

J48

Gas Pressure Regulator
Inlet Pressure 350mbar
Nominal Diameter 3/4" – 2"



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 latest version of the regulator includes a new quick release spring adjustment mechanism unit. This enhancement provides easy access for spring adjustment and routine maintenance. The J48 is available in sizes from 3/4" to 6", the larger sized units from 2 1/2" being described in a separate leaflet. Also available and described on separate leaflets are the zero, H (high inlet), and HL (high inlet, low outlet) versions.

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. The design of this mechanism provides virtually frictionless adjustment and eliminates "spring wind up". The complete spring adjustment mechanism can be removed easily for maintenance and spring changes. If required the units can be supplied factory set with a security seal at extra cost.

Approvals: The J48 range is approved to EN88-1 Class A2. They are also AGA / CGA approved to the following specifications:

CGA 6.3	- M95 / ANSI Z21.18 – 1995
CGA 6.3a	- M98 / ANSI Z21.18a – 1998
CGA 6.3b	- M100 / ANSI Z21.18b – 2000

Technical Data: Maximum inlet pressure: 350mbar (5 psig)
Maximum outlet Pressure: 160mbar (64"wg)

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.

3/4" - 1"	reference number SK4806-01
1 1/4" - 1 1/2"	reference number SK4808-01
2"	reference number SK4809-01.

Main features

- Sizes 3/4", 1", 1 1/4", 1 1/2" & 2" (for 2 1/2" – 6" see separate leaflet)
- Temperature range -20°C to +70°C
- Threaded connections to BS EN 10226 (ISO 7) or NPT (other threads may be available upon request)
- Fully inlet pressure balanced
- Full lock-up capability
- Internal impulse
- Spring loaded
- Quick release spring adjustment
- Excellent outlet pressure control



J48: Low Pressure Regulator

Regulating Capacities

All capacities in SCMH 0.64 s.g.

Setting Flow Rate: 2.8 SCMH

Lock-up: SG30

REGULATOR SIZE: 3/4"

OUTLET PRESSURE SETTING (mbar) / DROOP (%)

	10		17.5		20		27.5		50	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin mbar										
15	6.1	6.3	-	-	-	-	-	-	-	-
20	7.0	12.5	7.1	13.1	-	-	-	-	-	-
25	7.9	13.4	8.4	15.9	9.0	16.6	-	-	-	-
35	9.8	15.0	10.4	22.3	11.5	25.0	13.5	25.0	-	-
53	10.6	16.3	12.3	24.4	15.6	27.5	20.6	31.3	12.5	26.3
70	9.0	17.5	13.5	26.3	21.3	28.1	25.0	33.8	22.5	36.3
105	10.3	17.5	14.9	26.9	26.9	33.1	30.0	36.3	28.8	43.1
140	10.5	18.8	15.8	26.3	30.0	36.3	32.5	37.5	33.8	46.3
210	8.3	15.6	16.8	26.3	36.3	41.3	38.8	43.8	45.0	51.3
350	7.3	14.3	15.1	28.1	42.5	43.8	38.8	42.5	60.0	65.0

REGULATOR SIZE: 1"

OUTLET PRESSURE SETTING (mbar) / DROOP (%)

Setting Flow Rate: 2.8 SCMH

Lock-up: SG30

	10		17.5		20		27.5		50	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin mbar										
15	8.9	13.0	-	-	-	-	-	-	-	-
20	11.3	15.6	10.0	22.5	-	-	-	-	-	-
25	12.5	22.4	12.9	25.0	12.5	25.0	-	-	-	-
35	18.8	26.3	18.8	27.5	17.5	30.0	16.3	37.5	-	-
53	18.8	26.3	27.5	32.5	26.3	35.0	24.4	46.3	21.3	45.0
70	23.8	28.8	31.3	36.3	33.1	37.5	30.0	50.0	28.8	52.5
105	40.0	41.3	31.3	37.5	32.5	41.3	37.5	53.8	38.8	55.0
140	35.0	38.8	33.8	41.3	35.0	45.0	42.5	57.5	41.3	56.3
210	38.8	42.5	38.8	45.0	38.8	47.5	41.3	60.0	43.8	62.5
350	42.5	51.3	42.5	56.3	43.8	62.5	47.5	62.5	50.0	68.8

REGULATOR SIZE: 1 1/4"

OUTLET PRESSURE SETTING (mbar) / DROOP (%)

Setting Flow Rate: 2.8 SCMH

Lock-up: SG30

	10		17.5		20		27.5		50	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin mbar										
15	18.1	37.5	-	-	-	-	-	-	-	-
20	22.5	43.8	20.0	37.5	-	-	-	-	-	-
25	23.1	47.5	25.0	45.0	22.5	45.0	-	-	-	-
35	25.0	54.4	28.8	56.3	32.5	57.5	36.3	60.0	-	-
53	25.0	51.3	35.0	67.5	40.0	73.8	52.5	82.5	36.3	61.3
70	26.3	48.8	41.3	71.3	48.8	85.0	62.5	96.3	52.5	86.3
105	27.5	48.8	55.0	73.8	65.0	100.0	80.0	115.0	75.0	116.3
140	27.5	51.3	66.3	85.0	80.0	108.8	70.0	131.3	88.8	135.0
210	26.3	61.3	82.5	101.3	106.3	130.0	115.0	156.3	112.5	168.8
350	20.0	40.0	120.0	137.5	143.8	175.0	85.0	198.8	150.0	212.5

J48: Low Pressure Regulator

Regulating Capacities

All capacities in SCMH 0.64 s.g.

Setting Flow Rate: 4.2 SCMH

Lock-up: SG30

REGULATOR SIZE: 1½"

OUTLET PRESSURE SETTING (mbar) / DROOP (%)

	10		17.5		20		27.5		50	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin mbar										
15	21.3	43.8	-	-	-	-	-	-	-	-
20	26.3	51.3	21.3	42.5	-	-	-	-	-	-
25	31.3	56.3	26.3	53.8	27.5	53.8	-	-	-	-
35	42.5	68.8	33.8	70.0	36.3	71.3	42.5	71.3	-	-
53	60.0	83.8	47.5	88.8	46.3	91.3	66.3	103.8	42.5	71.3
70	73.8	98.8	53.8	105.0	57.5	107.5	81.3	127.5	60.0	105.0
105	98.8	128.8	77.5	130.0	80.0	133.8	111.3	158.8	83.3	150.0
140	116.3	145.0	115.0	152.5	100.0	157.5	135.0	183.8	96.3	180.0
210	165.0	190.0	173.8	192.5	162.5	190.0	177.5	218.8	137.5	220.0
350	231.3	241.3	212.5	223.8	225.0	250.0	237.5	287.5	200.0	295.0

REGULATOR SIZE: 2"

OUTLET PRESSURE SETTING (mbar) / DROOP (%)

Setting Flow Rate: 4.2 SCMH

Lock-up: SG30

	10		17.5		20		27.5		50	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin mbar										
15	32.5	65.0	-	-	-	-	-	-	-	-
20	41.3	92.5	40.0	75.0	-	-	-	-	-	-
25	52.5	120.0	51.3	97.5	50.0	96.3	-	-	-	-
35	85.0	150.0	87.5	140.0	85.0	137.5	72.5	132.5	-	-
53	161.3	243.8	150.0	206.3	151.3	190.0	112.5	205.0	87.5	150.0
70	175.0	300.0	212.5	287.5	216.3	271.3	193.8	275.0	150.0	225.0
105	162.5	362.5	337.5	375.0	337.5	387.5	337.5	368.8	275.0	312.5
140	168.8	337.5	375.0	400.0	450.0	462.5	443.8	452.5	337.5	412.5
210	125.0	337.5	312.5	500.0	325.0	512.5	325.0	560.0	350.0	475.0
350	125.0	325.0	125.0	325.0	331.3	412.5	337.5	425.0	462.5	525.0

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:

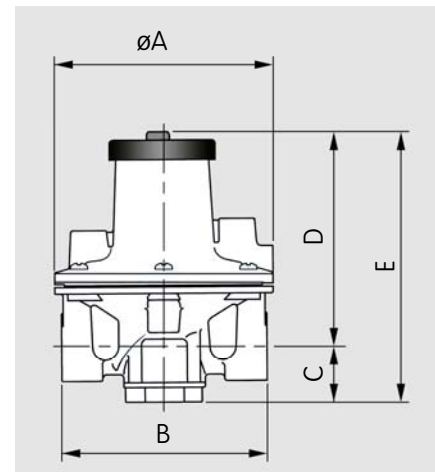
$$\sqrt{\frac{0.64}{\text{gas sg}}}$$

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)
3/4" & 1"	134	125	34	132	166	1.0
1 1/4" & 1 1/2"	185	155	45	149	194	1.9
2"	234	200	52	167	219	3.1



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, cover, spring adjusting bush, spring adjusting screw and bottom plug.	Aluminium Alloy
Top cap, locking lever, spring holder, diaphragm spacer, valve spacer and valve disc holder.	Acetal Resin (Top cap and locking lever UV stabilised)
Diaphragm plate.	Mild steel
Main diaphragm, secondary diaphragm, valve disc and "O" rings.	Nitrile (Buna)
Springs	Carbon Steel
Impulse tube	Brass

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.

Loading Springs

All springs are colour coded for ease of identification.

Spring Range Mbar	3/4" & 1"	1 1/4" & 1 1/2"	2"
5 - 15	J4806-007 Yellow	J4808-004 Red / Yellow	J4809-007 Dark Blue / Yellow
12.5 - 25	J4806-004 Black	J4808-007 Red / Black	J4809-004 Dark Blue / Black
22.5 - 35	J4806-005 Orange	J4808-008 Red / Orange	J4809-005 Dark Blue / Orange
25 - 75	J4806-101 Yellow / Black	J4808-077 Yellow / Orange	J4809-066 Yellow / Dark Green
70 - 100	J4806-079 Pink / Gold	J4808-075 Pink / Silver	J4809-065 Grey / Gold
90 - 160	J4808-077 Yellow / Orange	J4809-065 Grey / Gold	

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