



TRIDENT REGULATOR Model 4304

APPLICATION

EFFECTIVELY TACKLES YOUR STANDARD PRESSURE REGULATION OF FLUIDS

Forty-five years of experience in manufacturing and marketing pressure regulators have provided industry with this new designed valve to satisfy its standard pressure reduction requirements.

Manufactured in 1/2" (15mm), 3/4" (20mm), and 1" (25mm), sizes and with inline equivalent B.S.P. threads, this regulator incorporates a simple and reliable design. It features an integral non-return valve to meet water supply regulations. Rangeability* of this regulator series is excellent for a single-seat design.

*Rangeability (or turndown ratio)

Rangeability (turndown ratio) is the ratio of the maximum controllable flow to the minimum controllable flow. If a regulator is able to control a maximum flow of 100 gpm and a minimum flow of 10 gpm, it is said to have a rangeability of 10:1. This is the Rangeability of the TRELOAR TRIDENT.

FEATURES

- Tight shut-off.
- No seating springs to corrode.
- Negligible downstream pressure variation through large changes in upstream pressure.
- Long life single ply reinforced nitrile moulded diaphragm.
- Backed by a national, comprehensive after-sales and technical service through Treloar.

SPECIFICATIONS

Maximum Inlet Pressure.....2700 kPa (390 PSIG)
 Maximum Outlet Pressure.....700 kPa (100PSIG)
 Maximum Temperature.....90°C (200°F)
 FluidsWater, Oil and Gases
 (For clarification of oil and gases compatibility with materials of construction refer to your distributor or Treloar)

1. The maximum inlet pressure for all sizes 2700 kPa.
2. The maximum outlet (downstream) pressure 700 kPa. (limited by Diaphragm)
3. Due to the elimination of the seating spring the minimum downstream pressure required to give effective shut off at 2700 kPa (400 PSIG) inlet pressure for all sizes, is 50 kPa (7.5 PSIG)



Materials of Construction:

Body and Cap	Bronze to AS.H47.LG2C
Spring Chamber	Aluminium Alloy
Diaphragm	Moulded Nitrile Rubber
Valve Disc	Moulded Nitrile Rubber
Main Spring	Japanned Spring Steel

COVERED BY THE FOLLOWING SPECIFICATIONS:

A.S.B.57	Copper Alloy screwed pipe fittings for use in water supply and hot water services.
A.S.B.53	British Standard pipe threads.
A.S.H.47	Schedule of Copper Alloy Ingots and Copper Alloy Castings
A.S.1271	Metric standards for valves and other fittings for unfired pressure vessels.

WHEN ORDERING PLEASE SPECIFY:

- a. Flow capacity required through valve. Refer capacity table over.
- b. Upstream pressure variations. (in kPa or PSIG)
- c. Downstream pressure requirement. (in kPa or PSIG)
- d. Pipeline size preferred.
- e. "Fluid" to be regulated and its temperature. (in °C or °F).



Sizing Tables for Water - Oil - Gases

(Maximum Capacities)

PRESSURES		AIR S.cu m/hr			WATER (cu m/hr)			OIL (500SSU) (cu m/hr)		
INLET (kPa)	OUTLET (kPa)	15mm (1/2")	20mm (3/4")	25mm (1")	15mm (1/2")	20mm (3/4")	25mm (1")	15mm (1/2")	20mm (3/4")	25mm (1")
35	20	15.9	36.0	53.9	0.50	1.12	1.68	0.30	0.69	1.04
	7	22.0	49.6	74.2	0.70	1.60	2.36	0.43	0.99	0.98
70	55	17.9	40.4	60.6	0.50	1.12	1.68	0.30	0.69	1.04
	35	27.5	61.8	92.8	0.78	1.76	2.64	0.49	1.10	1.68
175	140	35.5	80.1	120.0	0.78	1.76	2.64	0.49	1.10	1.68
	105	48.5	109.0	163.0	1.12	2.48	3.76	0.70	1.54	2.32
	0-50	61.0	137.0	206.0	1.44	3.36	5.04	0.90	2.08	3.12
350	275	66.3	149.0	223.0	1.16	2.61	3.92	0.72	1.62	2.43
	210	86.0	193.0	290.0	1.60	3.52	5.28	1.00	2.18	3.28
	0-140	100.0	225.0	338.0	1.92	4.32	6.48	1.20	2.68	4.00
525	420	91.2	206.0	310.0	1.36	3.04	4.56	0.84	1.89	2.80
	350	117.0	262.0	396.0	1.78	4.00	6.00	1.10	2.48	3.72
	0-210	149.0	326.0	490.0	2.37	4.56	8.00	1.44	3.32	4.96
700	560	116.0	261.0	392.0	1.53	3.44	5.14	0.94	2.16	3.20
	490	140.0	315.0	472.0	1.88	4.42	6.39	1.17	2.64	4.00
	0-350	173.0	391.0	586.0	2.48	5.57	8.32	1.52	3.46	5.16
1050	875	161.0	362.0	544.0	1.76	3.90	5.92	1.09	2.43	3.08
	760	202.0	456.0	685.0	2.26	5.12	7.68	1.40	3.18	4.76
	0-525	256.0	577.0	866.0	3.04	6.88	10.30	1.89	4.26	6.40
1400	1190	208.0	461.0	693.0	1.94	4.40	6.56	1.20	2.73	4.06
	1050	256.0	577.0	866.0	2.50	5.62	8.40	1.54	3.49	5.20
	0-700	338.0	760.0	1142.0	3.54	7.95	11.92	2.19	4.94	7.39
2100	1760	314.0	708.0	1059.0	2.48	5.60	8.32	1.54	3.47	5.16
	1550	390.0	866.0	1299.0	3.15	7.12	10.84	1.95	4.42	6.60
	0-1050	500.0	1225.0	1688.0	4.32	9.76	14.63	2.68	6.05	9.08
2700	2250	403.0	908.0	1363.0	2.80	6.32	9.50	1.76	3.92	5.90
	2100	460.0	1035.0	1531.0	3.28	7.36	11.00	2.03	4.56	6.88
	0-1400	628.0	1412.0	2118.0	4.80	10.80	16.20	2.98	6.70	10.00

Notes on Tables:

1. Conversion Factors: 1kPa = 0.145 psi. 1 cu m/hr = 3.666 galls.m (Imp)
1 S.cu m/hr = 0.59 S.cu.ft/m (S = Standard)
2. The above chart is based on the flow of free (Standard) Air @ 16°C (60°F)
3. The flow of air or gas through a valve reaches its maximum when the Outlet Pressure is approximately equal to 55% of the Inlet Pressure. It increases very little with a greater pressure drop.
4. For any intermediate Inlet and/or Outlet Pressures not listed in the Chart, solve for capacity by direct interpolation methods.