

J78

Gas Pressure Regulator Inlet Pressure 5 psig Nominal Diameter 1/2", 3/4" & 1"



Applications

- Industrial
- Commercial

Brief information

Operation: The J78 range is a compact, accurate and economical regulator. It is suitable for a wide range of commercial and industrial applications, including such OEM equipment as boiler and burner trains. The J78 offers positive lock up, and is available in a number of sizes, with a comprehensive range of regulator springs for different requirements.

Application: The J78 range is suitable for inlet pressures up to 5psig. It meets the essential requirements of the European Gas Directive (90/396/EEC). All units are designed for natural, liquefied petroleum and manufactured gases and can be installed in horizontal or vertical pipelines.

The regulators may be utilised for domestic meter service applications with inlet pressures up to 30"wc.

High efficiency has been obtained by careful design of the internal gas ways. Thus ensuring maximum flow with minimum pressure loss.

Options: The J78 range is available in two variants. The J78R has a plain breather port. The J78RS is fitted with a 1/4" NPT threaded breather port that can be used to ventilate to atmosphere where this additional safety feature is required.

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 cover and top cap are drilled so that a sealing wire can be easily fitted if required.

Technical Data: Maximum inlet pressure: 5 psig
Maximum outlet Pressure: Please refer to spring table.

Approvals

Jeavons J78RS Series models are 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

Servicing: The J78 has been designed for ease of access, inspection and servicing of all internal components. A standard soft spares kit is available for all sizes.

1/2" - 3/4"	reference number 52980K001
1"	reference number 52980K002

Main features

- Sizes 1/2", 3/4" and 1"
- Temperature range -4°F to +158°F
- Threaded connections to NPT (other threads may be available upon request)
- Fully inlet pressure balanced
- Full lock-up capability
- Internal impulse
- Spring loaded
- Excellent outlet pressure control



J78: Low Pressure Regulator

Regulating Capacities

All capacities in SCFH 0.64 s.g.

Setting Flow Rate: 50 SCFH

REGULATOR SIZE: 1/2"

OUTLET PRESSURE SETTING ("wc) / DROOP (%)

	4"		7"		8"		11"		14"	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin "wc										
6	124	163	-	-	-	-	-	-	-	-
8	168	212	141	181	-	-	-	-	-	-
10	199	247	168	238	155	221	-	-	-	-
Pin PSIG										
0.50	250	327	185	260	190	281	221	265	-	-
0.75	256	309	203	296	216	287	247	397	283	366
1.00	155	207	221	309	230	296	331	464	289	441
1.50	149	199	274	322	274	340	340	408	296	552
2.00	146	195	247	309	252	331	353	395	318	640
3.00	119	190	225	296	234	322	300	380	309	684
5.00	309	358	260	441	287	495	366	706	353	750

REGULATOR SIZE: 3/4"

OUTLET PRESSURE SETTING ("wc) / DROOP (%)

Setting Flow Rate: 50 SCFH

	4"		7"		8"		11"		14"	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin "wc										
6	132	252	-	-	-	-	-	-	-	-
8	150	291	221	296	-	-	-	-	-	-
10	163	344	247	406	243	362	-	-	-	-
Pin PSIG										
0.50	185	238	313	552	340	530	322	455	-	-
0.75	177	234	388	795	415	795	508	750	362	684
1.00	159	221	274	596	406	927	684	993	397	993
1.50	124	349	268	581	278	773	530	1104	402	750
2.00	119	331	243	366	265	508	265	883	441	914
3.00	172	287	238	397	252	397	331	530	388	989
5.00	234	300	247	441	366	508	419	671	419	883

REGULATOR SIZE: 1"

OUTLET PRESSURE SETTING ("wc) / DROOP (%)

Setting Flow Rate: 50 SCFH

	4"		7"		8"		11"		20"	
	10%	20%	10%	20%	10%	20%	10%	20%	10%	20%
Pin "wc										
6	177	287	-	-	-	-	-	-	-	-
8	212	335	256	455	-	-	-	-	-	-
10	238	384	353	574	331	618	-	-	-	-
Pin PSIG										
0.50	256	459	561	750	530	795	428	883	-	-
0.75	260	662	861	971	750	971	750	1192	750	1236
1.00	795	883	971	1059	883	1148	971	1457	1082	1589
1.50	574	971	1059	1324	927	1324	1059	1898	1766	1898
2.00	927	1192	1104	1148	1059	1280	1766	2163	1986	2163
3.00	1059	1236	1368	1457	1368	1457	1677	2295	2340	2472
5.00	119	181	238	441	199	327	238	450	340	1457

J78: Low Pressure Regulator

The tests opposite 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 SCFH of natural gas (0.64 SG). For other gases multiply the capacity by:

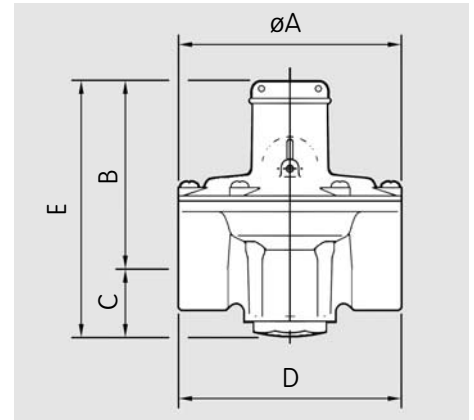
$$\sqrt{\frac{0.64}{\text{gas sg}}}$$

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

J78: Low Pressure Regulator

Dimensions and Weights

SIZE	A		B		C		D		E		Weight (oz)	
	R	RS	R	RS	R	RS	R	RS	R	RS	R	RS
1/2"	3.93"	3.93"	3.23"	3.54"	1.18"	1.18"	3.93"	3.93"	4.41"	4.72"	18.3	19.2
3/4"	3.93"	3.93"	3.23"	3.54"	1.18"	1.18"	3.93"	3.93"	4.41"	4.72"	16.9	17.7
1"	3.93"	3.93"	3.23"	3.54"	1.57"	1.57"	4.13"	4.13"	4.80"	5.12"	18.8	19.6



Material Specifications

A summary of the material specification for the J78 is given for reference. All material has been selected to provide maximum durability and reliability in service.

Components	Specification
Body, cover, bottom plug (1"), diaphragm spacer (1").	Aluminum Alloy
Top cap.	Zinc Alloy
Spring holder, valve spacer, diaphragm spacer (3/4"), valve, valve disc holder (1"), valve spacer (1").	Acetal Resin
Diaphragm plate, secondary diaphragm clamping plate.	Mild Steel
Main diaphragm, secondary diaphragm, valve seat (3/4"), valve disc (1") and "O"ring seals.	Nitrile (Buna)
Springs.	Carbon Steel
Impulse tube, bottom plug (3/4").	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 ISO9001:2000.

Loading Springs

All springs are color coded for ease of identification.

SPRING	Spring Range ("wc)				COLOR CODE
	J78RS		J78R		
	1/2" - 3/4"	1"	1/2" - 3/4"	1"	
70017P093	0.8 - 5.5	1.6 - 4.5	2.4 - 3.6	3.4 - 5.2	Dark Green / Red
70017P094	0.8 - 6.4	2.4 - 8.4	3.6 - 6.8	5.2 - 7.6	Yellow
70017P095	4 - 8	5.2 - 10.4	6 - 9.2	8 - 9.6	Black
70017P096	6.4 - 11.2	7.2 - 14.4	8.8 - 12.4	10.8 - 12.8	Orange
70017P097	8.8 - 16	11.2 - 19.3	12.4 - 17	14.9 - 18.5	Brown

Contact

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