

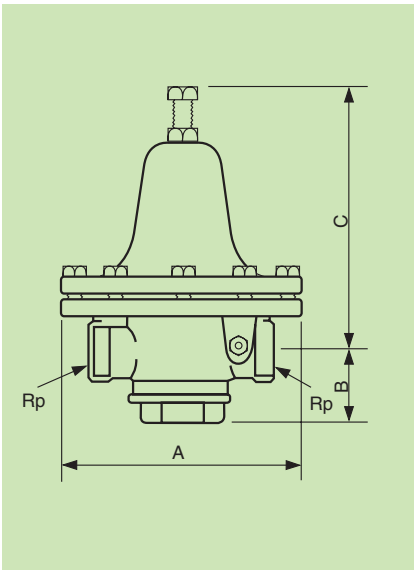
NABIC®

PRESSURE REDUCING VALVE

APPLICATIONS

The Fig 825 Pressure Reducing Valve is capable of handling the majority of lower volume process requirements for either saturated wet, or superheated steam. The design offers highly sensitive response to reduced pressure changes while maintaining the fullest possible volume without appreciable reduced pressure drop. These valves are used successfully on autoclaves, vulcanizers and sterilisers etc.

DIMENSIONS



SIZE DN	Rp BSP	A mm	B mm	C mm
15	1/2	117	45	175
20	3/4	117	45	175
25	1	143	51	184
32	1 1/4	143	51	184
40	1 1/2	159	70	292
50	2	159	70	292

Fig 825



BODY MATERIAL	: CAST IRON
MAXIMUM INLET PRESSURE	: 13.8 bar
MAXIMUM OUTLET PRESSURE	: 9.6 bar
MINIMUM OUTLET PRESSURE	: 0.2 bar

NABIC®

CONSTRUCTION

The Fig 825 body is manufactured from cast iron, with the seat, valve disc and stem from 316 stainless steel. A large bottom plug allows for removal and maintenance of the disc and filter.

To prevent vibration noises caused by certain critical flow conditions the reducer is fitted with a compensator screw, which can be adjusted to eliminate vibration.

Available in sizes DN15 to 50, the inlet and outlet connections are screwed BSP.

FEATURES

- INLINE SERVICING
- INTEGRAL FILTER
- STAINLESS STEEL TRIM AND GUIDE
- LAMINATED METAL DIAPHRAGM
- HIGH SENSITIVITY

VALVE SIZING

For steam service the correct size of valve is most important for satisfactory service and selection should be carefully considered. Generally, the smallest size valve that will satisfy the peak demands of a given installation is the correct size. If a valve is too large, wire drawing of the seat and disc will result, if it is too small, service will be inadequate and regulation will be uneven. The size of the valve is in direct relation to the demand and is determined by the weight of steam required under given initial and reduced pressures.

VALVE CO-EFFICIENTS FOR STEAM						
SIZE	DN15	DN20	DN25	DN32	DN40	DN50
CO-EFFICIENT	0.024	0.085	0.120	0.132	0.187	0.216

STEAM CAPACITY CHART																			
REDUCED PRESSURE psi	INITIAL PRESSURE (psi)																		
	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
5	1830	2250	2790	3350	3890	4430	4850	5390	5950	6480	7020	7560	8110	8540	9080	9620	10150	10720	11240
10	1670																		
15		↓																	
20		1980	↓																
25		1500	2590	↓															
30			2250	3180	↓														
35			1670	2900	3740	↓													
40				2480	3510	4300													
45				1830	3180	4100	↓												
50					2700	3820	4680	↓											
55					1980	3430	4430	5240	↓										
60						2900	4100	5020	5800	↓									
65						2120	3670	4730	5600	6360	↓								
70							3090	4360	5350	6180	6910	↓							
75							2250	3890	5020	5950	6740	7460	↓						
80								3260	4620	5660	6520	7300	8070	↓					
85								2370	4100	5300	6270	7110	7860	↓					
90									3430	4850	5950	6860	7680	8410	↓				
95									2480	4300	5550	6570	7460	8240	8950	↓			
100											3590	5070	6220	7180	8030	8800	9500	↓	↓

Required co-efficient = $\frac{\text{Required steam capacity}}{\text{Figure from above chart}}$ < Actual co-efficient from table

Eg: Initial pressure = 100psi
 Required steam = 275lb/hr
 Reduced pressure = 45psi

Required co-efficient = $\frac{275}{5950} = 0.046$

Use DN20 Fig 825 actual co-efficient = 0.085



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