

APPLICATION

The J123 is a spring loaded distribution and industrial regulator that can also be operated by auxiliary systems and is suitable for use as a monitor or active regulator. It is designed for use in installations complying with the requirements of BGC/PS/E26 (formerly DIR6) and IGE/TD/10.

All units are suitable for operation on natural, liquified petroleum and manufactured gases and can be installed in horizontal or vertical pipelines. The regulator must be externally impulsed from the downstream main at a point of minimum turbulence. A distance of at least 15 pipe diameters is recommended for the impulse tapping.

High sensitivity is assured by a high pressure rolling secondary diaphragm which maintains a constant effective area over the complete inlet pressure range. In addition the valve spindle and annular valve spindle guide provide impulsing for dynamic pressure compensation at all flow rates. A valve travel indicator and breather hole dust cap are fitted as standard on all units.

A comprehensive range of loading springs is available for outlet pressures up to 0.35 Bar (5 psig).

Modular Construction

The J123 has been designed on a modular basis which allows the regulator mechanism to be removed without disturbing the pipework. By removing only four nuts the J123 module can be withdrawn from the body. This allows routine servicing and maintenance to be undertaken under workshop conditions.

SIZES

50mm, 80mm and 100mm

TEMPERATURE

-20°C to +70°C.

CONNECTIONS

Flanged connections to BS EN 1092-2 NP16, or ANSI 125 lb. unless otherwise requested.

CAPACITY

The flow rate can be calculated using:

$$Q = K \sqrt{P_o (P_i - P_o)} \quad \text{when } P_i / P_o < 1.894$$

$$Q = K P_i / 2 \quad \text{when } P_i / P_o > 1.894$$

where Q = Flow Rate m³ / hr (SG = 0.6)

P_i = Inlet Pressure Absolute (Bar)

P_o = Outlet Pressure Absolute (Bar)

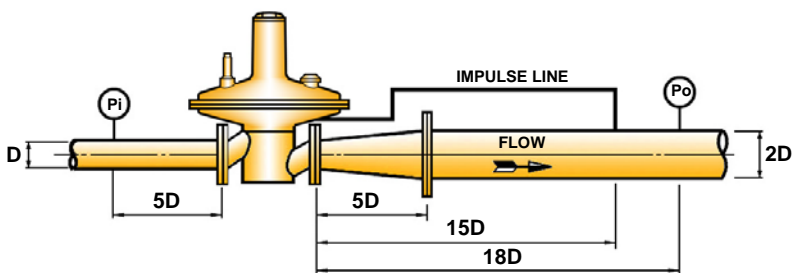
K = Flow Constant (see table)

Assuming absolute pressure = 1.014 Bar

To convert to ft³ / hr multiply by 35.315

To convert to specific gravities other than 0.6 multiply by

$$\sqrt{\frac{0.6}{\text{specific gravity of gas}}}$$



DATASHEET CS2301 ISSUE D DECEMBER 2003

Inlet Pressures up to 4 Bar (60 PSIG)

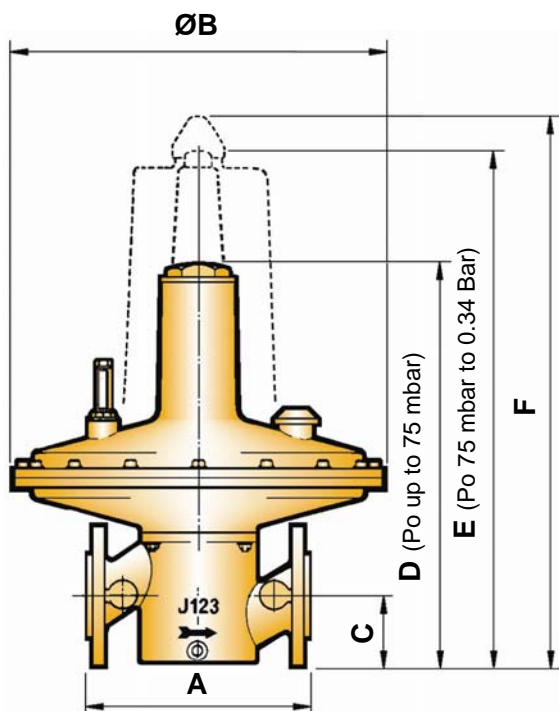


APPROVALS

The J123 has been approved to modules B + D of the PED 97/23/EC by BSI (Notified body No. 0086). It is classified as Category IV equipment and a pressure accessory.

CAPACITIES in SCMH 0.6 s.g.

Inlet Pressure	Outlet Pressure	Size		
		50mm	80mm	100mm
75 mbar	50 mbar	300	800	1105
150 mbar	50 mbar	600	1590	2210
200 mbar	50 mbar	730	1950	2710
300 mbar	50 mbar	945	2515	3500
350 mbar	50 mbar	1035	2760	3830
700 mbar	50 mbar	1520	4060	5640
1.00 Bar	50 mbar	1840	4905	6815
1.25 Bar	50 mbar	2070	5524	7675
1.50 Bar	50 mbar	2300	6134	8520
1.75 Bar	50 mbar	2530	6745	9370
2.00 Bar	50 mbar	2670	7355	10220
2.50 Bar	50 mbar	3215	8575	11910
3.00 Bar	50 mbar	3670	9795	13610
3.50 Bar	50 mbar	4130	11015	15300
Valve Factor "K"		1830	4880	6780



MATERIAL SPECIFICATION

Components	Specification
Body and Valve Seat Holder	Nodular Iron
Diaphragm Case and Top Cover	Aluminium Alloy
Main & Rolling Secondary Diaphragm	Reinforced Nitrile Synthetic Rubber
Valve Spindle, Valve Seat, Annular Valve Spindle Guide	Stainless Steel
Main Diaphragm Clamping Plates, Valve Disc Clamping Washer and Holder	Mild Steel, Zinc Plated and Passivated
Secondary Diaphragm Clamping Plates and Top Spring Holder.	Aluminium Alloy
Valve Disc and "O" rings	Nitrile Synthetic Rubber
Loading Springs	Carbon Steel, Zinc Plated and Passivated

DIMENSIONS & WEIGHTS

Size	A	B	C	D	E	F	Weight (Kg)
50	250	426	83	489	638	-	25
80	320	426	105	545	694	-	36
100	350	540	125	-	-	756	80

OUTLET PRESSURE SPRINGS

All springs are colour coded for ease of identification

Spring Range		50mm and 80mm		100mm	
		Part No.	Colour Code	Part No.	Colour Code
Low Pressure	10 – 25mbar (4 – 10"wg)	J12311-024	Dark Blue / Gold	Not Available	
	20 – 40mbar (8 – 16"wg)	J4811-029	White	J12312-026	Red / Silver
	35 – 50mbar (14 – 20"wg)	J4811-030	White / Red	J12312-027	Red / Pink
	45 – 75mbar (18 – 30"wg)	J12311-023	Dark Blue / Yellow	J12312-028	Red / Light Green
Medium Pressure	70 – 100mbar (28 – 40"wg)	J12311-022	Dark Blue / Orange	J12312-029	Red / Dark Blue
	100 – 150mbar (40 – 60"wg)	J12311-021	Dark Blue / Dark Green	J12312-030	Red / Dark Green
	0.15 – 0.2 Bar (2.2 – 3 psig)	J12311-020	Dark Blue / Light Blue	J12312-031	Red / Light Blue
	0.2 – 0.35 Bar (3 – 5 psig)	J12311-019	Dark Blue / Brown	J12312-032	Red / Brown

H.P. VERSION

For details of the high pressure version of the J123 regulator please refer to datasheet no. CS2308

QUALITY

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

A Soft Spares Kit is Available

Elster Jeavons has a programme of continuous product development and improvement and in consequence the information in this leaflet may be subject to change or modification without notice.