INSTALLATION, OPERATION & MAINTENANCE MANUAL

BB, BW, BD, CB, CW, CL, CD, NW, ND SERIES

Industrial Air Filtration Equipment

ULTRA INDUSTRIES, INC.

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ULTRA INDUSTRIES, INC.

The Ultra Industries Warranty and Commitment

WARRANTY:

It is the goal of Ultra Industries, Inc. to provide the best industrial air filtration equipment in the industry and to back it with the most comprehensive warranty available. Ultra Industries, Inc. hereby offers to the original purchaser, starting from date of shipment, and provided that said air filtration equipment is properly installed, operated as originally specified and maintained according to guidelines established by Ultra and found in its Installation, Operation and Maintenance Manual, the following warranty coverage. This warranty coverage applies to all equipment installed in the United States and Canada.

Parts & Labor	One Year
Parts	Two Years

In the event defects develop within said period under normal and proper use, Ultra will furnish without charge (FOB Factory), parts required to replace components found to be defective. Should a defect develop within the first year, Ultra Industries will cover the labor to correct the defect, based on a pre-established flat rate schedule. Ultra will not warrant for damage or component failure due to extreme environmental conditions, normal wear and tear, unauthorized modifications or equipment used outside of its intended application or design parameters. Filters are considered to be a wear item and are not covered under this warranty. Filters are guaranteed to be free of material or workmanship defects at time of delivery.

Any warranty terms beyond those stated above must be approved at the time of quotation, in writing, by the Engineering Manager or Operations Manager of Ultra Industries.

Ultra Industries, Inc. reserved the right to amend this warranty without notice.

INDEMNITY:

The sole and exclusive remedy for breach of warranty shall be limited to repair or replacement under the standard warranty clause. In no case shall Companies liability exceed the price to Purchaser of the specific good manufactured by Company giving rise to the cause of action. Purchaser agrees that in no event shall Companies liability extend to include incidental or consequential damages. Consequential damages shall include but not be limited to loss of anticipated profits, loss of use, loss of revenue, cost of capital and damage or loss of other property or equipment. In no event shall Company be liable for property damage and/or third party claims covered by umbrella insurance and/or indemnity coverage provided to Purchaser, its assigns, and each successor in interest to the goods provided hereunder.

CONTACTS: **info@ultraind.com**
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updated January 1, 2024

Receiving Your Collector

Congratulations on selecting an Ultra Industries collector for state of the art, efficient, thorough air filtration and product recovery. We urge that you read and follow the instructions and advice which follows. We want you to be completely satisfied with your collector.

Shipment

Ultra dust collectors have been designed to minimize customer assembly. Air headers, solenoids, air piping and air pressure gauges are all shipped mounted on the collector, completely piped for operation.

Housings for the Ultra bottom bag removal collectors such as the BB and CB models are shipped as completely welded assemblies. Ultra top bag removal collectors such as the BW and CW models are shipped in two subassemblies. The larger rectangular top bag removal collectors such as the NW and ND models are also shipped in two subassemblies often with the hopper inverted and nested inside the main housing.

Timers, bags, bag clamps, cages and differential pressure gauges are shipped separate from the collector. These shipments are carefully marked for identification.

Inspection

Ultra dust collectors are carefully inspected before shipment to ensure high quality workmanship. Heavy skids and secure truck cribbing are used, but at times damage does occur during shipment. We recommend that you inspect your collector when it is received and look for any possible damage. If there is any damage or a shortage, it should be noted on your Bill of Lading. The purchaser should file claims against the carrier within a few days of receipt of the shipment. Damage incurred in transit is the responsibility of the common carrier. Since it is the manufacturers' policy to ship F.O.B. the factory, any claims must be initiated against the carrier by the purchaser.

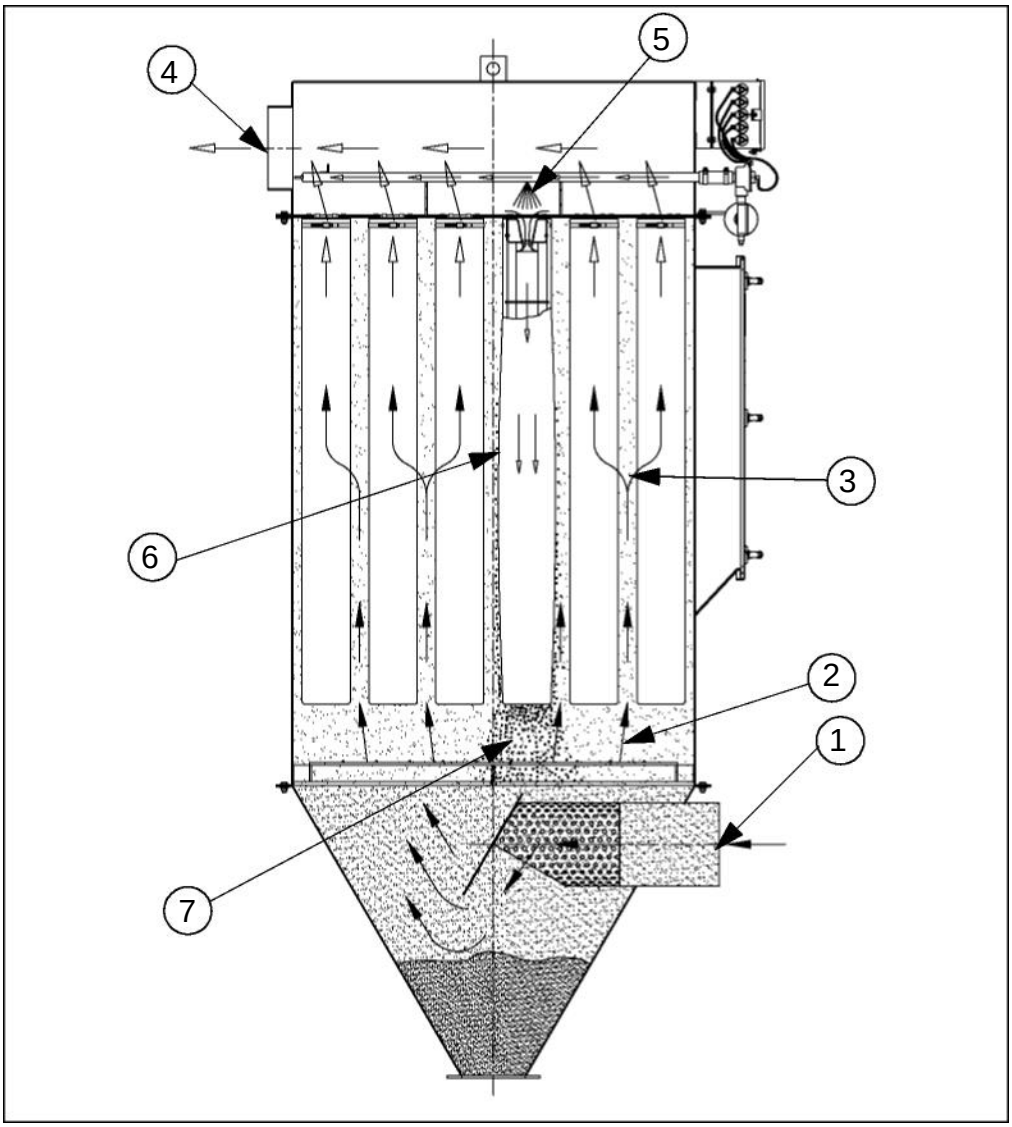
Storage

The standard finish for the outside of the collector is one coat of Direct to Metal enamel paint unless additional coats or special coatings were specified.

If additional protection is required (due to lengthy outside storage in damp environments, corrosive atmospheres, or other adverse conditions), the collector should be given an additional protective coating while the original coating is still in good condition. All openings should be covered with suitable material to protect interior surfaces from corrosion.
Bags & Cages, which may arrive in a separate shipment to avoid shipping damage, should be stored in a dry indoor location.

Operating Principles

Ultra Industries dust collectors remove 99.9% of dust particles greater than 2 microns quickly and efficiently. Dust laden air enters the hopper (1) where heavier particles drop out of the air stream. The lighter particles are trapped in the air stream and rise into the filter bags (2). As the air passes through the filter bags, the dust particles are collected on the outside surface of the filter bags (3) and the cleaned air is exhausted out through the collector (4). At precise intervals, jets of compressed high pressure air pass through venturis (5), inducing a strong flow of secondary air, briefly reversing the airflow through the bags. This produces an internal shock wave which travels down the length of the bag, causing the bag to pressurize and flex outwards (6). This allows reversed airflow to dislodge accumulated dust on the outside of the bag where it falls into a collection hopper (7). With this method of cleaning, airflow through a row of bags is reversed for only a fraction of a second, resulting in steady state airflow conditions throughout the dust collector. The cleaning operation is controlled by an easily adjusted solid state timer. A Magnehelic gauge permits optimum regulation of the timer. Pulse durations and pulse intervals can be simply and accurately set at the timer to minimize compressed air consumption.



Mounting the Differential Pressure Gauge

Ultra Industries dust collectors include a standard Magnehelic™ gauge designed for a differential pressure range between 0" and 10" W.C. (Water Column). Also, the gauge is designed for operation at temperatures between -20°F and 140°F.

Installation

Standard equipment comes complete with a gauge mounting bracket. A full set of hardware along with installation instructions is provided with each gauge. ***See Magnehelic™ Gauge Assembly.***

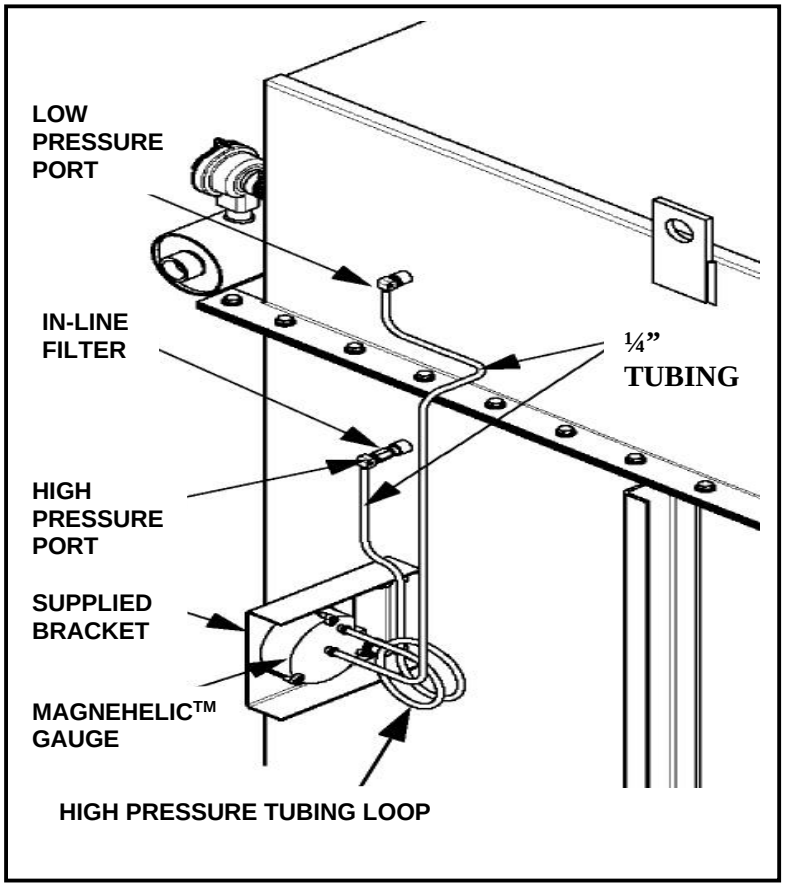
If your equipment comes complete with a Photohelic™ gauge, see title ***Installation and Operation of the Photohelic™ Differential Pressure Switch/Gauge.***

Location

Location of the Magnehelic.′ gauge should be near the dust collector. If conditions or accessibility to the dust collector prohibit local mounting of the gauge, pick a location that is free from excessive vibration and where ambient temperatures will not exceed 140°F. Also, avoid **direct sunlight which will accelerate discoloration of the clear plastic cover.**

Connecting the Gauge

We provide 1/4" black polyethylene tubing for connections made locally with the supplied bracket. This tubing is usually sufficient for most applications. For outdoor or severe duty applications, this tubing may become brittle and crack over time and will require replacement. For these installations, we recommend that you use 1/4" copper tubing with compression fittings. We recommend that a loop be placed in the high pressure line that leads away from the dirty air housing. This loop acts as a trap for dust or possible condensation and will help in keeping it from entering the high pressure port on the gauge. Also, for excessively dirty air lines, we recommend the use of an in-line filter to be used in combination with the loop. (See tubing installation detail.)



TUBING INSTALLATION DETAIL

To zero the gauge after installation

After installation of the Magnehelic™ gauge, it must be zeroed out. This is simply done by turning the external zero adjust screw on the cover at the bottom. Note that the zero check or adjustment can only be made with the high and low pressure taps both open to atmosphere.

Two pairs of high and low pressure ports are supplied for each gauge. After connection of the high and low pressure lines, be absolutely sure that the remaining ports are sealed with a plug which comes with your Magnehelic™ gauge.

Installing the Compressed Air Cleaning System

Air Consumption

The average amount of air that is consumed is listed on the drawing for each collector. This is based on a six second pulse interval “OFF-TIME” and a pulse duration of 0.05 seconds “ON-TIME” which are average settings for most applications and can be varied up or down depending on the type of dust and dust loading. For example, with a very light dust loading, the “OFF-TIME” could be set at 12 to 18 seconds thus reducing the air requirements to 1/2 or 1/3 of the stated volume. A corresponding reduction in the size of the air supply piping may be made.

Air Supply Piping

A 1” to 2-1/2” compressed air supply pipe furnishing 85-100 PSI(g) air will need to be connected to the air header. Refer to Recommended Pipe Sizes table below. Higher pressures shorten filter bag life and lower pressures do not adequately clean the filter bags. It is a good practice to blow down the air supply piping before connecting it to the air header. This removes any debris in the supply pipe before it is connected to your collector.

Air Quality

Dirt, scale, or foreign matter in the piping can cause problems in the air pulsing system. Oil in the air supply can eventually cause plugging of the bags. Water in the system can cause valve problems plus the chance of freeze-up in a cold atmosphere. It is, therefore, necessary that the air be clean, dry, and oil-free. The air receiver should have an automatic moisture drain. In-line air filters with automatic drains may suffice if moisture content is not too great and if kept from freezing. However, if a large amount of moisture or oil is present, a desiccant type of filter is recommended.

RECOMMENDED PIPE SIZES

Total Free Air Consumption	Up to 100 Feet	Up to 500 Feet	Up to 1,000 Feet
Up to 50 SCFM	1”	1-1/4”	1-1/2”
51 to 100 SCFM	1-1/4”	1-1/2”	2”
101 to 200 SCFM	1-1/2”	2”	2-1/2”

Installing the Filter Bags

Side Bag (Bottom) Removal Collectors

NOTE: Follow confined space procedures as outlined in OSHA regulations (Standards-29CFR) Permit - Required Confined Spaces-1910.146

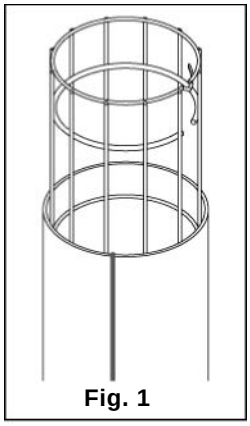


Fig. 1

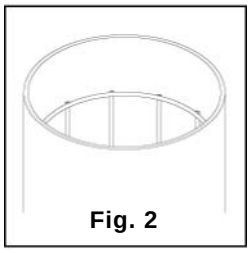


Fig. 2

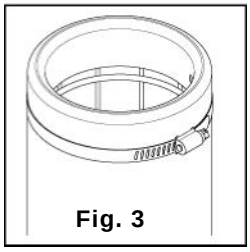


Fig. 3

1. Slip filter bag over the cage, making sure that the bag seam is not over the split in the top collar of the cage. (See Fig. 1)
2. The bottom of the bag must be tight against the cage bottom. The bag seam should be straight and all wrinkles smoothed out.
3. Fold the top of the bag (about 2 inches) over the top edge of the cage. Smooth out the inside folds and make sure that the bag does not overlap the annular ring on the inside of the cage. If necessary, trim any excess bag length. (See Fig. 2)
4. Loosely slip on the bag clamp making sure that the tightening mechanism (worm gear screw) is not over the bag seam. Locate the bag clamp 1” to 1-1/2” below the top of the bag & cage assembly. (See Fig. 3)
5. Starting at the far side of the collector, slide the bag and cage assembly upward over the bag cup until the cage snaps into place on the groove in the bag cup. The bag & cage assembly should fit snug against the tube sheet for proper alignment. (See Fig. 4)
6. Tighten the bag clamp until the bag and cage assembly does not rotate. (See Fig. 5)
7. Check to make sure that the filter bags are hanging straight and do not touch other bags or the collector housing. (See Fig. 6)
8. Install the remaining bags in the same manner, moving your way towards the access door. The final few bags will be required to be installed from outside the access door.
9. Close and tighten all access doors.

TIP! It is best if one person holds the bag assembly up tight against the tube sheet, while the other person tightens the clamp.

NOTE: It is important to use a 3/8” socket. A screwdriver may slip off the bag clamp and accidentally puncture the bag. (See Fig. 5)

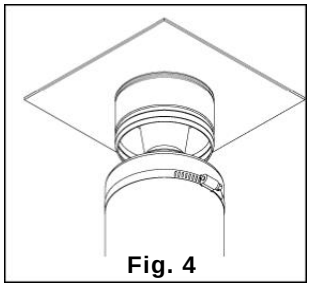


Fig. 4

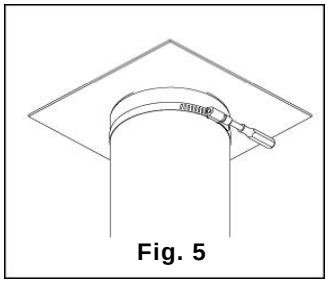


Fig. 5

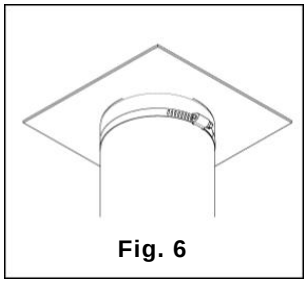
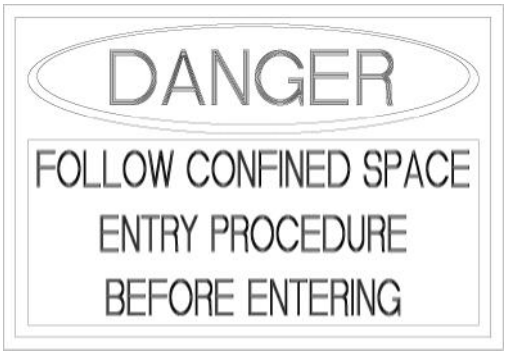


Fig. 6

Top Bag Removal Collectors

CAUTION

NOTE: Follow confined space procedures as outlined in OSHA regulations (Standards-29CFR) Permit - Required Confined Spaces-1910.146



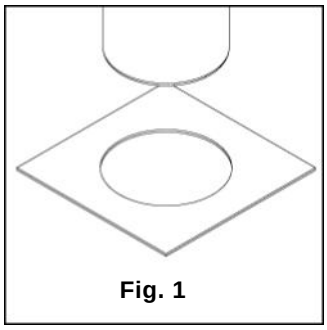


Fig. 1

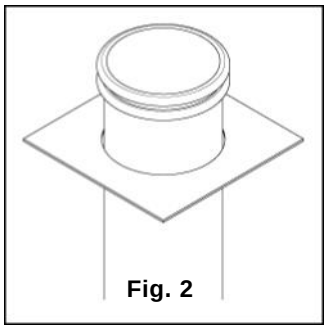


Fig. 2

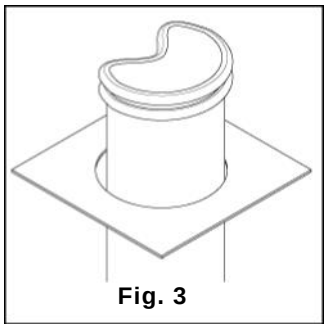


Fig. 3

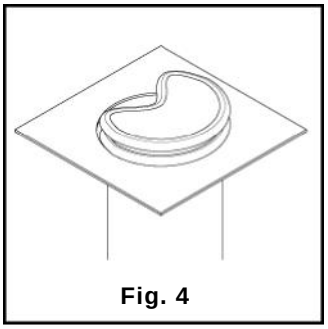


Fig. 4

1. From the top side of the tube sheet, lower the bag into the housing up to the bag cuff. (See Fig. 1)
2. The bag cuff has two sewn-in spring steel bands. (See Fig. 2). Collapse the cuff inward onto itself (See Fig. 3) and into a “U” shape and lower the bag (See Fig. 4) until one of the bands is below the tube sheet (See Fig. 5) and the other above. Then, let the cuff spring back to its original shape. (See Fig. 6) Smooth the cuff around the hole. The cuff should form a perfect seal at the tube sheet.
3. Lower the cage assembly into the bag and press firmly into place. (See Fig. 7 & 8)
4. Install the remaining bags in the same manner.
5. Close and tighten all access doors.

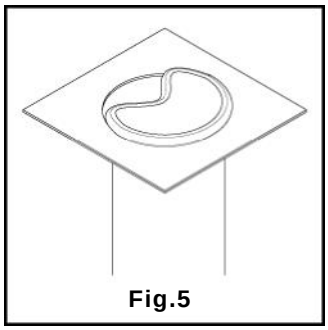


Fig.5

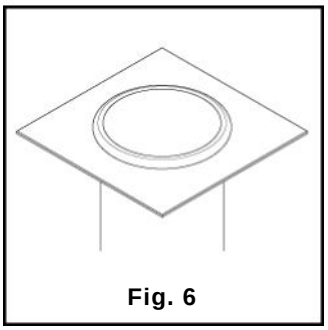


Fig. 6

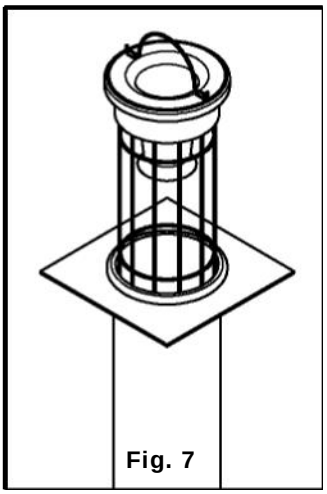


Fig. 7

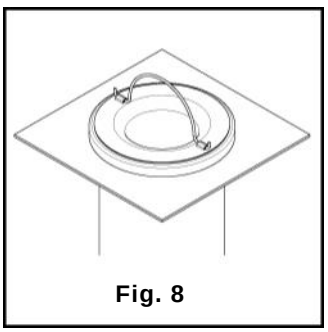


Fig. 8

CAUTION

NOTE: Be careful when you release the cuff so that your fingers do not get in-between the tube sheet hole and the cuff.

Installing the Solid State Timer

1. The Ultra sequential timer is a completely solid state switching control board that is manufactured to rigid specifications. The timer board has a replaceable fuse for overload protection. The timer can be operated in continuous mode or “On Demand” mode. In Continuous mode, the timer operates under the pre-set conditions on the timer board. In “On Demand” mode, the fan stop terminals are connected to a separately supplied differential pressure switch which will open and close the timer board circuit based on the differential pressure at the collector. Pre-set differential pressure settings will “Demand” the timer to initiate the cleaning sequence. ***See Installation and Operation of Photohelic™ Differential Pressure Switch/Gauge.***

2. The timing range is fully adjustable for optimum collector performance. The “ON-TIME” (pulse duration) is adjustable from 0.03 seconds to 0.99 seconds. The “OFF-TIME” (interval between pulses) can be varied from 1 to 999 seconds. An indicator light for “Power On” is prominently located on the timer board as well as lights which indicate which row of bags is being cleaned. We recommend initial settings for the timer “ON-TIME” be set to 0.10 seconds and the timer “OFF-TIME” be set to 15 seconds. ***Refer to the separate Timer Board Programming Instructions for any clarification.***

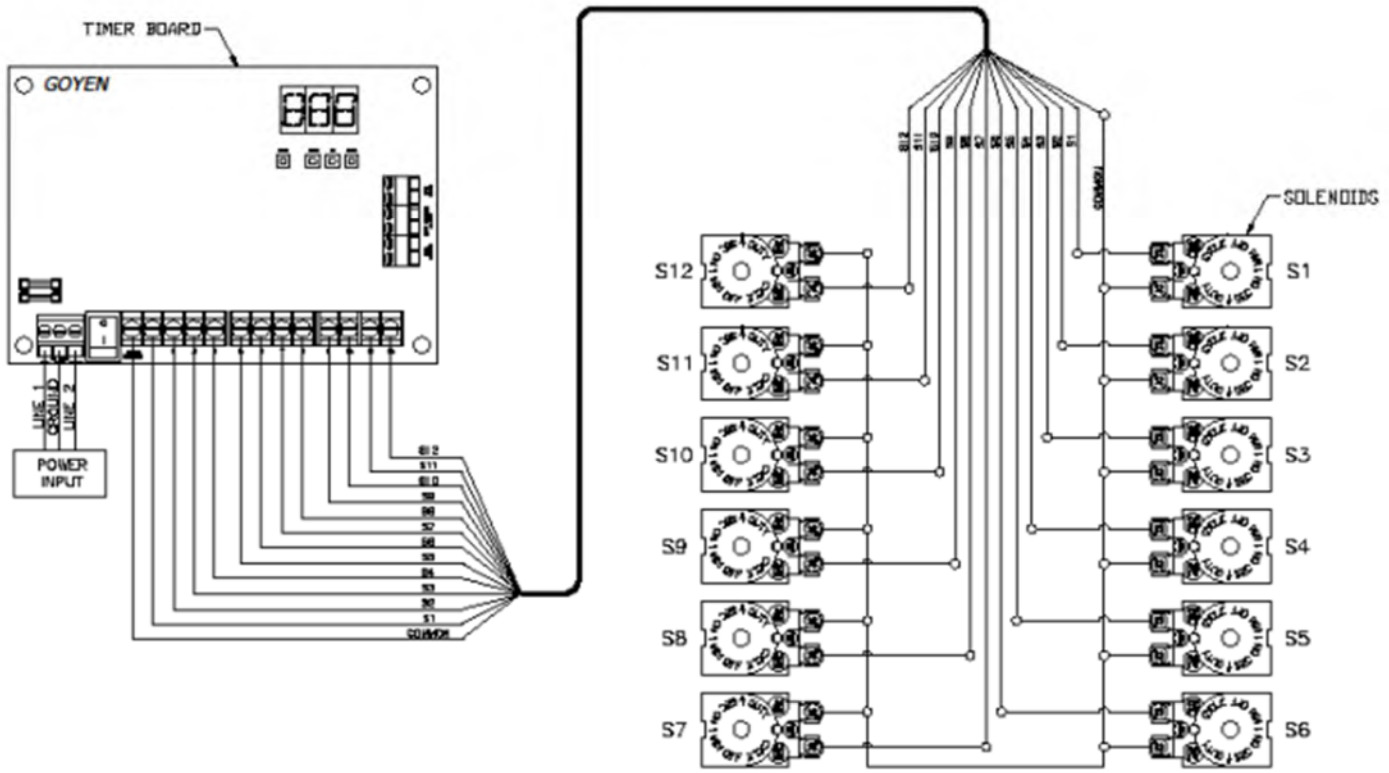
3. The standard timer is shipped in a NEMA 4X, weatherproof enclosure for mounting by the customer. Other enclosures are available for hazardous applications.

4. Install an “ON/OFF” switch in the power supply to the timer. Connect 115 Volt, single phase, 60 Hz, 10 amperes input through this switch to the timer board terminals marked “LINE” and “NEUTRAL”. A ground lead should be connected to “EARTH”.

ELECTRICAL HAZARD! Use extreme caution when handling high voltage wires and make sure all electrical enclosures and equipment are properly grounded.

5. Connect wiring between the timer and the solenoid valves; one side of each solenoid to the timer common terminal marked “VALVE COMMON”, and the other side of the first solenoid to the timer solenoid output terminal marked “1”, the second solenoid to “2”, etc.

12 POSITION SOLENOID/TIMER WIRING DIAGRAM



Installation and Operation of the Photohelic™ Differential Pressure Switch/Gauge

Operation

The Photohelic™ is used to control the reverse pulse jet cleaning of the dust collector based on a set range of the differential pressure across the Tube Sheet. When the differential pressure reaches the high set point on the Photohelic™ gauge, a switch is thrown which turns on the timer to start the cleaning process. This will continue until the differential pressure reaches the low set point and the timer is turned off. In this way, the dust collector pulses on demand only when it is required and eliminates wasteful consumption of compressed air.

Location/Mounting

See **Mounting the Differential Pressure Gauge** for connection of the tubing.

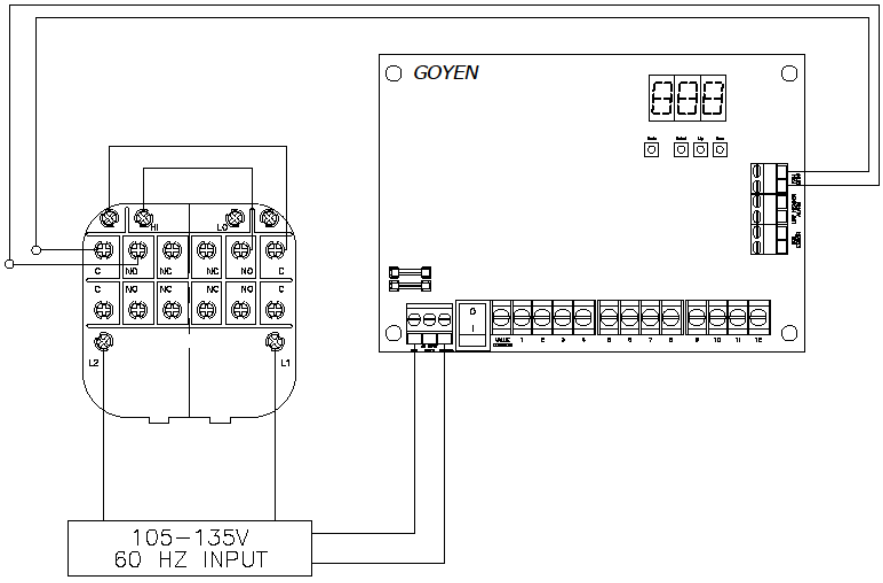
Wiring

The Photohelic™ Gauge comes pre-wired and installed in a NEMA 4X fiberglass box. Wiring connections are described below for the standard Goyen timer board.

CAUTION

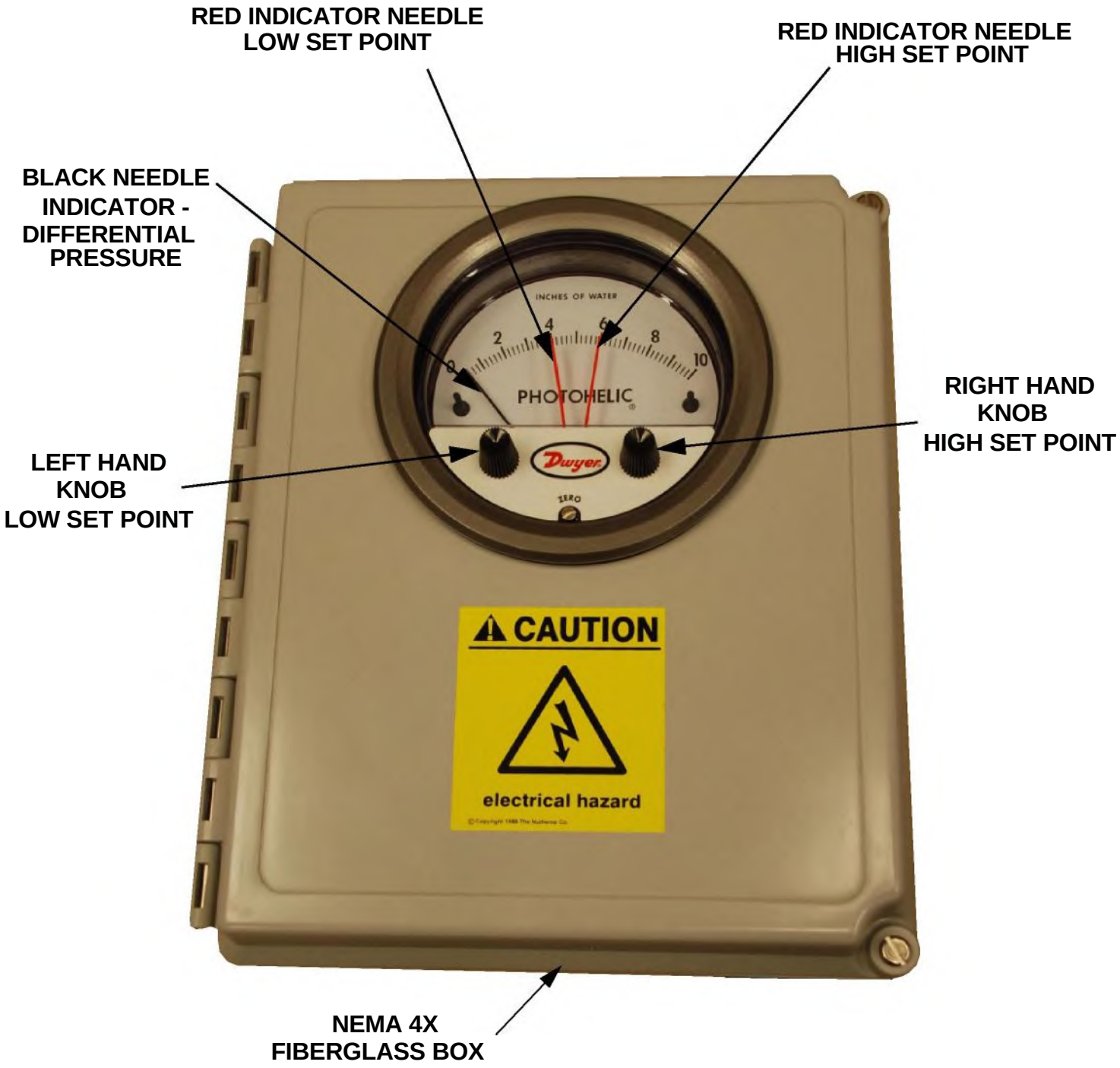
ELECTRICAL HAZARD! Use extreme caution when handling high voltage wires and make sure all electrical enclosures and equipment are properly grounded

You will be required to connect 115 Volt, single phase, 60 Hz power to the “L1” and “L2” terminals on the Photohelic™ Gauge as well as the “LINE” and “NEUTRAL” terminals on the timer board. You will also need to connect a dry circuit between the “NO” (Normally Open) and “C” (Common) Photohelic™ switch terminals and the timer board “FAN STOP” terminals.



Adjustment

There are two hand knobs on the front cover of the gauge. The right hand knob is the high set point and the left hand knob is the low set point. There is a corresponding red needle indicator that is visible through the gauge cover to show where your current setting is located. We recommend that the differential pressure settings for the gauge be set to a high set point of 5-6” W.C. and a low set point of 3-4” W.C. Please note that the settings on the timer should be adjusted to an “OFF-TIME” of 5-10 seconds to allow the timer sequence to pulse all rows before the differential pressure reaches the low set point.



Initial System Start Up

Auxiliary Equipment

Inspect all equipment before start-up to see that there are no foreign objects in rotating equipment and that safety equipment is in place.

Start the fan, screw conveyor and/or airlock and inspect for proper rotation and that all equipment runs smoothly. After making the necessary corrections, turn all this equipment off.

Duct Work

See that all connections are tight and that all cleanout ports are closed. The duct work must be free from debris.

Starting the System

1. All doors and ports should be closed, with timer and auxiliary equipment off. Turn on compressed air to collector and inspect the system for leaks. If air is leaking from any blow pipe with the timer off, there may be a leak between the solenoid and diaphragm valve. Inspect the $^1/_4$" OD tubing between the solenoids and the diaphragm valves to be certain that all connections are tight and there are no leaks. The tubing must not be crimped. Shut off the compressed air supply.
2. Turn on the timer. The red "POWER-ON" indicator should light up. Turn the "OFF-TIME" and "ON-TIME" screws fully counterclockwise. The individual timing lights should blink at 1.5 second intervals and the corresponding solenoid valves will be activated. A "click" sound can be heard every time a solenoid activates.
3. Turn on the air supply to the air header. All solenoid valves should be operating and the

NOTE: On systems that use 1-1/2" diaphragm valves, the "ON-TIME" must not be set lower than 0.10 seconds.

exhaust air from each valve can be felt by placing your finger over the exhaust port. Let the collector pulse for ten minutes to clear all lines. Then, set the "OFF-TIME" between six and ten seconds with 85 PSI(g) air supplied. Later, this may be adjusted to suit your collection requirements based on the dust loading.
4. Turn on all dust discharge equipment such as rotary valves, screw conveyors, etc.
5. If water vapor or other condensates are present, it will be necessary to preheat the system so that the surface temperature of the piping/ductwork and collector are above the dew point temperature. Dryers, coolers, and some grinding systems are common examples.
6. Start the fan with the fan damper set at about half-flow and run for 30 minutes because it is good practice to introduce the dust stream to a new bag at a reduced rate. This is particularly true when very fine dust (less than 2 microns) or high concentrations are present.
7. Observe the differential pressure gauge. At start-up, the differential pressure (pressure drop) will be low. After thirty minutes of operation, the bags will start to be coated, the filtering efficiency will increase and the differential pressure will start to rise. At this time, the fan damper should be opened to the design setting.

8. When the collector has stabilized (may require eight hours of operation) the differential pressure should remain steady at some value between 1” and 6” Water Column/Gauge. We recommend that the differential pressure be maintained at 4” W.C. If it is below 4”, gradually increase the “OFF-TIME” until it reaches 4” W.C. If it is over 4”, the “OFF-TIME” should be decreased until it reaches 4” W.C.

NOTE: Never Allow the differential pressure across the bags to reach above 15” W.C. At this pressure, bag cages will start to collapse.

9. The temperature of the system must be controlled to remain below the maximum temperature capability of the filter bags.
10. The collector is now ready for use.

Using Your Collector

Standard Start-Up

Subsequent start-ups should begin with all systems off. **Exception: After new bags are installed, follow Initial System Start Up procedure.** Turn on in the following sequence:

1. Filter bags & cages installed, all ports, access doors and rotating equipment closed with safety equipment (belt guards, etc.) in place.
2. Turn on compressed air.
3. After pressure reaches 85-100 PSI(g), turn on the timer.
4. Turn on all dust discharge equipment.
5. Turn on the fan. Preheat the system if necessary.
6. If the collector discharge is visible, refer to the **Trouble Shooting Check List**.

Shutting Down Your Collector

Dust control and pneumatic conveying systems Reverse start-up procedure. First, turn off the fan, wait five to ten minutes and turn off the timer and discharge (auxiliary) equipment.
Process Systems Dryers and the system to the collector discharge should be run until empty and heat maintained at a reduced rate until the collector metal surfaces and filter bags are dry. Then proceed as above.

Routine Maintenance

Inspections

Frequency will vary as widely as there are operating conditions. Your experience will be the best guide. In general, proceed as follows:

1. Daily adjust the timer “OFF-TIME” to achieve a differential pressure of 4” W.C.
2. Weekly check timer, solenoid valves and diaphragm valves for proper operation. Usually listening to determine that there is a uniform time interval between diaphragm valve air discharge blasts will suffice.
3. Monthly lubricate fan, rotary valve, and screw conveyor. Inspect the seals on the airlock and screw conveyor for dust leakage. Refer to the respective IOM manual for instructions.
4. Quarterly inspect filter bags for condition.
5. Inspect, clean, and replace air supply and differential pressure gauge filters as operating conditions require.

Safety
Before entering the dust collector:

1. Run cleaning system for 20 minutes with the fan turned off to clean off the filter bags.
2. Run collected solids out of the hopper.
3. Lock out electrical power on all rotating equipment.
4. If toxic gases and/or solids are present, purge collector housing with fresh air and block off inlet duct. **Refer to plant safety confined space entry procedures.**
5. Install catwalks and safety cables.
6. Secure access doors in open position or remove doors by lifting from the hinge pins.
7. Use buddy system.
8. Wear a respirator as required.
9. Use common sense.

Trouble Shooting Check List

Problems with Probable Causes

First be sure that you have followed the complete **Standard Start-Up** procedure.

Visible Exhaust Dust Loss

1 Missing bag. Dust loss will be constant and not in synchronization with diaphragm valve blasts. Locate and replace the missing bag.

2. Improperly installed bags. Side removal bags with loose clamps or top removal bags with loosely seated snap bands in the tube sheet hole. Reinstall the filter bags and cages properly.

3. Holes in bags. Caused from mechanical damage during installation, abrasion, thermal or corrosive attack or wear. Replace worn or damaged bags with bags made from filter media suitable for the application.

4. Dust in the clean air plenum after bags fail. Always clean the plenum before installing new filter bags.

5. Filter bags are not efficient for the application and the dust passes through the filter media. Contact Ultra Industries, Inc. for alternate bag selection.

Insufficient Air Pressure

6. Compressed air piping leaks. Tighten all fittings.

7. Additional usage from plant compressed air system. Revise system to furnish adequate air supply.

Entire Row of Bags Inadequately Cleaned

8. Debris in diaphragm valve. Disassemble valve and gently clean the inside of the valve as well as the plastic seat on the underside of the diaphragm.

9. Dirt in the solenoid valve plunger. Remove the solenoid cover and clean the plunger. Note: Be careful not to lose the spring which may pop out as you remove the plunger.

10. Solenoid valve inoperative. Electric, solenoid or timer fault. Establish power to the solenoid and proper wiring to the timer. Check solenoid and if alright, change wiring at the timer to the next unused terminal and move the program wire to the highest numbered terminal used. If this is not desired or no other terminals are available, replace the timer. If the solenoid is defective, replace.

Random Bag Inadequately Cleaned

11. Debris in air distribution pipe hole. Remove debris either by inserting a small rod into the hole or by removing the air pipe and flushing it out.

High Differential Pressure

12. Excessive air flow. Adjust fan damper until differential pressure gauge indicates the proper pressure.

13. Compressed air pressure is below 75 PSI(g). See paragraphs 5 & 6.

14. Solenoids skipping. See paragraph 9.

15. Leakage through rotary valve. Check rotary valve for wear or damage and correct.

16. Dust on inside of bags after previous bag failure. Clean the plenum and the inside of the filter bags. See paragraph 4.

17. Blinding (Plugging) of the bags due to condensation. Change operations upstream so that liquids remain vaporized through the dust collector. It may be necessary to insulate the collector. Usually operating the collector with no solids flowing through will permit recovery and removal of condensation.

18. Re-entrainment of dust due to hopper overloading, bridging, or plugging. Run out dust from discharge system with the fan off. Consider increasing the capacity of the discharge system or reducing the load. Install hopper vibrators and/or fluidizers.

19. Improper timer sequence. Inspect the timer for proper solenoid wiring and program wire position.

20. Defective Timer. Return timer to be repaired or replaced.

21. Bags are too tight. If bags were cleaned, they may have shrunk and are too tight to permit proper flexing. Replace with new filter bags.

Improper Pulsing

22. Solenoid valves not working. See paragraph 9.

23. Continuous air flow through diaphragm valve. See paragraphs 7 & 8. Leak in tubing between solenoid and diaphragm valve. Tighten connections and replace tubing if necessary.

24. Insufficient Dust Collection (System Volume Too Low)

25. Fan running backwards. Correct fan rotation.

26. High differential pressure. See paragraphs 5 through 9 and 16 through 19.

27. Fan belt slippage. Tighten or replace belts.

28. Air leakage between collection pick-ups and fan. Seal any leaks and tighten all flanged connections in duct work.

29. Additions to dust collection system. Increase system capacity

Short Bag Life

30. High Temperature. Bleed in ambient air and/or replace filter bags with higher temperature resistant filter media.

31. Chemical attack. Contact Ultra for recommendations.

32. Localized wear from rubbing. Straighten cages so that bags do not rub against each other or against the collector housing. Replace worn bags & cages. Wear near the material inlet may require an inlet baffle.

Timer Malfunction

33. “Power-On” indicator light not on. Ascertain that timer “ON/OFF” switch is on, that timer wiring is connected, and that indicator bulb is good. Inspect for blown fuse. The standard 12 position Goyen timer board requires a T2.5A 250V fuse.

34. Solenoids skipping. See paragraph 9.

Unusual Differential Pressure Gauge Readings

35. Unusual readings. Inspect gauge filter and replace if plugged. Blocked gauge tubing. Disconnect and remove blockage. If blockage occurs frequently, install filter, and replace it routinely.

Replacement Parts

Your Ultra collector uses the finest components available. To ensure continued trouble-free operation of your collector, we recommend that only factory engineered components be used. The following components are suggested to be kept on hand to maintain trouble free service:

1. A spare set of filter bags and bag clamps

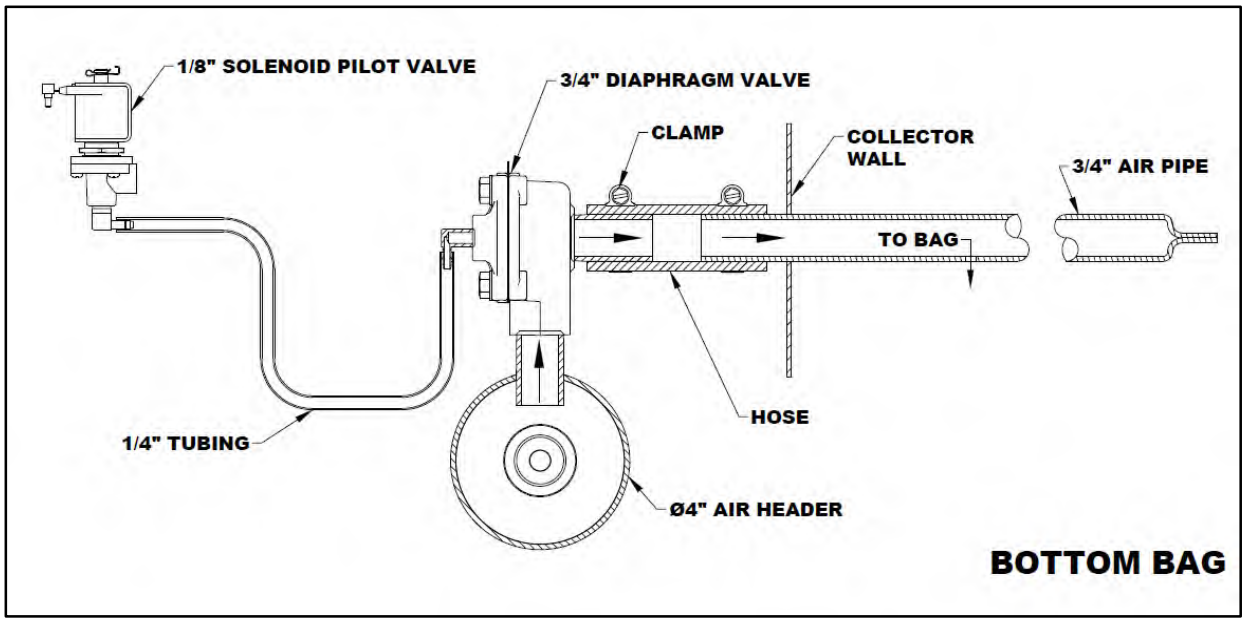
2. Extra solenoid valves and diaphragm valves

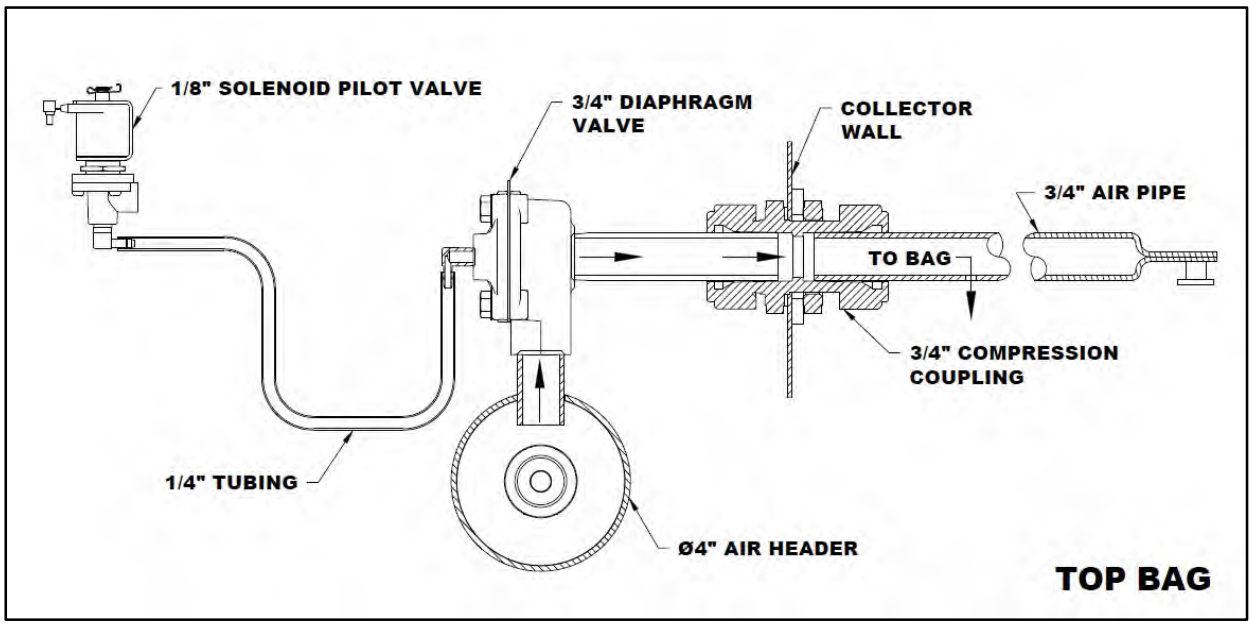
3. A spare timer board for multi-collector installations.

Our collector components can be used to maintain peak performance of collectors manufactured by other leading manufacturers.

Common Assembly Diagrams

PULSE-JET MECHANISM 3/4”





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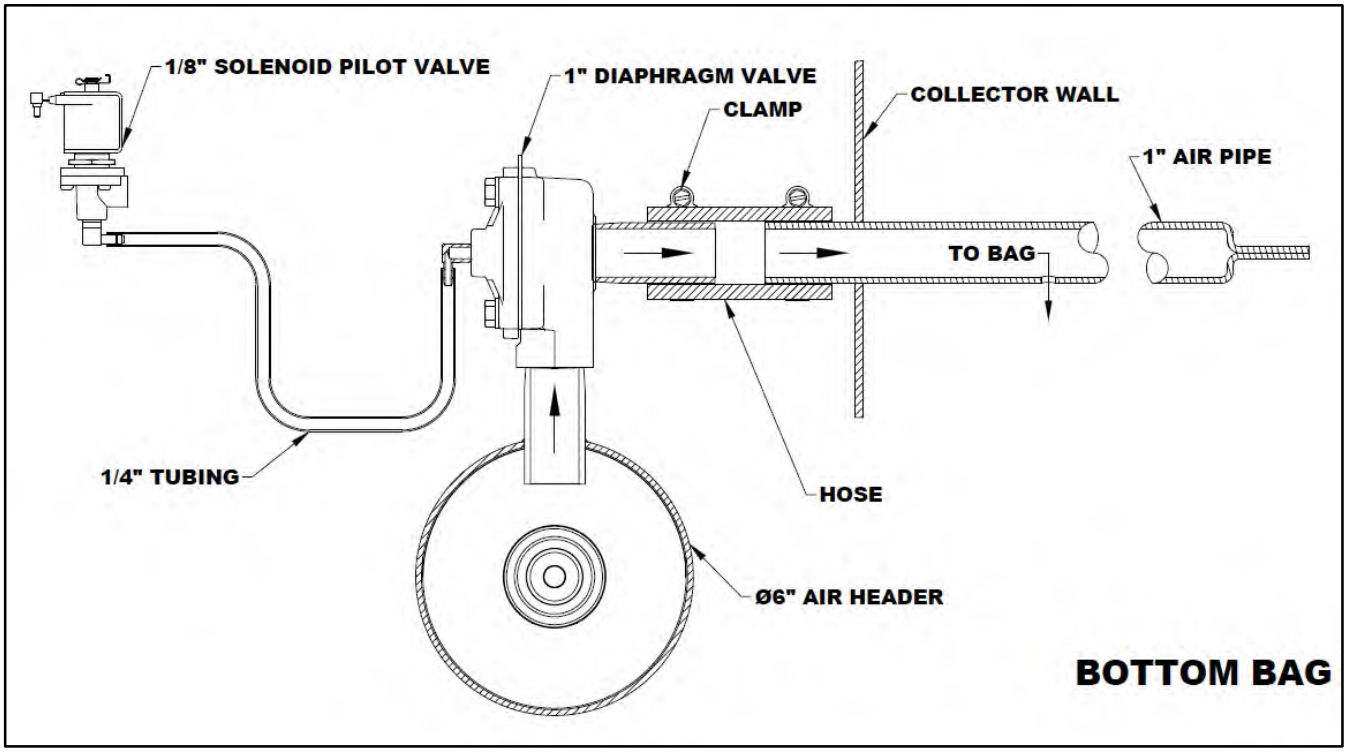
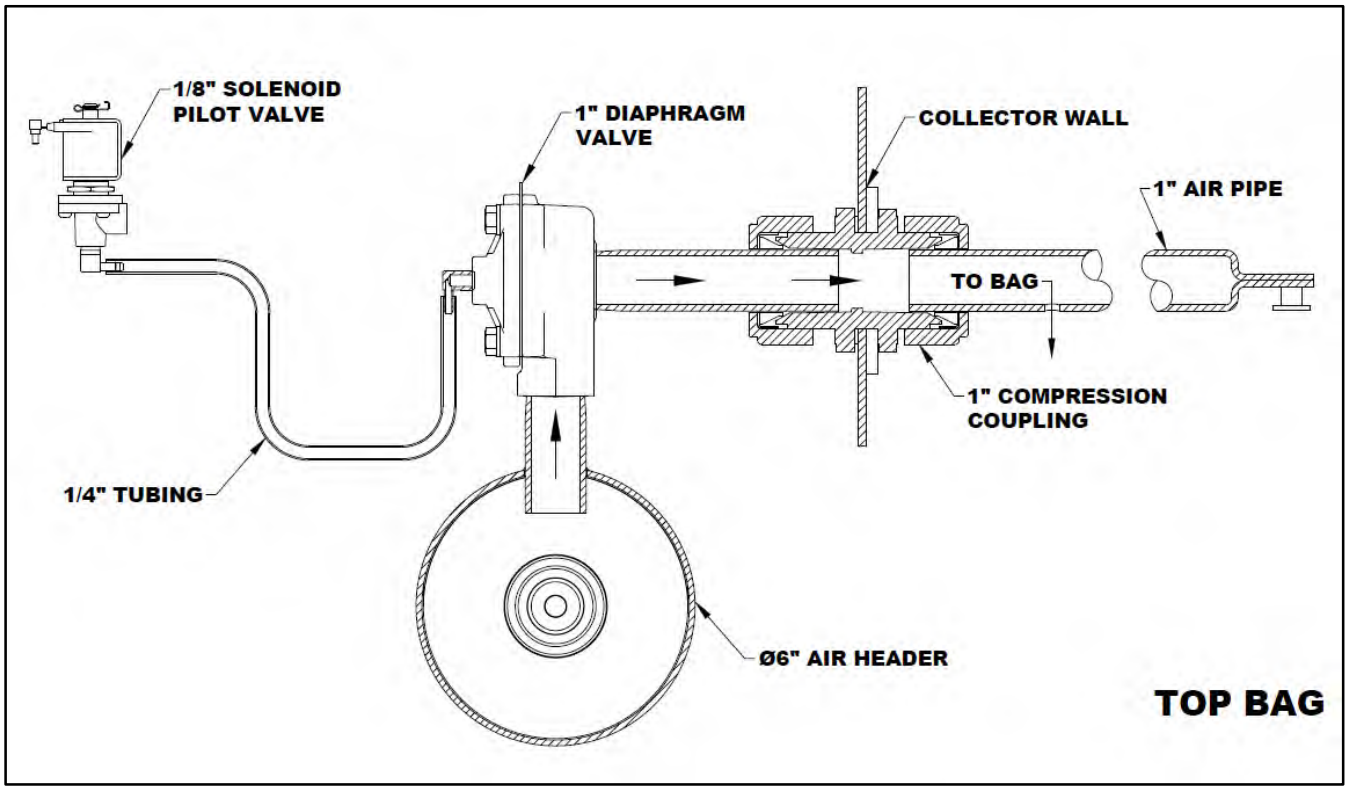
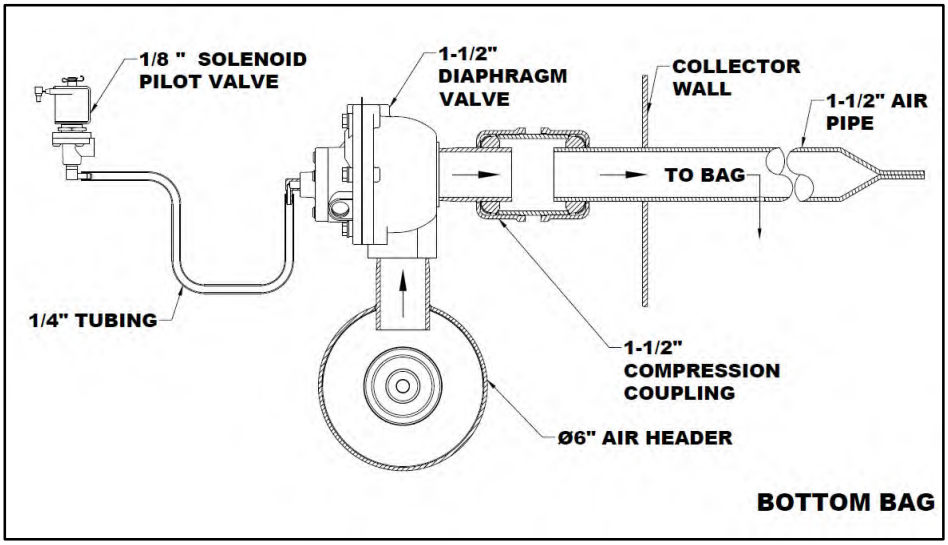
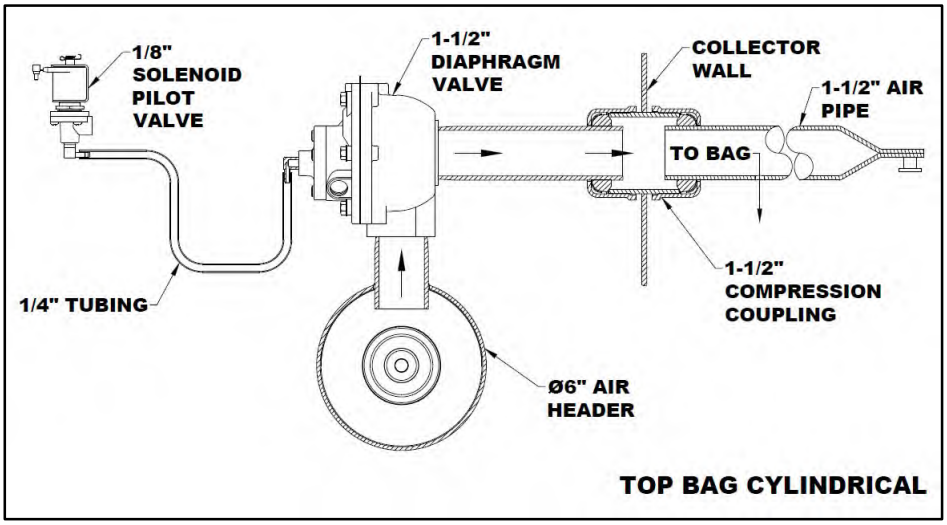
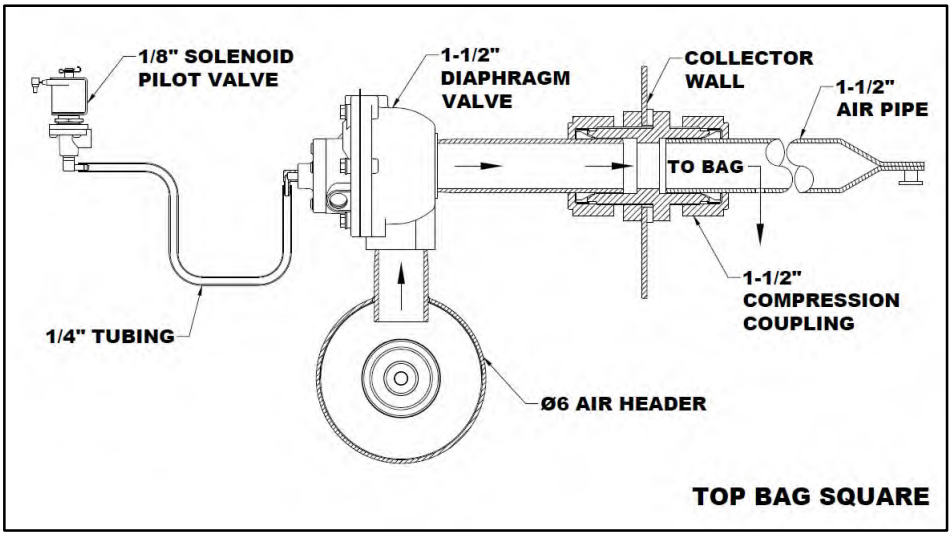




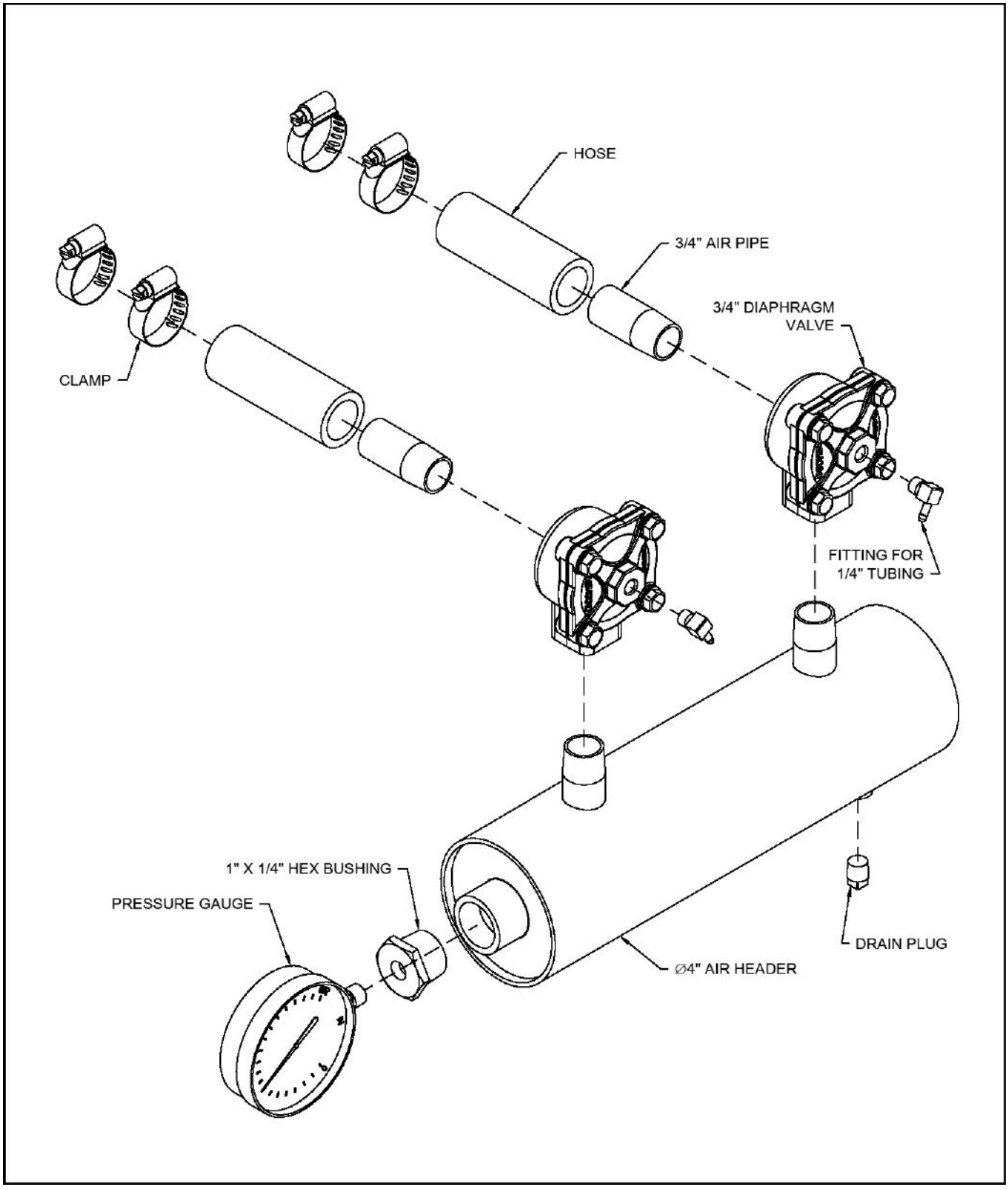
PULSE-JET MECHANISM 1-1/2”



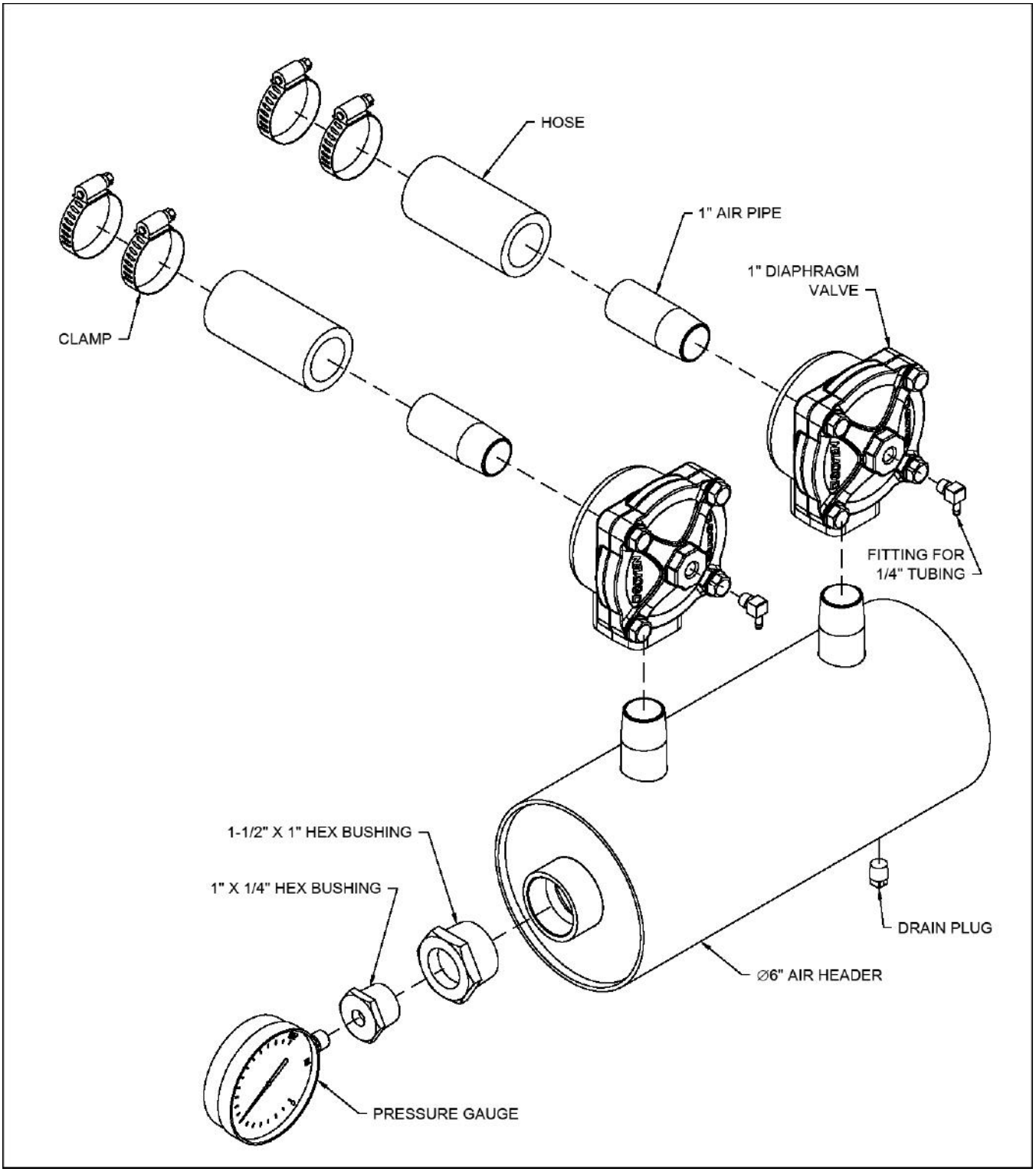




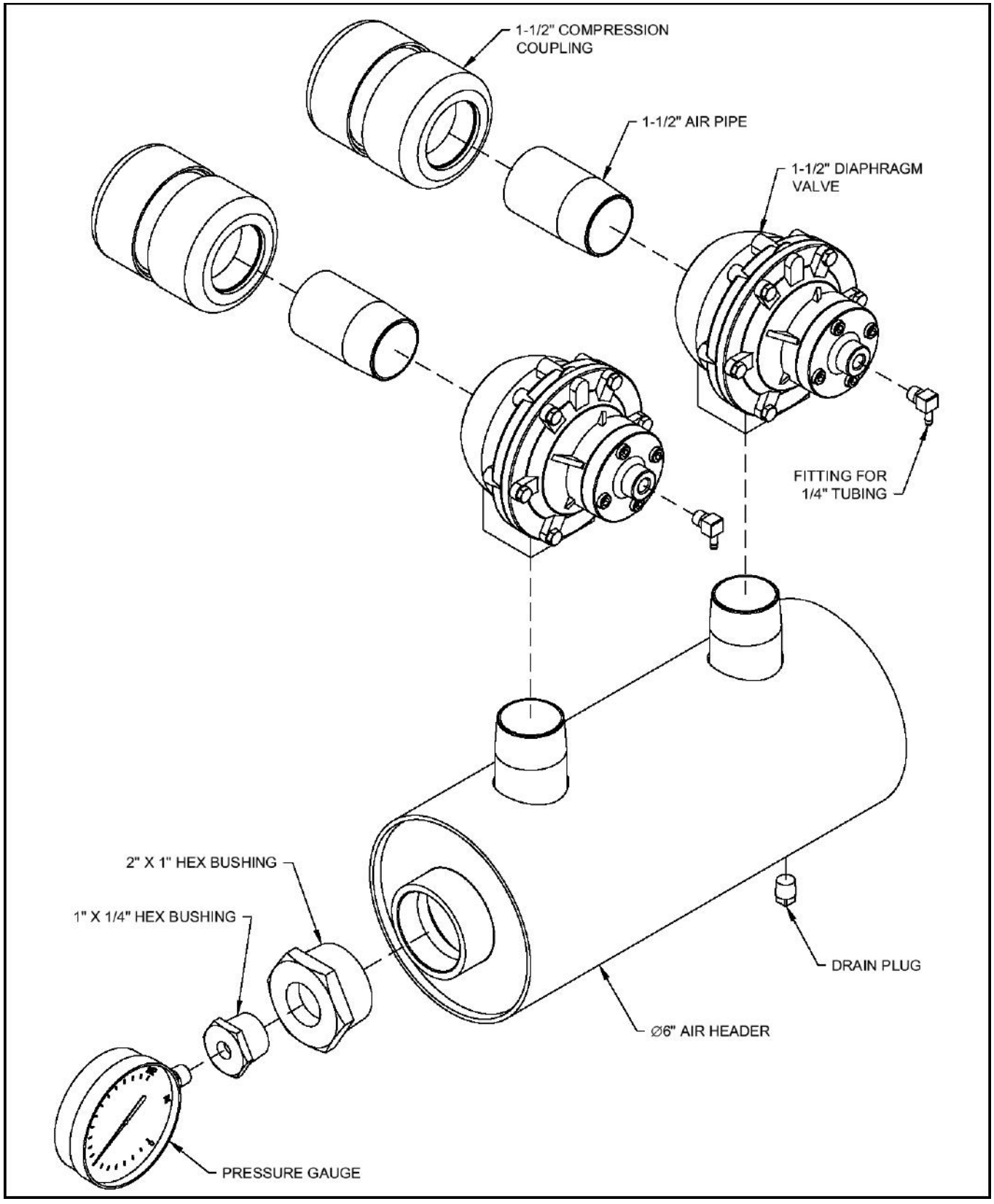
AIR HEADER ASSEMBLY 3/4”



AIR HEADER ASSEMBLY 1”



AIR HEADER ASSEMBLY 1-1/2”



DIAPHRAGM VALVE 3/4”

P/N DIA075GOYT4

VALVE BASE

VALVE DIAPHRAGM
SPARE PART KIT NUMBER KITDIA075GOYT4

VALVE COVER

DIAPHRAGM VALVE 1”

P/N DIA100GOYT4

VALVE BASE

VALVE DIAPHRAGM
SPARE PART KIT NUMBER KITDIA100GOYT4

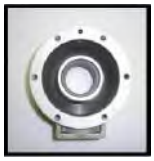
VALVE COVER

DIAPHRAGM VALVE 1-1/2"

P/N DIA150GOY

DIAPHRAGM VALVE CONSISTS OF THE FOLLOWING, IN ORDER OF PROPER ASSEMBLY:

1



VALVE BASE

2

MAIN DIAPHRAGM

3

MAIN SPRING

4

MAIN COVER

5

SECONDARY DIAPHRAGM

6

SECONDARY SPRING

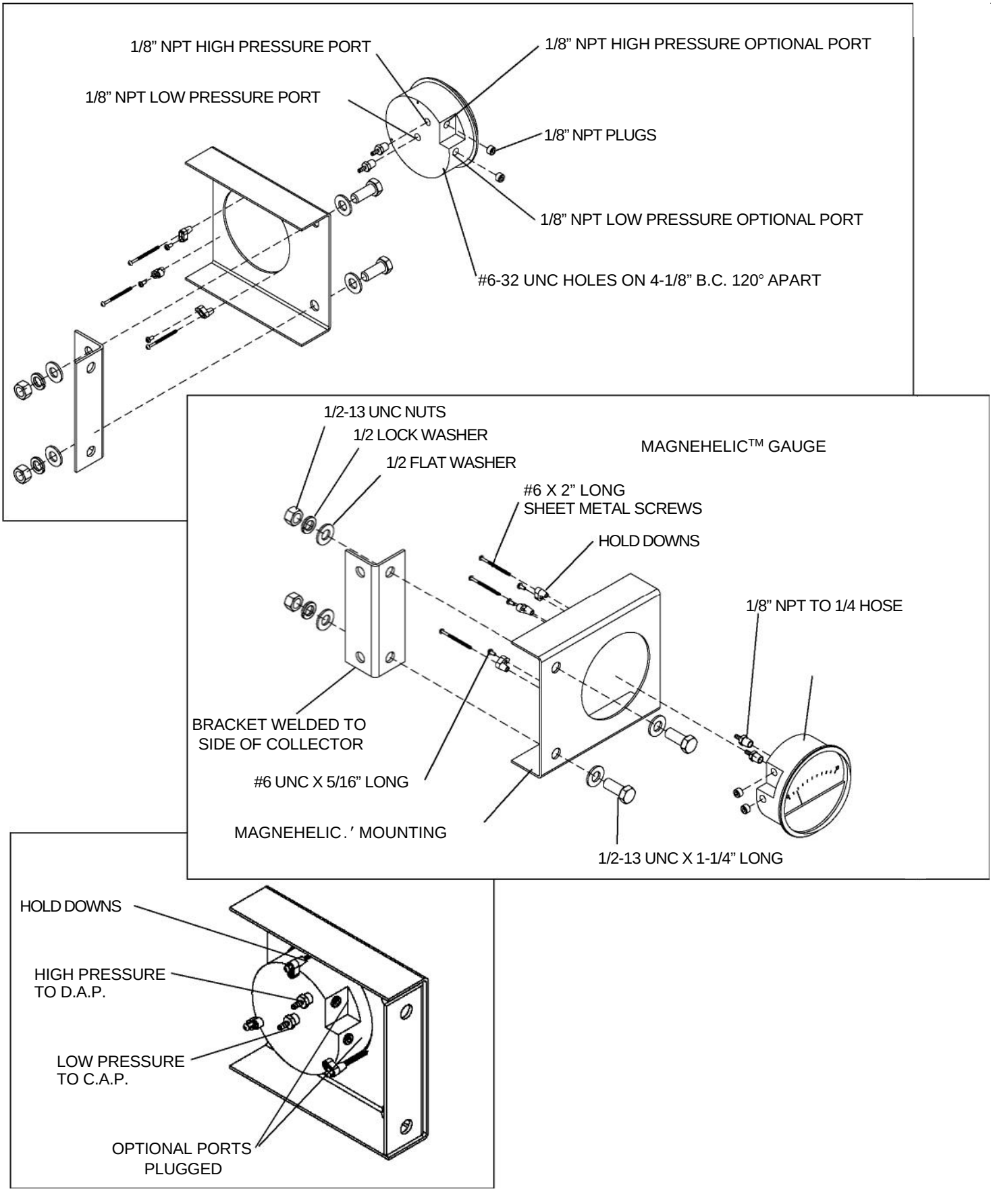
7

VALVE COVER

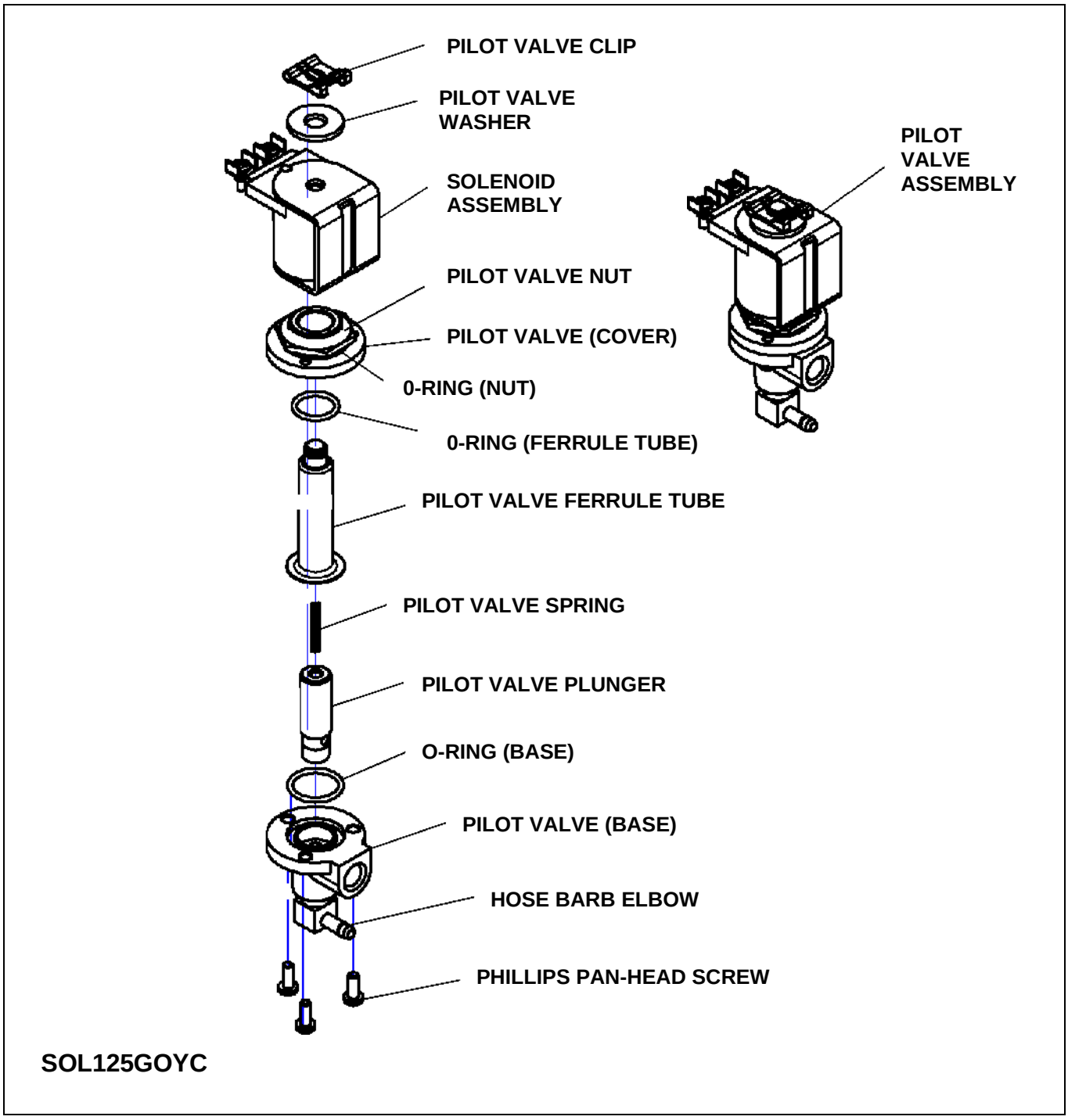
KITDIA150GOY

KIT INCLUDES:
MAIN DIAPHRAGM
MAIN SPRING
SECONDARY DIAPHRAGM
SECONDARY SPRING

MAGNEHELIC™ GAUGE ASSEMBLY



PILOT VALVE ASSEMBLY



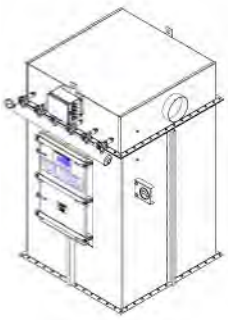
SOL125GOYC

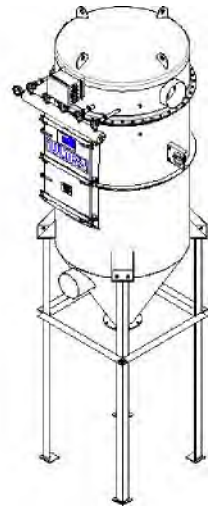
KITSOL125GOY

KIT INCLUDES:
O-RING (FERRULE TUBE)
PILOT VALVE FERRULE TUBE
O-RING, (BASE)
PILOT VALVE WASHER
PILOT VALVE CLIP
(3) SCREWS

NOTES

NOTES





Ultra Industries is a manufacturer of air filtration and pneumatic conveying equipment providing exceptional service and quality for its customers.

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or email us at: info@ultraind.com