

The Fluid Control Solutions Europe (FCSE) is a Business Unit of FCCE Division of Parker Hannifin, the global leader in motion and control technologies.

Our European headquarter is located in Gessate (Milan), this is also where our R&D, Marketing, Application Support and Product Management functions are located.

History

Parker FCSE has been a leading player in the manufacturing and development of solenoid valve technologies for over 60 years, with continuous research and development bringing innovative solutions to the marketplace, for example leading the way in the utilisation of synthetic ruby for critical water applications or the unsurpassed reliability and precision of our pressure regulators.

The expertise accumulated and developed through the years is evident in the superior quality of FCSE solutions.

Fast Delivery

Most products listed in this catalogue are showing the fast delivery sign as you can see below.



These products are stocked items and will ensure 48 hours delivery time upon receipt of the order.

Quality Standards



- ISO 9001
- ISO 14001
- ISO 18001

Certifications and approvals

Our products have been approved and are compliant with the relevant market requirements including:

- CE
- RoHS
- REACH
- NSF
- UL
- CSA
- VDE
- IMQ
- DIN - TUV
- AGA
- ATEX
- IECEx
- Ex EAC
- KOSHA
- NEPSI

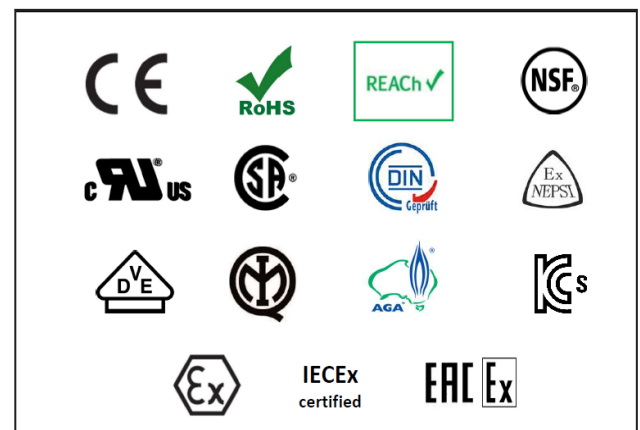


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HOW TO SELECT A VALVE

Once you are in the selected family **1** and application **2**
The summary table is designed to help you navigate to the products matching your criteria.

First decide the actuation **3**, then move across the table selecting your body material **4**,
function **5** and technical requirements **6**.

When a proper selection is made, please go to the corresponding page number in column **7**

1

SELECT PRODUCT FAMILY

2

SELECT APPLICATION

3

SELECT ACTUATION

4

SELECT BODY

5

SELECT FUNCTION

6

SELECT TECHNICAL DATA

7

SELECT CORRESPONDING PAGE

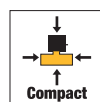
Please find below the pictograms you will find in the catalogue to help you identify the specifications of each valves



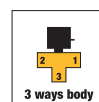
Valve is closed when de-energized



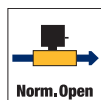
Valve capable of high pressure



Compact size valve



3 way in the valve body



Valve is open when de-energized



Valve with high performances



Fast delivery



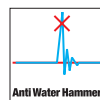
Valve with 3/2 - 5/2 conversion plate



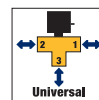
Allows manual control of the valve



Valve with high flow factor KV



Anti water hammer valve



Valve can be used as NC/NO, bypass and mixer applications



High corrosion resistant



Valve easy to maintain and service



Valve compatible with air and neutral gases only



Valve for slurry solutions, high pressures, high temperatures

1
2/2

2 VALVES FOR ALL FLUIDS AND AIR



The Parker 2 way valves (1 way for inlet and 1 way for outlet) for all fluids, including air, offer large possibilities to control many kinds of fluids with different sealing and flow capabilities. According to the installation and requirements, a wide selection of robust valves is proposed to fulfill the most demanding needs.

Typical applications are:

- Shut off valves
- Filling
- Dosing
- Air handling
- Mixing

These applications can be found in many markets where reliability and performances are key factors like in industries, water treatment, transportation, medical, process, etc...

Actuation	Body	Function	Specification	Port Size	Orifice (mm)	MOPD (bar)	Page
Direct Operated (No minimum pressure required)	Brass/ Pipe Mounting	Normally Closed	-	1/8" to 1/4"	2 to 6	15	8
			High Performance	1/4" to 1/2"	1.2 to 11	80	10
	316L Stainless St./ Pipe Mounting	Normally Open	High Performance / Manual override	1/4"	3 to 4	10	16
			High Performance	1/4"	1.5 to 2.5	30	17
Pilot Operated (Minimum pressure required)	Brass/ Pipe Mounting	Normally Closed	-	1/8" to 1/2"	1.5 to 5	20	18
			-	1/4"	3	6	19
	316L Stainless St./ Pipe Mounting	Normally Open	Compact / High flow	1/4" to 1/2"	11	10	20
			Easy Maintenance	1/4" to 1"	12 to 18	10	28
			For Air / Neutral Gases	1"	13 to 25	16	16
			High Flow / High Pressure	1/2"	8 to 15	40	30
Magnalift (No minimum pressure - High flow)	Brass/ Pipe Mounting	Normally Closed	Easy Maintenance	1/2" to 3/4"	12 to 18	12	30
			High Flow / High Pressure	1/2"	15	40	31
	316L Stainless St./ Pipe Mounting	Normally Closed	High Performance	1/2"	15	15	31
			-	3/8" to 1"	13 to 25	5	32
Air Operated	316L S.Steel Body / 304 S.Steel Actuator/ Pipe Mounting	Normally Closed	High Performance	3/8" to 1"	15 to 25	16	33
			-	3/8" to 1"	15 to 24	10	35
	316L S.Steel Body / Aluminium Actuator/ Pipe Mounting	Normally Closed	Angle Seat Valve - Air operated	3/8" to 1-1/4"	13 to 31	16	36
			Angle Seat Valve - Air operated	3/8" to 1-1/4"	13 to 31	16	38
			Angle Seat Valve - Air operated	1/2" to 1"	13 to 24	16	39



The Parker 2 way solenoid valves (1 way for inlet and 1 way for outlet) to control many kinds of fluids with different sealing and flow capabilities.

A wide selection of solenoid valves is proposed to fulfill the most demanding needs.

Typical applications are:

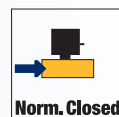
- Fluid control shut-off
- Filling
- Dosing
- Air handling
- Mixing

Actuation	Body	Function	Specification	Port Size	Orifice (mm)	MOPD (bar)	Page
Direct Operated (No minimum pressure required)	Brass/ Pipe Mounting	Normally Closed	High Performance	1/4" to 1/2"	1.2 to 11	80	8-9
			High Performance / Manual override	1/4"	3 to 4	10	10
		Normally Open	High Performance	1/4"	1.5 to 2.5	30	11
	316L Stainless St./ Pipe Mounting	Normally Closed	Corrosion Resistant	1/4"	1.5 to 5	20	27
Pilot Operated (Minimum pressure required)	Brass/ Pipe Mounting	Normally Closed	Easy Maintenance	3/8" to 2"	12 to 40	16	12
			High Flow / High Pressure	1/4" to 1/2"	8 to 15	40	14
		Normally Open	Easy Maintenance	1/2" to 2"	12 to 40	16	16
			High Flow / High Pressure	1/2"	15	40	18
Magnalift (No minimum pressure)	Brass/ Pipe Mounting	Normally Closed	High Performance	3/8" to 1"	15 to 25	16	19-20
	316L Stainless St./ Pipe Mounting	Normally Closed	Corrosion Resistant	3/8" to 1"	15 to 25	10	21
Air Operated	316L S.Steel Body / 304 S.Steel Actuator/ Pipe Mounting	Normally Closed	Angle Seat Valve - Air operated	3/8" to 1-1/4"	13 to 31	16	22-23
		Normally Open	Angle Seat Valve - Air operated	3/8" to 1-1/4"	13 to 31	16	24
	316L S.Steel Body / Aluminium	Normally Closed	Angle Seat Valve - Air operated	1/2" to 1"	13 to 24	16	25

2/2

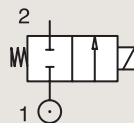
VALVES FOR ALL FLUIDS AND AIR

DIRECT OPERATED

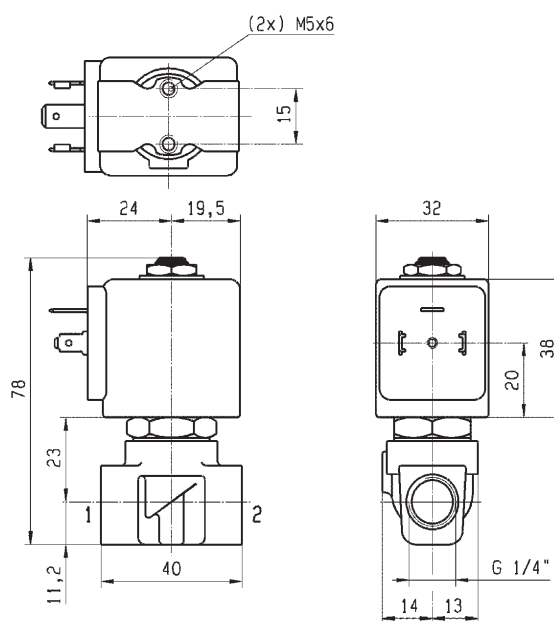


BRASS PIPE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max (MOPD)		Min °C	Max °C				AC W	DC W		
BSP	mm					AC bar	DC bar									
1/4"	1.2	0.85	0.05	50	0	80	36	-30	100	Ruby	E121K65-2995	482725	8	9	2.0	3510
	1.5	1.5	0.09	80	0	60	25	-30	75	PCTFE	E121K04-2995	482725	8	9	2.0	3510
	1.5	1.5	0.09	80	0	20	20	-10	100	FKM	E121K0402-2995	482725	8	9	2.0	3510
	1.5	1.5	0.09	80	0	60	25	-30	100	Ruby	E121K67-2995	482725	8	9	2.0	3510
	2.5	3.5	0.21	220	0	28	10	-30	100	Ruby	E121K63-2995	482725	8	9	2.0	3510
	2.5	3.5	0.21	220	0	14	7	-10	100	FKM	121K0706-2995	482725	8	9	2.0	3510
	3	4.5	0.27	320	0	20	7	-30	75	PCTFE	E121K03-2995	482725	8	9	2.0	3510
	3	4.5	0.27	-	0	10	7	0	100	EPDM	121K0323-2995	482725	8	9	2.0	3510
	3	4.5	0.27	320	0	10	7	-10	100	FKM	E121K0302-2995	482725	8	9	2.0	3510
	3	4.5	0.27	320	0	20	7	-30	100	Ruby	E121K64-2995	482725	8	9	2.0	3510
	4	7.5	0.45	480	0	10	4	-10	100	FKM	121K02-2995	482725	8	9	2.0	3510
	5	11	0.66	750	0	7	2	-10	100	FKM	121K01-2995	482725	8	9	2.0	3510

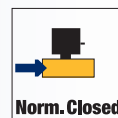


Fast Delivery

Drawing 3510

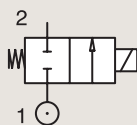
2/2

VALVES FOR ALL FLUIDS AND AIR DIRECT OPERATED

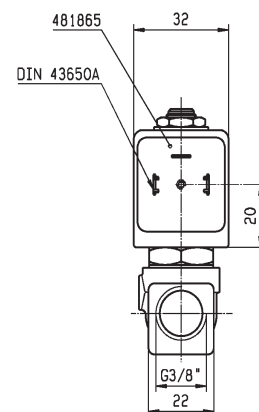
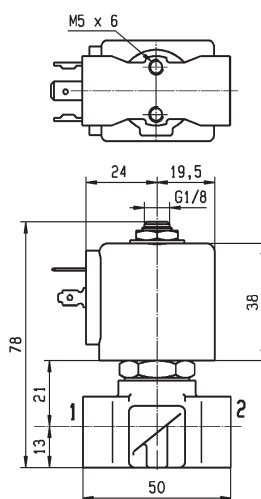


BRASS PIPE MOUNTING

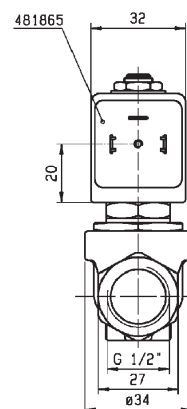
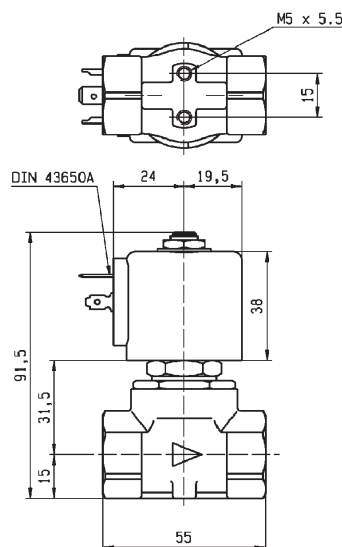
NORMALLY CLOSED



Port size	Orifice Ø	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv	Qv	Qn	Min	Max (MOPD)		Min	Max				AC W	DC W		
BSP	mm	l/min	m³/h	l/min	bar	AC bar	DC bar	°C	°C							
3/8"	4	7.5	0.45	480	0	10	4	-10	100	FKM	121K3206-2995	482725	8	9	2.0	3551
	5	11	0.66	750	0	7	2	-10	100	FKM	121K3106-2995	482725	8	9	2.0	3551
	6	12	0.72	1100	0	5	1.1	-10	100	FKM	121K3306-2995	482725	8	9	2.0	3551
1/2"	8.5	25	1.5	1600	0	1.1	0.5	-10	100	FKM	E121K46-2995	482725	8	9	2.0	3427
	11	36	2.16	2500	0	0.7	0.3	-10	100	FKM	E121K45-2995	482725	8	9	2.0	3427



Drawing 3551



Drawing 3427

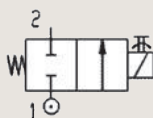
2/2

VALVES FOR ALL FLUIDS AND AIR DIRECT OPERED



BRASS PIPE MOUNTING

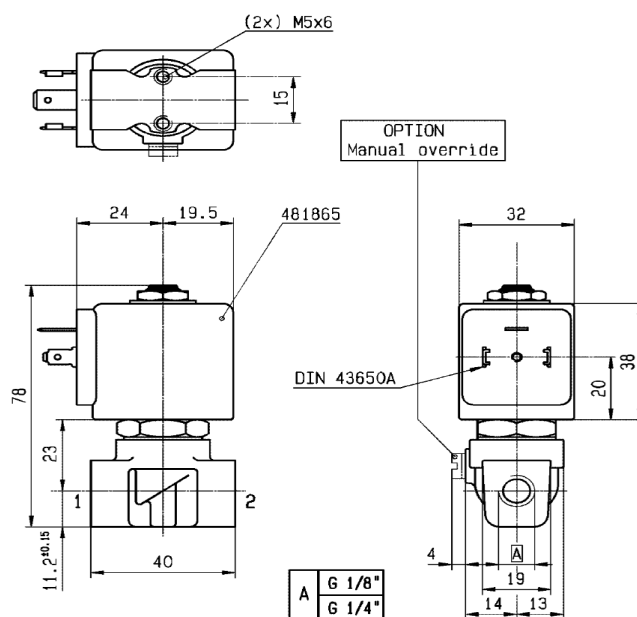
NORMALLY CLOSED



Port size	Orifice Ø	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Min	Max (MOPD)		Min	Max	AC W	DC W								
BSP	mm	Kv l/min	KV m³/h	Qn l/min	bar	AC bar	DC bar	°C	°C							
1/4"	3	4.5	0.27	320	0	10	7	-10	100	FKM	E121K0352-2995 ₁	482725	8	9	2.0	3510
	4	7.5	0.45	480	0	10	4	-10	100	FKM	121K0250-2995 ₁	482725	8	9	2.0	3510

Notes:

1. With manual override

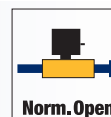


Drawing 3510

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VALVES FOR ALL FLUIDS AND AIR

DIRECT OPERATED



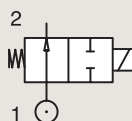
Norm. Open



High Perf.

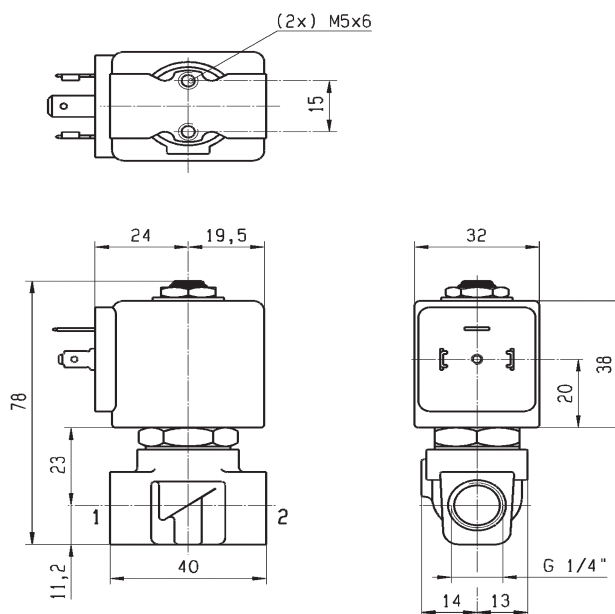
BRASS PIPE MOUNTING

NORMALLY OPEN



Port size	Orifice Ø	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv	KV	Qn	Min	Max (MOPD)		Min	Max				AC W	DC W		
BSP	mm	l/min	m³/h	l/min	bar	AC bar	DC bar	°C	°C							
1/4"	1.5	1.5	0.09	80	0	30	30	-10	100	PCTFE	122K84-2995	482725	8	9	2.0	3510
	1.5	1.5	0.09	80	0	20	20	-10	100	FKM	122K8406-2995	481865	8	9	2.1	3510
	2.5	3	0.18	180	0	12	12	-30	75	PCTFE	122K83-2995	482725	8	9	2.0	3510
	2.5	3	0.18	180	0	12	12	-10	100	FKM	122K8306-2995	482725	8	9	2.0	3510

Fast Delivery

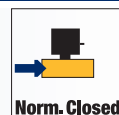


Drawing 3510

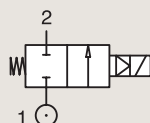
2 WAY VALVES

2/2

VALVES FOR ALL FLUIDS AND AIR PILOT OPERATED

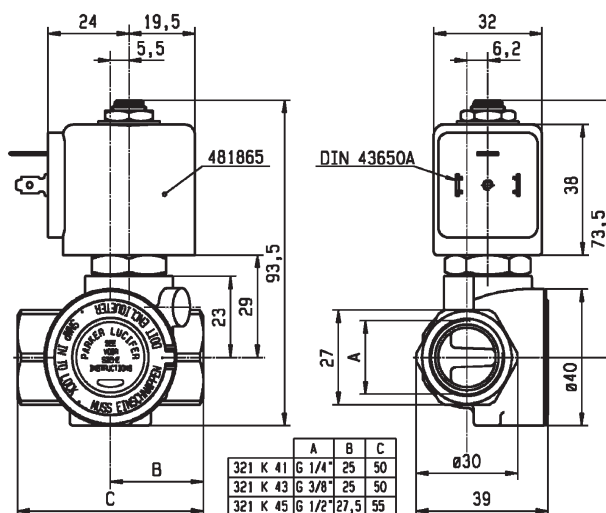


BRASS PIPE MOUNTING NORMALLY CLOSED



Port size	Orifice Ø	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
BSP	mm	Kv l/min	KV m³/h	Qn l/min	Min bar	Max (MOPD)		Min °C	Max °C				AC W	DC W		
3/8"	12	45	2.7	3050	0.3	12	12	-10	100	FKM	321K4306-2995	482725	8	9	2.0	7094
1/2"	12	50	3	3400	0.3	12	12	-10	100	FKM	321K4506-2995	482725	8	9	2.0	7094
3/4"	18	100	6	9400	0.3	12	12	-10	100	FKM	321K4606-2995	482725	8	9	2.0	7099
1"	18	100	6.6	10150	0.3	12	12	-10	100	FKM	321K4706-2995	482725	8	9	2.0	7100
1 1/2"	40	420	25.2	31500	0.3	16.0	7.0	-10	100	FKM	E321G3906-2995	482725	8	9	2.0	3442
2"	40	540	32.4	40000	0.3	16.0	7.0	-10	100	FKM	E321G4006-2995	482725	8	9	2.0	3442

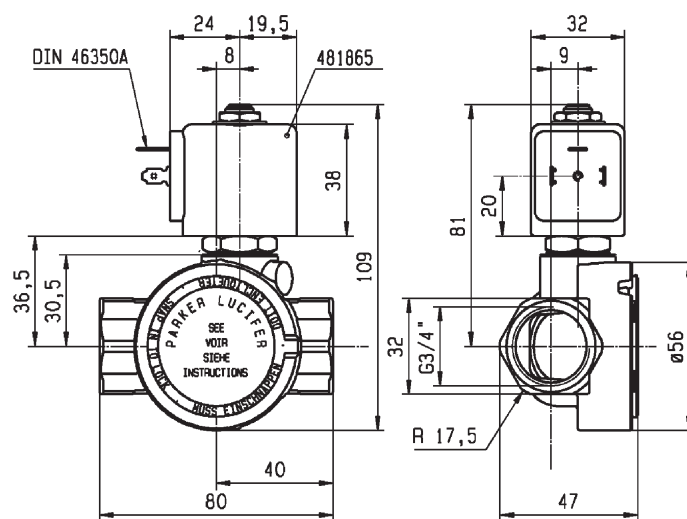
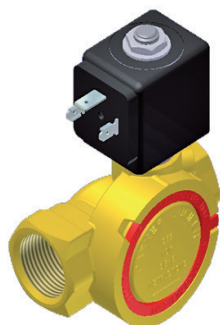
Fast Delivery



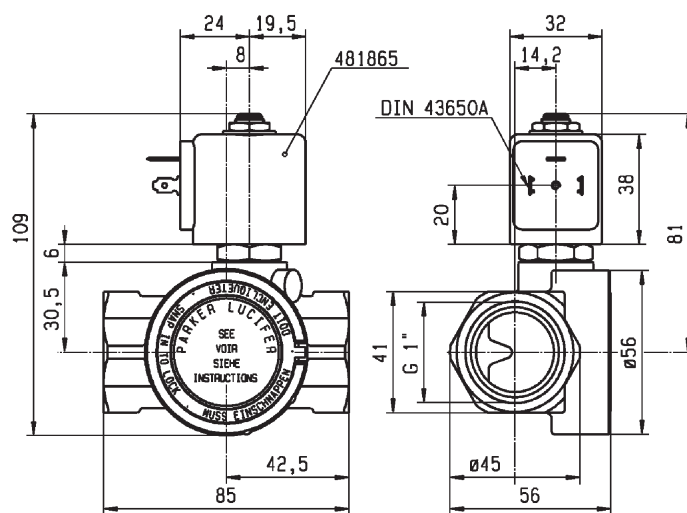
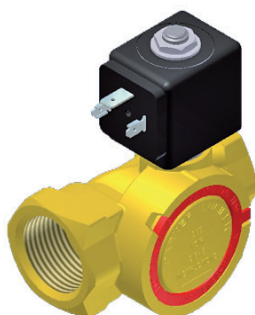
Drawing 7094

2/2

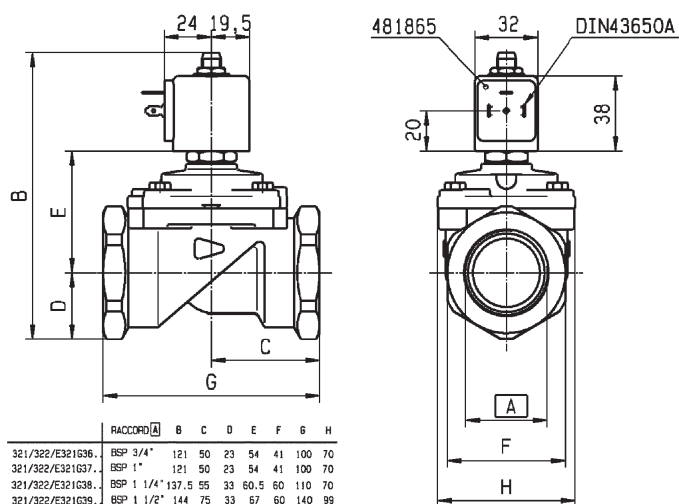
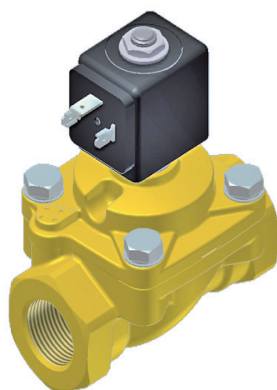
VALVES FOR ALL FLUIDS AND AIR PILOT OPERATED



Drawing 7099



Drawing 7100

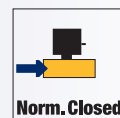


Drawing 3442

	RACCORD(A)	B	C	D	E	F	G	H
321/322/E321G36..	BSP 3/4"	121	50	23	54	41	100	70
321/322/E321G37..	BSP 1"	121	50	23	54	41	100	70
321/322/E321G38..	BSP 1 1/4"	137.5	55	33	60.5	60	110	70
321/322/E321G39..	BSP 1 1/2"	144	75	33	67	60	140	99
321G3966/G3967	UNF 1 7/8"	144	75	33	67	60	140	99
U321/U322G40..	BSP 2"	158.5	80	41.5	73	75	150	99

2/2

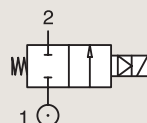
VALVES FOR ALL FLUIDS AND AIR PILOT OPERATED



BRASS

PIPE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max (MOPD)		Min °C	Max °C				AC W	DC W		
BSP	mm					AC bar	DC bar									
1/4"	8	36	2.16	1600	0.3	40	25	-10	100	NBR	E321H11-2995 ₁₂	482725	8	9	2.0	3523
3/8"	11	50	3	2800	0.3	40	25	-10	100	NBR	E321H13-2995 ₁₂	482725	8	9	2.0	3523
1/2"	15	60	3.6	-	0.3	40	25	-10	100	FKM	E321H25-2995 ₂	482725	8	9	2.0	3523

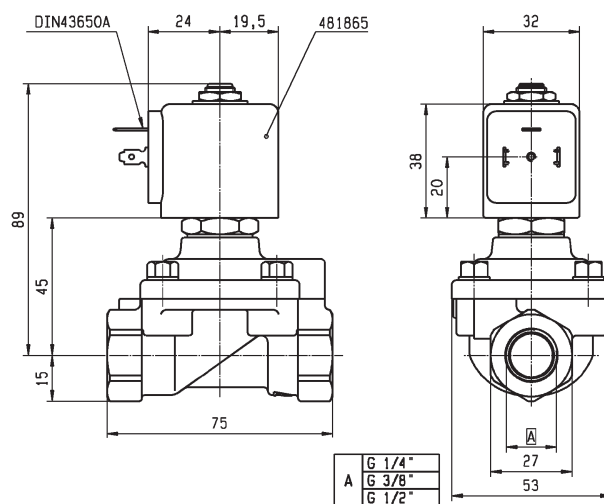
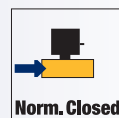
Notes:

1. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing
2. Pilot seat disc in synthetic Ruby

Fast Delivery

2/2

VALVES FOR ALL FLUIDS AND AIR

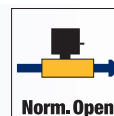


Drawing 3523

2 WAY VALVES

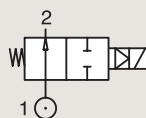
2/2

VALVES FOR ALL FLUIDS AND AIR PILOT OPERATED



BRASS PIPE MOUNTING

NORMALLY OPEN

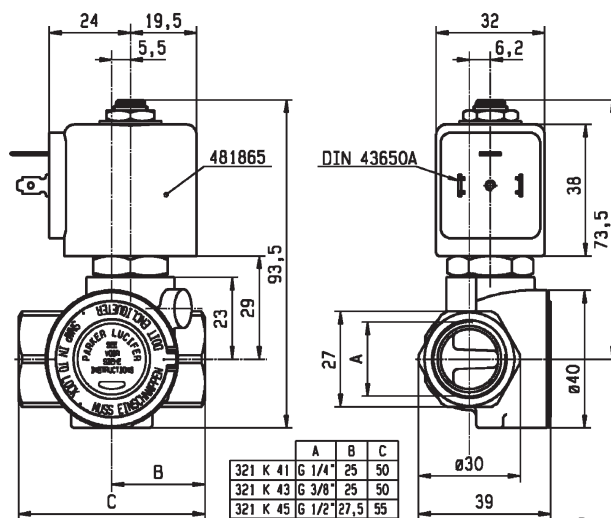


IECEX
certified



Port size	Orifice Ø	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv	KV	Qn	Min	Max (MOPD)		Min	Max				AC W	DC W		
BSP	mm	l/min	m³/h	l/min	bar	AC bar	DC bar	°C	°C							
1/2"	12	50	3	3400	0.3	12	12	-10	100	FKM	322K4506-2995	482725	8	9	2.1	7094
3/4"	18	100	6	9400	0.3	12	12	-10	100	FKM	322K4606-2995	482725	8	9	2.1	7099
1"	18	110	6.6	10150	0.3	12	12	-10	100	FKM	322K4706-2995	482725	8	9	2.0	7100
1 1/2"	40	420	25.2	31500	0.3	16.0	7.0	-10	100	FKM	322G3906-2995 ₁	482725	8	9	2.0	3442
2"	40	540	32.4	40000	0.3	16.0	7.0	-10	100	FKM	322G4006-2995 ₁	482725	8	9	2.0	3442

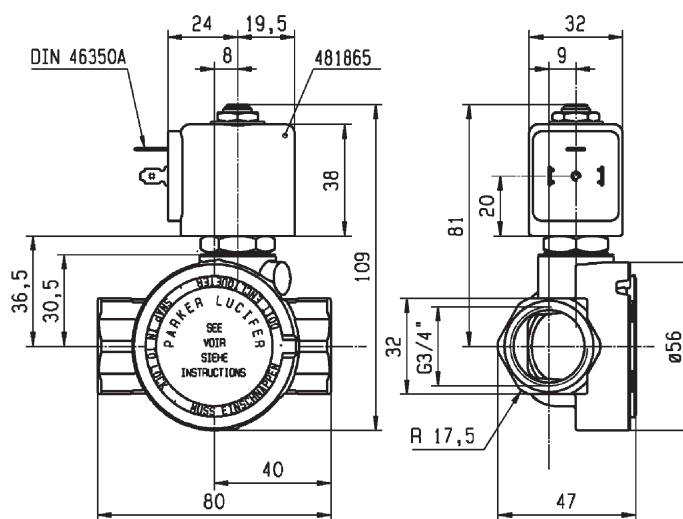
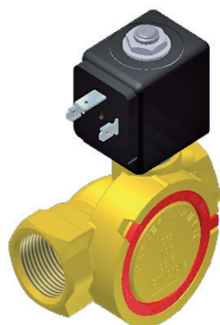
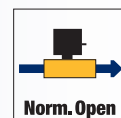
Fast Delivery



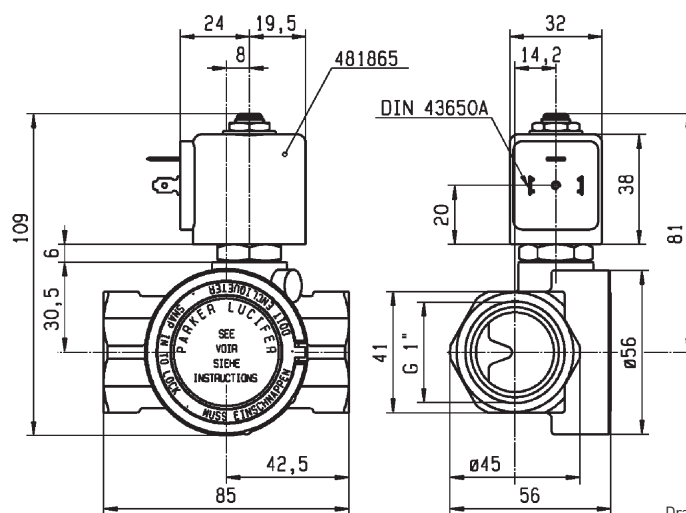
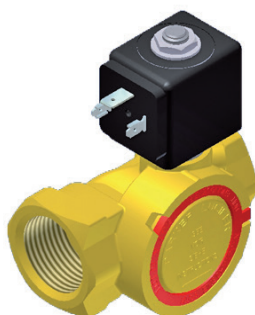
Drawing 7094

2/2

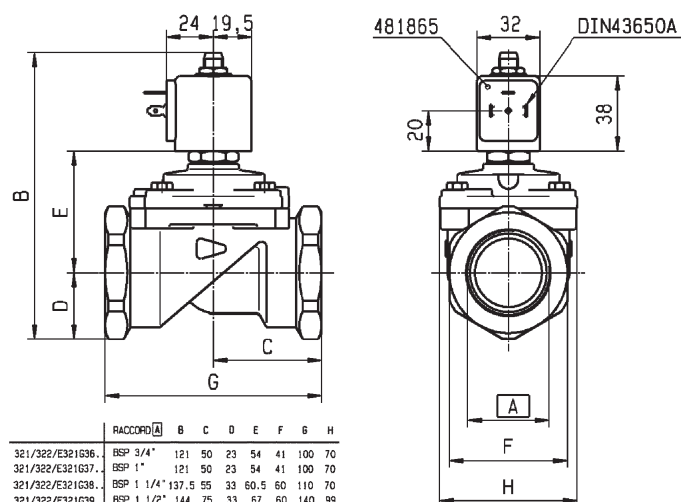
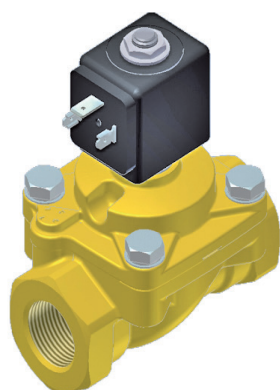
VALVES FOR ALL FLUIDS AND AIR PILOT OPERATED



Drawing 7099



Drawing 7100

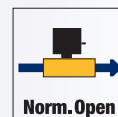


Drawing 3442

	RACCORD(A)	B	C	D	E	F	G	H
321/322/E321G36..	BSP 3/4"	121	50	23	54	41	100	70
321/322/E321G37..	BSP 1"	121	50	23	54	41	100	70
321/322/E321G38..	BSP 1 1/4"	137.5	55	33	60.5	60	110	70
321/322/E321G39..	BSP 1 1/2"	144	75	33	67	60	140	99
321G3966/G3967	UNF 1 7/8"	144	75	33	67	60	140	99
U321/A322G40..	BSP 2"	158.5	80	41.5	73	75	150	99

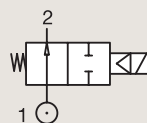
2/2

VALVES FOR ALL FLUIDS AND AIR PILOT OPERATED



BRASS PIPE MOUNTING

NORMALLY OPEN



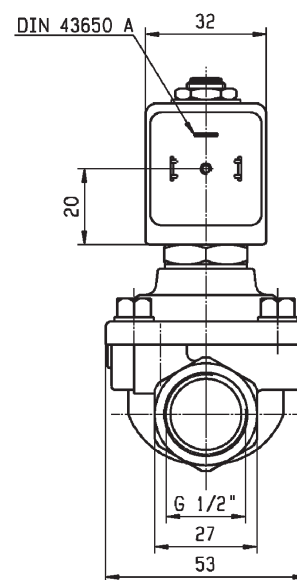
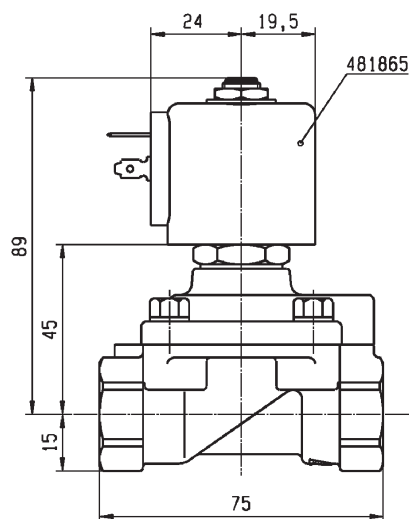
Port size	Orifice Ø	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv	KV	Qn	Min	Max (MOPD)		Min	Max				AC W	DC W		
BSP	mm	l/min	m³/h	l/min	bar	AC bar	DC bar	°C	°C							
1/2"	15	60	3.6	3890	0.3	40	40	-10	100	NBR	322H75-2995 ₁₂	482725	8	9	2.0	3522
	15	60	3.6	3890	0.3	40	40	-10	100	FKM	322H7506-2995 ₁₂	482725	8	9	2.0	3522

Notes:

1. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing

2. Pilot seat disc in synthetic Ruby

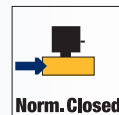
Fast Delivery



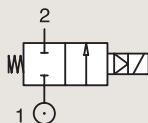
Drawing 3522

2/2

VALVES FOR ALL FLUIDS AND AIR MAGNALIFT



BRASS PIPE MOUNTING NORMALLY CLOSED

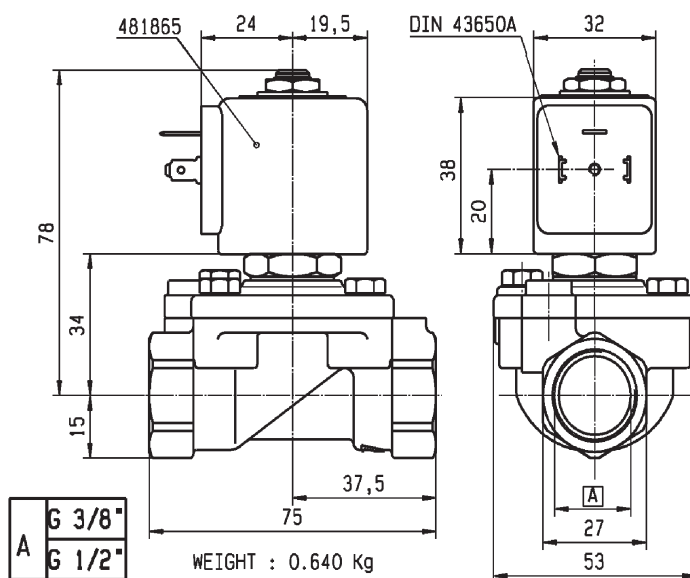


Port size	Orifice Ø	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max (MOPD)		Min °C	Max °C				AC W	DC W		
BSP	mm					AC bar	DC bar									
3/8"	15	65	3.9	4500	0	16	-	0	100	FKM	221G23-2995 ₁	482725	8	-	2.0	3732
	15	65	3.9	-	0	10	-	0	100	EPDM	221G1303-2995	482725	8	-	2.0	3732
	15	65	3.9	4500	0	-	10	-10	100	FKM	221G2330-2995	482725	-	9	2.1	3732
1/2"	15	65	3.9	4500	0	10	-	0	100	EPDM	221G1503-2995	482725	8	-	2.0	3732
	15	65	3.9	4500	0	16	-	0	100	FKM	221G25-2995	482725	8	-	2.0	3732
	15	65	3.9	4500	0	-	10	-10	100	FKM	221G2530-2995	482725	-	9	2.1	3732

Notes:

1. Valve only compatible with hydraulic oil and air/neutral gases

Fast Delivery

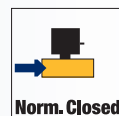


Drawing 3732

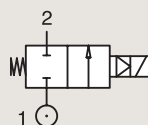
2 WAY VALVES

2/2

VALVES FOR ALL FLUIDS AND AIR MAGNALIFT



BRASS PIPE MOUNTING NORMALLY CLOSED

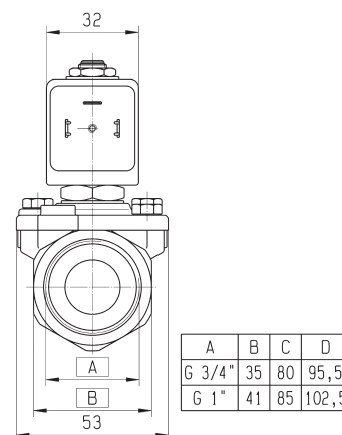
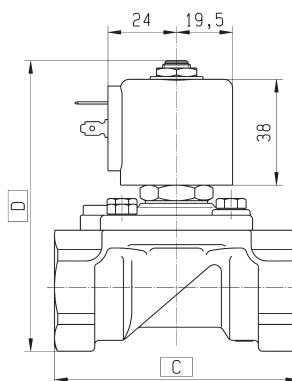


Port size	Orifice Ø	Flow factors				Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv	KV	Qn		Min	Max (MOPD)		Min	Max				AC W	DC W		
BSP	mm	l/min	m³/h	l/min	bar	AC bar	DC bar		°C	°C							
3/4"	15	80	4.8	6000	0	16	-		0	100	FKM	221G26-2995,	482725	8	-	2.0	3445
	15	80	4.8	-	0	10	-		0	100	EPDM	221G1603-2995	482725	8	-	2.0	3445
	15	80	4.8	6000	0	-	10		-10	100	FKM	221G2630-2995	482725	-	9	2.1	3445
1"	15	80	4.8	6000	0	10	-		0	100	EPDM	221G1703-2995	482725	8	-	2.0	3445
	15	80	4.8	6000	0	-	10		0	100	FKM	221G2730-2995	482725	-	9	2.1	3445
	15	80	4.8	6000	0	16	-		0	100	FKM	221G27-2995	482725	8	-	2.0	3445
	25	170	10.2	14000	0	16	-		-10	100	NBR	221G21-2995	482725	8	-	2.0	3448

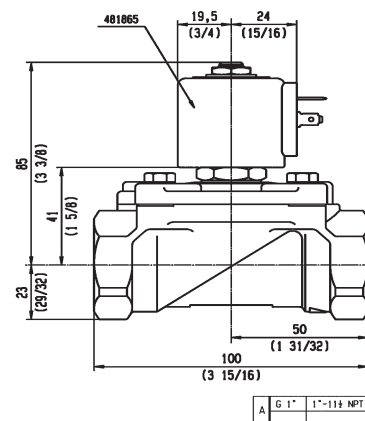
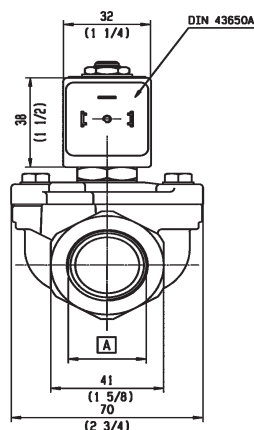
Notes:

1. Valve only compatible with hydraulic oil and air/neutral gases

Fast Delivery



Drawing 3445

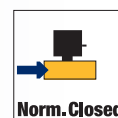


Drawing 3448



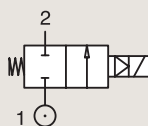
2/2

VALVES FOR ALL FLUIDS AND AIR MAGNALIFT

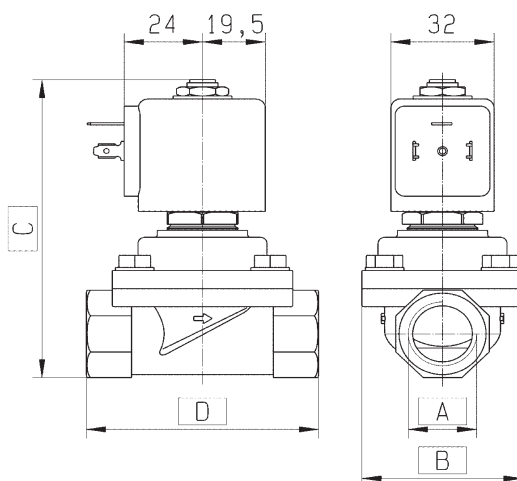


316L STAINLESS ST.
PIPE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max (MOPD)		Min °C	Max °C				AC W	DC W		
BSP	mm					AC bar	DC bar									
3/8"	15	65	3.90	-	0	-	10	-10	100	FKM	221G6336-2995	482725	8	9	2.1	3732
	15	65	3.90	-	0	10	-	-10	100	FKM	221G6306-2995	482725	8	9	2.1	3732
1/2"	15	65	3.90	-	0	-	10	-10	100	FKM	221G6536-2995	482725	8	9	2.1	3732
	15	65	3.90	-	0	10	-	-10	100	FKM	221G6506-2995	482725	8	9	2.1	3732
3/4"	15	80	4.80	-	0	-	10	-10	100	FKM	221G6636-2995	482725	-	9	2.1	3732
	15	80	4.80	-	0	10	-	-10	100	FKM	221G6606-2995	482725	-	9	2.1	3732
1"	25	170	10.20	-	0	-	10	-10	100	FKM	221G6136-2995	482725	8	9	2.0	3732
	25	170	10.20	-	0	10	-	-10	100	FKM	221G6106-2995	482725	8	9	2.0	3732



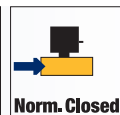
A	B	C	D
G 3/8"	53	93	75
G 1/2"	53	93	75
G 3/4"	53	95.5	80
G 1"	70	108	100

Drawing 3732

2 WAY VALVES

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VALVES FOR ALL FLUIDS AND AIR AIR OPERATED



316L S.STEEL BODY / 304 S.STEEL ACTUATOR

PIPE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø	Actuator size	Flow factors			Seat Seal	Atex Zone	Operating Pressure Differential		Fluid Temp.		Pilot Control Pressure Min / Max	Flow Direction	Solenoid Valve Order Number
			Kv l/min	KV m³/h	Qn l/min			Min bar	Max bar	Min °C	Max °C			
3/8"	13	32	78	4.70	-	PTFE	2-22	0	16	0	180	4.5 to 10	Over Seat	PA10C1G3R032S ₁
		32						0	6	0	180	5 to 10	Under Seat	PA10C2G3R032S ₁
		50						0	16	0	180	3 to 10	Over Seat	PA10S1G3R050S ₂
		50						0	16	0	180	4.5 to 10	Under Seat	PA10SAG3R050S ₂
1/2"	13	32	78	4.70	-	PTFE	2-22	0	16	0	180	4.5 to 10	Over Seat	PA15C1G4R032S ₁
		32						0	6	0	180	5 to 10	Under Seat	PA15C2G4R032S ₁
		40						0	16	0	180	4 to 10	Over Seat	PA15S1G4R040S ₂
		40						0	16	0	180	3 to 10	Over Seat	PA15S1G4R050S ₂
		50						0	16	0	180	4.5 to 10	Under Seat	PA15SAG4R050S ₂

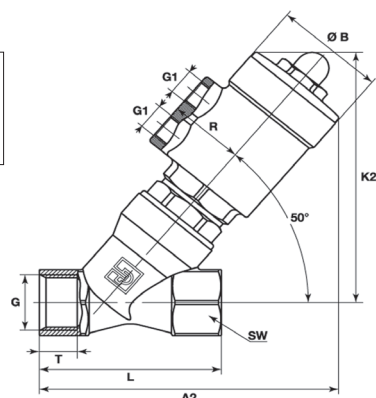
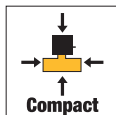
Notes:

1. Drawing number 1
2. Drawing number 2

Fast Delivery

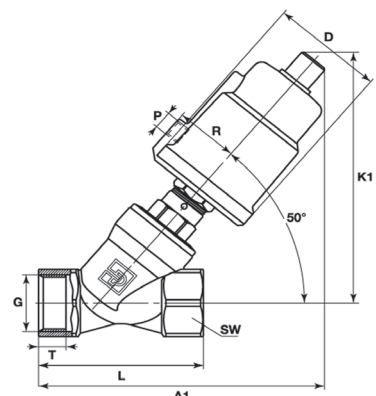
For liquids use valve with flow direction under the seat to avoid anti water hammer effect.

N° 1



G	Actuator	Ø B	R	G1	K2 Type C1/C2 (180°C)	A2 Type C1/C2 (180°C)	L	T	SW
G 3/8"	32	39.6	27	G1/8	107	117	60	10	22 hexagon
G 1/2"	32	39.6	27	G1/8	109	119	65	11.5	25 hexagon

N° 2



G	Actuator	D	R	P	K1	A1	L	T	SW
G 3/8"	40	50.5	27	G1/8	116	121	60	10	22 hexagon
	50	62	34	G1/8	130	133	60	10	22 hexagon
G 1/2"	40	50.5	27	G1/8	118	124	65	11.5	25 hexagon
	50	62	34	G1/8	131	135	65	11.5	25 hexagon

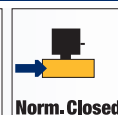
Warning : Check minimum operating control pressure page 26



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VALVES FOR ALL FLUIDS AND AIR

AIR OPERATED



316L S.STEEL BODY / 304 S.STEEL ACTUATOR

PIPE MOUNTING



NORMALLY CLOSED

Port size	Orifice Ø	Actuator size	Flow factors			Seat Seal	Atex Zone	Operating Pressure Differential		Fluid Temp.		Pilot Control Pressure Min / Max W	Flow Direction	Solenoid Valve Order Number	
			Kv l/min	KV m³/h	Qn l/min			Min bar	Max bar	Min °C	Max °C				
BSP	mm	mm													
3/4"	15	32	90	5.40	-	PTFE	2-22	0	14	0	180	4.5 to 10	Over Seat	PA20C1G5R032S ₁	
	18	50	150	9.00				0	4	0	180	5 to 10	Under Seat	PA20C2G5R032S ₁	
								0	16	0	180	3 to 10	Over Seat	PA20S1G5R050S ₂	
1"	24	63	267	16.00				0	10	0	180	4.5 to 10	Under Seat	PA20SAG5R050S ₂	
								0	16	0	180	3 to 10	Over Seat	PA25S1G6R050S ₂	
								0	16	0	180	3 to 10	Over Seat	PA25S1G6R063S ₂	
1-1/4"	31	80	400	24.00				0	8	0	180	4.5 to 10	Under Seat	PA25SAG6R063S ₂	
								0	16	0	180	3 to 10	Over Seat	PA32S1G7R063S ₂	
								0	11	0	180	4 to 10	Under Seat	PA32SAG7R080S ₂	

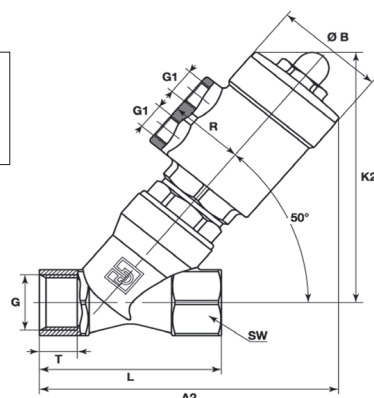
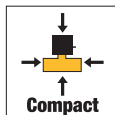
Notes:

1. Drawing number 1
2. Drawing number 2

For liquids use valve with flow direction under the seat to avoid anti water hammer effect.

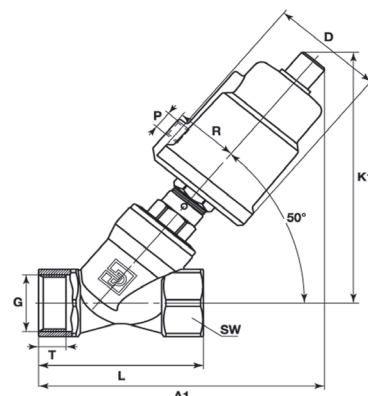
Fast Delivery

N° 1



G	Actuator	Ø B	R	G1	K2	A2	L	T	SW
G 3/4"	32	39.6	27	G1/8	112	126	75	14	31 hexagon

N° 2



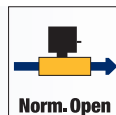
G	Actuator	D	R	P	K1	A1	L	T	SW
G 3/4"	50	62	34	G1/8	134	141	75	14	31 hexagon
G 1"	50	62	34	G1/8	141	153	90	15	39 hexagon
	63	77	41.5	G1/8	164	175	90	15	39 hexagon
G1-1/4"	63	77	41.5	G1/8	170	188	110	18	50 octagon
	80	98	52	G1/4	184	205	110	18	50 octagon

Warning : Check minimum operating control pressure page 26



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VALVES FOR ALL FLUIDS AND AIR AIR OPERATED



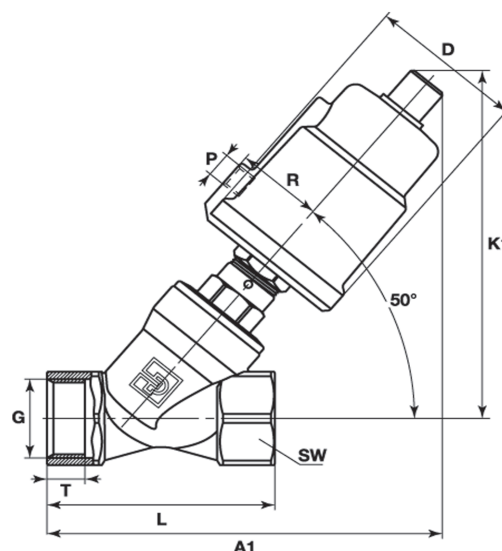
316L S.STEEL BODY / 304 S.STEEL ACTUATOR PIPE MOUNTING



NORMALLY OPEN

Port size	Orifice Ø	Actuator size	Flow factors			Seat Seal	Atex Zone	Operating Pressure Differential		Fluid Temp.		Pilot Control Pressure Min / Max	Flow Direction	Solenoid Valve Order Number
			Kv l/min	KV m³/h	Qn l/min			Min bar	Max bar	Min °C	Max °C			
BSP	mm	mm										W		
3/8"	13	50	78	4.70	-	PTFE	2-22	0	16	0	180	3.5 to 10	Over Seat	PA10S2G3R050S
1/2"	18	50	150	9.00	-	PTFE	2-22	0	16	0	180	3.5 to 10	Over Seat	PA15S2G4R050S
3/4"	24	63	267	16.00	-	PTFE	2-22	0	16	0	180	4.5 to 10	Over Seat	PA20S2G5R050S
1"	31	63	400	24.00	-	PTFE	2-22	0	16	0	180	4.5 to 10	Over Seat	PA25S2G6R063S
1-1/4"	31	63	400	24.00	-	PTFE	2-22	0	14	0	180	4.5 to 10	Over Seat	PA32S2G7R063S

Fast Delivery



G	Actuator	D	R	P	K1	A1	L	T	SW
G 3/8"	40	50.5	27	G1/8	116	121	60	10	22 hexagon
	50	62	34	G1/8	130	133	60	10	22 hexagon
G 1/2"	40	50.5	27	G1/8	118	124	65	11.5	25 hexagon
	50	62	34	G1/8	131	135	65	11.5	25 hexagon
G 3/4"	50	62	34	G1/8	134	141	75	14	31 hexagon
G 1"	50	62	34	G1/8	141	153	90	15	39 hexagon
	63	77	41.5	G1/8	164	175	90	15	39 hexagon
G 1-1/4"	63	77	41.5	G1/8	170	188	110	18	50 octagon
	80	98	52	G1/4	184	205	110	18	50 octagon

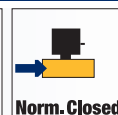
Warning : Check minimum operating control pressure page 26



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VALVES FOR ALL FLUIDS AND AIR

AIR OPERATED



316L S.STEEL BODY / ALUMINIUM ACTUATOR

PIPE MOUNTING

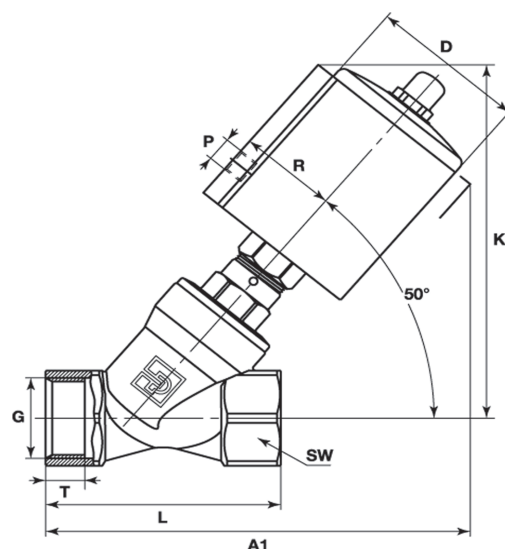
NORMALLY CLOSED



Port size	Orifice Ø	Actuator size	Flow factors			Seat Seal	Atex Zone	Operating Pressure Differential		Fluid Temp.		Pilot Control Pressure Min / Max W	Flow Direction	Solenoid Valve Order Number
			Kv l/min	KV m³/h	Qn l/min			Min bar	Max bar	Min °C	Max °C			
BSP	mm	mm												
1/2"	13	50	78	4.70	-	PTFE	2-22	0	16	0	180	3 to 10	Over Seat	PA15S1G4R050A
								0	16	0	180	4.5 to 10	Under Seat	PA15SAG4R050A
3/4"	18		150	9.00				0	16	0	180	3 to 10	Over Seat	PA20S1G5R050A
								0	10	0	180	4.5 to 10	Under Seat	PA20SAG5R050A
1"	24	63	267	16.00				0	8	0	180	4.5 to 10	Under Seat	PA25SAG6R063A

For liquids use valve with flow direction under the seat to avoid anti water hammer effect.

Fast Delivery

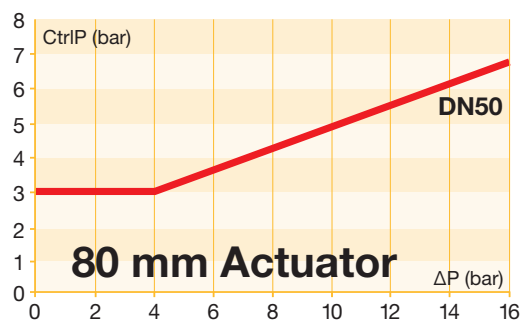
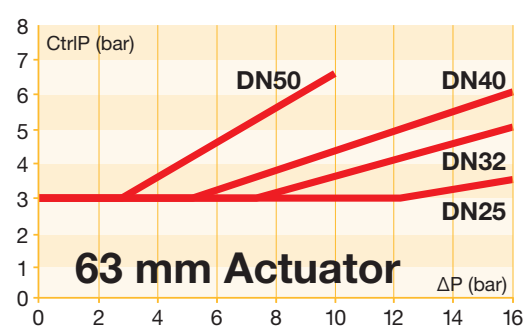
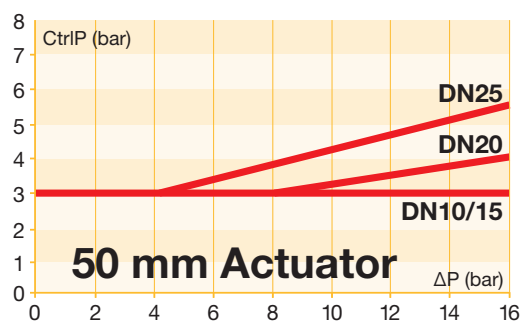
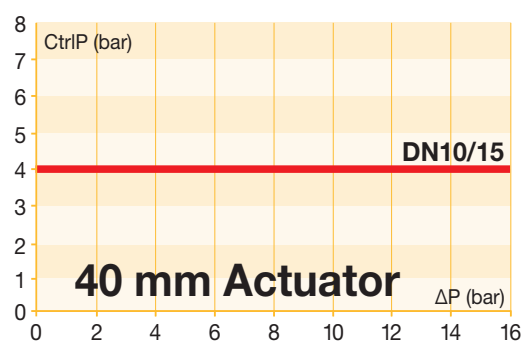
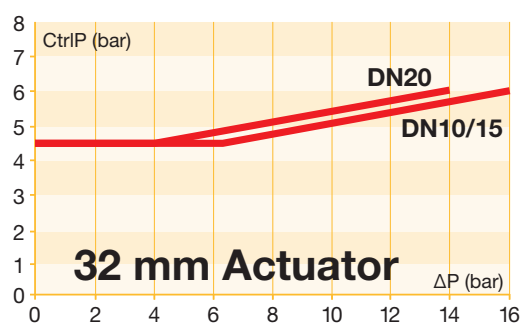


G	Actuator	D	R	P	K1	A1	L	T	SW
G 1/2"	50	61	38	G1/8	133	144	65	11.5	25 hexagon
G 3/4"	50	61	38	G1/8	136	150	75	14	31 hexagon
G 1"	50	61	38	G1/8	144	162	90	15	39 hexagon
	63	75	45	G1/8	167	183	90	15	39 hexagon

Warning : Check minimum operating control pressure page 26



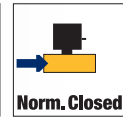
Control Pressure & Operating Pressure Charts for Air Operated Valves with flow direction over seat



2/2

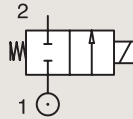
VALVES FOR HOT WATER AND STEAM

DIRECT OPERATED



303 STAINLESS ST.
PIPE MOUNTING

NORMALLY CLOSED

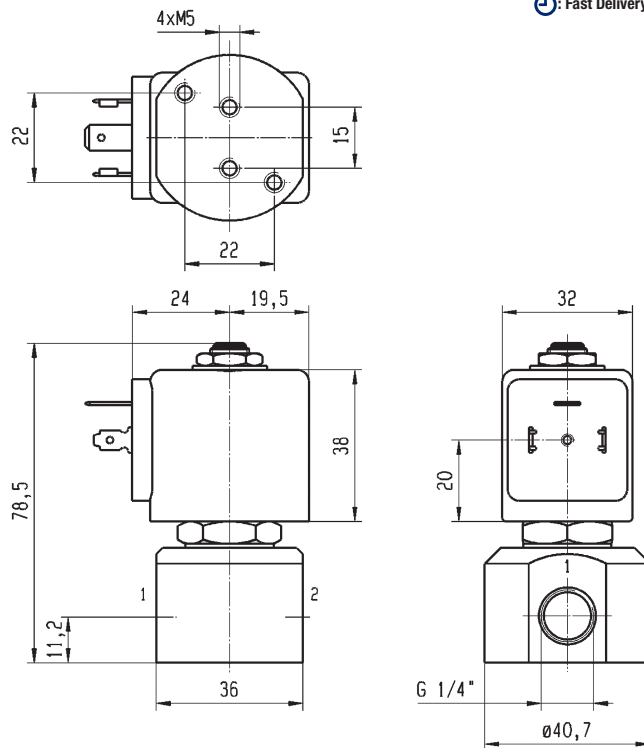


Port size	Orifice Ø	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max (MOPD)		Min °C	Max °C				AC W	DC W		
BSP	mm					AC bar	DC bar									
1/4"	1.5	1.5	0.09	80	0	20	20	-10	100	FKM	121V5406-2995	482725	8	9	2.0	8116
	1.5	1.5	0.09	80	0	60	25	0	100	Ruby	121V5463-2995 ₁	482725	8	9	2.0	8116
	2.5	3.5	0.21	220	0	14	7	-10	100	FKM	121V5706-2995	482725	8	9	2.0	8116
	3	4.5	0.27	315	0	10	7	-10	100	FKM	121V5306-2995	482725	8	9	2.0	8116
	3	4.5	0.27	315	0	20	7	0	100	Ruby	121V5363-2995 ₁	482725	8	9	2.0	8116
	4	7	0.42	450	0	10	4	-10	100	FKM	121V5206-2995	482725	8	9	2.0	8116
	4	7	0.42	450	0	3.5	3.5	0	100	PTFE	121V5212-2995 ₁	482725	8	9	2.0	8116
	4	7	0.42	450	0	12	4	0	100	Ruby	121V5263-2995 ₁	482725	8	9	2.0	8116
	5	10	0.6	750	0	7	2	-10	100	FKM	121V5106-2995	482725	8	9	2.0	8116
	5	10	0.6	750	0	8.5	2	0	100	Ruby	121V5163-2995 ₁	482725	8	9	2.0	8116
	5	10	0.6	-	0	2.8	2	0	100	PTFE	121V5112-2995 ₁	482725	8	9	2.0	8116

Notes:

1. Valve only compatible with hydraulic oil and neutral liquids

Fast Delivery



Drawing 8116

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

3/2 VALVE FOR ALL FLUIDS AND AIR

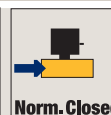


3 way valves (1 way for inlet, 1 way for outlet and 1 way for exhaust) are typical constructions to shut-off, divert, select or to pilot actuators.
A wide range of sealing solutions give a large range of chemical compatibility.

Actuation	Body	Function	Specification	Port Size	Orifice (mm)	MOPD (bar)	Page
3/2 Direct Operated (No minimum pressure required)	Brass/ Pipe Mounting	Normally Closed	High Performance	1/4"	1.2 to 2.5	30	30
			Manual override	1/8" to 1/4"	1.5 to 2.5	15	31
		Universal	Pipe Mounting	1/4"	0.8 to 2	30	32
	303 Stainless St./ Pipe Mounting	Normally Closed	Corrosion resistant	1/4"	1.5 to 2.5	15	33

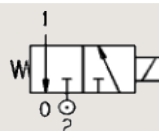
3/2

VALVE ALL FLUIDS AND AIR DIRECT OPERATED



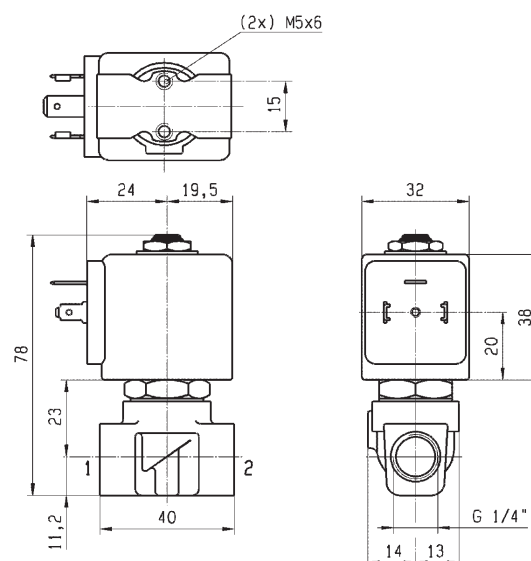
BRASS
PIPE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø		Flow factors				Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	IS	Power		Coil Group	Dwg. No.
	1	(2)	1	(2)	1	(2)	Min	Max (MOPD)		Min	Max					AC W	DC W		
BSP	mm		Kv l/min		KV m³/h		bar	AC bar	DC bar	°C	°C								
1/4"	1.2	1.5	0.8	1.5	0.05	0.09	0	30	-	-30	130	Ruby	E131K64-2995	482725		8	-	2.0	3510
	1.5	1.5	1.5	1.5	0.09	0.09	0	16	16	-10	120	FKM	E131K04-2995	482725		8	8	2.0	3510
	2	2.5	2.5	3.5	0.15	0.21	0	10	10	-10	120	FKM	E131K06-2995	482725		8	8	2.0	3510
	2.5	2.5	3.5	3.5	0.21	0.21	0	7	7	-10	100	FKM	E131K03-2995	482725		8	8	2.0	3510

Fast Delivery



Drawing 3510

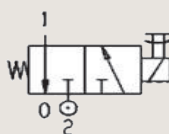
3/2

VALVE ALL FLUIDS AND AIR DIRECT OPERATED



BRASS
PIPE MOUNTING

NORMALLY CLOSED

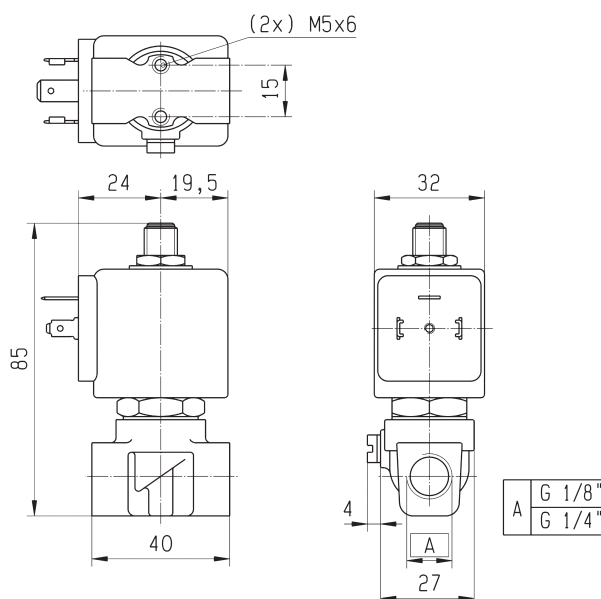


Port size	Orifice Ø		Flow factors				Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	IS	Power		Coil Group	Dwg. No.
BSP	1	(2)	1	(2)	1	(2)	Min	Max (MOPD)		Min	Max					AC W	DC W		
	mm		Kv l/min		KV m³/h		bar	AC bar	DC bar	°C	°C								
1/8"	2	2.5	2.5	3.5	0.15	0.21	0	10	10	-10	100	FKM	131K1650-2995,1	482725		8	9	2.1	3510
	1.5	1.5	1.5	1.5	0.09	0.09	0	15	15	-10	100	FKM	E131K0450-2995,1	482725		8	9	2.1	3510
1/4"	2	2.5	2.5	3.5	0.15	0.21	0	10	10	-10	100	FKM	E131K0650-2995,1	482725		8	9	2.1	3510
	2.5	2.5	3.5	3.5	0.21	0.21	0	7	7	-10	100	FKM	E131K0350-2995,1	482725		8	9	2.1	3510

Notes:

1. With manual override

Fast Delivery

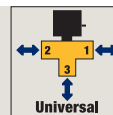


Drawing 3510

3 WAY VALVES

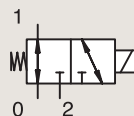
3/2

VALVE ALL FLUIDS AND AIR DIRECT OPERATED

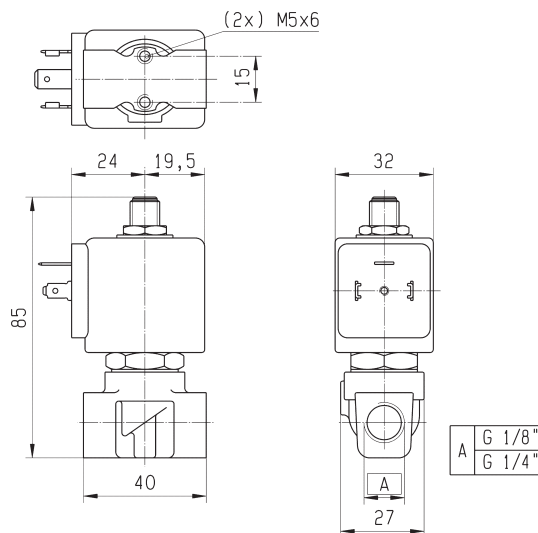


BRASS
PIPE MOUNTING

UNIVERSAL



Port size	Orifice Ø		Flow factors				Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	IS	Power		Coil Group	Dwg. No.
BSP	1	(2)	1	(2)	1	(2)	Min	Max (MOPD)		Min	Max					AC W	DC W		
	mm		Kv l/min		KV m³/h		bar	AC bar	DC bar	°C	°C								
1/4"	0.8	0.8	0.3	0.3	0.02	0.02	0	30	30	-10	100	FKM	E133K05-2995	482725		8	9	2.1	3510
	2	2	2.5	2.5	0.15	0.15	0	7	7	-10	100	FKM	E133K06-2995	482725		8	9	2.0/3.0	3510

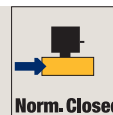


Drawing 3510

3/2

VALVE ALL FLUIDS AND AIR

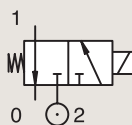
DIRECT OPERATED



303 STAINLESS ST.

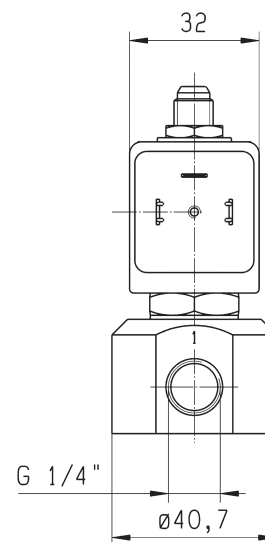
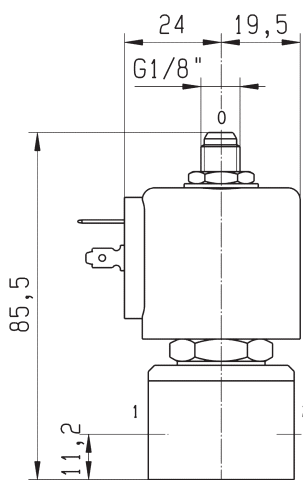
PIPE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø		Flow factors				Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	IS	Power		Coil Group	Dwg. No.
BSP	1	(2)	1	(2)	1	(2)	Min	Max (MOPD)		Min	Max					AC W	DC W		
	mm		Kv l/min		KV m³/h		bar	AC bar	DC bar	°C	°C								
1/4"	1.5	1.5	1.5	1.5	0.09	0.09	0	15	15	-10	100	FKM	131V5406-2995	482725		8	9	2.1	8116
	2.5	2.5	3.5	3.5	0.21	0.21	0	7	7	-10	100	FKM	131V5306-2995	482725		8	9	2.1	8116

Fast Delivery



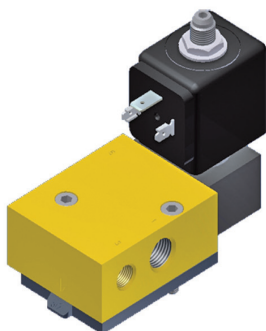
Drawing 8116

3 WAY VALVES

[illegible]

3/2
5/2

PROCESS CONTROL VALVES



The Parker 3 way valves (1way for inlet , 1 way for outlet and 1 way for exhaust) for air are typical constructions to pilot valve actuators or single acting cylinders applying or exhausting pressure in the chamber.

The Parker 5 ways valves (1way for inlet, 2 ways for outlet and 2 ways for exhaust) for air are typical constructions to pilot double acting cylinders or valve actuators applying or exhausting pressure in the 2 chambers.

The high flow versions and the low response time allow improving installation efficiency.

Typical applications are:

- Control of air actuators
- Diverting, Selector

Actuation	Body	Function	Specification	Port Size	Orifice (mm)	MOPD (bar)	Page
3/2 Direct Operated	Anodized Aluminium/ NAMUR	Normally Closed	Manual override	1/2"	12	10	36
5/2 Pilot Operated	Anodized Aluminium/ NAMUR	Normally Closed	Manual override/Dual solenoid	1/4" to 1/2"	7 to 12	10	37
3/2-5/2 Pilot Operated	Anodized Aluminium/ NAMUR	Normally Closed	Manual override/convertible	1/4"	7	10	38

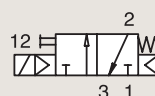
3/2

VALVES FOR AIR PILOT OPERATED



ANODIZED ALUMINIUM
NAMUR

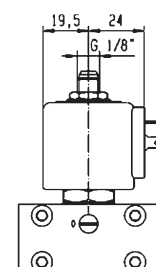
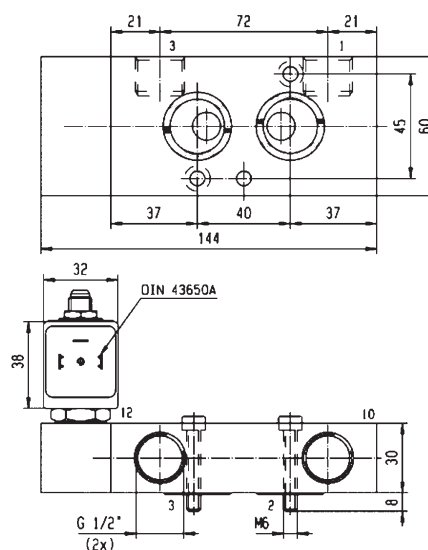
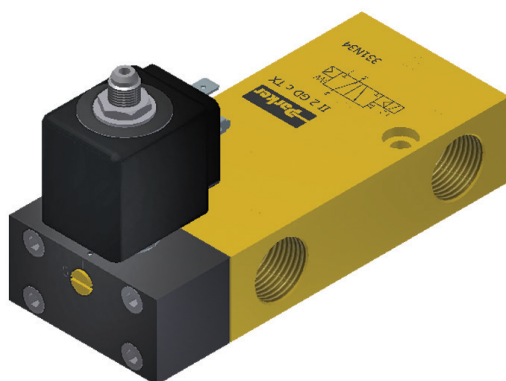
NORMALLY CLOSED



Port size	Orifice Ø	Flow factors	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
			Min	Max (MOPD)		Min	Max				AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C							
1/2"	12	3000	2.5	10	10	-10	50	NBR	331N34-2995 ₁	482725	8	9	2.1	8210
	12	3000	2.5	10	10	-20	50	NBR	341N34-2995 ₁	482725	8	9	2.1	8210

Notes:

1. With manual override



Drawing 8210

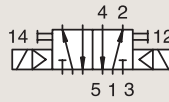
5/2

VALVES FOR AIR PILOT OPERATED



ANODIZED ALUMINIUM
NAMUR

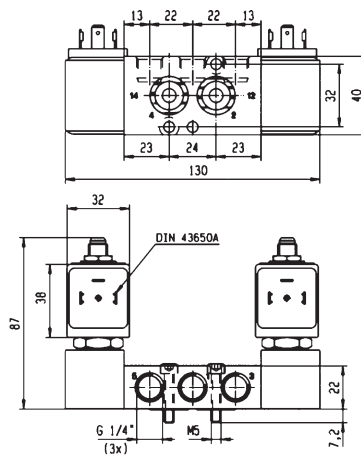
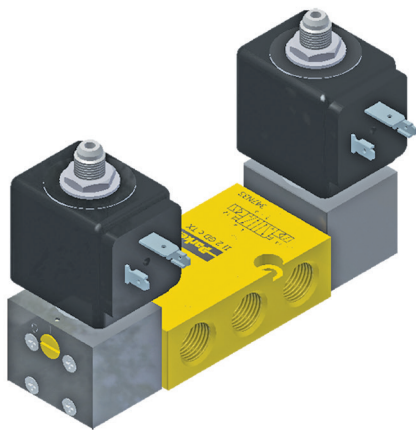
DUAL SOLENOIDS



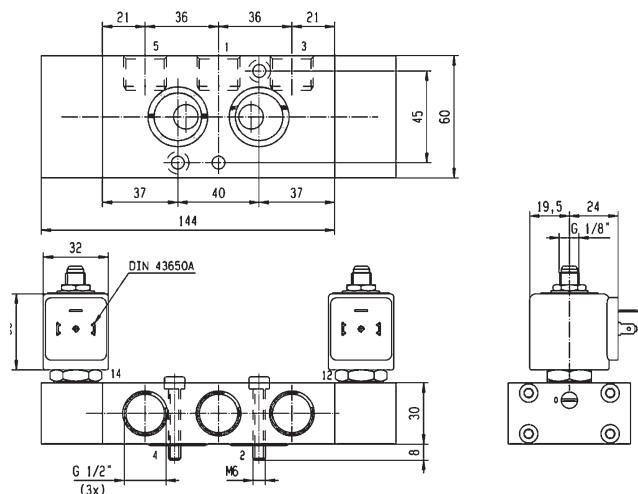
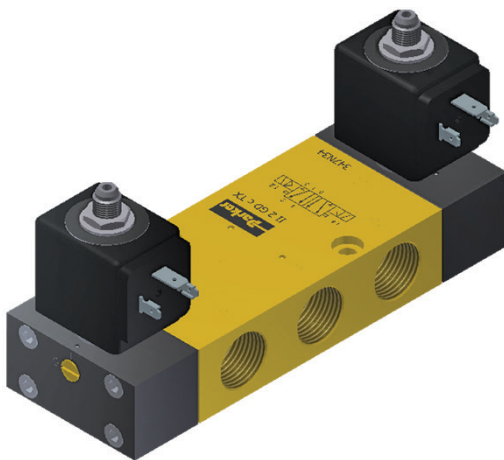
Port size	Orifice Ø	Flow factors	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
			Min	Max (MOPD)		Min	Max				AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C							
1/4"	7	1250	2.5	10	10	-10	120	NBR	347N33-2995 ₁	482725	8	9	2.1	8209
1/2"	12	3000	2.5	10	10	-10	120	NBR	347N34-2995 ₁	482725	8	9	2.1	8212

Notes:

1. With manual override



Drawing 8209



Drawing 8212

5 WAY VALVES

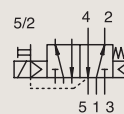
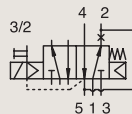
3/2-5/2

VALVES FOR AIR PILOT OPERATED



ANODIZED ALUMINIUM
NAMUR

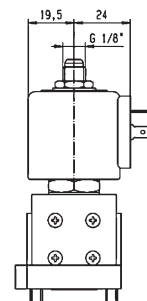
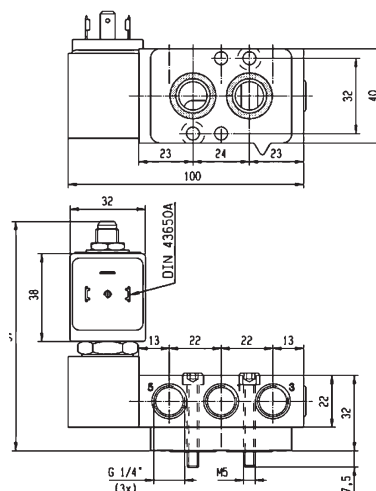
NORMALLY CLOSED



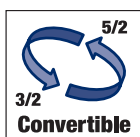
Port size	Orifice Ø	Flow factors	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
			Min	Max (MOPD)		Min	Max				AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C							
1/4"	7	1200	2.5	10	10	-10	50	NBR	341N35-2995	482725	8	9	2.1	8213

Notes:

1. With manual override



Drawing 8213



Original PARKER patented interface conversion plate permits to convert 3/2 to 5/2 function



NOTES

5 WAY VALVES

ELECTRICAL PARTS

TABLE OF CONTENT

COILS FOR DIN PLUG CONNECTION

482725 - Coils 32 mm	41
----------------------------	----

ELECTRICAL PARTS "nAc nCc" ATEX Zone 2/22

495870 - Electrical part 32 mm	42
--------------------------------------	----

FLAME PROOF ENCAPSULATED ELECTRICAL PARTS "db mb" ATEX Zone 1/21

495905 - Electrical parts 37 mm	43
---------------------------------------	----

482725- COILS 32 mm

This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.

Part number 482725 corresponding to our standard coil 481865 with DIN Plug Form A in 1 off package.

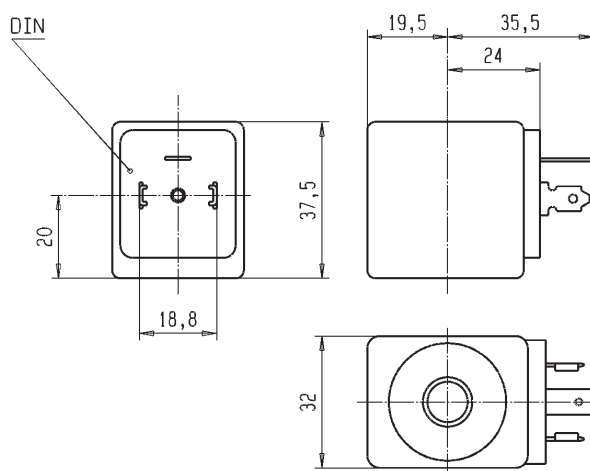


DIN plug integrated

Reference (with DIN plug)			482725		
Degree of protection			IP65 according to IEC / EN 60529 standards (with DIN plug).		
Class of insulation			F 155°C		
Electrical connection			The coil is connected with a 2 P + E plug according to EN 175301-803 type A		
Ambient temperature			-40°C to +50°C The application is limited also by the temperature range of the valve.		
Electrical Power	DC	Pn (hot)	9 W		
		P (cold) 20°C	12 W		
	AC	Pn (holding)	8 W		
		Attraction cold	26 VA (9 W)		
Weight			130 g (without plug)		
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		220-230/50	3D 	24	C2 
		110/50	A5 	12DC	C1 
		24/50	A2 		

To Order a Coil choose Coil Ref + Voltage Code, example: 482725 for 24 VDC = 482725C2

 Fast Delivery



ZONE 2/22

495870 - ELECTRICAL PART 32 mm

Application:

Control of solenoid valves in dangerous areas where explosion-proof protection Ex nAc nCc IIC T3/T4 is required.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Benefits:

The synthetic material encapsulation of the coil provides an effective compact housing, offering full protection against dust, oil, water, etc.

Small size for ease of mounting in confined spaces.

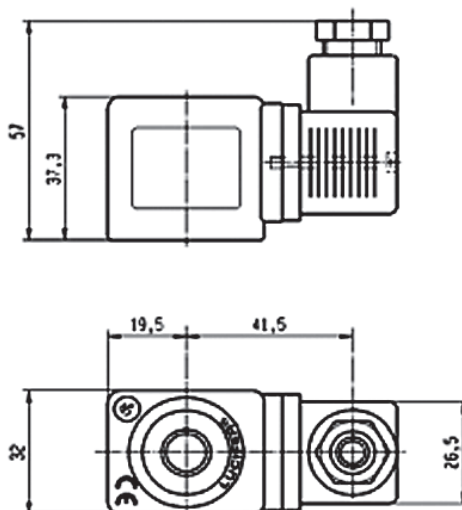
Coil delivered with DIN plug.



Coil delivered with DIN plug

Reference (with DIN plug)			495870			
Certificate			LCIE 05 ATEX 6003 X			
Type of protection	Gas		II 3 G Ex nAc nCc IIC T3/T4			
	Dust		II 3 D - Ex tc IIIC - T195°C / T130°C			
Degree of protection			IP65 (with plug) according to IEC/EN 60529 Standards			
Class of insulation			F 155°C			
Duty cycle			100%			
Ambient temperature			-40°C to +65°C / 50°C The application is limited also by the temperature range of the valve.			
Electrical Power	DC	Pn (hot)	9 W			
		P (cold) 20°C	12 W			
	AC	Pn (holding)	8 W			
		Attraction cold	26 VA (9 W)			
Weight			150 g			
Voltages "Un" -10% to +10% of the Un			VAC/Hz	Code	VDC	Code
			220-230/50	3D	24	C2

To Order a Coil choose Coil Ref + Voltage Code, example: 495870 for 24 VDC = 495870C2



All dimensions are in mm

ZONE 1/21

495905 - ELECTRICAL PARTS 37 mm

Application:

Control of solenoid valves in dangerous areas where explosion-proof protection Ex db mb IIC T4 is required.

Benefits:

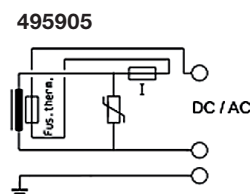
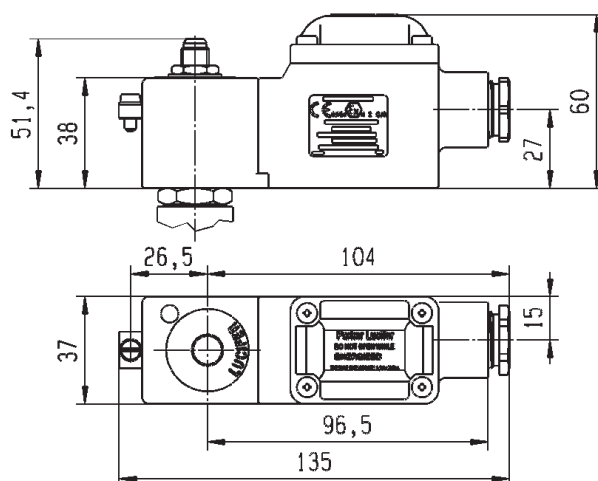
Rotatable 360° fibreglass-reinforced plastic housing (class H). Solenoid coil, rectifier (silicium diodes), fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection.

The plastic housing is delivered with M20 x 1.5 cable gland certified for use "db" protection. Small size for ease of mounting in confined space.



Reference			495905			
Certificate			LCIE 03 ATEX 6451 X - IECEx LCI 06.0004 X			
Type of protection	Gas	II 2 G - Ex db mb IIC T4				
	Dust	II 2 D - Ex tb IIIC - 130°C				
Degree of protection			IP67 according to IEC/EN 60529 Standards			
Class of insulation			H 180°			
Electrical connection			Electric connection is done in the connection box on an easily accessible connector terminals. The introduction of the cable (Ø min 5 mm, Ømax. 11 mm, section max. 2.5 mm²) in the connection box passes by the built in M20 x 1.5 cable gland.			
Ambient temperature			-40°C to +80°C The application is limited also by the temperature range of the valve.			
Electrical Power	DC	Pn (hot)	8 W			
		P (cold) 20°C	9 W			
	AC	Pn (holding)	8 W			
		Attraction cold	9 W			
Voltages "Un" -10% to +10% of the Un			VAC/Hz	Code	VDC	Code
			230/50	F4	24	C2

To Order a Coil choose Coil Ref + Voltage Code, example: 495905 for 24 VDC = 495905C2



All dimensions are in mm

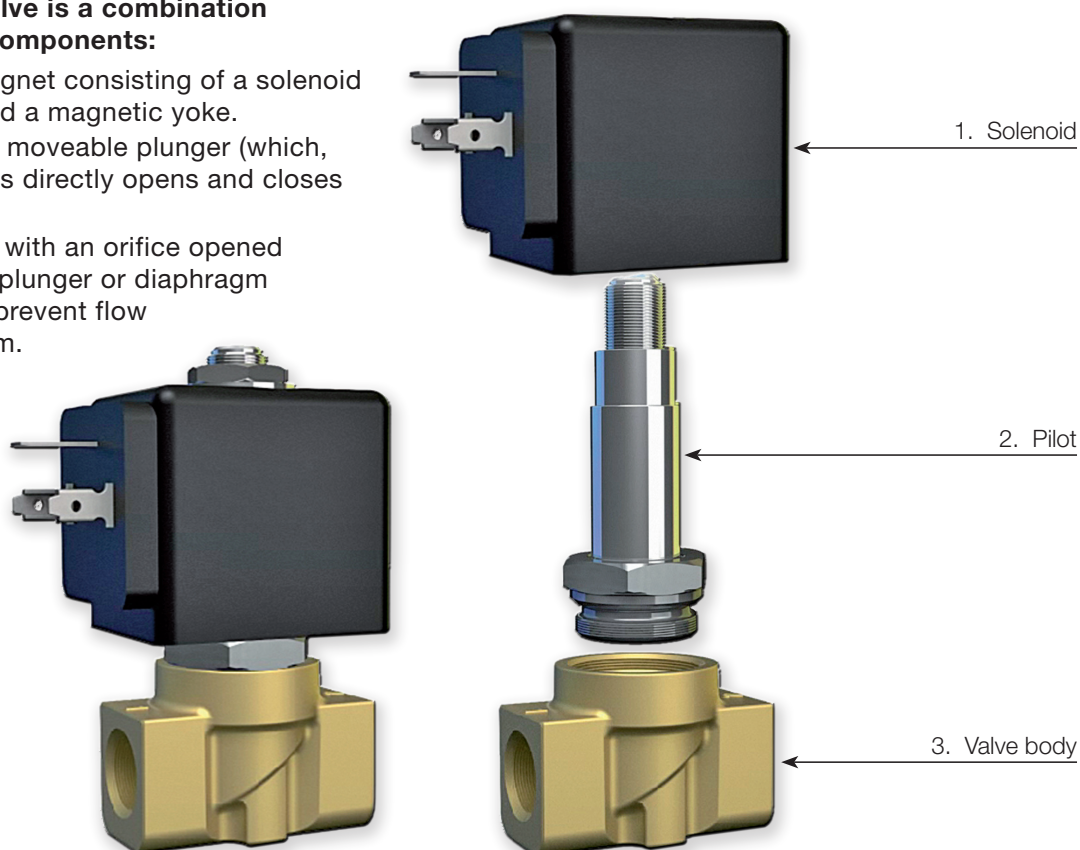
TECHNICAL INFORMATION ABOUT SOLENOID VALVES

General Information

Solenoid valves are electro-mechanical devices used for interrupting or diverting the flow of fluids by opening or closing one or more orifices.

The solenoid valve is a combination of three basic components:

1. An electromagnet consisting of a solenoid (windings) and a magnetic yoke.
2. A pilot with a moveable plunger (which, in some cases directly opens and closes the valve).
3. A valve body with an orifice opened or closed by plunger or diaphragm to enable or prevent flow of the medium.



Operating principles

The term solenoid refers to operator and coil, also known as pilot or magnetic actuator.

The coil consists of copper wire wound on a support reel. When electric current is applied into the coil, magnetic flow lines are generated which are stronger in the coil center.

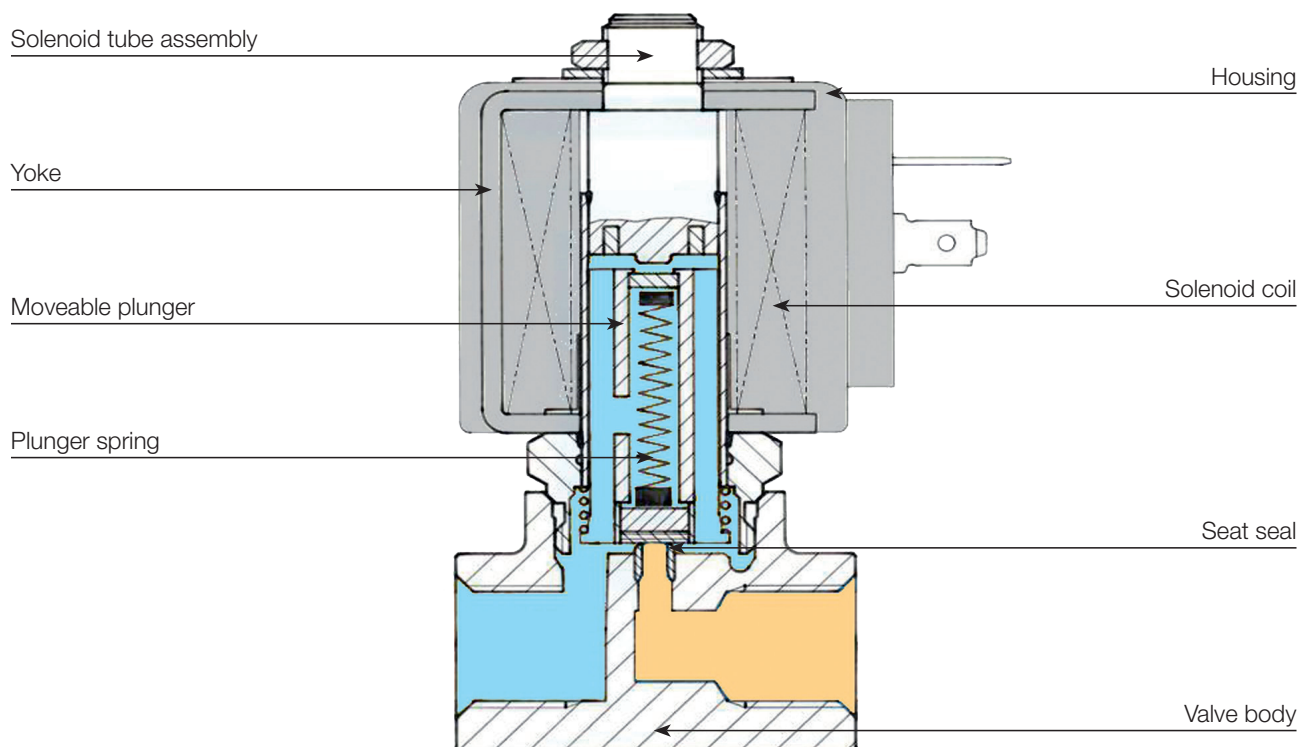
This magnetic flow raises the moveable plunger in the coil until it brings it into contact with the pole piece. The valve body has an orifice through which the fluid flows when the valve is open.

The moveable plunger has an integral seat which when the solenoid coil is energised, moves off the valve (direct operated) orifice or diaphragm (pilot operated) orifice opening the valve.

When the coil is de-energised, a return spring brings the plunger back to the original closing position, thus cutting off the flow of the fluid.

BASIC COMPONENTS OF A SOLENOID VALVE

Valve body:	Main part of the solenoid valve including ports, seat and orifices.
Solenoid tube assembly:	Cylinder, in stainless steel, hermetically sealed and closed at one extremity. It is the guide channel of the moveable plunger which is moved magnetically. The solenoid coil is fitted on the external side of the enclosing tube.
Moveable plunger:	Made by ferritic stainless steel, it is attracted by the solenoid magnetic field and slides inside the tube.
Plunger spring (or return spring):	Used to hold the moveable plunger in position and to return it when de-energized.
Seat seal:	Part of the moveable plunger, it is used to close a valves main orifice or pilot orifice.
Electromagnet (or solenoid coil):	Electrical part consisting of a copper windings (solenoid) along, with a magnetic yoke (armature), when electric current flows through, it generates a magnetic field attracting the moveable plunger.
Housing:	Part that contains and protects the coil.
Yoke:	Metalic case surrounding the coil and concentrating electro-magnetic force on the moveable plunger.



TECHNICAL VOCABULARY USED IN TABLES

NORMALLY CLOSED

Port size	Orifice Ø	Flow factors			Seat Seal	Atex Zone	Operating Pressure Differential		Fluid Temp.		Power	Voltage	Solenoid Valve Order Number
		Kv l/min	KV m³/h	Qn l/min			Min bar	Max bar	Min °C	Max °C			
BSP	mm										W		

The basic technical features of each solenoid valve are indicated in the tables, the terminology used is shown and explained below.

Actuation:	The mechanical method used to control the flow.	Atex Zone:	The hazardous areas are classified in zones based on the frequency of the occurrence and the duration of an explosive gas or dust environment as follows: • Zone 1(gas)-21(dust): An area in which an explosive gas (dust) atmosphere is present likely to occur in normal operation (~10 to 999 h/y). • Zone 2(gas)-22(dust): An area in which an explosive gas (dust) atmosphere is not likely to occur and if it does occur it will exist for short period only (~1 to 10 h/y).
Body:	Main part of the solenoid valve with the ports, seats and orifice needed.		
Function:	The way the valve operates when de-energised.		
Specification:	The main describing attribute for the considered product.		
Port Size:	Fitting dimensions are defined as threaded in inches (G), in BSP or Sub-base, when a flat interface for ports is adopted.		
Orifice (mm):	Main orifice diameter in millimeters (nominal diameter).		
Actuator size (mm):	The diameter in mm of the pneumatically driven piston head of an Angle Seat Valve.	Minimum Operating Pressure Differential:	The lowest differential pressure required for operation (bar).
Pmax (bar):	Maximum working pressure for the valve.	Maximum Operating Pressure Differential (MOPD):	The highest working differential pressure 90% of the rated voltage (-10% Vn) applied to the solenoid coil (for AC) and 95% of the rated voltage (-5% Vn) (for DC).
Flow Factors:	Define the quantity of fluid which flows through the solenoid valve with a pressure drop of 1 bar during one minute. For liquids Kv and KV are expressed in l/min and m³/h. For air and gases Qn is expressed in l/min.	Fluid Temperature:	Minimum and Maximum admissible for the media used (°C).
Seat seal:	Material used for the seat discs.	Power:	The rated power under normal conditions of the solenoid expressed in W.
Flow Direction:	Specifies the direction of the main flow into an Angle Seat Valve. Flow direction is "over seat" for a standard valve and "under seat" for an Anti Water Hammer valve.	Voltage:	Indicates the voltage type required to energise the coil of the solenoid valve.
		Pilot Control Pressure:	The pressure to apply to the inlet port of the actuator for an Angle

The liquid flow through a pipe or a valve is given by:

$$Q = Kv \cdot \sqrt{\frac{\Delta P}{\gamma}}$$

Where

Q = Flow [l/min]

ΔP = Differential Pressure [bar]

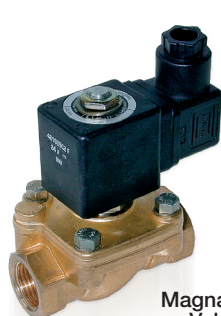
γ = Density of the fluid [kg/dm³]
(water γ = 1 [kg/dm³])

kv = Flow Factor [l/min]

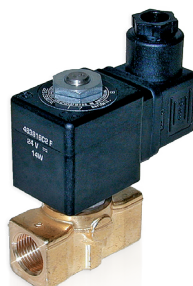
TECHNICAL INFORMATION ABOUT VALVES

Solenoid Valves

Solenoid valves are electrically operated devices used to control flow. The most common types of solenoid valve are:



MagnaLift
Valves



Direct
Operated Valves



Pilot
Operated Valves

Angle Seat Valves

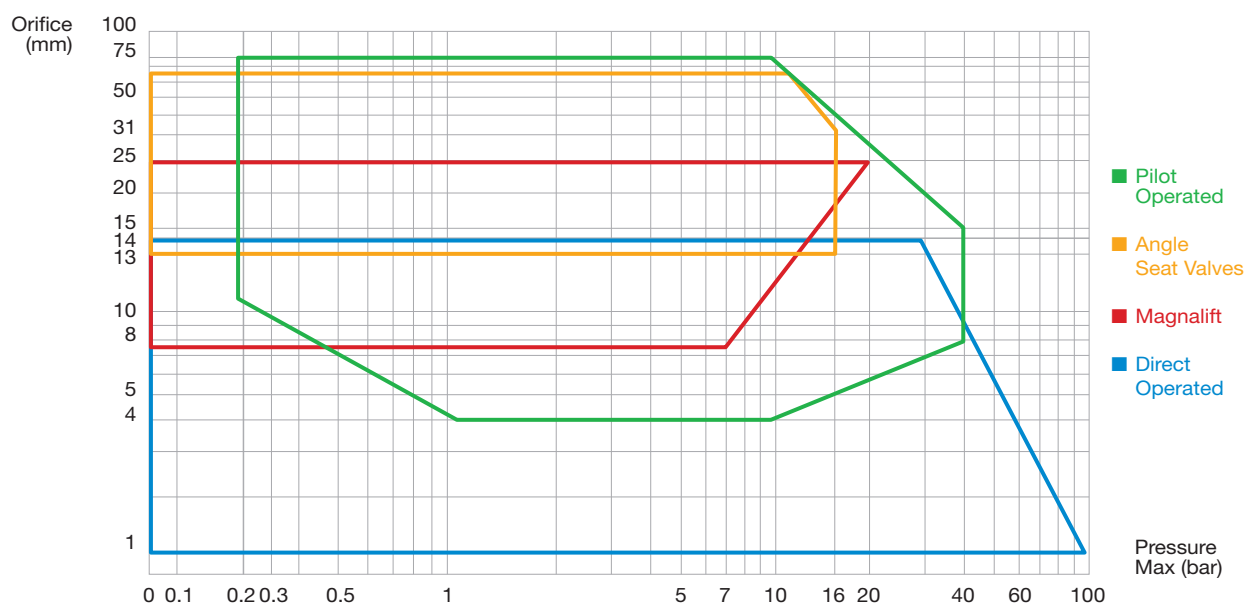
An angle seat valve is actuated by a pneumatically driven piston and is capable to handle slurry solutions with particles or corrosive solutions at high temperature up to 180°C and operating pressure up to 16 Bar.



Angle
Seat Valves

Area of operation:

Each valve principle, as described in the previous pages, has a defined area of operation related to its pressure and flow capabilities. The following graph shows which type of valve is suitable in our complete range for a certain situation.



Areas of operation of Parker solenoid valves.

NOTES

[illegible]

NOTES

[illegible]

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Aerospace **Key Markets**

Aftermarket services
Commercial transports
Engines
General & business aviation
Helicopters
Launch vehicles
Military aircraft
Missiles
Power generation
Regional transports
Unmanned aerial vehicles

Key Products

Control systems & actuation products
Engine systems & components
Fluid conveyance systems & components
Fluid metering, delivery & atomization devices
Fuel systems & components
Fuel tank inerting systems
Hydraulic systems & components
Thermal management
Wheels & brakes



Climate Control **Key Markets**

Agriculture
Air conditioning
Construction Machinery
Food & beverage
Industrial machinery
Life sciences
Oil & gas
Precision cooling
Process
Refrigeration
Transportation

Key Products

Accumulators
Advanced actuators
CO₂ controls
Electronic controllers
Filter driers
Hand shut-off valves
Heat exchangers
Hose & fittings
Pressure regulating valves
Refrigerant distributors
Safety relief valves
Smart pumps
Solenoid valves
Thermostatic expansion valves



Electromechanical **Key Markets**

Aerospace
Factory automation
Life science & medical
Machine tools
Packaging machinery
Paper machinery
Plastics machinery & converting
Primary metals
Semiconductor & electronics
Textile
Wire & cable

Key Products

AC/DC drives & systems
Electric actuators, gantry robots & slides
Electrohydraulic actuation systems
Electromechanical actuation systems
Human machine interface
Linear motors
Stepper motors, servo motors, drives & controls
Structural extrusions



Filtration **Key Markets**

Aerospace
Food & beverage
Industrial plant & equipment
Life sciences
Marine
Mobile equipment
Oil & gas
Power generation & renewable energy
Process
Transportation
Water Purification

Key Products

Analytical gas generators
Compressed air filters & dryers
Engine air, coolant, fuel & oil filtration systems
Fluid condition monitoring systems
Hydraulic & lubrication filters
Hydrogen, nitrogen & zero air generators
Instrumentation filters
Membrane & fiber filters
Microfiltration
Sterile air filtration
Water desalination & purification filters & system



Fluid & Gas Handling **Key Markets**

Aerial lift
Agriculture
Bulk chemical handling
Construction machinery
Food & beverage
Fuel & gas delivery
Industrial machinery
Life sciences
Marine
Mining
Mobile
Oil & gas
Renewable energy
Transportation

Key Products

Check valves
Connectors for low pressure fluid conveyance
Deep sea umbilicals
Diagnostic equipment
Hose couplings
Industrial hose
Mooring systems & power cables
PTFE hose & tubing
Quick couplings
Rubber & thermoplastic hose
Tube fittings & adapters
Tubing & plastic fittings



Hydraulics **Key Markets**

Aerial lift
Agriculture
Alternative energy
Construction machinery
Forestry
Industrial machinery
Machine tools
Marine
Material handling
Mining
Oil & gas
Power generation
Refuse vehicles
Renewable energy
Truck hydraulics
Turf equipment

Key Products

Accumulators
Cartridge valves
Electrohydraulic actuators
Human machine interfaces
Hybrid drives
Hydraulic cylinders
Hydraulic motors & pumps
Hydraulic systems
Hydraulic valves & controls
Hydrostatic steering
Integrated hydraulic circuits
Power take-offs
Power units
Rotary actuators
Sensors



Pneumatics **Key Markets**

Aerospace
Conveyor & material handling
Factory automation
Life science & medical
Machine tools
Packaging machinery
Transportation & automotive

Key Products

Air preparation
Brass fittings & valves
Manifolds
Pneumatic accessories
Pneumatic actuators & grippers
Pneumatic valves & controls
Quick disconnects
Rotary actuators
Rubber & thermoplastic hose & couplings
Structural extrusions
Thermoplastic tubing & fittings
Vacuum generators, cups & sensors



Process Control **Key Markets**

Alternative fuels
Biopharmaceuticals
Chemical & refining
Food & beverage
Marine & shipbuilding
Medical & dental
Microelectronics
Nuclear Power
Offshore oil exploration
Oil & gas
Pharmaceuticals
Power generation
Pulp & paper
Steel
Water/wastewater

Key Products

Analytical Instruments
Analytical sample conditioning products & systems
Chemical injection fittings & valves
Fluoropolymer chemical delivery fittings, valves & pumps
High purity gas delivery fittings, valves, regulators & digital flow controllers
Industrial mass flow meters/ controllers
Permanent no-weld tube fittings
Precision industrial regulators & flow controllers
Process control double block & bleeds
Process control fittings, valves, regulators & manifold valves



Sealing & Shielding **Key Markets**

Aerospace
Chemical processing
Consumer
Fluid power
General industrial
Information technology
Life sciences
Microelectronics
Military
Oil & gas
Power generation
Renewable energy
Telecommunications
Transportation

Key Products

Dynamic seals
Elastomeric o-rings
Electro-medical instrument design & assembly
EMI shielding
Extruded & precision-cut, fabricated elastomeric seals
High temperature metal seals
Homogeneous & inserted elastomeric shapes
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