

Membrane Air Drying System

309920D

EN

Model 234418, Series C

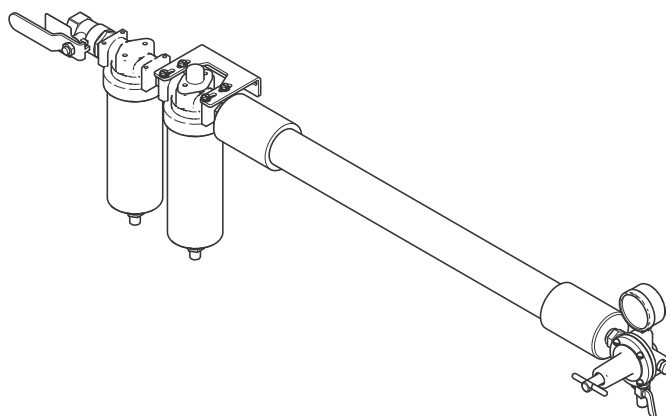
Maximum Working Pressure 160 psi (1.1 MPa, 11 bar)

Maximum Temperature 150° F (65° C)



Important Safety Instructions

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



ti22159a

Includes:

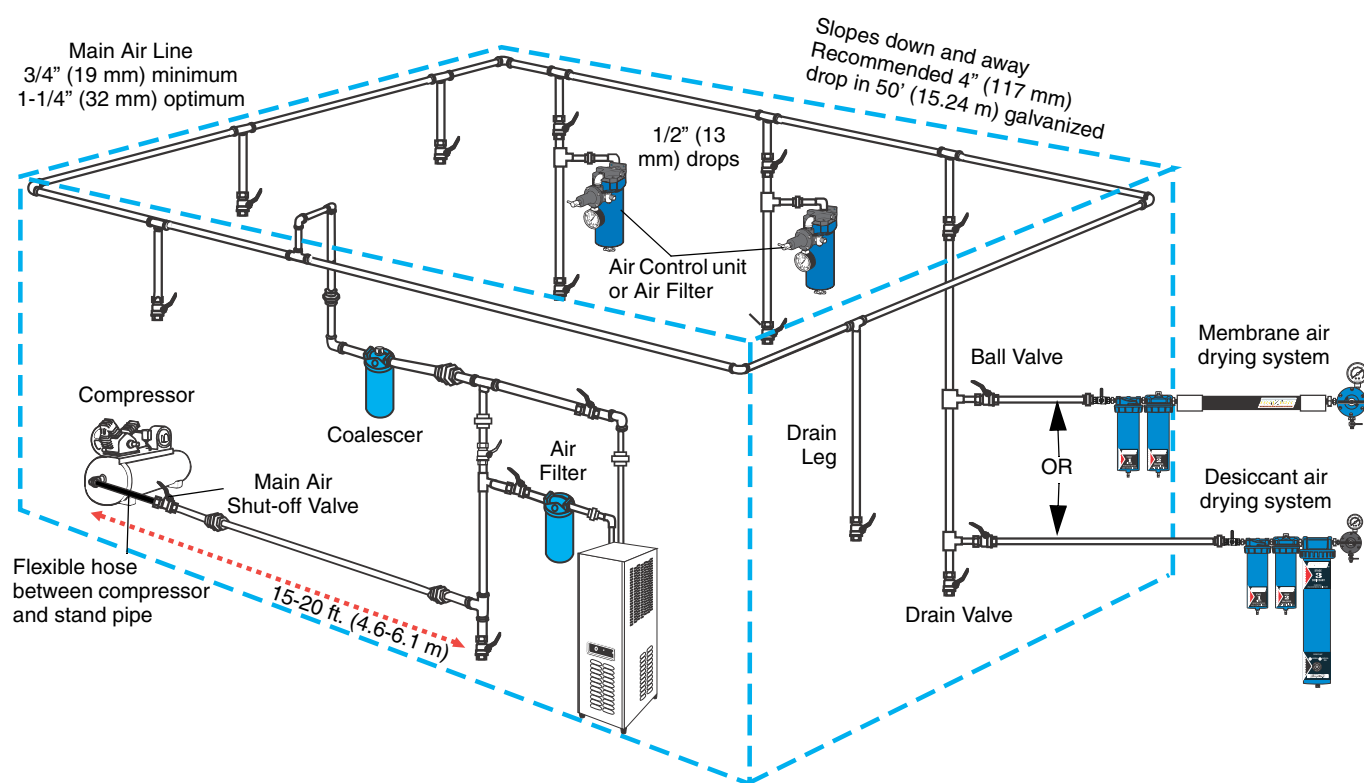
Part No.	Series	Description	Air Inlet npt(f)	Air Outlet npt(f)	Air Flow Capacity at 100 psi (0.7 MPa, 7 bar)	Maximum Operating Pressure
234402	B	Stage 1 - Air Filter with auto drain Removes water and contaminants down to 3 microns.	1/2"	1/2"	100 CFM	175 psi (1.2 MPa, 12 bar)
234397	B	Stage 2 - Coalescer with auto drain Removes oil and sub-micronic particles down to 1 micron.	1/2"	1/2"	83 CFM	175 psi (1.2 MPa, 12 bar)
118560	A	Stage 3 - Membrane Air Dryer Removes uncondensed moisture.	1/2"	1/2"	30 CFM	175 psi (1.2 MPa, 12 bar)
234394	A	Self Relieving Air Regulator	3/8"	1/4"	100 CFM	160 psi 1.1 MPa, 11 bar)
288798	A	Shut-off Valve				175 psi (1.2 MPa, 12 bar)

PROVEN QUALITY. LEADING TECHNOLOGY.

Installation

1. Before installing air line components, blow out the pipe line to remove debris. Be sure air to the regulator is clean. Erratic operation or loss of regulation is usually caused by dirt in the regulator.
2. Install the Air Drying System as close as possible to the equipment it serves.
3. Install air shut-off valve 288798 upstream from the air system to isolate it for service.
4. Install system so air flows through filters in the direction noted on top of filter.
5. A minimum 1/2" npt piping is recommended. Avoid using too many fittings, couplings, etc., which will restrict air flow.

Shop Air Piping Layout



- Main Air Line stand pipe should not be smaller than compressor outlet size.
- A minimum of 25 ft. (7.62 m) from compressor to first filter outlet is required to cool air [50 ft. (15.24 m) optimum]

Minimum Pipe Size Recommendations			
Compressor		Main Air Line	
Size	Capacity	Length	Size
1-1/2 - 2 HP	6 - 9 CFM	any	3/4" (19 mm)
3 - 5 HP	12 - 20 CFM	Up to 200 ft. (61 m)	3/4" (19 mm)
		Over 200 ft. (61 m)	1" (25.4 mm))
5 - 10 HP	20 - 40 CFM	Up to 100 ft. (30.5)	3/4" (19 mm)
		Over 100-200 ft. (30.5-61 m)	1" (25.4 mm)
		Over 200 ft. (61 m)	1-1/4" (31.8 mm)
10 - 15 HP	40 - 60 CFM	Up to 100 ft. (30.5)	3/4" (19 mm)
		Over 100-200 ft. (30.5-61 m)	1-1/4" (31.8)
		Over 200 ft. (61 m)	1-1/2" (38.1)

Air Pressure Drop Through Hose, by hose length and ID psi (Kpa, bar)						
Air Hose Inside Diameter	4 ft. (1.22 m)	10 ft. (3.05 m)	15 ft. (4.6 m)	20 ft. (6.1 m)	25 ft. (7.62 m)	50 ft. (15.24 m)
1/4 in. (6.4 mm)						
40 psi (276 kPa, 2.8 bar)	6 (41, .4)	8 (55, .6)	9.5 (66, .7)	11 (76, .8)	12.75 (88, 0.9)	24 (165, 1.7)
50 psi (345 kPa, 3.4 bar)	7.5 (52, .5)	10 (69, .7)	12 (83, .8)	14 (97, 1)	16 (110, 1.1)	28 (193, 1.9)
60 psi (414 kPa, 4.1 bar)	9 (62, .6)	12.5 (86, .9)	14.5 (100, .1)	16.75 (115, 1.2)	19 (131, 1.3)	31 (214, 2.1)
70 psi (483 kPa, 4.8 bar)	10.75 (74, .7)	14.5 (100, 1)	17 (117, 1.2)	19.5 (134, 1.3)	22.5 (155, 1.6)	34 (234, 2.3)
80 psi (552 kPa, 5.5 bar)	12.25 (84, .8)	16.5 (114, 1.1)	19.5 (134, 1.3)	22.5 (155, 1.6)	25.5 (176, 1.8)	37 (255, 2.6)
90 psi (621 kPa, 6.2 bar)	14 (97, 1)	18.75 (129, 1.3)	22 (152, 1.5)	25.25 (172, 1.7)	29 (200, 2)	39.5 (169, 2.7)
5/16 in. (7.9 mm)						
40 psi (276 kPa, 2.8 bar)	2.25 (16, .2)	2.75 (19, .2)	3.25 (22, .2)	3.5 (24, .2)	4 (28, .3)	8.5 (59, .6)
50 psi (345 kPa, 3.4 bar)	3 (21, .2)	3.5 (24, .2)	4 (28, .3)	4.5 (31, .3)	5 (34, .3)	10 (69, .7)
60 psi (414 kPa, 4.1 bar)	3.75 (26, .3)	4.5 (31, .3)	5 (34, .3)	5.5 (38, .4)	6 (41, .4)	11.5 (79, .8)
70 psi (483 kPa, 4.8 bar)	4.5 (31, .3)	5.25 (36, .4)	6 (41, .4)	6.75 (47, .5)	7.25 (50, .5)	13 (90, .9)
80 psi (552 kPa, 5.5 bar)	5.5 (38, .4)	6.25 (43, .4)	7 (48, .5)	8 (55, .6)	8.75 (60, .6)	14.5 (100, 1)
90 psi (621 kPa, 6.2 bar)	6.5 (45, .4)	7.5 (52, .5)	8.5 (59, .6)	9.5 (66, .7)	10.5 (72, .7)	16 (110, 1.1)

Operation



WARNING

Do not exceed the Maximum Incoming Air Pressure of the equipment. Over pressurizing can cause component rupture and serious injury.

1. Attach air hose(s) to air regulator outlet valve 289165.
2. Open main shut-off valve 288798.
3. Turn the T-hand adjusting screw in or out to adjust regulator to desired setting.
4. Open outlet valve 289165 to supply air to spray guns or tool.
5. With air flowing, readjust air pressure regulator if necessary.
6. Turn off unit when not in use. Follow **Pressure Relief Procedure**, page 5.

Coalescer Pressure Drop Indicator

The differential pressure drop indicator provides early detection of a clogged coalescing filter element. As the filter element becomes clogged, the red indicator starts to rise while air is flowing through the unit. When the

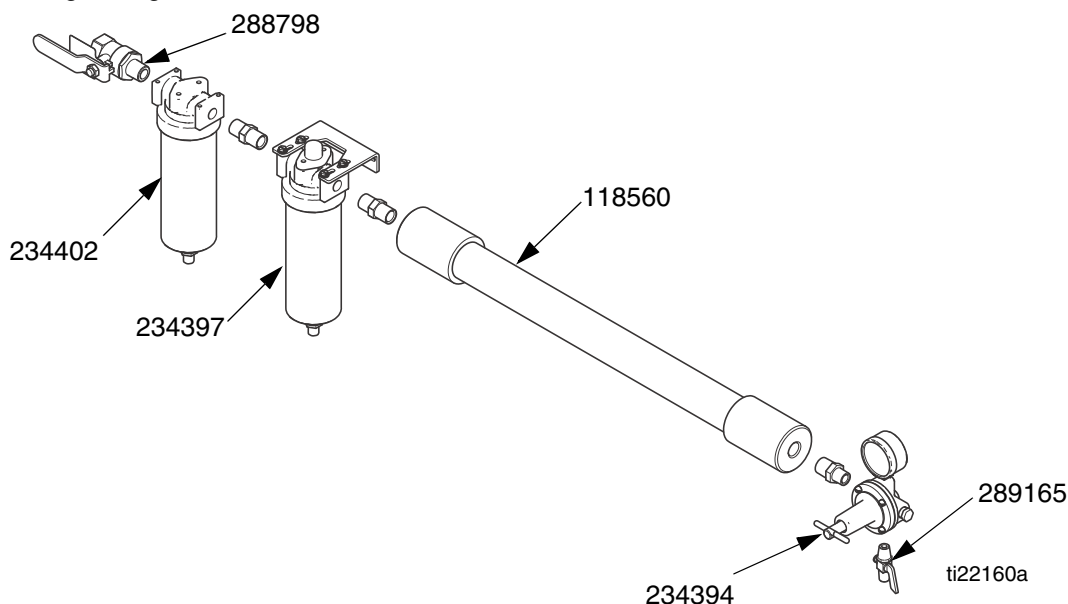
pressure drop across the element reaches 10-12 psi (69-83 kPa, 0.7-0.8 bar), the red indicator will be in full view, and the element should be replaced. Failure to replace the element when the pressure drop exceeds 10 psi (69 kPa, 0.7 bar) will affect your air quality and tool efficiency.

Automatic Drain

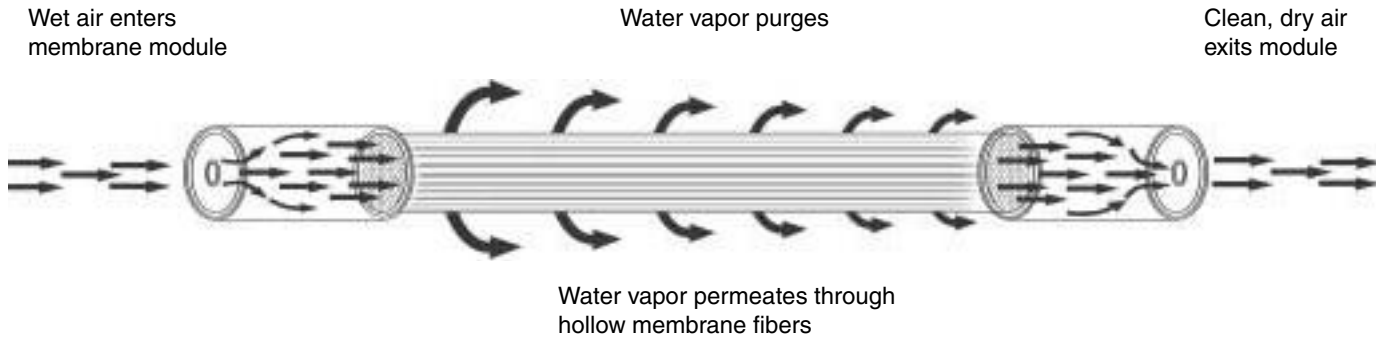
The automatic drain is equipped with a float actuated device which automatically ejects liquid contaminants under pressure.

Parts

Part No.	Description
234402	Air Filter with auto drain; see manual 309919 for parts information
234397	Coalescer with auto drain; see manual 309919 for parts information
118560	Membrane Air Dryer
234394	Air Regulator; see manual 309924 for parts information
289165	Shut-off Valve
288798	Shut-off Valve



How Membrane Air Dryer Works



Pressure Relief Procedure



WARNING

To avoid injury, relieve air and fluid pressure before checking, cleaning, or repairing the equipment.

The following is a basic pressure relief procedure. Be sure to follow the specific pressure relief procedure in your spray gun and/or fluid supply equipment manuals.

1. Close the main air shut-off valve.
2. Trigger the gun or dispense valve and open any drain valves to relieve pressure.

Maintenance



- Relieve the pressure before cleaning, checking or repairing equipment. Follow **Pressure Relief Procedure**, above.
- Check system at least once per shift to ensure proper drainage.

Air Filter with Auto Drain 234402, Series B

To maintain maximum filtering efficiency and avoid excessive pressure drop, the filter must be kept clean. See Manual 309919 for cleaning and parts information.

Coalescer with Auto Drain 234397, Series B



It is recommended that Air Filter 234402 be installed upstream of the coalescing filter to remove 3 micron and larger size particles and separate large droplets of moisture from the air line.

CAUTION

Never let the liquid level in the bowl reach the base of the coalescing element.

See Manual 309919 for operation, cleaning, and parts information.

Air Regulator 234394

Be sure air to the regulator is clean. Erratic operation or loss of regulation is usually caused by dirt in the regulator. See Manual 309924 for cleaning and parts information.

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 présent 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 Phone Numbers

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 309920

Sales Offices: Minneapolis

International Offices: Belgium, China, Japan, Korea

GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441

Copyright 2003, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.

www.graco.com

Revision D, September 2013