



aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Parker 7321B/ 7322B Series Water Valves

High performance 2-way pilot operated solenoid valves for water, light oils and steam



ENGINEERING YOUR SUCCESS.

Parker 7321B/7322B Series Water Valves

Parker 7321B/7322B 2/2 pilot operated valves is the best solution anywhere a perfect control media such water, steam, and light oils is required.

7321B/7322B Series are diaphragm pilot operated valves and require a minimum differential pressure to operate.

Water is the basic element for human life, and water control makes possible a wide variety of human activities such as irrigation and food production, breeding, water dispensing, energy production, car and tools washing; water is the basic element in many applications like fire-fighting, domestic, plumbing.

Basing on solenoid technology, among the features this product provides a high flow rate, a fast reaction time and a superior reliability in a robust and modern design.

Manual override is available to open and close the valve without electrical supply, as well as speed control option against water hammer effect.

Our 7321B/7322B Water Valves range is usable with the most of our FCDE coil ranges, including ATEX, low power and IP67 electrical parts.



The Species Evolution



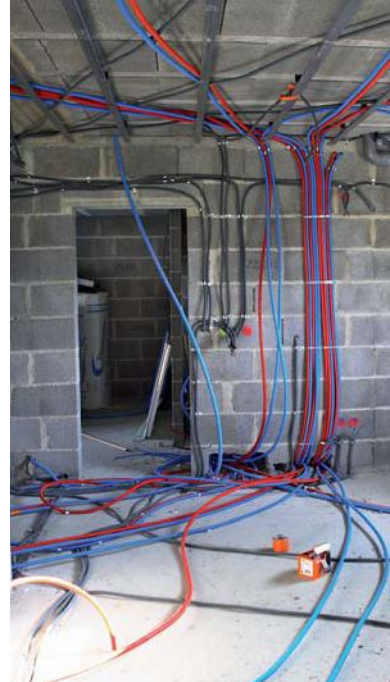
Roman Age



Parker Age

Applications

Thanks to the best performances in flow rate, 7321B/7322B Series can be used for many applications with high flow rates and media such as water, hot water and steam. Typical applications can be found in: Plumbing mkt, industrial washing machines, car wash installations, cooling of machine tools, hydrocleaners, autoclaves, irrigation systems, etc...



Benefits

Among the most valuable features you can find in this product:

- Best performances for minimum and maximum operating pressure differential
- Exclusive diaphragm design for a **Superior Flow Rate**, higher than the competition valves with the same dimensional specs and flat diaphragm
- **One of the Fastest** in electrical and hydraulic opening response time
- Modular concept: a wide range of electrical parts increases the versatility of this product
- Robust design: areas under mechanical stress have been studied and oversized
- Manual override control option: valve can be easily activated also when there's no energy supply
- Stainless steel pilot for superior life endurance with special sealing
- Easy access to internal parts, to permit easy and quick maintenance

Introducing Parker 7321B/7322B Series Water Valves

General Description

Parker 7321B/7322B are diaphragm pilot operated solenoid valves and require a minimum differential pressure to operate.

This serie is available in both Normally Closed and Normally Open function: 7321B Serie is a Normally Closed family (closed when de-energised), 7322B Serie is the Normally Open family (Open when de-energised).

Material Specifications

Valve body:	CW617N UNI EN 12165:98 Forged Brass	Spring:	AISI 302 St. Steel
Enclosing tube:	AISI 304 stainless steel	Seals:	NBR (Buna N) - EPDM FKM (Viton)
Plunger:	AISI 430F St. Steel	Shading ring:	Copper

Installation

The valves can be mounted in any position. It is however recommended to install them with the coil in vertical position above the body.

Media

These valves have been developed to achieve the best performances for water, steam, light oils (up to 2°E). Therefore these valves are not usable with gas and air.

We recommend to choose NBR versions for plumbing mkt (max. temp. 90°C), FKM version for water/light oils control applications up to 140°C, EPDM version for superheated water and steam (up to 140°C)

Electrical Parts

A wide range of electrical parts are available for 7321B/7322B Series. The complete offer of electrical parts is shown at pages 18 to 21.

Please consult factory in case you need to verify the compatibility of 7321B/7322B Series with alternative ranges of paper FCDE coils not included in this catalogue.

Please consult also the "How to Order" section at page 22 to select the product configuration which fits your application requirements.

Available Options

Manual Control

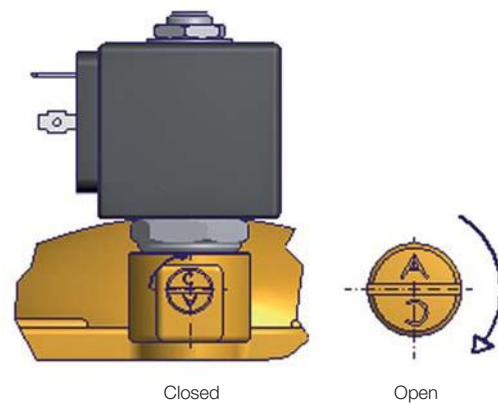
Parker 7321B Serie (NC version only) can be ordered with Manual control option. A manual control is used to operate the valve without connecting the coil.

The control consists in a slotted-head screw for a screwdriver and has two possible positions:

Closed: The letter "C" is in the upper position of the screw head (fig.1,2)

Open: The letter "A" is in the upper position of the screw head (fig.1,2)

Standing in its closed position, the valve operates normally when coil is energised/de-energised. Manual and speed control are standard on 2 ½" and 3" versions.



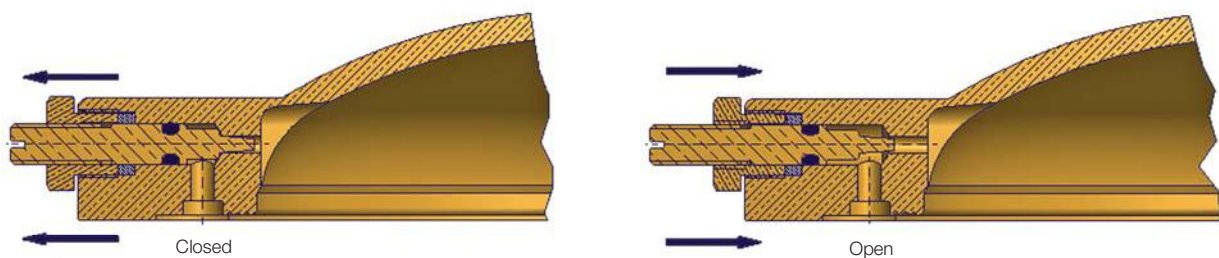
Speed Control Option (Anti-Water Hammer Control)

Parker 7321B Serie (NC version only) can be ordered with Speed control option. The closure time of certain types can be changed by means of the adjusting screw. The latter, by acting as a throttle on the inlet equalisation (pilot) hole of the valve, slows down the closure speed of the valve, thus reducing the water hammer effect.

The regulation range is as follows:

Screw fully open: Max. closure speed

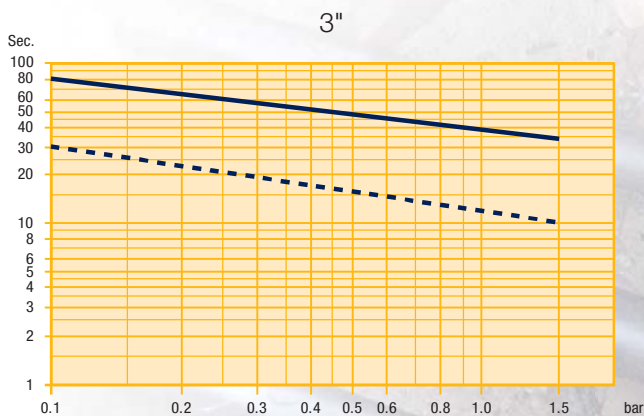
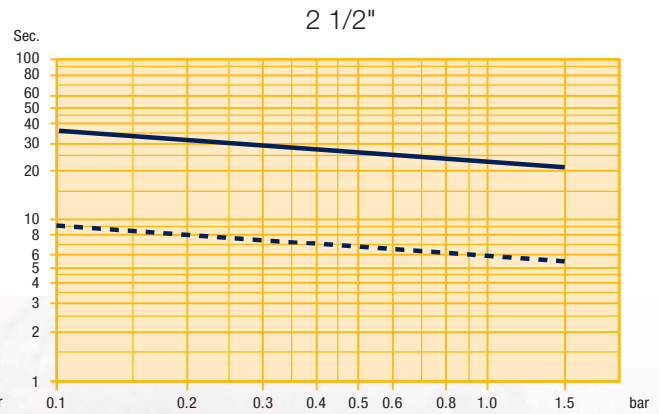
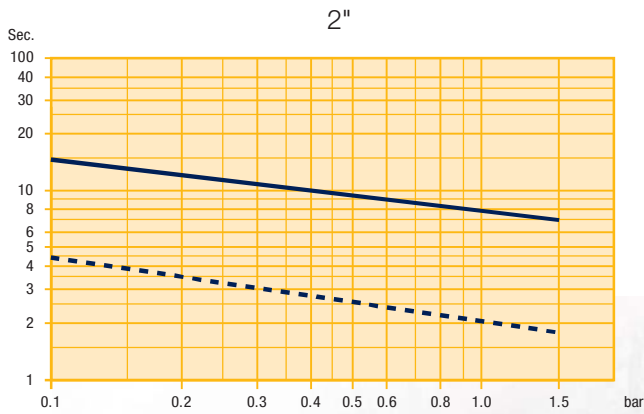
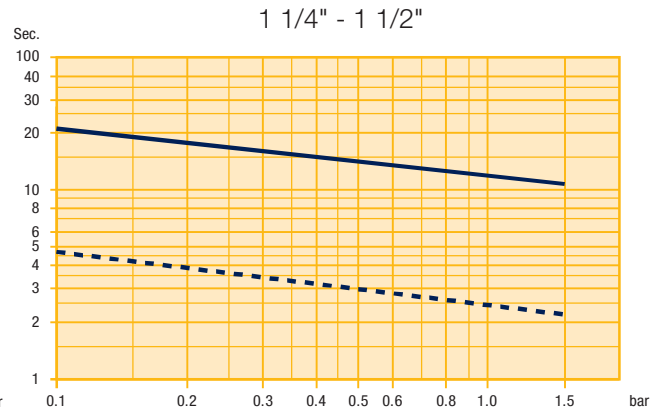
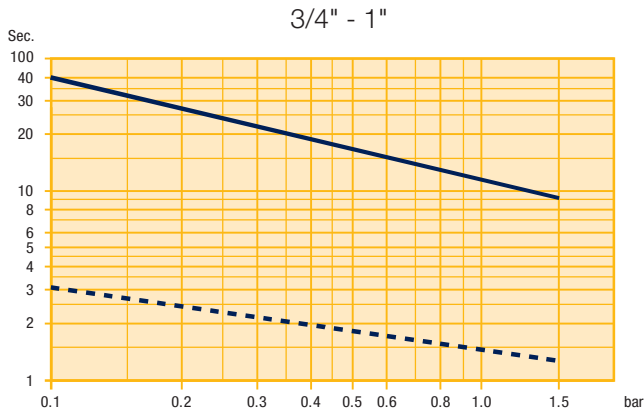
Screw fully closed: Valve always open



Please consult diagrams at page 6 of this catalogue to find details about shut-off response time with speed control option.



Diagrams of the Closing Times



- Curve 1:** Closing time with adjusting screw open by 1/2 turn
- - - Curve 2:** Closing time with adjusting screw completely open

Product availability

7321B/7322B Pressure Vessel

A wide range of configurations for this solenoid valve family is available: port sizes from 3/8" to 3" in brass, with BSPP port threads or with NPT ports, along with a wide range of seal and disc materials ensures that we have a standard valve to fit most applications.

In the table herebelow you might also find an explanation of the general description system for 7321B/7322B Series water valves family.

Description							Reference		
7	3	2	1	B	A	N	x	x	
7									7 000 Operators
	3								Pilot Operated Valve
	2								Direct Lift Operated Valve
	1								Direct Operated Valve
		2							2/2 Ways
			2						Normally Open
			1						Normally Close
				A					Family Name
				B					
				C					
				...					
					I				
					A				1/2"
					C				3/4"
					D				1"
					E				1 1/4"
					F				1 1/2"
					G				2"
					L				2 1/2"
					M				3"
						N			NBR
						V			KKM
						H			EPDM
							0	0	Standard Version
							0	1	Manuel Override
							0	2	Speed Control + MO
							0	6	Speed Control
							9	0	NPT
							9	1	NPT - Manuel Override (MO)
							9	2	NPT - Speed Control + MO
					S	x	x	x	Special versions

Please note:

- Electrical parts available are not included in the description system hereabove which refers to pressure vessel only. You can find electrical parts available at pages 18 to 21.
- Please consult in detail the "How to Order" section at page 22.

2/2 Normally Closed - BSP threads

NBR Seals (Max. Media Temp. 90°C)

Port Size G	Orifice mm	Flow Factors m ³ /h	l/min	Minimum Pressure	Maximum Differential	Weight Kg	Manual Control	Speed Control Pressure	Description	Part Number	Dimensional Drawing
3/8"	13	3.0	50.0	0.1	20	0.55	-	-	7321BIN00	443776W	2
	13	3.0	50.0	0.1	20	0.55	x	-	7321BIN01	443777W	
1/2"	13	3.0	50.0	0.1	20	0.58	-	-	7321BAN00	443779W	2
	13	3.0	50.0	0.1	20	0.58	x	-	7321BAN01	443780W	
3/4"	20	8.4	139.9	0.1	20	1.02	-	-	7321BCN00	443782W	3
	20	8.4	139.9	0.1	10	1.02	x	-	7321BCN01	443783W	
	20	8.4	139.9	0.1	10	1.02	x	x	7321BCN02	443784W	
1"	25	9.6	159.9	0.1	20	1.08	-	-	7321BDN00	443786W	3
	25	9.6	159.9	0.1	10	1.08	x	-	7321BDN01	443787W	
	25	9.6	159.9	0.1	10	1.08	x	x	7321BDN02	443788W	
1 1/4"	35	25.2	419.8	0.1	10	3.15	-	-	7321BEN00	443790W	4
	35	25.2	419.8	0.1	5	3.15	x	-	7321BEN01	443791W	
	35	25.2	419.8	0.1	5	3.15	x	x	7321BEN02	443792W	
1 1/2"	40	30.0	499.8	0.1	10	2.90	-	-	7321BFN00	443794W	4
	40	30.0	499.8	0.1	5	2.90	x	-	7321BFN01	443795W	
	40	30.0	499.8	0.1	5	2.90	x	x	7321BFN02	443796W	
2"	50	37.2	619.8	0.1	10	4.30	-	-	7321BGN00	443798W	4
	50	37.2	619.8	0.1	5	4.30	x	-	7321BGN01	443799W	
	50	37.2	619.8	0.1	5	4.30	x	x	7321BGN02	443800W	
2 1/2"	65	66.0	1099.6	0.2	10	13.60	x	x	7321BLN02	443802W	5
3"	75	80.0	1332.8	0.2	10	11.90	x	x	7321BMN02	443803W	5

Nominal pressure: 25 bar from 1 1/4" to 3" 16 bar

FKM Seals (Max. Media Temp. 140°C)

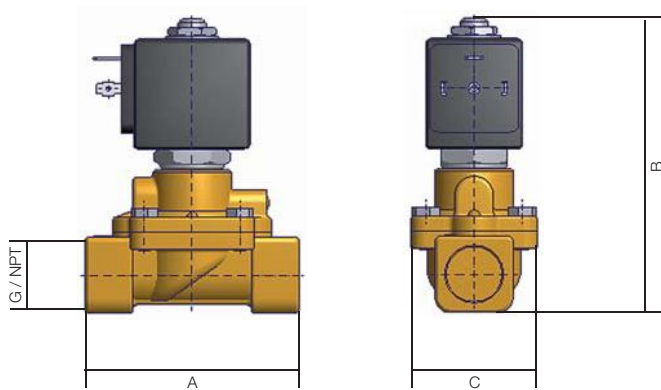
Port Size G	Orifice mm	Flow Factors m ³ /h	l/min	Minimum Pressure	Maximum Differential	Weight Kg	Manual Control	Speed Control Pressure	Description	Part Number	Dimensional Drawing
3/8"	13	3.0	50.0	0.1	20	0.55	-	-	7321BIV00	444492W	2
1/2"	13	3.0	50.0	0.1	20	0.58	-	-	7321BAV00	444494W	2
3/4"	20	8.4	139.9	0.1	20	1.02	-	-	7321BCV00	444497W	3
1"	25	9.6	159.9	0.1	20	1.08	-	-	7321BDV00	443804W	3

Nominal pressure: 25 bar

EPDM Seals (Max. Media Temp. 140°C)

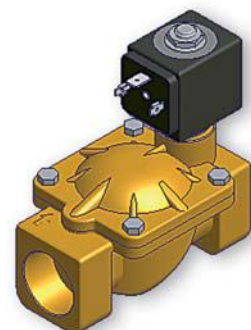
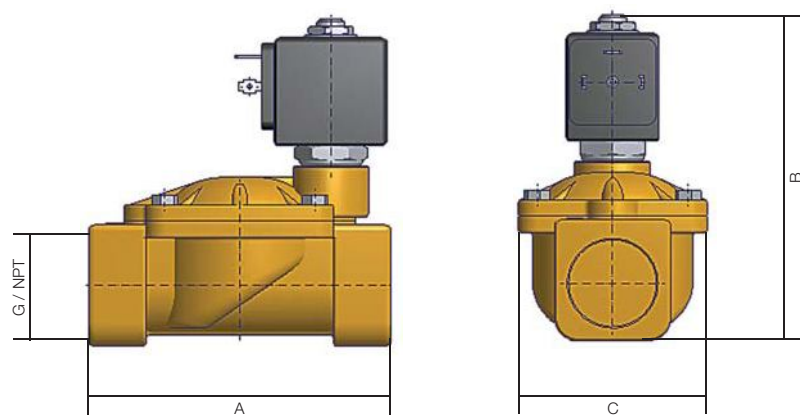
Port Size G	Orifice mm	Flow Factors m ³ /h	l/min	Minimum Pressure	Maximum Differential	Weight Kg	Manual Control	Speed Control Pressure	Description	Part Number	Dimensional Drawing
3/8"	13	3.0	49.98	0.1	10	0.55	-	-	7321BIH00	443778W	2
1/2"	13	3.0	49.98	0.1	10	0.55	-	-	7321BAH00	443781W	2
3/4"	20	8.4	139.94	0.1	10	1.02	-	-	7321BCH00	443785W	3
1"	25	9.6	159.94	0.1	10	1.08	-	-	7321BDH00	443789W	3
1 1/4"	35	25.2	419.83	0.1	10	3.15	-	-	7321BEH00	443793W	4
1 1/2"	40	30.0	499.80	0.1	10	2.90	-	-	7321BFH00	443797W	4
2"	50	37.2	619.75	0.1	10	4.30	-	-	7321BGH00	443801W	4

Nominal pressure: 25 bar - Max press for steam: 4 bar



G NTP	A		B		C	
	mm	inch	mm	inch	mm	inch
3/8"	69	2.71	99.5	3.91	40	1.57
1/2"	72	2.83	101.5	3.99	40	1.57

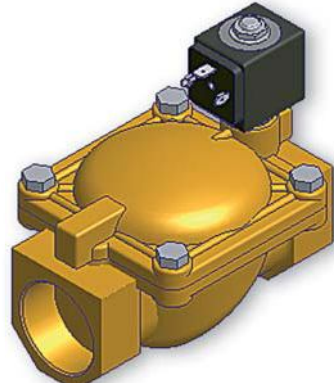
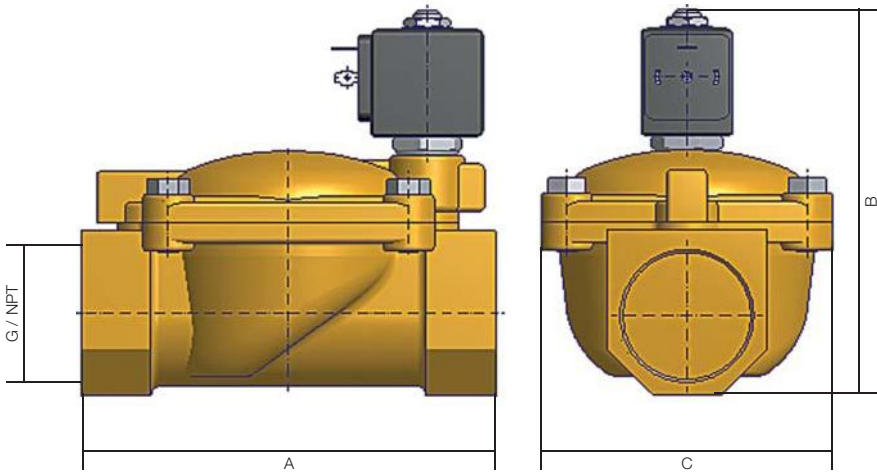
Dimensional Drawing N° 2



G NTP	A		B		C	
	mm	inch	mm	inch	mm	inch
3/4"	100	3.83	107	4.21	65	2.55
1"	104	4.09	112.5	4.42	65	2.55

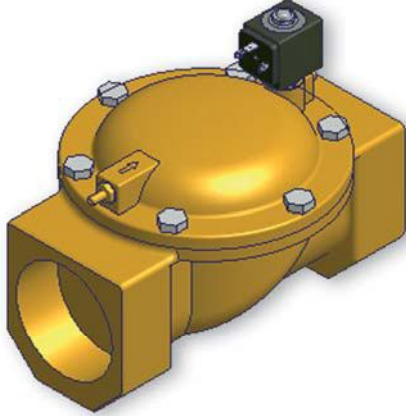
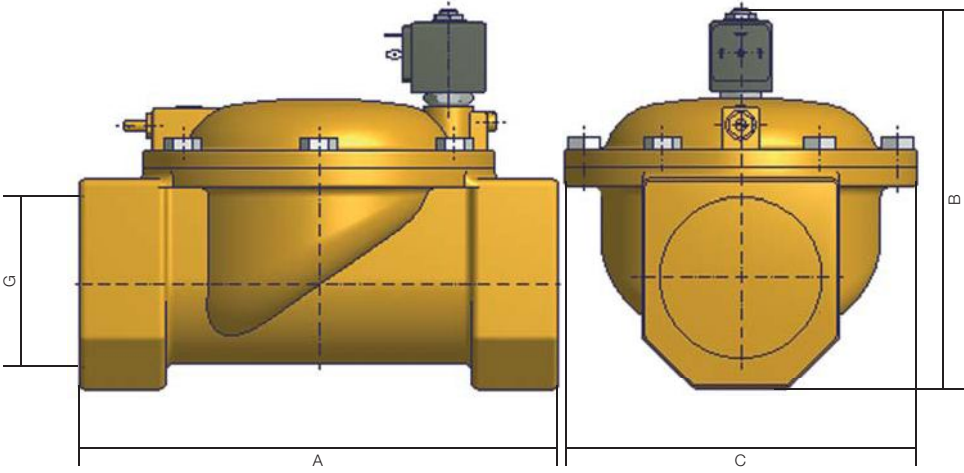
Dimensional Drawing N° 3

2/2 Normally Closed - BSP threads



G NTP	A		B		C	
	mm	inch	mm	inch	mm	inch
1-1/4"	145	5.70	134	5.27	102	4.01
1-1/2"	145	5.70	134	5.27	102	4.01
2"	173	6.81	148	5.82	118	4.64

Dimensional Drawing N° 4



G	A		B		C	
	mm	inch	mm	inch	mm	inch
3/8"	245	-	195	-	184	-
1/2"	250	-	195	-	184	-

Dimensional Drawing N° 5

2/2 Normally Open - BSP threads

NBR Seals (Max. Media Temp. 90°C)

Port Size G	Orifice mm	Flow Factors m ³ /h	Flow Factors l/min	Minimum Pressure	Maximum Differential	Weight Kg	Manual Control	Speed Control Pressure	Description	Part Number	Dimensional Drawing
3/8"	13	3.0	49.98	0.1	20	0.55	-	-	7322BIN00	443805W	6
1/2"	13	3.0	49.98	0.1	20	0.58	-	-	7322BAN00	443806W	6
3/4"	20	8.4	139.94	0.1	20	1.02	-	-	7322BCN00	443807W	7
1"	25	9.6	159.94	0.1	20	1.08	-	-	7322BDN00	443808W	7
1 1/4"	35	25.2	419.83	0.1	10	3.15	-	-	7322BEN00	443809W	8
1 1/2"	40	30.0	499.80	0.1	10	2.90	-	-	7322BFN00	443810W	8
2"	50	37.2	619.75	0.1	10	4.30	-	-	7322BGN00	443811W	8
2 1/2"	65	66.0	1099.56	0.2	10	13.60	-	x	7322BLN06	444513W	9
3"	75	80.0	1332.80	0.2	10	11.90	-	x	7322BMN06	444503W	9

Nominal pressure: 25 bar from 1 1/4" to 3" 16 bar

FKM Seals (Max. Media Temp. 140°C)

Port Size G	Orifice mm	Flow Factors m ³ /h	Flow Factors l/min	Minimum Pressure	Maximum Differential	Weight Kg	Manual Control	Speed Control Pressure	Description	Part Number	Dimensional Drawing
3/8"	13	3.0	49.98	0.1	20	0.55	-	-	7322BIV00	444499W	6
1/2"	13	3.0	49.98	0.1	20	0.58	-	-	7322BAV00	444500W	6
3/4"	20	8.4	139.94	0.1	20	1.02	-	-	7322BCV00	444501W	7
1"	25	9.6	159.94	0.1	20	1.08	-	-	7322BDV00	444502W	7

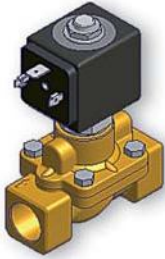
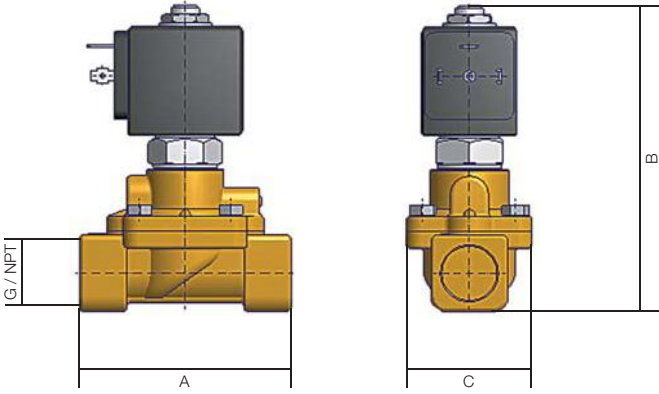
Nominal pressure: 25 bar from 1 1/4" to 2" 16 bar

EPDM Seals (Max. Media Temp. 140°C)

Port Size G	Orifice mm	Flow Factors m ³ /h	Flow Factors l/min	Minimum Pressure	Maximum Differential	Weight Kg	Manual Control	Speed Control Pressure	Description	Part Number	Dimensional Drawing
3/8"	13	3.0	49.98	0.1	10	0.55	-	-	7322BIH00	444600W	6
1/2"	13	3.0	49.98	0.1	10	0.58	-	-	7322BAH00	444601W	6
3/4"	20	8.4	139.94	0.1	10	1.02	-	-	7322BCH00	444602W	7
1"	25	9.6	159.94	0.1	10	1.08	-	-	7322BDH00	444603W	7
1 1/4"	35	25.2	419.83	0.1	10	3.15	-	-	7322BEH00	444576W	8
1 1/2"	40	30.0	499.80	0.1	10	2.90	-	-	7322BFH00	444604W	8
2"	50	37.2	619.75	0.1	10	4.30	-	-	7322BGH00	444605W	8

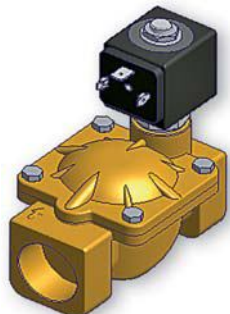
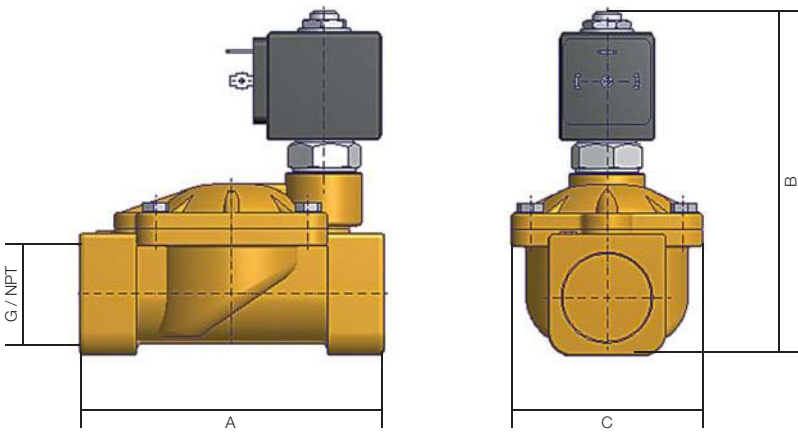
Nominal pressure: 25 bar from 1 1/4" to 2" 16 bar

2/2 Normally Open - BSP threads



G NTP	A		B		C	
	mm	inch	mm	inch	mm	inch
3/8"	69	2.71	110	4.33	40	1.57
1/2"	72	2.83	112	4.41	40	1.57

Dimensional Drawing N° 6



G NTP	A		B		C	
	mm	inch	mm	inch	mm	inch
3/4"	100	3.83	117.5	4.62	65	2.55
1"	104	4.09	113	4.84	65	2.55

Dimensional Drawing N° 7