

**5/2 and 5/3 Glandless Valves
Solenoid and Pilot Actuated
Manifold and Sub-base Mounted
G^{1/8}**

- **Non corrosive spool and sleeve for long trouble free life**
- **Integral flow regulators for cylinder speed control**
- **Low power solenoids with manual override**
- **Multi-station manifolds and sub-bases for up to 12 stations**
- **Soft start valves available**


Technical Data
Medium:

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

Operation:

Glandless spool valve, solenoid pilot or air pilot actuated

Mounting:

On manifold or sub-base

Port Sizes:

 G^{1/8}
Operating Pressure:

Maximum 10 bar (145 psig)

Details of minimum and maximum pilot pressure see overleaf

Flow Characteristics (unregulated):

Function	'C'	'b'	'A'	l/min	Cv	Kv
5/2	3,25	0,13	12,00	750	0,76	0,65
5/3 APB	3,20	0,16	12,02	750	0,76	0,66

Ambient Temperature:

-15°C* to +50°C (5°F* to +122°F)

solenoid and air pilot actuated valves

*Consult our Technical Service for use below +2°C (36°F)

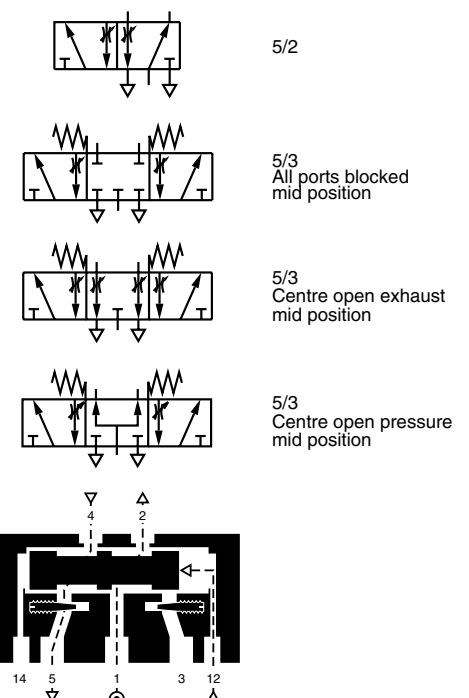
Materials:

Die cast aluminium body. Hard anodised, Teflon coated, matched aluminium spool and sleeve. Nitrile rubber seals. Zinc die cast locking plate. Zinc plated screws. Brass flow regulators.

Valve size:	Thread size:	Maximum suggested torque:
Midi star	M4	2,4 Nm

Ordering Information

To order select model number, add manual override and voltage code from page 5.4.148.3 e.g. SXE9561-A80-00/13J for a 5/2 single solenoid pilot valve with internal pilot air supply, shrouded push button lockable manual override, 22 mm coil 24 V DC with Industrial Standard connector interface.



For further technical data on Soft Start Valves and Multipole with electrical wireway, refer to section 5.4.149.



General Information

5/2 Solenoid Pilot Actuated Valves

Symbol	Model	Pilot Supply	Operator 14	Return 12	Operating Pressure bar (psig)	Pilot Pressure bar (psig)	Weight kg (lb.)
	SXE9561-A80-0x/****	Internal	Solenoid	Air Spring	1 - 10 (14.5 - 145)	-	0.27 (0.59)
	SXE9561-A85-0x/****	External	Solenoid	Air Spring	-0.9 - 10 (-13.1 - 145)	1 - 10 (14.5 - 145)	0.27 (0.59)
	SXE9561-A81-0x/****	Internal	Solenoid	Spring	1.6 - 10 (23.2 - 145)	-	0.27 (0.59)
	SXE9561-A86-0x/****	External	Solenoid	Spring	-0.9 - 10 (-13.1 - 145)	1.6 - 10 (23.2 - 145)	0.27 (0.59)
	SXE0561-A60-0x/****	Internal	Solenoid	Solenoid	2 - 10 (29 - 145)	-	0.40 (0.88)
	SXE0561-A65-0x/****	External	Solenoid	Solenoid	-0.9 - 10 (-13.1 - 145)	2 - 10 (29 - 145)	0.40 (0.88)

5/3 Solenoid Pilot Actuated Valves and Soft Start Valve

Symbol	Model	Valve Function	Pilot Supply	Operator 14	Return 12	Operating Pressure bar (psig)	Pilot Pressure bar (psig)	Weight kg (lb.)
	SXE9661-A60-0x/****	APB	Internal	Solenoid	Solenoid	2 - 10 (29 - 145)	-	0.45 (0.99)
	SXE9661-A65-0x/****	APB	External	Solenoid	Solenoid	-0.9 - 10 (-13.1 - 145)	2 - 10 (29 - 145)	0.45 (0.99)
	SXE9761-A60-0x/****	COE	Internal	Solenoid	Solenoid	2 - 10 (29 - 145)	-	0.45 (0.99)
	SXE9761-A65-0x/****	COE	External	Solenoid	Solenoid	-0.9 - 10 (-13.1 - 145)	2 - 10 (29 - 145)	0.45 (0.99)
	SXE9861-A60-0x/****	COP	Internal	Solenoid	Solenoid	2 - 10 (29 - 145)	-	0.45 (0.99)
	SXE9861-A65-0x/****	COP	External	Solenoid	Solenoid	-0.9 - 10 (-13.1 - 145)	2 - 10 (29 - 145)	0.45 (0.99)
	SE 9362-A08-0x/****	Soft Start Valve	Internal	Solenoid	Air Spring	3 - 10 (43.5 - 145)	-	0.58 (1.27)

× Insert 'Manual Override Option' from "Electrical Details for Solenoid Operators" on page 5.4.148.03

**** Insert 'Voltage Code' from table on page 5.4.148.03

Valve Function Designations: APB = All Ports Blocked / COE = Centre Open Exhaust / COP = Centre Open Pressure

5/2 + 5/3 Air Pilot Actuated Valves

Symbol	Model	Valve Function	Operator	Return	Operating Pressure bar (psig)	Pilot Pressure bar (psig)	Weight kg (lb.)
	SXP9561-180-00	-	Air	Spring	-0.9 - 10 (-13.1 - 145)	1.6 - 10 (23.2 - 145)	0.16 (0.35)
	SXP0561-180-00	-	Air	Air	-0.9 - 10 (-13.1 - 145)	2 - 10 (29 - 145)	0.16 (0.35)
	SXP9661-180-00	APB	Air	Air	-0.9 - 10 (-13.1 - 145)	2 - 10 (29 - 145)	0.18 (0.39)
	SXP9761-180-00	COE	Air	Air	-0.9 - 10 (-13.1 - 145)	2 - 10 (29 - 145)	0.18 (0.39)
	SXP9861-180-00	COP	Air	Air	-0.9 - 10 (-13.1 - 145)	2 - 10 (29 - 145)	0.18 (0.39)

Valve Function Designations: APB = All Ports Blocked / COE = Centre Open Exhaust / COP = Centre Open Pressure

Electrical Details for Solenoid Operators

Voltage Tolerance	± 10%
Rating	100% Continuous Duty
Inlet orifice	1,0 mm
Electrical Connection (corresponding to chosen coil)	DIN 43 650 table 'B' Industrial Standard 22 mm width
Solenoid Coil	May be rotated at 90° intervals
Manual Override	× = 0 Shrouded push button, spring return, lockable × = 1 Shrouded push button, spring return
Protection Class	IP 65 with sealed plug (ISO 6952)

Explosion proofed version available on request.

Voltage Codes and Spare Coils

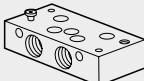
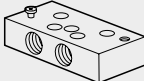
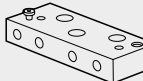
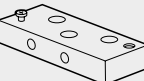
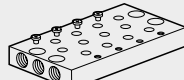
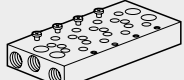
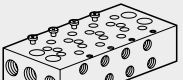
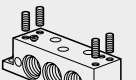
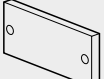

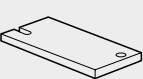

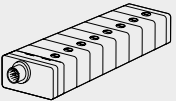
Voltage	22 mm Coil with connector interface acc. to Industrial Standard		Coil Part.-no.	22 mm Coil with connector interface acc. to DIN 43650 table "B"		Coil Part.-no.
	Code	Power Inrush/Hold		Code	Power Inrush/Hold	
12 V d.c.	12J	2 W	QM/48/12J/21	12L	2 W	V10626-A12L
24 V d.c.	13J	2 W	QM/48/13J/21	13L	2 W	V10626-A13L
24 V 50/60 Hz	14J	4/2,5 VA	QM/48/14J/21	14L	4/2,5 VA	V10626-A14L
48 V 50/60 Hz	16J	4/2,5 VA	QM/48/16J/21	16L	4/2,5 VA	V10626-A16L
110/120 V 50/60 Hz	18J	4/2,5 VA	QM/48/18J/21	18L	4/2,5 VA	V10626-A18L
220/240 V 50/60 Hz	19J	9/5,0 VA	QM/48/19J/21	19L	9/5,0 VA	V10626-A19L

Other Voltages available on request.

For further technical data on coils see section 5.4.023 or consult our Technical Department.

Connector plugs to be ordered separately. For technical data see section 7.7.001.

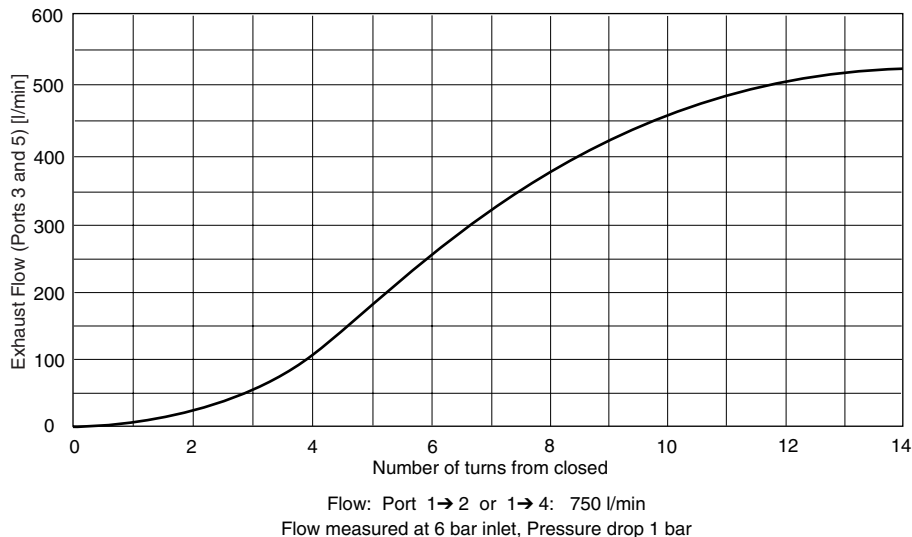
Bases and Accessories

				
Single Station Sub-base Side ported with pilot ports	Single Station Sub-base Side ported without pilot ports	Single Station Manifold with pilot ports	Single Station Manifold without pilot ports	
FP 2011-20 (G1/8)	FP 2011 (G1/8)	FP 2021-20	FP 2021	
				
Fixed length Manifold	Fixed length Sub-base Bottom ported	Fixed length Sub-base Side ported	Modular Manifold	
BL 3**1-21	BP 40**-13-91 (G1/8)	BP 43**-13-91 (G1/8)	FP 2880	
				
Blanking End Plate for FP2880	Blanking Disc for FP2880	Blanking Plate for unused station	Blanking Plug	Multipole Wireway ‡
FP 2857	FP 2858	FP 2001	FP 2080 (for BL 3...-) FP 2081 (for BP 4...-)	TSK 2000

** Insert number of stations: 02, 03, 04, 05, 06, 07, 08, 10 and 12 stations

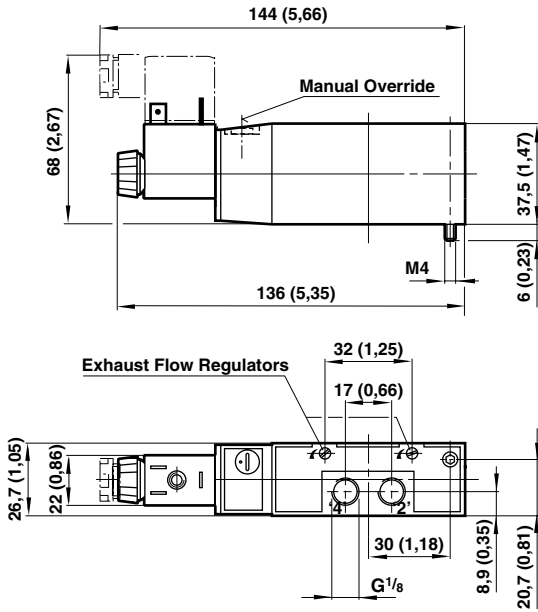
‡ For further technical data on Multipole with electrical wireway, refer to Section 5.4.149

Exhaust Flow Characteristics for MIDI★ STAR Valves with Integral Flow Regulator

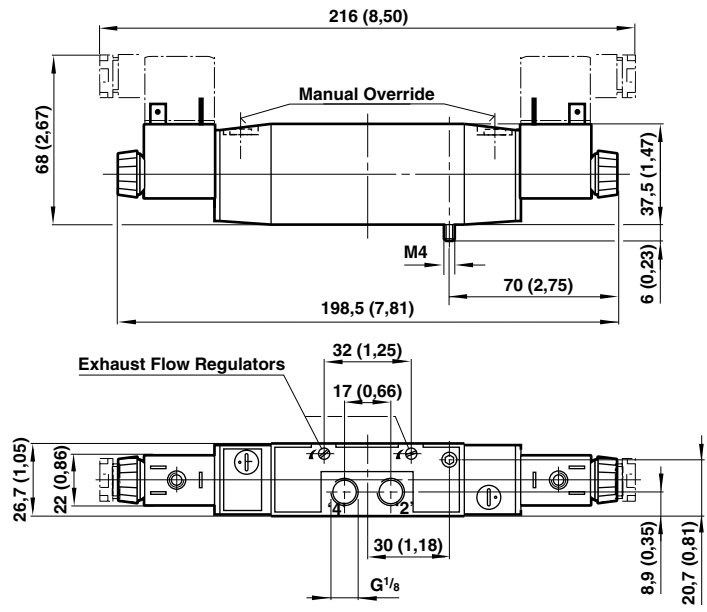




SXE 9561-A Models Single Solenoid Valves

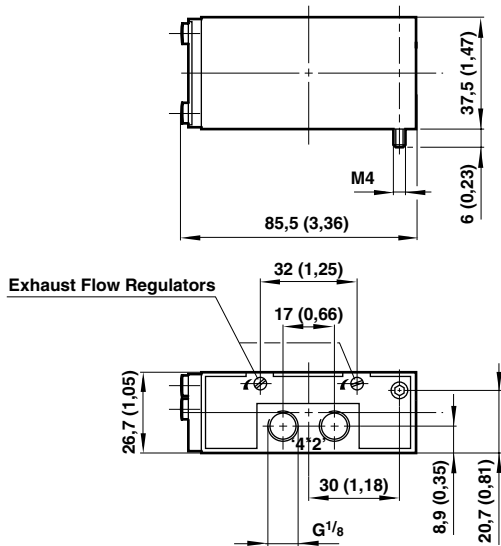


SXE 0561-A Models Double Solenoid Valves

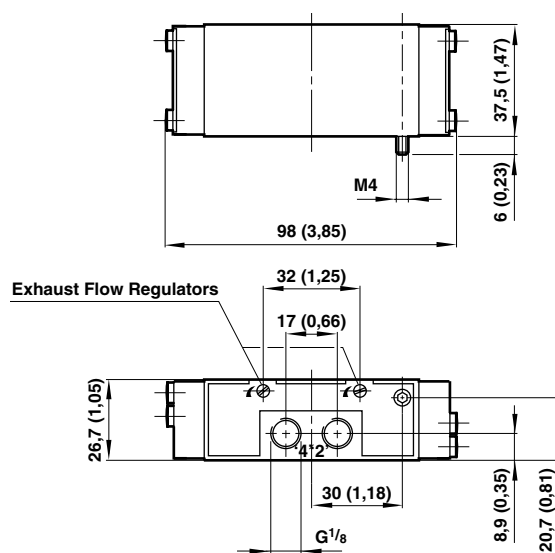


All dimensions in mm (inch)!

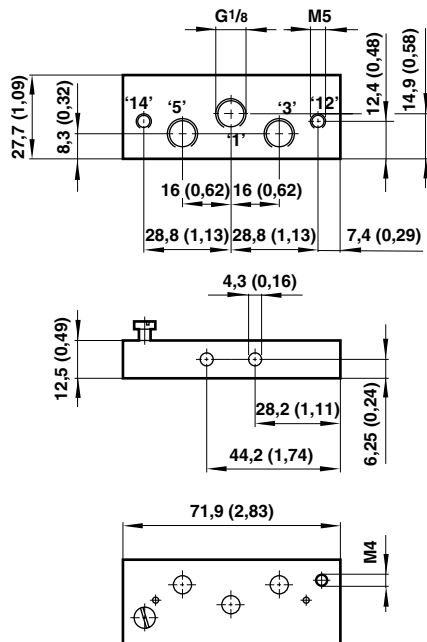
SXP *561-1 Models 5/2 Single and Double Air Pilot Valves



SXP 9*61-1 Models 5/3 Double Air Pilot Valves



All dimensions in mm (inch)!

FP 2021 Models
Single Station Manifold

Single Station Manifold
with Pilot Ports
FP 2021-20

Ports: 1/3/5/12 and 14 on bottom

2+4 in valve body

Weight: 0,06 kg (0,13 lb.)

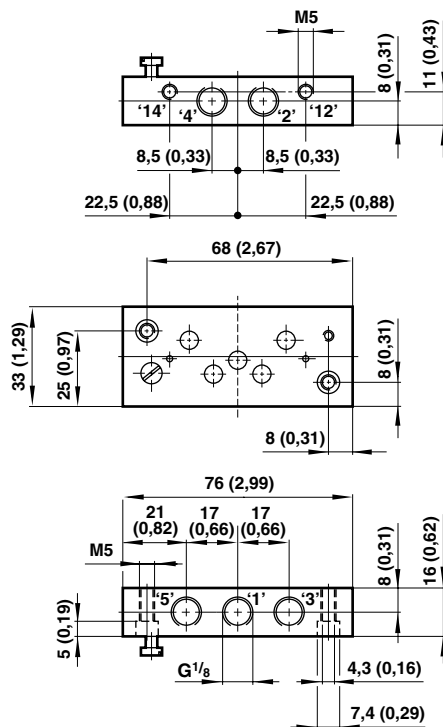
Single Station Manifold
without Pilot Ports
FP 2021

Ports: 1/3/5, on bottom

2+4 in valve body

Weight: 0,06 kg (0,13 lb.)

All dimensions in mm (inch)!

FP 2011 Models
Single Station Sub-base

Single Station Side Ported Sub-base
with Pilot Ports
FP 2011-20

Ports: 1/2/3/4/5/12 and 14 on side

Weight: 0,10 kg (0,22 lb.)

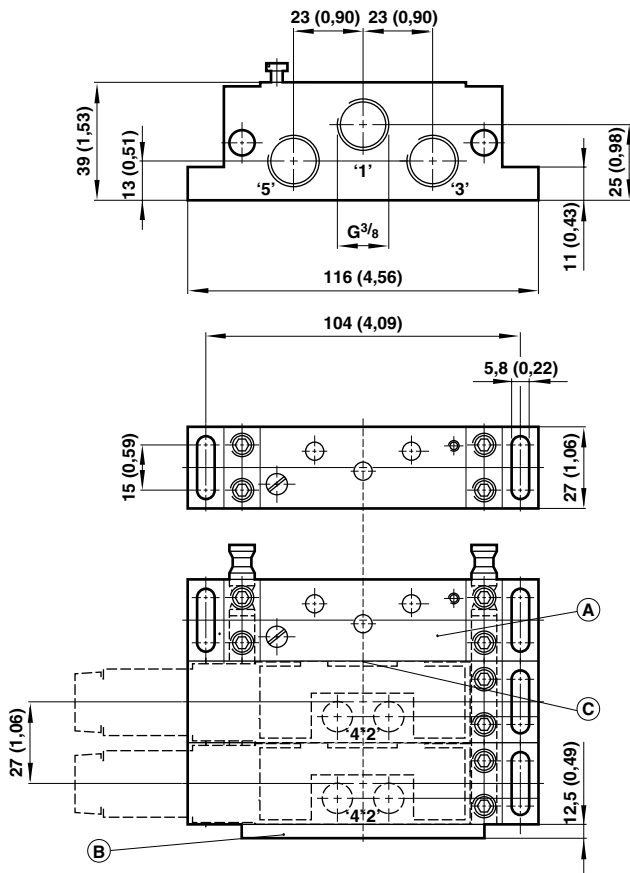
Single Station Side Ported Sub-base
without Pilot Ports
FP 2011

Ports: 1/2/3/4 and 5 on side

Weight: 0,10 kg (0,22 lb.)

Note:
Ports 2 and 4 in valve body to be blocked!

All dimensions in mm (inch)!

FP 28 Models
Modular Manifolds**

Modular Manifold (A)
FP 2880

Weight: 0,17 kg (0,38 lb.)

Blanking End Plate (B)
FP 2857

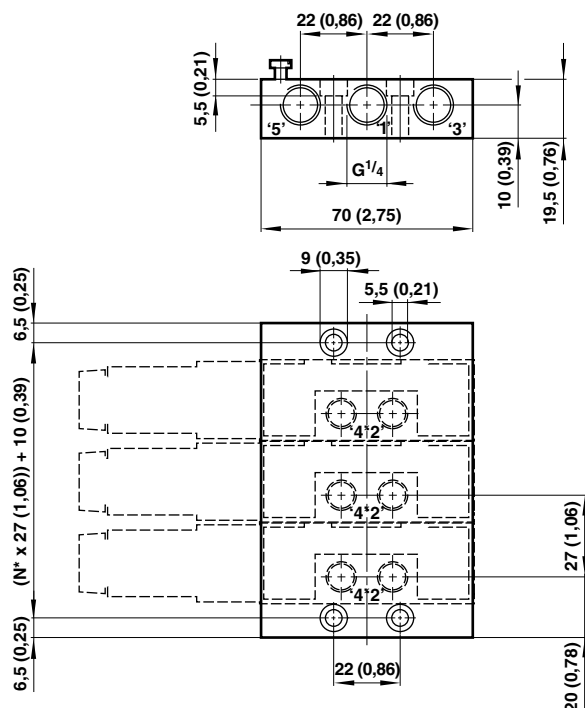
Weight: 0,10 kg (0,23 lb.)

Dual Pressure Blanking Disk (C)
FP 2858

Type: To be placed in port 1 between two modules for dual pressure supply

Weight: 0,002 kg (0,004 lb.)

All dimensions in mm (inch)!

BL 31-21 Models
Fixed Length Manifolds**


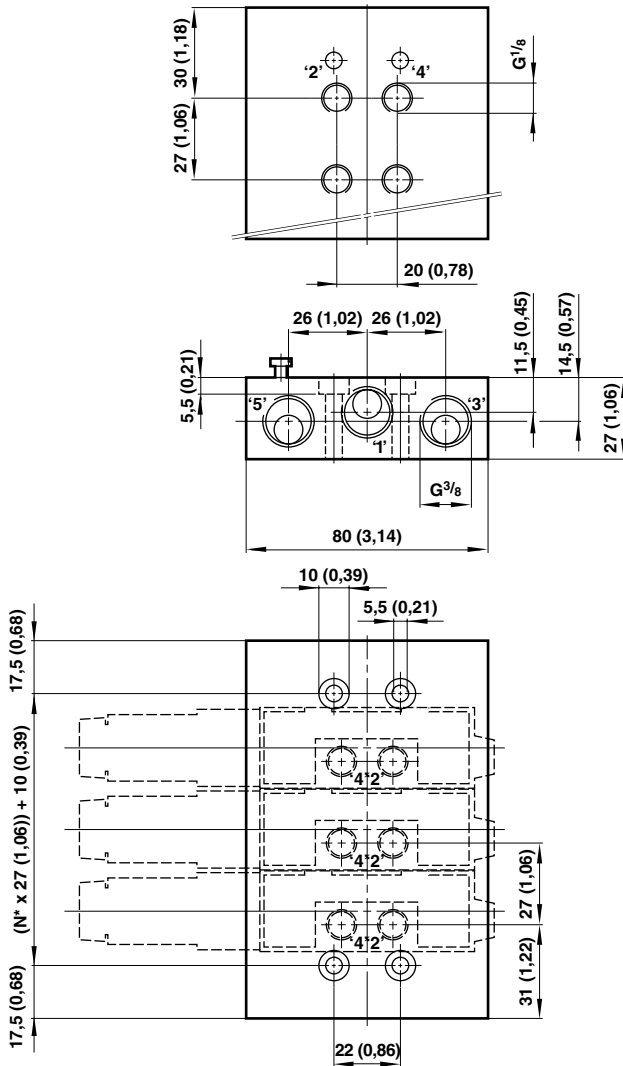
*N = Number of stations in manifold

Model	Stations	Weight kg (lb.)
BL 3021-21	2	0,25 (0,55)
BL 3031-21	3	0,34 (0,74)
BL 3041-21	4	0,43 (0,95)
BL 3051-21	5	0,52 (1,14)
BL 3061-21	6	0,61 (1,34)
BL 3071-21	7	0,70 (1,54)
BL 3081-21	8	0,79 (1,74)
BL 3101-21	10	0,97 (2,13)
BL 3121-21	12	1,15 (2,53)

Ports 1/3/5 on both ends

Ports 2+4 in valve body

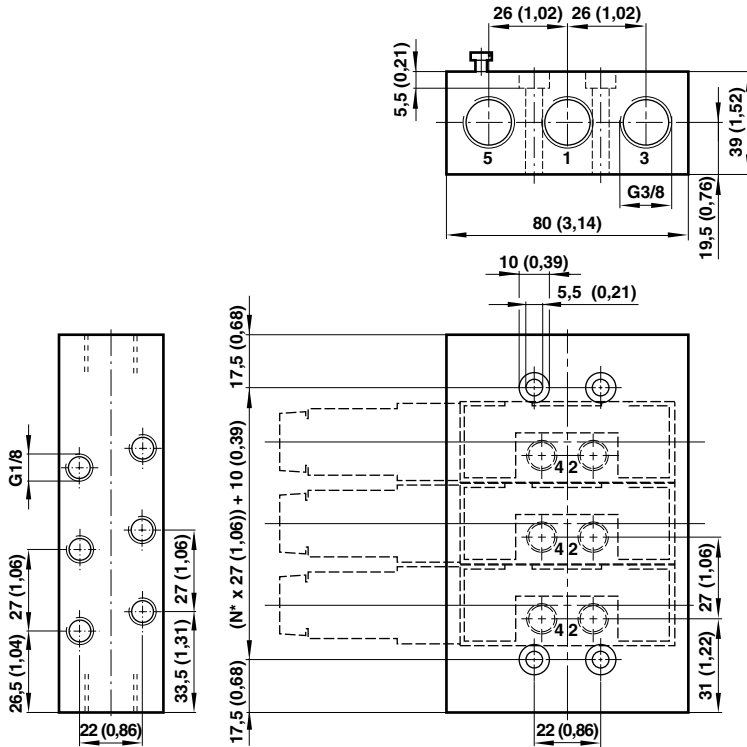
All dimensions in mm (inch)!

BP 40-13-91 Models**
Fixed Length Sub-bases


*N = Number of stations in sub-base

Model	Type	Stations	Weight kg (lb.)
BP 4002-13-91	Bottom ported	2	0,44 (0,97)
BP 4003-13-91	Bottom ported	3	0,58 (1,27)
BP 4004-13-91	Bottom ported	4	0,72 (1,58)
BP 4005-13-91	Bottom ported	5	0,86 (1,89)
BP 4006-13-91	Bottom ported	6	1,00 (2,20)
BP 4008-13-91	Bottom ported	8	1,14 (2,51)
BP 4010-13-91	Bottom ported	10	1,28 (2,82)
BP 4012-13-91	Bottom ported	12	1,42 (3,13)

Note:
Ports 2 and 4 in valve body to be blocked!

BP 43-13-91 Models**
Fixed Length Sub-bases


Model	Type	Stations	Weight kg (lb.)
BP 4302-13-91	Side ported	2	0,70 (1,54)
BP 4303-13-91	Side ported	3	0,90 (1,98)
BP 4304-13-91	Side ported	4	1,11 (2,42)
BP 4305-13-91	Side ported	5	1,31 (2,88)
BP 4306-13-91	Side ported	6	1,52 (3,35)
BP 4308-13-91	Side ported	8	1,72 (3,79)
BP 4310-13-91	Side ported	10	1,93 (4,25)
BP 4312-13-91	Side ported	12	2,13 (4,69)

Note:
Ports 2 and 4 in valve body to be blocked!

*N = Number of stations in sub-base

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 where applicable.