41	19	94	47	15	10.5	0.66



Media: air – water – gas – light oil – vacuum  
 Pressure range: 0 to 200 Bar max  
 Media temperature: +100°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 40 centistokes max  
 Mounting: any position  
 Weight (including coil): 550 g  
 Opening or closing time: 20 mSec max



# 2/2 Stainless

## 1/8 – 1/4

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 200 Bar

### TYPE WH



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/min	Pressure Rating (Bar)		Seals	Part Number	List Price
			Min	Max			
1/8 or 1/4	0.6	0.2	0	200	NBR FKM EPDM	W0.6H + seal + port + voltage	£308.69
	0.8	0.3	0	120		W0.8H + seal + port + voltage	
	1	0.5	0	50		W1H + seal + port + voltage	£241.04
	1.2	0.67	0	40		W1.2H + seal + port + voltage	
	1.5	0.95	0	30		W1.5H + seal + port + voltage	
	2	1.6	0	20		W2H + seal + port + voltage	
	2.5	2.3	0	13		W2.5H + seal + port + voltage	
	3	3	0	10		W3H + seal + port + voltage	
	4	5	0	5		W4H + seal + port + voltage	
	5	7	0	3		W5H + seal + port + voltage	
3/8 or 1/2	6	9.7	0	2		W6H + seal + port + voltage	£646.93
	8	17	0	1		W6H + seal + port + voltage	
	12	30	0	0.5		W6H + seal + port + voltage	

#### OPTIONS

IP65 Coil + Connector PG9 – DIN 43650 A	Included +£36.04 +£36.04 +£404.78
NPT 1/8 + 1/4 Thread	
PTFE Seals (up to 5mm orifice only)	
Explosion Proof Enclosure ATEX II 2 G/D EExdIICT6, IP65 85°C (Ambient T° from -20°C to +40°C)	

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12 - 24 - 48 - 110 - 230 (50 or 60 Hz)	31400	48 VA	24 VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 - 110- 190 (DC)		14 - 20 Watts				

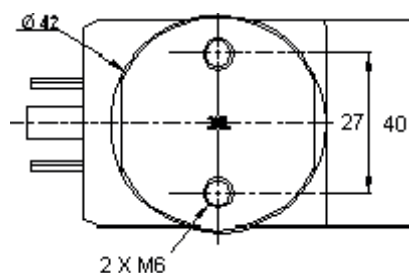
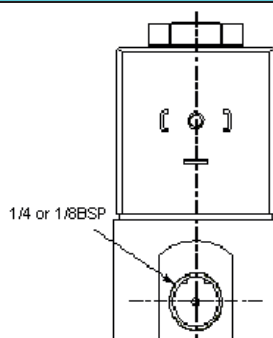
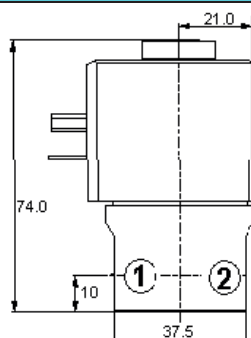
#### CONSTRUCTION

Body: Stainless steel  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR, EPDM or FKM  
 Moulded coil: Polyamide

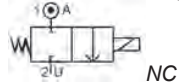
#### REPAIR KIT

Coil	31400 + voltage
Complete plunger + O' rings	KIT + valve part number

#### OVERALL DIMENSIONS



Media: air – water – light oil  
 Pressure range: 0 to 500 Bar max  
 Media temperature: +80°C max  
 Ambient temperature: -20°C to +50°C max  
 Media viscosity: 40 centistokes max  
 Mounting: Coil upright  
 Weight (including coil): 400 g  
 Opening or closing time: 20 mSec max



# 2/2 Stainless

1/8 – 1/4

## NORMALLY CLOSED

## 2 WAY DIRECT/PILOT ACTING

## 500 Bar

## TYPE EN520



### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP		Seals	Max Media Temp	Part Number	List Price
		Kv Ltr/min	Min	Max				
1/8	0.7	0.175	0	300	PTFE + FKM	+80°C	EN52051 + voltage	£556.864
1/4	0.7	0.175	0	300			EN52050 + voltage	
1/8	0.7	0.175	0	350	VOLTALF		EN52061 + voltage	£694.892
1/4	0.7	0.175	0	350			EN52060 + voltage	
1/8	0.6	0.15	10	400	PEEK	+150°C	EN520810685-0181 + voltage	£1659.54
1/8	0.5	0.15	10	500			EN520810585-0181 + voltage	
1/4	0.6	0.15	10	400			EN520810685-0141 + voltage	
1/4	0.5	0.15	10	500			EN520810585-0141 + voltage	

### OPTIONS

IP65 Coil + Connector PG9 – DIN 43650 A

NPT 1/8 + 1/4 thread

Explosion Proof Enclosure ATEX II 2 G/D EexdIICT6 or T4, IP65

Included

+£36.04

+£404.78

### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12 - 24 - 48 - 110 - 230 (50 or 60 Hz)	31037	48 VA	24 VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 – 110 (DC)		13.7 Watts				

### CONSTRUCTION

Body: Stainless steel

Tube and internal parts: Stainless steel

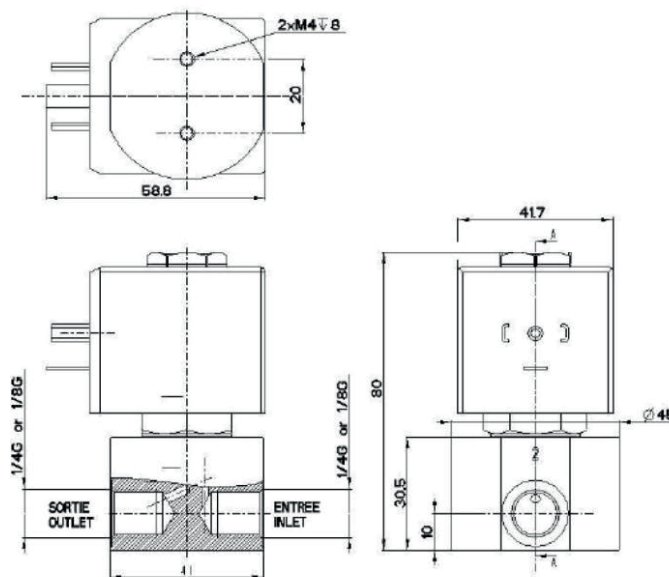
Seals and gaskets: PTFE + FKM, VOLTALF or PEEK

Moulded coil: Resin

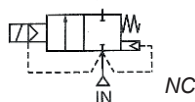
### REPAIR KIT

Coil	31037 + voltage
Complete plunger + O' rings	KIT + valve part number

### OVERALL DIMENSIONS



Media: air – water – light oil - vacuum  
 Pressure range: 0 to 16 Bar max  
 Media temperature: +40°C to +150°C max  
 Ambient temperature: -20°C to +60°C max  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing Time: 50 mSec Max



## 2/2 Stainless Steel

3/8 – 3/4

NORMALLY CLOSED  
 2 WAY ZERO RATED

0 – 7 or 12 Bar

TYPE SPU220®



### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (bar)				Seals	Max Media Temp. °C	Part Number	List Price	
		Kv Ltr/ min	Min	DC Coil		AC Coil					
				15 Watt	18.5 Watt	15 Watt					18.5 Watt
3/8	13	35	0	5		7		NBR	80	SPU22003 + voltage	£144.00
								FKM	120	SPU22003V + voltage	£126.56
								EPDM	150	SPU22003E + voltage	£144.00
1/2	13	35	0	5		7		NBR	80	SPU22004A + voltage	£144.00
								FKM	120	SPU22004AV + voltage	£126.56
								EPDM	150	SPU22004AE + voltage	£144.00
3/4	20	72	0	5		7		NBR	80	SPU22006A + voltage	£165.57
								FKM	120	SPU22006AV + voltage	£158.75
								EPDM	150	SPU22006AE + voltage	£165.57
3/8	13	35	0		12		12	NBR	80	SPU22003-18.5W + voltage	£152.25
								FKM	120	SPU22003V-18.5W + voltage	£134.81
								EPDM	150	SPU22003E-18.5W + voltage	£152.25
1/2	13	35	0		12		12	NBR	80	SPU22004A-18.5W + voltage	£152.25
								FKM	120	SPU22004AV-18.5W + voltage	£134.81
								EPDM	150	SPU22004AE-18.5W + voltage	£152.25
3/4	20	72	0		16		16	NBR	80	SPU22006A-18.5W + voltage	£160.50
								FKM	120	SPU22006AV-18.5W + voltage	£167.00
								EPDM	150	SPU22006AE-18.5W + voltage	£160.50

### OPTIONS

22003 IP65 CE approved 15 Watt Coil & Connector PG9 – DIN 43650 A Connector  
 22005 IP65 CE approved 18.5 Watt Coil & Connector – DIN 43650 A Connector  
 ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C (Max ΔP 3 Bar)  
 NPT Thread  
 HNBR seals – same price as NBR or EPDM seal

Included  
 +£8.25  
 +£101.68  
 +10%

### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12-24-48-110-220-240-380 (50/60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12-24-48-110-220 (DC)		15 Watts				
~	24-48-110-230 (50/60 Hz)	22005	33VA	24VA			
=	12-24-48-110-220 (DC)		18.5 Watts				

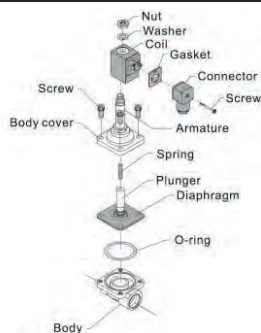
### CONSTRUCTION

Body: 316 Stainless steel (1/2 & 3/4 ATEX certified body)  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: FKM (Optional EPDM, NBR or HNBR)  
 Nass Magnet Moulded coil: DuroPlast / ThermoSet Resin

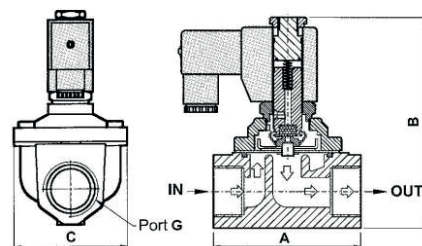
### REPAIR KIT

Diaphragm seal	22004 or 22006 + seal material
Coil	Coil size (22003 or 22005) + voltage
Complete plunger assembly	225320 + seal material

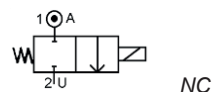
### OVERALL DIMENSIONS



Model	SPU22003	SPU22004A	SPU22006A
Port R	3/8	1/2	3/4
A	66.5	66.5	71.0
B	101.0	101.0	107.0
C	48.0	48.0	58.0
Kg	0.74	0.715	0.945



Media: vacuum (10 Torr) - air - water - light oil  
 Pressure range: 0 to 10 Bar max  
 Media temperature: +90°C  
 Ambient temperature: -30°C to +40°C (+50°C\*)  
 Media viscosity: 50 centistokes  
 Mounting: preferred coil upright  
 Opening / Closing 100 mSec Max



# 2/2 Stainless

## 3/8 - 2"

### NORMALLY CLOSED

### 2 WAY ZERO RATED

### 0 - 10 Bar

## TYPE MD316



#### PRESSURE

Ø Port BSPT	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar)			Seals	Part Number	List Price
			Min	Max Air/ Water	Max Oil			
1/2	16	61.7	0	10	7	EPDM NBR FKM	MD15316M16E + voltage MD15316M16N + voltage MD15316M16V + voltage	£133.38 £133.38 £148.05
3/4	23	105.0	0	10	7	EPDM NBR FKM	MD20316M16E + voltage MD20316M16N + voltage MD20316M16V + voltage	£151.90 £151.90 £168.61
1	28	133.3	0	10	7	EPDM NBR FKM	MD25316M16E + voltage MD25316M16N + voltage MD25316M16V + voltage	£177.83 £177.83 £197.38
1 1/4	32	217	0	10	7	EPDM NBR FKM	MD32316M16E + voltage MD32316M16N + voltage MD32316M16V + voltage	£255.63 £255.63 £283.75
1 1/2	40	338	0	10	7	EPDM NBR FKM	MD40316M16E + voltage MD40316M16N + voltage MD40316M16V + voltage	£314.90 £314.90 £349.54
2	50	533	0	10	7	EPDM NBR FKM	MD50316M16E + voltage MD50316M16N + voltage MD50316M16V + voltage	£407.52 £407.52 £452.34

#### OPTIONS

IP65 Coil & Connector PG11 - DIN 43650 A NPT Thread Without Shading Ring (DC voltages only) M17 Class N High Power Coil +50°C Ambient, 0 to 16 Bar (MDxx316M17 + seal + voltage)	Included +10% +£36.30 +£33.22
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#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous Duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	M16	70VA	35VA	F 155°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 – 48 - 125 (DC)		26 Watts				

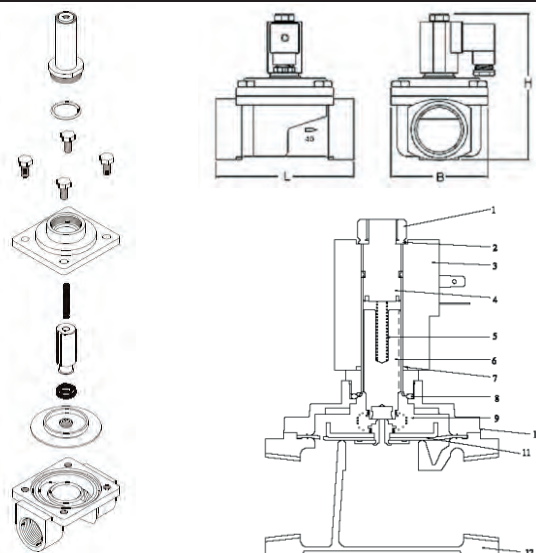
#### CONSTRUCTION

Body: 316 Stainless Steel (CF8M)  
 Tube and internal parts: 304, 430F Stainless steel  
 Seals and gaskets: EPDM (Optional NBR or Viton®)  
 Shading Ring: Copper (Option for silver shading ring)  
 Moulded coil: Resin F rated

#### REPAIR KIT

Diaphragm seal	MD + orifice + material
Coil	Coil type (M16 or M17) + voltage
Armature assembly	SP + Valve Part Number - ARMATURE

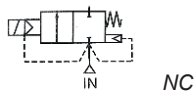
#### OVERALL DIMENSIONS



Model	Port	L	B	H	Kg
MD15	1/2	70	52	112	0.8
MD20	3/4	80	62	122	1
MD25	1	90	72	132	1.25
MD32	1 1/4	120	83	138	1.9
MD40	1 1/2	136	97	140	2.6
MD50	2	160	112	150	4

Part	Description	Material
1	Nut	SUS304
2	O Ring	NBR
3	IP65 Moulded Coil	
4	Packless Ass'y	SUS304
5	Plunger Spring	SUS304
6	Plunger	SUS304, KM31
7	O Ring	NBR
8	O Ring	NBR
9	Spring	SUS304
10	Valve Bonnet	3/8-1" C3771BE/SCS14 1 1/4 - 2" BC 6/SCS14
11	Diaphragm	SUS304, BSBF(SUS304) NBR, EPDM or Viton
12	Valve Body	3/8-1" C3771BE/SCS14 1 1/4 - 2" BC 6/SCS14

Media: slight acid/ alkali – fluid – gas – vacuum  
 Pressure range: 0 to 10 Bar max  
 Media temperature: 180°C max  
 Ambient temperature: -10°C to +60°C max  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening Closing time: 150 mSec Max



# 2/2 Stainless

## 3/8 – 2

### NORMALLY CLOSED

### 2 WAY ZERO RATED

### 0 – 10 Bar

## TYPE ADS14-50



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure Rating (Bar) ΔP			Seals	Max Media Temp °C	Part Number	List Price
			Min	Max AC	Max DC				
3/8	15	40	0	10	7	FKM EPDM NBR	120 120 80	ADS14V + voltage ADS14E + voltage ADS14N + voltage	£221.25 £243.38 £243.38
1/2	15	40	0	10	7	FKM EPDM NBR	120 120 80	ADS15V + voltage ADS15E + voltage ADS15N + voltage	£221.25 £243.38 £243.38
3/4	20	95	0	10	7	FKM EPDM NBR	120 120 80	ADS20V + voltage ADS20E + voltage ADS20N + voltage	£251.34 £276.47 £276.47
1	25	185	0	10	7	FKM EPDM NBR	120 120 80	ADS25V + voltage ADS25E + voltage ADS25N + voltage	£352.22 £387.44 £387.44
1 1/4	35	400	0	10	7	FKM EPDM NBR	120 120 80	ADS35V + voltage ADS35E + voltage ADS35N + voltage	£612.38 £673.62 £673.62
1 1/2	35	400	0	10	7	FKM EPDM NBR	120 120 80	ADS40V + voltage ADS40E + voltage ADS40N + voltage	£612.38 £673.62 £673.62
2	50	570	0	7	4.9	FKM EPDM NBR	120 120 80	ADS50V + voltage ADS50E + voltage ADS50N + voltage	£1220.70 £1342.77 £1342.77

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL & CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A  
 Silver shading ring (ADSxxxS)  
 NPT, BSPT Thread  
 ATEX EExmIT4 II 2G & 2D IP65 T130°C Coil (Pressure 3 Bar Max)  
 Manual Over Ride (Base entry T bar)  
 VST seals suitable for steam 180°C, CR, ECO, HNBR, Silicone or Hypalon Seals

Included  
 +£30.06  
 +10%  
 +£101.68  
 +£105.23  
 +10%

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 220 - 240 - 380 (50 or 60 Hz)	WPG2	18.7VA	15.3VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 – 24 - 48 (DC)		18 Watts				

#### CONSTRUCTION

Body: 316 stainless steel (CF8M)  
 Tube + Spring 304 Stainless Armature: 430F Stainless steel  
 Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, VST, CR, ECO, HNBR and Hypalon)  
 Moulded coil: Resin

#### REPAIR KIT

Coil	WPG2 + voltage
Diaphragm	SP215 + Valve Part Number

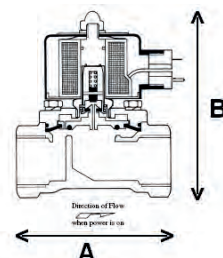
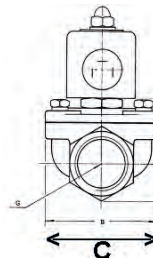
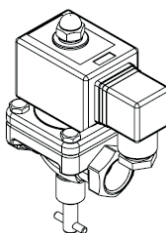
#### OVERALL DIMENSIONS



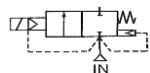
No.	Part No	Description
1	SP201*	Nut
2	SP202*	Washer
3	SP203*	Nameplate
5	WPG2*	Coil
6	SP206*	Gasket
7	SP207*	Connector
8	SP208*	Core Tube
9	SP209*	Valve Bonnet
10	SP210*	Bolt
11	SP211*	Bonnet O Ring
12	SP212*	Armature Assembly
13	SP213*	Diaphragm Base Kit
14	SP214*	Diaphragm Base
15	SP215*	Diaphragm
16	SP216*	Base O Ring
17	SP217*	Valve Body

\* = Valve Part Number

Model	ADS 15	ADS 20	ADS 25	ADS35 ADS40	ADS 50
A	75	85	100	120	150
B	103	114	120	140	160
C	52	60	70	90	122
Kg	1.06	1.24	1.51	2.87	4.81



Media: air – fluid – gas – vacuum- water  
 Pressure range: 0 to 10 Bar max  
 Media temperature: 120°C max  
 Ambient temperature: -20°C to +60°C max  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing Time: 50 mSec Max



NC

## 2/2 Stainless Flanged

DN15 – DN50

### NORMALLY CLOSED

### 2 WAY ZERO RATED

0 – 10 Bar

## TYPE ADSF



#### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar) ΔP			Max Working	Seals Temperature °C	Part Number	List Price
			Min	Max AC	Max DC				
DN15	15	75	0	10	7	10	NBR +80°C FKM +120°C EPDM +120°C Silicone +130°C  *CST +185°C	ADS15PF + seal + voltage	£541.20
DN20	20	155	0	10	7	10		ADS20PF + seal + voltage	£586.30
DN25	25	220	0	10	7	10		ADS25PF + seal + voltage	£865.92
DN32	35	400	0	10	7	10		ADS35PF + seal + voltage	£1337.96
DN40	35	400	0	10	7	10		ADS40PF + seal + voltage	£1337.96
DN50	51	800	0	7	5	10		ADS50PF + seal + voltage	£2315.14

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A  
 ATEX EExmII T4 II 2G & 2D IP65 T130°C coil. (Max Pressure 3 Bar)  
 ANSI150Lb, JIS10K or other flange  
 Manual Over Ride (Bottom entry mounted turn T bar)  
 Silver Shading Ring (ADSxxPFS)  
 \*VST special seals for steam 180°C, CR, ECO, HNBR, Silicone or Hypalon Seals  
 Other custom made options available upon request

Included  
 +£101.68  
 +20%  
 +£105.23  
 +£30.06  
 +10%

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	WPG2	18.7VA	15.3VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 (DC)		18 Watts				

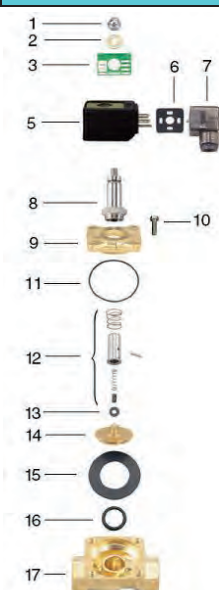
#### CONSTRUCTION

Body: 316 stainless steel CF8M  
 Tube and Spring: 304 Stainless Armature: 430F Stainless other internal parts 316 Stainless  
 Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, VST, CR, ECO, HNBR and Hypalon)  
 Moulded coil: Resin

#### REPAIR KIT

Coil	WPG2 + voltage
Diaphragm	SP215 + Valve Part Number

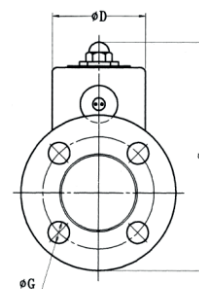
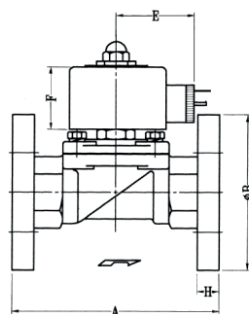
#### OVERALL DIMENSIONS



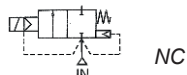
No.	Part No	Description
1	SP201*	Nut
2	SP202*	Washer
3	SP203*	Nameplate
5	SP205*	Coil
6	SP206*	Gasket
7	SP207*	Connector
8	SP208*	Core Tube
9	SP209*	Valve Bonnet
10	SP210*	Bolt
11	SP211*	Bonnet O Ring
12	SP212*	Armature Assembly
13	SP213*	Diaphragm Base Kit
14	SP214*	Diaphragm Base
15	SP215*	Diaphragm
16	SP216*	Base O Ring
17	SP217*	Valve Body

\* = Valve Part Number

Model	A	B	C	D	G	H	Kg
ADS15F	110			40			
ADS20F	120			40			
ADS25F	130	125	162	40	19	14	5.35
ADS35F	160	135	174	40	19	16	7.75
ADS40F	160	140	177	40	19	16	8.00
ADS50F	200	155	195	40	19	16	11.0



Media: air – water – Gas - Light Oil  
 Pressure range: 1 to 100 Bar max  
 Media temperature: -20°C to +180°C max  
 Ambient temp: -15°C to +60°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Opening / Closing time: 50 mSec Max  
 Weight 660g



# 2/2 Stainless

## 1/8 – 3/8

### NORMALLY CLOSED

### 2 WAY SERVO ASSISTED

### 1 – 100 Bar

## TYPE SAPS



#### PRESSURE

Ø Port BSP	Ø Orifice mm	Flow Kv Ltr/min	Pressure Rating (Bar) ΔP		Part Number	List Price
			Min	Max		
1/8	5	7.2	1	100	SAPS6150 + voltage	£210.46
1/4	5	7.2	1	100	SAPS8150 + voltage	
3/8	5	7.2	1	100	SAPS10150 + voltage	£225.50

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN43650A NPT Thread Silver Shading Ring EPDM, NBR, SILICONE, VST, CR, ECO, HNBR and Hypalon (40 Bar Max)	Included +10% +£30.06 +10%
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#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 60%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12 – 24 – 110 – 230 – 380 (50 or 60 Hz)	WPG2	18.7VA	15.3VA	F 155°C	IP65 With Connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 – 24 (DC)		18 Watts				

#### CONSTRUCTION

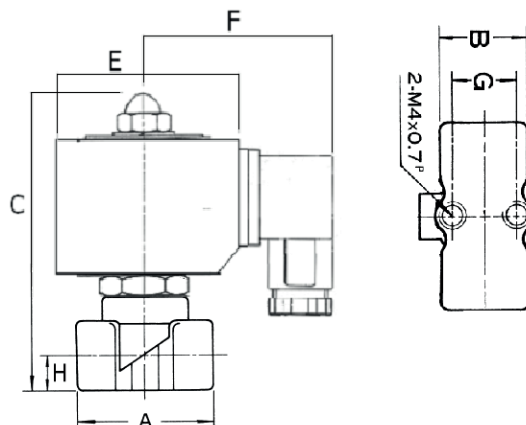
Body: 316 Stainless steel (CF8M)  
 Tube: 304 stainless steel, armature 430F stainless steel  
 Shading ring: copper  
 Seals and gaskets: PTFE (Optional EPDM, NBR, SILICONE, VST, CR, ECO, HNBR and Hypalon)  
 Moulded coil: Resin

#### REPAIR KIT

Armature	SP + Valve Part Number -ARMATURE
Coil	WPG2 + voltage

#### OVERALL DIMENSIONS

SAPS	A	B	C	D	E	F	G	H
6150	41	19	88	-	58	65	15	10.5
8150	41	19	88	-	58	65	15	10.5
10150	41	19	88	-	58	65	15	10.5



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

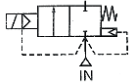



Plastic  
N/Closed

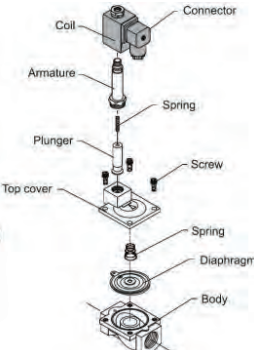
Plastic  
Acids/  
Alkali

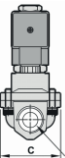
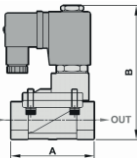
2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

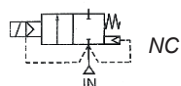
Pressure  
Reducing  
Valves

<p>Media: air – water – gas – light oil Pressure range: 0.5 to 15 bar max Media temperature: -40°C to +160°C Max Ambient temperature: -40°C to +60°C Media viscosity: 50 centistokes max Mounting: coil upright Opening Closing Time: 50 mSec Max</p>  <p>IN NC</p>			<p><b>2/2 Stainless</b> <b>3/8 – 2</b> <b>NORMALLY CLOSED</b> <b>2 WAY SERVO ASSISTED</b> <b>0.5 – 15 Bar</b> <b>TYPE SPU225®</b></p>						
PRESSURE									
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar) ΔP		Max Working	Seals	Max Media Temp. °C	Part Number	List Price
			Min	Max					
3/8	13	40.0	0.5	10	15	NBR FKM EPDM	80 130 160	SPU22503N + voltage SPU22503V + voltage SPU22503E + voltage	£159.38 £152.81 £159.38
1/2	13	40.0	0.5	10	15	NBR FKM EPDM	80 130 160	SPU22504AN + voltage SPU22504AV + voltage SPU22504AE + voltage	£159.38 £152.81 £159.38
3/4	25	165.0	0.5	10	15	NBR FKM EPDM	80 130 160	SPU22506AN + voltage SPU22506AV + voltage SPU22506AE + voltage	£236.52 £229.38 £236.52
1	25	165.0	0.5	10	15	NBR FKM EPDM	80 130 160	SPU22508AN + voltage SPU22508AV + voltage SPU22508AE + voltage	£236.52 £229.38 £236.52
1 1/4	38	367	0.5	10	15	NBR FKM EPDM	80 130 160	SPU22512AN + voltage SPU22512AV + voltage SPU22512AE + voltage	£330.69 £305.51 £330.68
1 1/2	38	500	0.5	10	15	NBR FKM EPDM	80 130 160	SPU22514AN + voltage SPU22514AV + voltage SPU22514AE + voltage	£330.69 £305.51 £330.68
2	50	580	0.5	10	15	NBR FKM EPDM	80 130 160	SPU22520AN + voltage SPU22520AV + voltage SPU22520AE + voltage	£507.94 £482.76 £508.06
OPTIONS									
<p>IP65 Coil &amp; Connector PG9 – DIN 43650 A ATEX 22003EX Coil: ATEX EExmIIT4 II 2G &amp; 2D IP65 T130°C  Explosion Proof Enclosure: EExdIICT6 ATEX II 2 G/D IP65  (Custom made) NPT Thread Normally Closed with Silver Shading Ring (D014DVHA) HNBR seals same price as NBR or EPDM seal.</p>									<p>Included +£101.68 +£404.78 +10% +£65.57</p>
ELECTRICAL DATA									
Voltage (-10% + 10%) Continuous duty 100%			Coil	Power Consumption		Insulation class	Enclosure	Electrical connections	
				Inrush	Holding				
~	12-24-48-110-220- 240-380 (50/60 Hz)		22003	23VA	17VA	H 180°C	IP65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110	
=	12-24-48-110-220 (DC)			15 Watts					
CONSTRUCTION									
<p>Body: 316 Stainless Steel (CF8M) ATEX Certified Tube and internal parts: 304 + 430F Stainless steel Seals and gaskets: FKM (Optional NBR, EPDM &amp; HNBR) Moulded coil: Duroplast / Thermo set resin</p>									
REPAIR KIT									
Diaphragm seal					225 + size code (03-20) + material				
Coil					22003 + Voltage				
Complete plunger + O' rings (Normally Closed)					225320VNC + seal material				
OVERALL DIMENSIONS									

	Model	SPU225 03 & 4A	SPU225 06A & 08A	SPU225 12A & 14A	SPU225 20A
	Port	3/8 + 1/2	3/4 + 1	1 1/4	2
	A	66.5	96	131.5	160
	B	106.5	126	145.5	160
	C	48	75	101	118
Kg		0.74Kg	1.565Kg	2.56Kg	3.44Kg

Media: air – water – gas – light oil  
 Pressure range: 0.5 to 15 Bar max  
 Media temp: -40°C to +150°C max  
 Ambient temp: -20°C to +60°C max  
 Media viscosity: 50 centistokes  
 Mounting: coil upright  
 Opening Closing Time: 50 mSec Max



## 2/2 Stainless

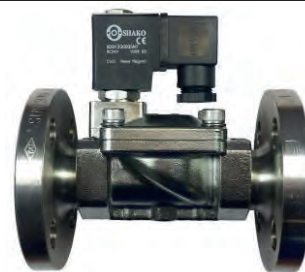
### DN10 – DN50

### NORMALLY CLOSED

### 2 WAY SERVO ASSISTED

### 0.5 – 15 Bar

## TYPE SPU225F®



#### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure Rating (Bar) ΔP		Max Working	Seals	Max Media Temp. °C	Part Number	List Price
			Min	Max					
DN10	13	40.0	0.5	10	15	NBR FKM EPDM	80 130 150	SPU22503F4N + voltage SPU22503F4V + voltage SPU22503F4E + voltage	£377.00
DN15	13	40.0	0.5	10	15	NBR FKM EPDM	80 130 150	SPU22504F4N + voltage SPU22504F4V + voltage SPU22504F4E + voltage	
DN20	25	165	0.5	10	15	NBR FKM EPDM	80 130 150	SPU22506F4N + voltage SPU22506F4V + voltage SPU22506F4E + voltage	
DN25	25	165	0.5	10	15	NBR FKM EPDM	80 130 150	SPU22508F4N + voltage SPU22508F4V + voltage SPU22508F4E + voltage	£439.15
DN32	40	450	0.5	10	15	NBR FKM EPDM	80 130 150	SPU22512F4N + voltage SPU22512F4V + voltage SPU22512F4E + voltage	
DN40	40	450	0.5	10	15	NBR FKM EPDM	80 130 150	SPU22514F4N + voltage SPU22514F4V + voltage SPU22514F4E + voltage	
DN50	50	580	0.5	10	15	NBR FKM EPDM	80 130 150	SPU22520F4N + voltage SPU22520F4V + voltage SPU22520F4E + voltage	£882.22

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A  
 ATEX 22003EX Coil: ATEX EExmIT4 II 2G & 2D IP65 T130°C   
 Explosion Proof Enclosure: EExdIICT6 ATEX II 2 G/D IP65 (Custom made)  
 Normally Closed with Silver Shading Ring (D014DVHA) Requires 22005 18.5 Watt high power coil  
 ANSI150Lb (F3) & JIS10K (F) or other flange

Included  
 +£101.68  
 +£404.78  
 +£65.57  
 +10%

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12-24-48-110-220-240-380 (50/60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12-24-48-110-220 (DC)		15 Watts				

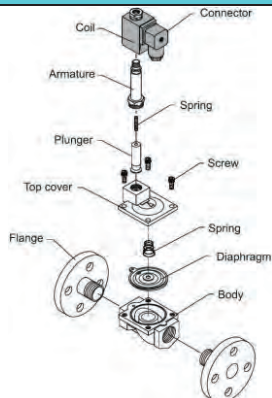
#### CONSTRUCTION

Body & Flanges: 316 Stainless Steel (CF8M)  
 Tube and internal parts: 430F, 304 Stainless steel  
 Seals and gaskets: FKM (Optional EPDM, NBR or HNBR)  
 Moulded coil: Duroplast / Thermo set resin

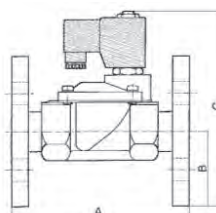
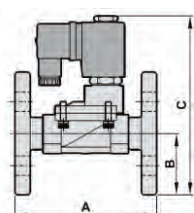
#### REPAIR KIT

Diaphragm Seal	225 + orifice code (03-20) + seal material
Coil	22003 + voltage
Armature assembly	225320 + seal material

#### OVERALL DIMENSIONS



Model	SPU225 03F	SPU225 04F	SPU225 06F	SPU225 08F	SPU225 12F	SPU225 14F	SPU225 20F
Port	DN10	DN15	DN20	DN25	DN32	DN40	DN50
A	110	110	149	150	180	180	210
B	45	47.5	50	62.5	67.5	70	77.5
C	137	139.5	152.5	164	173.0	182.5	210
Kg	3.1	3.1	4.13	4.1	5.68	5.66	7.55



Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP			Part Number	List Price
		Kv Ltr/ min	Min	Max Steam	Max Air/ Water		
3/8	15	75	0.5	12	20	SAS14 + voltage	£787.53
1/2	15	75	0.5	12	20	SAS15 + voltage	
3/4	20	155	0.5	12	20	SAS20 + voltage	£878.27
1	25	220	0.5	12	20	SAS25 + voltage	£968.39
1 1/4	35	433	0.5	12	20	SAS35 + voltage	£1801.57
1 1/2	35	433	0.5	12	20	SAS40 + voltage	
2	50	800	0.5	12	20	SAS50 + voltage	£2950.08
3/8	15	75	0.5	12	40	SASH14 + voltage	£884.50
1/2	15	75	0.5	12	40	SASH15 + voltage	
3/4	20	155	0.5	12	40	SASH20 + voltage	£1075.46
1	25	220	0.5	12	40	SASH25 + voltage	£1185.77
1 1/4	35	433	0.5	12	40	SASH35 + voltage	£2206.02
1 1/2	35	433	0.5	12	40	SASH40 + voltage	
2	50	800	0.5	12	40	SASH50 + voltage	£3476.94
3/8	15	75	0.5	12	80	SAS14HH + voltage	£1167.85
1/2	15	75	0.5	12	80	SAS15HH + voltage	
3/8	15	75	0.5	12	120	SAS14HHH + voltage	£1327.07
1/2	15	75	0.5	12	120	SAS15HHH + voltage	

IP67 (EN60529:1991+A1:2000) UL & CSA Approved Coil + IP65 LED Connector DIN 43650A  
ATEX Coil ExEmIT4 II 2G & 2D IP65 T130°C 10 Bar Max  (20 Bar is special option 3/8 & 1/2 only)  
Silver Shading Ring (SASxxxS)  
NPT Thread  
Other custom made options available upon request

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	WPG2	18.7VA	15.3VA	H 180°C	IP 65 With Connector	3 spades DIN 43650 DIN 40050 VDE0110
=	12 – 24 DC		18 Watts				

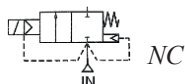
Body: 316 Stainless steel, Tube: 304 Stainless Steel Internal parts: 430F + 303 Stainless steel  
Seals and gaskets: PTFE. Moulded coil: Resin

Coil	WPG2 + voltage
Piston	SP210 + valve part number

OVERALL DIMENSIONS

Model	A	B	C	D	E	F	G	H	Kg
SAS14	67	48	123	67	52	42	3/8	15	1.13
SAS15	67	48	123	67	52	42	1/2	15	1.1
SAS20	96	72	149	67	52	42	3/4	25	1.53
SAS25	96	72	149	67	52	42	1	25	1.85
SAS35	120	90	168	52	45	41	1 1/4	33	3.3
SAS40	120	90	168	52	45	41	1 1/2	33	3.25
SAS50	150	122	203	52	45	41	2	40.5	6.8

Media: air, water, steam, oil, fluid, gas  
 Pressure range: 0.3 to 16 bar max\*  
 Media temperature: -15°C to +200°C\* Max  
 Ambient temperature: 0° to +60°C  
 Media viscosity: 50 centistokes max  
 Cycle life: 500,000 cycles  
 Opening / Closing time: 3 - 5 Sec



# 2/2 Stainless Steel 304

DN50 – DN300  
 NORMALLY CLOSED  
 2 WAY SERVO ASSISTED  
 0.3 – 16\* Bar  
 TYPE BFE-S



## PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Cv	Pressure Rating (Bar) ΔP		Seals	Part Number	List Price	
			Min	Max			Seals NBR	Seals Viton
DN50	50	37	0.3	10*	NBR (80°C)  FKM (100°C)  *FFKM (200°C)	BFE50S + seal + voltage	£1533.40	£1632.62
DN65	65	85	0.3	10*		BFE65S + seal + voltage	£1788.89	£1888.11
DN80	80	110	0.3	10*		BFE80S + seal + voltage	£2128.72	£2227.94
DN100	100	150	0.3	10*		BFE100S + seal + voltage	£2847.32	£2973.60
DN125	125	230	0.3	10*		BFE125S + seal + voltage	£3665.12	£3815.46
DN150	150	450	0.3	10*		BFE150S + seal + voltage	£4825.70	£4976.04
DN200	200	580	0.3	10*		BFE200S + seal + voltage	£9320.66	£9633.36
DN250	250	910	0.3	10*		BFE250S + seal + voltage	£17026.76	£17339.45
DN300	300	1300	0.3	10*		BFE300S + seal + voltage	£18824.74	£19137.44

## OPTIONS

IP65 Coil & Connector PG 11 – DIN 43650A

Manual Over ride lever valve

ATEX EExmIIT4 II 2G & 2D IP65 T130°C coil

\*16 Bar rated solenoid controller with M17 high power coil

Special 200°C steam rated solenoid controller and pipework with M17 coil

Other flanges JIS10K, JIS20K, ANSI150Lb

Other custom FFKM seals for +200C steam, media, seals, pressure and size options available upon request

Included  
 Included  
 +£101.68  
 +£8.40  
 £182.01  
 +10%  
 POA

## ELECTRICAL DATA

Voltage (-10% +10%) Continuous Duty 100%		Coil	Power Consumption		Insulation Class	Enclosure	Electrical Connections
			Inrush	Holding			
~	24 – 110 – 230 (50 or 60 Hz)	M16	70 VA	35 VA	F 155°C	IP65 with connector	3 spades DIN 43650 DIN40050 VDE0110
=	12 – 24		26 Watts				
~	110 – 230 (50 or 60 Hz)	*M17	35VA	26VA	26VA		
=	24		19 Watts				

## CONSTRUCTION

Body & Piston: 304 Stainless Steel (100% Pressure tested to 35 bar)

Seat + Shaft: Stainless steel

Bolts: Stainless Steel

Spring: Stainless steel

Ports: Flanged PN16 RF

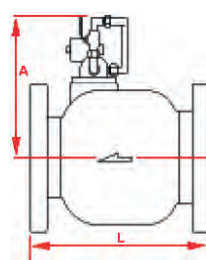
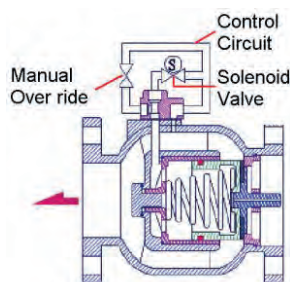
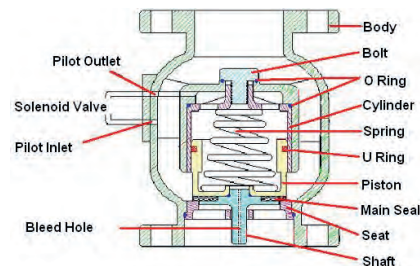
Seals and gaskets: NBR (+80°C max), Viton (+100°C max) or FFKM (+200°C max)

Control pipe work circuit + fittings: 304 stainless steel

## REPAIR KIT

Piston U Ring	SP + Valve Part Number + U RING
External Control pipework	BFES-NC + seal –PIPEWORK + voltage

## OVERALL DIMENSIONS



Port	L	A	Kg
DN50	190	187	12
DN65	210	192	15
DN80	225	210	18
DN100	250	222	24
DN125	280	235	32
DN150	310	260	44
DN200	420	300	87
DN250	470	335	152
DN300	530	370	202

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
N/Closed

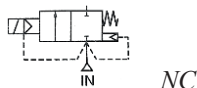
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air, water, steam, gas, fluid  
Pressure range: 0.3 to 16 Bar max\*  
Media temperature: -15°C to +200°C Max\*  
Ambient temperature: 0°C to +60°C  
Media viscosity: 50 centistokes max  
Cycle life: 500,000 cycles  
Opening / Closing time: 3 - 5 Sec



# 2/2 Stainless Steel 316

## DN50 – DN300


### NORMALLY CLOSED

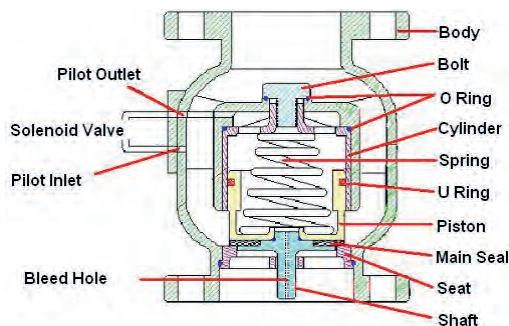
### 2 WAY SERVO ASSISTED

### 0.3 – 16\* Bar

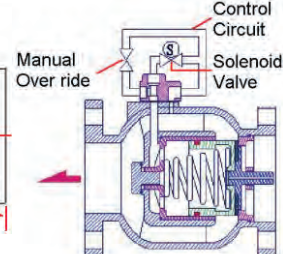
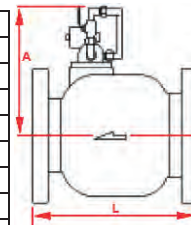
## TYPE BFE-SS



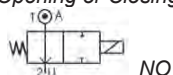
PRESSURE									
Ø Port PN16	Ø Orifice (mm)	Flow Cv	Pressure Rating (Bar) ΔP		Seals	Part Number	List Price		
			Min	Max			Seals NBR	Seals Viton	
DN50	50	37	0.3	10*	NBR (80°C)	BFE50SS + seal + voltage	£1695.76	£1794.98	
DN65	65	85	0.3	10*		BFE65SS + seal + voltage	£1996.42	£2095.64	
DN80	80	110	0.3	10*		BFE80SS + seal + voltage	£2371.46	£2470.68	
DN100	100	150	0.3	10*		BFE100SS + seal + voltage	£3063.80	£3190.08	
DN125	125	230	0.3	10*	FKM (100°C)	BFE125SS + seal + voltage	£4152.21	£4302.54	
DN150	150	450	0.3	10*		BFE150SS + seal + voltage	£5475.14	£5625.48	
DN200	200	580	0.3	10*	*FFKM (200°C)	BFE200SS + seal + voltage	£10643.60	£10956.30	
DN250	250	910	0.3	10*		BFE250SS + seal + voltage	£19507.26	£19819.95	
DN300	300	1300	0.3	10*		BFE300SS + seal + voltage	£20532.27	£20844.97	
OPTIONS									
IP65 Coil & Connector PG 11 – DIN 43650A Manual Over ride lever valve ATEX EExmIIT4 II 2G & 2D IP65 T130°C coil.  *16 Bar solenoid controller with M17 high power coil Special 200°C steam rated solenoid controller and pipework with M17 coil Other custom FFKM seals +200C steam, media, seals, pressure and size options available upon request								Included Included +£101.69 +£8.40 £182.01	
ELECTRICAL DATA									
Voltage (-10% +10%) Continuous Duty 100%			Coil	Power Consumption		Insulation Class	Enclosure	Electrical Connections	
				Inrush	Holding				
~	24 – 110 – 230 (50 or 60 Hz)		M16	70 VA	35 VA	F 155°C	IP65 with connector	3 spades DIN 43650 DIN40050 VDE0110	
=	12 – 24			26 Watts					
~	110 – 230 (50 or 60 Hz)		*M17	35VA	26VA	N 200°C			
=	24			19 Watts					
CONSTRUCTION									
Body & Piston: 316 Stainless Steel (100% Pressure tested to 35 bar) Seat + Shaft: Stainless steel Bolts: Stainless Steel Spring: Stainless steel Ports: Flanged PN16 RF Seals and gaskets: Viton +100°C or NBR +80°C Max Control pipe work circuit + fittings: 304 stainless steel									
REPAIR KIT									
Piston U Ring					SP + Valve Part Number + U RING				
External Control pipework					BFESS-NC + seal –PIPEWORK + voltage				
OVERALL DIMENSIONS									



Port	L	A	Kg
DN50	190	187	12
DN65	210	192	15
DN80	225	210	18
DN100	250	222	24
DN125	280	235	32
DN150	310	260	44
DN200	420	300	87
DN250	470	335	152
DN300	530	370	202



Media: air – water – gas – light oil – vacuum  
 Pressure range: 0 to 10 Bar max  
 Media temperature: 120°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 40 centistokes max  
 Mounting: any position  
 Weight (including coil) 280 g  
 Opening or Closing time: 6 - 20 mSec Max



# 2/2 Stainless

## 1/8 – 1/4

### NORMALLY OPEN

### 2 WAY DIRECT ACTING

### 0 – 10 Bar

## TYPE JAX



#### PRESSURE

Ø Port BSPT	Ø Orifice (mm)	Flow	Pressure Rating (Bar)			Seals	Max Media Temp °C	Part Number	List Price
		Kv Ltr/Min	Min	Max AC	Max DC				
1/8	1.6	0.8	0	10	7	NBR Viton EPDM	50 80 120	JA1BXN + voltage JA1BXV + voltage JA1BXE + voltage	£90.61
	2.4	1.6	0	7	5	NBR Viton EPDM	50 80 120	JA1CXN + voltage JA1CXV + voltage JA1CXE + voltage	
1/4	1.6	0.8	0	10	7	NBR Viton EPDM	50 80 120	JA2BXN + voltage JA2BXV + voltage JA2BXE + voltage	
	2.4	1.6	0	7	5	NBR Viton EPDM	50 80 120	JA2CXN + voltage JA2CXV + voltage JA2CXE + voltage	

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A  
 NPT Thread  
 Seals: Viton (optional NBR or EPDM)

**Included +10%**

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 230 - 415 (50 or 60 Hz)	31400	48 VA	26 VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 (DC)		14 – 20 Watts				

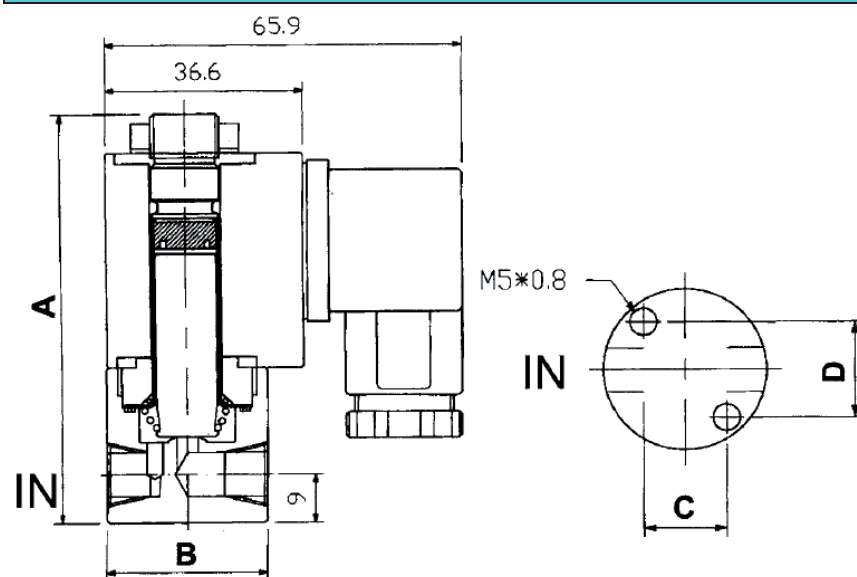
#### CONSTRUCTION

Body: AISI303 Stainless steel  
 Tube and internal parts: stainless steel  
 Head & plunger: 430Fr Stainless steel  
 Seals and gaskets: FPM (Optional EPDM & NBR)  
 Moulded coil: Resin

#### REPAIR KIT

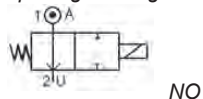
Coil	31400 + voltage
Armature & Seal	SP + Valve Part Number -ARMATURE

#### OVERALL DIMENSIONS



Port	A	B	C	D
1/8	89	30	15.2	17.8
1/4	91	35	16	22

Media: air – water – light oil – vacuum (10<sup>-4</sup> Torr)  
 Pressure range: 0 to 10 Bar max  
 Media temperature: 180°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Opening Closing: 6-20 mSec Max



# 2/2 Stainless

## 1/8 – 1/2"

### NORMALLY OPEN

### 2 WAY DIRECT ACTING

### 0 – 10 Bar

## TYPE NOS612



PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar)			Max Media Temp °C	Part Number	List Price
		Kv Ltr/min	Min	AC Max	DC Max			
1/8	3.0	4	0	10	7	NBR (+80°C) EPDM (+100°C) FKM (+120°C) Silicone (+120°C) *PTFE (+180°C) *VST (+180°C)	NOS6A + seal + voltage	£120.26
	4.0	5.5	0	6	4.2		NOS6B + seal + voltage	
	5.0	7.2	0	4	2.8		NOS6C + seal + voltage	
1/4	3.0	4	0	10	7		NOS8A + seal + voltage	
	4.0	5.5	0	6	4.2		NOS8B + seal + voltage	
	5.0	7.2	0	4	2.8		NOS8C + seal + voltage	
3/8	4.0	5.5	0	6	4.2		NOS10A + seal + voltage	£150.34
	6.0	10.5	0	2	1.4		NOS10B + seal + voltage	
1/2	6.0	10.5	0	2	1.4		NOS12A + seal + voltage	£240.54

OPTIONS							
IP67 (EN60529:1991+A1:2000) UL & CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A NPT Thread *PTFE seals 1/4 + 3/8 *PTFE seals 1/2 *VST, CR, ECO, HNBR or Hypalon Seals Silver shading ring (NOSXXX + seal + voltage)							
							Included +10%
							+£60.13
							+£75.16
							+10%
							+£51.14

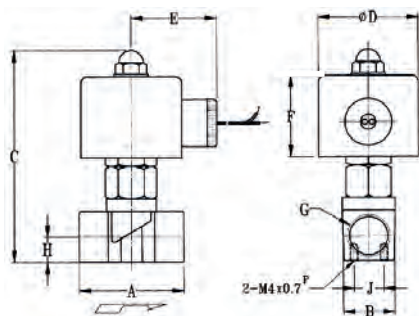
ELECTRICAL DATA							
Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50/60 Hz)	WPG2	18.7VA	15.3VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 (DC)		18 Watts				

CONSTRUCTION							
Body: Forged 316 stainless steel (CF8M) Tube 304 stainless steel, armature 430F stainless steel Shading ring: copper (Optional silver) Seals and gaskets: FKM (Optional EPDM - NBR – SILICONE – VST - PTFE) Moulded coil: Resin							

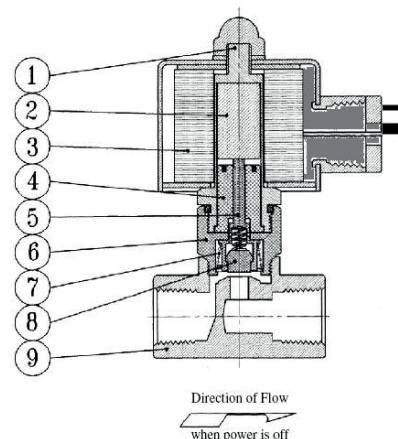
REPAIR KIT							
Coil				WPG2 + voltage			
Armature Assembly				SP + Valve Part Number -ARMATURE			

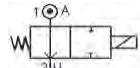

OVERALL DIMENSIONS							
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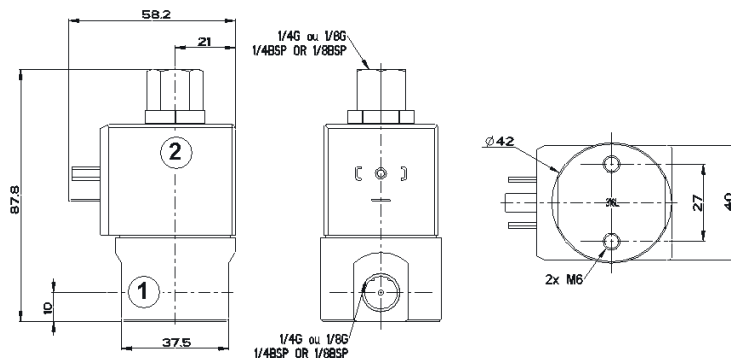
Model	A	B	C	D / E	F*	G	H	J	Kg
NOS8	41	19	108	40	38	1/4	10.5	15	0.5
NOS10	50	25	110	40	38	3/8	11.7	15	0.8
NOS12	55	27	112	40	38	1/2	13	n/a	0.95



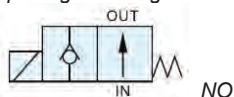
Item	Article	Material
1	Solenoid Tube	Stainless
2	Slide Core	Stainless
3	Coil	Brass Wire
4	Armature Core	Stainless
5	Operating Spindle	Stainless
6	Joint Sleeve	Stainless
7	Spring	Stainless
8	Seat	NBR, Silicone, EPDM, FKM
9	Valve Body	316 Stainless



<div>Media: air - water - light oil - vacuum</div> <div>Pressure range: 0 to 300 Bar max</div> <div>Media temperature: 100°C max</div> <div>Ambient temperature: -10° to +50°C max</div> <div>Media viscosity: 40 centistokes max</div> <div>Mounting: Vertical position coil up</div> <div>Weight (including coil): 500g</div> <div>Opening or closing time: 20 mSec max</div> <div> NO</div>				<div>2/2 Stainless</div> <div>1/8 – 1/4</div> <div>NORMALLY OPEN</div> <div>2 WAYS DIRECT ACTING</div> <div>0 – 300 Bar</div> <div>TYPE WFH</div>					
PRESSURE									
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/Min	Coil	Pressure Rating (Bar)		Seals	Part Number	List Price	
				Min	Max				
1/8 Or 1/4	0.5	0.15	10065	0	300	PTFE NBR EPDM FKM	WF0.5H80 + port + voltage WF0.5H10 + port + voltage WF0.5H30 + port + voltage WF0.5H20 + port + voltage	£715.91	
	0.6	0.20	31400	0	200	NBR FKM	WF0.6H10 + port + voltage WF0.6H20 + port + voltage	£317.80	
	0.8	0.30		0	130	NBR FKM	WF0.8H10 + port + voltage WF0.8H20 + port + voltage		
	0.9	0.40		0	100	NBR FKM	WF0.9H10 + port + voltage WF0.9H20 + port + voltage		
	1	0.50		0	70	NBR FKM EPDM	WF1H10 + port + voltage WF1H20 + port + voltage WF1H30 + port + voltage		
	1.2	0.67		0	50	NBR FKM EPDM	WF1.2H10 + port + voltage WF1.2H20 + port + voltage WF1.2H30 + port + voltage	£301.83	
	1.5	0.95		0	35	NBR FKM EPDM	WF1.5H10 + port + voltage WF1.5H20 + port + voltage WF1.5H30 + port + voltage		
	2	1.60		0	20	NBR FKM EPDM	WF2H10 + port + voltage WF2H20 + port + voltage WF2H30 + port + voltage		
	2.2	1.80		0	15	NBR FKM EPDM	WF2.2H10 + port + voltage WF2.2H20 + port + voltage WF2.2H30 + port + voltage		
	2.5	2.30		0	12	NBR FKM EPDM	WF2.5H10 + port + voltage WF2.5H20 + port + voltage WF2.5H30 + port + voltage		
OPTIONS									
IP65 Coil & Connector DIN 43650 A PG9 NPT 1/8 + 1/4 thread Seals and gaskets in PTFE Explosion Proof Enclosure ATEX II 2 G/D EexdIICT6, IP65 🇪🇺								Included +£36.04 +£36.04 +£429.11	
ELECTRICAL DATA									
Voltage (-10% + 15%) Continuous duty 100%			Coil	Power Consumption		Insulation class	Enclosure	Electrical connections	
~	24-48-110-230 (50 / 60 Hz)		10065	Inrush	Holding				
=	12-24-48				14 W - 20 W		F 155°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
~	24-48-110-230 (50 / 60 Hz)		31400	37VA	20VA				
=	12-24-48				14 – 20 Watts				
CONSTRUCTION									
Body, tube and internal parts: Stainless Steel Seals and gaskets: NBR-FKM-EPDM Moulded coil: resin									
REPAIR KIT									
Coil					10065 + voltage				
Complete plunger					KIT + valve part number				
OVERALL DIMENSIONS									



Media: air – water – light oil – vacuum  
 Pressure range: 0 to 7 or 12 Bar max  
 Media temperature: -40°C 150°C max  
 Ambient temperature: -40°C to +60°C max  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing Time: 50 mSec Max



# 2/2 Stainless

## 3/8 – 1

### NORMALLY OPEN

### 2 WAY ZERO RATED

### 0 – 7 or 12 Bar

## TYPE NOSPU220



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar)			Seals	Max Media Temp. °C	Part Number	List Price
			Min	DC Coil	AC Coil				
				18.5 Watt	15 Watt	18.5 Watt			
3/8	13	35	0		7	NBR FKM EPDM	80 120 150	NOSPU22003 + voltage NOSPU22003V + voltage NOSPU22003E + voltage	£202.05 £184.60 £202.05
1/2	13	35	0		7	NBR FKM EPDM	80 120 150	NOSPU22004A + voltage NOSPU22004AV + voltage NOSPU22004AE + voltage	£202.05 £184.60 £202.05
3/4	20	72	0		7	NBR FKM EPDM	80 120 150	NOSPU22006A + voltage NOSPU22006AV + voltage NOSPU22006AE + voltage	£263.16 £245.72 £263.16
3/8	13	35	0	12		NBR FKM EPDM	80 120 150	NOSPU22003 + voltage+18W NOSPU22003V + voltage+18W NOSPU22003E + voltage+18W	£210.30 £192.85 £210.30
1/2	13	35	0	12		NBR FKM EPDM	80 120 150	NOSPU22004A + voltage+18W NOSPU22004AV + voltage+18W NOSPU22004AE + voltage+18W	£210.30 £192.85 £210.30
3/4	20	72	0	12		NBR FKM EPDM	80 120 150	NOSPU22006A + voltage+18W NOSPU22006AV + voltage+18W NOSPU22006AE + voltage+18W	£271.41 £253.97 £271.41

#### OPTIONS

22003 IP65 CE Approved Coil & Connector PG9 – DIN 43650 A Connector  
 ATEX 22003EX Coil: ATEX EExmIT4 II 2G & 2D IP65 T130°C (Max ΔP 3 Bar)  
 NPT Thread  
 HNBR seals same price as NBR & EPDM)

Included  
 +£101.68  
 +10%

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 240 - 380 (50 or 60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 (DC)		15 Watts				
~	24 - 48 - 110 - 240 - 380 (50 or 60 Hz)	22005	33VA	24VA			
=	12 - 24 - 48 - 110 (DC)		18.5 Watts				

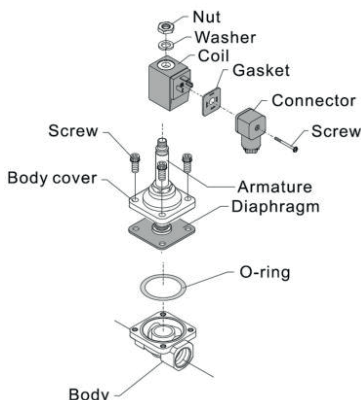
#### CONSTRUCTION

Body: 316 Stainless Steel (ATEX certified body ½ & ¾)  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: FKM (Optional EPDM, NBR & HNBR)  
 Nass Magnet Moulded coil: DuroPlast / ThermoSet Resin

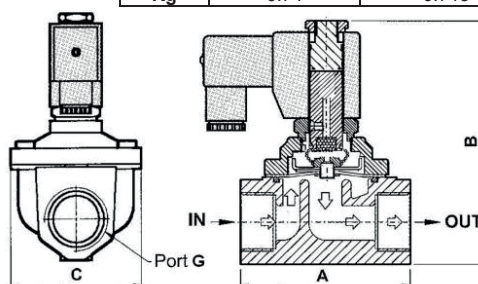
#### REPAIR KIT

Diaphragm seal	22004 or 22006 + seal material
Coil	Coil size (22003 or 22005) + voltage

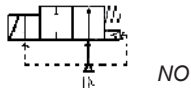
#### OVERALL DIMENSIONS



Model	NOSPU22003	NOSPU22004A	NOSPU22006A	NOSPU22008A
Port R	3/8	1/2	3/4	1
A	66.5	66.5	71.0	96.0
B	101.0	101.0	107.0	120.5
C	48.0	48.0	58.0	70.0
Kg	0.74	0.715	0.945	1.485



Media: air – water – light oil – vacuum 10<sup>-3</sup>  
 Pressure range: 0 to 10 Bar max  
 Media temperature: +120°C max  
 Ambient temperature: -5° to +50°C max  
 Media viscosity: 20 centistokes max  
 Mounting: coil upright  
 Opening / Closing 150 mSec Max



# 2/2 Stainless

## 1/2 – 2"

### NORMALLY OPEN

### 2 WAY ASSISTED CLOSE

### 0 – 10 Bar

## TYPE SUW-NO



#### PRESSURE

Port BSP	Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar) ΔP			Max Working	Seals	Part Number	List Price
			Min	Max Water / Oil	Max Air / Gas				
1/2	15	75	0	5	7	10	NBR +80°C FKM +130°C Silicone +130°C EPDM +130°C	SUW15NON + voltage SUW15NOV + voltage SUW15NOS + voltage	£259.27
3/4	20	143	0	5	7	10		SUW20NON + voltage SUW20NOV + voltage SUW20NOS + voltage	£287.83
1	25	200	0	5	7	10		SUW25NON + voltage SUW25NOV + voltage SUW25NOS + voltage	£343.39
1 1/4	35	400	0	5	7	10		SUW35NON + voltage SUW35NOV + voltage SUW35NOS + voltage	£552.48
1 1/2	40	460	0	5	7	10		SUW40NON + voltage SUW40NOV + voltage SUW40NOS + voltage	£572.20
2	50	800	0	5	7	10		SUW50NON + voltage SUW50NOV + voltage SUW50NOS + voltage	£721.41

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A  
 NPT, BSPT

Included  
+10%

#### ELECTRICAL DATA

Voltage (AC -10% + 10%) (DC -1% + 1%) Continuous duty 90%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	110 – 230 (50 or 60 Hz)	WPC2	60VA	36VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	24 (DC)		29 Watts				

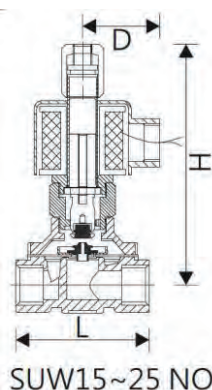
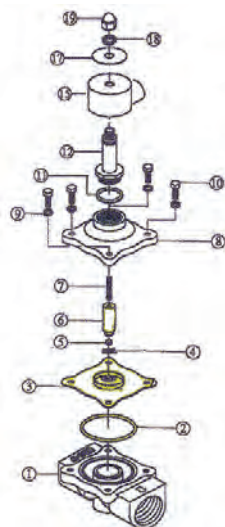
#### CONSTRUCTION

Body: 316 stainless steel (CF8M)  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: FKM (Optional NBR or Silicone)  
 Moulded coil: Resin

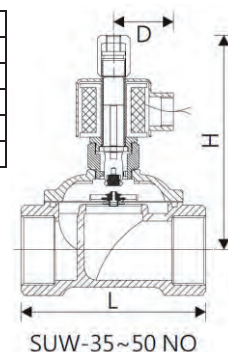
#### REPAIR KIT

Diaphragm seal	SUW + orifice + seal material
Coil	WPC2 + voltage
Armature assembly	SP + Valve Part Number -ARMATURE

#### OVERALL DIMENSIONS



Port G	1/2	3/4	1	1 1/4	1 1/2	2
L	70	76	100	123	123	167
H	126	132	139	140	140	150
D	48	48	48	48	48	48
Width	56.5	78	78	94	94	120
Kg	1.1	1.2	1.8	3.2	3.5	5.4



Brass  
 2/2  
 N/Closed  
 0 Rated

Brass  
 2/2  
 N/Closed  
 Pilot

Brass  
 2/2  
 N/Open  
 0 Rated

Stainless  
 2/2  
 N/Closed  
 0 Rated

Stainless  
 2/2  
 N/Closed  
 Pilot

Stainless  
 2/2  
 N/Open

Steam

Plastic  
 2/2  
 N/Closed

Plastic  
 N/Closed

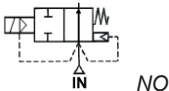
Plastic  
 Acids/  
 Alkali

2/2  
 Latching  
 Bi-Stable

EN161  
 Gas  
 Valves

Pressure  
 Reducing  
 Valves

Media: air – water – gas – light oil  
 Pressure range: 0.5 to 15 Bar max  
 Media temperature: -40°C to +160°C Max  
 Ambient temperature: -40°C to +60°C  
 Media viscosity: 50 centistokes  
 Mounting: coil upright  
 Opening Closing Time: 50 mSec Max



# 2/2 Stainless


## 3/8 – 2

### NORMALLY OPEN

### 2 WAY SERVO ASSISTED

### 0.5 – 15 Bar

# TYPE NOSPU225®



PRESSURE									
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar) ΔP		Max Working	Seals	Max Media Temp. °C	Part Number	List Price
			Min	Max					
3/8	13	40.0	0.5	10	15	NBR	80	NOSPU22503AN + voltage	£193.91
						FKM	130	NOSPU22503AV + voltage	£187.34
						EPDM	160	NOSPU22503AE + voltage	£193.91
1/2	13	40.0	0.5	10	15	NBR	80	NOSPU22504AN + voltage	£193.91
						FKM	130	NOSPU22504AV + voltage	£187.34
						EPDM	160	NOSPU22504AE + voltage	£193.91
3/4	25	165.0	0.5	10	15	NBR	80	NOSPU22506AN + voltage	£271.05
						FKM	130	NOSPU22506AV + voltage	£263.92
						EPDM	160	NOSPU22506AE + voltage	£271.05
1	25	165.0	0.5	10	15	NBR	80	NOSPU22508AN + voltage	£271.05
						FKM	130	NOSPU22508AV + voltage	£263.92
						EPDM	160	NOSPU22508AE + voltage	£271.05
1 1/4	40	450	0.5	10	15	NBR	80	NOSPU22512AN + voltage	£365.22
						FKM	130	NOSPU22512AV + voltage	£340.04
						EPDM	160	NOSPU22512AE + voltage	£365.22
1 1/2	40	450	0.5	10	15	NBR	80	NOSPU22514AN + voltage	£365.22
						FKM	130	NOSPU22514AV + voltage	£340.04
						EPDM	160	NOSPU22514AE + voltage	£365.22
2	50	580	0.5	10	15	NBR	80	NOSPU22520AN + voltage	£542.48
						FKM	130	NOSPU22520AV + voltage	£517.30
						EPDM	160	NOSPU22520AE + voltage	£542.48

### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A  
 ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C  
 NPT Thread  
 Normally Open for RO / Pure/ Demin water (use 0543-83.6-00 with 22005 18.5 Watt DC Coil c/w DIN2R rectified connector for AC)

Included  
 +£101.68  
 +10%  
 +£14.77

ELECTRICAL DATA							
Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12 - 24 - 48 - 110 - 240 - 380 (50 or 60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 (DC)		15 Watts				

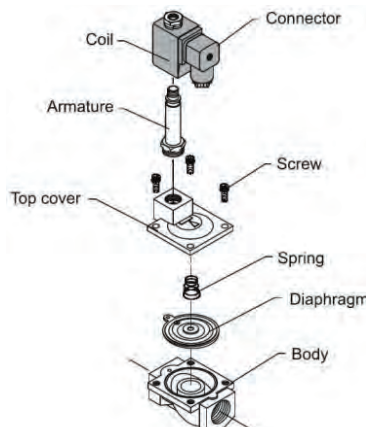
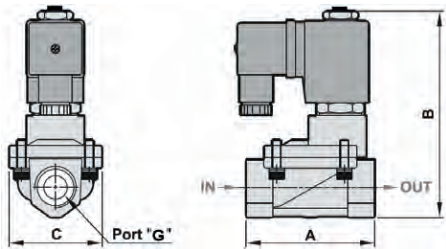
### CONSTRUCTION

Body: 316 Stainless Steel (CF8M) ATEX Certified body  
 Tube and internal parts: 304 + 430F Stainless steel  
 Seals and gaskets: FKM (Optional NBR & EPDM & HNBR)  
 Moulded coil: Duroplast / Thermo set resin

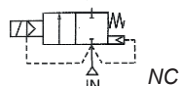
### REPAIR KIT

Diaphragm seal	225 + port size code (03-20)+ material
Coil	22003 + Voltage
Complete plunger + O' rings (Normally Open)	225320VNO

OVERALL DIMENSIONS				
Model	NOSPU225 03 & 4A	NOSPU225 06A & 08A	NOSPU225 12A & 14A	NOSPU225 20A
Port	3/8 + 1/2	3/4 + 1	1 1/4	2
A	66.5	96	131.5	160
B	106.5	126	145.5	160
C	48	75	101	118
Kg	0.74Kg	1.565Kg	2.56Kg	3.44Kg

Media: air – water – light oil - steam  
 Pressure range: 0 to 10 Bar max  
 Media temperature: +180°C Max  
 Ambient temperature: -30°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing 200 mSec Max



# 2/2 Steam

## 1/8 – 3/8

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 10 Bar

## TYPE SA610



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Coil	Pressure Rating (Bar)		Part Number	List Price
				Min	Max		
1/8	3	5.2	WPG1	0	10	SA6A + voltage	£51.11
1/4	3	5.2	WPG1	0	10	SA8A + voltage	
3/8	4	9.7	WPG2	0	10	SA10A + voltage	£90.20

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil & IP65 LED Connector DIN43650A PG11 NPT Thread

ATEX 22003EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C

WPA3C IP65 (100% Rated H rated IP54 coil with 30cm flying leads 33.6 Watts 57VA +200°C media) SA10A only

Other custom made options available upon request

Included  
 +10%  
 +£101.68  
 +£10.37

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 90%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz) DIN	WPG1	11.2VA	8.2VA	H 180°C	IP 65 With Connector	3 spades DIN 43650 DIN 40050 VDE0110
=	12 – 24 (DC) DIN		12 Watts				
~	24 - 110 - 230 (50 or 60 Hz) DIN	WPG2	18.7VA	15.3VA			
=	12 – 24 (DC) DIN		18 Watts				

#### CONSTRUCTION

Body: Brass  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: PTFE  
 Moulded coil: Resin

#### REPAIR KIT

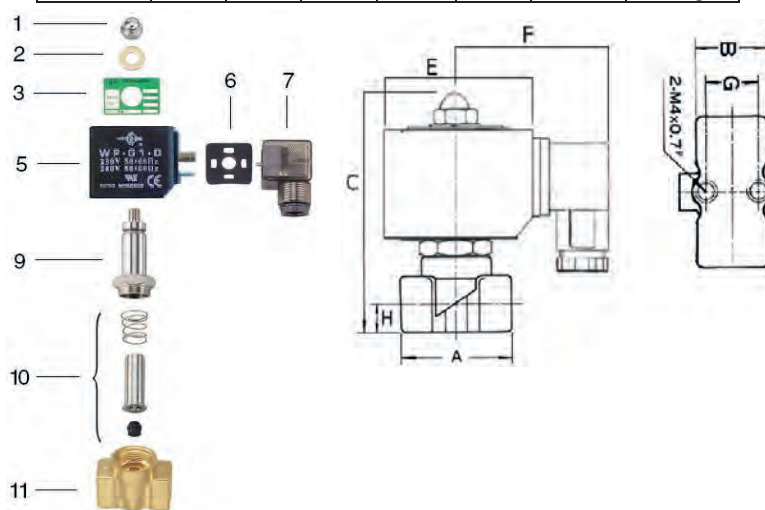
Coil	(WPG1 or WPG2) + voltage
Armature	SP210 + Valve Part Number

#### OVERALL DIMENSIONS

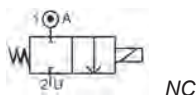
Item	Part No	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Nameplate
5	SP205-*	Coil
6	SP206-*	Gasket
7	SP207-*	Connector
9	SP209-*	Core Tube
10	SP210-*	Armature Assembly
17	SP211-*	Valve Body

\* = Valve Part Number

Model	A	B	C	F	G	H	Weight
SA6	41	19	86	40	1/8	10.5	470g
SA8	41	19	86	40	1/4	10.5	430g
SA10	50	25	91	45	3/8	11.7	560g



Media: vacuum - air - water - steam  
 Pressure range: 0 to 10 Bar max  
 Media temperature: -70°C to +180°C Max  
 Ambient temperature: -20°C to +50°C  
 Media viscosity: 50 centistokes max  
 Mounting: upright (+/- 15° from vertical)



## 2/2 Bronze Steam

1/2 - 1"

NORMALLY CLOSED  
 2 WAY DIRECT ACTING

0 - 10 Bar

TYPE MKS



### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure Rating (Bar)				Part Number	List Price
			Min	Max Steam	Max Air / Water	Max Oil		
1/2	14	50	0	10	8	7	MK15SM17 + voltage	£150.33
3/4	19	81	0	10	8	7	MK20SM17 + voltage	£210.46
1	25	103	0	10	8	7	MK25SM17 + voltage	£225.50

### OPTIONS

IP65 Coil & PG11 DIN43650A Connector	Included
Flanged and other custom made options available upon request	

### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 90%		Coil	Power Consumption		Insulation class	Enclosure	Electrical Connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	M17	35VA	26VA	H 180°C	IP65 With Connector	3 spades DIN43650 DIN40050 VDE0110
=	24 (DC)		19 Watts				

### CONSTRUCTION

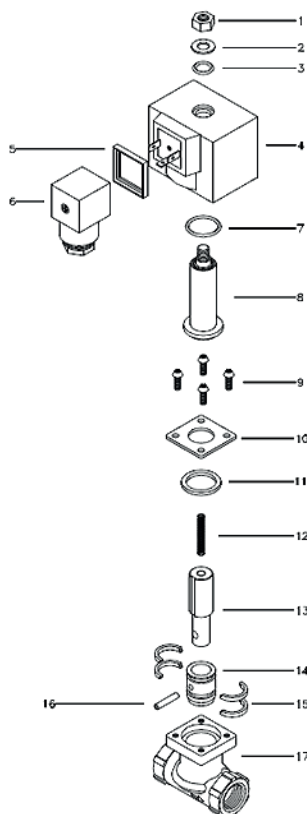
Body: Bronze BC6  
 Piston: Stainless steel 303,304, KM31 and Bronze BC6, PTFE  
 Tube: Stainless steel 304 & KM31  
 Seals and gaskets: PTFE & Graphite impregnated PTFE

### REPAIR KIT

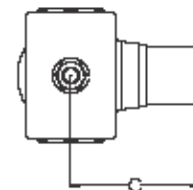
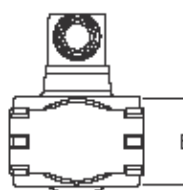
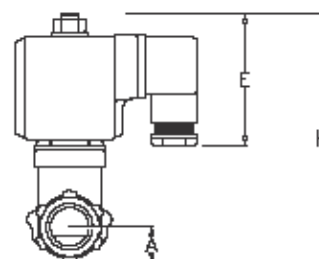
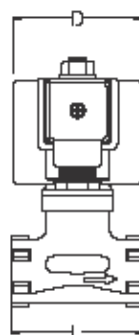
Coil	M17 + Voltage
Piston Kit	KIT + valve part number
Armature	SP + Valve Part Number -ARMATURE

### OVERALL DIMENSIONS

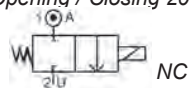
Model	L	H	A	B	C	D	Port	Kg
MK15M17S	63	120	17	30	65	60	1/2	0.95
MK20M17S	74	128	19	33			3/4	1.4
MK25M17S	88	133	24	41			1	1.7



NO.	Description	Material
1	Nut	BSBM
2	Washer	SPC
3	O ring	Viton
4	H Class IP65 coil	
5	Din Connector Gasket	
6	DIN Connector	
7	O ring	Viton
8	Core Tube	SUS304,KM-31
9	Bolts	SUS304
10	Plate	SPC
11	Packing	TEFLON
12	Plunger spring	SUS304
13	Armature	KM-31
14	Piston	BC 6
15	Piston ring	TEFLON
16	Sleeve pin	SUS303L
17	Valve body	BC 6



Media: vacuum - air - water - steam  
 Pressure range: 0 to 10 Bar max  
 Media temperature: -10°C to +180°C Max  
 Ambient temperature: -20°C to +50°C  
 Media viscosity: 50 centistokes max  
 Mounting: upright (+/- 15° from vertical)  
 Opening / Closing 200 mSec Max



# 2/2 Bronze Steam

## 11/4 - 2

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 - 10 Bar

### TYPE MK32-50S



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (bar)ΔP				Part Number	List Price
			Min	Max Steam	Max Air/ Water	Max Oil		
11/4	33	217	0	10	8	7	MK32SM20 + voltage	£341.28
11/2	43	300	0	10	8	7	MK40SM20 + voltage	£384.85
2	53	383	0	10	8	7	MK50SM20 + voltage	£442.94

#### OPTIONS

IP65 Coil & Connector Flange PN16 or ANSI150Lb	Included TBA
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#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 50% 1 Hour Max		Coil	Power		Insulation class	Enclosure	Electrical Connections
			Inrush	Holding			
~	110 - 230 (50 or 60 Hz)	M20	79VA	48VA	H 180°C	IP65 with connector	3 spades DIN43650 DIN40050 VDE0110

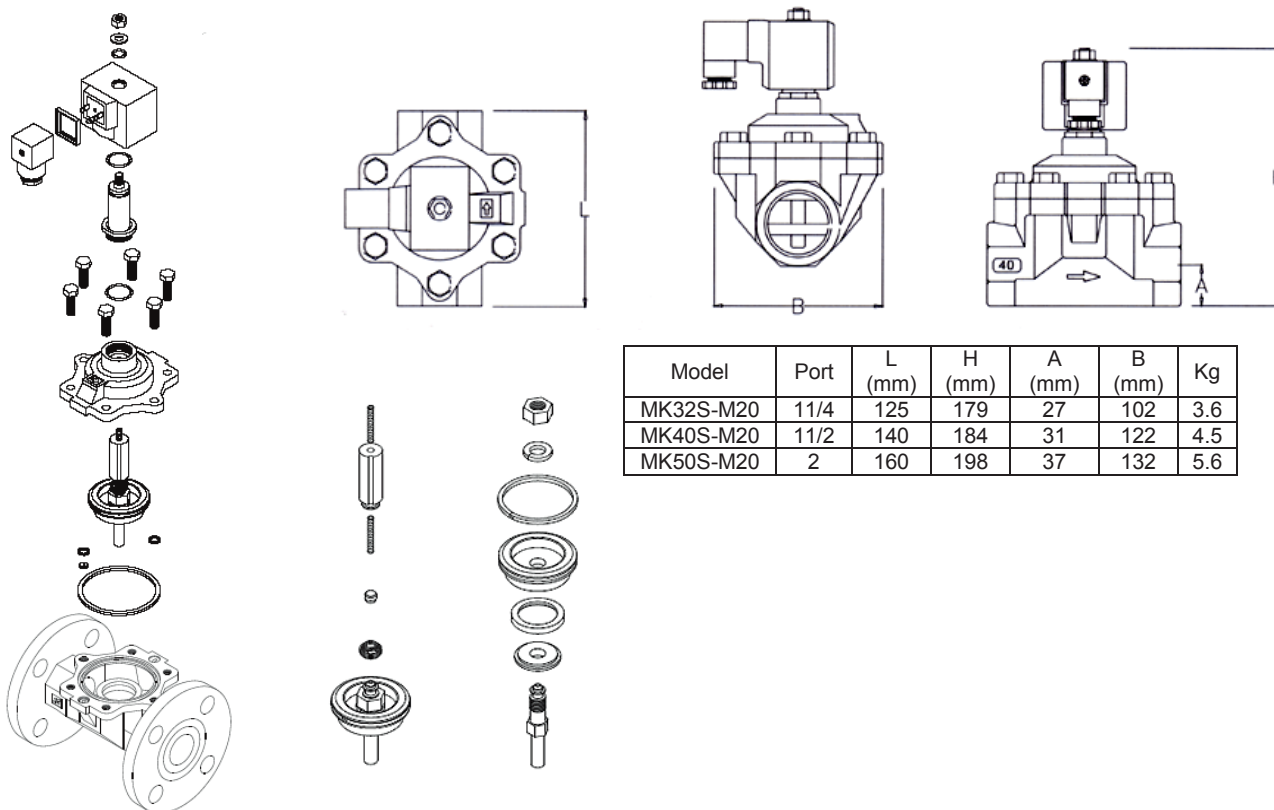
#### CONSTRUCTION

Body: Bronze BC6  
 Piston: Stainless steel 303,304, KM31 and Bronze BC6, PTFE  
 Tube: Stainless steel 304 & KM31  
 Seals and gaskets: PTFE & Graphite impregnated PTFE

#### REPAIR KIT

Coil	M20 + Voltage
Complete plunger + O' rings	KIT + valve part number

#### OVERALL DIMENSIONS



Model	Port	L (mm)	H (mm)	A (mm)	B (mm)	Kg
MK32S-M20	11/4	125	179	27	102	3.6
MK40S-M20	11/2	140	184	31	122	4.5
MK50S-M20	2	160	198	37	132	5.6

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

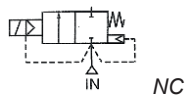
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – light oil – steam  
Pressure range: 0.5 to 15 Bar max  
Media temperature: -40°C to +180°C Max  
Ambient temperature: -20°C to +60°C  
Media viscosity: 50 centistokes max  
Mounting: coil upright  
Opening / Closing time: 500 mSec Max



# 2/2 Steam

## 3/8 to 1

### NORMALLY CLOSED

### 2 WAY SERVO ASSISTED

### 0.5 – 15 Bar

## TYPE PU22503-08S®



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar) ΔP			Part Number	List Price
			Min	Max Air/ Water	Max Steam		
3/8	13	75	0.5	15	10	PU22503S + voltage	£122.53
1/2	13	75	0.5	15	10	PU22504S + voltage	
3/4	25	200	0.5	15	10	PU22506S + voltage	£178.94
1	25	200	0.5	15	10	PU22508S + voltage	

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A ATEX 22003EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C  NPT Thread	Included +£101.68 +10%
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#### ELECTRICAL DATA

Voltage (-10% + 10%) Duty rating 90%		Nass Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12-24-48-110-220-240-380 (50/60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12-24-48-110-220 (DC)		15 Watts				

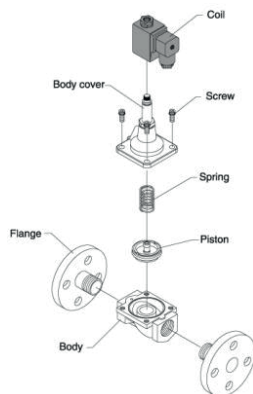
#### CONSTRUCTION

Body: Forged Brass, Tube and internal parts: Stainless steel  
Seals and gaskets: PTFE, Moulded coil: Duroplast / Thermo set resin

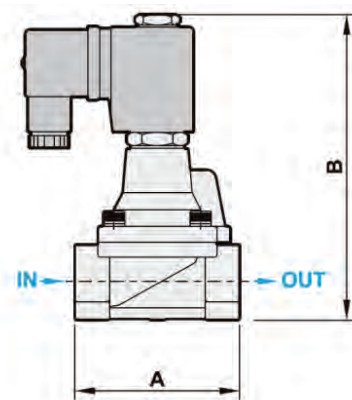
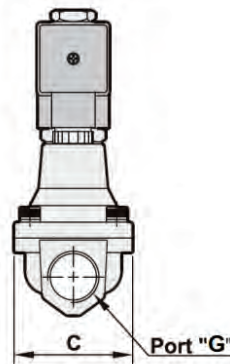
#### REPAIR KIT

Coil	22003 + Voltage
Complete plunger + O' rings	225320VPTFE
Piston	SP + Valve Part Number -PISTON

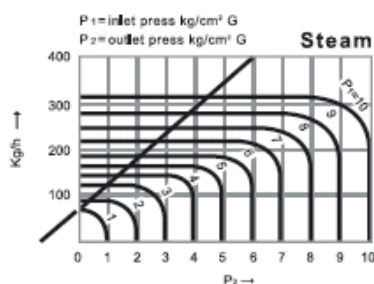
#### OVERALL DIMENSIONS



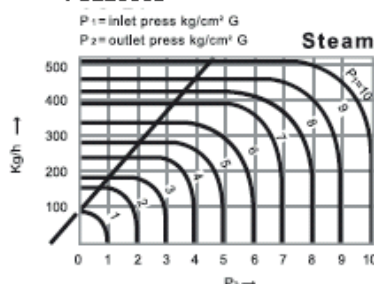
Port	A	B	C	Kg
3/8	66.5	106.5	48	0.86
1/2	66.5	106.5	48	0.84
3/4	96	126.5	70	1.8
1	96	126.5	70	1.75



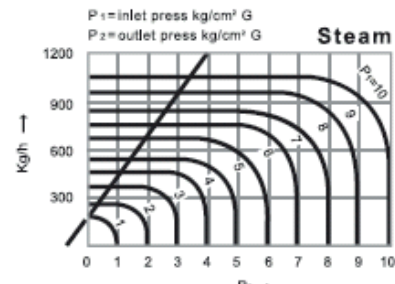
PU22504S



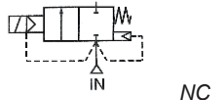
PU22506S



PU22508S



Media: air – water – light oil - steam  
 Pressure range: 0.5 to 15 Bar max  
 Media temperature: -40°C to +180°C Max  
 Ambient temperature: -20° to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright



## 2/2 Steam Flanged


DN10 – DN25  
 NORMALLY CLOSED  
 2 WAY SERVO ASSISTED  
 0.5 – 15 Bar  
 TYPE PU225SF®



### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (bar) ΔP			Part Number	List Price
			Min	Max Gas/Liquid	Max Steam		
DN10	13	75	0.5	15	10	PU22503SF4 + voltage	£231.36
DN15	13	75	0.5	15	10	PU22504SF4 + voltage	
DN20	25	200	0.5	15	10	PU22506SF4 + voltage	£312.25
DN25	25	200	0.5	15	10	PU22508SF4 + voltage	

### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A ATEX 22003EX Coil: ATEX EExmIT4 II 2G & 2D IP65 T130°C  Other Flanges ANSI150Lb (F3) or JIS10K (F)	Included +£101.68 +10%
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### ELECTRICAL DATA

Voltage (-10% + 10%) Duty rating 90%		Nass Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12-24-48-110-220-240-380 (50/60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12-24-48-110-220 (DC)		15 Watts				

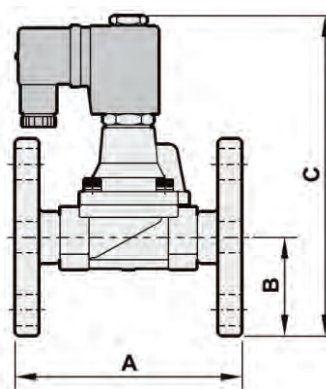
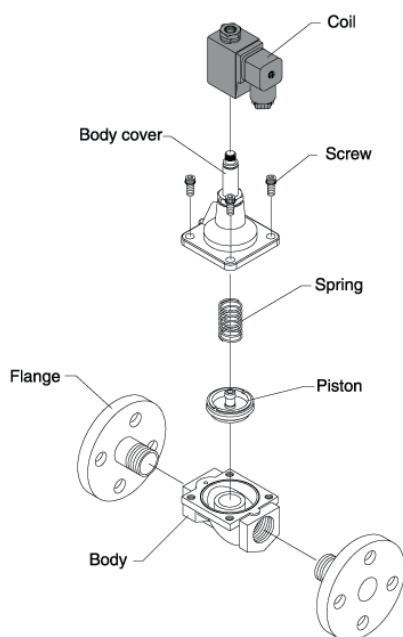
### CONSTRUCTION

Body: Brass; Flanges Stainless Steel  
 Tube, internal parts & piston: Stainless steel  
 Seals and gaskets: PTFE  
 Moulded coil: Duroplast / Thermo set resin

### REPAIR KIT

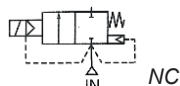
Coil	22003 + Voltage
Complete plunger + O' rings	225320VPTFE
Piston	SP + Valve Part Number – PISTON

### OVERALL DIMENSIONS



Model	PU22503SF	PU22504SF	PU22506SF	PU22508SF
Flange	PN16	PN16	PN16	PN16
A	110	110	150	152.6
B	45	47.5	52.5	57.5
C	151.7	154.2	185.5	186
D	90	95	105	115
P	16	16	18	18
K	60	65	75	85
Kg	2.13	2.1	2.84	2.66

Media: air – water – light oil - steam  
 Pressure range: 0.5 to 20 Bar max  
 Media temperature: +200°C Max\*  
 Ambient temperature: -40° to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing 200 mSec Max



# 2/2 Steam

## 3/8 - 2

### NORMALLY CLOSED

### 2 WAY SERVO ASSISTED

### 0.5 – 20 Bar


## TYPE SA



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar) Max ΔP			Part Number	List Price
			Min	Steam	Air/ Water		
3/8	15	75	0.5	12	20	SA14 + voltage	£175.36
1/2	15	75	0.5	12	20	SA15 + voltage	
3/4	20	155	0.5	12	20	SA20 + voltage	£183.40
1	25	220	0.5	12	20	SA25 + voltage	£198.44
1 1/4	35	433	0.5	12	20	SA35 + voltage	£375.84
1 1/2	35	433	0.5	12	20	SA40 + voltage	
2	50	800	0.5	12	20	SA50 + voltage	£634.40

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil & IP65 LED Connector DIN43650A PG11  
 NPT Thread  
 ATEX EExmII T4 II 2G & 2D IP65 T130°C 10 Bar Max  (20 Bar is special option)  
 WPA3C IP65 (100% Rated H rated IP54 coil with 30cm flying leads 33.6 Watts 57VA +200°C media)  
 Manual Over ride circuit  
 Stainless Steel Body, High Pressure, Flanged, normally open and other custom made options available upon request

Included  
 +10%  
 +£101.68  
 +£10.37  
 +£148.47

#### ELECTRICAL DATA

Voltage (-10% + 10%) WPG2 duty 90%, WPA3C 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50/ 60 Hz) DIN	WPG2	18.7VA	15.3VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE0110
=	12 – 24 (DC)		18 Watts				
~	24 - 110 - 230 (50 60 Hz)	WPA3C	88VA	57VA	N 200°C	IP54	30cm lead wires
=	12 – 24 (DC)		33.6 Watts				

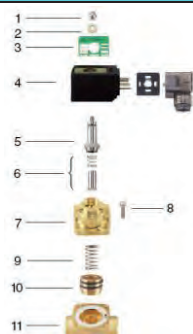
#### CONSTRUCTION

Body: Brass, Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless steel  
 Seals and gaskets: PTFE, Moulded coil: Resin

#### REPAIR KIT

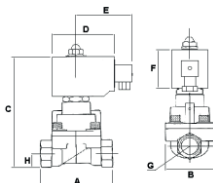
Coil	Coil type (WPG2 or WPA3C) + voltage
Piston	SP210 + Valve Part Number

#### OVERALL DIMENSIONS

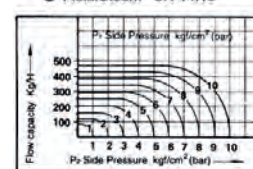


No.	Part Ref	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Nameplate
4	WPG2	Coil
5	SP205-*	Core Tube
6	SP206-*	Armature
7	SP207-*	Valve Bonnet
8	SP208-*	Screw
9	SP209-*	Spring
10	SP210-*	Piston
11	SP211-*	Valve Body

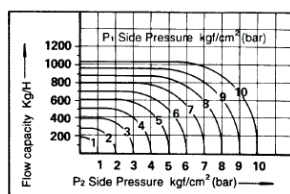
Model	A	B	C	D	E	F	G	H	Kg
SA14	67	48	123	67	52	42	3/8	15	1.13
SA15	67	48	123	67	52	42	1/2	15	1.1
SA20	96	72	149	67	52	42	3/4	25	1.53
SA25	96	72	149	67	52	42	1	25	1.85
SA35	120	90	168	52	45	41	1 1/4	33	3.3
SA40	120	90	168	52	45	41	1 1/2	33	3.25
SA50	150	122	203	52	45	41	2	40.5	6.8



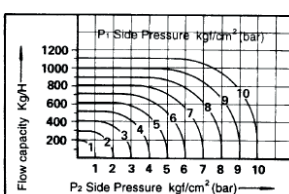
● Fluid: Steam SA-14,15



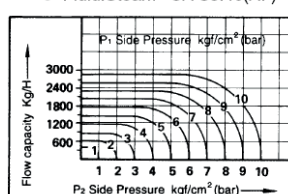
● Fluid: Steam SA-20



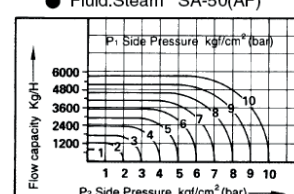
● Fluid: Steam SA-25(AF)



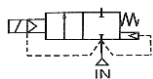
● Fluid: Steam SA-35.40(AF)



● Fluid: Steam SA-50(AF)



Media: air – water – light oil - steam  
 Pressure range: 0.5 to 20 Bar max  
 Media temperature: +200°C Max  
 Ambient temperature: -30°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright



NC

## 2/2 Steam Flanged

### DN25 – DN50

### NORMALLY CLOSED

### 2 WAY SERVO ASSISTED

### 0.5 – 20 Bar


## TYPE SAF



#### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar) ΔP			Part Number	List Price
			Min	Max Steam	Max Air/ Water		
DN25	25	220	0.5	12	20	SA25PF + voltage	£541.20
DN32	35	433	0.5	12	20	SA35PF + voltage	£895.98
DN40	35	433	0.5	12	20	SA40PF + voltage	
DN50	50	800	0.5	12	20	SA50PF + voltage	£1488.30

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil & IP65 LED Connector PG11  
 ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C 10 Bar Max   
 WPA3C IP65 (100% Rated H rated coil with 30cm flying leads 33.6 Watts 57VA)  
 ANSI150Lb, JIS10K or other flange  
 Other custom made options available upon request

Included  
 +£101.68  
 +£10.37  
 +10%

#### ELECTRICAL DATA

ELECTRICAL DATA							
Voltage (-10% + 10%) WPG duty 90% WPA3C 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
=	12 – 24 – 48 - 110 DC DIN	WPG2	18.7VA	15.3VA	H 180°C	IP 65 <i>With connector</i>	3 spades DIN 43650 DIN 40050 VDE0110
~	24 - 110 – 240 - 380 (50/ 60 Hz) DIN		18 Watts				
~	24 - 110 - 230 (50 60 Hz)	WPA3C	88VA	57VA	N 200°C	IP54	30cm lead wires
=	12 – 24 (DC)		33.6 Watts				

#### CONSTRUCTION

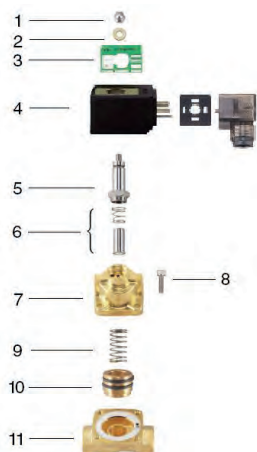
Body: Brass, Tube and internal parts: Stainless steel  
 Seals and gaskets: PTFE, Moulded coil: Resin

#### REPAIR KIT

Coil	WPG2 + voltage
Piston	SP210 + Valve Part Number

#### OVERALL DIMENSIONS

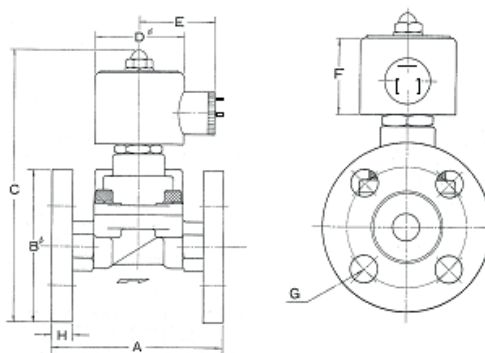
Model	A	B	C	D	E	F	G	G Hole	H	Kg
SA25AF	130	125	188	53	47	43	19	4	14	1.8
SA35AF	160	135	205	53	47	43	19	4	16	3.3
SA40AF	160	140	205	53	47	43	19	4	16	3.25
SA50AF	200	155	240	53	47	43	19	4	16	6.8



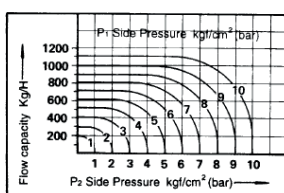
#### ● Spare Parts Table

Item	Order No.	Description
1	SP-201-*	Nut
2	SP-202-*	Washer
3	SP-203-*	Nameplate
4	SP-204-*	Coil
5	SP-205-*	Solenoid Tube
6	SP-206-*	Armature Core
7	SP-207-*	Valve Bonnet
8	SP-208-*	Screw
9	SP-209-*	Spring
10	SP-210-*	Piston
11	SP-211-*	Valve Body

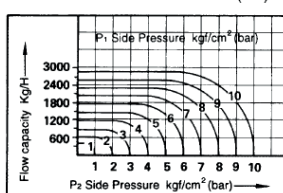
\* Model Number



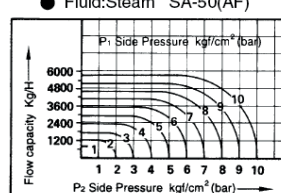
● Fluid: Steam SA-25(AF)



● Fluid: Steam SA-35.40(AF)



● Fluid: Steam SA-50(AF)



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

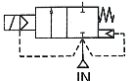

Plastic  
2/2  
N/Closed

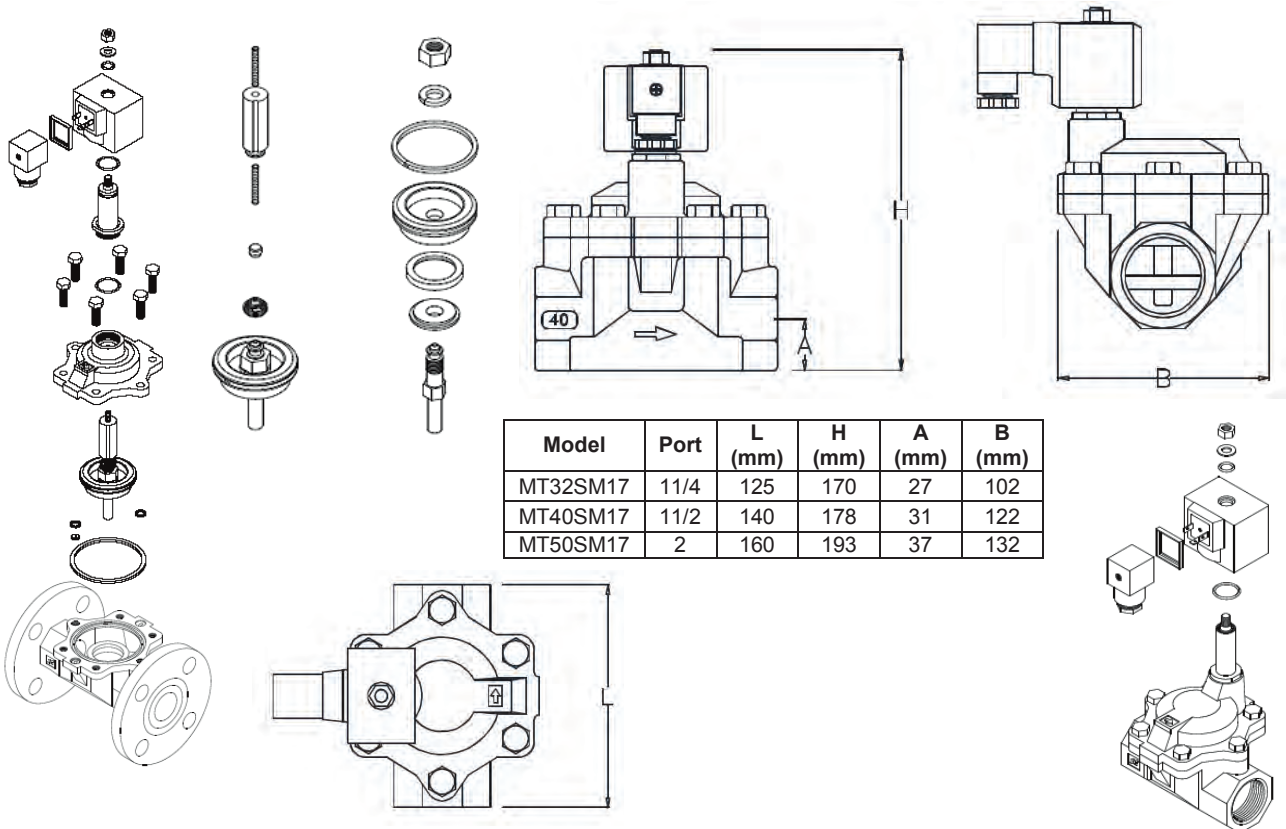
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

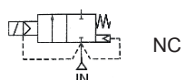
EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

<p>Media: air – water – steam – light oil Pressure range: 0.3 to 10 Bar max Media temperature: -10°C to +180°C Max Ambient temperature: -20°C to +50°C Media viscosity: 50 centistokes max Mounting: upright (+/- 15° from vertical) Opening / Closing 200 mSec Max</p> <div><div>NC</div></div>			<div>2/2 Bronze Steam</div> <div>11/4 - 2</div> <div>NORMALLY CLOSED</div> <div>2 WAY SERVO ASSISTED</div> <div>0.3 – 10 Bar</div> <div>TYPE MTS</div>					
PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar)ΔP				Part Number	List Price
		Kv Ltr/ min	Min	Max Steam	Max Air/ Water	Max Oil		
11/4	33	367	0.3	10	8	7	MT32SM17 + voltage	£337.65
11/2	43	500	0.3	10	8	7	MT40SM17 + voltage	£384.85
2	53	800	0.3	10	8	7	MT32SM17 + voltage	£446.57
OPTIONS								
IP65 Coil & Connector Flange PN16, ANSI150Lb or JIS10K Normally open (+90C Max)								Included +50% +10%
ELECTRICAL DATA								
Voltage (-10% + 10%) Continuous duty 50% 1 Hour Max			Coil	Power Consumption		Insulation class	Enclosure	Electrical Connections
				Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)		M17	35VA	26VA	N 200°C	IP65 with connector	3 spades DIN43650 DIN40050 VDE0110
=	24 (DC) (12vdc with flying lead wires)			21 Watts				
CONSTRUCTION								
Body: Bronze BC6 Piston: Stainless steel 303,304, KM31 and Bronze BC6, PTFE Tube: Stainless steel 304 & KM31 Seals and gaskets: PTFE & Graphite impregnated PTFE								
REPAIR KIT								
Coil				M17 + Voltage				
Complete plunger + O' rings				KIT + valve part number				
OVERALL DIMENSIONS								



Media: air – water – steam – light oil  
 Pressure range: 0.3 to 10 Bar max  
 Media temperature: -10°C to +180°C Max  
 Ambient temperature: -20°C to +50°C  
 Media viscosity: 50 centistokes max  
 Mounting: upright (+/- 15° from vertical)  
 Opening / Closing 200 mSec Max



## 2/2 Bronze Steam DN32 to DN50 NORMALLY CLOSED 2 WAY SERVO ACTING 0.3 – 10 Bar TYPE MTFS



### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar)ΔP				Part Number	List Price
			Min	Max Steam	Max Air/ Water	Max Oil		
DN32	33	217	0.3	10	8	7	MT32FSM17 + voltage	£562.24
DN40	43	300	0.3	10	8	7	MT40FSM17 + voltage	£631.40
DN50	53	383	0.3	10	8	7	MT32FSM17 + voltage	£715.58

### OPTIONS

IP65 Coil & Connector Flange ANSI150Lb or JIS10K	Included +10%
---	------------------

### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 50% 1 Hour Max		Coil	Power Consumption		Insulation class	Enclosure	Electrical Connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	M17	35VA	26VA	N 200°C	IP65 with connector	3 spades DIN43650 DIN40050 VDE0110
=	24 (DC)		19 Watts				

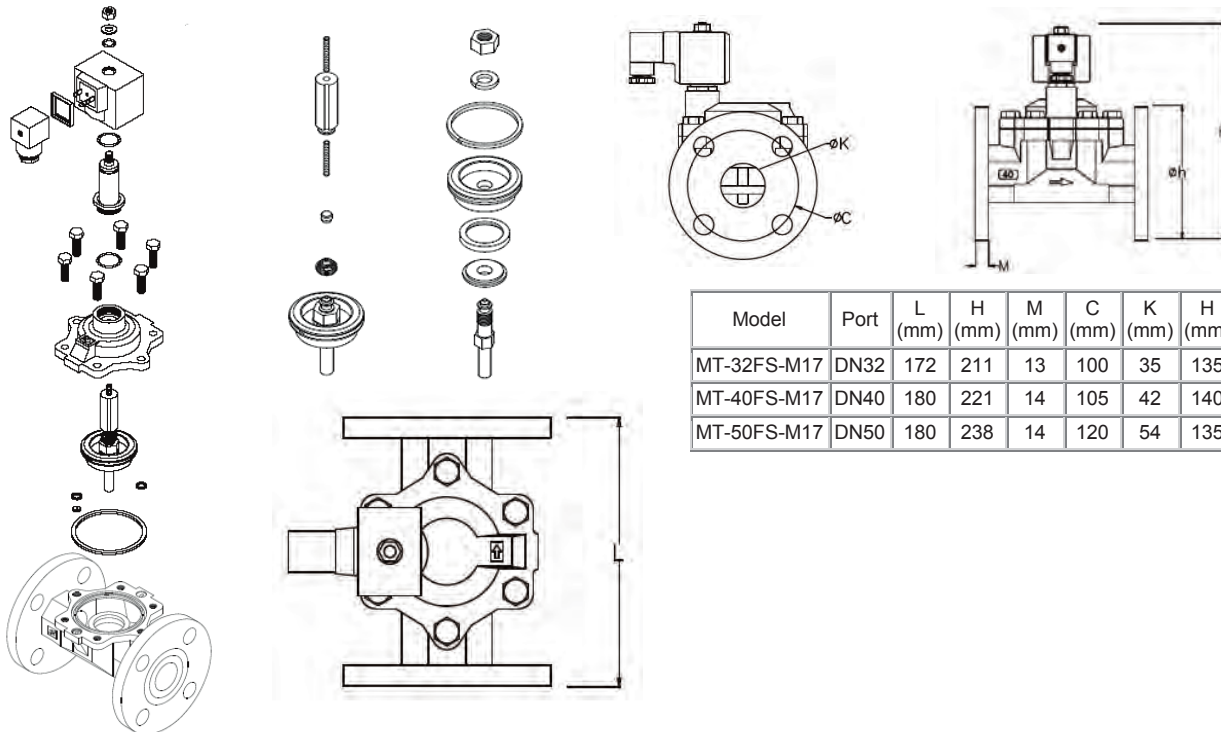
### CONSTRUCTION

Body: Bronze BC6  
 Piston: Stainless steel 303,304, KM31 and Bronze BC6, PTFE  
 Tube: Stainless steel 304 & KM31  
 Seals and gaskets: PTFE & Graphite impregnated PTFE

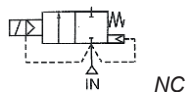
### REPAIR KIT

Coil	M17 + Voltage
Complete plunger + O' rings	KIT + valve part number

### OVERALL DIMENSIONS



Media: air – water – light oil - steam  
 Pressure range: 1 to 10 Bar max  
 Media temperature: +185°C Max  
 Ambient temperature: -20° to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing 200 mSec Max



# 2/2 Steam Flanged

DN65 – DN100  
 NORMALLY CLOSED  
 SERVO ASSISTED  
 0.5 – 10 Bar  
 TYPE USLF



## PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Cv m³/hr	Pressure Rating (Bar) ΔP		Part Number	List Price
			Min	Max		
DN65	65	68	1	10	USL65F + voltage	£802.78
DN80	80	100	1	10	USL80F + voltage	£859.51
DN100	100	175	1	10	USL100F + voltage	£1000.24

## OPTIONS

IP65 Coil + DIN Connector PG11 DIN43650A (Optional 30cm N Rated IP54 Flying lead coil)  
 Other flange ANSI150Lb, JIS10K, JIS20K, PN40

Included  
 +10%

## ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 90%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 220 (50 or 60 Hz)	WPC2	40VA	24.4VA	H 180°C	IP65 with connector	3 spades DIN 43650 DIN 40050 VDE0110
=	12 - 24 (DC)		18 Watts				

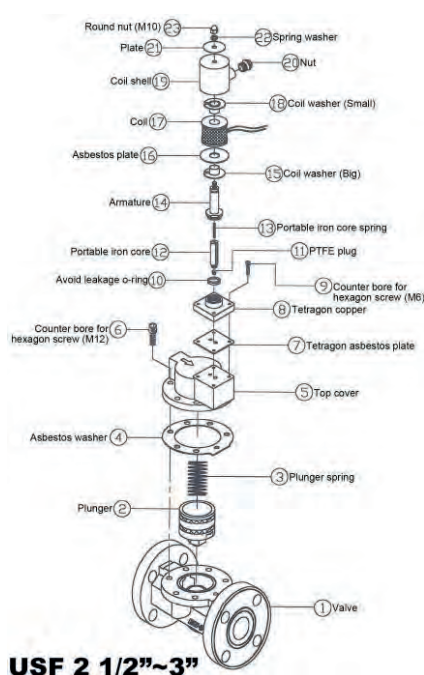
## CONSTRUCTION

Body: FC-20 (1 piece casting)  
 Piston: Bronze  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: PTFE  
 Moulded coil: Resin

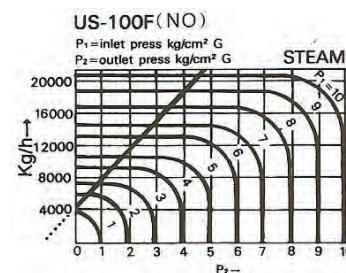
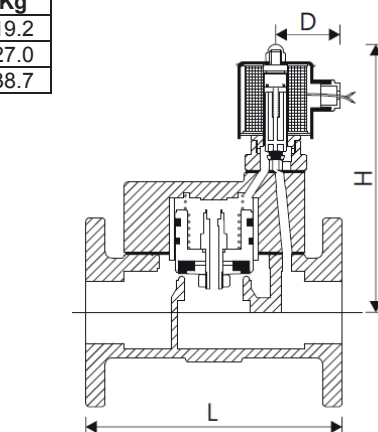
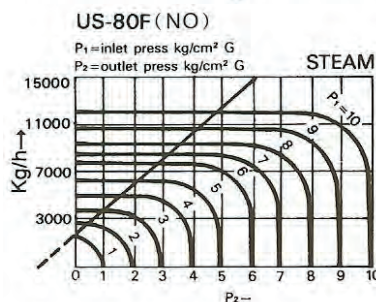
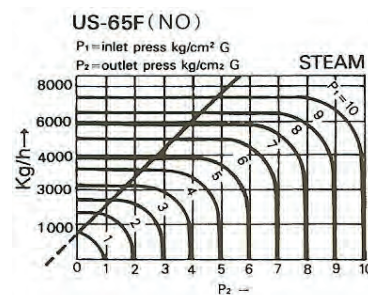
## REPAIR KIT

Coil	WPC2 + voltage
Piston	SP + Valve Part Number – PISTON

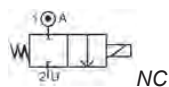
## OVERALL DIMENSIONS



Model	L	H	D	Kg
USL65F	240	209	48	19.2
USL80F	300	228	48	27.0
USL100F	340	244	48	38.7



Media: steam-air-water-light oil-vacuum  
 Pressure range: 0 to 10 Bar max  
 Media temperature: +185°C Max  
 Ambient temperature: -5° to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright advised



# 2/2 Steam Stainless

## 1/8 – 3/8

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 10 Bar

## TYPE SUS610



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Coil	Pressure Rating (Bar)		Max Media Temp. °C	Part Number	List Price
				Min	Max			
1/8	2.5	3.8	HTA1	0	7	PTFE 185C NBR 80C Silicone 130°C FKM 130°C	SUS6 - 316 + voltage	£77.62
1/4	2.5	3.8	HTA1	0	7		SUS8 - 316 + voltage	
3/8	4	9.7	WPA2	0	10		SUS10 - 316 + voltage	£99.44

#### OPTIONS

IP65 Coil and DIN43650A Connector SUS10 only. HTA1 IP54 flying lead coil (SUS6 + SUS8) NPT + BSPT threads EPDM or FKM seals +130°C Max	Included +10% +10%
--	--------------------------

#### ELECTRICAL DATA

Voltage AC (-10% + 10%) DC (-1% - +1%) Continuous duty 90%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	110 - 220 (50 or 60 Hz)	HTA 1	28VA	15.4VA	N 200 °C	IP54	2 wire 30cm flying lead
=	12 - 24 (DC)		12 Watts				
~	110 - 220 (50 or 60 Hz)	WPA2	40VA	24.4VA	H 180 °C	IP65	3 spades DIN 43650A DIN 40050 VDE0110
=	12 - 24 (DC)		18 Watts				

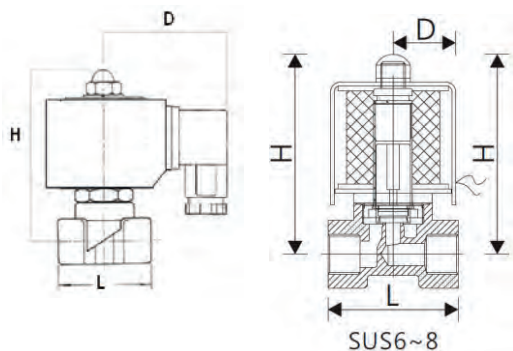
#### CONSTRUCTION

Body: 316 (CF8M) stainless steel  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: PTFE (Optional FKM, EPDM, NBR and Silicone)  
 Moulded coil: Resin  
 Standard coil: H rated special copper wire  
 Washer: PTFE or NBR

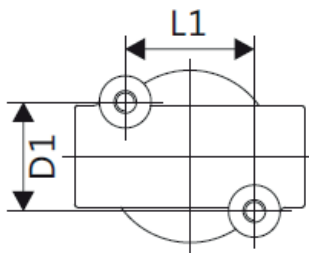
#### REPAIR KIT

Coil	Coil size (HTA1 or HTA2) + voltage
Armature assembly	SP + Valve Part Number -ARMATURE

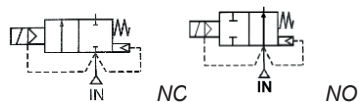
#### OVERALL DIMENSIONS



Model	L	H	D	Weight	L1	D1	M
SUS6	41	68	21.5	340g	23	19.3	M4 x0.7
SUS8	41	68	21.5	330g	23	19.3	
SUS10	53	83	48	540g	20	21	M5x0.8



Media: steam - air - water - gas - light oil  
 Pressure range: 0.5 to 10 Bar max  
 Media temperature: +185°C max  
 Ambient temp: -10°C to +50°C max  
 Media viscosity: 20 centistokes max  
 Mounting: coil upright  
 Suitable for high frequency applications



## 2/2 Stainless Steel

1/2 - 2

N/CLOSED + N/OPEN

2 WAY SERVO ASSIST

0.5 - 10 Bar

TYPE SUS



### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/min	Pressure Rating (Bar) ΔP		Part Number	List Price
			Min	Max		
1/2	17	67	0.5	10	SUS15 + voltage	£205.06
3/4	17	100	0.5	10	SUS20 + voltage	£231.50
1	22	200	0.5	10	SUS25 + voltage	£264.59
1 1/4	30	300	1	10	SUS35 + voltage	£486.27
1 1/2	30	367	1	10	SUS40 + voltage	£486.27
2	50	800	1	10	SUS50 + voltage	£756.49

### OPTIONS

IP65 Coil & Connector PG9 - DIN 43650 A

BSPT + NPT Threads

Normally Open (No ATEX option)

ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C (Type SKSXX)

Included  
 +10%  
 +£99.90  
 +£101.68

### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 90%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 – 380 (50 or 60 Hz)	WPC2D	40VA	24.4VA	H 180°C	IP65 with Connector	3 spades DIN43650A DIN40050 VDE0110
=	12 - 24 (DC)		18 Watts				

### CONSTRUCTION

Body: Forged 316 stainless steel (CF8M)

Tube 304 stainless steel, armature 430F stainless steel

Shading ring: copper

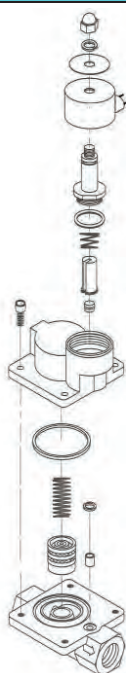
Seals and gaskets: PTFE

Moulded coil: Resin

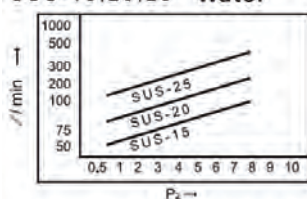
### REPAIR KIT

Coil	WPC2D + voltage
Armature	SP + Valve Part Number -ARMATURE
Piston	SP + Valve Part Number -PISTON

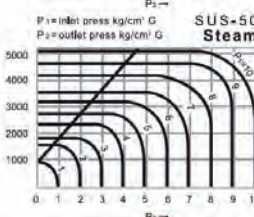
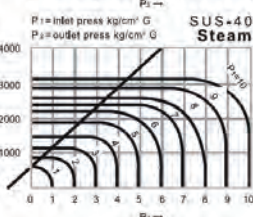
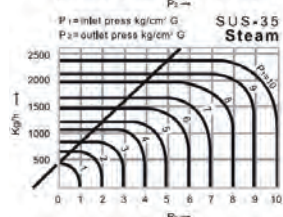
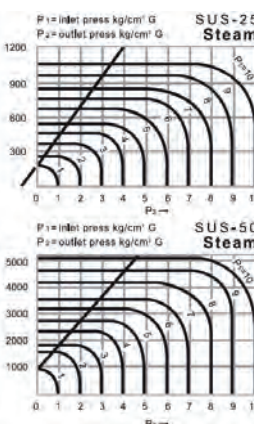
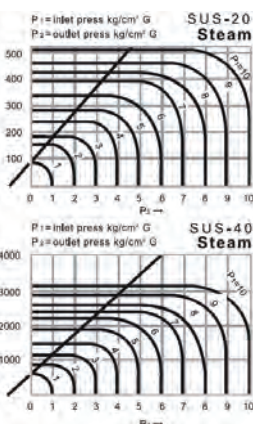
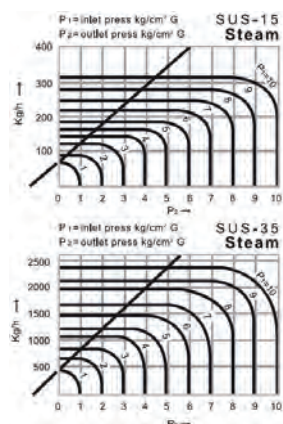
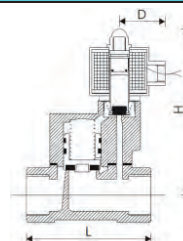
### OVERALL DIMENSIONS



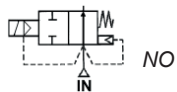
SUS-15,20,25 Water



Model	L	H	D	Kg
SUS15	84	115	48	1.38
SUS20	84	120	48	1.43
SUS25	98	132	48	1.88
SUS35	123	142	48	2.62
SUS40	123	146	48	2.72
SUS50	167	173	48	5.45



Media: air – water – light oil - steam  
 Pressure range: 0.5 to 20 Bar max  
 Media temperature: +180°C Max  
 Ambient temperature: -20° to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing 200 mSec Max



# 2/2 Steam

1/8 – 2  
 NORMALLY OPEN  
 2 WAY DIRECT/ SERVO  
 0 – 20 Bar  
 TYPE NOSA



## PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Coil	Pressure Rating (Bar) ΔP			Part Number	List Price
		Kv Ltr/ min		Min	Max Steam	Max Air/ Water		
1/8	3	5.2	WPG1	0	10	10	NOSA6A + voltage	£99.22
1/4				0	10	10	NOSA8A + voltage	
3/8	4	9.7	WPG2	0	10	10	NOSA10A + voltage	£108.24
	15	75		0.5	12	20	NOSA14 + voltage	£285.64
1/2				0.5	12	20	NOSA15 + voltage	
3/4	20	155		0.5	12	20	NOSA20 + voltage	£297.66
1	25	220		0.5	12	20	NOSA25 + voltage	£306.68
11/4	35	433		0.5	12	20	NOSA35 + voltage	£466.04
11/2	35	433		0.5	12	20	NOSA40 + voltage	
2	50	800		0.5	12	20	NOSA50 + voltage	£724.60

## OPTIONS

IP67 (EN60529:1991+A1:2000) UL + CSA Approved Coil & IP65 LED Connector PG11 DIN43650A  
 NPT Thread  
 WPA3C IP65 (100% Rated N rated coil with 30cm flying leads 33.6 Watts 57VA)  
 Other custom made options available upon request

Included  
 +10%  
 +£10.37

## ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 90%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	WPG1	11.2VA	8.2VA	H 180°C	IP 65 With Connector	3 spades DIN 43650 DIN 40050 VDE0110
=	12 – 24 - 48 (DC)		12 Watts				
=	12 - 24 – 48 (DC)	WPG2	18.7VA	15.3VA			
~	24 - 110 - 230 (50 or 60 Hz)		18 Watts				

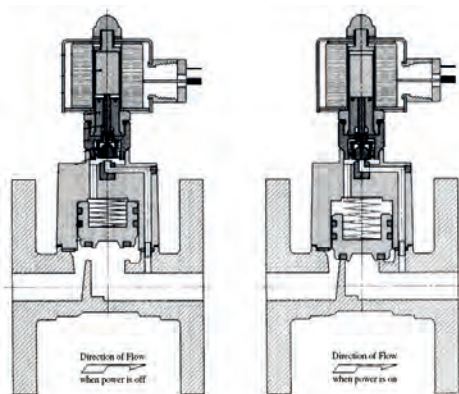
## CONSTRUCTION

Body: Brass  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: PTFE  
 Moulded coil: Resin

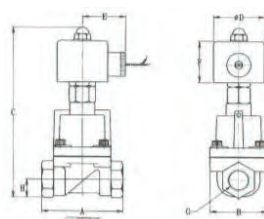
## REPAIR KIT

Coil	Coil size (WPG1 or WPG2) + voltage
Piston	SP + Valve Part Number -PISTON
Armature assembly	SP + Valve Part Number -ARMATURE

## OVERALL DIMENSIONS



Model	A	B	C	D	E	F	G	H	Kg
NOSA6	41	19	86	41	40	-	1/8	10.5	0.35
NOSA8	41	19	86	41	40	-	1/4	10.5	0.4
NOSA10	50	25	91	52	45	-	3/8	11.7	0.5
NOSA14	75	52	158	40	65	38	3/8	15	1.65
NOSA15	75	52	158	40	65	38	1/2	15	1.63
NOSA20	85	60	165	40	65	38	3/4	18	2.13
NOSA25	100	70	172	40	65	38	1	23	2.35
NOSA35	120	90	192	40	65	38	1 1/4	33	3.85
NOSA40	120	90	192	40	65	38	1 1/2	33	3.3
NOSA50	150	120	216	40	65	38	2	40.5	7.35



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

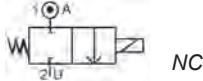
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – liquid - vacuum  
Pressure range: 0 to 8 Bar max  
Media temperature: 100°C max  
Ambient temperature: -10°C to +40°C max  
Media viscosity: 40 centistokes max  
Mounting: any position (M5 tapped body)  
Weight (including coil) 100 g  
Opening / Closing time 6 – 20 mSec Max



# 2/2 Polypropylene

## 1/4

### NORMALLY CLOSED

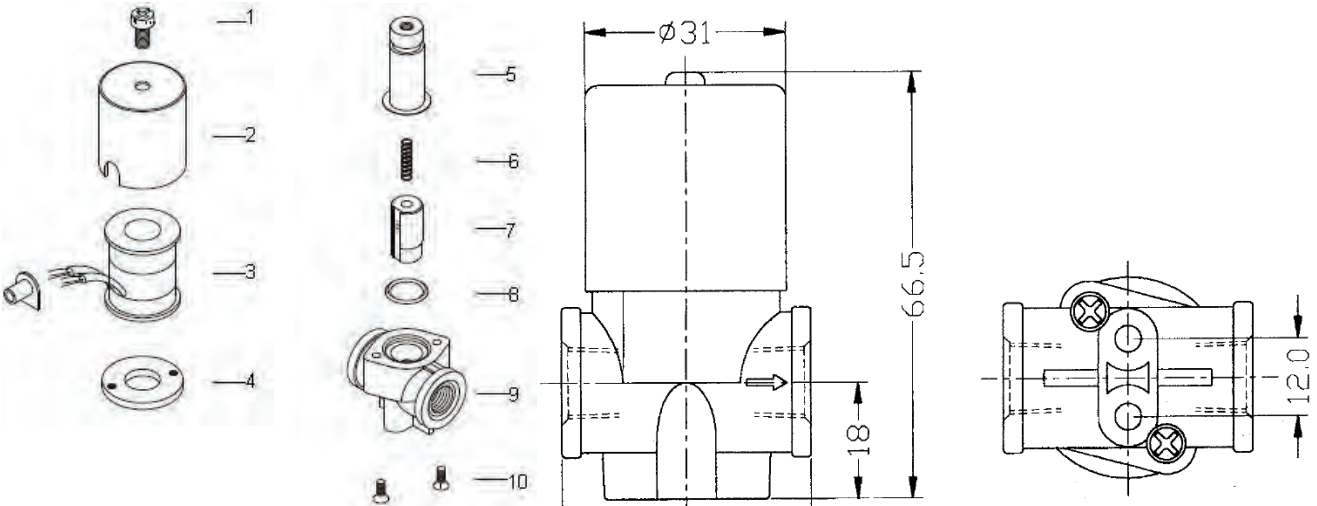
### 2 WAY DIRECT

### 0 – 8 Bar

### TYPE GC2

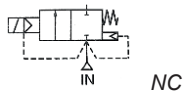


PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP			Seals	Part Number	List Price
		Kv Ltr/Min	Min	Max AC	Max DC			
1/4	2.5	3.5	0	8.1	6.8	EPDM	GC2 + voltage	£17.89
OPTIONS								
IP54 Coil flying lead (30cm) BSPT or NPT Thread Buna-N or Viton Other custom made options and voltages available upon request								Included +10% POA
ELECTRICAL DATA								
Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections	
			Inrush	Holding				
~	12 - 24 - 110 - 230 (50 or 60 Hz)	GC	11.2 VA	6.8 VA	B 130°C	IP54	30 cm lead wires	
=	12 - 24 (DC)		6 W					
CONSTRUCTION								
Body: Polypropylene - glass filled Tube and internal parts: head & plunger 430Fr Stainless steel Seals and gaskets: EPDM								
REPAIR KIT								
Coil				GC + voltage				
Complete plunger + O' rings				SP + Valve Part Number -ARMATURE				
OVERALL DIMENSIONS								



No.	Description	Material
1.	Coil fixing screw	SWRM
2.	Coil cover	SPC
3.	Solenoid Coil	B Class
4.	Retainer	SPC
5.	Core Tube	SUS304 KM-31
6.	Armature Spring	SUS 304
7.	Armature	430F
8.	O Ring	EPDM
9.	Valve Body	Nylon 66
10.	Retaining Bolt	SUS 304

Media: air – water – slight acid/alkali – vacuum Torr10<sup>-1</sup>  
 Pressure range: 0 to 7 Bar max  
 Media temperature: 60°C max  
 Ambient temperature: +4°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright



# 2/2 Nylon

## 1/2 - 1

### NORMALLY CLOSED

### 2 WAY ASSISTED LIFT

### 0 – 7 Bar

### TYPE PK



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/min	Pressure Rating (Bar) ΔP			Seals	Part Number	List Price
			Min	DC Max 18.5 Watt 22005 Coil	AC Max 15 Watt 22003 Coil			
1/2	18	67	0		7	NBR FKM EPDM	PK15NS + voltage PK15VS + voltage PK15ES + voltage	£102.41
				4		NBR FKM EPDM	PK15N-5 + voltage PK15V-5 + voltage PK15E-5 + voltage	
3/4	28	163	0		7	NBR FKM EPDM	PK20NS + voltage PK20VS + voltage PK20ES + voltage	£136.47
				3		NBR FKM EPDM	PK20N-5 + voltage PK20V-5 + voltage PK20E-5 + voltage	
1	28	183	0		7	NBR FKM EPDM	PK25NS + voltage PK25VS + voltage PK25ES + voltage	£136.47
				3		NBR FKM EPDM	PK25N-5 + voltage PK25V-5 + voltage PK25E-5 + voltage	

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A  
 Silver Shading Ring for AC voltages (Not suitable for Atex EExmIIT4 coil)  
 ATEX 22003EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C (AC 2 Bar DC 1 Bar) (No Shading Ring)  
 NPT Thread

Included  
 Included  
 +£101.68  
 +10%

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12 - 24 - 48 - 110 - 230 - 380 (50/60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 (DC)		15 Watts				
~	24 - 48 - 110 - 230 (50/60 Hz)	22005	33VA	24VA			
=	12 - 24 - 48 – 110 - 220 (DC)		18.5 Watts				

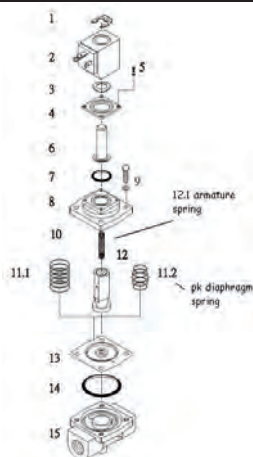
#### CONSTRUCTION

Body: Nylon  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR (Optional EPDM or FKM)  
 Moulded coil: Resin  
 Shading Ring: Silver for AC voltages only (No shading ring required for DC voltages)

#### REPAIR KIT

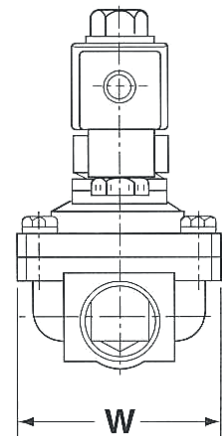
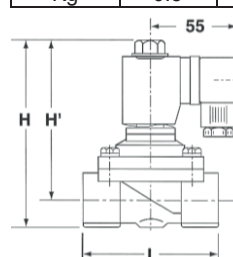
Diaphragm seal	Valve part number + seal material
Coil	22003 or 22005 + voltage
Complete Armature assembly	SP + Valve Part Number -ARMATURE

#### OVERALL DIMENSIONS



No	Description
1	Coil Clip
2	Coil
3	Wave Washer
4	Flange
5	Screw
6	Core Tube
7	Cover O Ring
8	Bonnet
9	Bonnet Screw
10	Armature Spring
11.1	Diaphragm Spring for PD
11.2	Diaphragm Spring for PK
12	Armature
13	Diaphragm
14	Body O Ring
15	Valve Body

Model	PK15	PK20	PK25
Port	1/2	3/4	1
L	71	90	
H	114	124	
H1	98	104	
W	56	76	
Kg	0.5	0.7	0.6



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

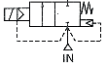












Plastic  
N/Closed

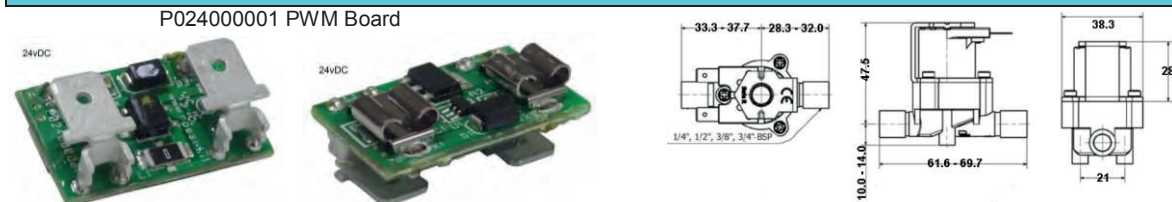
Plastic  
Acids/  
Alkali



2/2  
Latching  
Bi-Stable

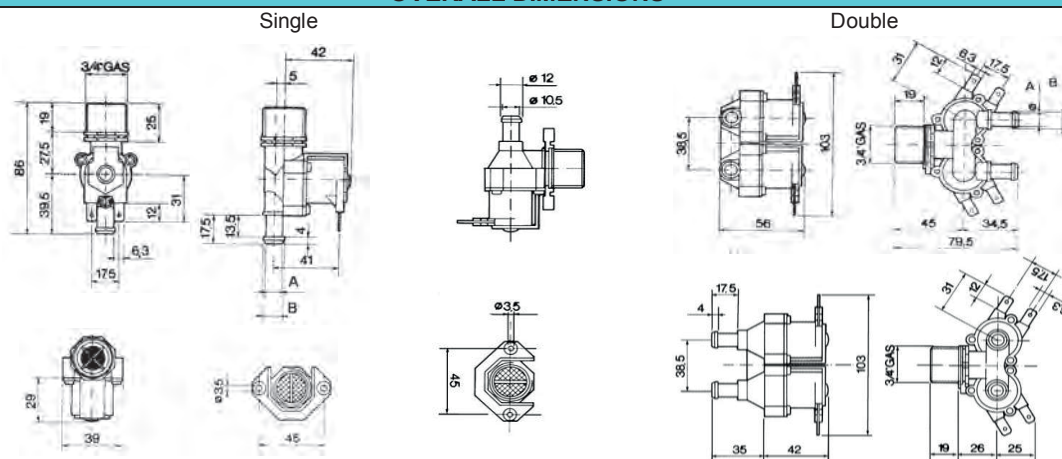
EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

<div>Media: water</div> <div>Pressure range: 0.2 to 10 Bar max</div> <div>Media temperature: 90°C max</div> <div>Ambient temperature: +40°C max</div> <div>Mounting: any position</div> <div>Weight (including coil): 155 g</div> <div>Opening / Closing Time: 25 mSec Max</div> <div></div> <div>NC</div>			<div>2/2 NYLON</div> <div>1/4 – 3/4 WRAS APPROVED</div> <div>NORMALLY CLOSED</div> <div>2 WAY SERVO ASSISTED</div> <div>0.2 – 10 Bar</div> <div>TYPE 115BC</div>			<div></div>	
PRESSURE							
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (bar) ΔP		Picture	Part Number	List Price
			Min	Max			
1/4 Male	11.0	19.5	0.2	10		3115BC + voltage	£25.05
1/4 Female	11.0	19.5	0.2	10		3105BC + voltage	
3/8 Male	11.0	27.5	0.2	10		4115BC + voltage	
3/8 Female	11.0	27.5	0.2	10		4105BC + voltage	
1/2 Male	11.0	28.3	0.2	10		5115BC + voltage	
1/2 Female	11.0	28.3	0.2	10		5105BC + voltage	
3/4 Male	11.0	28.3	0.2	10		6115BC + voltage	
6mm Push Fit	11.0	19.5	0.2	10		1136BC + voltage	£29.55
8mm Push Fit	11.0	19.5	0.2	10		1145BC + voltage	
10mm Push Fit	11.0	27.5	0.2	10		1156BC + voltage	
15mm Push Fit	11.0	28.3	0.2	10		1175BC + voltage	
1/4 Push Fit	11.0	19.5	0.2	10		1186BC + voltage	
3/8 Push Fit	11.0	27.5	0.2	10		1196BC + voltage	
OPTIONS							
IPX0 coil & Anti Water Hammer 30 cm Flying Lead wire coil P024000001 – 24vDC PWM pulse width modulating circuit board, 50% heat & 60% power reduction for 100% duty cycle							Included +10% £58.14
ELECTRICAL DATA							
Voltage (-10% + 15%) Media under 60°C 100% 60°C+ (60% Duty 2 min ON - 3 min OFF)		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12 - 24 - 110 - 230	COIL-R	11VA	8 VA	Insulation Class II Windings Class F	IPX 0	Faston Tags
=	12 - 24		6.2 Watts				
=	12 - 24	COIL-R-LP	3.6 Watts				
CONSTRUCTION							
Body: White glass filled food grade nylon or Black glass filled nylon non-food grade Tube and internal parts: stainless steel, Seals and gaskets: NBR, Moulded coil: resin							
REPAIR KIT							
Coil				COIL-R + voltage			
APPROVALS							
Complies with EN55014 ED. 1993, EN60730-2-8-1 Ed. 1995, WRc approved materials throughout as per cert. 7067							
OVERALL DIMENSIONS							



<p>Media: water Pressure range: 0.2 to 10 Bar max Media temperature: +75°C max Ambient temp: +5°C to +50°C max Mounting: any position Opening / Closing time: 50 mSec Max Weight: 80g / 120g</p>  <p>NC</p>			<p><b>2/2 Nylon WRAS</b> <b>3/4 – 10/13mm</b> <b>NORMALLY CLOSED</b> <b>SERVO ASSISTED</b> <b>0.2 – 10 Bar</b> <b>TYPE SDT180/90</b></p>				
PRESSURE							
Ø Inlet Port	Outlet Hose Barb mm	Orifice (mm) KV=21 Ltr / Min	Pressure Rating (Bar) ΔP		Port Config	Part Number	List Price
			Min	Max			
3/4 BSP Male	Single 10mm	11	0.2	10	180°	S18 + voltage + 10BH	£13.26
	Single 13mm		0.2	10	180°	S18 + voltage + 12BH	
	Single 10mm		0.2	10	90°	S90 + voltage + 10BH	
	Single 13mm		0.2	10	90°	S90 + voltage + 12BH	
	Double 10mm		0.2	10	180°	D18 + voltage + 10BH	£24.59
	Double 13mm		0.2	10	180°	D18 + voltage + 12BH	
	Double 10mm		0.2	10	90°	D90 + voltage + 10BH	
	Double 13mm		0.2	10	90°	D90 + voltage + 12BH	
	Triple 10mm		0.2	10	180°	T18 + voltage + 10BH	£37.65
	Triple 10mm		0.2	10	90°	T90 + voltage + 10BH	
OPTIONS							
IPX0 coil faston tags (Optional Flying lead wire) Plastic Inlet filter Mounting bracket (Adjustable horizontal or vertical) Flow regulator (0.25mm to 5mm in 0.25 increments)						Included Included Included +£0.58	
ELECTRICAL DATA							
Voltage (-10% + 15%) Duty 2 min ON max - 3 min OFF min		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	12 - 24 - 110 - 230 (50 or 60 Hz)	Coil-R	7.2 - 13.2VA	4.4 - 8VA	F 155°C	IPX0	Faston Tags
=	12 - 24 (DC)		5.4 – 8.5 Watts				
CONSTRUCTION							
Body: White glass filled nylon Tube: 304 stainless steel, armature 430F stainless steel Shading ring: copper Seals and gaskets: Buna Moulded coil: Resin							
APPROVALS							
VDE (Germany) KEMA (Netherlands) DEMKO (Denmark) SETI (Finland) SEV (Switzerland)				NEMKO (Norway) SEMKO (Sweden) BEAB (UK) OVE (Austria) UL (USA Approval No MH13778 (N), category YOIZ2)			
REPAIR KIT							
Coil (faston Tags)				COIL-R + voltage			
OVERALL DIMENSIONS							



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

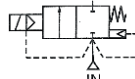

Plastic  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

<p>Media: slight acid – alkali – air – water Pressure range: 0.5 to 10 Bar max Media temperature: +5°C to 100°C Ambient temperature: +5°C to +60°C Media viscosity: 50 centistokes max Mounting: coil upright</p> <div><div>NC</div></div>			<p><b>2/2 Delrin</b> <b>3/8 – 11/2</b> <b>NORMALLY CLOSED</b> <b>2 WAY SERVO ASSISTED</b> <b>0.5 – 10 Bar</b> <b>TYPE PA</b></p>					
PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure Rating (Bar) ΔP		Seals	Max Media Temp. °C	Part Number	List Price
			Min	Max				
3/8	15	70	0.5	10	FKM EPDM NBR	80 80 40	PA14V + voltage PA14E + voltage PA14N + voltage	£114.26 £90.20 £90.20
1/2	15	70	0.5	10	FKM EPDM NBR	80 80 40	PA15V + voltage PA15E + voltage PA15N + voltage	£114.26 £90.20 £90.20
3/4	20	95	0.5	10	FKM EPDM NBR	80 80 40	PA20V + voltage PA20E + voltage PA20N + voltage	£135.30 £120.26 £120.26
1	25	175	0.5	10	FKM EPDM NBR	80 80 40	PA25V + voltage PA25E + voltage PA25N + voltage	£135.30 £120.26 £120.26
11/4	35	390	0.5	10	FKM EPDM NBR	80 80 40	PA35V + voltage PA35E + voltage PA35N + voltage	£237.52 £222.50 £222.50
11/2	35	410	0.5	10	FKM EPDM NBR	80 80 40	PA40V + voltage PA40E + voltage PA40N + voltage	£237.52 £222.50 £222.50
OPTIONS								
<p>IP67 (EN60529:1991+A1:2000) UL + CSA Approved coil &amp; IP65 LED Connector PG11 – DIN 43650 A ATEX 22003EX Coil: ATEX EExmIT4 II 2G &amp; 2D IP65 T130°C (No shading ring) Silver Shading Ring (PAxxxS) * VST, CR, ECO, HNBR or Hypalon Seals Other custom made options available upon request</p>								<p>Included +£101.68 +£30.06 +10%</p>
ELECTRICAL DATA								
Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections	
			Inrush	Holding				
~	24 - 110 - 220 - 380 (50 or 60 Hz)	WPG1	11.2VA	8.2VA	H 180°C	IP65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110	
=	12 - 24 (DC)		12 Watts					
CONSTRUCTION								
<p>Body: Poly-acetate Tube and internal parts: Stainless steel Moulded coil: Resin</p>								
REPAIR KIT								
Coil				WPG1 + voltage				
Diaphragm				SP213 + valve part number				
OVERALL DIMENSIONS								

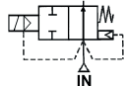
An exploded view diagram of a valve assembly. The components are numbered 1 through 14. 1: Nut. 2: Washer. 3: Name Plate. 5: Coil (WPG1). 6: Gasket. 7: Connector. 9: Core Tube. 10: Armature. 11: Valve Bonnet. 12: Bolts. 13: Diaphragm. 14: Valve Body.

No	Reference	Description
1	SP201-*	Nut
2.	SP202-*	Washer
3.	SP203-*	Name Plate
5.	WPG1	Coil
6	SP206-*	Gasket
7.	SP207-*	Connector
9.	SP209-*	Core Tube
10.	SP210-*	Armature
11.	SP211-*	Valve Bonnet
12.	SP212-*	Bolts
13.	SP213-*	Diaphragm
14.	SP214-*	Valve Body

Model	A	B	C	D	E	F	Kg
<b>PA14</b>	73.5	48	105	35	55	3/8	0.32
<b>PA15</b>	73.5	48	105	35	55	1/2	0.32
<b>PA20</b>	104	90	124	35	55	3/4	0.65
<b>PA25</b>	104	90	124	35	55	1	0.6
<b>PA35</b>	132	120	145	35	55	11/4	0.85
<b>PA40</b>	132	120	145	35	55	11/2	0.8

Technical drawing of the valve showing dimensions A, B, C, D, E, F, and G. The drawing includes a side view and a front view. The side view shows the valve body and bonnet assembly. The front view shows the valve body and bonnet assembly with dimensions A, B, C, D, E, F, and G.

Media: water  
 Pressure range: 0.65 to 10 Bar max  
 Media temperature: +60° C max  
 Ambient temperature: 0° to +60°C  
 Media viscosity: 22 centistokes max  
 Mounting: any position



## 2/2 Irrigation Valve

### 1", 2" & 3" BSP

### N/CLOSED & LATCHING

### 2 WAY SERVO ASSISTED

### 0.65 to 10 Bar

### TYPE PN225A



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Options Included	Flow Rate		Pressure Rating (bar)		Seals	Function	Part Number	List Price
			Kv M³ Hr	USG Min	Min diff	Max diff				
1	25	Manual Override Flow Controller	7.7	35	0.65	10	NBR	Normally Closed	PN22508A + voltage	£27.67
								Latching	PN22508AL-6-40vDC	£30.97
11/2	40	Manual Override	25	110	0.65	10	NBR	Normally Closed	PN22514A + voltage	£88.67
								Latching	PN22514AL-6-40vDC	£91.97
2	50	Manual Override	40	180	0.65	10	NBR	Normally Closed	PN22520A + voltage	£106.40
								Latching	PN22520AL-6-40vDC	£109.70
3	80	-	90	400	0.65	10	NBR	Normally Closed	PN22528A + voltage	£177.33
								Latching	PN22528AL-6-40vDC	£180.63

#### OPTIONS

IP66 weather proof coil with flying lead wire  
 NPT Thread

Included  
 + 10%

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil Size	Power	Insulation class	Enclosure	Electrical connections
~	24 - 230 (50 or 60 Hz)	2W	12.5VA	F 155°C	IP 66	Flying lead wire
=	12 - 24 (DC)		12.5 Watts			
=	6 to 40vDC (Req 4700µf capacitor) Pulse 20 - 100msec	2WL	2.2 Watts 6Ω			

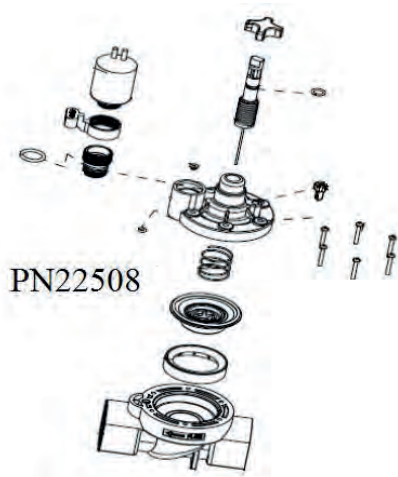
#### CONSTRUCTION

Body : Glass Reinforced UV resistant PA66  
 Tube, internal parts and bolts : Stainless steel  
 Seals and gaskets : NBR  
 Moulded coil : Resin

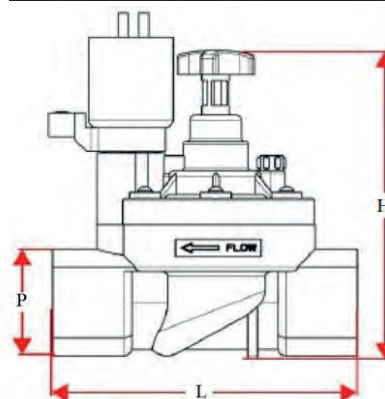
#### REPAIR KIT

Diaphragm Seal	225N + port + seal material
Coil	2W + voltage

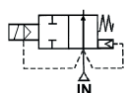
#### OVERALL DIMENSIONS



Port	H	L	P	Kg
1	133	119	44	0.6
11/2	104	190	61	1.35
2	104	200	75	1.8
3	159	257	111	2.2



Media: water  
 Pressure range: 0.65 to 10 bar max  
 Adjustable range: 0.8 to 6.5 Bar  
 Media temperature: +60° C max  
 Ambient temperature: 0° to +60° C  
 Media viscosity: 22 centistokes max  
 Mounting: any position



# 2/2 Irrigation Valve

## 1 1/2" to 4"

### Solenoid & PRV

### 2 WAY SERVO ASSISTED

### 0.8 to 6.5 Bar

## TYPE PN225APRV



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Rate		Pressure Rating (Bar) ΔP		Function	Part Number	List Price
		Kv M <sup>3</sup> Hr	USG Min	Min	Max			
1 1/2	40	25	110	0.8	6.5	Normally Closed + Pressure Reducing Valve	PN22514APRV-24vAC	£248.29
2	50	40	180	0.8	6.5		PN22520APRV-24vAC	£266.04
3 Weld	80	100	440	0.8	6.5		PN22528APRV-24vAC	£319.22
4" Weld	100	160	700	0.8	6.5		PN22532APRV-24vAC	£478.84

#### OPTIONS

IP65 Coil with flying lead wire  
 Manual over ride for open, closed or solenoid control  
 NPT Thread  
 12vdc, 24vdc, 110vAC or 230vAC  
 Pressure adjustment range 0.5 to 3 Bar (7 – 40 psi)  
 Without solenoid – manual control only

Included  
 Included  
 + 10%  
 +£2.75

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil Size	Power	Insulation class	Enclosure	Electrical connections
~	24 - 110 – 230 (50 or 60 Hz)	2W	12.5VA	F 155°C	IP 66	Flying lead wire
=	12 – 24 (DC)		12.5 Watts			

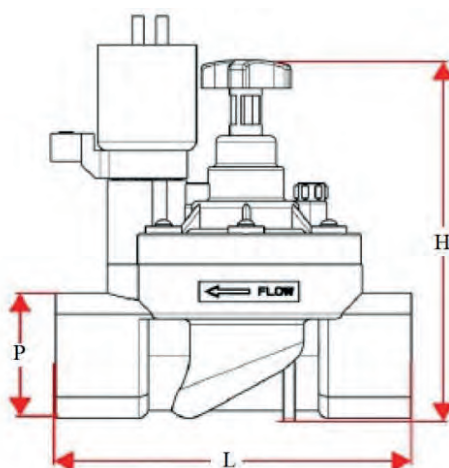
#### CONSTRUCTION

Body : Glass Reinforced PA66  
 Tube, internal parts and bolts : Stainless steel  
 Seals and gaskets : NBR  
 Moulded coil : Resin

#### REPAIR KIT

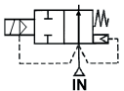
Diaphragm Seal	225N + port + seal material
Coil	2W + voltage

#### OVERALL DIMENSIONS



Port	H	L	P	Kg
1 1/2	104	190	61	1.6
2	104	200	75	2
3	187	259	112	2.75
4	201	278	136	5.9

Media: air – water – vacuum (Torr 10<sup>-1</sup>)  
 Pressure range: 0 to 5 Bar max  
 Media temperature: +60°C max  
 Ambient temperature: +4°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright



NO

# 2/2 Nylon


## 1/2 – 1"

### NORMALLY OPEN


### 2 WAY ZERO RATED

### 0 – 5 Bar

## TYPE NOPK



PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/min	Pressure Rating (Bar)			Seals	Part Number	List Price
			Min	Max DC 22005 Coil	Max AC 22003 Coil			
1/2	18	67	0		5	NBR FKM EPDM	NOPK15NS + voltage NOPK15VS + voltage NOPK15ES + voltage	£138.02
				5		NBR FKM EPDM	NOPK15N-5 + voltage NOPK15V-5 + voltage NOPK15E-5 + voltage	
3/4	28	163	0		5	NBR FKM EPDM	NOPK20NS + voltage NOPK20VS + voltage NOPK20ES + voltage	£176.24
				4		NBR FKM EPDM	NOPK20N-5 + voltage NOPK20V-5 + voltage NOPK20E-5 + voltage	
1	28	183	0		5	NBR FKM EPDM	NOPK25NS + voltage NOPK25VS + voltage NOPK25ES + voltage	
				4		NBR FKM EPDM	NOPK25N-5 + voltage NOPK25V-5 + voltage NOPK25E-5 + voltage	

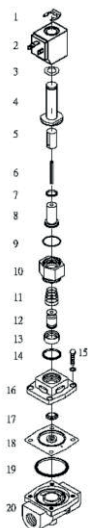
OPTIONS							
IP65 Coil & Connector PG9 – DIN 43650 A Silver Shading Ring for AC Coil (Not suitable for DC or ATEX EExmII T4 coils) ATEX EExmII T4 II 2G & 2D IP65 T130°C (AC ~3 Bar DC= 1 Bar)  (Without Shading Ring) NPT Thread							<b>Included Included</b> <b>+£101.68</b> <b>+10%</b>

ELECTRICAL DATA							
Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 230 - 380 (50 or 60 Hz)	22003	23VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
~	12 - 24 - 48 (DC)	22005	18.5 Watts				

CONSTRUCTION							
Body: Poly Acetate Tube and internal parts: Stainless steel Seals and gaskets: EPDM (Optional FKM or NBR) Moulded coil: Resin							

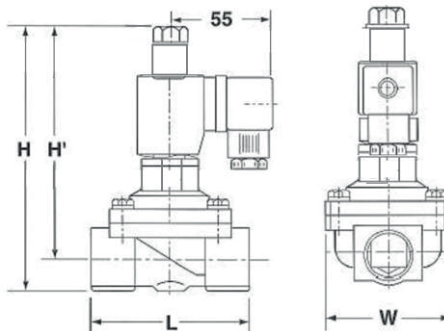
REPAIR KIT							
Diaphragm seal				SP + Valve Part Number -DIAPHRAGM			
Coil				Coil size (22003 or 22005) + voltage			

OVERALL DIMENSIONS							
--------------------	--	--	--	--	--	--	--



No	Description
1	Coil Clip
2	Coil
3	Wave Washer
4	Core Tube
5	Armature
6	Push Bar
7	Base O Ring
8	Armature Base
9	Socket O Ring
10	Socket
11	Pillar Spring
12	Pillar
13	Spring Seat
14	Socket O Ring
15	Bonnet Bolt
16	Bonnet
17	Diaphragm Spring
18	Diaphragm
19	Body O Ring
20	Valve Body

Model	NOPK15	NOPK20	NOPK25
Port	1/2	3/4	1
L	71	90	
H	114	124	
H1	98	104	
W	56	76	
Kg	0.5	0.7	0.6



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

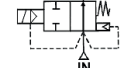














Plastic  
2/2  
N/Open

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

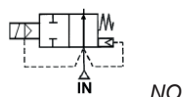
EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

<div>Media: air – water</div> <div>Pressure range: 0.2 to 10 Bar max</div> <div>Media temperature: +90°C max</div> <div>Ambient temperature: +40°C max</div> <div>Media viscosity: 40 centistokes max</div> <div>Mounting: any position</div> <div>Weight (including coil): 155 g</div> <div>Open / Close Time: 25mSec Max</div> <div></div> <div>IN</div> <div>NO</div>			<div>2/2 NYLON</div> <div>1/4–3/4 + Push Fit WRAS</div> <div>NORMALLY OPEN</div> <div>2 WAY SERVO ASSISTED</div> <div>0.2 – 10 Bar</div> <div>TYPE 115BA</div>				
PRESSURE							
Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP		Picture	Part Number	List Price
		Kv Ltr/ min	Min	Max			
1/4 Male	11.0	19.5	0.2	10		3115BA + voltage	£43.21
1/4 Female	11.0	19.5	0.2	10		3105BA + voltage	
3/8 Male	11.0	27.5	0.2	10		4115BA + voltage	
3/8 Female	11.0	27.5	0.2	10		4105BA + voltage	
1/2 Male	11.0	28.3	0.2	10		5115BA + voltage	
1/2 Female	11.0	28.3	0.2	10		5105BA + voltage	
3/4 Male	11.0	28.3	0.2	10		6115BA + voltage	£47.71
6mm Push Fit	11.0	19.5	0.2	10		1136BA + voltage	
8mm Push Fit	11.0	19.5	0.2	10		1145BA + voltage	
10mm Push Fit	11.0	27.5	0.2	10		1156BA + voltage	
15mm Push Fit	11.0	28.3	0.2	10		1175BA + voltage	
1/4 Push Fit	11.0	19.5	0.2	10		1186BA + voltage	
3/8 Push Fit	11.0	27.5	0.2	10		1196BA + voltage	
OPTIONS							
IPX0 coil, Anti Water Hammer 30cm flying lead wire coil P024000001 – 24vDC PWM pulse width modulating circuit board, 50% heat & 60% power reduction for 100% duty cycle							Included +10% +£58.14
ELECTRICAL DATA							
Voltage (-10% + 15%) Media under 60°C 100% 60°C+ (60% Duty 2 min ON - 3 min OFF)		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
~	12 - 24 - 110 - 230		Inrush	Holding			
=	12 - 24	COIL-R	11VA	8 VA	Insulation Class II Windings Class F	IPX 0	Faston Tags
=	12 – 24		6.2 Watts				
	12 – 24	COIL-R-LP	3.6 Watts				
CONSTRUCTION							
Body: White glass filled food grade nylon or Black glass filled nylon non-food grade Tube and internal parts: stainless steel, Seals and gaskets: NBR, Moulded coil: resin							
REPAIR KIT							
Coil				COIL-R + voltage			
APPROVALS							
Complies with EN55014 ED. 1993, EN60730-2-8-1 Ed. 1995, WRc approved materials throughout as per cert. 7067							
OVERALL DIMENSIONS							



Media: slight acid – alkali – water – gas  
 Pressure range: 0.5 to 10 Bar max  
 Media temperature: -10°C to 100°C  
 Ambient temperature: +5°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright



# 2/2 Delrin

## 3/8 – 1 1/2

### NORMALLY OPEN

### 2 WAY SERVO ASSISTED

### 0.5 – 10 Bar

## TYPE NOPA



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure Rating (Bar) ΔP		Seals	Max Media Temp. °C	Part Number	List Price
			Min	Max				
3/8	15	70	0.5	10	FKM	80	NOPA14V + voltage	£159.36
					EPDM	80	NOPA14E + voltage	£135.30
					NBR	40	NOPA14N + voltage	£135.30
1/2	15	70	0.5	10	FKM	80	NOPA15V + voltage	£159.36
					EPDM	80	NOPA15E + voltage	£135.30
					NBR	40	NOPA15N + voltage	£135.30
3/4	20	95	0.5	10	FKM	80	NOPA20V + voltage	£180.40
					EPDM	80	NOPA20E + voltage	£165.36
					NBR	40	NOPA20N + voltage	£165.36
1	25	175	0.5	10	FKM	80	NOPA25V + voltage	£180.40
					EPDM	80	NOPA25E + voltage	£165.36
					NBR	40	NOPA25N + voltage	£165.36
1 1/4	35	390	0.5	10	FKM	80	NOPA35V + voltage	£282.62
					EPDM	80	NOPA35E + voltage	£267.60
					NBR	40	NOPA35N + voltage	£267.60
1 1/2	35	410	0.5	10	FKM	80	NOPA40V + voltage	£282.62
					EPDM	80	NOPA40E + voltage	£267.60
					NBR	40	NOPA40N + voltage	£267.60

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL & CSA Approved Coil & IP65 Connector PG11 – DIN 43650 A

Silver Shading Ring (NOPAXXX + S + voltage)

ATEX 22003EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C

\* VST, CR, ECO, HNBR or Hypalon Seals

Included

+£36.08

+£101.68

+10%

#### ELECTRICAL DATA

ELECTRICAL DATA							
Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connection
			Inrush	Holding			
~	24 - 110 - 230 - 380 (50 or 60 Hz)	WPG2	18.7VA	15.3VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 – 48 (DC)		18 Watts				

#### CONSTRUCTION

Body: Poly-acetate

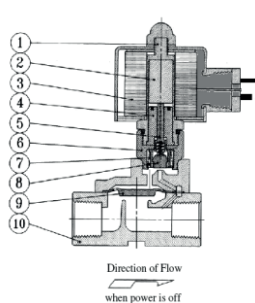
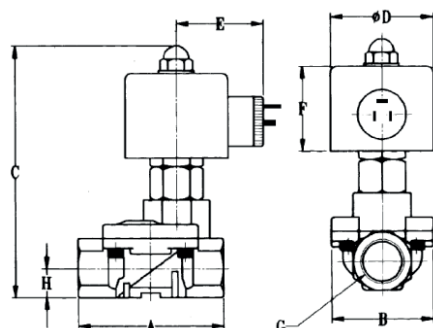
Tube and Spring: 304 Stainless Armature: 430F Stainless other internal parts 316 Stainless

Moulded coil: Resin

#### REPAIR KIT

Diaphragm	SP + Valve Part Number -DIAPHRAGM
Coil	WPG2 + voltage
Armature + seal	SP + Valve Part Number -ARMATURE

#### OVERALL DIMENSIONS



1	Tube	Stainless
2	Slide Block	Stainless
3	Coil	Brass Wire
4	Armature Core	Stainless
5	Sliding link	Stainless
6	Joint	Stainless
7	Spring	Stainless
8	Seals	NBR, EPDM, FKM
9	Valve Body	P.O.M.

Model	A	B	C	D	E	F	Kg
NOPA14	73.5	48	128	40	65	38	1.32
NOPA15	73.5	48	128	40	65	38	1.32
NOPA20	104	90	147	40	65	38	1.6

Model	A	B	C	D	E	F	Kg
NOPA25	104	90	147	40	65	38	1.65
NOPA35	120	120	170	40	65	38	1.8
NOPA40	132	120	170	40	65	38	1.85

Brass  
 2/2  
 N/Closed  
 0 Rated

Brass  
 2/2  
 N/Closed  
 Pilot

Brass  
 2/2  
 N/Open  
 0 Rated

Stainless  
 2/2  
 N/Closed  
 0 Rated

Stainless  
 2/2  
 N/Closed  
 Pilot

Stainless  
 2/2  
 N/Open

Steam

Plastic  
 2/2  
 N/Closed

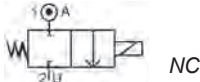

Plastic  
 2/2  
 N/Closed

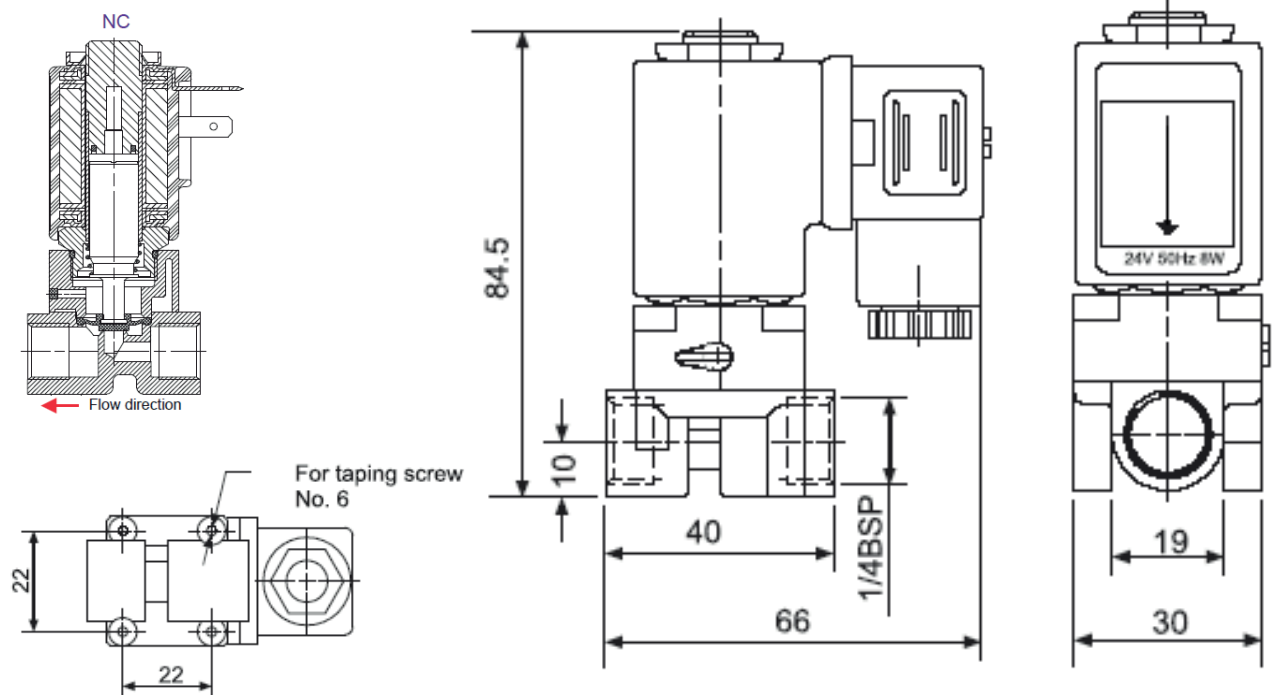
Plastic  
 Acids/  
 Alkali

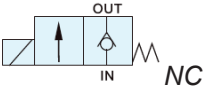

2/2  
 Latching  
 Bi-Stable

EN161  
 Gas  
 Valves


Pressure  
 Reducing  
 Valves

<p>Media: acid – detergent – bleach - vinegar Pressure range: 0 to 2.5 Bar max Media temperature: -15°C to 90°C max Ambient temperature: -10°C to +50°C Media viscosity: 50 centistokes max Mounting: any position Weight (including coil): 200g</p> 				<p><b>2/2 PPA</b> <b>1/4 DRY – ARMATURE</b> <b>NORMALLY CLOSED</b> <b>2 WAY DIRECT ACTING</b> <b>0 – 2.5 BAR</b> <b>TYPE PPA1</b></p>					
<b>PRESSURE</b>									
<b>Ø Port BSP</b>	<b>Ø Orifice (mm)</b>	<b>Flow Kv Ltr/ min</b>	<b>Pressure Rating (Bar) ΔP</b>				<b>Seals</b>	<b>Part Number</b>	<b>List Price</b>
<b>1/4</b>	4.5	5	0	2.5	2	0.4	EPDM	PPA1EPDM + voltage	<b>£77.57</b>
	4.5	5	0	2.5	2	0.4	FKM	PPA1FKM + voltage	
	4.5	5	0	2.5	2	0.4	SILICONE	PPA1Silicone + voltage	
<b>OPTIONS</b>									
IP65 Coil & Connector PG9 – DIN 43650 A Manual Over ride									<b>Included Included</b>
<b>ELECTRICAL DATA</b>									
<b>Voltage (-10% + 15%) Continuous duty 100%</b>			<b>Coil</b>	<b>Power Consumption</b>		<b>Insulation class</b>	<b>Enclosure</b>	<b>Electrical connections</b>	
				Inrush	Holding				
~ 24 - 48 - 110 - 240 (50 or 60 Hz)			11630	26VA 14VA		F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110	
= 6 - 12 - 24 - 48 (DC)				10 Watts					
~ 24 - 48 - 110 - 240 (50 or 60 Hz)			11630/55	16VA 12VA					
= 12 - 24 - 48 (DC)				5.5W					
<b>CONSTRUCTION</b>									
Body: Reinforced PPA (Polyphthalamide) Tube and internal parts: Stainless steel (Dry Armature) Seals and gasket: EPDM (Optional FKM & SILICONE) Moulded coil: Resin									
<b>REPAIR KIT</b>									
Coil					11630 or 11630/55 + voltage				
Complete plunger					SP + Valve Part Number -ARMATURE				
Diaphragm					SP + Valve Part Number -DIAPHRAGM				
<b>OVERALL DIMENSIONS</b>									



<p>Media: acid – alkali - water –light oil (Not suitable for vacuum) Pressure range: 0 to 3 Bar max Media temperature: +5°C to +40°C max Ambient temperature: +5°C to +40°C Media viscosity: 50 centistokes max Mounting: any position</p> 	<p><b>2/2 PTFE</b> <b>3/8 – 1/2 DRY-ARMATURE</b> <b>NORMALLY CLOSED &amp; OPEN</b> <b>2 WAY ZERO RATED</b> <b>0 – 3 Bar</b> <b>TYPE PE220 + PE220N</b></p>	
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PRESSURE							
Ø Port BSP	Orifice Ø (mm)	Coil	Flow Kv Ltr/min	Function	Pressure Rating (Bar) ΔP		List Price
					Min	Max	
3/8	5.0	22003	7.1	2/2 Normally Closed	0.1	1	£169.26
1/2		22003			0.1	1	
3/8		22005			0	3	£177.51
1/2		22005			0	3	
3/8		22003		2/2 Normally Open	0.1	1	£178.30
1/2		22003			0.1	1	
3/8		22005			0	3	£186.55
1/2		22005			0	3	

OPTIONS							
IP65 Coil & Connector PG9 – DIN 43650 A ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C (0.5 Bar Max) 							Included
							£101.68

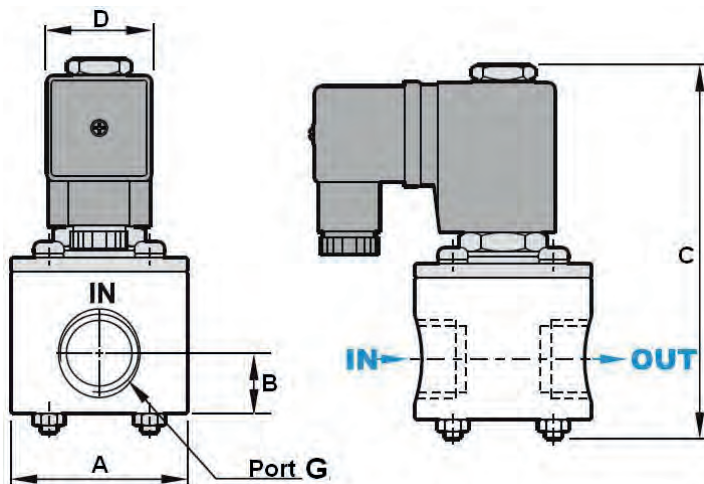
ELECTRICAL DATA								
Voltage (-10% + 10%) Continuous duty 100%			Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
				Inrush	Holding			
~	12 - 24 - 48 - 110 - 220 - 380 (50/60 Hz)		22003	22VA	17VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 (DC)			15 Watts				
~	24 - 48 - 110 - 220 - 380 (50/ 60 Hz)		22005	33VA	24VA			
=	12 - 24 - 48 – 110 – 220 (DC)			18.5 Watts				

CONSTRUCTION							
Body: PTFE (all wetted parts in contact with media PTFE) Tube and internal parts: Stainless steel (Dry armature) Seal: PTFE encapsulated NBR Test pressure: 1.5 Bar H series 4.5 Bar							

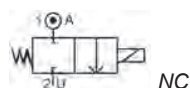
REPAIR KIT							
Coil				Coil size (22003 or 22005) + voltage			
Diaphragm				SP + Valve Part Number - DIAPHRAGM			

OVERALL DIMENSIONS							
--------------------	--	--	--	--	--	--	--

Model	PE22003 (mm)	PE22004 (mm)
Port	3/8	1/2
A	50	50
B	21	21
C	105.5	105.5
D	30/36	30/36
Kg	0.44	0.44



Media: strong acid – strong alkali  
(Not suitable for vacuum)  
Pressure range: 0 to 5 Bar max  
Media temperature: +5°C to +80°C max  
Ambient temperature: +5° to +40°C  
Media viscosity: 50 centistokes max  
Mounting: coil upright



# 2/2 PTFE

## 1/4 – 1/2 DRY-ARMATURE

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 5 Bar

## TYPE SVC



### PRESSURE

Ø Port BSP	Orifice Ø (mm)	Coil	Flow Kv Ltr/min	Pressure Rating (bar) ΔP		Part Number	List Price
				Min	Max		
1/4	3	RF1	4.3	0	2	SVC-202-3T + voltage	£171.38
	6	RF1	9.1	0	0.5	SVC-202-6T + voltage	
3/8	3	RF2	4.3	0	5	SVC-203-3T + voltage	£279.62
	6	RF2	9.1	0	1	SVC-203-6T + voltage	
1/2	8	RF3	18	0	1	SVC-204-8T + voltage	£511.14
	12	RF3	35	0	0.5	SVC-204-12T + voltage	

### OPTIONS

IP67 UL + CSA Approved Coil + IP65 LED Connector PG11 (SVC 202 + 203 only)  
ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C (Not available SVC204) (Pressure Reduced by 50%)  
NPT thread  
Other custom made orifice, coil and pressure options available upon request

+5%  
+£101.68  
+10%

### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	RF1	11.2VA	8.2VA	F 155°C	IP54	30 cm flying lead
=	12 - 24 (DC)		12 Watts				
~	24 - 110 - 230 (50 or 60 Hz)	RF2	30VA	18.2VA			
=	12 - 24 (DC)		18 Watts				
~	110 - 220 (50 or 60 Hz)	RF3	29VA	17.6VA			
=	12 - 24 (DC)		14.4 Watts				

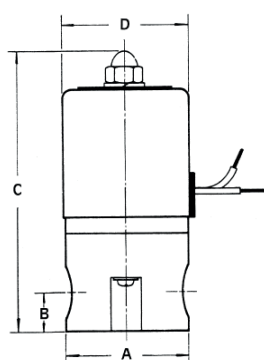
### CONSTRUCTION

Body: PTFE (all wetted parts PTFE) other parts stainless steel  
Tube and internal parts: Stainless steel (Dry armature)  
Seal: PTFE encapsulated FKM

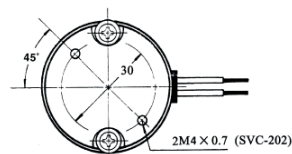
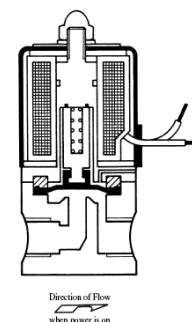
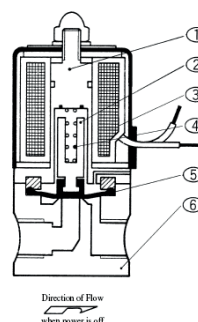
### REPAIR KIT

Coil	Coil size (RF1 or RF2 or RF3) + voltage
Diaphragm	SP + Valve Part Number -DIAPHRAGM

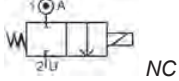
### OVERALL DIMENSIONS



Model	SVC202	SVC203	SVC204
Port	1/4	3/8	1/2
A	40	50	70
B	12.5	13.5	19
C	89	120	155
D	42	52	60
Kg	0.28	0.48	1.3



Media: vacuum - acid-detergent-bleach  
 Pressure range: 0 to 0.7 bar max  
 Media temperature: +5°C to 50°C max  
 Ambient temperature: -10° to +40°C  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Weight (including coil): 300 g  
 Opening or Closing time: 20 mSec Max



# 2/2 PVC 1/2 DRY- ARMATURE NORMALLY CLOSED 2 WAY DIRECT ACTING 0 – 0.7 Bar TYPE C40



## PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP			Seals	Part Number	List Price
		Kv Ltr/Min	Min	Max ~10 w	Max =10W			
1/2	8.0	19	0	0.7	0.4	FKM EPDM	C4012 + seal + voltage	£175.89
	8.0	19	0	-1	-0.4	FKM EPDM	C4011 + seal + voltage	

## OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A  
 NPT Thread

Included  
+10%

## ELECTRICAL DATA

Voltage (+10% -5%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 230 (50 or 60 Hz)	11630	26VA	14VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	6 - 12 - 24 - 48		10 Watts				

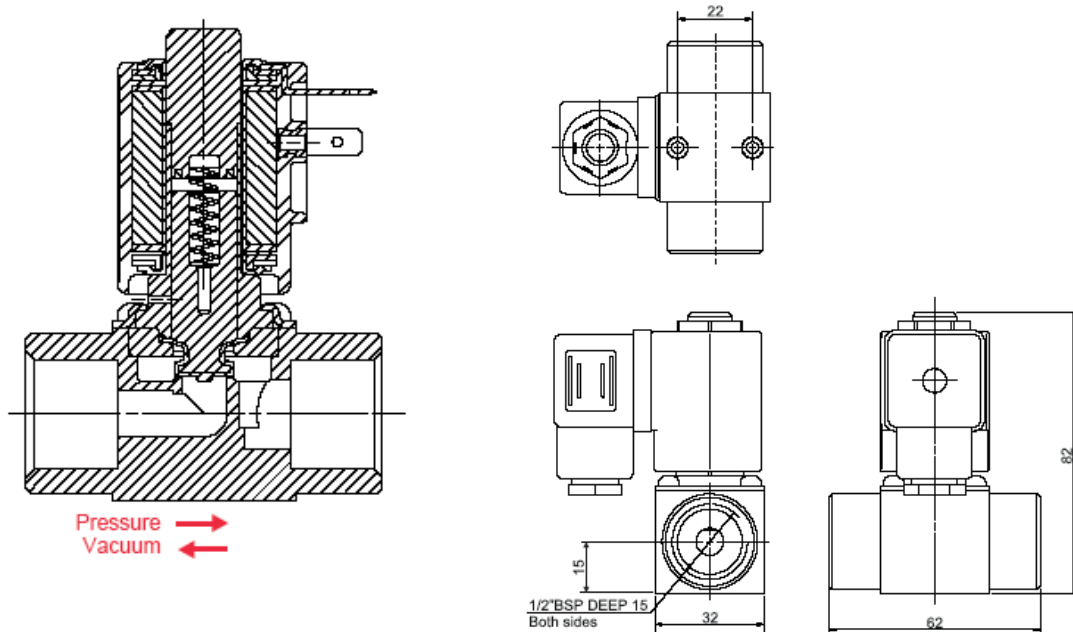
## CONSTRUCTION

Body: PVC  
 Tube and internal parts: Stainless steel  
 Seals and gasket: FKM or EPDM  
 Moulded coil: Resin

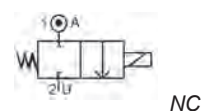
## REPAIR KIT

Coil	11630 or 11630/55 + voltage
Armature	SP + Valve Part Number -ARMATURE
Diaphragm	SP + Valve Part Number - DIAPHRAGM

## OVERALL DIMENSIONS



Media: Strong Acid – Strong Alkali  
 Pressure range: 0 to 1 Bar max  
 Media temperature: -5°C to +80°C max  
 Ambient temperature: -10°C to +40°C max  
 Media viscosity: 20 centistokes max  
 Mounting: any position



# 2/2 PVC + PTFE

## 1/4 – 1/2 DRY- ARMATURE

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 1 Bar

## TYPE UDC & TF



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Coil	Body	Pressure Rating (Bar)			Part Number	List Price
		Cv			Min	Max AC	Max DC		
1/4	6.5	0.28	WPA2	PVC	0	1	0.7	UDC8 + voltage	£166.10
3/8	6.5	0.28			0	1	0.7	UDC10 + voltage	
1/2	6.5	0.28			0	1	0.7	UDC15 + voltage	
1/4	6.5	0.28		PTFE	0	0	1	UDC8TF + voltage	£235.42
3/8	6.5	0.28			0	0	1	UDC10TF + voltage	
1/2	6.5	0.28			0	0	1	UDC15TF + voltage	
3/4	13	4.0	22514S		0	0	0.5	UDC20TF + voltage	
1	13	4.0		0	0	0.5	UDC25TF + voltage	£435.67	

#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A (1/4 3/8 & 1/2), 3/4 & 1" IP54 flying lead wire

Included

#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	WPA2	40VA	24.2VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 (DC)		18 Watts				
~	24 - 110 - 230 (50 or 60 Hz)	22514S	116VA	72.6VA	N200°C	IP54	30 cm flying lead
=	12 - 24 (DC)		27 Watts				

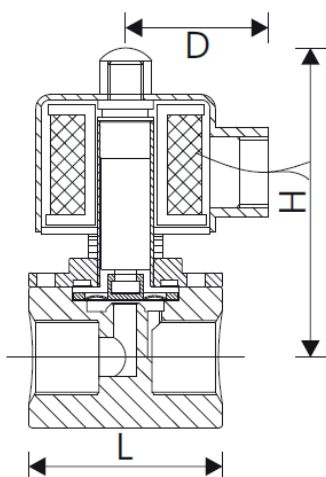
#### CONSTRUCTION

Body: UDC PVC ; UDC-TF PTFE (Dry Armature)  
 Tube: stainless steel, armature 430F stainless steel  
 Shading ring: copper  
 Seals and gaskets: PTFE  
 Moulded coil: Resin  
 Not suitable for Vacuum

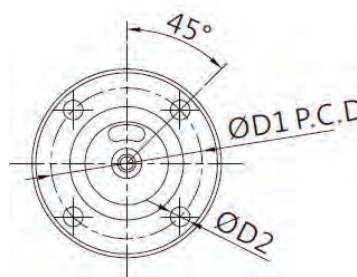
#### REPAIR KIT

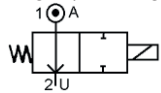

Coil	WPA2 or 22514S + voltage
Core tube & armature assembly	SP + Valve Part Number -ARMATURE

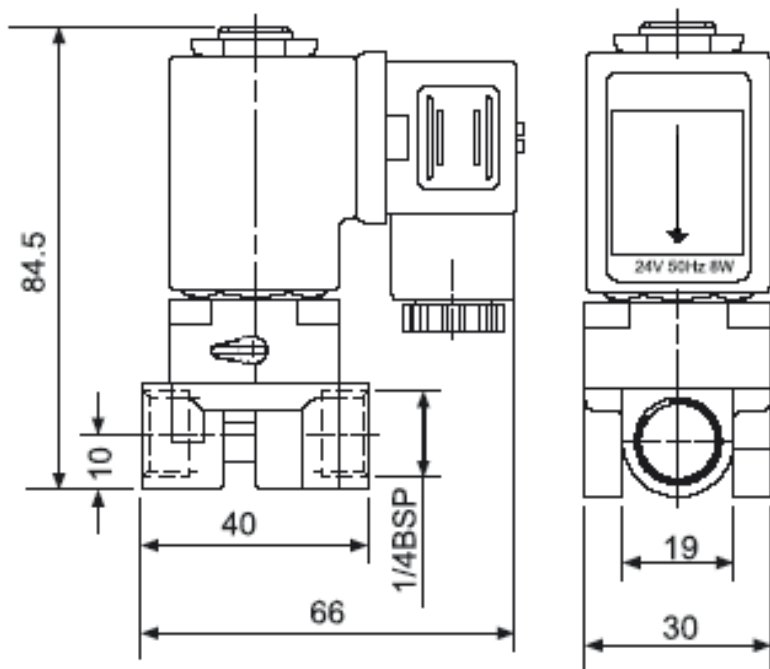
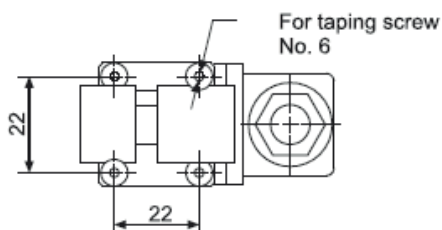
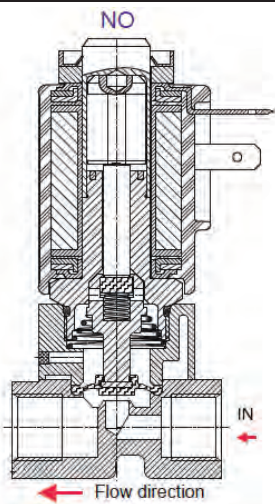
#### OVERALL DIMENSIONS



Model	L	H	D	D1	D2	Kg
UDC8	50	90	48	45	5.2	0.53
UDC10	50	90	48	45	5.2	0.52
UDC15	55	93	48	45	5.2	0.58
UDC20	76	119	58	45	5.2	1.76
UDC25	76	119	58	45	5.2	1.73



<p>Media: acid – detergent – bleach - vinegar Pressure range: 0 to 1 Bar max Media temperature: -15 °C to +90 °C max Ambient temperature: -10 °C to +50 °C Media viscosity: 50 centistokes max Mounting: any position Weight (including coil): 200g</p> <div><p>NO</p></div>			<p><b>2/2 PPA</b> <b>1/4 DRY - ARMATURE</b> <b>NORMALLY OPEN</b> <b>2 WAY DIRECT ACTING</b> <b>0 – 1 BAR</b> <b>TYPE PPA2</b></p>						
PRESSURE									
Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP				Seals	Part Number	List Price
		Kv Ltr/ min	Min	Max 10W	Max ~5.5W	Max =5.5W			
1/4	4.5	5	0	1	0.5	0.5	EPDM	PPA2-EPDM + voltage	£98.49
	4.5	5	0	1	0.5	0.5	FKM	PPA2-FKM + voltage	
	4.5	5	0	1	0.5	0.5	SILICONE	PPA2-SILICONE + voltage	
OPTIONS									
IP65 Coil & Connector PG9 – DIN 43650 A									Included
ELECTRICAL DATA									
Voltage (-10% + 15%) Continuous duty 100%			Coil	Power Consumption		Insulation class	Enclosure	Electrical connections	
				Inrush	Holding				
~ 24 - 48 - 110 - 240 (50 or 60 Hz)			11630	26VA	14VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110	
= 6 - 12 - 24 - 48 (DC)				10 Watts					
~ 24 - 48 - 110 - 240 (50 or 60 Hz)			11630/55	16VA	12VA				
= 12 - 24 - 48 (DC)				5.5W					
CONSTRUCTION									
Body: Reinforced PPA (Polyphthalamide) Tube and internal parts: Stainless steel (Dry Armature) Seals and gasket: EPDM (Optional FKM & SILICONE) Moulded coil: Resin									
REPAIR KIT									
Coil					30 or 30/55 + voltage				
Armature					SP + Valve Part Number – ARMATURE				
Diaphragm					SP + Valve Part Number - DIAPHRAGM				
OVERALL DIMENSIONS									



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – light oil - vacuum  
Pressure range: 0 to 3.5 Bar max  
Media temperature: 120°C max  
Ambient temperature: -10°C to +50°C max  
Media viscosity: 50 centistokes max  
Mounting: any position  
Opening / Closing time: 20 mSec Max

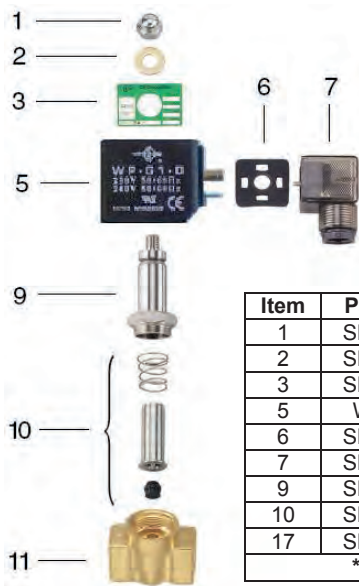


LATCHING

# 2/2 Brass 1/8 – 1/2 LATCHING 2 WAY DIRECT ACTING 0 – 3.5 Bar TYPE LAD612



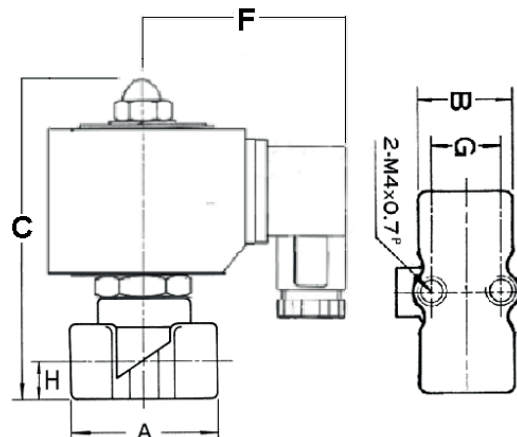
PRESSURE									
Ø Port BSP	Ø Orifice (mm)	Coil	Flow	Pressure Rating (Bar)		Seals	Part Number	List Price	
			Kv Ltr/min	Min	Max				
1/8	3.0	WPG1	4	0	3.5	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C	LAD6A + seal + voltage	£54.12	
	4.0		5.5	0	2.5		LAD6B + seal + voltage		
	5.0		7.2	0	1.8		LAD6C + seal + voltage		
1/4	3.0		4	0	3.5		LAD8A + seal + voltage		
	4.0		5.5	0	2.5		LAD8B + seal + voltage		
	5.0		7.2	0	1.8		LAD8C + seal + voltage		
3/8	4.0	WPG2	5.5	0	3.5		*PTFE +120°C	LAD10A + seal + voltage	£99.22
	6.0		10.5	0	1.8		*VST +120°C	LAD10B + seal + voltage	
	8.0		16.2	0	0.7		LAD10C + seal + voltage		
1/2	6.0		10.5	0	1.8	LAD12A + seal + voltage	£105.24		
	8.0		16.2	0	0.7	LAD12B + seal + voltage			
OPTIONS									
IP67 CSA + UL Approved Coil & IP65 LED Connector PG11 – DIN 43650 A * PTFE, VST, CR, ECO, HNBR and Hypalon Manual Over Ride AD8 – AD10								Included +£15.37 +£45.10	
ELECTRICAL DATA									
Voltage (-10% + 10%) Continuous duty 100%				Coil	Power Consumption	Insulation class	Enclosure	Electrical connections	
=	12 - 24 (DC)			WPG1	12 Watts	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110	
=	12 - 24 (DC)			WPG2	18 Watts				
CONSTRUCTION									
Body: Brass Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless No Shading Ring Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon) Moulded coil: Resin									
REPAIR KIT									
Coil					WPG1 OR WPG2 + voltage				
Armature + Seal					SP210 + valve part number				
OVERALL DIMENSIONS									



Model	A	B	C	F*	G	H	Kg
LAD8	41	19	89	63	15	10.5	0.47
LAD10	50	25	90	65	15	11.7	0.73
LAD12	55	27	91	65	17	13	0.78

Item	Part No	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Nameplate
5	WPG*	Coil
6	SP206-*	Gasket
7	SP207-*	Connector
9	SP209-*	Core Tube
10	SP210-*	Armature Assembly
17	SP211-*	Valve Body

\* = Valve Part Number



Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 42 Bar max  
 Media temperature: 120°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Opening / Closing time: 20 mSec Max



## 2/2 Brass

### 1/8"

### LATCHING

### 2 WAY DIRECT ACTING

### 0 – 42 Bar

## TYPE LAD6000



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Coil	Flow	Pressure Rating (Bar)		Seals	Part Number	List Price
			Kv Ltr/min	Min	Max			
1/8	1.2	WPG1	1.1	0	21	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C	LAD6012 + seal + voltage	£66.15
	1.6		1.5	0	14		LAD6016 + seal + voltage	
	2.0		1.8	0	7		LAD6020 + seal + voltage	
	1.2	WPG2	1.1	0	42	PTFE +120°C VST +120°C	LAD6112 + seal + voltage	£102.22
	1.6		1.6	0	21		LAD6116 + seal + voltage	
	2.0		1.8	0	10		LAD6120 + seal + voltage	
	3.0		4.3	0	7		LAD6130 + seal + voltage	
	4.0		9.7	0	4.2		LAD6140 + seal + voltage	
	5.0		10.7	0	3.5		LAD6150 + seal + voltage	

#### OPTIONS

IP67 UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A

\* PTFE, VST, CR, ECO, HNBR or Hypalon Seals

Manual Over Ride

Other custom made options available upon request

Included

+£15.37

+£45.10

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption	Insulation class	Enclosure	Electrical connections
=	12 – 24 (DC)	WPG1	12 Watts	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 – 24 (DC)	WPG2	18 Watts			

#### CONSTRUCTION

Body: Brass

Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless No Shading Ring

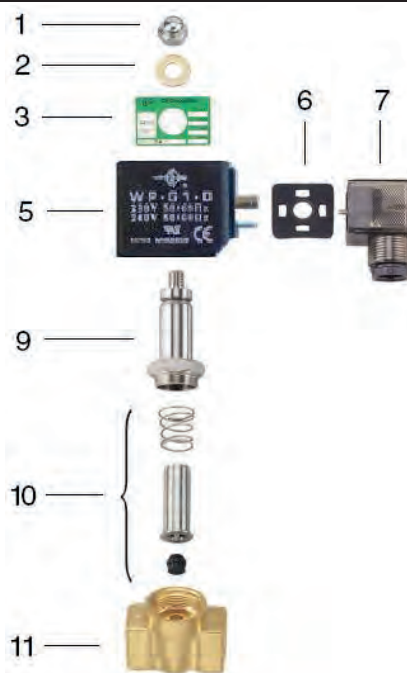
Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon)

Moulded coil: Resin

#### REPAIR KIT

Coil	Coil size (WPG1 or WPG2) + voltage
Armature	SP210 + valve part number

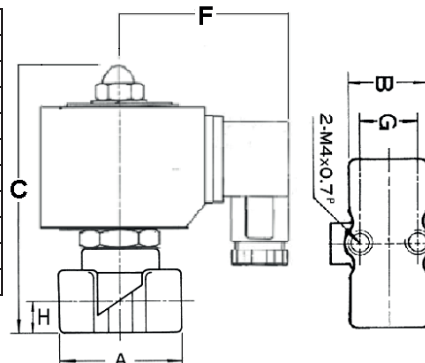
#### OVERALL DIMENSIONS



Model	A	B	C	F*	G	H	Kg
6012-6020	41	19	85	63	15	10.5	0.47
6112-6150	41	19	88	65	15	10.5	0.66

Item	Part No	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Nameplate
5	WPG-*	Coil
6	SP206-*	Gasket
7	SP207-*	Connector
9	SP209-*	Core Tube
10	SP210-*	Armature Assembly
17	SP211-*	Valve Body

\* = Valve Part Number



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – light oil – vacuum  
Pressure range: 0 to 42 Bar max  
Media temperature: 120°C max  
Ambient temperature: -10°C to +50°C max  
Media viscosity: 50 centistokes max  
Mounting: any position  
Opening / Closing time: 20 mSec Max

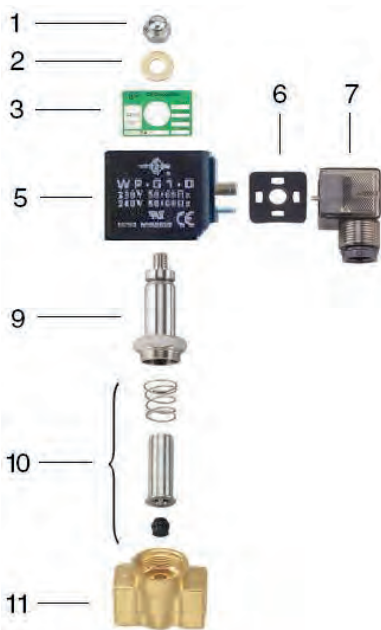


LATCHING

# 2/2 Brass 1/4" LATCHING 2 WAY DIRECT ACTING 0 – 42 Bar TYPE LAD8000

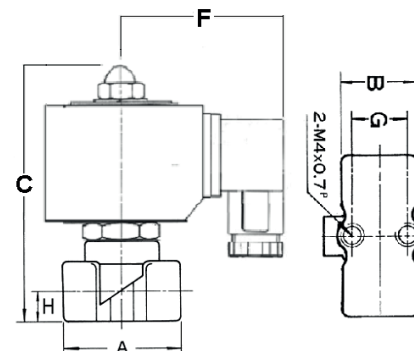


PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Coil	Flow	Pressure Rating (Bar)		Seals	Part Number	List Price
			Kv Ltr/min	Min	Max			
1/4	1.2	WPG1	1.1	0	21	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C	LAD8012 + seal + voltage	£66.15
	1.6		1.5	0	14		LAD8016 + seal + voltage	
	2.0		1.8	0	7		LAD8020 + seal + voltage	
	1.2	WPG2	1.1	0	42	*PTFE +120°C *VST +120°C	LAD8112 + seal + voltage	£102.23
	1.6		1.6	0	21		LAD8116 + seal + voltage	
	2.0		1.8	0	10		LAD8120 + seal + voltage	
	3.0		4.3	0	7		LAD8130 + seal + voltage	
	4.0		9.7	0	4.2		LAD8140 + seal + voltage	
	5.0		10.7	0	3.5		LAD8150 + seal + voltage	
	OPTIONS							
IP67 UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A * PTFE, VST, CR, ECO, HNBR or Hypalon Seals Manual Over Ride Other custom made options available upon request								Included +£15.37 +£45.10
ELECTRICAL DATA								
Voltage (-10% + 10%) Continuous duty 100%				Coil	Power Consumption	Insulation class	Enclosure	Electrical connections
=	12 - 24 (DC)			WPG1	12 Watts	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
				WPG2	18 Watts			
CONSTRUCTION								
Body: Brass Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless No Shading Ring Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon) Moulded coil: Resin								
REPAIR KIT								
Coil					Coil size WPG1 or WPG2 + voltage			
Armature + Seal					SP210 + valve part number			
OVERALL DIMENSIONS								

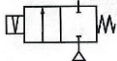


Model	A	B	C	F*	G	H	Kg
8012-8020	41	19	85	63	15	10.5	0.47
8112-8150	41	19	88	65	15	10.5	0.66

Item	Part No	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Nameplate
5	WPG-*	Coil
6	SP206-*	Gasket
7	SP207-*	Connector
9	SP209-*	Core Tube
10	SP210-*	Armature Assembly
17	SP211-*	Valve Body
* = Valve Part Number		



Media: air – water – light oil - vacuum  
 Pressure range: 0 to 4.9 Bar max  
 Media temperature: 120°C max  
 Ambient temperature: -20°C to +60°C max  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright  
 Opening / Closing Time: 50 mSec Max



LATCHING

## 2/2 Brass


### 3/8 – 2"

## LATCHING

## 2 WAY ZERO RATED

### 0 – 3.5 Bar

## TYPE LAD



PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar)		Seals	Max Media Temp. °C	Part Number	List Price
			Min	Max				
3/8	15	35	0	3.5	NBR FKM EPDM	80 120 120	LAD14N + voltage LAD14V + voltage LAD14E + voltage	£138.30
1/2	15	35	0	3.5	NBR FKM EPDM	80 120 120	LAD15N + voltage LAD15V + voltage LAD15E + voltage	£138.30
3/4	20	72	0	3.5	NBR FKM EPDM	80 120 120	LAD20N + voltage LAD20V + voltage LAD20E + voltage	£153.34
1	25	183	0	3.5	NBR FKM EPDM	80 120 120	LAD25N + voltage LAD25V + voltage LAD25E + voltage	£210.46
1 1/4	35	400	0	3.5	NBR FKM EPDM	80 120 120	LAD35N + voltage LAD35V + voltage LAD35E + voltage	£297.66
1 1/2	35	400	0	3.5	NBR FKM EPDM	80 120 120	LAD40N + voltage LAD40V + voltage LAD40E + voltage	£297.66
2	51	580	0	2.5	NBR FKM EPDM	80 120 120	LAD50N + voltage LAD50V + voltage LAD50E + voltage	£565.25

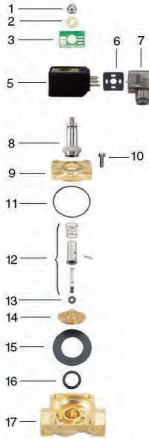
OPTIONS								
IP67 UL & CSA Approved Coil & IP65 LED Connector PG11 DIN 43650A NPT Thread Manual Over Ride Base Mounted Screw T Bar for AD series * VST, CR, ECO, HNBR and Hypalon								Included +10% +£105.24 +10%

ELECTRICAL DATA						
Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption	Insulation class	Enclosure	Electrical connections
=	12 – 24 (DC)	WPG2	18 Watts	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110

CONSTRUCTION						
Body: Brass Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless No Shading Ring Seals and gaskets: NBR (Optional EPDM, NBR, SILICONE, VST, CR, ECO, HNBR and Hypalon) Moulded coil: Duroplast / Thermo set resin						

REPAIR KIT	
Diaphragm seal	SP215 + Valve Part Number
Coil	WPG2 + voltage

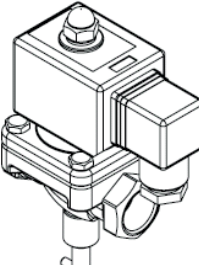
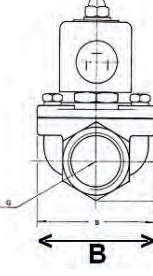
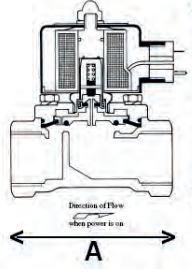
OVERALL DIMENSIONS	
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No.	Part No	Description
1	SP201*	Nut
2	SP202*	Washer
3	SP203*	Nameplate
5	SP205*	Coil
6	SP206*	Gasket
7	SP207*	Connector
8	SP208*	Core Tube
9	SP209*	Valve Bonnet
10	SP210*	Bolt
11	SP211*	Bonnet O Ring
12	SP212*	Armature Parts
13	SP213*	Diaphragm Base
14	SP214*	Diaphragm Base
15	SP215*	Diaphragm
16	SP216*	Base O Ring
17	SP217*	Valve Body

\* = Valve Part Number

Model	AD14 AD15	AD20	AD25	AD35 AD40	AD50
Port R	1/2	3/4	1	1 1/2	2
A	75	85	100	120	150
B	52	60	70	90	120
C	103	114	120	140	160
Kg	1.03	1.24	1.51	2.77	4.81

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

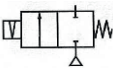
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – light oil - steam  
Pressure range: 0 - 4.9 or 0.5 - 20 Bar  
Media temperature: +200°C Max  
Ambient temperature: -20°C to +60°C  
Media viscosity: 50 centistokes max  
Mounting: coil upright  
Opening / Closing 200 mSec Max



LATCHING

# 2/2 Brass


## 1/8 - 2

### LATCHING

#### 2 WAY DIRECT + SERVO ASSIST

#### 0 – 20 Bar

## TYPE LSA



PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Flow	Coil	Pressure Rating (Bar) Max ΔP			Part Number	List Price
		Kv Ltr/ min		Min	Steam	Air/ Water		
1/8	3	5.2	WPG1	0	4.9		LSA6A + voltage	£66.14
1/4	3	5.2	WPG1	0	4.9		LSA8A + voltage	£66.14
3/8	4	9.7	WPG2	0	4.9		LSA10A + voltage	£120.26
3/8	15	75	WPG2	0.5	12	20	LSA14 + voltage	£205.43
1/2	15	75	WPG2	0.5	12	20	LSA15 + voltage	£205.43
3/4	20	155	WPG2	0.5	12	20	LSA20 + voltage	£213.47
1	25	220	WPG2	0.5	12	20	LSA25 + voltage	£228.50
11/4	35	433	WPG2	0.5	12	20	LSA35 + voltage	£405.90
11/2	35	433	WPG2	0.5	12	20	LSA40 + voltage	£405.90
2	50	800	WPG2	0.5	12	20	LSA50 + voltage	£664.47

IP67 UL + CSA Approved Coil & IP65 PG11 LED Connector DIN43650A  
NPT Thread  
Stainless Steel Body, High Pressure, Flanged and other custom made options available upon request

Included  
+10%

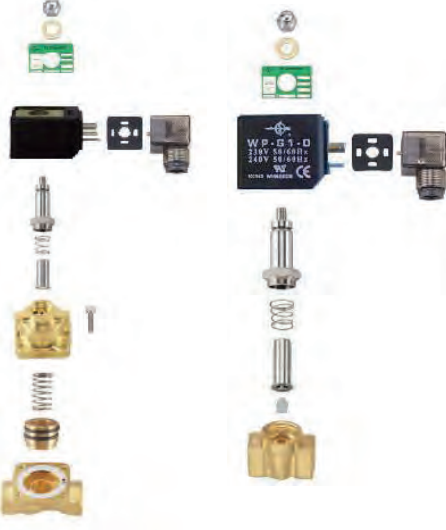
ELECTRICAL DATA						
Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption	Insulation class	Enclosure	Electrical connections
=	12 – 24 (DC)	WPG1	12 Watts	H 180°C	IP 65 With Connector	3 spades DIN 43650 DIN 40050 VDE0110
		WPG2	18 Watts			

CONSTRUCTION

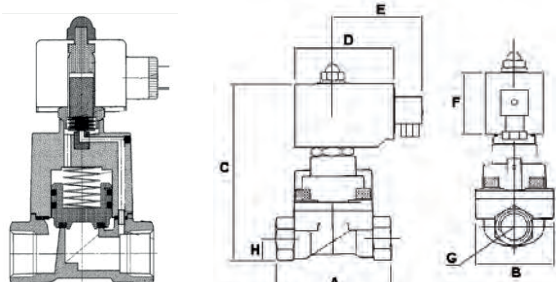
Body: Brass  
Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless No Shading Ring  
Seals and gaskets: PTFE  
Moulded coil: Resin

REPAIR KIT	
Coil	Coil size (WPG1 or WPG2) + voltage (DC Only)
Piston	SP + valve part number - PISTON
Armature assembly	SP + valve part number - ARMATURE

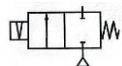
OVERALL DIMENSIONS



Model	A	B	C	D	E	F	G	H	Kg
LSA6	41	19	86	41	40	-	1/8	10.5	0.47
LSA8	41	19	86	41	40	-	1/4	10.5	0.43
LSA10	50	25	91	52	45	-	3/8	11.7	0.56
LSA14	67	48	123	67	52	42	3/8	15	1.13
LSA15	67	48	123	67	52	42	1/2	15	1.1
LSA20	96	72	149	67	52	42	3/4	25	1.53
LSA25	96	72	149	67	52	42	1	25	1.85
LSA35	120	90	168	52	45	41	1 1/4	33	3.3
LSA40	120	90	168	52	45	41	1 1/2	33	3.25
LSA50	150	122	203	52	45	41	2	40.5	6.8



Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 3.5 Bar max  
 Media temperature: 180°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Opening / Closing time: 20 mSec Max



LATCHING

# 2/2 Stainless

## 1/8 – 1/2"

### LATCHING

### 2 WAY DIRECT ACTING

### 0 – 3.5 Bar

### TYPE LADS612



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Coil	Flow	Pressure Rating (Bar)		Seals	Part Number	List Price
			Kv Ltr/min	Min	Max			
1/8	3.0	WPG1	4	0	3.5	NBR +80°C Silicone +120°C EPDM +120°C FKM+120°C	LADS6A + seal + voltage	£112.45
	4.0		5.5	0	2.5		LADS6B + seal + voltage	
	5.0		7.2	0	1.8		LADS6C + seal + voltage	
1/4	3.0	WPG1	4	0	3.5		LADS8A + seal + voltage	£112.45
	4.0		5.5	0	2.5		LADS8B + seal + voltage	
	5.0		7.2	0	1.8		LADS8C + seal + voltage	
3/8	4.0	WPG2	5.5	0	3.5	*PTFE +180°C *VST +180°C	LADS10A + seal + voltage	£178.60
	6.0		10.5	0	1.8		LADS10B + seal + voltage	
	8.0		16.2	0	0.7		LADS10C + seal + voltage	
1/2	6.0	WPG2	10.5	0	1.8		LADS12A + seal + voltage	£198.44
	8.0		16.2	0	0.7		LADS12B + seal + voltage	

#### OPTIONS

IP67 UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A  
 Manual Over Ride (LADS8 – 10)  
 \* PTFE, VST, CR, ECO, HNBR or Hypalon Seals  
 Other custom made options available upon request

Included  
 +£49.61  
 +£16.91

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption	Insulation class	Enclosure	Electrical connections
=	12 – 24 (DC)	WPG1	12 Watts	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
=	12 - 24 (DC)	WPG2	18 Watts			

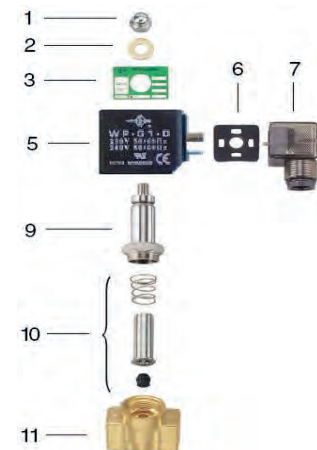
#### CONSTRUCTION

Body: Forged 316 stainless steel (CF8M)  
 Tube 304 stainless steel, armature 430F stainless steel  
 Shading ring: None  
 Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon)  
 Moulded coil: Resin

#### REPAIR KIT

Coil	Coil size (WPG1 or WPG2) + voltage
Armature + seal	SP210 + valve part number - ARMATURE

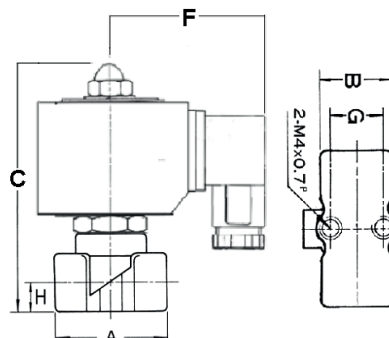
#### OVERALL DIMENSIONS



Item	Part No	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Nameplate
5	WPG*	Coil
6	SP206-*	Gasket
7	SP207-*	Connector
9	SP209-*	Core Tube
10	SP210-*	Armature Assembly
17	SP211-*	Valve Body

\* = Valve Part Number

Model	A	B	C	F	G	H	Kg
LADS8	41	19	89	63	15	10.5	0.47
LADS10	50	25	90	65	15	11.7	0.73
LADS12	55	27	91	65	17	13	0.78



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
3/2  
N/Closed

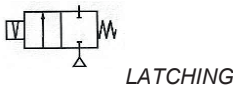
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – light oil - vacuum  
Pressure range: 0 to 42 Bar max  
Media temperature: 180°C max  
Ambient temperature: -10°C to +50°C max  
Media viscosity: 50 centistokes max  
Mounting: any position  
Opening / Closing time: 20 mSec Max



LATCHING

# 2/2 Stainless

## 1/8"

### LATCHING

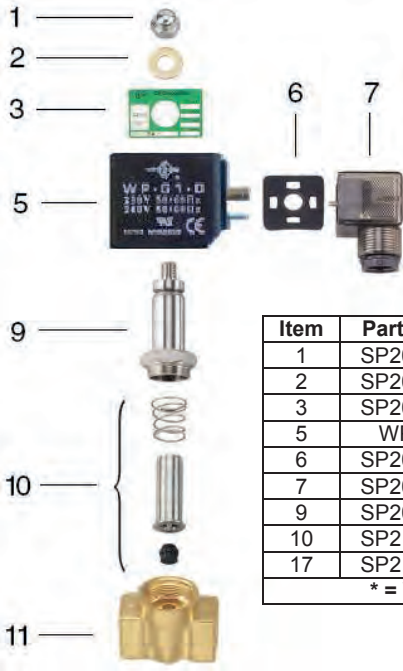
### 2 WAY DIRECT ACTING

### 0 – 42 Bar

## TYPE LADS6000



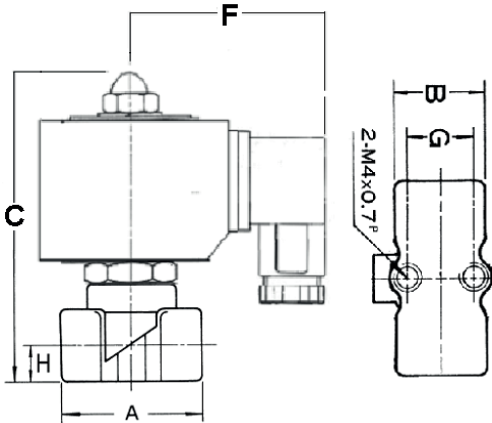
PRESSURE									
Ø Port BSP	Ø Orifice (mm)	Coil	Flow	Pressure Rating (Bar)		Seals	Part Number	List Price	
			Kv Ltr/min	Min	Max				
1/8	1.2	WPG1	1.1	0	21	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C	LADS6012 + seal + voltage	£132.29	
	1.6		1.5	0	14		LADS6016 + seal + voltage		
	2.0		1.8	0	7		LADS6020 + seal + voltage		
	1.2	WPG2	1.1	0	42	*PTFE +180°C *VST +180°C	LADS6112 + seal + voltage	£156.34	
	1.6		1.6	0	21		LADS6116 + seal + voltage		
	2.0		1.8	0	10.5		LADS6120 + seal + voltage		
	3.0		4.3	0	7		LADS6130 + seal + voltage		
	4.0		9.7	0	4.2		LADS6140 + seal + voltage		
	5.0		10.7	0	3.5		LADS6150 + seal + voltage		
	OPTIONS								
IP67 UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A * PTFE, VST, CR, ECO, HNBR or Hypalon Seals Manual Over Ride Other custom made options upon request								Included +£15.37 +£45.10	
ELECTRICAL DATA									
Voltage (-10% + 10%) Continuous duty 100%				Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
=	12 - 24 (DC)			WPG1	12 Watts		H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
				WPG2	18 Watts				
CONSTRUCTION									
Body: 316 Stainless steel Tube 304 stainless steel, armature 430F stainless steel, Shading ring None Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon) Moulded coil: Resin									
REPAIR KIT									
Coil					Coil size (WPG1 OR WPG2) + voltage				
Armature					SP210 + Valve Part Number				
OVERALL DIMENSIONS									



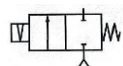
Item	Part No	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Nameplate
5	WP*	Coil
6	SP206-*	Gasket
7	SP207-*	Connector
9	SP209-*	Core Tube
10	SP210-*	Armature Assembly
17	SP211-*	Valve Body

\* = Valve Part Number

Model	A	B	C	F	G	H	Kg
6012-6020	41	19	85	63	15	10.5	0.47
6112-6150	41	19	88	65	15	10.5	0.66



Media: air – water – gas – light oil - vacuum  
 Pressure range: 0 to 42 Bar max  
 Media temperature: 180°C max  
 Ambient temperature: -10°C to +50°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Opening / Closing time: 20 mSec Max



LATCHING

# 2/2 Stainless

## 1/4"

### LATCHING

### 2 WAY DIRECT ACTING

### 0 – 42 Bar

## TYPE LADS8000



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Coil	Flow	Pressure Rating (Bar)		Seals	Part Number	List Price
			Kv Ltr/min	Min	Max			
1/4	1.2	WPG1	1.1	0	21	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C  *PTFE +180°C *VST +180°C	LADS8012 + seal + voltage	£132.29
	1.6		1.5	0	14		LADS8016 + seal + voltage	
	2.0		1.8	0	7		LADS8020 + seal + voltage	
	1.2	WPG2	1.1	0	42		LADS8112 + seal + voltage	£156.34
	1.6		1.6	0	21		LADS8116 + seal + voltage	
	2.0		1.8	0	10.5		LADS8120 + seal + voltage	
	3.0		4.3	0	7		LADS8130 + seal + voltage	
	4.0		9.7	0	4.2		LADS8140 + seal + voltage	
	5.0		10.7	0	3.5		LADS8150 + seal + voltage	

#### OPTIONS

IP67 UL + CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A

\* PTFE, VST, CR, ECO, HNBR or Hypalon Seals

Manual Over Ride

Other custom made options upon request

Included  
 +£15.37  
 +£45.10

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption	Insulation class	Enclosure	Electrical connections
= 12 - 24 (DC)		WPG1	12 Watts	H 180°C	IP 65 with connector	3 spades DIN 43650A DIN 40050 VDE 0110
		WPG2	18 Watts			

#### CONSTRUCTION

Body: 316 Stainless steel

Tube 304 stainless steel, armature 430F stainless steel

Shading ring: None

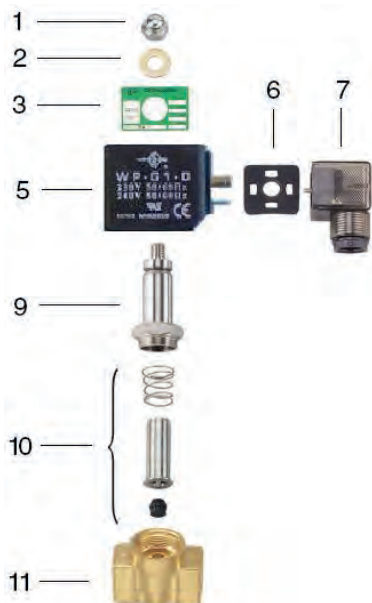
Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, PTFE, VST, CR, ECO, HNBR and Hypalon)

Moulded coil: Resin

#### REPAIR KIT

Coil	Coil size (WPG1 or WPG2) + voltage
Armature + Seal	SP210 + Valve Part Number

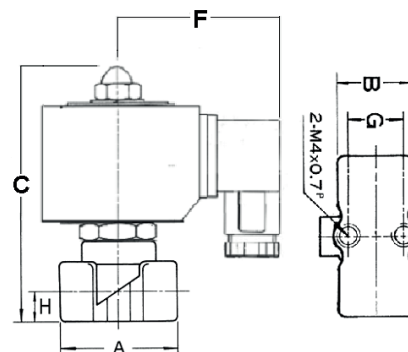
#### OVERALL DIMENSIONS



Model	A	B	C	F	G	H	Kg
8012-8020	41	19	85	63	15	10.5	0.47
8112-8150	41	19	88	65	15	10.5	0.66

Item	Part No	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Nameplate
5	WPG-*	Coil
6	SP206-*	Gasket
7	SP207-*	Connector
9	SP209-*	Core Tube
10	SP210-*	Armature Assembly
17	SP211-*	Valve Body

\* = Valve Part Number



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

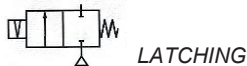
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: slight acid – alkali - water – vacuum  
Pressure range: 0 to 3.5 Bar max  
Media temperature: 180°C max  
Ambient temperature: -10°C to +60°C max  
Media viscosity: 50 centistokes max  
Mounting: coil upright  
Opening Closing time: 150 mSec Max



# 2/2 Stainless

## 3/8 – 2"

### LATCHING

### 2 WAY ZERO RATED

### 0 – 3.5 Bar

## TYPE LADS



PRESSURE								
Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure Rating (Bar)		Seals	Max Media Temp °C	Part Number	List Price
			Min	Max				
1/2	15	40	0	3.5	FKM EPDM NBR SILICONE	120 120 80 120	LADS15V + voltage LADS15E + voltage LADS15N + voltage LADS15S + voltage	£251.32
3/4	20	95	0	3.5	FKM EPDM NBR SILICONE	120 120 80 120	LADS20V + voltage LADS20E + voltage LADS20N + voltage LADS20S + voltage	£281.40
1	25	185	0	3.5	FKM EPDM NBR SILICONE	120 120 80 120	LADS25V + voltage LADS25E + voltage LADS25N + voltage LADS25S + voltage	£382.28
1 1/4	35	400	0	3.5	FKM EPDM NBR SILICONE	120 120 80 120	LADS35V + voltage LADS35E + voltage LADS35N + voltage LADS35S + voltage	£642.44
1 1/2	35	400	0	3.5	FKM EPDM NBR SILICONE	120 120 80 120	LADS40V + voltage LADS40E + voltage LADS40N + voltage LADS40S + voltage	£642.44
2	50	570	0	2.5	FKM EPDM NBR SILICONE	120 120 80 120	LADS50V + voltage LADS50E + voltage LADS50N + voltage LADS50S + voltage	£1250.77

OPTIONS							
IP67 UL approved Coil & IP65 LED Connector PG11 – DIN 43650 A NPT, BSPT Thread Manual Over Ride (Base entry T bar) * VST, CR, ECO, HNBR or Hypalon Seals Other custom made options available upon request							Included +10% +£105.23 +10%

ELECTRICAL DATA						
Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption	Insulation class	Enclosure	Electrical connections
=	12 – 24 (DC)	WPG2	18 Watts	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110

CONSTRUCTION	
Body: 316 stainless steel (CF8M) Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless No Shading Ring Seals and gaskets: FKM (Optional EPDM, NBR, SILICONE, VST, CR, ECO, HNBR and Hypalon) Moulded coil: Resin	

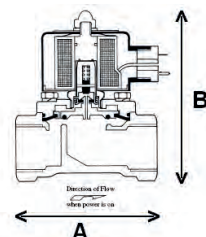
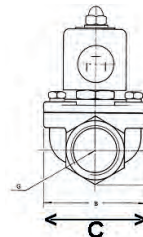
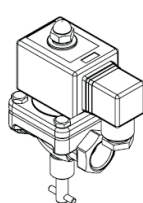
REPAIR KIT	
Diaphragm	SP + valve part number - DIAPHRAGM
Coil	WPG2 + voltage (DC Only)
Armature	SP + valve part number + ARMATURE

OVERALL DIMENSIONS	
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No.	Part No	Description
1	SP201*	Nut
2	SP202*	Washer
3	SP203*	Nameplate
5	WPG2*	Coil
6	SP206*	Gasket
7	SP207*	Connector
8	SP208*	Core Tube
9	SP209*	Valve Bonnet
10	SP210*	Bolt
11	SP211*	Bonnet O Ring
12	SP212*	Armature Assembly
13	SP213*	Diaphragm Base Kit
14	SP214*	Diaphragm Base
15	SP215*	Diaphragm
16	SP216*	Base O Ring
17	SP217*	Valve Body
* = Valve Part Number		



Model	LADS15	LADS20	LADS25	LADS35/40	LADS50
A	75	85	100	120	150
B	103	114	120	140	160
C	52	60	70	90	122
Kg	1.06	1.24	1.51	2.87	4.81



Media: water  
 Pressure range: 0.2 to 10 Bar max  
 Media temperature: +90°C max  
 Ambient temperature: +40°C max  
 Mounting: any position  
 Weight (including coil): 155g  
 Opening / Closing Time: 25 mSec Max



# 2/2 Nylon

## 1/4 – 3/4 + 15mm WRAS

### LATCHING

### 2 WAY SERVO ASSISTED

### 0.2 – 10 Bar

### TYPE 115BB



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP			Part Number	List Price
		Kv Ltr/ min	Min	Max	Picture		
1/4 Male	11.0	19.5	0.2	10		3115BB - 6vDC	£30.83
1/4 Female	11.0	19.5	0.2	10		3105BB - 6vDC	
3/8 Male	11.0	27.5	0.2	10		4115BB - 6vDC	
3/8 Female	11.0	27.5	0.2	10		4105BB - 6vDC	
1/2 Male	11.0	28.3	0.2	10		5115BB - 6vDC	
1/2 Female	11.0	28.3	0.2	10		5105BB - 6vDC	
3/4 Male	11.0	28.3	0.2	10		6115BB - 6vDC	£40.68
15mm Push Fit	11.0	28.3	0.2	10		1175BB - 6vDC	

#### OPTIONS

IPX0 coil QD00582 Protective fire retardant, shock water splash proof cover	Included +£5.19
--	--------------------

#### ELECTRICAL DATA

Voltage (-10% + 15%)		Coil	Power Consumption				Insulation class	Enclosure	Electrical connections
			Open		Close				
=	6vDC (50% ED) Latching Only (375 mA 15mSec)	COIL-R6vL	Min	Max	Min	Max	Windings Class F Insulation Class II	IPX 0	Faston Tags
			4.5v	7.5v	3.0v	7.5v			
			2.2 Watts						

#### CONSTRUCTION

Body: White glass filled food grade nylon, Tube and internal parts: stainless steel + Plastic  
 Seals and gaskets: Buna, Moulded coil: resin

#### REPAIR KIT

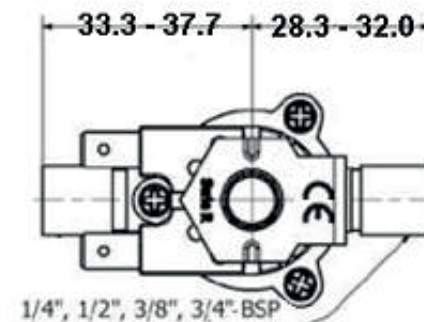
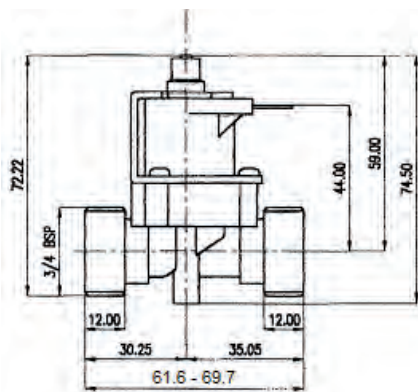
Coil

COIL-R-6vL

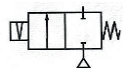
#### APPROVALS

Complies with EN55014 ED. 1993  
 EN60730-2-8-1 Ed. 1995  
 WRC approved materials throughout as per cert. 7067

#### OVERALL DIMENSIONS



Media: slight acid – alkali – air – water  
 Pressure range: 0.5 to 10 Bar max  
 Media temperature: +5°C to 100°C  
 Ambient temperature: +5°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: coil upright



LATCHING

# 2/2 Delrin

## 3/8 – 1 1/2"

### LATCHING

### 2 WAY SERVO ASSISTED

### 0.5 – 10 Bar

## TYPE LPA



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure Rating (Bar) ΔP		Seals	Max Media Temp. °C	Part Number	List Price
			Min	Max				
3/8	15	70	0.5	10	FKM	80	LPA14V + voltage	£129.29
					EPDM	80	LPA14E + voltage	£105.24
					NBR	40	LPA14N + voltage	£105.24
1/2	15	70	0.5	10	FKM	80	LPA15V + voltage	£129.29
					EPDM	80	LPA15E + voltage	£105.24
					NBR	40	LPA15N + voltage	£105.24
3/4	20	95	0.5	10	FKM	80	LPA20V + voltage	£150.34
					EPDM	80	LPA20E + voltage	£135.30
					NBR	40	LPA20N + voltage	£135.30
1	25	175	0.5	10	FKM	80	LPA25V + voltage	£150.34
					EPDM	80	LPA25E + voltage	£135.30
					NBR	40	LPA25N + voltage	£135.30
1 1/4	35	390	0.5	10	FKM	80	LPA35V + voltage	£252.56
					EPDM	80	LPA35E + voltage	£237.53
					NBR	40	LPA35N + voltage	£237.53
1 1/2	35	410	0.5	10	FKM	80	LPA40V + voltage	£252.56
					EPDM	80	LPA40E + voltage	£237.53
					NBR	40	LPA40N + voltage	£237.53

#### OPTIONS

IP67 UL + CSA Approved coil & IP65 LED Connector PG11 – DIN 43650 A

\* VST, CR, ECO, HNBR or Hypalon Seals

Other custom made options available upon request

Included +10%

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption	Insulation class	Enclosure	Electrical connections
=	12 - 24 (DC)	WPG1	12 Watts	H 180°C	IP 65 with connector	3 Spades DIN 43650 DIN 40050 VDE 0110

#### CONSTRUCTION

Body: Poly-acetate

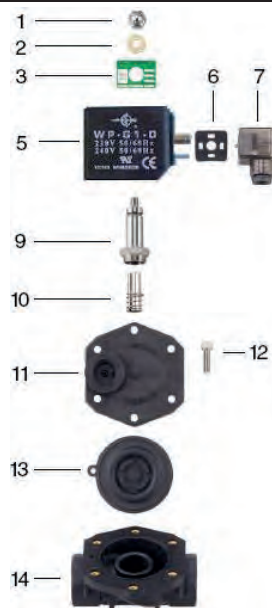
Tube and Spring: 304 Stainless Armature: 430F Stainless Other internal parts: Stainless No Shading Ring

Moulded coil: Resin

#### REPAIR KIT

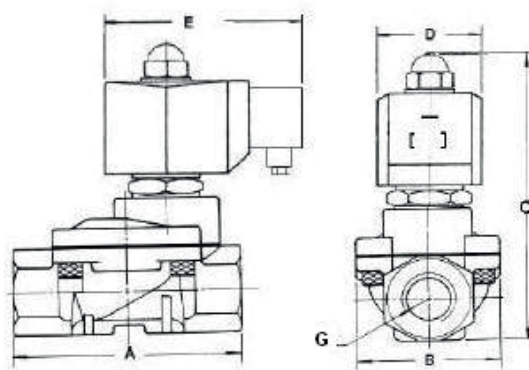
Diaphragm	SP213 + Valve Part number
Coil	WPG1 + voltage (DC Only)

#### OVERALL DIMENSIONS

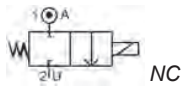


No	Reference	Description
1	SP201-*	Nut
2	SP202-*	Washer
3	SP203-*	Name Plate
5	WPG1	Coil
6	SP206-*	Gasket
7	SP207-*	Connector
9	SP209-*	Core Tube
10	SP201-*	Armature
11	SP211-*	Valve Bonnet
12	SP212-*	Bolts
13	SP213-*	Diaphragm
14	SP214-*	Valve Body

Model	A	B	C	D	E	F	Kg
LPA14	73.5	48	105	35	55	3/8	0.32
LPA15	73.5	48	105	35	55	1/2	0.32
LPA20	104	90	124	35	55	3/4	0.65
LPA25	104	90	124	35	55	1	0.6
LPA35	132	120	145	35	55	1 1/4	0.85
LPA40	132	120	145	35	55	1 1/2	0.8



Media: mains gas - air  
 Pressure range: 0 to 200 mBar max  
 Media temperature: 60°C max  
 Ambient temperature: -15°C to +60°C  
 Mounting: coil upright  
 Opening - Closing Time: 1 Sec Max  
 EN161 Gas Approved



# EN161 Gas Valves

## 1/2 – 2" DN50 – DN150

### NORMALLY CLOSED

### Slam Shut Safety Valves

### 0 – 200mBar

## TYPE VMR



#### PRESSURE

Ø Port	Ø Orifice (mm)	Power Consumption		Pressure Rating (mBar)		Part Number	List Price
		Inrush	Hold	Min	Max mBar		
1/2	10	16		0	200	VMR120TN + 230vAC	£66.84
3/4	20	25		0	200	VMR22 + 230vAC	£169.48
1	25	45		0	200	VMR32 + 230vAC	£179.03
1 1/4	32	120	30	0	200	VMR352 + 230vAC	£250.64
1 1/2	40	120	30	0	200	VMR42 + 230vAC	£255.41
2	50	120	30	0	200	VMR62 + 230vAC	£338.96
DN65	65	180	45	0	200	VMR72 + 230vAC	£742.36
DN80	80	180	45	0	200	VMR82 + 230vAC	£840.22
DN100	100	280	70	0	200	VMR92 + 230vAC	£1627.93
DN125	125	320	80	0	200	VMR932 + 230vAC	£3162.78
DN150	150	320	80	0	200	VMR952 + 230vAC	£3329.87

#### OPTIONS

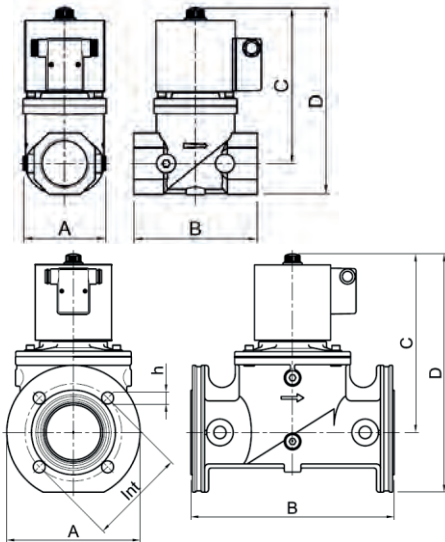
IP54 Coil & Connector PG9 – DIN 43650 A & Flow Adjustment, Metal mesh filter  
 Closed Position Indicator (KO1)  
 110vAC, 24vAC/DC or 12vAC/DC  
 360mBar (DN65-DN150), 500mBar (3/8-2") or 6 Bar (3/8 to DN100) AC 230-110vAC only  
 ATEX, Biogas or Coke Gas corrosive gases

Included  
 +£93.09  
 +10%  
 +10%  
 TBA

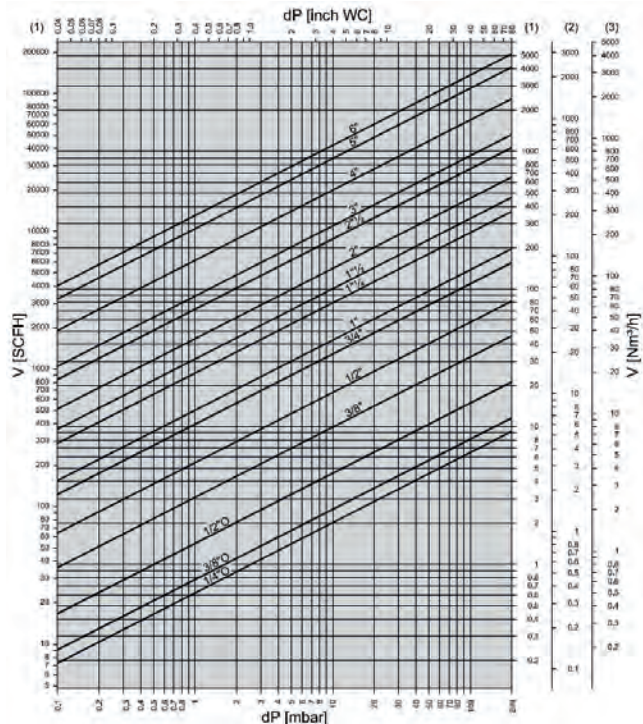
#### CONSTRUCTION

Body: Aluminium, (Except VMR120TN - Brass), Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR  
 Moulded coil: Resin

#### DIMENSIONS



Model	A	B	C	D	Depth	Int	Holes	Kg
VMR120TN	58	30	95	110	30			0.4
VMR22	96	46	150	164	88			2.5
VMR32	96	46	150	164	88			2.5
VMR352	153	65	188	220	120			5.7
VMR42	153	65	188	220	120			5.7
VMR62	156	77	192	230	106			6
VMR72	305	190	266	355	200	145	4X18	14
VMR82	305	190	266	355	200	160	8X18	14
VMR92	350	220	352	492	252	180	8X18	36
VMR932	460	250	430	600	310	210	8X18	58
VMR952	460	285	430	600	310	240	8X22	60



Media: mains gas –air – coke/bio gas  
 Pressure range: 0 to 1.6 Bar max  
 Media temperature: 60°C max  
 Ambient temperature: -15°C to +60°C  
 Mounting: upright  
 Opening Time: 50 Sec Max  
 Closing Time: <1 Second  
 EN161 Gas Class A Approved  
 Power: Inrush 110VA, Holding 20VA

# EN161 Gas Valves

## DN65 – DN300

### NORMALLY CLOSED

### Electro Hydraulic

### 0 – 1600 mBar

## TYPE VMH



#### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Opening Time Seconds	Flow Kvs m³/hr	Max Cycles per hour	Pressure Rating (mBar)		Part Number	List Price
					Min	Max mBar		
DN65	65	10-15	83	60	0	1600	VMH7 + 230vAC	£1969.28
DN80	80	10-15	92	60	0	1600	VMH8 + 230vAC	£2064.76
DN100	100	15-25	152	40	0	1300	VMH9 + 230vAC	£2532.61
DN125	125	25-40	250	30	0	500	VMH93 + 230vAC	£3771.46
DN150	150	25-40	315	30	0	500	VMH95 + 230vAC	£4034.03
DN200	200	35-50	476	20	0	200	VMH98 + 230vAC	£8688.68
DN250	250	40-60	660	15	0	1300	VMH910 + 230vAC	£11911.13
DN300	300	45-75	970	15	0	1300	VMH912 + 230vAC	£13605.90

#### OPTIONS

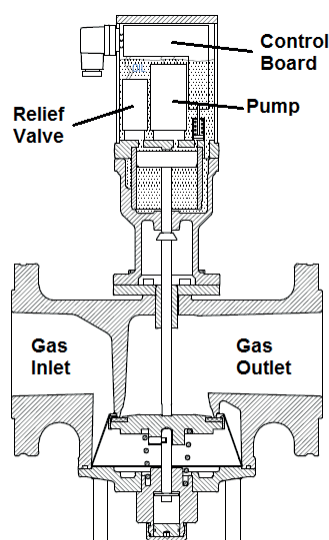
IP65 Coil & Connector PG9 – DIN 43650 A, Filter 600µ metal mesh, Flow rate adjustment (VMH7 & 8 DN65 to DN80)  
 PCS (closed position indicator switch)  
 110 v 50/60 Hz  
 Higher pressure options VMH93U, 95U, 98U 1.3 Bar, 1300mBar  
 K Version for Coke and Bio Gas, ATEX Version for Hazardous Area

**Included Included**  
**+10%**  
**+10%**  
**TBA**

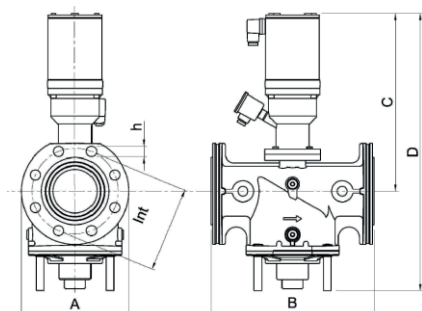
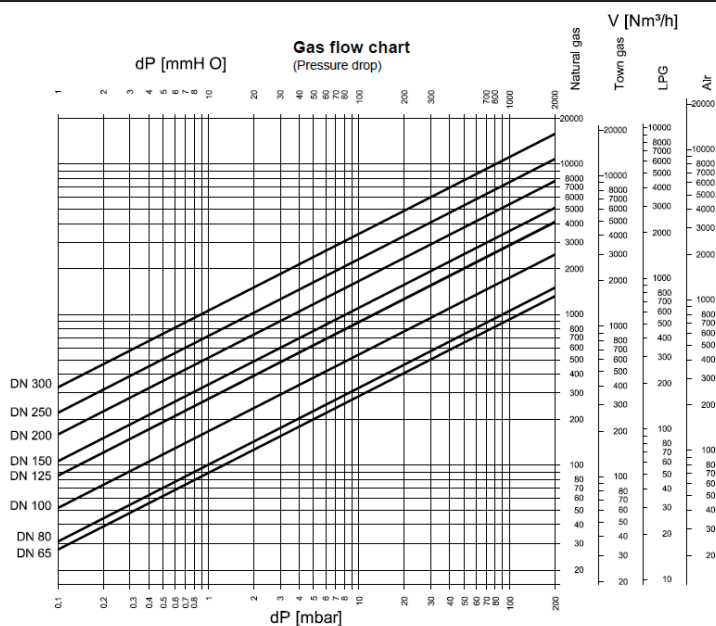
#### CONSTRUCTION

Body: Aluminium  
 Internal parts: Stainless steel, plated steel, Brass, anaerobic adhesive  
 Seals and gaskets: NBR, FPM and PTFE

#### DIMENSIONS



**VMH Gas Safety Shut Off Valve**



Model	A	B	C	D	Int	h	Kg
VMH7	200	305	350	536	145	4x18	14
VMH8	200	305	350	536	160	8x18	14
VMH9	252	350	365	572	180	8x18	18
VMH93	310	460	461	671	210	8x18	34
VMH95	310	460	461	671	240	8x23	36
VMH98	370	546	494	740	295	12x23	52
VMH910	405	600	560	852	355	12x28	59
VMH912	460	700	596	923	410	12x28	106

European Approval: Gas EN161 Class A + (2009/142/CE), PED (97/23/CE), Electromagnetic (2004/108/EC), Low Voltage (2006/95/EC)

Media: Natural Gas: Gas: Air  
 Pressure range: 0 to 600 mBar max  
 Media temperature: -10°C +90°C max  
 Ambient temperature: -15° to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Closing time <1 sec  
 EN161 Approved

# EN161 Gas Valves

3/8 – 2”BSP DN65 – DN300  
 MANUAL RESET  
 0 – 600 mBar  
 TYPE EVRMNC



## PRESSURE

Ø Port BSP/ PN16	Weight Kg	Watts 230vAC	Flow Kvs M³/Hr	Pressure Rating		Part Number	List Price
				Min	Max (mBar)		
1/2	0.9	12	1.3	0	600	EVRMNCA1 + 230vac	£121.74
3/4	1.1	12	2.0	0	600	EVRMNCA2 + 230vac	£138.45
1	1.1	12	4.5	0	600	EVRMNCA3 + 230vac	£143.22
1 1/4	2.0	12	20	0	600	EVRMNCA35 + 230vac	£214.83
1 1/2	2.0	12	26	0	600	EVRMNCA4 + 230vac	£226.77
2	2.3	12	40	0	600	EVRMNCA6 + 230vac	£286.44
DN65	7.6	12	63	0	600	EVRMNCA7 + 230vac	£1002.54
DN80	7.6	12	80	0	600	EVRMNCA8 + 230vac	£1098.02
DN100	17	35	148	0	600	EVRMNCA9 + 230vac	£1456.07
DN125	29	35	250	0	600	EVRMNCA93 + 230vac	£2618.54
DN150	31	35	315	0	600	EVRMNCA95 + 230vac	£2900.21
DN200	46	35	516	0	600	EVRMNCA98 + 230vac	£4929.16
DN250	72	35	660	0	600	EVRMNCA100 + 230vac	£7340.03
DN300	99	35	1120	0	600	EVRMNCA102 + 230vac	£8056.13

## OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A, 600µ metal mesh filter  
 Manual reset (valve stays open when energised – closes on power failure will need to manually reset open with power on to open)  
 Closed position indicator (CPI Switch)  
 Voltages D 12vAC/DC; C 24vAC/DC; B 110vAC,  
 6 Bar (90 psig) EVRM6NC  
 J series for biogas, ATEX tc IIIC T135C Dc Zones 2 & 22

Included  
 Included  
 +£93.09  
 +10%  
 +10%  
 TBA

## ELECTRICAL DATA

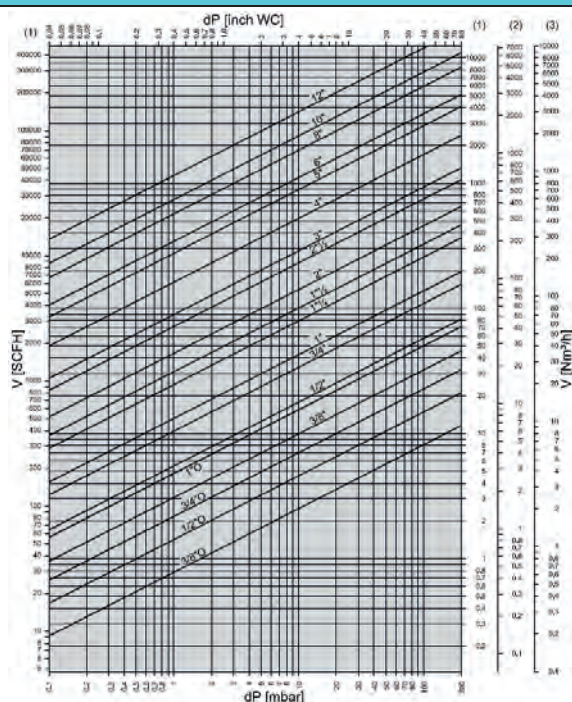
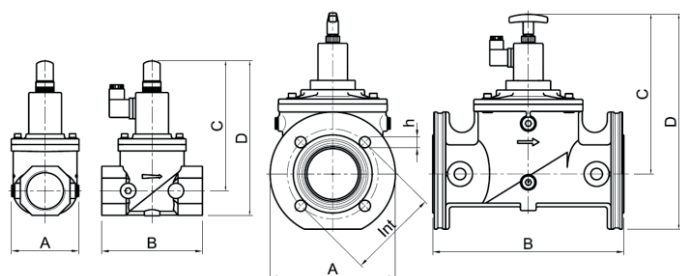
Voltage (-15% + 10%) Continuous duty 100%		Insulation class	Enclosure	Electrical connections
~	12 - 24 – 110 – 230 (50 or 60 Hz)	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE0110
=	12 – 24 (DC)			

## CONSTRUCTION

Body: BSP 3/8-1" Brass, BSP 1 1/4 and PN16 flange DN65 to DN300 Aluminium  
 Tube and internal parts: Stainless steel, Seals and gaskets: NBR (EN459)  
 Moulded coil: Resin

## OVERALL DIMENSIONS

	A	B	C	D	Depth	Int	Holes
1/2	70	77	148	164	70		
3/4	85	96	158	180	85		
1	85	96	158	180	85		
1 1/4	120	153	188	220	120		
1 1/2	120	153	188	220	120		
2	106	156	192	230	106		
DN65	200	305	262	352	200	145	4 x 18
DN80	200	305	262	352	200	160	8 x 18
DN100	252	350	305	435	252	180	8 x 18
DN125	310	460	370	540	310	210	8 x 18
DN150	310	460	370	540	310	240	8 x 23
DN200	370	546	425	635	370	295	12 x 23
DN250	405	600	485	712	432	355	12 x 28
DN300	460	700	523	786	496	410	12 x 28



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
N/Closed

Plastic  
N/Closed

Plastic  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – fluid – oil – water  
Pressure: Inlet 12 Bar max  
Pressure: Outlet 1 to 5 Bar max  
Media temperature: -15°C to +80°C max  
Media viscosity: 40 centistokes max  
Mounting: any position

# Pressure Reducing Valve

## 1/2 – 2 1/2

### Bronze, Stainless & Titanium

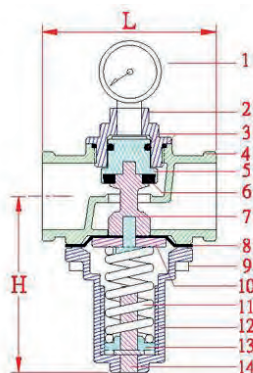
### 2 WAY DIRECT ACTING

### 12 – 1 Bar

## TYPE RDT,B, S & T

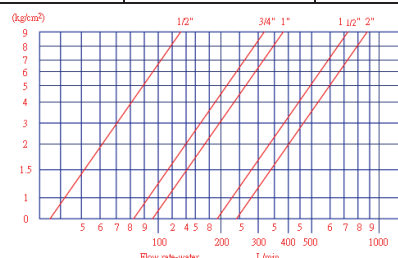


PRESSURE						
Ø Port BSP	Flow	Pressure Range (Bar) ΔP Inlet 12 Bar Max	Body Material	Seal	Part Number	List Price
	Cv m³/Hr					
1/2	2.5	Outlet Adjustment Range Options (1 – 3 Bar) (2 – 5 Bar) (4 – 9 Bar)	Bronze	NBR	RDT15B + Pressure Range	£57.12
3/4	4			NBR	RDT20B + Pressure Range	£69.16
1	6.5			NBR	RDT25B + Pressure Range	£75.163
1 1/4	10			NBR	RDT32B + Pressure Range	£105.24
1 1/2	13			NBR	RDT40B + Pressure Range	£186.42
2	17			NBR	RDT50B + Pressure Range	£210.46
2 1/2	28			NBR	RDT65B + Pressure Range	£1010.24
1/2	2.5		Stainless Steel 304	NBR	RDT15S + Pressure Range	£147.32
3/4	4			NBR	RDT20S + Pressure Range	£189.42
1	6.5			NBR	RDT25S + Pressure Range	£231.52
1 1/4	10			NBR	RDT32S + Pressure Range	£258.58
1 1/2	13			NBR	RDT40S + Pressure Range	£342.76
2	17			NBR	RDT50S + Pressure Range	£399.88
				Inlet 16 Bar Max	Titanium	Spring Cover Material→
1/2	2.0	Outlet Adjustment Range Options (1 – 6 Bar) (4 – 10 Bar)	Viton	RDT15T + cover + pressure range		£1145.54 £1428.16
3/4	4.0		Viton	RDT20T + cover + pressure range		£1362.02 £1641.64
1	6.0		Viton	RDT25T + cover + pressure range		£1593.54 £1873.16
1 1/4	10.0		Viton	RDT32T + cover + pressure range		£1912.24 £2191.86
1 1/2	13.0		Viton	RDT40T + cover + pressure range		£2931.50 £3211.12
2	17.0		Viton	RDT50T + cover + pressure range		£3698.20 £3977.82
OPTIONS						
Pressure Gauge Seals: Bronze & stainless steel models NBR (option EPDM or Viton), Titanium model Viton (optional NBR or EPDM) Other custom made options and pressure ranges available upon request						Included
CONSTRUCTION						
See below Test Pressure 21 Bar Bronze + Stainless steel, Titanium 24 Bar						
OVERALL DIMENSIONS						
Direct Acting Pressure Reducing Valve Bronze, Stainless or Titanium body and can be used for fluid, air or water. Pressure reducing valve gate utilises balance pressure system that will not influence outlet pressure regardless of inlet pressure changes. The combination of diaphragm and piston allows the valve to respond quickly and accurately whilst minimising leakage and maintaining accurate outlet pressures.						



No	Part	Material		
	Model	RDTB Bronze	RDTS Stainless	RDTT Titanium
1	Gauge	Steel	Stainless steel	Stainless steel
2	Upper cover	Bronze	Stainless steel	Titanium
3	O Ring	NBR	NBR	Viton
4	Body	Bronze	Stainless steel	Titanium
5	Piston	Bronze	Stainless steel	Titanium
6	Sealing	NBR	NBR	Viton / PTFE
7	Shaft	Stainless steel	Stainless steel	Titanium
8	Diaphragm	NBR	NBR	CR Rubber
9	Fixed bolt	304 stainless	Stainless steel	Titanium
10	Diaphragm washer	Electroplated iron		Stainless steel 304
11	Spring	Spring steel		Spring Steel
12	Spring cover	Polyamide 66		Titanium or 316 Stainless
13	Spring washer	Brass	Stainless steel	Stainless steel 304
14	Adjusting bolt	Brass	Stainless steel	Stainless steel 304

Model	Port	H (mm)	L (mm)
RDT15	1/2	70	60
RDT20	3/4	70	70
RDT25	1	80	80
RDT32	1 1/4	85	90
RDT40	1 1/2	110	110
RDT50	2	115	115



Media: air – water  
 Pressure: Inlet 25 Bar max  
 Pressure: (1 – 5), (4 – 10) or (8 – 13) Bar  
 Media temperature: -15°C to +80°C max  
 Media viscosity: 40 centistokes max  
 Mounting: any position

# Pressure Reducing Valve

## 1/2 – 2" & DN15-DN150

### STAINLESS STEEL

### DIRECT ACTING

### (1 – 5), (4 – 10) or (8 – 13) Bar

### TYPE RET + REF



#### PRESSURE

Ø Port BSP	Flow Cv	Max Inlet (Bar)	Part Number Outlet Adjustment Range Options (1 – 5), (4 – 10) or (8 – 13) Bar	List Price	
				Seals NBR	Seals Viton
1/2	2.5	25	RET15S + seal + pressure range	£240.54	£285.64
3/4	4.0	25	RET20S + seal + pressure range	£255.56	£300.66
1	6.5	25	RET25S + seal + pressure range	£288.64	£327.72
1 1/2	13.0	25	RET40S + seal + pressure range	£505.12	£595.32
2	17.0	25	RET50S + seal + pressure range	£541.20	£661.46

#### Ø Port PN16 Flange

DN15	2.5	25	REF15S + seal + pressure range	£420.94	£466.04
DN20	4.0	25	REF20S + seal + pressure range	£448.00	£502.12
DN25	6.5	25	REF25S + seal + pressure range	£475.06	£544.20
DN32	13.0	25	REF32S + seal + pressure range	£676.50	£739.64
DN40	13.0	25	REF40S + seal + pressure range	£691.54	£781.74
DN50	17.0	25	REF50S + seal + pressure range	£772.72	£892.98
DN65	30.0	25	REF65S + seal + pressure range	£1713.80	£1894.20
DN80	42.0	25	REF80S + seal + pressure range	£1864.14	£1924.26
DN100	75.0	25	REF100S + seal + pressure range	£2429.38	£2549.66
DN150	170.0	25	REF150S + seal + pressure range	£5099.30	£5249.64

#### OPTIONS

Pressure Gauge (displays outlet pressure)  
 Optional NPT or Rc thread or ANSI150Lb or JIS10K flange  
 Other custom made PTFE or other seal, media and pressure options available upon request

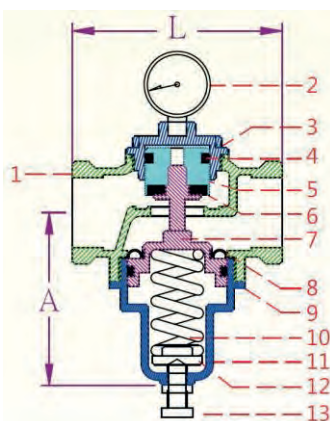
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#### CONSTRUCTION

RET Pressure adjustment screw 1/2 to 1" is external, 1 1/2 and 2" is internal, Test Pressure 35 Bar

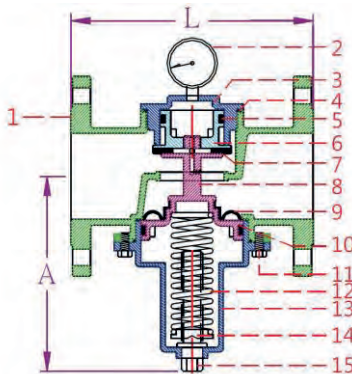
#### OVERALL DIMENSIONS

No	Part	Material
1	Main Body	316 Stainless Steel
2	Pressure Gauge	Stainless Steel
3	Upper Cover	316 Stainless Steel
4	U Ring	NBR or Viton
5	Piston	316 Stainless Steel
6	Sealing Spacer	NBR or Viton
7	Shaft	316 Stainless Steel
8	Diaphragm	NBR or Viton
9	UH Ring	NBR or Viton
10	Spring	Spring Steel
11	Lower Cover	316 Stainless Steel
12	Washer	Brass
13	Adjusting Stem	304 Stainless steel



Model	Port	L (mm)	A (mm)
RET15S	1/2	71	75
RET20S	3/4	86	75
RET25S	1	90	81
RET40S	1 1/2	115	115
RET50S	2	120	115

No	Part	Material
1	Main Body	316 Stainless Steel
2	Pressure Gauge	Stainless steel
3	Upper Cover	316 Stainless Steel
4	O Ring	NBR or Viton
5	U Ring	NBR or Viton
6	Piston	316 Stainless Steel
7	Sealing Spacer	NBR or Viton
8	Shaft	316 Stainless Steel
9	Diaphragm	NBR or Viton
10	UH Ring	NBR or Viton
11	Bolt	304 Stainless Steel
12	Spring	Steel
13	Cover	316 Stainless Steel
14	Washer	Brass
15	Stem	304 Stainless Steel



Model	Port	L (mm)	A (mm)
REF15S	DN15	150	75
REF20S	DN20	150	82
REF25S	DN25	150	82
REF32S	DN32	190	115
REF40S	DN40	190	115
REF50S	DN50	192	115
REF65S	DN65	210	185
REF80S	DN80	225	185
REF100S	DN100	250	230
REF150S	DN150	310	290

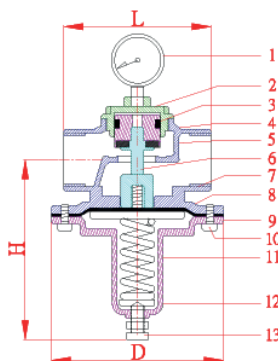
Media: air – water  
 Pressure: Inlet 10 Bar max  
 Pressure: Outlet 0.2 to 1.5 Bar  
 Media temperature: -15°C to +80°C max  
 Ambient temperature: +80°C max  
 Media viscosity: 40 centistokes max  
 Mounting: Gauge upright, stem down

# **Low Pressure Reducing Valve** **1/2 – 2" DN15-50** **316 STAINLESS STEEL** **DIRECT ACTING** **0.2 – 1.5 Bar** **TYPE RELT / RELF**



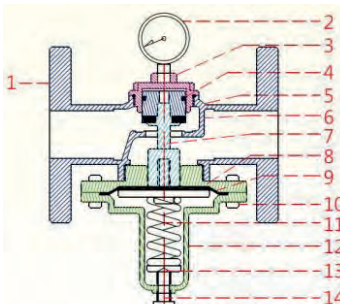
PRESSURE							
Ø Port BSP	Flow Cv	Pressure Rating (Bar)			Part Number	List Price	
		Max Inlet (Bar)	Adjustable Pressure Reducing Range			Seals NBR	Seals Viton
			Minimum	Maximum			
1/2	1.44	10	0.2	1.5	RELT15S + seal	£369.82	£414.92
3/4	5.38	10	0.2	1.5	RELT20S + seal	£384.85	£429.95
1	6.58	10	0.2	1.5	RELT25S + seal	£416.45	£457.01
1 1/2	12.57	10	0.2	1.5	RELT40S + seal	£694.54	£784.74
2	14.96	10	0.2	1.5	RELT50S + seal	£730.62	£850.88
Ø Port Flange PN16							
DN15	1.44	10	0.2	1.5	RELF15S + seal	£550.22	£595.32
DN20	5.38	10	0.2	1.5	RELF20S + seal	£577.28	£631.40
DN25	6.58	10	0.2	1.5	RELF25S + seal	£604.34	£673.49
DN32	12.57	10	0.2	1.5	RELF32S + seal	£805.78	£868.92
DN40	12.57	10	0.2	1.5	RELF40S + seal	£880.96	£971.16
DN50	14.96	10	0.2	1.5	RELF50S + seal	£962.14	£1082.40
OPTIONS							
Pressure Gauge (316 Stainless steel) displays outlet pressure NPT or Rc thread, ANSI150Lb or JIS10K flange Other custom made seal, media and pressure options available upon request							Included +10%
CONSTRUCTION							
Body, Piston & shaft: 316 stainless steel, Seals: NBR or Viton, Spring: steel, Fixing bolts and adjusting stem: 304 stainless steel Test Pressure: 16 Bar							
OVERALL DIMENSIONS							

NO	Part Name	Material
1	Gauge	Stainless Steel
2	Upper cover	Stainless Steel 316
3	U-Ring	Viton or EPDM
4	Piston	Stainless Steel 316
5	Sealing spacer	NBR or Viton
6	Shaft	Stainless Steel 316
7	Main body	Stainless Steel 316
8	Diaphragm	NBR or Viton
9	Lower cover	Stainless Steel 316
10	Fixed bolt	Stainless Steel 304
11	Spring	Spring steel
12	Washer	Brass
13	Adjusting stem	Stainless Steel 304



Part No:	Port	H mm	L mm	D	Kg
RELT15	1/2	110	70	105	1.3
RELT20	3/4	125	85	105	1.5
RELT25	1	125	90	105	1.6
RELT40	1 1/2	155	115	145	3
RELT50	2	155	120	145	4

NO	Part Name	Material
1	Main Body	Stainless Steel 316
2	Gauge	Stainless Steel
3	Upper cover	Stainless Steel 316
4	U-Ring	Viton or EPDM
5	Piston	Stainless Steel 316
6	Sealing spacer	NBR or Viton
7	Shaft	Stainless Steel 316
8	Diaphragm disc	Stainless Steel 316
9	Diaphragm	NBR or Viton
10	Fixed bolt	Stainless Steel 304
11	Spring	Spring steel
12	Lower cover	Stainless Steel 316
13	Washer	Brass
14	Adjusting stem	Stainless Steel 304



Part No:	Port	H mm	L mm	Kg
RELF15	DN15	110	150	2.5
RELF20	DN20	125	150	3.5
RELF25	DN25	125	150	5.6
RELF40	DN40	155	190	8.7
RELF50	DN50	155	190	13.5

Media: water  
 Pressure: Inlet 10 Bar max  
 Pressure range: 0.03 to 0.15 Bar  
 Media temp: -15°C to +80°C max  
 Ambient temperature: +80°C max  
 Mount: Gauge upright, stem down

# Micro Pressure Reducing Valve

1/2 – 2" or DN15 – DN50  
 316 STAINLESS STEEL  
 DIRECT ACTING  
 0.03 – 0.15 Bar  
 TYPE REMT + REMF



## PRESSURE

Ø Port BSP	Flow Cv	Pressure Rating (Bar)			Part Number	List Price	
		Max Inlet (Bar)	Adjustable Pressure Reducing Range (Bar)			Seals NBR	Seals FKM
			Minimum	Maximum			
1/2	2.4	10	0.03	0.15	REMT15S + seal	£2245.98	£2291.08
3/4	9.0	10	0.03	0.15	REMT20S + seal	£2261.01	£2306.12
1	11.0	10	0.03	0.15	REMT25S + seal	£2294.08	£2333.18
1 1/2	21.0	10	0.03	0.15	REMT40S + seal	£2510.56	£2600.76
2	25.0	10	0.03	0.15	REMT50S + seal	£2546.64	£2666.92

## Ø Port PN16 Flange

DN15	2.4	10	0.03	0.15	REMF15S + seal	£2426.38	£2471.48
DN20	9.0	10	0.03	0.15	REMF20S + seal	£2453.44	£2507.56
DN25	11.0	10	0.03	0.15	REMF25S + seal	£2480.50	£2549.66
DN32	21.0	10	0.03	0.15	REMF32S + seal	£2681.94	£2745.08
DN40	21.0	10	0.03	0.15	REMF40S + seal	£2696.98	£2787.18
DN50	25.0	10	0.03	0.15	REMF50S + seal	£2778.16	£2898.42

## OPTIONS

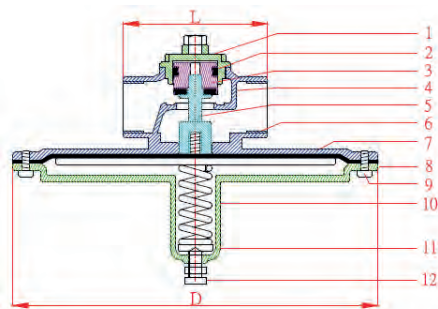
Pressure Gauge (316 Stainless steel)  
 Other ANSI150Lb, JIS10K flange or NPT and Rc thread options  
 Other custom made media, pressure and seal options available upon request

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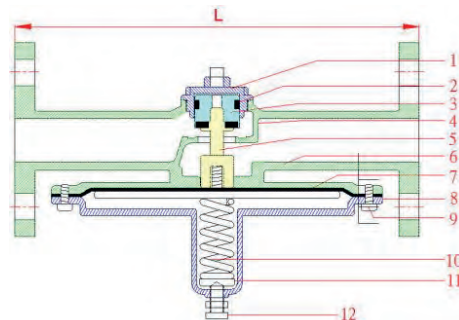
## CONSTRUCTION

Body, Piston & shaft: 316 stainless steel  
 Seals: NBR or FKM, Diaphragm Nylon /EPDM  
 Spring: steel  
 Fixing bolts and adjusting stem: 304 stainless steel  
 Body Test Pressure: 16 Bar

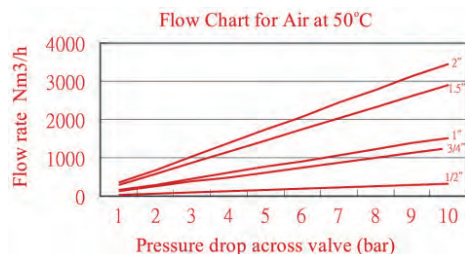
## OVERALL DIMENSIONS



Part No:	Port	L mm	D
REMT15	1/2	70	310
REMT20	3/4	85	310
REMT25	1	90	310
REMT40	1 1/2	115	310
REMT50	2	120	310
REMF15	DN15	420	
REMF20	DN20	420	
REMF25	DN25	420	
REMF40	DN40	420	
REMF50	DN50	420	



No	Part	Material	No	Part	Material
1	Cover	Stainless steel 316	7	Diaphragm	Nylon - EPDM
2	U Ring	NBR or FKM	8	Spring cover	Stainless steel 316
3	Piston	Stainless steel 316	9	Stem	Stainless steel 304
4	Sealing	NBR or FKM	10	Spring	Spring steel
5	Shaft	Stainless steel 316	11	Washer	Brass
6	Main body	Stainless steel 316	12	Stem	Stainless steel 304



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: Water  
Pressure Rating: 20 Bar Max  
Pressure: (0.2 – 4), (2 - 8) or (4 - 12) Bar  
Media temperature: -15°C +80°C max  
Media viscosity: 50 centistokes max  
Mounting: any position

# Pressure Reducing Valve

## DN50 – DN300

### Ductile Iron Epoxy Coated

### PILOT ASSISTED

### (0.2 - 4), (2 - 8) or (4 - 12) Bar

## TYPE BFR-DE

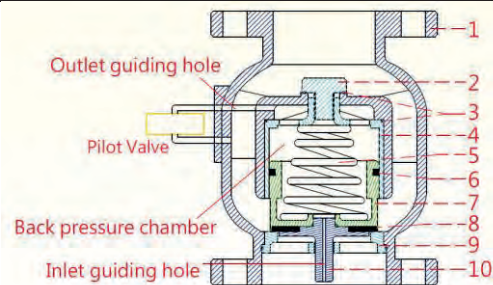


PRESSURE					
Ø Port PN16	Ø Orifice (mm)	Flow Cv	Max Inlet Pressure (Bar)	Part Number Pressure Reducing Adjustment Range Options: (0.2 – 4), (2 – 8) or (4 – 12) Bar	List Price
DN50	50	37	20	BFR50DE + pressure range	£444.98
DN65	65	85	20	BFR65DE + pressure range	£616.36
DN80	80	110	20	BFR80DE + pressure range	£802.78
DN100	100	150	20	BFR100DE + pressure range	£974.16
DN125	125	230	20	BFR125DE + pressure range	£1515.36
DN150	150	450	20	BFR150DE + pressure range	£2077.60
DN200	200	580	20	BFR200DE + pressure range	£4982.04
DN250	250	910	20	BFR250DE + pressure range	£9870.88
DN300	300	1300	20	BFR300DE + pressure range	£12928.66
DN350	350	1800	20	BFR350DE + pressure range	POA
DN400	400	2300	20	BFR400DE + pressure range	POA

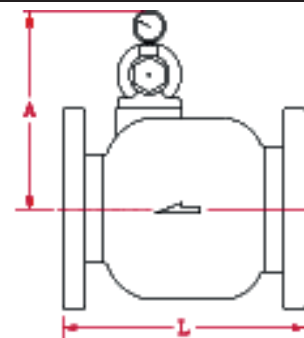
OPTIONS	
Pressure Regulator PRV controller Brass Pressure gauge (Displays outlet Pressure) Pressure adjusting range (0.2 to 4 Bar), (2 to 8 Bar) or (4 to 12 Bar) Other flange options JIS10K, ANSI150Lb, JIS20K, PN10, PN20 Other custom made sizes (up to 56" DN1400), higher pressures and other media and seal options available upon request	Included Included Included +10%

REPAIR KIT	
Piston U Ring	SP + Valve Part Number + U RING
Pressure Reducing Controller	BFRB + pressure range

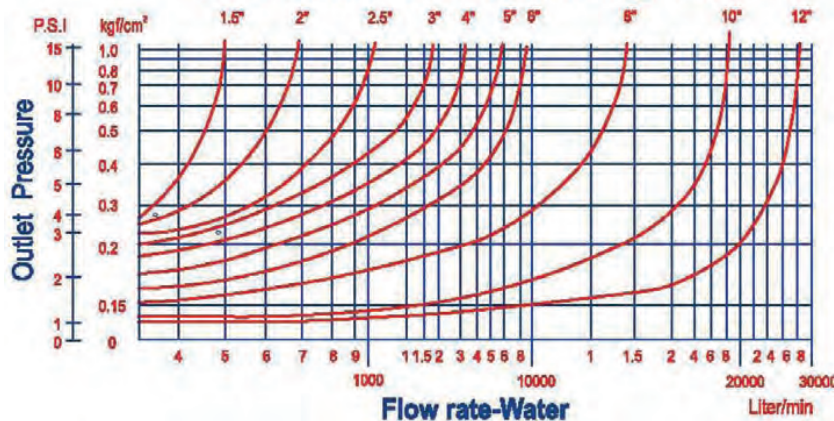
OVERALL DIMENSIONS	
Pressure reducing valve will reduce and maintain a stable set outlet pressure regardless of inlet pressure changes to prevent pipeline and equipment damage caused by accidental over pressure. Outlet pressure is displayed by external pressure gauge.	



No	Description	Material
1	Main body	Ductile Iron
2	Cylinder bolt	Ductile Iron
3	O-Ring	NBR
4	Cylinder	Bronze
5	Spring	304 Stainless
6	U- ring	NBR
7	Piston	Bronze
8	Sealing	NBR
9	Seat	Bronze
10	Shaft	Bronze



Flow Chart of Pressure Reducing Valve



Item	Kg	Dimensions (mm)	
		L	A
BFR50	12	190	130
BFR65	15	212	140
BFR80	18	225	155
BFR100	24	250	165
BFR125	32	284	180
BFR150	44	310	215
BFR200	87	420	235
BFR250	152	470	280
BFR300	202	535	310
BFR350		600	350
BFR400		600	355

Media: water  
 Pressure Rating: 20 Bar Max  
 Pressure: (0.2 - 4), (2 - 8) or (4 - 12) Bar  
 Media temperature: -15°C +80°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position

# Pressure Reducing Valve

## DN50 – DN300

### Stainless Steel 304 or 316

### PILOT ASSISTED

### (0.2 – 4), (2 – 8) or (4 – 12) Bar

## TYPE BFR-S



#### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Cv	Max Inlet Pressure (Bar)	Part Number Pressure Reducing Adjustment Range Options: (0.2 – 4), (2 – 8) or (4 – 12) Bar	List Price	
					304 Stainless	316 Stainless
DN50	50	37	20	BFR50 + body material + pressure range	£1239.23	£1416.44
DN65	65	85	20	BFR65 + body material + pressure range	£1482.28	£1731.84
DN80	80	110	20	BFR80 + body material + pressure range	£1849.10	£2086.62
DN100	100	150	20	BFR100 + body material + pressure range	£2411.34	£2772.14
DN125	125	230	20	BFR125 + body material + pressure range	£3361.46	£3896.64
DN150	150	450	20	BFR150 + body material + pressure range	£4519.02	£5192.52
DN200	200	580	20	BFR200 + body material + pressure range	£9017.00	£10370.00
DN250	250	910	20	BFR250 + body material + pressure range	£16512.62	£18993.12
DN300	300	1300	20	BFR300 + body material + pressure range	£20018.38	£23001.00

#### OPTIONS

Pressure Regulator PRV Controller Stainless steel  
 Pressure gauge (Displays outlet Pressure)  
 Pressure adjusting range (0.2 to 4 Bar) or (2 to 8 Bar) or (4 to 12 Bar)  
 Other flange options ANSI150Lb, JIS10K, JIS20K, PN10, PN20  
 Other custom made sizes (up to 56" DN1400), higher pressures and other media (acid- alkali – oil) options available upon request

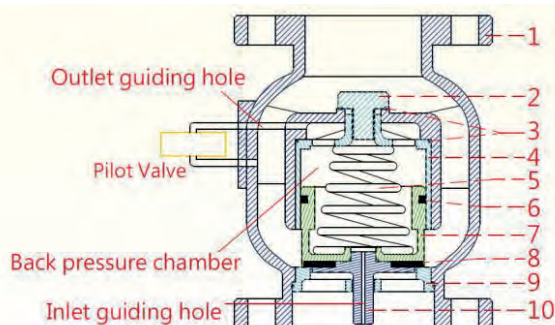
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#### REPAIR KIT

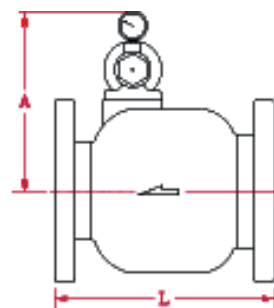
Piston U Ring	SP + Valve Part Number + U RING
Pressure Reducing Controller	BFRS + pressure range

#### OVERALL DIMENSIONS

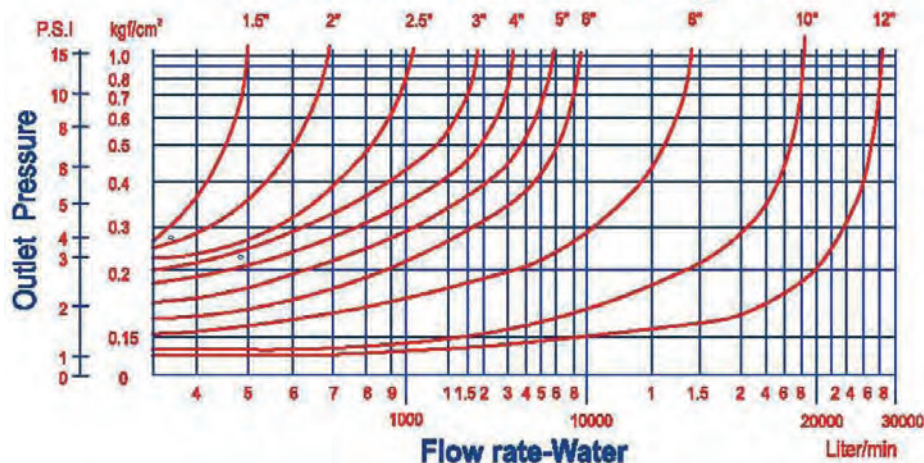
Pressure reducing valve will reduce and maintain a stable set outlet pressure regardless of inlet pressure changes to prevent pipeline and equipment damage caused by accidental over pressure. Outlet pressure is displayed by external pressure gauge.



No	Description	Material
1	Main body	Stainless Steel
2	Cylinder bolt	Stainless Steel
3	O-Ring	NBR
4	Cylinder	Stainless Steel
5	Spring	304 Stainless
6	U- ring	NBR
7	Piston	Stainless Steel
8	Sealing	NBR
9	Seat	Stainless Steel
10	Shaft	Stainless Steel



### Flow Chart of Pressure Reducing Valve



Item	Kg	Dimensions (mm)	
		L	A
BFR50	12	190	130
BFR65	15	212	140
BFR80	18	225	155
BFR100	24	250	165
BFR125	32	284	180
BFR150	44	310	215
BFR200	87	420	235
BFR250	152	470	280
BFR300	202	535	310
BFR350		600	350
BFR400		600	355

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: water  
Pressure Rating: 12 Bar Max  
Pressure: (0.2 - 4), (2 - 8) or (4 - 12) Bar  
Media temperature: -15°C +80°C max  
Media viscosity: 50 centistokes max  
Mounting: any position

## Pressure Reducing Valve

### DN50 – DN300

### Bronze

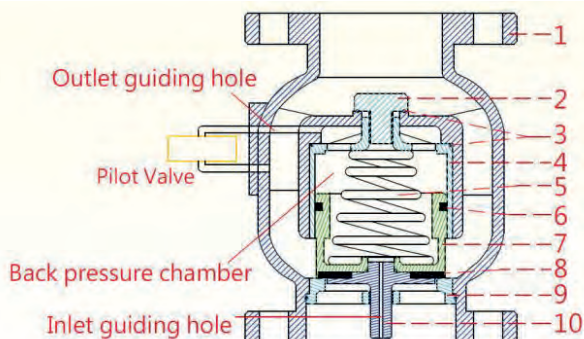
### PILOT ASSISTED

### (0.2 – 4), (2 – 8) or (4 – 12) Bar

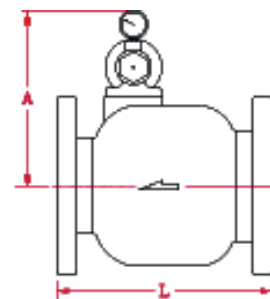
## TYPE BFR-B



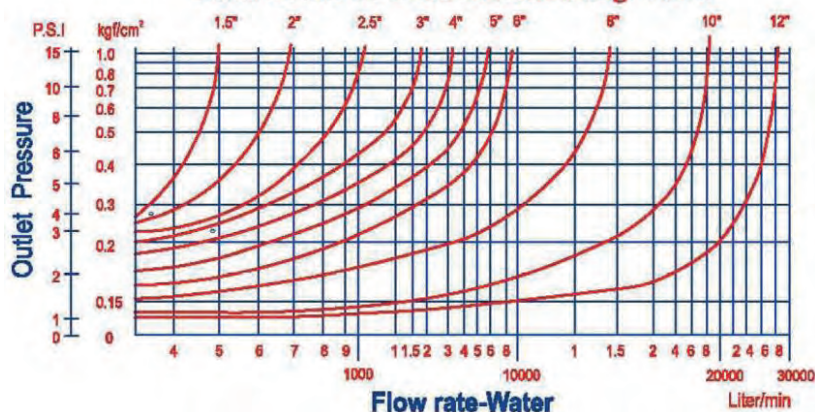
PRESSURE					
Ø Port PN16	Ø Orifice (mm)	Flow Cv	Max Inlet Pressure (Bar)	Part Number Pressure Reducing Adjustment Range Options: (0.2 – 4), (2 – 8) or (4 – 12) Bar	List Price
DN50	50	37	12	BFR50B + pressure range	£1220.70
DN65	65	85	12	BFR65B + pressure range	£1220.70
DN80	80	110	12	BFR80B + pressure range	£1527.38
DN100	100	150	12	BFR100B + pressure range	£1972.38
DN125	125	230	12	BFR125B + pressure range	£3006.66
DN150	150	450	12	BFR150B + pressure range	£4134.16
DN200	200	580	12	BFR200B + pressure range	£8785.48
DN250	250	910	12	BFR250B + pressure range	£15514.40
DN300	300	1300	12	BFR300B + pressure range	£18406.82
OPTIONS					
Pressure Regulator PRV controller Brass Pressure gauge (Displays Outlet Pressure) Pressure adjusting range (0.2 to 4 Bar), (2 to 8 Bar) or (4 to 12 Bar) Other flange options JIS10K, ANSI150Lb, PN10, PN20, JIS20K Other custom made sizes (up to 56" DN1400), higher pressures and other media and seal options available upon request					Included Included Included +10%
REPAIR KIT					
Piston U Ring				SP + Valve Part Number + U RING	
Pressure Reducing Controller				BFRB + pressure range	
OVERALL DIMENSIONS					
Pressure reducing valve will reduce and maintain a stable set outlet pressure regardless of inlet pressure changes to prevent pipeline and equipment damage caused by accidental over pressure. Outlet pressure is displayed by external pressure gauge.					



No	Description	Material
1	Main body	Bronze
2	Cylinder bolt	Brass
3	O-Ring	NBR
4	Cylinder	Bronze
5	Spring	304 Stainless
6	U- ring	NBR
7	Piston	Bronze
8	Sealing	NBR
9	Seat	Bronze
10	Shaft	Bronze



Flow Chart of Pressure Reducing Valve



Item	Kg	Dimensions (mm)	
		L	A
BFR50	12	190	130
BFR65	15	212	140
BFR80	18	225	155
BFR100	24	250	165
BFR125	32	284	180
BFR150	44	310	215
BFR200	87	420	235
BFR250	152	470	280
BFR300	202	535	310
BFR350		600	350
BFR400		600	355

Media: Air - Water - Oil  
 Pressure: 25 Bar Max  
 Back Pressure: (1 - 5) or (4 - 10) Bar  
 Media temperature: +80°C max  
 Ambient temperature: +80°C max  
 Media viscosity: 40 centistokes max  
 Mounting: any position

## Pressure Sustaining Valve

### 1/2 – 2" DN15-150

## STAINLESS STEEL

### DIRECT ACTING

### (1 – 5) or (4 – 10) Bar

## TYPE RFT RFF



Pressure  
Sustaining  
Valves

2/2 & 3/2  
Coaxial  
Solenoid  
Valves

Electric  
Actuated  
Ball Valves

Air  
Solenoid  
Valves

Mechanical  
Air  
Valves

Accessories,  
Fittings,  
Tubing

FRL's, Filters  
Regulators  
Lubricators

Air  
Actuated  
Valves

Arrestors  
Vent Suction  
Check Valves

Interlocking  
Valves

Pinch  
Proportional  
Sub Base

Timers,  
Coils &  
Connectors

Magnets  
& Y Filters

#### PRESSURE

Ø Port BSP	Flow Cv M³/Hr ΔP 1 Bar	Max Inlet (Bar)	Part Number Outlet Adjustment Range Options (1 – 5) or (4 – 10) Bar	List Price	
				Seals NBR	Seals Viton
1/2	2.5	25	RFT15S + seal + pressure range	£240.54	£285.64
3/4	4.0	25	RFT20S + seal + pressure range	£255.56	£300.66
1	6.5	25	RFT25S + seal + pressure range	£288.64	£327.72
1 1/2	13.0	25	RFT40S + seal + pressure range	£505.12	£595.32
2	17.0	25	RFT50S + seal + pressure range	£541.20	£661.46

#### Ø Port Flange PN16

DN15	2.5	25	RFF15S + seal + pressure range	£420.94	£466.04
DN20	4.0	25	RFF20S + seal + pressure range	£448.00	£502.12
DN25	6.5	25	RFF25S + seal + pressure range	£475.06	£544.20
DN32	13.0	25	RFF32S + seal + pressure range	£676.50	£739.64
DN40	13.0	25	RFF40S + seal + pressure range	£691.54	£781.74
DN50	17.0	25	RFF50S + seal + pressure range	£772.72	£892.98
DN65	30.0	25	RFF65S + seal + pressure range	£1713.80	£1894.20
DN80	42.0	25	RFF80S + seal + pressure range	£1864.14	£1924.26
DN100	75.0	25	RFF100S + seal + pressure range	£2429.38	£2549.66
DN150	170.0	25	RFF150S + seal + pressure range	£5099.30	£5249.64

#### OPTIONS

Pressure Gauge (Shows the sustained back pressure)  
 Other thread options NPT & Rc or flange ANSI150Lb or JIS10K  
 Other custom made options and pressure ranges available upon request

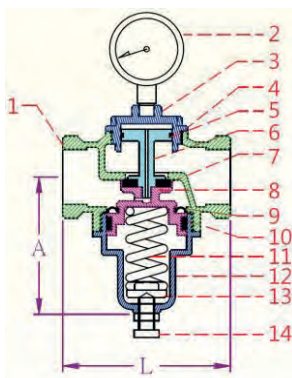
Included  
+10%

#### CONSTRUCTION

Test Pressure 35 Bar

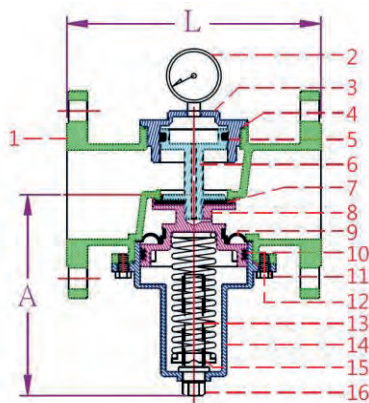
#### OVERALL DIMENSIONS

No	Part	Material
1	Main Body	316 Stainless
2	Pressure Gauge	Stainless
3	Upper Cover	316 Stainless
4	O Ring	NBR or Viton
5	U Ring	NBR or Viton
6	Piston	316 Stainless
7	Sealing Spacer	NBR or Viton
8	Shaft	316 Stainless
9	Diaphragm	NBR or Viton
10	UH Ring	NBR or Viton
11	Spring	Spring Steel
12	Lower Cover	316 Stainless
13	Washer	Brass
14	Adjusting Stem	304 Stainless



Model	Port	L (mm)	A (mm)
RFT15S	1/2	71	75
RFT20S	3/4	86	75
RFT25S	1	90	81
RFT40S	1 1/2	115	115
RFT50S	2	120	115

No	Part	Material
1	Main Body	316 Stainless
2	Pressure Gauge	Stainless
3	Upper Cover	316 Stainless
4	O Ring	NBR or Viton
5	U Ring	NBR or Viton
6	Shaft	316 Stainless
7	Sealing Spacer	NBR or Viton
8	Set	316 Stainless
9	Diaphragm	NBR or Viton
10	UH Ring	NBR or Viton
11	O Ring	NBR or Viton
12	Bolt	304 Stainless
13	Spring	Spring Steel
14	Lower Cover	316 Stainless
15	Washer	Brass
16	Adjusting Stem	304 Stainless



Model	Port	L (mm)	A (mm)
RFF15S	DN15	150	75
RFF20S	DN20	150	82
RFF25S	DN25	150	82
RFF40S	DN40	190	115
RFF50S	DN50	192	115
RFF65S	DN65	210	185
RFF80S	DN80	225	185
RFF100S	DN100	250	230
RFF150S	DN150	310	290

Media: air – water  
 Back pressure range: 0.2 to 1.5 Bar  
 Media temperature: -15°C to +80°C max  
 Ambient temperature: +80°C max  
 Media viscosity: 40 centistokes max  
 Mounting: Gauge upright, stem down

## Pressure Sustaining Valve

1/2 – 2" or DN15 – DN50

316 STAINLESS STEEL

DIRECT ACTING

0.2 – 1.5 Bar

TYPE RFLT + RFLF



### PRESSURE

Ø Port BSP	Adjustable Pressure Sustaining Range (Bar)		Part Number	List Price	
	Minimum	Maximum		Seals NBR	Seals FKM
1/2	0.2	1.5	RFLT15S + seal material	£369.82	£414.92
3/4	0.2	1.5	RFLT20S + seal material	£384.85	£429.95
1	0.2	1.5	RFLT25S + seal material	£416.42	£457.01
1 1/2	0.2	1.5	RFLT40S + seal material	£694.54	£784.74
2	0.2	1.5	RFLT50S + seal material	£730.62	£850.88
Port PN16 Flange					
DN15	0.2	1.5	RFLF15S + seal material	£550.22	£595.32
DN20	0.2	1.5	RFLF20S + seal material	£577.28	£631.40
DN25	0.2	1.5	RFLF25S + seal material	£604.34	£673.49
DN32	0.2	1.5	RFLF32S + seal material	£805.78	£868.92
DN40	0.2	1.5	RFLF40S + seal material	£880.96	£971.16
DN50	0.2	1.5	RFLF50S + seal material	£962.14	£1083.50

### OPTIONS

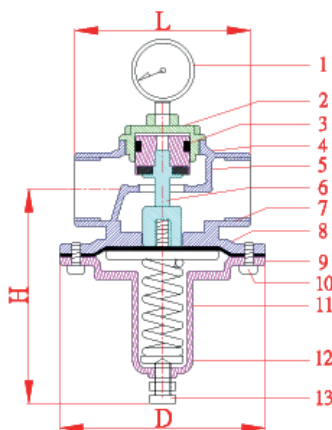
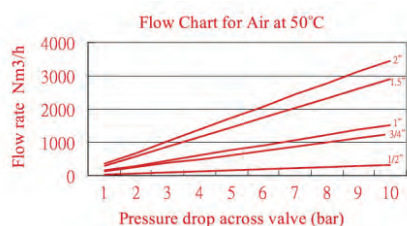
Pressure Gauge (316 Stainless steel) displays back sustained pressure  
 Other flange ANSI150Lb, JIS10K, JIS20K and NPT or Rc thread options  
 Other custom made seal, media and pressure options available upon request

Included  
+10%

### CONSTRUCTION


Body, Piston & shaft: 316 stainless steel  
 Seals: NBR or FKM  
 Spring: steel  
 Fixing bolts and adjusting stem: 304 stainless steel  
 Test Pressure: 16 Bar

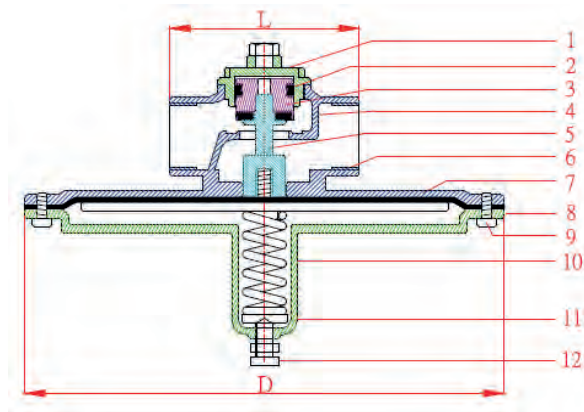
### OVERALL DIMENSIONS



Part No:	Port	H mm	L mm	Kg
RFLT15	1/2	110	70	1.3
RFLT20	3/4	125	85	1.5
RFLT25	1	125	90	1.6
RFLT40	1 1/2	155	115	3
RFLT50	2	155	120	4
RFLF15	DN15 PN16	110	150	2.5
RFLF20	DN20 PN16	125	150	3.5
RFLF25	DN25 PN16	125	150	5.6
RFLF40	DN40 PN16	155	190	8.7
RFLF50	DN50 PN16	155	190	13.5

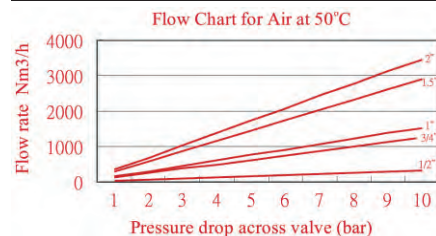
NO	Part Name	Material	No	Part Name	Material
1	Gauge	Stainless Steel	8	Diaphragm	EPDM or Viton
2	Upper cover	Stainless Steel 316	9	Lower cover	Stainless Steel 316
3	U-Ring	NBR or Viton	10	Fixed bolt	Stainless Steel 304
4	Piston	Stainless Steel 316	11	Spring	Spring steel
5	Sealing spacer	NBR or Viton	12	Washer	Brass
6	Shaft	Stainless Steel 316	13	Adjusting stem	Stainless Steel 304
7	Main body	Stainless Steel 316			

<div>Media: air – water Back pressure range: 0.02 - 0.2 Bar Media temperature: -15 °C to +80°C max Ambient temperature: +80°C max Media viscosity: 40 centistokes max Mounting: any position</div>				<div>Pressure Sustaining Valve 1/2 – 2” or DN15 – DN50 STAINLESS STEEL 2 WAY DIRECT ACTING 0.02 to 0.2 Bar TYPE RFMT + RFMF</div>			
PRESSURE							
Ø Port BSP	Flow Cv	Adjustable Pressure Sustaining Range (Bar)		Part Number	List Price		
		Minimum	Maximum		Seals NBR	Seals FKM	
1/2	2.4	0.02	0.2	RFMT15S + seal material	£2245.98	£2291.08	
3/4	9.0	0.02	0.2	RFMT20S + seal material	£2261.01	£2306.11	
1	11.0	0.02	0.2	RFMT25S + seal material	£2292.58	£2333.17	
11/2	21.0	0.02	0.2	RFMT40S + seal material	£2633.84	£2724.04	
2	25.0	0.02	0.2	RFMT50S + seal material	£2669.92	£2790.18	
Ø Port PN16 Flange							
1/2	2.4	0.02	0.2	RFMF15S + seal material	£2426.38	£2471.48	
3/4	9.0	0.02	0.2	RFMF20S + seal material	£2453.44	£2507.56	
1	11.0	0.02	0.2	RFMF25S + seal material	£2480.50	£2549.65	
11/2	21.0	0.02	0.2	RFMF40S + seal material	£2820.26	£2910.46	
2	25.0	0.02	0.2	RFMF50S + seal material	£2901.44	£3021.70	
OPTIONS							
Pressure Gauge (316 Stainless steel) Other ANSI150Lb, JIS10K, JIS20K flange or NPT or Rc thread options Other custom made media, seal and pressure options available upon request						Included +10%	
CONSTRUCTION							
Body, Piston & shaft: 316 stainless steel Seals: NBR or FKM Spring: steel Fixing bolts and adjusting stem: 304 stainless steel Test Pressure: 16 Bar							
OVERALL DIMENSIONS							



Part No:	Port	L mm	D
RFMT15	1/2 BSP	70	*
RFMT20	3/4 BSP	85	*
RFMT25	1 BSP	90	*
RFMT40	1 1/2 BSP	115	*
RFMT50	2 BSP	120	*

\* Diameter D depend on outlet pressure setting



No	Part	Material	No	Part	Material
1	Cover	Stainless steel 316	7	Diaphragm	Nylon - EPDM
2	U Ring	NBR	8	Spring cover	Stainless steel 316
3	Piston	Stainless steel 316	9	Stem	Stainless steel 304
4	Sealing	NBR	10	Spring	Spring steel
5	Shaft	Stainless steel 316	11	Washer	Brass
6	Main body	Stainless steel 316	12	Stem	Stainless steel 304

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Steam  
Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: water  
Pressure Rating: 20 Bar Max  
Back Pressure Range: (0.2-4) or (2-8) Bar  
Media temperature: -15°C +80°C max  
Ambient temperature: -15°C to +60°C  
Media viscosity: 50 centistokes max  
Mounting: any position

# Pressure Sustaining Valve

## DN50 – DN300

### Ductile Iron Epoxy Coated

### PILOT ASSISTED

### (0.2 – 4) or (2 – 8) Bar

### TYPE BFS-DE

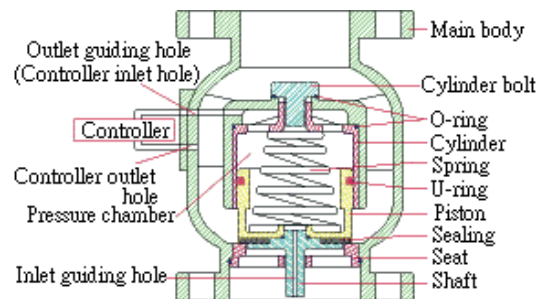


PRESSURE				
Ø Port PN16	Ø Orifice (mm)	Flow Cv	Part Number Pressure Sustaining Adjusting Range Options: (0.2 – 4) or (2 – 8) Bar	List Price
DN50	50	37	BFS50DE + pressure range	£444.98
DN65	65	85	BFS65DE + pressure range	£616.36
DN80	80	110	BFS80DE + pressure range	£802.78
DN100	100	150	BFS100DE + pressure range	£974.16
DN125	125	230	BFS125DE + pressure range	£1515.36
DN150	150	450	BFS150DE + pressure range	£2077.60
DN200	200	580	BFS200DE + pressure range	£4982.04
DN250	250	910	BFS250DE + pressure range	£9870.88
DN300	300	1300	BFS300DE + pressure range	£12928.66

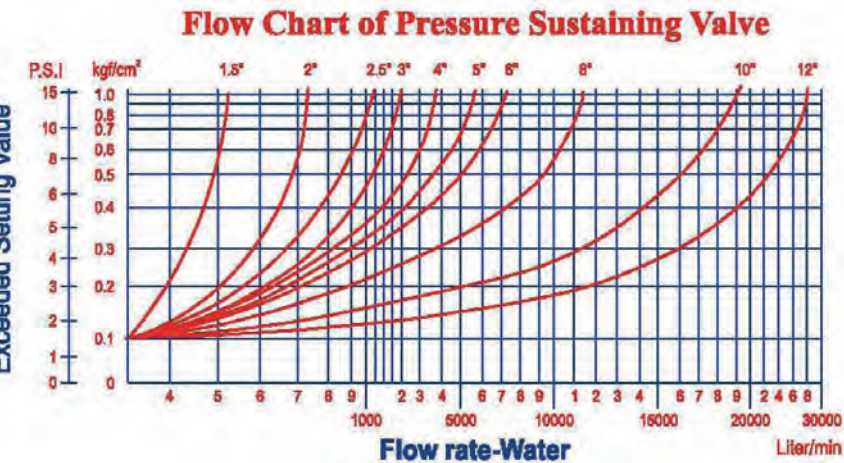
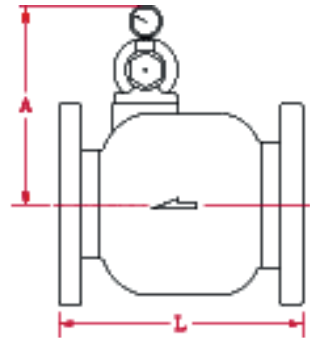
OPTIONS	
Pressure Regulator (Bronze)	Included Included Included +10%
Pressure gauge (Displays back sustained Pressure)	
Pressure adjusting range (0.2 to 4 Bar) or (2 to 8 Bar)	
Other flange options JIS10K, JIS20K, ANSI150Lb, PN10, PN20	
Other custom made sizes (up to 56"), higher pressures and other media and seal options available upon request	

REPAIR KIT	
Piston U Ring	SP – Valve Part Number - U RING
Pressure Sustaining Controller	BFSB + pressure range

OVERALL DIMENSIONS
Pressure sustaining valve will maintain a set minimum back pressure regardless of downstream demand. If back pressure drops to minimum set level valve will begin to close to reduce flow to increase back pressure. When pressure increases above minimum set limit valve will slowly open again.



Materials + Pressure Spec.	
Main body	Ductile Iron Epoxy Coated
Cylinder bolt	Ductile Iron
O-Ring	NBR
Cylinder	Bronze
Spring	Stainless steel
U- ring	NBR
Piston	Bronze
Sealing	NBR
Seat	Bronze
Shaft	Bronze
Controller	Brass
Working	20 Bar
Test	32 Bar



Item	Kg	Dimensions (mm)	
		L	A
BFS50	12	190	180
BFS65	15	210	185
BFS80	18	225	200
BFS100	24	250	222
BFS125	32	280	235
BFS150	44	310	260
BFS200	87	420	300
BFS250	152	470	335
BFS300	202	530	370

Media: water  
 Pressure Rating: 20 Bar Max  
 Back Pressure Range: (0.2–4) or (2–8) Bar  
 Media temperature: -15°C +80°C max  
 Ambient temperature: -15°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: any position

# Pressure Sustaining Valve

## DN50 – DN300

### Stainless 304 or 316

### PILOT ASSISTED

### (0.2 – 4) or (2 – 8) Bar

## TYPE BFS-S



#### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Cv	Part Number Pressure Sustaining Adjusting Range Options: (0.2 – 4) or (2 – 8) Bar	List Price	
				304 Stainless	316 Stainless
DN50	50	37	BFS50 + body material + pressure range	£1239.23	£1416.44
DN65	65	85	BFS65 + body material + pressure range	£1482.28	£1731.84
DN80	80	110	BFS80 + body material + pressure range	£1849.10	£2086.62
DN100	100	150	BFS100 + body material + pressure range	£2411.34	£2772.14
DN125	125	230	BFS125 + body material + pressure range	£3361.46	£3896.64
DN150	150	450	BFS150 + body material + pressure range	£4519.02	£5192.52
DN200	200	580	BFS200 + body material + pressure range	£9017.00	£10370.00
DN250	250	910	BFS250 + body material + pressure range	£16512.62	£18993.12
DN300	300	1300	BFS300 + body material + pressure range	£20018.38	£23001.00

#### OPTIONS

Pressure Regulator 304 Stainless steel  
 Pressure gauge (Displays Back Sustained Pressure)  
 Pressure adjusting range (0.2 to 4 Bar) or (2 to 8 Bar)  
 Other flange options JIS10K, JIS20K, ANSI150Lb, PN10, PN20  
 Other custom made sizes (up to 56"), higher pressures and other media (acid- alkali – oil) and seal options available upon request

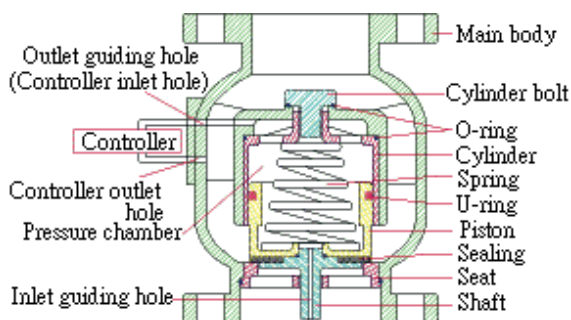
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 +10%

#### REPAIR KIT

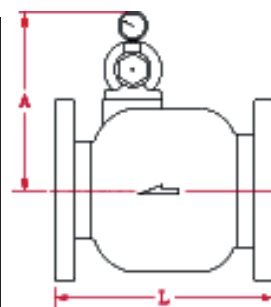
Piston U Ring	SP – Valve Part Number - U RING
Pressure Sustaining Controller	BFSS + pressure range

#### OVERALL DIMENSIONS

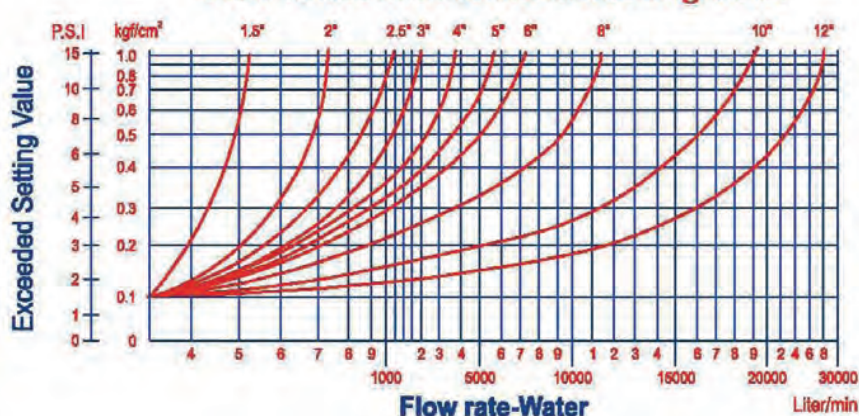
Pressure sustaining valve will maintain a set minimum back pressure regardless of downstream demand. If back pressure drops to minimum set level valve will begin to close to reduce flow to increase back pressure. When pressure increases above minimum set limit valve will slowly open again.



Materials + Pressure Spec	
Main body	304 or 316 Stainless steel.
Cylinder bolt	Stainless steel.
O-Ring	NBR or FKM
Cylinder	Stainless steel.
Spring	Stainless steel.
U- ring	NBR or FKM
Piston	Stainless steel.
Sealing	NBR or FKM
Seat	Stainless steel.
Shaft	Stainless steel.
Controller	Stainless steel.
Working	22 Bar
Test	35 Bar



#### Flow Chart of Pressure Sustaining Valve



Item	Kg	Dimensions (mm)	
		L	A
BFS50	12	190	180
BFS65	15	210	185
BFS80	18	225	200
BFS100	24	250	222
BFS125	32	280	235
BFS150	44	310	260
BFS200	87	420	300
BFS250	152	470	335
BFS300	202	530	370

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: water  
Pressure Rating: 12 Bar Max  
Back Pressure Range: (0.2–4) or (2–8) Bar  
Media temperature: -15°C +80°C max  
Ambient temperature: -15°C to +60°C  
Media viscosity: 50 centistokes max  
Mounting: any position

## Pressure Sustaining Valve

DN50 – DN300

Bronze

PILOT ASSISTED

(0.2 – 4) or (2 – 8) Bar

TYPE BFS-B



### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Cv	Part Number Pressure Sustaining Adjustment Range Options: (0.2 – 4) or (2 – 8) Bar	List Price
DN50	50	37	BFS50B + pressure range	£1220.70
DN65	65	85	BFS65B + pressure range	£1220.70
DN80	80	110	BFS80B + pressure range	£1527.38
DN100	100	150	BFS100B + pressure range	£1972.38
DN125	125	230	BFS125B + pressure range	£3006.66
DN150	150	450	BFS150B + pressure range	£4134.16
DN200	200	580	BFS200B + pressure range	£8785.48
DN250	250	910	BFS250B + pressure range	£15514.40
DN300	300	1300	BFS300B + pressure range	£18406.82

### OPTIONS

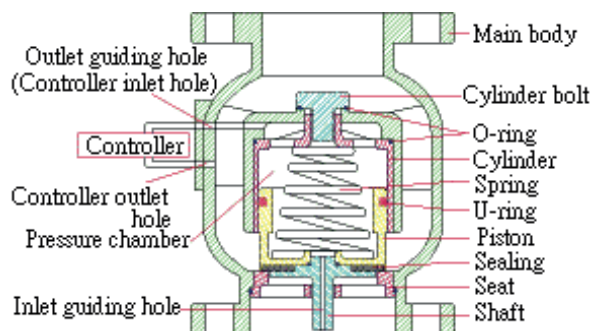
Pressure Regulator Bronze Pressure gauge (Displays Back Sustained Pressure) Pressure adjusting range (0.2 to 4 Bar) or (2 to 8 Bar) Other flange options JIS10K, JIS20K, ANSI150Lb, PN10, PN20 Other custom made sizes (up to 56"), higher pressures and other media and seal options available upon request	Included Included Included +10%
--	--

### REPAIR KIT

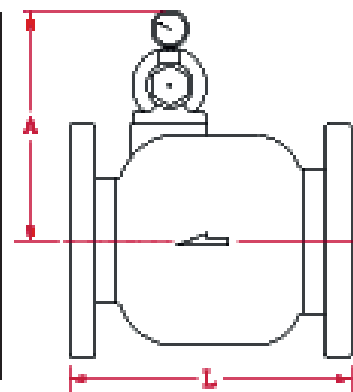
Piston U Ring	SP – Valve Part Number - U RING
Pressure Sustaining Controller	BFSB + pressure range

### OVERALL DIMENSIONS

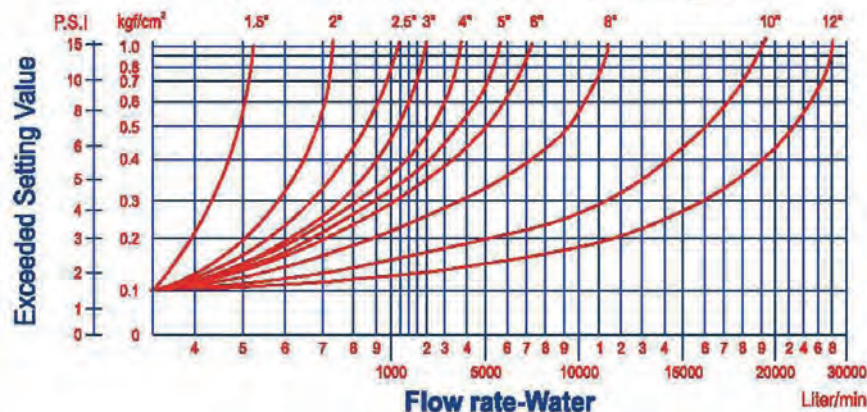
Pressure sustaining valve will maintain a set minimum back pressure regardless of downstream demand. If back pressure drops to minimum set level valve will begin to close to reduce flow to increase back pressure. When pressure increases above minimum set limit valve will slowly open again.



Materials + Pressure Specs	
Main body	Bronze
Cylinder bolt	Brass
O-Ring	NBR
Cylinder	Bronze
Spring	Stainless steel
U- ring	NBR
Piston	Bronze
Sealing	NBR
Seat	Bronze
Shaft	Bronze
Controller	Brass
Working	12 Bar
Test	21 Bar



### Flow Chart of Pressure Sustaining Valve



Item	Kg	Dimensions (mm)	
		L	A
BFS50	12	190	180
BFS65	15	210	185
BFS80	18	225	200
BFS100	24	250	222
BFS125	32	280	235
BFS150	44	310	260
BFS200	87	420	300
BFS250	152	470	335
BFS300	202	530	370

Media: water  
Media Temperature: +80°C Max  
Pressure Range: 0 - 10 Bar Max  
Media viscosity: 50 centistokes max

# Float Ball Valve

1/2 - 3" DN80 –DN100  
304 Stainless Steel  
Mechanical Full Flow  
0 – 10 Bar  
TYPE FBV-SS



## PRESSURE

Ø Port BSP	Part Number	List Price
1/2	FBV-SS	£105.24
3/4	FBV20-SS	£114.26
1	FBV25-SS	£120.26
1 1/2	FBV40-SS	£287.13
2	FBV50-SS	£411.92
3	FBV65-SS	£781.74
Flange PN16		
DN80	FBV80F-SS	£948.61
DN100	FBV100F-SS	£1816.62

## OPTIONS

Fully adjustable water tank level link mechanism  
20 Bar Pressure Option  
Other flange options JIS10K, JIS20K, ANSI150Lb

Included  
POA  
POA

## CONSTRUCTION

Body: 304 Stainless Steel  
Ball: 304 Stainless Steel  
Seals: Silicone with EPDM Seat

## OVERALL DIMENSIONS

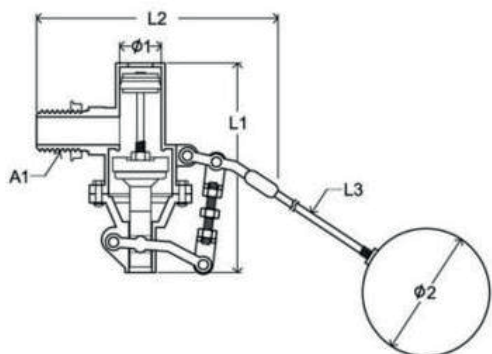
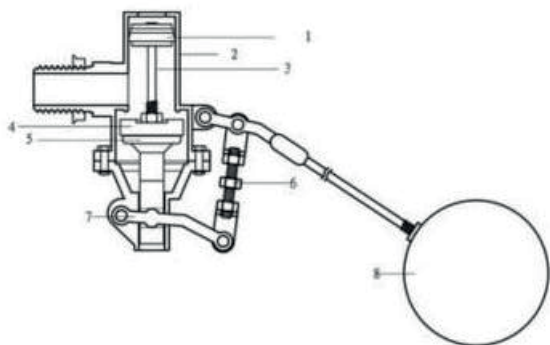


Table of valve sizes				SS304 Ball Float		Kg
A1	L1	L2	Ø1	L3	Ø2	
1/2	110	133	20	170	100	0.67
3/4	110	145	20	170	100	0.72
1	110	145	20	170	100	0.76
1 1/2	170	120	30	300	150	1.75
2	210	130	40	400	150	2.42
3	240	160	60	420	200	5.67



Material Specs		
1	U Ring	EPDM / Silicone
2	Main body	Stainless 304
3	Shaft	Stainless 304
4	U Ring	EPDM / Silicone
5	Piston	Stainless 304
6	Adjusting Screw	Stainless 304
7	Lifting Gear	Stainless 304
8	Float Ball	Stainless 304



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

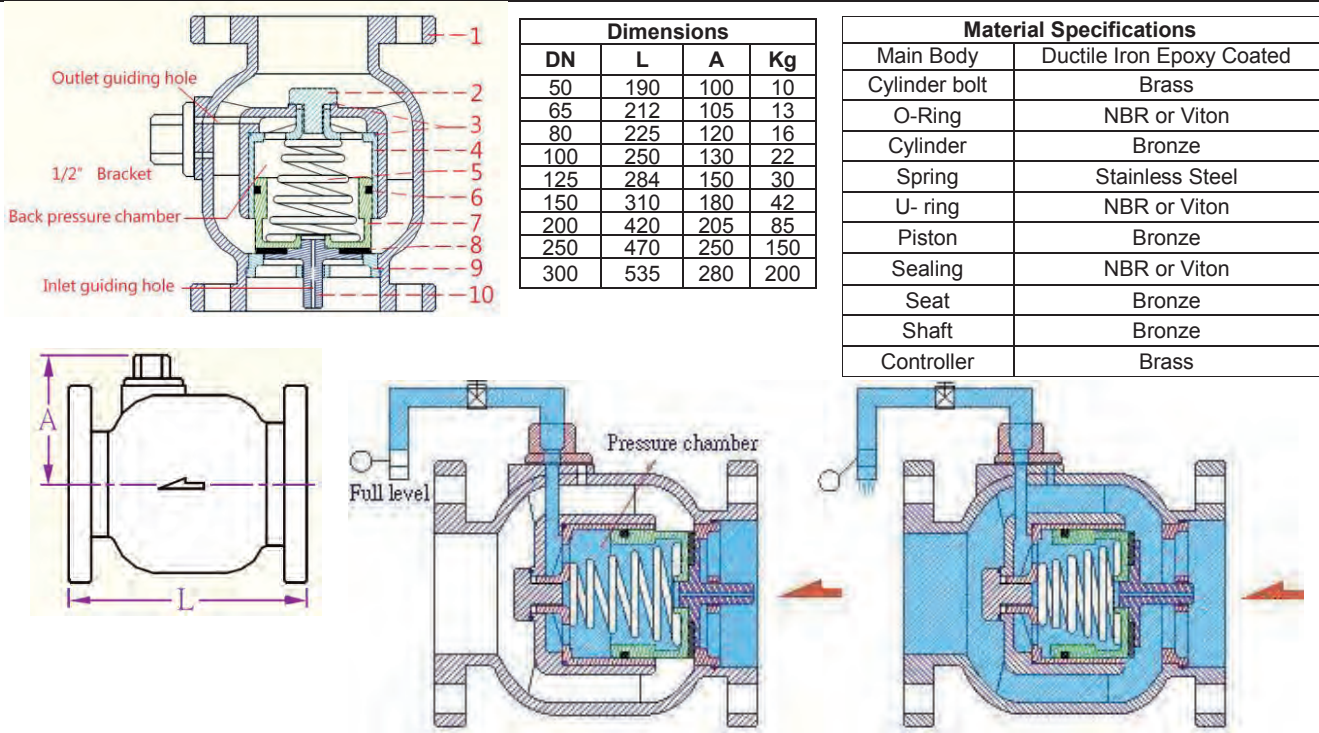
Pressure  
Reducing  
Valves

Media: water  
Pressure range: 0.7 to 20 Bar max  
Media temperature: -15°C +80°C max  
Ambient temperature: -15°C to +60°C  
Media viscosity: 50 centistokes max  
Mounting: any position

**Pilot Float Valves**  
**DN50 – DN300**  
**Ductile Iron Epoxy Coated**  
**PILOT ASSISTED**  
**0.7 – 20 Bar**  
**TYPE BFF-DE**



PRESSURE						
Ø Port PN16	Ø Orifice (mm)	Flow Cv	Max Inlet Pressure (Bar)	Part Number	List Price	
					Seals NBR	Seals Viton
DN50	50	37	20	BFF50DE + seal material	£378.84	£478.06
DN65	65	85	20	BFF65DE + seal material	£586.30	£685.52
DN80	80	110	20	BFF80DE + seal material	£859.90	£959.12
DN100	100	150	20	BFF100DE + seal material	£1226.72	£1353.00
DN125	125	230	20	BFF125DE + seal material	£1849.10	£1999.44
DN150	150	450	20	BFF150DE + seal material	£2074.60	£2224.94
DN200	200	580	20	BFF200DE + seal material	£5171.46	£5484.16
DN250	250	910	16	BFF250DE + seal material	£9372.60	£10622.56
DN300	300	1300	16	BFF300DE + seal material	£13554.06	£13866.75
DN350	350	1800	10	BFF350DE + seal material	POA	POA
DN400	400	2300	10	BFF400DE + seal material	POA	POA
OPTIONS						
½" Threaded pilot adaptor plate Flange JIS10K, JIS20K, ANSI150Lb, PN10, PN25 Other custom made sizes (up to 56") and other media and seal options available upon request						Included +10%
REPAIR KIT						
Piston U Ring				SP + Valve Part Number + U RING		
OVERALL DIMENSIONS						



Media: water  
 Pressure range: 0.7 to 20 Bar max  
 Media temperature: -15°C +80°C max  
 Ambient temperature: -15°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: any position

# Pilot Float Valves

## DN50 – DN300

### Stainless 304 or 316

#### PILOT ASSISTED

#### 0.7 – 20 Bar

## TYPE BFF-S



### PRESSURE

Ø Port PN16	Ø Orifice (mm)	Flow Cv	Max Inlet Pressure (Bar)	Part Number	List Price			
					Stainless 304		Stainless 316	
					Seals NBR	Seals Viton	Seals NBR	Seals Viton
DN50	50	37	20	BFF50 + body material + seal	£1019.26	£1118.48	£1181.62	£1280.84
DN65	65	85	20	BFF65 + body material + seal	£1274.82	£1374.04	£1482.283	£1581.50
DN80	80	110	20	BFF80 + body material + seal	£1614.58	£1713.80	£1813.317	£1912.54
DN100	100	150	20	BFF100 + body material + seal	£2333.18	£2459.46	£2549.66	£2675.94
DN125	125	230	20	BFF125 + body material + seal	£3150.98	£3301.32	£3638.06	£3788.40
DN150	150	450	20	BFF150 + body material + seal	£4311.56	£4461.90	£4961.00	£5111.34
DN200	200	580	20	BFF200 + body material + seal	£8806.52	£9119.22	£10129.46	£10442.16
DN250	250	910	16	BFF250 + body material + seal	£16512.62	£16825.31	£18993.12	£19305.81
DN300	300	1300	16	BFF300 + body material + seal	£20018.13	£20330.83	£23001.00	£23313.70

### Options

1/2" threaded pilot adaptor plate  
 Other flange JIS10K, JIS20K; ANSI150Lb, PN10 or PN25  
 Other custom made sizes (up to 56" DN1400) and other media and seal options available upon request

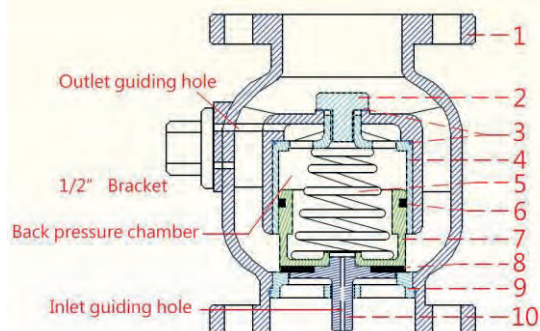
Included  
 +10%

### REPAIR KIT

Piston U Ring

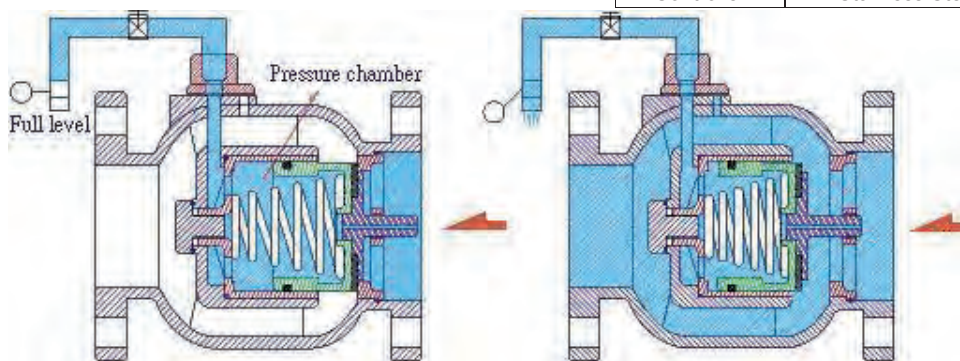
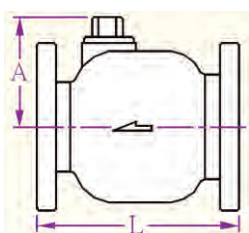
SP + Valve Part Number + U RING

### OVERALL DIMENSIONS



Dimensions				
DN	L	A	Kg	
50	190	100	10	
65	212	105	13	
80	225	120	16	
100	250	130	22	
125	284	150	30	
150	310	180	42	
200	420	205	85	
250	470	250	150	
300	535	280	200	

Material Specs	
Main body	Stainless Steel
Cylinder bolt	Stainless Steel
O-Ring	NBR or Viton
Cylinder	Stainless Steel
Spring	Stainless Steel
U- ring	NBR or Viton
Piston	Stainless Steel
Sealing	NBR or Viton
Seat	Stainless Steel
Shaft	Stainless Steel
Controller	Stainless Steel



Brass  
 2/2  
 N/Closed  
 0 Rated

Brass  
 2/2  
 N/Closed  
 Pilot

Brass  
 2/2  
 N/Open  
 0 Rated

Brass  
 2/2  
 N/Closed  
 0 Rated

Brass  
 Stainless  
 3/2

Stainless  
 2/2  
 N/Closed  
 0 Rated

Stainless  
 2/2  
 N/Closed  
 Pilot

Stainless  
 2/2  
 N/Open

Steam

Plastic  
 2/2  
 N/Closed


Plastic  
 2/2  
 N/Closed

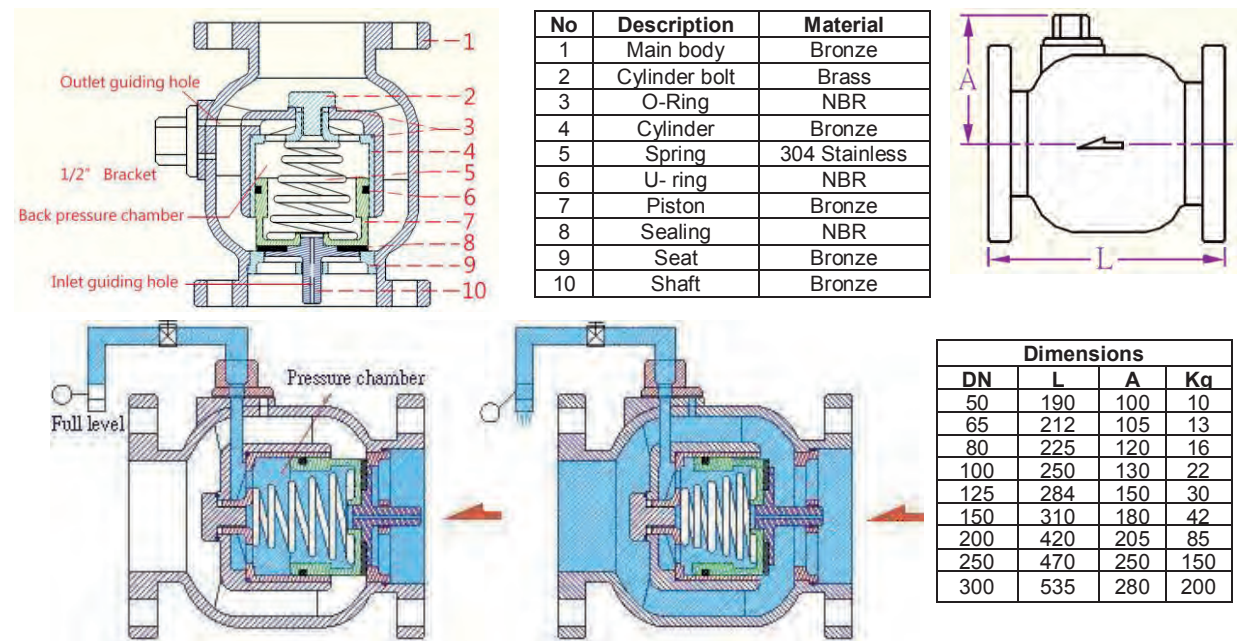
Plastic  
 Acids/  
 Alkali

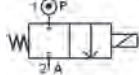
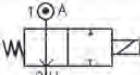

2/2  
 Latching  
 Bi-Stable

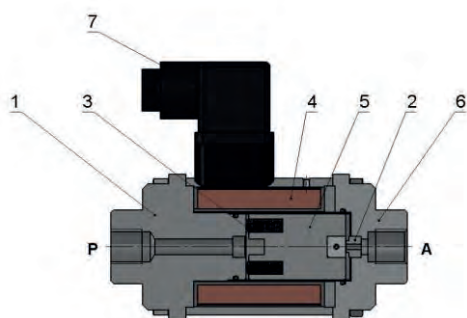
EN161  
 Gas  
 Valves

Pressure  
 Reducing  
 Valves

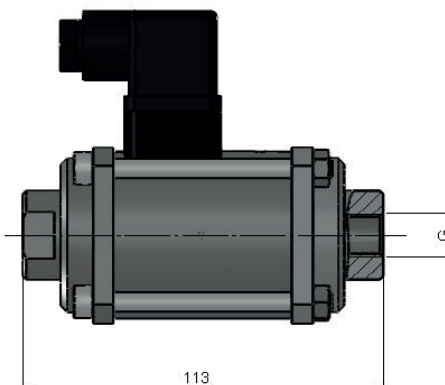
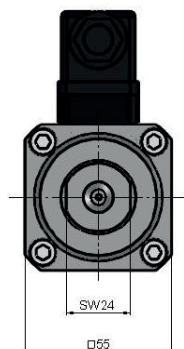
<div>Media: water Pressure range: 0.7 to 12 Bar max Media temperature: -15°C +80°C max Ambient temperature: -15°C to +60°C Media viscosity: 50 centistokes max Mounting: any position</div>			<div>Pilot Float Valves DN50 – DN300 Bronze PILOT ASSISTED 0.7 – 12 Bar TYPE BFF-B</div>		
PRESSURE					
Ø Port PN16	Ø Orifice (mm)	Flow Cv	Part Number	List Price	
				Seals NBR	Seals Viton
DN50	50	37	BFF50B + seal material	£1127.50	£1226.72
DN65	65	85	BFF65B + seal material	£1127.50	£1226.72
DN80	80	110	BFF80B + seal material	£1434.18	£1533.40
DN100	100	150	BFF100B + seal material	£2300.10	£2426.38
DN125	125	230	BFF125B + seal material	£2913.46	£3063.80
DN150	150	450	BFF150B + seal material	£4040.96	£4191.30
DN200	200	580	BFF200B + seal material	£8692.28	£9004.97
DN250	250	910	BFF250B + seal material	£15418.18	£15730.88
DN300	300	1300	BFF300B + seal material	£18310.60	£18623.30
OPTIONS					
1/2" Threaded pilot adaptor plate Flange JIS10K, JIS20K, ANSI150Lb, PN10 Other custom made sizes (up to 56") and other media and seal options available upon request					Included +10%
REPAIR KIT					
Piston U Ring			SP + Valve Part Number + U RING		
OVERALL DIMENSIONS					



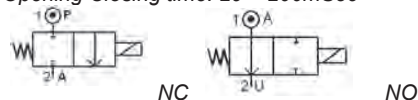
<p>Media: air – water – oil - vacuum Pressure range: 0 to 100 bar max Media temperature: -20° to +100° C Ambient temperature: -30° to +50° C Media viscosity: 500 centistokes max Mounting: any position Opening Closing time: 25 – 130mSec</p> <div> NC</div> <div> NO</div>			<p><b>2/2 Steel</b> <b>1/8 – 1/4 COAXIAL</b> <b>N/CLOSED &amp; N/OPEN</b> <b>2 WAY DIRECT ACTING</b> <b>0 - 100 Bar</b> <b>TYPE 266</b></p>					
PRESSURE								
Port BSP	Ø Orifice (mm)	Flow Kv L/min	Pressure Rating (bar) ΔP		Body Material	Part Number	List Price	
			Min	Max				
				A→P	P→A			
1/8 or 1/4	2.0	2.5	0	12	100	Steel Galvanised	266A20S1G + port + voltage	£340.05
	3.0	3.7	0	12	40		266A30S1G + port + voltage	
	4.0	6.5	0	12	20		266A40S1G + port + voltage	
	5.0	8.0	0	12	16		266A50S1G + port + voltage	
	6.0	9.5	0	10	10		266A60S1G + port + voltage	
	2.0	2.5	0	12	100	Steel Nickel Plated	266A20S2G + port + voltage	£377.58
	3.0	3.7	0	12	40		266A30S2G + port + voltage	
	4.0	6.5	0	12	20		266A40S2G + port + voltage	
	5.0	8.0	0	12	16		266A50S2G + port + voltage	
	6.0	9.5	0	10	10		266A60S2G + port + voltage	
OPTIONS								
Normally Open version (266B)							+£25.33	
Fastening Brackets (Steel Zinc plated)							+£39.86	
Other options: Vacuum – Free of oil and Grease – Flanged – Brass - Stainless Steel 304 or 316 – 3/8 Port								
ELECTRICAL DATA								
Voltage (-10% + 10%) Continuous duty 100%			Power Consumption (Watts)			Insulation class	Enclosure	Electrical connections
~	12 - 24 - 48 - 110 - 230 (Connector with rectifier)		41			F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 - 230 (DC)		35					
CONSTRUCTION								
Body: Steel Tube and internal parts: Stainless steel Seals: PTFE								
OVERALL DIMENSIONS								



Position	Quantity	Description
1	1	Solenoid core
2	1	Nozzle
3	2	Spring
4	1	Coil
5	1	Plunger
6	1	Adaptor fitting
7	1	Plug
Weight	1.7Kg	



Media: air – water – oil - vacuum  
 Pressure range: 0 to 300 Bar max  
 Media temperature: -20°C to +100°C  
 Ambient temperature: -30°C to +50°C  
 Media viscosity: 500 centistokes max  
 Weight: 4000g  
 Opening Closing time: 29 – 200mSec



# 2/2 Steel

## 1/8 – 3/8 COAXIAL

### N/CLOSED & N/OPEN

### 2 WAY DIRECT ACTING

### 0 - 300 Bar

### TYPE 267



#### PRESSURE

Port BSP	Ø Orifice (mm)	Flow Kv L/min	Pressure Rating (Bar)		Body Material	Part Number	List Price
			Min	Max			
				P→A      A→P			
1/8	1.0	0.7	0	300      100	Galvanised Steel	267A1S1 + port + voltage	£769.23
	2.0	1.9	0	300      50		267A2S1 + port + voltage	
	2.5	2.7	0	300      30		267A3S1 + port + voltage	
	3.0	4.6	0	270      24		267A4S1 + port + voltage	
	4.0	7.3	0	135      9		267A5S1 + port + voltage	
	5.0	8.2	0	90      3		267A6S1 + port + voltage	
	6.0	10.7	0	60      2		267A7S1 + port + voltage	
1/4	1.0	0.7	0	300      100	Nickel Plated Steel	267A1S2 + port + voltage	£834.89
3/8	2.0	1.9	0	300      50		267A2S2 + port + voltage	
	2.5	2.7	0	300      30		267A3S2 + port + voltage	
	3.0	4.6	0	270      24		267A4S2 + port + voltage	
	4.0	7.3	0	135      9		267A5S2 + port + voltage	
	5.0	8.2	0	90      3		267A6S2 + port + voltage	
	6.0	10.7	0	60      2		267A7S2 + port + voltage	

#### OPTIONS

Normally Open version (267B)

Fastening Brackets (Steel Zinc plated)

Other options available upon request – Vacuum – Free of oil and Grease

+£60.09

+£39.86

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Power Consumption (Watts)	Insulation class	Enclosure	Electrical connections
~	12 - 24 - 48 - 110 - 230 (Connector with rectifier)	58	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 - 230 (DC)	55			

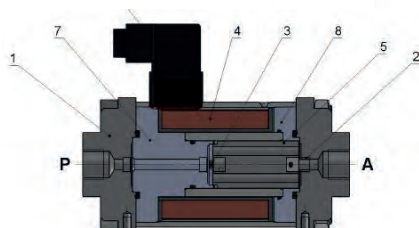
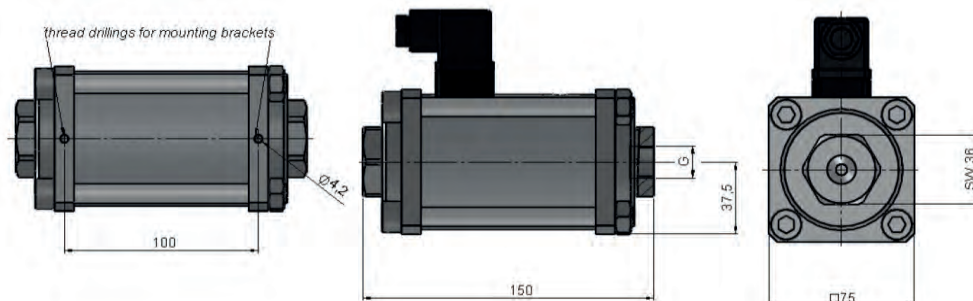
#### CONSTRUCTION

Body: Steel (S1 galvanised or S2 nickel plated)

Tube and internal parts: Stainless steel

Seals: FKM static, PTFE Dynamic

#### OVERALL DIMENSIONS



1	Adaptor	5	Plunger
2	Nozzle	6	Plug
3	Spring	7	Solenoid Core
4	Coil	8	Solenoid Cover

Media: air – water – oil - vacuum  
 Pressure range: 0 to 20 bar max  
 Media temperature: -20°C to +100°C  
 Ambient temperature: -10°C to +50°C  
 Media viscosity: 500 centistokes max  
 Mounting: any position  
 Opening Closing time: 25 – 130mSec



## 2/2 Brass & Stainless

1/4 – 1/12" COAXIAL  
 N/CLOSED & N/OPEN  
 2 WAY DIRECT ACTING  
 0 - 20 Bar  
**TYPE 269**



### PRESSURE

Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (bar) ΔP			Body Material	Part Number	List Price
		Kv m³/hr	Min	Max				
				P→A	A→P			
1/4, 3/8, 1/2, (3/4*)	10	2.5	0	20	16	Brass	269A10MOG + port + voltage	£319.42
3/8, 1/2, 3/4, (1*)	15	5.2	0	20	16	Brass	269A15MOG + port + voltage	£519.93
1/2, 3/4, 1, (1 1/4*)	20	7.0	0	20	16	Brass	269A20MOG + port + voltage	£681.98
3/4, 1, 1 1/4, (1 1/2*)	25	12.3	0	20	16	Brass	269A25MOG + port + voltage	£863.74
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	20	16	Brass	269A32MOG + port + voltage	£1295.25
1/4, 3/8, 1/2, (3/4*)	10	2.5	0	20	16	St.St.303	269A10V2G + port + voltage	£621.01

### OPTIONS

Normally Open version (269B)  
 PTFE, NBR or EPDM Seals  
 Fastening Brackets (Steel Zinc plated)  
 Electrical Position Switch E1 with 1 position Open or Closed (Please advise if require position Open or Position Closed Switch)  
 Electrical Position Switch E2 with 2 positions Open and Closed  
 \*Special options – Vacuum – Degreased – Flanged – Stainless Steel – Manual Override – Galvanised or Nickel Plated Steel Body

+ 7%  
 +10%  
 +6%  
 +£504.94  
 +£822.48

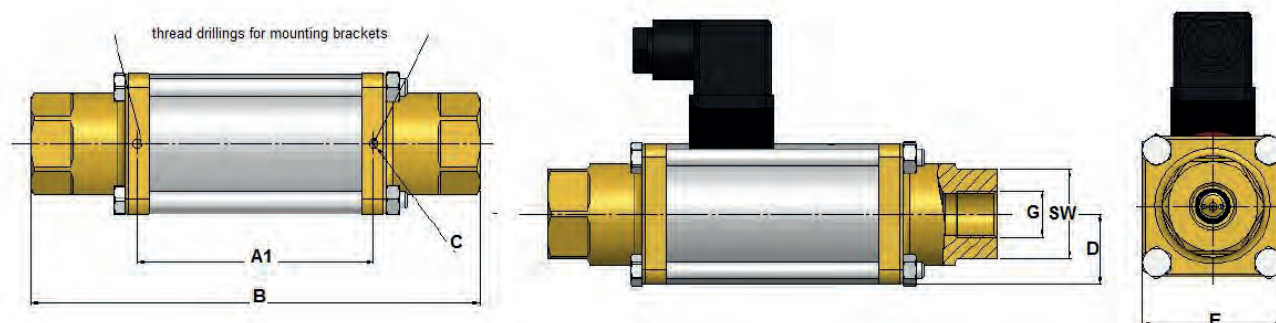
### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Power Consumption (Watts)					Insulation class	Enclosure	Electrical connections
		Ø 10	Ø 15	Ø 20	Ø 25	Ø 32			
~	24 - 48 - 110 - 230 (40 – 60Hz Connector with rectifier)	29	32	42	60	76	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 - 230 (DC)	25	30	34	51	73			

### CONSTRUCTION

Body: Brass MS058 (MO version): Option: St steel 303 (V2G) or 316L (V4G)  
 Tube and internal parts: Stainless steel  
 Seals: Static FKM - Dynamic PTFE (Optional NBR, EPDM or PTFE)

### OVERALL DIMENSIONS



DN	G	SW	A1	B	C	D	E	Kg
10	1/4 3/8 1/2 (3/4*)	32	84	159.5	M4	25	50	1.7
15	3/8 1/2 3/4 (1*)	41	100	184	M5	35	70	3.6
20	1/2 3/4 1 (1 1/4*)	46	108	215	M5	40	80	5.4
25	3/4 1 1 1/4 (1 1/2*)	55	121	246	M5	45	90	7.1
32	1 1 1/4 1 1/2 (2*)	60	122	269	M6	57.5	115	12.6

Media: air – water – oil – vacuum  
 Pressure range: 0 to 40 bar max  
 Media temperature: -20°C to +130°C  
 Ambient temperature: -30°C to +60°C  
 Media viscosity: 500 centistokes max  
 Mounting: any position  
 Opening Closing time: 25 – 130mSec



## 2/2 Brass & Stainless

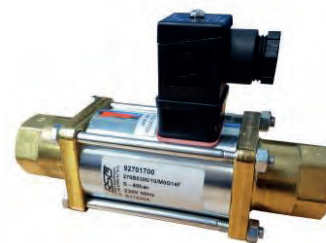
### 1/4 – 2" COAXIAL

### N/CLOSED & N/OPEN

### 2 WAY DIRECT ACTING

### 0 - 40 Bar

## TYPE 270



#### PRESSURE

Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (bar) ΔP			Body Material	Part Number	List Price
		Kv m³/hr	Min	Max				
				P→A	A→P			
1/4, 3/8, 1/2, (3/4*)	10	2.5	0	40	16	Brass	270A10MOG + port + voltage	£344.98
3/8, 1/2, 3/4, (1*)	15	5.2	0	40	16	Brass	270A15MOG + port + voltage	£561.21
1/2, 3/4, 1, (1 1/4*)	20	7.0	0	40	16	Brass	270A20MOG + port + voltage	£736.40
3/4, 1, 1 1/4, (1 1/2*)	25	12.3	0	40	16	Brass	270A25MOG + port + voltage	£930.81
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	40	16	Brass	270A32MOG + port + voltage	£1374.76
1 1/2	40	45.7	0	16	16	Brass	270A40MOG112 + voltage	£1953.79
2	50	47.2	0	16	16	Brass	270A50MOG2 + voltage	£2080.19
1/4, 3/8, 1/2, (3/4*)	10	2.5	0	40	16	St.St.303	270A10V2G + port + voltage	£627.34
3/8, 1/2, 3/4, (1*)	15	5.2	0	40	16	St.St.303	270A15V2G + port + voltage	£1001.64
1/2, 3/4, 1, (1 1/4*)	20	7.0	0	40	16	St.St.303	270A20V2G + port + voltage	£1181.05
3/4, 1, 1 1/4, (1 1/2*)	25	12.3	0	40	16	St.St.303	270A25V2G + port + voltage	£1541.74
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	40	16	St.St.303	270A32V2G + port + voltage	£2373.34
1 1/2	40	45.7	0	16	16	St.St.303	270A40V2G112 + voltage	£2594.97
2	50	47.2	0	16	16	St.St.303	270A50MOG2 + voltage	£2830.65
1/4, 3/8, 1/2, (3/4*)	10	2.5	0	40	16	St.St.316	270A10V4G + port + voltage	£762.42
3/8, 1/2, 3/4, (1*)	15	5.2	0	40	16	St.St.316	270A15V4G + port + voltage	£1151.03
1/2, 3/4, 1, (1 1/4*)	20	7.0	0	40	16	St.St.316	270A20V4G + port + voltage	£1438.55
3/4, 1, 1 1/4, (1 1/2*)	25	12.3	0	40	16	St.St.316	270A25V4G + port + voltage	£1791.03
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	40	16	St.St.316	270A32V4G + port + voltage	£2725.12
1 1/2	40	45.7	0	16	16	St.St.316	270A40V4G112 + voltage	£3124.75
2	50	47.2	0	16	16	St.St.316	270A50V4G2 + voltage	£3336.05

#### OPTIONS

Normally Open version (270B)  
 Electrical Position Switch E1 with 1 position Open or Closed (Please advise if require position Open or Position Closed Switch)  
 Electrical Position Switch E2 with 2 positions Open and Closed  
 Vacuum – Degreased – Flanged – Manual Override – Galvanised or Nickel Plated – mounting brackets – EPDM NBR or PTFE seals

+ 7%  
 +£504.94  
 +£822.48

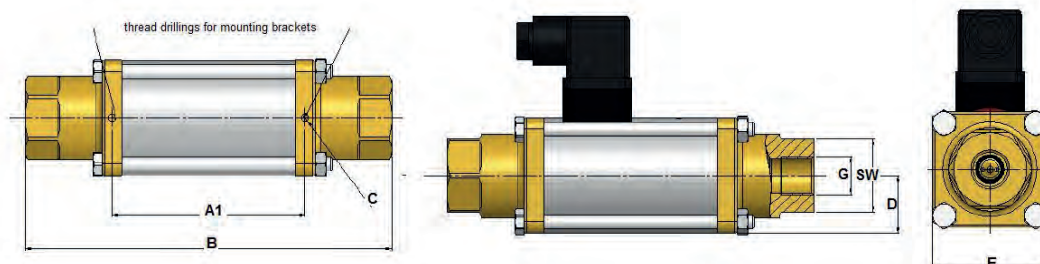
#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Power Consumption (Watts)							Insulation class	Enclosure	Electrical connections
		Ø 10	Ø 15	Ø 20	Ø 25	Ø 32	Ø 40	Ø 50			
~	24 - 48 - 110 - 230 (40 – 60Hz Connector with rectifier)	41	45	53	68	76	91	91	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 - 230 (DC)	35	40	45	60	73	73	73			

#### CONSTRUCTION

Body: Brass MS058 (MO version): Option: St steel 303 (V2G) or 316L (V4G)  
 Tube and internal parts: Stainless steel  
 Seals: Static FKM - Dynamic PTFE (Optional NBR, EPDM or PTFE)

#### OVERALL DIMENSIONS



DN	G	SW	A1	B	C	D	E	Kg
10	1/4 3/8 1/2 (3/4*)	32	84	159.5	M4	25	50	1.7
15	3/8 1/2 3/4 (1*)	41	100	184	M5	35	70	3.6
20	1/2 3/4 1 (1 1/4*)	46	108	215	M5	40	80	5.4
25	3/4 1 1 1/4 (1 1/2*)	55	121	246	M5	45	90	7.1
32	1 1 1/4 1 1/2 (2*)	60	122	269	M6	57.5	115	12.6
40	1 1/2	75	131	304	M6	65	130	18.3
50	2	75	131	304	M6	65	130	18.3

Media: air – water – oil - vacuum  
 Pressure range: 0 to 64 bar max  
 Media temperature: -20° to +130° C  
 Ambient temperature: -30° to +60° C  
 Media viscosity: 500 centistokes max  
 Mounting: any position  
 Opening Closing time: 25 – 130mSec



## 2/2 Brass & Stainless

### 1/4 - 1 1/2 COAXIAL

### N/CLOSED & N/OPEN

### 2 WAY DIRECT ACTING

### 0 - 64 Bar

## TYPE 271



#### PRESSURE

Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar)			Body Material	Part Number	List Price
		Kv <i>m³/hr</i>	Min	Max				
				P→A	A→P			
1/4, 3/8, 1/2, (3/4*)	10	2.5	0	64	16	Brass	271A10MOG + port + voltage	£413.69
3/8, 1/2, 3/4, (1*)	15	5.2	0	64	16	Brass	271A15MOG + port + voltage	£673.54
1/2, 3/4, 1, (1 1/4*)	20	7.0	0	64	16	Brass	271A20MOG + port + voltage	£883.91
3/4, 1, 1 1/4, (1 1/2*)	25	12.3	0	64	16	Brass	271A25MOG + port + voltage	£1117.02
1, 1 1/4, 1 1/2 (2*)	32	20.0	0	64	16	Brass	271A32MOG + port + voltage	£1649.85
1/4, 3/8, 1/2, (3/4*)	10	2.5	0	64	16	St.St.303	271A10V2G + port + voltage	£721.15
3/8, 1/2, 3/4, (1*)	15	5.2	0	64	16	St.St.303	271A15V2G + port + voltage	£1151.96
1/2, 3/4, 1, (1 1/4*)	20	7.0	0	64	16	St.St.303	271A20V2G + port + voltage	£1358.34
3/4, 1, 1 1/4, (1 1/2*)	25	12.3	0	64	16	St.St.303	271A25V2G + port + voltage	£1773.20
1, 1 1/4, 1 1/2 (2*)	32	20.0	0	64	16	St.St.303	271A32V2G + port + voltage	£2604.81
1/4, 3/8, 1/2, (3/4*)	10	2.5	0	64	16	St.St.316	271A10V4G + port + voltage	£876.40
3/8, 1/2, 3/4, (1*)	15	5.2	0	64	16	St.St.316	271A15V4G + port + voltage	£1323.63
1/2, 3/4, 1, (1 1/4*)	20	7.0	0	64	16	St.St.316	271A20V4G + port + voltage	£1654.30
3/4, 1, 1 1/4, (1 1/2*)	25	12.3	0	64	16	St.St.316	271A25V4G + port + voltage	£2059.55
1, 1 1/4, 1 1/2 (2*)	32	20.0	0	64	16	St.St.316	271A32V4G + port + voltage	£2950.27

#### OPTIONS

Normally Open version (271B)  
 Electrical Position Switch E1 with 1 position Open or Closed (Please advise if require position Open or Position Closed Switch)  
 Electrical Position Switch E2 with 2 positions Open and Closed  
 Vacuum – Degreased – Flanged – Manual Override – Galvanised or Nickel Plated Steel – NBR EPDM PTFE seals, Mounting Bracket

+ 7%  
 +£504.94  
 +£822.48

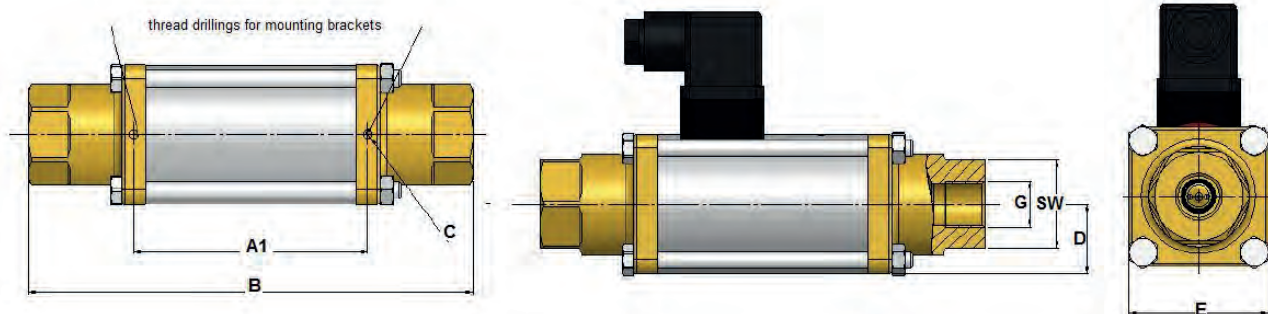
#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Power Consumption (Watts)					Insulation class	Enclosure	Electrical connections
		Ø 10	Ø 15	Ø 20	Ø 25	Ø 32			
~	12 - 24 - 48 - 110 - 230 (40 – 60Hz Connector with rectifier)	53	55	59	85	76	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 - 230 (DC)	44	50	53	77	73			

#### CONSTRUCTION

Body: Brass MS058 (MO version): Option: St steel 303 (V2G) or 316L (V4G)  
 Tube and internal parts: Stainless steel  
 Seals: Static FKM - Dynamic PTFE (Optional NBR, EPDM or PTFE)

#### OVERALL DIMENSIONS



DN	G	SW	A1	B	C	D	E	Kg
10	1/4 3/8 1/2 (3/4*)	32	84	159.5	M4	25	50	1.7
15	3/8 1/2 3/4 (1*)	41	100	184	M5	35	70	3.6
20	1/2 3/4 1 (1 1/4*)	46	108	215	M5	40	80	5.4
25	3/4 1 1 1/4 (1 1/2*)	55	121	246	M5	45	90	7.1
32	1 1 1/4 1 1/2 (2*)	60	122	269	M6	57.5	115	12.6

Media: air – water – oil - vacuum  
 Pressure range: 0 to 100 bar max  
 Media temperature: -20°C to +130°C  
 Ambient temperature: -30°C to +60°C  
 Media viscosity: 500 centistokes max  
 Mounting: any position  
 Opening Closing time: 25 – 130mSec



## 2/2 Brass & Stainless

### 1/4 – 1 1/2 COAXIAL

### N/CLOSED & N/OPEN

### 2 WAY DIRECT ACTING

### 0 - 100 Bar

## TYPE 272



#### PRESSURE

Port BSP	Ø Orifice (mm)	Flow  Kv m³/hr	Pressure Rating (Bar)			Body Material	Part Number	List Price
			Min	Max				
				P→A	A→P			
1/4, 3/8, 1/2, (3/4*)	10	2.5	0	100	16	Brass	272A10MOG + port + voltage	£496.47
3/8, 1/2, 3/4, (1*)	15	5.2	0	100	16	Brass	272A15MOG + port + voltage	£808.16
1/2, 3/4, 1, (1 1/4*)	20	7.0	0	100	16	Brass	272A20MOG + port + voltage	£1060.73
3/4, 1, 1 1/4, (1 1/2*)	25	12.3	0	100	16	Brass	272A25MOG + port + voltage	£1340.28
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	100	16	Brass	272A32MOG + port + voltage	£1945.58
1/4, 3/8, 1/2, (3/4*)	10	2.5	0	100	16	St.St.303	272A10V2G + port + voltage	£753.05
3/8, 1/2, 3/4, (1*)	15	5.2	0	100	16	St.St.303	272A15V2G + port + voltage	£1202.15
1/2, 3/4, 1, (1 1/4*)	20	7.0	0	100	16	St.St.303	272A20V2G + port + voltage	£1417.67
3/4, 1, 1 1/4, (1 1/2*)	25	12.3	0	100	16	St.St.303	272A25V2G + port + voltage	£1850.13
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	100	16	St.St.303	272A32V2G + port + voltage	£2827.61
1/4, 3/8, 1/2, (3/4*)	10	2.5	0	100	16	St.St.316	272A10V4G + port + voltage	£914.86
3/8, 1/2, 3/4, (1*)	15	5.2	0	100	16	St.St.316	272A15V4G + port + voltage	£1381.33
1/2, 3/4, 1, (1 1/4*)	20	7.0	0	100	16	St.St.316	272A20V4G + port + voltage	£1726.54
3/4, 1, 1 1/4, (1 1/2*)	25	12.3	0	100	16	St.St.316	272A25V4G + port + voltage	£2149.61
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	100	16	St.St.316	272A32V4G + port + voltage	£3238.96

#### OPTIONS

Normally Open version (272B)

Electrical Position Switch E1 with 1 position Open or Closed (Please advise if require position Open or Position Closed Switch)

Electrical Position Switch E2 with 2 positions Open and Closed

Vacuum – Degreased – Flanged – Manual Override – Galvanised or Nickel Plated – Mounting Brackets

+ 7%  
 +£504.94  
 +£822.48

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Power Consumption (Watts)					Insulation class	Enclosure	Electrical connections
		Ø 10	Ø 15	Ø 20	Ø 25	Ø 32			
~	24 - 48 - 110 - 230 (40 – 60Hz Connector with rectifier)	53	55	59	85	76	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 - 230 (DC)	44	50	53	77	73			

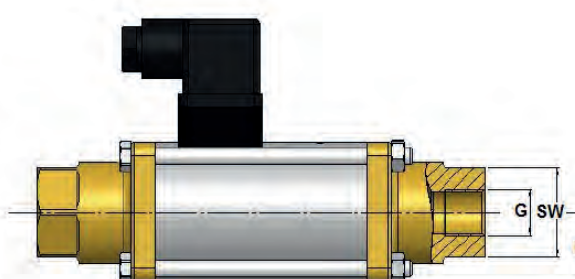
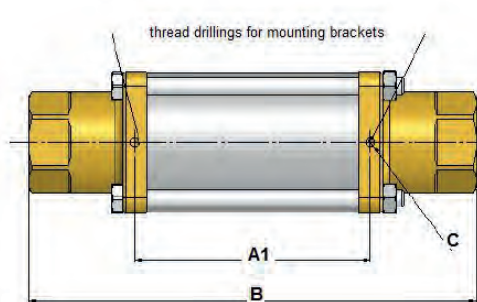
#### CONSTRUCTION

Body: Brass MS058 (MO version): Option: St steel 303 (V2G) or 38516L (V4G)

Tube and internal parts: Stainless steel76

Seals: Static FKM - Dynamic PTFE

#### OVERALL DIMENSIONS



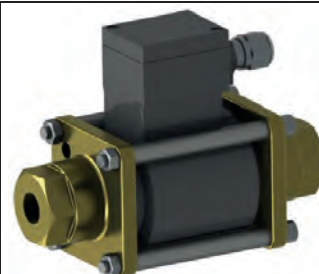
DN	G	SW	A1	B	C	D	E	Kg
10	1/4 3/8 1/2 (3/4*)	32	84	159.5	M4	25	50	1.7
15	3/8 1/2 3/4 (1*)	41	100	184	M5	35	70	3.6
20	1/2 3/4 1 (1 1/4*)	46	108	215	M5	40	80	5.4
25	3/4 1 1 1/4 (1 1/2*)	55	121	246	M5	45	90	7.1
32	1 1 1/4 1 1/2 (2*)	60	122	269	M6	57.5	115	12.6

Media: air – water – oil – vacuum  
 Pressure range: 0 to 20 Bar max  
 Media temperature: -20° to +40°C  
 Ambient temperature: -30° to +40°C  
 Media viscosity: 500 centistokes max  
 Mounting: any position  
 Opening Closing time: 25 – 130mSec



## 2/2 Brass + Stainless

### 1/4 – 3/4" ATEX COAXIAL N/CLOSED & N/OPEN 2 WAY DIRECT ACTING 0 - 20 Bar TYPE 290



#### PRESSURE

Port BSP	Ø Orifice (mm)	Flow Kv L/min	Pressure Rating (bar) ΔP		Body Material	Part Number	List Price
			Min	Max			
				P→A      A→P			
1/4, 3/8, 1/2, (3/4*)	10	51	0	20      16	Brass	290A10MOG + port + voltage	£953.33
	10	51	0	20      16	303 Stainless	290A10V2G + port + voltage	£1365.38
	10	51	0	20      16	316 Stainless	290A10V4G + port + voltage	£1692.06
3/8, 1/2, 3/4, (1*)	15	91	0	20      16	Brass	290A15MOG + port + voltage	£1118.19
	15	91	0	20      16	303 Stainless	290A15V2G + port + voltage	£1490.61
	15	91	0	20      16	316 Stainless	290A15V4G + port + voltage	£2158.76

#### OPTIONS

ATEX II 2G ExemII T4 + II 2D td A21 IP65 T130°C

Normally Open version (290B)

PTFE Seals

Fastening Brackets (Steel Zinc plated)

\*Special options – Vacuum – Degreased – Flanged – Manual Override – Galvanised or Nickel Plated Steel Body - Manifold

Included  
+ 7%  
+10%  
+6%  
£POR

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Power Consumption (Watts)		Insulation class	Enclosure	Electrical connections
		Ø 10	Ø 15			
~	230 (40 – 60Hz Connector with rectifier)	23	23	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	24 (DC)	30	30			

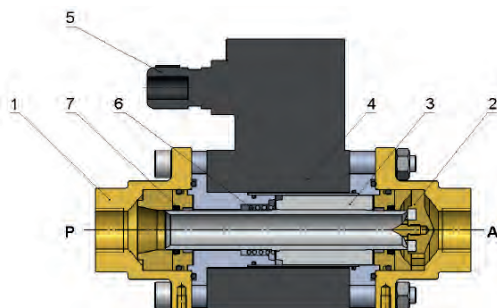
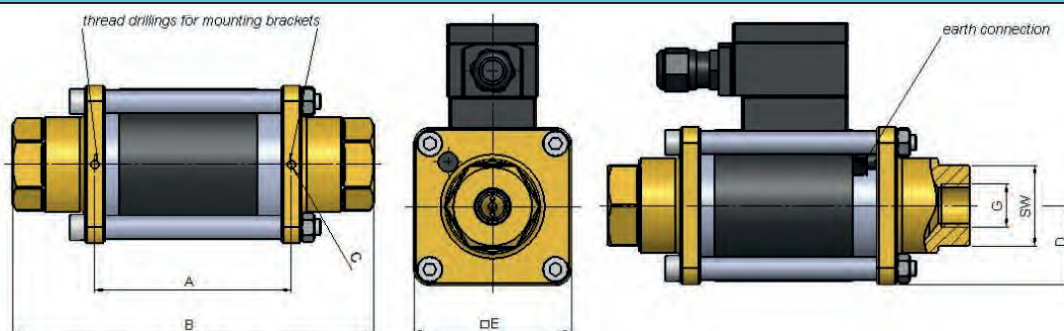
#### CONSTRUCTION

Body: Brass MS058 (MG version): Option: St steel 303 (V2G) or 316L (V4G)

Tube and internal parts: Stainless steel

Seals: Static FKM - Dynamic PTFE (Optional NBR, EPDM or PTFE)

#### OVERALL DIMENSIONS



Position	Description
1	Port adaptor
2	Valve Seat
3	Plunger
4	Solenoid
5	M16x1.5 Cable entry
6	Spring
7	PTFE Rod seal

DN	G	SW	A	B	C	D	E	Kg
10	1/4 3/8 1/2 (3/4*)	32	84	159.5	M4	32.5	65	2.3
15	3/8 1/2 3/4 (1*)	41	100	184	M5	40	80	4.3

Media: air – water – oil – vacuum  
 Pressure range: 0 to 40 bar max  
 Media temperature: -20°C to +100°C  
 Ambient temperature: -30°C to +50°C  
 Media viscosity: 500 centistokes max  
 Mounting: any position  
 Opening Closing time: 25 – 130mSec



## 3/2 Brass & Stainless

### 1/4 – 2" COAXIAL

### N/CLOSED & N/OPEN

### 3 WAY DIRECT ACTING

### 0 - 40 Bar

## TYPE 370



#### PRESSURE

Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar)			Body Material	Part Number	List Price
		Kv M³/Hr	Min	Max				
				P⇒A P⇒R	A⇒P R⇒P			
1/4, 3/8, 1/2	10	2.0	0	40	16	Brass	370A10MOG + port + voltage	£414.63
3/8, 1/2, 3/4	15	5.6	0	40	16	Brass	370A15MOG + port + voltage	£700.04
1/2, 3/4, 1	20	8.0	0	40	16	Brass	370A20MOG + port + voltage	£921.20
3/4, 1, 1 1/4	25	11.5	0	40	16	Brass	370A25MOG + port + voltage	£1160.17
1, 1 1/4, 1 1/2	32	17.9	0	40	16	Brass	370A32MOG + port + voltage	£1934.79
1 1/2	40	41.5	0	16	16	Brass	370A40MOG112 + voltage	£2884.60
2	50	43.0	0	16	16	Brass	370A50MOG2 + voltage	£3236.38
1/4, 3/8, 1/2	10	2.0	0	40	16	St.St.303	370A10V2G + port + voltage	£784.94
3/8, 1/2, 3/4	15	5.6	0	40	16	St.St.303	370A15V2G + port + voltage	£1396.33
1/2, 3/4, 1	20	8.0	0	40	16	St.St.303	370A20V2G + port + voltage	£2068.46
3/4, 1, 1 1/4	25	11.5	0	40	16	St.St.303	370A25V2G + port + voltage	£2572.22
1, 1 1/4, 1 1/2	32	17.9	0	40	16	St.St.303	370A32V2G + port + voltage	£4268.26
1 1/2	40	41.5	0	16	16	St.St.303	370A40V2G112 + voltage	£6355.49
2	50	43.0	0	16	16	St.St.303	370A50V2G2 + voltage	£6613.46
1/4, 3/8, 1/2	10	2.0	0	40	16	St.St.316	370A10V4G + port + voltage	£1090.75
3/8, 1/2, 3/4	15	5.6	0	40	16	St.St.316	370A15V4G + port + voltage	£1525.56
1/2, 3/4, 1	20	8.0	0	40	16	St.St.316	370A20V4G + port + voltage	£2197.92
3/4, 1, 1 1/4	25	11.5	0	40	16	St.St.316	370A25V4G + port + voltage	£2818.46
1, 1 1/4, 1 1/2	32	17.9	0	40	16	St.St.316	370A32V4G + port + voltage	£4636.46
1 1/2	40	41.5	0	16	16	St.St.316	370A40V4G112 + voltage	£6847.98
2	50	43.0	0	16	16	St.St.316	370A50V4G2 + voltage	£7152.86

#### OPTIONS

Normally Open version (370B)  
 Vacuum – Nickel Plated – Free of oil and Grease – Flanged – NBR EPDM or PTFE seals – Position feed back switches

+ 7%

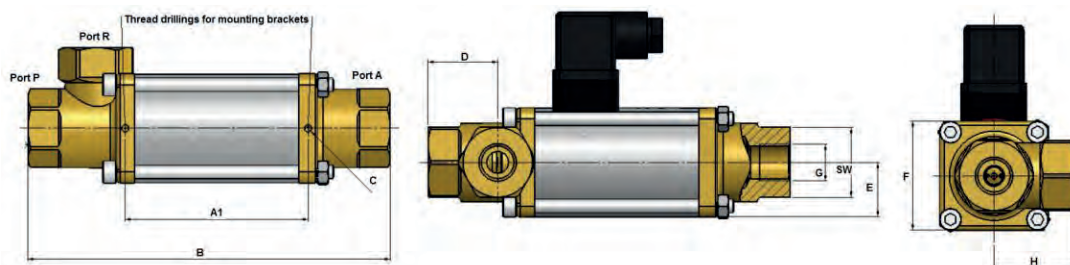
#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Power Consumption (Watts)							Insulation class	Enclosure	Electrical connections
		Ø 10	Ø 15	Ø 20	Ø 25	Ø 32	Ø 40	Ø 50			
~	24 - 48 - 110 - 230 (40 – 60Hz Connector with rectifier)	35	40	45	60	73	73	73	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 - 230 (DC)	41	45	53	68	76	90	90			

#### CONSTRUCTION

Body: Brass MS058 (MO version): Option: St steel 303 (V2G) or 316L (V4G)  
 Tube and internal parts: Stainless steel  
 Seals: Static FKM, Dynamic PTFE, Seat FKM, Optional NBR and EPDM

#### OVERALL DIMENSIONS



DN	G	SW	A1 (mm)	A2 (mm)	B (mm)	C	D (mm)	E (mm)	F (mm)	H (mm)	Kg
10	1/4 3/8 1/2	32	84	-	166.5	M4	32	25	50	37	1.9
15	3/8 1/2 3/4	41	100	-	200	M5	38.5	35	70	60	4
20	1/2 3/4 1	46	108	-	228	M5	45.5	40	80	72	6
25	3/4 1 1 1/4	55	121	-	252	M5	48	45	90	80	7.5
32	1 1 1/4 1 1/2	60	122	50	269	M6	49.5	57.5	115	80	13.4
40	1 1/2	75	131	60	304	M6	56.5	65	130	84	18.7
50	2	75	131	60	304	M6	56.5	65	130	84	18.5

Media: air – water – oil – vacuum  
 Pressure range: 0 to 64 bar max  
 Media temperature: -20°C to +100°C  
 Ambient temperature: -30°C to +50°C  
 Media viscosity: 500 centistokes max  
 Mounting: any position  
 Opening Closing time: 25 – 130mSec



# **3/2 Brass** **1/4 – 11/2" COAXIAL** **N/CLOSED & N/OPEN** **3 WAY DIRECT ACTING** **0 - 64 Bar** **TYPE 371**



## **PRESSURE**

Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar)			Body Material	Part Number	List Price
		Kv M³/Hr	Min	Max				
				P⇒A P⇒R	A⇒P R⇒P			
1/4, 3/8, 1/2	10	2.0	0	64	16	Brass	371A10MOG + port + voltage	£619.14
3/8, 1/2, 3/4	15	5.6	0	64	16	Brass	371A15MOG + port + voltage	£812.38
1/2, 3/4, 1	20	8.0	0	64	16	Brass	371A20MOG + port + voltage	£1069.41
3/4, 1, 1 1/4	25	11.5	0	64	16	Brass	371A25MOG + port + voltage	£1346.38
1, 1 1/4, 1 1/2	32	17.9	0	64	16	Brass	371A32MOG + port + voltage	£2036.10
3/4, 1, 1 1/4	25	11.5	0	64	16	St.St.316	371A25V4G + port + voltage	£3087.23

## **OPTIONS**

Normally Open version (371B)  
 PTFE, NBR or EPDM Seals  
 Fastening Brackets (Steel Zinc plated)  
 Electrical Position Switch E1 with 1 position Open or Closed (Please advise if require position Open or Position Closed Switch)  
 Electrical Position Switch E2 with 2 positions Open and Closed  
 Many other options available upon request – Vacuum – Nickel Plated – Free of oil and Grease – Flanged – Stainless Steel 304 or 316

+ 7%  
 +10%  
 +6%  
 +£504.94  
 +£822.48

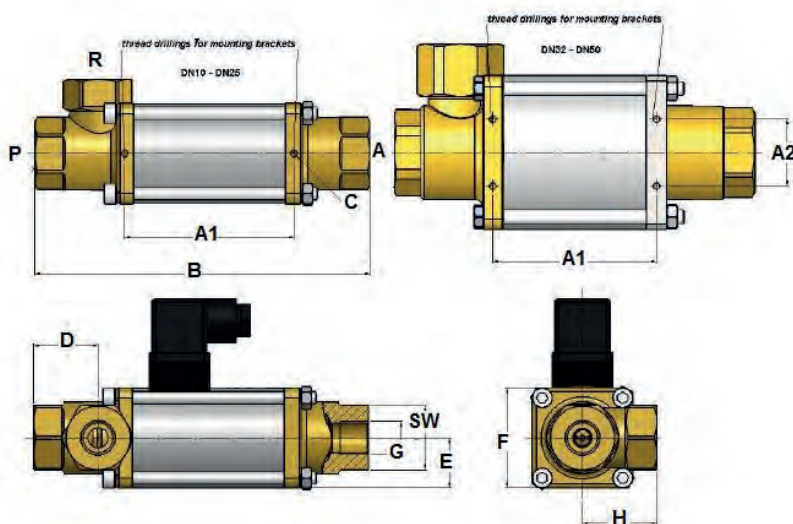
## **ELECTRICAL DATA**

Voltage (-10% + 10%) Continuous duty 100%		Power Consumption (Watts)					Insulation class	Enclosure	Electrical connections
		Ø 10	Ø 15	Ø 20	Ø 25	Ø 32			
~	24 - 48 - 110 - 230 (40 – 60Hz Connector with rectifier)	53	55	59	85	76	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 - 110 - 230 (DC)	44	50	53	77	73			

## **CONSTRUCTION**

Body: Brass MS058 (MO version): Option: St steel 303 (V2G) or 316L (V4G)  
 Tube and internal parts: Stainless steel  
 Seals: Static FKM, Dynamic PTFE, Seat FKM, Optional NBR and EPDM

## **OVERALL DIMENSIONS**



DN	G	SW	A1 (mm)	A2 (mm)	B (mm)	C	D (mm)	E (mm)	F (mm)	H (mm)	Kg
10	1/4 3/8 1/2	32	84	-	166.5	M4	32	25	50	37	1.9
15	3/8 1/2 3/4	41	100	-	200	M5	38.5	35	70	60	4
20	1/2 3/4 1	46	108	-	228	M5	45.5	40	80	72	6
25	3/4 1 1 1/4	55	121	-	252	M5	48	45	90	80	7.5
32	1 1 1/4 1 1/2	60	122	50	269	M6	49.5	57.5	115	80	13.4

Media: air – water – oil - vacuum  
 Pressure range : 0 to 64 bar max  
 Media temperature : -10°C to +100°C  
 Ambient temperature : -10°C to +50°C  
 Control pressure : 3 – 8 Bar air  
 Media viscosity : 500 centistokes max  
 Mounting : any position  
 Opening/Closing : 50 – 1000 mSec



## 2/2 Brass & Stainless

1/4 – 2" COAXIAL  
 N/CLOSED + N/OPEN  
 2 WAY PNEUMATIC  
 0 - 64 Bar  
**TYPE 280**



### PRESSURE

Port BSP	Ø Orifice (mm)	Flow Kv m³/hr	Pressure Rating (Bar)		Body Material	Part Number	List Price
			min	Max.			
				P→A    A→P			
1/4, 3/8, 1/2 (3/4*)	10	2.7	0	64    16	Brass	280A10MOG + port	£320.58
3/8, 1/2, 3/4, (1*)	15	7.2	0	64    16	Brass	280A15MOG + port	£460.36
1/2, 3/4, 1, (1 1/4*)	20	9.4	0	64    16	Brass	280A20MOG + port	£548.54
3/4, 1, 1 1/4, (1 1/2*)	25	14.5	0	64    16	Brass	280A25MOG + port	£684.56
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	64    16	Brass	280A32MOG + port	£966.46
1 1/2	40	45.7	0	64    16	Brass	280A40MOG112	£1360.22
2	50	47.2	0	64    16	Brass	280A50MOG2	£1536.11
1/4, 3/8, 1/2 (3/4*)	10	2.7	0	64    16	St.St.303	280A10V2G + port	£604.59
3/8, 1/2, 3/4, (1*)	15	7.2	0	64    16	St.St.303	280A15V2G + port	£974.19
1/2, 3/4, 1, (1 1/4*)	20	9.4	0	64    16	St.St.303	280A20V2G + port	£1245.54
3/4, 1, 1 1/4, (1 1/2*)	25	14.5	0	64    16	St.St.303	280A25V2G + port	£1478.65
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	64    16	St.St.303	280A32V2G + port	£1897.27
1 1/2	40	45.7	0	64    16	St.St.303	280A40V2G112	£2991.31
2	50	47.2	0	64    16	St.St.303	280A50V2G2	£3236.38
1/4, 3/8, 1/2 (3/4*)	10	2.7	0	64    16	St.St.316	280A10V4G + port	£678.23
3/8, 1/2, 3/4, (1*)	15	7.2	0	64    16	St.St.316	280A15V4G + port	£1100.36
1/2, 3/4, 1, (1 1/4*)	20	9.4	0	64    16	St.St.316	280A20V4G + port	£1427.29
3/4, 1, 1 1/4, (1 1/2*)	25	14.5	0	64    16	St.St.316	280A25V4G + port	£1639.07
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	64    16	St.St.316	280A32V4G + port	£2073.16
1 1/2	40	45.7	0	64    16	St.St.316	280A40V4G112	£3306.96
2	50	47.2	0	64    16	St.St.316	280A50V4G2	£3589.33

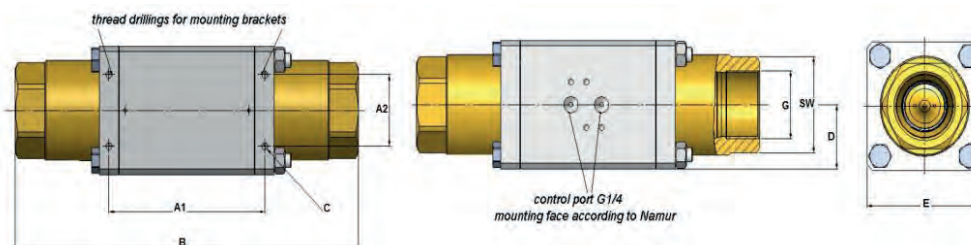
### OPTIONS

Normally Open version (280B)	+ 7%
Namur Valve CY52002S single acting spring close	+£48.55
Namur Valve CY52002D double acting	+£73.45
ATEX 22001EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C	+£67.16
E1 Open or Closed position feedback switch	+£352.25
E2 Open & Closed position feedback switches	+£511.72
Vacuum – Degreased – Flanged – Galvanised or Nickel Plated – Mounting Brackets – NBR EPDM PTFE sealing	

### CONSTRUCTION

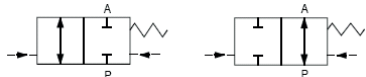
Body : Brass MS058 (MO version) : Option St steel 303 (V2G) or St steel 316L (V4G)  
 Tube and internal parts : Stainless steel  
 Seals : Static FKM - Dynamic FKM + PTFE - Seat PTFE (Optional NBR and EPDM)

### OVERALL DIMENSIONS



DN	G	SW	A1 (mm)	A2 (mm)	B (mm)	C	D (mm)	E (mm)	Kg
10	1/4 3/8 1/2 (3/4*)	32	84	-	159.5	M4	25	50	1.6
15	3/8 1/2 3/4 (1*)	41	100	-	184	M5	35	70	2.8
20	1/2 3/4 1 (1 1/4*)	46	108	-	215	M5	40	80	4.0
25	3/4 1 1 1/4 (1 1/2*)	55	121	-	246	M5	45	90	5.3
32	1 1 1/4 1 1/2 (2*)	60	122	50	269	M6	45	90	6.9
40	1 1/2	75	131	60	304	M6	55	110	11.7
50	2	75	131	60	304	M6	55	110	11.7

Media: air – water – oil - vacuum  
 Pressure range : 0 to 120 bar max  
 Media temperature : -10°C to +100°C  
 Ambient temperature : -10°C to +50°C  
 Control pressure : 3 – 8 Bar air  
 Media viscosity : 500 centistokes max  
 Mounting : any position  
 Opening/Closing : 50 – 1000 mSec



# 2/2 Brass

## 1/4 – 2" COAXIAL

### N/CLOSED + N/OPEN

### 2 WAY PNEUMATIC

### 0 - 120 Bar


## TYPE 281



#### PRESSURE

Port BSP	Ø Orifice (mm)	Flow Kv M³/Hr	Pressure Rating (Bar)		Body Material	Part Number	List Price
			min	Max.			
				P→A    A→P			
1/4, 3/8, 1/2, (3/4*)	10	2.7	0	120    16	Brass	281A10MOG + port	£476.54
3/8, 1/2, 3/4, (1*)	15	7.2	0	120    16	Brass	281A15MOG + port	£568.71
1/2, 3/4, 1, (1 1/4*)	20	9.4	0	120    16	Brass	281A20MOG + port	£737.56
3/4, 1, 1 1/4 (1 1/2*)	25	14.5	0	120    16	Brass	281A25MOG + port	£869.36
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	100    16	Brass	281A32MOG + port	£1350.60
1 1/2	40	45.7	0	100    16	Brass	281A40MOG112	£1712.00
2	50	47.2	0	100    16	Brass	281A50MOG2	£1829.26
1/4, 3/8, 1/2, (3/4*)	10	2.7	0	120    16	St.St.303	281A10V2G + port	£637.43
3/8, 1/2, 3/4, (1*)	15	7.2	0	120    16	St.St.303	281A15V2G + port	£1094.74
1/2, 3/4, 1, (1 1/4*)	20	9.4	0	120    16	St.St.303	281A20V2G + port	£1355.76
3/4, 1, 1 1/4 (1 1/2*)	25	14.5	0	120    16	St.St.303	281A25V2G + port	£1626.39
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	100    16	St.St.303	281A32V2G + port	£2002.80
1 1/2	40	45.7	0	100    16	St.St.303	281A40V2G112	£3119.12
2	50	47.2	0	100    16	St.St.303	281A50V2G2	£3331.59
1/4, 3/8, 1/2, (3/4*)	10	2.7	0	120    16	St.St.316	281A10V4G + port	£752.35
3/8, 1/2, 3/4, (1*)	15	7.2	0	120    16	St.St.316	281A15V4G + port	£1191.83
1/2, 3/4, 1, (1 1/4*)	20	9.4	0	120    16	St.St.316	281A20V4G + port	£1477.95
3/4, 1, 1 1/4 (1 1/2*)	25	14.5	0	120    16	St.St.316	281A25V4G + port	£1693.23
1, 1 1/4, 1 1/2, (2*)	32	20.0	0	100    16	St.St.316	281A32V4G + port	£2161.81
1 1/2	40	45.7	0	100    16	St.St.316	281A40V4G112	£3402.42
2	50	47.2	0	100    16	St.St.316	281A50V4G2	£3541.73

#### OPTIONS

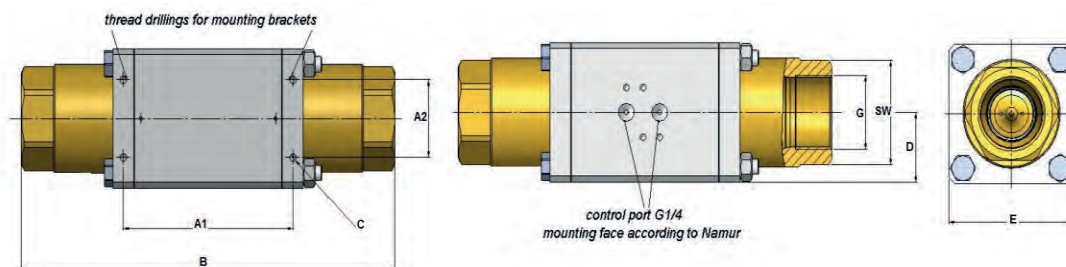
Normally Open version (281B)  
 Namur Valve CY52002S single acting spring close  
 Namur Valve CY52002D double acting  
 ATEX 22001EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C   
 E1 Open or Closed position feedback switch  
 E2 Open & Closed position feedback switches  
 Vacuum – Degreased – Flanged – Galvanised or Nickel Plated Body – Mounting Brackets – NBR EPDM PTFE seals

+ 7%  
 +£48.55  
 +£73.45  
 +£67.16  
 +£352.25  
 +£511.72

#### CONSTRUCTION

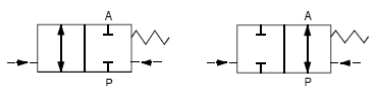
Body : Brass MS058 (MO version) : Option St steel 303 (V2G) or St steel 316L (V4G)  
 Tube and internal parts : Stainless steel  
 Seals : Static FKM - Dynamic FKM + PTFE - Seat PTFE (Optional NBR and EPDM)

#### OVERALL DIMENSIONS



DN	G	SW	A1 (mm)	A2 (mm)	B (mm)	C	D (mm)	E (mm)	Kg
10	1/4 3/8 1/2 (3/4*)	32	84	-	159.5	M4	25	50	1.6
15	3/8 1/2 3/4 (1*)	41	100	-	184	M5	35	70	2.8
20	1/2 3/4 1 (1 1/4*)	46	108	-	215	M5	40	80	4.0
25	3/4 1 1 1/4 (1 1/2*)	55	121	-	246	M5	45	90	5.3
32	1 1 1/4 1 1/2 (2*)	60	122	50	269	M6	45	90	6.9
40	1 1/2	75	131	60	304	M6	55	110	11.7
50	2	75	131	60	304	M6	55	110	11.7

Media: air – water – oil – vacuum  
 Pressure range : 0 to 160 Bar max  
 Media temperature : -10°C to +100°C  
 Ambient temperature : -10°C to +50°C  
 Control pressure : 3 – 8 Bar air  
 Media viscosity : 500 centistokes max  
 Mounting : any position  
 Opening/Closing : 50 – 1000 mSec



## 2/2 Brass & St.St.

### 1/4 – 1 1/4" COAXIAL

### N/CLOSED + N/OPEN

### 2 WAY PNEUMATIC

### 0 - 160 Bar

## TYPE 282



#### PRESSURE

Port BSP	Ø Orifice (mm)	Flow Kv M³/Hr	Pressure Rating (bar) ΔP		Body Material	Part Number	List Price
			min	Max.			
				P→A    A→P			
1/4, 3/8, 1/2, (3/4*)	10	2.7	0	160    16	Brass	282A10MOG + port	£524.15
3/8, 1/2, 3/4, (1*)	15	7.2	0	160    16	Brass	282A15MOG + port	£682.34
1/2, 3/4, 1, (1 1/4*)	20	9.4	0	160    16	Brass	282A20MOG + port	£720.92
3/4, 1, 1 1/4, (1 1/2*)	25	14.5	0	160    16	Brass	282A25MOG + port	£867.72
1/4, 3/8, 1/2, (3/4*)	10	2.7	0	160    16	St.St.303	282A10V2G + port	£693.01
3/8, 1/2, 3/4, (1*)	15	7.2	0	160    16	St.St.303	282A15V2G + port	£1121.95
1/2, 3/4, 1, (1 1/4*)	20	9.4	0	160    16	St.St.303	282A20V2G + port	£1421.43
3/4, 1, 1 1/4, (1 1/2*)	25	14.5	0	160    16	St.St.303	282A25V2G + port	£1626.63
1/4, 3/8, 1/2, (3/4*)	10	2.7	0	160    16	St.St.316	282A10V4G + port	£881.09
3/8, 1/2, 3/4, (1*)	15	7.2	0	160    16	St.St.316	282A15V4G + port	£1351.78
1/2, 3/4, 1, (1 1/4*)	20	9.4	0	160    16	St.St.316	282A20V4G + port	£1550.65
3/4, 1, 1 1/4, (1 1/2*)	25	14.5	0	160    16	St.St.316	282A25V4G + port	£1795.49

#### OPTIONS

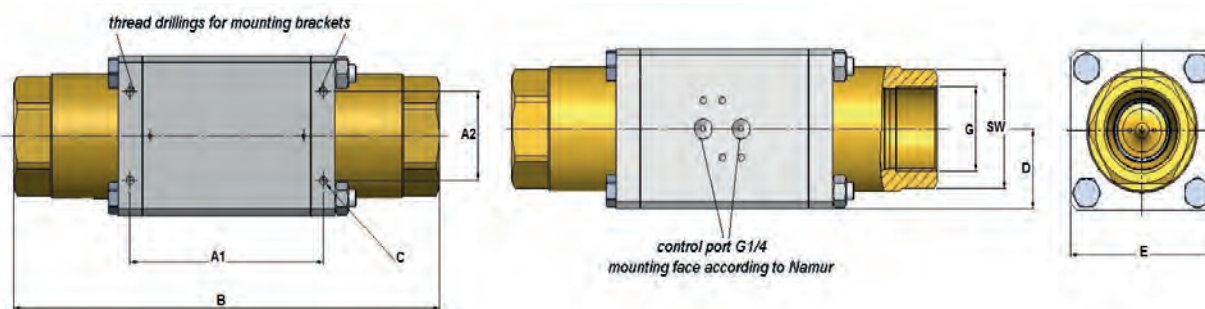
Normally Open version (282B)  
 Fastening Brackets (Steel Zinc plated)  
 Namur Valve CY52002S single acting spring close  
 Namur Valve CY52002D double acting  
 ATEX 22001EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C ☺  
 E1 Open or Closed position feedback switch  
 E2 Open & Closed position feedback switches  
 Many other options available upon request – Vacuum – Nickel Plated – Free of oil and Grease – Flanged – Stainless Steel 304 or 316

+ 7%  
 +6%  
 +£48.55  
 +£73.45  
 +£67.16  
 +£352.25  
 +£511.72

#### CONSTRUCTION

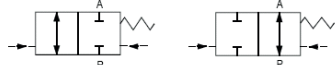
Body : Brass MS058 (MO version) : Option St steel 303 (V2G) or St steel 316L (V4G)  
 Tube and internal parts : Stainless steel  
 Seals : Static FKM - Dynamic FKM + PTFE - Seat PTFE (Optional NBR and EPDM)

#### OVERALL DIMENSIONS



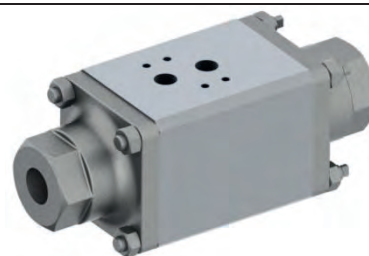
DN	G	SW	A1 (mm)	A2 (mm)	B (mm)	C	D (mm)	E (mm)	Kg
10	1/4 3/8 1/2 (3/4*)	32	84	-	159.5	M4	25	50	1.6
15	3/8 1/2 3/4 (1*)	41	100	-	184	M5	35	70	2.8
20	1/2 3/4 1 (1 1/4*)	46	108	-	215	M5	40	80	4.0
25	3/4 1 1 1/4 (1 1/2*)	55	121	-	246	M5	45	90	5.3

Media: air – water – oil - vacuum  
 Pressure range : 0 to 200 bar max  
 Media temperature : -10° to +100°C  
 Ambient temperature : -10° to +50°C  
 Control pressure : 3 – 8 Bar air  
 Media viscosity : 500 centistokes max  
 Mounting : any position  
 Opening/Closing : 50 – 1000 mSec



## 2/2 Brass & St.St.

3/8 – 1" COAXIAL  
 N/CLOSED + N/OPEN  
 2 WAY PNEUMATIC  
 0 - 200 Bar  
**TYPE 283**



### PRESSURE

Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (bar) ΔP			Body Material	Part Number	List Price
		Kv M³/Hr	min	Max.				
				P⇒A	A⇒P			
3/8, 1/2, 3/4	15	7.2	0	200	16	Brass	283A15MOG + port	£1315.19
3/8, 1/2, 3/4	15	7.2	0	200	16	St.St.303	283A15V2G + port	£1490.61
1	25	14.5	0	200	16	Brass	283A25MOG1	£1982.87
1	25	14.5	0	200	16	St.St.303	283A25V2G1	£2393.28

### OPTIONS

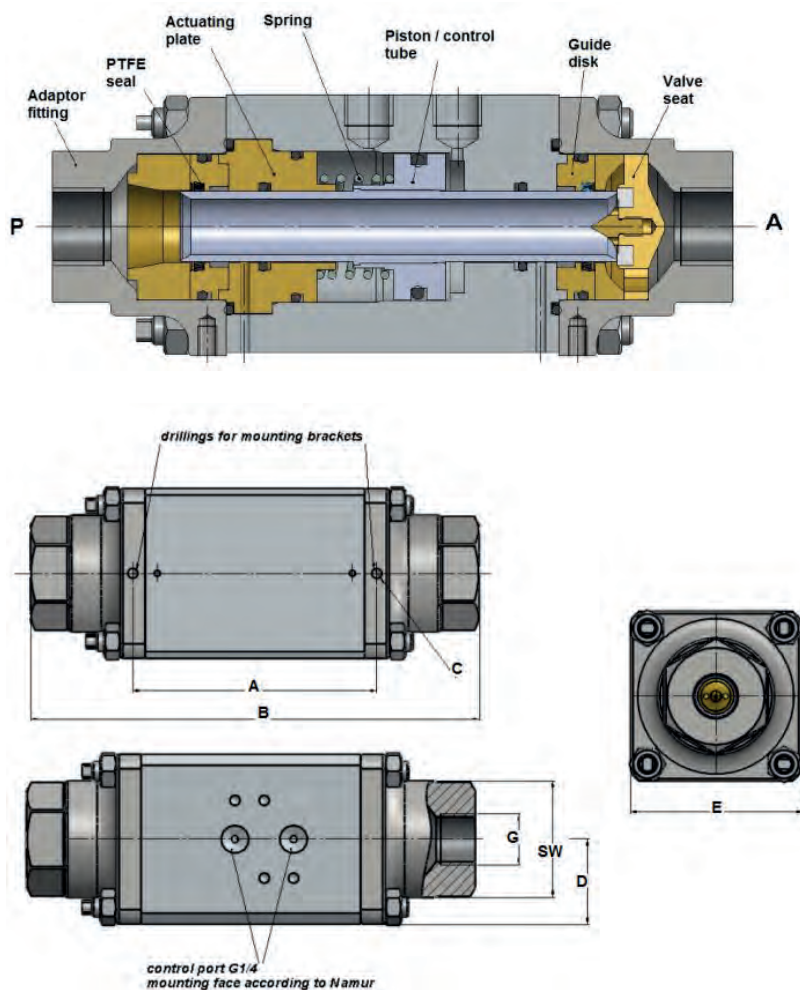
Normally Open version (283B)  
 Fastening Brackets (Steel Zinc plated)  
 Namur Valve CY52002S single acting spring close  
 Namur Valve CY52002D double acting  
 ATEX 22001EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C   
 Many other options available upon request – Vacuum – Nickel Plated – Free of oil and Grease

+ 7%  
 +6%  
 +£48.55  
 +£73.45  
 +£67.16

### CONSTRUCTION

Body : Brass MS058 (MO version) : Option St steel 303 (V2G) or St steel 316L (V4G)  
 Tube and internal parts : Stainless steel  
 Seals : Static FKM - Dynamic FKM + PTFE - Seat PTFE (Optional NBR and EPDM)

### OVERALL DIMENSIONS

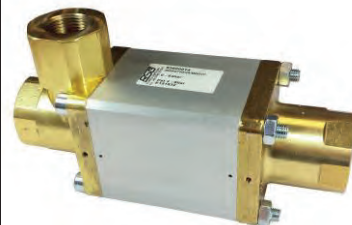


DN	G	SW	A1 (mm)	B (mm)	C	D (mm)	E (mm)	Kg
15	3/8 1/2 3/4	50	100	184	M5	35	70	3.2

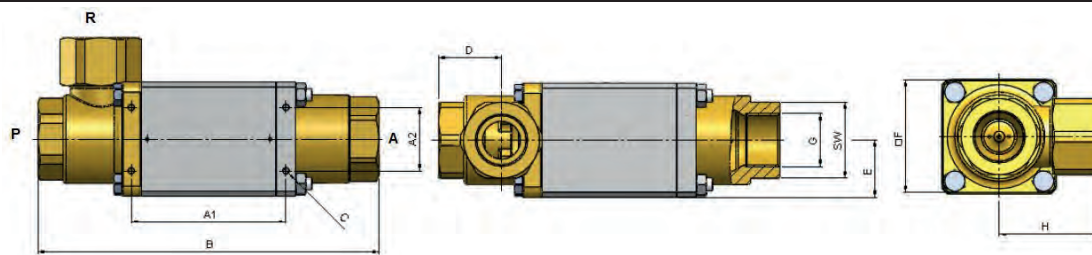
Media: air – water – oil - vacuum  
 Pressure range: 0 to 64 bar max  
 Media temperature: -20°C to +100°C  
 Ambient temperature: -30°C to +50°C  
 Media viscosity: 500 centistokes max  
 Mounting: any position  
 Air pilot: 3 - 8 bar  
 Open / Close 50 – 1000 mSec



# 3/2 Brass & Stainless 1/4 – 2" COAXIAL N/CLOSED & N/OPEN 3 WAY PNEUMATIC 0 - 64 Bar TYPE 380

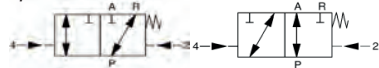


PRESSURE								
Port BSP	Ø Orifice (mm)	Flow Kv M³/Hr	Pressure Rating (Bar)			Body Material	Part Number	List Price
			min	Max.				
				P⇒A P⇒R	A⇒P R⇒P			
1/4, 3/8, 1/2	10	2.5	0	64	16	Brass	380A10MOG + port	£540.57
3/8, 1/2, 3/4	15	6.6	0	64	16	Brass	380A15MOG + port	£580.21
1/2, 3/4, 1	20	10.0	0	64	16	Brass	380A20MOG + port	£676.83
3/4, 1, 1 1/4	25	12.2	0	64	16	Brass	380A25MOG + port	£816.37
1, 1 1/4, 1 1/2	32	17.9	0	64	16	Brass	380A32MOG + port	£1177.76
1 1/2	40	41.5	0	64	16	Brass	380A40MOG112	£2040.32
2	50	43.0	0	64	16	Brass	380A50MOG2	£2626.62
1/4, 3/8, 1/2	10	2.5	0	64	16	St.St.303	380A10V2G + port	£674.25
3/8, 1/2, 3/4	15	6.6	0	64	16	St.St.303	380A15V2G + port	£1022.27
1/2, 3/4, 1	20	10.0	0	64	16	St.St.303	380A20V2G + port	£1206.14
3/4, 1, 1 1/4	25	12.2	0	64	16	St.St.303	380A25V2G + port	£1708.01
1, 1 1/4, 1 1/2	32	17.9	0	64	16	St.St.303	380A32V2G + port	£2246.71
1 1/2	40	41.5	0	64	16	St.St.303	380A40V2G112	£3705.42
2	50	43.0	0	64	16	St.St.303	380A50V2G2	£4186.18
1/4, 3/8, 1/2	10	2.5	0	64	16	St.St.316	380A10V4G + port	£747.89
3/8, 1/2, 3/4	15	6.6	0	64	16	St.St.316	380A15V4G + port	£1148.68
1/2, 3/4, 1	20	10.0	0	64	16	St.St.316	380A20V4G + port	£1383.20
3/4, 1, 1 1/4	25	12.2	0	64	16	St.St.316	380A25V4G + port	£1868.42
1, 1 1/4, 1 1/2	32	17.9	0	64	16	St.St.316	380A32V4G + port	£2534.70
1 1/2	40	41.5	0	64	16	St.St.316	380A40V4G112	£4058.37
2	50	43.0	0	64	16	St.St.316	380A50V4G2	£4574.32
OPTIONS								
Normally Open (380B)								+7%
PTFE Seals								+10%
Nimur Valve CY52002S single acting spring close								+£48.55
Nimur Valve CY52002D double acting								+£73.45
ATEX 22001EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C ⚠								+£67.16
E1 Open or Closed position feedback switch								+£352.25
E2 Open & Closed position feedback switches								+£511.72
Many other options available upon request – Vacuum – Nickel Plated – Free of oil and Grease – Flanged – Mounting Brackets								
CONSTRUCTION								
Body: Brass MS058 (MO): Optional St steel 303 (V2G) or 316L (V4G)								
Tube and internal parts: Stainless steel								
Seals: Static FKM, Dynamic PTFE + FKM, Seat PTFE								
OVERALL DIMENSIONS								



DN	G	SW	A1 (mm)	A2 (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	H (mm)	Kg
10	1/4 3/8 1/2	32	84	-	166.5	M4	32	25	50	37	1.8
15	3/8 1/2 3/4	41	100	-	200	M5	38.5	35	70	60	3.2
20	1/2 3/4 1	46	108	-	228	M5	45.5	40	80	72	4.6
25	3/4 1 1 1/4	55	121	-	252	M5	48	45	90	80	6.5
32	1 1 1/4 1 1/2	60	122	50	269	M6	49.5	45	90	80	7.6
40	1 1/2	75	131	60	304	M6	56.5	55	110	84	12.1
50	2	75	131	80	304	M6	56.5	55	110	84	12.1

Media: air – water – oil – vacuum  
 Pressure range: 0 to 100 Bar max  
 Media temperature: -10°C to +100°C  
 Ambient temperature: -10°C to +50°C  
 Media viscosity: 500 centistokes max  
 Mounting: any position  
 Air pilot: 3 - 8 bar  
 Open/Close time: 50 - 1000 mSec



# 3/2 Brass & Stainless 1/4 – 2" COAXIAL N/CLOSED & N/OPEN 3 WAY PNEUMATIC 0 - 100 Bar TYPE 381



## PRESSURE

Port BSP	Ø Orifice (mm)	Flow  Kv M³/Hr	Pressure Rating (Bar)			Body Material	Part Number	List Price
			min	Max.				
				P⇒A P⇒R	A⇒P R⇒P			
1/4, 3/8, 1/2	10	2.5	0	100	16	Brass	381A10MOG + port	£540.57
3/8, 1/2, 3/4	15	6.6	0	100	16	Brass	381A15MOG + port	£740.15
1/2, 3/4, 1	20	10.0	0	100	16	Brass	381A20MOG + port	£849.43
3/4, 1, 1 1/4	25	12.2	0	100	16	Brass	381A25MOG + port	£1000.93
1, 1 1/4, 1 1/2	32	17.9	0	100	16	Brass	381A32MOG + port	£1414.39
1 1/2	40	41.5	0	100	16	Brass	381A40MOG-112	£2392.10
2	50	43.0	0	100	16	Brass	381A50MOG-2	£3236.38
1/4, 3/8, 1/2	10	2.5	0	100	16	St.St.303	381A10V2G + port	£828.09
3/8, 1/2, 3/4	15	6.6	0	100	16	St.St.303	381A15V2G + port	£1130.38
1/2, 3/4, 1	20	10.0	0	100	16	St.St.303	381A20V2G + port	£1365.14
3/4, 1, 1 1/4	25	12.2	0	100	16	St.St.303	381A25V2G + port	£1848.02
1, 1 1/4, 1 1/2	32	17.9	0	100	16	St.St.303	381A32V2G + port	£2532.82
1 1/2	40	41.5	0	100	16	St.St.303	381A40V2G-112	£4033.74
2	50	43.0	0	100	16	St.St.303	381A50V2G-2	£4504.90
1/4, 3/8, 1/2	10	2.5	0	100	16	St.St.316	381A10V4G + port	£965.76
3/8, 1/2, 3/4	15	6.6	0	100	16	St.St.316	381A15V4G + port	£1250.46
1/2, 3/4, 1	20	10.0	0	100	16	St.St.316	381A20V4G + port	£1502.11
3/4, 1, 1 1/4	25	12.2	0	100	16	St.St.316	381A25V4G + port	£2064.95
1, 1 1/4, 1 1/2	32	17.9	0	100	16	St.St.316	381A32V4G + port	£2814.47
1 1/2	40	41.5	0	100	16	St.St.316	381A40V4G-112	£4408.98
2	50	43.0	0	100	16	St.St.316	381A50V4G-2	£4710.10

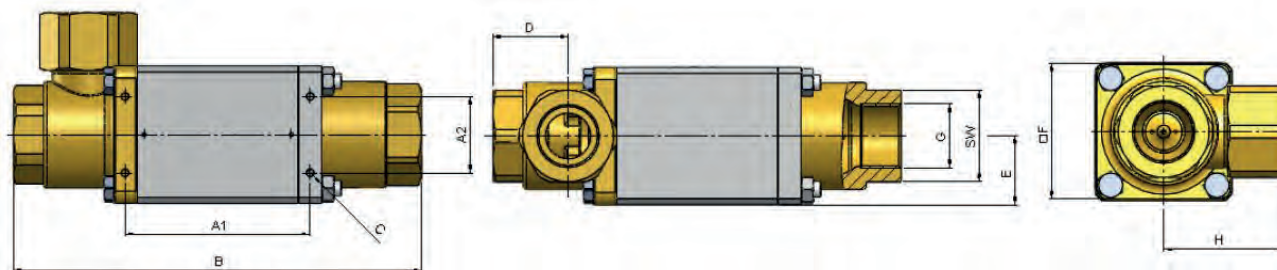
## OPTIONS

Normally Open (381B)	+7%
Namur Valve CY52002S single acting spring close	+£48.55
Namur Valve CY52002D double acting	+£73.45
ATEX 22001EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C	+£67.16
E1 Open or Closed position feedback switch	+£352.25
E2 Open & Closed position feedback switches	+£511.72
Vacuum – Nickel or Galvanised Steel – Oil / Grease Free – Flanged – Mounting Brackets – PTFE NBR EPDM seals	

## CONSTRUCTION

Body: Brass MS058 (MO): Optional St steel 303 (V2G) or 316L (V4G)  
 Tube and internal parts: Stainless steel  
 Seals: Static FKM - Dynamic PTFE + FKM - Seat PTFE (Optional NBR or EPDM)

## OVERALL DIMENSIONS



DN	G	SW	A1 (mm)	A2 (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	H (mm)	Kg
10	1/4 3/8 1/2	32	84	-	166.5	M4	32	25	50	37	1.8
15	3/8 1/2 3/4	41	100	-	200	M5	38.5	35	70	60	3.2
20	1/2 3/4 1	46	108	-	228	M5	45.5	40	80	72	4.6
25	3/4 1 1 1/4	55	121	-	252	M5	48	45	90	80	6.5
32	1 1 1/4 1 1/2	60	122	50	269	M6	49.5	45	90	80	7.6
40	1 1/2	75	131	60	304	M6	56.5	55	110	84	12.1
50	2	75	131	80	304	M6	56.5	55	110	84	12.1

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
3/2  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air – water – gas – liquid  
Pressure range: 0 to 10 bar max  
Media temperature: -15°C +100° C max  
Ambient temperature: -20° to +45° C  
Media viscosity: 500 centistokes max  
Duty cycle: 70,000  
Mounting: Any  
Seals: Silicone + PTFE

# Actuated PVC Ball Valve

1/2 – 3/4

## NORMALLY CLOSED

## 2 WAY DIRECT

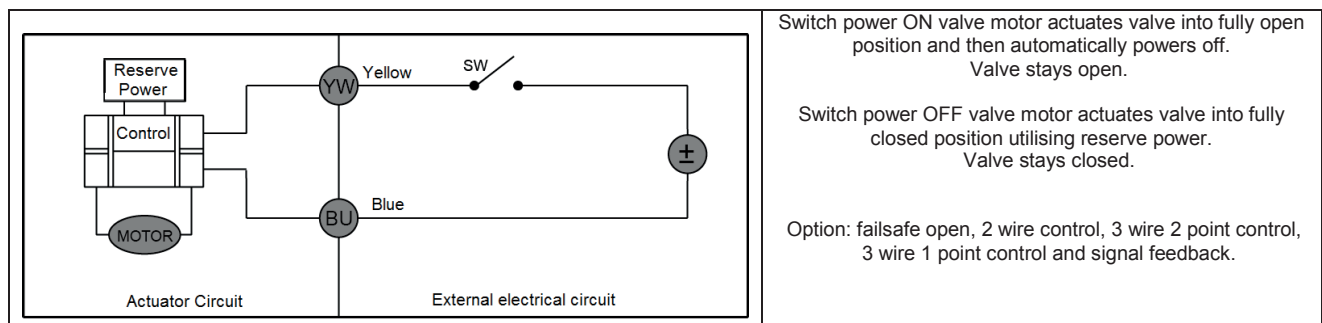
0 – 10 Bar

## TYPE ABVMP-AR

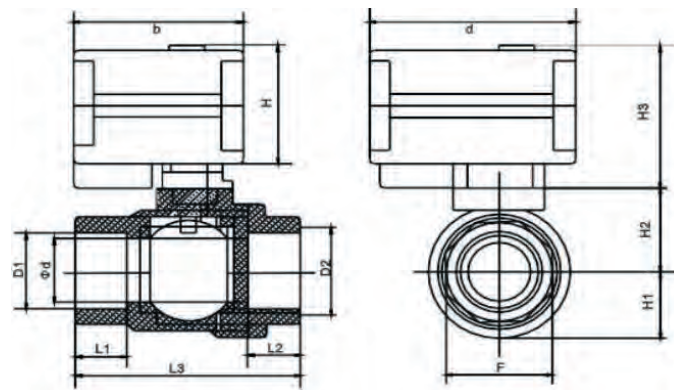


PRESSURE								
Ø Port BSP	Orifice mm	Max Opening Time Seconds	Max Closing Time Seconds	Min (Bar)	Max (Bar)	Voltage	Part Number	List Price
1/2	15	3	3	0	10	9 to 24v AC or DC	ABVM04P-9AR	£54.12
						85 to 265v AC	ABVM04P-2AR	£78.16
3/4	15	5	5	0	10	9 to 24v AC or DC	ABVM06P-9AR	£57.15
						85 to 265v AC	ABVM06P-2AR	£81.18
OPTIONS								
3 to 6 volt, manual Over Ride, Visual Position Indicator, 316 Stainless Steel or Brass Valve, Failsafe open, 3 wire control (power open/power close and open / closed signal position feedback.								TBA
ELECTRICAL DATA								
Voltage Min - Max Continuous duty 100%		Actuator		Power	Enclosure	Electrical connections		
		Model	Torque					
9 to 24 volts AC 50/60Hz or DC		ABVM	2 Nm	5 Watts	IP65	2 lead wires 0.5 meter		
85 to 265 volts AC 50/60Hz								
CONSTRUCTION								
Valve Body: CPVC Plastic, Optional Brass or 304 and 316 stainless steel ABVM Actuator: ABS Engineering Plastic , Gears Metal and POM								
OVERALL DIMENSIONS								

Requires minimum 60 second power ON time to charge the reserve power to close.



Size	D1,2	d	L1	L2	L3	F	H1	H2	H3	b	d	Kg
1/2	G1/2	15	11	11	54	27	16	22	50	52	62	0.34
3/4	G3/4	15	10	10	61	30	22	22	50	52	62	0.33



Media: air – water – gas – liquid  
 Pressure range: 0 to 10 bar max  
 Media temperature: -15°C +100°C max  
 Ambient temperature: -20°C to +45°C  
 Media viscosity: 500 centistokes max  
 Duty cycle: 70,000  
 Mounting: Any  
 Seals: PTFE

# Actuated Ball Valve

3/8 – 1  
 NORMALLY CLOSED  
 2 WAY DIRECT  
 0 – 10 Bar  
 TYPE ABVM-AR



## PRESSURE

Ø Port BSP	Orifice mm	Max Opening Time Seconds	Max Closing Time Seconds	Min (Bar)	Max (Bar)	Voltage	Part Number	List Price
1/2	15	3	3	0	10	5 to 6vDC	ABVM04S-6V	£54.12
						9 to 24v AC or DC	ABVM04S-9AR	
						85 to 265v AC	ABVM04S-2AR	£78.16
3/4	20	5	5	0	10	5 to 6vDC	ABVM06S-6V	£69.14
						9 to 24v AC or DC	ABVM06S-9AR	
						85 to 265v AC	ABVM06S-2AR	£93.17
1	25	5	5	0	10	5 to 6vDC	ABVM08S-6V	£90.20
						9 to 24v AC or DC	ABVM08S-9AR	
						85 to 265v AC	ABVM08S-2AR	£114.24

## OPTIONS

Manual Over Ride, Visual Position Indicator, 316 Stainless Steel or Brass Valve, Failsafe open, 3 wire control (power open/power closed), and open / closed signal position feedback.

TBA

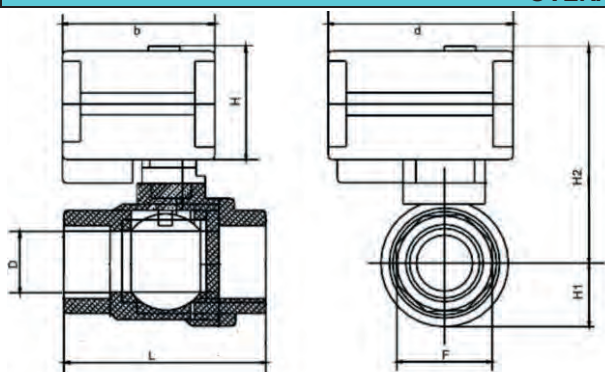
## ELECTRICAL DATA

Voltage Min - Max Continuous duty 100%	Actuator		Power	Enclosure	Electrical connections
	Model	Torque			
5 to 6 volts DC	ABVM	2 Nm	5 Watts	IP65	2 lead wires 0.5 meter
9 to 24 volts AC 50/60Hz or DC					
85 to 265 volts AC 50/60Hz					

## CONSTRUCTION

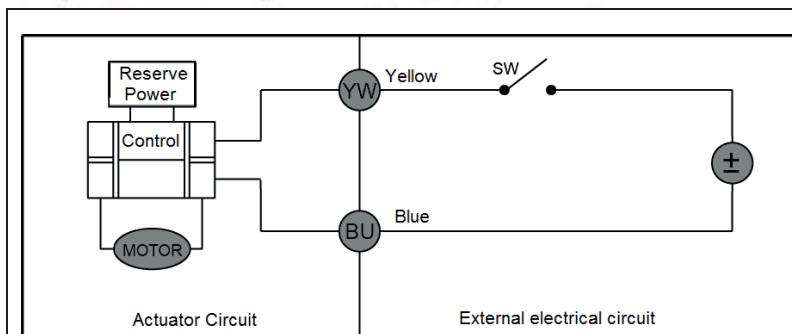
Valve Body: 304 stainless steel, Optional Brass or 316 stainless steel  
 ABVM Actuator: ABS Engineering Plastic, Gears Metal and POM

## OVERALL DIMENSIONS



Port	D	L	F	H1	H2	H	d	b	Kg
1/2	15	55	26.5	17	75	45	67	52	0.4
3/4	20	70.5	31	20	75	45	67	52	0.5
1	23	72	37	22	80	45	67	52	0.6

Requires minimum 60 second power ON time to charge the reserve power to close.



Switch power ON valve motor actuates valve into fully open position and then automatically powers off.

Valve stays open.

Switch power OFF valve motor actuates valve into fully closed position utilising reserve power. Valve stays closed.

Option: failsafe open, 2 wire control, 3 wire 2 point control, 3 wire 1 point control and signal feedback.

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
3/2  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

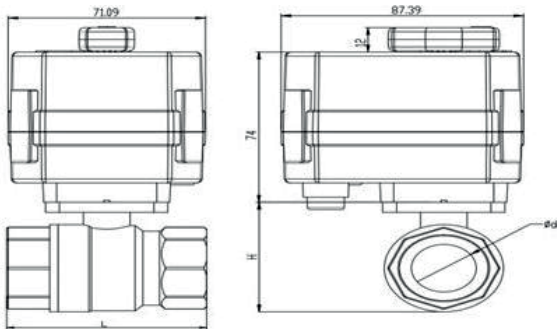
Media: air – water – gas – liquid  
Pressure range: 0 to 10 bar max  
Media temperature: 0°C to +100°C max  
Ambient temperature: -20°C to +45°C  
Media viscosity: 500 centistokes max  
Duty cycle: 100,000  
Mounting: Any  
Seals: PTFE

# Actuated Ball Valve

11/4 – 2  
N/CLOSED + N/OPEN  
2 WAY ISO5211  
0 – 10 Bar  
TYPE ABV-AR

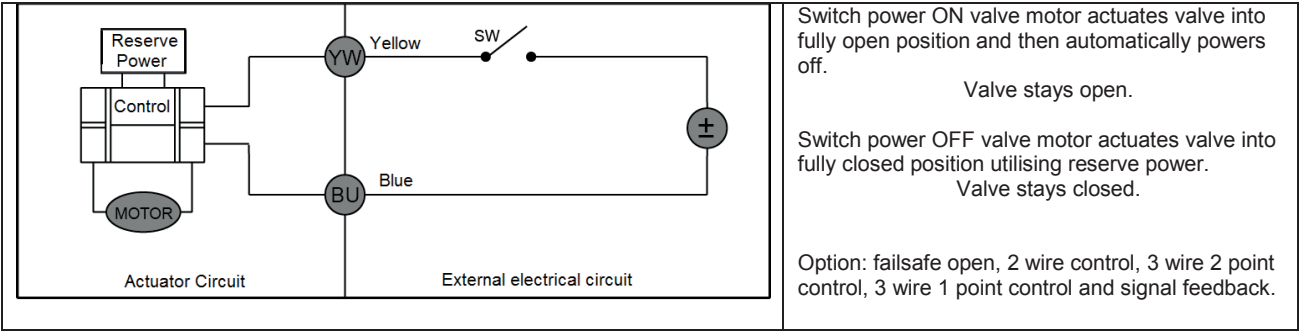


PRESSURE								
Ø Port BSP	Orifice mm	Max Opening Time Seconds	Max Closing Time Seconds	Min (Bar)	Max (Bar)	Voltage	Part Number	List Price
11/4	32	12	12	0	10	9 to 35v AC/DC	ABV12S-9AR	£234.52
						85 to 250vAC	ABV12S-2AR	£255.134
11/2	38	12	12	0	10	9 to 35v AC/DC	ABV14S-9AR	£273.625
						85 to 250vAC	ABV14S-2AR	£294.239
2	50	12	12	0	10	9 to 35v AC/DC	ABV20S-9AR	£330.715
						85 to 250vAC	ABV20S-2AR	£351.329
OPTIONS								
Visual Position Indicator Manual stay button, disengages motor so valves keeps position until button pulled back to reengage motor. Failsafe Open 3 to 6 volt, 316 Stainless Steel or Brass Valve, 3 wire (power open/power closed)or open / closed signal position feedback.								Included Included +10% TBA
ELECTRICAL DATA								
Voltage Min - Max Continuous duty 100%	Actuator		Power	Enclosure	Electrical connections			
	Model	Torque						
9 to 35 volts AC 50/60 Hz or DC	ABV-AR	20 Nm	22 Watt	IP67	2 lead wires 0.5 meter			
85 to 250 volts AC 50/60 Hz								
CONSTRUCTION								
Valve Body: 304 stainless steel, Optional Brass or 316 stainless steel, Plastic UPVC or CPVC ABV Actuator: ABS Engineering Plastic with ISO5211 valve mounting Gears Metal								
OVERALL DIMENSIONS								



Port	ød	L	H	d	Kg
11/4	32	90	84	32	1.2
11/2	40	98	100	38	1.5
2	50	121	118	50	2.2

Requires minimum 60 second power ON time to charge the reserve power to close.  
Designed for very long periods power ON.



Media: air – water – gas – oil  
 Pressure range: 0 to 40 Bar max  
 Media temp: -20°C to +95°C max  
 Ambient temp: -20°C to +70°C  
 Mounting: Any position  
 Cycles: 20,000  
 Opening/Closing: 10-15 Sec  
 Duty cycle: 75% (min 1 min stop  
 between cycles for cooling)

# Actuated WRAS Ball Valve

1/4 – 2"  
 Open-Close, Failsafe or Modulating  
 ISO5211 2 WAY DIRECT  
 0 – 40 Bar  
 TYPE CNX20-2BW



## PRESSURE

Ø Port BSP	Orifice (mm)	Min (Bar)	Max at Ambient Temp (Bar)	Part Number	List Price
1/4	15	0	40	CNX202BW14 + voltage + option	£329.96
3/8	15	0	40	CNX202BW38 + voltage + option	
1/2	15	0	40	CNX202BW12 + voltage + option	
3/4	20	0	40	CNX202BW34 + voltage + option	£340.66
1	25	0	40	CNX202BW1 + voltage + option	£358.05
1 1/4	32	0	40	CNX202BW114 + voltage + option	£395.74
1 1/2	40	0	40	CNX202BW112 + voltage + option	£428.13
2	50	0	40	CNX202BW2 + voltage + option	£493.46

## OPTIONS

Basic actuator, Visual Position Indicator, Manual Over Ride, 2x volt free open + closed contact feedback cam adjustable switches	Included
Anti-condensation heater (ACH)	+£12.28
Aluminium cover (ALC)	+£20.46
Relay output with alarm (RO)	+£20.46
Failsafe return (power off valve automatically returns to start position) 15NM Max (FSC closed or FSO open)	+£102.30
Valve: 2 PC and 3 PC stainless or plastic.	TBA
Smart actuator, with LED & button control for override, dead band; speed control, closed position & reverse action adjustment (CNX20S)	+£132.99
Modulating 4-20mAmp (Smart actuator only) (CNX20SM)	+£16.37
Wireless (Smart actuator only) (CNX20SW)	+£69.56
Modbus (Smart actuator only) (CNX20SMB)	+£0.00
High speed actuator (24VDC Smart actuator only) (CNX20SHS)	+£34.10
Timer (Smart actuator only) (CNX20ST)	+£8.18

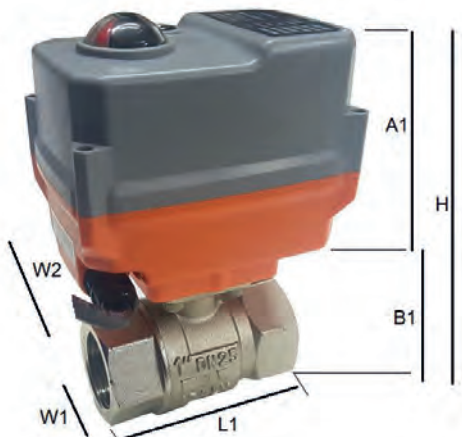
## TECHNICAL DATA

Rated Voltage	Voltage Range	Torque		Power Consumption				Run time	IP
		Max Break	Working	Run Watts	Hold Watts	Max Current	Fuse		
12 volts DC	10 – 15 Volts	15	15	9.5	0.3	1A for 5ms	2Amp	12 Sec	IP67
24 volts DC	22 – 28 Volts	20	15	9.6	0.3	500mA for 5ms	2Amp	10 Sec	
24 volts AC	22 – 28 Volts	20	15	10.8	0	450mA for 5ms	2Amp	15 Sec	
110 volts AC	90 – 130 Volts	20	15	15	0	135mA for 5ms	1Amp		
230 volts AC	190 – 250 Volts	20	15	13.2	0	60mA for 5ms	1Amp		

## CONSTRUCTION

Valve Body: WRAS full flow 2 piece Brass nickel plated, ball brass chrome plated, seals PTFE  
 CNX02N Actuator: ABS Engineering Plastic

## OVERALL DIMENSIONS



Port	A1 (cm)	B1 (cm)	H (cm)	L1 (cm)	W1 (cm)	W2 (cm)
1/2	8.5	4.5	13	6	3	6.5
3/4	8.5	5.5	14	7	4	6.5
1	8.5	6	14.5	8	5	6.5
1 1/4	8.5	7	15.5	9	6	6.5
1 1/2	8.5	9	17.5	10	7	6.5

Media: air – water – gas – oil  
 Pressure range: 0 to 63 Bar max  
 Media temp: -20°C to +80°C max  
 Ambient temp: -20°C to +70°C  
 Mounting: Any position  
 Cycles: 20,000  
 Opening/Closing: 10-20 Sec  
 Duty cycle: 75% (min 1 min stop between cycles for cooling)

# Actuated St.St. Ball Valve

## 1/4 – 4"

### Open-Close, Failsafe or Modulating

### ISO5211 2 WAY DIRECT

### 0 – 63 Bar

## TYPE CNX--3S



#### PRESSURE

Ø Port BSPT	Orifice (mm)	Actuator	Min (Bar)	Max at Ambient Temp (Bar)	Part Number	List Price
1/4	15	CNX20	0	63	CNX20-3S02 + voltage	£330.77
3/8	15	CNX20	0	63	CNX20-3S03 + voltage	
1/2	15	CNX20	0	63	CNX20-3S04 + voltage	
3/4	20	CNX20	0	63	CNX20-3S06 + voltage	£337.59
1	25	CNX20	0	63	CNX20-3S08 + voltage	£365.64
1 1/4	32	CNX60	0	63	CNX60-3S12 + voltage	£364.87
1 1/2	40	CNX60	0	63	CNX60-3S14 + voltage	£416.02
2	50	CNX60	0	63	CNX60-3S20 + voltage	£826.93
2 1/2	65	CNX60	0	63	CNX60-3S24 + voltage	£888.31
3	80	CNX110	0	63	CNX110-3S28 + voltage	£1184.98
4	100	CNX110	0	63	CNX110-3S32 + voltage	£1535.36
						£1965.02

#### OPTIONS

Basic actuator, Visual Position Indicator, Manual Over Ride, 2x volt free open + closed contact feedback cam adjustable switches  
 Basic actuator with failsafe (other options such as Modulating, Wireless, Modbus or High Speed require Smart Actuator)  
 Smart actuator, includes LED & button control for over ride, dead band; speed control, closed position & reverse acting adjustments (CNXS)  
 Anti-condensation heater (ACH)  
 Aluminium cover (ALC)  
 Relay output with alarm (RO)

Included  
 See below  
 See below  
 +£12.28  
 +£20.46  
 +£20.46

#### CNX20 Smart

Smart actuator (CNX20S)  
 Modulating 4-20mA (CNX20SM)  
 Wireless (CNX20SW)  
 Modbus (CNX20SMB)  
 High speed 24VDC only (CNX20SHS)  
 Failsafe Return 1/4-1" valve

+£132.99  
 +£16.37  
 +£69.56  
 +£0.00  
 +£34.10  
 +£102.30

#### CNX60 Smart

Smart actuator (CNX60S)  
 Modulating 4-20mA (CNX60SM)  
 Wireless (CNX60SW)  
 Modbus (CNX60SMB)  
 High speed 24VDC only (CNX60SHS)  
 Failsafe Return 1 1/4-2 1/2" valve

+£115.08  
 +£86.11  
 TBA  
 TBA  
 +£106.57  
 +£204.60

#### CNX110 Smart

Smart actuator (CNX110S)  
 Modulating 4-20mA (CNX110SM)  
 Wireless (CNX110SW)  
 Modbus (CNX110SMB)  
 High speed 24VDC (CNX110SHS)  
 Failsafe Return 3 & 4" valve

+£36.66  
 +£138.11  
 TBA  
 TBA  
 +£121.55  
 +£204.60

#### TECHNICAL DATA

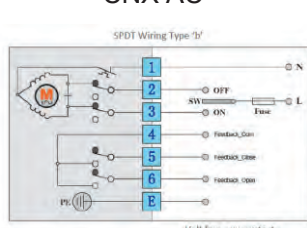
CNX	Rated Voltage	Voltage Range (Volts)	Torque (NM)		Power Consumption				Run time (Sec)
			Max Break	Working	Run Watts	Hold Watts	Max Current	Fuse (Amp)	
20	DC24	22 – 28	20	15	9.6	0.3	500mA for 5ms	2	10
20	AC24	22 – 28	20	15	10.8	0	450mA for 5 ms	2	15
20	AC110	90 – 130	20	15	15	0	135mA for 5 ms	1	
20	AC230	190 – 250	20	15	13.2	0	60mA for 5 ms	1	
60	DC24	21.6-26.4	60	60	36	1.5	2.5 for 5ms	4	20
60	AC24	22-28	60	60	50	0	2.5 for 5ms	10	
60	AC110	90-130	60	60	55	0	0.6 for 5ms	5	
60	AC230	190-250	60	60	55	0	0.3A for 5ms	2	
110	DC24	21.6-26.4	110	110	36	1.5	2.5 for 5ms	4	
110	AC24	22-28	110	110	50	0	2.5 for 5ms	10	
110	AC110	90-130	110	110	55	0	0.6 for 5ms	5	
110	AC230	190-250	110	110	55	0	0.3 for 5ms	2	

#### CONSTRUCTION

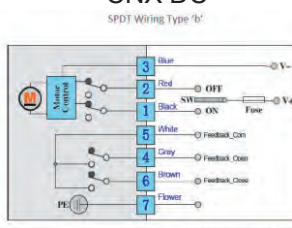
Valve Body: full flow 3 piece stainless steel 1.4408, ball stainless steel 1.4408, seals Viton, seats RPTFE, stem 316 stainless  
 CNX Actuator: ABS Engineering Plastic

#### WIRING

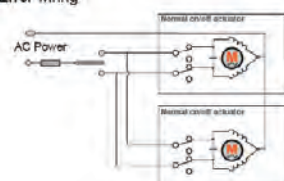
#### CNX AC



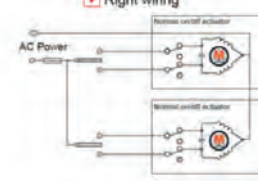
#### CNX DC



#### Error wiring



#### Right wiring



Media: filtered air class 3,4,3  
 Pressure range: 0 to 10 bar max  
 Media temperature: -10°C +50° C max  
 Ambient temperature: -10° to +50° C  
 Media viscosity: Air Only  
 Mounting: any position  
 Opening / Closing time: 5 -15mSec  
 Cycles: 2000 cpm  
 Life expectancy 50 million cycles

NC

# 2/2 + 3/2 Pilot Valve

15mm Width  
 DIRECT ACTING  
 N/CLOSED + OPEN  
 0 – 10 Bar  
 TYPE 15



## PRESSURE

Valve Type	Function	Orifice		Kv Factor	Flow Rate NL/Min (Port 1 to 2) 6 Bar ΔP 1 bar	Pressure		Power		List Price
		Port 1	Port 2			Min	Max	Watt DC	VA AC	
A	3/2 NC	0.8	1.0	0.28	18	0	8	1	3	£12.63
B	3/2 NC	1.1	1.5	0.42	28	0	10	2.5	3	
C	3/2 NC	1.5	1.5	0.55	36	0	6	2.5	3	
D	2/2 NC	0.8	-	0.28	18	0	8	1	3	
E	2/2 NC	1.1	-	0.42	28	0	10	2.5	3	
F	2/2 NC	1.5	-	0.55	36	0	6	2.5	3	
G	3/2 NO	1.0	1.1	0.36	23	0	7	2.5	3	
H	3/2 NO	1.5	1.5	0.55	36	0	3.5	2.5	3	
I	2/2 NO	1.0	-	0.4	26	0	10	1	3	
J	2/2 NO	1.5	-	0.55	36	0	10	2.5	3	
K	3/2 NC	0.8	1.0	0.28	18	0	16	2.5	3	
N	3/2 NC	1.1	1.5	0.42	28	2	7.5	1	-	
Q	3/2 UNI	0.8	1.0	0.28/0.36	18/23	2	10	2.5	3	

## OPTIONS

M3x18 fixing screws  
 Integral gasket  
 Connection DIN C, optional AMP 2.8x0.5, Flying leads, M12

Included  
 Included  
 Included

## ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption	Insulation class	Enclosure
~	24 – 115 - 230 (50 or 60 Hz)	Integral	3VA	H 180°C	IP40 According to EN60529
=	12 - 24 (DC)		1 – 2.5 Watts		

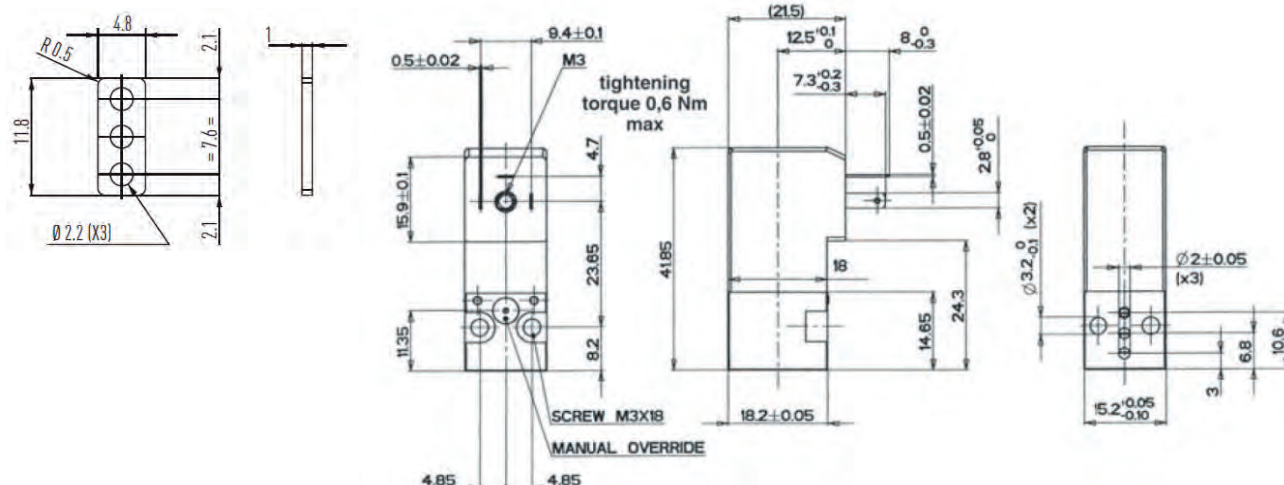
## CONSTRUCTION

Body: 30% Glass Filled polyester (PBT)  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR (Optional FKM)  
 Life expectancy 50 Million Cycles, maximum 2000 cycles a minute

## REPAIR KIT

N/A

## OVERALL DIMENSIONS



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Steam

Plastic  
2/2  
N/Closed



Plastic  
3/2  
N/Closed

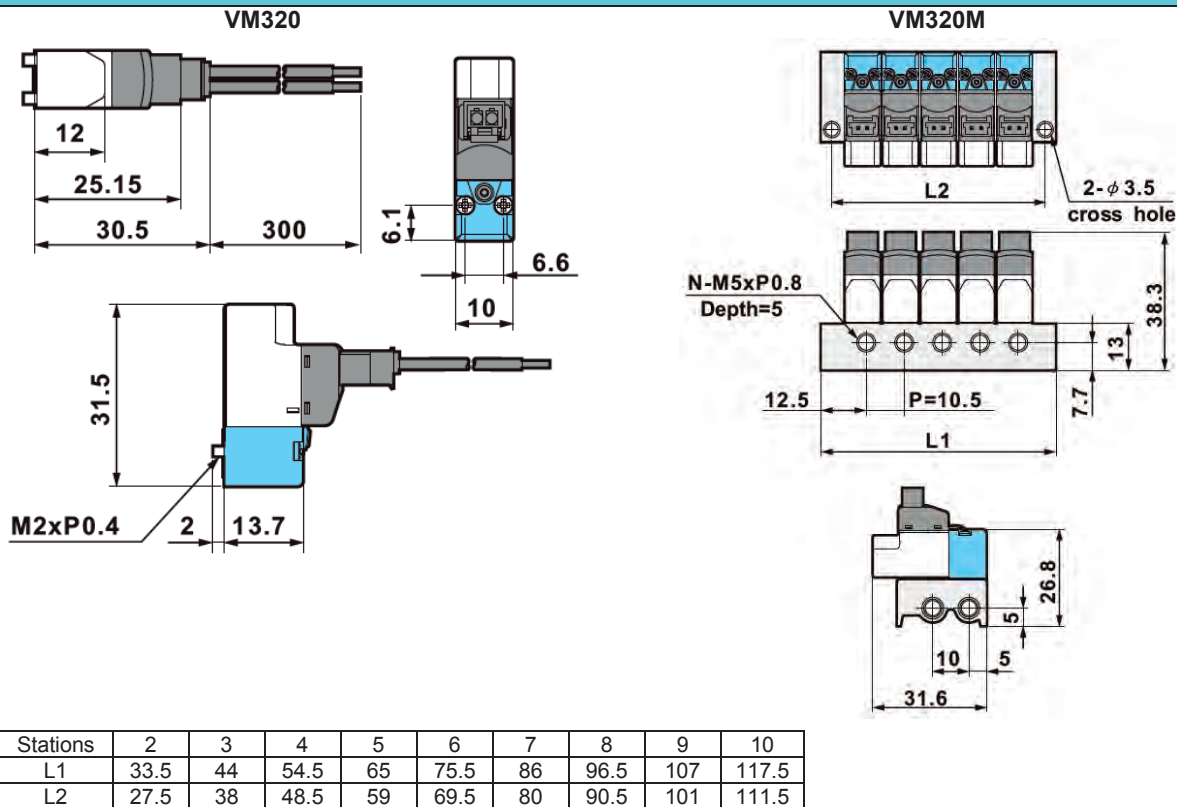
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

<div>Media: air</div> <div>Pressure range: 0 to 7 Bar max</div> <div>Media temperature: +50°C max</div> <div>Ambient temperature: -10°C to +50°C max</div> <div>Mounting: any position</div> <div>Cycle rate: 20 Hz max</div> <div>Weight (including coil): 10g</div> <div>Low power consumption 0.8 Watts</div>				<div>3/2 Miniature Solenoid Valve</div> <div>M5 10mm Width</div> <div>3/2 Way</div> <div>DIRECT ACTING</div> <div>0 – 7 Bar</div> <div>TYPE VM320</div>				
3/2 Way Valve Only VM320 Series								
Ø Port	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar)		Max Working	Valve Part Number		List Price	
		Min	Max					
M5	0.14	0	7	8	VM320 + voltage		£22.25	
Manifold Only VM320M Series								
Ø Port	Manifold Part Number						List Price Per Station	
M5	VM320M-M5 + number of stations					£4.51		
OPTIONS								
IP65 dust proof Coil & JPC Connector with LED, surge protection & non polarity & short circuit protection						Included		
ELECTRICAL DATA								
Voltage (-10% + 10%) Continuous duty 100%				Power Consumption	Insulation class	Enclosure	Electrical connections	
=	12vDC or 24vDC			0.8 Watts	F 155°C	Dust proof	JPC plug connector	
CONSTRUCTION								
Body: Aluminium alloy, Tube and internal parts: Stainless steel, Seals and gaskets: special rubber seals								
OVERALL DIMENSIONS								



Media: air  
 Pressure range: 1 to 7 Bar max  
 Media temperature: +50°C max  
 Ambient temperature: -10°C to +50°C max  
 Mounting: any position  
 Cycle rate: 5 Hz max  
 Weight : 72g,93g  
 Low power consumption 0.8 Watts

# 5/2 Miniature Solenoid Valve

1/8" 16.6mm Width

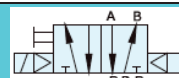
## 5/2 SPRING RETURN & DOUBLE ACTING


### PILOT ASSIST

1 – 7 Bar

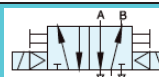
## TYPE VM5252 & 5252M


### 5/2 Way Spring Return VM5252 Series




Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Work	Part Number		List Price
		Min	Max				
1/8	8.8	1.5	7	8	VM5252-01S + voltage		£61.34

### 5/2 Way Double Acting VM5252D Series



Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Work	Part Number		List Price
		Min	Max				
1/8	8.8	1	7	8	VM5252-01D + voltage		£100.12

### Manifold Only VM5252M Series

Ø Port BSP	Part Number		List Price per station
1/4	VM5252M-02 + number of stations		£4.51

### OPTIONS

IP65 dust proof coil & JPC LED connector with flying lead wires, surge protection & non polarity & short circuit protection  
 NPT Thread

Included  
 +10%

### ELECTRICAL DATA

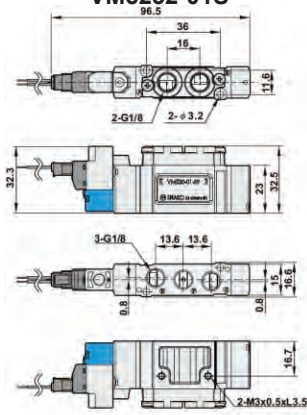
Voltage (-10% + 10%) Continuous duty 100%		Power Consumption	Insulation class	Enclosure	Electrical connections
= 12vDC or 24vDC		0.8 Watts	F 155°C	Dust Proof	JPC plug connector

### CONSTRUCTION

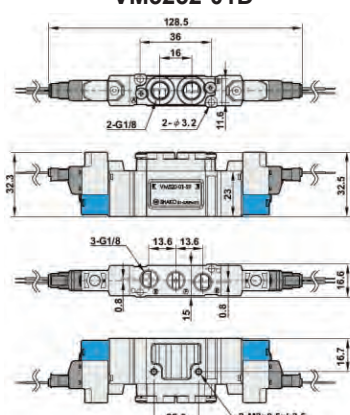
Body: Aluminium alloy, Internal parts: Stainless steel, seals and gaskets: special rubber seals.

### OVERALL DIMENSIONS

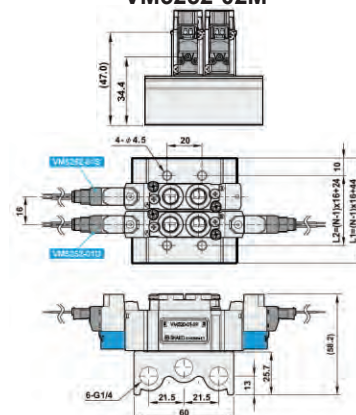
VM5252-01S



VM5252-01D



VM5252-02M



Station	2	3	4	5	6	7	8	9	10
L1	60	76	92	108	124	140	156	172	188
L2	40	56	72	88	104	120	136	152	168

Media: air – Inert Gas  
 Pressure range: 0.5 to 8 Bar max  
 Media temperature: -10°C to +50°C max  
 Ambient temperature: -10°C to +50°C max  
 Mounting: any position  
 Weight (including coil): 125, 195, 215 g  
 Exhaust: M5

# 5/2 & 5/3 Pneumatic Solenoid



## 1/8" 18mm Width



### 5/2 S/RETURN or 5/2 + 5/3 D/ACTING



### SERVO ASSISTED

### 1.5 – 10 Bar

## TYPE AM520S&D & AM530D

5/2 Way Spring Return AM520S Series							
Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Working	Part Number		List Price
		Min	Max				
1/8	11.0	1.5	8	10	AM52001S + voltage		£42.83

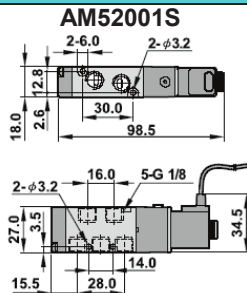
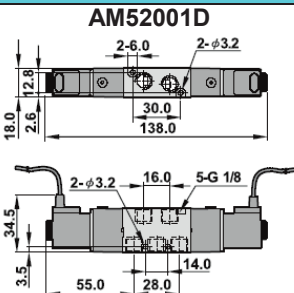
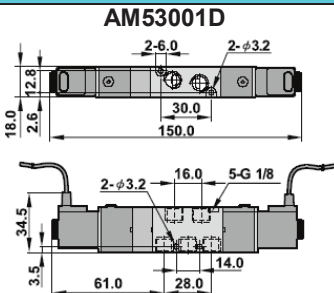
5/2 Way Double Acting AM520D Series							
Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Working	Part Number		List Price
		Min	Max				
1/8	11.0	1.5	8	10	AM52001D + voltage		£75.50

5/3 Way Double Acting AM530D Series							
Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Working	Part Number		List Price
		Min	Max				
1/8	9.0	2	7	10	AM53001D + voltage		£108.19

OPTIONS							
IP65 coil + Connector 30cm flying lead & manual over ride							Included
DIN 43650B Coil + connector							+£1.65
NPT or Rc Thread							+10%
AM520B 5/2 way base mounted							+£1.65
AM530X Exhaust centre or AM530Y pressure centre							+£2.02
AM0501 Manifold c/w Gaskets and Fixing Kit (cost is per station Ref: MF520 X Number of stations)							+£5.19

ELECTRICAL DATA							
Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	22000	11.6 VA	8.5 VA	F 155°C	IP 65	30 cm flying lead
=	12 - 24 - 48 - 110 (DC)		4.5 Watts				

CONSTRUCTION	
Body: Anodised Aluminium, Tube and internal parts: Stainless steel	
Seals and gaskets: NBR, Moulded coil: Resin	

OVERALL DIMENSIONS			
 <p>AM52001S</p>		 <p>AM52001D</p>	
 <p>AM53001D</p>			
125g		195g	
		215g	


Media: air  
 Pressure range: 1.5 to 8 Bar max  
 Media temperature: +50°C max  
 Ambient temperature: -10°C to +50°C max  
 Mounting: any position  
 Weight (including coil): 115, 180g

# 3/2 Single/Double Solenoid

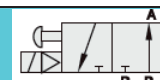
1/8 1/4" 18mm Width  
 3/2 Normally Closed or Open  
 SERVO ASSISTED  
 1.5 – 10 Bar  
 TYPE BM320


## 3/2 Way Normally Closed BM320 Series




Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Work	Part Number		List Price
		Min	Max				
1/8	12	1.5	8	10	BM320-01S + voltage		£29.47
1/4	16	1.5	8	10	BM320-02S + voltage		£27.06

## 3/2 Way Normally Open BM320N Series



BM320N SERIES						R P	
Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Work	Part Number		List Price
		Min	Max				
1/8	12	1.5	8	10	BM320N-01S + voltage		£37.43
1/4	16	1.5	8	10	BM320N-02S + voltage		£28.69

## OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 B & manual over ride (option flying lead wire coil F)  
 NPT Thread  
 ATEX 22001EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C   
 BM320D double acting version (BM320-01/2D)

Included  
 +10%  
 +£67.14  
 +£34.57

## ELECTRICAL DATA

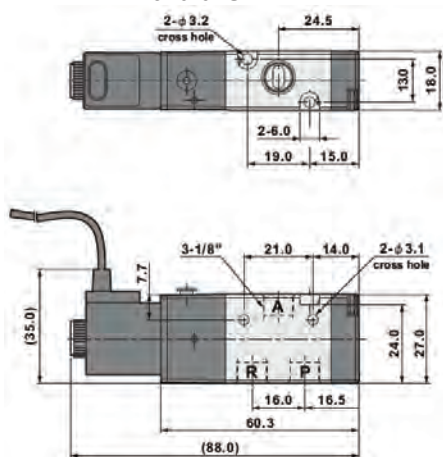
Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	22001	7.6 VA	6 VA	F 155°C	IP 65 with connector	3 spades DIN 43650B DIN 40050 VDE 0110
=	12 - 24 – 48 - 110 (DC)		4.5 Watts				

## CONSTRUCTION

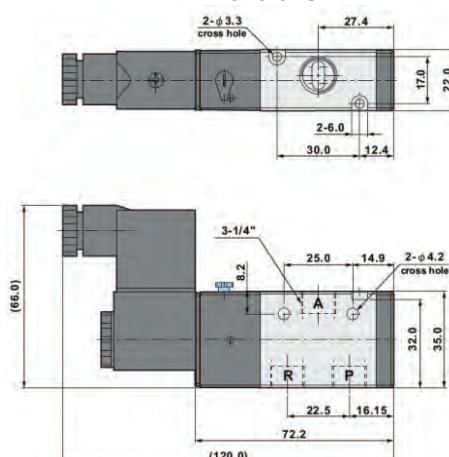
Body: Anodised Aluminium  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR  
 Moulded coil: Resin

## OVERALL DIMENSIONS

BM320-01S



BM320-02S



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Steam  
Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air  
Pressure range: 1.5 to 8 Bar max  
Media temperature: +50°C max  
Ambient temperature: -10°C to +50°C max  
Mounting: any position  
Weight (including coil): 235, 335, 445g

# 5/2 & 5/3 Pneumatic Solenoid



## 1/4" 22mm Width



### 5/2 S/RETURN or 5/2 & 5/3 D/ACTING

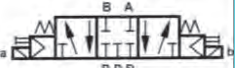

### SERVO ASSISTED


### 1.5 – 10 Bar

## TYPE BM520

5/2 Way Spring Return BM520S Series						
Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Work	Part Number	
		Min	Max			
1/4	18	1.5	8	10	BM52002S + voltage	<b>List Price</b> <b>£39.94</b>

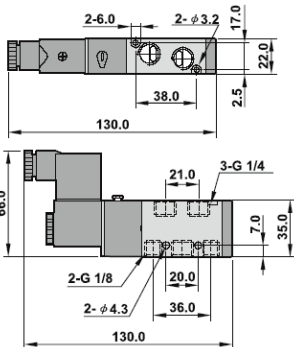
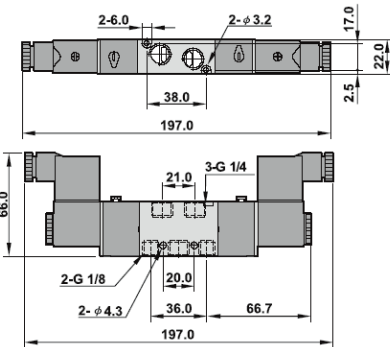
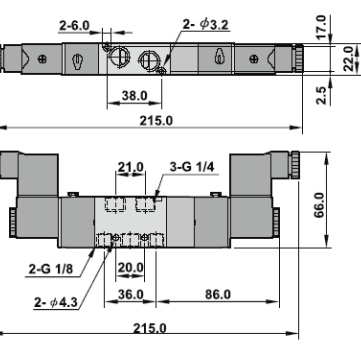
5/2 Way Double Acting BM520D Series						
Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Work	Part Number	
		Min	Max			
1/4	18	1.5	8	10	BM52002D + voltage	<b>List Price</b> <b>£74.426</b>

5/3 Way Double Acting BM530D Series						
Ø Port BSP	Ø Orifice (mm)	Pressure Rating (Bar) ΔP		Max Work	Part Number	
		Min	Max			
1/4	14	2	8	10	BM53002D + voltage	<b>List Price</b> <b>£105.29</b>

OPTIONS	
IP65 Coil & Connector PG9 – DIN 43650 B & manual over ride (option flying lead wire coil)	<b>Included</b> <b>+10%</b> <b>+£67.14</b> <b>+£5.61</b> <b>+£3.18</b>
NPT Thread	
ATEX 22001EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C 	
BF Manifold c/w Gaskets and Fixing Kit (cost is per station Ref: BF X Number of stations)	
BM530X Exhaust centre or BM530Y Pressure centre	

ELECTRICAL DATA							
Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	22001	7.6 VA	6 VA	F 155°C	IP 65 with connector	3 spades DIN 43650B DIN 40050 VDE 0110
=	12 - 24 – 48 - 110 (DC)		4.5 Watts				

CONSTRUCTION	
Body: Anodised Aluminium	
Tube and internal parts: Stainless steel	
Seals and gaskets: NBR	
Moulded coil: Resin	

OVERALL DIMENSIONS		
BM520S	BM520D	BM530D
		

Media: air  
 Pressure range: 1.5 to 8 Bar max  
 Media temperature: +50°C max  
 Ambient temp: -10°C to +50°C max  
 Mounting: any position  
 Weight (including coil): 430, 525, 715g

# 5/2 & 5/3 Aluminium

3/8 30mm Width

## 5/2 S/RETURN 5/2 & 5/3 D/ACTING

1.5 – 10 Bar

### TYPE PU52003

#### 5/2 Way Spring Return PU52003S Series



Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Working	Part Number	List Price
		Min	Max			
3/8	35	1.5	8	10	PU52003S + voltage	£48.10



#### 5/2 Way Double Acting PU52003D Series



Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Working	Part Number	List Price
		Min	Max			
3/8	35	1.5	8	10	PU52003D + voltage	£59.53



#### 5/3 Way Double Acting PU53003T Series



Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Working	Part Number	List Price
		Min	Max			
3/8	32	2	8	10	PU53003D + voltage	£97.12



#### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A & manual over ride (Optional flying lead wire coil & ) NPT or Rc Thread ATEX 22001EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C PU530X Exhaust centre or PU530Y Pressure centre	Included +10% +£67.16 +£5.13
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#### ELECTRICAL DATA

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 230 (50 or 60 Hz)	22001	7.6 VA	6 VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 110 (DC)		4.5 Watts				

#### CONSTRUCTION

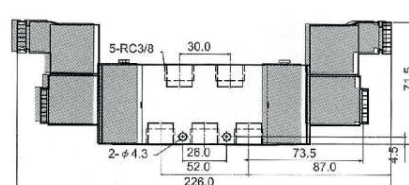
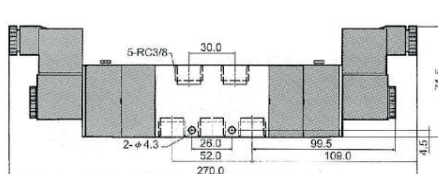
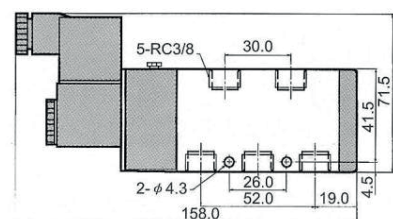
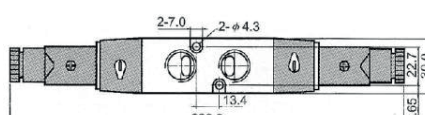
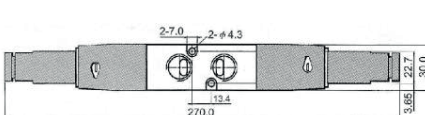
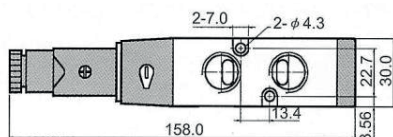
Body: Anodised Aluminium  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR  
 Moulded coil: Resin

#### OVERALL DIMENSIONS

PU52003

PU52003D

PU53003D



430g

525g

715g

Media: air  
 Pressure range: 2 to 8 bar max  
 Media temperature: +50°C max  
 Ambient temp: -10°C to +50°C max  
 Mounting: any position  
 Weight (including coil):  
 665,770,1045g

# 5/2 & 5/3 Aluminium

1/2 BSP Width 34mm

## 5/2 S/RETURN 5/2 & 5/3 D/ACTING

### 2 – 10 Bar

## TYPE PU52004

### 5/2 Way Spring Return PU52004S Series



Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Working	Part Number
		Min	Max		
1/2	70	2	8	10	PU52004S + voltage



List Price

£84.18

### 5/2 Way Double Acting PU52004D Series



Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Working	Part Number
		Min	Max		
1/2	70	2	8	10	PU52004D + voltage



List Price

£124.23

### 5/3 Way Double Acting PU53004D Series



Ø Port BSP	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Working	Part Number
		Min	Max		
1/2	54	2	8	10	PU53004D + voltage



List Price

£168.38

### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A & manual over ride (option flying lead wire coil)  
 NPT Thread  
 ATEX 22001EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C  
 PU530X Exhaust Centre or PU530Y pressure centre

Included  
 +10%  
 +£67.16  
 +£9.02

### ELECTRICAL DATA

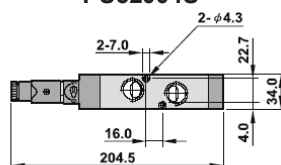
Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 – 48 - 110 - 230 (50 or 60 Hz)	22001	7.6 VA	6 VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 – 48 - 110 (DC)		4.5 Watts				

### CONSTRUCTION

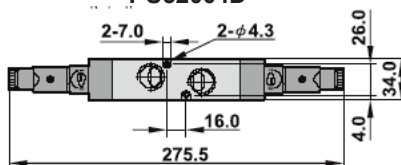
Body: Anodised Aluminium  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR  
 Moulded coil: Resin

### OVERALL DIMENSIONS

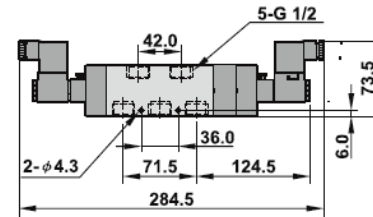
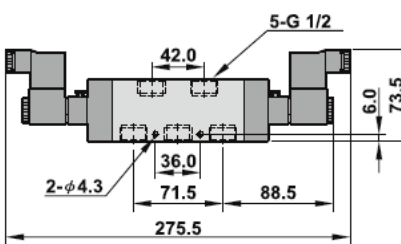
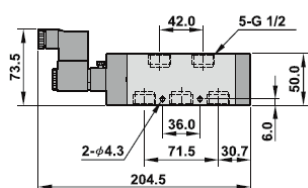
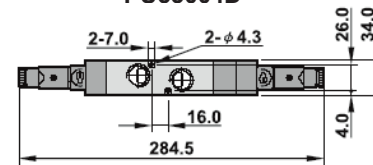
PU52004S



PU52004D



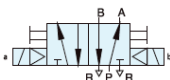
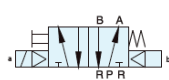
PU53004D



Media: air  
 Pressure range: 1.5 to 8 Bar max  
 Media temperature: +50°C max  
 Ambient temperature: -10°C to +60°C max  
 Mounting: any position

PS520S

PS520D



# ISO 1 & 2 5/2 Solenoid Valve



1/4 3/8 1/2

INTERNAL PILOT


1.5 – 8 Bar

TYPE PS520

## ISO 1 & ISO 2 5/2 Way PS520 Series

Ø Port	Kg	Ø Orifice (mm <sup>2</sup> )	Pressure Rating (Bar) ΔP		Max Work	ISO Standard	Part Number	Picture	List Price
			Min	Max					
1/4	0.32	29	1.5	8	10	ISO 1	PS520-02S + voltage		£60.14
3/8	0.7	62	1.5	8	10	ISO 2	PS520-03S + voltage		£120.26
1/4	0.46	29	1.5	8	10	ISO 1	PS520-02D + voltage		£81.18
3/8	0.84	62	1.5	8	10	ISO 2	PS520-03D + voltage		£150.34

## Manifold Only ZESF Series

Ø Port	Kg	Part Number	ISO Standard		List Price
1/4 (02)	0.18	ZESF-02	ISO 1		£23.16
3/8 (03) 1/2 (04)	0.28	ZESF + port size	ISO 2		£35.77

## OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A & manual over ride (Optional flying lead wire coil & )  
 NPT or Rc Thread

ATEX 22001EX Coil: ATEX EExmIIT4 II 2G & 2D IP65 T130°C ☹️

Included  
 +10%  
 +£67.16

## ELECTRICAL DATA

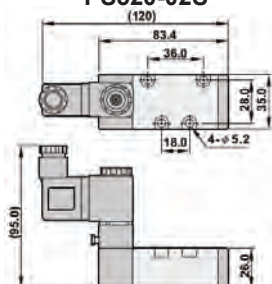
ELECTRICAL DATA						
Voltage (-10% + 10%) Continuous duty 100%		Power Consumption		Insulation class	Enclosure	Electrical connections
		Inrush	Holding			
~	12 - 24 - 48 -110 - 230 (50 or 60 Hz)	7.6 VA	6 VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 110 (DC)	4.5 Watts				

## CONSTRUCTION

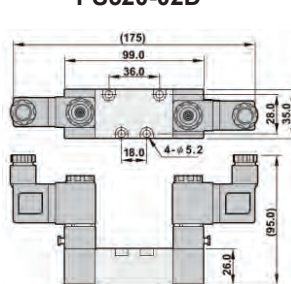
Body: Aluminium alloy, Tube and internal parts: Stainless steel, Seals and gaskets: NBR

## OVERALL DIMENSIONS

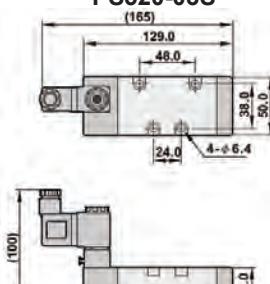
PS520-02S



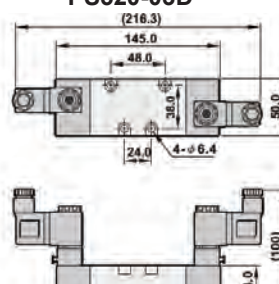
PS520-02D



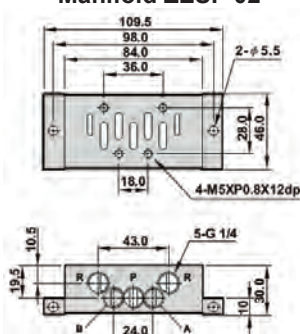
PS520-03S



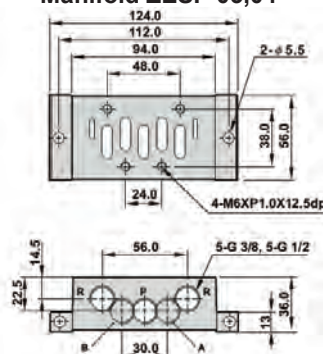
PS520-03D



Manifold ZESF-02



Manifold ZESF-03,04

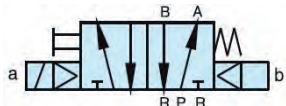



Media: air – Inert Gas  
 Pressure range: 1.5 to 10 Bar max  
 Media temperature: 50°C max  
 Ambient temp: -10°C to +50°C max  
 Mounting: any position  
 Seals: NBR  
 Opening & Closing: 50mSec Max  
 Weight: 305g & 390g  
 1/4 Exhaust



# **Namur Mount** **1/4** **NORMALLY CLOSED** **3/2-5/2 S/RETURN + D/ACTING** **1.5 – 10 Bar** **TYPE CY525**



## **5/2 Way Spring Return** **CY520S Series**

Ø Port BSP	Ø Orifice mm	Pressure Rating (Bar) ΔP		Max Work	Part Number		List Price
		Min	Max				
1/4	4.8	1.5	8	10	CY52502S + voltage		£48.55

## **5/2 Way Double Acting** **CY520D Series**

Ø Port BSP	Ø Orifice mm	Pressure Rating (Bar) ΔP		Max Work	Part Number		List Price
		Min	Max				
1/4	4.8	1.5	8	10	CY52502D + voltage		£73.45

## **OPTIONS**

IP65 Coil & DIN Connector PG9 – DIN 43650 B  
 3/2 Mounting plate adaptor  
 NPT Thread  
 ATEX 22001EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C

Included  
 Included  
 +10%  
 +£67.14

## **ELECTRICAL DATA**

Voltage (-10% + 15%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 110 - 230 (50 or 60 Hz)	22001	7.6 VA	6 VA	F 155°C	IP 65 with connector	3 spades DIN 43650B DIN 40050 VDE 0110
=	12 - 24 - 110 (DC)		4.5 Watts				

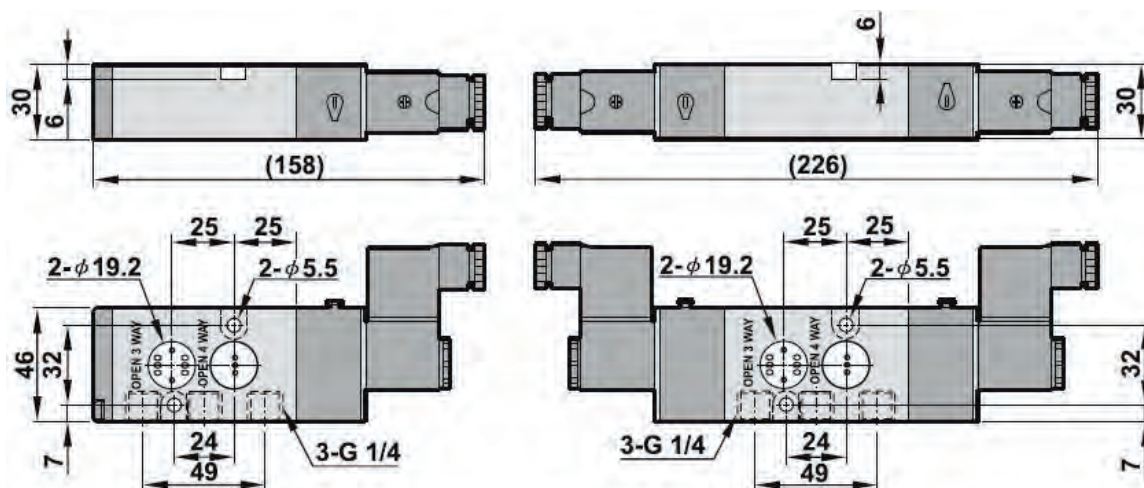
## **CONSTRUCTION**







Body: Anodised Aluminium Exhaust 1/4 BSP  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR  
 Moulded coil: Resin

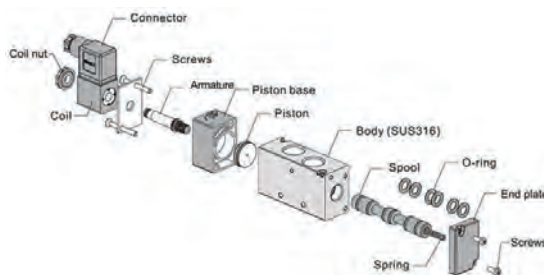
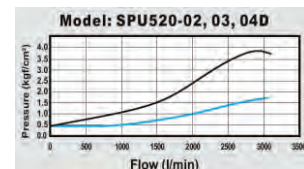
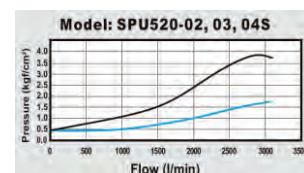
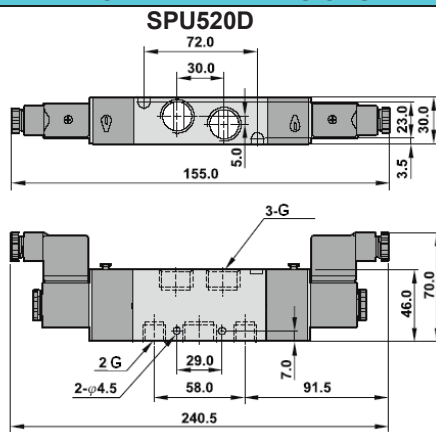
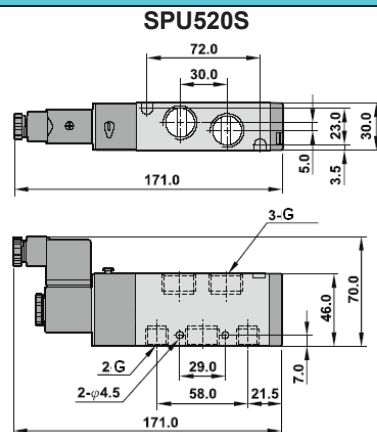
## **OVERALL DIMENSIONS**

**CY52502S**

**CY525 02D**



<div>Media: air – inert gas Pressure range: 1.5 to 8 Bar max Media temperature: +50°C max Ambient temperature: -10°C to +60°C max Mounting: any position Weight (including coil): 1000g / 1200g</div>				<div>5/2 Stainless 1/4 - 1/2 5/2 SINGLE + D/ACTING SERVO ASSISTED 1.5 – 8 Bar TYPE SPU520</div>				<div></div>				
5/2 Way Spring Return SPU520S						<div></div>						
Ø Port BSP	Ø Orifice (mm²)	Pressure Rating (Bar) ΔP		Max Working	Part Number	<div></div>	List Price					
		Min	Max									
		1/4	35					1.5	8	10	SPU52002S + voltage	£397.63
		3/8	65					1.5	8	10	SPU52003S + voltage	
1/2	65	1.5	8	10	SPU52004S + voltage							
5/2 Way Double Acting SPU520D						<div></div>						
Ø Port BSP	Ø Orifice (mm²)	Pressure Rating (Bar) ΔP		Max Working	Part Number	<div></div>	List Price					
		Min	Max									
		1/4	35					1.5	8	10	SPU52002D + voltage	£456.41
		3/8	65					1.5	8	10	SPU52003D + voltage	
1/2	65	1.5	8	10	SPU52004D + voltage							
OPTIONS												
IP65 Coil & Connector PG9 – DIN 43650 B & manual over ride (optional flying lead wire coil) NPT Thread ATEX 22001EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C 							Included +10% +£67.14					
ELECTRICAL DATA												
Voltage (-10% + 15%) Continuous duty 100%				Coil	Power Consumption		Insulation class	Enclosure	Electrical connections			
					Inrush	Holding						
~	24 – 48 - 110 - 230 (50 or 60 Hz)				7.6 VA	6 VA						
=	12 - 24 – 48 - 110 (DC)			22001	4.5 Watts		F 155°C	IP 65 with connector	3 spades DIN 43650B DIN 40050 VDE 0110			
CONSTRUCTION												
Body: 316 stainless steel, Tube and internal parts: Stainless steel Seals and gaskets: NBR, Moulded coil: Resin												
OVERALL DIMENSIONS												



Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
3/2  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

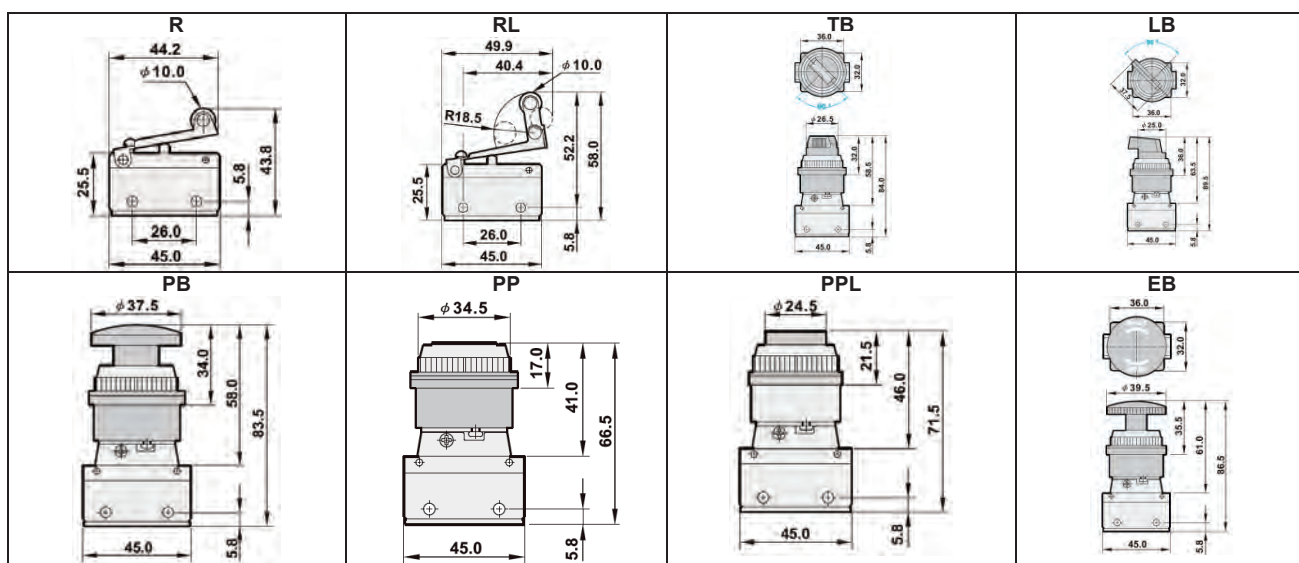
Pressure  
Reducing  
Valves

Media: air  
Pressure range: 0 to 9 Bar max  
Media temp: -10°C +60°C max  
Ambient temperature: -10° to +60°C  
Mounting: any position

# 3/2 Hand Control 1/8 Mechanical Valves 3 WAY DIRECT ACTING 0 – 9 Bar TYPE MSV8632



PRESSURE									
Ø Port	Ø Orifice (mm²)	Pressure Rating (Bar)			Operator			Part Number	List Price
		Min ΔP	Max ΔP	Max	Type	Standard Colour	Picture		
1/8 (01)	1/8" 1.8mm²	0	9	10	Basic	-		MSV8632-01	£20.45
		0	9	10	Roller	-		MSV8632-01R	£21.65
		0	9	10	One Way Roller	-		MSV8632-01RL	£24.35
		0	9	10	Twist Selector	Black		MSV8632-01TB	£21.65
		0	9	10	Long Twist Selector	Black		MSV8632-01LB	£24.35
		0	9	10	Palm Button Mushroom	Red		MSV8632-01PB	£21.65
		0	9	10	Palm Button Flush	Red		MSV8632-01PP	
		0	9	10	Palm Button Extended	Red		MSV8632-01PPL	
		0	9	10	Push Pull	Red		MSV8632-01EB	£24.35
OPTIONS									
With exhaust port NPT Thread (MSV8632-01N) Optional button colours Green (G), Black (B) or Yellow(Y) Panel mount diameter 25mm Without exhaust MSV8622 or Stackable 2 station (LB or TB) or stackable MSV8642, Stackable with exhaust MSV8662								Included + 10% +5% +10% TBA	
CONSTRUCTION									
Body : Aluminium alloy, Panel dimension 30mm, internal parts : Stainless steel, Seals and gaskets : NBR									
OVERALL DIMENSIONS									



Media: air  
 Pressure range: 0 to 9 Bar max  
 Media temp: -10°C +60°C max  
 Ambient temperature: -10°C to +60°C  
 Mounting: any position

# **3/2 Hand Control** **1/4** **Mechanical Valves** **3 WAY DIRECT ACTING** **0 – 9 Bar** **TYPE MSV9832**



## **PRESSURE**

Ø Port	Ø Orifice (mm²)	Pressure Rating (Bar)			Operator			Part Number	List Price
		Min ΔP	Max ΔP	Max	Type	Standard Colour	Picture		
1/4 (02)	18mm²	0	9	10	Basic	-		MSV9832-02	£26.46
		0	9	10	Roller	-		MSV9832-02R	£28.57
		0	9	10	Twist Selector	Black		MSV9832-02TB	
		0	9	10	Long Twist selector	Black		MSV9832-02LB	£31.57
		0	9	10	Palm Button Mushroom	Red		MSV9832-02PB	£28.57
		0	9	10	Palm Button Flush	Red		MSV9832-02PP	
		0	9	10	Palm Button Extended	Red		MSV9832-02PPL	
		0	9	10	Detent Button	Red		MSV9832-02EB	£31.57

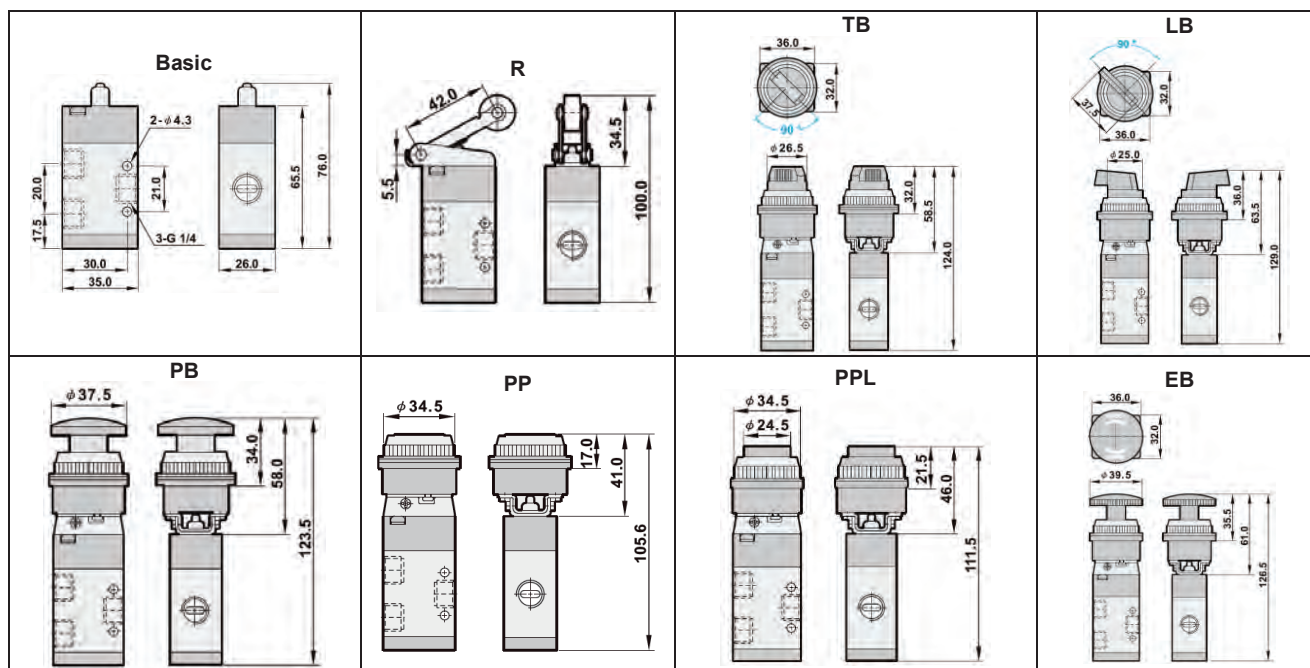
## **OPTIONS**

NPT Thread (MSV9832-02N)	+ 10% +5% +10%
Optional button colours Green (G), Black (B) or Yellow(Y) (PB, PP, PPL)	
Panel diameter 25mm or Port 1/8"	

## **CONSTRUCTION**

Body : Aluminium alloy, Panel dimension 30mm, internal parts : Stainless steel, Seals and gaskets : NBR

## **OVERALL DIMENSIONS**



Media: air  
 Pressure range: 0 to 9 Bar max  
 Media temp: -10°C +60°C max  
 Ambient temperature: -10° to +60°C  
 Mounting: any position

# 5/2 Hand Control

## 1/8 1/4









### Mechanical Valves

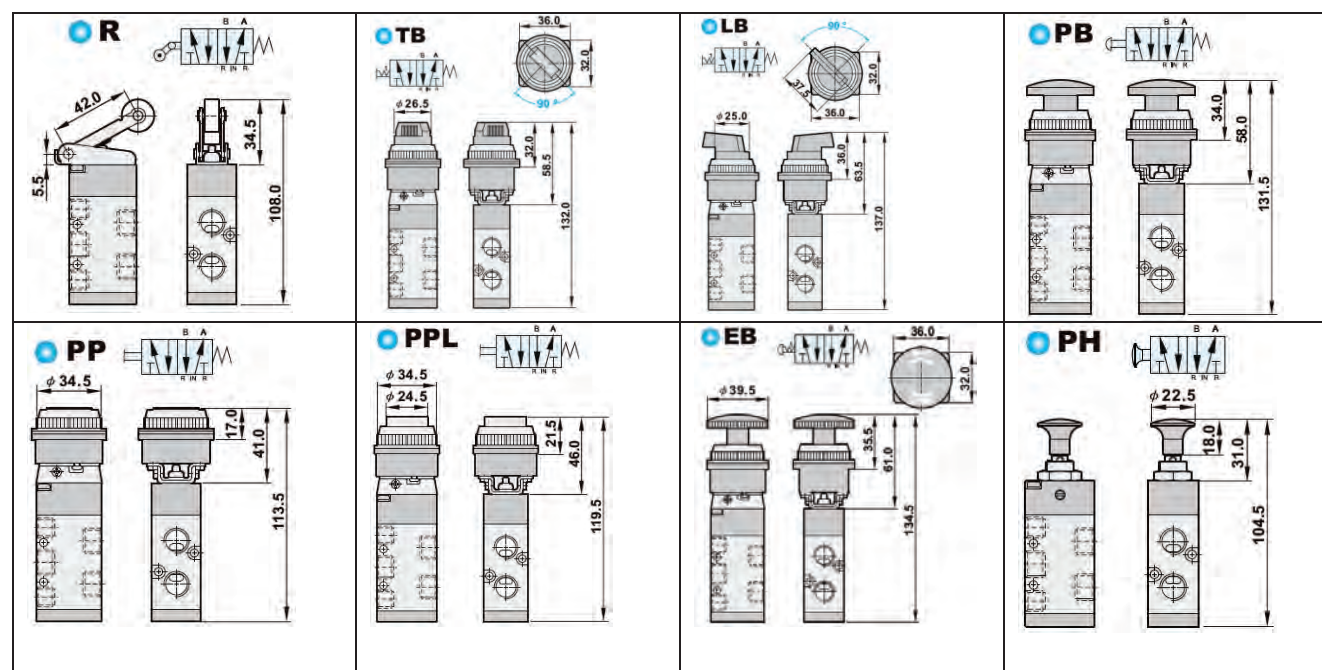
### 5 WAY DIRECT ACTING

### 0 – 9 Bar

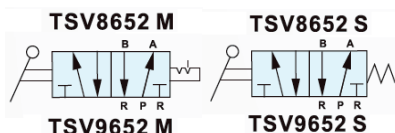
## TYPE MSV8652



PRESSURE									
Ø Port	Ø Orifice (mm²)	Pressure Rating (Bar)			Operator			Part Number	List Price
		Min ΔP	Max ΔP	Max	Type	Standard Colour	Picture		
1/8 (01)  1/4 (02)	1/8" 14mm²	0	9	10	Roller	-		MSV8652 + port (01/02)R	£34.73
		0	9	10	Twist Selector	Black		MSV8652+ port (01/02)TB	
		0	9	10	Long Twist selector	Black		MSV8652+ port (01/02)LB	£37.71
		0	9	10	Palm Button Mushroom	Red		MSV8652+ port (01/02)PB	£34.73
	0	9	10	Palm Button Flush	Red		MSV8652+ port (01/02)PP		
	0	9	10	Palm Button Extended	Red		MSV8652+ port (01/02)PPL		
	0	9	10	Detent Button	Red		MSV8652+ port (01/02)EB	£37.71	
	0	9	10	Push Pull Button	Black		MSV8652+ port (01/02)PH		
OPTIONS									
NPT Thread (MSV8652-01/2N) Optional button colours Green (G), Black (B) or Yellow(Y) (PB, PP, PPL) Panel diameter 25mm									+ 10% +5% +10%
CONSTRUCTION									
Body : Aluminium alloy, Panel dimension 30mm, internal parts : Stainless steel, Seals and gaskets : NBR									
OVERALL DIMENSIONS									



Media: air - vacuum  
 Pressure range: 0 to 9 Bar max  
 Media temp: -10°C +60°C max  
 Ambient temperature: -10°C to +60°C  
 Mounting: any position



# 5/2 Hand Control 1/8 1/4 3/8 Mechanical Lever Valves 5 WAY DIRECT ACTING 0 – 9 Bar TYPE TSV8652



## PRESSURE

Ø Port	Ø Orifice (mm²)	Pressure Rating (Bar)		Mounting	Valve type	Picture	Part Number	List Price
		Min	Max					
1/8 (01)	18mm²	0	9	Standard	Spring Return		TSV8652 + port + S	£26.16
1/4 (02)		0	9		Detent		TSV8652 + port + M	
3/8 (03)	35mm²	0	9		Spring Return		TSV8652-03S	£34.57
		0	9		Detent		TSV8652-03M	
1/8 (01)	18mm²	0	9	Manifold Type (R)	Spring Return		TSV8652R + port + S	£31.57
1/4 (02)		0	9		Detent		TSV8652R + port + M	

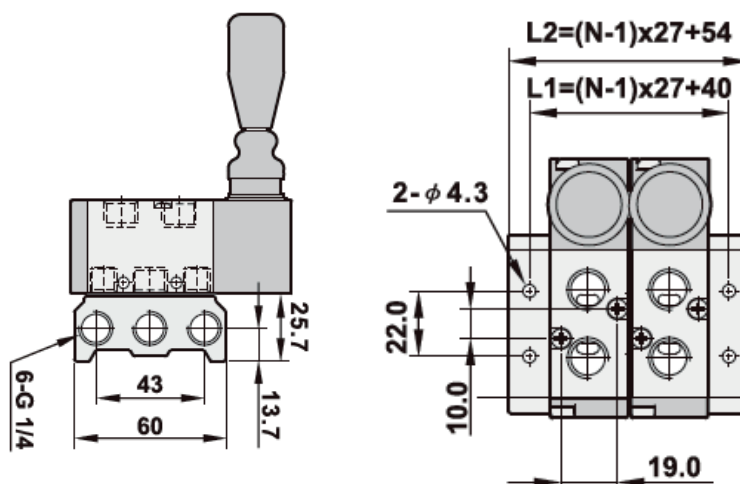
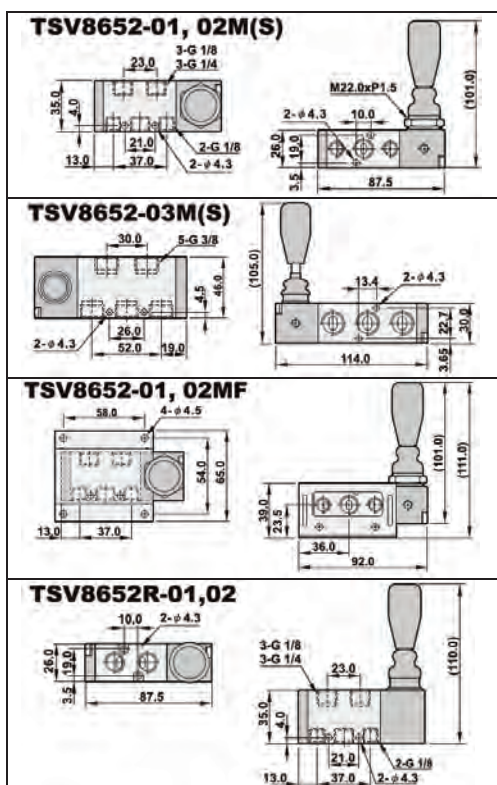
## OPTIONS

Panel mounting ring M22xp1.5 (TSV9652-02M&S, 8652-01-02MS+F) only	Included +10% +£5.20
NPT Thread (TSV +port +N)	
Mounting bracket (F) (TSV8652 1/8 & 1/4 only)	

## CONSTRUCTION

Body : Aluminium alloy, internal parts : Stainless steel, Seals and gaskets : NBR, Test pressure: 10 Bar

## OVERALL DIMENSIONS



No of station	2	3	4	5	6	7	8	9	10
L1	67	94	121	148	175	202	229	256	283
L2	81	108	135	162	189	216	243	270	297

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Closed  
Pilot

Brass  
2/2  
N/Open  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
2/2  
N/Closed

Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air - vacuum  
Pressure range: 0 to 9 Bar max  
Media temp: -10°C +60°C max  
Ambient temperature: -10°C to +60°C  
Mounting: any position

• TSV8753-02M • TSV8753-02SX • TSV9832-M



• TSV8753-02S • TSV8753-02MX • TSV9832-S



# 5/3 3/2 Hand Control

## 1/8 1/4 3/8




### Mechanical Lever Valves

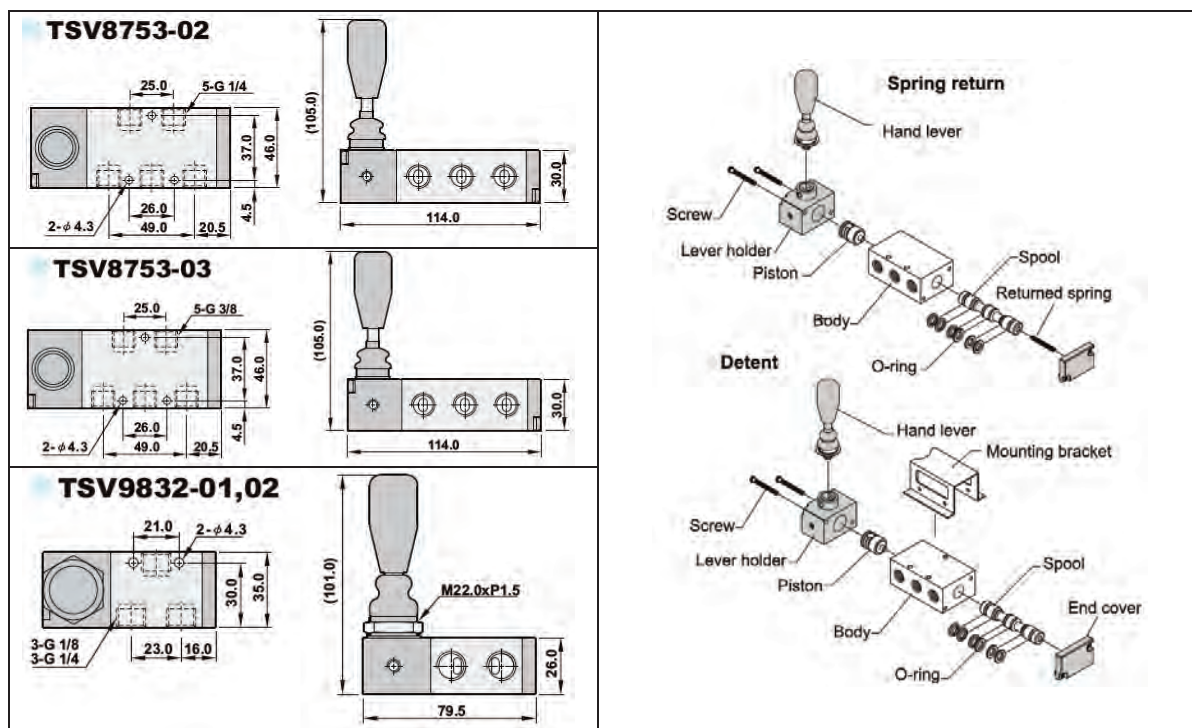
#### 3+5 WAY DIRECT ACTING

#### 0 – 9 Bar

## TYPE TSV8753-9832



PRESSURE								
Ø Port	Ø Orifice (mm²)	Pressure Rating (Bar)		Function	Valve type	Picture	Part Number	List Price
		Min	Max					
1/4 (02)	18mm²	0	9	5/3	Spring return		TSV8753-02S	£44.95
		0	9		Spring return exhaust centre		TSV8753-02SX	£46.30
1/4 (02) 3/8 (03)	1/4 18mm²	0	9		Detent		TSV8753 + port +M	£34.57
	3/8 (35mm²)	0	9		Detent with exhaust centre		TSV8753 + port + MX	£36.08
1/8 (01) 1/4 (02)	1/8 18mm²	0	9	3/2	Detent		TSV9832 + port + M	£28.17
	1/4 35mm²	0	9		Spring Return		TSV9832 + port + S	
OPTIONS								
NPT Thread (TSV +port +N) Mounting bracket (F)								+10%
CONSTRUCTION								
Body : Aluminium alloy, Panel dimension 30mm, internal parts : Stainless steel, Seals and gaskets : NBR Test pressure: 10 Bar								
OVERALL DIMENSIONS								

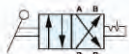


Media: air  
 Pressure range: 0 to 9 Bar max  
 Media temp: -10°C +60°C max  
 Ambient temperature: -10° to +60°C  
 Mounting: any position

TSV30043



TSV30042



# **4/2 4/3 Hand Control** **1/4 3/8 1/2** **Mechanical Valves** **4 WAY DIRECT ACTING** **0 – 9 Bar** **TYPE TSV30043/42**



## **PRESSURE**

Ø Port	Ø Orifice (mm²)	Pressure Rating (Bar)		Function	Valve type	Picture	Part Number	List Price
		Min	Max					
1/4 (02) 3/8 (03) 1/2 (04)	18mm²	0	9	4/3 Way TSV30043 	Standard		TSV30043 + port	£27.96
		0	9		Ports in base		TSV30043 + port + B	£41.49
		0	9		With lock button		TSV30043 + port + C	
		0	9		Panel mounted		TSV30043 + port + P	£44.50
		0	9	4/2 way TSV30042 	Standard		TSV30042 + port	£27.96
		0	9		Ports in base		TSV30042 + port + B	£41.49
		0	9		With lock button		TSV30042 + port + C	
		0	9		Panel mounted		TSV30042 + port + P	£44.50

## **OPTIONS**

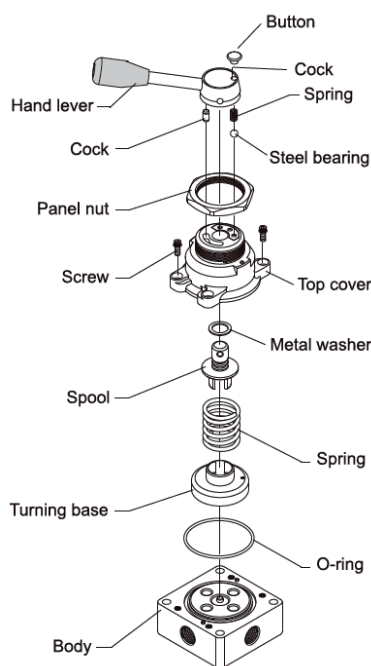
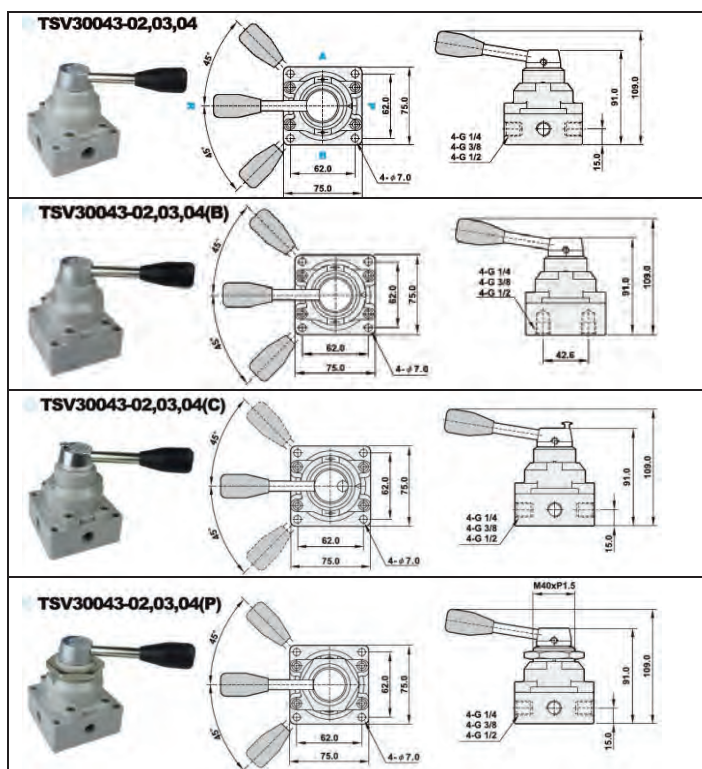
NPT Thread (TSV30043 +port +N)

+10%

## **CONSTRUCTION**

Body : Aluminium alloy, Panel dimension 30mm, internal parts : Stainless steel, Seals and gaskets : NBR  
 Test pressure: 10 Bar

## **OVERALL DIMENSIONS**



Media: air  
 Pressure range: 0 to 9 Bar max  
 Media temp: -10°C +60°C max  
 Ambient temperature: -10°C to +60°C  
 Mounting: any position  
 Air pilot start pressure: 3.5 - 4.5 Bar

# 3/2 Mechanical

## 1/8








### Normally Open or Closed

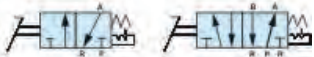
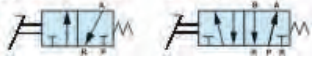

### 3 WAY DIRECT ACTING

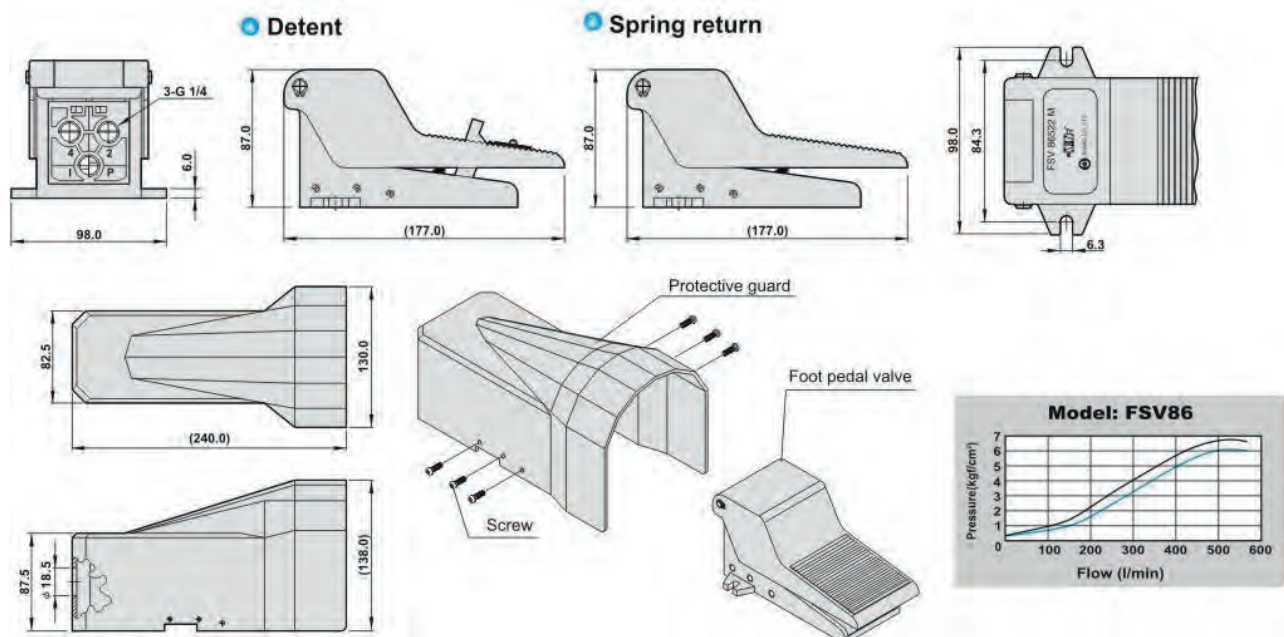
### 0 – 9 Bar

## TYPE MSV30132



PRESSURE								
Ø Port	Ø Orifice (mm²)	Pressure Rating (Bar)			Operator		Part Number	List Price
		Min ΔP	Max ΔP	Max	Type	Picture		
1/8 (01)	5.5mm²	0	9	10	Toggle Lever		MSV30132-01V	£26.25
		0	9	10	Roller		MSV30132-01R	£28.86
		0	9	10	Push Button		MSV30132-01P	£26.25
		0	9	10	One Way Roller		MSV30132-01D	£35.66
		0	9	10	Ball Plunger		MSV30132-01B	£30.97
		0	9	10	Air Pilot		MSV30132-01A	£41.28
		0	9	10	Finger Button		MSV30132-01F	£40.35
OPTIONS								
NPT or Rc Thread (MSV30132-01N)								+ 10%
CONSTRUCTION								
Body : Aluminium alloy Panel dimension 12mm Internal parts : Stainless steel Seals and gaskets : NBR MSV30132-01P patent number ZL200530157285.1 MSV30132-01V patent number ZL200530157282.8								
OVERALL DIMENSIONS								


<p>Media: air Pressure range: 0 to 9 Bar max Media temperature: -10 °C +60 °C max Ambient temperature: -10° to +60 °C Mounting: any position</p> <p>• FSV8632-02M    • FSV8652-02M</p>  <p>• FSV8632-02S    • FSV8652-02S</p> 				<h1>3/2 5/2 Foot Pedal</h1> <p>1/4"</p> <p>S/RETURN + DETENT</p> <p>3/2 5/2 WAY MECHANICAL</p> <p>0 – 9 Bar</p> <p>TYPE FSV</p>					
PRESSURE									
Ø Port	Function	Operation	Foot Guard	Pressure Rating (Bar)		Part Number	List Price		
				Min	Max				
WITHOUT GUARD									
1/4	3/2	Spring Return	NO	0	9	FSV8632-02S	£52.61		
1/4	3/2	Detent/Latch	NO	0	9	FSV8632-02M	£61.93		
1/4	5/2	Spring Return	NO	0	9	FSV8652-02S	£55.91		
1/4	5/2	Detent/Latch	NO	0	9	FSV8652-02M	£64.93		
WITH FOOT GUARD									
1/4	3/2	Spring Return	YES	0	9	FSV8632-02SF	£61.93		
1/4	3/2	Detent/Latch	YES	0	9	FSV8632-02MF	£71.25		
1/4	5/2	Spring Return	YES	0	9	FSV8652-02SF	£64.93		
1/4	5/2	Detent/Latch	YES	0	9	FSV8652-02MF	£75.16		
OPTIONS							+ 10%		
NPT Thread With foot guard (F) or without foot guard, 3/2 (FSV8632) or 5/2 way (FSV8652), Spring return (S) or mechanical detent / latch (M)									
CONSTRUCTION									
Body : Aluminium Alloy Internal parts : Stainless steel Foot guard: Polycarbonate Test pressure: 10 Bar									
REPAIR KIT									
Foot Guard				Valve part number + foot guard					
OVERALL DIMENSIONS									



Media: air – gas  
 Pressure range: 10 Bar max  
 Media temperature: -10 °C +80 °C max  
 Ambient temperature: -10 °C to +80 °C  
 Media viscosity: 20 centistokes max  
 Mounting: any position

# ACCESSORIES

## SPEED CONTROL

## QUICK EXHAUST

## CHECK NON RETURN

## SHUTTLE

### TYPE SV, S, Q, C0, ST, STH

#### PRESSURE

Ø Port	Ø Orifice (mm²)	Symbol	Valve Type	Pressure Rating (Bar)		Picture	Part Number	List Price
				Min	Max			
1/8	3.8		Speed Control Precise Type	0	10		SV-01	£8.42
1/4	6			0	10		SV-02	£8.42
3/8	38			0	10		SV-03	£10.22
1/2	48			0	10		SV-04	£14.14
3/4	43		Speed Control	0	10		S-06	£33.08
1				0	10		S-08	
1/8	16		Quick Exhaust Valves	0.5	10		Q-01	£8.42
1/4	27			0.5	10		Q-02	£9.92
3/8	28			0.5	10		Q-03	
1/2	71			0.5	10		Q-04	£33.08
3/4	72.5		Check Valve	0.5	10		Q-06	
1/8	10			0.3	8		C-01	£5.86
1/4	23			0.3	8		C-02	£7.43
3/8	38			0.3	8		C-03	£8.60
1/2	56		Shuttle Valve	0.3	8		C-04	£9.77
1/8	7.5			0.8	10		ST-01	£9.92
1/4	21			0.8	10		ST-02	£11.43
1/8	14		Double Pressure Valve	0.8	10		STH-01	£9.92

#### OPTIONS

NPT Thread (N)

+ 10%

#### CONSTRUCTION

Body : Aluminium Alloy, Internals: Stainless steel

#### OVERALL DIMENSIONS


SV					R	A	B	C	D	E	F	G	H	I						
					1/8	24.5	35	25.5	54	4	4.5	19	11.7	M12xP1.0						
					1/4	24.5	35	25.5	54	4	4.5	19	11.7	M12xP1.0						
					3/8	38	52	32	72.8	4.8	5.5	24	14.2	M18xP1.25						
					1/2	38	52	36	80.5	5.5	5.5	28	15.2	M22xP1.25						
S					Model		A		B		C		D		E		F		G	
					S-06		50		90		51		124		7.8		6.3		38	
					S-08															
Q					G	L	W		H		A		B		C		D			
					1/8	46	19		32		30		4.3		27		PS 1/4			
					1/4	61.5	25.5		38		39		5.6		31.5		PS 3/8			
					3/8	61.5	25.5		38		39		5.6		31.5		PS3/8			
					1/2	98	38		63.7		60		8.5		50.5		PS 3/4			
					3/4	98	38		63.7		60		8.5		50.5		PS 3/4			
C					Model		C-01		C-02		C-03		C-04							
					Port		1/8		1/4		3/8		1/2							
					A		40		50		50		63							
					B		14		17		21		25							
					C		14		17		21		25							
ST STH					Model		R	A	B	C	D	E	F	G						
					STH01		1/8	25	40	16	8	25.4	19.5	4.3						
					ST01		1/8	25	40	16	8	25.4	19.5	4.3						
					ST02		1/4	35	52	22	11	35	25	5.5						

Media: air – gas  
 Pressure range: 8 Bar max  
 Temperature: -10°C to +70°C  
 Body Material: POM / BRASS  
 Seals: NBR  
 Mounting: any position


# PUSH IN FITTINGS

## PLASTIC


### Male Straight

	NPC	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price £	1.09	0.82	1.09	1.09	0.82	1.09	1.37	1.09	1.09	1.37	1.91	1.37	1.64	1.91	2.05	2.05	2.32


### Male Elbow

	NPL	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price	1.37	1.09	1.37	1.37	1.09	1.37	1.64	1.37	1.37	1.64	2.73	1.91	1.91	2.73	2.73	2.73	2.73


### Male Branch Tee

	NPB	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price	1.91	1.91	2.05	1.91	1.91	2.05	2.46	2.05	2.05	2.60	4.65	2.73	2.73	4.65	4.65	4.65	4.65


### Speed Controller

	NSC	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price	6.83	6.29	6.29	6.83	6.01	6.01	8.20	6.01	6.01	8.75	8.75	8.75	8.75	11.48	11.48	11.48	11.48


### Male Run Tee

	NPD	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price	1.91	1.91	2.19	1.91	1.91	1.91	2.46	2.19	2.19	2.46	4.65	2.73	2.73	4.10	4.10	4.10	4.10


### Female Elbow

	NPLF	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price	1.56	1.56	1.78	1.69	1.56	1.78	2.73	1.64	1.78	2.73	3.14	2.46	2.73	3.14	3.14	3.14	3.14


### Female Straight

	NPCF	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price	1.23	1.23	1.64	1.23	1.23	1.64	2.32	1.37	1.64	2.32	2.73	2.73	2.73	3.01	3.01	3.01	3.42

### Single Universal Elbow

	NPH	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price	2.19	2.19	2.19	2.19	2.19	2.19	2.73	2.19	2.19	2.73	5.47	2.73	2.73	5.47	5.47	5.47	5.47

### Extended Stud Elbow

	NPLL	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price	2.19	2.19	2.19	2.49	2.49	2.49	2.84	2.57	2.57	2.84	4.37	2.84	2.84	4.37	5.47	5.47	5.47

Pressure  
Sensing  
Valves

Flow  
Control  
Valves

2/2 & 3/2  
Coaxial  
Solenoid  
Valves

Directional  
Control  
Valves

Electric  
Actuated  
Ball Valves

Air  
Solenoid  
Valves

Mechanical  
Air  
Valves

Accessories,  
Fittings,  
Tubing

FRL's, Filters  
Regulators  
Lubricators

Air  
Actuated  
Valves

Arrestors  
Vent Suction  
Check Valves

Throttle  
Valves

Pinch  
Proportional  
Sub Base

Timers,  
Coils &  
Connectors


Magnets  
& Y Filters

Media: air – gas  
 Pressure range: 8 Bar max  
 Temperature: -10°C to +70°C  
 Body Material: POM / BRASS  
 Seals: NBR  
 Mounting: any position


# PUSH IN FITTINGS

## PLASTIC


### S Type Speed Controller

	NSS	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price £	6.86	6.86	6.86	6.86	6.86	7.38	11.32	7.38	7.38	11.32	12.51	11.32	11.32	12.51	12.51	12.51	12.51

### Bulkhead Female Union

	NCM		401	402		601	602		801	802	803		1002	1003		1202	1203	
	Tube		4	4		6	6		8	8	8		10	10		12	12	
	Thread		1/8	1/4		1/8	1/4		1/8	1/4	3/8		1/4	3/8		1/4	3/8	
	Price		2.51	3.06		2.52	3.06		2.73	3.06	4.43		3.83	4.65		6.01	6.01	

### Male Equal Y

	NPX	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price	3.28	3.28	3.28	3.28	3.28	3.28	5.36	3.55	3.55	3.83	5.47	4.92	4.92	5.47	6.56	6.56	6.56

### Union Elbow

	NPV	4	6	8	10	12			NPU	4	6	8	10	12	
	Tube	4	6	8	10	12			Tube	4	6	8	10	12	
	Tube	4	6	8	10	12			Tube	4	6	8	10	12	
	Price	1.50	1.50	1.64	2.05	3.14			Price	1.64	1.64	1.78	2.19	3.14	

### Union Tee

	NPE	4	6	8	10	12			NPM	4	6	8	10	12	
	Tube	4	6	8	10	12			Tube	4	6	8	10	12	
	Tube	4	6	8	10	12			Tube	4	6	8	10	12	
	Price	1.91	1.91	1.91	2.46	5.47			Price	3.61	3.88	4.62	5.33	5.47	

### Unequal Y

	NPW	64	86	108	1210			NPGJ	64	84	86	106	108	
	Tube	6	8	10	12			Tube	6	8	8	10	10	
	Tube	4 4	6 6	8 8	10 10			Tube	4	4	6	6	8	
	Price	3.58	4.37	4.76	7.65			Price	4.26	4.26	4.87	5.47	5.47	

### Unequal T

	NEG	64	86	108	1210			NPG	64	86	106	108	1210	
	Tube	6	8	10	12			Tube	6	8	10	10	12	
	Tube	4 4	6 6	8 8	10 10			Tube	4	6	6	8	10	
	Price	3.58	4.37	4.76	7.65			Price	2.73	3.58	3.72	3.71	4.76	

### Union Y


	NPY	4	6	8	10	12								
	Tube	4	6	8	10	12								
	Tube	4	6	8	10	12								
	Price	2.73	2.73	3.01	3.55	6.56								

Media: air – gas  
 Pressure range: 0 to 8 Bar  
 Body: 316 Stainless steel  
 Seals: Viton  
 Temperature: 0°C to +180°C


# PUSH IN FITTINGS

## 316 Stainless Steel


### Male Straight

	S6PC	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price £	8.47	7.38	7.93	8.47	7.65	8.47	11.21	9.02	9.02	11.21	14.76	11.21	11.21	14.76	14.76	14.76	14.76


### Male Elbow

	S6PL	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price	11.48	10.39	11.21	11.48	10.66	11.48	15.03	10.66	12.03	15.03	24.60	15.03	15.03	24.60	24.60	24.60	24.60


### Male Branch Tee

	S6PB	4M5	401	402	6M5	601	602	603	801	802	803	804	1002	1003	1004	1202	1203	1204
	Tube	4	4	4	6	6	6	6	8	8	8	8	10	10	10	12	12	12
	Thread	M5	1/8	1/4	M5	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	1/4	3/8	1/2
	Price	18.31	16.40	17.77	18.31	16.95	18.31	22.14	19.13	19.13	22.14	31.71	22.14	22.14	31.71	22.14	31.71	31.71


### Male Run Tee

	S6PD		401	402		601	602		801	802			1002	1003		1202	1203	1204
	Tube		4	4		6	6		8	8			10	10		12	12	12
	Thread		1/8	1/4		1/8	1/4		1/8	1/4			1/4	3/8		1/4	3/8	1/2
	Price		16.40	17.77		16.95	18.31		19.13	19.13			22.14	22.14		31.71	31.71	31.71

### Bulkhead Female Union

	S6CM		401	402		601	602	603	801	802	803		1002	1003	1004	1202	1203	1204
	Tube		4	4		6	6	6	8	8	8		10	10	10	12	12	12
	Thread		1/8	1/4		1/8	1/4	3/8	1/8	1/4	3/8		1/4	3/8	1/2	1/4	3/8	1/2
	Price		11.75	13.94		11.75	13.94	19.68	11.75	15.31	21.05		15.31	21.05	27.88	16.67	22.96	30.07

### Female Straight

	S6PCF		401	402		601	602	603	801	802	803		1002	1003	1004	1202	1203	1204
	Tube		4	4		6	6	6	8	8	8		10	10	10	12	12	12
	Tube		1/8	1/4		1/8	1/4	3/8	1/8	1/4	3/8		1/4	3/8	1/2	1/4	3/8	1/2
	Price		9.84	15.57		9.84	12.57	16.67	10.39	13.12	17.49		13.12	17.49	22.96	13.94	18.85	24.33

### Union Straight

	S6PU	4	6	8	10	12			S6PM	4	6	8	10	12	
	Tube	4	6	8	10	12			Tube	4	6	8	10	12	
	Tube	4	6	8	10	12			Tube	4	6	8	10	12	
	Price	11.21	11.21	12.57	13.94	17.49			Price	16.13	17.49	19.68	21.59	23.78	

### Union T

	S6PE	4	6	8	10	12												
	Tube	4	6	8	10	12												
	Tube	4	6	8	10	12												
	Price	19.41	20.50	22.96	25.42	42.09												

Pressure  
Sensing  
Valves

Flow  
Control  
Valves

2/2 & 3/2  
Coaxial  
Solenoid  
Valves

2/2 & 3/2  
Direct  
Acting  
Solenoid  
Valves

Electric  
Actuated  
Ball Valves

Air  
Solenoid  
Valves

Mechanical  
Air  
Valves

Accessories,  
Fittings,  
Tubing

FRL's, Filters  
Regulators  
Lubricators

Air  
Actuated  
Valves


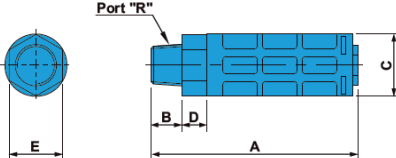


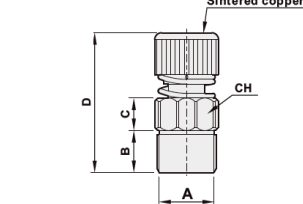


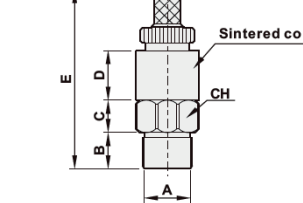

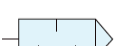
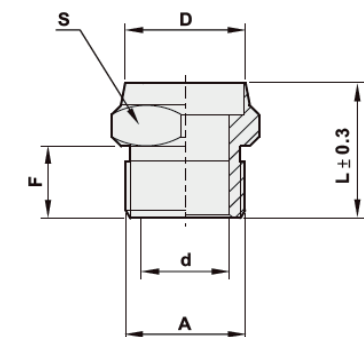


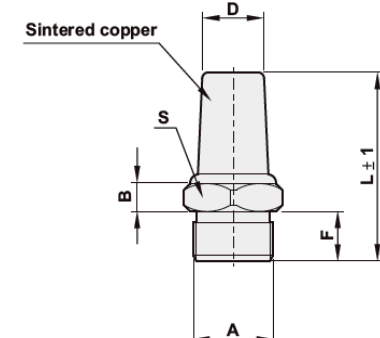

Arrestors  
Vent Suction  
Check Valves

Proportional  
Valves

Pinch  
Proportional  
Sub Base

Timers,  
Coils &  
Connectors

Magnets  
& Y Filters

Media: air – gas - vacuum Pressure range: 10 Bar max Media temperature: -10 °C +80 °C max Ambient temperature: -10 °C to +80 °C Mounting: any position		<div>SILENCERS</div> <div>PLASTIC, VIBRATION TYPE, EXHAUST SPEED CONTROL, BREATHER VENT, MUFFLER</div> <div>TYPE SV, S, Q, C0, ST, STH</div>									
Ø Port	Symbol	Drawing	Dimensions					Picture	Part Number	List Price	
Silencer Plastic											
1/8			A	B	C	D	E		EN-01	£0.75	
1/4			41	8	16	7	14		EN-02	£0.94	
3/8			65	10	21	10	20		EN-03	£1.27	
1/2			83.5	12.5	25	10	22		EN-04	£1.65	
3/4			94	14	30	10	26		EN-06	£6.92	
1			116	16	45	10	32		EN-08	£10.22	
Silencer Vibration Type											
1/8			B	C	D	CH					
1/4			6	7	33	12		EV-01	£2.83		
3/8			9	7	35	16		EV-02	£4.36		
1/2			10	10	40	18		EV-03	£5.93		
			10	10	42	24	EV-04	£6.56			
Silencer Exhaust with Speed Control											
1/8			B	C	D	E	CH				
1/4			6	7	23	36	12		ES-01	£2.98	
3/8			9	7	28	43	14		ES-02	£4.99	
1/2			10	10	35	46.5	18		ES-03	£6.31	
			11	5	20	56.5	22	ES-04	£7.76		
Silencer Breather Vent Type											
M5			D	d	L	F	S				
1/8			7.5	2.5	10	5	8		EP-M5	£0.97	
1/4			11.4	6.5	11.3	6.4	12		EP-01	£0.99	
3/8			14.8	9	14.1	8.2	15		EP-02	£1.18	
1/2			18	12	15.8	9	19		EP-03	£1.89	
3/4			21	15	18.8	10.5	22		EP-04	£3.55	
			26	20	20.8	12	27		EP-06	£6.25	
1			34.2	26	24.8	14.5	36		EP-08	£8.84	
Silencer Muffler Type											
M5			D	L	F	S	B				
1/8			5.5	20	5	10	3.5		EC-M5	£0.97	
1/4			8	24	6	13	4		EC-01	£1.11	
3/8			11	33	8	15	4		EC-02	£1.39	
1/2			14	44	10	22	5		EC-03	£2.77	
3/4			18	49	10	24	6.5		EC-04	£3.97	
			21	57	11	30	7.5		EC-06	£7.63	
1			27	72	15	36	8		EC-08	£10.74	
OPTIONS											
NPT Thread (N)										+ 10%	

Media: air – gas – fluid		<h1>Nylon &amp; PU Tubing</h1> <p>4 – 16mm &amp; 1/4-1/2 100 &amp; 200 Mtr Rolls TRANSPARENT, RED, YELLOW GREEN, BLACK &amp; MILK WHITE</p>					
POLYURETHANE TUBE							
OD	ID	Break Pressure	Colour	Roll Length (Meters)	Part Number	List Price	
4	2	15	<b>Standard</b> Blue (BL) Black (B) Orange (OR)  <b>Option</b> Red (R) Yellow (Y) Transparent(T) Green(G) White (W)	200	PU-0420 + colour code	£61.94	
4	2.5	18		200	PU-0425 + colour code	£51.71	
6	4	20		200	PU-0640 + colour code	£82.69	
8	5	20		100	PU-0850 + colour code	£68.55	
10	6.5	20		100	PU-1065 + colour code	£113.65	
11	8	18		100	PU-1180 + colour code	£118.77	
12	8	20		100	PU-1280 + colour code	£139.21	
16	12	20		100	PU-1612 + colour code	£245.05	
16	13	18		100	PU1613 + colour code	£190.93	
1/4"	3/16	20		200	PU-1/4 + colour code	£103.13	
3/8"	1/4"	18		100	PU-3/8 + colour code	£108.24	
1/2"	3/8"	18		100	PU-1/2 + colour code	£141.91	
NYLON TUBE							
OD	ID	Break Pressure	Colour	Roll Length (Meters)	Part Number	List Price	
4	2.5	50	<b>Standard</b> Milk White (W)  <b>Black (B)</b> (Except NY0420)  <b>Option</b> Red (R) Yellow (Y) Transparent (T) Green (G)	200	NY-0425 + colour code	£85.39	
6	4	50		100	NY-0640 + colour code	£64.34	
8	6	50		100	NY-0860 + colour code	£89.90	
10	7.5	50		100	NY-1075 + colour code	£139.51	
12	9	50		100	NY-1290 + colour code	£203.56	
1/4"	3/16	45		100	NY-1/4 + colour code	£64.34	
3/8"	1/4	45		100	NY-3/8 + colour code	£139.51	
1/2"	3/8	50		100	NY-1/2 + colour code	£203.56	
OPTIONS							
Polyurethane tube standard colours Blue (BL) Black (B) or Orange (OR) - price as listed						Included +10% Included POA	
Polyurethane Tube colour Red (R), Yellow (Y), Transparent (T), Green (G) or White (W)							
Nylon tube standard colours Milk White (W), Black (B) except NY0420 milk white only - price as listed							
Nylon tube other colours							

Pressure  
Sensing  
Valves

1/4"  
1/2"  
Valves

2/2 & 3/2  
Coaxial  
Solenoid  
Valves

1/4"  
1/2"  
Valves

Electric  
Actuated  
Ball Valves

Air  
Solenoid  
Valves

Mechanical  
Air  
Valves

Accessories,  
Fittings,  
Tubing

FRL's, Filters  
Regulators  
Lubricators

Air  
Actuated  
Valves

Arrestors  
Vent Suction  
Check Valves

1/4"  
1/2"  
Valves

Pinch  
Proportional  
Sub Base

Timers,  
Coils &  
Connectors

Magnets  
& Y Filters

Media: air  
Inlet Pressure: 8 Bar max  
Operating Pressure range: 0.5 – 8 Bar  
Media temperature: -10°C to +60°C  
Ambient temperature: -10°C to +60°C  
Mounting: any  
Weight: 205g



Regulator

# Miniature Regulator

## 1/8 - 1/4

### Aluminium

### Relieving or Non Relieving

### 0 – 8 Bar

## TYPE R200 + NR200

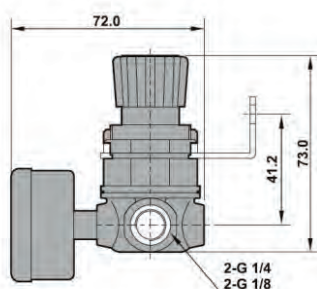
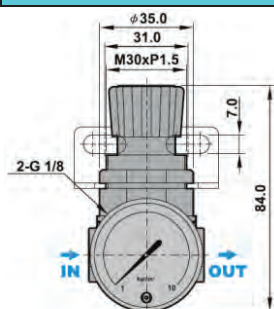


PRESSURE						
Ø Port BSP	Flow (ANR) L/Min	Regulator Type	Pressure (Bar) Air		Part Number	List Price
			Min	Max		
1/8	1500	Diaphragm	0.5	8	NR200-01	£14.73
	1500	Diaphragm	0	4	NR200L4-01	£14.73
	1500	Diaphragm	0	2	NR200L2-01	£14.73
1/4	1550	Piston	0.5	8	R200-02	£12.33
	1500	Diaphragm	0.5	8	NR200-01	£14.73
	1500	Diaphragm	0	4	NR200L4-01	£14.73
	1500	Diaphragm	0	2	NR200L2-01	£14.73

OPTIONS						
Panel mounting ring, Relieving as standard (option non relieving (V) available upon request), Blanking plug x1 Pressure gauge (G) Mounting bracket (B) NPT Thread						Included +£4.66 +£0.90 +5%

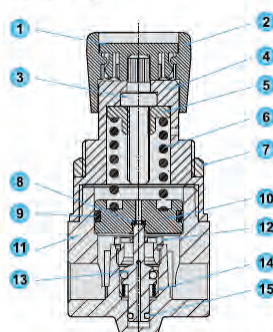
CONSTRUCTION						
Body Die Cast Aluminium Regulator : R200 Piston, NR200 Diaphragm R200 10 Bar NR200 12 Bar proof pressure teste						

## OVERALL DIMENSIONS



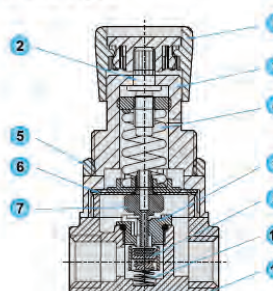
X Axis: Flow (L/min)
Y axis: Pressure (Bar / Kgcm²)
Blue line (PO) = Outlet pressure
Black line (P1) = Inlet pressure
P1 – P0 = pressure range

R200-01, 02

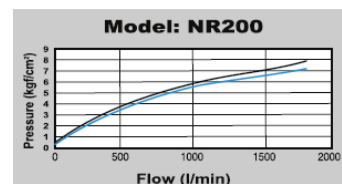
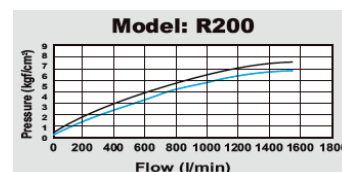


No	Description	Material
1	Regulator Dome	NY
2	Regulator Knob	NY
3	Pressure Regulating Screw	Fe+Ni
4	Regulator Base	NY+GF
5	Pressure Regulating Nut	Cu+Ni
6	Spring	Spring Steel
7	Lock Nut	NY+GF
8	O Ring	NBR
9	O Ring	NBR
10	Piston	AL
11	Body	ADC12
12	Positioning Nut	Cu
13	Regulating Needle	Cu
14	Spring	SUS
15	O Ring	NBR

NR200-01, 02



No	Description	Material
1	Regulator Knob	NY
2	Pressure Regulating screw	Fe-Ni
3	Regulator base	NY-GF
4	Spring	Spring steel
5	Lock Nut	NY-GF
6	Diaphragm	NBR70°
7	Regulating needle	AL
8	Positioning nut	POM
9	Plug	Cu
10	Spring	SUS
11	Body	ADC12



Media: air  
 Inlet Pressure: 8 Bar max  
 Pressure range: 0.05 – 8 Bar  
 Media temperature: -5°C to +60°C  
 Ambient temperature: -5°C to +60°C  
 Mounting: any  
 Weight: 345g



# Precision Mini Regulator

## 1/4

### Aluminium

### Relieving or Non Relieving

### 0.05 – 8, 4 or 2 Bar

## TYPE URP-02



### PRESSURE

Ø Port BSP	Accuracy (F.S.)	Colour	Pressure (Bar) Air		Part Number	List Price
			Min	Max		
1/4	Sensitivity +/- 0.2% Repeatability +/- 0.5%	Blue	0.1	8	URP-02	£101.49
		Orange	0.1	4	URPL4-02	
		Yellow	0.05	2	URPL2-02	

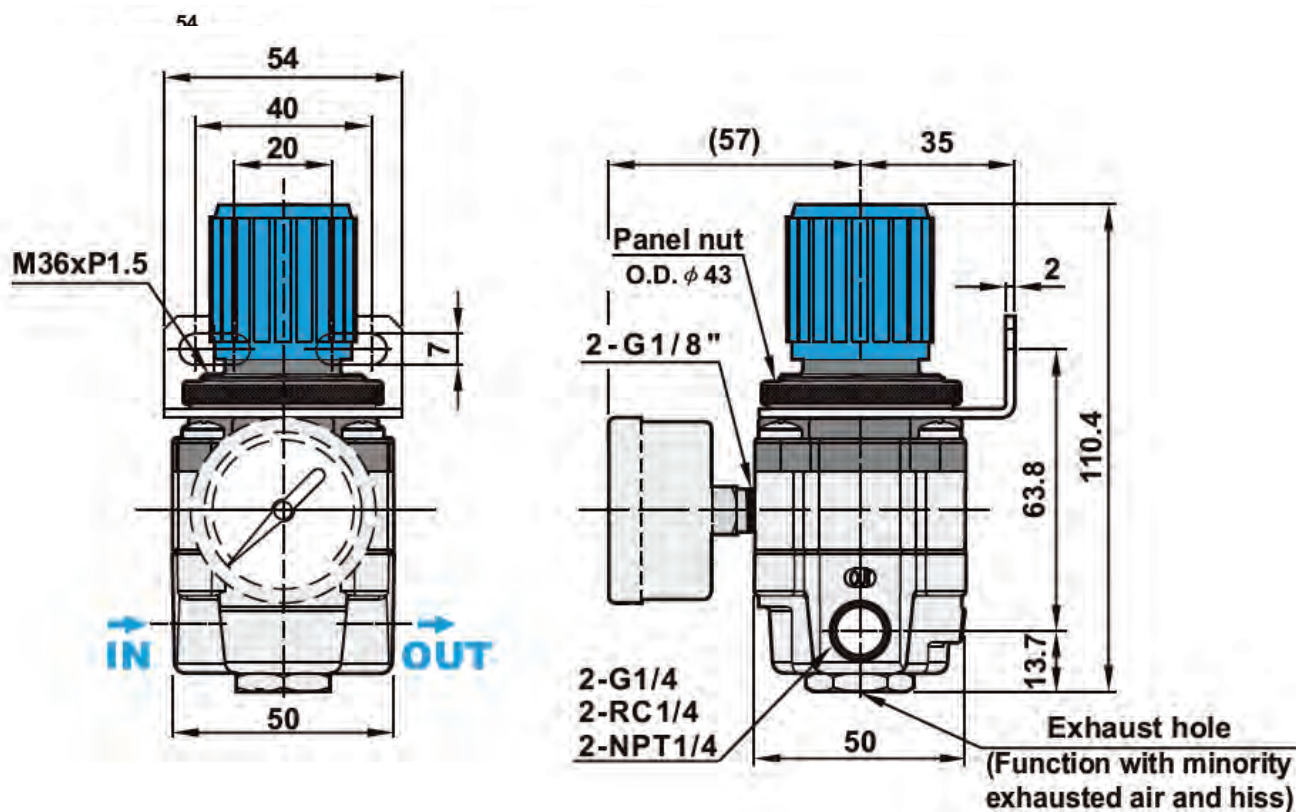
### OPTIONS

Panel mounting ring, Relieving as standard (option non relieving (V) available upon request), Blanking plug x1 Pressure gauge (G) Mounting bracket (B) NPT or Rc Thread	Included +£4.65 +0.90 +5%
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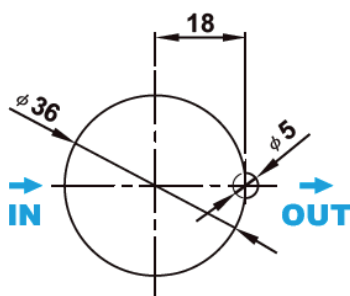
### CONSTRUCTION

Body Die Cast Aluminium  
 Regulator : Diaphragm  
 10 Bar proof pressure tested

### OVERALL DIMENSIONS



### Panel Size



Thickness: Max. 3.5

Brass  
2/2  
N/Closed  
0 Rated

Brass  
2/2  
N/Open  
0 Rated

Brass  
2/2  
N/Closed  
0 Rated

Brass  
Stainless  
3/2

Stainless  
2/2  
N/Closed  
0 Rated

Stainless  
2/2  
N/Closed  
Pilot

Stainless  
2/2  
N/Open

Steam

Plastic  
2/2  
N/Closed

Plastic  
3/2  
N/Closed

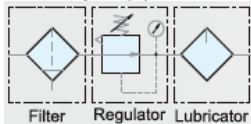
Plastic  
Acids/  
Alkali

2/2  
Latching  
Bi-Stable

EN161  
Gas  
Valves

Pressure  
Reducing  
Valves

Media: air  
Inlet Pressure: 10 Bar max  
Pressure range: 0.5 – 10 Bar  
Media temp: -10°C to +60°C  
Ambient temp: -10°C to +60°C  
Mounting: any position

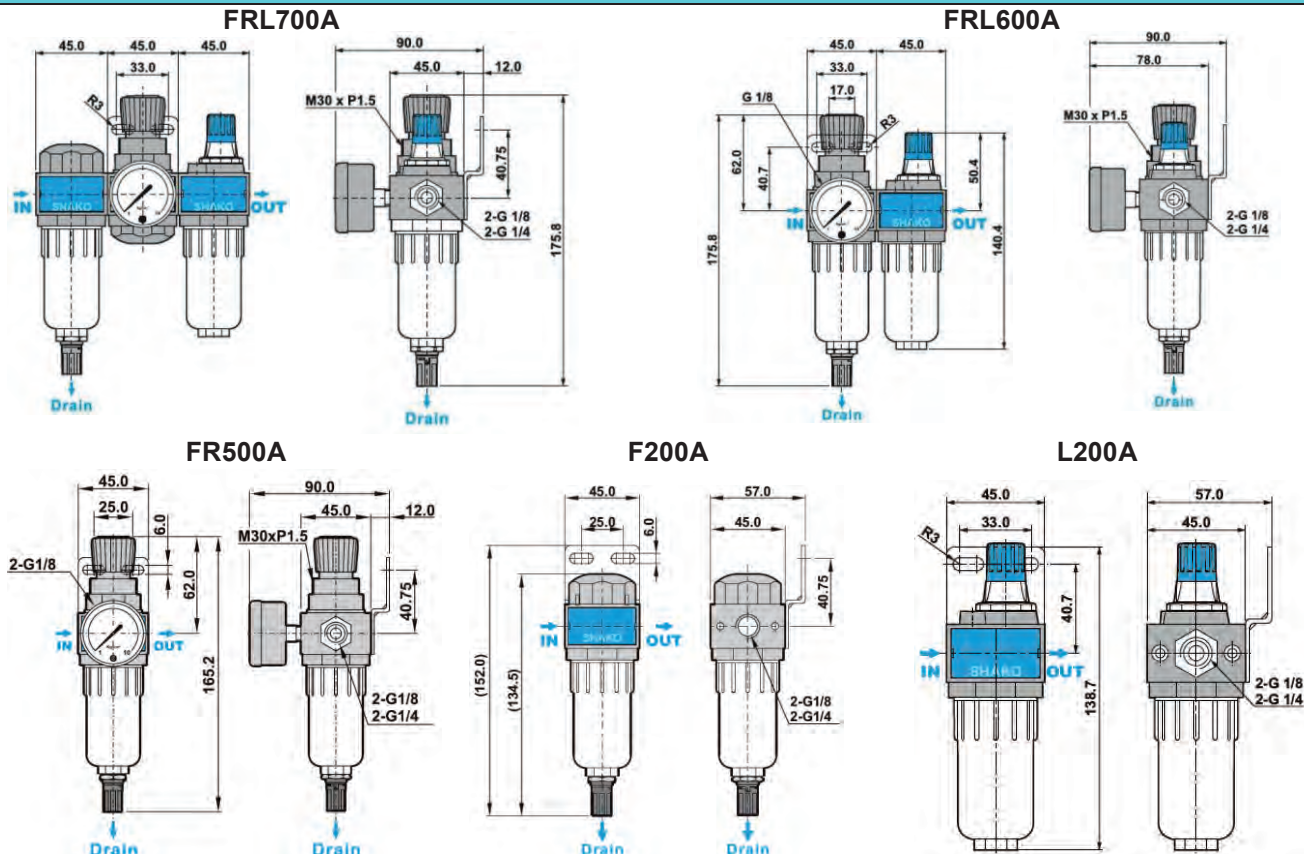


# Miniature FRL

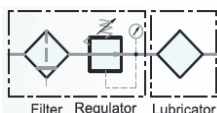
1/8 1/4  
Aluminium  
Manual, Semi & Auto Drain  
0.5 – 10 Bar  
TYPE FRL7,6,5 +200



PRESSURE							
Ø Port BSP	Max Flow Air (L/Min) @ 6Bar (ANR)	Kg	Pressure (Bar)		Combination	Part Number	List Price
			Min	Max			
1/8(01)	1850	0.81	0.5	10	F+R+L	FRL700A + port	£56.53
	1650,1850	0.56	0.5	10	FR+L	FRL600A + port	£44.50
	1840,1940	0.37	0.5	10	FR	FR500A	£29.77
1/4(02)	1900	0.245	0.5	10	Filter	F200A	£21.35
	2449	0.165	0.5	10	Lubricator	L200A	£18.34
OPTIONS							
5 µm PE Filter element , Semi-Automatic drain below 0.5 Bar, Pressure Gauge, Plug, Mounting Bracket & screws (FRL700,600,FR500) 40 µm PE Filter element (C) 5 µm (S) or 40 µm(T) Sintered Bronze element Manual drain (H) Full auto drain (D) Acid alkali resistant bowls (A) (FRL700/600 x2pcs, FR500A,F+L200A x1 pc) Bowl Guard (K) (FRL700+600 x2pcs, FR500,F200A, L200A x1pc) Mounting bracket (option for F200A & L200A) NPT Thread							Included +£0.61 +£3.00 +£5.50 +£12.63 +£9.32 +£2.20 +£1.20 +10%
CONSTRUCTION							
Diaphragm Regulator, Filter (35cc), Lubricator (50cc) Body & Bowls: Polycarbonate Recommended Oil ISO VG32							
FEATURES							
Ultra-compact high accuracy high flow diaphragm pressure regulation long life Lubricator oil refill under during full working pressure					12 Bar Proof Pressure Tested Secure Oil mist delivery and adjustment		
OVERALL DIMENSIONS							



Media: air  
Inlet Pressure: 10 Bar max  
Pressure range: 0.5 – 10 Bar  
Media temp: -10°C to +60°C  
Ambient temp: -10°C to +60°C  
Mounting: any position



# FRL

## 1/4 3/8 1/2

### Aluminium

#### Manual, Semi & Auto Drain

#### 0.5 – 10 Bar

## TYPE NUFRL



### PRESSURE

Ø Port BSP	Max Flow Air (L/Min) @ 6Bar (ANR)	Kg	Pressure (Bar)		Combination	Part Number	List Price
			Min	Max			
1/4(02)	2080,2100,2600	2.3	0.5	10	F+R+L	NUFRL + port	£97.71
	2080,2100,2600	1.68	0.5	10	FR+L	NUFR/L + port	£69.75
	2080,2100,2600	0.81	0.5	10	FR	NUFR + port	£42.39
3/8(03)	2440,2450,3030	0.48	0.5	10	Filter	NUF + port	£30.36
	2100,2130,2750	0.56	0.5	10	Regulator	NUR + port	£34.28
	2080,2100,2600	0.55	0.5	10	Lubricator	NUL + port	£25.86

### OPTIONS

5 µm PE Filter element , Semi-Automatic drain below 0.5 bar with Manual Drain, Pressure Gauge Integral (NUFRL, NUFR/L, NUFR, NUR)  
40 µm PE Filter element (C)  
5 µm (S) or 40 µm(T) Sintered Bronze element  
Fully Automatic Drain (D)  
Manual Drain (H)  
Aluminium Bowl (AL) (For NUFRL, NUFR/L 2pcs, NUFR, NUF, NUL 1pc)  
Acid / Alkali Resistant Bowl (A) (For NUFRL, NUFR/L 2pcs, NUFR, NUF, NUL 1pc)  
NPT Thread

Included  
+£0.78  
+£8.42  
+£12.63  
+£5.50  
+£17.59  
+£13.38  
+10%

### CONSTRUCTION

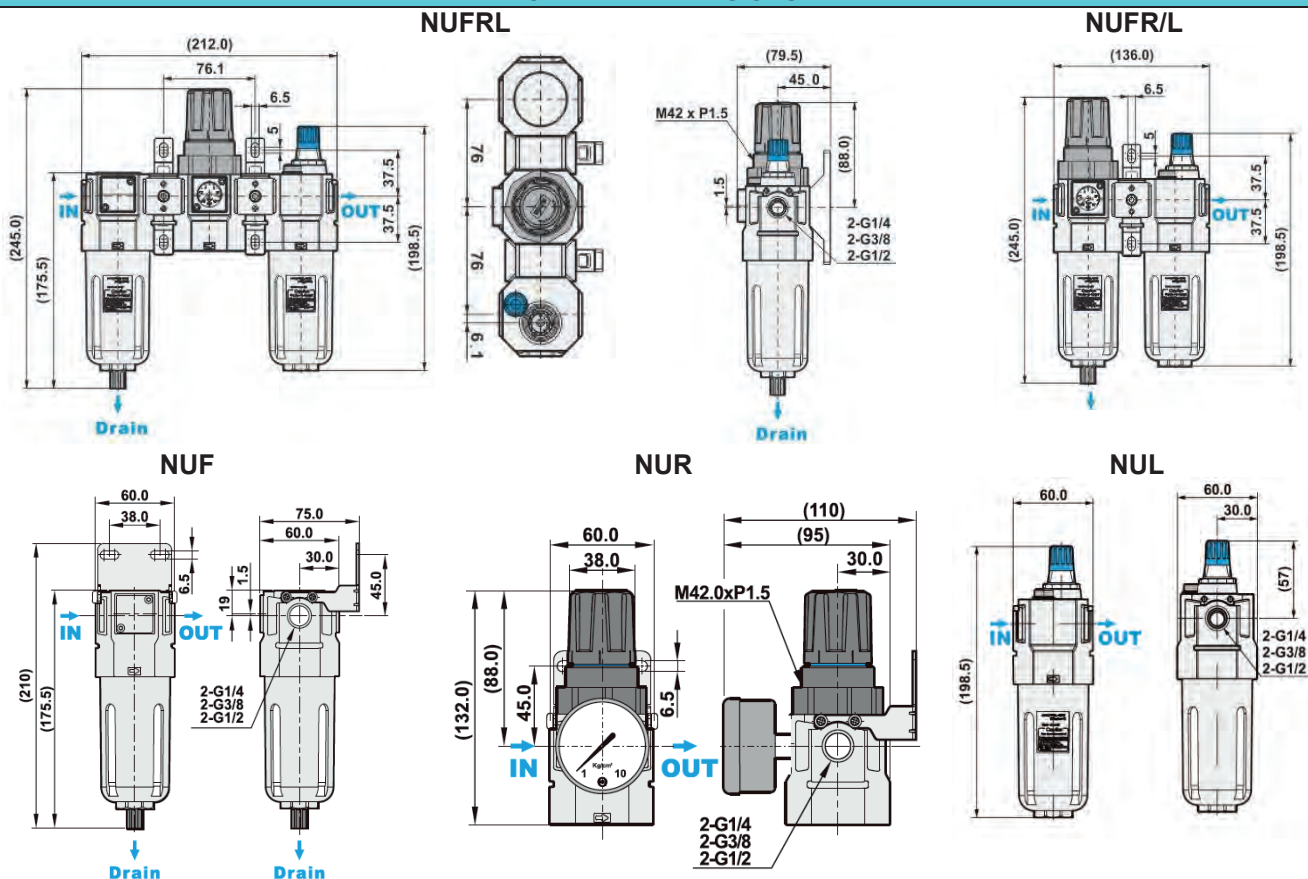
Piston Regulator, Filter (105cc), Lubricator (125cc): Die Cast Aluminium  
Bowls: Polycarbonate standard  
Recommended Oil ISO VG32

### FEATURES

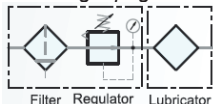
High Accuracy High Flow Pressure Regulating Long Life Piston  
Lubricator oil refill under during full working pressure

15 Bar Proof Pressure Tested  
Secure Oil mist delivery and adjustment

### OVERALL DIMENSIONS



Media: air  
Inlet Pressure: 10 Bar max  
Pressure range: 0.5 to 10 Bar  
Media temp: -10°C to +60°C  
Ambient temp: -10°C to +60°C  
Mounting: upright



# FRL

## 3/4 - 1

### Aluminium

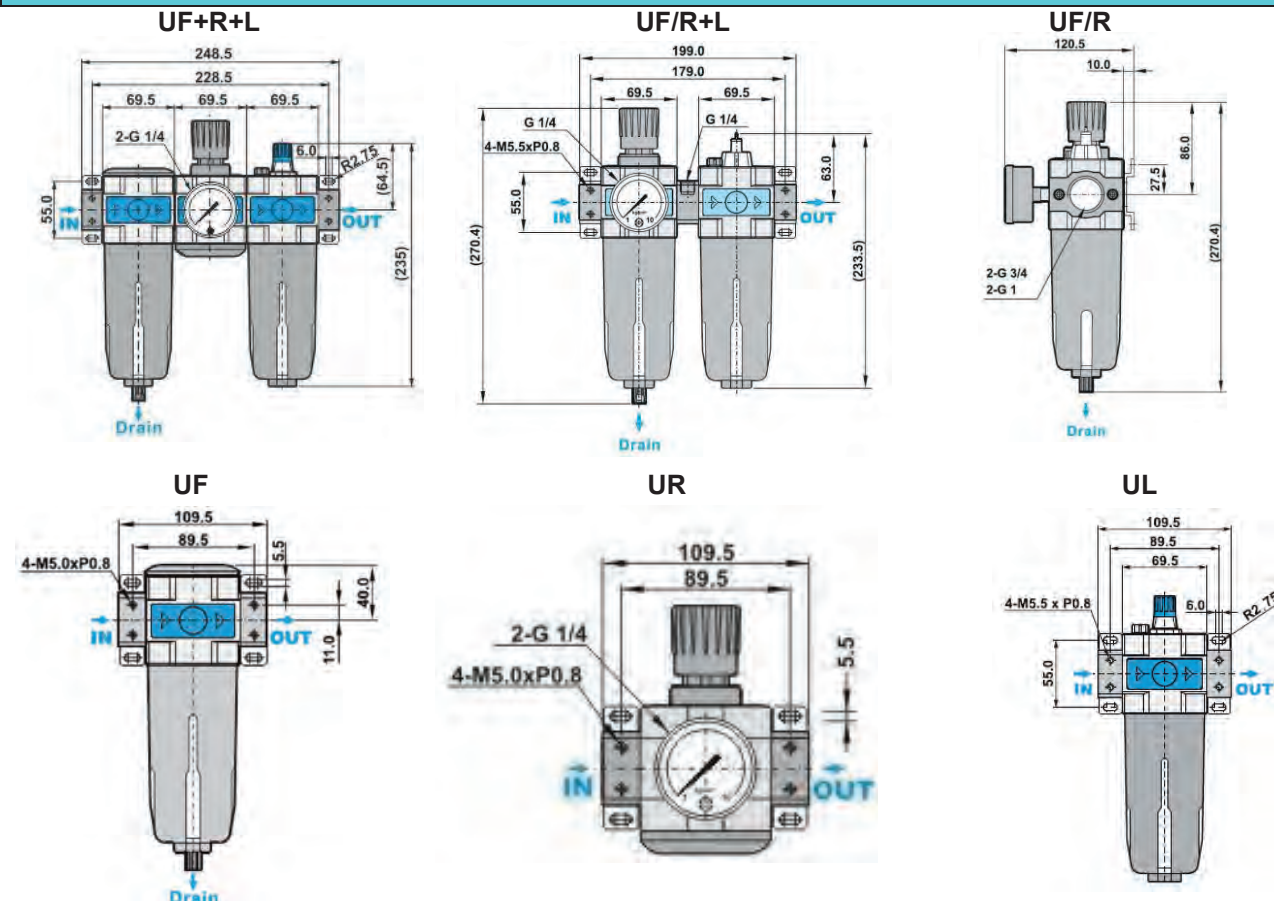
### Manual, Semi & Auto Drain

### 0.5 – 10 Bar

## TYPE UFRL



PRESSURE							
Ø Port BSP	Max Flow Air L/min @ 6Bar (ANR)	Kg	Pressure (Bar)		Combination	Part Number	List Price
			Min	Max			
3/4(06)  1(08)	7490,8200	2.65	0.5	10	F+R+L	UFRL + port	£177.40
	7490,8200	2.145	0.5	10	F/R+L	UF/RL + port	£135.30
	7940,8200	1.36	0.5	10	F/R	UF/R + port	£95.61
	8250,8860	1.25	0.5	10	Filter	UF + port	£66.14
	8000,8500	1.25	0.5	10	Regulator	UR + port	£81.18
	8400,9000	1.095	0.5	10	Lubricator	UL + port	£66.14
OPTIONS							
5 µm PE filter element, Semi-Automatic drain below 0.5 Bar with Manual Drain (UFRL, UF/RL, UF/R, UF06-08) Pressure Gauge, mounting bracket, plug, screws (UFRL, UF/RL, UF/R, UR06-08) 40 µm PE Filter element (C) (UFRL, UF/RL, UF/R, UF06-08) 5 µm (S) or 40 µm (T) sintered bronze filter element (UFRL, UF/RL, UF/R, UF06-08) Fully Automatic Drain (D) (UFRL, UF/RL, UF/R, UF06-08) Manual Drain (H) (UFRL, UF/RL, UF/R, UF06-08) Acid / Alkali Resistant Filter or lubricator Bowl (A) (UFRL, UF/RL require 2pcs,UF/R, UF, UL06-08 require 1pc) NPT Thread							Included Included +£2.76 +£10.53 +£12.63 +£5.50 £17.58 +10%
CONSTRUCTION							
Piston regulator, Filter (210cc), Lubricator 235cc: Die Cast Aluminium Recommended Oil ISO VG32 Test pressure: 15 Bar							
FEATURES							
High Accuracy High Flow Pressure Regulating Long Life Piston Lubricator oil refill under during full working pressure				15 Bar Proof Pressure Tested Secure Oil mist delivery and adjustment			
OVERALL DIMENSIONS							



Media: air  
 Inlet Pressure: 8 Bar max  
 Operating Pressure range: 0 – 8 Bar  
 Media temperature: -10°C to +60°C  
 Ambient temperature: -10° to +60°C  
 Mounting: any  
 Weight: 2200g/2800g



# **Pilot Regulator** 1 1/2 - 2 Aluminium Relieving or Non Relieving 0 – 8 Bar **TYPE UAR/UR14-20**



## **PRESSURE**

Ø Port BSP	Pressure (Bar) Air		Flow (L/Min)	Part Number	List Price
	Min	Max			
1 1/2	0	8	30000	UAR14	£371.33
2	0	8	30000	UAR20	
1 1/2	0	8	30000	UR14	£381.84
2	0	8	30000	UR20	

## **OPTIONS**

Pressure gauge and plug  
 Relieving as standard (option non relieving available upon request)  
 NPT Thread

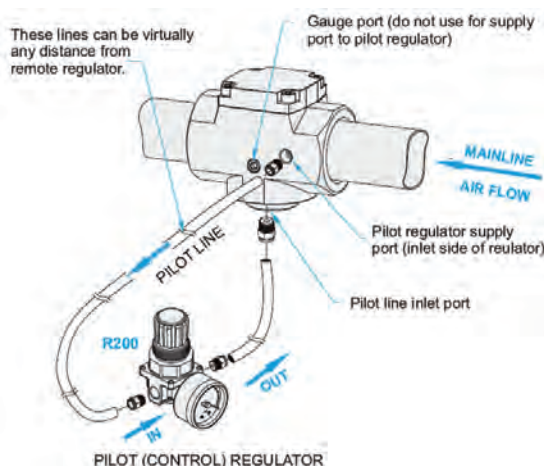
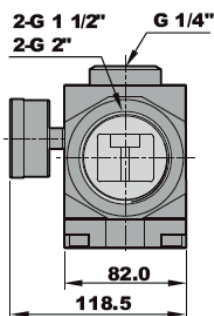
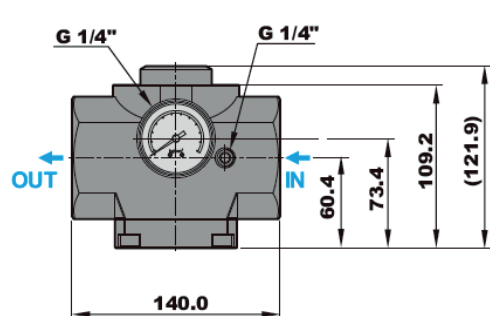
**Included**  
 +5%  
 +10%

## **CONSTRUCTION**

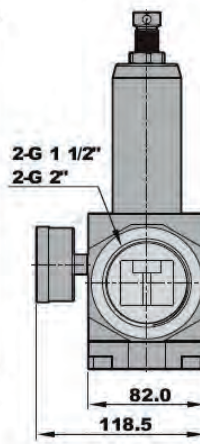
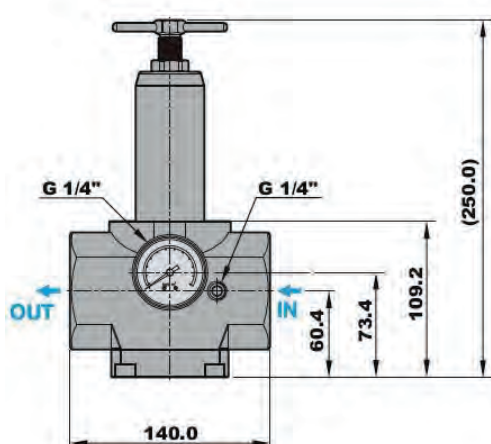
Body Aluminium alloy  
 Regulator Piston  
 10 Bar proof pressure tested

## **OVERALL DIMENSIONS**

### **UAR14-20 Remote Pilot Regulator (2.2Kg)**



### **UR14-20 Regulator (2.8Kg)**



Brass  
 2/2  
 N/Closed  
 0 Rated

Brass  
 2/2  
 N/Closed  
 Pilot

Brass  
 2/2  
 N/Open  
 0 Rated

Brass  
 2/2  
 N/Closed  
 Pilot

Stainless  
 3/2

Stainless  
 2/2  
 N/Closed  
 0 Rated

Stainless  
 2/2  
 N/Closed  
 Pilot

Stainless  
 2/2  
 N/Open

Steam

Plastic  
 2/2  
 N/Closed




Plastic  
 2/2  
 N/Open

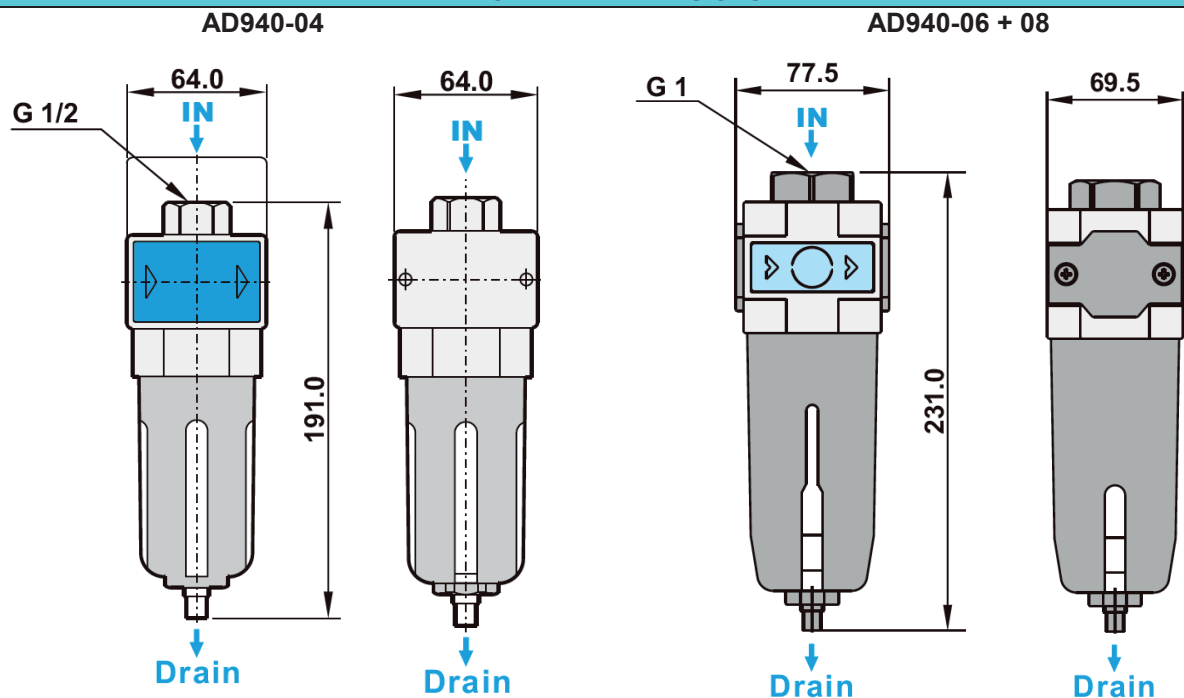
Plastic  
 Acids/  
 Alkali

2/2  
 Latching  
 Bi-Stable

EN161  
 Gas  
 Valves

Pressure  
 Reducing  
 Valves

<p>Media: air Inlet Pressure: 10 Bar max Pressure range: 0.5 to 10 Bar Media temp: -10°C to +60°C Ambient temp: -10°C to +60°C Mounting: upright</p> <div><p>Drain</p></div>		<h1>Drip Leg Drain</h1> <p>1/2 3/4 1 Aluminium Auto Drain 0.5 – 10 Bar TYPE AD940</p>		<div></div>		
PRESSURE						
Ø Port BSP	Kg	Pressure (Bar)		Bowl	Part Number	List Price
		Min	Max			
1/2	0.5	0.5	10	Polycarbonate	AD940-04	£39.69
3/4	0.4	0.5	10	Polycarbonate	AD940-06	£56.53
1	0.4	0.5	10	Polycarbonate	AD940-08	
1/2	0.5	0.5	10	Aluminium	AD940-04	£57.28
OPTIONS						
Fully automatic drain NPT Thread					Included +10%	
CONSTRUCTION						
Die cast Aluminium body Filter bowl polycarbonate, capacity 1/2 105cc, 3/4 + 1" 210cc optional aluminium bowl Test pressure: 12 Bar						
FEATURES						
Effective fast fully automatic water drain.			Special internal construction prevents vacuum in system.			
OVERALL DIMENSIONS						



Media: air  
Inlet Pressure: 10 Bar max  
Pressure range: 0.5 to 10 Bar  
Media temp: 0°C to +60°C  
Ambient temp: 0°C to +60°C  
Mounting: Upright +/- 5°



# UMF Air Filter

1/4 – 1

## Coalescing & Activated Charcoal

### Manual or Semi Auto Drain

#### 0.5 - 10 Bar

## TYPE UMF02-08



### PRESSURE

Ø Port BSP	Max Flow Air L/min @ 6 Bar (ANR)	Pressure (Bar)		Filter Element	Part Number	List Price
		Min	Max			
1/4	2050	0.5	10	Coalescing	UMF02	£94.41
				Activated Carbon	UMF02K	£99.81
3/8	2100	0.5	10	Coalescing	UMF03	£94.41
				Activated Carbon	UMF03K	£99.81
1/2	2150	0.5	10	Coalescing	UMF04	£94.41
				Activated Carbon	UMF04K	£99.81
3/4	3800	0.5	10	Coalescing	UMF06	£200.54
				Activated Carbon	UMF06K	£205.95
1	3850	0.5	10	Coalescing	UMF08	£200.54
				Activated Carbon	UMF08K	£205.95

### OPTIONS

0.01 Micron coalescing filter element or Activated charcoal element	Included
Manual drain (H)	+£5.50
Mounting bracket and screws (B)	+£1.10
Acid Alkali resistant bowl 1/4 3/8 or 1/2 (A)	+£7.22
Acid Alkali resistant bowl 3/4 or 1 (A)	+£19.55
Aluminium Bowl (AL) 1/4 3/8 or 1/2 Only	+£15.79

### CONSTRUCTION

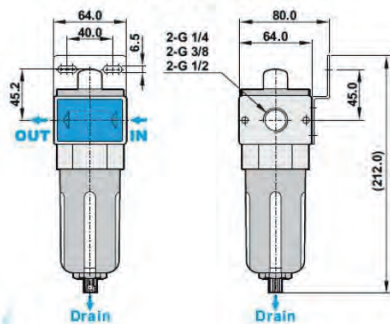
Filter bowl 02-03-04(65cc), 06-08 (115cc)  
Body die cast aluminium, Bowls Polycarbonate optional acid/alkali resistant or aluminium  
Test Pressure: 15 Bar

### Repair Kit

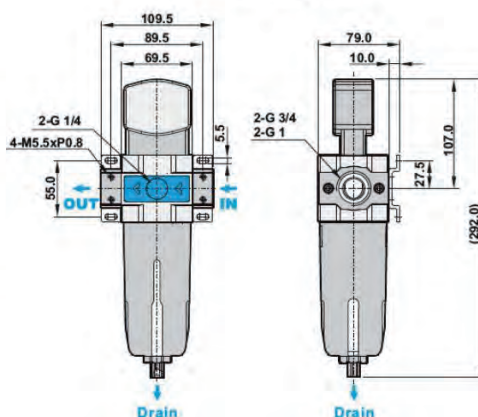
0.01 Micron Coalescing filter element 1/4 3/8 & 1/2 (ZH04H), 3/4 & 1" (ZH08H)  
Activated charcoal filter element 1/4 3/8 & 1/2 (ZH04CHA), 3/4 & 1" (ZH08CHA)

### OVERALL DIMENSIONS

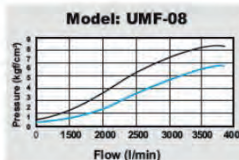
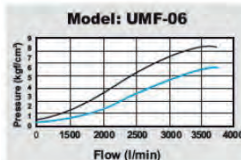
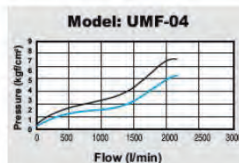
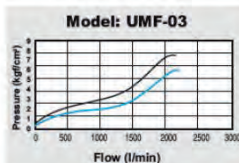
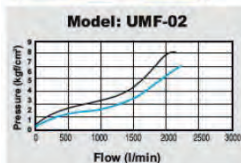
UMF-02, 03, 04



UMF-06, 08



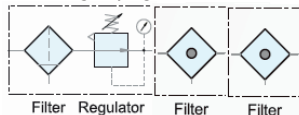
Flow chart



### Note:

X axis: Flow (l/min)  
Y axis: Pressure (kgf/cm²)  
Blue line (P0) = Outlet pressure  
Black line (P1) = Inlet pressure  
P1-P0=Pressure range

Media: air  
Inlet Pressure: 10 Bar max  
Pressure range: 0.5 to 10 Bar  
Media temp: 0°C to +60°C  
Ambient temp: 0°C to +60°C  
Mounting: Upright +/- 5°



# Breathing Air Filter Set

## 1/4, 3/8 & 1/2

### Coalescing & Charcoal Filtration

### Semi Auto or Manual Drain

### 0.5 - 10 Bar

## TYPE UFR+UMFK



### PRESSURE

Ø Port BSP	Max Flow Air L/min @ 6 Bar (ANR)	Pressure (Bar)		Combination	Part Number	List Price
		Min	Max			
1/4	2050	0.5	10	Filter Regulator + Coalescing Filter + Activated Charcoal Filter	UFR02-UMF02B-UMF02KB	£235.72
3/8	2100	0.5	10		UFR03-UMF03B-UMF03KB	
1/2	2150	0.5	10		UFR04-UMF04B-UMF04KB	

### OPTIONS

5µ pre-filter, 0.01µ coalescing filter, activated charcoal filter, semi-automatic drain, mounting brackets, pressure gauge	Included
40 µ pre-filter element (C)	+£0.78
5 µ (S) or 40 µ (T) sintered bronze pre-filter	+£8.42
0.1µ coalescing filter elements (L)	+£11.00
Manual drains (H)	+£16.50
Acid + Alkali resistant bowls (A)	+£42.37
Aluminium bowls (AL)	+£52.77
NPT or Rc thread	+10%

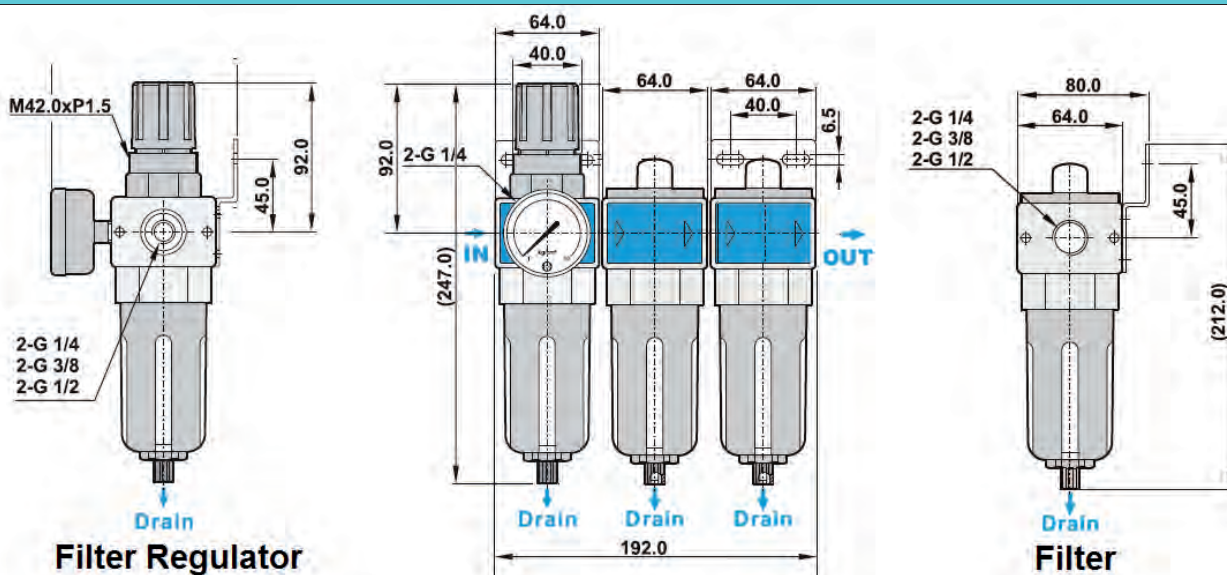
### CONSTRUCTION

Body die cast aluminium, Filter bowl Polycarbonate (65cc) optional acid/alkali resistant or aluminium  
Test Pressure: 15 Bar, Weight standard 2.13Kg, with aluminium bowls 3.03Kg

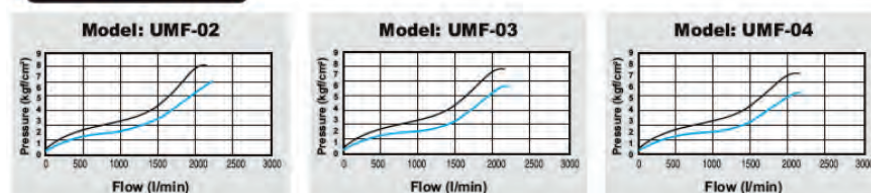
### Repair Kit

0.01 Micron Coalescing filter element (ZH04H)  
Activated charcoal filter element (ZH04CHA)

### OVERALL DIMENSIONS



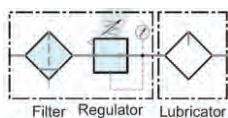
### Flow chart



### Note:

X axis: Flow (l/min)  
Y axis: Pressure (kgf/cm²)  
Blue line (P0) = Outlet pressure  
Black line (P1) = Inlet pressure  
P1-P0 = Pressure range

Media: air - Inert Gas  
Inlet Pressure: 20 Bar max  
Pressure range: 0.5 to 20 Bar  
Media temp: -10°C to +60° C  
Ambient temp: -10° to +60° C  
Mounting: any position



# Stainless F R L

## 1/4 Miniature Series

### 316 Stainless Steel

#### Manual – Semi Auto Drain

#### 0.5 – 20 Bar

## TYPE SSFRL02



### PRESSURE

Ø Port BSP	Max Flow Air L/min @ 6Bar (ANR)	Pressure (Bar)		Combination	Part Number	List Price
		Min	Max			
1/4	1850	0.5	20	Filter/Regulator + Lubricator	SSFRL600-02	£601.34
	1850	0.5	20	Filter / Regulator	SSFR500-02	£375.84
	1900	0.5	20	Filter	SSF200-02	£225.50
	1850	0.5	20	Regulator	SSR200-02	£294.66
	2500	0.5	20	Lubricator	SSL200-02	£276.62

### OPTIONS

5 Micron SUS316 Filter Element, Semi-Automatic drain, Pressure Gauge, Plug, Mounting Bracket, Screws  
Manual Drain (H)  
40 Micron SUS316 Filter Element  
NPT or Rc Thread  
Non relieving (Relieving is standard)

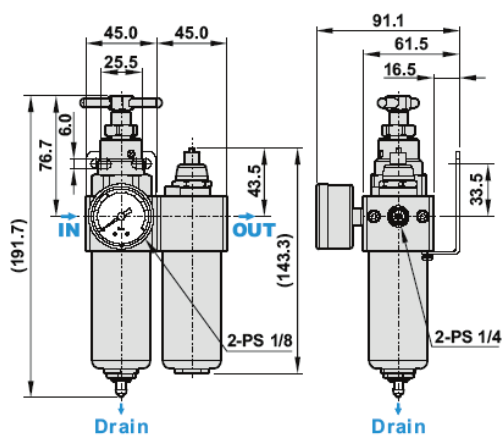
**Included**  
+£5.50  
+£5.50  
+5%  
+£5.50

### CONSTRUCTION

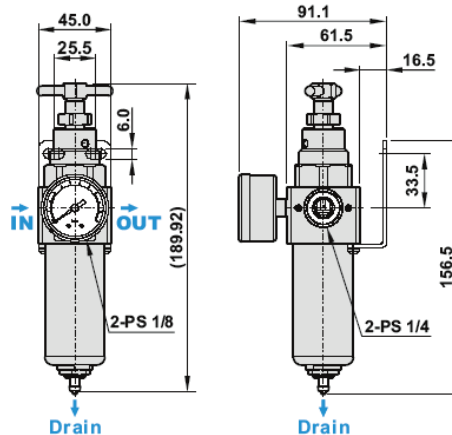
Body, Regulator, Filter (105cc) Lubricator (125cc), Filter Elements, Mounting Bracket, Blanking Plug: 316 Stainless Steel  
Pressure gauge: Case 304 Stainless Steel /Thread 316 Stainless Steel  
Test pressure: 30 Bar

### OVERALL DIMENSIONS

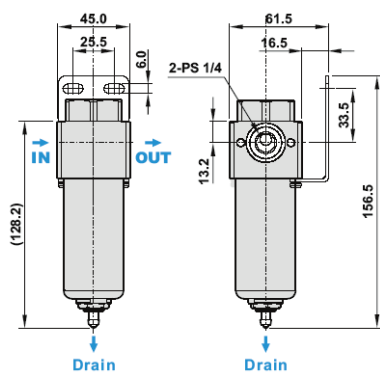
**SSFRL600 (2.66Kg)**



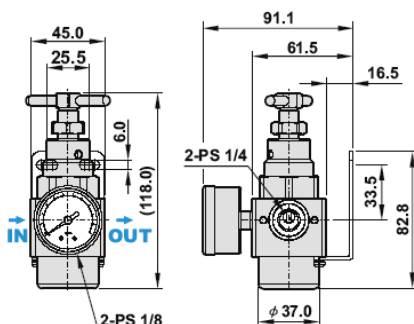
**SSFR500 (1.38Kg)**



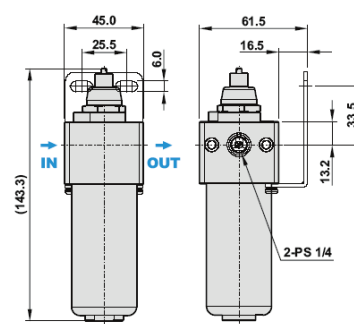
**SSF200 (1.2Kg)**



**SSR200 (1.2Kg)**



**SSL200 (1.2Kg)**



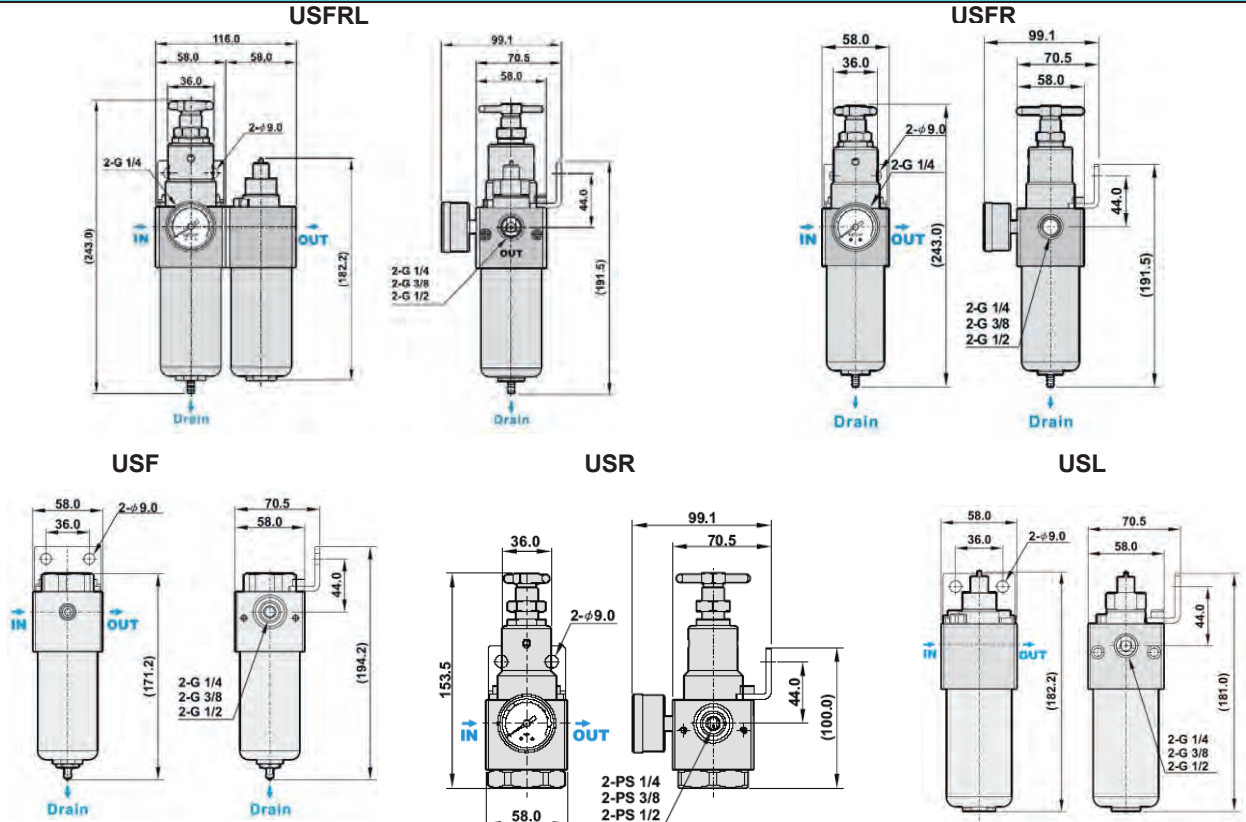
The diagram shows a hydraulic circuit with a pump (represented by a circle with a diagonal line) connected in series to a filter (diamond shape), a regulator (square shape), and a lubricator (diamond shape). The components are labeled below the diagram: Filter, Regulator, and Lubricator.

The image displays three distinct pressure gauge models. On the left is a compact, square-bodied gauge with a single dial and a horizontal adjustment screw. In the center is a vertical, cylindrical gauge with a single dial and a top-mounted adjustment screw. On the right is a dual-chamber gauge, consisting of two vertical cylinders sharing a common base, each with its own dial and adjustment screw. The rightmost gauge features a blue label with the text 'P-1000' and '1000 PSI'.

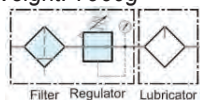
Ø Port BSP	Max Flow Air L/min @ 6Bar (ANR)	Kg	Pressure (Bar) ΔP		Combination	Part Number	List Price
			Min	Max			
1/4(02)	2080,2200,2500	3.8	0.5	12	F/R+L	USFR/LB + port	£637.42
			12	30		USFR/L + port	
3/8(03)	2200,2500,3800	2	0.5	12	Filter/Regulator	USFRB + port	£408.90
			12	30		USFR + port	
1/2(04)	2440,2450,3030	1.65	0.5	30	Filter	USF + port	£276.61
	1950,2250,2520		0.5	12	Regulator	USRB + port	£336.74
		1.4	12	30		USR + port	
		2500,2525,4100	1.75	0.5	30	Lubricator	USL + port

5 Micron SUS316 Filter Element (USFRL, USFR + USF)  
 40 Micron SUS316 Filter Element (USFRL, USFR, USF)  
 Semi-Automatic drain (S) below 0.5 bar (USFRL, USFR, USF)  
 Fully Automatic Drain (D) (USFRL, USFR, USF)  
 Pressure Gauge, Blanking Plug, Mounting Bracket and Screws (USFRL, USFR, USR)  
 NPT Thread

Body, Regulator, Filter (110cc) Lubricator (130cc) Bowl, Filter Elements, Mounting Bracket, Blanking Plug: 316 Stainless Steel  
Pressure gauge: cover 304 Stainless Steel / Thread 316 Stainless Steel  
O rings: Viton  
Test Pressure: 60 Bar



Media: air - gas  
Inlet Pressure: 28 Bar max  
Pressure range: 0.5 – 28 Bar  
Media temp: -10°C to +70°C  
Ambient temp: -10° to +70°C  
Mounting: any position  
Weight: 7960g



# Stainless F R L

## 3/4 – 1

### 316 Stainless Steel

#### Manual, Semi or Auto Drain

#### 0.5 - 28 Bar

## TYPE USFR/L06-08



### PRESSURE

Ø Port BSP	Max Flow Air L/min @ 6Bar (ANR)	Kg	Pressure (Bar) ΔP		Combination	Part Number	List Price
			Min	Max			
3/4(06) 1(08)	7600,8000	10.34	0.5	12	F+R+L	USF+R+LB + port	£2126.53
	15200		12	28		USF+R+L + port	
	7600,8000	7.96	0.5	12	F/R + L	USF/R+LB + port	£1705.60
	15200		12	28		USF/R+L + port	
	8700	4.58	0.5	12	F/R	USF/RB + port	£962.13
	9100		12	28		USF/R + port	
	9600	3.95	0.5	12	Filter	USFB + port	£721.60
	19200		0.5	28		USF + port	
	9000,9400	3.4	0.5	12	Regulator	USRB + port	£809.07
	18000,22000		12	28		USR + port	
	13200	3.36	0.5	12	Lubricator	USLB + port	£721.60
	26400		5	30		USL + port	

### OPTIONS

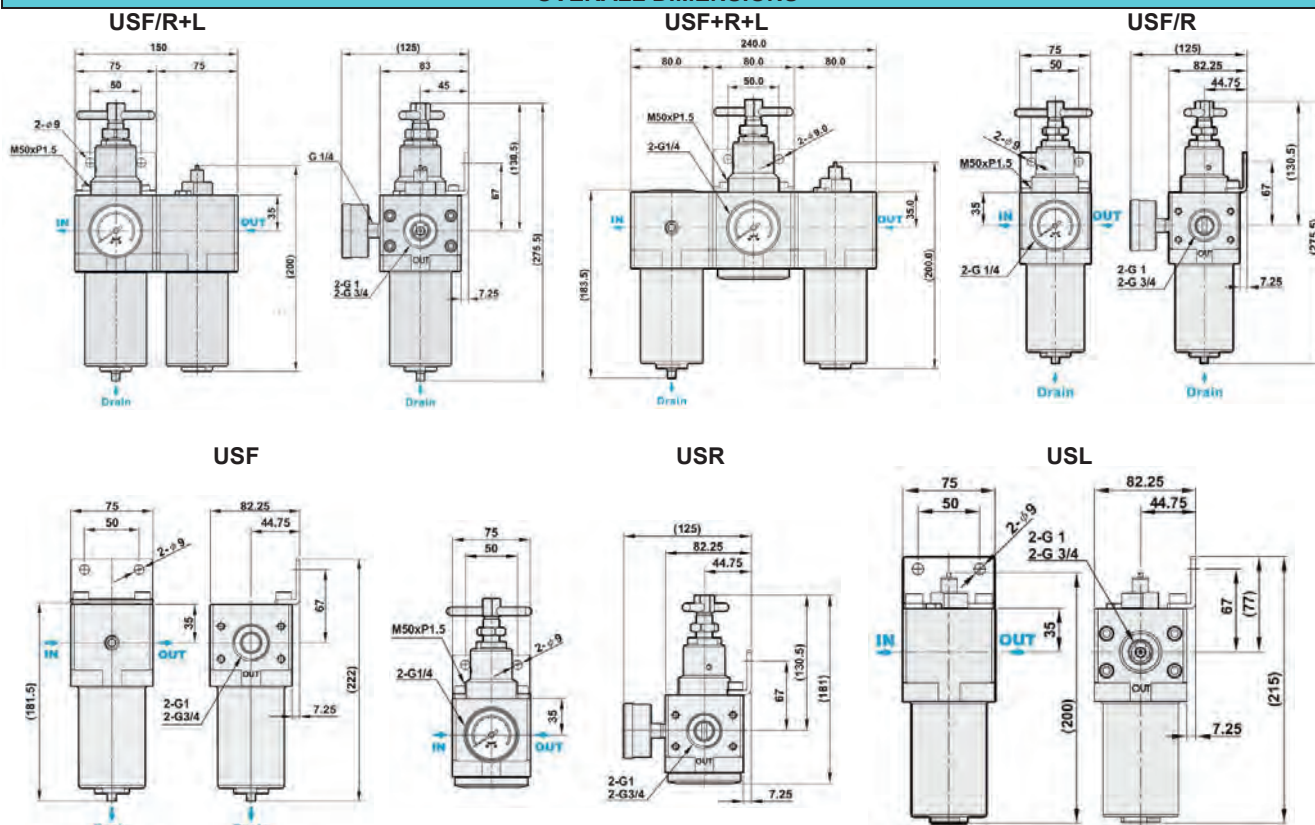
5 Micron Filter Element, Semi auto Drain, Pressure Gauge, Mounting Brackets + screws (USFRL, USF/R, USF)  
40 Micron Filter Element (USFRLB, USF/R+LB, USFRB, USFB)  
Manual drain (H) (USFRLB, USF/R+LB, USFRB, USFB)  
Fully automatic drain (D) (USFRLB, USF/R+LB, USFRB, USFB)  
Bowl Viewer (W) (USFRLB, USF/R+LB, USFRB, USFB, USLB 0.5 to 12 Bar Only)  
NPT Thread

Included  
+£5.00  
+£5.00  
+£19.13  
+£0.00  
+5%

### CONSTRUCTION

Body, Regulator, Filter (200cc), Lubricator Bowl (220cc), Mounting Bracket, Blanking Plug, Filter Element: 316 Stainless Steel  
Pressure gauge: Case 304 Stainless Steel / Thread 316 Stainless Steel  
O rings: Viton  
Test Pressure : USFRL 60 Bar USFRLB 15 Bar

### OVERALL DIMENSIONS



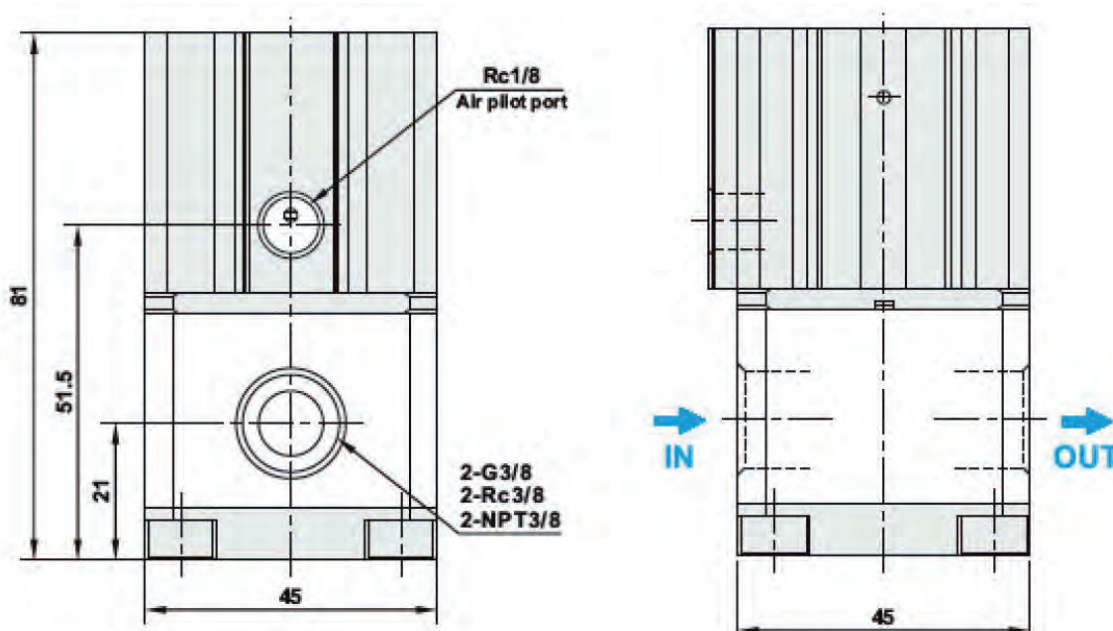
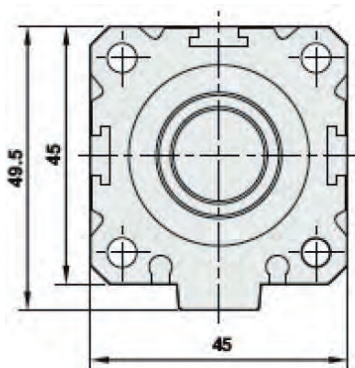


Ø Port	Ø Orifice (mm)	Pressure Rating (Bar)		Seals	Part Number	List Price
		Min	Max			
3/8	8.0	0	5	PTFE	PEC22-03C	£169.27
1/2	8.0	0	5	PTFE	PEC22-04C	

NPT Thread	+ 10% POA
Normally open function (PEC22-XXN)	

Body : PTFE
Pneumatic cylinder: Aluminium alloy air port 1/8"
Diaphragm: NBR with PTFE base coating

Diaphragm Seal	PEC22-PTFE
Cylinder	PEC22-cylinder



Media: air – water – oil – steam  
 Pressure range : 0 to 16 Bar Max  
 Media temperature : +180°C max  
 Ambient temperature: +5°C to +80°C  
 Media viscosity : 600 centistokes max  
 Mounting : any position  
 Pilot Media : air or neutral gas  
 Pilot Pressure : 0.3 to 10 Bar  
 Pilot mounting : Namur  
 Frequency: 3 cycles a sec Max

# **Pneumatic Shuttle**

## **3/8 - 2**

### **AIR SHUTTLE VALVE**

### **2 WAY AIR DIRECT ACTING**

### **0 – 16 Bar**

## **Type SVF**



#### **PRESSURE**

Ø Port BSP	Function	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure (Bar) ΔP		Seal	Part Number	List Price
				Min	Max			
3/8	(0) Normally Open	10	75	0	16	FKM	SVF20 + function + 10G	£146.58
1/2	(1) Normally Closed Single Acting	15	90	0	16		SVF20 + function + 15G	£164.16
3/4		20	167	0	16		SVF20 + function + 20G	£197.54
1		25	253	0	16		SVF20 + function + 25G	£226.85
1 1/4	(2) Normally Closed double acting	32	383	0	16		SVF20 + function + 32G	£368.47
1 1/2		40	683	0	16		SVF20 + function + 40G	£429.35
2	(3) double acting	50	1183	0	16		SVF20 + function + 50G	£542.10

#### **OPTIONS**

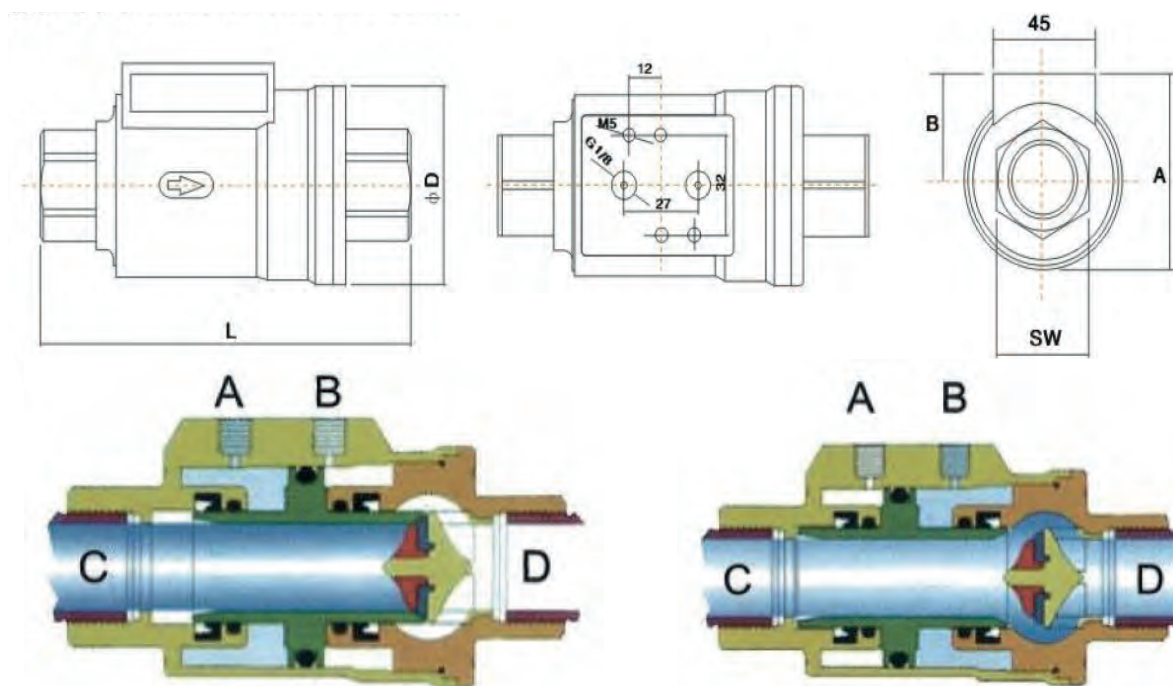
(0) Normally Open, (1) Normally Closed Single Acting, (2) Normally Closed double acting, (3) Double acting Open Position Proximity Switch	+10% +£85.69
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#### **CONSTRUCTION**

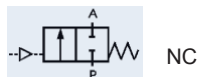
Body, Piston and internal parts : AISI316 (CF8M) stainless steel  
 Seals and gaskets : FKM SVF (optional EPDM SVE)

#### **OVERALL DIMENSIONS**

(mm)	10	15	20	25	32	40	50
Port	3/8	1/2	3/4	1	1 1/4	1 1/2	2
A	56	61	72	78	94	104	116
D	46	52	64	69	86	96	108
SW	22	26.5	32	41	50	56	70
B	33	35	40	43	51	56	62
L	98	112	135	143	165	180	207
Kg	0.8	1	1.5	1.92	3.06	3.76	5.71



Media: water – gas – fluid – steam- vacuum  
 Pressure range : 0 to 16 bar Max  
 Media temperature : -10°C to +200°C max  
 Ambient temperature: +5°C to +60°C  
 Media viscosity : 600 centistokes max  
 Mounting : any position  
 Pilot Media : air – water – gas  
 Pilot Pressure : 5 to 8 Bar



# Piston Stainless

## 3/8 - 3

### ANGLE SEAT PISTON VALVE

### 2 WAY AIR DIRECT ACTING

### 0 – 16 Bar

## Type ASPVSS-316



#### PRESSURE

Ø Port BSP	Function	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure (Bar)			Actuator (mm)	Part Number	List Price
				Min	1↔2 Over Seat	1⇒2 Under seat			
3/8	N/Closed	10	75	0	16	8	40	ASPV10SS-316	£113.83
1/2	N/Closed	15	90	0	16	8	40	ASPV15SS-316	
3/4	N/Closed	20	167	0	16	8	50	ASPV20SS-316	£128.69
1	N/Closed	25	253	0	16	8	50	ASPV25SS-316	£143.56
1 1/4	N/Closed	32	383	0	16	8	63	ASPV32SS-316	£217.78
1 1/2	N/Closed	40	683	0	16	8	80	ASPV40SS-316	£252.56
2	N/Closed	50	1183	0	16	8	80	ASPV50SS-316	£277.19
2 1/2	N/Closed	65	1800	0	16	16	100	ASPV65SS-316	£593.98
3	Double Acting	80	2667	0	16	16	125	ASPV80SS-316	£985.06

#### OPTIONS

Visual Position Indicator (Except 3 (Double acting) and Anti water Hammer flow 1 ⇒ 2 (Flow under seat))  
 Normally Open Version (Except ASPV80SS double acting)  
 Open Position Proximity Switch (normally closed actuator only)  
 Modulating, Normally Open, Double Acting, 3 Way, Flanged, 90 degree, manifold, high pressure and other custom made options.

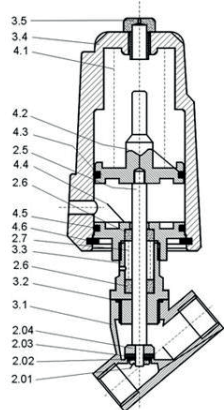
Included  
 +10%  
 +£56.66  
 TBA

#### CONSTRUCTION

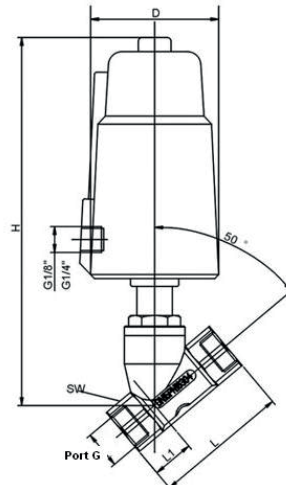
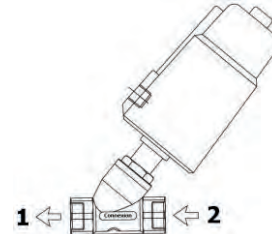
Body, Tube, Piston and internal parts : AISI316 (CF8M) stainless steel  
 Actuator head : AISI304 stainless steel (Rotation 360°)  
 Seals and gaskets : Valve – PTFE, Actuator - FKM

#### OVERALL DIMENSIONS

Parts List	
2.01 Bolt	
2.02 Orifice Plate Seal	
2.03 Disc Seal	
2.04 Disc	
2.5 Steam	
2.6 V Seal	
2.7 Spring	
3.1 Body	
3.2 Seal Ring	
3.3 Screw connector	
3.4 Cylinder	
3.5 Cover	
4.1 Spring	
4.2 Piston	
4.3 O ring	
4.4 Bonnet	
4.5 O Ring	
4.6 Bearing Ring	



DN	Port	L	L1	SW	H	D	Act	Pilot	Kg
10	3/8	55	17	21	120	51	40	1/8	1.1
15	1/2	70	21	26.5	138	51	40	1/8	1.1
20	3/4	76	23	32	154	62	50	1/8	1.3
25	1	90	25	40	168	62	50	1/8	1.7
32	1 1/4	116	32	50	200	76	63	1/8	3.1
40	1 1/2	116	32	55.5	215	92	80	1/8	3.9
50	2	138	40	68.5	230	92	80	1/8	4.8
65	2 1/2	168	51	85	268	117	100	1/4	9.3
80	3	192	54	100	325	140	125	1/4	14.0



Media: gas – water – fluid – steam- vacuum  
 Pressure range : 0 to 16 Bar Max  
 Media temperature : -10°C to +200°C max  
 Ambient temperature: +5°C to +60°C  
 Media viscosity : 600 centistokes max  
 Mounting : any position  
 Pilot Media : air – water – gas  
 Pilot Pressure : 5 to 8 Bar

# Piston Stainless

## DN15 – DN80

### ANGLE PISTON VALVE

### 2 WAY DIRECT ACTING

### 0 – 16 Bar

### Type ASPVSS-F



#### PRESSURE

Ø Port PN16	Function	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure (Bar) ΔP			Actuator (mm)	Part Number	List Price
				Min	1↔2 Over Seat	1⇒2 Under seat			
DN15	N/Closed	15	90	0	16	8	40	ASPV15SS-F	£177.44
DN20	N/Closed	20	167	0	16	8	50	ASPV20SS-F	£198.03
DN25	N/Closed	25	253	0	16	8	50	ASPV25SS-F	£216.49
DN32	N/Closed	32	383	0	16	8	63	ASPV32SS-F	£313.71
DN40	N/Closed	40	683	0	16	8	80	ASPV40SS-F	£370.37
DN50	N/Closed	50	1183	0	16	8	80	ASPV50SS-F	£417.44
DN65	N/Closed	65	1800	0	16	16	100	ASPV65SS-F	£795.95
DN80	Double Acting	80	2667	0	16	16	125	ASPV80SS-F	£1121.04

#### OPTIONS

Visual Position Indicator (Except DN80 is Double acting)  
 Anti water hammer flow 1 ⇒ 2 (Flow under seat)  
 Normally Open Version (Except ASPV80SS double acting)  
 Open Position Proximity Switch (Black Synthetic Actuator only)  
 Flanged ANSI150Lb, JIS10K  
 Normally Open, Double Acting, 3 Way and other custom made Flange options available upon request

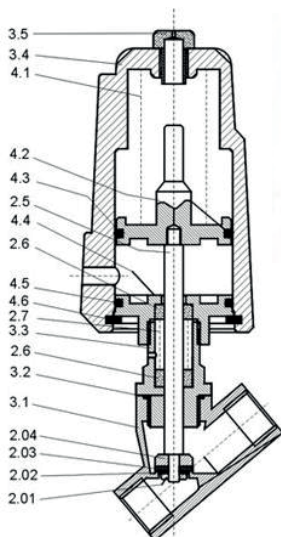
Included  
 Included  
 +10%  
 +£56.66  
 +10%

#### CONSTRUCTION

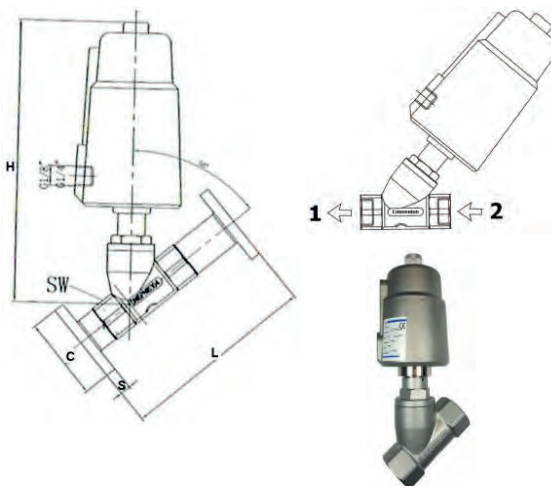
Body, Tube, Piston, Flange and internal parts : AISI316 (CF8M) stainless steel  
 Actuator : AISI304 stainless steel (Rotation 360°)  
 Seals and gaskets : Valve - PTFE Actuator - FKM  
 Moulded coil : Resin

#### OVERALL DIMENSIONS

Parts List	
2.01 Bolt	
2.02 Orifice Plate Seal	
2.03 Disc Seal	
2.04 Disc	
2.5 Steam	
2.6 V Seal	
2.7 Spring	
3.1 Body	
3.2 Seal Ring	
3.3 Screw connector	
3.4 Cylinder	
3.5 Cover	
4.1 Spring	
4.2 Piston	
4.3 O ring	
4.4 Bonnet	
4.5 O Ring	
4.6 Bearing Ring	



DN	Port	L	H	C	Bolt	Act	Pilot
15	1/2	172	138	16	14x4	40	1/8
20	3/4	182	154	16	14x4	50	1/8
25	1	196	168	18	14x4	50	1/8
32	1 1/4	228	200	18	16x4	63	1/8
40	1 1/2	228	215	22	18x4	80	1/8
50	2	250	230	22	18x4	80	1/8
65	2 1/2	295	268	24	20x4	100	1/4
80	3	320	325	24	20x8	125	1/4



Brass  
 2/2  
 N/Closed  
 0 Rated  
 Brass  
 2/2  
 N/Closed  
 Pilot  
 Brass  
 2/2  
 N/Open  
 0 Rated  
 Stainless  
 2/2  
 N/Closed  
 0 Rated  
 Stainless  
 2/2  
 N/Closed  
 Pilot  
 Stainless  
 2/2  
 N/Open  
 Steam  
 Plastic  
 2/2  
 N/Closed  
 Plastic  
 2/2  
 N/Closed  
 Plastic  
 2/2  
 N/Closed  
 Plastic  
 Acids/  
 Alkali  
 2/2  
 Latching  
 Bi-Stable  
 EN161  
 Gas  
 Valves  
 Pressure  
 Reducing  
 Valves

Media: air – water – oil – steam- vacuum  
 Pressure range : 0 to 16 Bar Max  
 Media temperature : -10°C to +200°C max  
 Ambient temperature: +5°C to +60°C  
 Media viscosity : 600 centistokes max  
 Mounting : any position  
 Pilot Media : air – water – gas  
 Pilot Pressure : 4 to 6 Bar  
 Pilot Inlet : 1/8 BSP

# Piston Stainless

1/2 to 1 BSP

## ANGLE SEAT PISTON VALVE

### 3 WAY AIR DIRECT ACTING

0 – 16 Bar

## Type ASPV3SS

PRESSURE								
Ø Port BSP	Function	Ø Orifice (mm)	Flow Kv Ltr/Min	Pressure (Bar)		Actuator (mm)	Part Number	List Price
				Min	Max			
1/2	Double Acting	20	167	0	16	50	ASPV315SS + option	£258.06
3/4	Double Acting	20	167	0	16	50	ASPV320SS + option	
1	Double Acting	25	253	0	16	50	ASPV325SS + option	

OPTIONS

Visual Position Indicator  
 NPT Thread  
 Aluminium Alloy Actuator  
 Open Position Proximity Switch (Black synthetic actuator head)  
 Modulating, Flanged, Manifold mount and other custom made options available upon request

Included  
 +10%  
 +10%  
 +£56.66

CONSTRUCTION

Body : AISI304. Tube, Piston and Internal Parts : AISI316 stainless steel (CF8M)  
 Actuator : AISI304 stainless steel (Rotation 360°)  
 Seals and gaskets : Valve - PTFE Actuator - FKM

3.1 Stem	4.1 Valve Body	5. Back up ring
3.2 Gasket	4.2 Screw connector	5.2 Cylinder head
3.3 PTFE Seal	4.3 Seal ring	5.3 O Ring
3.4 Disc	4.4 Screw connector	5.4 Piston
3.5 Lock Nut	4.5 seal ring	5.5 Spring
3.6 Spindle Seal	4.6 Cylinder	
3.7 Spring	4.7 Position Window	

Port BSP	L	H	D	DN
1/2	74	230	60	1/2
3/4	74	230	60	3/4
1	94	250	60	1

Media: air – water – oil – aggressive  
 Pressure range: 0 to 68 Bar max  
 Media temperature: -10°C +120°C max  
 Ambient temperature: -10°C to +50°C  
 Media viscosity: 500 centistokes max  
 Mounting: any position  
 Compressed air supply: 4 - 6 bar

# 2/2 Stainless

## 1/4 - 3"

### NORMALLY CLOSED

### Pneumatic Actuated Ball Valve

### 0 – 68 Bar

## TYPE SCY2223



#### PRESSURE

Ø Port BSP	Orifice (mm)	Pressure (Bar)		Part Number	List Price
		Min	Max		
1/4	11.6	0	68	SCY2223CA-02	£228.50
3/8	12.7	0	68	SCY2223CA-03	£228.50
1/2	15	0	68	SCY2223CA-04	£220.54
3/4	20	0	68	SCY2223CA-06	£252.56
1	25	0	68	SCY2223CA-08	£300.66
1 1/4	32	0	68	SCY2223CA-12	£399.88
1 1/2	40	0	68	SCY2223CA-14	£432.96
2	50	0	68	SCY2223CA-20	£487.08
2 1/2	65	0	68	SCY2223CA-24	£799.78
3	80	0	68	SCY2223CA-30	£974.16

#### OPTIONS

Normally Open version	+£0.00
NPT Thread	+10%
Limit Switch	+£176.79
Cast Iron Actuator	TBA

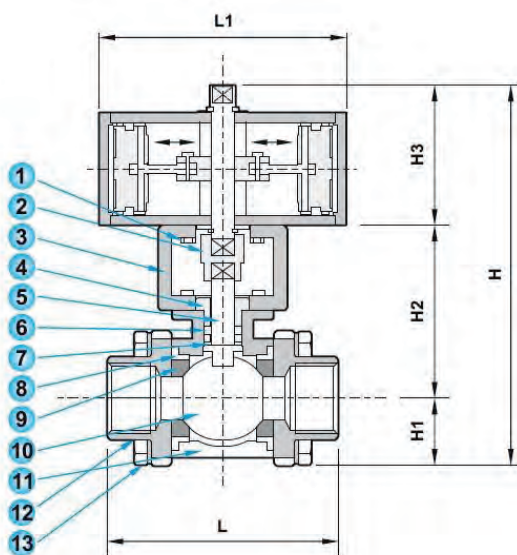
#### CONSTRUCTION

Ball valve: 316 stainless steel 3 piece  
 Ball Valve: Seals and gaskets : PTFE  
 Actuator: Aluminium Alloy Double Acting

#### REPAIR KIT

Actuator Only to suit 1/2 or 3/4	£169.87
Actuator Only to suit 1	£199.95
Actuator Only to suit 1 1/4, 1 1/2 or 2	£249.56
Actuator Only to suit 2 1/2 or 3	£338.25

#### OVERALL DIMENSIONS



Port	L	L1	H	H1	H2	H3
1/4	65	109	175	20	76	79
3/8	65	109	175	20	76	79
1/2	74	109	185	24	82	79
3/4	83	109	191	27	85	79
1	94	131	208	30	88	90
1 1/4	105	165	238	35	94	109
1 1/2	120	165	268	40	119	109
2	136	165	283	47	127	109
2 1/2	167.5	200	258	59	155	128
3	189	200	337	67	168	128

No.	Description	Material	Quantity
1	Bolt	SUS304	4
2	Adaptor	SCS13	1
3	Yoke	SCS13	1
4	Gland	SUS304	1
5	Stem	SUS304	1
6	Gland packing	PTFE	4
7	Packing	Teflon	1
8	Packing	PTFE	1
9	Seat ring	PTFE	1
10	Ball	ASTM A351 GR.CF8M	1
11	Body	ASTM A351 GR.CF8M	1
12	End cap	ASTM A351 GR.CF8M	2
13	Bolt	SUS304	4

Brass  
 2/2  
 N/Closed  
 0 Rated

Brass  
 2/2  
 N/Closed  
 Pilot

Brass  
 2/2  
 N/Open  
 0 Rated

Brass  
 Stainless  
 3/2

Stainless  
 2/2  
 N/Closed  
 0 Rated

Stainless  
 2/2  
 N/Closed  
 Pilot

Stainless  
 2/2  
 N/Open

Steam

Plastic  
 2/2  
 N/Closed


Plastic  
 3/2  
 N/Closed

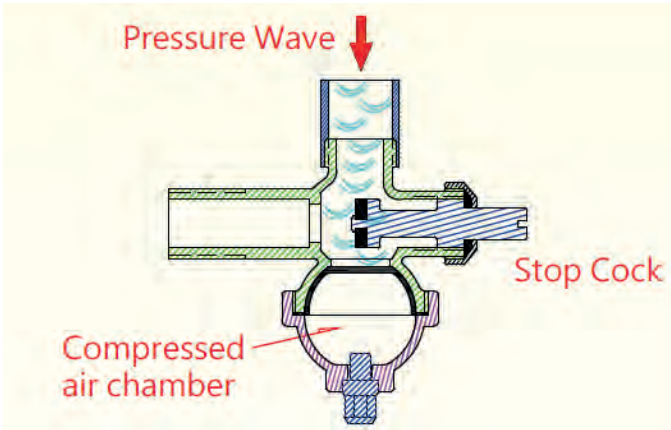
Plastic  
 Acids/  
 Alkali

2/2  
 Latching  
 Bi-Stable

EN161  
 Gas  
 Valves

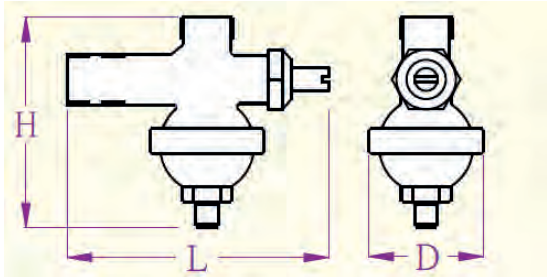
Pressure  
 Reducing  
 Valves

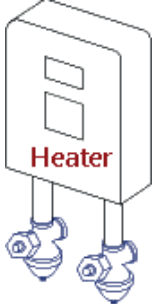
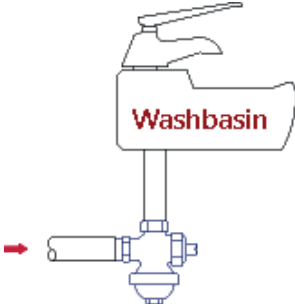

<div>Media: Water</div> <div>Pressure: 12 Bar max</div> <div>Media temperature: -15°C to +80°C max</div> <div>Media viscosity: 50 centistokes max</div> <div>Mounting: any position</div>					<div>Anti Water Hammer</div> <div>Brass Nickel Plated</div> <div>1/2 &amp; 3/4 BSP</div> <div>12 Bar</div> <div>TYPE AXT</div>				
PRESSURE									
Ø Port BSP Male	Air Chamber CM³	Dimensions			Part Number	List Price			
		H	L	D					
1/2	17	105	85	45	AXT15-Brass	£33.08			
3/4	30	120	95	42	AXT20-Brass	£66.14			
OPTIONS									
Flow controller Air inlet valve Other custom made pressure, seal and thread options available upon request						Included Included TBA			
REPAIR KIT									
Diaphragm Seal					Seal-part number				
CONSTRUCTION									
Body: Brass Nickel plated Seals: NBR									
OVERALL DIMENSIONS									



**AXT Angle Water Hammer Arrestor**

This design water hammer arrestor is for domestic. Patented and especially designed for easy installation and maintaining tranquillity for any indoor environment. Additionally the AXT patented design includes a flow controller to help reduce water flow, consumption and noise and is truly an environmentally friendly addition to any home. The air chamber pressure should be set at 1.0 Bar.



								
<p>Water heaters are the most common causes of water hammer within the home as its complicated piping system can cause unstable pressure impact when turned on/off. Installing the AXT valve can reduce this. Also fitting the AXT valve to the outlet of the shower heater will reduce hammer from the shower hose. As you can see the AXT valve is ideally designed to fit easily in this application.</p>			<p>Fast response taps can cause water hammer effect that will echo through the pipework system. The AXT valve can reduce this when fitted to the water inlet pipe. As you can see the AXT valve is ideally designed to fit easily in this application.</p>			<p>When the water level in the Toilet Cistern is approaching full, the float ball valve can fluctuate hindering the flow and creates a series of backpressure waves causing water hammer. Installing the AXT water hammer arrestor at the water inlet will reduce this noise. As you can see the AXT valve is ideally designed to fit easily in this application.</p>		

Media: Water  
 Pressure: Bronze: 12 Bar max  
 Pressure: Ductile Iron: 12 Bar max  
 Pressure: Stainless: 20 Bar max  
 Media temperature: -5°C +80°C max  
 Media viscosity: 50 centistokes max  
 Mounting: any position

# Anti Water Hammer

1/2 - 4" & DN65 to DN300  
 Ductile Iron – Bronze - Stainless  
 In Line I Series  
 0 to 12 or 20 Bar  
**TYPE AIT + AIF**



## PRESSURE

Ø Port BSP	Air Chamber CM³	Dimensions		Part Number	List Price	
		H	D		Bronze	304 Stainless
1/2	17	74	46	AIT15 + body material	£30.67	£54.12
3/4	30	82	52	AIT20 + body material	£36.08	£57.12
1	63	95	62	AIT25 + body material	£42.10	£72.16
1 1/2	205	120	110	AIT40 + body material	£121.77	£134.89
2	650	162	135	AIT50 + body material	£229.11	£279.62
2 1/2	1125	180	155	AIT65 + body material	£351.78	£457.02
3	2000	218	188	AIT80 + body material	£580.28	£678.70
4	4400	260	238	AIT100 + body material	£1121.48	£1213.19

## Flange PN16

					Ductile Iron	Bronze	304 Stainless	316 Stainless
DN80	2000	218	188	AIF80 + body material	£399.88	£1187.64	£1262.80	£1389.08
DN100	4400	260	238	AIF100 + body material	£757.68	£1620.60	£1683.74	£1852.10
DN125	5535	330	330	AIF125 + body material	£841.86	£2134.74	£2194.86	£2414.36
DN150	15325	420	400	AIF150 + body material	£1419.14	£4428.82	£4570.14	£5027.14
DN200	27230	510	460	AIF200 + body material	£2405.34	£6945.40	£7140.84	£7856.42
DN250	27230	510	460	AIF250 + body material	£2880.38	£7300.18	£8803.52	£9651.40
DN300	67860	625	625	AIF300 + body material	£5724.66	£13656.28	£13566.08	£14913.06

## OPTIONS

Pressure Gauge for AIF, (AIT no pressure gauge option available)  
 Other thread NPT or RC and Flange JIS10K, JIS20K, ANSI150Lb, PN10 or PN25  
 Custom made seal options for acid and alkali or hot media, higher pressures or sizes available upon request

Included  
 +10%  
 POA

## CONSTRUCTION

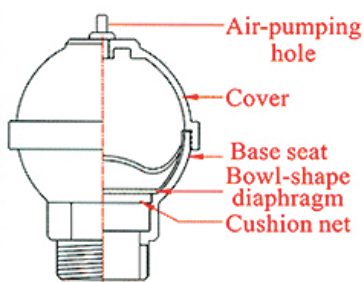
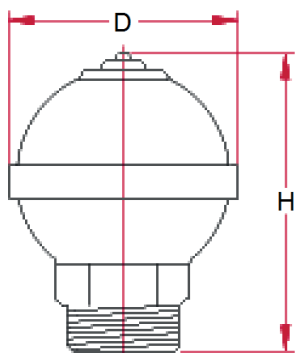
Body: Bronze (Pressure tested to 21 Bar); Ductile Iron with Epoxy Coating (tested to 21 Bar), 304 or 316 Stainless Steel (tested to 42 Bar)  
 Seals: NBR

## REPAIR KIT

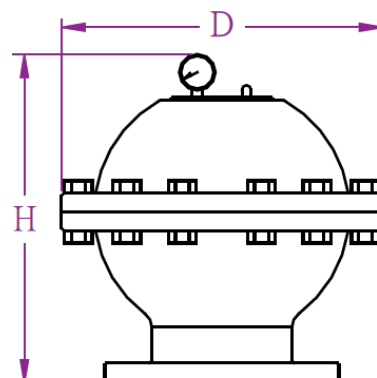
Diaphragm Seal

Valve part number + seal material

## OVERALL DIMENSIONS



▲ Thread end(AIT)  
 Without Pressure Gauge



## I Style Hammer Arrester

These hammer arrestors can be mounted in any position. For Acid or Alkali or Oil we can offer custom made seal materials to suit. For special temperature applications please ask.

Media: water - fluid  
Media Temperature: -15°C to +80°C  
Ambient Temperature: -15°C to +80°C  
Maximum Pressure: 12 or 20 Bar  
Mounting: Vertically at highest point

# Air Release & Vacuum Breaker

## 1/2 - 2"

### Cast Iron, Stainless Steel

### 0 – 12 or 20 Bar

### Type ATR



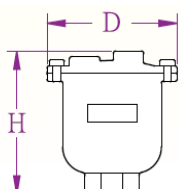
PRESSURE				
Ø Port Size BSP	Body Material	Max Pressure (Bar)	Part Number	List Price
1/2	Cast Iron	12	ATR15-C	£105.23
3/4"		12	ATR20-C	
1"		12	ATR25-C	
1 1/2		12	ATR40-C	£505.12
2		12	ATR50-C	
1/2	Cast Iron Epoxy Coated	12	ATR15-CE	£136.81
3/4"		12	ATR20-CE	
1"		12	ATR25-CE	
1 1/2		12	ATR40-CE	£544.20
2		12	ATR50-CE	
1/2"	Stainless Steel	20	ATR15-S	£216.48
3/4"		20	ATR20-S	
1"		20	ATR25-S	

OPTIONS			
NPT or Rc Thread Other seal Options			+10% POA

CONSTRUCTION	
Cast Iron Valve: Body + Bolts Cast Iron, Plug and Ball float 304 Stainless steel Stainless Valve: Body, Bolts, Plug, Ball float: 304 Stainless steel Seals and gaskets: NBR Test pressure Cast Iron 21 Bar, Stainless Steel 32 Bar	

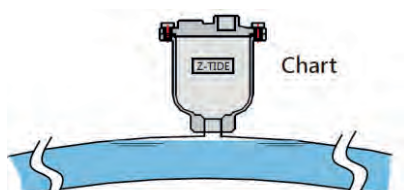
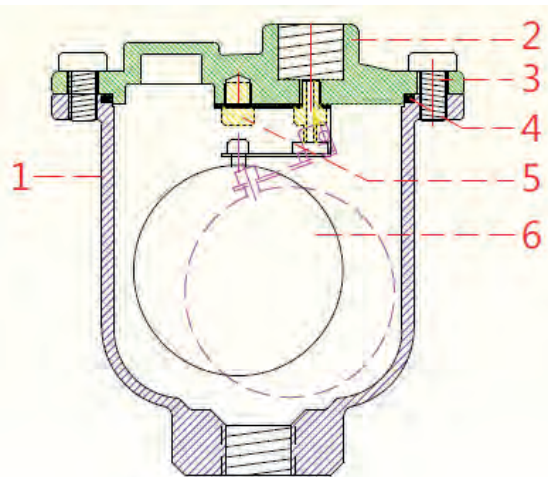
REPAIR KIT	
Seal Kit	Kit + Part Number

OVERALL DIMENSIONS	
Automatic Vacuum and air release valve must be installed vertical and at highest location of pipe system.	



Part No:	Port	D (mm)	H (mm)	Kg
ATR-15	1/2"	120	131	1.9
ATR-20	3/4"	120	131	1.9
ATR-25	1"	120	131	1.9
ATR-40	1 1/2"	190	210	
ATR-50	2"	190	210	

No	Description	Material		
1	Main Body	Cast Iron	Cast Iron Epoxy Coated	304 Stainless
2	Cover	Cast Iron	Cast Iron Epoxy Coated	304 Stainless
3	Bolt	Iron	Iron Epoxy Coated	304 Stainless
4	Sealing Spacer	NBR	NBR	NBR
5	Plug	304 Stainless	304 Stainless	304 Stainless
6	Float Ball Set	304 Stainless	304 Stainless	304 Stainless



Mount Vertical at highest point in pipeline.

Media: Water  
Temperature: -15°C to +80°C Max

# **Full Flow Foot Strainer Valve** **Flange DN50 – DN200** **Pump Prime Aid and Self Cleaning** **Cast or Ductile Iron and Stainless Steel** **20 Bar Max** **Type FVT + FVF**



## **PRESSURE**

Ø Port Size BSP	Seal	Part Number	List Price		
			Cast Iron	Ductile Iron	Stainless Steel 304
2"	NBR	FVT50 + Body Material	£198.44	£243.54	£538.20
2 1/2"		FVT65 + Body Material	£237.52	£288.64	£601.34
Flange PN10					
DN50		FVF50 + Body Material	£198.44	£243.54	£538.20
DN65		FVF65 + Body Material	£237.52	£288.64	£601.34
DN80		FVF80 + Body Material	£282.62	£336.74	£748.66
DN100		FVF100 + Body Material	£363.80	£472.04	£892.98
DN125		FVF125 + Body Material	£472.04	£568.26	£1157.56
DN150		FVF150 + Body Material	£646.44	£841.86	£1380.06
DN200		FVF200 + Body Material	£1190.64	£1545.42	£2940.52

## **OPTIONS**

Other Flange JIS10K, JIS20K, ANSI150Lb or Thread NPT or Rc Options +10%  
TBA  
 Stainless steel clean lever for Cast or Ductile Iron

## **CONSTRUCTION**

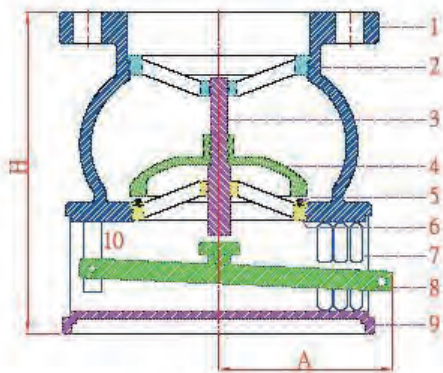
Body: Cast Iron, Ductile Iron or 304 Stainless Steel  
 Seals and gaskets: NBR  
 Test Pressure: Cast Iron 16 Bar, Ductile Iron 35 Bar, Stainless Steel Bar 35  
 Maximum Applied Pressure: Cast Iron 12 Bar, Ductile Iron 20 Bar, Stainless Steel 20 Bar

## **REPAIR KIT**

Seal Kit + Part Number

## **OVERALL DIMENSIONS**

Full flow foot strainer suction valve prevents large debris ingress. Lever operated self-cleaning system. Aids pump priming and prevent prime loss.



	Description	Material		
1	Main Body	Cast Iron	Ductile Iron	Stainless Steel
2	Upper Seat	Brass	Brass	Stainless Steel
3	Shaft	Brass	Brass	Stainless Steel
4	Disc	Ductile Iron	Ductile Iron	Stainless Steel
5	Sealing	NBR	NBR	NBR
6	Seat	Brass	Brass	Stainless Steel
7	Screen	Stainless Steel	Stainless Steel	Stainless Steel
8	Clean lever	Ductile Iron	Ductile Iron	Stainless Steel
9	Screen seat	Ductile Iron	Ductile iron	Stainless Steel
10	Lever stand	Ductile Iron	Ductile Iron	Stainless Steel

Part Number	Port Size Type	H (mm)	A (mm)	Kg
FVT50	2" BSP	160	95	5
FVT65	2 1/2" BSP	165	105	6
FVF50	2" Flange	160	95	6
FVF65	2.5" Flange	165	105	7
FVF80	3" Flange	210	115	9.5
FVF100	4" Flange	215	125	12
FVF125	5" Flange	240	145	18
FVF150	6" Flange	275	160	25
FVF200	8" Flange	380	185	44

Media: Water  
 Pressure range: 20 Bar max  
 Media temperature: -15°C to +80°C  
 Ambient temperature: -15° to +80°C  
 Mounting: Vertical and Horizontal

# Full Flow Silent Check Valve

## DN50 - DN300

### Ductile Iron & Stainless

### 20 Bar Max

### Type CHF



#### PRESSURE

Port Flange PN16	Ø Orifice	Max Pressure (Bar)	Part Number	List Price	
				Ductile Iron	Stainless
DN50	50	20	CHF50 + body material	£226.13	£741.49
DN65	65	20	CHF65 + body material	£289.22	£941.33
DN80	80	20	CHF80 + body material	£354.98	£1130.66
DN100	100	20	CHF100 + body material	£473.28	£1504.00
DN125	125	20	CHF125 + body material	£604.75	£1919.46
DN150	150	20	CHF150 + body material	£809.86	£2426.92
DN200	200	20	CHF200 + body material	£1643.32	£4527.82
DN250	250	20	CHF250 + body material	£2818.71	£7761.93
DN300	300	20	CHF300 + body material	£4585.64	£9576.22

#### OPTIONS

Bypass manual valve (up to DN150 only)  
 Other Flange Options JIS10K, JIS20K, ANSI150Lb  
 Custom made options include 316 Stainless steel, special media, temperature and sizes available upon request

Included  
+10%

#### CONSTRUCTION

Body: Ductile Iron or Stainless steel 304  
 Seals and gaskets: NBR  
 Test Pressure: Stainless Steel 35 Bar, Ductile Iron 33 Bar, Cast Iron 21 Bar  
 Maximum Applied Pressure: Stainless Steel 20 Bar, Ductile Iron 20 Bar, Cast Iron 16 Bar

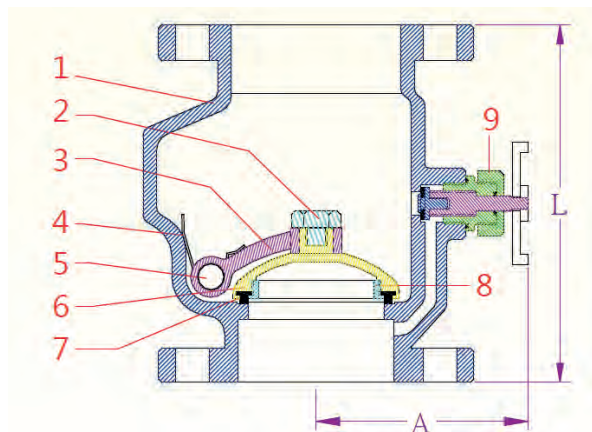
#### REPAIR KIT

U Ring seal

Kit + Part Number

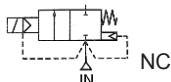
#### OVERALL DIMENSIONS

Part No.	Flange Size	H (mm)	A (mm)	(kg)
CHF-50	DN50	183	122	9
CHF-65	DN65	200	132	12
CHF-80	DN80	210	147	14
CHF-100	DN100	220	160	16
CHF-125	DN125	260	180	27
CHF-150	DN150	280	200	32
CHF-200	DN200	370	Upon Request	61
CHF-250	DN250	450	Upon Request	117
CHF-300	DN300	520	Upon Request	138



Sizes DN50 to DN150					Sizes DN200 to DN300				
No	Description	Material			No	Description	Material		
1	Main Body	Cast Iron	Ductile Iron	Stainless 304	1	Main Body	Cast Iron	Ductile Iron	Stainless 304
2	Locating Bolt	Stainless 304			2	Locating Bolt	Stainless 304		
3	Cantilever	Stainless 304			3	Cantilever	Brass	Brass	Stainless 304
4	Spring	Stainless 304			4	Spring	Stainless 304		
5	Pin	Stainless 304			5	Pin	Cast iron	Ductile Iron	Stainless 304
6	Sealing Retainer	Brass			6	Sealing Retainer	Ductile iron		
7	Sealing	NBR			7	Sealing	NBR		
8	Seat	Brass	Brass	Seat	8	Seat	Brass	Brass	Stainless 304
9	By Pass Valve	Brass	Brass	Stainless 304					

Media: air  
 Pressure range: 0.5 to 7 bar  
 Media temp: -5°C to +80°C max  
 Ambient temperature: -15°C to +50°C  
 Mounting: any position  
 Opening: 20- 50 mSec Max  
 Closing: 100 – 400 mSec Max



# 2/2 Aluminium

## 3/4 – 3"

### Dust Collecting

### NORMALLY CLOSED

### Pulse Valve

## TYPE PI PU PR RU



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Cv m³/Hr	Operation	Pressure Rating Bar ΔP		Part Number	List Price
				Min	Max		
3/4	25	12	Solenoid	0.5	7	PI20	£117.89
1	30	25		0.5	7	PI25	£125.47
1 1/2	45	52		0.5	7	PI40	£174.41
2	57	85		0.5	7	PI50	£325.30
2 1/2	72	104		0.5	7	PI65	£355.56
3	80	172		0.5	7	PI80	£673.17
25mm	30	25		0.5	7	PU25	£219.46
40mm	45	52		0.5	7	PU40	£295.09
3/4	25	12	Air Pilot	0.5	7	PR20	£82.08
1	30	25		0.5	7	PR25	£92.32
1 1/2	45	52		0.5	7	PR40	£138.50
2	57	85		0.5	7	PR50	£292.38
2 1/2	72	104		0.5	7	PR65	£323.15
3	80	172		0.5	7	PR80	£641.15
25mm	30	25		0.5	7	RU25	£185.27
40mm	45	52		0.5	7	RU40	£231.36

#### OPTIONS

IP65 Coil + Connector PG9 – DIN 43650 A (PI & PU)	Included +£101.68
ATEX 8/30 Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C (PI & PU only)	
Sequence Controller Frequency 0.01-9.99 seconds (ON), adjustability (OFF) 1-999 Sec, 5AMP max, Temp -10C to +50C, Hipot 1000v	
PSC06 1-6 Steps, 85-265vAC	
PSC10 1-10 Steps, 85-265vAC or 24vDC	£254.78
PSC20 1-20 steps, 85-265vAC or 24vDC	£330.98
	£587.08

#### ELECTRICAL DATA

Voltage (-10% +10%) Continuous Duty 100%		Coil	Power Consumption		Insulation Class	Enclosure	Electrical Connections
			Inrush	Holding			
~	24 – 48 – 110 - 230	Coil 3 830P6	13.2VA	8VA	H 180°C	IP65 with connector	3 spades DIN 43650 VDE 0110
=	12 – 24 – 48 – 110 - 220		6.8 Watts				

#### CONSTRUCTION

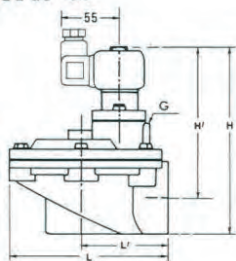
Body: Anodised Aluminium, Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR, Diaphragm NBR with Nylon fibre reinforcement, Moulded coil: Resin

#### REPAIR KIT

Diaphragm	SP-diaphragm + size code (20-80)
Coil	Coil 3 830P6 + voltage

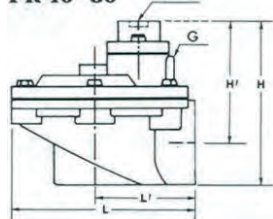
#### OVERALL DIMENSIONS

PI 40~80

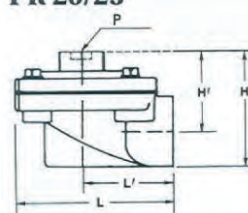


Model	Code	Width	L1	L	H1	H	P	G	Kg
PI	20	75	52	90	108	130	-	5.0	0.7
	25	75	52	90	108	130	-	5.0	0.7
	40	137	72	140	148	178	-	G1/4	1.5
	50	170	95	181	183	228	-	G3/4	3.1
	65	170	95	181	183	228	-	G3/4	3.0
	80	206	118	215	206	264	-	G3/8	2.6
PR	20	75	52	90	56	64	G1/8	-	0.4
	25	75	52	90	56	64		-	0.4
	40	137	72	140	90	120	G3/8	G1/4	1.3
	50	170	95	181	112	157		G3/4	2.9
	65	170	95	181	112	157		G3/4	2.8
	80	206	118	215	136	194		G3/8	2.4

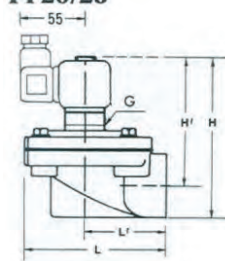
PR 40~80



PR 20/25



PI 20/25

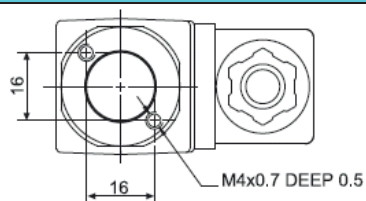


Media: according to tube specifications  
 Pressure range: 0 to 1 Bar max  
 Media temperature: -10°C +100°C max  
 Ambient temperature: -20°C to +40°C  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Tubing: 55 - 60 Shore Hardness  
 Opening or Closing time: 500mSec Max

# **2/2 + 4/2 Pinch** **6x4 - 8x5 - 9.5x6.5** **NORMALLY CLOSED** **DIRECT ACTING** **0 – 1 Bar** **TYPE PV**

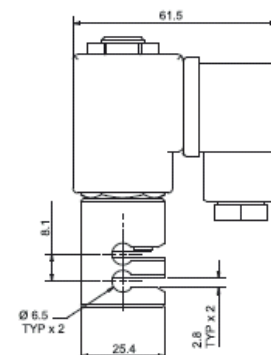
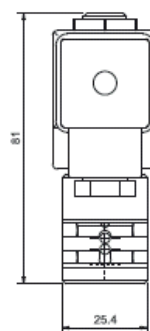
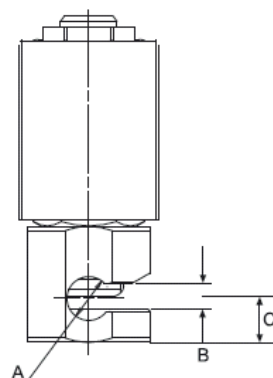
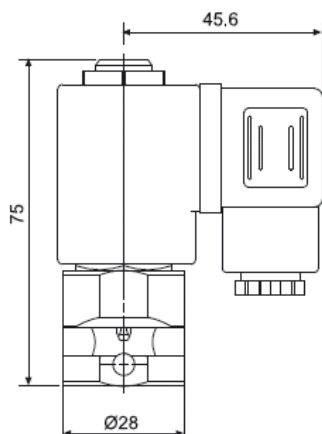
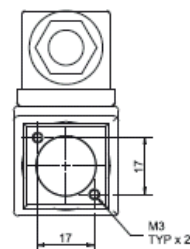


PRESSURE								
Ø Tube Size	Function	Ø Orifice	Pressure Rating (bar) ΔP		Seals	Part Number	List Price	
			Min	Max				
6x4	2/2 NC	4	0	1	Silicone Tube	PV6X4-2 + voltage	£135.30	
8x5		5	0	1	Silicone Tube	PV8X5-2 + voltage		
9.5x6.5		6.5	0	1	Silicone Tube	PV9.5X6.5-2 + voltage		
6x4	4/2 NC	4	0	1	Silicone Tube	PV6X4-3 + voltage	£169.81	
OPTIONS								
IP65 Coil + PG9 IP65 Connector DIN 43650A High power 14 Watt coil (70% Duty only) for 4/2 way valve Tube sizes up to 15 x 21 and normally open versions Aluminium body Stainless steel body							Included Included TBA +5% TBA	
ELECTRICAL DATA								
Voltage (-5% + 10%) Continuous duty 70%			Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
				Inrush	Holding			
~	12 - 24 - 48 - 110 - 230 (Rectified)		11630	26VA	14VA	F 155°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	6 - 12 - 24 - 48 -110 (DC)			10 Watts				
=	6 - 12 - 24 - 48 (DC)		31400	14 - 20 Watts				
CONSTRUCTION								
Body: Mazak Tube and internal parts: Stainless steel Seals and gaskets: Silicone Moulded coil: Resin								
REPAIR KIT								
Armature				SP + Valve Part Number - ARMATURE				
Coil				11630 or 31400 + voltage				
OVERALL DIMENSIONS								

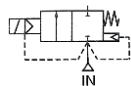


Model	A	B	C
PV6	6.5	5	10
PV8	9.5	6.5	10
PV9.5	9.5	6.5	10

Sizes in mm



Media: air – water – gas – light oil  
 Pressure range: 1 to 16 Bar max  
 Media temperature: -10°C +80°C max  
 Ambient temperature: -10°C to +55°C  
 Media viscosity: 21 centistokes max  
 Mounting: preferred upright  
 Weight 250g



PROPORTIONAL

## 2/2 Brass & Stainless

1/8 – 1/4

24v PROPORTIONAL  
 2 WAY SERVO ASSISTED  
 1 – 16 Bar  
 TYPE PR



### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP		Max Working	Seals	Body	Part Number	List Price
		Kv Ltr/Min	Min	Max					
1/8 or 1/4	0.8	0.6	8	16	19.2	NBR FKM EPDM	Brass	PR2 + port + 1 + seal	£157.85
							Stainless	PR3 + port + 1 + seal	£189.42
							Aluminium	PR5 + port + 1 + seal	£157.85
	1.2	1.1	6	12	14.4		Brass	PR2 + port + 2 + seal	£157.85
							Stainless	PR3 + port + 2 + seal	£189.42
							Aluminium	PR5 + port + 2 + seal	£157.85
	1.6	1.7	5	10	12		Brass	PR2 + port + 3 + seal	£157.85
							Stainless	PR3 + port + 3 + seal	£189.42
							Aluminium	PR5 + port + 3 + seal	£157.85
	2.0	2.5	4	8	9.6		Brass	PR2 + port + 4 + seal	£157.85
							Stainless	PR3 + port + 4 + seal	£189.42
							Aluminium	PR5 + port + 4 + seal	£157.85
	2.4	3.5	3	6	7.2		Brass	PR2 + port + 5 + seal	£157.85
							Stainless	PR3 + port + 5 + seal	£189.42
							Aluminium	PR5 + port + 5 + seal	£157.85
	3.0	4.5	2.45	3.5	4.2		Brass	PR2 + port + 6 + seal	£157.85
							Stainless	PR3 + port + 6 + seal	£189.42
							Aluminium	PR5 + port + 6 + seal	£157.85
	4.0	5	1	2	2.4		Brass	PR2 + port + 7 + seal	£157.85
							Stainless	PR3 + port + 7 + seal	£189.42
							Aluminium	PR5 + port + 7 + seal	£157.85

### OPTIONS

IP65 Coil & Connector PG9 – DIN 43650 A  
 NPT Thread

Included  
 + 10%

### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption	Insulation class	Enclosure	Electrical connections
=	24 V pilot signal	11630 24vDC	100-500 mAmp	F 155°C	IP 65	3 spades DIN 43650 DIN 40050 VDE 0110

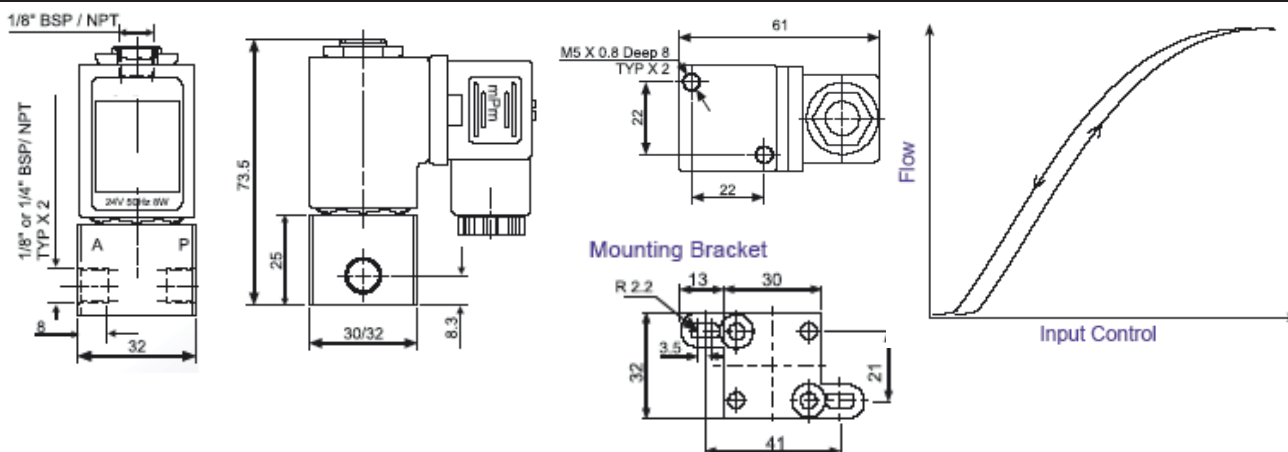
### CONSTRUCTION

Body: Brass (Aluminium and 316L Stainless steel)  
 Tube and internal parts: Stainless steel  
 Seals and gaskets: NBR (FKM or EPDM)  
 Moulded coil: Resin

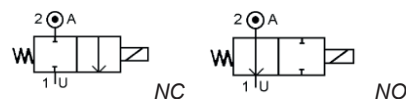
### Selection Guideline

Special consideration must be given to valve selection based on Cv. ΔP pressure drop should be 30-50% or more. Maximum pressure should be 1.2 times working pressure with max pressure top adjustment screw. Inlet pressure needs to remain constant.

### OVERALL DIMENSIONS



Media: air – water – gas – vacuum 10-6 Torr  
 Pressure range: 0 to 10 Bar max  
 Media temperature: -10°C +80°C max  
 Ambient temperature: -20°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Weight: 1750g per set



## 2/2 Brass

### 1/8 + 1/4 Manifold

### N/CLOSED + N/OPEN

### 2 WAY DIRECT ACTING

### 0 – 10 Bar


## TYPE ADF68



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/ min	Pressure Rating (Bar) ΔP			Seals	Part Number	List Price Per Station
			Min	Max DC	Max AC			
1/8	3.0	4.3	0	7.0	10	NBR VITON EPDM Silicone *PTFE	ADF6A + seal + voltage + sets	£69.16
	4.0	9.7	0	4.9	7		ADF6B + seal + voltage + sets	
	5.0	10.7	0	3.5	5		ADF6C + seal + voltage + sets	
1/4	3.0	4.3	0	7.0	10	NBR VITON EPDM Silicone *PTFE	ADF8A + seal + voltage + sets	
	4.0	9.7	0	4.9	7		ADF8B + seal + voltage + sets	
	5.0	10.7	0	3.6	5		ADF8C + seal + voltage + sets	

#### OPTIONS

IP67 (EN60529:1991+A1:2000) UL & CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A  
 Brass Manifold 1/8 or 1/4 BSP port (2 – 10 Stations)  
 ATEX 22003EX Coil: ATEX EExmII T4 II 2G & 2D IP65 T130°C   
 NPT Thread  
 Normally Open NOADF  
 \* PTFE, VST, CR, ECO, HNBR or Hypalon Seals  
 Stainless Steel and other custom made options are available upon request

**Included**  
**Included**  
**+£101.68**  
**+ 10%**  
**+£51.12**  
**+£15.04**

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 220 - 380 (50 or 60 Hz)	WPG1	11.2VA	8.2VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 (DC)		12 Watts				

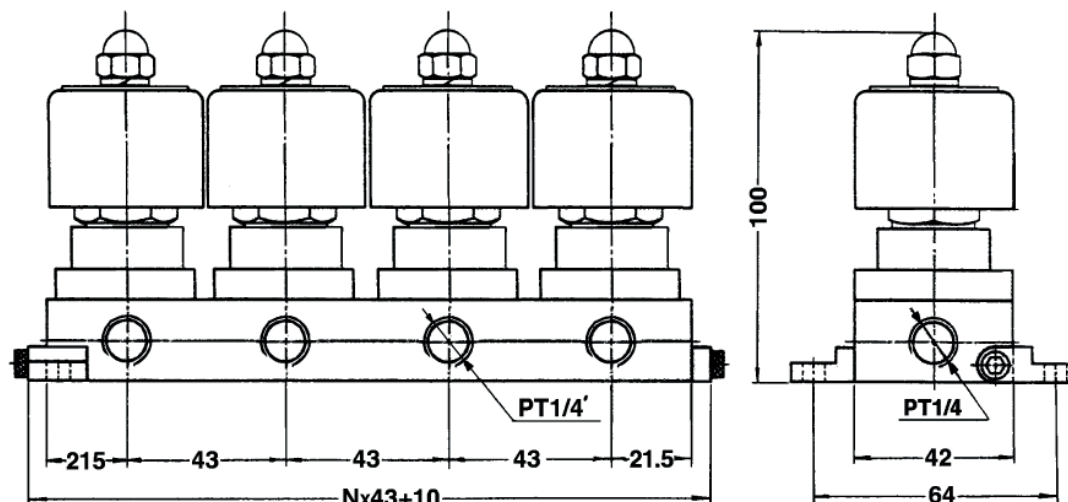
#### CONSTRUCTION

Body : Brass  
 Tube and internal parts : Stainless steel  
 Seals and gaskets: NBR (Optional EPDM, Viton, Silicone or PTFE)  
 Moulded coil : Resin

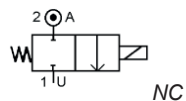
#### REPAIR KIT

Armature	SP + Valve Part Number + ARMATURE
Coil	WPG1 + voltage
Solenoid Valve	GAB312 + orifice + seal + voltage

#### OVERALL DIMENSIONS



Media: air – water – gas – vacuum  
 Pressure range: 0 to 150 Bar max  
 Media temperature: +180°C max\*  
 Ambient temperature: -20°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Weight: 1750g per set



## 2/2 Brass

### 1/8 & 1/4 MANIFOLD

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 150 Bar

## TYPE ADF6/8000



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP			Coil	Seals	Part Number	List Price Per Station
		Kv Ltr/ min	Min	Max AC	Max DC				
1/8 6000  1/4 8000	1.2	1.1	0	60	42	WPG1	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C *VST +180°C (30 Bar Max)  *PTFE +180°C (150 Bar)	ADF6/8012 + seal + voltage	£135.30
	1.6	1.5	0	40	28			ADF6/8016 + seal + voltage	
	2.0	1.8	0	20	15			ADF6/8020 + seal + voltage	
	1.2	1.1	0	120	84	WPG2		ADF6/8112 + seal + voltage	£165.363
	1.6	1.6	0	60	42			ADF6/8116 + seal + voltage	
	2.0	1.8	0	30	21			ADF6/8020 + seal + voltage	
	3.0	4.3	0	20	14			ADF6/8130 + seal + voltage	
	4.0	9.7	0	12	8.4			ADF6/8140 + seal + voltage	
	5.0	10.7	0	10	7	WPA3C		ADF6/8150 + seal + voltage	£225.50
	1.2	1.1	0	150	105			ADF6/8212 + seal + voltage	
	1.6	1.5	0	80	56			ADF6/8216 + seal + voltage	
	2.0	1.8	0	60	42			ADF6/8220 + seal + voltage	
	3.0	4.3	0	40	28			ADF6/8230 + seal + voltage	
	4.0	9.7	0	20	14			ADF6/8240 + seal + voltage	
	5.0	10.7	0	15	10.5			ADF6/8250 + seal + voltage	

#### OPTIONS

WPG IP67 (EN60529:1991+A1:2000) UL & CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A, WPA3C IP54  
 Brass manifold 1/4 BSP port (2 – 10 Stations)  
 ATEX EExmIT4 II 2G & 2D IP65 T130°C coil. (Pressure rating WPG1 same, WPG2 70% of DC rating, WPA3C not available)  
 NPT Thread  
 \*\* PTFE, VST, CR, ECO, HNBR or Hypalon Seals

Included  
 Included  
 +£101.68  
 + 10%  
 +£15.04

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 220 - 380 (50 or 60 Hz)	WPG1	11.2VA	8.2VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 (DC)		12 Watts				
~	24 - 48 - 110 - 220 - 380 (50 or 60 Hz)	WPG2	18.7VA	15.3VA			
=	12 - 24 - 48 (DC)		18 Watts				
~	24 - 48 - 110 - 220 - 380 (50 or 60 Hz)	WPA3C	88VA	57VA	N 200°C	IP54	30cm flying lead wires
=	12 - 24 (DC)		33.6 Watts				

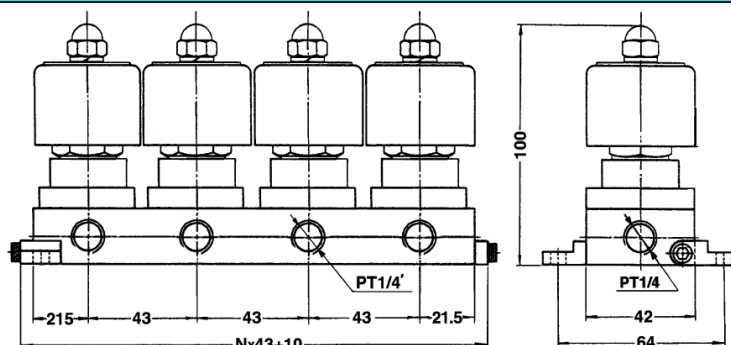
#### CONSTRUCTION

Body : Brass  
 Tube and internal parts : Stainless steel  
 Seals and gaskets: NBR, EPDM, Viton, Silicone or PTFE  
 Moulded coil WPG : Resin, WPA3C round metal enclosure

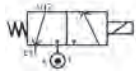
#### REPAIR KIT

Armature	SP + Valve Part Number + ARMATURE
Coil	WPG1, WPG2 or WPA3C + voltage

#### OVERALL DIMENSIONS



Media: air – water – gas – vacuum 10-6 Torr  
 Pressure range: 0 to 10 Bar max  
 Media temperature: -10°C +80°C max  
 Ambient temperature: -20°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Weight: 1650g per set



NC

# **3/2 Brass** **1/8 – 1/4" MANIFOLD** **NORMALLY CLOSED** **3 WAY DIRECT ACTING** **0 – 10 Bar** **TYPE MDF**



## **PRESSURE**

Ø Port BSP	Ø Orifice (mm)	Flow Kv Ltr/min	Pressure Rating (Bar)			Seals	Part Number	List Price Per Station
			Min	Max AC	Max DC			
1/8	1.6	1.5	0	10	7	NBR VITON EPDM Silicone PTFE*	MDF6A + seal + voltage + sets	£150.34
	2.0	1.8	0	7	4.9		MDF6B + seal + voltage + sets	
1/4	1.6	1.5	0	10	7		MDF8A + seal + voltage + sets	
	2.0	1.8	0	7	4.9		MDF8B + seal + voltage + sets	

## **OPTIONS**

IP67 (EN60529:1991+A1:2000) UL & CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A  
 Brass manifold 1/8 or 1/4 BSP Port – (2 – 10 Sets)  
 ATEX 22003EX Coil: ATEX EExmII4 II 2G & 2D IP65 T130°C  
 NPT Thread  
 \*PTFE Seals  
 Stainless Steel and other custom made options available upon request

**Included**  
**Included**  
**+£101.68**  
**+ 10%**  
**+£15.04**

## **ELECTRICAL DATA**

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 230 (50 or 60 Hz)	WPG1	11.2VA	8.2VA	H 180°C	IP65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 (DC)		12 Watts				

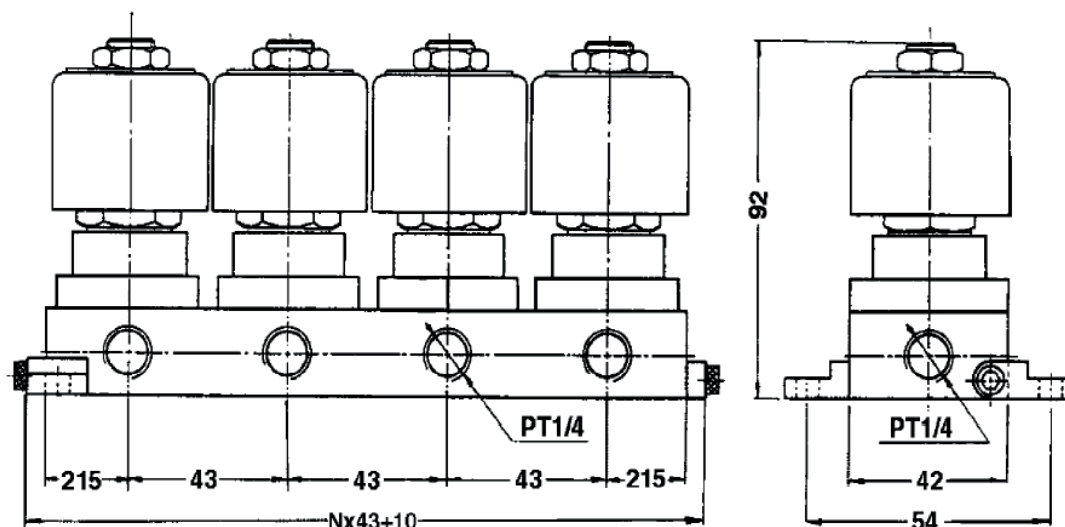
## **CONSTRUCTION**

Body : Brass  
 Tube and internal parts : Stainless steel  
 Seals and gaskets: NBR (Optional EPDM, Viton, Silicone or PTFE)  
 Moulded coil : Resin

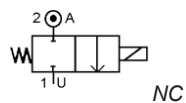
## **REPAIR KIT**

Armature	SP + Valve Part Number
Coil	WPG1 + voltage
Solenoid Valve Body	GAB313 + orifice + seal + voltage

## **OVERALL DIMENSIONS**



Media: air – water – gas – vacuum  
 Pressure range: 0 to 150 Bar max  
 Media temperature: +180°C max\*  
 Ambient temperature: -20°C to +60°C  
 Media viscosity: 50 centistokes max  
 Mounting: any position  
 Weight: 1750g per set



# 2/2 Stainless

## 1/8 & 1/4 MANIFOLD

### NORMALLY CLOSED

### 2 WAY DIRECT ACTING

### 0 – 150 Bar

## TYPE ADFS6/8000



#### PRESSURE

Ø Port BSP	Ø Orifice (mm)	Flow	Pressure Rating (Bar) ΔP			Coil	Seals	Part Number	List Price Per Station
		Kv Ltr/ min	Min	Max AC	Max DC				
1/8 ADFS6000  1/4 ADFS8000	1.2	1.1	0	60	42	WPG1	NBR +80°C SILICONE +120°C EPDM +120°C FKM +120°C *VST +180°C (30 Bar Max)  *PTFE +180°C (150 Bar)	ADFS6/8012 + seal + voltage	£279.62
	1.6	1.5	0	40	28			ADFS6/8016 + seal + voltage	
	2.0	1.8	0	20	15			ADFS6/8020 + seal + voltage	
	1.2	1.1	0	120	84	WPG2		ADFS6/8112 + seal + voltage	£309.68
	1.6	1.6	0	60	42			ADFS6/8116 + seal + voltage	
	2.0	1.8	0	30	21			ADFS6/8020 + seal + voltage	
	3.0	4.3	0	20	14			ADFS6/8130 + seal + voltage	
	4.0	9.7	0	12	8.4			ADFS6/8140 + seal + voltage	
	5.0	10.7	0	10	7	WPA3C		ADFS6/8150 + seal + voltage	£369.82
	1.2	1.1	0	150	105			ADFS6/8212 + seal + voltage	
	1.6	1.5	0	80	56			ADFS6/8216 + seal + voltage	
	2.0	1.8	0	60	42			ADFS6/8220 + seal + voltage	
	3.0	4.3	0	40	28			ADFS6/8230 + seal + voltage	
	4.0	9.7	0	20	14			ADFS6/8240 + seal + voltage	
	5.0	10.7	0	15	10.5			ADFS6/8250 + seal + voltage	

#### OPTIONS

WPG IP67 (EN60529:1991+A1:2000) UL & CSA Approved Coil & IP65 LED Connector PG11 – DIN 43650 A, WPA3C IP54  
 316 stainless steel manifold 1/8 BSP port (2 – 9 Sets)  
 ATEX EExmIIT4 II 2G & 2D IP65 T130°C coil. (Pressure rating WPG1 same, WPG2 70% of DC rating, WPA3C not available)  
 NPT Thread  
 \*PTFE Seal

Included  
 Included  
 +£101.68  
 + 10%  
 +£15.04

#### ELECTRICAL DATA

Voltage (-10% + 10%) Continuous duty 100%		Coil	Power Consumption		Insulation class	Enclosure	Electrical connections
			Inrush	Holding			
~	24 - 48 - 110 - 220 - 380 (50 or 60 Hz)	WPG1	11.2VA	8.2VA	H 180°C	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	12 - 24 - 48 (DC)		12 Watts				
~	24 - 48 - 110 - 220 - 380 (50 or 60 Hz)	WPG2	18.7VA	15.3VA			
=	12 - 24 - 48 (DC)		18 Watts				
~	24 - 48 - 110 - 220 - 380 (50 or 60 Hz)	WPA3C	88VA	57VA	N 200°C	IP54	30cm flying lead wires
=	12 - 24 (DC)		33.6 Watts				

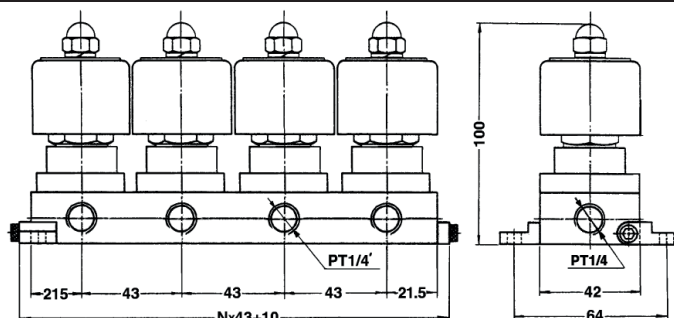
#### CONSTRUCTION

Body : 316 stainless steel  
 Tube and internal parts : Stainless steel  
 Seals and gaskets: NBR, EPDM, Viton, Silicone or PTFE  
 Moulded coil WPG : Resin, WPA3C round metal enclosure

#### REPAIR KIT

Armature	SP + Valve Part Number + ARMATURE
Coil	WPG1, WPG2 or WPA3C + voltage

#### OVERALL DIMENSIONS



Ambient temperature -40°C to +60°C  
Adjustable interval and discharge times  
Mounting: Any position  
CE Tested  
Weight 80g  
Fully Automatic - no maintenance  
Simple to install  
SVT22 fit all DIN43650A coils  
SVT11 fit all DIN 43650B coils

# Solenoid Valve Timer

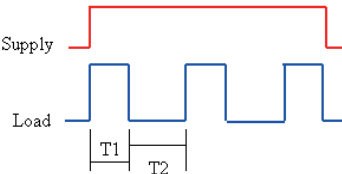




## SOLID STATE

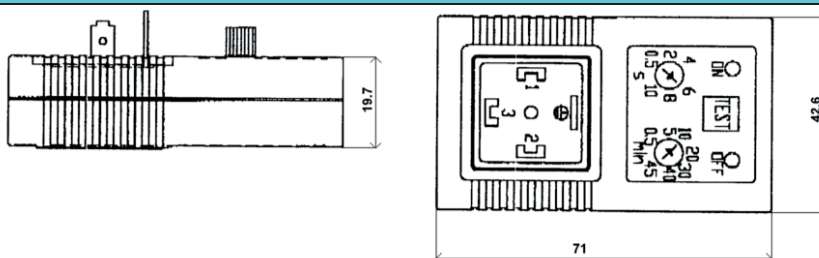
### 24 - 240v AC or DC

### DIN43650A + DIN43650B

## Type SVT22 + SVT11

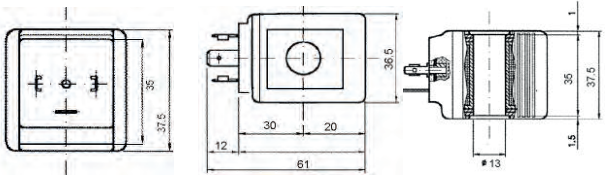

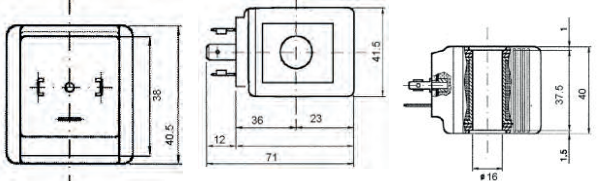

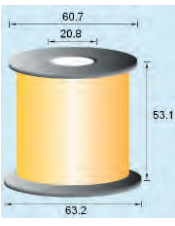

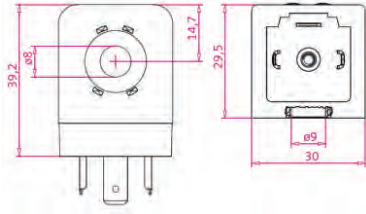

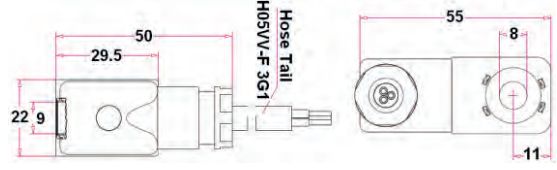

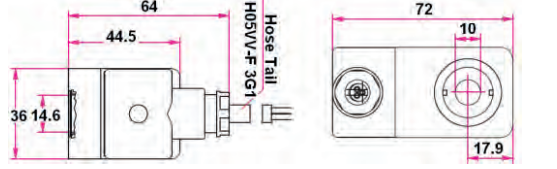









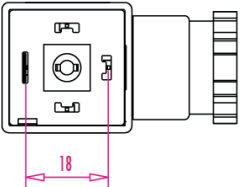


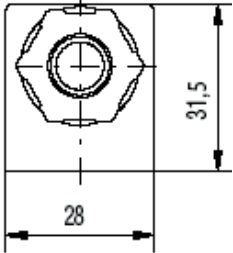
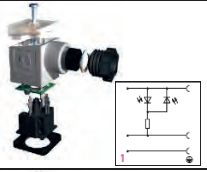
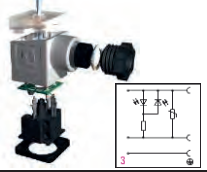
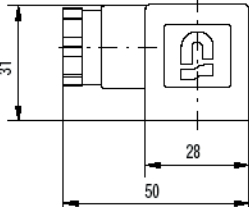
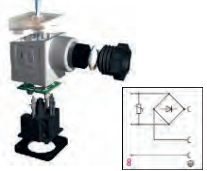

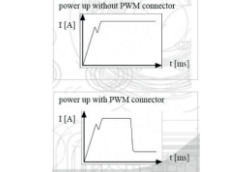
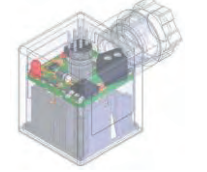
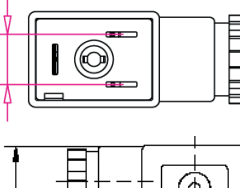

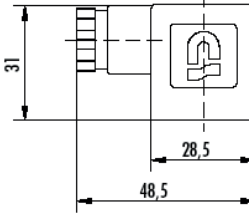
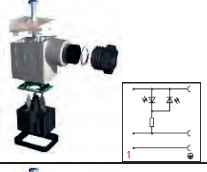
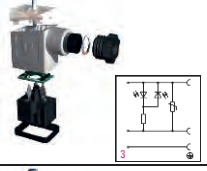
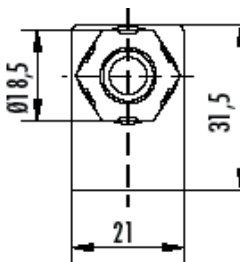
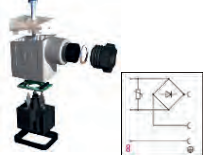
Models						
Cyclic Repeat Solenoid Valve Timers	Front View	Rear View	Power Off Cycle adjustment	Power On Cycle adjustment	Part Number	List Price
<b>DIN 43650A</b>  Upon application of power the timer resets, enters the ON state for a period of T1, then switches OFF for a period T2. This cycle repeats until power is removed.  			0.5 - 45 Min	0.5 - 10 Sec	SVT22	£57.84
			25 - 150 Min	0.5 - 10 Sec	SVT22N-02	£89.86
			0.5 - 60 Min	20 - 300 mSec	SVT22N-03	
			0.5 - 10 Sec	0.5 - 60 Min	SVT22N-04	
			0.5 - 60 Min	0.3 - 5 Min	SVT22N-05	
<b>DIN 43650B Output DIN43650A Input</b>  Upon application of power the timer resets, enters the ON state for a period of T1, then switches OFF for a period T2. This cycle repeats until power is removed.			0.5 - 45 Min	0.5 - 10 Sec	SVT11	£57.84
ALMOST ANY OTHER TIME / VOLTAGE AVAILABLE PLEASE ASK						
OPTIONS						
Manual test switch - LED Power ON light - LED Power OFF light Single shot timer: Application of power the timer resets, enters the ON state for a period T1, then switches OFF indefinitely Delay Timer: Application of power the timer resets, enters the OFF state for a period T2, then switches ON indefinitely Delayed repeat Cycle Timer: Application of power the timer resets and enters the OFF state for a period T2, then switches ON for a period T1. This sequence repeats until power is removed Single Cycle Timer: Application of power the timer enters the OFF state for a period T2, then switches ON for a period T1. It then switches OFF & remains OFF indefinitely 12vDC - 440vAC - 10 Amp version - Limitless time scale availability – Horizontal – Various Colours and other custom options available						Included £89.86 £89.86 £89.86 £89.86 POA
ELECTRICAL DATA						
Voltage (24 - 240v AC or DC) Continuous duty 100%		Power Consumption		Power Connection	Enclosure	Electrical connections
~	24 to 240 50/60 Hz	4 mA Max		1 Amp Max	IP 65 with connector	3 spades DIN 43650 DIN 40050 VDE 0110
=	24 to 240 v DC					
CONSTRUCTION						
Housing material ABS plastic FR Grade						
OVERALL DIMENSIONS						



Fitment	Part	Coil Identification Chart Dimensions	Picture	Price
Class F IP65	22001			£16.24
DIN 43650B				
Class H IP65	22003			£32.46
DIN 43650A				
Class H IP65	22005			£40.00
DIN 43650A				
Class F IP65	11630			£32.46
DIN 43650A				
IP68 2 meter Flying lead	11630BP			£49.79
Class F IP65	31400			£32.46
DIN 43650A				
Class F IP65	M16			£32.46
DIN 43650A				
Class H IP65	M17			£40.46
DIN 43650A				
Class N IP54	WPA3C	<p>Voltage Colour Code            Blue / White = 12vDC            Red / White = 24vDC            Red / Black = 24vAC            Blue / Blue = 110vAC            Red / Red = 240vAC</p>		£32.46
30cm flying lead				

Brass
2/2
N/Closed
0 Rated
Brass
2/2
N/Closed
Pilot
Brass
2/2
N/Open
0 Rated
Brass
2/2
N/Closed
Pilot
Brass
2/2
N/Open
3/2
Stainless
2/2
N/Closed
0 Rated
Stainless
2/2
N/Closed
Pilot
Stainless
2/2
N/Open
Steam
Plastic
2/2
N/Closed
Plastic
2/2
N/Closed
Plastic
2/2
N/Closed
Plastic
Acids/Alkali
2/2
Latching
Bi-Stable
EN161
Gas
Valves
Pressure
Reducing
Valves

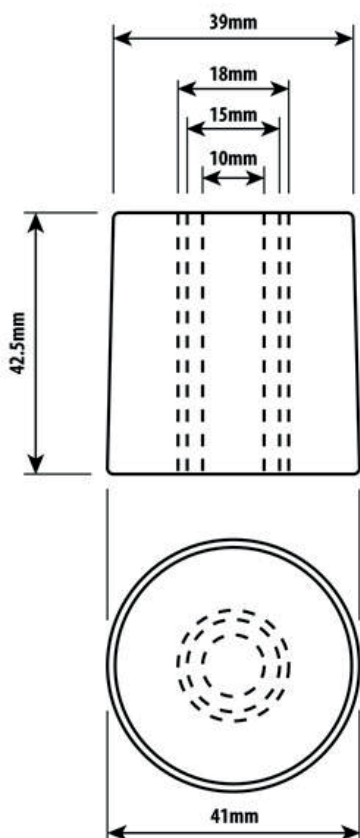
<div> <div>Class H IP67</div> <div> <div>WPG1</div> <div> <div>DIN 43650A CSA UL Listed MH45009</div> </div> </div> </div>	<div>  </div>	<div>  </div>	<div>£32.46</div>
<div> <div>Class H IP67</div> <div> <div>WPG2</div> <div> <div>DIN 43650A CSA UL Listed MH45009</div> </div> </div> </div>	<div>  </div>	<div>  </div>	<div>£32.46</div>
<div> <div>IP54 Class N</div> <div> <div>22514S</div> <div> <div>30 cm flying lead</div> </div> </div> </div>	<div> <div> <div> <div>Voltage Colour Code</div> <div>White / White = 380vAC</div> <div>Red / Red = 220vAC</div> <div>Blue / Blue = 110vAC</div> <div>Red / Blue = 24vDC</div> <div>Blue / White = 24vAC</div> <div>Blue / White = 12vDC</div> </div> <div>  </div> </div> </div>	<div>  </div>	<div>£36.31</div>
<div> <div>125930.1-00/5146 EEx ia IIC T6</div> <div> <div>125950.1-00/5146 EEx ia IIC T4 IP65 DIN43650A 24vdc only</div> </div> </div>	<div>  </div>	<div> <div>Ex</div>  </div>	<div>£89.54</div>
<div> <div>22001EX EEx m II T4 + T6 3 Mtr 3 core lead Options 5 Meter £70.20 10 Meter £79.35</div> </div>	<div>  </div>	<div> <div>Ex</div>  </div>	<div>£67.14</div>
<div> <div>22003EX EEx m II T4 + T6 3 Mtr 3 core lead Options 5 Meter £106.31 10 Meter £120.17</div> </div>	<div>  </div>	<div> <div>Ex</div>  </div>	<div>£101.68</div>
<div>225320NNC-0.3</div>	<div> <div>2/2 Normally Closed (AC or DC) Operator Shako SPU / PU Series New 0.3mm Internal Clearance</div> </div>	<div>  </div>	<div>£35.09</div>
<div>225320VNO</div>	<div> <div>2/2 Normally Open operator Shako SPU/PU Series New 3 pc reduced heat series</div> </div>	<div>  </div>	<div>£34.54</div>
<div>0543-83.6-00</div>	<div> <div>2/2 Normally Open Operator Power Level 5 13/36 22005 coils 18.5 Watts or 22.5 to 27.5 VA Shako SPU / PU Series</div> </div>	<div> <div>  <div>Silver</div>  </div> </div>	<div>£34.54</div>
<div>0543-95.6-00</div>	<div> <div>2/2 Normally Open 22003 Operator Power Level 3 + 4 13/30 22003 coils 11 + 15 Watts or 15.4 to 17.7VA Shako SPU225 / PU225 Series</div> </div>	<div> <div>  <div>Red</div>  </div> </div>	<div>£34.54</div>

CONNECTORS		DIN43650A		
Part Number	Description	Overall Dimensions		List Price
DIN2	Basic 1 Piece Black No Circuit PG9 for 6 to 8 mm cable NBR Seal IP65, Max 16 Amp Resistance <4 mOhm Clamping contact Optional Conduit Entry 5 – 6mm cable, 1/2NPT 1.5mm <sup>2</sup> Cable section max			£1.08
DIN3	Basic 1 Piece Black No Circuit with moulded 3 meter PG9 9 mm cable NBR Seal IP67, Max 10 Amp Resistance <4 mOhm Screw contact, 0 to 250 volts 1.5mm <sup>2</sup> Cable section max			£28.14
DIN2LED R + voltage (24 – 110-230)	1 Piece Clear With LED (Red) PG9 for 6 to 8 mm cable, NBR Seal IP65, Max 1.0 Amp Resistance <4 mOhm, Clamping Contact, Power Consumption Max 5mA, Drop off delay approx 3mSec Wrong polarity protection, Optional 24v or 110v or 250v Yellow + Green LED, 5 – 6mm or 1/2NPT. 1.0mm <sup>2</sup> Cable section max			£4.43
DIN2LEDVD R + voltage (24 – 110 – 230)	1 Piece Clear With LED (Red) + Varistor (VDR) PG9 for 6 to 8 mm cable, NBR Seal IP65, Max 1.0 Amp Resistance <4 mOhm, Clamping Contact, Power Consumption Max 5mA, Drop off delay approx 3mSec Wrong polarity protection, Optional 24v or 110v or 250v, Yellow + Green LED, 5 – 6mm or 1/2NPT. 1.0mm <sup>2</sup> Cable section max			£4.43
DIN2R-All	2 Piece Clear With Rectifier + VDR PG9 for 6 to 8 mm cable, NBR Seal IP65, Max 1.0Amp Resistance <4 mOhm, Clamping Contact Power Consumption 0.5mA, Drop off delay approx 3mSec Wrong polarity protection, Voltage 0 to 230v, Yellow + Green + Red LED, 5 – 6mm or 1/2NPT Conduit. 1.0mm <sup>2</sup> Cable section max			£7.62
6-11173-0102	2 Piece ATEX Black without circuit II 3G II 3D Ex nA IIC T95C PG9 6 to 8mm cable, NBR seal IP65, EN175301-803-A To be used with ATEX coil 125930.1-5146 or 125950.1-00/5146 ATEX coil.			£11.28
DIN2-PWM-24v	2 Piece Clear with Diode and Pulse width Modulation energy saving 11 to 89% with LED PG9 for 6 to 8mm cable, NBR seal IP65, Max 1.0 Amp Delay 175 mSec, switching frequency 3.1Khz at 24vDC 8 holding power reduction variations by jumper to achieve power saving 11%, 22%, 33%, 44%, 56%, 67%, 78% and 89%			£23.45
CONNECTORS		Industrial Form		
DIN1	Basic 1 Piece Black No Circuit PG9 for 6 to 8 mm cable NBR Seal IP65, Max 10 Amp Resistance <4 mOhm Clamping contact Optional 5 – 6mm or 1/2NPT 1.0mm <sup>2</sup> Cable section max			£1.08
DIN1LED R + voltage (24 – 110-230)	1 Piece Clear With LED (Red) PG9 for 6 to 8 mm cable, NBR Seal IP65, Max 1.0 Amp Resistance <4 mOhm, Clamping Contact, Power Consumption Max 5mA, Wrong polarity protection, Optional 24v or 110v or 250v, Yellow + Green LED, 5 – 6mm or 1/2NPT. 1.0mm <sup>2</sup> Cable section max			£4.24
DIN1LEDVD R + voltage (24 – 110 – 230)	1 Piece Clear With LED (Red) + Varistor (VDR) PG9 for 6 to 8 mm cable, NBR Seal IP65, Max 1.0 Amp Resistance <4 mOhm, Clamping Contact, Power Consumption Max 5mA, Wrong polarity protection, Optional 24v or 110v or 250v, Yellow + Green LED, 5 – 6mm or 1/2NPT. 1.0mm <sup>2</sup> Cable section max			£4.43
DIN1R + voltage (24 – 110 – 230)	2 Piece Clear With Rectifier + VDR PG9 for 6 to 8 mm cable, NBR Seal IP65, Max 1.0Amp Resistance <4 mOhm, Clamping Contact, Power Consumption 0.5mA, Drop off delay approx 3mSec Wrong polarity protection, Voltage 24 – 110 - 230v, Yellow + Green + Red LED. 1.0mm <sup>2</sup> Cable section max			£4.94

# SOLENOID VALVE OPERATING MAGNETS SERVICE & COMMISSIONING TOOL FOR THE MANUAL OPERATION OF SOLENOID VALVES



ID	Colour	Fitment Range	Part Number	List Price
10mm	White	10 to 14mm Armature or Coil ID	MAGNET 10	£49.92
15mm	Orange	15 to 17mm Armature or Coil ID	MAGNET 15	
18mm	Red	18 to 22mm Armature or Coil ID	MAGNET 18	
OPTIONS				
Other colours available upon request				
CONSTRUCTION				
Injection moulded ABS plastic housing Magnetic strength 1500 Gauss flux density in total. Unit consists of three separate magnets with 1200 Gauss each encapsulated in strong ABS corrosion resistant casing. Magnetic stability is high, low demagnetisation when exposed to external magnetic fields Maximum working temperature +250°C				
OVERALL DIMENSIONS				



Suitable for Refrigeration, Water, Oil, Air-conditioning, gas, Air installations and other plant and machinery where solenoid valves require opening and closing manually. The Solenoid Valve Operating Magnet has been designed and manufactured to solve the problem of how to operate Solenoid Valves when a system is not under power. The Magnet is the same shape and size of a large cotton reel and, when placed on top of a Solenoid Valve with the coil removed, it causes the armature to open or close.

This means that the device can be used to operate valves in a plant or system that has yet to be wired up. It eliminates the need to wire up the system or worry about the correct voltages. It can also be used when recovering refrigerant from a plant that has already been decommissioned and power removed. In emergencies, such as the failure of a Solenoid Valve coil, it can also be used to keep a system operating while a replacement coil is found.

1. Simply remove the electrically operated coil, making sure that the power is switched off.
2. Place the solenoid magnet (widest diameter at the bottom) fully over the valve stem.
3. A click should be heard, this means the valve is in the open position.
4. If no click is heard, simply turn the magnet the other way up and repeat as above.
5. When the manual operation is complete, simply replace the electrically operated coil for normal operation.

## WARNING

**DO NOT ENERGISE THE ELECTRICALLY OPERATED COIL UNLESS IT IS SEATED ON THE VALVE STEM CORRECTLY.**

**Keep away from heart pacemakers and magnetically stored data**

Media: fluid – air – steam - water - acid  
 Pressure range: 0 to 55 Bar max  
 Media temperature: -29°C to +232°C  
 Mounting: any position

# Stainless Y Filter

3/8 to 2 1/2"  
 316 Stainless  
 0.3 to 0.45mm filter mesh  
 0 - 55 Bar  
 TYPE YSS



## PRESSURE

Ø Port BSP	Ø Orifice (mm)	Pressure Rating (bar)		Part Number	List Price
		Min	Max		
3/8	10	0	55	YS38SS	£19.23
1/2	15	0	55	YS12SS	£19.23
3/4	20	0	55	YS34SS	£25.50
1	25	0	55	YS1SS	£39.75
1 1/4	32	0	55	YS114SS	£78.33
1 1/2	40	0	55	YS112SS	£92.64
2	50	0	55	YS2SS	£143.59
2 1/2	65	0	55	YS212SS	£232.53

## OPTIONS

NPT Thread	+ 10%
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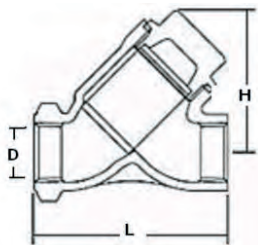
## CONSTRUCTION

Body : 316 stainless steel  
 Tube and internal parts : 304 Stainless steel  
 Seals and gaskets : PTFE  
 Pressure tested to 55 Bar

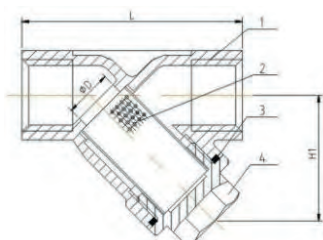
## REPAIR KIT

Filter mesh	KIT + valve part number
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## OVERALL DIMENSIONS



Port D	L	H	Kg
3/8	55	49	0.137
1/2	70	59	0.336
3/4	76	65	0.35
1	72	78	0.56
1 1/4	118	105	1.074
1 1/2	118	108	1.18
2	140	128	1.96
2 1/2	170	158	3.34



No	Description	Material
1	Body	CF8M Stainless
2	Filter Mesh	304 Stainless
3	Gasket	PTFE
4	Cover	CF8M Stainless
5	Bolt seal	PTFE

- Pressure Solenoid Valves
- Pinch Proportional Sub Base
- 2/2 & 3/2 Coaxial Solenoid Valves
- Electric Actuated Ball Valves
- Air Solenoid Valves
- Mechanical Air Valves
- Accessories, Fittings, Tubing
- FRL's, Filters Regulators Lubricators
- Air Actuated Valves
- Arrestors Vent Suction Check Valves
- Timers, Coils & Connectors
- Magnets & Y Filters

## INSTALLATION AND MAINTENANCE INSTRUCTIONS

### A. Installation.

Before mounting the valve it is **essential** to check that the solenoid valve model, the voltage (Volt) and the frequency (Hz) correspond to the characteristics required.

### B. Mechanical Part

Assembly of the solenoid valve must correspond with the flow direction indicated with an arrow on the valve body.

If the valves are provided with **caps for protecting** the connections, make sure they are removed before assembly.

Care should be taken to prevent **foreign bodies** from entering the valve during the assembly phase, e.g. material chips, dirt or particles of insulating material such as PTFE tape from the "external thread" connections.

Although the valve can be used in **any position**, the inverted position is not advised since possible impurities could become blocked inside the tube causing malfunctioning.

When installing the valve make sure that the position and surrounding **space are sufficient** to allow for possible future maintenance or replacement of the coil.

**Never use part of the tube** or the coil itself as a lever during the tightening phase: this could cause irreparable damage to the valve.

In those installations **where impurities, slag or deposits** of various types may infiltrate the fluid, it is advisable to mount a filter upstream of the valve.

In case of solenoid valves with **holes drilled for supports**, use must be made exclusively of these without modifying the holes or anything else on the valve body.

For solenoid valves with connections to be welded, please refer to paragraph D.

### C. Electrical Connections

**Before connecting** the coil to the supply system, make sure that the characteristics conform to the supply voltage.

Where applicable the earth terminal must be connected.

The coil should **not be energised** before being installed on the valve since this could cause it to burn out.

Rotate the coil to the most suitable position, loosening and subsequently **tightening the upper nut**.

### D. Working Temperature

It is normal for the coil temperature to increase during operation; irregular **overheating** will cause smoke and smell of burning. In this case the power supply must **be immediately isolated**.

Care should be taken **not to install** the valve **near a source of heat** or in environments where there could be a disruption to the dissipation of heat produced by the coil.

For special conditions, e.g. **high temperatures** or particular safety regulations please consult our catalogue or our Technical Office.

Particular attention should be paid to the temperatures when installing valves with welded connections.

When carrying out welding between the valve connection and the pipe system, it is necessary to dismantle the coil and check that the temperature of the valve body does not exceed values of 100°C - 150°C (200°F - 300°F). The flame should be regulated so that it does not come into contact with the valve. It is advisable to cool the valve body by wrapping it in a wet cloth. Should it be impossible to carry out these precautions, we suggested dismantling the parts inside the valve.

### E. Maintenance

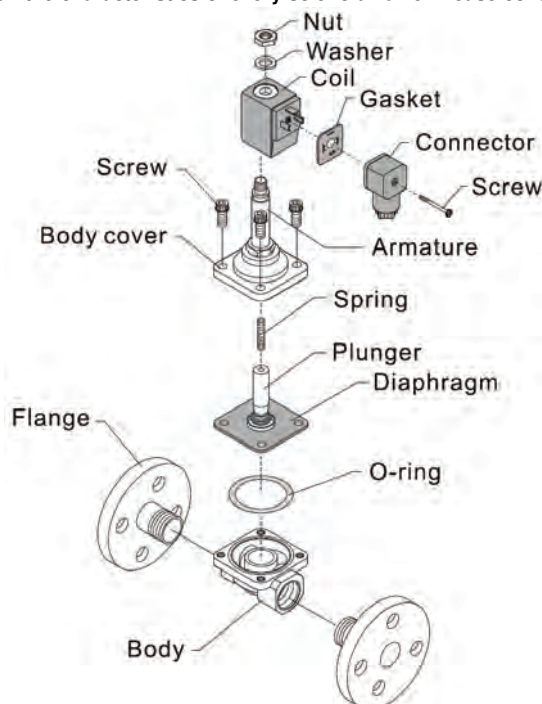
**After disconnecting** the supply voltage and discharging the pressure, carry out inspection of the valve.

**Clean and inspect** all the internal parts and replace them if necessary with type original spare parts available, as indicated in the catalogue.

**Remount all the parts**, making up the solenoid valve with care, paying great attention to the correct position of each part and protecting the sealing surfaces.

Check for **tightness** and correct operation.

**These general instructions give an approximate idea of the correct use of the solenoid valves but cannot in any way be considered as a substitute for the catalogue giving all the characteristics of every solenoid valve. Please consult this volume or our technical office for every new installation.**



## Solenoid Valve Fault Diagnosis – Check List

### Valve unable to open

**Failed Power Supply** – Check if valve is normally closed (power to open) Or Normally Open (Power to close), Use magnetic detector, Lift coil slightly to check if magnetic field is present Do not remove coil if energised as IT WILL BURN OUT, Check contacts, Check wire connections and DIN connector, Check fuses.

**Wrong Voltage** – Check coil marked voltage is correct for supply, Check voltage tolerances normally +/- 10% some AC coils work on the principle of creating an inrush condition to open the valve, check your power supply is rated for the coil current requirements. Most valves will have cable plugs rated to IP65, ensure cable gland and cable diameter are matched, plug connecting screw correctly tightened and allow cable to drop under cable gland to help prevent ingress of water droplets.

**Coil Burnt Out** – Check valve armature is not stuck, Check there has been no water ingress if need be prevent water droplets reaching coil do not encapsulate coil as will over heat, check correct voltage is supplied, replace coil.

**Pressure – Too High** – Check coil power rating, higher power version may be required. Reduce inlet pressure in line with valve specification as shown.

**Pressure – Too Low** – Check inlet/ outlet pressure difference (Differential) is in line with design conditions of the valve. If too low valve will need replacing with zero rated valve. Remember that the downstream side can rise to a higher tank or system, so should also be subtracted from the supply side pressure. Other system demands may also reduce the overall supply pressure And downstream elbows or equipment will further reduce differentials.

**Damaged Armature Tube** – Replace armature tube.

**Dirt Ingress Under Diaphragm** – Clean diaphragm or replace if damaged. Fit Y type strainer upstream to filter out suspended particles.

**Dirt Ingress In Armature Tube** – Clean valve armature or replace. Suspended particles of dirt can be filtered out with a strainer, always mount valve with coil upright to reduce wear and assist particles to gravitate away. If hard water scale builds up install water softener or dry armature valve, otherwise install Y type strainer to filter out suspended particles.

**Corrosion** – Replace damaged components and check media compatibility with valve if the armature is pitted due to cleaning or dosing fluids Some weak acids & Alkali's can attack the 430F stainless steel armature, which is corrosion resistant but not guaranteed to withstand all media.

**Missing Components After Maintenance** – Replace parts.

### Valve opens slightly

**Low Pressure** – Check inlet/ outlet pressure difference (Differential) is in line with valve specification. If differential is too low the valve will need replacing with a zero rated version. Remember that the downstream pressure can rise due to vertical pipes, elbows or other down stream equipment, so should also be subtracted from the supply side pressure. Other system demands may also reduce the overall supply (inlet) pressure such as elbows or other equipment that will further reduce these pressure differentials.

**Damaged Or Bent Armature Tube** – Replace tube.

**Dirt Ingress Under Diaphragm** – Clean diaphragm or replace if damaged. Fit Y type strainer upstream.

**Corrosion** – Replace damaged components and check media compatibility with valve.

Do not use EPDM seals on Oils or Fats as the seals will swell and restrict flow. Call technical help line or soak seals or component parts overnight to see if seals swell up or react with the media.

**Missing Components After Maintenance** – Replace parts.

### Valve fail to close or partly closes

**Residual Power To Coil** – Lift coil slightly to check if magnetic field is present, Do not completely remove coil if energised as IT WILL BURN OUT. Check wiring and diagrams, Check lead connections.

**Dirt Ingress In Pilot Hole Under Coil Armature** – Clean orifice with pin or compressed air.

**Manual Over Ride** – Check position of manual over ride and adjust if required.

**Pressure Pulse Upstream, Pressure Difference in/out Too High, Outlet Pressure Occasionally Higher Than Inlet**

**Pressure** – Check valve technical data and replace if necessary, Check pressure and flow, Check other items in installation.

**Damaged or Bent Armature Tube** – Replace tube.

**Damaged Diaphragm Base Or Valve Seat** – Replace valve. Check valve is being used within its specification.

**Diaphragm Inverted** – Refit diaphragm correctly or replace with new part.

**Dirt Ingress In Armature Tube** – Clean valve armature or replace. If hard water scale build up install water softener or dry armature valve.

**Corrosion In Pilot Orifice** – Replace damaged components, Check valve specification in suitable for application.

**Valve Installed Wrong Way Around** – Check flow direction is in line with flow direction arrow or in/out markings on ports.

**Missing Components After Maintenance** – Replace parts.

### Valve noise appears incorrect

**Wrong Voltage** – Check coil marked voltage is correct with power supply, Change coil for correct one if required, Check wiring and wiring diagram, Check voltage tolerance, normally +/- 10%.

**Coil Short Circuit** – Check remaining installation for short circuit, Check lead connections at coil and DIN connector, Check for moisture in coil, Replace as required. Check IP rating.

**Coil Armature Slow** - Replace damaged armature, Check media compatibility with valve.

**Bent Armature Tube** - Replace accordingly.

**Dirt In Armature Tube** - clean and fit Y type strainer.

**Media Temperature Too High** - Check media temperature against valve technical data, Move valve to cooler area or increase ventilation around valve & coil, Check you have correct function normally closed or normally open.

# Useful Engineering Data

Liquid Flow Formulae				Air Flow Formulae		
$Q=K_v \times \sqrt{(\Delta P/d)}$ or $\Delta P=d(Q/K_v)^2$				Where $\Delta P$ less than P1/2	Where $\Delta P$ equal to P1/2	
				$Q=1.69K_v\sqrt{(\Delta P \times P^2)}$	$Q = 0.84K_v \times P_1$	
Q = Flow L/Min ΔP = Pressure Drop (Bar) d = density i.e. Water = 1 Cv = flow factor coefficient of valve (L/Min) (N.B. ΔP 5 - 10% is preferred)				Q = Flow (M³ Hr) ΔP = Pressure Drop (Bar) Kv = flow factor coefficient of valve (M³ Hr) P1 = inlet pressure + 1 bar P² = absolute downstream pressure = (inlet pressure + 1 bar - ΔP)		
Saybolt Universal (seconds)	Engler (degrees)	Kinematic (centistokes)	Saybolt Universal (seconds)	Engler (degrees)	Kinematic (centistokes)	
-	1.05*	1.5	103	3.0	21.3	<b>PRESSURE</b>  1 Bar = 14.5 PSI 1 Bar = 100 kPa (Kilopascal) 1 PSI = 6.9 kPa 1 Kg/cm² = 0.98 Bar 1 Atmosphere = 1.013 Bar 1 Inch Water gauge = 2.49 mbar 1 mm Mercury = 1.33 mbar 1 Ton / in² = 154 Bar
34	1.15*	2.5	109	3.2	22.8	
37	1.25*	3.4	115	3.4	24.1	
40	1.3*	4.2	125	3.7	26.7	
42	1.4*	5.0	137	4.0	29.2	
45	1.45*	5.7	148	4.3	31.7	
50	1.6*	7.5	160	4.6	34.2	
57	1.8*	9.4	171	4.9	36.8	
62	1.9	11.0	183	5.2	39	
68	2.1	12.6	205	5.9	44	
74	2.2	14.2	242	7	50	
85	2.6	17.0	285	8.1	62	
92	2.7	18.6	313	8.9	68	
98	2.9	20.0	342	9.8	74	
<b>Degrees Of Protection Provided By Electrical Enclosures (IP rating)</b>						
1 <sup>st</sup> No.	Definition	Test Type	2 <sup>nd</sup> No.	Definition	Test Type	
1	Protected against objects Ø 50mm Protect from access with hand		1	Protected against vertically falling water drops		
2	Protected against objects Ø 12.5mm Protected against access with finger		2	Protected against vertically falling water drops up to 15° inclination.		
3	Protected against objects Ø 2.5mm Protected against access with tool		3	Protected against vertically falling water drops up to 60° inclination.		
4	Protected against objects Ø 1.0mm Protected against access with wire		4	Protected against splashing water in any direction		
5	Dust protected		5	Protected against water jets from any direction		
6	Dust tight		6	Protected against powerful water jets from any direction		
i.e. IP65 Ingress Protection (6) Dust Tight (5) Protected against water jets from any direction			7	Protected against temporary immersion in water		
			8	Protected against the effect of submersion		

## PRESSURE

1 Bar = 14.5 PSI  
 1 Bar = 100 kPa (Kilopascal)  
 1 PSI = 6.9 kPa  
 1 Kg/cm<sup>2</sup> = 0.98 Bar  
 1 Atmosphere = 1.013 Bar  
 1 Inch Water gauge = 2.49 mbar  
 1 mm Mercury = 1.33 mbar  
 1 Ton / in<sup>2</sup> = 154 Bar

## Volume

1 Gallon (UK) = 4.54 Litres  
 1 Gallon 9USA = 3.79 Litres  
 1 Pint (UK) = 0.57 Litres  
 1 Pint (USA) = 0.47 Litres  
 1 Fluid Once (UK) = 28.4 cm<sup>3</sup>  
 1 Fluid Once (USA) = 29.6 cm<sup>3</sup>

## FLOW

1 CFM = 0.472 Litres a second  
 1 CFM = 0.000472 m<sup>3</sup>/Sec  
 1 CFM = 28.32 Litres a minute

## Temperature

From °F to C°  
 Add 40 then multiply by 5 then divide by 9 then -40

From C° to F°  
 Multiply by 9 then -40 divide by 5 then +40

## Length

1 Inch = 25.4mm  
 1/16" Inch = 1.5875mm  
 1 foot = 0.305 Meters  
 1 Mile = 1.609 Kilometre

## **Terms and Conditions Of Sale (The Seller)** **to all Buyers (The Buyer)**

Where the expression 'The Company' is used in this document it shall mean 'The Seller'.

1. **General**

**The acceptance of this catalogue is the acceptance of the following terms and conditions.** All quotations made and all orders are accepted subject to the following conditions. All conditions of the Buyer or other condition's whatsoever are excluded from the contract or any variation thereof, unless expressly accepted by the Company in writing. Quotations shall only be available for acceptance for a maximum period of 30 days from the month of quotation, unless stipulated in writing from the Company and may be withdrawn by the company within such a period at any time without notice.

2. **Prices**

All prices are quoted net ex works and are subject to change without prior notice. Any increase in such costs during the period of production will be added to the quoted price. All prices exclude VAT, which will be added in accordance with current law. In the event of any alteration required by the Buyer in design specification or quantities, the Company shall be entitled to make an adjustment of the contract price corresponding to such alteration. The cost of carriage and packing will be charged extra on all orders to the Buyer unless specified otherwise by the Company.

3. **Delivery**

Time for delivery is given as accurately as possible but is not guaranteed. The Buyer shall have no right to damages or to cancel the order for failure for any cause to meet any delivery time stated. Date of delivery shall in every case be dependent upon receipt of final instructions or approvals being obtained from the Buyer. The Company will endeavour to comply with reasonable requests for postponement of delivery but shall be under no obligation to do so.

4. **Risk: Insurance Title**

Risk shall pass to the Buyer when the goods or the relevant part thereof leave the premises of the Company for delivery to the Buyer notwithstanding that the Company may arrange for delivery.

**Title in the goods shall pass to the Buyer when the Company has received payment in full.**

5. **Cancellation**

Orders cannot be cancelled except with our consent and on terms that will indemnify the Company against all loss.

6. **Terms of payment**

Credit terms are subject to acceptance by the company's credit protection agents. All accounts shall be net monthly and payable by the Buyer not later than the 30th day of the month following the date of invoice. No disputes arising under the contract nor delays beyond the control of the Company shall interfere with the prompt payment by the Buyer. In the event of default, the Buyer will allow the Company or his agent to enter the premises where the goods are kept and remove the same. The Buyer will be responsible to the Company for all costs incurred in reclaiming the goods.

7. **Shortages and Defects Apparent on Inspection**

Any claim for shortages or defects apparent on inspection will only be considered if: -

The Buyer inspects the goods within 3 days of delivery. Any complaint must be made to the Company in writing prior to the expiry of seven days from the delivery and The company is given the opportunity to inspect the goods. If a complaint is not made to the Company herein provided then the goods shall be deemed to be in all respects in accordance with the contract and the Buyer shall be bound to pay for the same accordingly. The Company is in no way responsible for the delivery of the goods and is in no way liable for claims for loss or damage in transit, which must be made by the Buyer against the Carrier in accordance with the Carriers conditions.

8. **Guarantee**

Save as provided by Condition 7 hereof the Company agrees to replace or repair at it's option goods or parts of goods manufactured and or supplied by the Company and proved to the Companies satisfaction to be faulty. (Excepting fair wear and tear or damage due to misuse or faulty operation), provided that such fault be notified within twelve months from the date of despatch from the Companies works. Any such replacement shall include free delivery to Buyers works. The Company shall not be liable for consequential damage or loss or injury resulting from defective goods, performance fluctuations from specification or failure by employees or sub contractors.

9. **Regulations**

Where the components supplied are "Safety Critical" the liability of the Company shall be limited to the standard of production required by the appropriate quality control procedure of the Company which will be produced to the Buyer on request at the relevant time. No responsibility is accepted by the company for failure to comply with any regulations or requirements of any government or other authority.

10. **Data**

Illustrations, weights, measures specifications and performance schedules set out in the sales literature of the Company are statements of opinion and are provided for information only and form no part of the contract.

11. **Sub-Contractors**

The Company shall be entitled to appoint one or more sub contractors to carry out all or any of its obligations hereunder.

12. **Legal**

The Contract shall in all respects be construed and operated as an English contract and in conformity with English Law.

13. **Contract**

The Company reserves the right to add 4% per month to the invoice price of any batch which is held on the Buyers instructions, or if payment is not made within the agreed period shown on the quotation or within 38 days following the month of invoice.



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