



Donaldson
FILTRATION SOLUTIONS

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

DRYFLO® MIST COLLECTOR

Models DMC-D2, D4, D6, D8 & D10



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SAFETY RECOMMENDATIONS

This manual contains specific precautionary statements relative to worker safety in appropriate sections. To avoid dangerous situations we give you the following advice:



Refers to special information on how to use the mist collector most efficiently.



Refers to special information directed towards preventing damage.



Refers to special information designed to prevent injury or death.



The machine has been built in accordance with state-of-the-art standards and recognized safety rules. Nevertheless, it may put people at risk. It may also cause damage to the machine and to other material property.

The machine must only be used in technically perfect condition in accordance with its designated use and the instructions set out in the operating manual. The machine must be used only by safety-conscious persons who are fully aware of the risks involved in operating the machine. Any functional disorders, especially those affecting the safety of the machine, should therefore be rectified immediately.



Avoid mixing combustible materials, such as, buffing lint, paper, wood, dust, aluminium and magnesium, with dust generated from grinding ferrous metals due to the potential fire hazard.



Dryflo mist collectors can only be used for oils with an LEL > 15g/m³.



Oil mist is potentially flammable and Dryflo mist collectors are only suitable for working in ambient temperature conditions and handling fluids with a flash point > 65°C.



Under no conditions, should the machine operator be allowed to put lit cigarettes or any burning object into the hood or ducting of any mist collection system.



A prudent user of Donaldson equipment should consult and comply with all National and Local Fire Codes and/or other appropriate codes when determining the location and operation of mist collection equipment.



Mist collectors do not contain fire extinguishing equipment. When collectors are used to collect flammable or explosive dusts or liquids, the collector should be located outside the building. Also, a manufacturer of fire extinguishing equipment, familiar with this type of fire hazard and local fire codes, should be consulted for recommendations and installation of the proper fire extinguishing equipment.



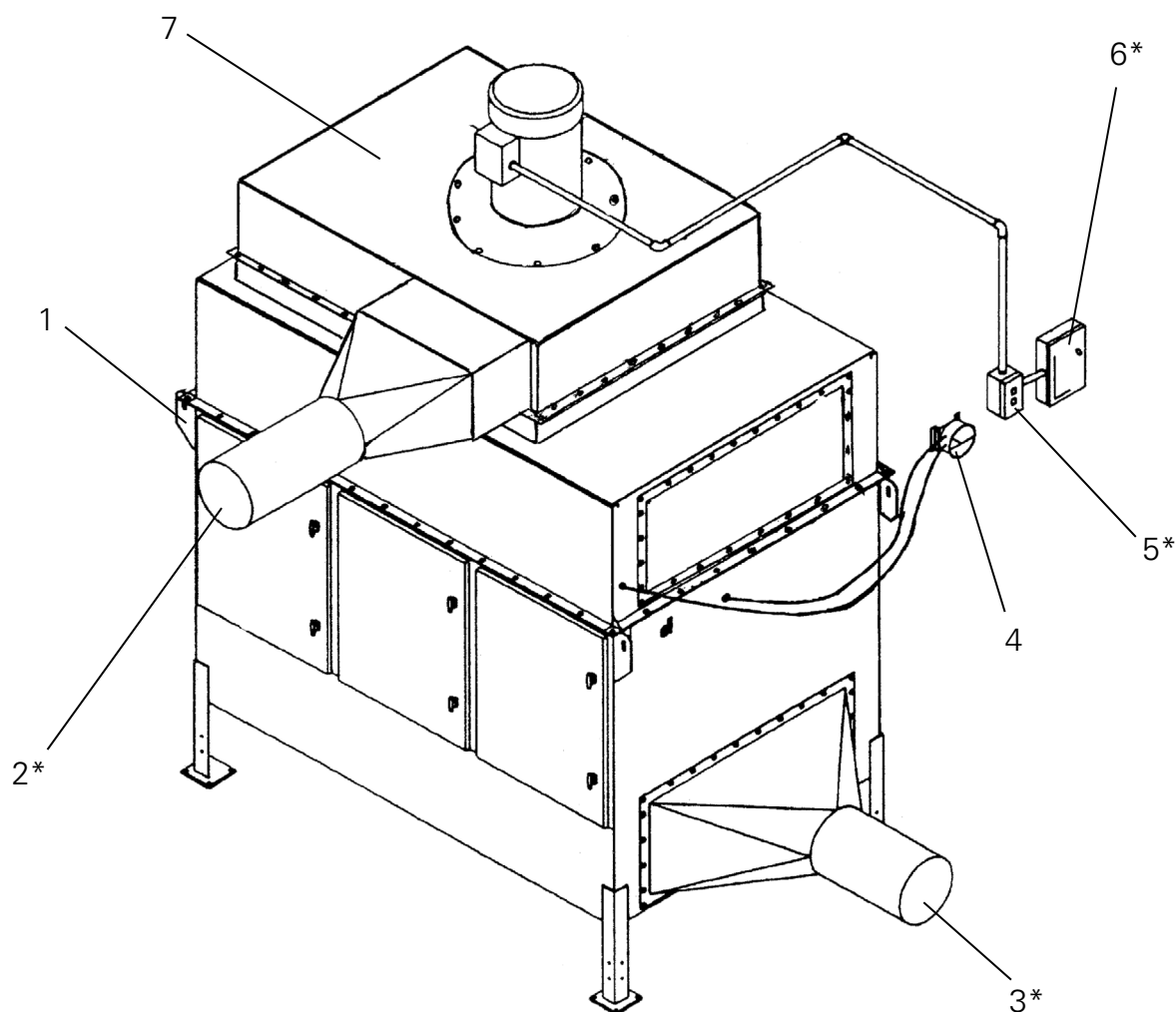
Operation of the Dryflo mist collector fan should be interlocked with the oil mist generation process such that in the event of fan failure, oil mist generation must stop immediately to prevent the increase to unsafe concentration levels.



Dryflo mist collectors cannot be placed or operated in potentially explosive atmospheres as classified by the ATEX Directive 2014/34/EU.



The user of the dustcollector is responsible to dispose of any dust generated by the process, according to local regulations.



- 1 Lifting lugs
 - 2 Outlet ducting as required (*)
 - 3 Inlet ducting (*)
 - 4 Magnehelic gage
 - 5 Motor starter (*)
 - 6 Power supply disconnect switch (*)
 - 7 Fan set
- (*) : these items are not included with mist collector

Figure 1: Typical installation view (Model DMC-D6 shown)

INTRODUCTION

The Dryflo mist collector is used for the collection of airborne mists. The Dryflo is often used to collect coolant mists resulting from machining operations. The unit is designed to collect oil, water soluble and synthetic coolant mists from a variety of machining operations and other industrial processes. The unit will also collect a small amount of dust from machining operations. With the optional Hepa (High Efficiency Particulate Arrestance) filter, smoke from machining operations can also be collected.

Proper installation and use of the Dryflo mist collector will greatly improve the quality of factory air. The Donaldson Dryflo mist collector is a key component to meeting industrial and government air quality standards.

Operational explanation

See figure 2.

Normal operation

During normal operation, contaminated air enters the Dryflo mist collector through one or both of the inlet openings located toward the bottom of each side of the unit. The incoming air slows and turns upward, causing large mist droplets and particles to fall out of the air stream and into the hopper.

The air passes through the first stage filter which is designed to collect and coalesce large droplets and particles. The first stage filter is a re-usable filter and may be cleaned periodically.

The air that passes through the first stage filter still contains smaller mist droplets. A second stage filter element wrap provides the next level of filtration. This wrap collects and coalesces mist into larger droplets. The vertical orientation of the wrap promotes drainage of the droplets. The wrap is not present when a WSO element is installed.

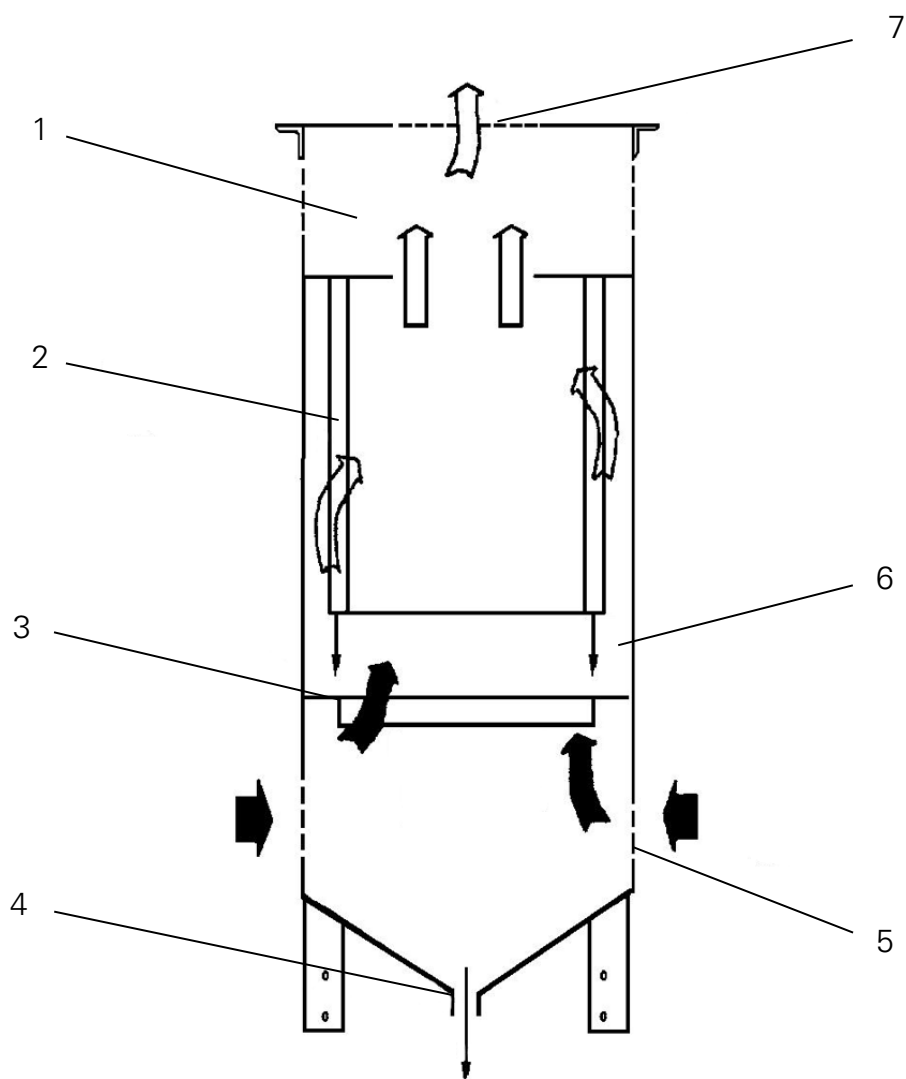
The air then passes through the Dryflo filter element, the third and most efficient stage of filtration. This filter element is the heart of the Dryflo system. It features a pleated filter media that has been specifically designed to collect, coalesce and drain fine mists.

As mist particles coalesce and form larger droplets, the droplets become large enough to run down the element and drain back into the collector. During normal operation, the droplets will drain on both the inside and outside of the filter element. Liquid that collects on the inside of the elements drains back into the collector due to the specially sloped design of the bottom filter pan. Clean, mist-free air exists the filter element and enters the clean air plenum. Clean air exhausts through the clean air plenum outlet.

The collected liquid drains from the hopper via an optional P-Trap.



Hopper should never be used for storage of collected liquids.



- 1 Clean air plenum
- 2 Second stage filter wrap and third stage filter element
- 3 First stage filter
- 4 Hopper drain
- 5 Contaminated air inlet(s)
- 6 Large droplets
- 7 Clean air outlet

Figure 2: Typical installation view Operational schematic (Model DMC-D2 shown)

Standard configuration

First Stage Filter

The standard first stage filter is a 50 mm thick metal mesh filter. This is a permanent filter and is designed to last the life of the Dryflo mist collector. This filter is designed for use in normal mist collection applications (for applications involving heavier dust loads or very heavy liquid loading, optional first stage filters are available, see 2.1.3 Optional Equipment and Accessories).

Second Stage Filter Wrap

The standard second stage filter wrap is designed to collect and coalesce fine mist into larger droplets. The vertical orientation of the wrap promotes drainage of the droplets. The filter wrap also collects particulate that may be in the air stream, extending the life of the third stage filter element.

Third Stage Filter Element

The third stage filter element features a pleated media designed to collect, coalesce and drain fine mists. As mist particles coalesce and form larger droplets, the droplets become large enough to run down the element and drain back into the collector.

Magnehelic Pressure Gage

The pressure gage is a standard feature with the Dryflo mist collector. As the second stage filter element wrap and the third stage filter element become loaded with contaminant, the restriction to airflow increases. The filters need to be serviced when the gage reads in the red area.

Optional equipment and accessories

First Stage Filters

For heavy liquid loading applications. An optional polypropylene first stage filter is available for applications involving heavy loading of liquids. This filter is designed as a permanent filter and may need to be periodically cleaned. It is not recommended for applications involving heavy loading particulate. Because of temperature limitations with the polypropylene material, high temperature cleaning methods such as steam cleaning should not be used.

For heavy particle loading applications. An optional thin screen is available for wet grinding applications where the Dryflo mist collector will collect a heavy quantity of LARGE particulate. The thin screen is easily cleaned by shaking or spray washing.

Fourth Stage HEPA Filter

An optional fourth stage HEPA filter offers an extremely high level of filtration (99.97 % on 0.3 micron particles). The HEPA filter is recommended for use in applications where smoke or other extremely small particles are generated. Smoke tends to be generated in machining processes generating large amounts of heat and in applications using straight oil as lubricants/ coolants. This option can be purchased separately (see Ultra-Lok™ Literature for full description).

Fan sets

Optional fan sets are available and recommended for use with the Dryflo mist collector models DMC-D2, D4 and D6. The fan sets are designed to be mounted on the roof of the unit. Other fan sets may need to be remote or floor mounted.

Roof mounting box

Roof mounting boxes are available for use with the optional fan sets. The integral slide gate allows to adjust the air volume.

The models D8 and D10 are not designed for roof mounted fan sets. Fan sets used with these units must be remote or floor mounted.

Controlbox (Motorstarter)

Optional controlboxes for starting the fan motor are available for :

3 x 400V + N + Pe

3 x 400V + Pe power supply.

These boxes include contactor, overload and short circuit protection, isolator, star/delta starter, start/stop button and indicators.

P-Trap drain

The P-Trap is designed to allow continuous drainage of collected liquid while the unit is in operation. The P-Trap may be plumbed so that the collected liquid returns to the machine for reuse.

P-Trap with Y-Strainer drain

This optional P-Trap arrangement is recommended for use in applications where heavy particulate loading occurs. The Y-Strainer will collect larger particulate, help keep the P-Trap from plugging and facilitate easy cleaning of the hopper drain. It is also designed to allow for continuous drainage of collected liquid while the mist collector is in operation and may be plumbed so the liquid can be returned to the machine for reuse.

Legs

Legs are available for the Dryflo mist collector and are designed to provide floor to P-Trap clearance of approximately 140 mm.

Platforms (Models DMC-D6, D8 and D10)

Service platforms are available for Dryflo mist collector models DMC-D6, D8 & D10. The platform allows easy service access to the first, second and third stage filters.

INSTALLATION

Inspection

The Dryflo mist collector should be checked for any damage that may have occurred during shipping.

Any damage should be noted and the carrier notified immediately.

Ship loose items

- Fan set
- Roof mounting box
- Magnehelic gage
- P-Trap drain
- Legs
- Platform

Equipment/Tools required

The following is a list of typical tools and equipment required to install and assemble a Dryflo mist collector:

- Crane/fork lift
- Lifting sling(s)/Chains
- Screwdriver
- Pipe wrenches
- Socket wrenches
- End wrenches
- Pipe sealant
- Clevis pins
- Level

Pre-installation

The Dryflo mist collector should be located with consideration for hopper drainage, shortest possible runs of inlet ductwork, electrical connection and convenience of maintenance.

Remove all crating, wrap, securing hardware and strapping from the collector. Check the parts received with the packing slips. If there are parts missing, the carrier and your local Donaldson representative should be notified immediately.



A crane or fork truck is recommended for unloading, assembly and installation of the mist collector.

With the fan set assembled to the top of the mist collector, the mist collector has a high center of gravity. Careful handling is required to avoid overturning during movement.

Dryflo ceiling mount (models DMC-D2, D4)

(see figure 3)

Dryflo models DMC-D2 and D4 can be mounted from the ceiling. When ceiling mounting these collectors, the total collector weight including material that is being collected, electrical, piping, and ductwork that is connected to the unit must first be calculated. All ceiling support members must be sized to properly support the unit and any auxiliary equipment. For ceiling mounting, brackets are provided on the upper corners of the cabinet.



For ceiling mounting, you must consider the weight of the collector, material being collected, ductwork and any auxiliary equipment that is attached. See the Specification Control Drawing for the Dryflo mist collector weight.

The recommended hanging hardware size for the DMC-D2 is M12 (Threaded rod quality 12.9).

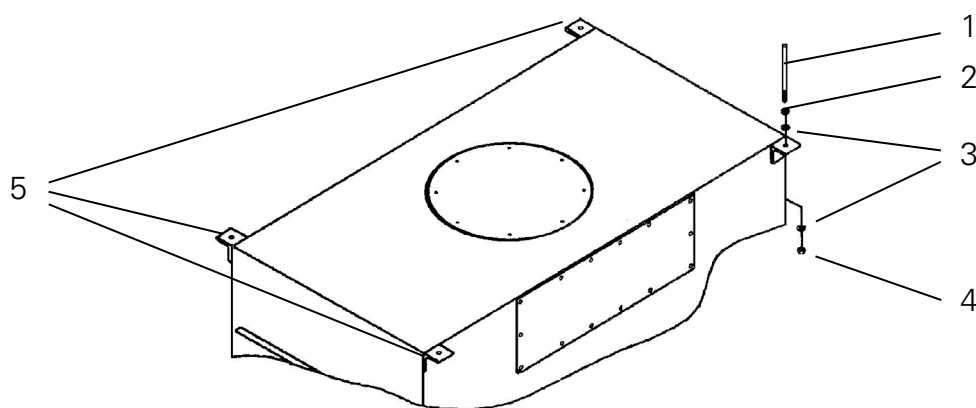
The recommended hanging hardware for the DMC-D4 is M16 (Threaded rod quality 12.9).

1. Use four threaded rods for hanging the unit. Thread a nut onto the threads of each rod for at least 40 mm.
2. Lift the unit into position under the rods. Place a flat washer on each rod before lowering the rod through the ceiling bracket.
3. Place another washer and a locking nut onto the end of each rod. Thread the nuts up until the bottom of the rod protrudes a minimum of 6 mm out of the nut



Level the unit before tightening any hardware.

4. Level the unit in all directions by tightening the bottom locking nut.
5. When the unit is level, thread the top nut down onto the top of the washer and bracket. Holding the bottom locknut, tighten the top nut securely.



- | | |
|---|--|
| 1 | Threaded rod |
| 2 | Nut |
| 3 | Flat washer, see text for proper hanging hardware size |
| 4 | Locking nut |
| 5 | Lifting lugs / ceiling mount bracket |

Figure 3: Dryflo ceiling mount (Models DMC-D2, D4)

Assembly of standard equipment

See figure 1



A crane or fork truck is recommended for unloading, assembly and installation of the mist collector.

Magnehelic gage installation

The magnehelic gage is a standard feature on the Dryflo mist collector. The pressure taps for this gage are factory installed.

1. After unpacking the magnehelic parts, choose a convenient accessible location on or near the unit for mounting the gage.
2. Mount the gage to the mounting bracket with three # 6- 32 x 1/4" long screws (supplied with the gage) as shown in Figure 4.
3. Locate the magnehelic gage and mounting bracket assembly for the best visual advantage. The plastic tubing will determine the maximum distance away from the collector that the mounting bracket and gage can be located (12 m is supplied). Remember that the tubing will have to be cut and that one piece may be longer than the other. If more tubing is required, please contact your local Donaldson representative. Once the mounting bracket assembly position is determined, mount this assembly to the supporting structure using the two self-drilling screws.
4. Connect the tubing to the high pressure and low pressure port fittings located on the magnehelic gage. The high pressure port tubing is attached to the pressure fitting mounted in the dirty air plenum or chamber (filter section). The low pressure port is attached to the fitting in the clean air plenum or chamber (see figure 4).
5. Zero and maintain magnehelic gage per operating and maintenance instructions provided by the manufacturer of the magnehelic gage.

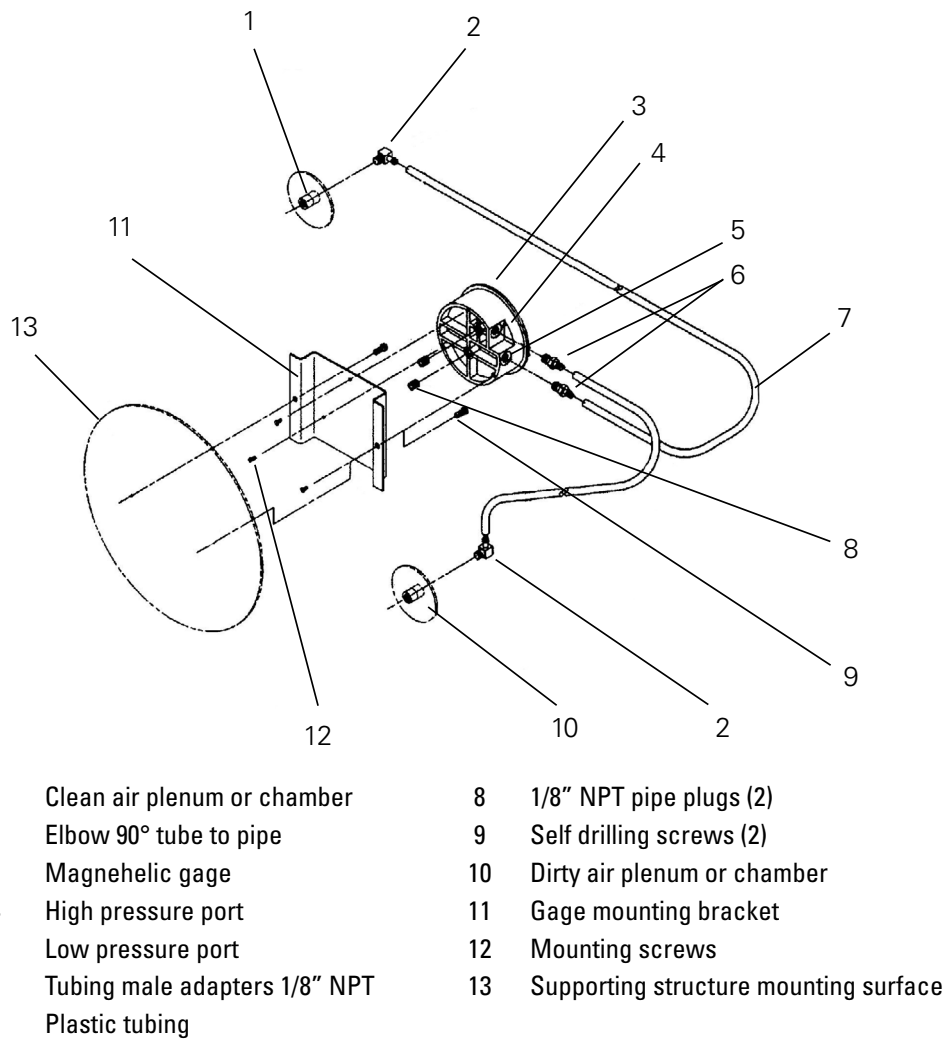


Figure 4: Installation of magnehelic gage - remote mount

Assembly of optional equipment

Leg installation

Models DMC-D2, D4

(see figure 5)

When floor mounting the Dryflo models DMC-D2 and D4, anchor bolts (supplied by customer) shall be used to fasten the unit to the floor. The anchor bolts will be M10 and will extend above the floor by 40 mm and should be placed before the unit is installed.

Use a crane or fork lift to lift and hold the unit up while installing the legs. Use clevis pins and a sling attached to all 4 lifting lugs when using a crane. If using a fork lift, securely fasten the unit to the fork lift using straps that are tied around the unit and mast of the fork lift.

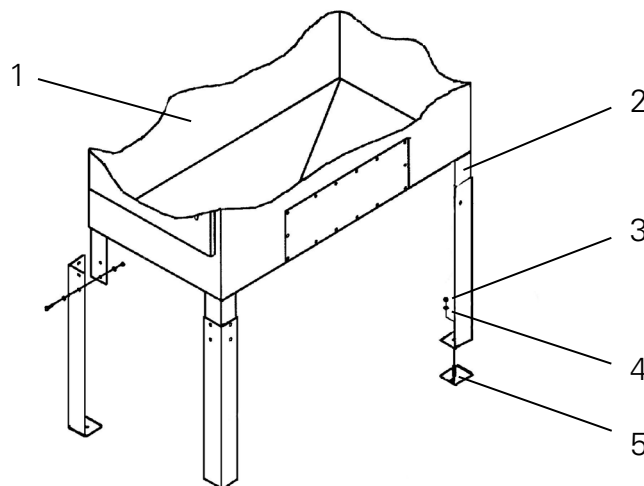


Level the unit before tightening any hardware.

1. Raise the unit to the required leg height.
2. Position the legs on the outside of the stub legs of the unit. Align the holes in the legs and fasten together using the bolts, washers and nuts supplied. Do not tighten hardware at this time.
3. Lower the unit onto the anchor bolts. Use a flat washer and a nut to fasten the leg pad to the floor. While the unit is still being held up, level the unit and tighten the bolts and nuts from the anchor bolts.
4. Before removing the lifting gear, re-check the hardware for tightness.



Make sure leg bolts and anchor bolts are securely tightened.



- | | |
|---|-----------------|
| 1 | Collector |
| 2 | Stub legs |
| 3 | Nut M10 |
| 4 | Washer |
| 5 | Anchor bolt M10 |

Figure 5: Leg installation (Models D2-D4) (Model DMC-D2 shown)

Models DMC-D6, D8 and D10

(see figure 6)

Anchor bolts (supplied by the customer) should be used to fasten the unit to the floor. Recommended anchor bolts are M20 and should extend above the floor 50 mm.

Preassemble the legs and crossbracing for the Dryflo models DMC-D8 and D10 as shown in Figure 6. Only hand tighten the hardware as this time (the DMC-D6 legs do not require crossbracing or preassembly). Refer to the leg assembly drawing which accompanied the legs for proper location and assembly of crossbracing and hardware.

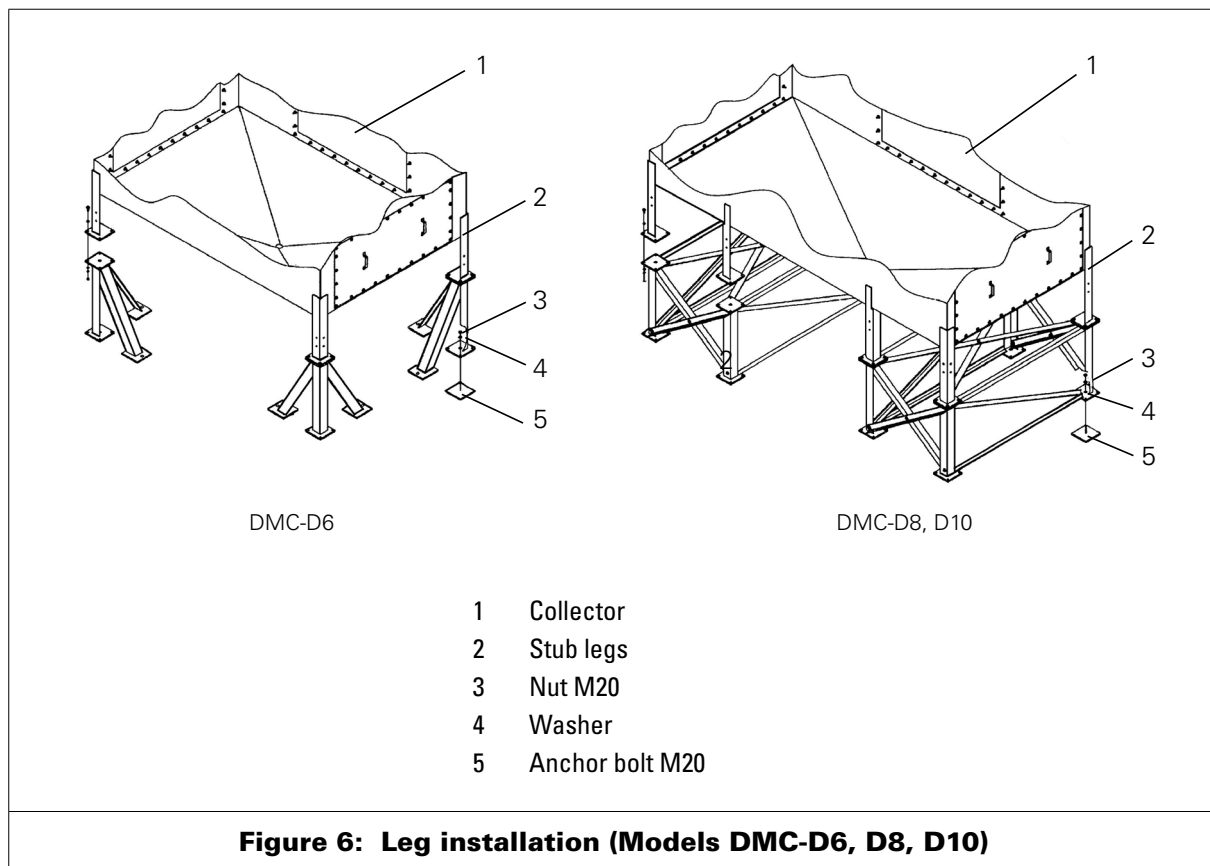
Lift the Dryflo mist collector with a crane using clevis pins and slings attached to all four lifting lugs.

Position the legs to the mist collector stub legs and bolt together with the appropriate hardware as shown in the aforementioned leg assembly drawing.

Fasten the mist collector to the anchor bolts and tighten all leg, crossbracing and anchor bolt hardware. Before disconnecting the crane, recheck all hardware to make sure that it is securely tightened.



Make sure leg bolts and anchor bolts are securely tightened.

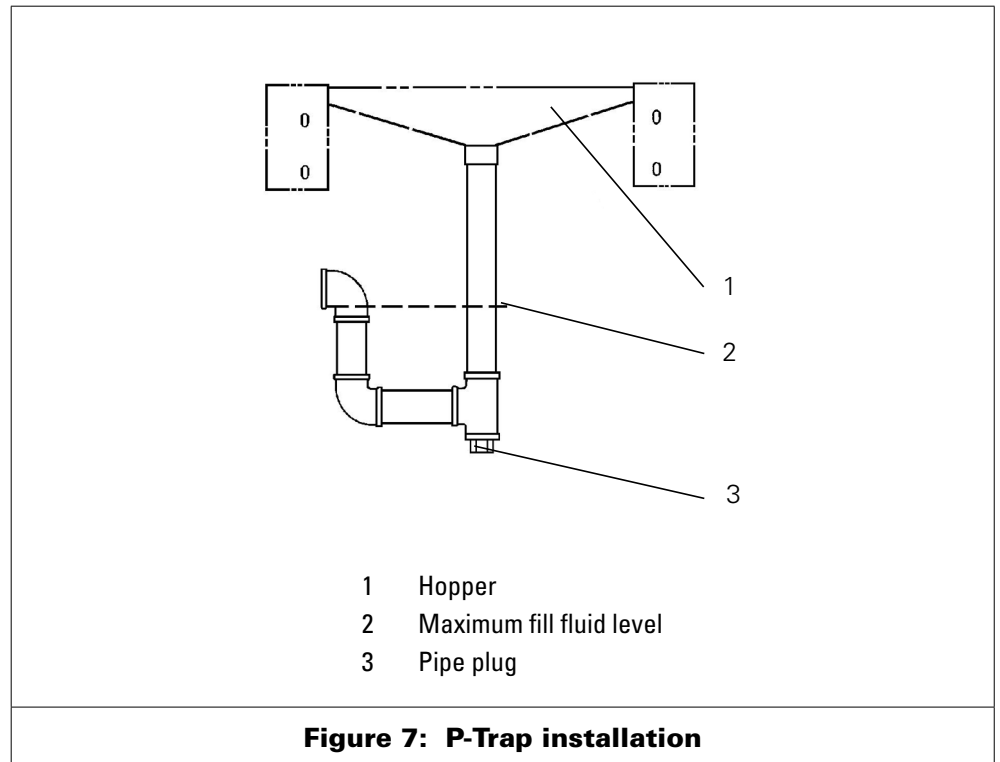


P-Trap Installation

(See figure 7)

The P-Trap can be installed during leg installation or after the unit has been installed in its operating position. Thread the P-Trap to the hopper drain coupling using thread pipe sealer.

Plumb the P-Trap to a receptacle or run a return line (provided by customer) back to the machine(s) where the collected fluid was generated. Fill the P-Trap with the appropriate fluid prior to the Dryflo mist collector start-up.



P-Trap with Y-Strainer Installation

(See figure 8)

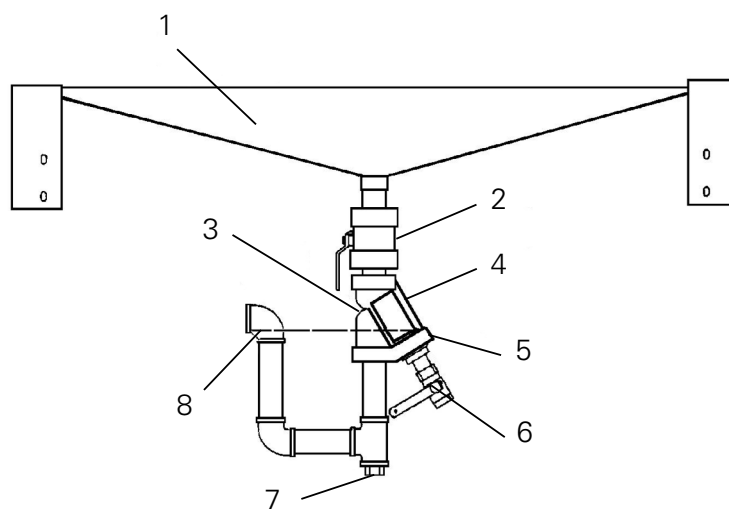
The P-Trap with Y-Strainer can be installed during leg installation or after the unit has been installed in its operating position. Thread the P-Trap to the hopper drain coupling using thread pipe sealer.

Plumb the P-Trap to a receptacle or run a return line (provided by customer) back to the machine(s) where the collected fluid was generated. Fill the P-Trap with the appropriate fluid prior to the Dryflo mist collector start-up.



The P-trap and the P-Trap with Y-Strainer must be filled prior to operation of the Dryflo mist collector to ensure proper drainage of the collected fluid.

The characteristics of some machining fluids change with time, use and exposure to air. Check the suitability of collected fluid before re-use.



- | | |
|---------------------|----------------------------|
| 1 Hopper | 5 Screen cap |
| 2 P-Trap valve | 6 Screen clean-out valve |
| 3 Y-strainer | 7 Pipe plug |
| 4 Y-strainer screen | 8 Maximul fill fluid level |

Figure 8: P-Trap with Y-strainer Installation

Roof mounted fan sets including roof mounting box

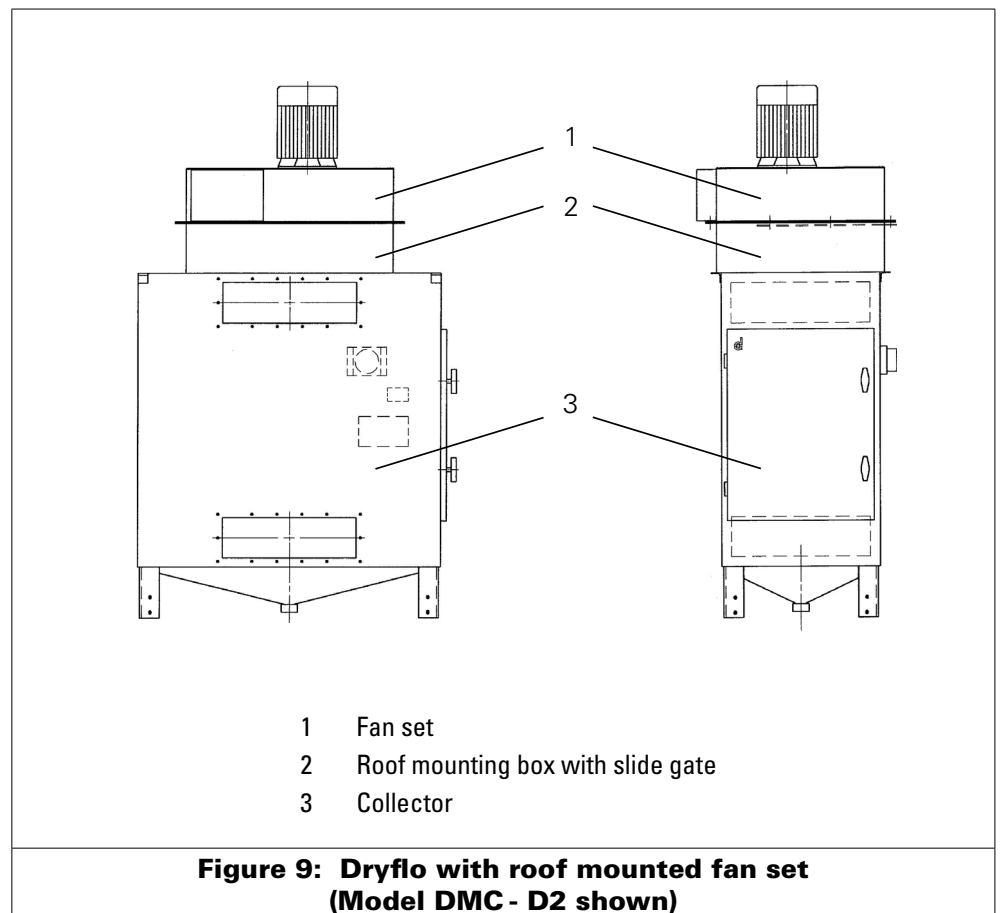
(Models DMC-D2, D4, D6) (see figure 9)

The fan set can be installed at any time during installation of the mist collector. If the mist collector needs to be moved or lifted after the fan set has been installed, special precautions and careful handling need to be observed to prevent overturning. The mist collector will have a high center of gravity when the fan set is installed.



With the fan set assembled to the top of the mist collector, the mist collector has a high center of gravity. Careful handling is required to avoid overturning during movement. Make certain leg bolts and anchor bolts are securely tightened.

Refer to the blower/motor installation and operating instructions shipped with the blower/motor assembly for detailed installation instructions.



Platform installation

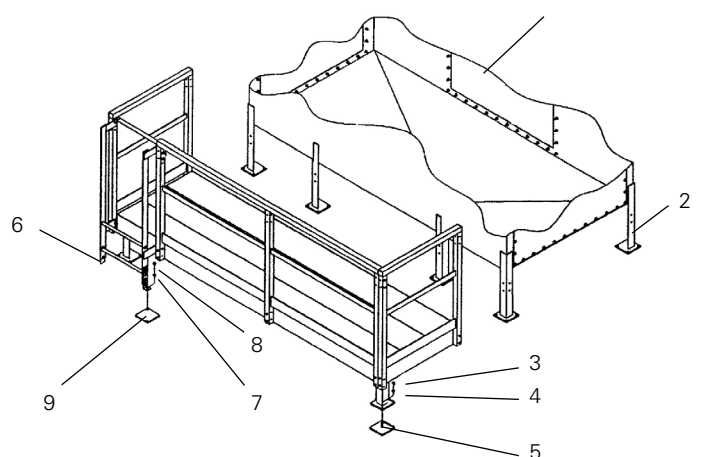
(Models DMC-D6, D8, D10) (see figure 10)

The base of the ladder as well as the platform legs should be secured to the floor with anchor bolts (supplied by the customer). Use the M10 bolts for the ladder and M20 anchor bolts for the platform legs. Only the DMC-D6 platform without a ladder does not require anchor bolts. The M10 ladder anchor bolts should extend 25 mm above the floor, and the M20 platform leg anchor bolts should extend 50 mm above the floor.

Preassemble the platform on the ground and then lift and fasten to the mist collector stub legs. A crane or lift truck will be required to lift the platform into position so it can be fastened to the collector stub legs. Before disconnecting the crane or lift truck be sure that all hardware is securely tightened.

Instructions with each platform will show the location of railings, ladder, and the specific hardware to be used.

Routine checks of platform should be carried out to ensure a safe platform.



- | | | | |
|---|-------------------------------------|---|-------------------------------------|
| 1 | Collector | 6 | Ladder angle anchors |
| 2 | Stub legs | 7 | Washer |
| 3 | Nut M20 | 8 | Nut M10 |
| 4 | Washer | 9 | Anchor bolt M10 |
| 5 | Anchor bolt M20 | | (except DMC-D6 platform w/o ladder) |
| | (except DMC-D6 platform w/o ladder) | | |

Figure 10: Platform installation (Models DMC - D6, D8, D10)
DMC-D8 platform shown

Electrical installation

(see figure 1)



All electrical work must be done by a qualified electrician according to local codes.

Mount the properly sized control box for the fan motor in a convenient location. (see figure 11: wiring diagram)



Always ground cabinets properly per local codes.

Make the proper connections to the blower motor following the motor manufacturer's instructions. All electrical apparatus should be properly sized for the required voltage.

Start the blower motor and check for proper rotation. Reference the rotation sticker on the blower housing. Proper rotation is extremely important. Even if the blower is running in the wrong direction, it will deliver approximately 40% of its rated air volume. Lock out all electrical input power and interchange any two wire leads (3 phase only) on the output side of the blower motor starter to reverse fan rotation.



Disconnect and lock out electrical power before servicing any electrical component.

Allow fan wheel to run down to a very slow speed and wear eye protection when checking for proper fan wheel rotation.

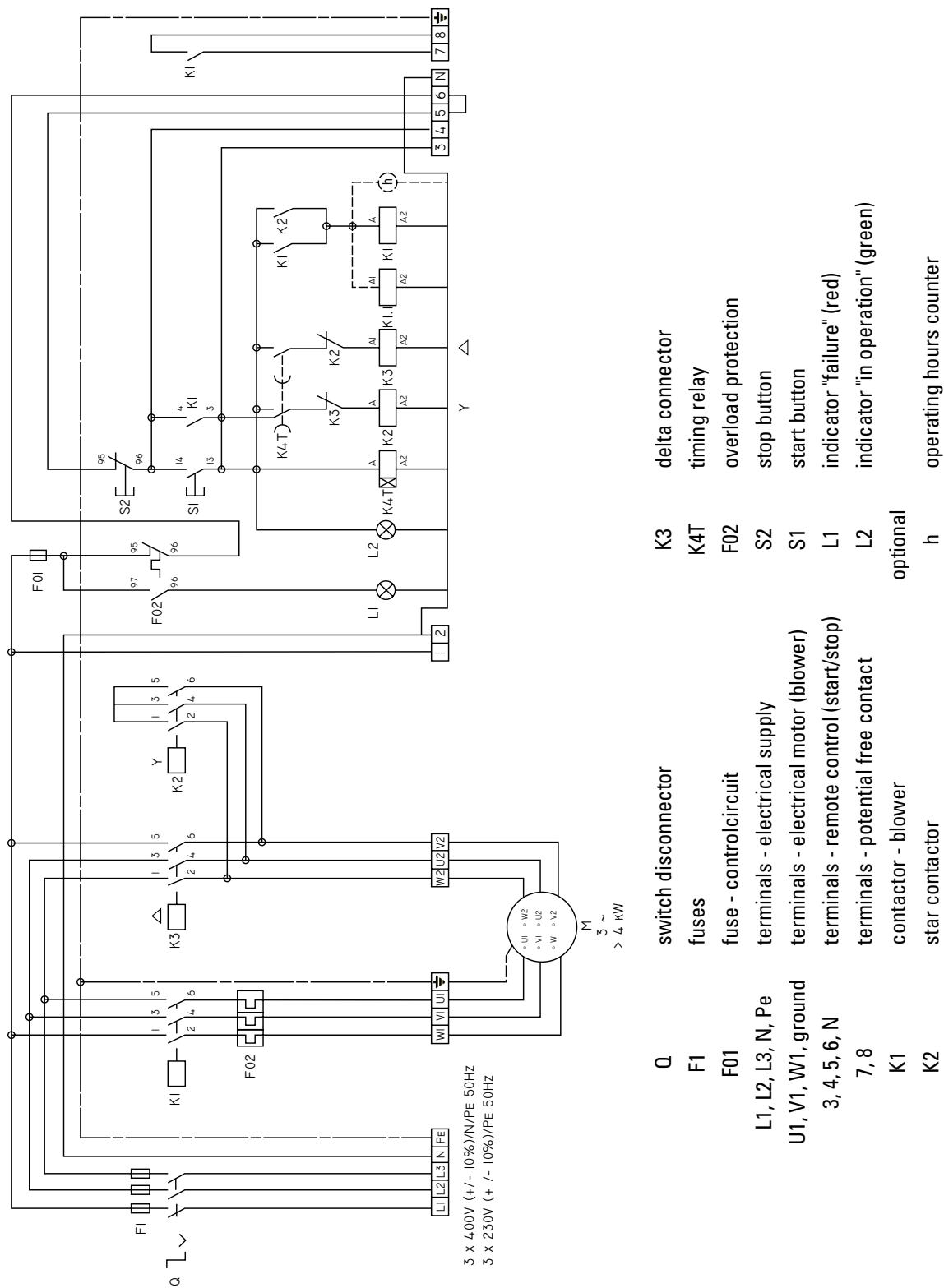


Figure 11: Control box - Star/Delta start electrical wiring diagram

PRE START-UP CHECK

Check to be sure that the inlet ducting is properly installed and duct joints are sealed. Pitch ducting toward the mist collector to prevent oil from collecting in the ducting, which could lead to excessive weight and/or leakage. Make certain filter elements are properly installed, doors are secured and the P-Trap is filled with suitable fluid. The magnehelic gage should be zeroed prior to start up. Refer to instructions shipped with gage.

ROUTINE MAINTENANCE

Monitor exhaust. Exhaust should remain visually clean throughout the filter life. If leakage is noted at the exhaust, check the third stage filter elements and HEPA filter(s) (if applicable) for positive gasket seals.

Monitor hopper drainage. If drainage is slow or has stopped, check the hopper drain for blockage and clean if necessary. Also check the P-Trap to make certain it is filled with liquid. Refill if it is low or dry. The hopper may also require cleaning.

Monitor second stage filter element wrap and third stage filter element ΔP (pressure drop across filter elements in mm of water gage). If the magnehelic gage is in the red zone, the third stage filter elements and/or the second stage filter element wraps will need replacement.

In some applications, it may be possible to use multiple second stage filter wraps during the life of a single third stage filter element. To determine if the third stage filter elements need replacement, install clean filter wraps, restart the collector and check the magnehelic gage. If the gage is in the green zone, the third stage filter elements will not require replacement and can continue operation with the clean filter element wraps. If the gage still reads in the red zone with the clean filter element wraps, the third stage filter elements will need to be replaced.

If system airflow decreases and the magnehelic gage is in the green zone, check the first stage filter/screen and inlet ducting for blockage or plugging and clean as required.



Do not operate the Dryflo mist collector without the first stage filter/screen or without the second stage filter element wrap installed. Significant reduction in third stage filter element life may result.

SERVICE



Disconnect and lock out any electrical power before servicing any electrical component.

Turn off and lock out electrical power before opening access doors or servicing the Dryflo mist collector.

P-trap service

P-trap

(see figure 7)

If the P-Trap should require cleaning, position a suitable container under it, turn the collector off and remove the pipe plug.

Allow the fluid and particulate to drain into the container. Replace the pipe plug using pipe thread sealer and refill the P-Trap with suitable fluid before restarting the collector.

P-Trap with Y-Strainer

(see figure 8)

If the P-Trap Y-Strainer screen requires cleaning, place a suitable container under the screen clean out valve, turn the collector off, close the P-Trap valve and open the screen clean out valve. Allow the fluid and particulate to drain into the container. With the screen clean out valve still open, open the P-Trap valve slowly to allow any fluid still trapped in the hopper to drain out the clean out valve and further rinse the screen clean.

Care should be taken when opening the P-Trap valve because a substantial amount of fluid may be trapped in the hopper. The amount of fluid in the hopper may exceed the container capacity. It may not be necessary to empty the hopper to completely flush the screen clean.

If the above procedure does not clean the screen sufficiently, it can be removed from the Y-Strainer for further cleaning. To remove the screen, close the P-Trap valve, unscrew the screen cap and pull out the screen. Clean the screen and the inside of the Y-Strainer body and reassemble. Take care to properly seat the screen in the body and cap.

After cleaning the Y-Strainer and/or the P-Trap, close the clean out valve, open the P-Trap valve and fill the P-Trap with fluid before restarting the collector.



Only remove the pipe plug from the P-Trap or open the clean out valve when the collector is turned off.

To ensure proper drainage of collected fluid, the P-Trap must be filled prior to operation of the Dryflo mist collector.

First Stage Screen/Filter Service

(see figure 2)

Access the first stage screens/filters through the access doors. Remove the screens/filters out of the cabinet by pulling them out. The flat first stage screen can be cleaned by rapping it over an appropriate waste container to dislodge particulate. If further cleaning is required, wash the screen in an appropriate wash tank. To clean the first stage filters, soak in an appropriate wash tank, rinse and dry the filter. Then install into cabinet.



Because of the temperature limitations of the polypropylene filter, high temperature cleaning methods such as steam cleaning should not be used.

Do not operate the collector without the first stage screen/filter installed. Significant reduction in third stage filter element life may result.

Wear gloves when handling filter elements and filter wraps.

Second Stage Filter Element Wrap Replacement (not applicable for WSO element)

(see figure 12)

For easiest maintenance, the second stage filter wraps and third stage filter elements can be changed at the same time. Access the filter element wrap through the access door. Remove the complete filter element assemblies from the cabinet. See "Third stage filter element replacement" section.

1. Remove the wrap by opening the hook and loop seam.
2. Pull the wrap from around the filter element.
3. Install the new wrap in the reverse order, making sure the wrap completely covers the filter element (top and bottom) and is securely fastened.

At times, due to accessibility, it may be easier to replace the wrap by removing the complete filter element assembly from the cabinet. See Third Stage Filter Element Replacement Section.



Do not operate the collector without the second stage filter element wrap installed. Significant reduction in third stage filter life may result.

Wear gloves when handling filter element and filter wrap.

Third Stage Filter Element Replacement

(see figure 12)

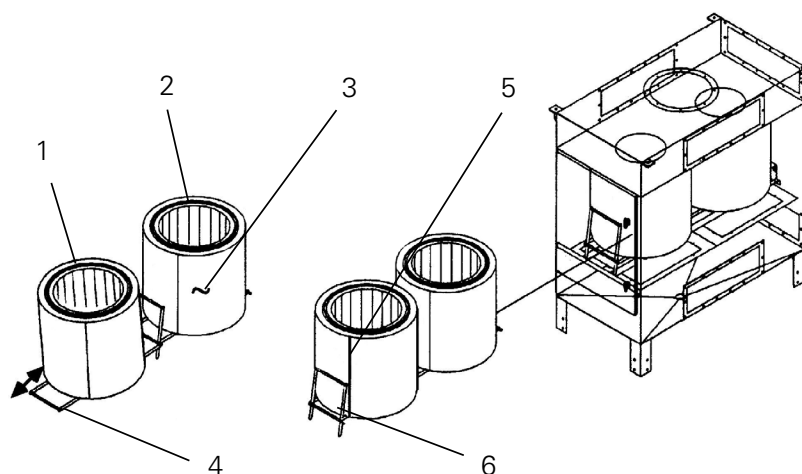
For easiest maintenance, the second stage filter wraps and third stage filter elements can be changed at the same time. The third stage filter elements are accessed through the access door.

1. Pull the element retention handle out and down to a horizontal position to loosen the element.
2. Pull the element out of the cabinet.
3. As the filter element is being removed, a plastic garbage bag (supplied by customer) can be slipped over the top of the filter. The filter may then be tipped as it is removed while the bag is being closed over the bottom of the filter element.
4. Repeat for back filter.
5. Install the new rear filter element with a new filter element wrap in the cabinet by placing the new filter element on the element retention with the gasket up and push it back in till the element stops.
6. Lift the retainer handle up and into the cabinet until it stops.
7. Repeat procedure for front filter.

Original Equipment Filter Elements

(see Replacement Parts List)

Donaldson filter elements are the only replacement filters that will provide the high level of performance that you expect from your investment in the Dryflo mist collector.



A. Element retention - open position

B. Element retention - closed position

- 1 Filter element
- 2 Filter element gasket
- 3 Filter wrap

- 4 Retention handle down
- 5 Hook and loop seam
- 6 Retention handle down

Figure 12: Second stage filter wrap and third stage filter element replacement (Model DMC-D2 shown)

TROUBLE SHOOTING GUIDE

Problem	Possible cause	Remedy
Blower fan and motor do not start	Proper wire size not used for motor	Rewire per local and national codes for proper wire size.
	Not wired correctly	Check and correct motor wiring for proper connections for your voltage (reference Motor Manufacturer Wiring Diagram on Motor). All wiring must follow wiring diagrams as well as the National Electric Code and local codes.
	Unit not wired for available voltage	Correct wiring for proper input voltage.
	Input circuit down	Check input to motor circuits for voltage on all leads.
	Blown fuses	Check all fuses. If fuse has blown, check the circuit that the fuse was protecting for possible motor, transformer, control device or wiring problem (as applicable). Caution : Disconnect power
Blower fan and motor start, but do not keep running	Overload relay	Reset overload relay. Check ampere draw on motor leads. If amps exceed motor nameplate, check for blower or airflow problems.
	Starter kicks out: Collector access door(s) are open or not closed tight.	Close and tighten access door(s).
Oil mist discharge out of clean air outlet.	Starter kicks out: Electrical circuit overload	Check that the supply circuit has sufficient power to run all equipment.
	Filter element(s) installed improperly	Check that the filter element(s) are correctly installed (see figure 12 and Third Stage Filter Element Replacement Section located in this manual).
	Filter element damage, dents in the end caps, gasket damage or holes in pleated media.	Replace the filter element(s). Use only Donaldson filter elements (see figure 12 and Reference Replacement Parts List and install as in the Third Stage Filter Element Replacement Section located in this manual).

Problem	Possible cause	Remedy
Insufficient airflow	Fan rotation backwards	Bump fan and check for proper rotation as indicated by "Rotation" arrow on fan housing. If rotation is in the direction opposite the arrow, simply reverse two leads (black or brown) on the load side of the fan motor starter.
	Fan exhaust area restricted	Check fan exhaust area for blockage. Remove material or debris that is blocking the fan exhaust area.
	Outlet is restricted	Check outlet for blockage. Remove material or debris that is blocking the outlet.
	Collector access door(s) not tight or closed.	Close and tighten access doors.
	Plugged first stage screen/filter	Remove and clean or replace. See First Stage Screen/Filter Replacement Section.
	Plugged second stage filter element wrap and/or third stage filter element	Filter element wraps and/or filter elements needs to be replaced. See figure 12 and the Second Stage Filter Element Wrap Replacement Section and Third Stage Filter Element Replacement.
Insufficient hopper discharge	Plugged P-trap	Clean P-trap. See P-trap Service Section located in this manual.
Liquid leaking from collector door	Plugged P-trap	Clean P-trap. See P-trap Service Section located in this manual.
	Damaged or torn door gasket	Replace door gasket.

REPLACEMENT PART LIST

Item N°	Part Number	Description	Model
1	347-5403	First stage filter screen	D2-D10
2	263-4245	First stage filter wire mesh	D2-D10
3	263-4246	First stage filter	D2-D10
4	262-5049	Second stage filter wrap	D2-D10
5	262-5045	Third stage filter element + Second stage filter element wrap	D2-D10
6	P78-6782	WSO 25 (smoke) filter element	D2-D10
7	263-4250	P-Trap assembly 11/2" BSP	D2
8	263-4251	P-Trap assembly 2" BSP	D4-D10
9	263-4252	P-Trap/Y-Strainer assembly 11/2" BSP	D2
10	263-4253	P-Trap/Y-Strainer assembly 2" BSP	D4-D10
11	263-4254	Magnehelic pack	D2-D10
12	262-2501	Door gasket replacement kit	D2-D10
13	262-2502	Latch with T-Handle	D2-D10