

High Volume Air Regulators

308168P

EN

Self-relieving diaphragm regulators for use in systems requiring up to a maximum of 380 scfm. For professional use only.

300 psi (2.1 MPa, 21 bar) Maximum Working Pressure

Part No.

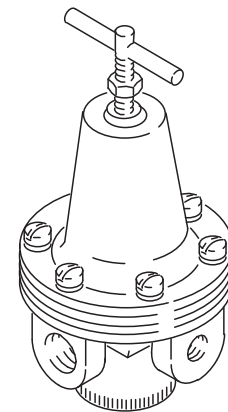
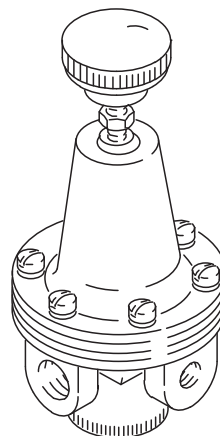
See page 2 for part no. information.



Important Safety Instructions

Read all warnings and instructions in this manual.
Save these instructions.

181521



206197
180187
207755
112728
C11002

ti28314a

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Part Numbers

These regulators have a maximum temperature range of 40-120°F (4-49°C).

Bare Regulator Part No.	Regulator Assembly Part No.	Maximum scfm (m ³ /min)	Pump/System Application	Inlet/Outlet Port Size (npt)	Gauge Port Size (2) (npt)	Handle Type	Regulated Pressure Range	Diaphragm Material
C11002		200 (5.6)	Senator Bulldog President Glutton Husky 2150	3/8	1/4	Tee	0-125 psi (0-0.9 MPA, 0-9 bar)	Nitrile Rubber
181251		200 (5.6)	Senator Bulldog	1/2	1/4	Knob	0-75 psi (0-0.5 MPA, 0-5 bar)	Nitrile Rubber
206197	205712 206276 218691 902412	200 (5.6)	Senator Bulldog President Glutton Husky 2150	1/2	1/4	Tee	0-125 psi (0-0.9 MPA, 0-9 bar)	Nitrile Rubber
180187	218315	380 (10.6)	63:1 King	3/4	1/4	Tee	0-80 psi (0-0.5 MPA, 0-5 bar)	Nitrile Rubber
207755	207651 244845	380 (10.6)	King	3/4	1/4	Tee	0-125 psi (0-0.9 MPA, 0-9 bar)	Nitrile Rubber
112728	236989 24Y519	380 (10.6)	Premier Xtreme XL	1"	1/4	Tee	0-125 psi (0-0.9 MPA, 0-9 bar)	Nitrile Rubber

NOTE: See manual 308167 for low volume regulators.

NOTE: Bare regulators are available separately or in the regulator assemblies shown with them.

NOTE: See page 7 for 241661 Regulator Kit parts.

Installation

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 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.

! WARNING

To reduce the risk of serious injury, including fluid injection, splashing fluid in the eyes or on the skin, or injury from the pump starting unexpectedly, **be sure your system includes a bleed-type master air valve.**

Install the air valve between the air regulator outlet and the device the regulator is serving. When relieving system air pressure, close the bleed-type master air valve to fully relieve air pressure.

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

Be sure the air to the regulator is clean. Erratic regulator operation or loss of regulation is usually caused by dirt in the disc area. To clean the regulator, see the Repair section on page 4.

Operation

Adjusting the Regulator

1. To increase the regulated air pressure, turn the handle clockwise.
2. To decrease the regulated air pressure, turn the handle counterclockwise.
3. Tighten the locknut to lock in the adjustment.

Relieving Pressure

1. Close the bleed-type master air valve to bleed air from the valve to the device it is serving.
2. Trigger the gun or dispense valve and open any fluid drain valves to relieve fluid pressure.

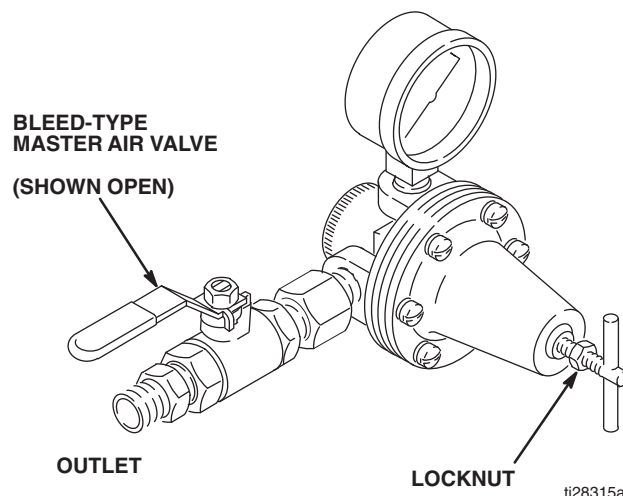



FIG. 1

Repair Kits

This chart identifies the available repair kits for the regulators covered in this manual. The cutaway drawing shows the location of the diaphragm.

Bare Regulator Part No.	Repair Kits	
	102763 Diaphragm	102762 Diaphragm
206197		X
207755	X	
180187	X	
181521		X
112728	X	

 Torque to 45 in-lb (5.1 N•m)

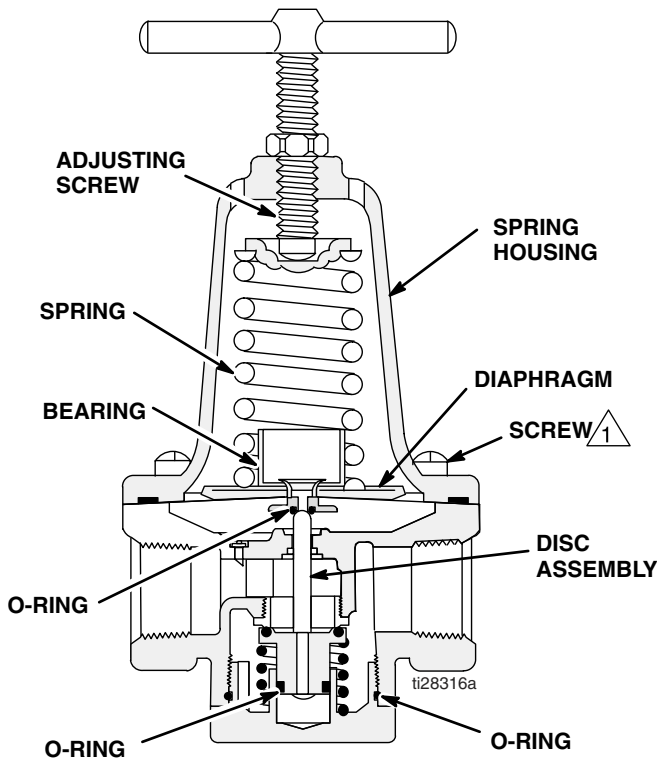


FIG. 2

WARNING

Relieve air and fluid pressure before servicing the regulator.

To reduce the risk of serious injury, fluid injection, splashing in the eyes or skin, injury from moving parts, **always** open the bleed-type master air valve (required) 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 **WARNING** above. Remove the regulator and service it as follows.

Disassemble the regulator.

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 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.

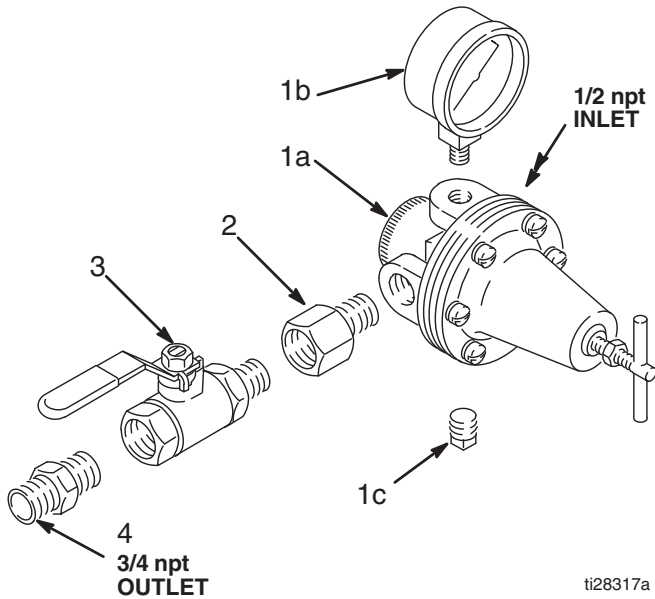
Inspect all parts for wear or damage. Replace damaged parts.

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

When installing the diaphragm, be sure the disc stem is installed in the center hole of the diaphragm. Install the spring housing and torque the screws to 45 in-lb (5.1 N•m).

Parts

Model 218691

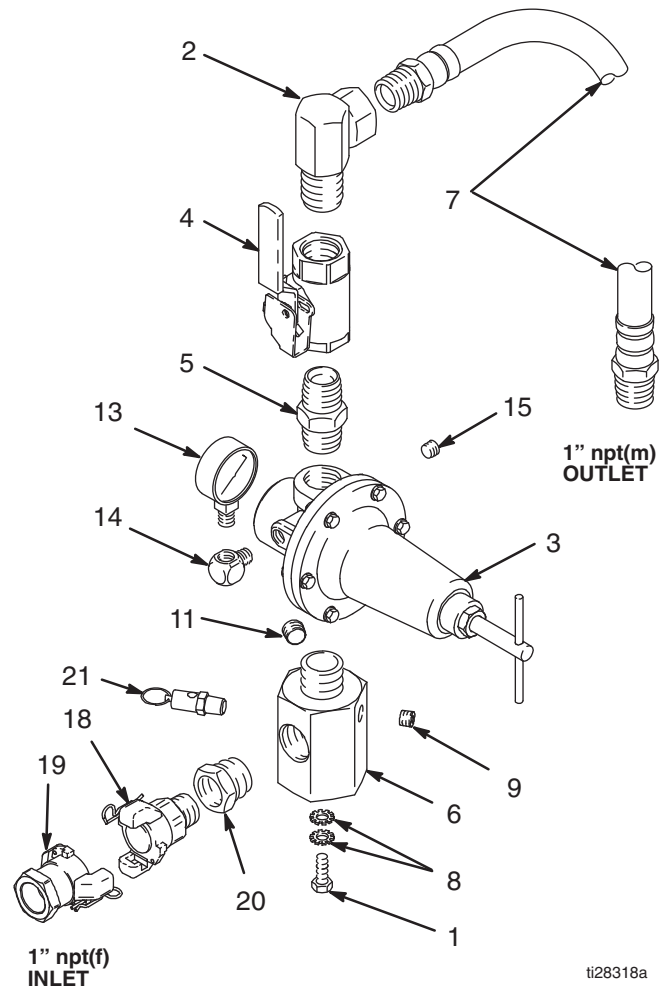


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Ref.	Part	Description	Qty.
1	206199	AIR REGULATOR & GAUGE Includes items 1a, 1b, and 1c	1
1a	206197	AIR REGULATOR	1
1b	100960	GAUGE, 0–200 psi (0–1.4 MPa, 0–14 bar) range	1
1c	100509	PLUG, pipe; 1/4–18 npt	1
2	168595	ADAPTER, 3/4(f) x 1/2(m) npt	1
3	107141	VALVE, bleed-type master air, 3/4 npt	1
4	160032	NIPPLE, 3/4 npt	1

Models 236989 and 24Y519

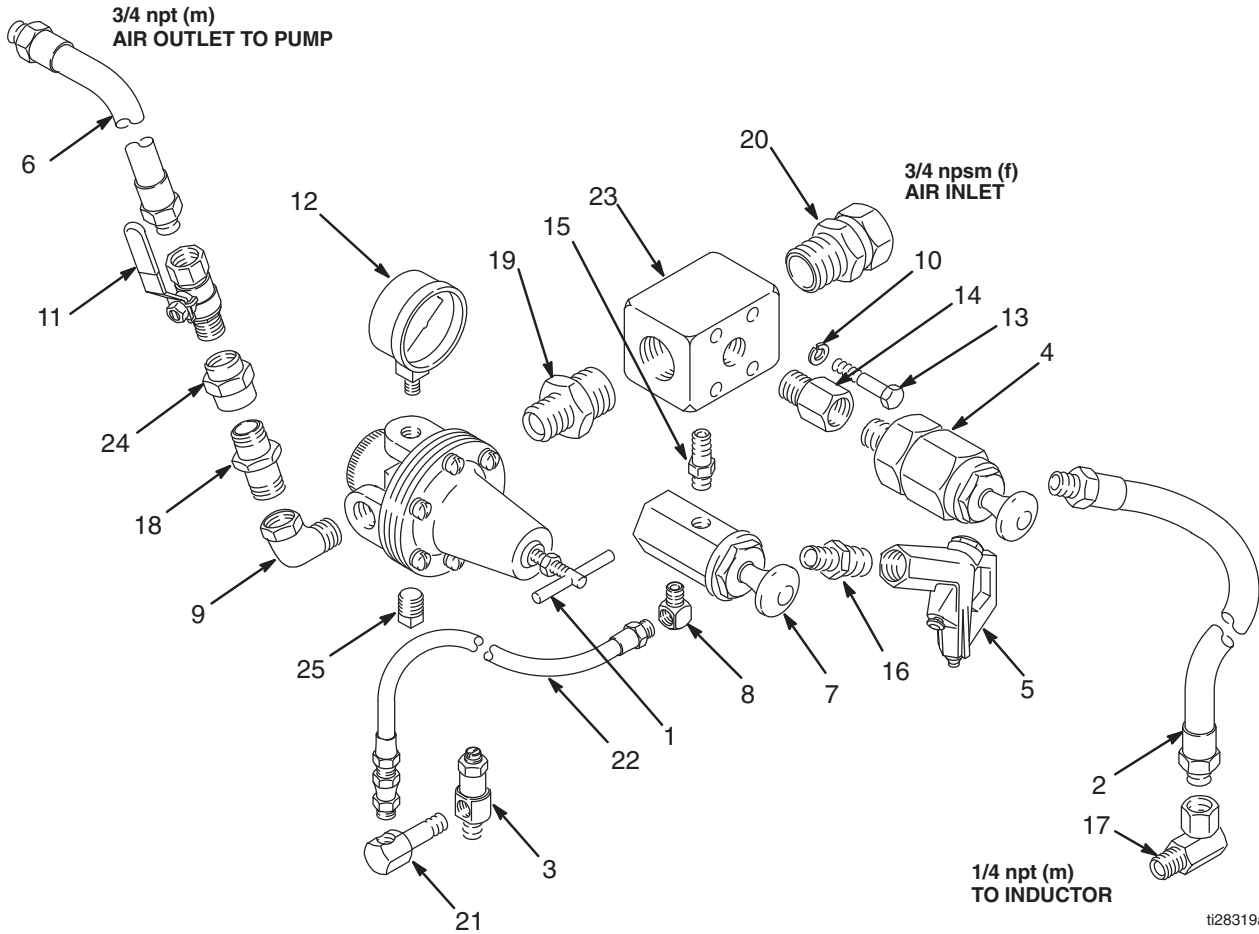
Ref.	Part	Description	Qty.
1	100101	SCREW, cap, hex hd; 3/8–16; 1" (25 mm) long	1
2	102806	UNION, swivel, 90; 1" npt(m) x 1" npsm(f)	1
3	112728	AIR REGULATOR	1
4	113163	VALVE, bleed-type master air, 1" npt (fbe)	1
5	158585	NIPPLE; 1" npt	1
6	189978	MANIFOLD, air; 1" npt(m) x 1" npt(f); 3/8, 1/4, and 1/8 npt ports	1
7	236990	HOSE, 24" long, 1" npt(mbe), 236989 only	1
	17H502	HOSE, 36" long, 1" npt(mbe), 24Y519 only	1
8	100322	LOCKWASHER, 3/8"	2
9	100139	PLUG, pipe, 1/8 npt	1
11	101754	PLUG, pipe, 3/8 npt	1
13	100960	GAUGE, 0–200 psi (0–1.4 MPa, 0–14 bar) range	1
14	100840	ELBOW, street, 90, 1/4 –18 npt (m x f)	1
15	100721	PLUG, pipe; 1/4 npt	1
18	113429	COUPLER; 3/4 npt(m)	1
19	113430	COUPLER; 3/4 npt(f)	1
20	158586	BUSHING; 1" npt(m) x 3/4 npt(f)	1
21	113498	RELIEF VALVE, air; 110 psi (0.7 MPa, 7.6 bar)	1



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Parts

Model 206276



Ref	Part	Description	Qty	Ref	Part	Description	Qty
1	206197	AIR REGULATOR	1	14	150286	ADAPTER, 3/8 npt (m x f)	1
2	202961	HOSE, 3/8 ID, cpld 3/8-18 x 1/4-18 npt, 48" (1219 mm)	1	15	151243	NIPPLE, 1/8-27 npt	1
3	203743	RESTRICTOR VALVE	1	16	151519	NIPPLE, reducing, 1/4-18 x 1/8-27 npt	1
4	203842	AIR VALVE, vacuum release	1	17	155541	UNION, 90, 1/4-18 npt (m) x 1/4-18 npsm(f) swivel	1
5	208625	AIR BLOW GUN	1	18	156877	NIPPLE, 1/2-14 npt, 2 1/2" long	1
6	214952	HOSE, 3/4" ID, cpld 3/4 x 1/2 npt, 16" (406 mm) long	1	19	157191	ADAPTER, 1/2-14 x 3/4-14 npt, 1 7/8" long	1
7	206292	SNAPOVER VALVE	1	20	157785	UNION, 3/4 npt(m) x 3/4 npsm(f) swivel	1
8	100839	ELBOW, 1/8-27 npt	1	21	160701	ELBOW, 1/8-27 npt (m x f)	1
9	100119	ELBOW, 1/2" npt	1	22	165741	HOSE, 1/2" ID, cpld 1/8-27 npt, 24" (610 mm) long	1
10	100214	LOCKWASHER, 5/16"	4	23	165770	AIR MANIFOLD, two 3/4-14 npt(f); 3/8-18 npt(f), 1/8-27 npt(f)	1
11	107142	VALVE, bleed-type master air, 1/2-14 npt(m x f)	1	24	158581	COUPLING, 1/2 npt (fbe) 1 1/4" long	1
12	100960	GAUGE, air pressure, 0-200 psi (0-14 bar) range, 1/4-18 npt thread	1	25	100509	PLUG, pipe, 1/4-18 npt	1
13	802277	CAPSCREW, hex head, 5/16-18 x 2 1/2" long	4				

Model 205712

Ref.	Part	Description	Qty.
1	206197	AIR REGULATOR	1
2	206205	MANIFOLD, air 1/2–14 npt(m) x 3/4–14 npsm(f) swivel, 3/8–16 npt mounting stud	1
3	100509	PLUG, pipe, 1/4–18 nptf	2
4	100131	NUT, hex, 3/8–16 unc	1
5	100133	LOCKWASHER, spring, 3/8"	1
6	100403	PLUG, pipe, 1/8 npt	1
7	187357	ELBOW, street, 1/4 npt (m x f)	1
8	101180	GAUGE, 0–200 psi (0–1.4 MPa, 0–14 bar) range	1
9	214952	HOSE, air, 3/4" ID, coupled 3/4–14 x 1/2 npt, 15" (381 mm) long	1
10	107142	VALVE, bleed-type air, 1/2–14 npt	1

Model 207651

Ref.	Part	Description	Qty.
1	207755	AIR REGULATOR	1
2	207675	MANIFOLD, air 3/4–14 npt(m) x 3/4–14 npsm(f) swivel, 3/8–16 npt mounting stud	1
3	100509	PLUG, pipe, 1/4–18 npt	2
4	100131	NUT, hex, 3/8–16 unc	1
5	100133	LOCKWASHER, spring, 3/8"	1
6	100403	PLUG, pipe, 1/8–18 npt	1
7	100840	ELBOW, street, 1/4 npt (m x f)	1
8	101180	GAUGE, 0–200 psi (0–1.4 MPa, 0–14 bar) range	1
9	214953	HOSE, air, 3/4" ID, coupled 3/4 npt (mbe), 15" (381 mm) long	1
10	107141	VALVE, bleed-type air, 3/4–14 npt	1

Models 241661 and 902412 (not shown)

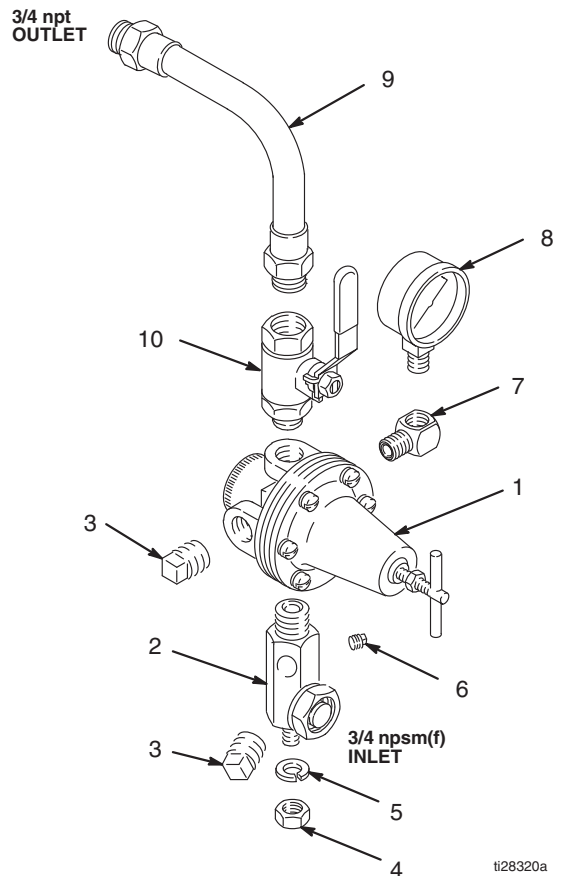
Ref.	Part	Description	Qty.
1	206197	AIR REGULATOR	1
2	207438	MANIFOLD (used on 902412)	1
	161262	UNION (used on 241661)	1
6	100403	PLUG, pipe (used on 902412)	1
	100509	PLUG, pipe (used on 241661)	1
7	100840	ELBOW, street, 1/4 npt (m x f)	1
8	100960	GAUGE, 0–200 psi (0–1.4 MPa, 0–14 bar) range	1
10	107142	VALVE, bleed (used on 902412)	1
	113269	VALVE, bleed (used on 241661)	1
11	158491	NIPPLE; 1/2 npt	2
12	157416	UNION, 90°, 1/2 npt (f) x 1/2 npsm(f) swivel	1

Model 244845 (not shown)

Ref.	Part	Description	Qty.
1	207755	AIR REGULATOR	1
3	100509	PLUG, pipe; 1/4–18 npt	1
8	100960	GAUGE, 0–200 psi (0–1.4 MPa, 0–14 bar) range	1

Model 218315

Ref.	Part	Description	Qty.
1	180187	AIR REGULATOR	1
2	207675	MANIFOLD, air 3/4–14 npt(m) x 3/4–14 npsm(f) swivel, 3/8–16 npt mounting stud	1
3	100509	PLUG, pipe, 1/4–18 npt	2
4	100131	NUT, hex, 3/8–16 unc	1
5	100133	LOCKWASHER, spring, 3/8"	1
6	100403	PLUG, pipe, 1/8–18 npt	1
7	100840	ELBOW, street, 90°, 1/4 npt (m x f)	1
8	101180	GAUGE, 0–200 psi (0–1.4 MPa, 0–14 bar) range	1
9	214953	HOSE, air, 3/4" ID, coupled 3/4 npt (mbe), 15" (381 mm) long	1
10	107141	VALVE, bleed-type master air, 3/4–14 npt	1



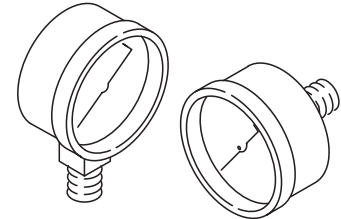
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Accessories

Gauges

Model	Air Pressure Range	Inlet	Type of Case	Dial Dia.	Style	Glass P/N
160430	0–100 psi (0.7 MPa, 7 bar)	1/4 npt	Black	2 in. (51 mm)	1	102019
100960	0–200 psi (1.4 MPa, 14bar)	1/4 npt	Black	2 in. (51 mm)	1	102019
101180	0–200 psi (1.4 MPa, 14bar)	1/4 npt	Chrome	2 in. (51 mm)	1	102019
101689	0–200 psi (1.4 MPa, 14bar)	1/4 npt	Chrome	2 in. (51 mm)	2	102019

Style 1 (Bottom Inlet)

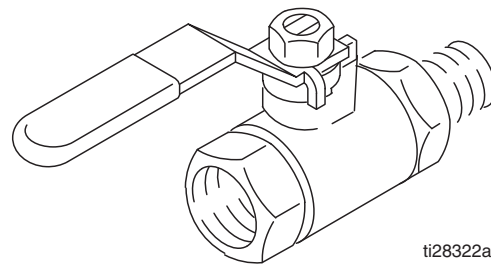


Style 2 (Back Inlet)

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Bleed-Type Master Air Valves

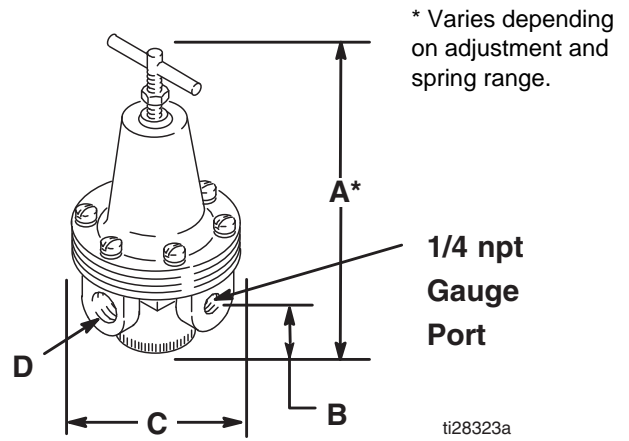
Part No.	Description
113269	1/2 npt (m x f), red handle
107142	1/2 npt (m x f), yellow handle
113331	1/2 npt (fbe), red handle
110225	1/2 npt (fbe), yellow handle
113218	3/4 npt (m x f), red handle
107141	3/4 npt (m x f), yellow handle
113332	3/4 npt (fbe), red handle
110226	3/4 npt (fbe), yellow handle
113163	1" npt (fbe), red handle



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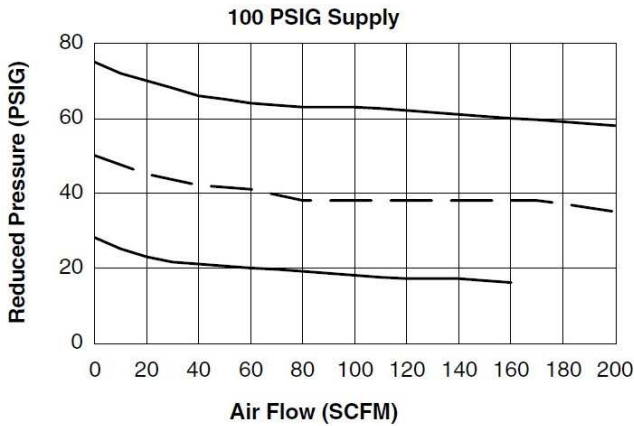
Dimensions

Model	A	B	C	D
206197	7.12" (181 mm)	1.5" (38 mm)	3.25" (83 mm)	1/2" npt
C11002	7.12" (181 mm)	1.5" (38 mm)	3.25" (83 mm)	3/8" npt
180187	7.9" (201 mm)	1.9" (48 mm)	4.25" (108 mm)	3/4" npt
181521	7.12" (181 mm)	1.5" (38 mm)	3.25" (83 mm)	1/2" npt
207755	7.9" (201 mm)	1.9" (48 mm)	4.25" (108 mm)	3/4" npt
112728	10" (254 mm)	1.9" (48 mm)	4.38" (111 mm)	1" npt

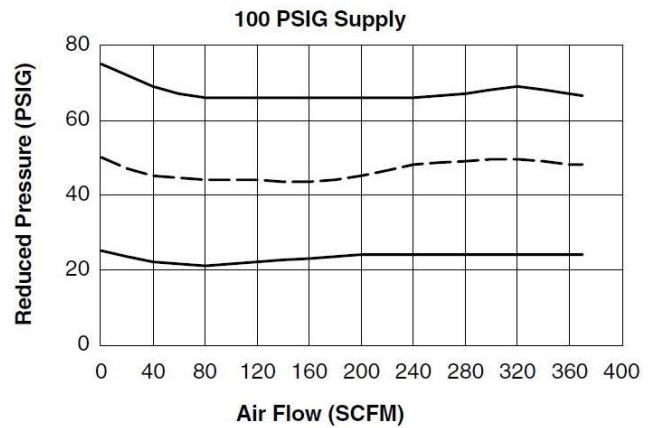


Flow Curves

Model 206197, 181521 (1/2" Port)



Model 180187, 207755 (3/4" Port), 112728 (1" Port)



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.

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

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

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

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Graco reserves the right to make changes at any time without notice.*

Original instructions. This manual contains English. MM 308168

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