

## TYPE AB PRESSURE REDUCING VALVE

The **AB pressure reducing valves** are balanced inlet design, which are suitable for use on compressed air, gas, water and oil. These valves are used in a variety of applications throughout industry, where their outstanding accuracy and reliability have been proven. The AB is also a **WRAS - Approved Product**.

Valves are supplied in sizes ½" to 2" in Stainless Steel or S. G. Iron with ends screwed female to customers requirements. Inlet pressures of up to 27.60 Barg for air and liquid service can be accommodated. **(Consult Broady Technical Sales Engineers for further information)**. Reduced pressure ranges of 0.70 – 8.30 Barg are possible.

### Specification

All valves are supplied with a nitrile disc and diaphragm for air, gases, oils, etc. as standard, but other materials are available on request. Valves for potable water service are supplied with a neoprene disc and diaphragm.

### Description of Action

High pressure is admitted to the underside of disc valve. The spring is then compressed the requisite amount and the valve opened permitting pressure to pass to the service

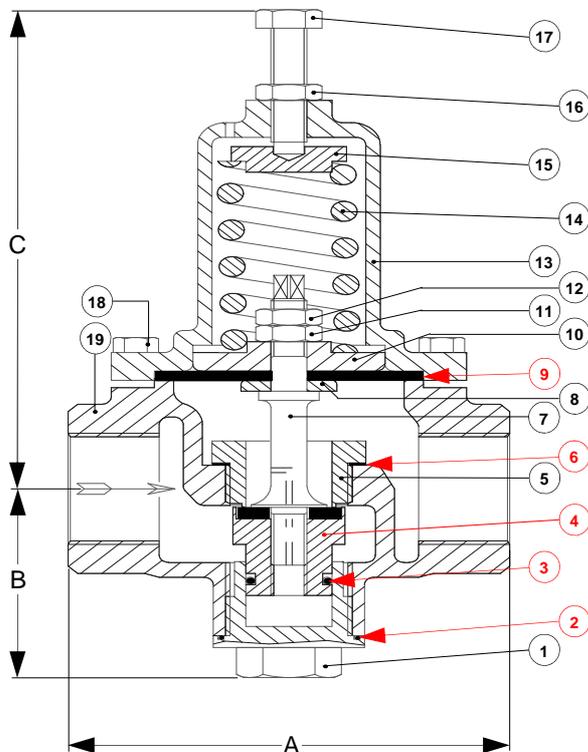
side. Expansion and consequent reduction of pressure takes place as it leaves the valve orifice and the reduced pressure is then controlled by the reaction of the spring to the reduced pressure acting upon the area of the piston. If the reduced pressure tends to fall, the spring, through the medium of the diaphragm, opens the valve and increases the orifice area. Conversely, if the pressure rises the valve closes until the required downstream pressure is restored; uniformity of the reduced pressure is thereby maintained within very close limits. The reduced pressure can be varied to requirements by compressing or relaxing the spring. The adjusting screw is provided for this purpose.

**Compressing** the spring **increases** the reduced pressure, **relaxing** the spring **decreases** the reduced pressure.

### Installation

All valves should be fitted in a horizontal pipeline with, flow in the direction of the arrow cast on the side of the body. The adjusting screw should be directly above or below the pipeline. The pipe must be clean and free from dirt, scale, etc. It is advisable to fit a stop valve on the high pressure side of the line. A relief valve should always be fitted where dead end conditions apply.

Valve for Air, Gas and Water Applications



These Items are recommended spares.

Item	Description	Material (Standard)	Material (WRAS - Approved Product)
1	Cap	Stainless Steel	Stainless Steel
2	O - Ring	Viton	Nitrile
3	O - Ring	Viton	Nitrile
4	Disc Assembly	Stainless Steel/ Viton	Stainless Steel/ EPDM
5	Seat	Stainless Steel	Stainless Steel
6	Joint, Seat	Copper	Copper
7	Spindle	Stainless Steel	Stainless Steel
8	Distance Piece	Stainless Steel	Stainless Steel
9	Diaphragm	Viton	EPDM
10	Piston	Stainless Steel	Brass
11	Locknut	Stainless Steel	Stainless Steel
12	Locknut	Stainless Steel	Stainless Steel
13	Dome	Stainless Steel	S. G. Iron
14	Spring	Stainless Steel	Carbon Steel
15	Spring Carrier	Stainless Steel	Brass
16	Locknut	Stainless Steel	Carbon Steel
17	Adjusting Screw	Stainless Steel	Carbon Steel
18	Setscrew	Stainless Steel	Carbon Steel
19	Body	Stainless Steel	S. G. Iron

Size	A	B	C
15NB	102	56	140
20NB	102	56	140
25NB	102	56	140
40NB	146	82	205
50NB	146	82	205

## TYPE AB PRESSURE REDUCING VALVE

**Air & Gas Capacities in Nm<sup>3</sup>/hr**

Pressure (Barg)		Valve Size	
Inlet	Outlet	½", ¾" & 1"	1½" & 2"
1.40	1.03	59	212
	0.70	76	271
2.80	2.00	101	373
	1.70	118	424
	0.7 - 1.40	127	458
4.10	3.40	118	424
	2.70	161	560
	0.70 - 2.00	178	628
5.50	4.80	144	492
	4.10	186	662
	3.40	212	747
	0.70 - 2.70	229	807
6.90	6.20	161	543
	5.10	229	807
	4.10	271	934
	0.70 - 3.40	280	976
8.60	7.60	212	722
	6.50	280	976
	5.50	322	1104
	0.70 - 4.50	348	1189
10.30	8.30	314	1070
	7.20	356	1240
	6.20	390	1359
	0.70 - 5.10	407	1410
12.10	8.30	424	1444
	7.20	458	1546
	0.70 - 6.20	475	1614
13.80	8.30	509	1699
	0.70 - 6.90	535	1783
15.50	8.30	594	2004
	0.70 - 7.90	603	2038
17.20	0.70 - 8.30	662	2123
18.90	0.70 - 8.30	730	2242
20.70	0.70 - 8.30	764	2463
24.10	0.70 - 8.30	849	2718
27.60	0.70 - 8.30	934	3058

**Water Capacities in Litres/Minute**

Pressure Drop (Barg)	½", ¾" & 1"	1½" & 2"
0.70	41	136
1.40	59	204
2.70	82	272
4.10	100	363
5.50	118	409
7.60	132	454
8.60	145	509
10.30	163	565
12.00	173	613
13.80	186	636
15.50	195	682
17.20	204	727
18.90	218	750
20.60	227	773

**Disclaimer**

The information, specifications and technical data contained in this catalogue are subject to change without notice. The user should verify all technical data and specifications prior to use. Broady Valves does not warrant that the material and information contained herein is current or correct and assumes no responsibility for the use or misuse of any such material and information by the user.

**Distributors for BROADY FLOW CONTROL LIMITED**

English Street, Kingston-Upon-Hull,  
East Yorkshire, HU3 2DU.

Telephone: 01482 619601 Fax: 01482 619701

Email: sales@broady.co.uk Website: www.broady.co.uk