

Installation, Operation and Maintenance Instructions



PORTABLE TRAMP OIL SEPARATOR CENTRIFUGE

ERIEZ WORLD HEADQUARTERS: 2200 ASBURY ROAD, ERIE, PA 16506-1402 U.S.A.
WORLD AUTHORITY IN SEPARATION TECHNOLOGIES

Introduction

This manual details the proper steps for installing, operating and maintaining the Portable Tramp Oil Separator Centrifuge.

Careful attention to these requirements will assure the most efficient and dependable performance of this equipment.

If there are any questions or comments about the manual, please call Eriez at 814-835-6000 for Centrifuge assistance.



SAFETY INFORMATION

1. **To avoid possible injury, read all manuals for full operating procedures before attempting operation of the Portable Tramp Oil Separator.**
2. **Wear safety goggles to protect eyes from splashing liquids when transferring into and out of clean and dirty coolant tanks. This is important, even if the fluids are not caustic or otherwise harmful, because metal particles suspended in the liquid could still cause serious eye damage.**
3. **Immediately clean up any spilled coolant to avoid slippery floors and possible dangerous falls.**
4. **DO NOT use this unit for solvents, flammable (low flash point) or other volatile liquids. Use only for water-soluble coolants.**
5. **DO NOT operate this unit without the centrifuge bowl properly assembled and the hood securely mounted in place.**
6. **This unit is to be operated and maintained by authorized personnel only.**



CAUTION

Safety labels must be affixed to this product. Should the safety label(s) be damaged, dislodged or removed, contact Eriez for replacement.

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Operation

To validate the equipment warranty, an Eriez' Service Technician must start up centrifuge-equipped units for the first time. This ensures proper operation of the equipment and complete training of your operators.

NOTE: Filtration of solids from the used coolant

⚠ CAUTION: DO NOT TRY TO RECYCLE RANCID COOLANT.

Rancid coolant cannot be recycled and will cause contamination of other nonrancid coolant in the plant.

is very important. Filtration prior to centrifugation extends the running time of the centrifuge in between cleanings, which reduces the labor required to operate the unit.

NOTE: In addition to the following operating procedure, consult the Westfalia Centrifuge Instruction Manual for detailed operation and maintenance instructions.

Start Up:

1. Centrifuge operators must be familiar with the centrifuge, preferably trained by an Eriez Service Technician.
2. Make sure the centrifuge bowl is properly assembled with all threads greased. (Refer to the centrifuge manual for instructions on bowl assembly.)
3. Make sure a ring dam is installed in the bowl. It should be a 41 or 44mm ID dam to start with.
4. Make sure the oil level in the drive chamber is at the proper level and is not contaminated. If contaminated, change immediately.
5. Connect the dirty fluid transfer hose from the Triangle Floating Skimmer assembly to the quick disconnect fitting on the inlet of the basket strainer on air pump models. If there is no room to use the Triangle Floating Skimmer in the sump or if there are floating chips on the surface of the coolant, use the supplied Suction Screen assembly with hose and connect it to the basket strainer. Clamp dirty coolant hose holder to wall of sump; adjust as necessary to keep Triangle Floating Skimmer in a position where it will not interfere with the machine tool or parts washer operation.
6. Connect the discharge hose to the clean coolant discharge port outlet and place the hose so that clean coolant is discharged back into the sump using the supplied magnetic hose clamp.
7. Plug in the electrical cord to a proper power supply outlet.
8. Turn on main power at the control panel disconnect.
9. Connect shop air supply.
10. Install a new clean filter bag or cartridge in the filter housing (see enclosed manual). If unit is equipped with an optional bag or large cartridge prefilter, there will be a bronze colored valve on top of the unit. This is an air bleed valve. Turn the black bleed screw on top of the valve counterclockwise 2 turns.

NOTE: THE SKIMMER SHOULD HAVE THE WIRE MESH STRAINER POINTING UP.

Adjust the inlet height of the Triangle Floating Skimmer center inlet pipe so that the inlet is approximately 1/8"-1/4" below the coalescer oil layer in the sump, which will allow the collector to always collect both oil and water. For shallow sumps the triangle floating skimmer can be inverted. (With wire mesh strainer pointing down, adjust the inlet pipe fitting so it is below the surface of the fluid when inverted). **NOTE:** If there are floating chips on the surface of the fluid, do not use the floating skimmer as the chips will clog up the skimmer and cause the unit to plug up and fail.

IF FLOATING CHIPS ARE A PROBLEM,

disconnect the skimmer hose from the inlet and connect the supplied suction strainer to the inlet using the suction strainer's connecting hose and quick disconnect fitting. Place the strainer in the tank so the hose is submerged into the fluid. It is not meant to pull fluid from the surface of the coolant sump.



11. Close manual ball valve in dirty coolant plumbing.
12. Start the unit by depressing the **“START”** button located on the control panel. This will start up the centrifuge.
13. **NOTE:** At this time, the air pump will temporarily start up and run until all air is out of the filter housing, then stop until the manual ball valve is opened.
14. Using the air-pressure regulator on the air pump, adjust the air pressure to the pump to approximately 60-90 PSI.
15. Wait approximately 15-60 seconds for the centrifuge bowl to come up to operating speed.
16. When the centrifuge is up to speed, open the manual ball valve to allow dirty fluid to feed into the centrifuge. A flow control is installed in the feed plumbing as standard.
17. For the standard prefilter, note the pressure reading on the gauge after the filter housing when there is a new filter cartridge and record the reading (This reading is usually between 15 and 25PSI). The standard filter cartridge should be changed once the pressure at the gauge reads 5 to 0 PSI. For units equipped with a larger cartridge or bag filter housing, change the filter bag or cartridge when there is a 30-35PSI differential between the pressure gauge at the inlet of the filter housing and the gauge in the outlet line.
18. The unit will now process the used coolant, purifying it of emulsified oils and solids and discharge cleaned coolant into the customer’s sump or clean tank. The tramp oils removed from the coolant are discharged into a waste oil container.
22. Turn off main power disconnect, and unplug electrical cord.
23. Disconnect air supply.
24. **NOTE:** If operator is going to clean the centrifuge bowl or perform any maintenance on the unit, the operator must follow established lock out-tagout procedures.

Maintenance

⚠ WARNING:
DO NOT ATTEMPT TO CLEAN OR SERVICE THE CENTRIFUGE UNLESS THE BOWL IS COMPLETELY STOPPED AND THE MAIN POWER IS SHUT OFF AND DISCONNECTED.

NOTE: The centrifuge bowl must be periodically cleaned of accumulated solids. How often this must be done is dependent upon the application and the amount of filtration done on the used coolant. Refer to the centrifuge manual for instructions on how to disassemble/assemble along with other required maintenance.

Bowl Cleaning:

Shut Down:

19. Shut off the unit by pressing the **“STOP”** button on the control panel.
20. Close the manual ball valve for dirty fluid feed to the centrifuge.
21. Wait until the centrifuge bowl has come to a complete stop.
25. Follow normal Shut Down procedure.
26. Make sure main power is shut off to control panel.
27. Make sure electrical cord is disconnected.
28. Make sure air supply is disconnected.
29. Make sure manual feed valve is closed.
30. Remove feed and discharge hoses from centrifuge hood.
31. Remove hood hold-down nuts (qty-2) and bolt (qty-1).
32. Disassemble centrifuge bowl and clean (see centrifuge manual).
33. Reassemble bowl (see centrifuge manual).

Filter Cleaning:

1. Follow normal shut down procedure.
2. Make sure main power is shut off to control panel.
3. Make sure electrical cord is disconnected.
4. Make sure air supply is disconnected.
5. Make sure manual feed valve is closed.
6. STANDARD FILTER: Depressurize the filter housing by pressing the red button located on top of the housing.
 - a. Remove the lower half of the filter housing by unscrewing it with the supplied spanner wrench or use both hands.
 - b. Clean or replace the used filter.
 - c. Reinstall filter and housing. Make sure housing is screwed on securely.
7. OPTIONAL BAG OR CARTRIDGE FILTER:(SEE MANUAL) Place a hose and waste container under the housing and depressurize by opening the drain ball valve on the bottom of the housing
 - h. Remove the hold down V clamp from the housing, or loosen the eye nuts depending on what housing your unit is equipped with.
 - i. Remove dirty element and replace with new one.

Regular Scheduled Maintenance:

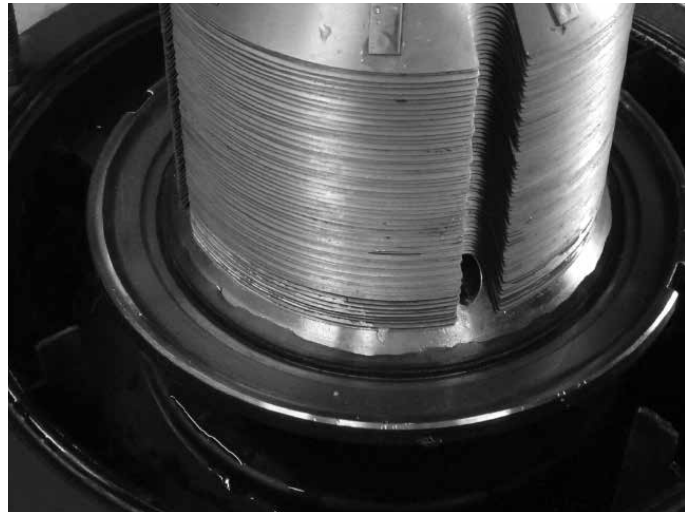
We recommend in addition to your coolant recycling plan that a preventative maintenance schedule be instituted for all associated recycling equipment in accordance with owner manuals and accepted maintenance schedules.

These are just basic guidelines for operating the equipment. Please contact Eriez at 814-835-6000.

OTC-2/OTC-3 Bowl

Assembly

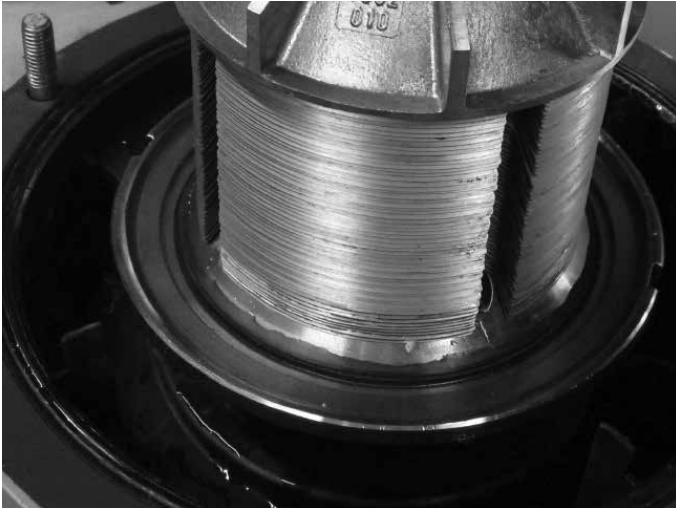
1. Make sure discs are clean and stacked correctly. Check the inner tabs to make sure they are not bent preventing the discs from stacking properly with no gaps. Stack the discs so that one disc with a slot punched on one inner tab is followed by a disc without the slot. This insures the discs are spaced correctly to the correct height.



2. Make sure the o-ring on the inside of the separating disc is in place and put on the distributor/spindle over the discs while pressing down on the disc stack.



3. The separating disc top should sit directly on top of the disc stack with no gap.



4. Place a clean or new sludge liner in the bowl top.
5. Place bowl top over the disc stack and fit it to the bowl bottom.
6. Thread the centripetal pump chamber bottom into the distributor spindle by hand. Place one wrench over the stud on the frame with the hook in the slot on the bowl bottom. Place second wrench with its hook into the slot of the chamber bottom and turn counterclockwise (close) until snug. **DO NOT OVERTIGHTEN!**



Disassembly

1. Remove quick disconnect fittings from hood.
2. Remove the screw plug from the top/center of the hood.
3. Place one wrench over the handle connection piece on top of the hood. Place the tee hex wrench in and down into the handle connection piece. Hold the tee wrench while turning the wrench clockwise (open) until completely unscrewed.



4. Remove the handle connection piece by pulling it straight up. Inspect the o-rings on it.



5. Loosen and remove the two (2) nuts and one (1) bolt that hold the hood down to the frame.
6. Place one wrench so the hook on the wrench fits into the slot on the bottom of the centripetal pump chamber. Rotate the bowl so the wrench is touching the drive motor. Place the other wrench so the hook on it fits in the slot on the centripetal pump chamber cover. Turn the second wrench clockwise (open) until the cover is loose, then remove it.



7. Remove the centripetal pump, inspect the gaskets. Remove the ring dam.



8. Place one wrench over the stud in the frame and place the hook on the wrench into the slot on the bowl bottom.



9. Place second wrench with its hook in the slot on the bottom of the centripetal pump chamber and turn clockwise (open).



10. Remove the chamber and inspect the gaskets.



11. Place your thumbs of both hands on separating disc where it sits above the bowl top. With the other fingers on the bottom of the bowl top, press down with your thumbs while lifting with your fingers. Lift the bowl top straight up and off.



12. The separating disc may stick to the underside of the bowl top. Use a wooden or plastic object and tap it free and remove from the bowl top.



13. Holding the bowl top in one hand or placing on a bench, use a thin screwdriver to gently pry the loose end of the sludge liner away from the bowl top.



- Take pliers and pull on the loose end of the liner and pull it out of the bowl top.



- Clean the liner. The liner can be reused many times until it breaks apart.
- Wipe the bowl top clean.
- If solids have built up into the outer edge of the disc stack, they must be removed and cleaned.

618 Cartridge Filter Housing

Operation

A. ELEMENT INSTALLATION INSTRUCTIONS

- Remove lid from housing by turning eye nuts
NOTE: eye nuts do not need to be fully removed from housing.
- Check inner housing and pipe connections for foreign material and discard any items that have entered during shipping or unpacking.
- Place housing and connect pipe connections.
- Tighten housing with proper tension to seal housing on existing pipe or flange.
- Place required element into housing and hand tighten top seal plate nut.
- Close lid and tighten eye nuts until lid is fully seated to o-ring.

- Loosen vent plug to allow air to escape from housing when liquid pressure begins to flow into housing.

- Housing is now ready for operation.

B. REMOVAL OF SPENT ELEMENT

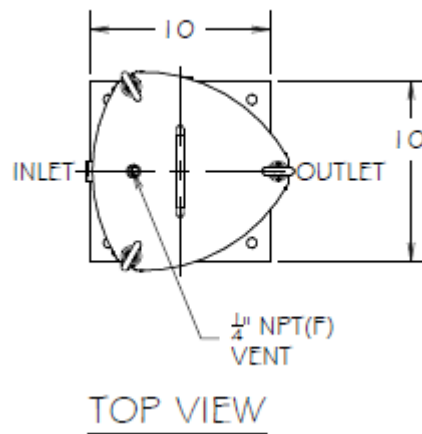
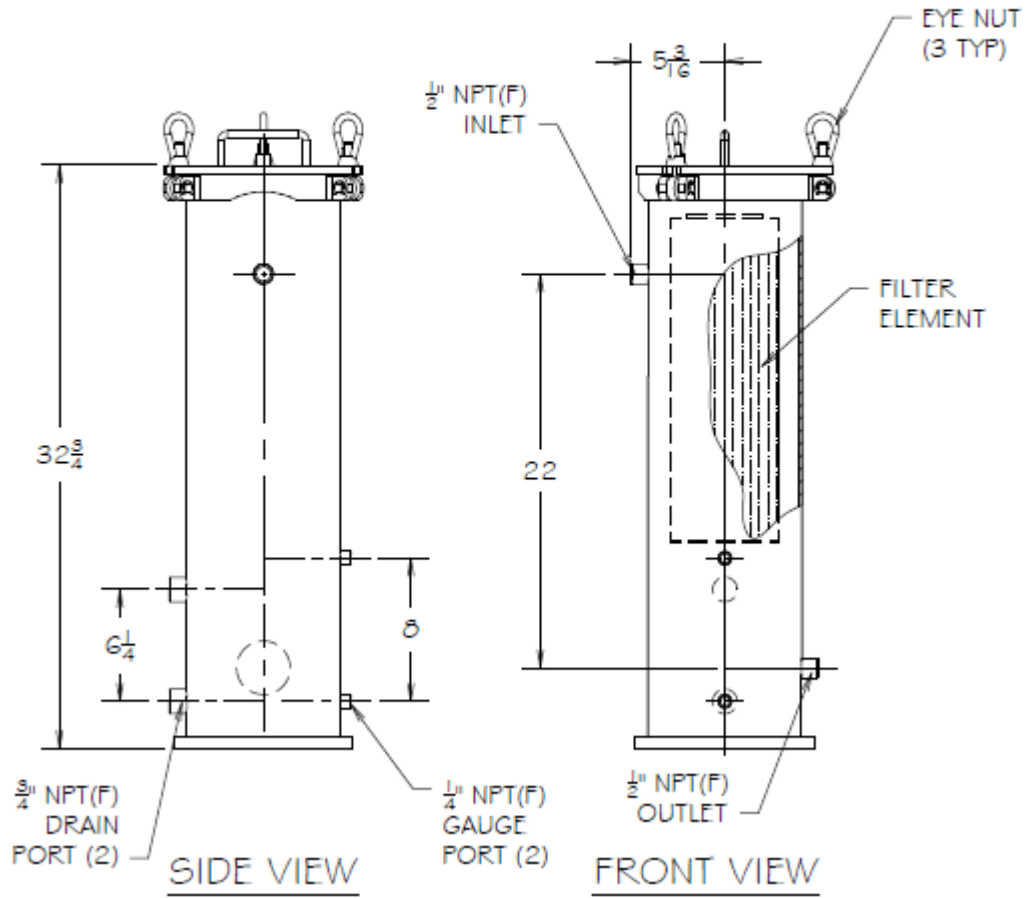
- When element reaches your pre-determined differential pressure; 25-35 PSI (1.6-2.4bar). Stop flow to the housing and relieve housing pressure through housing drain or vent.
- Loosen eye nuts on housing and tilt lid back on hinged bolt.
- Remove element and discard the element in accordance with any required local and federal laws.
- Replace element into housing as noted in A-5 above.

Optional Replacement Parts

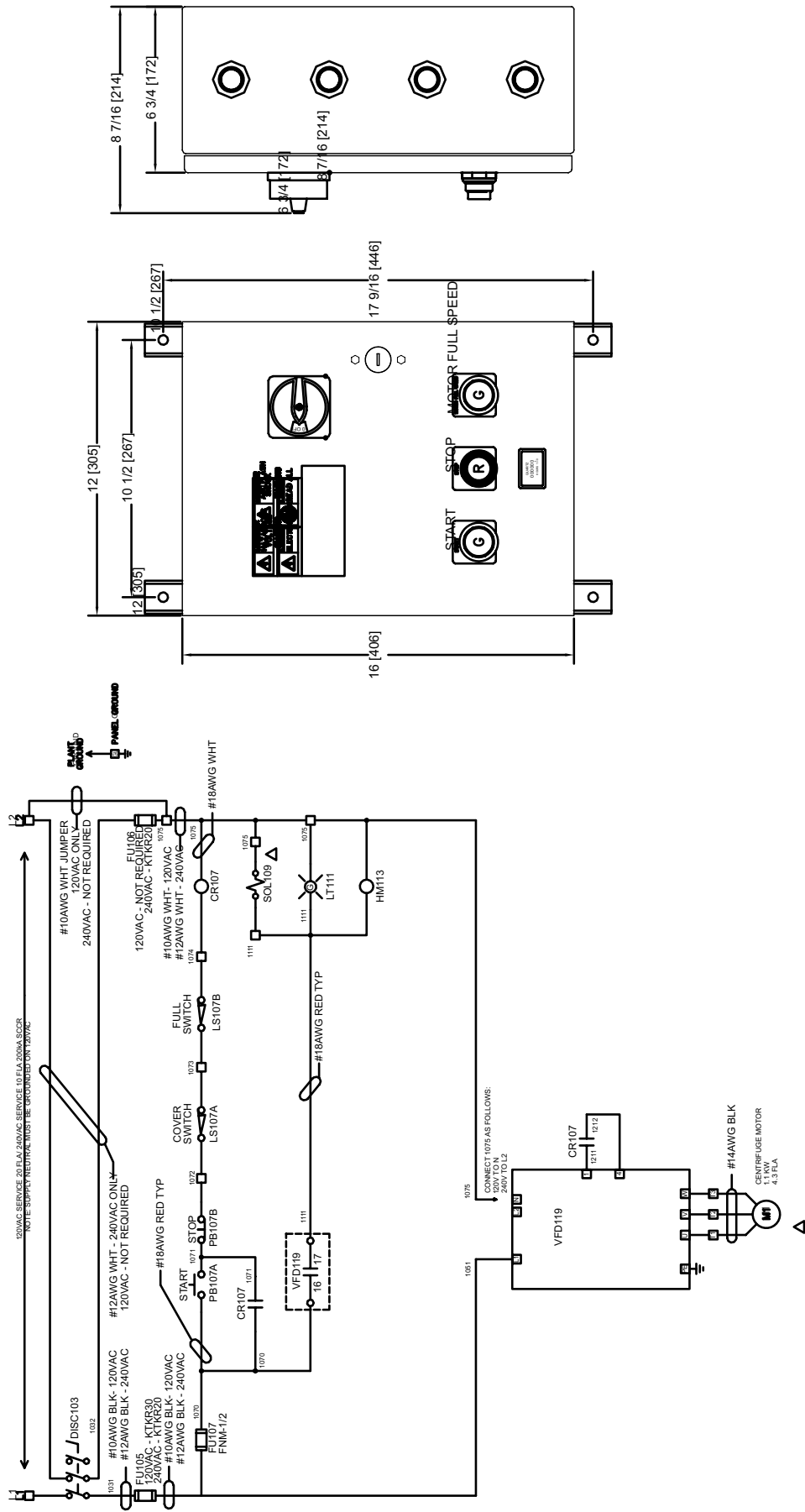
PART NUMBER		DESCRIPTION
744B		Buna lid O-Ring
4RE		Rod End
4EN		Eye Nut
4CPA		Clevis Bolt Assembly
L8LLC		Carbon Steel Lid Cover
L8LC4		Stainless Steel Lid Cover
REPLACEMENT ELEMENTS		
ERIEZ Part Number/ Manufacturers Part ID		Element Description/ Micron Rating
70-1370	718-5	Particulate Removal, 18", 5-Micron
460377	718-10	Particulate Removal, 18", 10-Micron
70-1380	718-20	Particulate Removal, 18", 20-Micron
NONE	718-30	Particulate Removal, 18", 30-Micron



CSD Filter drawing

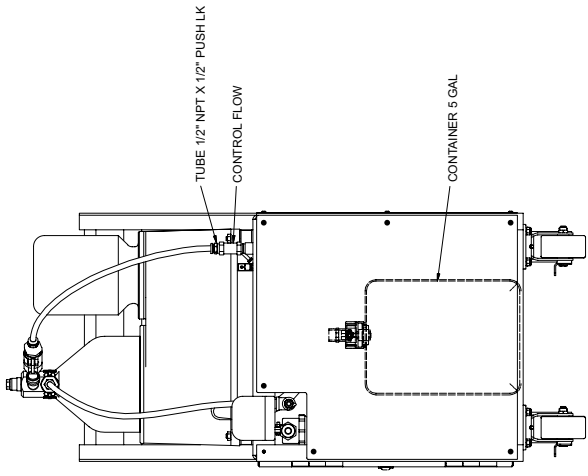
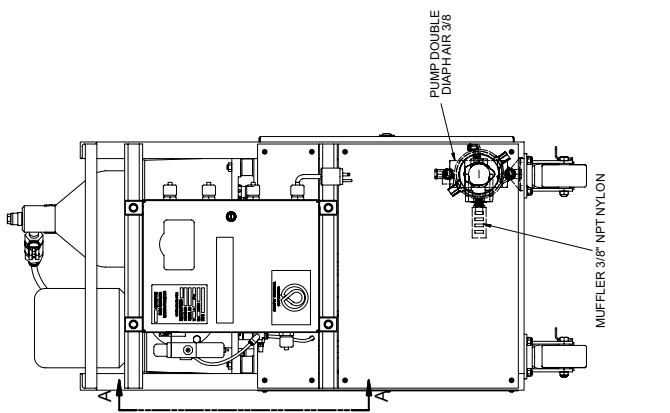
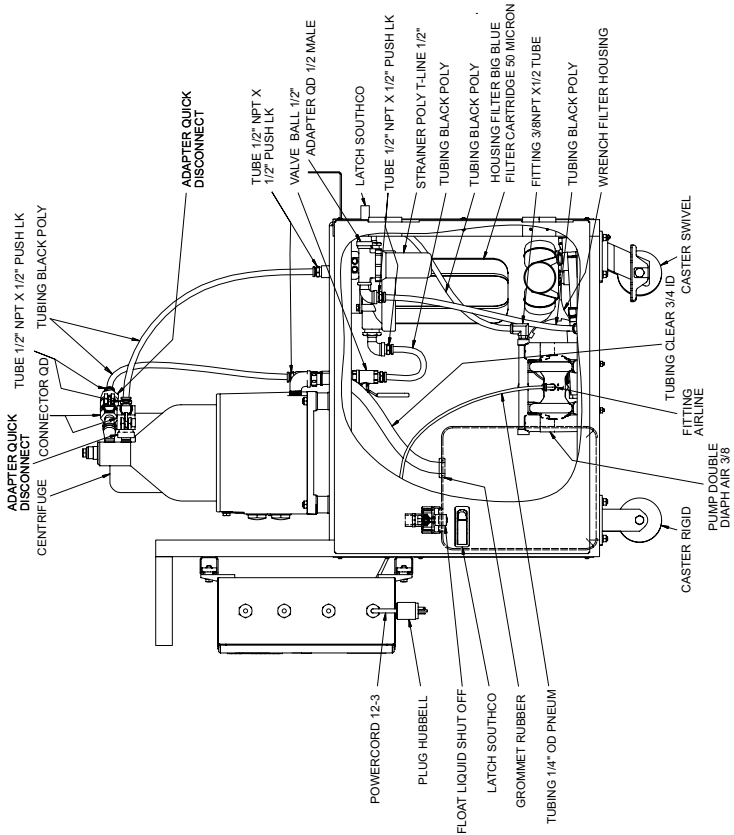
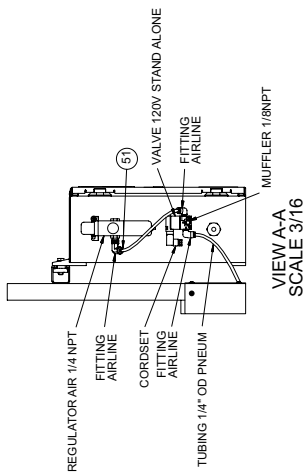
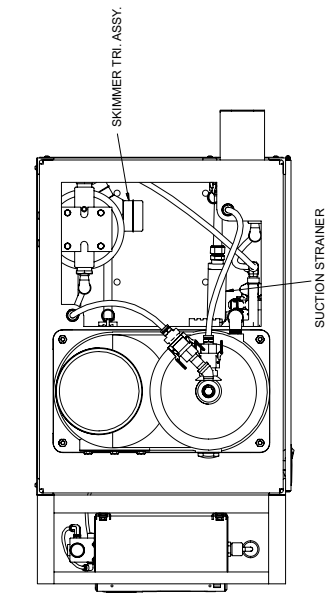
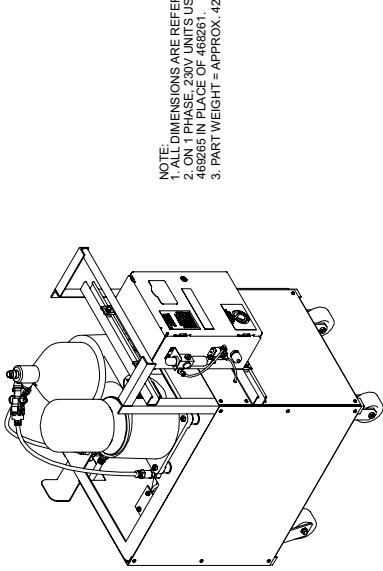


120 Volt Electrical drawing



Portable Tramp Oil Separator with Pentek Filter

NOTE:
 1. ALL DIMENSIONS ARE REFERENCE.
 2. ON 1 PHASE, 230V UNITS USE 469265 IN PLACE OF 468261.
 3. PART WEIGHT = APPROX. 425 LBS



Note: Some safety warning labels or guarding may have been removed before photographing this equipment.
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World Authority in Separation Technologies

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