



Steri-trol Aseptic Service 'S' series Two-port Pneumatic Control Valves - DN15 (1/2") to DN100 (4")

Description

Steri-trol 'S' series are two-port control valves manufactured using 316L stainless steel. They are designed for modulating control of clean steam, pure steam and process fluids. The valve is operated by a pneumatic actuator and may be interfaced with a control system using any of the Spirax Sarco range of positioners.

Available types

SB Two-port angle pattern design with aseptic steam sanitized bonnet

SA Two port angle pattern design (for chemical free steam)

Valve characteristics - options:

SBE Equal percentage (E) - Suitable for most modulating process control applications good control providing at low flowrates.

SBL Linear (L) - Primarily for liquid flow control where the differential pressure across the valve is constant.

Approvals and certification

Compliant to ASME BPE SF4 2019, internal surface finish 0.375 µm, FDA, and USP 26 Class VI approved sealing materials. EN 10204 type 3.1 certificates supplied as standard. Surface finish certificate supplied as standard.

Valve seating - options:

S Metal-to-metal (as standard) - Stainless steel

V Soft seal - White Viton to provide a tight shut-off

Valve stem sealing - options:

V White Viton - USP 26 Class VI approved

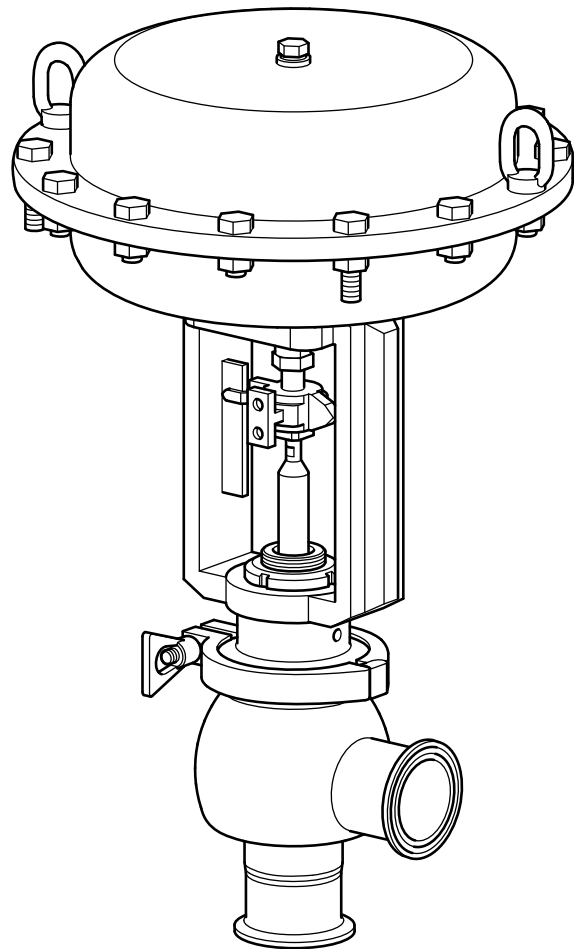
The Steri-trol can be used with the following actuators and positioners:

Pneumatic PNS3000, PNS4000, PN9000E and PN9000R series

Positioners PP5 (pneumatic) or EP500 (electropneumatic)

SP400 and SP500 (smart electropneumatic)

Refer to the relevant actuator Technical Information sheet for further details.



Technical data

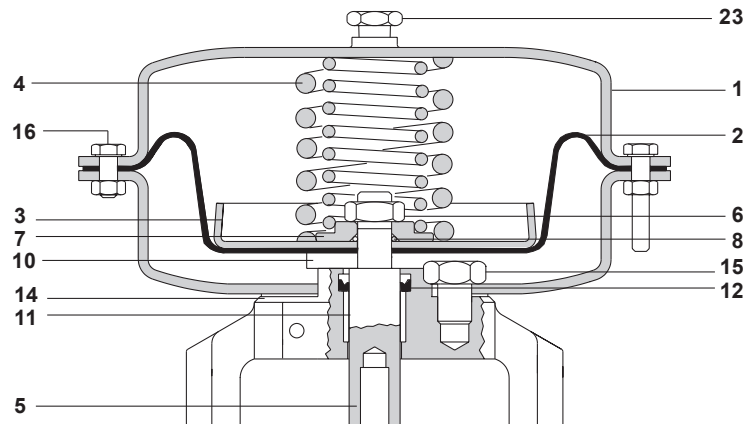
Plug design	DN15 to DN100	Parabolic
Leakage	Metal-to-metal	(0.01% of K_v)
	Soft seal	IEC 534-4 Class VI
Rangeability	Equal percentage	50:1
	Linear	30:1
Travel	DN15 to DN50 (½" to 2")	20 mm
	DN65 to DN100 (2½" to 4")	30 mm
Surface finish	Internal (Mechanical or electro polished)	< 0.375 μ m
	External	< 0.6 μ m

Sizes and end connections

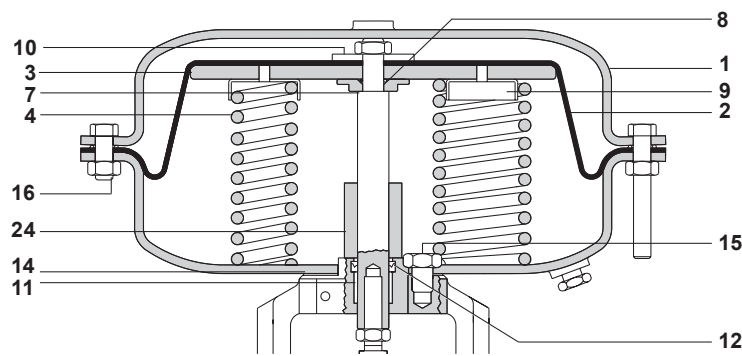
Connections	Size range
Butt weld/tube weld, screwed, flanged and sanitary clamp	DN15, DN20, DN25, DN32, DN40, DN50, DN65, DN80 and DN100 ½", ¾", 1", 1¼", 1½", 2", 2½", 3" and 4"

- Notes:**
- DN15, DN20 and DN32 is not available for certain end connections - see page 13.
 - If you require a pipe end connection which has not been mentioned within this document, please contact Spirax Sarco sales office for further advice and information regarding availability.

Materials



PNS3000 series



PNS4000 series

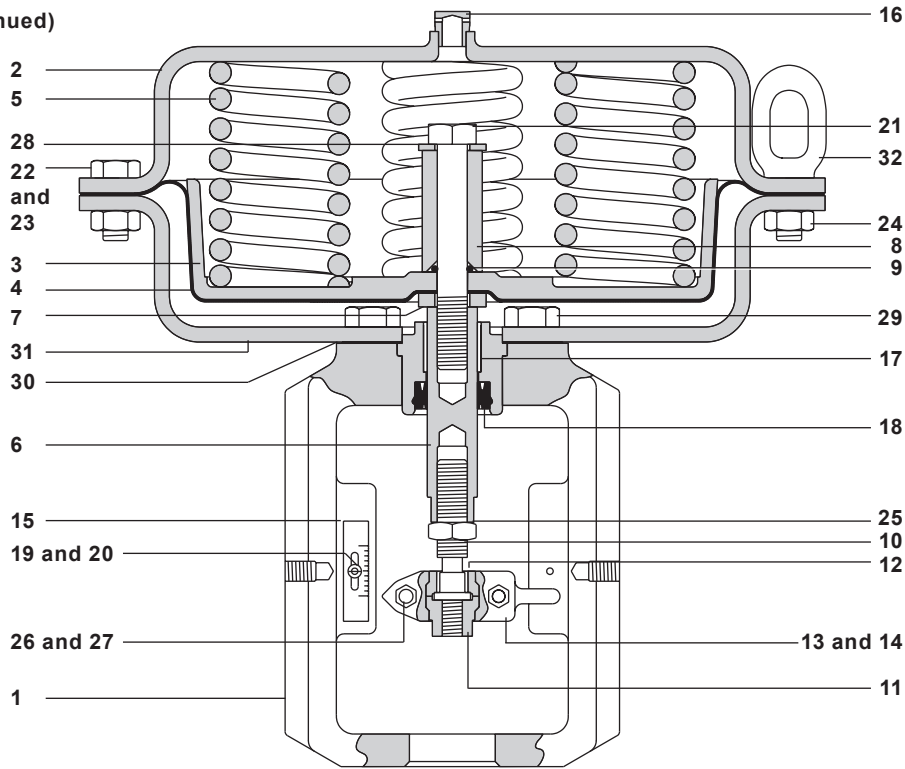
PNS3000 and PNS4000 series actuators

No. Part	Material
1 Diaphragm housing	Stainless steel 304
2 Diaphragm	Reinforced nitrile rubber
3 Diaphragm plate	Pressed steel
4 Springs	Spring steel
5 Spindle	Stainless steel
6 Lock-nut	Stainless steel
7 Spacer	Zinc plated steel
8 'O' ring	Rubber
9 Spring guide	Zinc plated steel
10 Diaphragm clamp	Zinc plated steel
11 Bearing	Bronze
12 'V' ring	Rubber

No. Part	Material
13 Yoke	Stainless steel 304
14 Gasket	Non asbestos fibre
15 Fixing screwed	Stainless steel
16 Housing bolts and nuts	Stainless steel
17 Top adaptor	Stainless steel
18 Lock-nut	Stainless steel
19 Bottom adaptor	Stainless steel
20 Connectors	Stainless steel
21 Connectors bolts and nuts	Stainless steel
22 Travel indicator	Aluminium
23 Cap (with vent hole)	Nickel plated brass
24 Spacer	Zinc plated steel

Materials (continued)

PN9000



PN 9000 series actuators

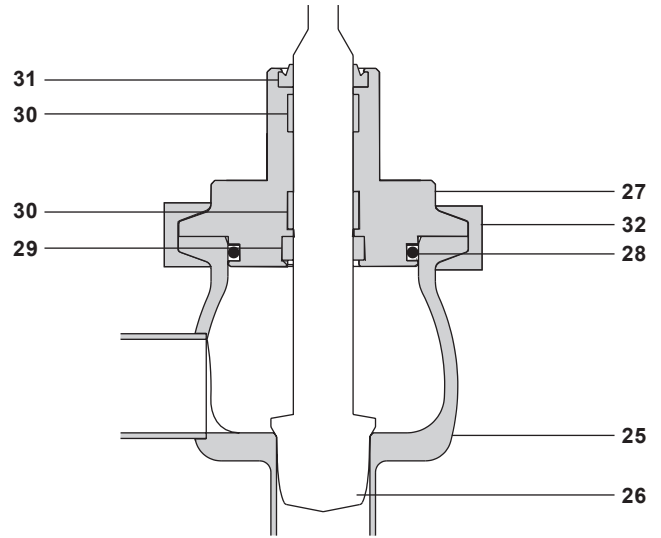
No.	Part	Material
1	Yoke	SG iron
2	Upper diaphragm housing	Carbon steel (plated)
3	Diaphragm plate	Aluminium
4	Diaphragm	Reinforced NBR
5	Spring	Spring steel
6	Spindle	Stainless steel
7	Washer	Carbon steel (plated)
8	Spacer	Carbon steel (plated)
9	'O' ring	Viton
10	Connector	Carbon steel (plated)
11	Adaptor	Carbon steel (plated)
12	Collar	Carbon steel (plated)
13	Clamp front	Stainless steel
14	Clamp rear	Stainless steel
15	Scale	Stainless steel
16	Vent plug	Brass
17	Bearing	PTFE/steel composite

No.	Part	Material
18	Seal	Polyurethane
19	Pan head screw	Carbon steel (plated)
20	Nyloc nut	Carbon steel (plated)
21	Bolt	Carbon steel (plated) Gr. 8.8
22	Hex. head screw (short)	Carbon steel (plated) Gr. 8.8
23	Hex. head screw (long)	Carbon steel (plated) Gr. 8.8
24	Nut	Carbon steel (plated) Gr. 8.8
25	Lock-nut	Carbon steel (plated)
26	Socket head screw	Carbon steel (plated) Gr. 8.8
27	Nut	Carbon steel (plated) Gr. 8.8
28	Washer	Carbon steel (plated)
29	Screw	Carbon steel (plated) Gr. 8.8
30	Gasket	Reinforced graphite
31	Lower diaphragm housing	Carbon steel (plated)
32	Lifting eye	Cast steel

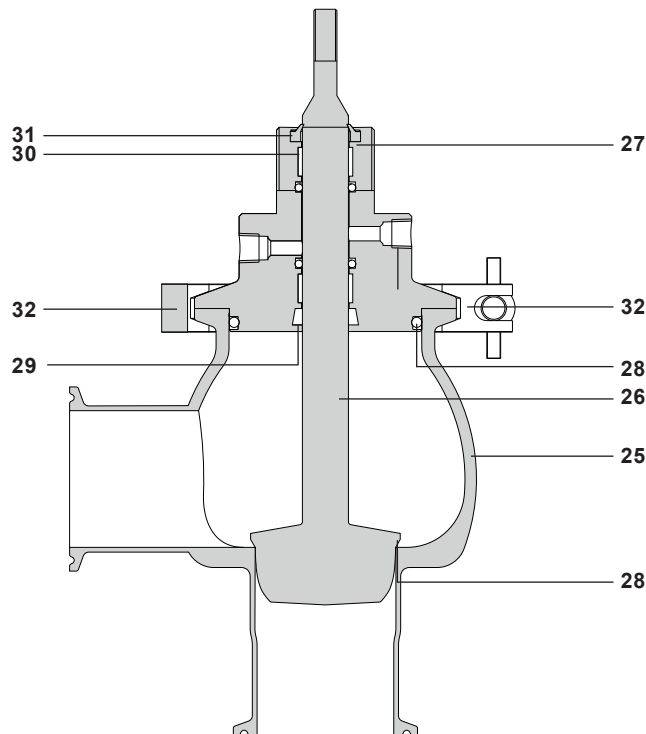
Materials (continued)

SA and SB control valves

No.	Part	Material
25	Body	Stainless steel ASTM A479-316L
26	Valve plug, stem and soft seal	Stainless steel ASTM A479-316L
		Stainless steel 316L
27	Bonnet	Stainless steel ASTM A479-316L
28	Body seal	Viton (FKM)
29	Stem seal	Viton (FKM)
30	Stem bushes	PTFE-FC
31	Seal washer	White Viton or EPDM
32	Body clamp	Stainless steel 304

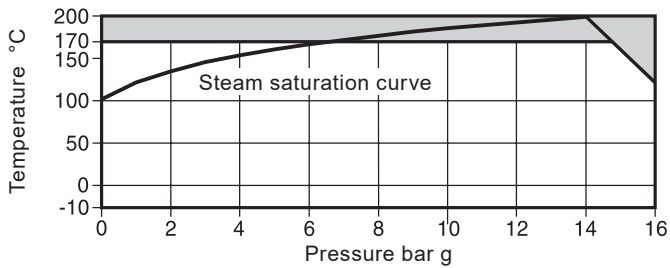


SA 2-port control valve



SB 2-Port control valve with aseptic steam sanitized bonnet (Provided as standard)

Pressure/temperature limits



The product **must not** be used in this region.

Viton (V) stem seals must be selected for use in this region.

Body design conditions	PN16
Maximum design pressure	16 bar g @ 120 °C
Maximum design temperature	200 °C @ 14 bar g
Minimum design temperature	-20 °C
Maximum operating temperature	Viton (FKM) (V) 170 °C
Minimum operating temperature	-10 °C
Note: For lower operating temperatures consult Spirax Sarco.	
Maximum differential pressure	See pages 7 to 9
Designed for a maximum cold hydraulic test pressure of:	24 bar g

K_v values (SB and SA models)

Flow characteristic	Valve size	K _v by valve size and trim reduction								
		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
	Travel	20 mm					30 mm			
Equal percentage and linear	Standard	4	6.3	10	16	25	36	63	100	160
	Reduction 1	-	4	6.3	10	16	25	36	63	100
	Reduction 2	-	-	4	6.3	10	16	25	36	63
	Reduction 3	-	-	-	4	6.3	10	16	25	36

Micro-flow trim for all valves ≤ DN25

Micro-flow trim	Travel	20 mm				
		Trim size	1/8"	3/16"	1/4"	3/8"
Linear characteristic	K _v	0.4	0.63	1.0	1.6	2.5

For conversion: $K_v = C_v(US) \times 0.855$ $C_v(UK) = C_v(US) \times 0.833$

Maximum differential pressures for Class IV shut-off SB and SA valves

PNS3000 spring-to-extend actuators

Valve size			DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
K _v			4.0	6.3	10	16	25	36	63	100	160
Travel mm			20 mm						30 mm		
Actuator	Spring range	Positioner required	Maximum differential pressure Class IV (bar)								
PNS3220	0.2 - 1.0	Optional	8.3	4.1	1.4						
	0.4 - 1.2	Optional	16.0	14.0	7.1	4.0	2.4				
PNS3320	0.2 - 1.0	Optional	16.0	16.0	16.0	4.0	2.4				
	0.4 - 1.2	Optional	16.0	16.0	16.0	11.4	7.6	3.8			
PNS3326	1.0 - 3.0	Yes	16.0	16.0	12.8	16.0	16.0	12.7			
PNS3420	0.2 - 1.0	Optional	16.0	16.0	16.0	7.7	5.0	2.3			
	0.4 - 1.2	Optional	16.0	16.0	16.0	16.0	12.8	6.8			
PNS3426	1.0 - 3.0	Yes			16.0	16.0	16.0	16.0			
PNS3430	0.4 - 1.2	Optional							3.4	2.0	1.2
PNS3436	1.0 - 3.0	Yes							10.7	6.9	4.6

PN9000 spring-to-extend actuators

Valve size			DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
K _v			4.0	6.3	10	16	25	36	63	100	160
Travel mm			20 mm						30 mm		
Actuator	Spring range	Positioner required	Maximum differential pressure Class IV (bar)								
PN9120E	0.4 - 1.2	Optional	14.0	8.0	4.0	2.0	1.0	-			
PN9126E	1.0 - 2.0	Yes	16.0	16.0	15.0	9.0	6.0	3.0			
PN9123E	2.0 - 4.0	Yes	16.0	16.0	16.0	16.0	15.0	8.0			
PN9220E	0.2 - 1.0	Optional	16.0	16.0	10.0	6.0	3.0	1.0			
	0.4 - 1.2	Optional	16.0	16.0	16.0	15.0	10.0	5.0			
PN9226E	1.0 - 2.0	Yes	16.0	16.0	16.0	16.0	16.0	16.0			
PN9223E	2.0 - 4.0	Yes	16.0	16.0	16.0	16.0	16.0	16.0			
PN9320E	0.2 - 1.0	Optional	16.0	16.0	16.0	14.0	10.0	5.0			
	0.4 - 1.2	Optional	16.0	16.0	16.0	16.0	16.0	12.0			
PN9330E	0.4 - 1.2	Yes							6.0	4.0	3.0
PN9336E	1.0 - 2.0	Yes							16.0	12.0	8.0
PN9337E	2.5 - 3.5	Yes							16.0	16.0	16.0

Maximum differential pressures for Class IV shut-off SB and SA valves

PNS4000 spring-to-extend actuators

Valve size				DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
K _v				4.0	6.3	10	16	25	36	63	100	160
Travel mm				20 mm						30 mm		
Actuator	Spring range	Positioner required	Minimum air pressure	Maximum differential pressure Class IV (bar)								
PNS4220	0.2 - 1.0	Optional	1.4	16.0	14.0	7.1	4.0	2.4				
	0.2 - 1.0	Yes	2.0	16.0	16.0	16.0	15.1	10.2	5.3			
	0.2 - 1.0	Yes	3.0	16.0	16.0	16.0	16.0	16.0	12.7			
	0.2 - 1.0	Yes	4.0	16.0	16.0	16.0	16.0	16.0	16.0			
PNS4320	0.2 - 1.0	Optional	1.4	16.0	16.0	16.0	11.4	7.6	3.8			
	0.2 - 1.0	Yes	2.0	16.0	16.0	16.0	16.0	16.0	12.7			
	0.2 - 1.0	Yes	3.0	16.0	16.0	16.0	16.0	16.0	16.0			
PNS4420	0.2 - 1.0	Optional	1.4			16.0	16.0	16.0	6.8			
	0.2 - 1.0	Yes	2.0			16.0	16.0	16.0	16.0			
	0.2 - 1.0	Yes	3.0			16.0	16.0	16.0	16.0			
PNS4430	0.2 - 1.0	Optional	1.4							3.4	2.0	1.2
	0.2 - 1.0	Yes	2.0							10.7	6.9	4.6
	0.2 - 1.0	Yes	3.0							16.0	15.0	10.2
	0.2 - 1.0	Yes	4.0							16.0	16.0	15.8

PN9000 spring-to-extend actuators

Valve size				DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
K _v				4.0	6.3	10	16	25	36	63	100	160
Travel mm				20 mm						30 mm		
Actuator	Spring range	Positioner required	Maximum differential pressure Class IV (bar)									
PN9120R	0.2 - 1.0	Optional	16.0	16.0	16.0	16.0	16.0	16.0	16.0			
	0.4 - 1.2	Optional	16.0	16.0	16.0	16.0	16.0	16.0	16.0			
PN9126R	1.0 - 2.0	Yes	16.0	16.0	16.0	16.0	16.0	16.0	16.0			
PN9123R	2.0 - 4.0	Yes	16.0	16.0	16.0	16.0	16.0	16.0	8.0			
PN9220R	0.2 - 1.0	Optional	16.0	16.0	16.0	16.0	16.0	16.0	16.0			
	0.4 - 1.2	Optional	16.0	16.0	16.0	16.0	16.0	16.0	16.0			
PN9226R	1.0 - 2.0	Yes	16.0	16.0	16.0	16.0	16.0	16.0	16.0			
PN9223R	2.0 - 4.0	Yes	16.0	16.0	16.0	16.0	16.0	16.0	16.0			
PN9320R	0.2 - 1.0	Optional	16.0	16.0	16.0	16.0	16.0	16.0	16.0			
	0.4 - 1.2	Optional	16.0	16.0	16.0	16.0	16.0	16.0	16.0			
PN9330R	0.4 - 1.2	Yes								16.0	16.0	16.0
PN9336R	1.0 - 2.0	Yes								16.0	16.0	16.0
PN9337R	2.5 - 3.5	Yes								8.0	5.0	3.0

Maximum differential pressures for Class VI shut-off (soft seat seal only) SB and SA valves

PNS3000 spring-to-extend actuators

Valve size			DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	
K _v			4.0	6.3	10	16	25	36	63	100	160	
Travel mm			20 mm						30 mm			
Actuator	Spring range	Positioner required	Maximum differential pressure Class VI (bar)									
PNS3220	0.4 - 1.2	Optional	12.1	8.4	3.0	2.3	1.3	-	-	-	-	
PNS3320	0.2 - 1.0	Optional	12.1	8.4	3.0	2.3	1.3	-	-	-	-	
	0.4 - 1.2	Optional	16.0	16.0	9.1	7.4	5.1	2.3	-	-	-	
PNS3326	1.0 - 3.0	Yes	16.0	16.0	16.0	16.0	16.0	8.4	-	-	-	
PNS3420	0.2 - 1.0	Optional	16.0	14.9	6.0	4.8	3.2	1.3	-	-	-	
	0.4 - 1.2	Optional	16.0	16.0	15.1	12.4	8.8	4.4	-	-	-	
PNS3426	1.0 - 3.0	Yes	-	-	16.0	16.0	16.0	13.5	-	-	-	
PNS3430	0.4 - 1.2	Optional	-	-	-	-	-	-	2.2	1.7	-	
PNS3436	1.0 - 3.0	Yes	-	-	-	-	-	-	7.4	5.9	3.7	

PN9000 spring-to-extend actuators

Valve size			DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	
K _v			4.0	6.3	10	16	25	36	63	100	160	
Travel mm			20 mm						30 mm			
Actuator	Spring range	Positioner required	Maximum differential pressure Class VI (bar)									
PN9120E	0.4 - 1.2	Optional	7.0	4.0	1.0	1.0	-	-	-	-	-	
PN9126E	1.0 - 2.0	Yes	16.0	16.0	7.0	6.0	4.0	2.0	-	-	-	
PN9123E	2.0 - 4.0	Yes	16.0	16.0	16.0	15.0	10.0	5.0	-	-	-	
PN9220E	0.2 - 1.0	Optional	16.0	11.0	4.0	3.0	2.0	1.0	-	-	-	
	0.4 - 1.2	Optional	16.0	16.0	12.0	10.0	7.0	3.0	-	-	-	
PN9226E	1.0 - 2.0	Yes	16.0	16.0	16.0	16.0	16.0	11.0	-	-	-	
PN9223E	2.0 - 4.0	Yes	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-	
PN9320E	0.2 - 1.0	Optional	16.0	16.0	11.0	9.0	7.0	3.0	-	-	-	
	0.4 - 1.2	Optional	16.0	16.0	16.0	16.0	15.0	8.0	-	-	-	
PN9330E	0.4 - 1.2	Yes	-	-	-	-	-	-	4.0	3.0	2.0	
PN9336E	1.0 - 2.0	Yes	-	-	-	-	-	-	13.0	10.0	6.0	
PN9337E	2.5 - 3.5	Yes	-	-	-	-	-	-	16.0	16.0	16.0	
PN9337E	2.5 - 3.5	Yes	-	-	-	-	-	-	16.0	16.0	16.0	

Maximum differential pressures for Class VI shut-off (soft seat seal only) SB and SA valves

PNS4000 spring-to-retract actuators

Valve size				DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
K _v				4.0	6.3	10	16	25	36	63	100	160
Travel mm				20 mm						30 mm		
Actuator	Spring range	Positioner required	Minimum air pressure	Maximum differential pressure Class VI (bar)								
PNS4220	0.2 - 1.0	Optional	1.4	12.1	8.4	3.0	2.3	1.3	-	-	-	-
	0.2 - 1.0	Yes	2.0	16.0	16.0	12.1	9.9	6.9	3.3	-	-	-
	0.2 - 1.0	Yes	3.0	16.0	16.0	16.0	16.0	16.0	8.4	-	-	-
	0.2 - 1.0	Yes	4.0	16.0	16.0	16.0	16.0	16.0	13.5	-	-	-
PNS4320	0.2 - 1.0	Optional	1.4	16.0	16.0	9.1	7.4	5.1	2.3	-	-	-
	0.2 - 1.0	Yes	2.0	16.0	16.0	16.0	16.0	16.0	8.4	-	-	-
	0.2 - 1.0	Yes	3.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-
PNS4420	0.2 - 1.0	Optional	1.4	-	-	15.1	12.4	8.8	4.4	-	-	-
	0.2 - 1.0	Yes	2.0	-	-	16.0	16.0	16.0	13.5	-	-	-
	0.2 - 1.0	Yes	3.0	-	-	16.0	16.0	16.0	16.0	-	-	-
PNS4430	0.2 - 1.0	Optional	1.4	-	-	-	-	-	-	2.2	1.7	-
	0.2 - 1.0	Yes	2.0	-	-	-	-	-	-	7.4	5.9	3.7
	0.2 - 1.0	Yes	3.0	-	-	-	-	-	-	16.0	13.1	8.4
	0.2 - 1.0	Yes	4.0	-	-	-	-	-	-	16.0	16.0	13.1

PN9000 spring-to-retract actuators

Valve size				DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
K _v				4.0	6.3	10	16	25	36	63	100	160
Travel mm				20 mm						30 mm		
Actuator	Spring range	Positioner required	Maximum differential pressure Class VI (bar)									
PN9120R	0.2 - 1.0	Optional	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-
	0.4 - 1.2	Optional	16.0	16.0	16.0	16.0	16.0	16.0	15.0	-	-	-
PN9126R	1.0 - 2.0	Yes	16.0	16.0	16.0	16.0	16.0	16.0	12.0	-	-	-
PN9123R	2.0 - 4.0	Yes	16.0	16.0	16.0	16.0	16.0	16.0	5.0	-	-	-
PN9220R	0.2 - 1.0	Optional	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-
	0.4 - 1.2	Optional	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-
PN9226R	1.0 - 2.0	Yes	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-
PN9223R	2.0 - 4.0	Yes	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-
PN9320R	0.2 - 1.0	Optional	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-
	0.4 - 1.2	Optional	16.0	16.0	16.0	16.0	16.0	16.0	16.0	-	-	-
PN9330R	0.4 - 1.2	Yes	-	-	-	-	-	-	-	16.0	16.0	16.0
PN9336R	1.0 - 2.0	Yes	-	-	-	-	-	-	-	16.0	16.0	14.0
PN9337R	2.5 - 3.5	Yes	-	-	-	-	-	-	-	6.0	4.0	3.0

Valve dimensions (approximate in mm)

Valve Size	Connection and Dimensions					
	Tube end		Threaded	Sanitary clamp	Dimensions common to all connections	
	A	B	A and B	A and B	C	D
DN15	70	24	-	42.0	64	43
DN20	70	26	-	44.0	64	43
DN25	70	40	55	60.3	73	57
DN32	70	43	66	64.5	75	57
DN40	70	49	70	69.9	80	57
DN50	85	54	82	88.9	91	65
DN65	105	68	105	88.9	95	85
DN80	105	83	110	95.3	121	85
DN100	130	96	150	114.3	133	97

Valve weights (kg)

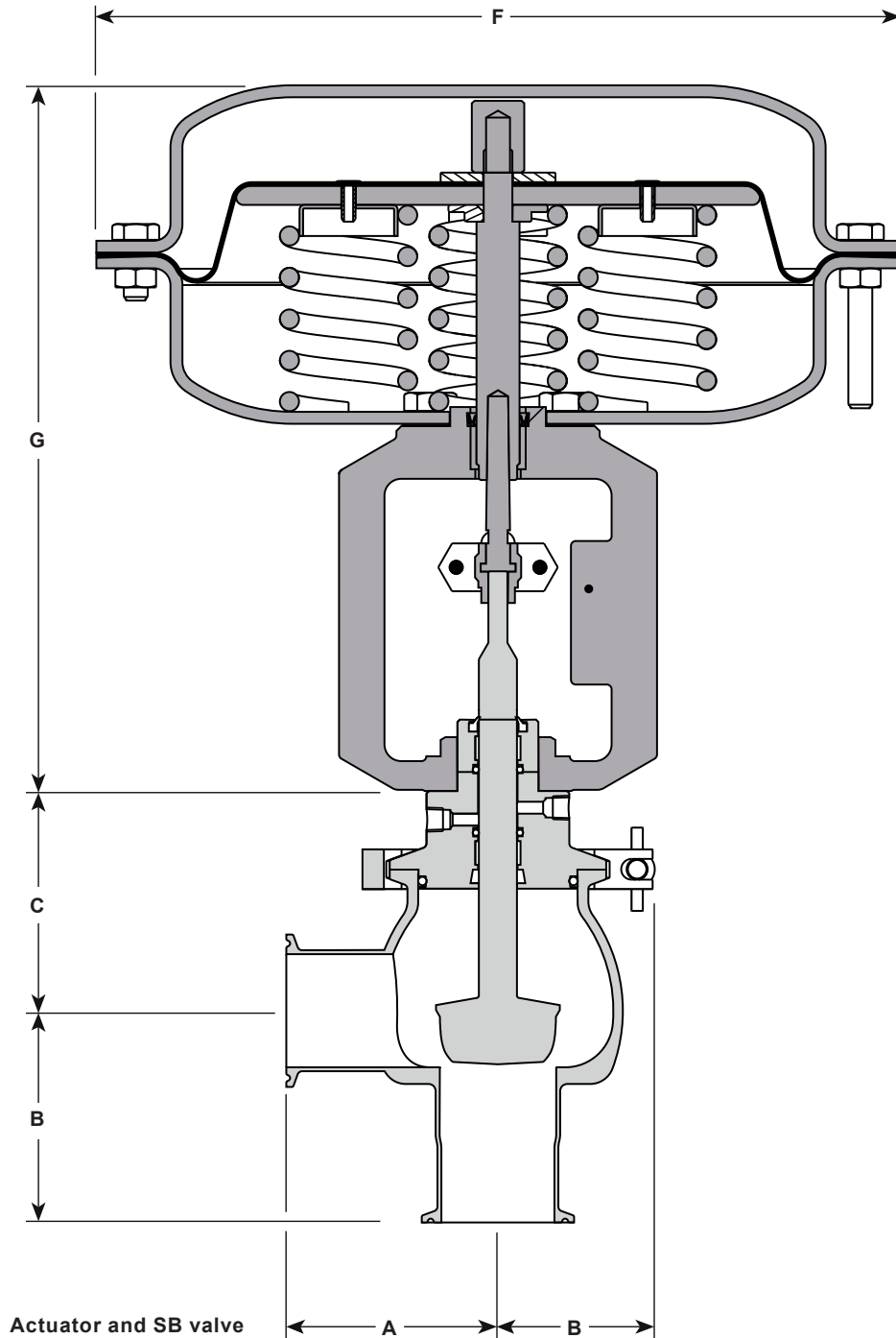
Valve size	Model SB, SA	
	Sanitary clamp and screwed	Tube end
DN15	1.5	1.0
DN20	1.5	1.0
DN25	2.5	2.0
DN32	3.0	2.0
DN40	3.0	2.5
DN50	4.0	3.0
DN65	6.5	5.5
DN80	8.0	7.0
DN100	11.0	10.0

Actuator dimensions and weights (approximate) in mm and kg

Actuator type	F	G	Weight
PNS3200 and PNS4200 series	209	240	7.2
PNS3300 and PNS4300 series	285	264	11.2
PNS3420 and PNS4420 series	336	263	20.0
PNS3430 and PNS4430 series	336	328	20.0
PNS3530 series	405	367	22.6
PNS3630 series	465	400	38.0

Dimensions/weights (approximate) in mm and kg

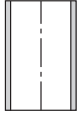

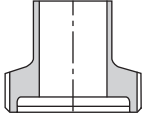
Actuator range	F	G	Weight
PN9100E and variants	275	170	6
PN9100R and variants	275	170	6
PN9200E and variants	300	300	17
PN9200R and variants	300	300	17
PN9320E and variants	325	390	27
PN9320R and variants	325	390	27
PN9330E and variants	335	390	27
PN9330R and variants	335	390	27



Connection codes

The codes specified below represent a small selection of pipe end connections that are available. If the connection required is not specified below please contact Spirax Sarco.

Note: All sizes are available for each connection/specification unless otherwise stated.

Connection		Specification	Code
Butt weld and Tube weld		DIN 11850 (Series 2)	OO
		ASME BPE (Not available for size DN32)	OD
Sanitary clamp		ASME BPE (Tri-clamp®) (Not available for size DN32)	AO
Aseptic-thread (fitted on pipe)		DIN 11864 T1 Form A	GS
		DIN 11864 T1 Form B	GT
		DIN 11887 (11851)	GU
		SMS 1146 (Not available for the DN15 and DN20 sizes)	GV

How to order

Ordering a control valve

Valve size	DN15, DN20, DN25, DN32, DN40, DN50, DN65, DN80 and DN100	DN15
	Note: DN15, DN20 and DN32 is not available for certain end connections - see page 13	
Valve series	SB = Two-port angle pattern design with Aseptic Steam Sanitized Bonnet	SB
	SA = Two-port angle pattern design	
Valve characteristic	E = Equal percentage	E
	L = Linear	
Body material	6 = 316L stainless steel	6
Connection standard	To be specified - See page 13	OO
Seating option	S = Stainless steel	S
Stem and body sealing option	V = White Viton (FDA, USP 26 Class VI approved)	V
Internal surface finish	0 = Standard 0.375 µm mechanical polishing (ASME BPE SFV4)	0
K _v	To be specified	4

Ordering a PNS, PN or PNP pneumatic actuator

Type	PNS pneumatic actuator	PNS = Pneumatic stainless steel	PN
	PN or PNP pneumatic actuator	PN = Pneumatic epoxy coated PNP = Pneumatic electroless nickel plated (ENP)	
Series and action	PNS pneumatic actuator	3 = 3000 multi-spring (spring-to-extend) 4 = 4000 multi-spring (spring-to-retract)	3
	PN or PNP pneumatic actuator	9 = 9000 series	
Diaphragm area	PNS pneumatic actuator	2 = 310 cm ² 3 = 490 cm ² 4 = 710 cm ² 1 = 100 cm ²	1
	PN or PNP pneumatic actuator	2 = 340 cm ² 3 = 670 cm ²	
Travel	PNS pneumatic actuator	2 = 20mm 3 = 30mm	2
	PN or PNP pneumatic actuator	2 = 20mm 3 = 30mm	
Spring range	PNS pneumatic actuator	0 = 0.2 to 1.0 bar (0.4 to 1.2 bar) 6 = 1.0 to 3.0 bar	0
	PN or PNP pneumatic actuator	0 = 0.2 to 1.0 bar (0.4 to 1.2 bar) 3 = 2.0 to 4.0 bar 6 = 1.0 to 2.0 bar 7 = 2.5 to 3.5 bar	
Travel		E = Spring to extend R = Spring to retract	E

Ordering example:

1 off Spirax Sarco Steri-trol type DN15 SBE6OOSV04 and 1 pneumatic actuator type PNS3320. Having a spring range of 0.4 to 1.2 bar.

Spare parts

The available spares are identified by the part numbers listed below. When placing an order for spare parts, always specify the actuator or the valve model (shown on the data plate) and the name of the part as described below.

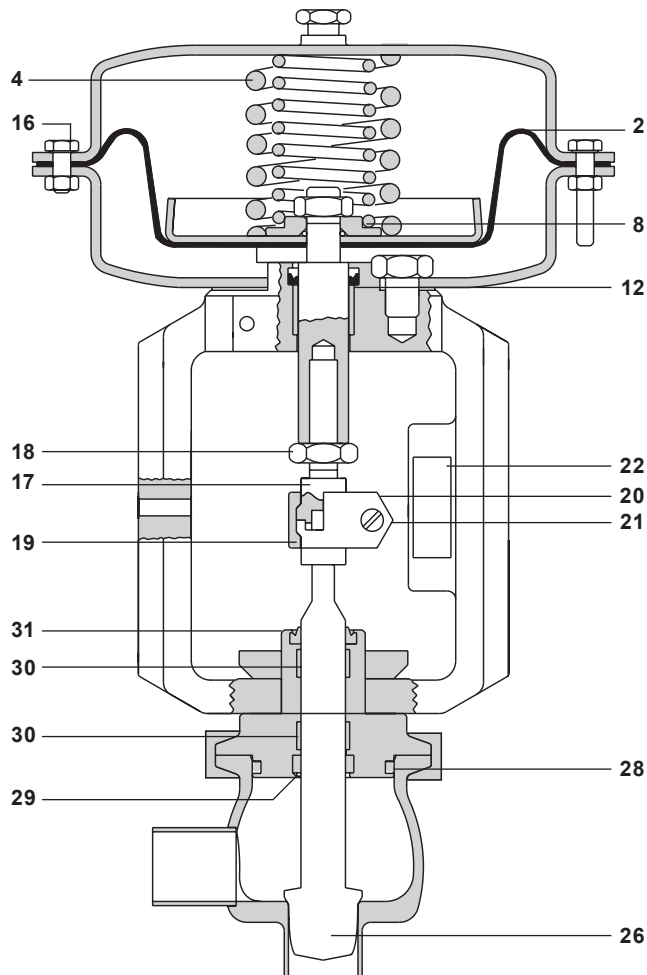
Available spares for the SA and SB control valves and the PNS3000 and PNS4000 series actuators

Description		Part number	
Stem seal kit	('O' ring and 'V' ring)	8 and 12	
Diaphragm kit	(diaphragm, 'O' ring and 'V' ring)	2, 8 and 12	
Actuator	Travel indicator	22	
	Spring kit	(set of springs, included 3 off longer hex, head bolts and nut on some spring range)	4 and 16
	Linkage kit	(lock-nut, top adaptor connectors, bolts and nuts)	17, 18, 19, 20 and 21
		Valve stem seal set (excluding bonnet seal)	29, 30 and 31
Valve	SA and SB models	Bonnet seal Viton (packet of 3)	28
		Plug and stem (Equal percentage or Linear)	26

Spare parts ordering example:

1 off Valve stem seal set for a Steri-trol DN15 SBE6OOSV04 two-port control valve.

1 off Stem seal kit for a type PNS3320 pneumatic actuator having a spring range 0.4 to 1.2 bar.



Actuator and SA valve

Note: For PN9000 actuator spares please refer to TI-P357-30