Parker
Pneumatic

Directional control valves

Flexflow Series

According to ISO 5599/1, size 1-4

Catalogue 9127007622GB-ul

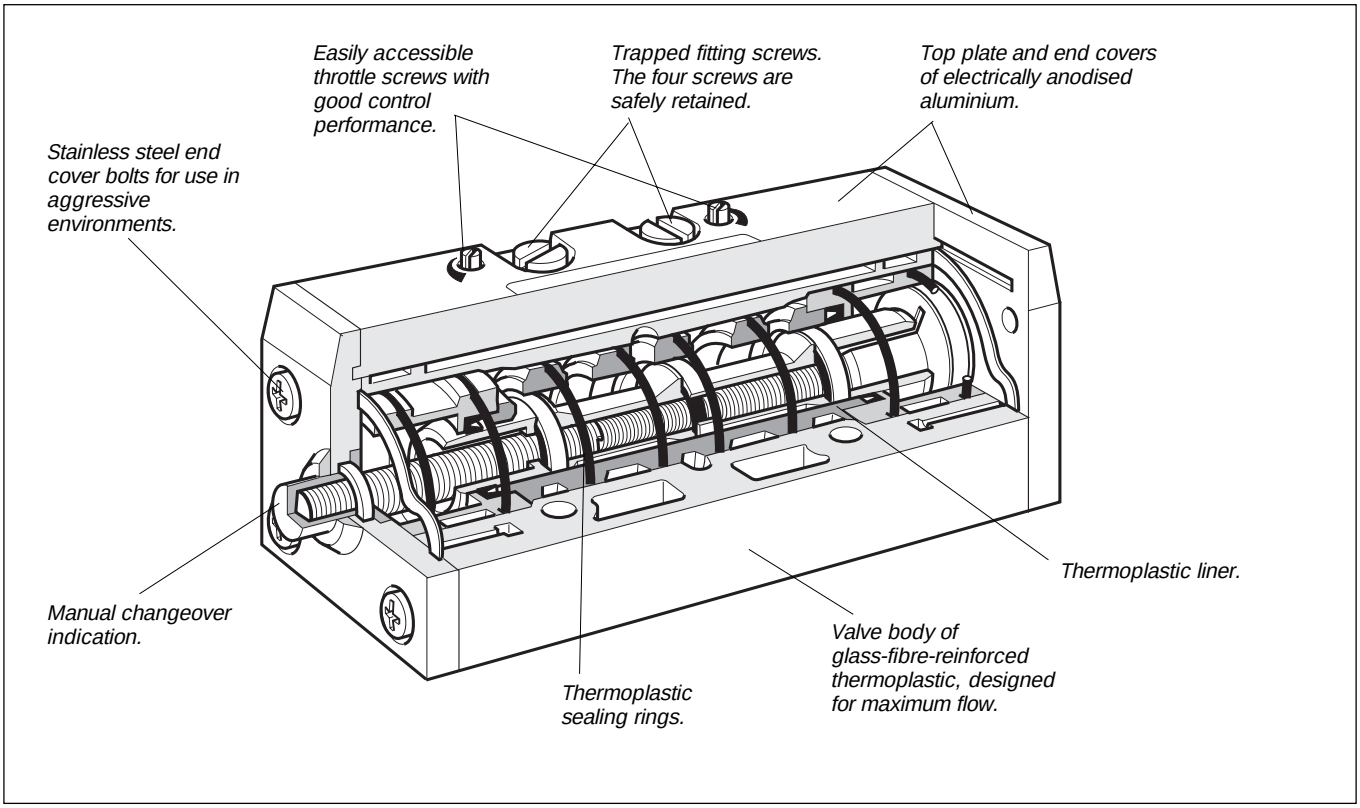
Home

Contents

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 dismantlingvalves or blind connection blocks.

Note!
All technical data in this catalogue is typical only.

The air quality is decisive for the valve life: see ISO 8573.



Valve range

VG25, G1/4, ISO 5599/1, size 1
VG35, G3/8, ISO 5599/1, size 2
VG45, G1/2, ISO 5599/1, size 3

The VG valve range consists of 5-port working valves, conforming to ISO 5599/1, sizes 1, 2 and 3. The valves feature small dimensions and high performance for applications where high flow rates are required.

The range includes both 5/2 and 5/3 valves, for pneumatic or Electric operation. Two types of electrically operated pilot valves are available: the compact VE03 or the VG13 in accordance with CNOMO.

Three different manifold systems are available for the VG25 range: a compact ISO manifold, an ISO and VDMA 24345 manifold and a side-connection ISO manifold. For the VG35, there are ISO and VDMA manifolds and a side-connection ISO manifold, while for the VG45 there are ISO and VDMA manifolds.

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 flow capacity

The design principle - of a round spool and an injection-moulded thermoplastic valve body - has made it possible to provide large flow areas for maximum flow capacity.

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 changeover - indication

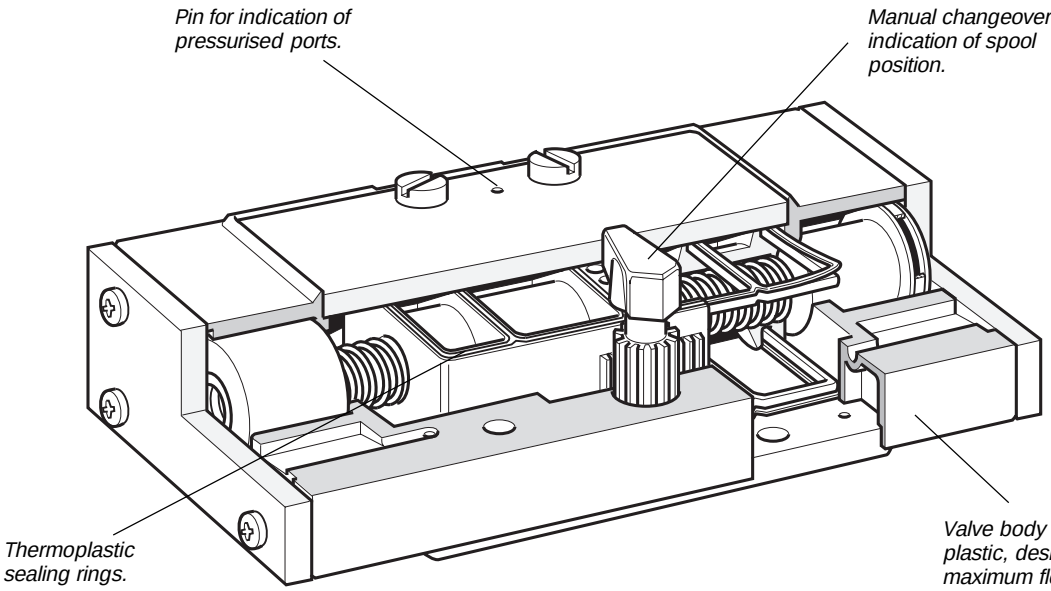
Commissioning and service are assisted by the incorporation of large, ergonomically designed pushbuttons for manual changeover as standard in all the valves in the range. This also makes it easy to see the position of the valve spools when fault-tracing.

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,

Common multiple mounting:
VG25-VG35 and VG25-VG45

The use of adapter connectors between multiple manifolds for the different valve sizes makes it easy to assemble different valve sizes into a single valve block.



Valve range

VE45, G1/2 and G3/4, ISO 5599/1, size 4

The VE45 valve range consists of 5-port working valves, conforming to ISO 5599/1, size 4. The range includes both 5/2 and 5/3 valves, for pneumatic or Electric operation: both types can also be manually operated. Electrically operated pilot valves are from the VE13 range.

Manifolds are available as single manifolds and as two sizes of multiple mounting manifolds, for G1/2 and G3/4.

International standard

VE45 valves are fully interchangeable, in accordance with ISO 5599/1. In addition, G3/4 manifolds comply with the German VDMA 24345 standard.

Lubrication and maintenance-free for long life

The valves have a flat, symmetrical plastic spool, pressure-relieved and mounted between slider surfaces, ensuring certainty of operation and reliable starting even after long periods at rest. The sliding lubricant-loaded plastic seal reduces friction and eliminates the need for additional lubrication. This, coupled with the choice of materials, ensures a long life and reliable operation.

High flow capacity

The flat spool ensures minimum pressure loss, whether operating with compressed air or vacuum.

Manual changeover - indication

Commissioning and service are assisted by the ability to operate the valve manually by means of a knob. The position of the knob also indicates the position of the spool.

An indication pin shows which ports are pressurised.

Speed control

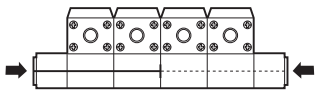
As standard, the compact G1/2 manifold incorporates easily accessible throttle valves in the exhaust ports. The G3/4 manifold conforms to VDMA 24345 and is designed for maximum flow rate.

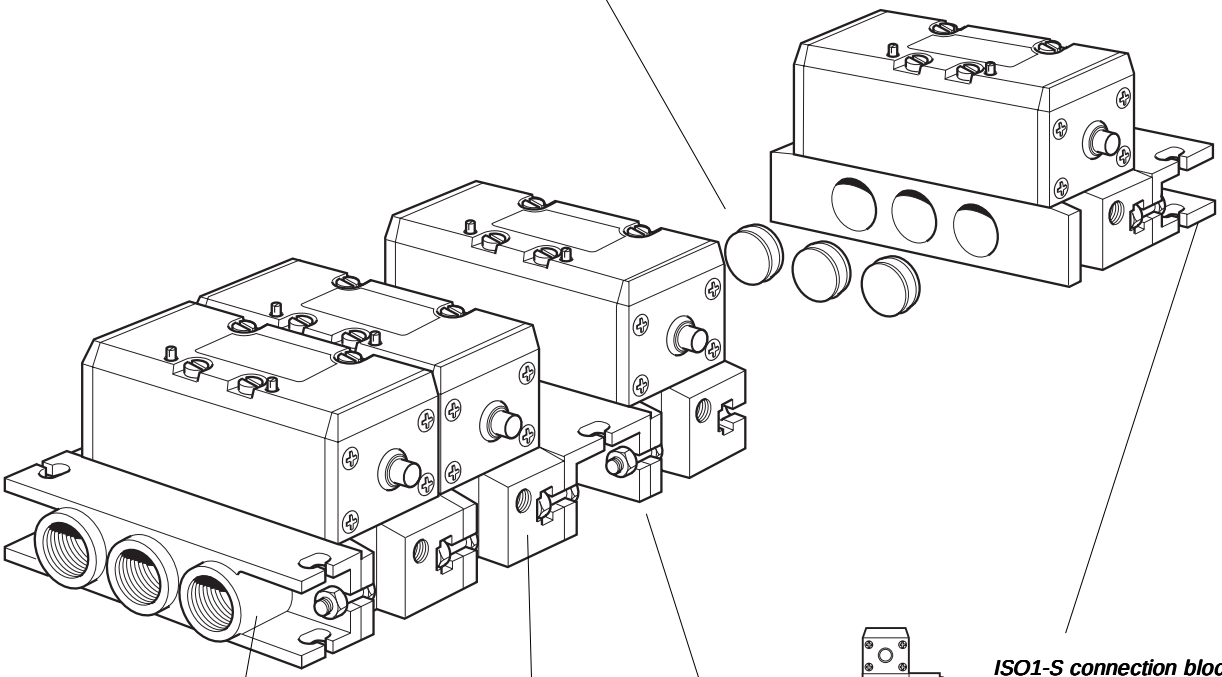
Solenoid valves

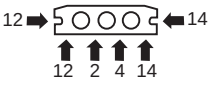
Solenoid valves and cable heads must be ordered separately. Use the VE13-E-S-6 as a pilot valve for the valves in this range. A pilot valve is required for each E in the valve order code. VE13 valves are available in standard (8 W) and low-power (2 W) versions.

Flexible multi-mounting, VG25

Isolation plugs
enable the use of two separate primary pressures in the same compact block.

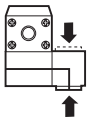






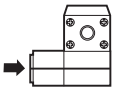
ISO1-M multiple manifold.
Ports 2 and 4 are connected from the bottom. Ports 12 and 14 can be connected from the side or from the bottom.

ISO1-S connection block,
for side connection

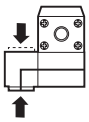


ISO1-L connection block,
for top or bottom connection

ISO1-M end block.

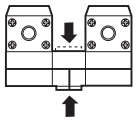


ISO1-S connection block,
for side connection

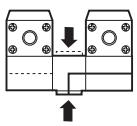


ISO1-L connection block,
for top or bottom connection

ISO1-M end block.

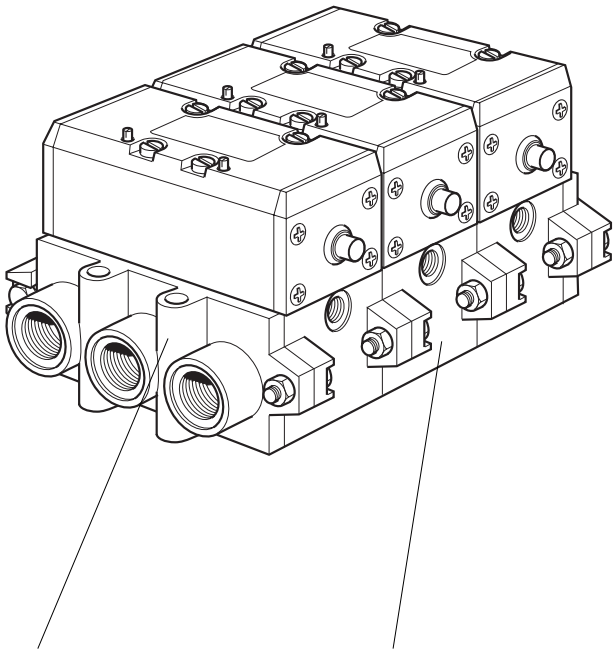


ISO1-T connection block
for connection to the centre of the valve block. Top or bottom connection.



ISO1-L connection block
for connection of separate primary supplies to the next valve block. Top or bottom connection.

Multiple mounting with bottom connection VG25, VG35 and VG45 to VDMA 24345

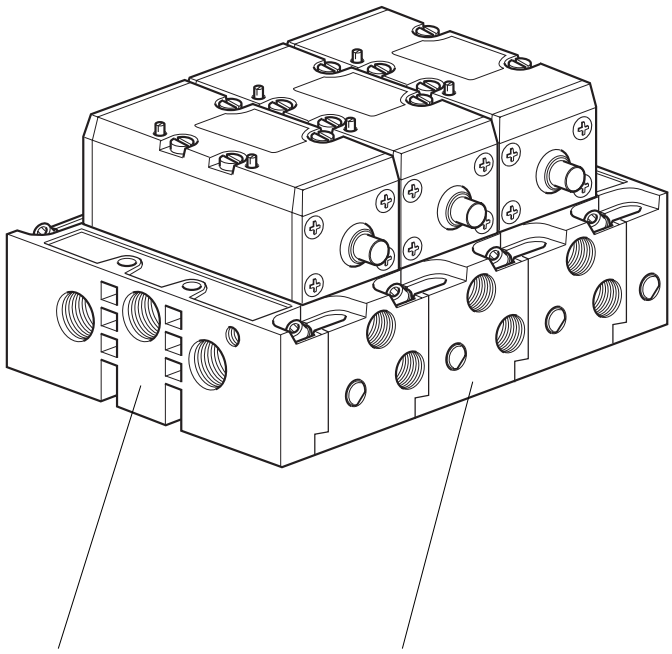


ISO*-D connection set
for side connection

*
1 for VG25
2 for VG35
3 for VG45

ISO*-C multiple manifold
Ports 2 and 4 connected from the bottom:
ports 12 and 14 connected from the side.

Multiple mounting with side connection VG25 and VG35 to VDMA 24345



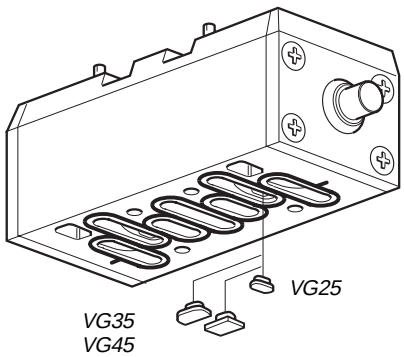
Connection set
P2N-EM513ES (VG25)
P2N-FM514ES (VG35)
For side connection

Multiple manifold
P2N-EM512MD (VG25)
P2N-FM513MD (VG35)
Ports 2 and 4, as well as 12 and 14, connected from the side.

Throttle inserts

Fitting throttle inserts in exhaust ports 3 and 5 provides several stages of cylinder speed control.

Valve	Throttle insert	Flow as % of maximum flow
VG25	With throttle insert Without throttle insert	0-60% -100%
VG35, VG45	With whole throttle insert With half throttle insert Without throttle insert	0-50% -80% -100%



NB:
The throttle inserts must be removed for maximum flow capacity.

- High flow rates, rapid changeover
- Compact, corrosion-resistant low-weight design
- Integral speed control
- Manual spool changeover
- Wide range of manifolds (low-profile and VDMA)

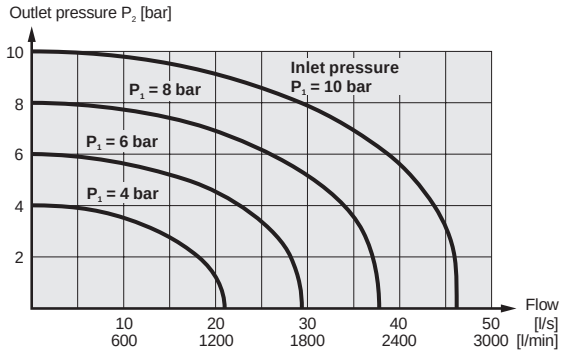
Material specification

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 pushbutton	Acetal plastic
Throttle screws	Galvanised brass
Throttle inserts	Acetal plastic
End cover bolts	Stainless steel
Mounting screws	Galvanised steel (standard)
Mounting screws	Stainless steel (accessories)
Manifolds	Electrically anodised aluminium

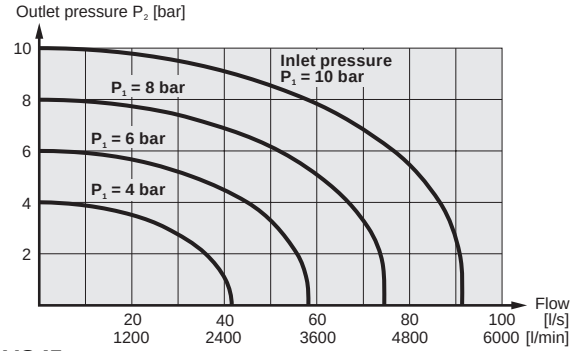
Flow characteristic

Flow capacity to ISO 6358. All pressures = effective pressure

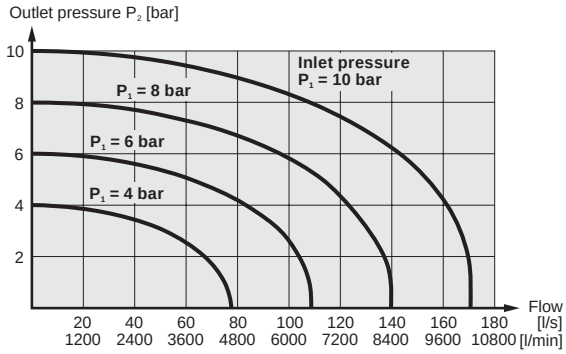
VG25



VG35



VG45



Ordering key

VG25- A X ERER 2 C Q

	ISO size
VG25-	ISO size 1
VG35-	ISO size 2
VG45-	ISO size 3

	Centre position
	Closed
X	Vented
Y	Pressurised
Z	Closed/ pressurised

	Solenoid
	Mini solenoid
A	CNOMO solenoid

	Actuator / return
AA	External air
AS	External air/Spring
AC	External air, self-centring
ERS	Electric, internal air/Spring
ERDR	Electric, internal air/ Differential air return
ERER	Electric, internal air
ERC	Electric, internal air, self-centring
EAS	Electric, external air/Spring
EAEA	Electric, external air
EAC	Electric, external air, self-centring

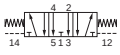
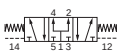
	Current
2	DC
4	50/60 Hz

	Voltage
C	24 V
E	110 V
H	220 V
K	240 V

	Connector
	None
Q	Connector with LED + VDR or diode

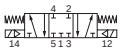
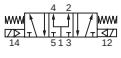
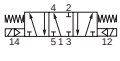
Possible combinations: see pages 9 - 13.

Data	**VG25**	**VG35**	**VG45**
Dimension	ISO 1	ISO 2	ISO 3
Operating pressure, max	10 bar	10 bar	10 bar
Operating temperature	–20 to +70 °C	–20 to +70 °C	–20 to +70 °C
Flow (acc. to ISO 6358)	C=4,2 Nl/s x bar b=0,2 Qn=17 l/s Qmax=29,4 l/s Cv=1,04	C=8,3 Nl/s x bar b=0,2 Qn=33 l/s Qmax=58,0 l/s Cv=2,02	C=15,5 Nl/s x bar b=0,2 Qn=62 l/s Qmax=108,5 l/s Cv=3,80

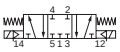
	Symbol	**ISO** size	**Actuator**	**Return**	**Signal** pressure min, bar at 6 bar activ./return	**Changeover** time, ms at 6 bar activ./return	**Port** nominal size	**Weight** Kg	**Order code**
Pneumatically actuated 5/2 and 5/3 valves									
		1	Air signal	Air signal	1,5/1,5	10/10	G1/4	0,26	**VG25-AA**
		2			1,5/1,5	12/12	G3/8	0,48	**VG35-AA**
		3			1,5/1,5	15/15	G1/2	0,95	**VG45-AA**
		1	Air signal	Spring	3,5/-	15/25	G1/4	0,26	**VG25-AS**
		2			3,5/-	17/35	G3/8	0,48	**VG35-AS**
		3			3,5/-	20/45	G1/2	0,95	**VG45-AS**
		1	Air signal closed centre position	Air signal self-centring	3,5/3,5	15/20	G1/4	0,26	**VG25-AC**
		2			3,5/3,5	17/28	G3/8	0,48	**VG35-AC**
		3			3,5/3,5	18/35	G1/2	0,95	**VG45-AC**
		1	Air signal vented centre position	Air signal self-centring	3,5/3,5	15/20	G1/4	0,26	**VG25-XAC**
		2			3,5/3,5	17/28	G3/8	0,48	**VG35-XAC**
		3			3,5/3,5	18/35	G1/2	0,95	**VG45-XAC**
		1	Air signal pressurised centre position	Air signal self-centring	3,5/3,5	15/20	G1/4	0,26	**VG25-YAC**
		2			3,5/3,5	17/28	G3/8	0,48	**VG35-YAC**

Manifolds must be ordered separately: see pages 23-26.
Dimensions: see pages 27-30.

Data	VG25	VG35	VG45
Dimension	ISO 1	ISO 2	ISO 3
Operating pressure, max	10 bar	10 bar	10 bar
Operating temperature	–20 to +70 °C	–20 to +70 °C	–20 to +70 °C
Flow (acc. to ISO 6358)	C=4,2 Nl/s x bar b=0,2 Qn=17 l/s Qmax=29,4 l/s Cv=1,04	C=8,3 Nl/s x bar b=0,2 Qn=33 l/s Qmax=58,0 l/s Cv=2,02	C=15,5 Nl/s x bar b=0,2 Qn=62 l/s Qmax=108,5 l/s Cv=3,80

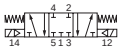
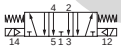
	Symbol	ISO size	Actuator	Return	Signal pressure min, bar at 6 bar activ./return	Changeover time, ms at 6 bar activ./return	Port nominal size	Weight Kg	Order code
Electrically actuated 5/2 and 5/3 valves									
		Internal air supply to solenoid valve(s) via port 1 for VE03 miniature solenoid valve.							
		1	Electric	Spring	3,5/-	15/25	G1/4	0,26	**VG25-ERS**
		2			3,5/-	28/58	G3/8	0,48	**VG35-ERS**
		3			3,5/-	40/90	G1/2	0,95	**VG45-ERS**
		1	Electric	Differential air signal	3,5/-	15/25	G1/4	0,26	**VG25-ERDR**
		2			3,5/-	28/58	G3/8	0,48	**VG35-ERDR**
		1	Electric	Electric	1,5/1,5	15/15	G1/4	0,26	**VG25-ERER**
		2			1,5/1,5	22/22	G3/8	0,48	**VG35-ERER**
		3			1,5/1,5	28/28	G1/2	0,95	**VG45-ERER**
		1	Electric closed centre position	Electric self-centring	3,5/-	25/30	G1/4	0,26	**VG25-ERC**
		2			3,5/-	38/65	G3/8	0,48	**VG35-ERC**
		3			3,5/-	50/100	G1/2	0,95	**VG45-ERC**
		1	Electric vented centre position	Electric self-centring	3,5/-	25/30	G1/4	0,26	**VG25-XERC**
		2			3,5/-	38/65	G3/8	0,48	**VG35-XERC**
		3			3,5/-	50/100	G1/2	0,95	**VG45-XERC**
		1	Electric pressurised centre position	Electric self-centring	3,5/-	25/30	G1/4	0,26	**VG25-YERC**
		2			3,5/-	38/65	G3/8	0,48	**VG35-YERC**
		1	Electric pressurised/ closed centre position	Electric self-centring	3,5/-	25/30	G1/4	0,26	**VG25-ZERC**
		2			3,5/-	38/65	G3/8	0,48	**VG35-ZERC**
		3			3,5/-	50/100	G1/2	0,95	**VG45-ZERC**

Data	**VG25**	**VG35**	**VG45**
Dimension	ISO 1	ISO 2	ISO 3
Operating pressure, max	10 bar	10 bar	10 bar
Operating temperature	–20 to +70 °C	–20 to +70 °C	–20 to +70 °C
Flow (acc. to ISO 6358)	C=4,2 Nl/s x bar b=0,2 Qn=17 l/s Qmax=29,4 l/s Cv=1,04	C=8,3 Nl/s x bar b=0,2 Qn=33 l/s Qmax=58,0 l/s Cv=2,02	C=15,5 Nl/s x bar b=0,2 Qn=62 l/s Qmax=108,5 l/s Cv=3,80

	Symbol	**ISO** size	**Actuator**	**Return**	**Signal** pressure min, bar at 6 bar activ./return	**Changeover** time, ms at 6 bar activ./return	**Port** nominal size	**Weight** Kg	**Order code**
Electrically actuated 5/2 and 5/3 valves									
		External air supply to solenoid valve(s) via port 14, or ports 14 and 12, for VE03 miniature solenoid valve.							
		1	Electric	Spring	3,5/-	15/25	G1/4	0,26	**VG25-EAS**
		2			3,5/-	28/58	G3/8	0,48	**VG35-EAS**
		3			3,5/-	40/90	G1/2	0,95	**VG45-EAS**
		1	Electric	Electric	1,5/1,5	15/15	G1/4	0,26	**VG25-EAEA**
		2			1,5/1,5	22/22	G3/8	0,48	**VG35-EAEA**
		3			1,5/1,5	28/28	G1/2	0,95	**VG45-EAEA**
		1	Electric closed centre position	Electric self-centring	3,5/-	25/30	G1/4	0,26	**VG25-EAC**
		2			3,5/-	38/65	G3/8	0,48	**VG35-EAC**
		1	Electric vented centre position	Electric self-centring	3,5/-	25/30	G1/4	0,26	**VG25-XEAC**
		2			3,5/-	38/65	G3/8	0,48	**VG35-XEAC**
		1	Electric pressurised/ closed centre position	Electric self-centring	3,5/-	25/30	G1/4	0,26	**VG25-ZEAC**
		2			3,5/-	38/65	G3/8	0,48	**VG35-ZEAC**
		3			3,5/-	50/100	G1/2	0,95	**VG45-ZEAC**

Solenoid valves must be ordered separately: see page 19.
Manifolds must be ordered separately: see pages 23-26.
Complete valves: see pages 16-18.
Dimensions: see pages 27-30.

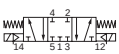
Data	**VG25**	**VG35**	**VG45**
Dimension	ISO 1	ISO 2	ISO 3
Operating pressure, max	10 bar	10 bar	10 bar
Operating temperature	–20 to +70 °C	–20 to +70 °C	–20 to +70 °C
Flow (acc. to ISO 6358)	C=4,2 Nl/s x bar b=0,2 Qn=17 l/s Qmax=29,4 l/s Cv=1,04	C=8,3 Nl/s x bar b=0,2 Qn=33 l/s Qmax=58,0 l/s Cv=2,02	C=15,5 Nl/s x bar b=0,2 Qn=62 l/s Qmax=108,5 l/s Cv=3,80

	Symbol	**ISO** size	**Actuator**	**Return**	**Signal** pressure min, bar at 6 bar activ./return	**Changeover** time, ms at 6 bar activ./return	**Port** nominal size	**Weight** Kg	**Order code**
Electrically actuated 5/2 and 5/3 valves									
		Internal air supply to solenoid valve(s) via port 1 for VG13 CNOMO solenoid valve.							
		1	Electric	Spring	3,5/-	15/15	G1/4	0,26	**VG25-AERS**
		2			3,5/-	22/22	G3/8	0,48	**VG35-AERS**
		3			3,5/-	40/90	G1/2	0,95	**VG45-AERS**
		1	Electric	Electric	1,5/1,5	15/15	G1/4	0,26	**VG25-AERER**
		2			1,5/1,5	22/22	G3/8	0,48	**VG35-AERER**
		3			1,5/1,5	28/28	G1/2	0,95	**VG45-AERER**
		1	Electric closed centre position	Electric self-centring	3,5/-	25/30	G1/4	0,26	**VG25-AERC**
		2			3,5/-	38/65	G3/8	0,48	**VG35-AERC**
		3			3,5/-	50/100	G1/2	0,95	**VG45-AERC**
		1	Electric vented centre position	Electric self-centring	3,5/-	25/30	G1/4	0,25	**VG25-AXERC**
		2			3,5/-	38/65	G3/8	0,48	**VG35-AXERC**
		3			3,5/-	50/100	G1/2	0,95	**VG45-AXERC**

Solenoid valves must be ordered separately: see page 19.
Manifolds must be ordered separately: see pages 23-26.
Complete valves: see pages 16-18.
Dimensions: see pages 27-30.

CNOMO

Data	**VG25**	**VG35**	**VG45**
Dimension	ISO 1	ISO 2	ISO 3
Operating pressure, max	10 bar	10 bar	10 bar
Operating temperature	–20 to +70 °C	–20 to +70 °C	–20 to +70 °C
Flow (acc. to ISO 6358)	C=4,2 Nl/s x bar b=0,2 Qn=17 l/s Qmax=29,4 l/s Cv=1,04	C=8,3 Nl/s x bar b=0,2 Qn=33 l/s Qmax=58,0 l/s Cv=2,02	C=15,5 Nl/s x bar b=0,2 Qn=62 l/s Qmax=108,5 l/s Cv=3,80

	Symbol	**ISO** size	**Actuator**	**Return**	**Signal** pressure min, bar at 6 bar activ./return	**Changeover** time, ms at 6 bar activ./return	**Port** nominal size	**Weight** Kg	**Order code**
Electrically actuated 5/2 and 5/3 valves									
		External air supply to solenoid valve(s) via port 14, or ports 14 and 12, for VG13 CNOMO solenoid valve.							
		1	Electric	Spring	3,5/-	15/15	G1/4	0,26	**VG25-AEAS**
		2			3,5/-	22/22	G3/8	0,48	**VG35-AEAS**
		3			3,5/-	40/90	G1/2	0,95	**VG45-AEAS**
		1	Electric	Electric	1,5/1,5	15/15	G1/4	0,26	**VG25-AEAEA**
		2			1,5/1,5	22/22	G3/8	0,48	**VG35-AEAEA**
		3			1,5/1,5	28/28	G1/2	0,95	**VG45-AEAEA**
		1	Electric closed centre position	Electric self-centring	3,5/-	25/30	G1/4	0,25	**VG25-AEAC**
		2			3,5/-	38/65	G3/8	0,48	**VG35-AEAC**
		1	Electric vented centre position	Electric self-centring	3,5/-	25/30	G1/4	0,25	**VG25-AXEAC**
		2			3,5/-	25/30	G3/8	0,48	**VG35-AXEAC**

CNOMO

Solenoid valves must be ordered separately: see page 19.
Manifolds must be ordered separately: see pages 23-26.
Complete valves: see pages 16-18.
Dimensions: see pages 27-30.

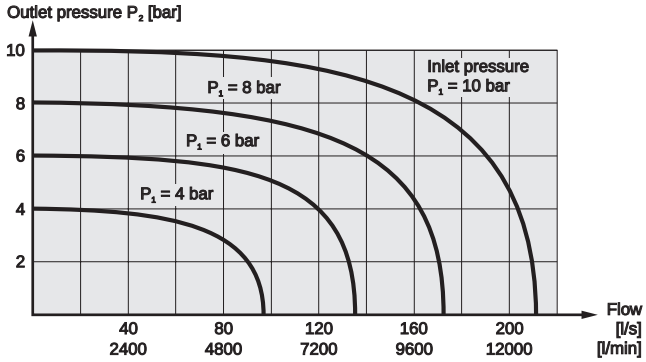
- Manual changeover and indication of the spool position.
- Indicator pin shows pressurised port to facilitate system fault-tracing.
- Throttle inserts in manifolds for simple speed control.
- Patented flat spool.

Material specification

Valve body	Acetal plastic
Spool	Acetal plastic
Spool seal	High-molecular thermoplastic
O-rings	Nitrile rubber, NBR
Flat spool	Glass-fibre-reinforced thermoplastic
Springs	Stainless steel
Indicator	Electrically anodised aluminium
Mounting screws	Galvanised steel
Throttle inserts	Galvanised steel
Manifolds	Electrically anodised aluminium
End covers and top plate	Electrically anodised aluminium
Hand lever	Galvanised steel

Flow characteristic

Flow capacity to ISO 6358
All pressures = effective pressure
VG45



Solenoid valves must be ordered separately: see page 19.
Manifolds must be ordered separately: see pages 26.
Dimensions: see page 31.

Ordering key

VE45- **X** **ERER** **2** **C** **Q**

	ISO size
VE45	ISO size 4

	Mittläge
	Closed
X	Vented
Y	Pressurised

	Actuator / return
HS	Hand lever/Spring
HL2	Hand lever, 2 positions
HB3	Hand lever, lockable 3 positions
HC	Hand lever, self-centring
AA	External air
AS	External air/Spring
AC	External air, self-centring
ERS	Electric, internal air/Spring
ERER	Electric, internal air
ERC	Electric, internal air self-centring

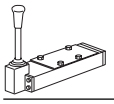
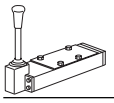
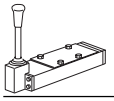
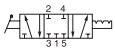
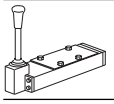
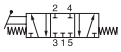
	Current
2	DC
4	50/60 Hz

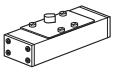
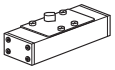
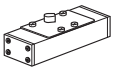
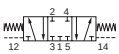
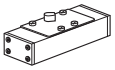
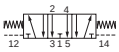
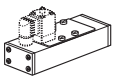
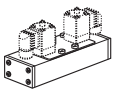
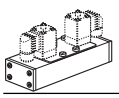
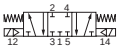
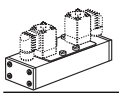
	Voltage
C	24 V
E	110 V
H	220 V
K	240 V

	Connector
	None
Q	Connector with LED + VDR or diode

Possible combinations: see page 15.

Data	**VE45**	Flow (to ISO 6358)	C=19,2 Nl/s x bar
Dimension	ISO 4		b=0,35
Operating pressure, max	10 bar		Qn=84 l/s
Operating temperature	–20 to +70 °C		Qmax=134,4 l/s
			Cv=5,0

	Symbol	ISO size	Actuator	Return	Changeover angle	Changeover force N	Port nominal size	Weight Kg	Order code
Hand lever operated 5/2 and 5/3 valves									
		4	Hand lever	Hand lever	30°	20	G1/2	1,120	**VE45-HL2**
		4	Hand lever	Spring	30°	60	G1/2	1,120	**VE45-HS**
		4	Hand lever closed centre position	Hand lever lockable 3 positions	±15°	40	G1/2	1,140	**VE45-HB3**
		4	Hand lever vented centre position	Hand lever self-centring	±15°	60	G1/2	1,140	**VE45-HC**

	Symbol	ISO size	Actuator	Return	Signal pressure min, bar at 6 bar activ./return	Changeover time, ms at 6 bar activ./return	Port nominal size	Weight Kg	Order code
Pneumatically actuated 5/2 and 5/3 valves									
		4	Air signal	Air signal	2,0/2,0	20/20	G1/2	0,764	**VE45-AA**
		4	Air signal	Spring	3,5/-	30/45	G1/2	0,764	**VE45-AS**
		4	Air signal closed centre position	Air signal self-centring	3,5/3,5	30/50	G1/2	0,820	**VE45-AC**
		4	Air signal vented centre position	Air signal self-centring	3,5/3,5	30/50	G1/2	0,820	**VE45-XAC**
Electrically actuated 5/2 and 5/3 valves									
	Internal air supply to solenoid valve(s) via port 1 for VE13 solenoid valve.								
		4	Electric	Spring	3,5/-	30/60	G1/2	0,870	**VE45-ERS**
		4	Electric	Electric	2,0/2,0	25/25	G1/2	0,870	**VE45-ERER**
		4	Electric closed centre position	Electric self-centring	3,5/3,5	35/70	G1/2	0,930	**VE45-ERC**
		4	Electric vented centre position	Electric self-centring	3,5/3,5	35/70	G1/2	0,930	**VE45-XERC**

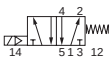
Complete valves

Complete factory-assembled valves, consisting of:
Directional control valve
Solenoid valve(s)
Cable head(s)

Complete valves, ISO size 1

Without manifold

VG25-ERS

Supply voltage	Order code	
24VDC	**VG25-ERS2CQ** Consisting of: 1 pc Valve VG25-ERS 1 pc Solenoid valve VE03-ESP002C2 1 pc Cable head 24VDC, LED+diode	
24V, 50/60Hz	**VG25-ERS4CQ** Consisting of: 1 pc Valve VG25-ERS 1 pc Solenoid valve VE03-ESC014C2 1 pc Cable head 24V AC/DC, LED+VDR	
110V, 50/60Hz	**VG25-ERS4EQ** Consisting of: 1 pc Valve VG25-ERS 1 pc Solenoid valve VE03-ESC014E2 1 pc Cable head 110V AC/DC, LED+VDR	
220V, 50/60Hz	**VG25-ERS4HQ** Consisting of: 1 pc Valve VG25-ERS 1 pc Solenoid valve VE03-ESC014H2 1 pc Cable head 220V AC/DC, LED+VDR	
240V, 50/60Hz	**VG25-ERS4KQ** Consisting of: 1 pc Valve VG25-ERS 1 pc Solenoid valve VE03-ESC014K2 1 pc Cable head 240V AC/DC, LED+VDR	

Complete valves, ISO size 1

Without manifold

VG25-ERER

Supply voltage	Order code	
24VDC	**VG25-ERER2CQ** Consisting of: 1 pc Valve VG25-ERER 2 pcs Solenoid valves VE03-ESP002C2 2 pcs Cable heads 24VDC, LED+diode	
24V, 50/60Hz	**VG25-ERER4CQ** Consisting of: 1 pc Valve VG25-ERER 2 pcs Solenoid valves VE03-ESC014C2 2 pcs Cable heads 24V AC/DC, LED+VDR	
110V, 50/60Hz	**VG25-ERER4EQ** Consisting of: 1 pc Valve VG25-ERER 2 pcs Solenoid valves VE03-ESC014E2 2 pcs Cable heads 110V AC/DC, LED+VDR	
220V, 50/60Hz	**VG25-ERER4HQ** Consisting of: 1 pc Valve VG25-ERER 2 pcs Solenoid valves VE03-ESC014H2 2 pcs Cable heads 220V AC/DC, LED+VDR	
240V, 50/60Hz	**VG25-ERER4KQ** Consisting of: 1 pc Valve VG25-ERER 2 pcs Solenoid valves VE03-ESC014K2 2 pcs Cable heads 240V AC/DC, LED+VDR	

Complete valves

Complete factory-assembled valves, consisting of:
Directional control valve
Solenoid valve(s)
Cable head(s)

Complete valves, ISO size 2

Without manifold

VG35-ERS

Supply voltage	Order code	
24VDC	**VG35-ERS2CQ**	Consisting of: 1 pc Valve VG35-ERS 1 pc Solenoid valve VE03-ESP002C2 1 pc Cable head 24VDC, LED+diode
24V, 50/60Hz	**VG35-ERS4CQ**	Consisting of: 1 pc Valve VG35-ERS 1 pc Solenoid valve VE03-ESC014C2 1 pc Cable head 24V AC/DC, LED+VDR
110V, 50/60Hz	**VG35-ERS4EQ**	Consisting of: 1 pc Valve VG35-ERS 1 pc Solenoid valve VE03-ESC014E2 1 pc Cable head 110V AC/DC, LED+VDR
220V, 50/60Hz	**VG35-ERS4HQ**	Consisting of: 1 pc Valve VG35-ERS 1 pc Solenoid valve VE03-ESC014H2 1 pc Cable head 220V AC/DC, LED+VDR
240V, 50/60Hz	**VG35-ERS4KQ**	Consisting of: 1 pc Valve VG35-ERS 1 pc Solenoid valve VE03-ESC014K2 1 pc Cable head 240V AC/DC, LED+VDR

Complete valves, ISO size 2

Without manifold

VG35-ERER

Supply voltage	Order code	
24VDC	**VG35-ERER2CQ**	Consisting of: 1 pc Valve VG35-ERER 2 pcs Solenoid valves VE03-ESP002C2 2 pcs Cable heads 24VDC, LED+diode
24V, 50/60Hz	**VG35-ERER4CQ**	Consisting of: 1 pc Valve VG35-ERER 2 pcs Solenoid valves VE03-ESC014C2 2 pcs Cable heads 24V AC/DC, LED+VDR
110V, 50/60Hz	**VG35-ERER4EQ**	Consisting of: 1 pc Valve VG35-ERER 2 pcs Solenoid valves VE03-ESC014E2 2 pcs Cable heads 110V AC/DC, LED+VDR
220V, 50/60Hz	**VG35-ERER4HQ**	Consisting of: 1 pc Valve VG35-ERER 2 pcs Solenoid valves VE03-ESC014H2 2 pcs Cable heads 220V AC/DC, LED+VDR
240V, 50/60Hz	**VG35-ERER4KQ**	Consisting of: 1 pc Valve VG35-ERER 2 pcs Solenoid valves VE03-ESC014K2 2 pcs Cable heads 240V AC/DC, LED+VDR

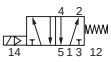
Complete valves

Complete factory-assembled valves, consisting of:
Directional control valve
Solenoid valve(s)
Cable head(s)

Complete valves, ISO size 3

Without manifold

VG45-ERS

Supply voltage	Order code	
24VDC	**VG45-ERS2CQ** Consisting of: 1 pc Valve VG45-ERS 1 pc Solenoid valve VE03-ESP002C2 1 pc Cable head 24VDC, LED+diode	
24V, 50/60Hz	**VG45-ERS4CQ** Consisting of: 1 pc Valve VG45-ERS 1 pc Solenoid valve VE03-ESC014C2 1 pc Cable head 24V AC/DC, LED+VDR	
110V, 50/60Hz	**VG45-ERS4EQ** Consisting of: 1 pc Valve VG45-ERS 1 pc Solenoid valve VE03-ESC014E2 1 pc Cable head 110V AC/DC, LED+VDR	
220V, 50/60Hz	**VG45-ERS4HQ** Consisting of: 1 pc Valve VG45-ERS 1 pc Solenoid valve VE03-ESC014H2 1 pc Cable head 220V AC/DC, LED+VDR	
240V, 50/60Hz	**VG45-ERS4KQ** Consisting of: 1 pc Valve VG45-ERS 1 pc Solenoid valve VE03-ESC014K2 1 pc Cable head 240V AC/DC, LED+VDR	

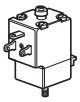
Complete valves, ISO size 3

Without manifold

VG45-ERER

Supply voltage	Order code	
24VDC	**VG45-ERER2CQ** Consisting of: 1 pc Valve VG45-ERER 2 pcs Solenoid valves VE03-ESP002C2 2 pcs Cable heads 24VDC, LED+diode	
24V, 50/60Hz	**VG45-ERER4CQ** Consisting of: 1 pc Valve VG45-ERER 2 pcs Solenoid valves VE03-ESC014C2 2 pcs Cable heads 24V AC/DC, LED+VDR	
110V, 50/60Hz	**VG45-ERER4EQ** Consisting of: 1 pc Valve VG45-ERER 2 pcs Solenoid valves VE03-ESC014E2 2 pcs Cable heads 110V AC/DC, LED+VDR	
220V, 50/60Hz	**VG45-ERER4HQ** Consisting of: 1 pc Valve VG45-ERER 2 pcs Solenoid valves VE03-ESC014H2 2 pcs Cable heads 220V AC/DC, LED+VDR	
240V, 50/60Hz	**VG45-ERER4KQ** Consisting of: 1 pc Valve VG45-ERER 2 pcs Solenoid valves VE03-ESC014K2 2 pcs Cable heads 240V AC/DC, LED+VDR	

VE03 solenoid valves



One solenoid valve is needed for each E in the order code number.

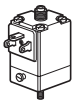
Voltage	Order code
Miniature solenoid valves	
24VDC, 2 W	**VE03-ESP002C2**
24VDC, 4 W	**VE03-ESC012C2**
24V, 50/60Hz	**VE03-ESC014C2**
110V, 50/60Hz	**VE03-ESC014E2**
220V, 50/60Hz	**VE03-ESC014H2**
240V, 50/60Hz	**VE03-ESC014K2**

Cable head, Type A

Suitable for use with VE03

Designation	Order code
24V DC, LED+Diode	**9125 9980-03**
24V AC/DC, LED+VDR	**9125 9980-05**
110V AC/DC, LED+VDR	**9125 9980-07**
240V AC/DC, LED+VDR	**9125 9980-09**
Black	**9141 1525-00**

VE13 solenoid valves



One solenoid valve is needed for each E in the order code number.

Voltage	Order code
24VDC, 2 W	**VE13-ESP012C2**
24VDC, 8 W	**VE13-ESC042C2**
24V/50Hz	**VE13-ESC044C2**
110V/50Hz	**VE13-ESC044E2**
220V/50Hz	**VE13-ESC044H2**
240V/50Hz	**VE13-ESC044K2**

Cable head, Type A

Suitable for use with VE13 and VG13

Designation	Order code
24V, LED+Diode	**9125 9980-04**
24V AC/DC, LED+VDR	**9125 9980-06**
110V AC/DC, LED+VDR	**9125 9980-08**
240V AC/DC, LED+VDR	**9125 9980-10**
Black	**9141 9980-11**

CNOMO solenoids

Voltage	Order code
24VDC (48V 50Hz)	**P2G-PV32C1**
24V/50Hz/60Hz (11VDC)	**P2G-PV34C1**
110V/50Hz/60Hz (50VDC)	**P2G-PV34E1**
230V/50Hz/60Hz (120VDC)	**P2G-PV34J1**
12V/50Hz/60Hz (6VDC)	**P2G-PV34B1**

Technical data

Valve	VE03-ESC01	VE03-ESP00	VE13-ESC04	VE13-ESP01	VG13-ESC16
Working pressure	10 bar	7 bar	10 bar	10 bar	10 bar
Working temperature	-10 to +55 °C	-10 to +55 °C	-10 to +55 °C	-10 to +55 °C	-15 to +50 °C
Orifice	Ø1,2 mm	Ø1,0 mm	Ø2,0 mm	Ø1,2 mm	Ø1,7 mm
Inrush power	4 W/9 VA	2 W/4,5 VA	8 W/21 VA	2 W/5,3 VA	6,8 W/14,5 VA
Holding power	4 W/6 VA	2 W/3 VA	8 W/12 VA	2 W/3 VA	6,8 W/10,5 VA

Transients

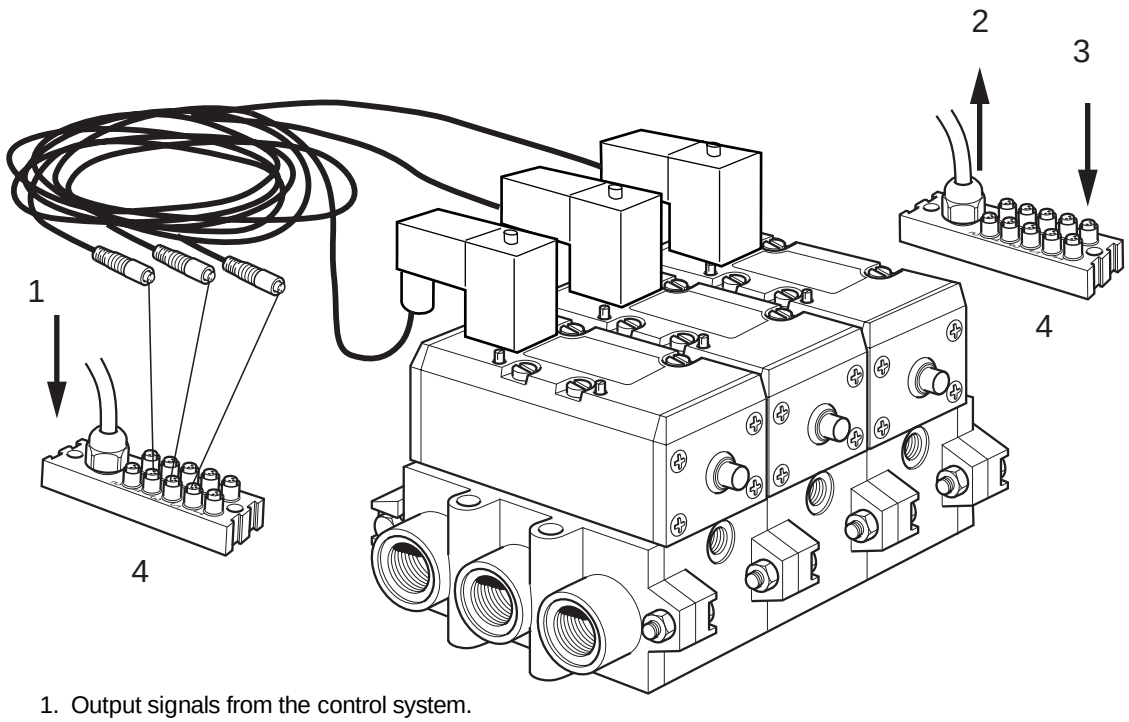
When the current through the coil of the solenoid valve is interrupted, the collapse of the magnetic field produces a high reverse voltage which, for DC and, in unfavourable cases, also for AC, can amount to several hundred times the supply voltage. Normally, these voltage transients do not cause any problems but, in order to ensure maximum life of relays, and particularly if there are transistors or thyristors in the circuit, some form of transient protection should be employed. For DC applications, the most effective is a reverse-connected diode (spark arrester) across the solenoid coil. Several alternatives are available for AC, such as a suitably rated RC circuit. However, the simplest solution is to select a cable head with integral voltage-dependent resistor (VDR) (both for AC and DC), or with a diode (DC only).

Faster, simpler and more reliable Electric installation

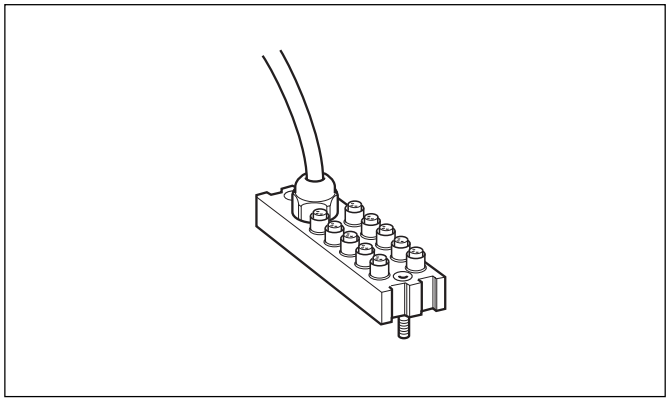
Combining Valvetronic 110 with ISO valves simplifies the time-consuming work of running cables and brings all the signal cables together to a single block, making them easy to check.

The Valvetronic 110 can be used to coordinate sensor signals from the machine and control signals to the valves, producing a single unit in the machine for pneumatic and electric control.

Valvetronic 110 with its convenient 8 mm contacts provides protection class IP67.



1. Output signals from the control system.
2. Input signals to the control system.
3. Sensor signals to the Valvetronic unit.
4. Valvetronic 110.



Valvetronic 110 signal unit

The Valvetronic 110 is a special terminating and cable connection block that can be used to collect signals from sensors on a machine and connect them to the control system through a multicore cable. It can also be used to provide a central connection point for the output signals from the control system, from where they can be distributed to the various destination points. It carries ten 8 mm round push-in contacts and a 3 m or 10 m multicore cable. The connections on the block are numbered from 1 to 10. Blanking plugs are available as accessories for blocking connections that are not to be used, and labels are also available for marking the blocks.

Valvetronic 110

Designation	Order code	Weight kg
Valvetronic 110 with 3 m cable	**9121 7190-01**	0,32
Valvetronic 110 with 10 m cable	**9121 7190-02**	0,95
Blanking plugs, pack of 10	**9121 7190-03**	0,02
Labels, pack of 10	**9121 7190-04**	0,02

Technical data Valvetronic 110

Signal connections:

Ten 3-pole numbered 8 mm round push-in contacts:

Input block
1. Common +24 V DC
2. Input signal
3. Common 0 V

Output block
1. Common earth
2. Output signal
3. Common 0 V

NB:
A special adaptor cable must be used when using reed relay contacts.
Order code

Mechanical data:

Protection class	IP67, DIN 40 050 when contacts and/or blanking plugs are fitted.
Temperature	-20 to +70 °C

Material:

Body	PA 6.6 VO to UL 94
Contact holder	PB1P
Push-in ring	LDPE
Filling resin	Epoxy
Seal	NBR
Screws	Steel, surface-protected

Cable:

Length	3 m or 10 m
Type	LifYY11Y
Cores	12
CSA	0.34 mm²
Colour coding	To DIN 47 100

Electric data:

Voltage	24 V DC (max. 60 V AC / 75 V DC)
Insulation class	C to DIN 0110
Load	Max. 1 A per connection 3 A total

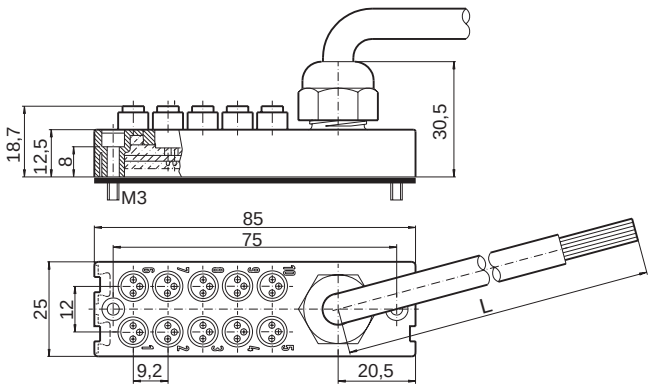
Industrial durability:

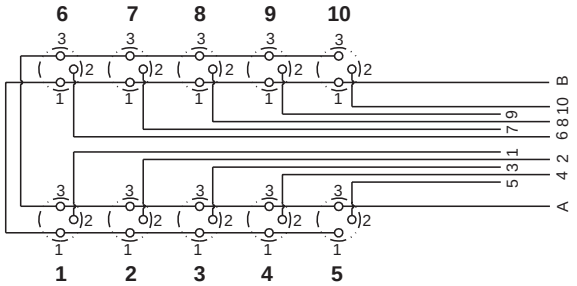
Good resistance to oils and chemicals. Tests should be performed before use in aggressive environments.

Blanking plug
Used to close connections not in use.

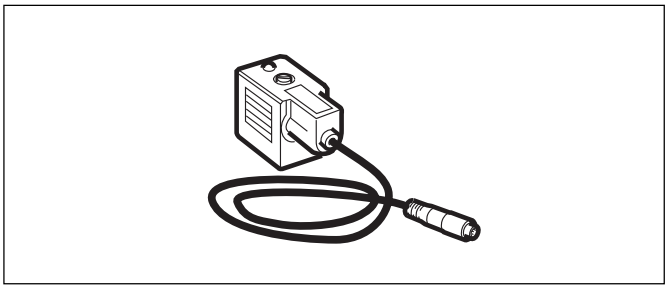
Label, white, for identification etc.
For insertion in slot on the side of the Valvetronic 110.

Dimensions and connection diagram



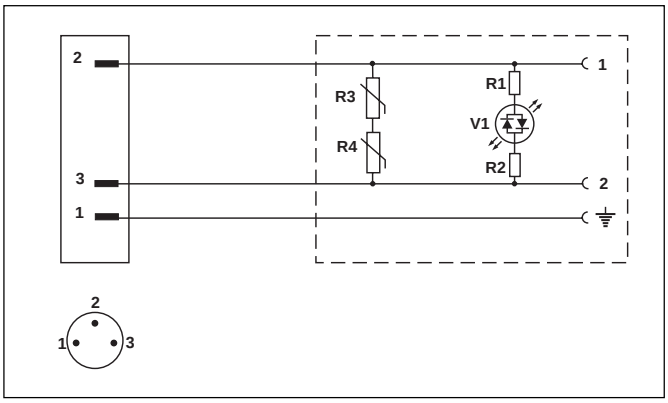


Core	Colour	Input	Output
1	Pink	Signal 1	Signal 1
2	Grey	Signal 2	Signal 2
3	Yellow	Signal 3	Signal 3
4	Green	Signal 4	Signal 4
5	White	Signal 5	Signal 5
6	Red	Signal 6	Signal 6
7	Black	Signal 7	Signal 7
8	Violet	Signal 8	Signal 8
9	Grey/pink	Signal 9	Signal 9
10	Red/blue	Signal 10	Signal 10
A	Blue	0 V	0 V
B	Brown	+24 V	PE



Cable head with cable

Cable head with moulded cable and 8 mm push-in connector for connection of conventional solenoid valves to the Valvetronic system. The cable head incorporates an LED and transient protection. If a longer cable is required, use the extension cables as listed below.

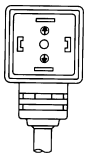
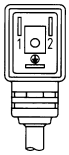
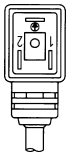


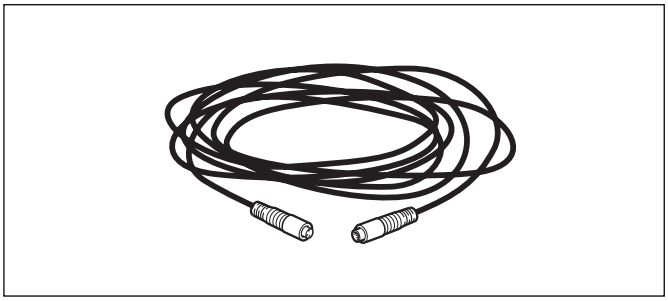
Technical data

General

Voltage	24 V AC/DC
Indication	LED, yellow
Transient protection	VDR
Load, max.	4 A
Enclosure	IP65

Cable head to DIN 43650

Designation		Order code	Weight kg
Cable head, type A			
Suitable for VE13 and VG13			
Cable length, 0.3 m		**9121 7190-20**	0,07
Cable length, 0.6 m		**9121 7190-21**	0,09
Cable head, type B1			
Suitable for VE03			
Cable length, 0,3 m		**9121 7190-25**	0,07
Cable length, 0,6 m		**9121 7190-26**	0,09
Cable head, type B2			
Suitable for VE03			
Cable length, 0,3 m		**9121 7190-30**	0,07
Cable length, 0,6 m		**9121 7190-31**	0,09



Ready-to-use extension cables

These cables have moulded 8 mm round push-in connectors at both ends, and are supplied in two types: one with straight 3-pole male and female contacts, and one with a straight 3-pole male contact at one end and an angled 3-pole female contact at the other.

Technical data

Contacts

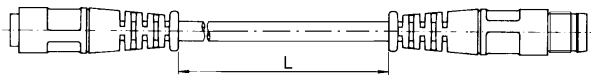
Moulded 8 mm push-in male/female contacts

Enclosure	IP 67

Cable

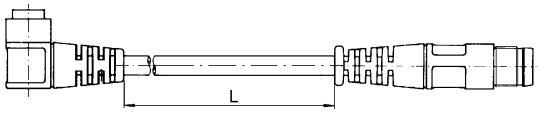
Cores	3 x 0.25 mm² (32 x 0.10 mm²)
Sheath	PVC / PUR
Colour	Black

Cables with straight 3-pole male and female connectors,



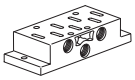
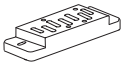
Designation	Order code	Weight kg
Cable with straight connectors , 0,2 m	**9121 7170-14**	0,02
Cable with straight connectors , 0,3 m	**9121 7170-15**	0,02
Cable with straight connectors , 0,5 m	**9121 7170-16**	0,03
Cable with straight connectors, 1,0 m	**9121 7170-17**	0,03
Cable with straight connectors , 2,0 m	**9121 7170-18**	0,05
Cable with straight connectors , 3,0 m	**9121 7170-19**	0,07
Cable with straight connectors, 5,0 m	**9121 7170-20**	0,12
Cable with straight connectors ,10 m	**9121 7170-21**	0,23

Cables with a straight 3-pole male connector at one end and a right-angle female connector at the other.

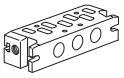
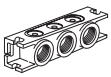
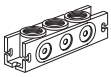
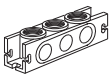
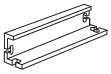


Designation	Order code	Weight kg
Cable with straight and elbow connect. 0,2 m	**9121 7170-22**	0,02
Cable with straight and elbow connect. 0,3 m	**9121 7170-23**	0,02
Cable with straight and elbow connect. 0,5 m	**9121 7170-24**	0,03
Cable with straight and elbow connect. 1,0 m	**9121 7170-25**	0,03
Cable with straight and elbow connect. 2,0 m	**9121 7170-26**	0,05
Cable with straight and elbow connect. 3,0 m	**9121 7170-27**	0,07
Cable with straight and elbow connect. 5,0 m	**9121 7170-28**	0,12
Cable with straight and elbow connect. 10 m	**9121 7170-29**	0,23

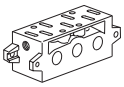
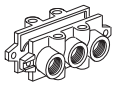
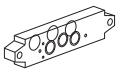
Single subbases, ISO size 1

Accessory	Designation	Connection	Weight Kg	Order code
	**Subbase, ISO1-1** With G1/4 side connection, compact	G1/4	0,17	**P2N-AS512SD**
	**Subbase, ISO1-1** With G1/8 side connection	G1/8	0,31	**P2N-GS511SD**
	**Subbase, ISO1-A** With G1/4 side connection, to VDMA 24345, Form A	G1/4	0,16	**P2N-VS512SD**
	**Subbase, ISO1-2** With G1/4 bottom connection	G1/4	0,29	**P2N-GS512SB**

Manifolds, bottom connection, compact ISO size 1

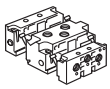
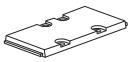
Accessory	Designation	Connection	Weight Kg	Order code
	**Manifold, ISO1-M** Including O-rings and stainless steel mounting bolts. Ports 2 and 4 bottom connection, ports 12 and 14 either end or bottom connection.	G1/4	0,20	**P2N-AM512MB**
	**Connecting block, ISO1-S** with G3/8 side connections, including seals and stainless steel fitting bolts.	G3/8	0,15	**P2N-AM513GS**
	**Connecting block, ISO1-L** with G3/8 connections from above or below, including seals and stainless steel fitting bolts.	G3/8	0,15	**P2N-AM513GT**
	**Intermediate block, ISO1-T** with G3/8 connections from above or below, including seals and stainless steel fitting bolts.	G3/8	0,14	**P2N-AM513BT**
	**End piece** including stainless steel fitting bolts.		0,06	**P2N-AM500J**
	**Isolating seal** for sealing between blocks with different primary pressures.		0,07	**P2N-AK0P**

Manifolds, bottom connection, VDMA ISO size 1

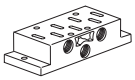
Accessory	Designation	Connection	Weight Kg	Order code
	**Manifold, ISO1-C** Including O-rings and stainless steel mounting bolts. Ports 2 and 4 bottom connection, ports 12 and 14 end connection, to VDMA 24345, Form C.	G1/4	0,24	**P2N-VM512MB**
	**Connecting kit, ISO1-D** with G3/8 side connections, including O-rings and fitting bolts. Supplied in pairs. To VDMA 24345, Form C.	G3/8	0,21	**P2N-VM513E**
	**Adaptor plate between ISO1 - ISO3.** VDMA multiple manifolds, including O-rings and fitting bolts.		0,55	**P2N-VM500AK**

Material specification, please see page 26.

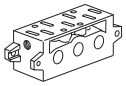
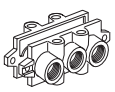
Manifolds, side connection, ISO size 1

Accessory	Designation	Connection	Weight Kg	Order code
 	**Manifold, ISO1-TS** With G1/4 side connection, including O-rings and fitting bolts	G1/4	0,06	**P2N-EM512MD**
 	**Connecting kit, ISO1-TS** With G3/8 side connection, including O-rings and fitting bolts	G3/8	0,21	**P2N-EM513ES**
 	**Adaptor set, ISO1 - ISO2** Including front and rear block, seal and fitting bolts		1,60	**P2N-EM500AG**
	**Bracket** For fitting to DIN rail. Four required per valve block.		0,10	**9121 7184-90**
	**Blanking plate, ISO1** Including seal and fitting bolts		0,10	**P2N-AA5B**
	**Stainless steel fitting bolts** Four stainless steel bolts for VG25		0,10	**9121 5902-69**

Single subbases, ISO size 2

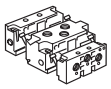
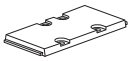
Accessory	Designation	Connection	Weight Kg	Order code
 	**Subbase, ISO2-A** with G3/8 side connections, to VDMA 24345, Form A.	G3/8	0,28	**P2N-WS513S**
 	**Subbase, ISO2-1** with G1/4 side connections	G1/4	0,53	**P2N-HS512SS**
 	**Subbase, ISO2-1** with G1/2 side connections	G1/2	0,50	**P2N-HS514SS**
 	**Subbase, ISO2-2** with G3/8 side connections	G3/8	0,57	**P2N-HS513SB**

Manifolds, bottom connection, VDMA ISO size 2

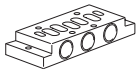
Accessory	Designation	Connection	Weight Kg	Order code
 	**Manifold, ISO2-C** Including O-rings and fitting bolts. Ports 2 and 4 bottom connection, ports 12 and 14 end connection, to VDMA 24345, Form C.	G3/8	0,36	**P2N-WM513MB**
 	**Connecting kit, ISO2-D** with G1/2 side connections, including O-rings and fitting bolts. Supplied in pairs. To VDMA 24345, Form D.	G1/2	0,34	**P2N-WM514ES**

Material specification, please see page 26.

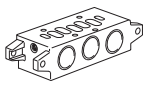
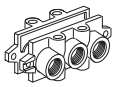
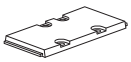
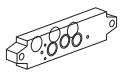
Manifold, side connection, ISO size 2

Accessory	Designation	Connection	Weight Kg	Order code
 	**Manifold, ISO2-TS** With G3/8 side connection, including O-rings and fitting bolts	G3/8	0,93	**P2N-FM513MD**
 	**Connecting kit, ISO2-TS** With G1/2 side connection, including O-rings and fitting bolts	G1/2	0,29	**P2N-FM514ES**
 	**Adaptor set, ISO1 - ISO2** Including front and rear block, seal and fitting bolts		1,60	**P2N-EM500AG**
	**Bracket** For fitting to DIN rail. Four required per valve block.		0,10	**9121 7184-90**
	**Blanking plate, ISO2** Including seal and fitting bolts		0,15	**P2N-BA5B**

Single subbases, ISO size 3

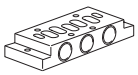
Accessory	Designation	Connection	Weight Kg	Order code Reference no.
 	**Subbase, ISO3-A** with G1/2 side connections, to VDMA 24345, Form A.	G1/2	0,34	**P2N-YS514SD**
 	**Subbase, ISO3-1** with G3/4 side connections	G3/4	0,57	**P2N-JS516SD**

Manifolds, bottom connection, VDMA ISO size 3

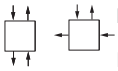
Accessory	Designation	Connection	Weight Kg	Order code
 	**Manifold, ISO3-C** Including O-rings and fitting bolts. Ports 2 and 4 bottom connection, ports 12 and 14 end or bottom connection, to VDMA 24345, Form C.	G1/2	0,70	**P2N-YM514MB**
 	**Connecting kit, ISO3-D** with G1 side connections, including O-rings and fitting bolts. Supplied in pairs. To VDMA 24345, Form D.	G1	0,68	**P2N-YM518ES**
	**Blanking plate, ISO3** Including seal and fitting bolts		0,20	**P2N-CA5B**
	**Adaptor plate, ISO1 - ISO3** VDMA multiple blocks, including O-rings and fitting bolts		0,53	**P2N-VM500AK**

Material specification, please see page 26.

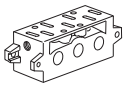
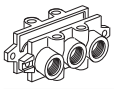
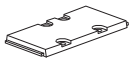
Single subbases, ISO size 4

Accessory	Designation	Connection	Weight Kg	Order code
 	**Subbase, ISO4-1** with G1/2 side connections with built-in restrictor	G1/2	0,69	**P2N-DS514SD**
 	**Subbase, ISO4-2** with G1/2 side connections with built-in restrictor	G1/2	0,88	**P2N-DS514SB**
 	**Subbase, ISO4** with G3/4 side connections. To VDMA 24345, Form A	G3/4	0,95	**P2N-ZS516SS**

Manifolds, bottom connection, ISO size 4

Accessory	Designation	Connection	Weight Kg	Order code Reference no.
 	**Manifold, ISO4-A** Inlet section, including O-rings. Ports 2 and 4, as well as ports 12 and 14, are bottom connection, to VDMA 24345, Form C.	G1/2	0,65	**P2N-DM514GB**
 	**Manifold, ISO4-M** Intermediate section, including O-rings and fitting set. Ports 2 and 4, as well as ports 12 and 14, are bottom connection, to VDMA 24345, Form C.	G1/2	0,69	**P2N-DM514BB**
 	**Manifold, ISO4-B** End section, including O-rings and fitting set. Ports 2 and 4, as well as ports 12 and 14, are bottom connection, to VDMA 24345, Form C.	G1/2	0,80	**P2N-DM514HB**

Manifolds, VDMA ISO size 4

Accessory	Designation	Connection	Weight Kg	Order code Reference no.
 	**Manifold, ISO4-C** Ports 2 and 4 bottom connection, ports 12 and 14 side connection, to VDMA 24345, Form C.	G3/4	1,40	**P2N-ZM516MB**
 	**Connection kit, ISO4-D** with G1 side connections. Supplied in pairs. To VDMA 24345, Form D.	G1	0,65	**P2N-ZM518ES**
	**Blanking plate** Including seal and fitting bolts		0,15	**P2N-DA5B**

Material specification

Manifolds size 1 to 3 (except for P2N-E... and P2N-F...)

Mounting screws	Galvanised steel
Manifolds	Electrically anodised aluminium

Manifolds size 1 and 2 (All with P2N-E... and P2N-F...)

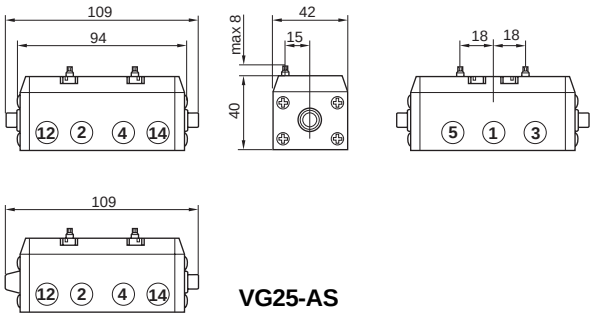
Mounting screws	Yellow crome plated steel
Cover	Yellow crome plated steel
Manifolds	Zinc

Manifolds size 4

Mounting screws	Galvanised steel
Throttle inserts	Galvanised steel
Manifolds	Electrically anodised aluminium

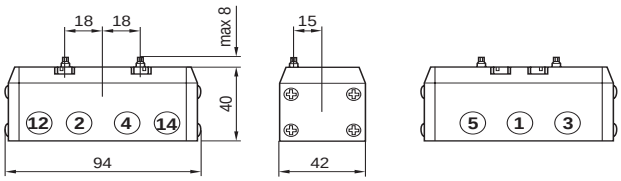
Dimensions

VG25-AA

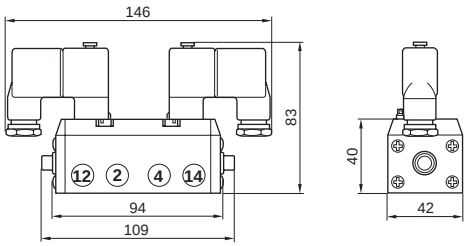


VG25-AS

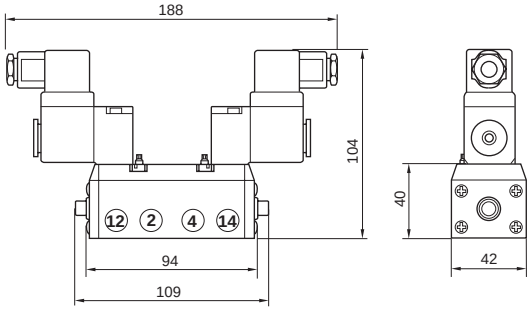
VG25-AC, VG25-XAC, VG25-YAC



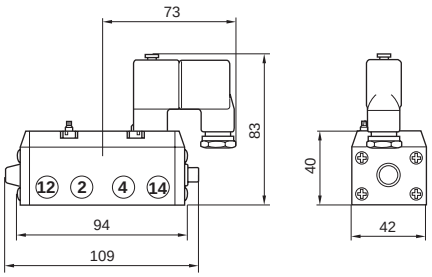
VG25-ERER, VG25-EAEA



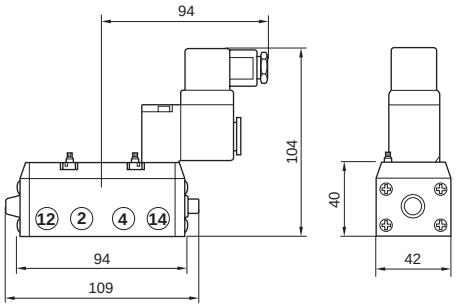
VG25-AERER, VG25-AEAEA



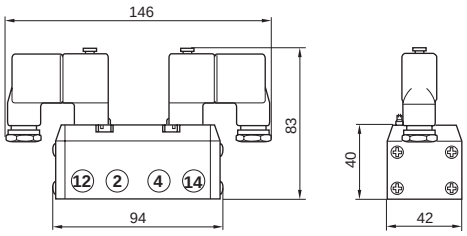
VG25-ERS, VG25-EAS



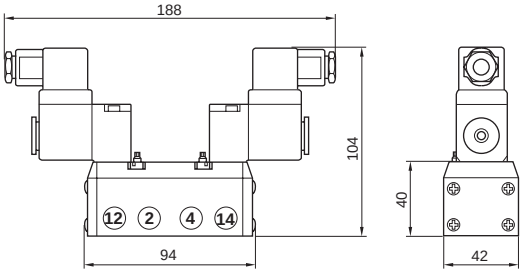
VG25-AERS, VG25-AEAS



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

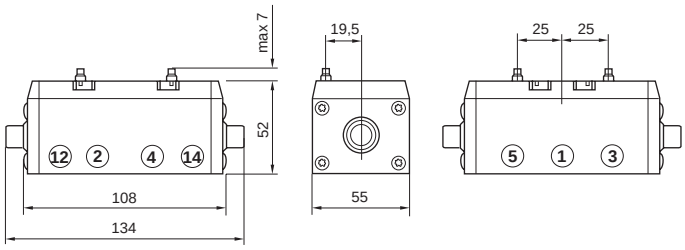


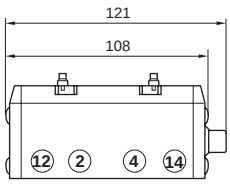
VG25-A(X)ERC, VG25-A(X)EAC



Dimensions

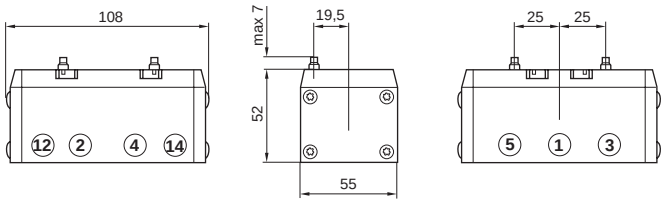
VG35-AA



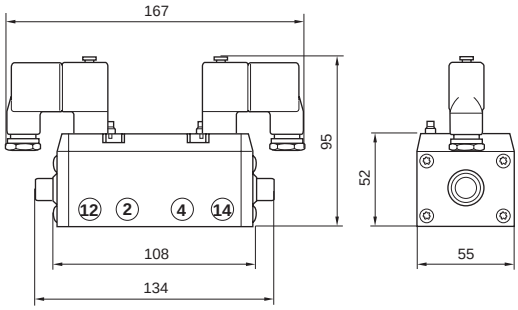


VG35-AS

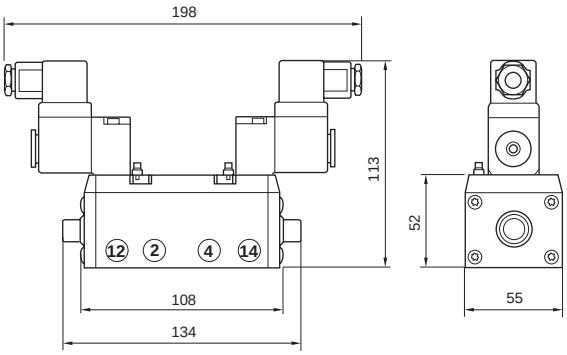
VG35-AC, VG35-XAC, VG35-YAC



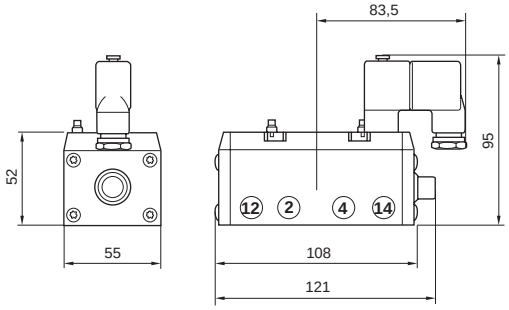
VG35-ERER, VG35-EAEA



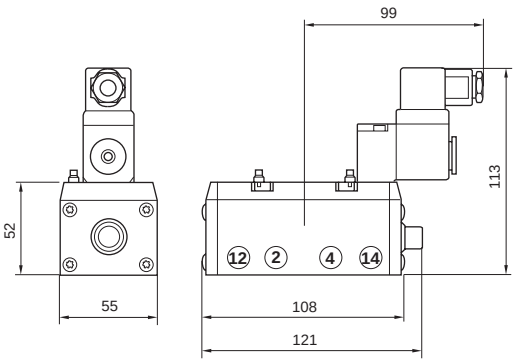
VG35-AERER, VG35-AEAEA



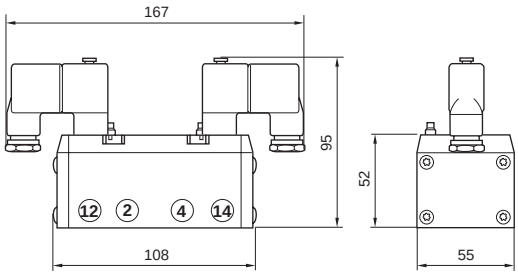
VG35-ERS, VG35-ERDR, VG35-EAS



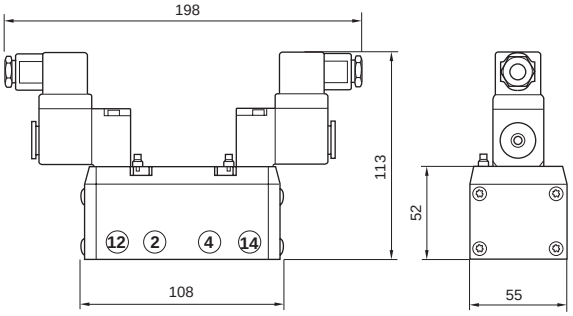
VG35-AERS, VG35-AEAS



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

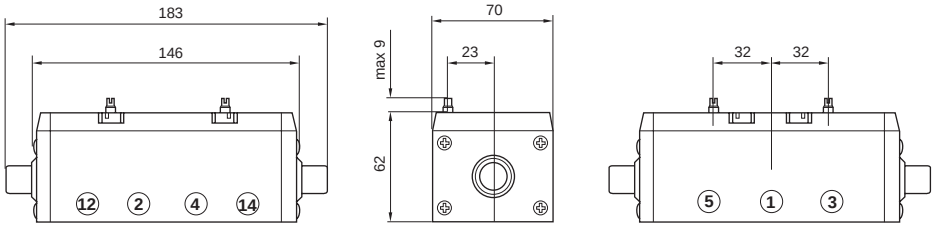


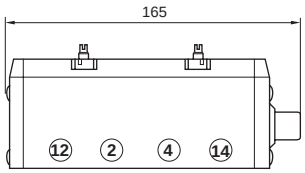
VG35-A(X)ERC, VG35-AEAC



Dimensions

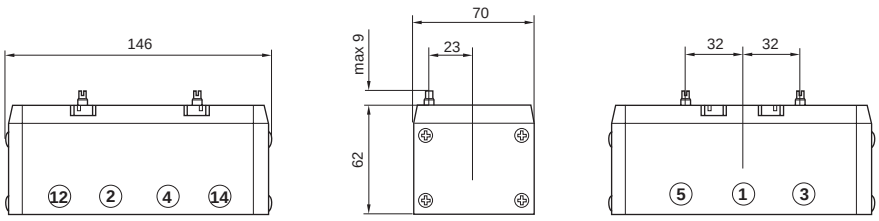
VG45-AA



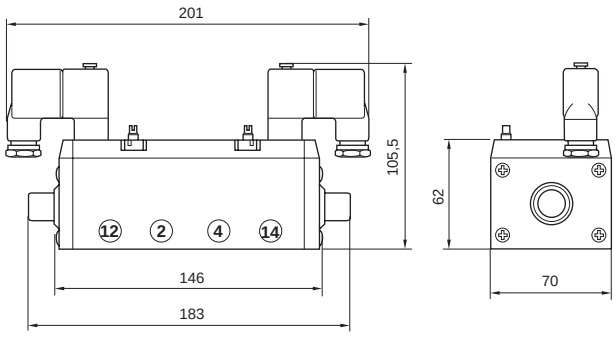


VG45-AS

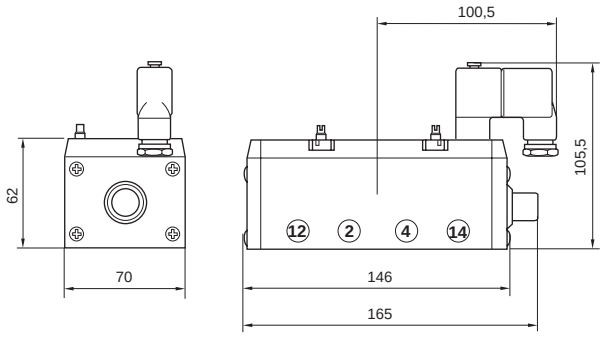
VG45-AC, VG45-XAC



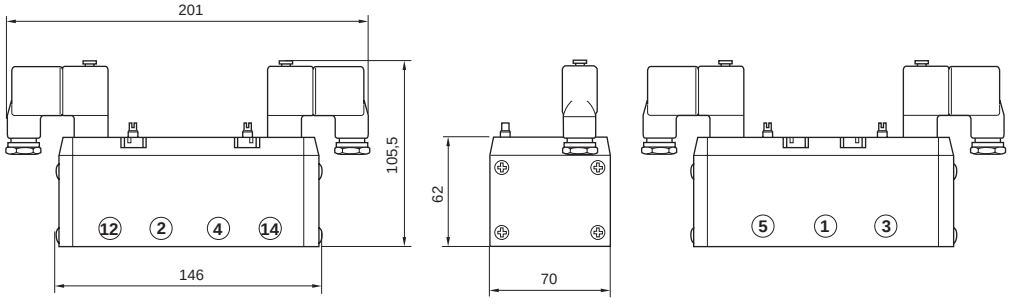
VG45-ERER, VG45-EAEA



VG45-ERS, VG45-EAS

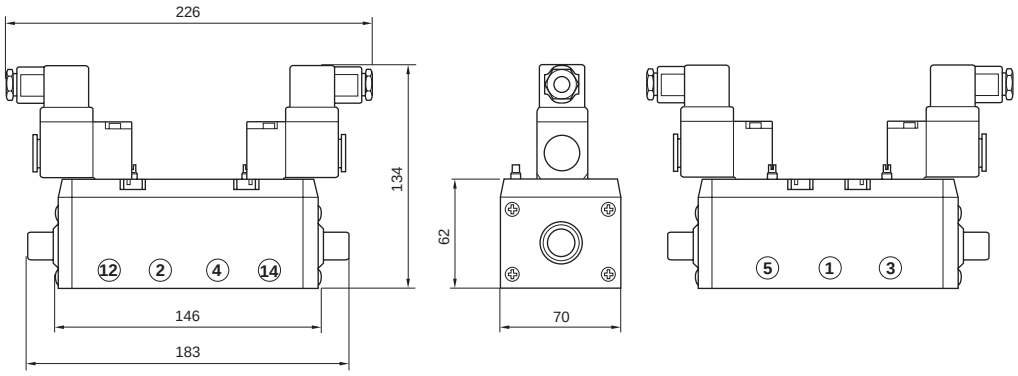


VG45-ERC, VG45-XERC

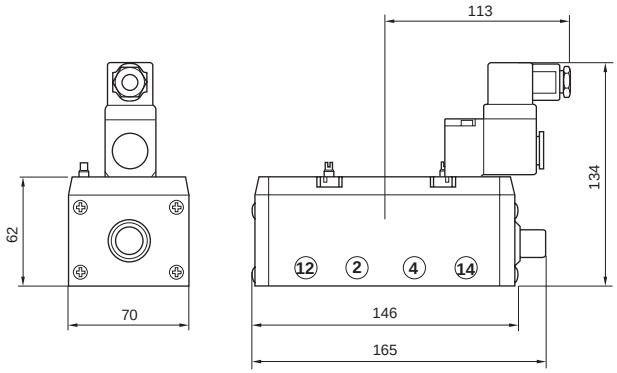


Dimensions

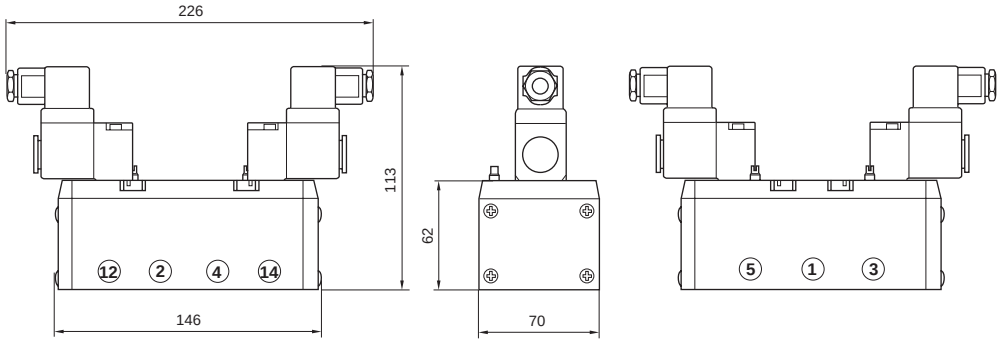
VG45-AERER, VG45-AEAEA



VG45-AERS, VG45-AEAS

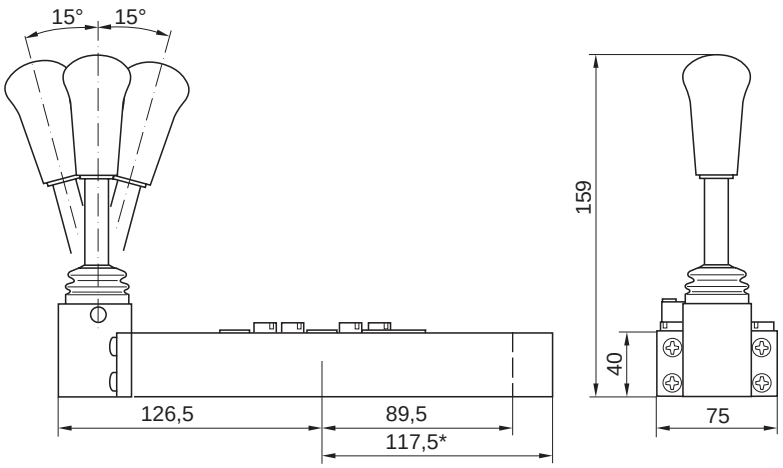


VG45-AERC, VG45-AXERC



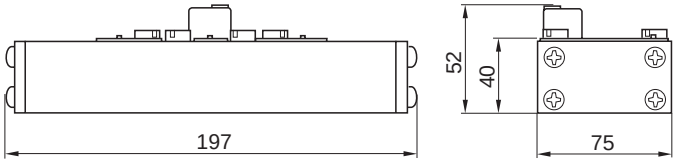
Dimensions

VE45 hand lever operated

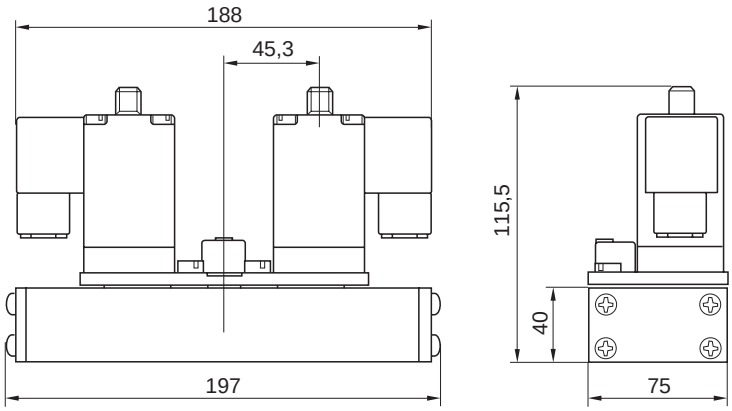


* Only VE45-HC

VE45 pneumatically actuated



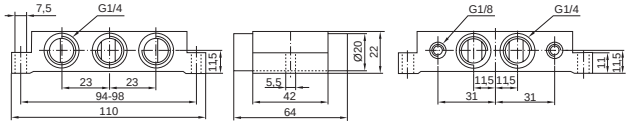
VE45 electrically actuated



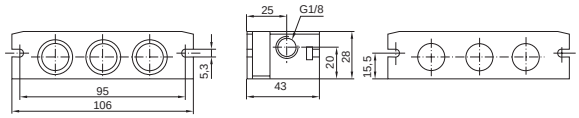
Dimensions

ISO1 subbases and manifolds, low-profile type

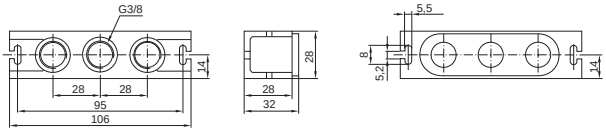
Subbase, ISO1-1, side connection
P2N-AS512SD



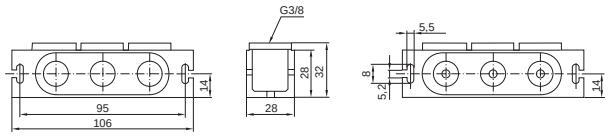
Manifold, ISO1-M, bottom connection
P2N-AM512MB



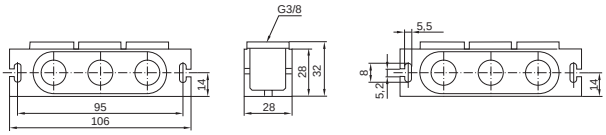
Connection block, ISO1-S, side connection
P2N-AM513GS



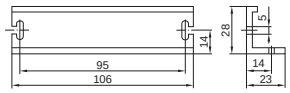
Connection block, ISO1-L
P2N-AM513GT



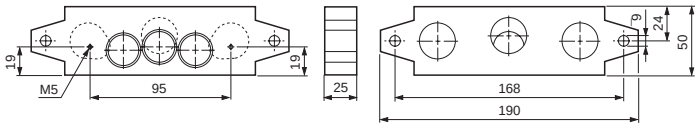
Intermediate block, ISO1-T
P2N-AM513BT



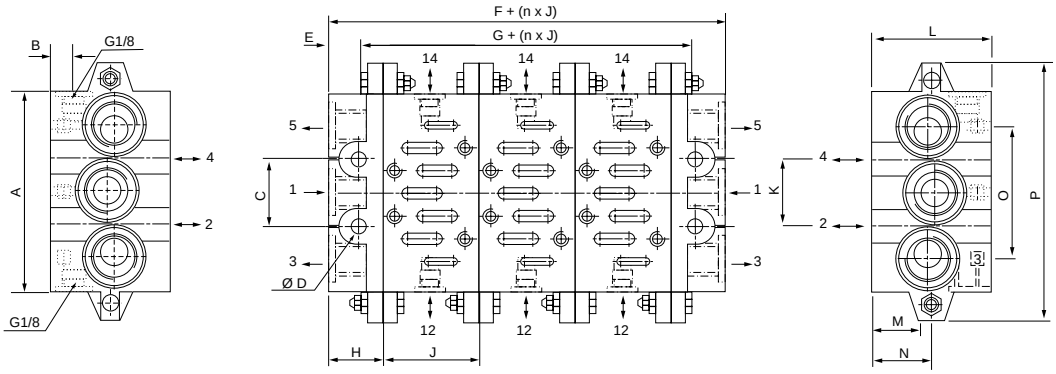
End piece, ISO1-M
P2N-AM500J



Adaptor plate, ISO1 - ISO3
P2N-VM500AK



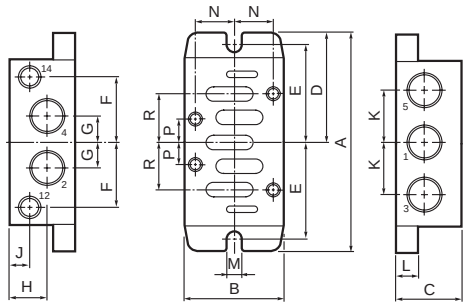
Manifolds, VDMA ISO sizes 1, 2 and 3



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	9,0	35	9	13	52	26	26	56	30	47	22	24	68	135
3	G1	G1/2	140	10,0	52	12	15	60	30	30	71	38	56	31	34	104	190

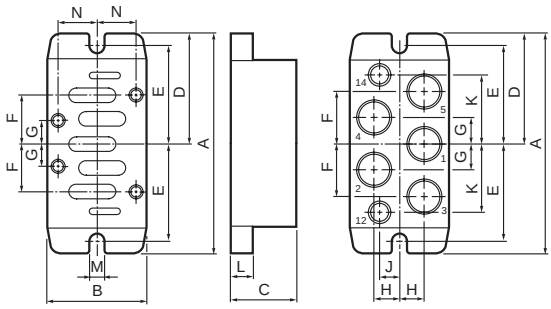
Dimensions

ISO 1, 2 and 3 subbases, side connection



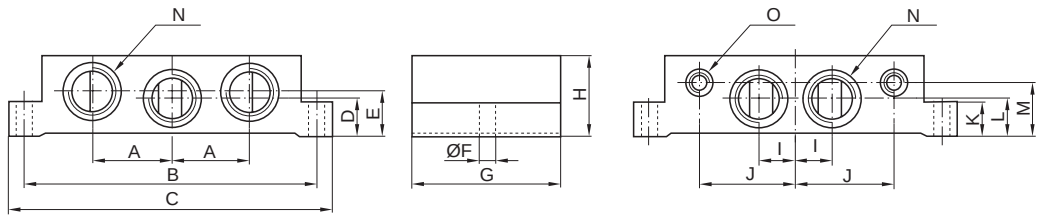
Type	ISO size	Port size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R
P2N-GS511SD	1	G1/8	100	40	29	50	45	30,5	11	18	10	22	10	5,4	14	9	18
P2N-HS512SS	2	G1/4	116	50	32	58	52	34,0	13	19	10	26	10	6,4	19	12	24
P2N-HS514SS	2	G1/2	124	51	42	62	56	37,0	18	24	10	34	10	6,4	19	12	24
P2N-JS516SD	3	G3/4	149	71	60	74,5	68	45,0	21	33	10	40	18	6,6	24	16	32

ISO 1 and 2 subbases, bottom connection



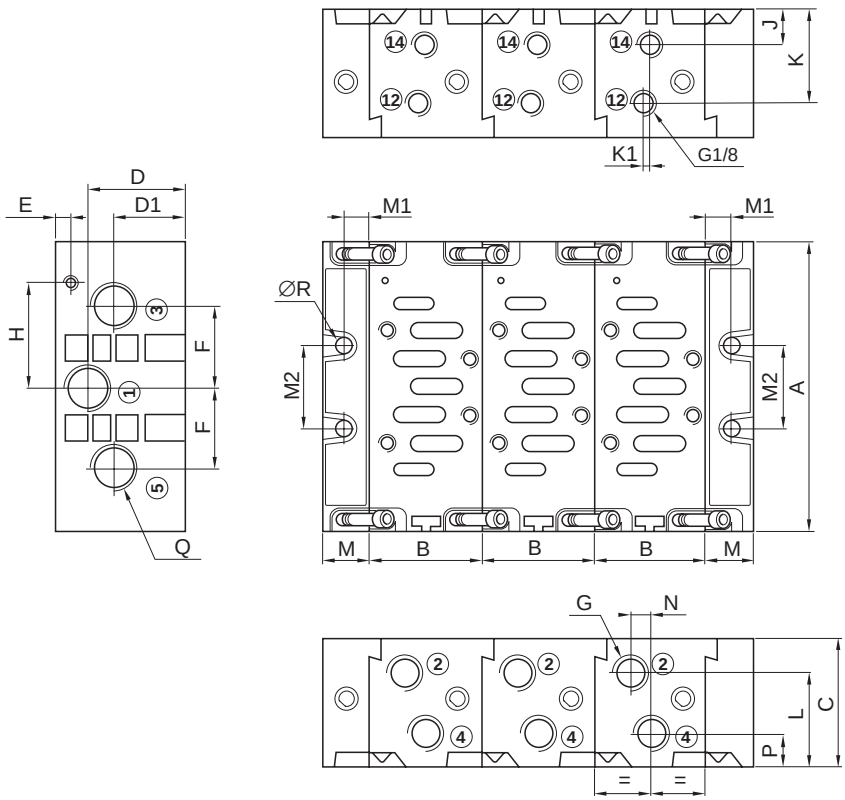
Typ	ISO storlek	Port storlek	A	B	C	D	E	F	G	H	J	K	L	M	N
P2N-GS512SB	1	G1/4	100	40	29	50	45	30,5	11	9,5	9,5	22	10	5,4	19
P2N-HS513SB	2	G3/8	116	50	32	58	52	24,0	12	12,5	10	26	10	6,4	19

VDMA ISO 1, 2 and 3 subbases, side connection



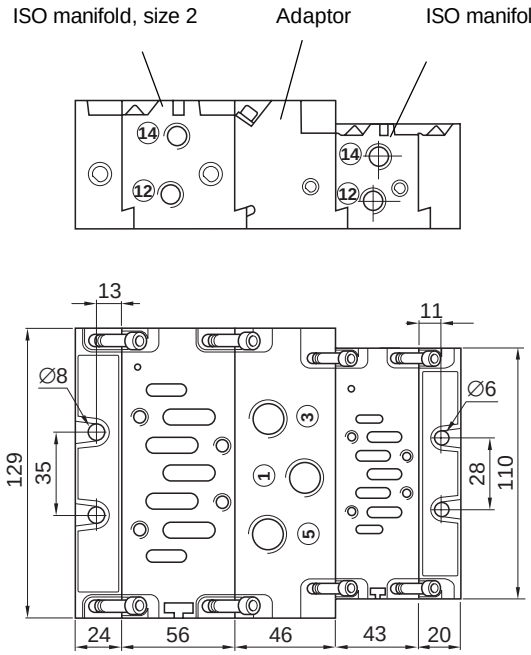
Type	ISO size	Port size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
P2N-VS512SD	1	G1/4	21,5	98	110	11	20	5,5	48	32	12	29	10	11	23	G1/4	G1/8
P2N-WS513S	2	G3/8	28,0	112	124	14	26	6,6	56	40	15	37	13	14	30	G3/8	G1/8
P2N-YS514SD	3	G1/2	34,0	136	149	17	17	6,6	71	32	16	45	18	17	22	G1/2	G1/8

Side connection, ISO size 1 - P2N-EM512MD, P2N-EM513ES
Side connection, ISO size 2 - P2N-FM513MD, P2N-FM514ES



Type	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	28,0	1/4"	36	15,5	35,0	3	32	20	11	28	12,0	12,5	3/8"	6
P2N-FM	129	56	60	44,5	35,5	6,0	34,5	3/8"	45	16,0	41,5	3	41	24	13	35	12,5	16,0	1/2"	8

Adaptor plate, P2N-EM500AG

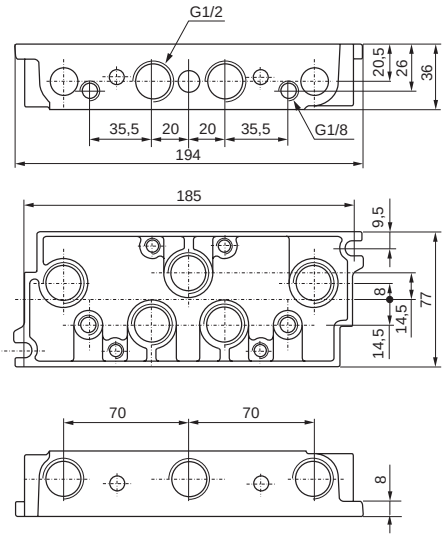


Other dimensions:
see the respective
manifold above

Dimensions

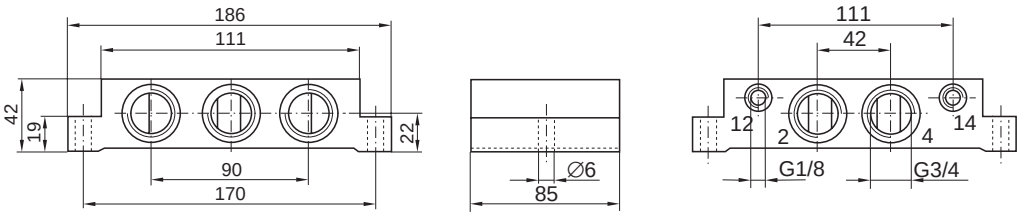
ISO4 subbases and manifolds

Subbase, side connection **P2N-DS514SD**
Subbase, bottom connection **P2N-DS514SB**
Manifold, inlet section **P2N-DM514GB**
Manifold, intermediate section **P2N-DM514BB**
Manifold, end section **P2N-DM514HB**



Subbase, VDMA, ISO4

Subbase **P2N-ZS516SS**



Manifolds, VDMA, ISO4

Manifold **P2N-ZM516MB**
Connection kit **P2N-ZM518ES** (supplied in pairs)