



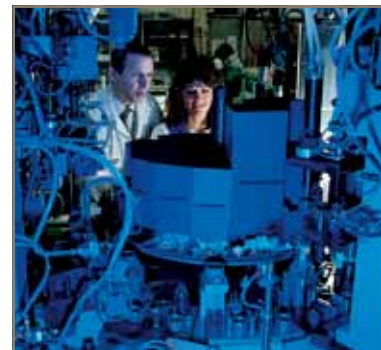
aerospace
 climate control
 electromechanical
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 hydraulics
pneumatics
 process control
 sealing & shielding



Flexflow ISO Valves

ISO 5599-1
 Sizes 1 to 3

PDE2596TCUK February 2014



ENGINEERING YOUR SUCCESS.



Important !

Before carrying out any service work, ensure that the valve and manifold have been vented. Remove the primary supply air hose to ensure total disconnection of the air supply before dismantling valves or blank connection blocks.



NB !

All technical data in this catalogue is typical only. The air quality is decisive for the valve life: see ISO 8573.



WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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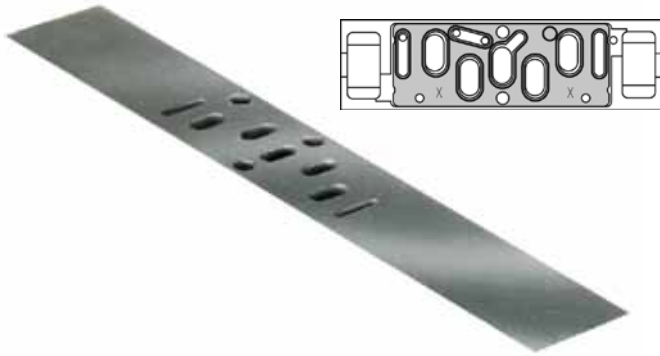
ISO specification.....	4 - 5
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Flexflow

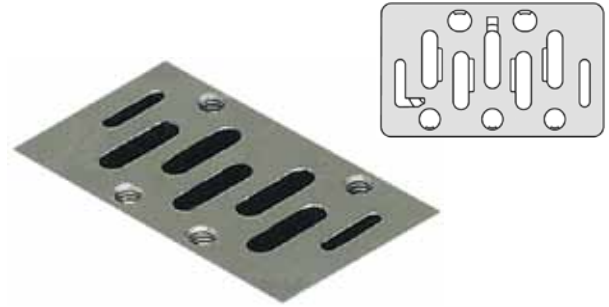
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ISO Specifications

Individual connection



15407-1 (VDMA 24563)  ISO 15407-1



5599-1  ISO 5599-1

External electrical connection subbase valves

The ISO Standard 15407-1 specifies an interface pattern for a common subbase valve consisting of pressure passages 1, 3, 5, 2 & 4 and pilot passages 12 & 14. The width of the pattern and location of the 4 bolt holes are also specified. There are no specifications for the type of external electrical connection used to control the valve.

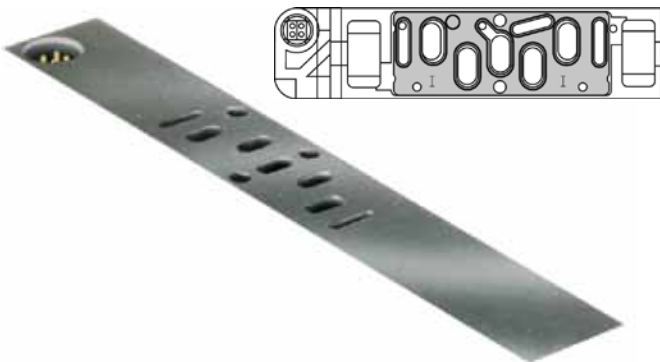
Size : 02 01

External electrical connection subbase valves

The ISO Standard 5599-1 specifies an interface pattern for a common subbase valve consisting of pressure passages 1, 3, 5, 2 & 4 and pilot passages 12 & 14. The width of the pattern and location of the 4 bolt holes are also specified. There are no specifications for the type of external electrical connection used to control the valve.

Size : 1 2 3

Plug-in connection



15407-2  ISO 15407-2



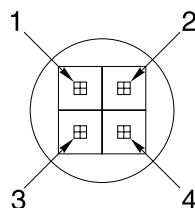
5599-2  ISO 5599-2

Body-to-base plug-in subbase valves

Same as 15407-1 for pneumatic pressure passages, 15407-2 standard also specifies a plug-in electrical connection.

Size : 01 02

- Pin 1 = 14 solenoid
- Pin 2 = 12 solenoid
- Pin 3 = Ground +
- Pin 4 = Common -

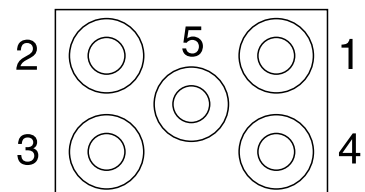


Body-to-base plug-in subbase valves

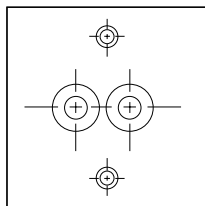
Same as 5599-1 for pneumatic pressure passages, 5599-2 standard also specifies a plug-in electrical connection.

Sizes : 1 2 3

- 1 = 12 solenoid
- 2 = 14 solenoid
- 3 = 12 solenoid
- 4 = 14 solenoid
- 5 = Ground

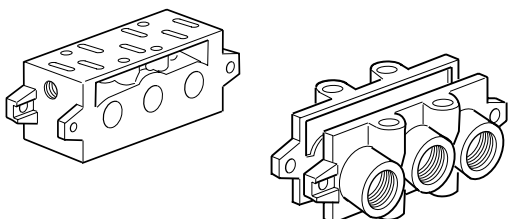


ISO Specifications



CNOMO 06-05-01

The solenoid pilot interface often used with ISO 5599-1 valves is the CNOMO interface. The CNOMO interface specifies the pressure and actuator port, and the screw holes for the mounting of this solenoid pilot. It is commonly used in European automotive plants, and its usage is becoming more prevalent for industrial ISO 5599-1 valves.



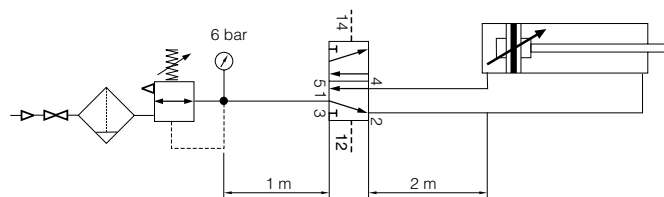
VDMA 24345

The VDMA 24345 is a standard for Manifolds and Subbase specifying a common base mounting footprint in addition to ISO 5599-1 Interface standard. (VDMA is a German organisation - Verband Deutscher Maschinen und Anlagen-Bauer - which is translated to Federation of German Machine and Unit Builders.)

Choice of components for air supply to cylinders

In the chart below can you find the suitable valves, tubes etc. for each cylinder size. If you have a tube length over 2 m, choose one tube size larger than in the chart.

Following data is valid :
 Supply pressure: min 7,0 bar
 Regulator pressure setting: 6,0 bar
 Pipe length between air treatment unit and valve: max 1 m
 Pipe length between valve and cylinder : max 2 m



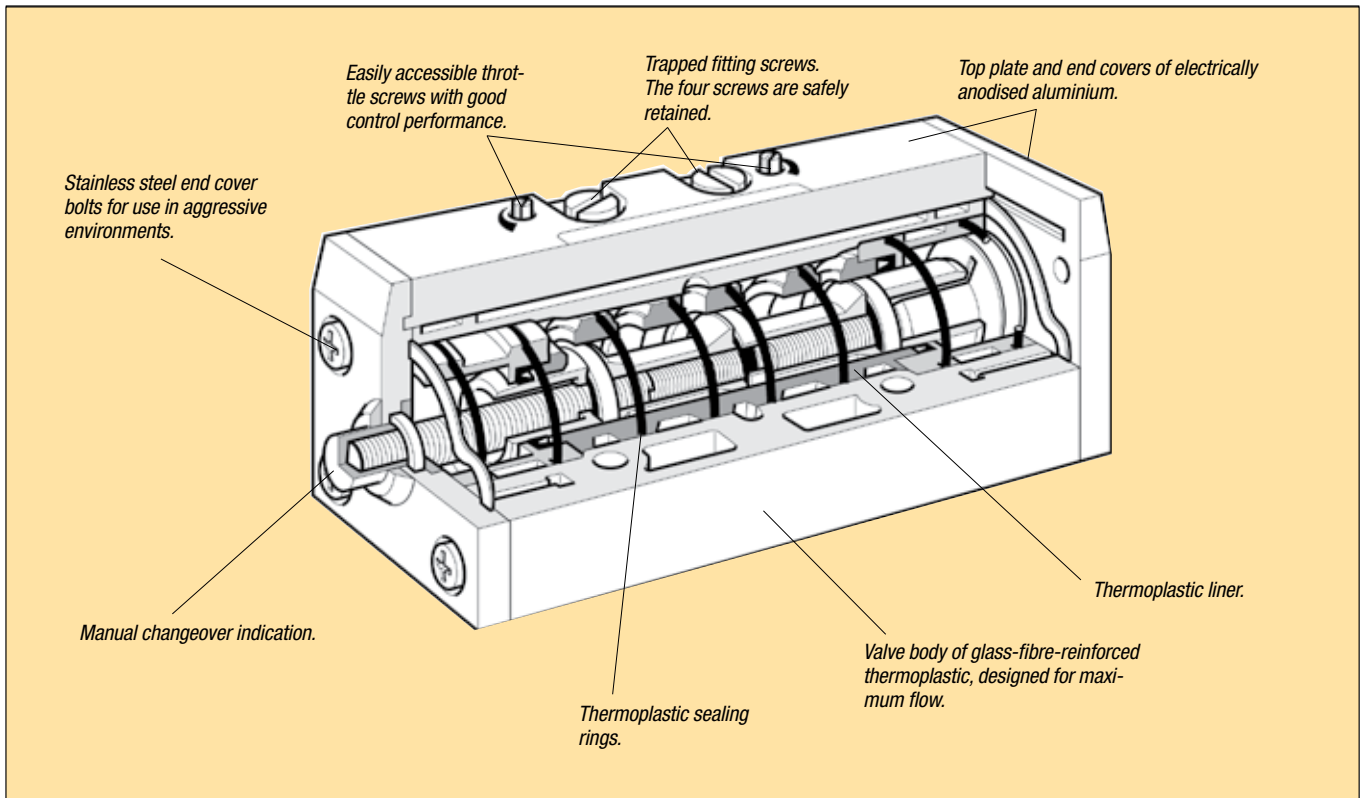
Cylinder bore	<Ø20	Ø20-32	Ø40-50	Ø63	Ø80	Ø100	Ø125	Ø160	Ø200
Cylinder port	M5	G1/8	G1/4	G3/8	G3/8	G1/2	G1/2	G3/4	G3/4
Tubing Ext / Int	4 / 2.7	6 / 4	8 / 6	10 / 7	10 / 7 12 / 9	12 / 9 14 / 11	14 / 11	18 / 15	20 / 18
Size 1	G1/4	G1/4	G1/4	G1/4	G1/4	G1/4			
Size 2				G3/8	G3/8	G3/8	G3/8		
Size 3				G1/2	G1/2	G1/2	G1/2	G1/2	G1/2

Cylinder speed < 0.5 m/s
 Cylinder speed < 1 m/s
 Cylinder speed > 1 m/s
 Oversizing

Flexflow - General Applications

Market Application

- Automotive Handling
- Packaging
- Manufacturing
- General application



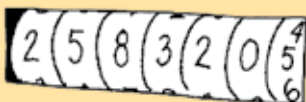
International standard

The VG25, VG35 and VG45 are all fully interchangeable, in accordance with ISO 5599/1. The range includes electrically-operated valves for use as pilot valves that comply with the French CNOMO standard, and there are also standardised manifolds that comply with the German VDMA 24345.

Compact, corrosion-resistant design

The valves combine high flow capacity with small size, while the smooth shape meets high hygiene requirements. Electrically anodised aluminium and stainless steel end cover bolts mean that the valves are suited for use in difficult environments as standard.

High reliability



Valves easily comply with the requirements for the component reliability in accordance with EU Machinery Directive standards EN292-2 and EN983.

Lubrication and maintenance-free for long life

The use of high-molecular plastic with inherent lubricating properties means that the VG25, VG35 and VG45 are suitable for use with or without additional lubrication. In addition, the design principle ensures many years of reliable operation.

Manual Override as standard

Solenoids are available with non- locking manual overrides so that valves can be operated when the electrical supply is turned off. Locking or no manual override as option.

Solenoid valves, 22 mm solenoid



Standard valve is fitted with a 22 mm solenoid having Industrial connector for sizes 1, 2 and 3.

Integral speed control

Ports 3 and 5 incorporate throttle screws for control of cylinder operation speeds. The screws are accessibly mounted on the top of the valves. A wide control range in several steps ensures excellent speed control of both large and small cylinders.

High electrical encapsulation class



The solenoid valves are protected to IP65 with the standard cable plug. .

Wide choice of solenoid connectors/cable plugs

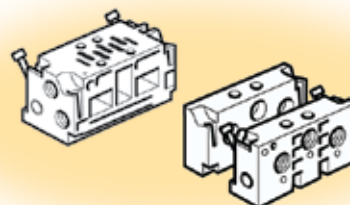


Solenoid connectors are available with or without LED and rectifier and may be selected fitted pre-wired with flying leads.

Manual changeover - indication

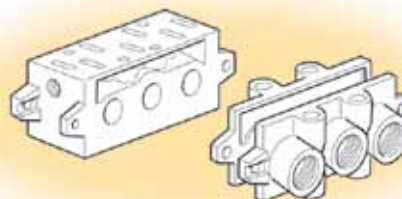
Commissioning and service are assisted by the incorporation of large, ergonomically designed pushbuttons for manual changeover as standard in all the valves in the range.

Bottom or side ported manifold



Manifolds with common ducts for ports 1,3 and 5, outlet port 2 and 4, and supply port for 12 and 14 are available side or bottom ported.

Subbase installation VDMA 25345

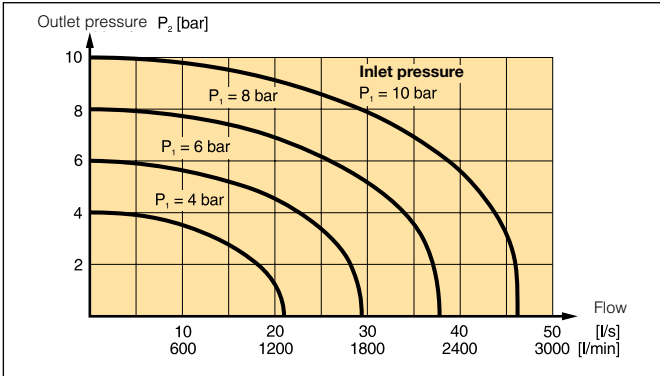


A large range of subbase, VDMA or not VDMA, bottom or side ported.

Flow Characteristics

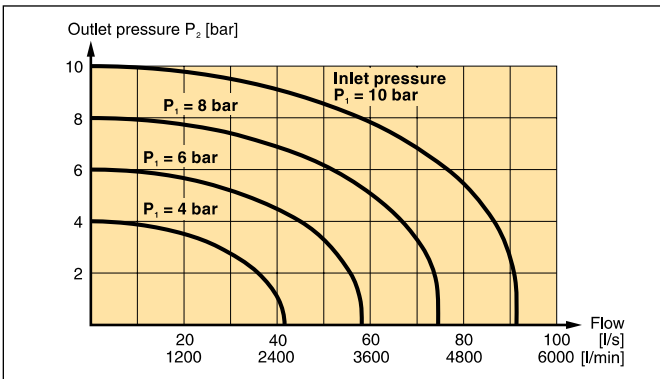
Flow capacities in accordance with ISO6358
 All pressures = effective pressure

VG25 - ISO 1



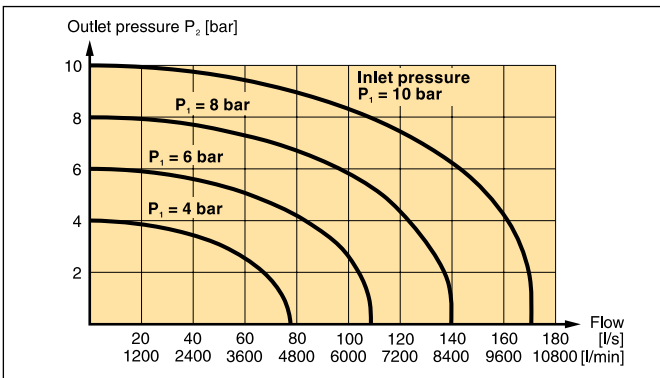
Operating pressure :	
5/2 Spring return	3,5 - 10 bar
5/2 Double solenoid	1,5 - 10 bar
Working temperature : electrical	-10°C to + 60°C
pneumatic	-20°C to + 70°C
Flow (acc. to ISO 6358)	c = 4,2 NI/s x bar b = 0,20 Qn = 17,0 l/s Qmax = 29,4 l/s

VG35 - ISO 2



Operating pressure :	
5/2 Spring return	3,5 - 10 bar
5/2 Double solenoid	1,5 - 10 bar
Working temperature : electrical	-10°C to + 60°C
pneumatic	-20°C to + 70°C
Flow (acc. to ISO 6358)	c = 8,3 NI/s x bar b = 0,20 Qn = 33,0 l/s Qmax = 58,0 l/s

VG45 - ISO 3



Operating pressure :	
5/2 Spring return	2,0 - 10 bar
5/2 Double solenoid	1,0 - 10 bar
Working temperature : electrical	-10°C to + 60°C
pneumatic	-20°C to + 70°C
Flow (acc. to ISO 6358)	c = 15,5 NI/s x bar b = 0,20 Qn = 62,0 l/s Qmax = 108,0 l/s

Material Specification and Characteristics

5599

Valve body	Acetal plastic
Spool	Acetal plastic
Spool seal	High-molecular thermoplastic
U-rings, O-rings	Nitrile rubber, NBR
Sleeves	Thermoplastic
Piston	Acetal plastic
End covers	Electrically anodised aluminium
Top plate	Electrically anodised aluminium
End seals	Nitrile rubber, NBR
Seal, top plate	Nitrile rubber, NBR
Manual changeover push-button	Acetal plastic
Throttle screws	Galvanised brass
Throttle inserts	Acetal plastic
End cover bolts	Stainless steel
Mounting screws	Galvanised steel (standard)
Manifolds	Electrically anodised aluminium

Characteristics

Fluid	Air or inert gas filtered 40u class 5 according to ISO 8573-1 dry class 4 according to ISO 8573-1 non-lubricated, or lubricated
Storage temperature	-20° to + 70°
Vibration	2G 2 to 150Hz according to IEC 68-2-6
Shock	15G 11ms according to IEC 68-2-7
Manual override	Non-locking, other type on request
Solenoid : please see pages 16 - 20	

Certification

EMC / CE mark.	According to EN 61 000-6-2
Dust & water protection	IP65 according to EN 60529

Flexflow - ISO 5599 - Size 1 / 2 / 3

Order chart

VG

25

-

ERER

-

















D

B

49

Size	
25	Size 1 (ISO 5599)
35	Size 2 (ISO 5599)
45	Size 3 (ISO 5599)


Coil Voltage		
Voltage	Voltage code	
	Vdc	Vac
No coil	Blank	
12 V	45	-
24 V	49	45
48 V	51	49
110 V	57	53
230 V	-	57

Valve type function		
Pneumatic pilot		
AA		5/2 double air
AS		5/2 spring return
AC		5/3 double air closed centre
XAC		5/3 double air vented centre
YAC		5/3 double air pressurised centre
Internal supply		
ERER		5/2 double solenoid
ERS		5/2 single solenoid spring return
ERDR		5/2 single solenoid, differential return
ERC		5/3 double solenoid closed centre
XERC		5/3 double solenoid vented centre
YERC		5/3 double solenoid pressurised center
External supply 14 & 12		
EAEA		5/2 double solenoid
EAS		5/2 single solenoid spring return
EAC		5/3 double solenoid closed centre
XEAC		5/3 double solenoid vented centre
YEAC		5/3 double solenoid pressurised centre

Solenoid enclosure	
B	22 mm 3-pin industrial
N	Solenoid less coil


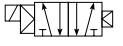
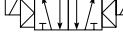


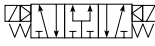
Overrides	
A	None
B	Flush non locking
C	Flush locking
D	Extended non locking

Shaded part numbers are standard



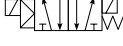
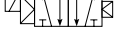
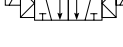
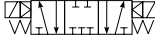
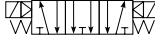
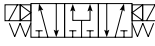
Solenoid operated ISO valve fitted with 22 mm solenoid(s) 24 VDC

Solenoid plug/connector to be ordered separately. See solenoid section.

Symbol	Size	Actuation	Return	Signal pressure min. (bar) at 6 bar actua./return	Changeover time (ms) at 6 bar actua./return	Weight kg	Order code
5/2 Valves							
	1 - 43mm	Electrical signal	Spring	3,5	15/25	0.50	VG25-ERS-DB49 VG35-ERS-DB49 VG45-ERS-DB49
	2 - 56mm			3,5	30/60	0.75	
	3 - 71mm			3,5	40/90	1.25	
	1 - 43mm	Electrical signal	Differential	4,5	15/25	0.50	VG25-ERDR-DB49 VG35-ERDR-DB49
	2 - 56mm			4,5	30/60	0.75	
	1 - 43mm	Electrical signal	Electrical signal	1,5/1,5	15/15	0.65	VG25-ERER-DB49 VG35-ERER-DB49 VG45-ERER-DB49
	2 - 56mm			1,5/1,5	25/25	0.90	
	3 - 71mm			1,5/1,5	30/30	1.40	
5/3 Valves							
	1 - 43mm	Electrical signal Closed center	Electrical signal Self centering	3,5	25/30	0.65	VG25-ERC-DB49 VG35-ERC-DB49 VG45-ERC-DB49
	2 - 56mm			3,5	40/65	0.90	
	3 - 71mm			3,5	50/100	1.40	
	1 - 43mm	Electrical signal Vented center	Electrical signal Self centering	3,5	25/30	0.65	VG25-XERC-DB49 VG35-XERC-DB49 VG45-XERC-DB49
	2 - 56mm			3,5	40/65	0.90	
	3 - 71mm			3,5	50/100	1.40	
	1 - 43mm	Electrical signal Pressure center	Electrical signal Self centering	3,5	25/30	0.65	VG25-YERC-DB49



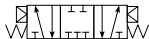
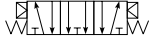
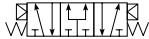
Solenoid operated ISO valve fitted with 22 mm operator without coil

Coils, solenoid plug/connector to be ordered separately. See solenoid section.

Symbol	Size	Actuation	Return	Signal pressure min. (bar) at 6 bar actua./return	Changeover time (ms) at 6 bar actua./return	Weight kg	Order code
5/2 Valves							
	1 - 43mm	Electrical signal	Spring	3,5	15/25	0.40	VG25-ERS-DN VG35-ERS-DN VG45-ERS-DN
	2 - 56mm			3,5	30/60	0.65	
	3 - 71mm			3,5	40/90	1.15	
	1 - 43mm	Electrical signal	Differential	4,5	15/25	0.40	VG25-ERDR-DN VG35-ERDR-DN
	2 - 56mm			4,5	30/60	0.65	
	1 - 43mm	Electrical signal	Electrical signal	1,5/1,5	15/15	0.55	VG25-ERER-DN VG35-ERER-DN VG45-ERER-DN
	2 - 56mm			1,5/1,5	25/25	0.80	
	3 - 71mm			1,5/1,5	30/30	1.30	
5/3 Valves							
	1 - 43mm	Electrical signal Closed center	Electrical signal Self centering	3,5	25/30	0.55	VG25-ERC-DN VG35-ERC-DN VG45-ERC-DN
	2 - 56mm			3,5	40/65	0.80	
	3 - 71mm			3,5	50/100	1.30	
	1 - 43mm	Electrical signal Vented center	Electrical signal Self centering	3,5	25/30	0.55	VG25-XERC-DN VG35-XERC-DN VG45-XERC-DN
	2 - 56mm			3,5	40/65	0.80	
	3 - 71mm			3,5	50/100	1.30	
	1 - 43mm	Electrical signal Pressure center	Electrical signal Self centering	3,5	25/30	0.55	VG25-YERC-DN

 Indicates stocked product.

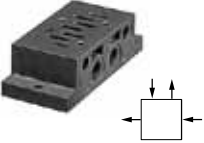
Pneumatic operated ISO valve

Symbol	Size	Actuation	Return	Signal pressure min. (bar) at 6 bar actua./return	Changeover time (ms) at 6 bar actua./return	Weight kg	Order code
5/2 Valves							
	1 - 43mm	Air signal	Spring	3,5/3,5	15/25	0.35	VG25-AS VG35-AS VG45-AS
	2 - 56mm			3,5/3,5	20/35	0.60	
	3 - 71mm			3,5/3,5	20/45	1.10	
	1 - 43mm	Air signal	Air signal	1,5/1,5	10/10	0.35	VG25-AA VG35-AA VG45-AA
	2 - 56mm			1,5/1,5	15/15	0.60	
	3 - 71mm			1,5/1,5	20/20	1.10	
5/3 Valves							
	1 - 43mm	Air signal	Air signal	3,5/3,5	15/25	0.35	VG25-AC VG35-AC
	2 - 56mm	Closed center	Self centering	3,5/3,5	20/30	0.60	
	1 - 43mm	Air signal	Air signal	3,5/3,5	15/25	0.35	VG25-XAC VG35-XAC VG45-XAC
	2 - 56mm	Vented center	Self centering	3,5/3,5	20/30	0.60	
	3 - 71mm			3,5/3,5	20/35	1.10	
	1 - 43mm	Air signal Pressure center	Air signal Self centering	3,5/3,5	15/25	0.35	VG25-YAC


 Indicates stocked product.

ISO 5599-1 Subbase & Manifolds


VDMA Side Ported Subbases

Description	Size	Port size	Weight (g)	Order code
 <p>Subbases VDMA Side port according to VDMA</p>	1 - 43mm	G1/4	160	P2N-VS512SD
	2 - 56mm	G3/8	280	P2N-WS513SD
	3 - 71mm	G1/2	350	P2N-YS514SD


VDMA Bottom Ported Manifold

Description	Size	Port size	Weight (g)	Order code
 <p>VDMA Form C Bottom port according to VDMA</p>	1 - 43mm	G1/4	240	P2N-VM512MB
	2 - 56mm	G3/8	360	P2N-WM513MB
	3 - 71mm	G1/2	700	P2N-YM514MB
 <p>VDMA Transition plate Size 1 to Size 3 Kit includes: Transition plate only</p>	1 to 3	G1/4		P2N-VM500AK
 <p>VDMA Form D - End plate According to VDMA</p>	1 - 43mm	G3/8	210	P2N-VM513ES
	2 - 56mm	G1/2	360	P2N-WM514ES
	3 - 71mm	G1	680	P2N-YM518ES
<p>VDMA Isolation - Main galley According to VDMA</p> <p>Kit includes: (1) Isolator plug.</p>	1 - 43mm			P2N-VK0P
	2 - 56mm			P2N-WK0P
	3 - 71mm			P2N-YK0P


Accessories

Description	Size	Port size	Weight (g)	Order code
 <p>Blanking plate</p> <p>Kit includes: (1) Blanking plate, (1) Gasket and (4) Mounting bolts</p>	1 - 43mm	G1/4	100	P2N-AA5B
	2 - 56mm	G3/8	150	P2N-BA5B
	3 - 71mm	G1/2	200	P2N-CA5B

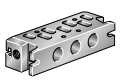



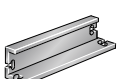

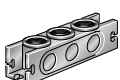


Side ported subbases

Description	Size	Port size	Weight (g)	Order code BSP	Order code NPT
 <p>Single subbase 1 3 5 2 4 ports & 12 14</p>	1 - 43mm	G1/4	160	PL1-1/4-70	PL1-1/4-80
		G3/8	160	PL1-3/8-70	
	2 - 56mm	G3/8	280	PL2-3/8-70	PL2-3/8-80
		G1/2		P2N-HS514SS	
	3 - 71mm	G1/2		PL3-1/2-70	PL3-1/2-80
		G3/4		P2N-JS516SD	





Bottom ported subbases

Description	Size	Port size	Weight (g)	Order code BSP	Order code NPT
 <p>Single subbase 1 3 5 2 4 ports & 12 14</p>	1 - 43mm	G1/4	370	PD1-1/4-70	PD1-1/4-80
	2 - 56mm	G3/8	590	PD2-3/8-70	PD2-3/8-80
	3 - 71mm	G1/2	590	PD3-1/2-70	

Size 1 bottom ported manifold

Description	Size	Port size	Weight (g)	Order code
  <p>Manifold with bottom ports low profile</p>	1 - 43mm	G1/4	20	P2N-AM512MB
  <p>Connecting block Top or bottom ported connecting block for above manifold "low profile"</p>	1 - 43mm	G3/8	150	P2N-AM513GT
  <p>End End piece for above manifold "low profile"</p>	1 - 43mm	no	6	P2N-AM500J
  <p>Intermediate supply Top or bottom ported intermediate supply for above manifold "low profile"</p>	1 - 43mm	G3/8	140	P2N-AM513BT
 <p>Isolation plugs isolating seal for above manifold "low profile"</p>	1 - 43mm		070	P2N-AK0P

Sizes 1 & 2 side ported manifold

Description	Size	Port size	Weight (g)	Order code
  <p>Manifold Manifold with side port</p>	1 - 43mm	G1/4	240	P2N-EM512MD
	2 - 56mm	G3/8	210	P2N-FM513MD
  <p>End Side ported connecting kit for above manifold with side ports</p>	1 - 43mm	G3/8	360	P2N-EM513ES
	2 - 56mm	G1/2	290	P2N-FM514ES

3/2 N.C. 20 x 22 Operator for 22 x 30 DIN Form B coils



Technical Data - Solenoid Operator & Coil Combinations

Technical Data	3/2 N.C. 20 x 22 Operator 22 x 30 DIN Form B Coil
Working pressure	0 to 10 bar
Ambient temperature	-10° C to 50° C
Orifice	Pressure : 1,2mm / Exhaust : 1,45mm
Nominal Flow Qn	0.7 dm ³ /s
Power	3 W
DC Voltages	50 Hz / 60 Hz : 5 VA
AC Voltages	
Voltage tolerance	+/- 10%
Duty cycle	100%
Insulation class	F
Electric connection	DIN 43650 (Industrial Form B)
Protection IP65	IP65 with suitable connector - According to EN 60529
Shock	According to IEC 68-2-6 (2G - from 2 to 150 Hz)
Vibration	According to IEC 68-2-7 (15G - 11 m/s)
Working media	All neutral media such as compressed air and inert gases

22 mm and CNOMO Solenoid pilot

3/2 solenoid pilot operators are designed for piloting pneumatic control valves with compressed air or other inert gases. The P2F P operator is available for Normal operating pressures up to 10 bar having an outlet orifice 1.3mm and exhaust orifice 1.5 mm.

Corrosion resistant design

The pilot operator body is manufactured in thermoplastic PA 6 material and the core tube brass/stainless steel. The plunger/core is made from stainless steel and the valve seats from FKM.

Solenoid Pilot Exhaust

These operators all exhaust out of the top of the core tube which is tapped M5. The standard solenoid nut fitted to the core tube is the Diffuser nut which allows the exhaust to escape to atmosphere. This nut also minimises ingress of dirt into the valve through this port. The alternative plastic knurled nut can be specified (refer to part number system) if the exhaust air needs to be captured and piped away using the M5 tapped port.

Coils

Coils are wound with enameled copper wire, having temperature index 180°C with class F insulation (155°C) and are encapsulated in Thermoplastic resin. When fitted with suitable connector and correct gasket they give protection to IP65.

Manual Override options

The pilot operators can be supplied with or without manual override. The standard manual override is the monostable (spring return) extended brass override. Alternatively the bistable (locking) override can be specified as an alternative for the Normal duty 10 bar option.

Spares

Solenoid operators are available as spares complete with mounting screws and seals. Coils and connectors should be ordered separately.

20 x 22 Solenoid Operator - Complete assembled 20 x 22 Operator with 22 x 30 DIN Form B Coil

Voltage	W (g)	Manual Override	
		Without Order code	With Locking Order code
12 Vdc - 3 W	165	P2FS13N4AB45	P2FS13N4EB45
24 Vdc - 3 W	165	P2FS13N4AB49	P2FS13N4EB49
48 Vdc - 3 W	165	P2FS13N4AB51	P2FS13N4EB51
110 Vdc - 3 W	165	P2FS13N4AB57	P2FS13N4EB57
24 Vac 50/60 Hz - 5 VA	165	P2FS13N4AB45	P2FS13N4EB45
48 Vac 50/60 Hz - 5 VA	165	P2FS13N4AB49	P2FS13N4EB49
110 Vac 50/60 Hz - 5 VA	165	P2FS13N4AB53	P2FS13N4EB53
230 Vac 50/60 Hz - 5 VA	165	P2FS13N4AB57	P2FS13N4EB57



Complete Solenoid Valve operator without connector.
Connector must be ordered separately from the table below.

Solenoid Coil 22 x 30 DIN Form B

Voltage	W (g)	Order code
12 Vdc - 3 W	93	P2FCB345
24 Vdc - 3 W	93	P2FCB349
48 Vdc - 3 W	93	P2FCB351
110 Vdc - 3 W	93	P2FCB357
24 Vac 50/60 Hz - 5 VA	93	P2FCB345
48 Vac 50/60 Hz - 5 VA	93	P2FCB349
110 Vac 50/60 Hz - 5 VA	93	P2FCB353
230 Vac 50/60 Hz - 5 VA	93	P2FCB357



Complete Solenoid Valve operator without connector.
Connector must be ordered separately from the table below.

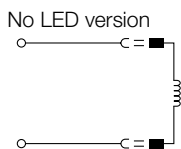
Diffuser Nuts

Description	Usage	W (g)	Order code
Plastic knurled nut	For valve requiring captured exhaust	5	P2FNP
Diffuser plastic nut	For valve requiring vented exhaust	5	P2FND

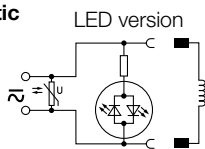


22 x 30 DIN Form B Connectors

Description	Characteristics	Visualisation	Cable length	W (g)	Order code
22 x 30 DIN Form B connector With standard screw	Standard IP65	No LED	No cable	15	3EV10V10
		24 Vdc/Vac LED	No cable	20	3EV10V20-24
			5 meters	350	3EV10V20-24L5
		48 Vdc/Vac LED	No cable	20	3EV10V20-48
			5 meters	350	3EV10V20-48L5
		110 Vac LED	No cable	25	3EV10V20-110
			5 meters	355	3EV10V20-110L5
		230 Vac LED	No cable	25	3EV10V20-230
			5 meters	360	3EV10V20-230L5

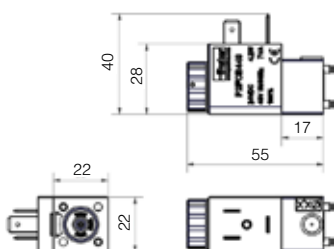


Connector schematic

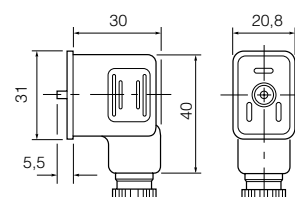


Dimensions

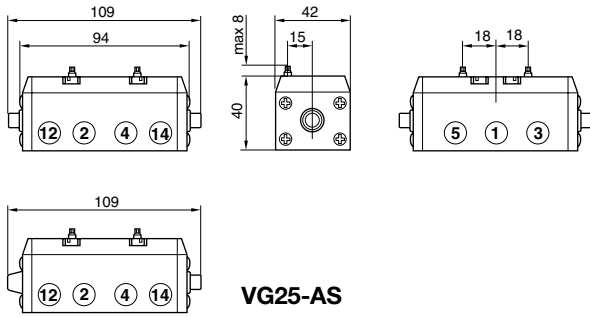
20 x 22 Solenoid Operator



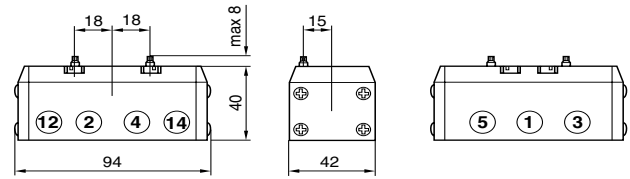
20 x 30 DIN Form B Connector



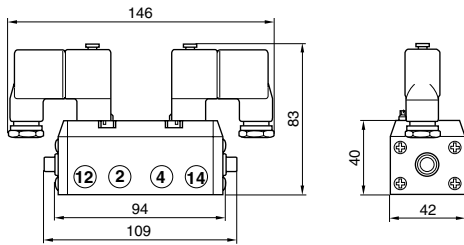
VG25-AA



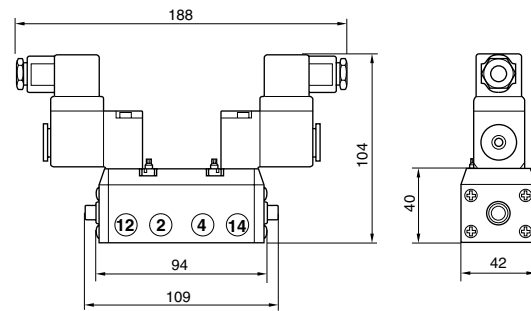
VG25-AC, VG25-XAC, VG25-YAC



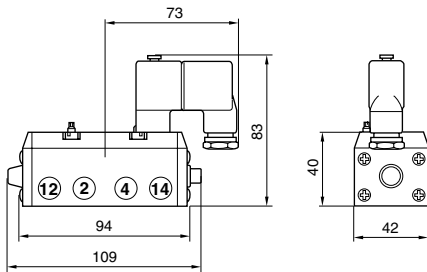
VG25-ERER, VG25-EAEA



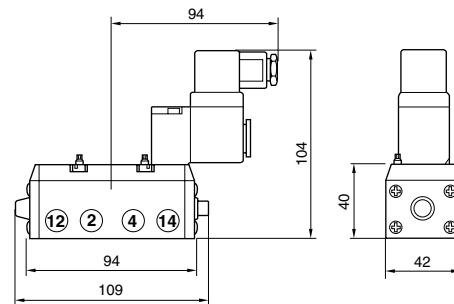
VG25-RER, VG25-AEA with CNOMO



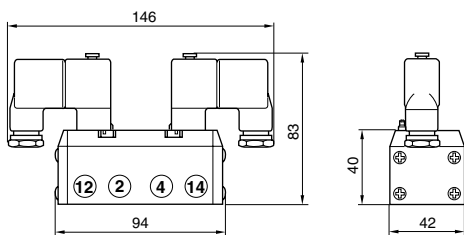
VG25-ERS, VG25-EAS



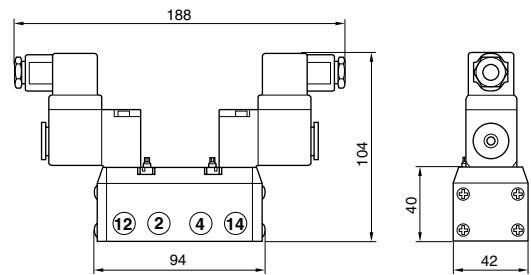
VG25-ERS, VG25-EAS with CNOMO



VG25-(X,Y)ERC, VG25-(X)EAC

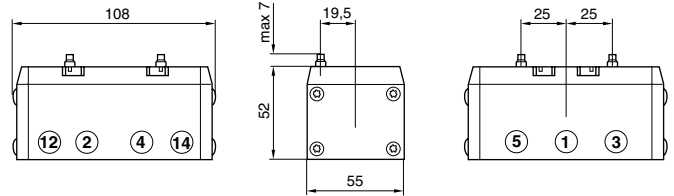
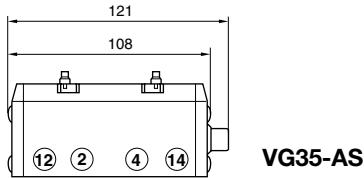
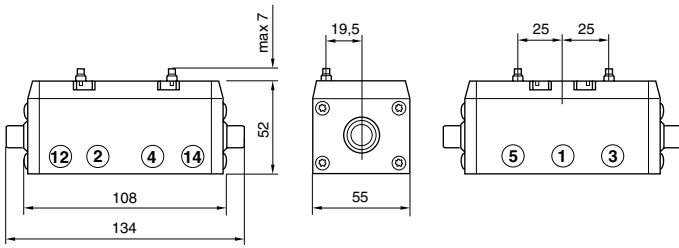


VG25-A(X)ERC, VG25-(X)EAC with CNOMO

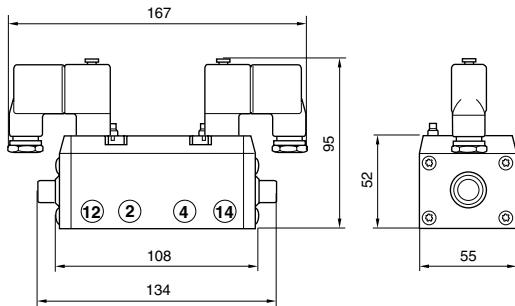


VG35-AA

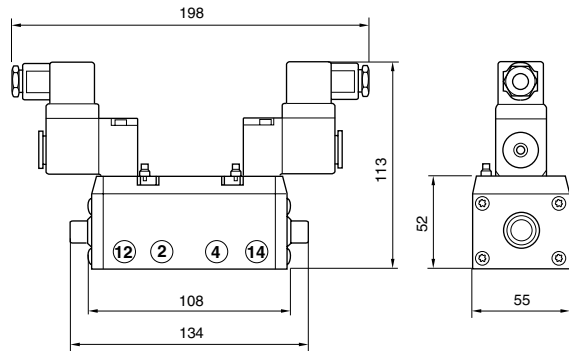
VG35-AC, VG35-XAC, VG35-YAC



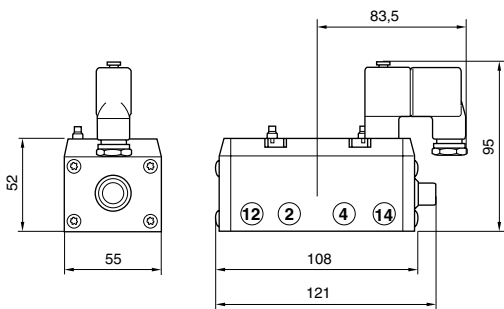
VG35-ERER, VG35-EAEA



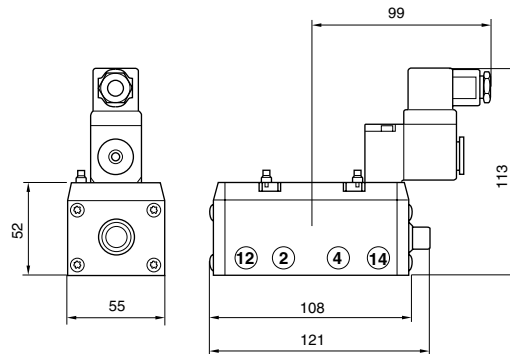
VG35-RER, VG35-AEA with CNOMO



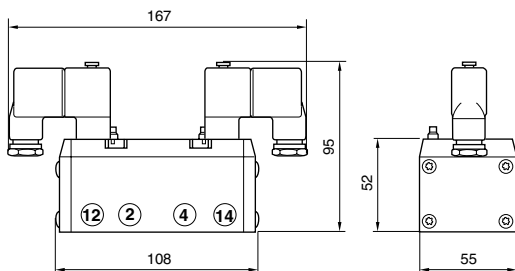
VG35-ERS, VG35-ERDR, VG35-EAS



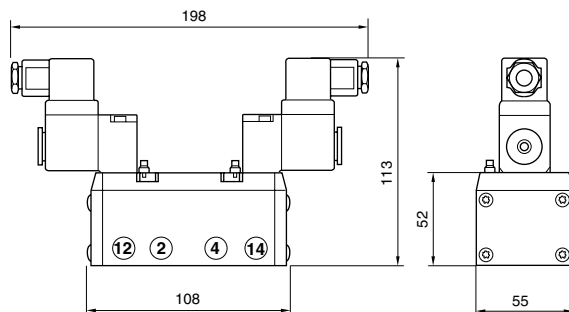
VG35-ERS, VG35-EAS with CNOMO



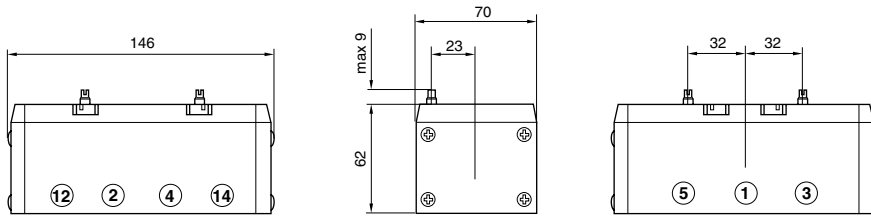
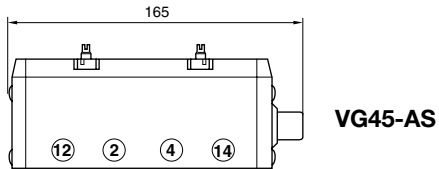
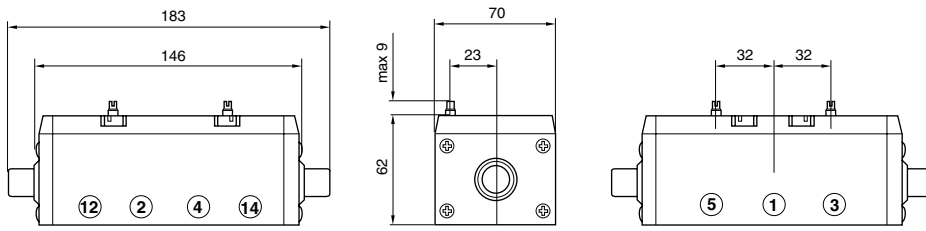
VG35-(X,Y)ERC, VG35-(X)EAC



VG35-(X)ERC, VG35-EAC with CNOMO

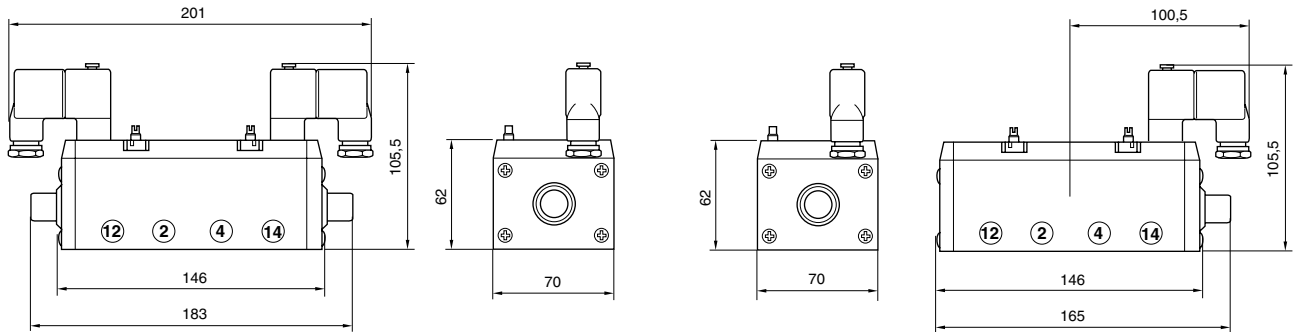


VG45-AA
VG45-AC, VG45-XAC

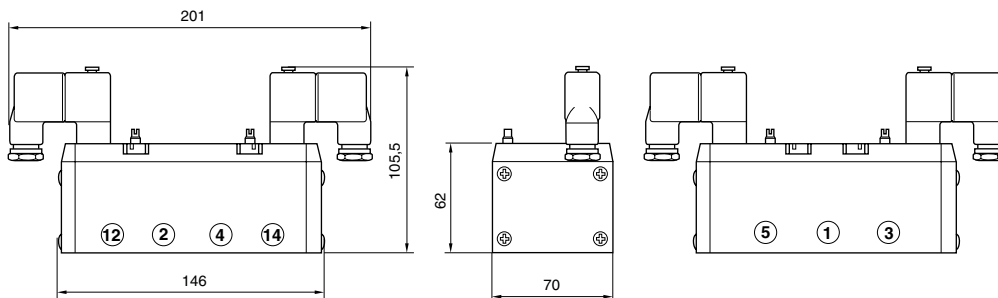


VG45-ERER, VG45-EAEA

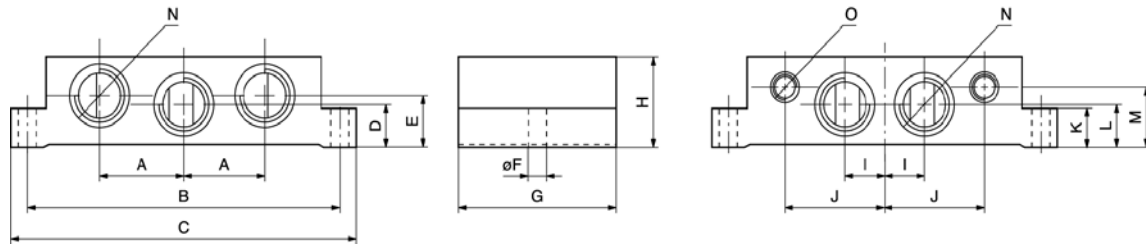
VG45-ERS, VG45-EAS



VG45-ERC, VG45-XERC

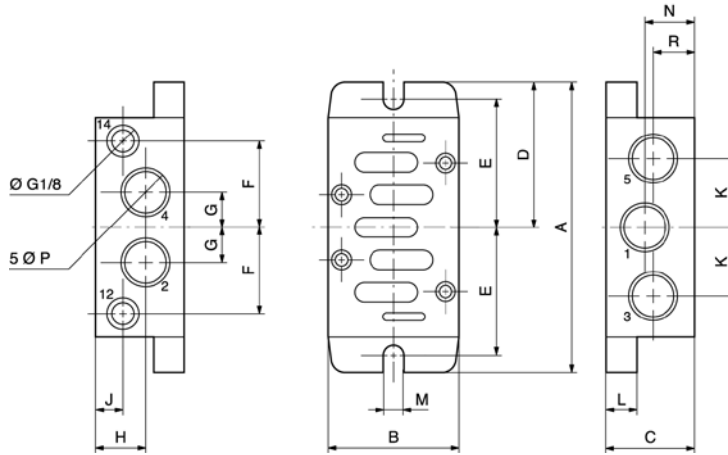


Single subbase with side ports according to VDMA



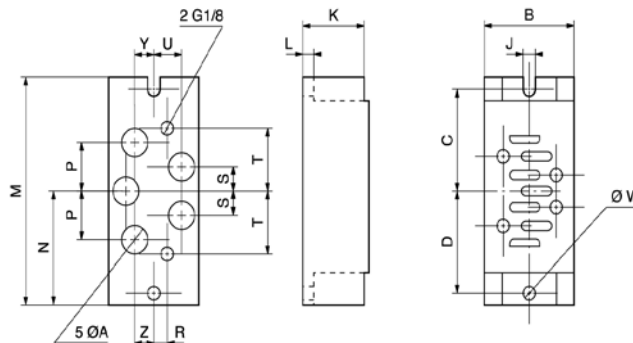
Order code	Size ISO	Port Size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
P2N-VS512SD	1	G1/4	21,5	98	110	11	20	5,5	48	32	12	29	10	11	23	G1/4	G1/8
P2N-WS513S	2	G3/8	28	112	124	14	26	6,6	56	40	15	37	13	14	30	G3/8	G1/8
P2N-YS514SD	3	G1/2	34	136	149	17	17	6,6	71	32	16	45	18	17	22	G1/2	G1/8

Single subbase with side ports



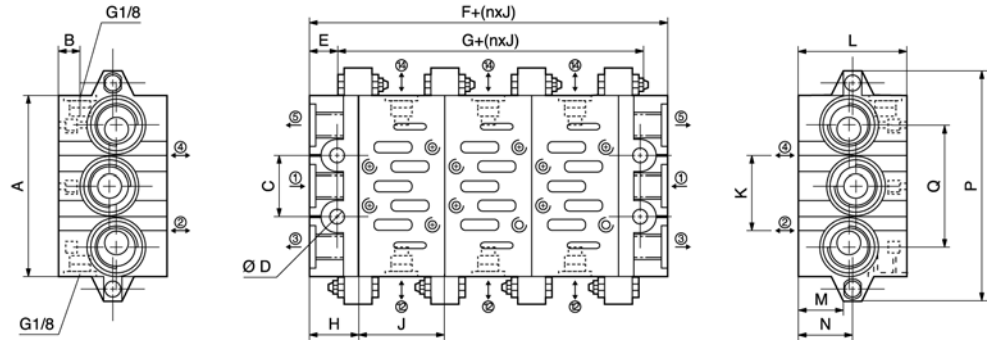
Order code	ISO Size	ØP	A	B	C	D	E	F	G	H	J	K	L	M	N	R
PL1-1/4-70	1	G1/4	110	46	29	55	49	30	11	17,75	17,75	22	6	5,5	17,75	17,75
PL2-3/8-70	2	G3/8	124	56	37	62	55	37	14,5	22,5	14	28	6	5,5	22,5	14,5
P2N-JS516SD	3	G3/4	149	71	60	74,5	68	45	21	33	10	40	18	6,6	37,5	22,5

Single subbase with bottom ports



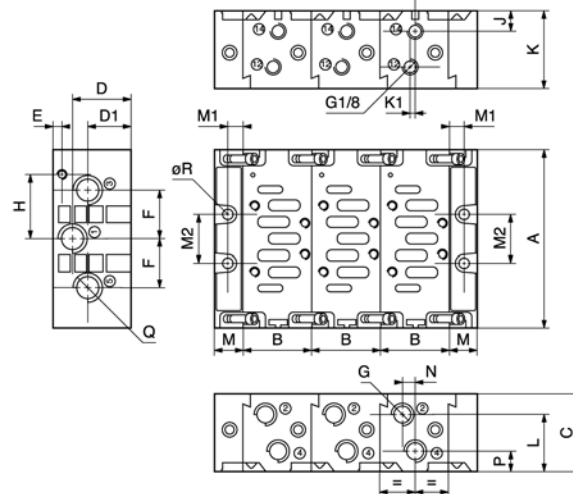
Order code	A	B	C	D	J	K	L	M	N	P	R	S	T	U	W	Y	Z
PD1-1/4-70	G1/4	46	49	49	5,5	29	6	110	55	22	10	11	30	10	5,5	10	10
PD2-3/8-70	G3/8	56	55	55	5,5	37	6	124	62	29	10	14,5	37	12,5	5,5	12,5	12,5
PD3-1/2-70	G1/2	77	68	68	6,6	32	18	149	74,5	34	10	17	45	17	6,5	17	17

Manifold and end plates according to VDMA (P2N-VM / WM / YM)



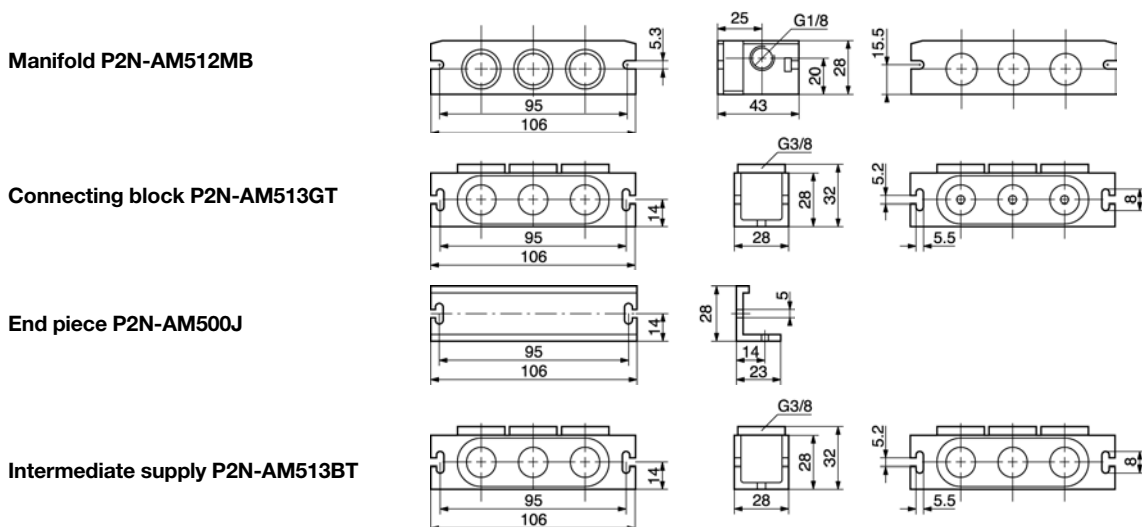
ISO Size	Port 1, 3, 5	Port 2, 4	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
1	G3/8	G1/4	85	8,5	28	7	11	44	22	22	43	26	46	21	24	56	110
2	G1/2	G3/8	100	9	35	9	13	52	26	26	56	30	47	22	24	68	135
3	G1	G1/2	140	10	52	12	15	60	30	30	71	38	56	31	34	104	190

Manifold and end plates with side ports (P2N-EM / FM..)



Order code	A	B	C	D	D1	E	F	G	H	J	K	K1	L	M	M1	M2	N	P	Q	R
P2N-EM ...	110	43	48	35,5	26,5	5,5	28	G1/4	36	15,5	35	3	32	20	11	28	12	12,5	G3/8	6
P2N-FM ...	129	56	60	44,5	35,5	6	34,5	G3/8	45	16	41,5	3	41	24	13	35	12,5	16	G1/2	8

Manifold and end plates with bottom ports "low profile" (P2N-AM..)



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