

Low Volume Air Regulators

308167N

EN

***For ensuring consistent air pressure in systems requiring up to a maximum of 90 scfm.
For professional use only.***

300 psi (2.1 MPa, 20.7 bar) Maximum Incoming Air Pressure

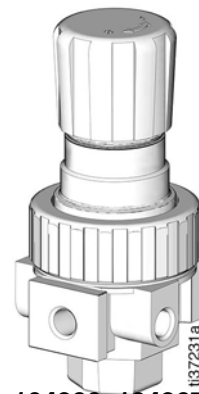
- Diaphragm-and Piston-Operated
- Self-Relieving
- Temperature Range: 40 - 120° F (4° C - 49° C)



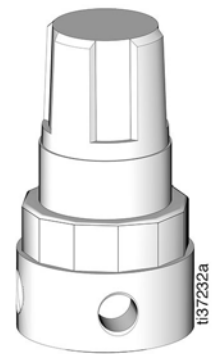
Important Safety Instructions

Read all warnings and instructions in this manual before using the equipment. Save these instructions.

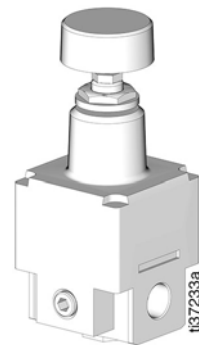
See page 2 for a list of regulators. Bare regulators are available separately or in the regulator assemblies shown with them. See manual 308168 for high volume regulators.



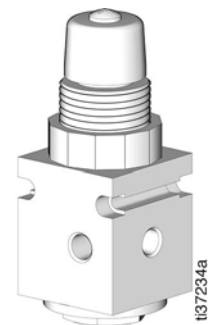
**104266, 104267,
171937, 110234,**



104815, 110318



16G409



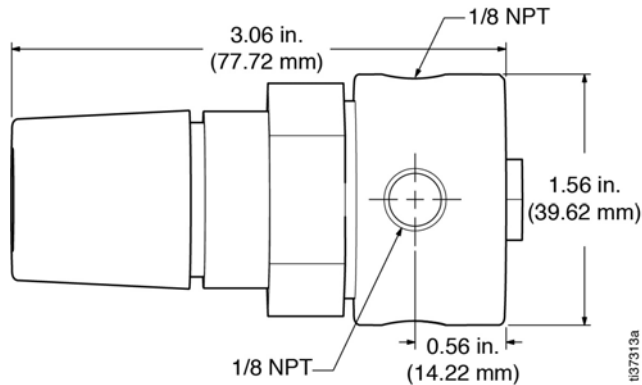
**110341, 111804,
116903, 116904**

Regulators

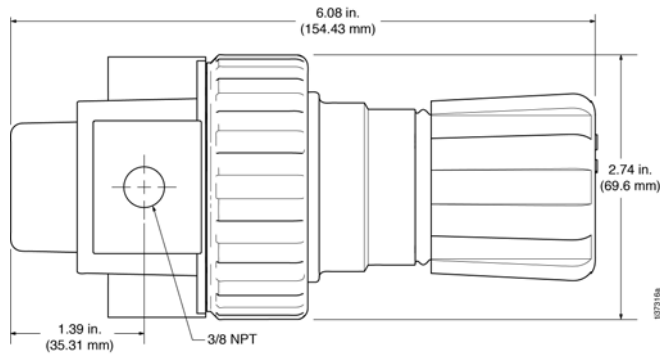
Bare Regulator Part No.	Regulator Assembly Part No.	Max. SCFM (m ³ /min.)	Inlet/ Outlet Port (npt)	Gage Ports (2) (npt)	Handle Type	Regulated Pressure Range	Diaphragm Material
104815		15 (0.4)	1/8	1/8	Knob	0-60 psi (0-4.1 bar, 0 -.41 MPa)	Nitrile Rubber
110318	110147	15 (0.4)	1/4	1/8	Knob	0-180 psi (0-12.4 bar, 0-1.24 MPa)	Nitrile Rubber
110341		39 (1.1)	1/8	1/8	Knob	0-125 psi (0-8.6 bar, 0-0.86 MPa)	None- piston type
111804		39 (1.1)	1/4	1/8	Knob	0-125 psi (0-8.6 bar, 0-0.86 MPa)	None- piston type
110234	109075 224512 224024	90 (2.5)	3/8	1/4	Knob	0-250 psi (0-17.2 bar, 0-1.72 MPa)	Nitrile Rubber
104266	206849 203716 202156 202858 244844 248829	90 (2.5)	1/2	1/4	Knob	0-250 psi (0-17.2 bar, 0-1.72 MPa)	Nitrile Rubber
104267	206237	90 (2.5)	1/2	1/4	Knob	0-125 psi (0-8.6 bar, 0-0.86 MPa)	Nitrile Rubber
116903		39 (1.1)	1/8	1/8	Knob	0-60 psi (0-4.1 bar, 0 -.41 MPa)	None- piston type
116904		39 (1.1)	1/8	1/8	Knob	0-25 psi (0-1.72 bar, 0-0.17 MPa)	None- piston type
16G409		121 (4)	1/4	1/8	Knob	0-58 psi (0-4 bar, 0-0.4 MPa)	Nitrile Rubber

Dimensions

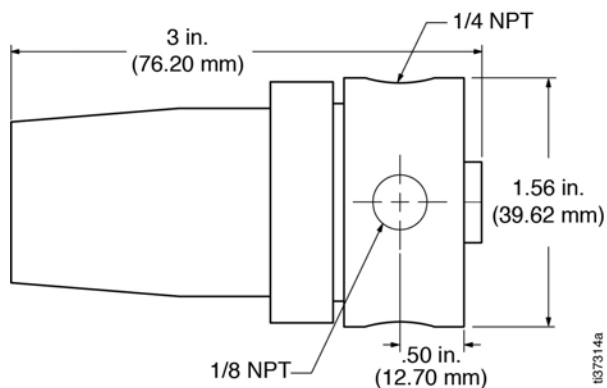
Model 104815 (1/8 in. Port)



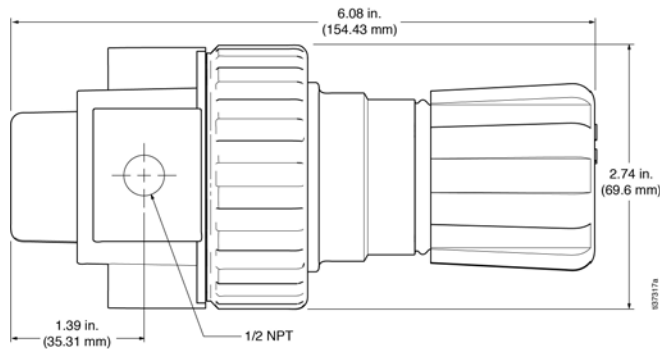
Model 110234 (3/8 in. Port)



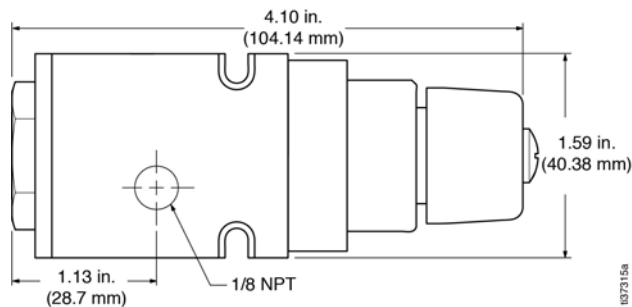
Model 110318 (1/4 in. Port)



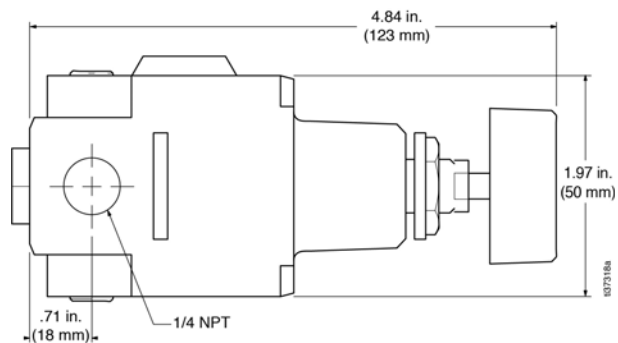
Model 104266, 104267 (1/2 in. Port)








**Model 110341 (1/8 in. Port)
Model 111804 (1/4 in. Port)
Model 116903, 116904 (1/8 in. Port)**



Model 16G409 (1/4 in. Port)



Installation

 WARNING				
				
<p>To reduce the risk of serious bodily injury, including fluid injection, splashing fluid into the eyes or onto the skin, or injury from the pump starting unexpectedly, be sure the system includes a bleed-type master air valve.</p> <p>Install the air valve between the air regulator outlet and the device that the regulator is serving. When relieving system air pressure, close the bleed-type master air valve to fully relieve air pressure.</p>				

Before installing any air line components, blow out the pipe line to remove scale and other debris. Use pipe compound or tape sparingly and only on male threads. Install the regulator in the pipe line so that the flow is in the direction of the arrow stamped on the body. Locate the regulator as close as possible to the equipment it serves.

Mounting brackets and nuts are available, see page 12.

To provide a variety of assembly options, a bleed-type master air valve is not included with all regulator assemblies. See **Accessories**, page 11 to order this valve. Another bleed-type master air valve may also be installed upstream from the air controls to isolate them for servicing.

The air to the regulator should be clean. Erratic regulator operation or loss of regulation is usually caused by dirt in the disc area. To clean the regulator, see **Repair**, page 6.

Operation

Adjust Pressure

1. If the knob does not have a screw, pull the knob up to adjust. When adjustment is complete, push the knob down to lock in place.
2. If the knob has a cross-head screw, loosen the screw 1/4 turn and then adjust the knob. Tighten the screw to lock in the adjustment.
3. To increase the regulated air pressure, turn the knob clockwise.
4. To decrease the regulated air pressure, turn the knob counterclockwise.

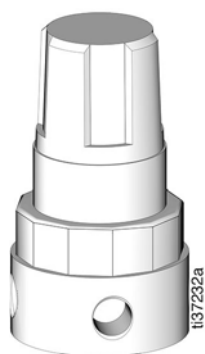







FIG. 1

Repair



WARNING

Relieve air and fluid pressure before servicing the regulator.

To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid, and moving parts, relieve pressure on both the inlet and outlet sides of the regulator before servicing.

Inlet: Turn off the air supply and depressurize the air line connected to the inlet.

Outlet: Open the bleed-type master air valve (required on the outlet side) to relieve system air pressure, and trigger the gun or dispense valve and open any fluid drain valves to relieve fluid pressure.

If the regulator fails to operate, operates roughly, vibrates, etc., follow the above Warning. Remove the regulator and service as follows:

Disassemble the regulator. See the **Repair Kit Drawings** on page 7.

Wash the parts with household soap and water or denatured alcohol. Wipe the parts dry with a clean, soft, dry rag. Use compressed air to blow any dirt and contaminants out of the regulator body.

NOTICE

Do not use trichloroethylene, acetone or similar solvents to clean the regulator. These solvents could damage the regulator parts.

Inspect parts for damage or wear. Replace any damaged parts.

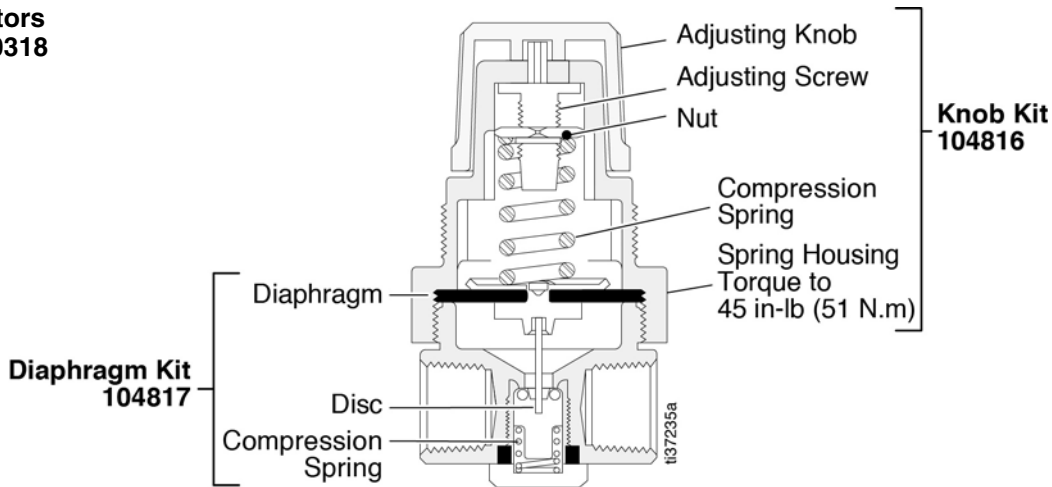
Lubricate the bearing area, adjusting screw threads, and spring ends with No. 2 lithium-base grease. Reassemble the regulator.

When installing the diaphragm, be sure that the disc is firmly in place. Install the disc stem into the center hole of the diaphragm. Torque the spring housing to 45 in-lb (51N•m).

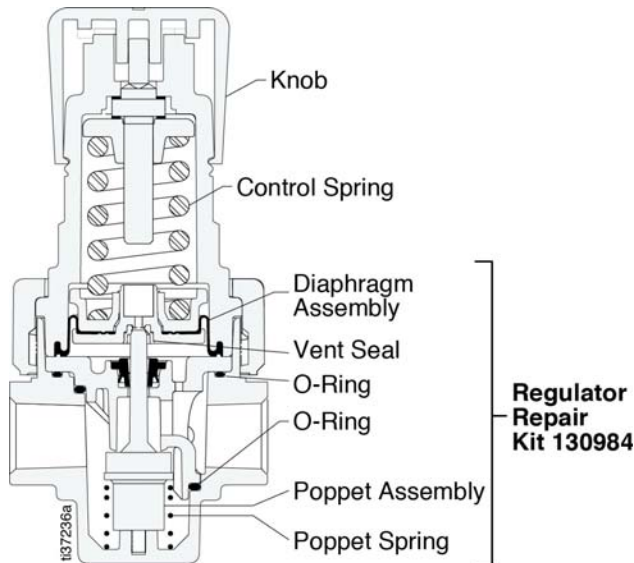
Bare Regulator Part No.	Repair Kits				
	104816 1/8 in. Knob	104817 1/8 in. Diaphragm	223164 1/8 in. and 1/4 in. Piston	130984 Kit, Service, Relieving	PS708P Diaphragm Assembly
104266				X	X
104267				X	X
110234				X	X
104815	X	X			
110341			X		
111804			X		
110318	X	X			
116903			X		
116904			X		

Repair Kit Drawings

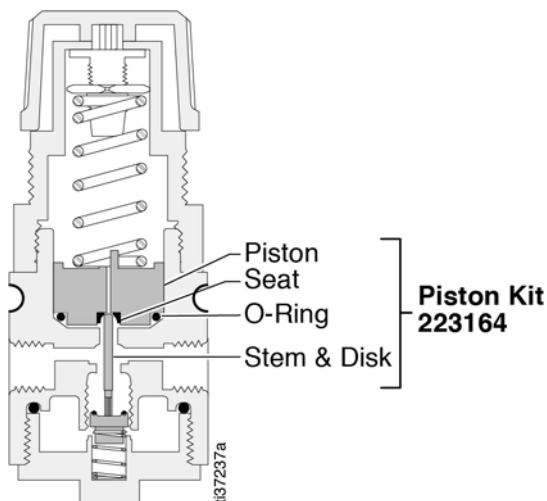
For Regulators
104815, 110318



For Regulators
104267, 104266, 110234,
130984

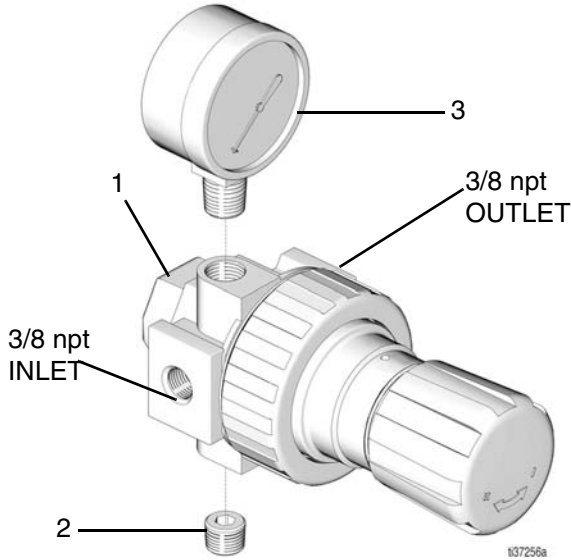


For Regulators
110341, 111804, 116903,
116904



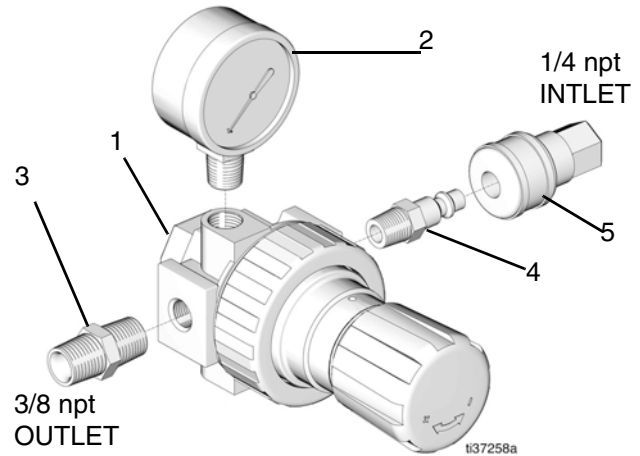
Parts

Model 109075



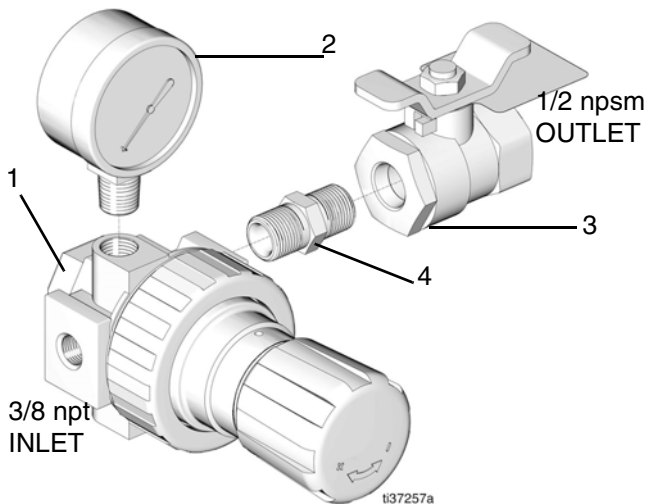
Ref.	Part	Description	Qty.
1	110234	3/8 in. AIR REGULATOR	1
2	100721	PLUG, pipe, 1/4 npt	1
3	100960	GAUGE, 0-200 psi (0-14 bar)	1

Model 224024



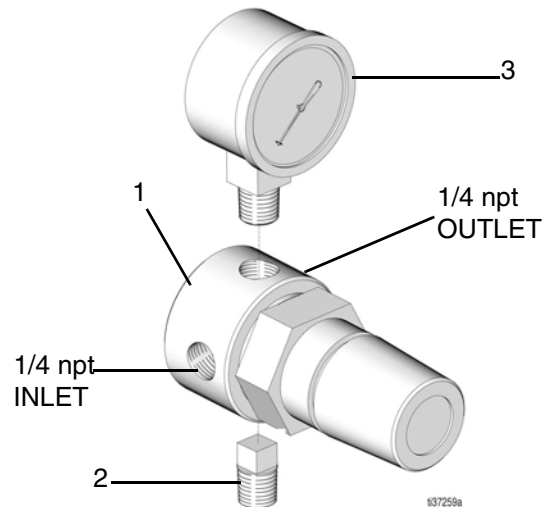
Ref.	Part	Description	Qty.
1	110234	3/8 in. AIR REGULATOR	1
2	100960	GAUGE, 0-200 psi (0-14 bar)	1
3	156849	NIPPLE, 3/8-18 npt	1
4	169971	FITTING, air line, 3/8 npt(m)	1
5	208536	COUPLER, air line	1
6	100721	PLUG, pipe, 1/4 npt	1

Model 224512



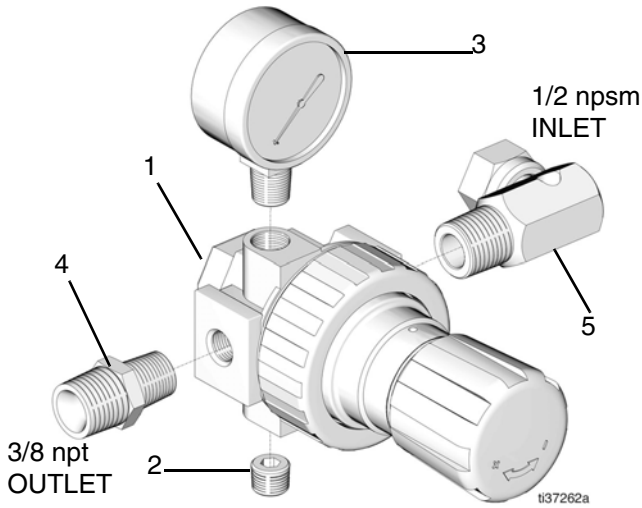
Ref.	Part	Description	Qty.
1	110234	3/8 in. AIR REGULATOR	1
2	100960	GAUGE, 0-200 psi (0-14 bar)	1
3	110224	BALL VALVE, 3/8-18 npt(t)	1
4	156849	NIPPLE, 3/8-18 npt	1

Model 110147



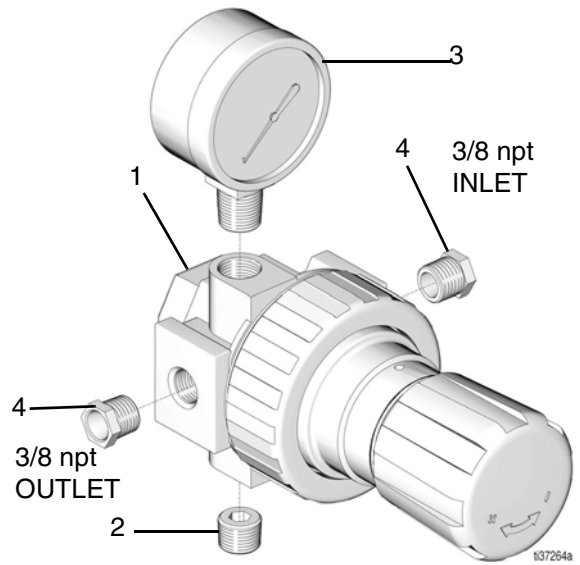
Ref.	Part	Description	Qty.
1	110318	1/4 in. AIR REGULATOR	1
2	100403	PLUG, pipe, 1/8 npt	1
3	110319	GAUGE, 0-200 psi (0-14 bar)	1

Model 203716



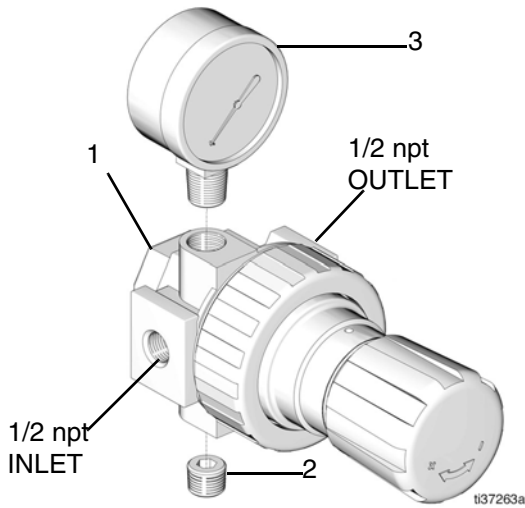
Ref.	Part	Description	Qty.
1	104266	1/2 in. AIR REGULATOR	1
2	100721	PLUG, pipe, 1/4 npt	1
3	101180	GAUGE, 0-200 psi (0-14 bar)	1
4	159239	NIPPLE, pipe, 1/2 x 3/8 npt	1
5	207438	UNION, 90° swivel, 1/2 npt(m) x 1/2 npsm(f) swivel	1

Model 202156



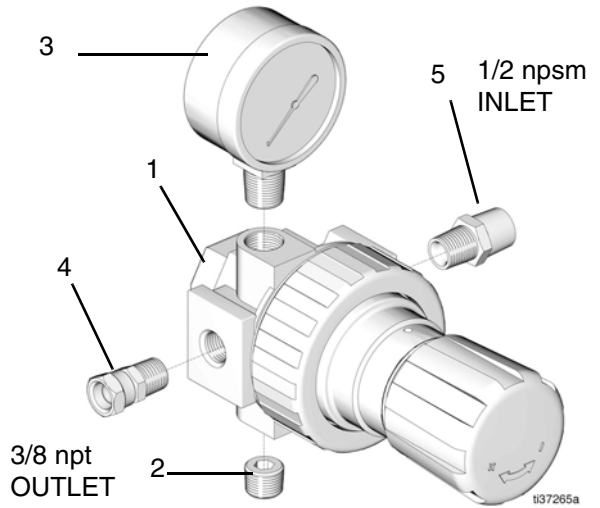
Ref.	Part	Description	Qty.
1	104266	1/2 in. AIR REGULATOR	1
2	100721	PLUG, pipe, 1/4 npt	1
3	100960	GAUGE, 0-200 psi (0-14 bar)	1
4	100081	BUSHING, 1/2(m) x 3/8(f) npt	1

Model 244844



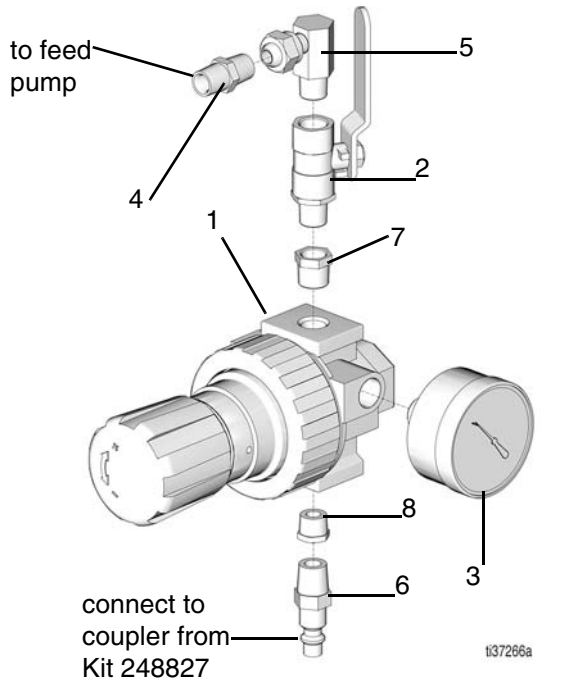
Ref.	Part	Description	Qty.
1	104266	1/2 in. AIR REGULATOR	1
2	100721	PLUG, pipe, 1/4 npt	1
3	100960	GAUGE, 0-200 psi (0-14 bar)	1

Model 202858



Ref.	Part	Description	Qty.
1	104266	1/2 in. AIR REGULATOR	1
2	100721	PLUG, pipe, 1/4 npt	1
3	100960	GAUGE, 0-200 psi (0-14 bar)	1
4	159239	NIPPLE, pipe, 1/2 x 3/8 npt	1
5	156684	UNION, swivel, 1/2 npt(m) x 1/2 npsm(f) swivel	1

Model 248829



Ref.	Part	Description	Qty.
1	104266	1/2 in. AIR REGULATOR	1
2	113333	VALVE, ball vented, 3/8 npt	1
3	101689	GAUGE, 0-200 psi (0-14 bar)	1
4	156849	NIPPLE, pipe, 3/8 npt	1
5	155494	UNION, swivel, 3/8 npt(m) x 3/8 npsm(f)	1
6	169970	FITTING, line air, 1/4 npt	1
7	100081	BUSHING, pipe, 1/2 x 3/8 npt	1
8	100206	BUSHING, pipe, 1/2 x 1/4 npt	1

Accessories

Gauges

Gauge Part Number	Air Pressure Range psi (bar)	Inlet npt(m)	Type of Case (includes ring)	Dial Diameter inch (mm)	Style	Glass P/N
160430	0-100 (7)	1/4	Black	2 (51)	1	102019
100960	0-200 (14)	1/4	Black	2 (51)	1	102019
101180	0-200 (14)	1/4	Chrome	2 (51)	1	102019
104655	0-60 (4)	1/8	Black	1.5 (38)	1	N/A
101689	0-200 (14)	1/4	Chrome	2 (51)	2	102019
108190	0-100 (7)	1/8	Black	1.5 (38)	2	N/A
110319	0-200 (14)	1/8	Black	1.5 (38)	1	N/A

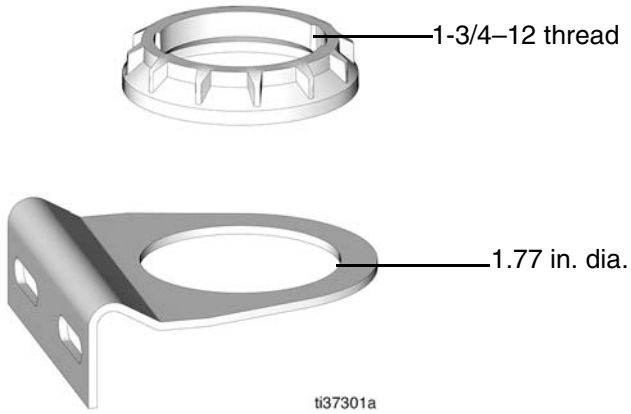


Style 1 (Bottom inlet)



Style 2 (Back inlet)

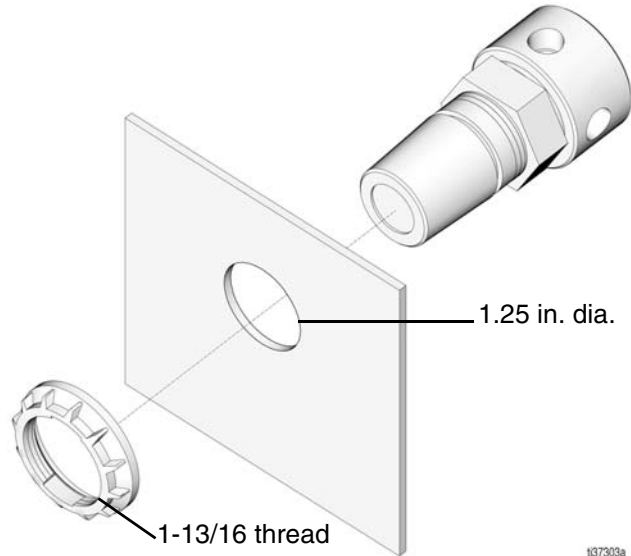
Regulator Mounting Bracket & Nut 130985



For Regulators

104266 110234
 104267

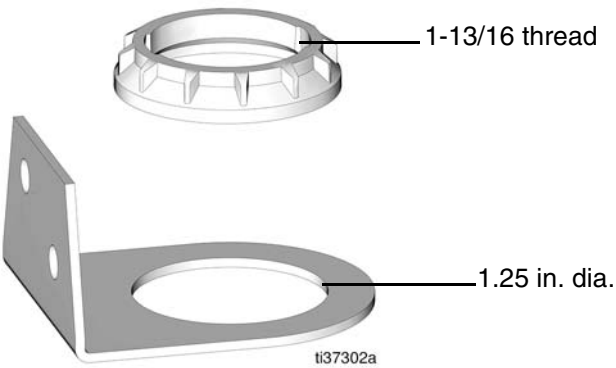
Panel Mounting Nut 110209



For Regulators

104815 110318
 110341 111804

Panel Mounting Bracket & Nut 110321



For Regulators

104815 110318
 110341 111804

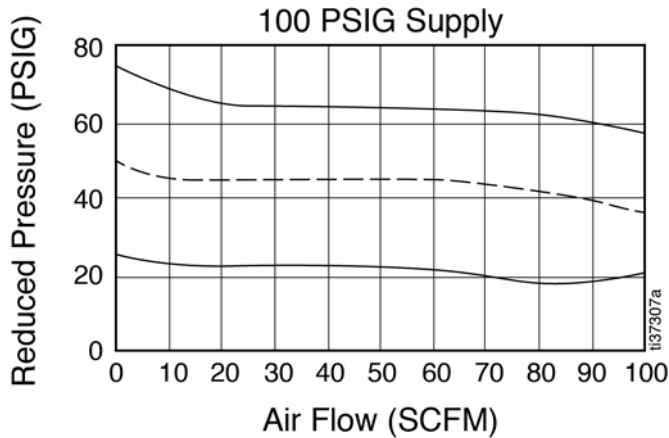
Bleed-Type Master Air Valves



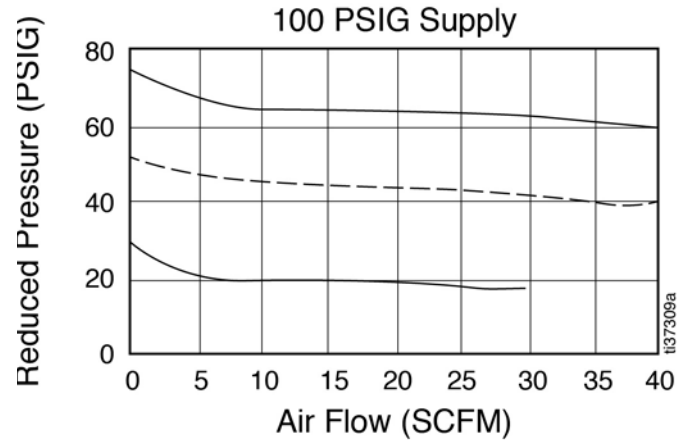
Part	Description
107141	3/4 npt (m x f)
107142	1/2 npt (m x f)
110223	1/4-18 npt (fbe)
110224	3/8-18 npt (fbe)
110225	1/2-14 npt (fbe)
110226	3/4-14 npt (fbe)

Flow Curves

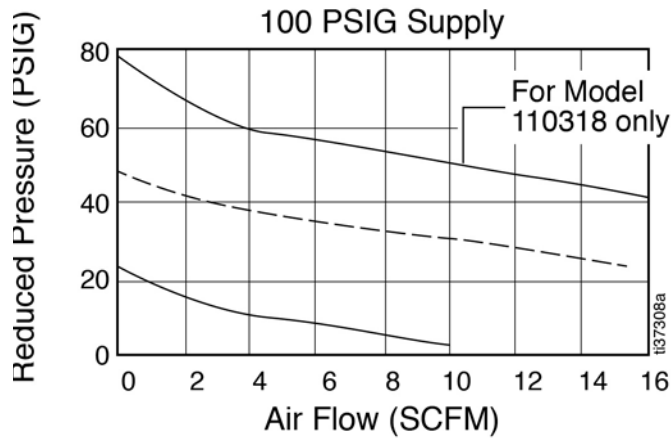
Model 104266, 104267, (1/2 in. Port)
 Model 110234 (3/8 in. Port)



Model 110341 (1/8 in. Port)
 Model 111804 (1/4 in. Port)
 Model 116903, 116904 (1/8 in. Port)



Model 104815 (1/8 in. Port)
 Model 110318 (1/4 in. Port)



California Proposition 65

CALIFORNIA RESIDENTS

⚠ WARNING: Cancer and reproductive harm – www.P65warnings.ca.gov.

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

Graco Information

For the latest information about Graco products, visit www.graco.com.

For patent information, see www.graco.com/patents.

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.

Phone: 612-623-6921 **or Toll Free:** 1-800-328-0211, **Fax:** 612-378-3505

All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Original instructions. This manual contains English. MM 308167

Graco Headquarters: Minneapolis

International Offices: Belgium, China, Japan, Korea

GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA
Copyright 1995, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.

www.graco.com
Revision N, September 2020