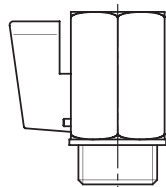




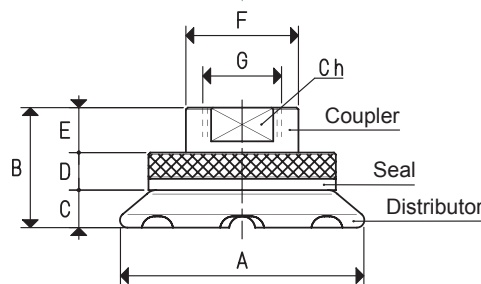
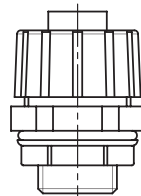
The suction valves described in this page have been designed for a quick vacuum connection on press bags for composite fibre products. These valves are composed of a steel distributor, to be inserted inside the bag, equipped with a cam housing suitable for the quick coupler for the vacuum connection. The latter is made with reeded and anodised aluminium and is easily coupled with the distributor by simply rotating it on its axis by 90°, once it's been inserted. A silicon seal to be placed between the two elements and the press bag, guarantees a perfect vacuum seal. Manual 2-way valves, quick couplers or simply flexible pipe fittings can be assembled onto these valves. They are currently available in the two versions indicated in the table, but can be provided in different sizes and shapes upon request for a minimum amount.

Quick coupling

2-way manual valve



TPR pipe fitting



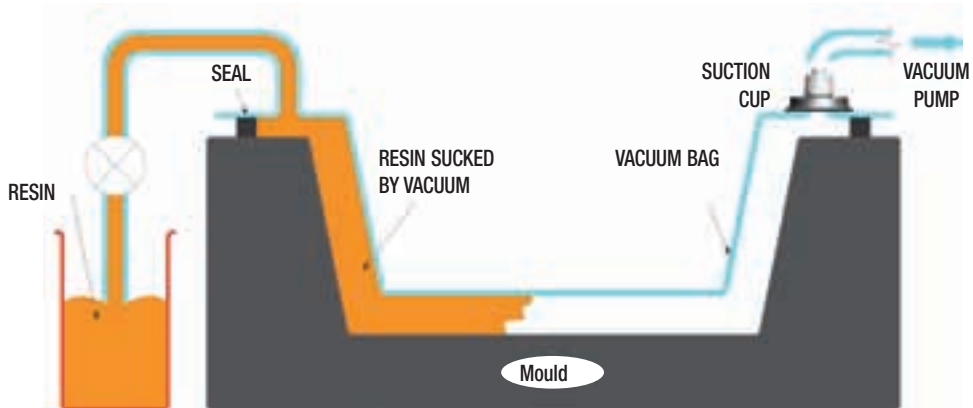
Art.	Max. capacity recommended cum/h	Hole to be made on the sack Ø	Manual 2-way valve art.	Quick Coupler art.	TPR pipe fitting art.	Weight g	A Ø	B	C	D	E	F Ø	G Ø	Ch
VSS 3/8"	10	16	13 02 11	RR3/8"	RTPR3/8"	178	60	32	10	13	9	24	G3/8"	19
VSS 1/2"	20	19	13 03 11	RR1/2"	RTPR1/2"	218	65	35	10	13	12	30	G1/2"	25

Note: 2-way valves are not integral part of the suction valve and therefore, must be ordered separately.

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

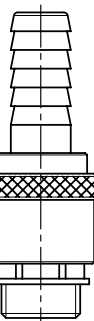
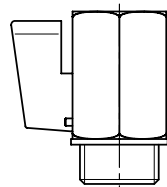
GAS-NPT thread adapters available at page 1.117

These suction valves, once laid on the resin infusion mould connections, allow a quick vacuum connection and guarantee a perfect seal. They are made with silicon rubber, while their support is made with anodised aluminium. Manual 2-way valves, quick couplers or simply flexible pipe fittings can be assembled onto these valves. They are available in the two versions shown below, but can be supplied in different sizes and shapes upon request.

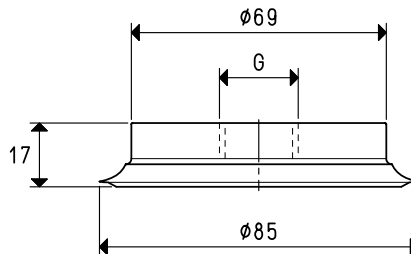
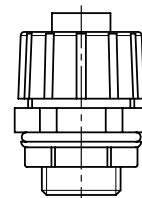


Quick coupling

2-way manual valve



TPR pipe fitting



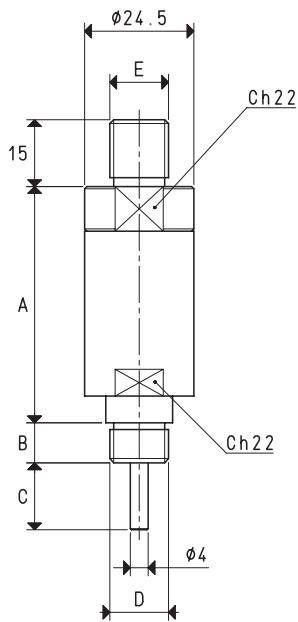
Art.	Max. capacity recommended cum/h	Manual 2-way valve art.	Quick coupler art.	TPR pipe fitting art.	Weight g	G
08 85 15 S 1/2"	20	13 03 11	RR1/2"	RTPR1/2"	108	G1/2"
08 85 15 S 3/4"	40	13 03 11	RR3/4"	RTPR3/4"	103	G3/4"

Note: 2-way valves and couplers are not integral part of the suction valve and therefore, must be ordered separately.

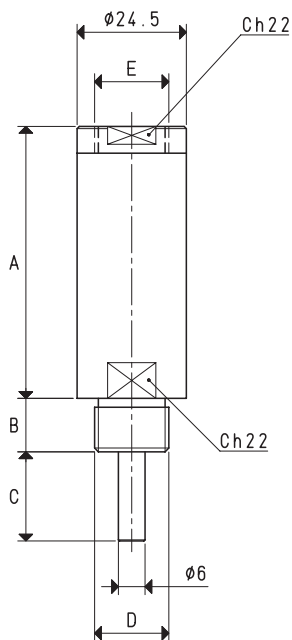
Conversion ratio: inch = $\frac{\text{mm}}{25.4}$, pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

Plunger valves are composed of a cylindrical brass body, a steel plunger with a conical valve and a thrust spring. Connected to vacuum, they are normally closed. They activate suction, thus creating vacuum, only when the plunger is in contact with the gripping surface. They are available in various versions, all suitable for our vacuum cups.



Art.	A	B	C	D ∅	E ∅	Weight g	Cup art.
19 01 10	53	9	15.0	G1/4"	G1/4"	160	08 150 16
19 01 11	53	9	15.0	M12	G1/4"	166	08 80 20
19 01 12	53	9	20.0	M12	G1/4"	152	08 127 15



Art.	A	B	C	D ∅	E ∅	Weight g	Cup art.
19 02 10	61	12	20	G3/8"	G3/8"	164	08 150 15 08 200 10
19 03 10	61	10	22,5	G1/2"	G3/8"	172	08 250 10 08 300 10 08 350 10
19 04 10	68	10	40	G1/2"	G3/8"	182	08 360 10

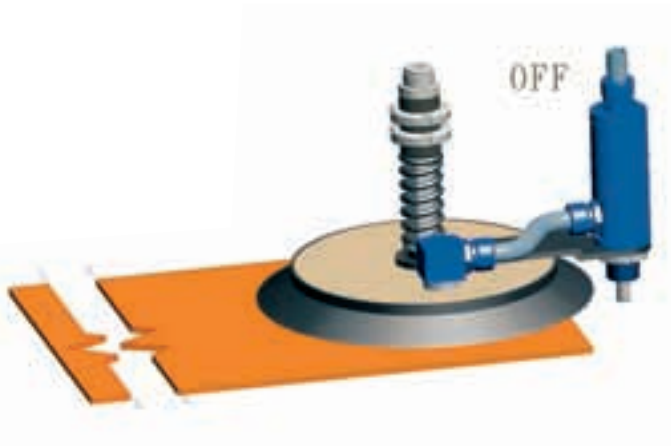
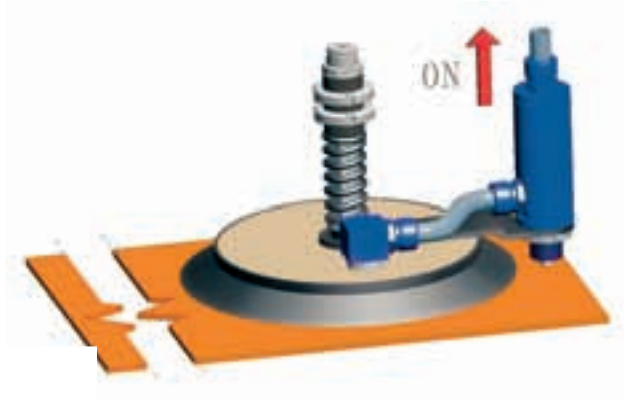
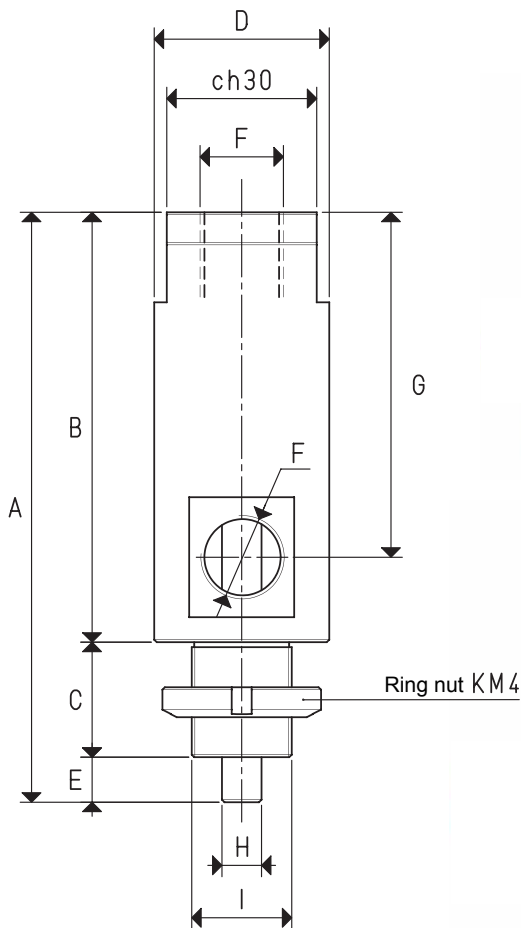
Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117



MECHANICALLY OPERATED VALVES

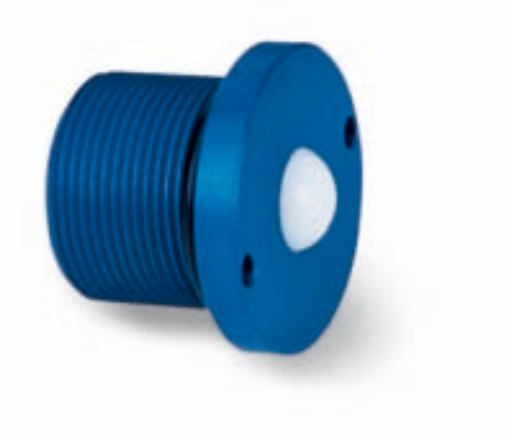
These valves are composed of an anodised aluminium body, a steel pin solidly connected to a conical shutter and of a thrust spring. Connected to vacuum, they are normally closed. They activate suction, thus creating vacuum, only when the pin is activated by the cams or any other mechanical device. They can be used as an alternative to plunger valves when these cannot be assembled onto the vacuum cups.



Art.	A	B	C	D	E	F	G	H	I	Weight
19 02 30	112	80	23	35	9	G3/8"	63	8	M20 x 1	252

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = 0.4536$

GAS-NPT thread adapters available at page 1.117

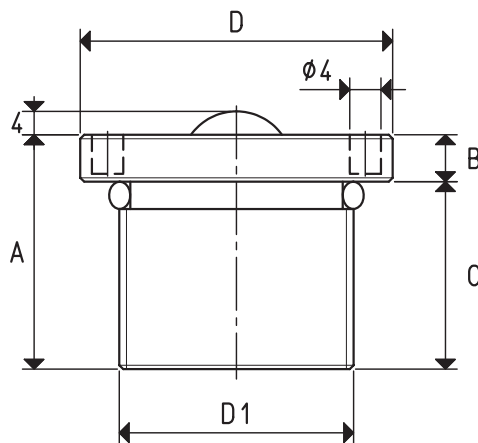


Valves with ball shutters activate suction, creating vacuum in the cups on which they are applied, only when the load to be held activates the sealing shutter.

They are made of an anodised aluminium body, a nylon ball shutter, a calibrated thrust spring and a threaded brass closing plug.

When properly calibrated, they guarantee a perfect vacuum seal.

They are recommended for making vacuum operated clamping surfaces. They can be supplied in different sizes and shapes upon request and for a minimum quantity to be defined in the order.



Art.	A	B	C	D	D1	Weight
22 01 10	30	6	24	40	M30 x 1.5	70

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

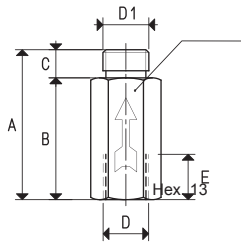
SHUT-OFF VALVES

They are special unidirectional valves that, when properly calibrated, allow a certain quantity of fluid to go through, afterwards, if the fluid continues to go through, they automatically close.

These shut-off valves have been specially designed to be applied on the cups and, in case of lack of objects to be gripped, of defective grips or leaks, they automatically deactivate suction, thus preventing any reduction of the vacuum level on the other gripping cups.

They are provided calibrated and commissioned, ready to be installed.

They are made with anodised aluminium and can be supplied in different shapes and sizes upon request and for a minimum quantity to be defined in the order.

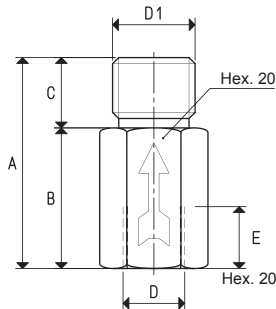


Hex. 20

Art.	A	B	C	D	D1	E	Weight
				∅	∅		g
14 01 05	32	26	6	G1/8"	G1/8"	8	8

Minimum ignition capacity = 1.5 cum/h

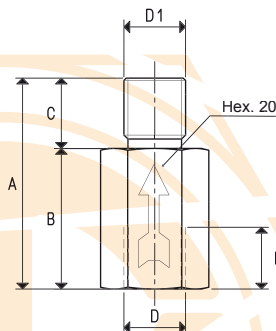
Minimum vacuum level = -250 mbar



Art.	A	B	C	D	D1	E	Weight
				∅	∅		g
14 01 10	45	30	15	G1/4"	G3/8"	14	28

Minimum ignition capacity = 4 cum/h

Minimum vacuum level = -250 mbar



Art.	A	B	C	D	D1	E	Weight
				∅	∅		g
14 01 15	45	30	15	G1/4"	G1/4"	14	29

Minimum ignition capacity = 4 cum/h

Minimum vacuum level = -250 mbar

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117



Art.	A	D	D1	E	Weight
		∅	∅		g
14 02 10	59	G1/4"	G1/4"	14	42

Minimum ignition capacity = 4 cum/h

Minimum vacuum level = -250 mmba

Art.	A	B	C	D	D1	E	Weight
				∅	∅		g
14 03 10	59	47	12	G3/8"	G1/4"	14	36

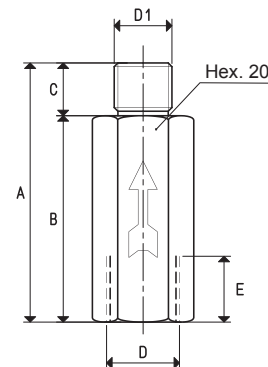
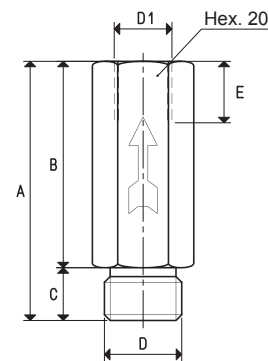
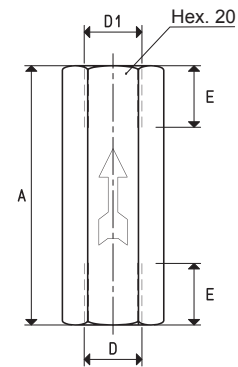
Minimum ignition capacity = 4 cum/h

Minimum vacuum level = -250 mbar

Art.	A	B	C	D	D1	E	Weight
				∅	∅		g
14 05 10	59	47	12	G3/8"	G1/4"	14	34

Minimum ignition capacity = 4 cum/h

Minimum vacuum level = -250 mbar



SHUT-OFF VALVES WITH CONTROLLED LEAK

These shut-off valves are based on the same operating principle as the others, only their sealing shutter allows the vacuum source a minimum suction even when completely closed. This feature allows the cup that has not gripped the object to be handled, for example for the anticipated suction activation, to recreate vacuum inside and, therefore, to grip the object without having to repeat the work cycle. If, on the other hand, there is a lack of an object to be handled, the valve does not prevent the vacuum level reduction on the remaining gripping cups, but the slight leak is easy to control and, therefore, to restore. They are fully made with anodised aluminium.

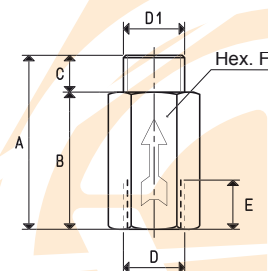


Art.	Max. leak NI/min	Minimum ignition capacity cum/h	A	B	C	D	D1	E	F	Weight
						∅	∅			g
14 01 11	7.5	1	36.0	29.5	6.5	G1/8"	G1/8"	10	13	8
14 02 11	7.5	1	37.5	29.5	8.0	G1/4"	G1/4"	15	17	16
14 03 11	24.0	3	42.0	32.5	9.5	G3/8"	G3/8"	17	22	28

Minimum vacuum level = -250 mbar

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

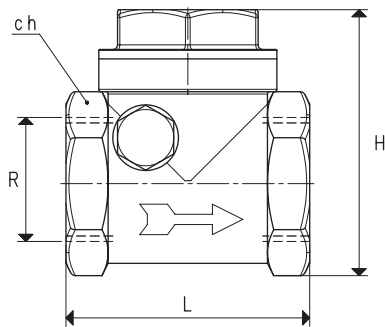


CHECK VALVES

These unidirectional valves are made with bronze and brass with a seal in NBR nitrile rubber or, upon request, in Viton®.

To ensure a practical assembly they are available in two versions: horizontal and vertical.

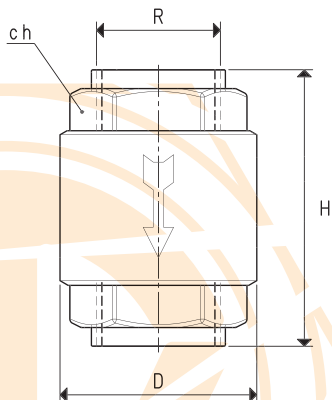
Fitted on the vacuum pump suction inlet, as soon as the latter stop, these valves prevent the air from returning in the plant (piping, tanks, autoclaves, vacuum gripping systems, vacuum cups, etc.), guaranteeing a perfect seal and preventing the oil from returning into the pump stator, which would cause considerable damages. Therefore, check valves are mandatory on all vacuum pumps with lubrication that do not have them built-in.



HORIZONTAL

Art.	R Ø	Ch	H	L	Weight Kg
10 02 10	G3/8"	27	49	43	0.19
10 03 10	G1/2"	27	49	43	0.17
10 04 10	G3/4"	34	58	52	0.27
10 05 10	G1"	42	66	62	0.43
10 06 10	G1" 1/4	50	75	72	0.59
10 07 10	G1" 1/2	57	86	80	0.79
10 08 10	G2"	69	99	94	1.08

Note: To order the valve with Viton® seal, add the letter V to the article (E.g.: 10 02 10 V)



VERTICAL

Art.	R Ø	Ch	D Ø	H	Weight Kg
10 01 11	G1/4"	21	28	47	0.10
10 02 11	G3/8"	25	35	59	0.17
10 03 11	G1/2"	26	35	58	0.12
10 04 11	G3/4"	33	42	65	0.28
10 05 11	G1"	40	48	74	0.42
10 06 11	G1" 1/4	50	61	82	0.64
10 07 11	G1" 1/2	55	71	92	0.87
10 08 11	G2"	70	87	100	2.70

Note: To order the valve with Viton® seal, add the letter V to the article (E.g.: 10 02 11 V)

$$\text{Conversion ratio: inch} = \frac{\text{mm}}{25.4} \quad \text{pounds} = \frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$$

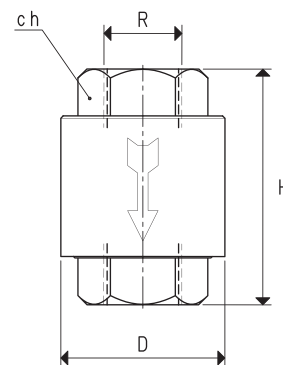
GAS-NPT thread adapters available at page 1.117

These valves have the same features of the other check valves, but they are made with anodised aluminium, which makes them particularly light. The seal is guaranteed by a EPDM membrane instead of the metal shutter with NBR seal.

For these features and for their modern design, they are recommended for pneumatic vacuum generators and, of course, on vacuum pumps.



Art.	R Ø	Ch	D Ø	H	Weight g
10 01 15	G1/4"	20	30	42	46
10 02 15	G3/8"	24	35	50	74
10 03 15	G1/2"	24	37	55	86
10 04 15	G3/4"	33	42	64	110
10 05 15	G1"	40	49	74	162

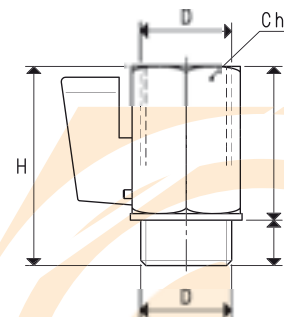


MANUAL 2-WAY MINIATURE VACUUM VALVES

These small manual valves are suited for intercepting vacuum on vacuum cup holders and any small utility in which solenoid valves cannot be installed. They feature a hexagonal nickel-plated brass body, a chromed brass ball shutter and a seal in plastic material to guarantee a perfect seal. A lever on the ball shutter, rotated by 90°, allows opening or closing the valve with no effort.



Art.	D Ø	Ch	E	F	H	Weight g
13 01 11	G1/4"	21	7	32	39	80
13 02 11	G3/8"	21	10	30	40	74
13 03 11	G1/2"	25	12	33	45	110



Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

PILOT-OPERATED 3-WAY VACUUM VALVES

These 2-position, 3-way valves feature pneumatically activated conical shutters.

They can be normally used either open or closed.

They are recommended in all the cases that require a quick exchange between the vacuum pump suction and the air inlet into the circuit for a quick restoration of the atmospheric pressure.

They are composed of an anodised aluminium body, two vulkollan® shutters assembled onto a stainless steel stem, a membrane for servo-control made with special compounds and a thrust spring for the shutter return.

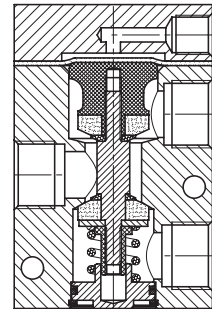
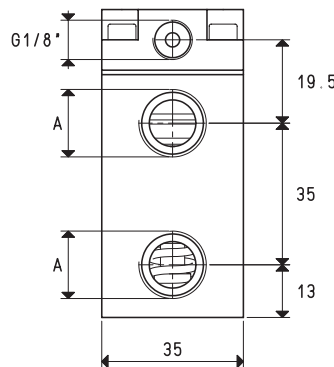
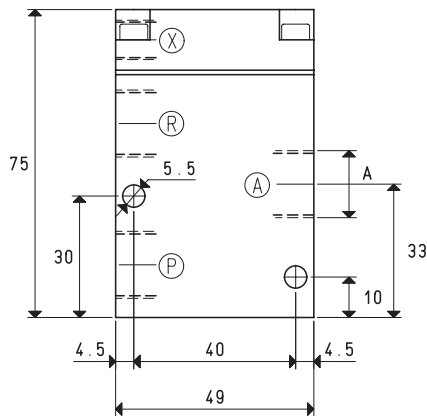
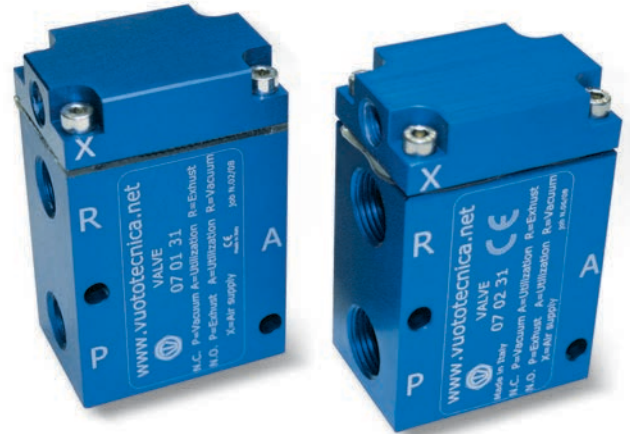
These valves allow reducing frictions and internal dynamic stresses to the minimum. The result being a high response speed and a guarantee of long lasting duration.

Technical features

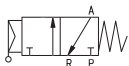
Working pressure: from 0.5 to 3000 mbar abs.

Servo-control pressure: see table

Temperature of the sucked fluid: from -5 to +60 °C

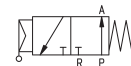


NC



X = Compressed air supply
P = Pump
A = Service
R = Passage

NO



X = Compressed air supply
P = Passage
A = Service
R = Pump

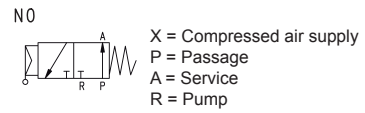
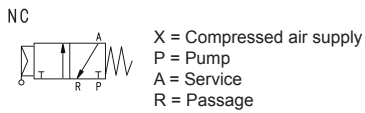
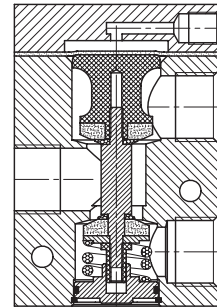
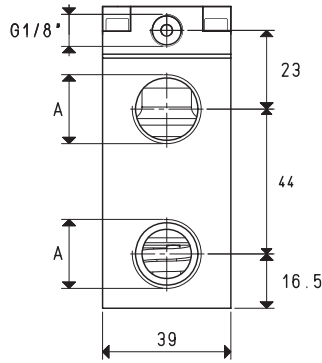
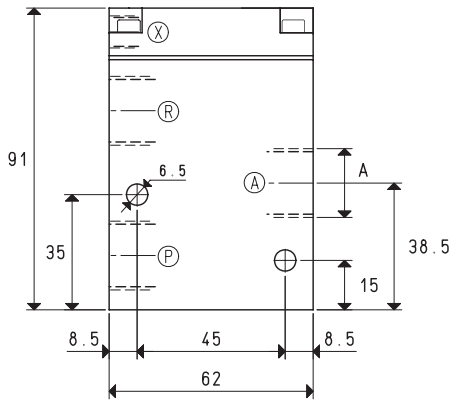
Art.	P A	A Ø	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	Servo-control pressure bar (g)	Weight g
				min	max	exc.	deexc.				
07 01 31		G1/4"	6	1000	0.5	5	10	8.5	56.8	4 ÷ 7	318
07 02 31		G3/8"	10	1000	0.5	5	10	11.5	103.8	4 ÷ 7	308

$$\text{Conversion ratio: inch} = \frac{\text{mm}}{25.4} \text{ pounds} = \frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$$

GAS-NPT thread adapters available at page 1.117

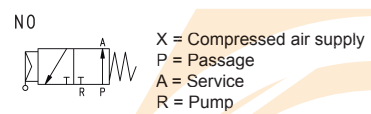
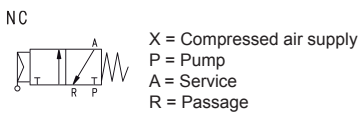
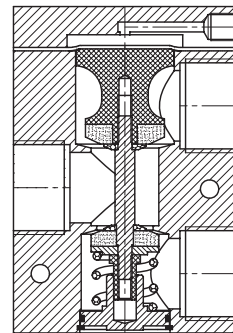
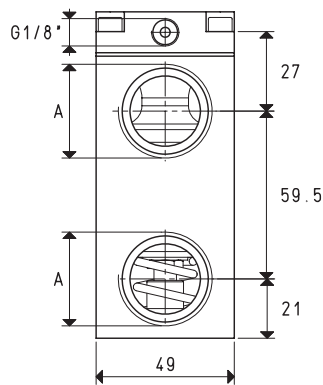
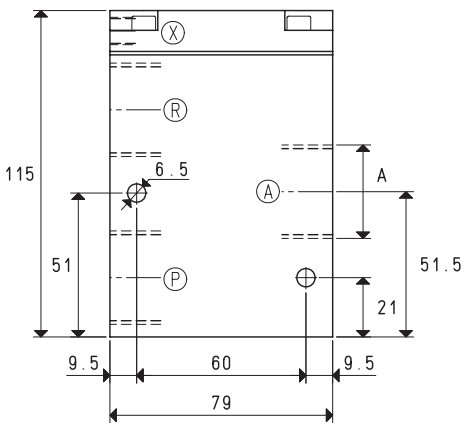


3-WAY VACUUM SOLENOID PILOT VALVES



Art.	A Ø	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	Servo-control pressure *bar (g)	Weight Kg
			min	max	exc.	deexc.				
07 03 31	G1/2"	20	1000	0.5	6	15	15.0	176	6 ÷ 8	0.490

* Add the letters LP to the article for servo-control pressure 4 ÷ 6 bar (g).

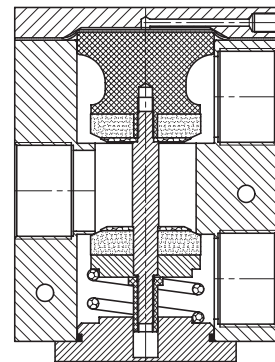
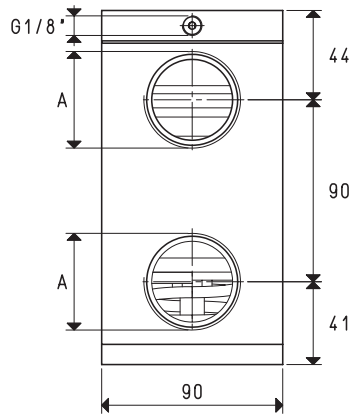
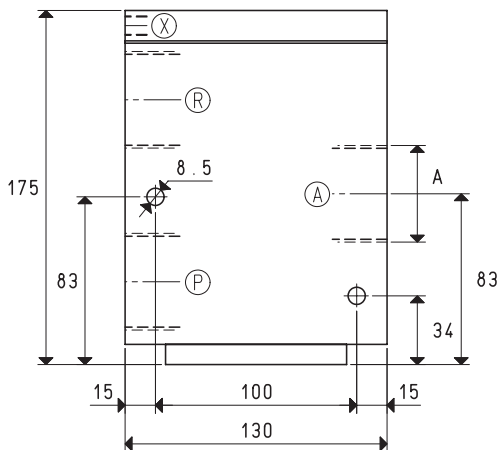


Art.	A Ø	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	Servo-control pressure *bar (g)	Weight Kg
			min	max	exc.	deexc.				
07 04 31	G3/4"	40	1000	0.5	7	16	20	314	6 ÷ 8	1.060
07 05 31	G1"	90	1000	0.5	7	16	25	490	6 ÷ 8	0.964

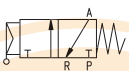
* Add the letters LP to the article for servo-control pressure 4 ÷ 6 bar (g).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

GAS-NPT thread adapters available at page 1.117

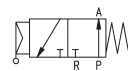


NC



X = Compressed air supply
P = Pump
A = Service
R = Passage

NO



X = Compressed air supply
P = Pump
A = Service
R = Passage

Art.	A Ø	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	Servo-control pressure *bar (g)	Weight Kg
			min	max	exc.	deexc.				
07 06 31	G1" 1/2	320	1000	0.5	65	30	40	1256	6 ÷ 8	4.456

* Add the letters LP to the article for servo-control pressure 4 ÷ 6 bar (g).

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = 0.4536$

GAS-NPT thread adapters available at page 1.117



These direct-drive valves have been specially designed for vacuum and are normally closed. They are composed of an anodised aluminium body, where the connections and the passage orifices are located, and of an actuator which is activated by an electric coil. The solenoid pilot valve shutter in NBR nitrile rubber or Vulkollan®, is an integral part of the actuator mobile core. Both the orifices of the 2-way solenoid pilot valves have the same size, while those of the 3-way ones have a 3mm outlet diameter, obtained through the tube. The very low reaction time allow carrying out a very high number of cycles per minute.

The standard electric coil is fully plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 6.3 mm 3-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650). Protection degree IP 54; IP 65 for inserted connector.

Allowed tolerance on the voltage nominal value: $\pm 10\%$.

Max. absorption: 16.5 V.A. with AC and 16 W with DC.

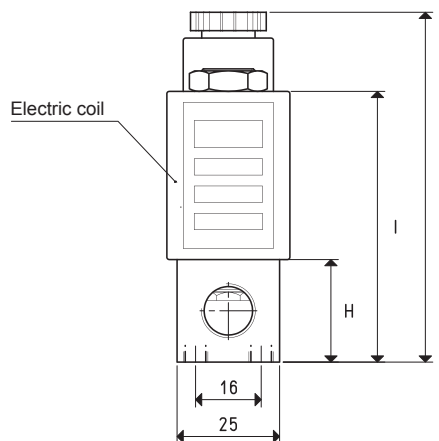
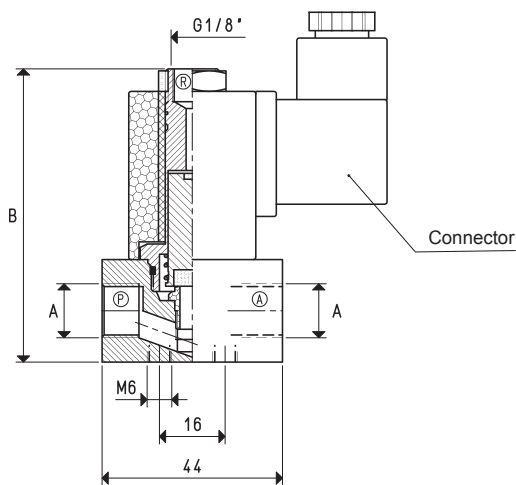
The electric coil can be rotated by 360°.

The connector can be rotated by 180° on the coil and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

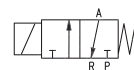
Technical features:

Working pressure: from 1 to 1500 mbar abs.

Temperature of the sucked fluid: from -5 to +60 °C



3 / 2 NC



P = Pump
A = Service
R = Passage

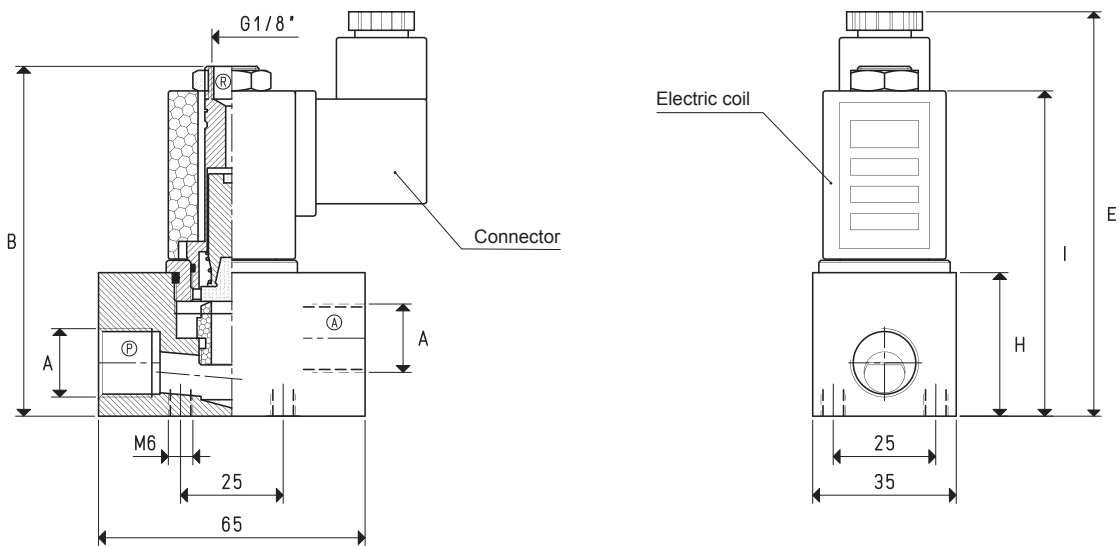
3-WAY SOLENOID PILOT VALVE

Art.	A	Max. capacity	Vacuum level		Reaction time		Ø	Passage section	B	E	H	I	Weight
			min	max	exc.	deexc.							
07 01 16	G1/4"	4 cum/h	1000	0.5	15	8	6	28.3	73	86	25	67	248

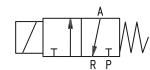
Note: The coil and the connectors are not integral part of the solenoid pilot valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117



3 / 2 NC



P = Pump
A = Service
R = Passage

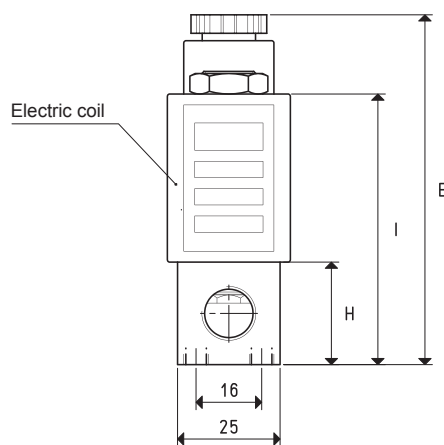
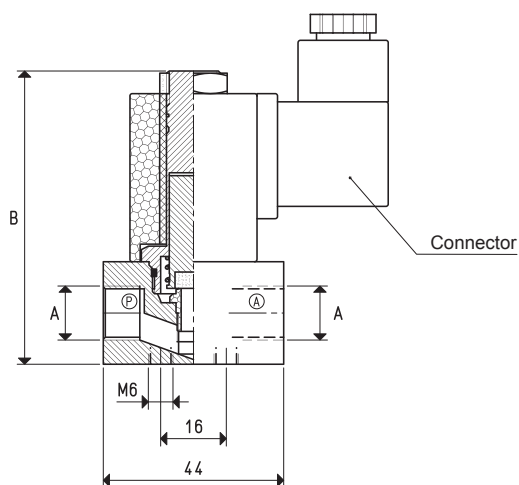
3-WAY SOLENOID PILOT VALVE

Art.	A	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	B	E	H	I	Weight g
			min	max	exc.	deexc.							
07 02 16	G3/8"	8	1000	0.5	22	10	10	78.5	85	98	35	79	392
07 03 16	G1/2"	10	1000	0.5	28	10	12	113.0	85	98	35	79	377

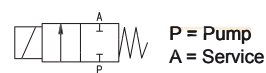
Note: The coil and the connectors are not integral part of the solenoid pilot valves, therefore, they must be ordered separately (See solenoid valve accessories).

$$\text{Conversion ratio: inch} = \frac{\text{mm}}{25.4}; \text{ pounds} = \frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$$

GAS-NPT thread adapters available at page 1.117



2 / 2 NC



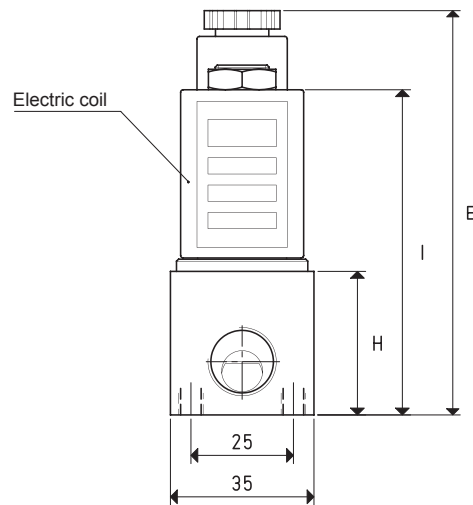
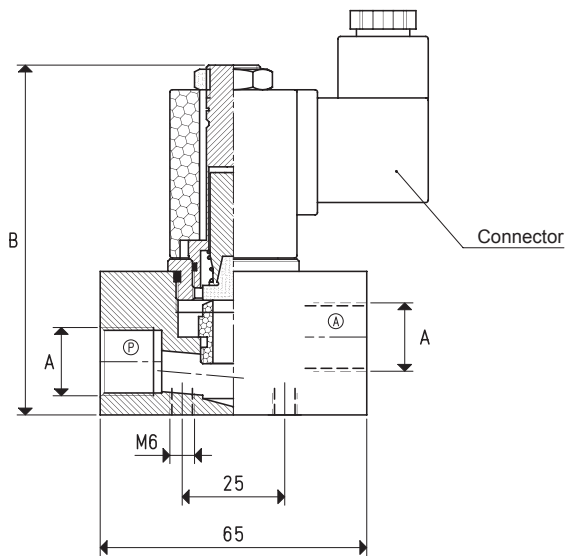
2-WAY SOLENOID PILOT VALVE

Art.	A	Max. capacity	Vacuum level		Reaction time		Ø orifice	Passage section	B	E	H	I	Weight
	Ø	cum/h	min	max	exc.	deexc.							
07 01 20	G1/4"	4	1000	0.5	15	8	6	28.3	73	86	25	67	244

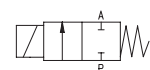
Note: The coil and the connectors are not integral part of the solenoid pilot valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117



2 / 2 NC



P = Pump
A = Service

2-WAY SOLENOID PILOT VALVE

Art.	A Ø	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	B	E	H	I	Weight g
			min	max	exc.	deexc.							
07 02 20	G3/8"	8	1000	0.5	22	10	10	78.5	85	98	35	79	384
07 03 20	G1/2"	10	1000	0.5	28	10	12	113.0	85	98	35	79	372

Note: The coil and the connectors are not integral part of the solenoid pilot valves, therefore, they must be ordered separately (See solenoid valve accessories).

$$\text{Conversion ratio: inch} = \frac{\text{mm}}{25.4}; \text{ pounds} = \frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$$

GAS-NPT thread adapters available at page 1.117



These state of the art solenoid valves feature minimal overall dimensions and high volumetric efficiency and high response speed at any vacuum level. They are the result of an attentive choice of materials, state of the art constructive techniques and of the in-depth knowledge of our technicians. This series of solenoid valves is patented.

The DDN solenoid valves are direct drive, 2-way, 2-position valves with direct drive, double shutter and they are normally closed. They are composed of hot pressed brass body where the connections are located, an internal mechanism with double shutter and of an actuator activated by an electric coil. The standard electric coil is fully plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 6.3 mm 3-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650). Protection degree IP 54; IP 65 with inserted connector.

Allowed tolerance on the voltage nominal value: $\pm 10\%$.

Max. absorption: 16.5 V.A. with AC and 16 W with DC (except for DDN 25 which cannot be activated with DC).

The electric coil can be rotated by 360°. The connector can be rotated by 180° on the coil and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

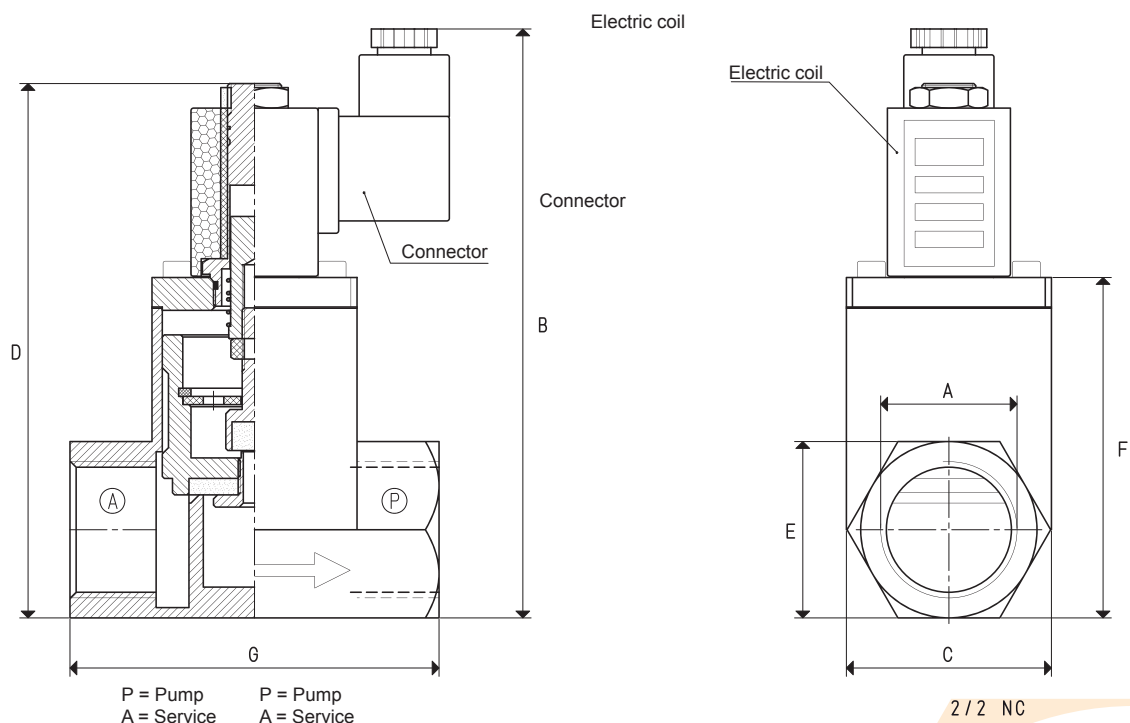
For a correct operation, we recommend installing the solenoid valve upside-down.

DDN solenoid valves are particularly indicated for degassers, autoclaves, vacuum thermo-welders and in all applications where suction has to be controlled separately from the air inlet into circuit.

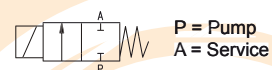
Technical features

Working pressure: from 0.5 to 1500 mbar abs.

Temperature of the sucked fluid: from -5 to +60 °C



2 / 2 NC



P = Pump
A = Service

Art.	A Ø	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	B	C	D	E	F	G	Weight Kg
			min	max	exc.	deexc.									
DDN 14	G1/2"	20	1000	0.5	30	15	14	154	127	35	110	30	63	75	0.83
DDN 25	G1"	90	1000	0.5	55	33	25	490	142	50	128	43	82	90	1.56

Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

The 3-way vacuum solenoid valves in this series are 2-position valves with pneumatically servo-controlled conical shutters.

They can normally be used either open or closed.

They are composed of an anodised aluminium body, two vulkollan® shutters assembled onto a stainless steel stem, a membrane for servo-control made with special compounds and a thrust spring for the shutter return; an actuator activated by an electric coil managed the compressed air supply.

These valves allow reducing frictions and internal dynamic stresses to the minimum. the result being a high response speed and a guarantee of long lasting duration.

The standard electric coil is fully plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 6.3 mm 3-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650). Protection degree IP 54; IP 65 for inserted connector.

Allowed tolerance on the voltage nominal value: ±10%.

Max. absorption: 16.5 V.A. in c.a. e 16 W in c.c.

The electric coil can be rotated by 360°. The connector can be rotated by 180° on the coil and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

3-way vacuum solenoid valves are usually used for intercepting vacuum on feeders and cup stackers, robots, sheet feeders, sack openers and in all those cases where a quick response is needed between suction and the air inlet into the circuit, for a quick restoration of the atmospheric pressure.

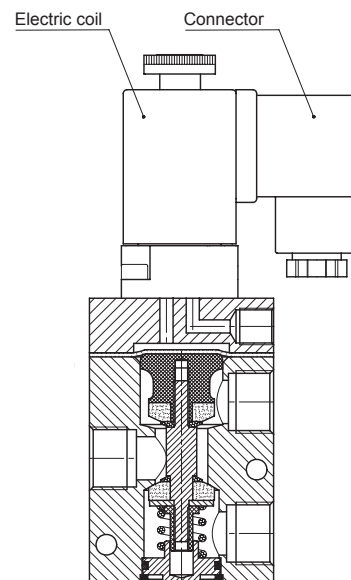
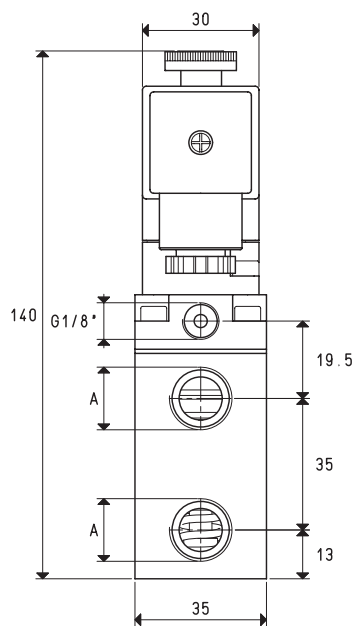
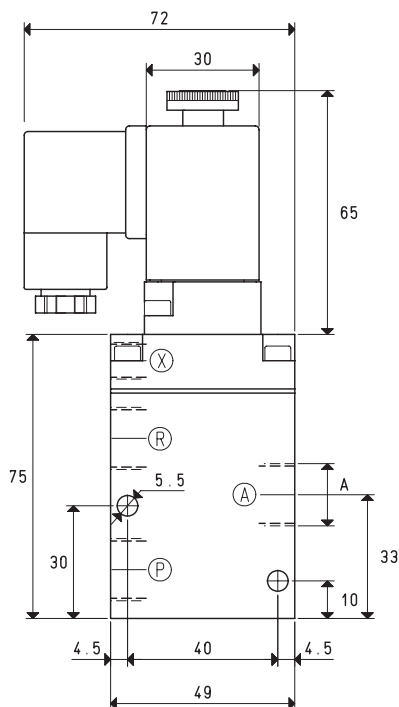
They can be supplied upon request with an SM device for manually opening and closing the solenoid valves already installed.

Technical features

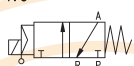
Working pressure: from 0.5 to 3000 mbar abs.

Servo-control pressure: see table

Temperature of the sucked fluid: from -5 to +60 °C

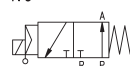


NC



X = Compressed air supply
P = Pump
A = Service
R = Passage

NO



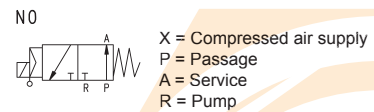
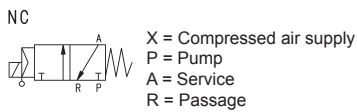
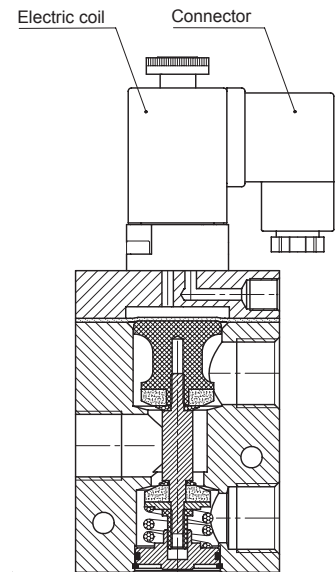
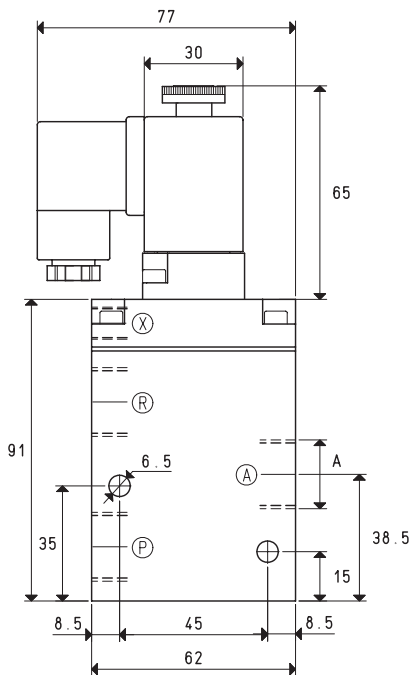
X = Compressed air supply
P = Passage
A = Service
R = Pump

Art.	A	Max. capacity	Vacuum level		Reaction time		Ø	Passage section	Servo-control pressure	Weight
			min	max	exc.	deexc.				
07 01 11	G1/4"	6	1000	0.5	16	27	8.5	56.8	4 ÷ 7	0.56
07 02 11	G3/8"	10	1000	0.5	16	27	11.5	103.8	4 ÷ 7	0.54

Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$, pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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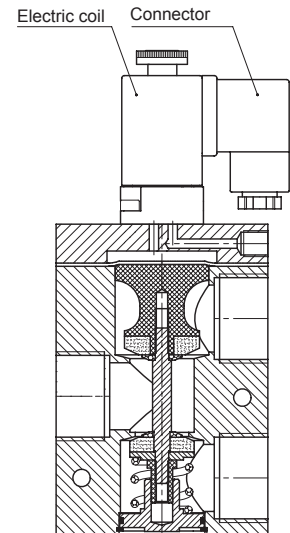
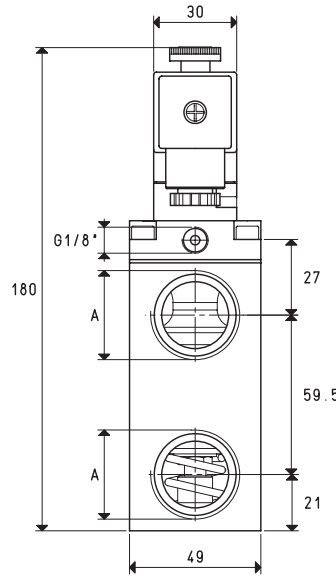
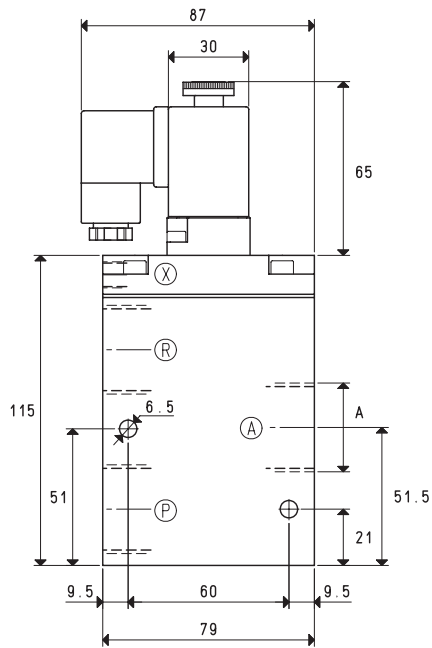
Art.	A	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	Servo-control pressure *bar (g)	Weight Kg
			min	max	exc.	deexc.				
07 03 11	G1/2"	20	1000	0.5	16	40	15.0	176	6 ÷ 8	0.73

* Add the letters LP to the article for servo-control pressure 4 ÷ 6 bar (g).

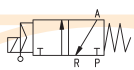
Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

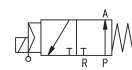


NC



X = Compressed air supply
P = Pump
A = Service
R = Passage

NO



X = Compressed air supply
P = Passage
A = Service
R = Pump

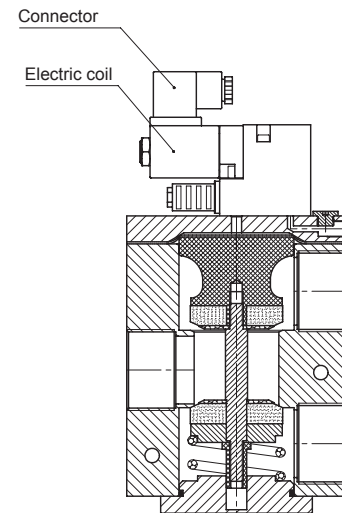
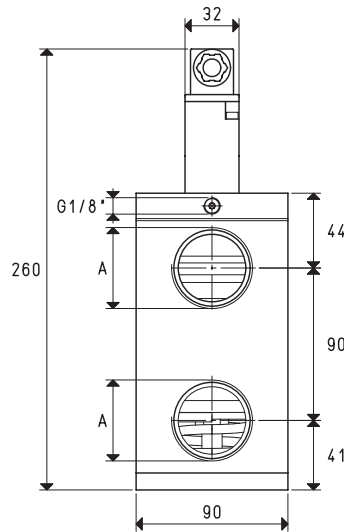
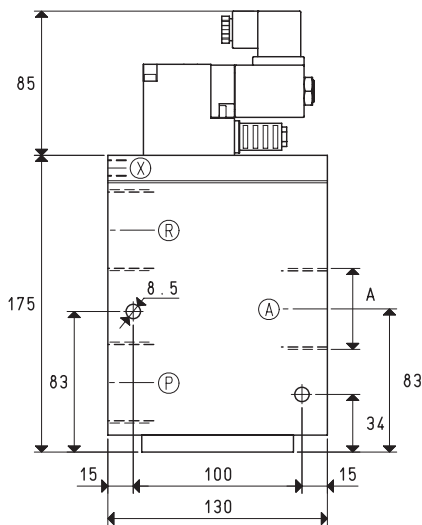
Art.	A	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	Servo-control pressure *bar (g)	Weight Kg
			min	max	exc.	deexc.				
07 04 11	G3/4"	40	1000	0.5	16	40	20	314	6 ÷ 8	1.25
07 05 11	G1"	90	1000	0.5	18	42	25	490	6 ÷ 8	1.16

* Add the letters LP to the article for servo-control pressure 4 ÷ 6 bar (g).

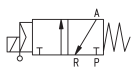
Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

$$\text{Conversion ratio: inch} = \frac{\text{mm}}{25.4} \cdot \text{pounds} = \frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$$

GAS-NPT thread adapters available at page 1.117

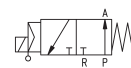


NC



X = Compressed air supply
P = Pump
A = Service
R = Passage

N0



X = Compressed air supply
P = Passage
A = Service
R = Pump

Art.	A	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	Servo-control pressure *bar (g)	Weight Kg
			min	max	exc.	deexc.				
07 06 11	G1" 1/2	180	1000	0.5	60	38	40	1256	6 ÷ 8	4.79

* Add the letters LP to the article for servo-control pressure 4 ÷ 6 bar (g).

Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

GAS-NPT thread adapters available at page 1.117

These solenoid valves have the same function and the same structure as the previous ones. Their distinctive features are the two coils that with a simple electric impulse, exchange the shutter positions and keep them in this position till the next impulse even in absence of compressed air at the servo control and of electric current.

For this feature, they are especially indicated in all those cases which require a safe connection to the vacuum source, even in absence of electric or pneumatic supply. The standard electric coils are fully plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 6.3 mm 3-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650). Protection degree IP 54; IP 65 for inserted connector.

Allowed tolerance on the voltage nominal value: $\pm 10\%$.
Max. absorption: $8 \div 16.5$ V.A. with AC and $6.5 \div 16$ W with DC.

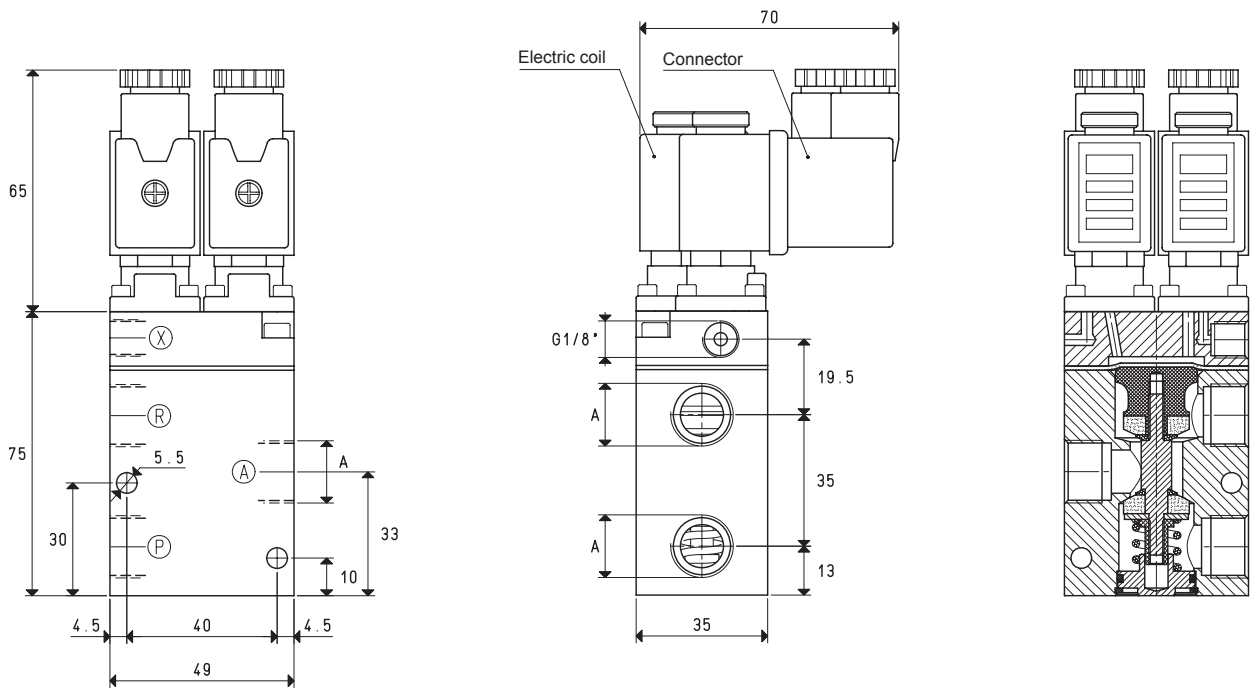
The electric coils can be rotated by 360°. The connector can be rotated by 180° on the coils and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

Technical features

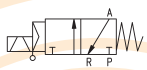
Working pressure: from 0.5 to 3000 mbar abs.

Servo-control pressure: see table

Temperature of the sucked fluid: from -5 to +60 °C

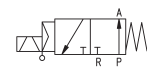


NC



X = Compressed air supply
P = Pump
A = Service
R = Passage

N0



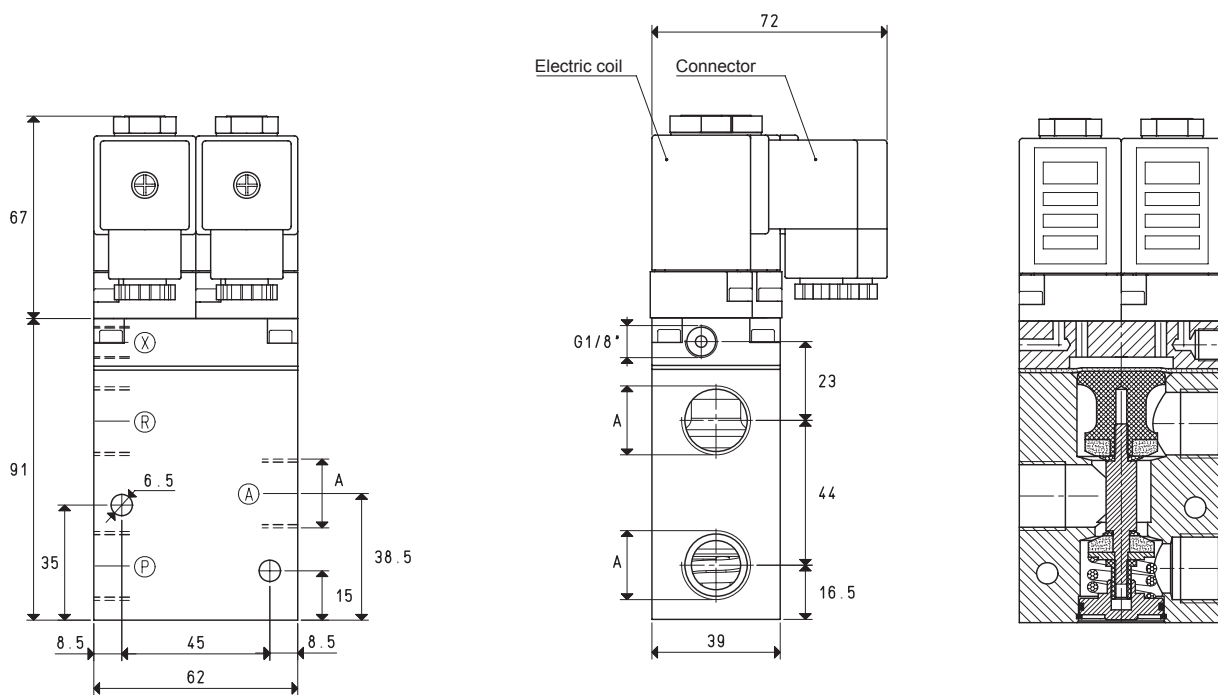
X = Compressed air supply
P = Passage
A = Service
R = Pump

Art.	A Ø	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm²	Servo-control pressure bar (g)	Weight Kg
			min	max	exc.	deexc.				
07 01 51	G1/4"	6	1000	0.5	16	27	8.5	56.8	4 ÷ 7	0.59
07 02 51	G3/8"	10	1000	0.5	16	27	11.5	103.8	4 ÷ 7	0.58

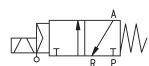
Note: Coils and connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = 0.4536$

GAS-NPT thread adapters available at page 1.117

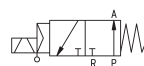


NC



X = Compressed air supply
P = Pump
A = Service
R = Passage

N0



X = Compressed air supply
P = Passage
A = Service
R = Pump

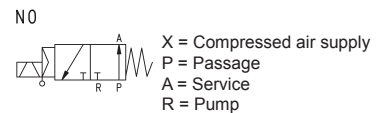
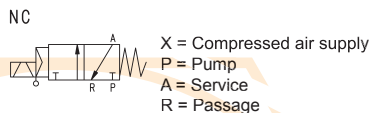
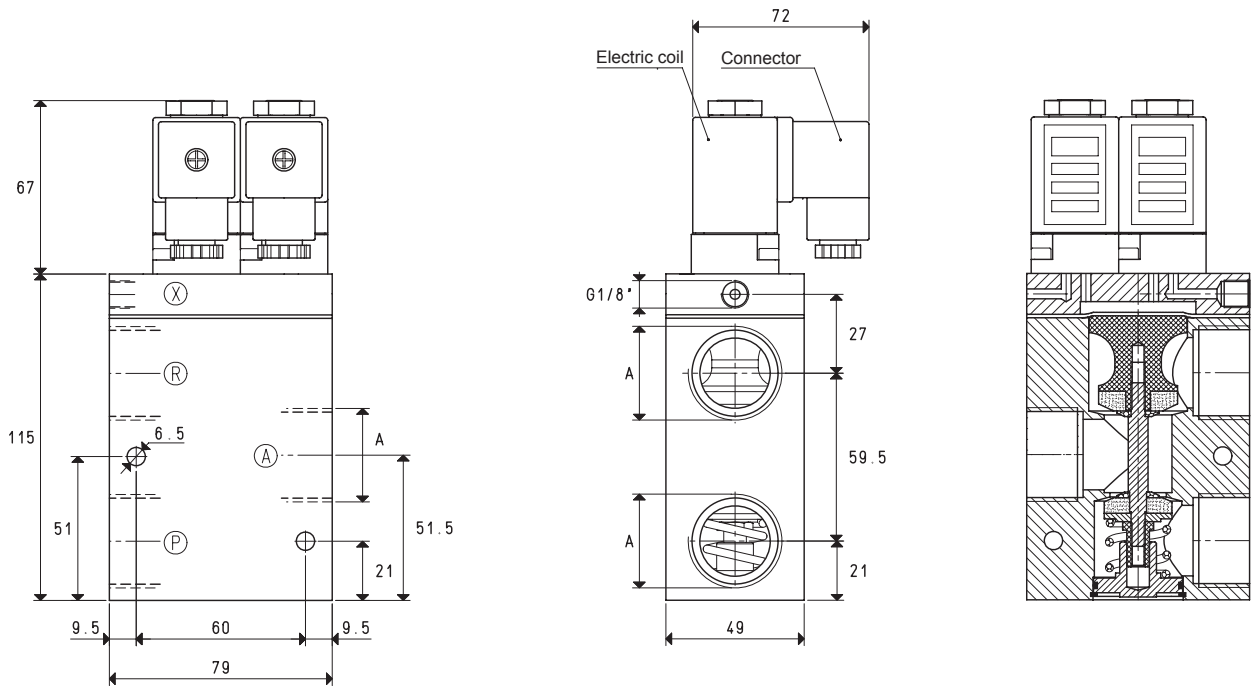
Art.	A	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	Servo-control pressure *bar (g)	Weight Kg
			min	max	exc.	deexc.				
07 03 51	G1/2"	20	1000	0.5	16	40	15.0	176	6 ÷ 8	0.97

* Add the letters LP to the article for servo-control pressure 4 ÷ 6 bar (g).

Note: Coils and connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

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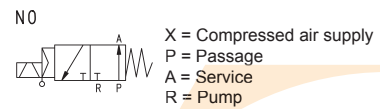
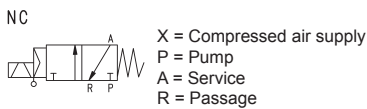
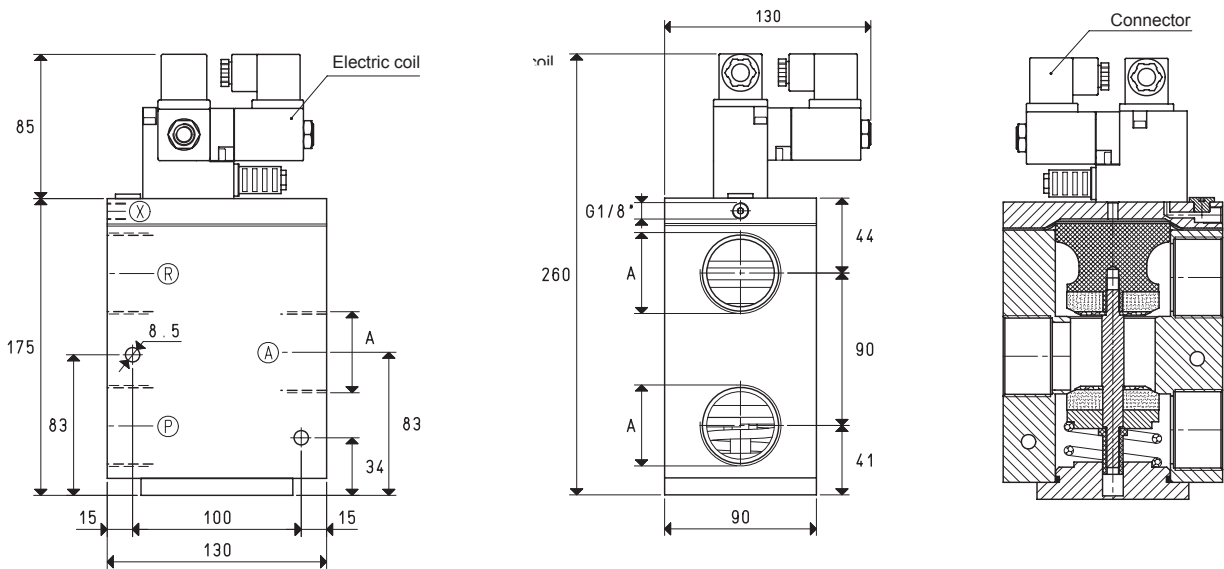
Art.	A	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	Servo-control pressure *bar (g)	Weight Kg
			min	max	exc.	deexc.				
07 04 51	G3/4"	40	1000	0.5	16	40	20	314	6 ÷ 8	1.51
07 05 51	G1"	90	1000	0.5	18	42	25	490	6 ÷ 8	1.41

* Add the letters LP to the article for servo-control pressure 4 ÷ 6 bar (g).

Note: Coils and connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

$$\text{Conversion ratio: inch} = \frac{\text{mm}}{25.4} \cdot \text{pounds} = \frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$$

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Art.	A	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm²	Servo-control pressure *bar (g)	Weight Kg
			min	max	exc.	deexc.				
07 06 51	G1" 1/2	180	1000	0.5	60	38	40	1256	6 ÷ 8	5.24

* Add the letters LP to the article for servo-control pressure 4 ÷ 6 bar (g).

Note: Coils and connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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These direct drive 3-way, 2-position vacuum solenoid valves feature conical shutters servo-controlled by the vacuum. As a standard they are normally closed, but they can be supplied normally open upon request. They are composed of an anodised aluminium body where the connections are located, two silicon shutters assembled onto a stainless steel stem and a membrane in special reinforced compound. An actuator activated by an electric coil manages the vacuum at the servo-control. The operating principle of these solenoid valves is based on the pressure differential between the vacuum pump or generator and the pressure of the sucked air.

By addressing this "differential pressure" to the servo-control via the actuator, the shutters can be controlled without compressed air or springs.

Due to their operating principle, they are not recommended on plants with low vacuum levels (below 850 mbar abs., equal to 15 % of vacuum).

The lack of springs, frictions and internal dynamic stresses favours a high response speed and guarantees long lasting operation.

The standard electric coil is fully plasticised with synthetic resin, tight execution, insulation class F (up to 155 °C) compliant with VDE standards, with 6.3 mm 3-terminal electrical connections in compliance with EN 175301-803 (ex DIN 43650). Protection degree IP 54; IP 65 for inserted connector.

Allowed tolerance on the voltage nominal value: ±10%.

Max. absorption: 16.5 V.A. with AC and 16 W with DC.

The electric coil can be rotated by 360°. The connector can be rotated by 180° on the coil and can be supplied, upon request, with Led lights, anti-interference circuit and/or with protection devices against overvoltage and polarity reversal.

The solenoid valves in this series, along with the uses described for the 07 .. 11 series can be used on plants with no compressed air.

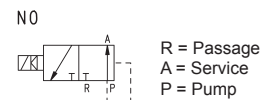
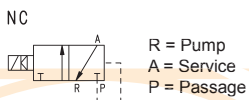
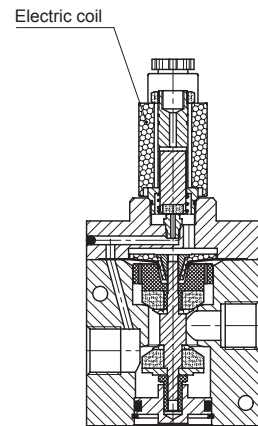
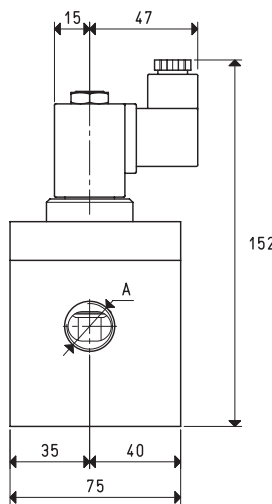
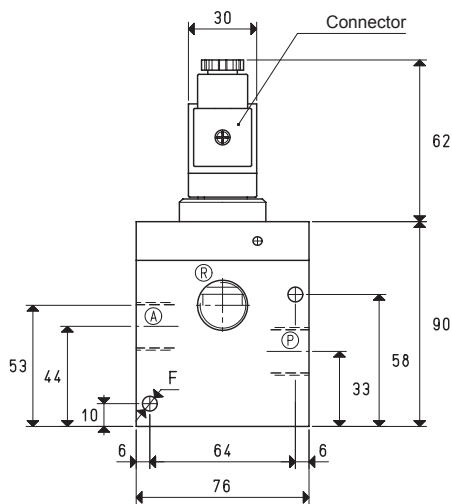
They can be provided, upon request, with SM device for manually opening or closing the solenoid valve already installed.

The solenoid valve must be always chosen according to the capacity and, therefore, to the vacuum pump or generator suction connection.

Technical features

Working pressure: from 0.5 to 850 mbar abs.

Temperature of the sucked fluid: from -5 to +60 °C



Art.	A	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Ø orifice	Passage section mm ²	F	Weight Kg
			min	max	exc.	deexc.				
07 03 40 NC	G1/2"	20	850	0.5	30	15	15	176	6.5	1.53
07 03 40 NO					20	18				
07 04 40 NC	G3/4"	40	850	0.5	30	15	20	314	6.5	1.50
07 04 40 NO					20	18				

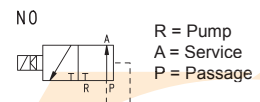
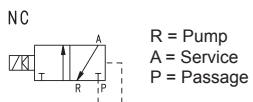
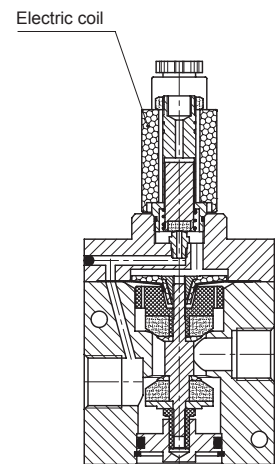
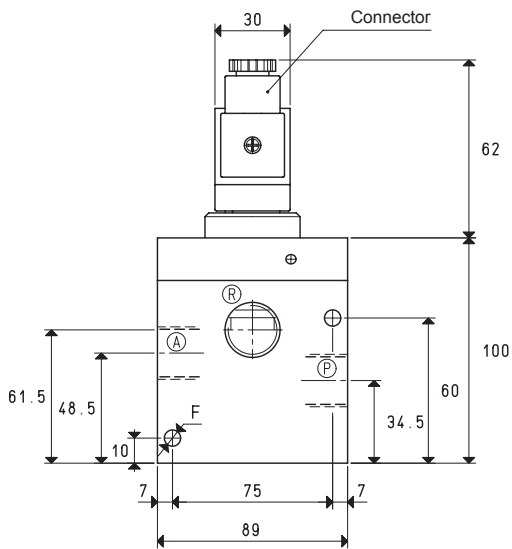
Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$, pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

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DIRECT DRIVE 3-WAY VACUUM SOLENOID VALVES

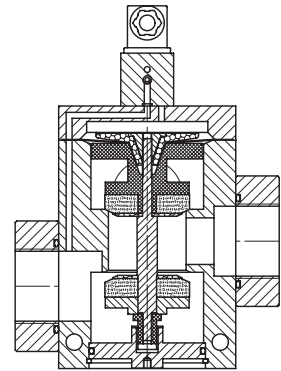
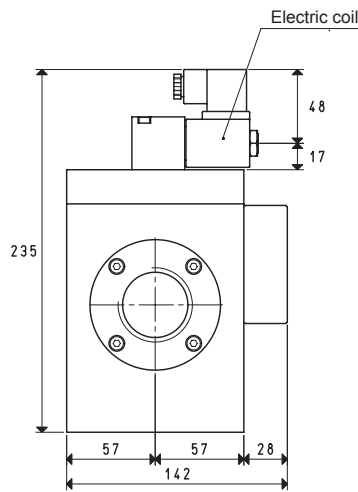
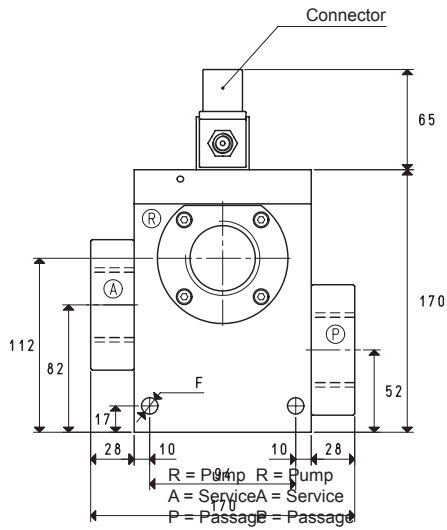


Art.	A	Max. capacity	Vacuum level		Reaction time		Ø	Passage section	F	Weight
			min	max	exc.	deexc.				
07 05 40 NC	G1"	90	850	0.5	38	18	25	490	6.5	1.91
07 05 40 NO					25	20				

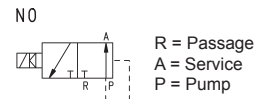
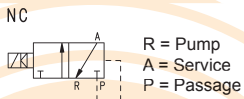
Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6}$ = $\frac{Kg}{0.4536}$

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R = Passage R = Passage
 A = Service A = Service
 P = Pump P = Pump



Art.	A	Max. capacity cum/h	Vacuum level mbar abs.		Reaction time msec		Passage section mm ²	Ø orifice	F Ø	Weight Kg
			min	max	exc.	deexc.				
07 06 40 NC	G1" 1/2	180	850	0.5	75	50	1256	40	10.5	5.90
07 06 40 NO					70	60				

Note: The coil and the connectors are not integral part of the solenoid valves, therefore, they must be ordered separately (See solenoid valve accessories).

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6}$ = $\frac{\text{Kg}}{0.4536}$

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