

NAMUR VALVES

General information

Function	Section	Pressure range	Pressure connection (nominal orifice)	Earthing contact	Electrical connections
5/2-way Poppet Valves	A	2.5 - 10 bar	G 1/4 (8 mm)	Part of the standard device	2.5 - 10 bar
5/2-way Spool Valves 5/3-way Spool Valves		2.5 - 10 bar	G 1/4 (8 mm)		2.5 - 10 bar

- Ambient temperature range:

From -15 °C to +50 °C
- Housing:

Die-cast and varnished aluminium alloy
- Seals:

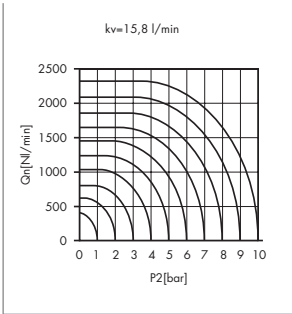
NBR
- Electrical connections:

Coil with 3 spade connectors (6.3 x 0.8 DIN 46247) + plug in sockets (order each separately)
- Mounting:

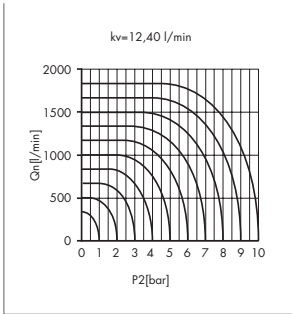
Any position
- Operating medium:

5 micron filtered, lubricated (or not) compressed air; also suitable for other media conforming to ISO-VG 10

SERIES 76
NAMUR VALVES



Poppet Valves
Orifice 8 mm

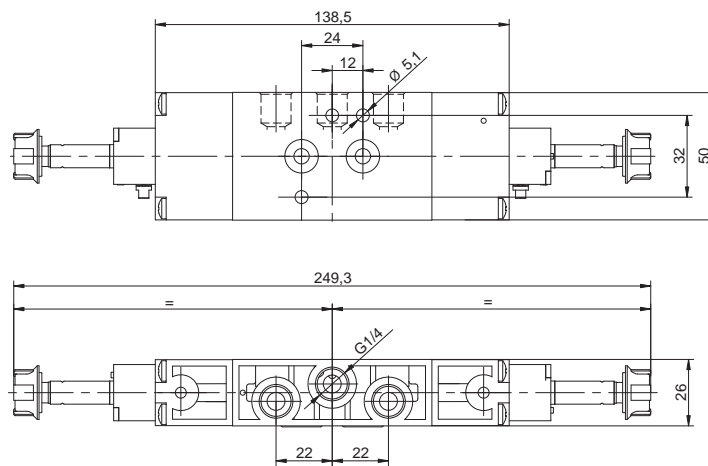
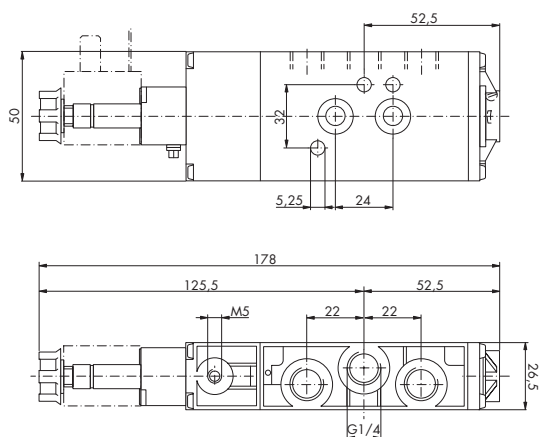
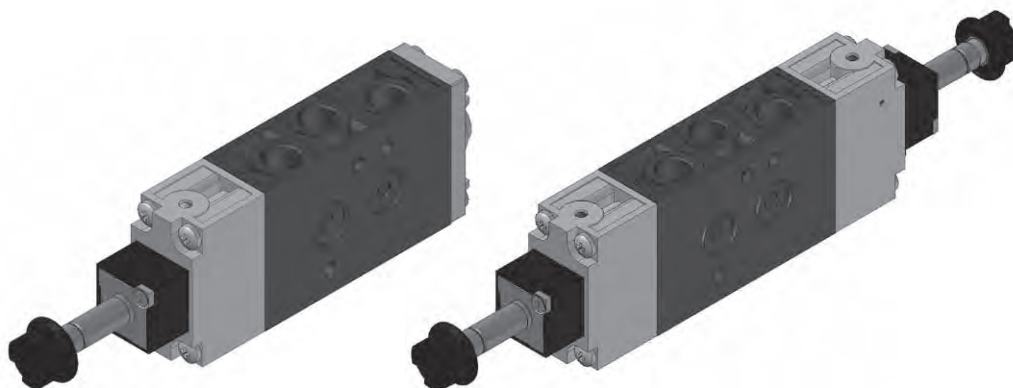


Spool Valves
Orifice 8 mm

5/2-way Poppet Valves & 5/2-way, 5/3-way Spool Valves - G 1/4 (D_{nom} 8 mm)

SECTION A

NAMUR ¼ ported valves are designed to a European specification that standardises the mounting holes amongst manufacturers.



Code	A	Valves	Actuation	Return	Coil Type	Symbol
76.077.91.00	G 1/4	Poppet	Solenoid	Spring (pressure supported)	76.410.xx.xx (order separately)	
76.077.92.00	G 1/4	Poppet	Solenoid	Solenoid	76.410.xx.xx (order separately)	
76.073.91.00	G 1/4	Spool	Solenoid	Spring (pressure supported)	76.410.xx.xx (order separately)	
76.073.92.00	G 1/4	Spool	Solenoid	Solenoid	76.410.xx.xx (order separately)	
76.074.02.00	G 1/4	Spool	Solenoid	Spring (return to centre)	76.410.xx.xx (order separately)	
76.074.12.00	G 1/4	Spool	Solenoid	Spring (return to centre)	76.410.xx.xx (order separately)	

ISO 1 & ISO 2 VALVES

General information

ISO Solenoid Valves

ISO	Function	Section	Pressure range	Nominal orifice	Earthing contact	Electrical connections
ISO 1	5/2-way Poppet Valves 5/2-way Spool Valves 5/3-way Spool Valves	A	2.5 - 10 bar	6 mm	Part of the standard device	Coil with 3 spade connectors (6.3 x 0.8 DIN 46247) + plug in socket (order each separately)
ISO 2	5/2-way Poppet Valves 5/2-way Spool Valves 5/3-way Spool Valves		2.5 - 10 bar	8 mm		

ISO Pneumatic Valves

ISO	Function	Section	Pressure range	Nominal orifice	Lubricant	Control pressure
ISO 1	5/2-way Poppet Valves 5/2-way Spool Valves 5/3-way Spool Valves	B	2.5 - 10 bar	6 mm	Not required	2.5 - 10 bar
ISO 2	5/2-way Poppet Valves 5/2-way Spool Valves 5/3-way Spool Valves		2.5 - 10 bar	8 mm		

ISO Solenoid & Pneumatic Valves

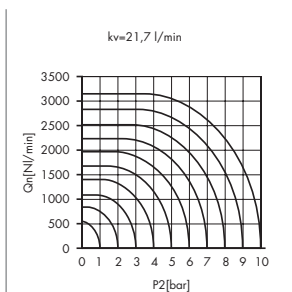
Ambient temperature range: From -15 °C to +50 °C

Housing: Die-cast and varnished aluminium alloy

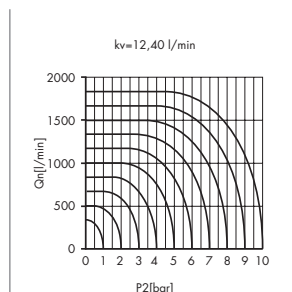
Seals: NBR

Pressure connection: On subplates

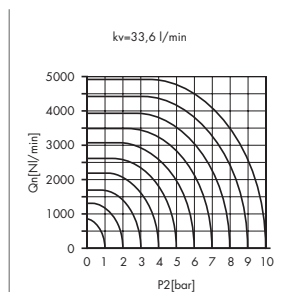
Operating medium: 5 micron filtered, lubricated (or not) compressed air; also suitable for other media conforming to ISO-VG 10



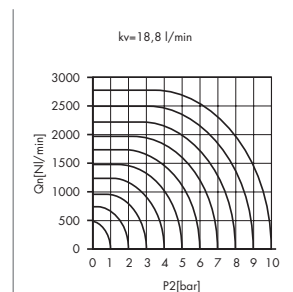
ISO 1
Poppet Valves



ISO 1
Spool Valves



ISO 2
Poppet Valves

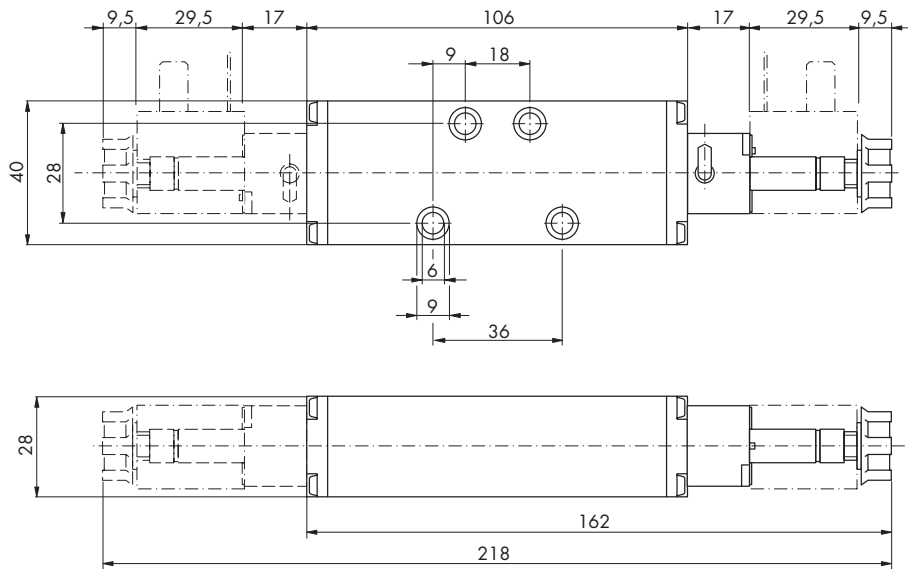
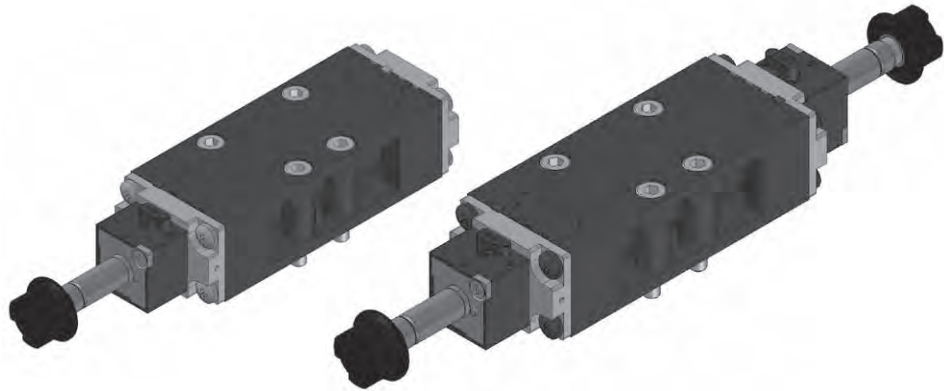


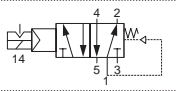
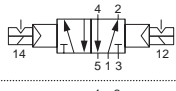
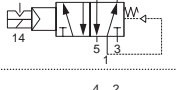
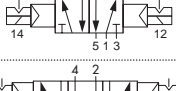
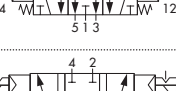
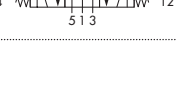
ISO 2
Spool Valves

5/2-way Poppet Valves & 5/2-way, 5/3-way Spool Valves

SECTION A

ISO 1 Valves - Horizontal coil

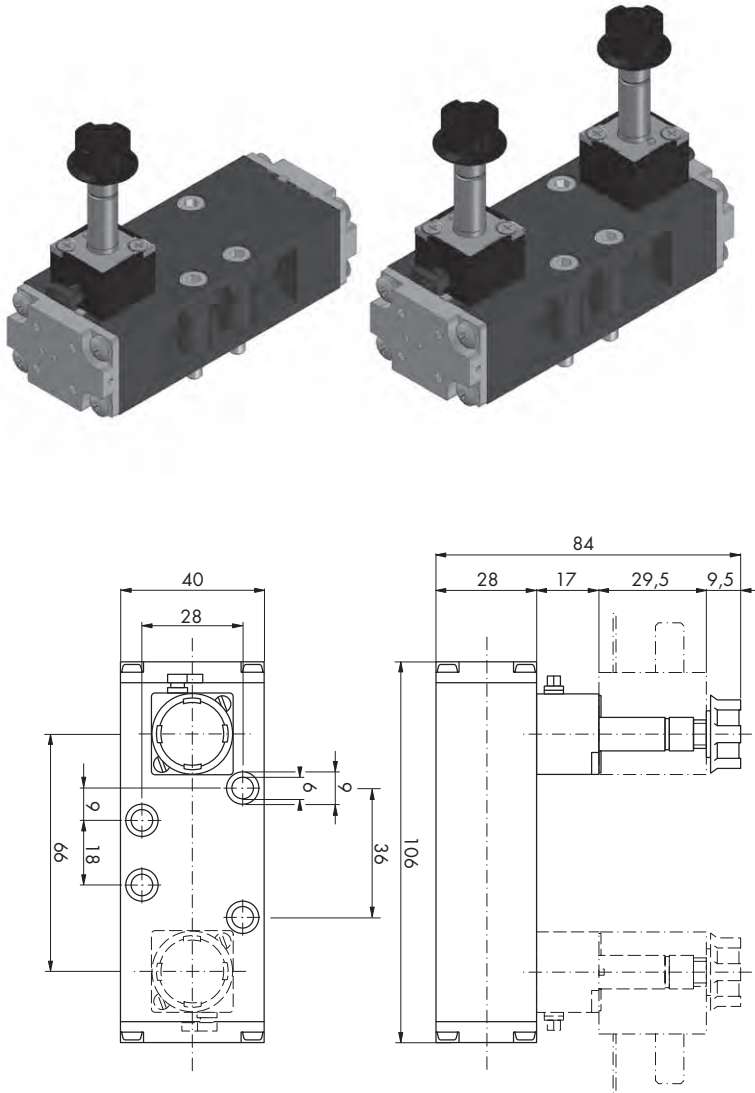


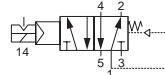
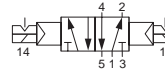
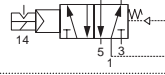
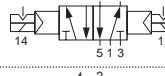
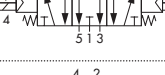
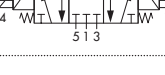
Code	Connection	Valves	Actuation	Return	Coil Type	Symbol
76.087.91.00	Subplates	Poppet	Solenoid, manual override	Spring (pressure supported)	76.410.xx.xx (order separately)	
76.087.92.00	Subplates	Poppet	Solenoid, manual override	Solenoid	76.410.xx.xx (order separately)	
76.083.91.00	Subplates	Spool	Solenoid, manual override	Spring (pressure supported)	76.410.xx.xx (order separately)	
76.083.92.00	Subplates	Spool	Solenoid, manual override	Solenoid	76.410.xx.xx (order separately)	
76.084.02.00	Subplates	Spool	Solenoid, manual override	Spring (return to centre)	76.410.xx.xx (order separately)	
76.004.12.00	Subplates	Spool	Solenoid, manual override	Spring (return to centre)	76.410.xx.xx (order separately)	

5/2-way Poppet Valves & 5/2-way, 5/3-way Spool Valves

SECTION A

ISO 1 Valves - Vertical coil

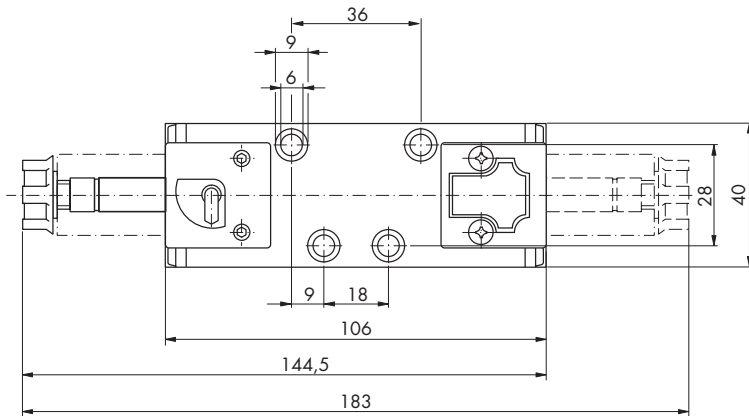
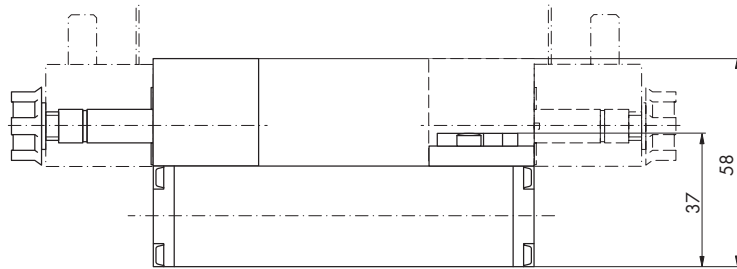
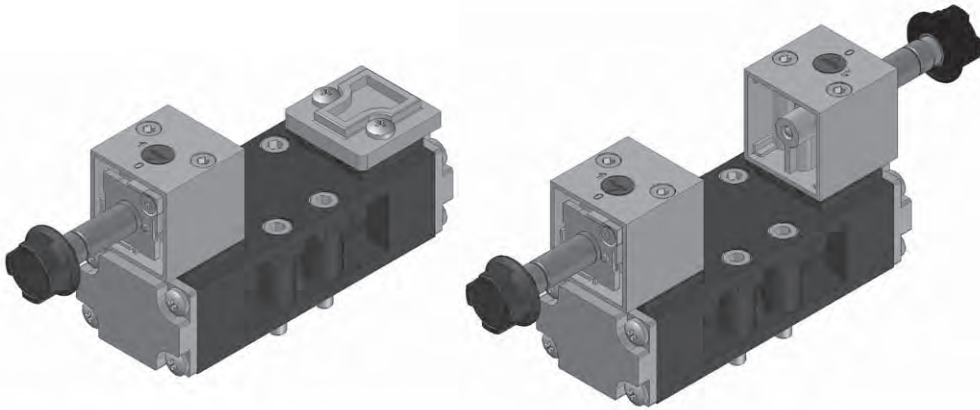


Code	Connection	Valves	Actuation	Return	Coil Type	Symbol
76.087.94.00	Subplates	Poppet	Solenoid, manual override	Spring (pressure supported)	76.410.xx.xx (order separately)	
76.087.95.00	Subplates	Poppet	Solenoid, manual override	Solenoid	76.410.xx.xx (order separately)	
76.083.94.00	Subplates	Spool	Solenoid, manual override	Spring (pressure supported)	76.410.xx.xx (order separately)	
76.083.95.00	Subplates	Spool	Solenoid, manual override	Solenoid	76.410.xx.xx (order separately)	
76.084.05.00	Subplates	Spool	Solenoid, manual override	Spring (return to centre)	76.410.xx.xx (order separately)	
76.084.15.00	Subplates	Spool	Solenoid, manual override	Spring (return to centre)	76.410.xx.xx (order separately)	

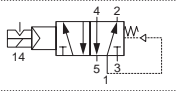
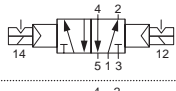
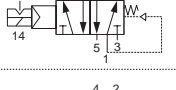
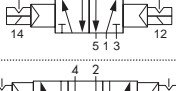
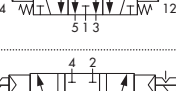
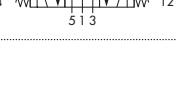
5/2-way Poppet Valves & 5/2-way, 5/3-way Spool Valves

SECTION A

ISO 1 Valves - Cnomo coil



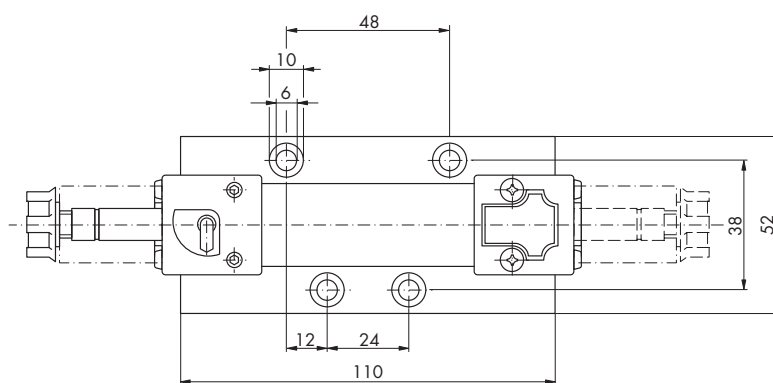
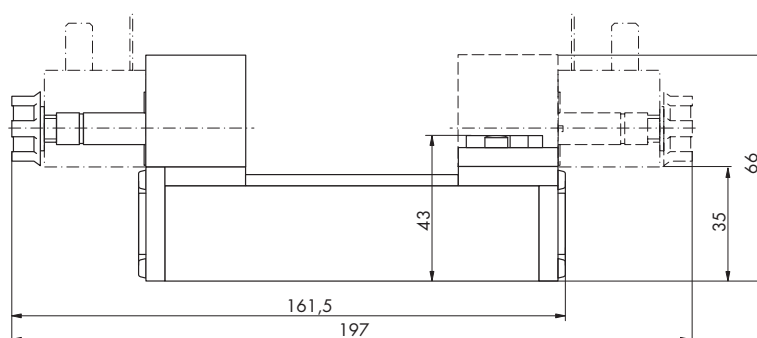
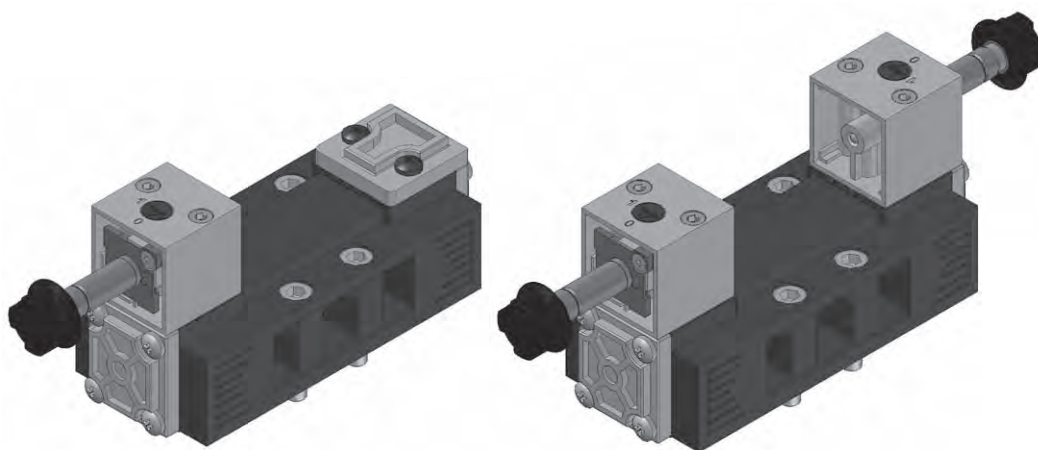
SERIES 76
ISO 1 & ISO 2 VALVES

Code	Connection	Valves	Actuation	Return	Coil Type	Symbol
76.087.97.00	Subplates	Poppet	Solenoid, manual override	Spring (pressure supported)	76.411.xx.xx (order separately)	
76.087.98.00	Subplates	Poppet	Solenoid, manual override	Solenoid	76.411.xx.xx (order separately)	
76.083.97.00	Subplates	Spool	Solenoid, manual override	Spring (pressure supported)	76.411.xx.xx (order separately)	
76.083.98.00	Subplates	Spool	Solenoid, manual override	Solenoid	76.411.xx.xx (order separately)	
76.084.08.00	Subplates	Spool	Solenoid, manual override	Spring (return to centre)	76.411.xx.xx (order separately)	
76.084.18.00	Subplates	Spool	Solenoid, manual override	Spring (return to centre)	76.411.xx.xx (order separately)	

5/2-way Poppet Valves & 5/2-way, 5/3-way Spool Valves

SECTION A

ISO 2 Valves - Cnomo coil

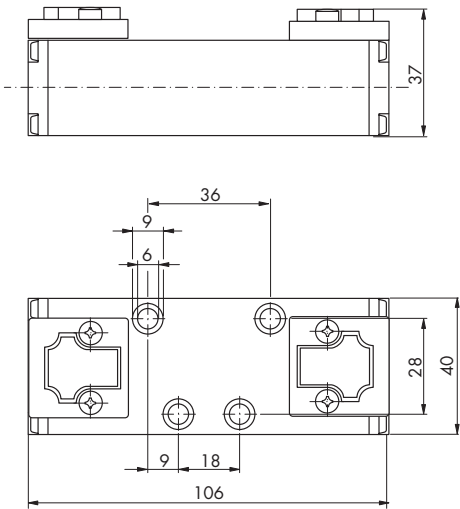
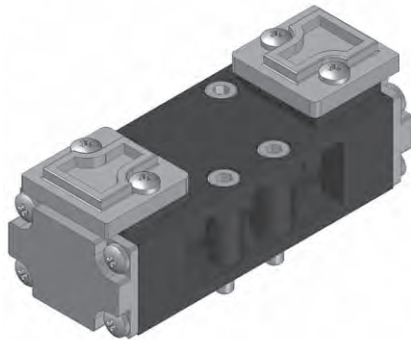


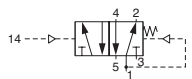
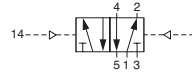
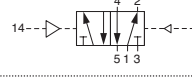
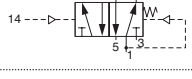
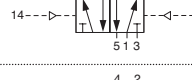
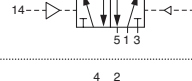
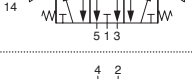
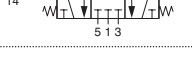
Code	Connection	Valves	Actuation	Return	Coil Type	Symbol
76.097.97.00	Subplates	Poppet	Solenoid, manual override	Spring (pressure supported)	76.411.xx.xx (order separately)	
76.097.98.00	Subplates	Poppet	Solenoid, manual override	Solenoid	76.411.xx.xx (order separately)	
76.093.97.00	Subplates	Spool	Solenoid, manual override	Spring (pressure supported)	76.411.xx.xx (order separately)	
76.093.98.00	Subplates	Spool	Solenoid, manual override	Solenoid	76.411.xx.xx (order separately)	
76.094.08.00	Subplates	Spool	Solenoid, manual override	Spring (return to centre)	76.411.xx.xx (order separately)	
76.094.18.00	Subplates	Spool	Solenoid, manual override	Spring (return to centre)	76.411.xx.xx (order separately)	

5/2-way Poppet Valves & 5/2-way, 5/3-way Spool Valves

SECTION B

ISO 1 Valves

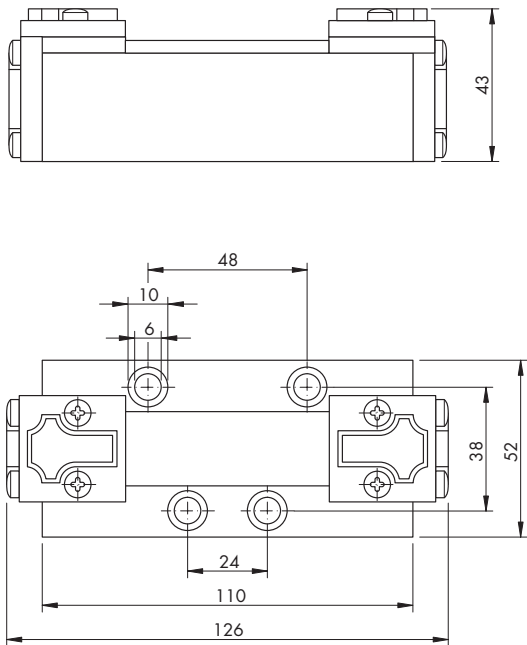
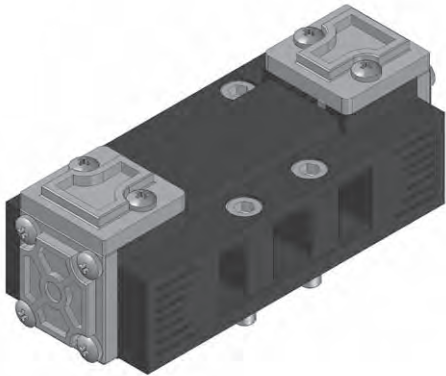


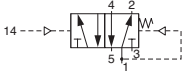
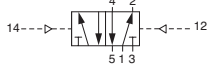

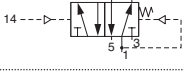
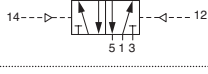

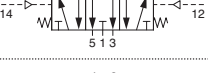
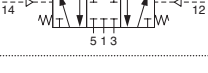
Code	Connection	Valves	Actuation	Return	Note	Symbol
76.087.71.41	Subplates	Poppet	pressure at 14	Spring	Min. control pressure at 14 \geq as pressure at 1	
76.087.71.42	Subplates	Poppet	pressure at 14	pressure at 12		
76.087.71.47	Subplates	Poppet	pressure at 14	pressure at 12 with priority at 14		
76.083.71.41	Subplates	Spool	pressure at 14	Spring	Min. control pressure at 14 \geq as pressure at 1	
76.083.71.42	Subplates	Spool	pressure at 14	pressure at 12		
76.083.71.47	Subplates	Spool	pressure at 14	pressure at 12 with priority at 14		
76.084.71.28	Subplates	Spool	pressure at 14	Spring (return to centre)		
76.084.71.38	Subplates	Spool	pressure at 14	Spring (return to centre)		

5/2-way Poppet Valves & 5/2-way, 5/3-way Spool Valves

SECTION B

ISO 2 Valves

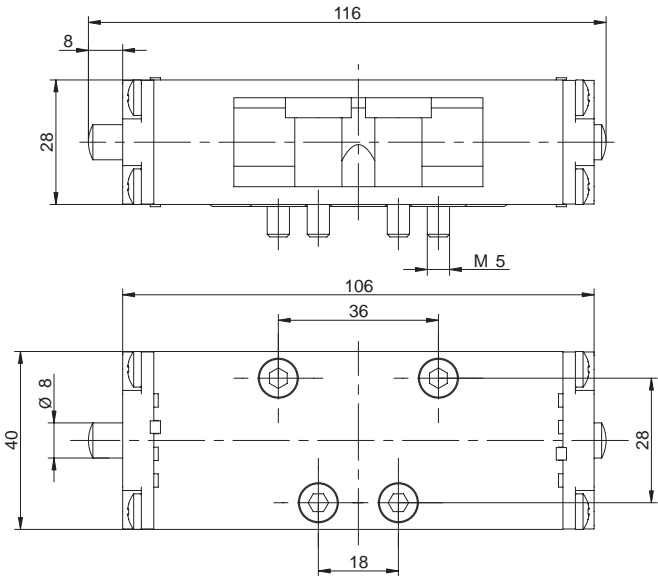
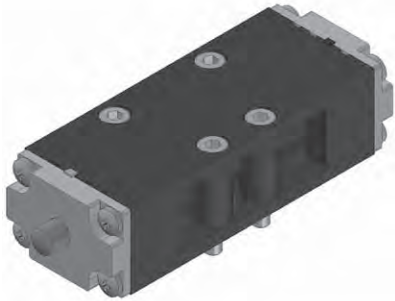


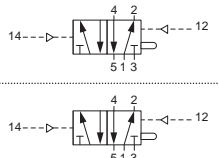
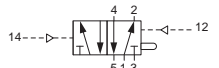
Code	Connection	Valves	Actuation	Return	Note	Symbol
76.097.71.41	Subplates	Poppet	pressure at 14	Spring	Min. control pressure at 14 ≥ as pressure at 1	
76.097.71.42	Subplates	Poppet	pressure at 14	pressure at 12		
76.097.71.47	Subplates	Poppet	pressure at 14	pressure at 12 with priority at 14		
76.093.71.41	Subplates	Spool	pressure at 14	Spring	Min. control pressure at 14 ≥ as pressure at 1	
76.093.71.42	Subplates	Spool	pressure at 14	pressure at 12		
76.093.71.47	Subplates	Spool	pressure at 14	pressure at 12 with priority at 14		
76.094.71.28	Subplates	Spool	pressure at 14	Spring (return to centre)		
76.094.71.38	Subplates	Spool	pressure at 14	Spring (return to centre)		

5/2-way Poppet Valves & 5/2-way Spool Valves for Pumps

SECTION B

ISO 1 Valves for Pumps

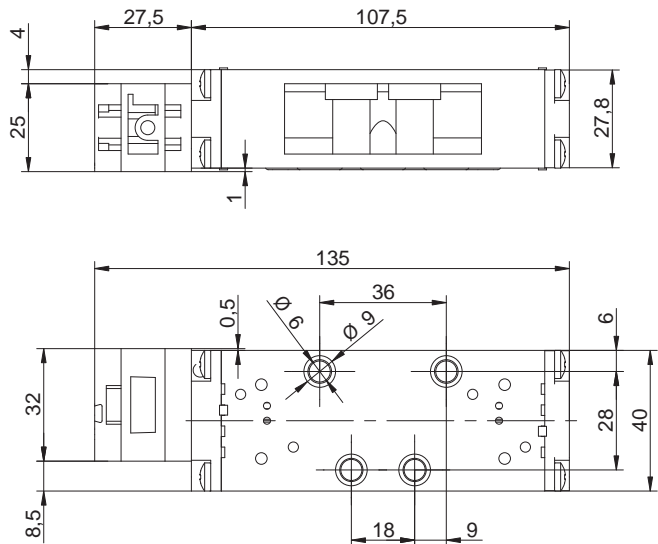
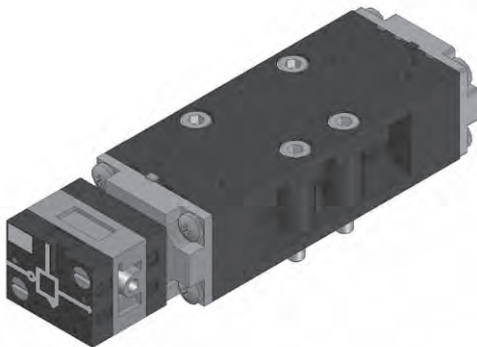


Code	Connection	Valves	Actuation	Return	Symbol
76.083.71.52	Subplates	Poppet	pressure at 14	pressure at 12 pushbutton	
76.087.71.52	Subplates	Spool	pressure at 14	pressure at 12 pushbutton	

5/2-way Valves for Direct Mounted Logic Modules

SECTION B

ISO 1 Valve for Direct Mounted Logic Module (Spring Return)



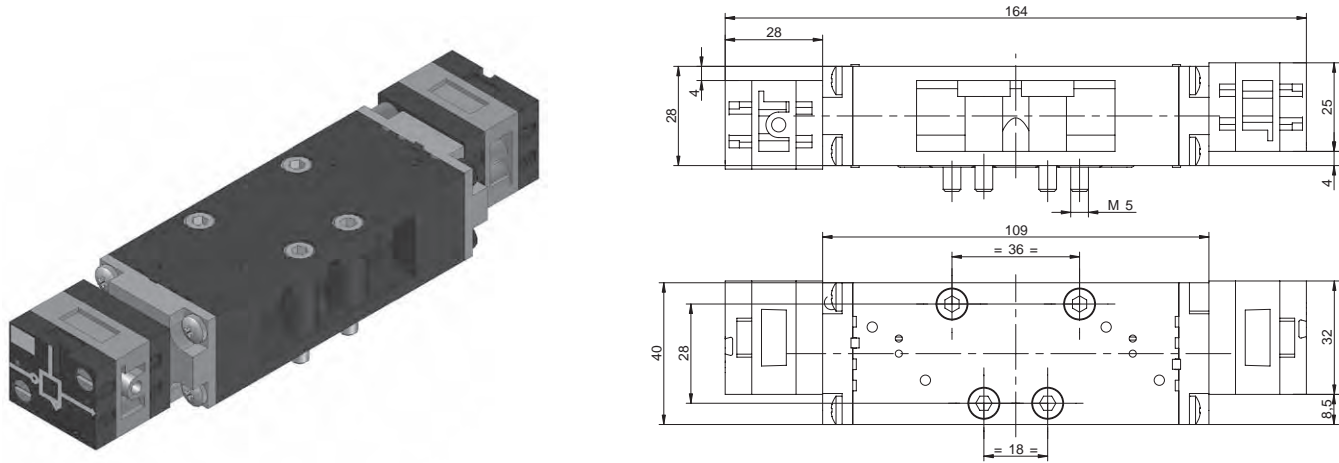
Code	Connection	Valves	Actuation	Return
76.087.72.41	Subplates	Poppet	"Not" Logic Module (order separately, part no C815.04.025)	Spring

Note: Order logic module separately.

5/2-way Valves for Direct Mounted Logic Modules

SECTION B

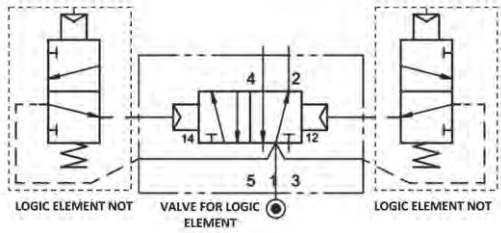
ISO 1 Valve for Direct Mounted Logic Modules (Logic Return)



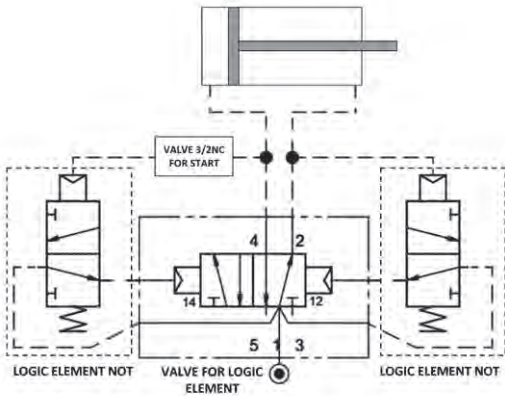
Code	Connection	Valves	Actuation	Return
76.083.72.72	Subplates	Spool	"Not" Logic Module (order separately, part no C815.04.025)	"Not" Logic Module (order separately, part no C815.04.025)

Note: Order logic module separately.

Valve function



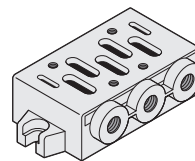
Example of a system



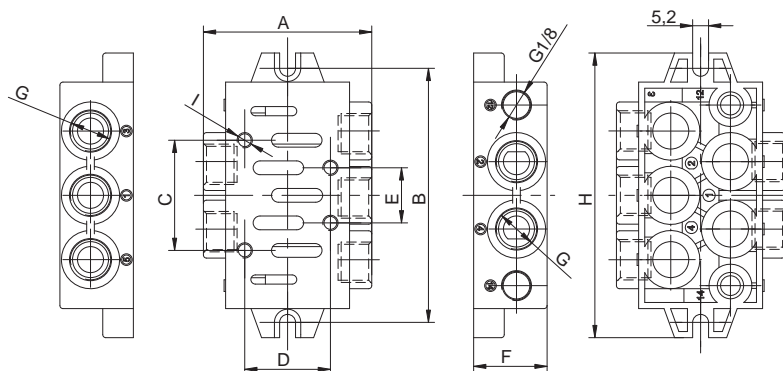
Subplates for ISO 1 and ISO 2 Valves - Single Subplate

Whoever has decided for a machine control with ISO valves most probably uses the variable connection plate system with subplates for valve mounting and the corresponding end plates. For expansion of individual valves or when an ISO valve is to be removed from a control block when in mounted condition, the use of an individual subplate presents itself.

Single subplates for use with ISO valves. Not for modular use.

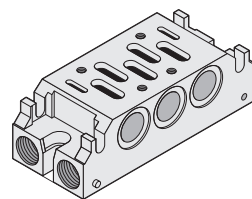


ISO	Code	A	B	C	D	E	F	G	H
ISO 1	76.420.00.11	56	82.5	36	28	18	24	G 1/4	92.5
ISO 2	76.420.00.12	65	100.5	48	38	24	30	G 3/8	112.5



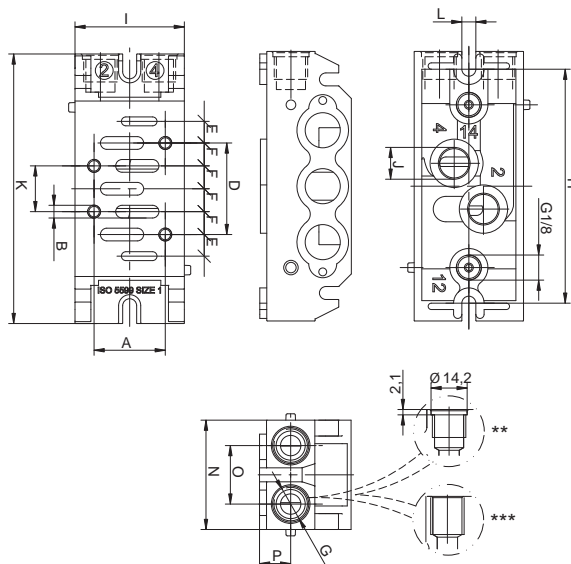
Subplates for ISO 1 and ISO 2 Valves - Single Subplates for Assemblies

Single subplates for use with ISO valves when building assemblies (valve islands). Add end plates, separation modules, intermediate exhaust modules, central supply modules and dummy plates as required.



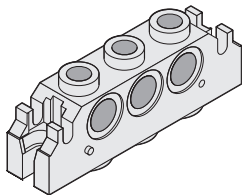
ISO	Code	A	B	C	D	E	F	G	H	I	J	K
ISO 1 *	76.420.00.13	28	M5	4.5	36	8.5	9	G 1/4	92	43	G 1/4	106
ISO 1 **	76.420.00.93	28	M5	4.5	36	8.5	9	G 1/4	92	43	G 1/4	106
ISO 2 **	76.420.00.14	38	M6	7	48	10	12	G 3/8	102	56	G 3/8	120

Note: Each subplate is supplied complete with valve seal, 2 dummy plugs, O-rings and connecting screws (M5 DIN 912).



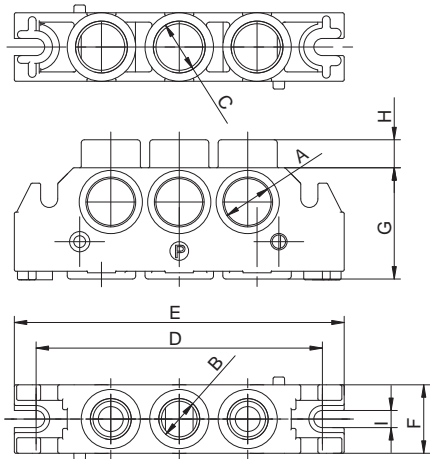
Subplates for ISO 1 and ISO 2 Valves - Universal End Plates

Each sub plate assembly will need 2 end plates, as blocked ends or for supply and exhaust; plus a possible (3rd) central supply plate. These universal end plates have threaded ports on each side and on the top. Supplied with sealed ports, simply break the respective diaphragm as required.



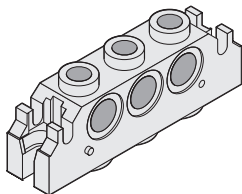
ISO	Code	A	B	C
ISO 1	76.420.00.75	G 3/8	G 1/4	G 3/8
ISO 2	76.420.00.85	G 1/2	G 1/4	G 1/2

Note: The shipment includes 1 subplate, 1 shaped seal, 2 connecting components (M5 screws DIN 912).



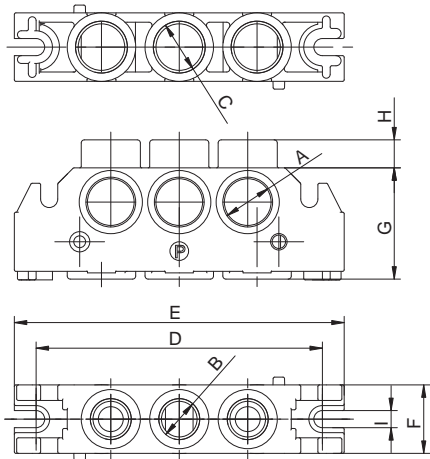
Subplates for ISO 1 and ISO 2 Valves - Separation Module

Externally, the separation module is identical to the end plate. The difference between it and the end plate is, however, that the separation module does not have a connection thread and that all ports are closed. The separation module can be mounted at any position on the connection plate system. Note that you cannot use the closed ports (even if you break the diaphragm), because these ports are not threaded. This module is used to separate pressure levels (or also as closed endplate).



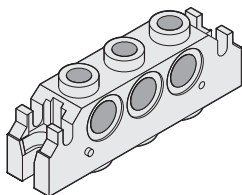
ISO	Code	A	B	C	D	E	F
ISO 1	76.420.00.27	92	106	22	36	8	5.5
ISO 2	76.420.00.28	102	120	29	43	7	6.5

Note: The shipment includes 1 subplate, 1 shaped seal, 2 connecting components (M5 screws DIN 912).



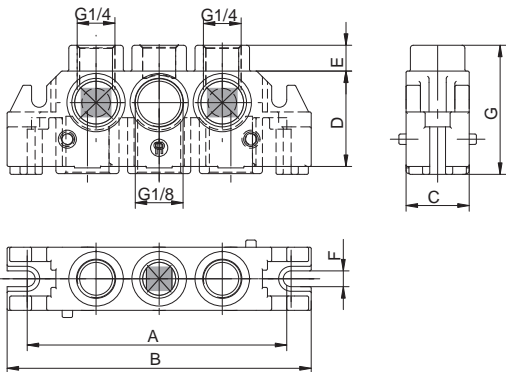
Subplates for ISO 1 and ISO 2 Valves - Intermediate Exhaust Module

Each module has 2 exhaust ports (only) for fitting of flow regulators. Designed for use in addition to the main exhaust ports of the universal end plates.



ISO	Code	A	B	C	D	E	F	G	I
ISO 1	76.420.00.29	92	106	22	36	8	5.5	5.5	5.5
ISO 2	76.420.00.30	102	120	29	43	7	6.5	6.5	6.5

Note: The shipment includes 1 subplate, 1 shaped seal, 2 connecting components (M5 screws DIN 912).



SERIES 76
ISO 1 & ISO 2 VALVES

Subplates for ISO 1 and ISO 2 Valves - End Plates Set

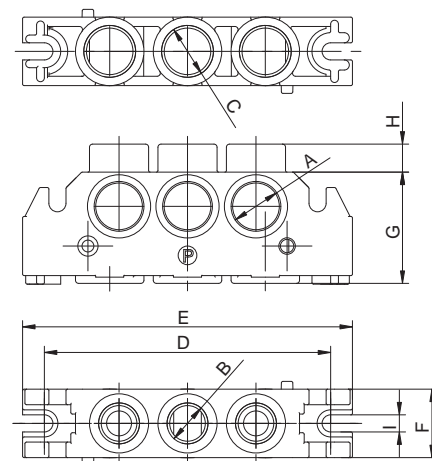
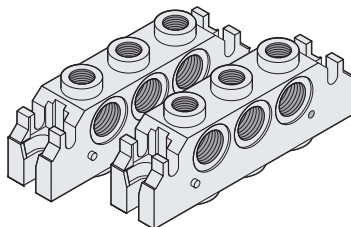
This is the easy and fast way to create a valve island. The endplates set is a kit comprising 2 plates, 2 shaped seal and 4 screws.

One piece is used as the input plate (pressure in).

The second piece could be the end plate (closed) or another input plate.

Depending on the plate, the feeding could be:

- Lateral (A)
- From above (B)
- From below (C)



ISO Plate	D	E	F	G	H	I
ISO 1 plate	92	106	22	36	8	5.5
ISO 2 plate	102	120	29	43	7	6,5

Note: The shipment includes 2 subplates, 2 shaped seal and 4 connecting components (M5 screws DIN 912).

ISO 1

Code	Type	Thread on the first plate	Thread on the second plate
76.420.00.15	input - end	open lateral (A = G3/8; B and C closed)	A, B and C closed (no thread)
76.420.00.16	input - input	open lateral (A = G3/8; B and C closed)	open lateral (A = G3/8; B and C closed)
76.420.00.17	input - end	open from above (B = G1/4; A and C closed)	A, B and C closed (no thread)
76.420.00.18	input - input	open from above (B = G1/4; A and C closed)	open from above (B = G1/4; A and C closed)
76.420.00.19	input - end	open from below (C = G3/8; A and B closed)	A, B and C closed (no thread)
76.420.00.20	input - input	open from below (C = G3/8; A and B closed)	open from below (C = G3/8; A and B closed)

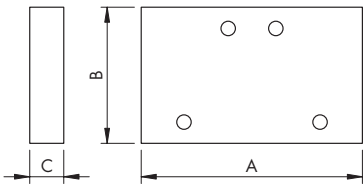
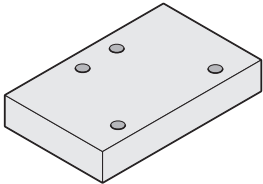
ISO 2

Code	Type	Thread on the first plate	Thread on the second plate
76.420.00.21	input - end	open lateral (A = G1/2; B and C closed)	A, B and C closed (no thread)
76.420.00.22	input - input	open lateral (A = G1/2; B and C closed)	open lateral (A = G1/2; B and C closed)
76.420.00.23	input - end	open from above (B = G1/4; A and C closed)	A, B and C closed (no thread)
76.420.00.24	input - input	open from above (B = G1/4; A and C closed)	open from above (B = G1/4; A and C closed)
76.420.00.25	input - end	open from below (C = G1/2; A and B closed)	A, B and C closed (no thread)
76.420.00.26	input - input	open from below (C = G1/2; A and B closed)	open from below (C = G1/2; A and B closed)

Note: You cannot use the closed ports (even if you break the diaphragm), because they are not threaded.

Subplates for ISO 1 and ISO 2 Valves - Blanking Plates

Subplate locations that have been provided for in the planning phase but are unused can be sealed with the dummy subplate. The vulcanized gasket ensures a perfect sealing of the air slits. This plate is mounted on the top of the subplate instead of the valve.

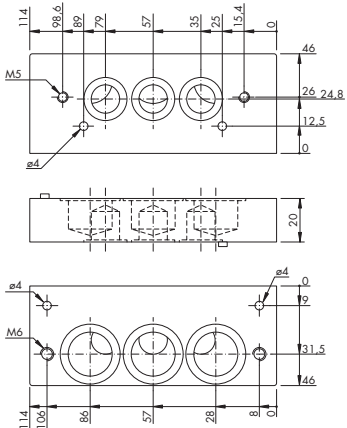
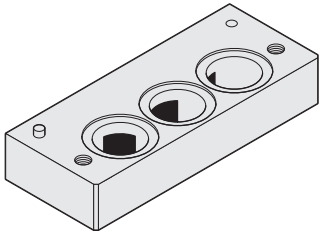


ISO	Code	A	B	C
ISO 1	76.420.00.31	68	40	6
ISO 2	76.420.00.32	80	54	6

Note: The shipment includes 4 screws.

Subplates for ISO 1 and ISO 2 Valves - Adaptor

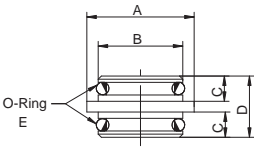
Use this adaptor to connect ISO 1 & ISO 2 sub plate assemblies.



ISO	Code
ISO 1 & ISO 2	76.420.00.33

Subplates for ISO 1 and ISO 2 Valves - Dummy Plug

Dummy plugs for sealing the pressure channel in the ISO subplate system. This plug closes the passage of air in the channels of the ISO subplate system.



ISO	Code
ISO 1	76.420.00.38
ISO 2	76.420.00.39

Note: The shipment includes 10 dummy plugs and 20 O-rings.

Subplates System Mounting Instructions

To assemble an ISO valve island you need at least:

- 1) Two Universal Endplates (or, as alternative, one Endplates set)
- 2) Two (or more) Modular use Subplates
- 3) Two (or more) ISO Valves to mount on the Subplates

Almost all demands can be realised with the connection plate system. We differentiate between two plate models:

1. Universal base plate

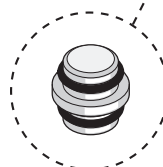
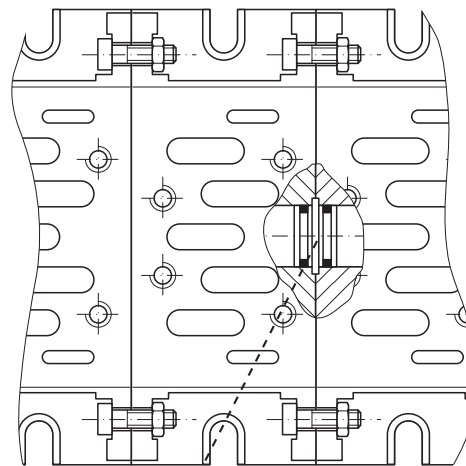
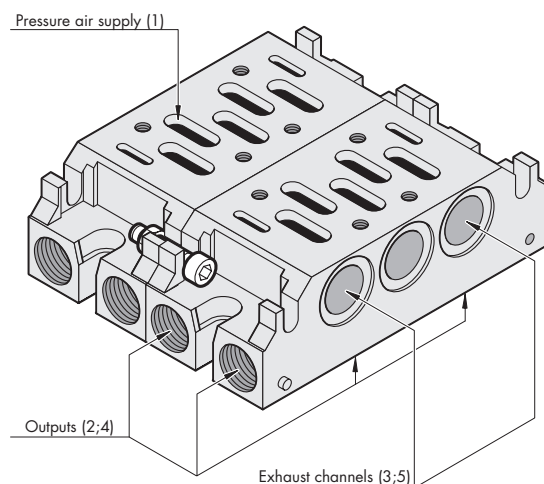
- Pressure air supply (1)
- Exhaust channels (3; 5)
- Outputs (2; 4)

The universal base plate takes the valves. The pressure air supply and exhaust is via central channels in the inside of the plate. The output connections can be screwed in laterally or from above or below. For the pneumatic control of the valve only connection from below is possible. Several plates are connected with imbus screws (DIN 912), whereby the centering is carried out by a lateral peg and a drilling. O-rings are used for the sealing. If various different pressures are to be utilized within the plate system then instead of the O-ring, a dummy plug with 2 sealing O-rings is assembled between the connection plates in the middle air channels.

2. End plates or separation plates

By combining connection, separation and end plates, a multitude of variations can be mounted without difficulty. When mounting the plates, make sure that the O-rings between the plates are centered and that the fixing elements are evenly tightened. Both dummy plugs included in the shipment of the subplates can be screwed either into the outputs (2; 4) from below or onto the front. In case of complex controls, we recommend that an extra valve location that can be closed with a dummy subplate be provided for in the planning phase. This measure pays off in case of a retrofit.

In case of doubts on assembly solutions, please contact our Sales Office.





BSG Kuhnke Solutions S.r.l.

Via R. Colpi, 38
35010 Limena (PD) - Italy

Tel. +39 049 86 57 711
Fax +39 049 88 41 571

sales@bsgkuhnkesolutions.com
www.bsgkuhnkesolutions.com