



Cert. No. LRQ 0963008

ISO 9001

spirax sarco

TI-P107-01
CH Issue 8

DP163, DP163G and DP163Y Pilot Operated

Pressure Reducing Valves with Stainless Steel Bodies

Description

The DP163, DP163G and DP163Y pilot operated pressure reducing valves have been manufactured using stainless steel.

Available types

DP163 Suitable for steam applications

DP163G Is a soft seal version available for compressed air and industrial gases. **Note: It is not recommended for oxygen service.**

DP163Y Having a lower rate pressure control spring is suitable for steriliser/autoclave applications

Sizes and pipe connections

DN15LC, DN15, DN20, DN25, DN32, DN40, DN50 and DN80.

Standard flanges: BS 4504 PN25 and PN40, BS 10 Table 'J' and ANSI 300.

Available on request: ANSI 150 and JIS 20.

Capacities

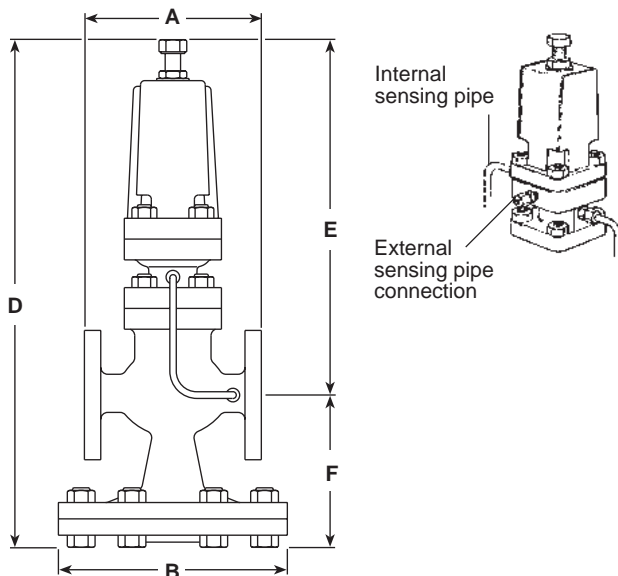
See TI-P006-03 for steam sizing and TI-P007-02 for compressed air. A low capacity version of the DN15 is available Type DN15LC. The K_V maximum values shown below are full capacities and should be used for safety valve sizing purposes only.

DN15LC	DN15	DN20	DN25	DN32	DN40	DN50	DN80
1.0	2.8	5.5	8.1	12.0	17.0	28.0	64.0

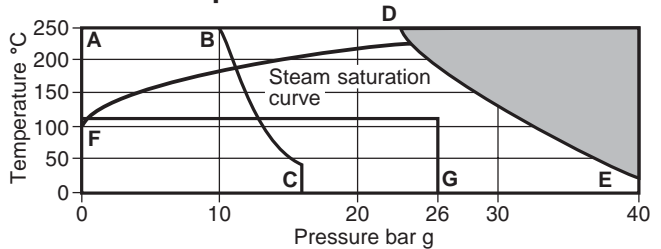
For conversion: C_V (UK) = $K_V \times 0.963$ C_V (US) = $K_V \times 1.156$

Note: Where the internal downstream pressure sensing pipe is used the valve capacity will be reduced.

Dimensions / weights (approximate) in mm and kg



Pressure / temperature limits



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

A-D-E Flanged BS 4504 PN40, BS 10 Table J and ANSI 300.

A-B-C Flanged ANSI 150.

F-G DP163G limited to 120°C and 26 bar g.

Note: Two colour coded pressure adjustment springs are available for the following downstream pressure ranges:

Red 0.2 bar g to 17 bar g

Grey 16.0 bar g to 21 bar g

Yellow 0.2 bar g to 3.0 bar g (DP163Y only)

Body design conditions	PN40
PMA Maximum allowable pressure @ 20°C	40 bar g
TMA Maximum allowable temperature	250°C
Minimum allowable temperature	-200°C
PMO Maximum operating pressure for saturated steam service	21 bar g
TMO Maximum operating temperature	250°C
Minimum operating temperature	0°C
Note: For lower operating temperatures consult Spirax Sarco.	
Δ PMX Maximum differential pressure is limited to the PMO	
Designed for a maximum cold hydraulic test pressure of 60 bar g	
Note: With internals fitted, test pressure must not exceed 40 bar g	

Sizes	BS 4504 PN40	ANSI 300	ANSI 150	BS 10 Table J	B	D	E	F	Weight
	A	A	A	A					
DN15 LC	130	130	122	130	175	405	277	128	15
DN15	130	130	122	130	175	405	277	128	15
DN20	150	150	142	150	175	405	277	128	16
DN25	160	160	156	164	216	440	288	152	23
DN32	180	183	176	184	216	440	288	152	25
DN40	200	209	200	209	280	490	305	185	40
DN50	230	236	230	243	280	490	305	185	42
DN80	310	319	310	325	350	580	322	258	103

Local regulations may restrict the use of this product to below the conditions quoted.
In the interests of development and improvement of the product, we reserve the right to change the specification.

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Materials

No.	Part	Material	
1	Adjustment screw	Stainless steel	BS 6105 A4/80
2	Adjustment lock-nut	Stainless steel	BS 6105 A4/80
3	Washer	Stainless steel	BS 1449 304 S16
4	Spring housing	Stainless steel	DIN 3100 316 C12
5	Top spring plate	Stainless steel	BS 970 431 S29
6	Pressure adjustment spring	Stainless steel	BS 2056 302 S25
7	Bottom spring plate	Stainless steel	BS 970 431 S29
8	Spring housing	Securing nuts	Stainless steel BS 6105 A4/80
		Securing studs	Stainless steel BS 6105 A4/80 M10 x 25 mm
9	Pilot diaphragm	Stainless steel	BS 1449 316 S31
10	Pilot valve housing	Stainless steel	BS 3100 316 C12
11	Pilot valve plunger	Stainless steel	BS 970 431 S29
12	Spring housing cover	Stainless steel	BS 1449 304 S12
13	Pilot valve and seat unit	Stainless steel	BS 970 431 S29
14	Internal strainer	Stainless steel	BS 1449 304 S16
15	Body gasket	Stainless steel reinforced exfoliated graphite	
16	Main valve return spring	Stainless steel	BS 2056 302 S25
17	Main valve	Stainless steel	BS 970 431 S29
18	Main valve seat	Stainless steel	BS 970 431 S29
19	Pressure sensing pipe	Stainless steel	BS 3605 304 S14
20	Main valve body	Stainless steel	BS 3100 316 C12
21	Pilot valve housing	Securing studs	Stainless steel BS 6105 A4/80
		Securing nuts	Stainless steel BS 6105 A4/80
			DN15 and DN20 M10 x 25 mm
			DN25 to DN50 M12 x 35 mm
			DN80 M12 x 35 mm
22	Main diaphragm chamber	Cast Stainless steel	BS 3100 316 C12
23	Main diaphragm	Securing bolts	Stainless steel BS 6105 A4/80
		Securing nuts	Stainless steel BS 3692 Gr. 8
			DN15 and DN20 M12 x 50 mm
			DN25 and DN32 M12 x 55 mm
			DN40 and DN50 M12 x 65 mm
			DN80 M12 x 75 mm
24	Main diaphragms	Stainless steel	BS 1449 316 S31
25	Main diaphragm plate	Stainless steel	BS 970 431 S29
26	Push rod	Stainless steel	BS 970 431 S29
27	Pipe assembly	Stainless steel	BS 3605 304 S14
28	Plug 1/8" BSP	Stainless steel	BS 970 431 S29
29	Pressure pipe union	Stainless steel	BS 970 316 S31
30	Lock-nut	Stainless steel	BS 6105 A4/80
45	Body studs	Stainless steel	BS 6105 A4/80
	Body nuts	Stainless steel	BS 3692 Gr. 8 M12 x 40 mm

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P006-07) supplied with the product.

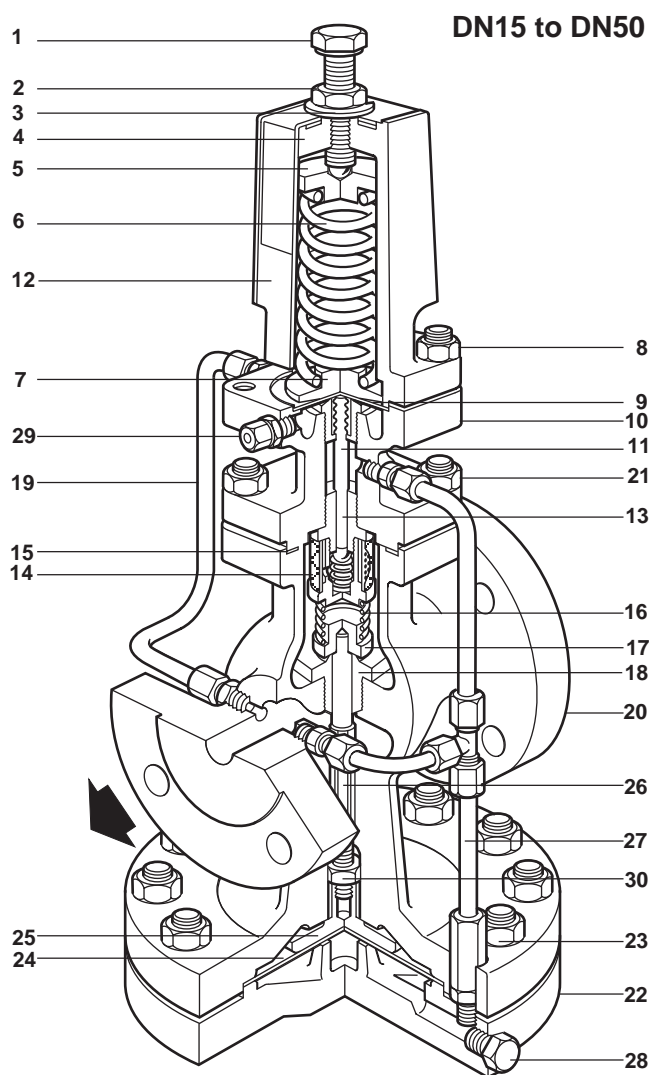
Installation note:

The valve should be installed in a horizontal pipeline with the direction of flow as indicated by the arrow on the valve body.

How to order

Example: 1 off Spirax Sarco DN32 DP163 pilot operated pressure reducing valve fitted with a red pressure adjustment spring and having flanged BS 4504 PN25 connections.

Spare parts See TI-P006-02



DN80

