

# Spring Loaded Regulator

A spring loaded pressure regulator used for quick control of outlet pressure. Accurate, economic and manually adjustable. Ideal for low to medium pressure applications.

For an operational overview, please refer to pages 18 and 19.



## Standard Features

**Valve Size:**

- 1/16" UNBALANCED

**Materials of construction:**

- BODY - BRASS - BS EN12164 CW614N
- SPRING HOUSING - ALUMINIUM - L168-T6511
- SEAT - STAINLESS STEEL - BS EN 10088 1.4401
- TRIM - PCTFE
- ELASTOMERS - HIGH NITRILE
- HANDWHEEL - PLASTIC

**Connections:**

- LINE 1/4" BSPP; GAUGE 1/8" BSPP (INLET & OUTLET)

**Maximum Inlet Pressure:**

- 210 BAR (3047 PSI) BRASS
- 450 BAR (6530 PSI) ST/STL

**Outlet Pressure Range:**

- 0 - 10 BAR (0 - 145 PSI)

**Media:**

- GASES
- INTEGRAL 25 MICRON FILTER SUPPLIED

**Weight:**

- 0.68Kg (1.5lbs)

## Additional Features

- LIMIT STOP DEVICE
- LOCKING DEVICE
- BASE MOUNTING
- DIFFERENTIAL CONTROL
- RELIEF VALVE
- SUITABLE FOR LIQUID (NO FILTER)
- 450 BAR (6530 PSI) INLET PRESSURE
- METAL DIAPHRAGM

## Options

**Valve Size:**

- 3/32" UNBALANCED

**Materials of construction:**

- BODY - STAINLESS STEEL - BS EN 10088 1.4401
- ELASTOMERS - FLUOROCARBON OR EPDM

**Connections:**

- 3/8" BSPP LINE, GAUGE 1/4" BSPP (INLET & OUTLET)
- 1/4" NPT LINE, GAUGE 1/4" BSPP (INLET & OUTLET)
- 3/8" NPT LINE, GAUGE 1/4" BSPP (INLET & OUTLET)

## Applications

- Gas distribution
- Pressure test rigs
- Piloting for dome-loaded regulators
- Gas mixing
- Oxygen Service
- Chemical processing
- Air compressors
- Differential regulation applications
- Analyser systems
- Sampling

## Ordering Information

TYPE	VALVE SEAT SIZE	MATERIAL OPTION	CONNECTIONS	OUTLET PRESSURE	LIQUID OR GAS USE	ELASTOMER	RELIEF	ADJUSTER OPTIONS	SPRING HOUSING
J20	Y (1/16") Z (3/32")	A9 (ST/STL) R1 (BRASS)	E1 (1/4" BSPP) E2 (3/8" BSPP) A1 (1/4" NPT) A2 (3/8" NPT)	E (0 - 0.7 BAR) J (0 - 2 BAR) N (0 - 7 BAR) P (0.1-10 BAR)	L (LIQUID) G (GAS)	N (NITRILE) V (FLUOROCARBON) E (EPDM) P (PCTFE & METAL DIAPHRAGM)	(BLANK NOT REQUIRED) R (RELIEF FITTED)	(BLANK NOT REQUIRED) L (LOCKING) S (LIMIT STOP)	(BLANK FOR BASIC) D (DIFFERENTIAL)

ORDERING INFORMATION EXAMPLE:

J20YA9E1PGNR

## Notes

## Technical Specifications

### Pressure

	PRESSURE	BODY MATERIAL
TEST (PROOF) PRESSURE	675 BAR (9794 PSI) 315 BAR (4571 PSI)	STAINLESS STEEL ONLY BRASS ONLY
MAXIMUM INLET PRESSURE	450 BAR (6530 PSI) 210 BAR (3047 PSI)	STAINLESS STEEL ONLY BRASS ONLY

### Outlet Pressure Ranges

PRESSURE	SENSING
0 - 0.7 BAR (0 - 10 PSI)	DIAPHRAGM
0 - 2 BAR (0 - 29 PSI)	DIAPHRAGM
0 - 7 BAR (0 - 101 PSI)	DIAPHRAGM
0.1 - 10 BAR (1.5 - 145 PSI)	DIAPHRAGM

### Leakage

STANDARD	BUBBLE TIGHT (TYPICALLY $10^{-6}$ atm.cm <sup>3</sup> /sec <sup>-1</sup> )
ON REQUEST	HELIUM LEAK TESTED TO $10^{-8}$ atm.cm <sup>3</sup> /sec <sup>-1</sup>

### Temperature Range

	TEMPERATURE	BODY MATERIAL
STANDARD	-10°C TO +100°C	ALL
OPTION	-40°C TO +150°C	CONSULT IVP

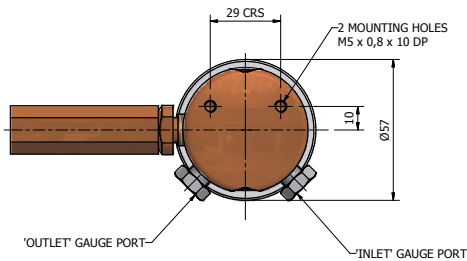
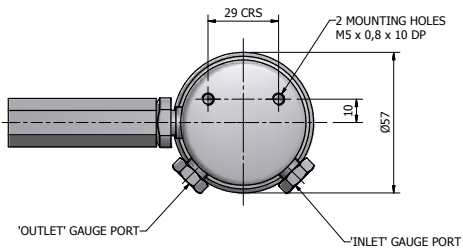
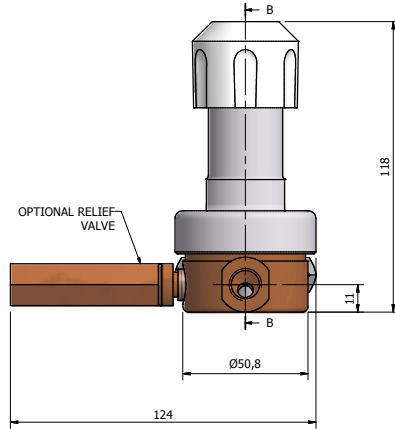
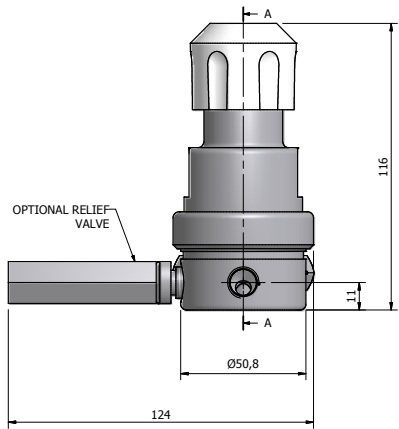
### Valve Size

	1/16"	3/32"
NOMINAL SIZE	1.6mm (1/16")	2.4mm (3/32")
ORIFICE AREA A1	0.9mm <sup>2</sup> (0.0014in <sup>2</sup> )	3.35mm <sup>2</sup> (0.0052in <sup>2</sup> )
PORT AREA A2	32mm <sup>2</sup> (0.05in <sup>2</sup> )	32mm <sup>2</sup> (0.05in <sup>2</sup> )
FLOW COEFFICIENT	Kv = 0.025 (Cv = 0.03)	Kv = 0.1 (Cv = 0.12)

### Spares Code

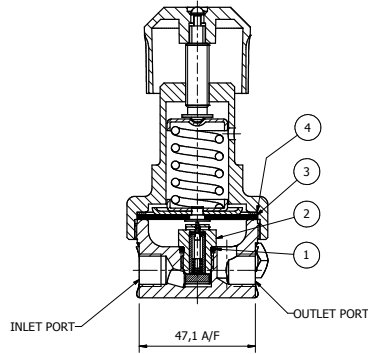
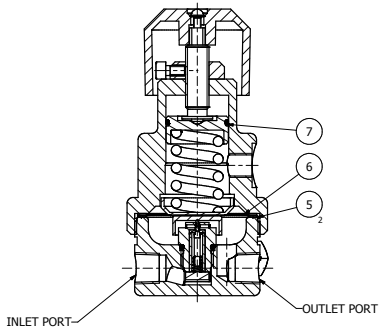
SPARES	VALVE SEAT SIZE	ELASTOMER	SPRING HOUSING
J20SPS	Y (1/16") Z (3/32")	N (NITRILE) V (FLUOROCARBON) E (EPDM) P (PCTFE & METAL DIAPHRAGM)	(BLANK FOR BASIC) D (DIFFERENTIAL)

## Technical Specifications



SECTION VIEW 'A-A'  
DIFFERENTIAL SPRING HOUSING  
METAL DIAPHRAGM - WITH LIMIT STOP  
TAPER THREADED PORTS

SECTION VIEW 'B-B'  
BASIC SPRING HOUSING  
RUBBER DIAPHRAGM  
PARALLEL THREADED PORTS



## Spares BOM

ITEM	DESCRIPTION	MATERIAL	REQUIRED			
1	'O' RING/WASHER	Rubber/PCTFE	*	*	*	*
2	VALVE CAPSULE ASSEY	Various	*	*	*	*
3	DIAPHRAGM ASSY	Various	*	*	*	*
4	GASKET	PCTFE	*	*	*	*
5	GASKET	Composite	*	*	*	*
6	METAL DIAPHRAGM	St. Stl.	*	*	*	*
7	'O' RING	Rubber	*	*	*	*

BASIC SPRING HOUSING (NON PCTFE)

BASIC SPRING HOUSING (PCTFE)

DIFFERENTIAL SPRING HOUSING (NON PCTFE)

DIFFERENTIAL SPRING HOUSING (PCTFE)