

MIDI*STAR (SXE & SXP), 5/2 & 5/3 Solenoid and pilot actuated glandless valves

- Sub-base mounted
- Specially coated glandless spool and sleeve for long trouble-free life
- Low power solenoids feature manual override as standard
- Single station sub-base for 'in-line' styling and multi-station sub-bases for up to 12 stations using common inlet and exhaust ports
- Integral flow regulator on ports 3 & 5 for cylinder speed control



Technical features

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

Operation:
Glandless spool valve, solenoid pilot or air pilot actuated

Operating pressure:
10 bar max, details of minimum and maximum pilot pressure see table on page overleaf

Port size:
G1/8

Flow:
750 l/min
Exhaust flow characteristics for integral flow regulators see page 5

Mounting:
On sub-bases and manifold

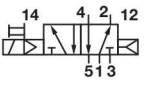
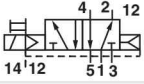
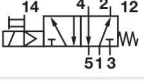
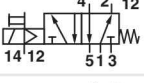
Ambient/Media temperature:
-15 ... +50°C (+5 ... +122°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

Materials:
Body: die-cast aluminium
Spool & sleeve: hard anodised aluminium with special PTFE coating
Seals: NBR
Locking plate: die-cast zinc
Screws: steel, blue zinc coated
Plastic parts: POM
Flow regulators: brass

Electrical details for solenoid operators

Voltage tolerance	± 10%	
Rating	100% continuous duty	
Inlet orifice	1,0 mm	
Electrical connection (corresponding to chosen coil)	DIN EN 175 301-803 - Form B, 22 mm spool	
	Industrial standard, 22 mm spool	
Solenoid coil	May be rotated at 90° intervals	
Manual override	Push and turn to lock (plastic)	x = 0
	Push only (plastic)	x = 1
Protection class	IP 65 (with sealed plug)	

5/2 Solenoid pilot actuated valves

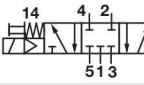
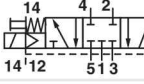
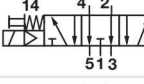
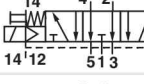
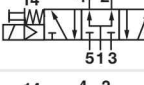
Symbol	Port size	Flow regulator	Actuation	Pilot supply	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	Weight (kg)	Drawing No.	Model
	G1/8	Built-in	Solenoid/air spring	Internal	750	1 ... 10	—	0,27	1	SXE9561-A80-0#-*1)
	G1/8	Built-in	Solenoid/air spring	External	750	-0,9 ... 10	1 ... 10	0,27	1	SXE9561-A85-0#-*1)
	G1/8	Built-in	Solenoid/spring	Internal	750	1,6 ... 10	—	0,27	1	SXE9561-A81-0#-*1)
	G1/8	Built-in	Solenoid/spring	External	750	-0,9 ... 10	1,6 ... 10	0,27	1	SXE9561-A86-0#-*1)
	G1/8	Built-in	Solenoid/solenoid	Internal	750	2 ... 10	—	0,40	2	SXE0561-A60-0#-*1)
	G1/8	Built-in	Solenoid/solenoid	External	750	-0,9 ... 10	2 ... 10	0,40	2	SXE0561-A60-0#-*1)

Insert code for manual override: 0 = Push and turn to lock; 1 = Push only

*1) Insert voltage code from table on next page or without coil; SXE**61-***-**K

*2) External pilot supply at port 12 or 14 (unconnected port 12 or 14 has to be plugged).

5/3 Solenoid pilot actuated valves

Symbol	Port size	Flow regulator	Actuation	Function	Pilot supply	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	Weight (kg)	Drawing No.	Model
	G1/8	Built-in	Solenoid/solenoid	APB	Internal	750	2 ... 10	—	0,45	2	SXE9661-A60-0#-*1)
	G1/8	Built-in	Solenoid/solenoid	APB	External	750	-0,9 ... 10	2 ... 10	0,45	2	SXE9661-A65-0#-*1)
	G1/8	Built-in	Solenoid/solenoid	COE	Internal	750	2 ... 10	—	0,45	2	SXE9761-A60-0#-*1)
	G1/8	Built-in	Solenoid/solenoid	COE	External	750	-0,9 ... 10	2 ... 10	0,45	2	SXE9761-A65-0#-*1)
	G1/8	Built-in	Solenoid/solenoid	COP	Internal	750	2 ... 10	—	0,45	2	SXE9861-A60-0#-*1)
	G1/8	Built-in	Solenoid/solenoid	COP	External	750	-0,9 ... 10	2 ... 10	0,45	2	SXE9861-A65-0#-*1)

Insert code for manual override: 0 = Push and turn to lock; 1 = Push only

*1) Insert voltage code from table on next page or without coil; SXE**61-***-**K

*2) External pilot supply at port 12 or 14 (unconnected port 12 or 14 has to be plugged).

Valve function:
 APB = All Ports Blocked
 COE = Centre Open Exhaust
 COP = Centre Open Pressure

Option selector (solenoid actuated valves)

SXE★★61-A★★-0★-★★★

Valve function	Substitute
5/2 solenoid/solenoid, bistable valve	05
5/2 solenoid/spring, monostable valve	95
5/3 - APB	96
5/3 - COE	97
5/3 - COP	98
Integrated flow control	Substitute
Without flow regulator (double solenoid)	5
With flow regulator (double solenoid)	6
Without flow regulator (solenoid & spring)	7
With flow regulator (solenoid & spring)	8

Voltage code	Substitute
For voltage code please see tables below	
Manual override	Substitute
Push and turn to lock	0
Push only	1
Pilot supply	Substitute
Internal (double solenoid or single solenoid/air spring)	0
Internal (single solenoid valve, mechanical spring)	1
External (double solenoid or single solenoid/air spring)	5
External (single solenoid valve, mechanical spring)	6

Voltage codes and spare coils

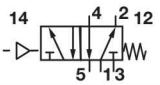
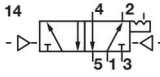
	Voltage	22 mm coil with connector interface acc. to industrial standard Power Inrush/Hold	Model	Code
	12 V d.c.	2 W	QM/48/12J/21	12J
	24 V d.c.	2 W	QM/48/13J/21	13J
	24 V 50/60 Hz	4/2,5 VA	QM/48/14J/21	14J
	48 V 50/60 Hz	4/2,5 VA	QM/48/16J/21	16J
	110/120 V 50/60 Hz	4/2,5 VA	QM/48/18J/21	18J
	220/240 V 50/60 Hz	6/5,0 VA	QM/48/19J/21	19J

	Voltage	22 mm coil with connector interface acc. DIN EN 175 301-803, form B Power Inrush/Hold	Model	Code
	12 V d.c.	2 W	V10626-A12L	12L
	24 V d.c.	2 W	V10626-A13L	13L
	24 V 50/60 Hz	4/2,5 VA	V10626-A14L	14L
	48 V 50/60 Hz	4/2,5 VA	V10626-A16L	16L
	110/120 V 50/60 Hz	4/2,5 VA	V10626-A18L	18L
	220/240 V 50/60 Hz	6/5,0 VA	V10626-A19L	19L

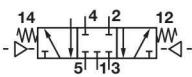
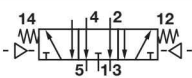
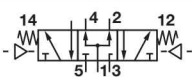
Connector plugs - ordered separately

Industrial standard 22 mm 2-pole + PE	22 mm, DIN EN 175301-803 (DIN 43650 B) Form B 2-pole + PE
	
0657868	0680003

5/2 Pilot actuated valves

Symbol	Port size	Flow regulator	Actuation	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	Weight (kg)	Drawing No.	Model
	G1/8	Built-in	Air/spring	750	-0,9 ... 10	1,6 ... 10	0,16	3	SXP9561-180-00
	G1/8	Built-in	Air/air	750	-0,9 ... 10	2 ... 10	0,16	3	SXP0561-180-00

5/3 Pilot actuated valves

Symbol	Port size	Flow regulator	Actuation	Function	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	Weight (kg)	Drawing No.	Model
	G1/8	Built-in	Air/air	APB	750	-0,9 ... 10	2 ... 10	0,18	4	SXP9661-180-00
	G1/8	Built-in	Air/air	COE	750	-0,9 ... 10	2 ... 10	0,18	4	SXP9761-180-00
	G1/8	Built-in	Air/air	COP	750	-0,9 ... 10	2 ... 10	0,18	4	SXP9861-180-00

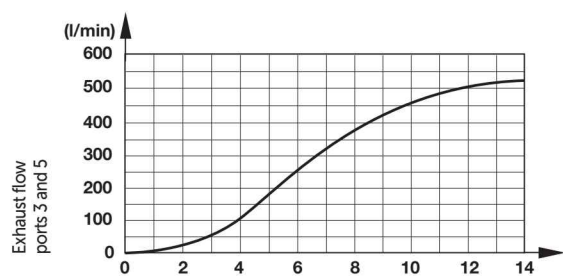
Valve function: APB = All Ports Blocked
 COE = Centre Open Exhaust
 COP = Centre Open Pressure

Option selector
(air pilot actuated valves) SXP★★61-1★0-00

Valve function	Substitute
5/2 pilot/pilot, bistable valve	05
5/2 pilot/spring, monostable valve	95
5/3 - APB	96
5/3 - COE	97
5/3 - COP	98

Integrated flow control	Substitute
Without	7
With	8

Exhaust flow characteristics for valves with integral flow regulators



Sub-bases and manifolds

Single station sub-base
side ported with
pilot ports



Page 6
FP2011-20

Single station sub-base
side ported without
pilot ports



Page 6
FP2011

Single station sub-base
bottom ported with
pilot ports



Page 7
FP2021-20

Single station sub-base
bottom ported without
pilot ports



Page 7
FP2021

Modular sub-base



Page 8
FP2885

Fixed length manifold

Fixed length manifold



Fixed length sub-base
side ported



Stations

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Page 7

2	BL3021-21	BP4302-13-91
3	BL3031-21	BP4303-13-91
4	BL3041-21	BP4304-13-91
5	BL3051-21	BP4305-13-91
6	BL3061-21	BP4306-13-91
7	BL3071-21	—
8	BL3081-21	BP4308-13-91
10	BL3101-21	BP4310-13-91
12	BL3121-21	BP4312-13-91

Accessories

Pressure shut-off



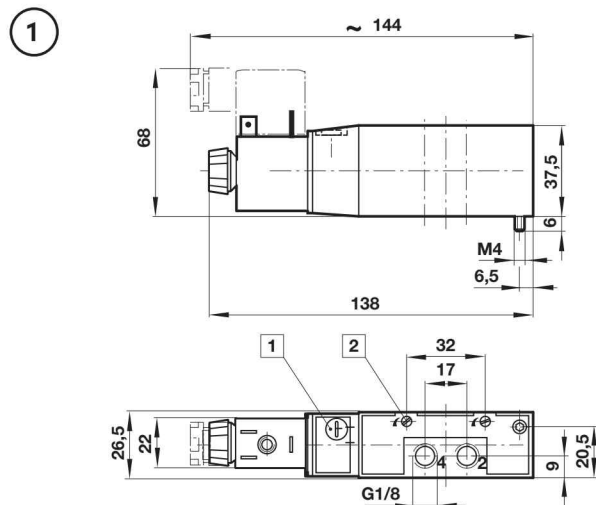
FP2080 (Ø 8 for BL3...)
FP2081 (Ø 10 for BP4...)

Blanking end plate
for unused station

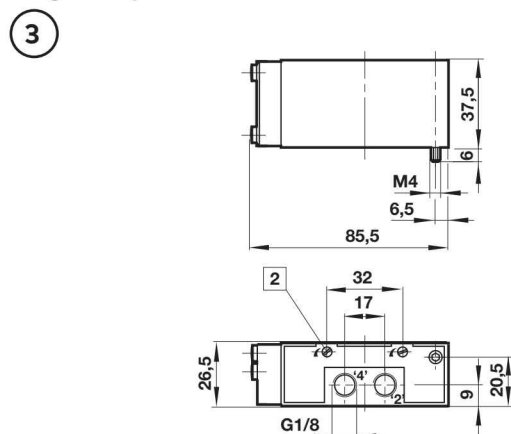


FP2001

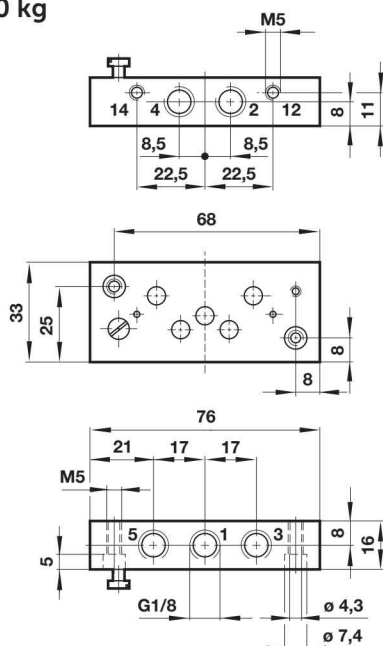
SXE 9561–A... models Single end solenoid pilot valves



SXP9561..., SXP0561... models Single air pilot valve

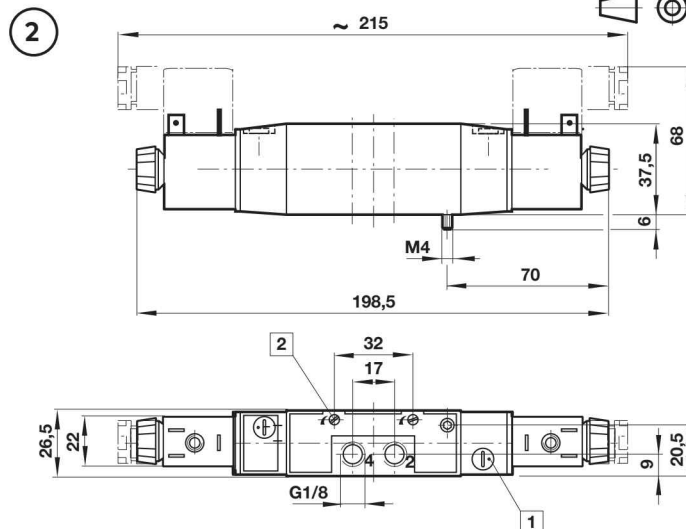


Single station sub-base with pilot ports FP2011-20 Ports 1/2/3/4/5/12 & 14 on side Weight: 0,10 kg

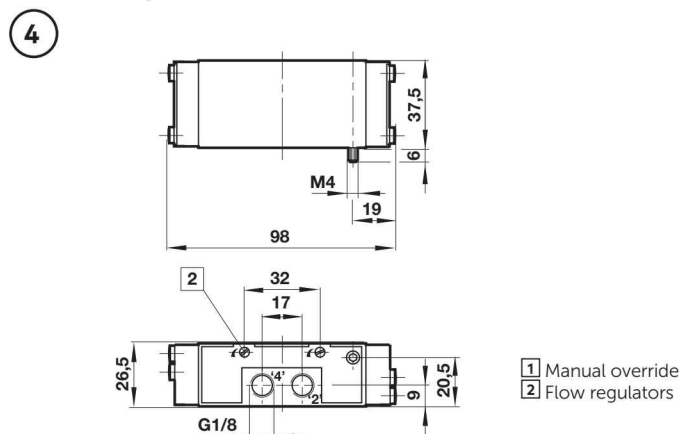


SXE0561–A..., and SXE9*61–A... models Double end solenoid pilot valves

Dimensions in mm
Projection/First angle

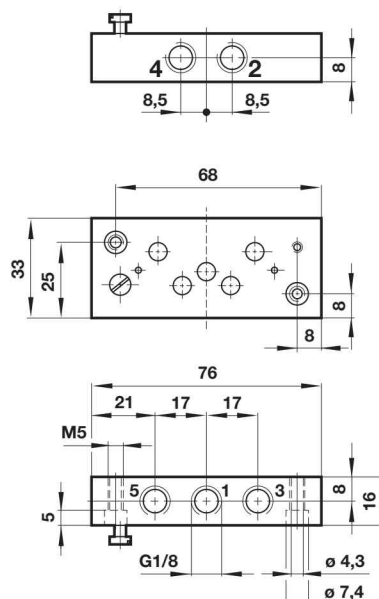


SXP0561..., SXP9.61... models Double air pilot valve

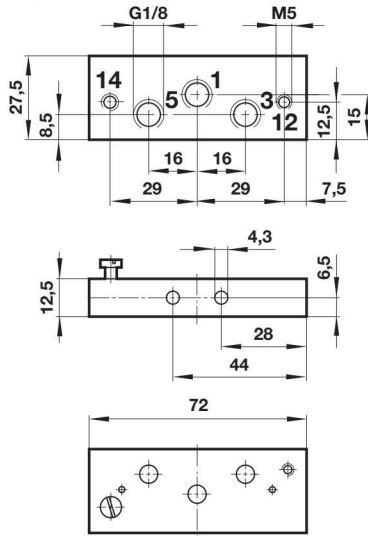


① Manual override
② Flow regulators

Single station sub-base without pilot ports FP2011 Ports 1/2/3/4 & 5 on side, 2 & 4 in valve body Weight: 0,10 kg

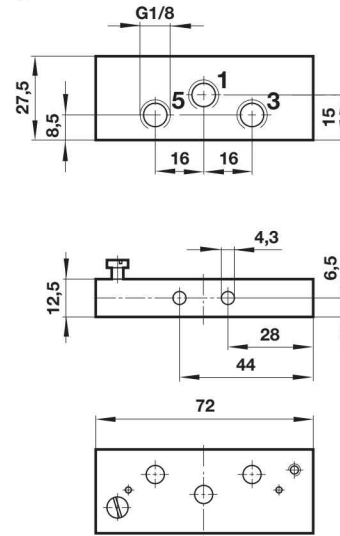


Single station sub-base with pilot ports FP2021-20
Ports 1/3/5/12 and 14 on bottom, 2 & 4 in valve body
Weight: 0,06 kg

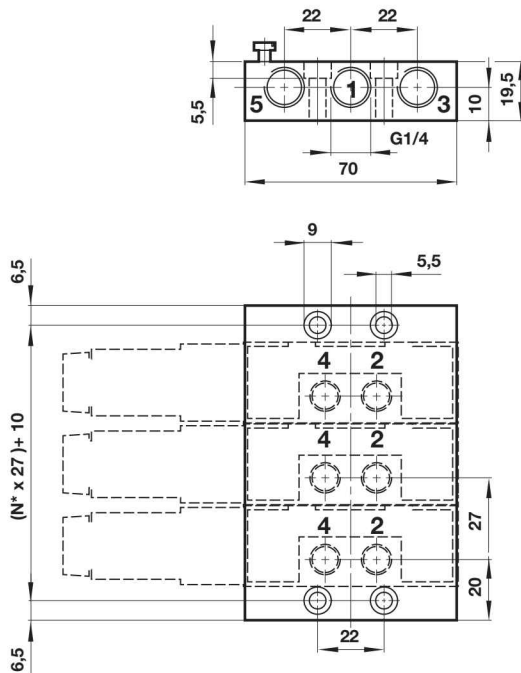


Single station sub-base without pilot ports FP2021
Ports 1/3 & 5 on bottom, 2 & 4 in valve body
Weight: 0,06 kg

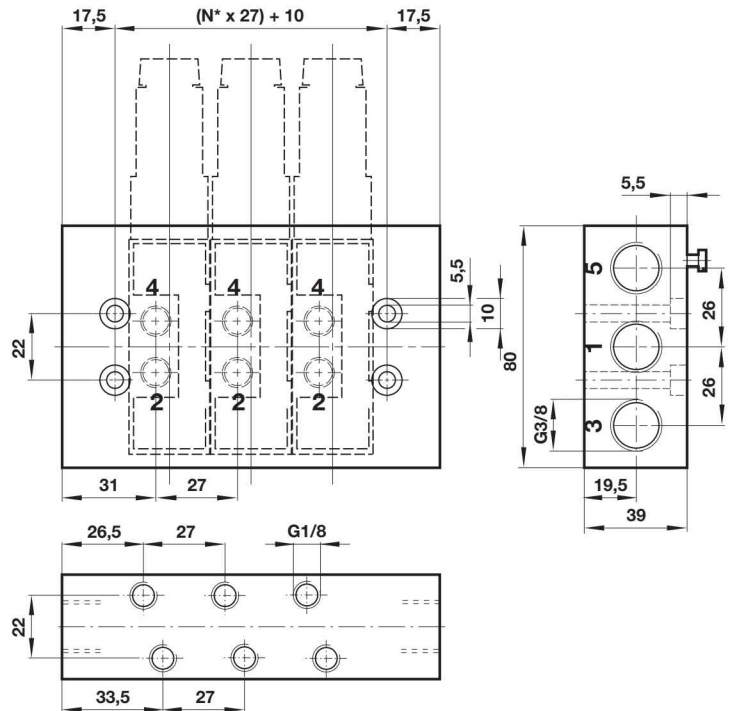
Dimensions in mm
 Projection/First angle



Fixed length manifold BL3021-21 ... BL3121-21
Ports 1/3/5 on both ends, ports 2&4 in valve body



Fixed length sub-base BP4302-13-91 ... BP4312-13-91
Ports 2&4 in valve body to be blockrd!



N = number of stations in sub-base

Number of station	Model	Weight (kg)
2	BL3021-21	0,25
3	BL3031-21	0,34
4	BL3041-21	0,43
5	BL3051-21	0,52
6	BL3061-21	0,61
7	BL3071-21	0,70
8	BL3081-21	0,79
10	BL3101-21	0,97
12	BL3121-21	1,15

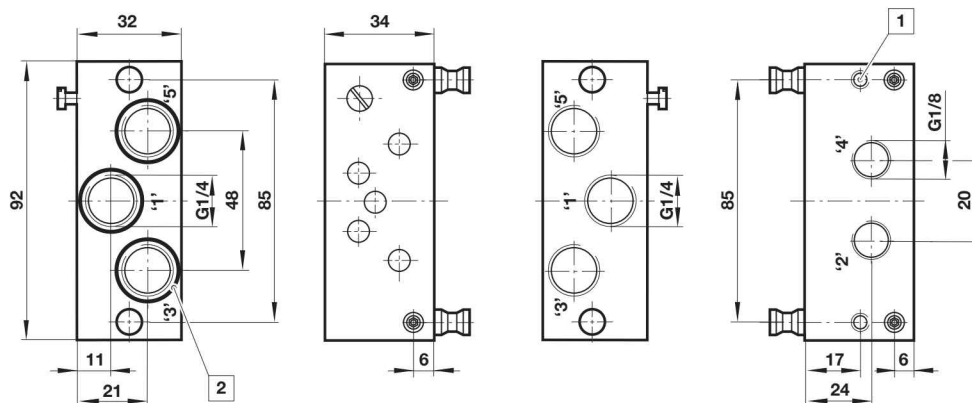
N = number of stations in sub-base

Number of station	Model	Weight (kg)
2	BP4302-13-91	0,70
3	BP4303-13-91	0,90
4	BP4304-13-91	1,11
5	BP4305-13-91	1,31
6	BP4306-13-91	1,52
8	BP4308-13-91	1,72
10	BP4310-13-91	1,93
12	BP4312-13-91	2,13

Modular sub-base FP2885

Weight: 0,06 kg

Dimensions in mm
Projection/First angle



- 1 Mounting threads M5, 10 deep
- 2 O' Rings Ø14 x 2 inscope of delivery

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 features/ 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 Ltd.

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.