11-018

Precision Air Pressure Regulator
1/4" Port Size

Fast response

Minimum overshoot during flow changes

Precision regulation obtained by pilot valve design - small change in the pilot valve position results in a large change in the main valve position

Constant bleed feature provides maximum sensitivity to system changes

Relieving feature allows reduction of downstream pressure when the system is dead-ended

Ordering Information. Models listed have PTF threads, hand wheel adjustment, and relieving diaphragm. A gauge is not included.

Port Size	Outlet Pressure Adjustment Range*	Model Number	Flow scfm (dm^3/s)	Weight lbs (kg)
1/4"	0.4 to 10 psig (0.03 to 0.69 bar)	11-018-146	12 (5.66)†	1.4 (0.64)
1/4"	1.0 to 60 psig (0.1 to 4.1 bar)	11-018-100	12 (5.66)†	1.4 (0.64)
1/4"	3 to 150 psig (0.2 to 10.3 bar)	11-018-110	12 (5.66)††	1.4 (0.64)

* Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.
† Typical flow with 100 psig (7 bar) inlet pressure, 60 psig (4.1 bar) set pressure and 0.125 psig (0.009 bar) droop from set.
†† Typical flow with 200 psig (14 bar) inlet pressure, 60 psig (4.1 bar) set pressure and 0.250 psig (0.017 bar) droop from set.
Note: 5 micron prefiltration required.

Alternative Models

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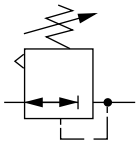
Threads	Substitute
PTF	0
ISO G parallel	8
ISO G Rc	9

Screw Adjustment	Substitute
-100 with slotted screw adjustment	101
-110 with slotted screw adjustment	112

ISO Symbols



Relieving

Service Kits

Type	Part number
Low Pressure Models	2787-01
High Pressure Models	2787-02
Special tool to install main valve seat	681-01

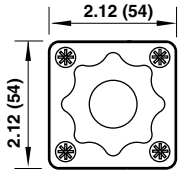
Service kit includes o-rings, seals, pilot diaphragm, pilot spring, main diaphragm, main valve, main valve seat, diffuser screen, constant bleed orifice and orifice filter

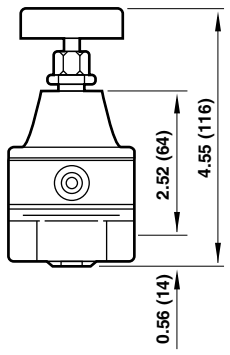
11-018 Precision Air Pressure Regulator

Technical Data

Fluid: Compressed air
Low Pressure Models:
11-018-100 and 11-018-146
High Pressure Models:
11-018-110
Inlet pressure range*
Low Pressure Models: 8 to 150 psig (0.55 to 10.3 bar)
High Pressure Models: 10 to 200 psig (0.7 to 13.8 bar)
* Inlet pressure must be at least 7 psig (0.5 bar) greater than the adjusted outlet pressure for proper operation.
Operating temperature*: 32° to 160°F (0° to 70°C)
** Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).
Flow capacity with 100 psig (6.9 bar) inlet pressure
11-018-146: 12 scfm (5.7 dm^3/s) with set pressure of 10 psig (0.7 bar)
11-018-100 and 11-018-110: 20 scfm (9.4 dm^3/s) with set pressure of 20 psig (1.4 bar). A small pressure droop occurs at flows above 12 scfm (5.7 dm^3/s).
Repeatability
Low Pressure Models: 0.02 psig (0.001 bar) for flow change; 0.05 psig (0.004 bar) when turning supply off and on
High Pressure Models: 0.08 psig (0.006 bar) for flow change; 0.16 psig (0.011 bar) when turning supply off and on
Constant bleed feature: Under dead-end conditions, a small, constant bleed of pilot air will escape thru the relief passage in the bottom plug. This will be accompanied by a slight residual outlet pressure of 1 to 4 inches H_2O (2.5 to 10 millibar).
Gauge ports:
1/4" PTF with PTF main ports
Rc1/4 with ISO G and ISO Rc main ports
Materials
Body: Zinc
Bonnet: Zinc
Main valve: Polycarbonate
Main valve seat: Teflon
Pilot valve: Stainless steel
Pilot valve seat: Aluminum
Main diaphragm: Nitrile
Pilot diaphragm
Low Pressure Models:302 SS
High Pressure Models: Nitrile
Bottom plug: Brass
Elastomers: Nitrile, neoprene, polyurethane

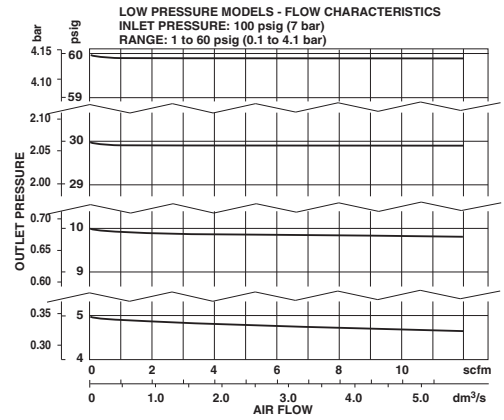
All Dimensions in Inches (mm)

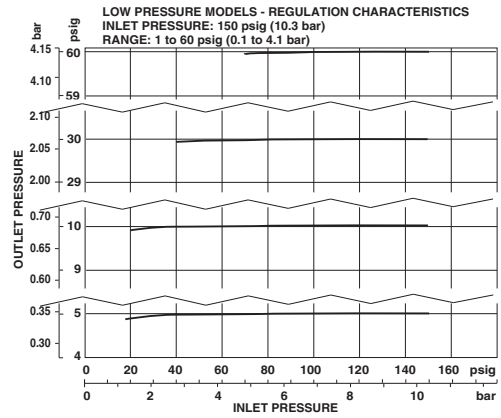


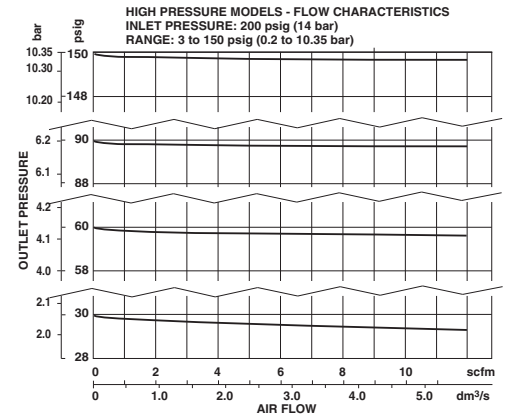


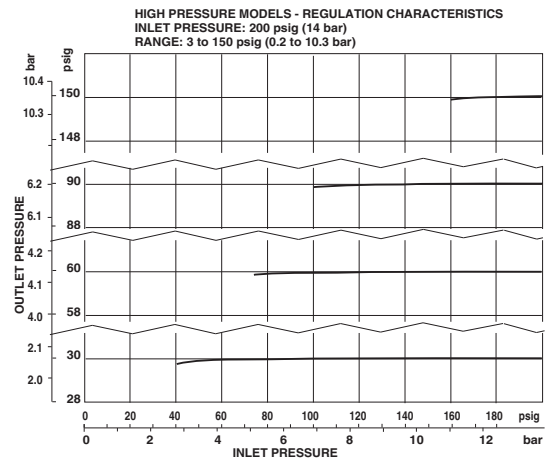
Panel mounting hole diameter: 0.47" (12 mm)
Maximum panel thickness: 0.094" (2.4 mm)

Typical Performance Characteristics









Instrument Regulator
Aluminum Model 1/4" Port Size

Compact instrument units with high performance

Stable regulation with temperature compensation

Excellent flow and regulation characteristics

Panel Mounting facility

Ordering Information. Models listed are relieving type with 0.6 to 30 psig (0.04 to 2 bar) outlet pressure adjustment range *, and PTF threads. A gauge is not included.

Port Size	Model Number	Flow† scfm (dm^3/s)	Weight lbs (kg)
1/4" PTF	R38-200-RNCA	17 (8)	1.06 (0.48)

† Typical flow with 100 psig (7 bar) inlet pressure, 15 psig (1 bar) set pressure and 1 psig (0.05 bar) droop from set.

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Port Size	Substitute
1/4" PTF	2

Material	Substitute
Aluminum, nitrile elastomers	0
Aluminum, Viton elastomers	1

Mounting Option	Substitute
Without	0
With handwheel only	5

Note: For kit including panel nut, mounting bracket, and handwheel order part number: 5990-01, and choose "0" (without) in the mounting option table.

Threads	Substitute
PTF	A
ISO Rc taper	B
ISO G parallel	D
API.LP.INT	K

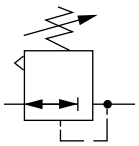
Outlet Pressure Adjustment Ranges*	Substitute
0.6 to 30 psig (0.04 to 2 bar)	C
1 to 60 psig (0.07 to 4 bar)	F
3.6 to 100 psig (0.25 to 7 bar)	K

Gauges	Substitute
Without	N

Diaphragm	Substitute
Relieving	R
Non relieving	N

* Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.

ISO Symbol



Technical Data

Fluid: Compressed air
Maximum pressure: 290 psig (20 bar)
Operating temperature: -40° to 175°F (-40° to 80°C) *

* Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).

Typical flow at 100 psig (7 bar) inlet pressure, 15 psig (1 bar) set pressure and a droop of 1 psig (0.07 bar) from set: 17 scfm (8 dm^3/s)

Typical relief differential at 30 psig (2 bar) outlet pressure:
2.3 psig (0.16 bar)

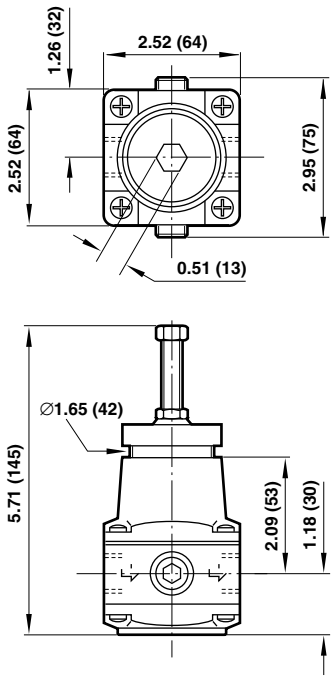
Maximum bleed flow at 30 psig (2 bar) outlet pressure (relieving types only):
0.003 scfm (1.5 cm^3/s)†

† Maximum bleed rate occurs under dead-end (noflow) conditions.

Gauge ports:
1/4 NPT

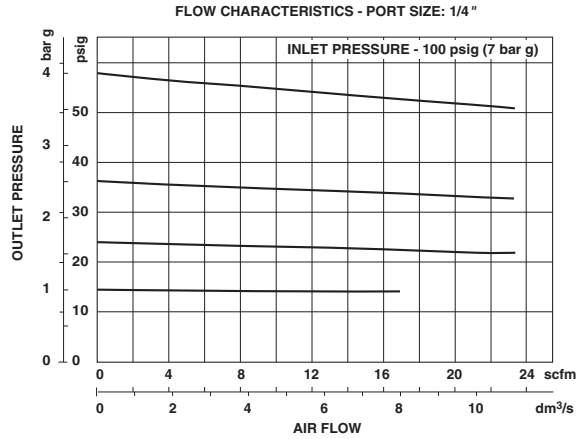
Materials
Body: Aluminum
Bonnet: Aluminum
Adjusting screw: Steel
Elastomeric materials: Nitrile

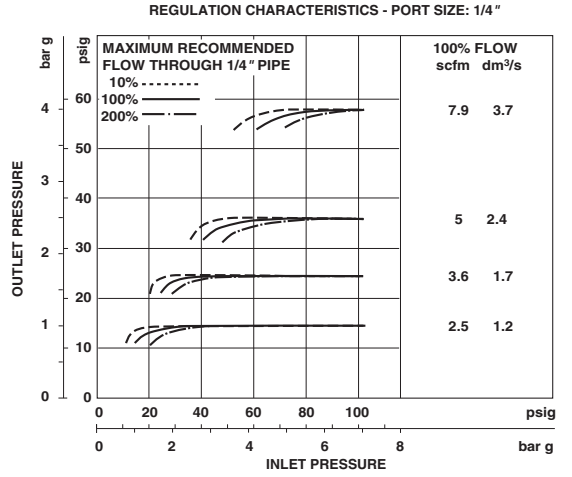
All Dimensions in Inches (mm)



Panel mounting hole diameter: 1.65" (42 mm)
Panel thickness: 0" to 0.24" (0 to 6 mm)

Typical Performance Characteristics





Service Kits

Item	Type	Part number
30 psig (2 bar) Range	Relieving	R38-100-R
	Non relieving	R38-100-NR
60, 105 psig (4 bar, 7 bar) Range	Relieving	R38-101-R
	Non relieving	R38-101-NR

Service kit includes diaphragm assembly, o-ring, valve, valve spring and 8 pan head screws.