

Features

- Compact size
- Low hysteresis
- Precision control
- .16% Repeatability
- Stud mount, 10-32 UNF
- Compatible with Nitrogen and Helium
- Self relieving



Miniature Precision Regulator

Pneumadyne's new Miniature Precision Regulator offers highly accurate air pressure control in a compact package; ideal for limited space applications.

This precision machined, high quality regulator features an output pressure range up to 100 psi and high flow rate of 4.5 scfm. With a maximum supply pressure of 250 psi, our Precision Regulator is extremely dependable and repeatedly returns to the set pressure when turned off and on. Exceptionally tight design tolerances effectively minimize vibration allowing the regulator to remain stable under changing operating conditions.

Highly accurate air pressure control in a compact package

Performance Data

Temperature Range	Operating Pressure	Maximum Supply Pressure	Media
-40° to + 248°F	0 to 100 psi	250 psi	Clean, Dry Air

Output Pressure Range	Flow Rate		Repeatability	Set-ability	Air Consumption
	50 psi	100 psi			
0 to 100 psi	2.5 scfm	4.5 scfm	0.16 %	.15 psi	1.0 scfh max

Materials

Body: Electroless Nickel Plated Aluminum
 Stem: Stainless Steel
 Seals: Buna-N
 Spring: Stainless Steel
 Piston: Carbon-Graphite
 Sleeve: Pyrex® Glass

Mounting Method

Stud Mount: 10-32 UNF (footprint provided)
 Panel Mount: Nominal mounting hole dimension 31/64"

Miniature Precision Regulator Cross Section

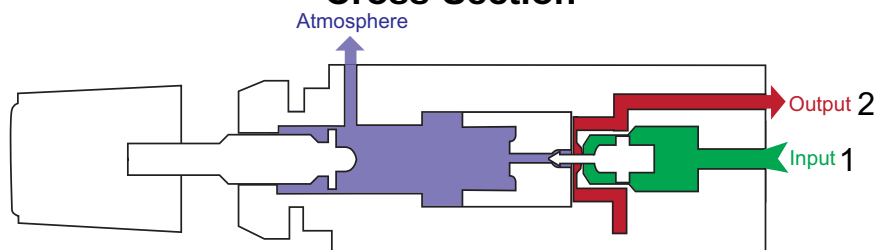


figure A

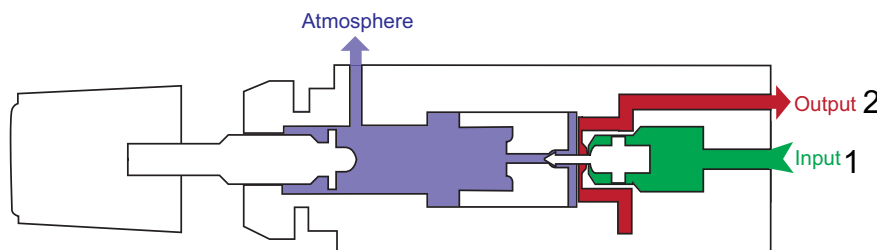
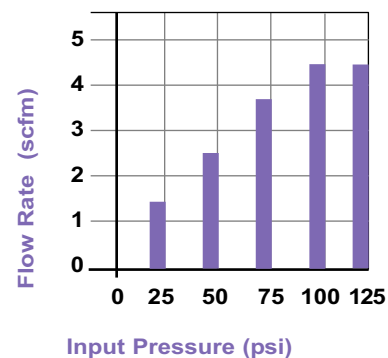
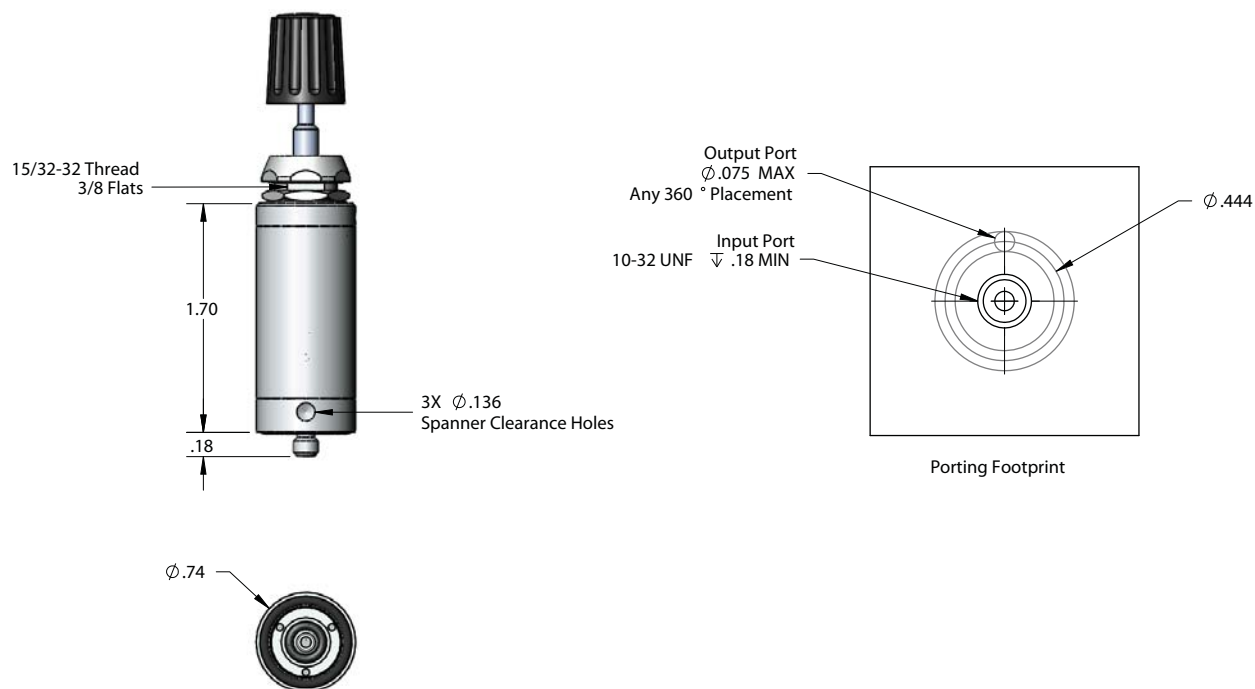


figure B

Miniature Precision Regulator Flow Chart



Miniature Precision Regulator



Ordering Information

- To order standard product use Part Number **PPR-S-100**.
- Optional seals available- contact factory.

Features

- Mounting versatility
- Knurled knob or Instrument quality knob
- Push-to-connect fittings available
- "O" Series input port rotates 360°
- "11" Series output port rotates 360°
- Direct gauge mount to output (11 Series)



Pressure Regulators

Pneumadyne's "O" & "11" Series Pressure Regulators are used to maintain a preset downstream pressure. Relieving and non-relieving styles are available to accommodate application requirements.

To ease regulator installation, porting options include 10-32 UNF, 1/8 NPT, barbs and push-in connections. For alignment purposes, the "O" Series features a swivel input and the "11" Series features a swivel output port.

The "11" Series can be mounted on a manifold allowing the consolidation of components with varying output pressures on a common pressure source (see figure C - System 11). Pneumadyne's micro gauge can be mounted on the "11" Series regulator with an extended gauge port providing an on-site pressure indicator.

Choose from a knurled knob or an Acetal panel knob for precision adjustment. Regulator components are anodized or Electroless nickel plated for corrosion and wear resistance.

Performance Data

Temperature Range	Operating Pressure	Max. Input Pressure	C _v Full Open	Flow Rate (scfm)	
				50 psi	125 psi
-20°F to 160°F	30 psi to 125 psi	125 psi	.27	9.8	22

C_v per ANSI / (NFPA) T3.21.3

Materials

Aluminum/ Black Anodize, Brass and Steel/ Electroless Nickel, Brass/ Black Dichromate, Buna-N, Stainless Steel, Acetal

Function

Relieving Regulator

Figure A - Adjustment of the control knob to a pre-determined level shifts the piston, unseating the Buna-N poppet and allowing air to flow through port 1 to port 2. When the set pressure is reached, the pressure under the piston and the force exerted by the spring are balanced producing a regulated output at port 2. A minimum of 30 psi input is required to maintain regulation.

Figure B - When downstream pressure exceeds the set level the poppet is seated -blocking input flow 1. The back pressure flows *in* output 2 lifting the Buna-N cup seal and piston allowing air to pass through the hollow stem and out the exhaust port 3.

Non-relieving Regulator

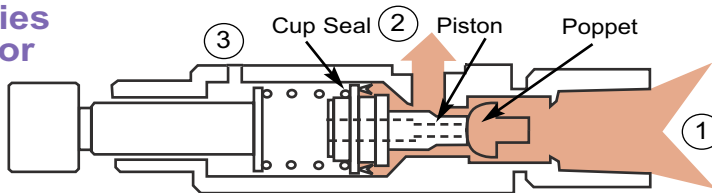
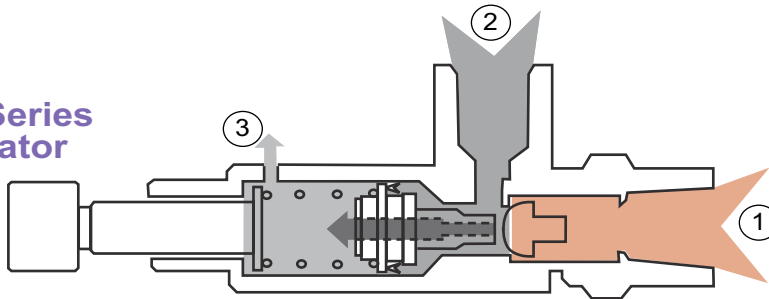
The non-relieving regulator flow path- input 1 to output 2- is the same as the relieving regulator, however the non-relieving regulator contains a solid piston that does not permit backflow at output port 2 to be exhausted.

Warning: for safety reasons only non-relieving regulators are recommended for use with liquids and with adequate means of downstream relief.

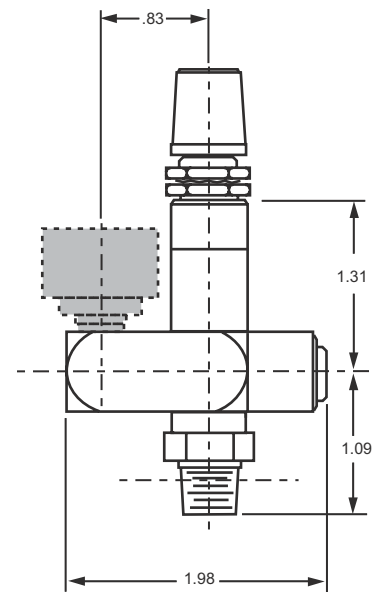
Regulator Cross Section

“O” Series
Regulator

figure A

“11” Series
Regulatorfigure B *Relieving Mode*

Extended Port

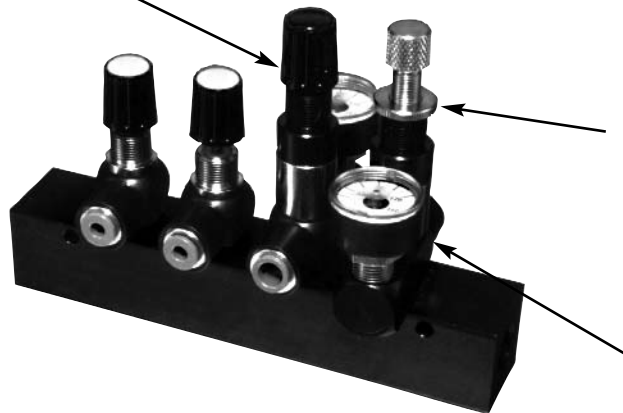


The “11” Series Regulator with extended gauge port housing and micro gauge installed (to prevent damage the gauge is packaged and sold separately). [Gauge data](#)

Control Knob- select the knurled knob manufactured from steel or the panel knob molded from durable acetal -both are standard actuators.

Slotted adjustment screw- also available- *contact factory.*

figure C



Locking Nut- RLN-40 (*sold separately*)- available to lock adjustment and eliminate possible setting variance, ideal for locations requiring infrequent adjustment.

Micro Gauge- PMG-60, PMG-160 (*sold separately*)- can be mounted on the “11” Series regulator with an extended gauge port providing an on-site pressure indicator. To order a gauge ready regulator add a “-G” suffix to the part number.

System 11- a method of consolidating 2 to 10 components with a common pressure source. Component selection includes button style valves, regulators, and needle valves. *Each System 11 is designed per order- contact factory. [See System 11 Information.](#)*

Product Information

"O" Series Regulators

Relieving

Part Number	Input x Output	
Knurled Knob	RO-RK-1	1/8 NPT 10-32 (F)
	RO-RK-2	10-32 (F) Elbow 10-32 (F)
	RO-RK-3	10-32 (F) Tee 10-32 (F)
	RO-RK-4	1/8 NPT (F) 10-32 (F)
	RO-RK-5	170 Barb 10-32 (F)
	RO-RK-6	1/4 Push-in 10-32 (F)
	RO-RK-7	5/32 Push-in 10-32 (F)
Panel Knob	RO-RP-1	1/8 NPT 10-32 (F)
	RO-RP-2	10-32 (F) Elbow 10-32 (F)
	RO-RP-3	10-32 (F) Tee 10-32 (F)
	RO-RP-4	1/8 NPT (F) 10-32 (F)
	RO-RP-5	170 Barb 10-32 (F)
	RO-RP-6	1/4 Push-in 10-32 (F)
	RO-RP-7	5/32 Push-in 10-32 (F)

Non-Relieving

Knurled Knob	RO-NK-1	1/8 NPT 10-32 (F)
	RO-NK-2	10-32 (F) Elbow 10-32 (F)
	RO-NK-3	10-32 (F) Tee 10-32 (F)
	RO-NK-4	1/8 NPT (F) 10-32 (F)
	RO-NK-5	170 Barb 10-32 (F)
	RO-NK-6	1/4 Push-in 10-32 (F)
	RO-NK-7	5/32 Push-in 10-32 (F)
Panel Knob	RO-NP-1	1/8 NPT 10-32 (F)
	RO-NP-2	10-32 (F) Elbow 10-32 (F)
	RO-NP-3	10-32 (F) Tee 10-32 (F)
	RO-NP-4	1/8 NPT (F) 10-32 (F)
	RO-NP-5	170 Barb 10-32 (F)
	RO-NP-6	1/4 Push-in 10-32 (F)
	RO-NP-7	5/32 Push-in 10-32 (F)

Accessories

RLN-40	Locking Nut
PMG-100	Micro Gauge 0-100 psi
PMG-160	Micro Gauge 0-160 psi
PMG-60	Micro Gauge 0-60 psi

Ordering Information

- To order Pressure Regulators use the Product Information listing to select part number.
- To order a gauge ready regulator, add a -G suffix to the part number.

Product Number Diagram:

"O" & "11" Series Regulators

R 1 1 - R K - 1 4

Model

R= Regulator

Series

O= "O" Series
11= "11" Series

Function

R= Relieving
N= Non-relieving

Actuator Style

K= Knurled Knob
P= Panel Knob

"O" Series Input

- 1= 1/8 NPT / 10-32 (F)
- 2= 10-32 (F) Elbow
- 3= 10-32 (F) Tee
- 4= 1/8 NPT (F)
- 5= 170 Barb*
- 6= 1/4 Push-in
- 7= 5/32 Push-in

* "O" Series Output

10-32 (F) ONLY
no designation

Example:

Regulator "11" Series, Relieving with Knurled Knob,
1/8 NPT / 10-32 (F) Input x 1/8 NPT (F) Output

"11" Series Output

- 4= 1/8 NPT (F)
- 6= 1/4 Push-in
- 7= 5/32 Push-in

"11" Series Input

- 1= 1/8 NPT / 10-32 (F)
- 4= 1/8 NPT (F)
- 6= 1/4 Push-in
- 7= 5/32 Push-in

"11" Series Regulators

Relieving

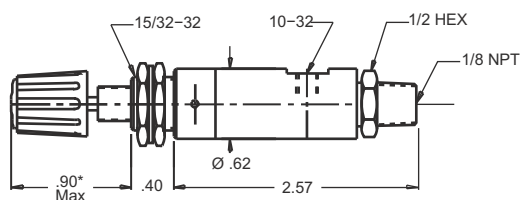
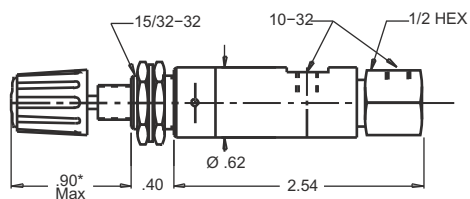
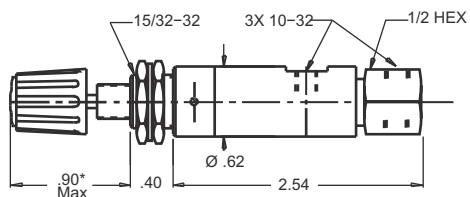
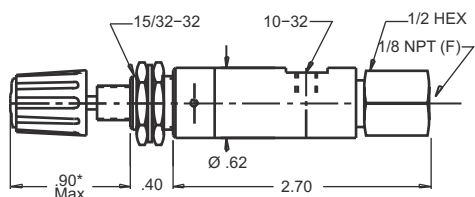
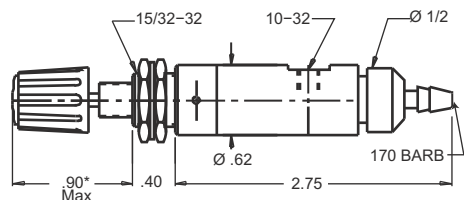
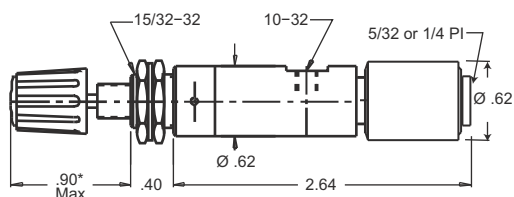
Part Number	Input x Output	
Knurled Knob	R11-RK-14	1/8 1/8 NPT (F)
	R11-RK-16	NPT 1/4 Push-in
	R11-RK-17	5/32 Push-in
	R11-RK-44	1/8 1/8 NPT (F)
	R11-RK-46	NPT 1/4 Push-in
	R11-RK-47	(F) 5/32 Push-in
	R11-RK-64	1/8 NPT (F)
Panel Knob	R11-RK-66	1/4 Push-in 1/4 Push-in
	R11-RK-67	5/32 Push-in
	R11-RK-74	5/32 1/8 NPT (F)
	R11-RK-76	Push-in 1/4 Push-in
	R11-RK-77	5/32 Push-in
	R11-RP-14	1/8 1/8 NPT (F)
	R11-RP-16	NPT 1/4 Push-in
Panel Knob	R11-RP-17	5/32 Push-in
	R11-RP-44	1/8 1/8 NPT (F)
	R11-RP-46	NPT 1/4 Push-in
	R11-RP-47	(F) 5/32 Push-in
	R11-RP-64	1/8 NPT (F)
	R11-RP-66	1/4 Push-in 1/4 Push-in
	R11-RP-67	5/32 Push-in
Panel Knob	R11-RP-74	1/8 NPT (F)
	R11-RP-76	5/32 1/4 Push-in
	R11-RP-77	Push-in 5/32 Push-in

"11" Series Regulators

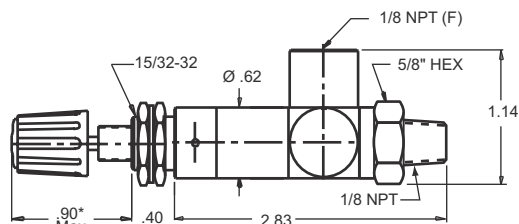
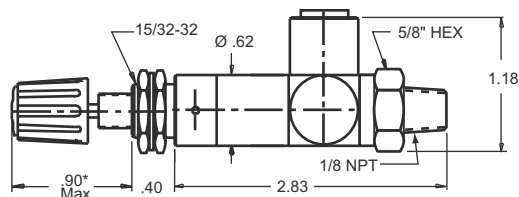
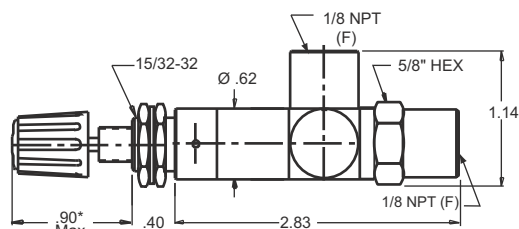
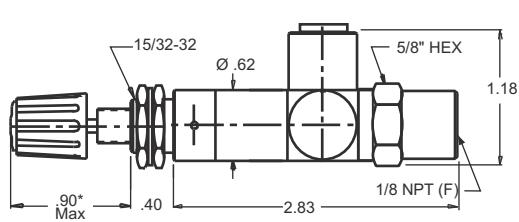
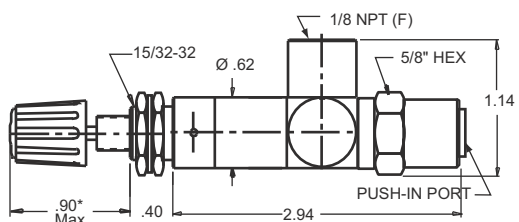
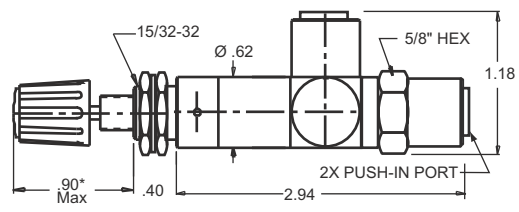
Non-Relieving

Part Number	Input x Output	
Knurled Knob	R11-NK-14	1/8 1/8 NPT (F)
	R11-NK-16	NPT 1/4 Push-in
	R11-NK-17	5/32 Push-in
	R11-NK-44	1/8 1/8 NPT (F)
	R11-NK-46	NPT 1/4 Push-in
	R11-NK-47	(F) 5/32 Push-in
	R11-NK-64	1/8 NPT (F)
Panel Knob	R11-NK-66	1/4 Push-in 1/4 Push-in
	R11-NK-67	5/32 Push-in
	R11-NK-74	5/32 1/8 NPT (F)
	R11-NK-76	Push-in 1/4 Push-in
	R11-NK-77	5/32 Push-in
	R11-NP-14	1/8 1/8 NPT (F)
	R11-NP-16	NPT 1/4 Push-in
Panel Knob	R11-NP-17	5/32 Push-in
	R11-NP-44	1/8 1/8 NPT (F)
	R11-NP-46	NPT 1/4 Push-in
	R11-NP-47	(F) 5/32 Push-in
	R11-NP-64	1/8 NPT (F)
	R11-NP-66	1/4 Push-in 1/4 Push-in
	R11-NP-67	5/32 Push-in
Panel Knob	R11-NP-74	1/8 NPT (F)
	R11-NP-76	5/32 1/4 Push-in
	R11-NP-77	Push-in 5/32 Push-in

Custom Products: Contact factory for applications requiring 1/8 NPT male or 1/4 NPT male output port

"O" SeriesShown with
Panel Knob**"-1" Input****"-2" Input****"-3" Input****"-4" Input****"-5" Input****"-6" Input
"-7" Input**

*.74 Max for knurled knob- all regulators

"11" SeriesShown with
Panel Knob**"-14" Porting****"-16" Porting
"-17" Porting****"-44" Porting****"-46" Porting
"-47" Porting****"-64" Porting
"-74" Porting****"-66" Porting
"-67" Porting
"-76" Porting
"-77" Porting**