

5/2 & 5/3 Valves Solenoid and Pilot Operated G¹/₄

- High flow compact valves
- Sub-base and low profile manifolds
- Light weight, long life corrosion resistant materials
- Multipole and Fieldbus compatible
- Flexible single step expansion



Technical Data

Medium:

Compressed air, filtered to 40µm, lubricated or non-lubricated

Operation:

Spool valve, indirectly actuated. Cylinder ports in valve or base

Mounting:

On sub-base or manifold - Din-Rail mounting option for sub-base assembly

Port Size:

G¹/₄

Operating Pressure:

Maximum 10 bar. For details see overleaf

Flow Characteristics:

Size	Function	'C'	'b'	'A'	l/min	Cv	Kv
G ¹ / ₄	5/2	4,92	0,23	17,31	1152	1,17	1,02
G ¹ / ₄	5/3 APB	3,76	0,14	13,95	1014	1,03	0,90

Ambient Temperature:

-20°C to +80°C Pilot models

-20°C to +50°C Solenoid models

*Consult our Technical Service for use below +2°C

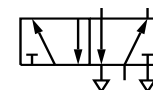
Materials

Aluminium alloy body. Glass filled PA or glass filled PPS end caps. Glass filled PBT solenoid adapters aluminium alloy pistons and spool with HNBR seals. Aluminium alloy Sub-bases and Manifolds with NBR gaskets.

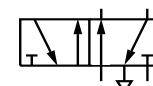
For further technical data on Multipole Systems and complete Valve Islands see Section 5.4.156

Ordering Information

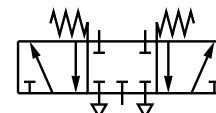
To order, quote model number and voltage code from tables overleaf, e.g. V14B517A-B213A for a Solenoid Pilot Actuated, Spring Return model fitted with a 24 V d.c. coil and screwdriver operated manual override.



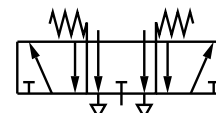
5/2



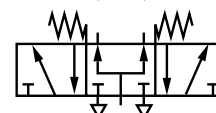
5/2 Twin Supply



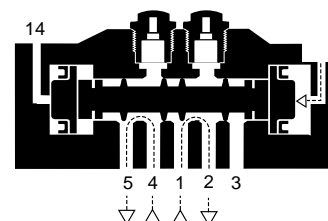
5/3
All ports blocked
- mid position



5/3
Centre open exhaust
- mid position



5/3 Centre open
pressure
- mid position





General Information

5/2 Solenoid Actuated Valves, supplied with gaskets as indicated

Symbol	Model	Manual Override	Pilot Supply (Gasket Type) [†]	Operator	Return	Operating Pressure (bar)	Pilot Pressure (bar)	Weight (kg)	Spares kit	Mounting Option
	V14B517A-B21*A	Screwdriver Bi-stable	Internal (W)	Solenoid	Spring	1,8 - 10	-	0,155	V10316-K30	All Bases
	V14B517A-B31*A	Push Button								
	V14B527A-B21*A	Screwdriver Bi-stable	External (X)	Solenoid	Spring	-0,9 - 10	1,8 - 10	0,155	V10316-K30	Sub-base
	V14B527A-B31*A	Push Button								
	V14B57A-B21*A	Screwdriver Bi-stable	Internal Twin Supply (Z)	Solenoid	Spring	-0,9 - 10	1,8 - 10	0,155	V10316-K30	Single Sub-base and Manifold
	V14B57A-B31*A	Push Button								
	V14B5E7A-B21*A	Screwdriver Bi-stable	Independent External (Y)	Solenoid	Spring	-0,9 - 10	1,8 - 10	0,165	V10316-K30	Single Sub-base and Manifold
	V14B5E7A-B31*A	Push Button								
	V14B511A-B21*A	Screwdriver Bi-stable	Internal (W)	Solenoid	Solenoid	1,2 - 10	-	0,215	V10316-K30	All Bases
	V14B511A-B31*A	Push Button								
	V14B522A-B21*A	Screwdriver Bi-stable	External (X)	Solenoid	Solenoid	-0,9 - 10	1,2 - 10	0,215	V10316-K30	Sub-base
	V14B522A-B31*A	Push Button								
	V14B5FFA-B21*A	Screwdriver Bi-stable	Internal Twin Supply (Z)	Solenoid	Solenoid	-0,9 - 10	1,2 - 10	0,215	V10316-K30	Single Sub-base and Manifold
	V14B5FFA-B31*A	Push Button								
	V14B5EEA-B21*A	Screwdriver Bi-stable	Independent External (Y)	Solenoid	Solenoid	-0,9 - 10	1,2 - 10	0,235	V10316-K30	Single Sub-base and Manifold
	V14B5EEA-B31*A	Push Button								

5/3 Solenoid Actuated Valves, supplied with gaskets as indicated

Symbol	Model	Manual Override	Pilot Supply (Gasket Type) [†]	Operator	Mid-Position	Return	Operating Pressure (bar)	Pilot Pressure (bar)	Weight (kg)	Spares kit	Mounting Option
	V14B611A-B21*A	Screwdriver Bi-stable	Internal (W)	Solenoid	APB	Solenoid	2,2 - 10	-	0,225	V10317-K30	All Bases
	V14B611A-B31*A	Push Button									
	V14B622A-B21*A	Screwdriver Bi-stable	External (X)	Solenoid	APB	Solenoid	-0,9 - 10	2,2 - 10	0,225	V10317-K30	Sub-base
	V14B622A-B31*A	Push Button									
	V14B6FFA-B21*A	Screwdriver Bi-stable	Internal Twin Supply (Z)	Solenoid	APB	Solenoid	-0,9 - 10	2,2 - 10	0,225	V10317-K30	Single Sub-base and Manifold
	V14B6FFA-B31*A	Push Button									
	V14B711A-B21*A	Screwdriver Bi-stable	Internal (W)	Solenoid	COE	Solenoid	2,2 - 10	-	0,225	V10318-K30	All Bases
	V14B711A-B31*A	Push Button									
	V14B722A-B21*A	Screwdriver Bi-stable	External (X)	Solenoid	COE	Solenoid	-0,9 - 10	2,2 - 10	0,225	V10318-K30	Sub-base
	V14B722A-B31*A	Push Button									
	V14B811A-B21*A	Screwdriver Bi-stable	Internal (W)	Solenoid	COP	Solenoid	2,2 - 10	-	0,225	V10347-K30	All Bases
	V14B811A-B31*A	Push Button									
	V14B822A-B21*A	Screwdriver Bi-stable	External (X)	Solenoid	COP	Solenoid	-0,9 - 10	2,2 - 10	0,225	V10347-K30	Sub-base
	V14B822A-B31*A	Push Button									

* Insert Voltage Code from table (see page 3.)

‡ Pressure to port 5 must not be less than the stated pressure for valve type.

† Gasket type supplied with the valve, for details see section 5.4.155.05.

Type Y gaskets are supplied with the Fixed Length Manifold and the Single Station Sub-base.

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure.



Pilot Actuated Valves, supplied with Sub-base gaskets

Symbol	Model	Gasket Type †	Operator	Mid-Position	Return	Operating Pressure (bar)	Pilot Pressure (bar)	Weight	Spares kit (kg)	Mounting Option
	V14B5D7A-X0090	X	Pilot	-	Spring	-0.9 - 10	1,8 - 10	0,100	V10316-K30	All Bases
	V14B5DDA-X0020	X	Pilot	-	Pilot	-0.9 - 10	1,2 - 10	0,100	V10316-K30	All Bases
	V14B59DA-X0060	X	Pilot Priority	-	Pilot	-0.9 - 10	1,2 - 10	0,100	V10316-K30	All Bases
	V14B6DDA-X0020	X	Pilot	APB	Pilot	-0.9 - 10	2,2 - 10	0,110	V10317-K30	All Bases
	V14B7DDA-X0020	X	Pilot	COE	Pilot	-0.9 - 10	2,2 - 10	0,110	V10318-K30	All Bases
	V14B8DDA-X0020	X	Pilot	COP	Pilot	-0.9 - 10	2,2 - 10	0,110	V10347-K30	All Bases

† Gasket type supplied with the valve, for details see section 5.4.155.05.
 APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure

***Voltage Codes and Spare Coils**

Voltage	Codes	Power Inrush/Hold	Coil Part Number
6V d.c. & 12V 50/60Hz	1	1,5 W 4,1/2,9 VA	V10025-A11
12V d.c.	2	1,7 W	V10025-A12
24V d.c.	3	1,7 W	V10025-A13
24V 50/60Hz	4	4,1/2,9 VA	V10025-A14
48V 50/60Hz	6	4,1/2,9 VA	V10025-A16
110V 50/60Hz	8	3,5/2,5 VA	V10025-A18
240V 50/60Hz	9	3,5/2,5 VA	V10025-A19

Electrical Details for Solenoid Operators

Voltage Tolerances:	±10%
Rating:	100% E.D.
Inlet Orifice:	0,8 mm
Electrical Connection:	DIN 43 650 table 'C'
Manual Override:	V14B5--A-B21*A – Screwdriver Bi-stable V14B5--A-B31*A – Push button, spring return
Protection Class:	IP 65 (DIN 40 050)

For details of connector plugs and light emitting seals see section 7.7.001.



Bases and Accessories

Sub-base Assemblies - Side Ported	Sub-base Assemblies - Bottom Ported	Modular Sub-base	PIF Sub-base	End Plate Kit
V14BAX**-XXXXX Single Pressure	V14BCX**-XXXXX Single Pressure	V14B517R-Q010G Side Ported	V14B517R-Q0108 Side Ported	V14B517R-Q050G Side Ported
V14BAX**-**XXX Dual Pressure	V14BCX**-**XXX Dual Pressure	V14B517R-Q020G Bottom Ported	V14B517R-Q0208 Bottom Ported	V14B517R-Q051G Bottom Ported

Fixed Length manifold	Single Station Sub-base Side Ported	Single Station Sub-base Bottom Ported	Single Station Sub-base Bottom Ported	Intermediate Supply/Exhaust Plate
V10028-G**	V10121-G01 G ^{1/4}	V10122-G01 G ^{1/4}	V10486-G01 G ^{1/4}	V14B517A-Q240G
01, 02, 04, 06, 08, 10, 12 Stations				

Blanking Plate for unused station	Pressure Indicator	DIN-rail Mounting Kit	DIN-rail	Tie Rod Kit
V14B517A-Q2700	V14B517A-Q2800	V10319-K30	V10009-C001 Metre	V14B517A-Q04**

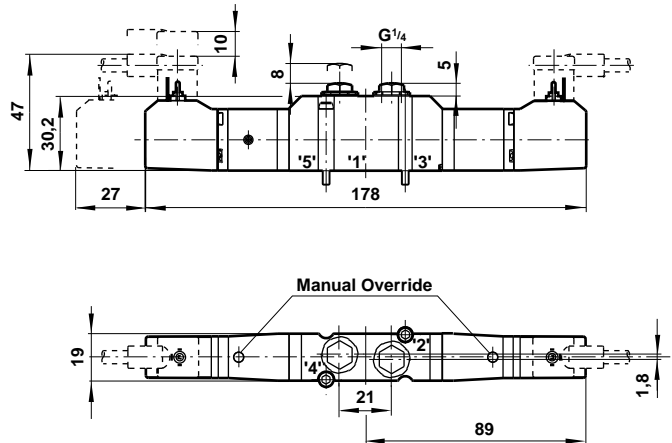
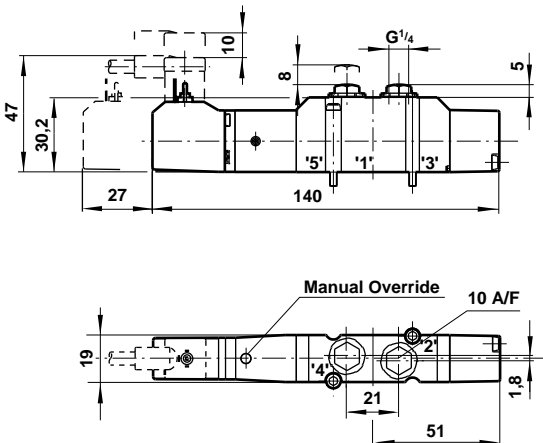
Pressure Regulator Block	Pressure Gauge Kit for PRV	Flow Regulator Block	Pressure Switch Assembly	Blanking Gasket Set
V14B517A-Q2103 Dual	V14B517A-Q2120 Dual	V14B517A-Q2201	V14B517A-Q1700	V10040-K96 Modular Sub-base
V14B517A-Q2106 Mono port 2	V14B517A-Q2121 Mono	-	-	-
V14B517A-Q2109 Mono port 4				

Blanking Plug For Fixed Length Manifold
V10320-K01 Manifold G ^{3/8}
V10320-K02 Manifold G ^{1/4}

** = 02 to 20 stations.(01, 02, 04, 06, 08, 10, 12 stations for Fixed Length Manifold)
 - = 01 to 19 to indicate position of Dual Pressure Blanking Plate. See page 7.

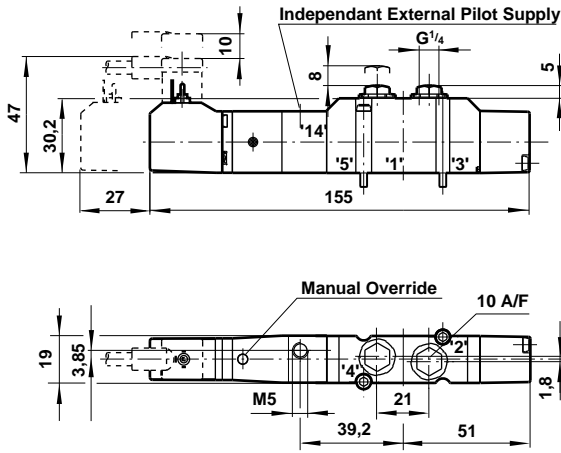
V14B5*7A Models
5/2 Single Solenoid Valve

V14B5**A Models
5/2 Double Solenoid Valve

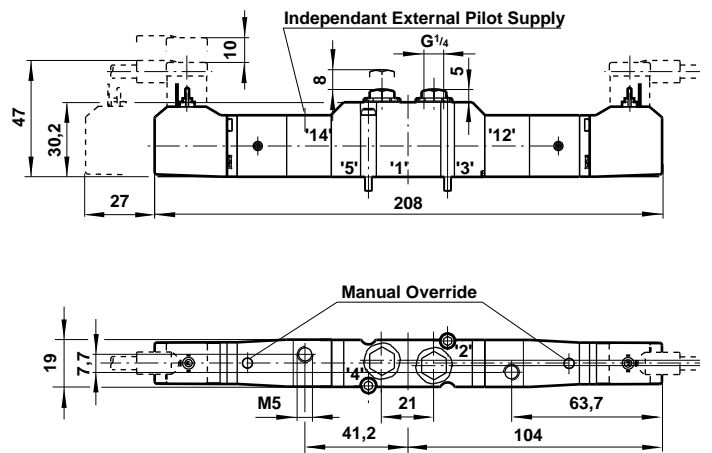




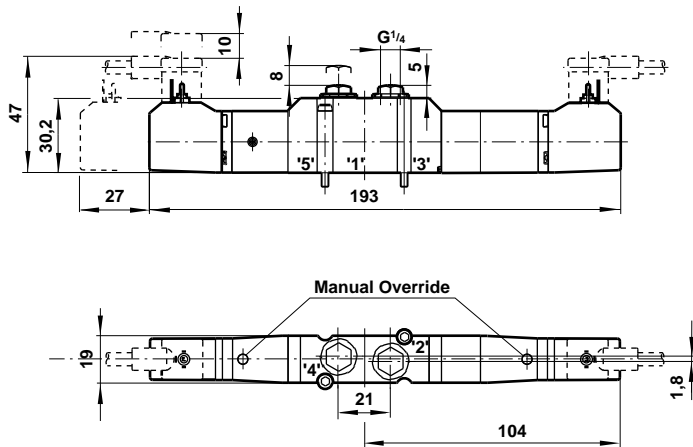
V14B5E7A Models
5/2 Single Solenoid Valve with Independent External Pilot Supply



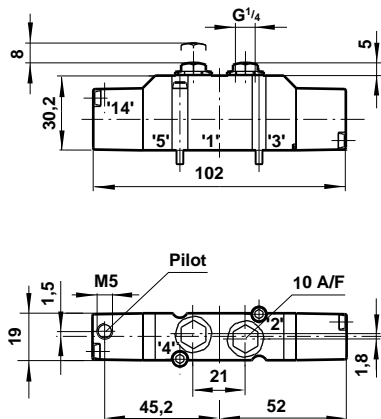
V14B5EEA Models
5/2 Double Solenoid Valve with Independent External Pilot Supply



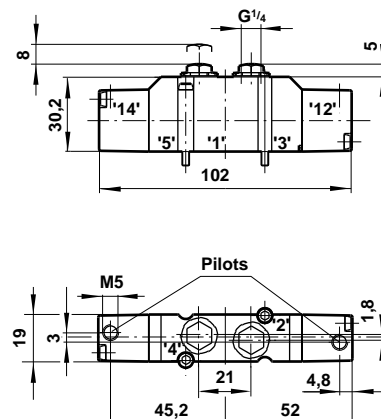
V14B*A Models**
5/3 Double Solenoid Valve



V14B5D7A-X0090
5/2 Single Pilot Valve



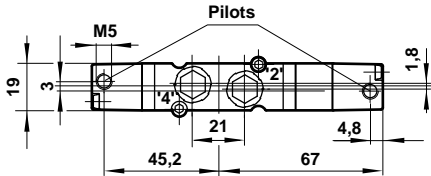
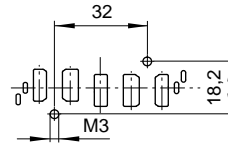
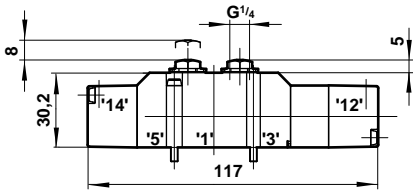
V14B5A Models**
5/2 Double Pilot Valve





V14B*DDA Models
5/3 Double Pilot Valves

Surface Mounting Details



Functional Valve Gaskets

For mounting, please use the following gaskets:

Modular Sub-base Gasket supplied with valve

Single Station Sub-base and Fixed Length Manifold Gaskets supplied with base*

***Twin Supply Valves** Gasket supplied with valve

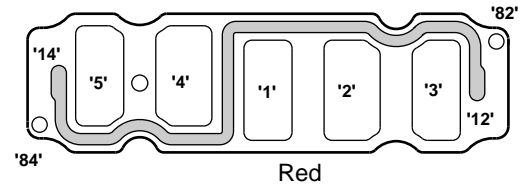
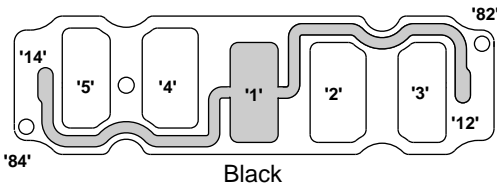
For Modular Sub-base

V10041-C95 - Internal Pilot Supply Gasket

Gasket Type: W supplied with all internal pilot supply valves

V10041-C96 - External Pilot Supply Gasket

Gasket Type: X supplied with all external pilot supply valves and pilot operated valves



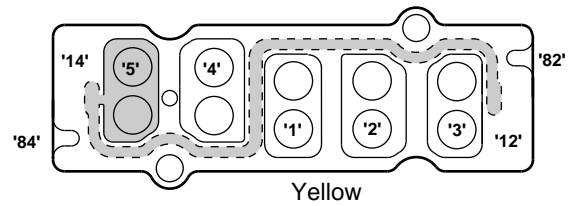
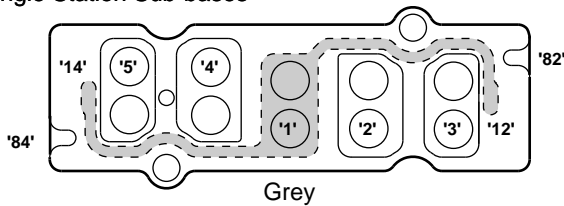
For Fixed Length Manifold and Single Station Sub-bases – V10121-G01 and V10221-G01

V10238-C01 - Internal Pilot Supply Gasket

Gasket Type: Y Supplied with Fixed Length Manifolds and Single Station Sub-bases

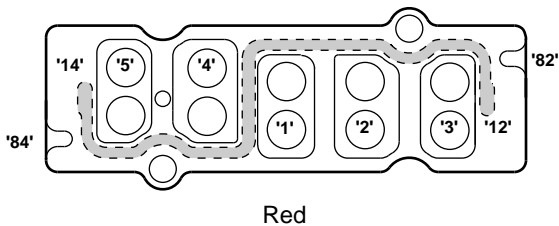
V10239-C01 - Twin Supply Gasket

Gasket Type: Z Supplied with Twin Supply Valves



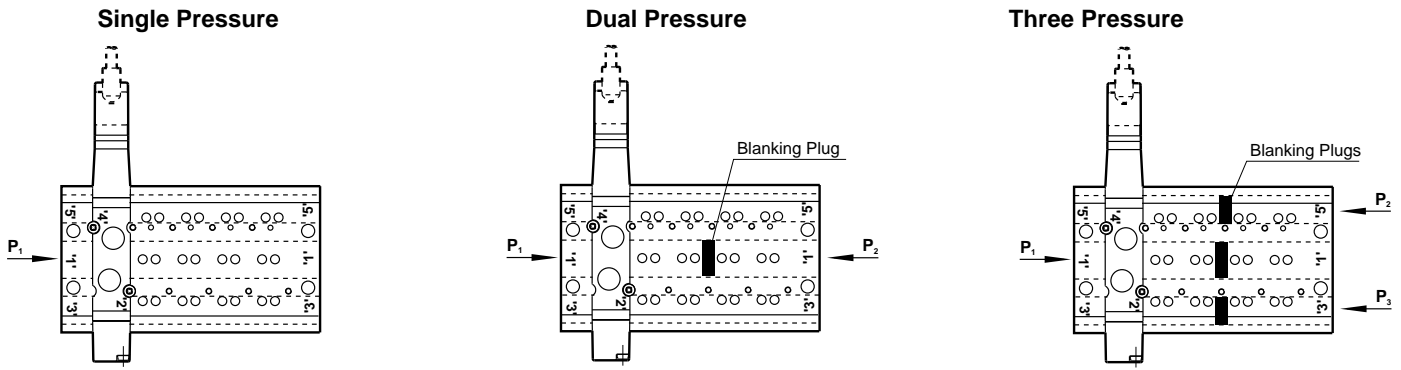
For Single Sub-base – V10121-G01, V10221-G01

V10381-C01 - External Supply Gasket

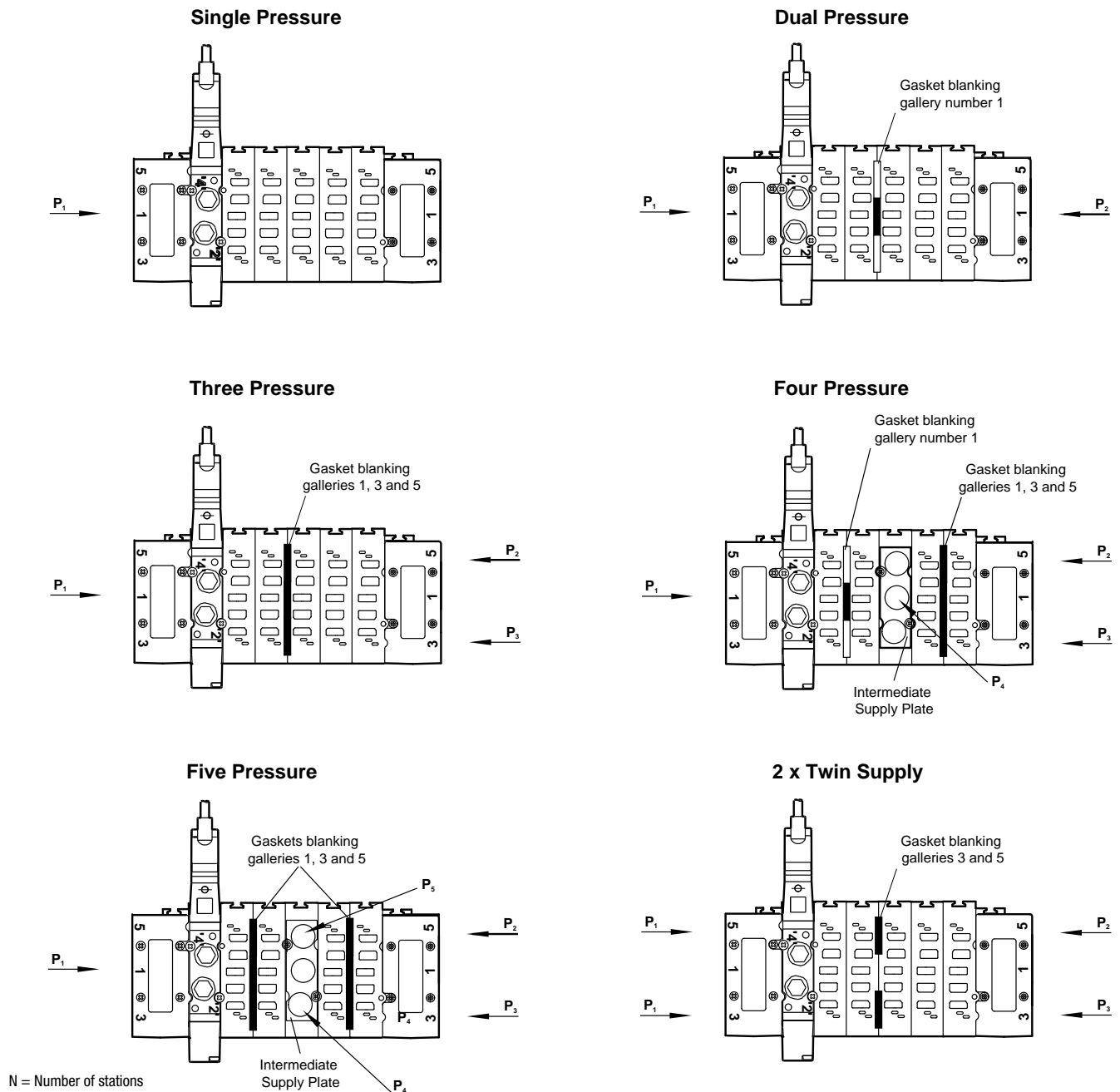




Pressure Options - Fixed Length Manifold Systems



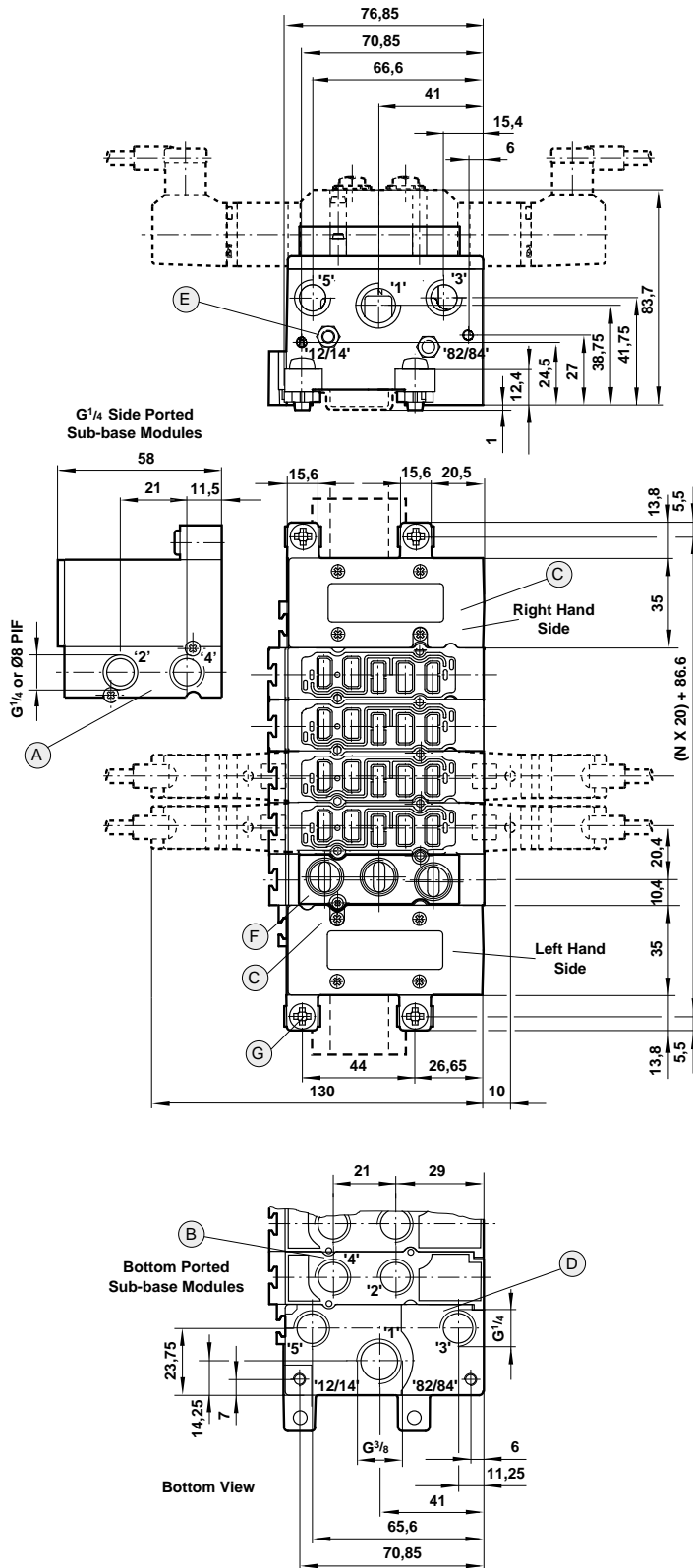
Pressure Options - Sub-base Systems



For further pressure configurations contact our Technical Service



Modular Sub-bases for DIN-Rail or surface mounting



Modular Sub-base - Side Ported (A)

V14B517R-Q010G 0,135 Kg

Modular Sub-base - Bottom Ported (B)

V14B517R-Q020G 0,137 Kg

Modular Sub-base – Side Ported with Push-in Fitting
V14B517R-Q0108 0,135 Kg

Modular Sub-base – Bottom Ported with Push-in Fitting
V14B517R-Q0208 0,137 Kg

End Plate Kit – Side Ported (C)

V14B517R-Q050G 0,584 Kg

Side ported end caps, 1 left hand and 1right hand.

End Plate Kit – Bottom Ported (D)

V14B517R-Q051G 0,584 Kg

Bottom ported end caps, 1 left hand and 1right hand.

Tie Rod Kits (E)

V14B517A-Q04** Weight: (N x 0,003) + 0,004 Kg

Consisting of 1x barrel nut, 1x tie rod and 1x M5 nut.
2 kits are required for assembly.

Blanking Gasket Set

V10040-K96 0,006 Kg

Set of 3 sub-base to sub-base gaskets for blanking port
1, ports 3 & 5 or ports 1,3 & 5.

Intermediate Supply/Exhaust Plate (F)

V14B517A-Q240G 0,041 Kg

For additional supply and exhaust.

DIN-Rail Mounting Kit (G)

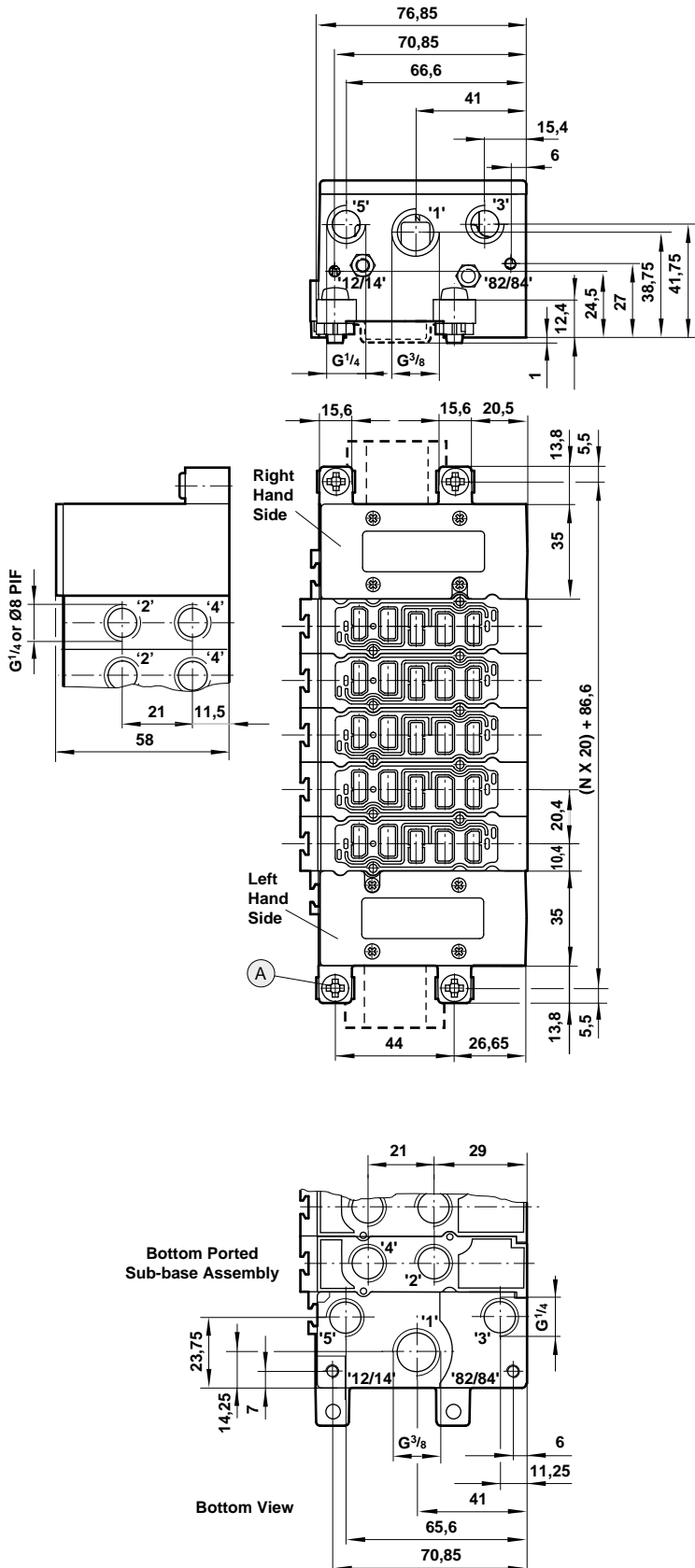
V10319-K30 0,008 Kg

For mounting on DIN-Rail

** = Number of stations - 02 to 20.



Modular Sub-base assemblies for DIN-Rail or surface mounting



Modular Sub-base Assemblies

Modular Sub-base assemblies for 2 to 20 valves.

V14BAX-XXXXX** Weight: (N x 0,138) + 0,584 Kg
Side ported

V14BCX-XXXXX** Weight: (N x 0,140) + 0,584 Kg
Bottom ported

** = 02 to 20

Modular Sub-base Assemblies with Ø8 Push-in Fitting

Modular Sub-base assemblies for 2 to 20 valves.

V148AX-XXXXX** Weight: (N x 0,135) + 0,584 Kg
Side ported

V148CX-XXXXX** Weight: (N x 0,137) + 0,584 Kg
Bottom ported

** = 02 to 20

Dual Pressure Modular Sub-base Assemblies

Modular Sub-base assemblies for 2 to 20 valves. Allows the supply of two different inlet pressures simultaneously.

V14BAX-**XXX** Weight: (N x 0,138) + 0,584 Kg
Side ported

V14BCX-**XXX** Weight: (N x 0,140) + 0,584 Kg
Bottom Ported

** = 01 to 19 to indicate position of Dual Pressure Blanking Plate, e.g V14BAX03-07XX indicates a 10 station base divided into groups of 3 and 7.

Dual Pressure Modular Sub-base Assemblies with Ø8 Push-in Fittings

Modular Sub-base assemblies for 2 to 20 valves. Allows the supply of two different inlet pressures simultaneously.

V148AX-**XXX** Weight: (N x 0,138) + 0,584 Kg
Side ported

V148CX-**XXX** Weight: (N x 0,140) + 0,584 Kg
Bottom Ported

** = 01 to 19 to indicate position of Dual Pressure Blanking Plate, e.g V148AX03-07XX indicates a 10 station base divided into groups of 3 and 7.

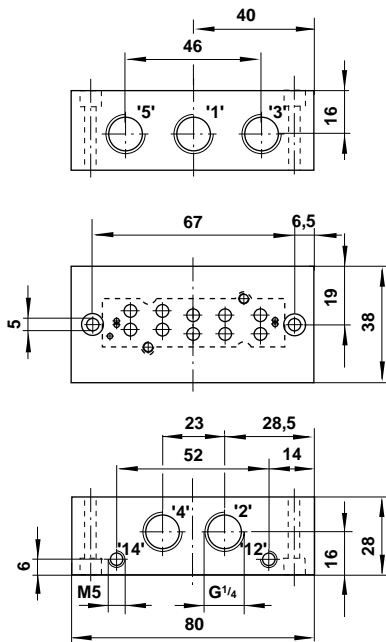
DIN-Rail Mounting Kit (A)

V10319-K30 0,008 Kg

For mounting on DIN-Rail



Single Station Sub-base - Side Ported with Pilot Ports



Single Station Sub-base

V10121-G01

0,235 Kg

G^{1/4} side ported with pilot ports

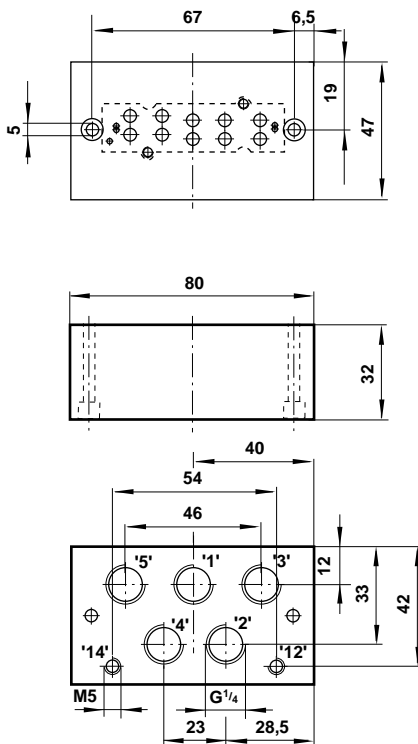
Ports 1, 2, 3, 4, 5, 12 and 14 on side

Supplied with Internal Pilot Supply Gasket - V10238-C01

For Twin Supply Valves, gasket No. V10239-C01 (supplied with the valves) should be used.

For external supply valves gasket V10381-C01S should be used.

Single Station Sub-base - Bottom Ported with Pilot Ports



Single Station Sub-base

V10122-G01

0,235 Kg

Ports 1, 2, 3, 4, 5, 12 and 14 on bottom

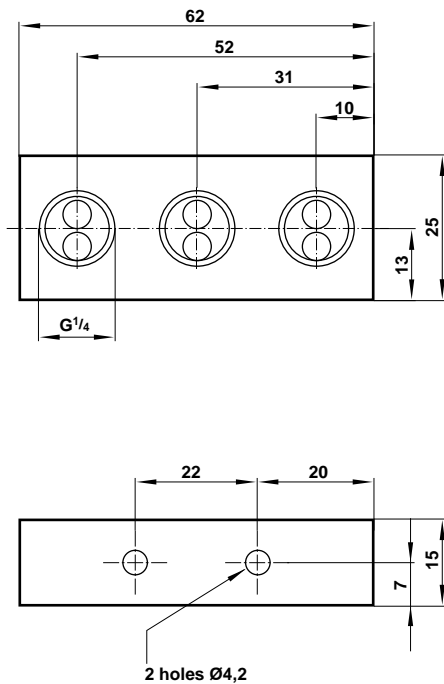
Supplied with Internal Pilot Supply Gasket - V10238-C01

For Twin Supply Valves, gasket No. V10239-C01 (supplied with the valves) should be used.

For external supply valves gasket V10381-C01S should be used.



Single Station Sub-base - Bottom Ported



Single Station Sub-base

V10486-G01

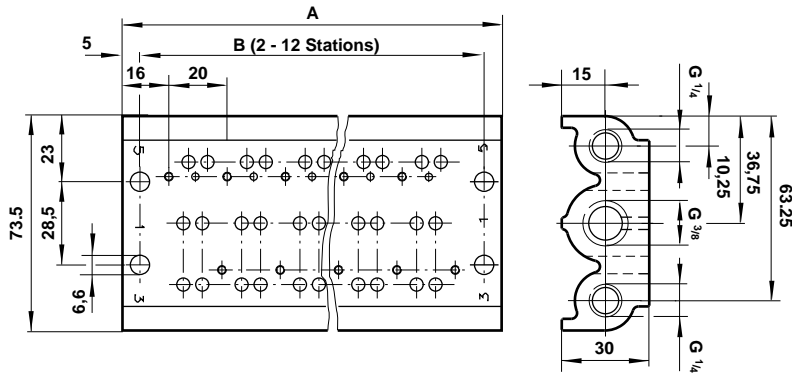
0,051 Kg

Ports 1, 3 and 5 on bottom

Supplied with Internal Pilot Supply Gasket - V10238-C01.

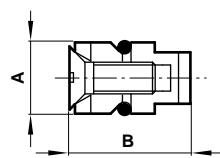
For twin supply valves gasket no. V10239-C01 (supplied with the valves) should be used.

Fixed Length Manifold



Type	No. of stations	A	B	Weight (Kg)
V10028-G01	1	45	-	0,158
V10028-G02	2	70	58	0,247
V10028-G04	4	110	98	0,398
V10028-G06	6	150	138	0,544
V10028-G08	8	190	178	0,693
V10028-G10	10	230	218	0,844
V10028-G12	12	270	258	0,997

Supplied with Internal Pilot Supply Gaskets V10238-C01. For Twin Supply Valves, gasket No. V10239-C01 supplied with the valves should be used.



Type	A	B
V10320-K01	11,20	14
V10320-K02	8,75	14

Blanking Plugs

For dual pressure supply on Fixed Length Manifold

V10320-K01

0,008 Kg

For ports 3 and 5 on Fixed Length Manifold

V10320-K02

0,005 Kg

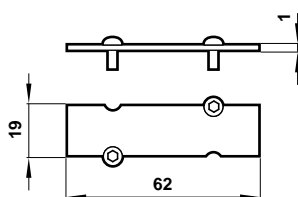
For port 1 on Fixed Length Manifold

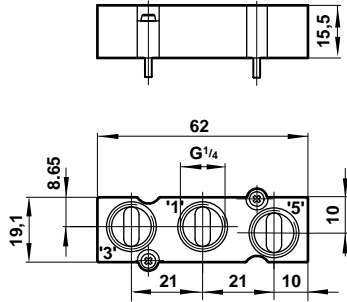
Blanking Plate

V14B517A-Q2700

0,014 Kg

Blanking Plate for blocking off unwanted station. Supplied with gaskets for Sub-base and Manifold mounting.





Intermediate Supply and Exhaust Module

V14B517-Q240G

0,038 Kg

G¹/₄. Provides additional porting on Modular Sub-base or Fixed Length Manifold systems. Occupies one valve station. Supplied with gaskets for Sub-base and Manifold mounting.

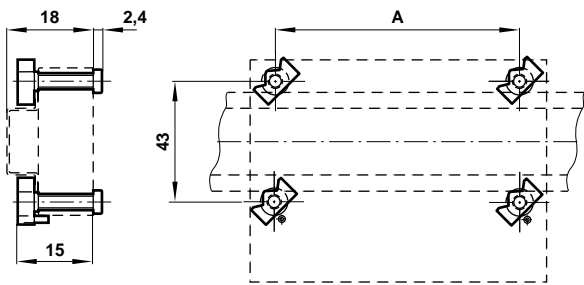
Can be used to:

Improve supply flow

Increase exhaust capacity

Pneumatically separate valves on Valve Island for fail safe in emergency

Supply and exhaust Twin Supply Valves

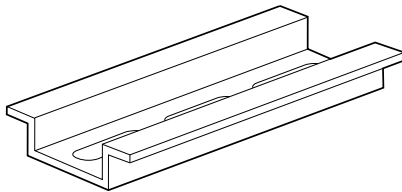


DIN-Rail Mounting Kits

V10319-K30

0,008 Kg

Kit for mounting side ported modular sub-bases on DIN 46277-3, BS5584 and CENELEC EN 50-022 mounting rail.

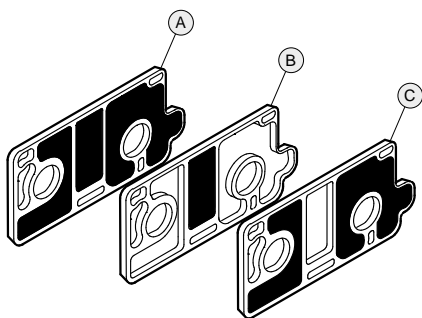


DIN-Rail

V10009-C00

0,312 Kg

1 Metre



Blanking Gasket Set

V10040-K96

0,006 Kg

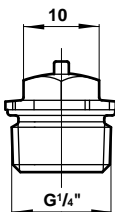
For dual or Multi-pressure Supply on Modular Sub-base.

Set of 3 sub-base to sub-base gaskets for blanking port 1, ports 3 & 5 or ports 1,3 & 5.

(A) Gasket for blanking ports 1, 3 and 5.

(B) Gasket for blanking port 1

(C) Gasket for blanking ports 3 and 5.

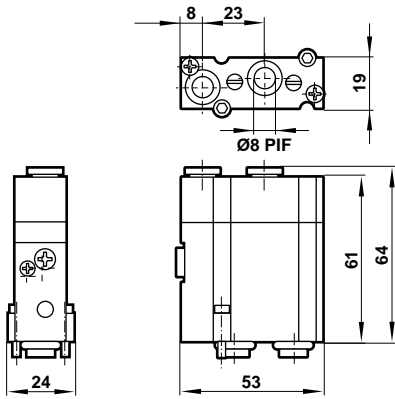


Pressure Indicator

V14B517A-Q2800

0,003 Kg

G¹/₄ port plug with integral pressure indicator. Replaces standard port plugs. Minimum 3 bar operating pressure.



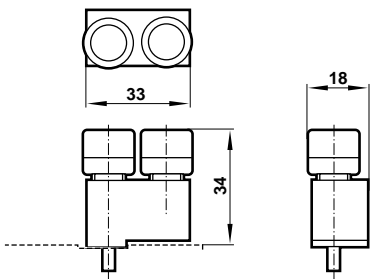
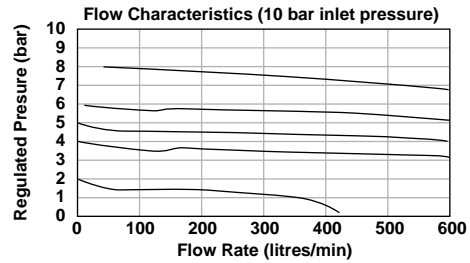
Pressure Regulator Block

V14B517A-Q210*

0,155 Kg

Available for operation over pressure 0-10 bar.

Part Number	
V14B517A-Q2103	Dual Regulation (2&4)
V14B517A-Q2106	Mono Regulation (2 only)
V14B517A-Q2109	Mono Regulation (4 only)



Pressure Gauge Kit

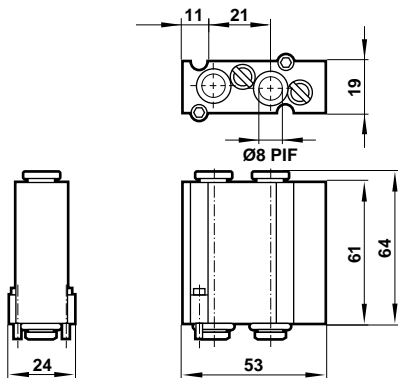
V14B517A-Q212*

0,020 Kg

Available with dual and mono pressure gauges.

Part Number	
V14B517A-Q2120	Dual Pressure Gauge
V14B517A-Q2121	Mono Pressure Gauge

For use with V14B517A-Q210* Pressure Regulator Block

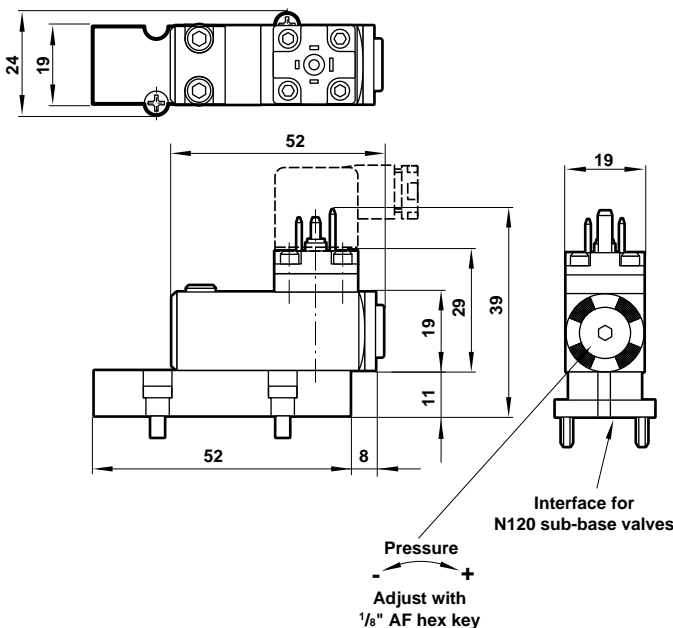
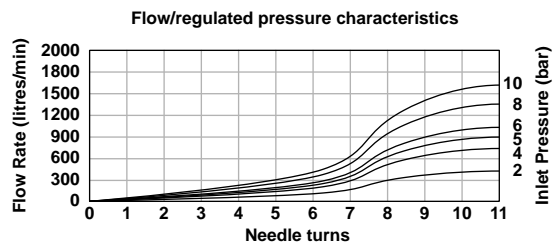


Flow Regulator Block

V14B517A-Q220*

0,140 Kg

Dual regulation (ports 2 and 4).



Pressure Switch Assembly

V14B517A-Q1700

0,120 Kg

Used in conjunction with a suitable PLC based control system. Valves will not operate until the inlet pressure on the valve island is above a preset level.



Accessories

For Connecting Plugs and Light Emitting Seals see section 7.7.001.

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where *pressures* and *temperatures* can exceed those listed under '**Technical Data**'.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult Norgren.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.