

J48

Gas Pressure Regulator
Inlet Pressure 350mbar
Nominal Diameter 2½" – 6"



Applications

- Industrial
- Commercial

Brief information

Operation: The J48 is a highly versatile proven range of Industrial Low Pressure Regulators, suitable for a wide range of pressure reduction applications. The J48 is available in sizes from ¾" to 6", the smaller sized units (up to 2") being described in a separate leaflet.

Application: The J48 is a service and appliance regulator suitable for a wide range of domestic, commercial and industrial applications. All units are designed for natural, liquefied petroleum and manufactured gases. The J48 can be installed in both horizontal and vertical pipelines, with certain sizes available with angled connections for meter services applications. The J48 has positive lock up, and has been designed for high efficiency and sensitivity with maximum flow and minimum pressure loss.

Control: A comprehensive range of springs is available, as described overleaf. The outlet pressure can be easily and accurately adjusted by turning the spring adjustment unit located under the top cap. If required the units can be supplied factory set with a security seal at extra cost.

Approvals: The J48 range is approved to specifications T/SP/PRS/33, PRS/33/E and BS EN88-1:2007 Class A Group 2.

Technical Data:

Maximum inlet pressure:	350mbar (5 psig)
Maximum outlet Pressure:	150mb (60"wg) 2½" – 3" 345mb (5 psig) 4" – 6"
Lock-up:	SG30

Servicing: The J48 has been designed for ease of access, inspection and servicing of all internal components. A standard soft spares kit is available for all sizes.

2½" and 3"	SK4811-01
4" (Po up to 75mb)	SK4812-01
(Po above 75mb)	SK4812-05
6" (Po up to 75mb)	SK4814-01
(Po above 75mb)	SK4814-05

Main features

- Sizes 2½", 3", 65mm, 80mm, 100mm, 150mm (for ¾" – 2" see separate leaflet)
- Temperature range -20°C to +70°C
- 2½" & 3" sizes can have threaded connections to BS EN 10226 (ISO 7) or flanged to BS EN 1092-2 NP16. Other sizes only available with flanged connections
- Other thread & flange specifications may be available upon request.
- Fully inlet pressure balanced
- Full lock-up capability
- Internal impulse
- Spring loaded
- Excellent outlet pressure control
- Can be installed in horizontal or vertical pipework.



J48: Low Pressure Regulator

Regulating Capacities

All capacities in SCMH 0.64 s.g

Setting Flow Rate: 19.5 SCMH

REGULATOR SIZE: 2½"

OUTLET PRESSURE SETTING (mbar) / DROOP (%)

	10		17.5		20		27.5		50		86	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin mbar												
15	83	139	-	-	-	-	-	-	-	-	-	-
20	85	141	104	179	-	-	-	-	-	-	-	-
25	95	156	110	203	118	220	-	-	-	-	-	-
35	98	164	133	220	139	241	130	248	-	-	-	-
53	114	173	154	239	159	249	166	284	174	295	-	-
70	118	189	168	255	173	268	183	298	195	351	-	-
105	136	175	171	265	179	276	193	311	208	393	253	523
140	153	180	176	293	183	294	200	316	218	276	283	594
210	184	204	190	236	193	303	170	330	246	416	344	605
350	234	239	220	301	246	281	258	283	268	444	373	613

REGULATOR Size 3"

Setting Flow Rate: 19.5 SCMH

OUTLET PRESSURE SETTING (mbar) / DROOP (%)

	10		17.5		20		27.5		50		86	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin mbar												
15	93	156	-	-	-	-	-	-	-	-	-	-
20	106	169	115	213	-	-	-	-	-	-	-	-
25	129	183	150	263	153	294	-	-	-	-	-	-
35	165	234	200	275	206	319	143	331	-	-	-	-
53	219	268	281	344	335	605	213	350	139	315	-	-
70	275	331	325	409	419	638	288	370	205	469	-	-
105	325	388	431	519	531	556	323	423	281	544	253	606
140	400	444	575	613	594	631	420	456	329	605	369	700
210	238	338	635	724	461	596	513	585	276	580	450	725
350	238	275	675	794	666	743	656	725	619	731	369	709

J48: Low Pressure Regulator

Regulating Capacities

All capacities in SCMH 0.64 s.g.

Setting Flow Rate: 30 SCMH

REGULATOR SIZE: 4"

OUTLET PRESSURE SETTING (mbar) / DROOP (%)

	10		17.5		20		27.5		50		86	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin mbar												
15	235	268	-	-	-	-	-	-	-	-	-	-
20	333	381	182	208	-	-	-	-	-	-	-	-
25	409	467	298	340	235	269	-	-	-	-	-	-
35	525	600	408	466	408	466	298	340	-	-	-	-
53	671	767	578	650	580	662	525	600	182	208	-	-
70	829	948	777	888	759	867	701	801	484	553	-	-
105	1052	1202	1012	1156	998	1140	954	1090	809	924	492	562
140	1241	1418	1207	1379	1195	1366	1159	1325	1042	1191	822	939
210	1564	1787	1537	1757	1528	1746	1500	1714	1411	1613	1258	1437
350	2102	2402	2082	2379	2075	2371	2055	2348	1991	2275	1886	2155

REGULATOR Size 6"

Setting Flow Rate: 50 SCMH

OUTLET PRESSURE SETTING (mbar) / DROOP (%)

	10		17.5		20		27.5		50		86	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin mbar												
15	534	610	-	-	-	-	-	-	-	-	-	-
20	757	865	414	473	-	-	-	-	-	-	-	-
25	928	1061	677	773	534	611	-	-	-	-	-	-
35	1190	1360	1072	1225	928	1061	677	773	-	-	-	-
53	1525	1742	1310	1500	1300	1450	1190	1360	413	472	-	-
70	1885	2154	1767	2019	1725	1971	1593	1821	1099	1256	-	-
105	2392	2734	2300	2628	2268	2592	2169	2479	1837	2099	1117	1277
140	2821	3224	2743	3134	2716	3104	2635	3011	2369	2707	1867	2134
210	3555	4062	3493	3992	3472	3968	3408	3895	3207	3666	2859	3267
350	4777	5459	4731	5407	4716	5390	4669	5336	4524	5170	4286	4898

The above tests are performed with the regulator set at a constant inlet pressure, a predetermined flow rate and the required outlet pressure. The flow rate is then increased whilst keeping the inlet pressure constant. The capacities are recorded when the outlet pressure has fallen by 10% and 20% from the set point.

The capacities on the previous pages are given in SCMH of natural gas (0.64 SG). For other gases multiply the capacity by:

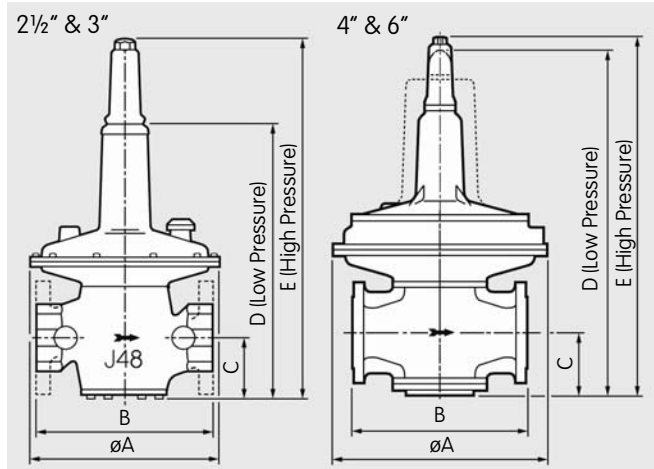
$$\sqrt{\frac{0.64}{\text{gas sg}}}$$

GAS	SG
Air	1.00
Towns Gas	0.50
Propane	1.53
Propane / Air	1.20

J48: Low Pressure Regulator

Dimensions and Weights

SIZE	A	B	C	D	E	Weight (Kg)
2½"	335	310	107	482	678	12.0
3"	335	310	107	482	678	12.0
4"	470	381	136	753	771	29.0
6"	533	482	181	873	895	47.6



Material Specifications

A summary of the material specification for the J48 is given for reference. All material has been selected to provide maximum durability and reliability in service.

Components	Specification
Body, diaphragm case, top cover, top cap, base plate, valve disc holder, valve disc clamping washer.	Aluminium Alloy
Valve spindle, spring adjusting screw, diaphragm spacer, diaphragm plates, reinforcing plate, spring holder*, secondary diaphragm washer.	Mild steel
Spring holder*	Brass
Main diaphragm, secondary diaphragm.	Fabric reinforced Nitrile (Buna)
Valve discs, "O" rings	Nitrile (Buna)
Springs	Carbon Steel

*100 – 150mm units only * 2½" – 3" units only

Loading Springs

	Spring Range		2½" & 3"	4"	6"
	mbar	"wg			
Low Pressure	6 – 15	2.6 – 6	J4811-020 White / Yellow	J3312-026 Black / Dark Green	J3314-019 Brown / Gold
	10 – 18	4 – 7		J3312-027 Black / Dark Blue	J3314-020 Brown / Light Green
	12.5 – 25	5 - 10	J4811-021 White / Black		
	23 – 38	9 – 15	J4811-022 White / Orange		
	25 – 50	10 - 20		J3314-027 Brown / Silver	J3314-036 Brown / Orange
	50 – 75	20 – 30		J3314-036 Brown / Orange	J3314-035 Brown / Light Blue
	35 – 50	14 – 20	J4811-028 White / Brown		
High Pressure	45 – 75	18 - 30	J4811-029 White		
	70 – 100	28 - 40	J4811-030 White / Red	J8112-058 White / Light Blue	J8114-036 Grey / Light Blue
	100 – 150	40 – 60	J4811-031 White / Grey	J8111-059 Yellow / Light Green	J8112-059 White / Brown
	138 – 207	2 - 3 PSI		J8112-059 White / Brown	J8112-081 White / Light Green
	138 - 345	2 – 5 PSI		J8112-082 White / Dark Blue	J8112-082 White / Dark Blue

Quality:

Elster Jeavons is committed to a programme of continuous quality enhancement. All equipment designed and manufactured by the Elster-Instromet group benefits from the group's quality assurance standards which are approved to EN ISO9001:2008.

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