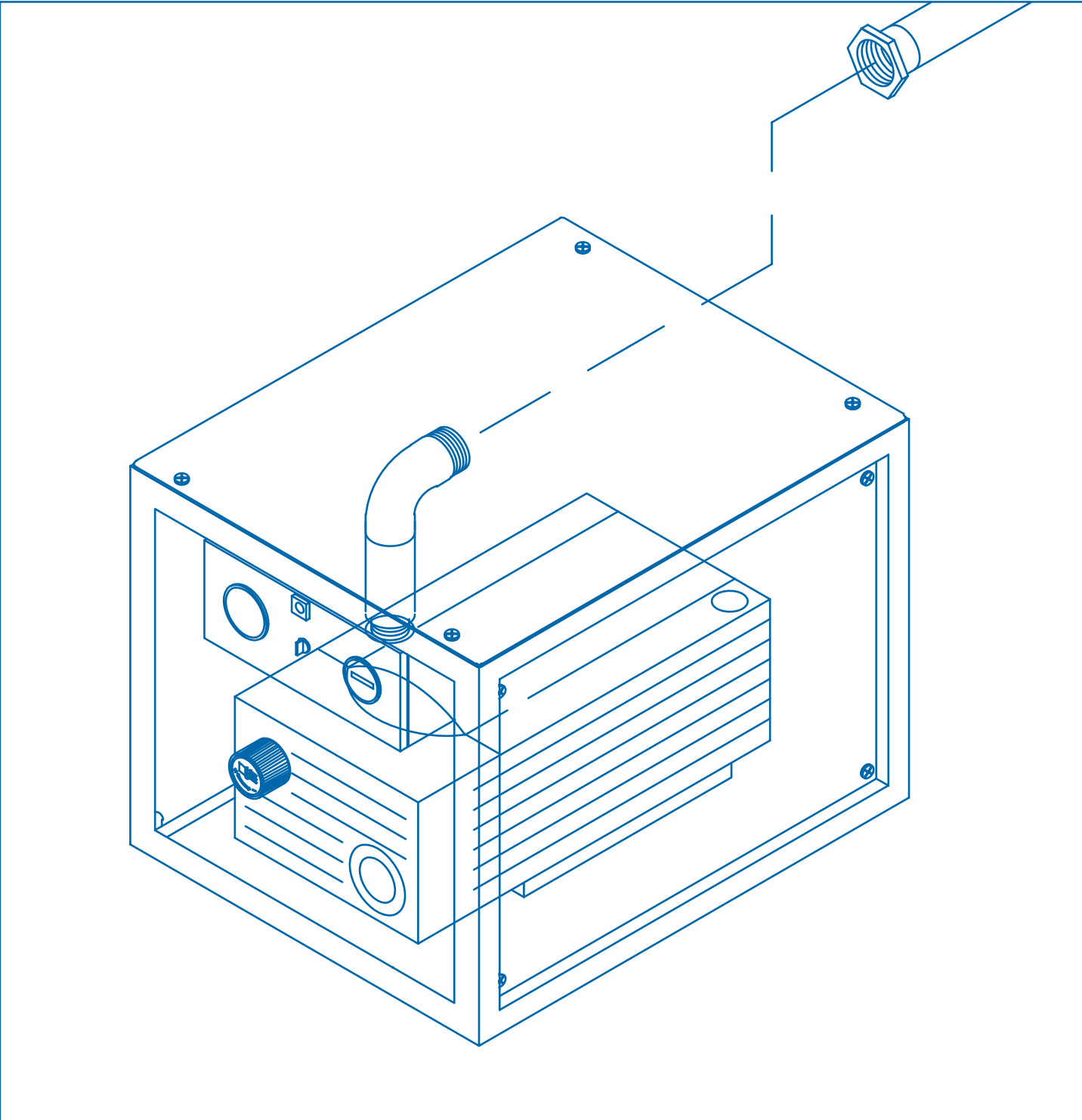


HD Series Installation Guide



Important Information

Intended Use

To provide vacuum suction during general examinations and procedures conducted by qualified dental professionals.

Disposal of Equipment

At the end of product life, the unit(s), accessories, and other consumable goods may become contaminated from normal use. Consult local codes and ordinances for proper disposal of equipment, accessories and other consumable goods.

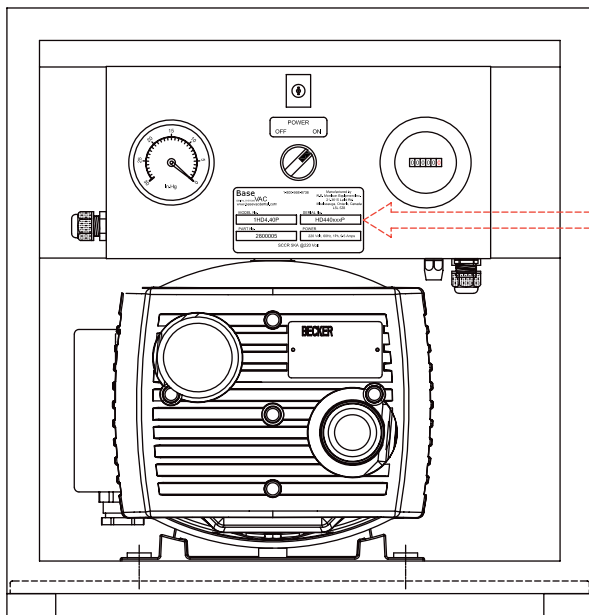
Transportation / Storage Conditions

Ambient Temperature Range.....0°F to 160°F (-17°C to +71°C)

Relative Humidity10% to 90% (non-condensing)

Atmospheric Pressure500hPa to 1060hPa (0.49atm to 1.05atm)

Nameplate Location



Base DENTAL SYSTEMS www.basevacdental.com	1-800-668-8736	Manufactured by R.E. Morrison Equipment Inc. 21-3615 Laird Rd. Mississauga, Ontario, Canada L5L 5Z8
MODEL No.	SERIAL No.	
1HD4.40P	HD440xxxP	
PART No.	POWER	
2800005	220 Volt, 60Hz, 1Ph, 9.5 Amps	
SCCR 5KA @220 Volt		

Note

Amplifies a procedure, practice, or condition.

BaseVac™ Systems are Manufactured by:



REM Equipment Inc.
3615 Laird Road
Mississauga, ON L5L 5Z8
Canada

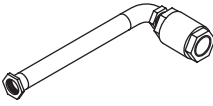
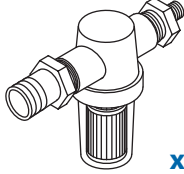
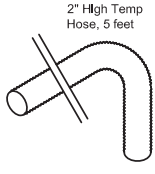
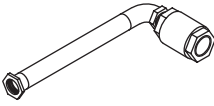
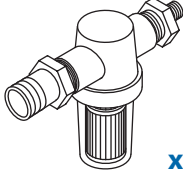
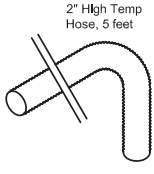
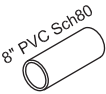
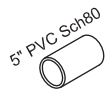

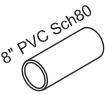
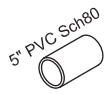















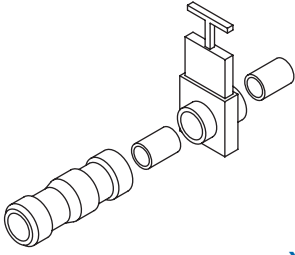
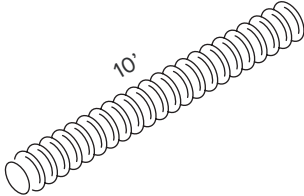

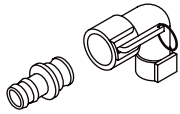
1.800.668.8736
F 905.828.3674
info@remequip.com
www.remequip.com

Visit www.basevacdental.com for frequently asked questions, user submitted installation photos and downloadable resources.

Table of Contents

Parts Identification	2
Collection Tank Setup	3
Inlet Piping Assembly	4
Multi Pump System Setup	6
Exhaust Piping Assembly	7
Electrical Connections	9
Electrical Diagram	10
Product Specifications	11
Troubleshooting	12

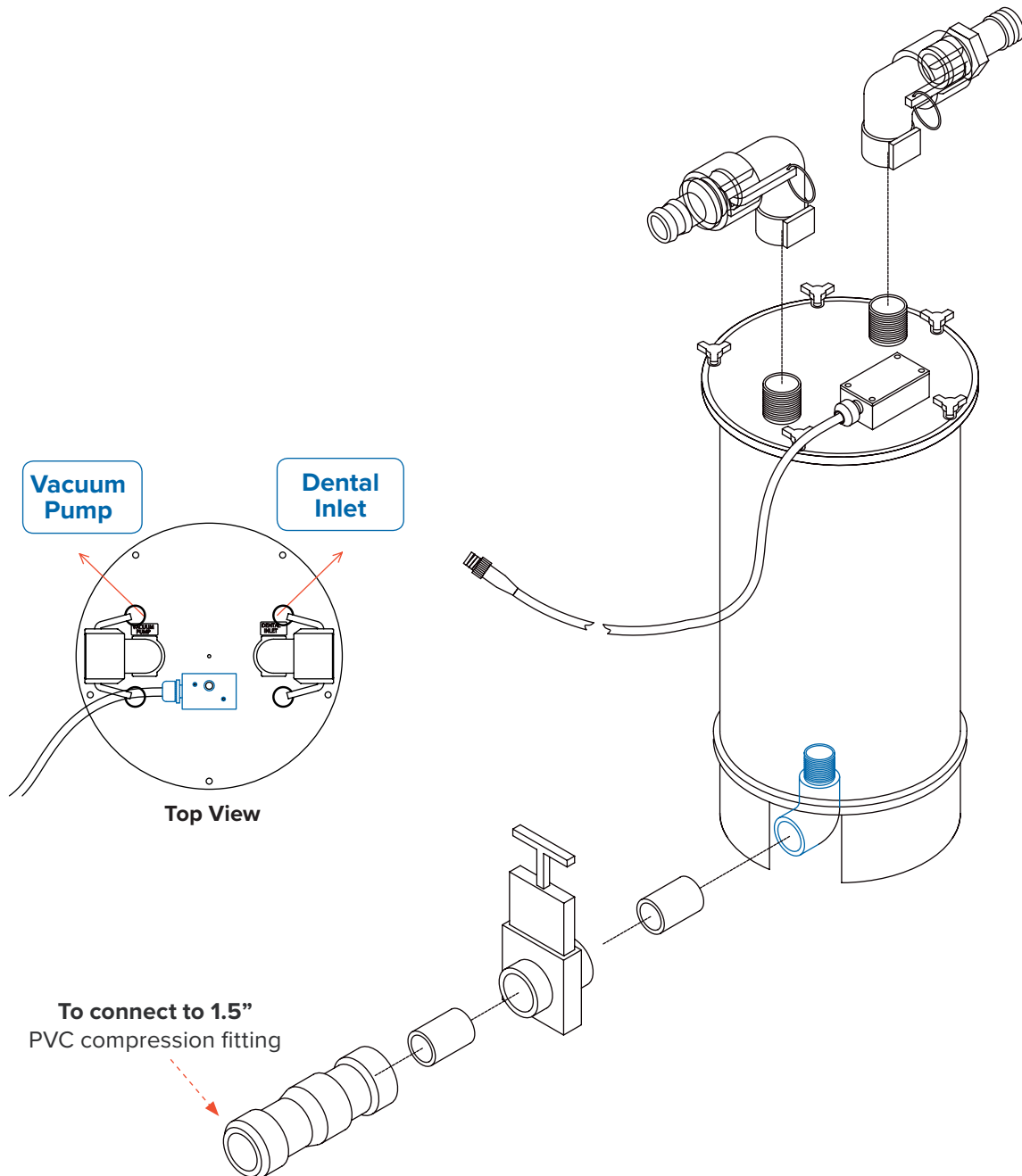
Parts Identification

1HD Series 1HD4.16 / 1HD4.25 / 1HD4.40			2HD Series 2HD4.25 / 2HD4.40		
 x1	 x1	 x1	 x2	 x2	 x3
 x1	 x1	 x1	 x2	 x2	 x2
 x1	 x1	 x1	 x2	 x2	 x1
 x1	 x1		 x1	 x1	 x1
			 x1	 x4	 x2
Tank					
 x1	 x1		 x3		 x4

Collection Tank Setup

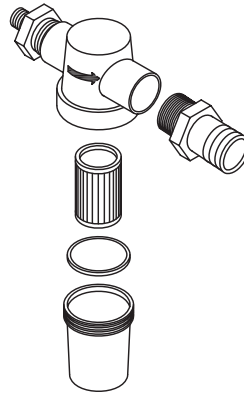
- 1 Twist on the Dental Inlet Connection to the Dental Inlet and the Vacuum Pump Connection to the Vacuum Pump Inlet as labelled on the top of the tank.
- 2 Connect the tank drain outlet hardware to the drain connection located at the bottom of the tank. Make sure that the gravity check valve flap is hanging down. The check valve has a 1.5" PVC compression fitting for connection to a drain (drain piping is not supplied). These fittings should be fastened with PVC glue.

NOTE: All connection hardware except for drain piping is included.

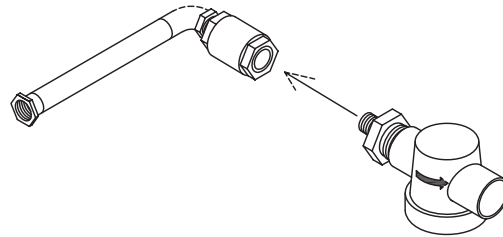


Inlet Piping Assembly

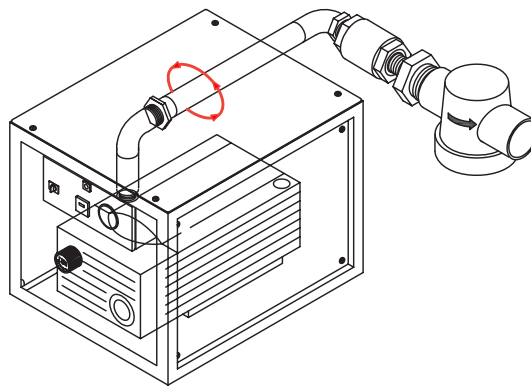
- 1 Remove clear housing filter, gasket and hose barb from the filter assembly



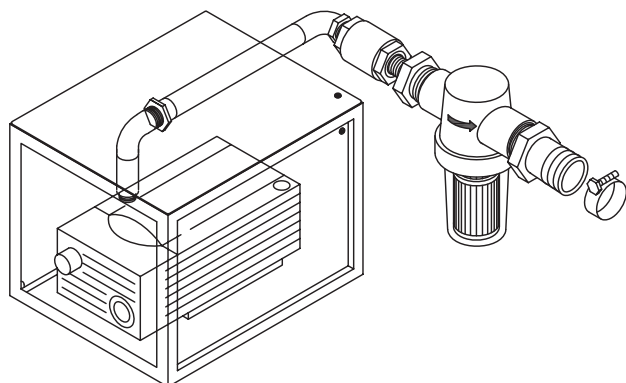
- 2 Assemble filter top to check valve and inlet assembly



- 3 Assemble completed unit from Step 2 to pump piping

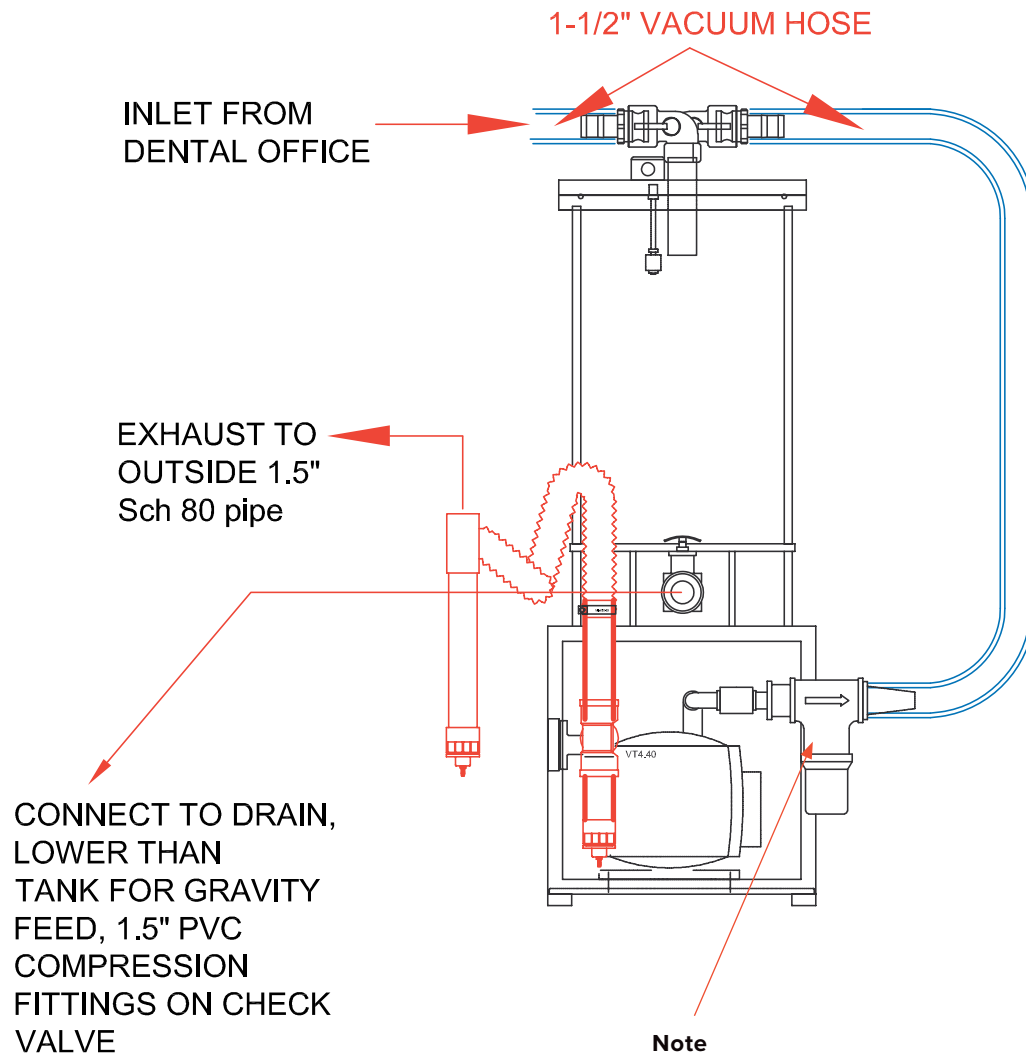


- 4 Assemble filter housing and hose barb



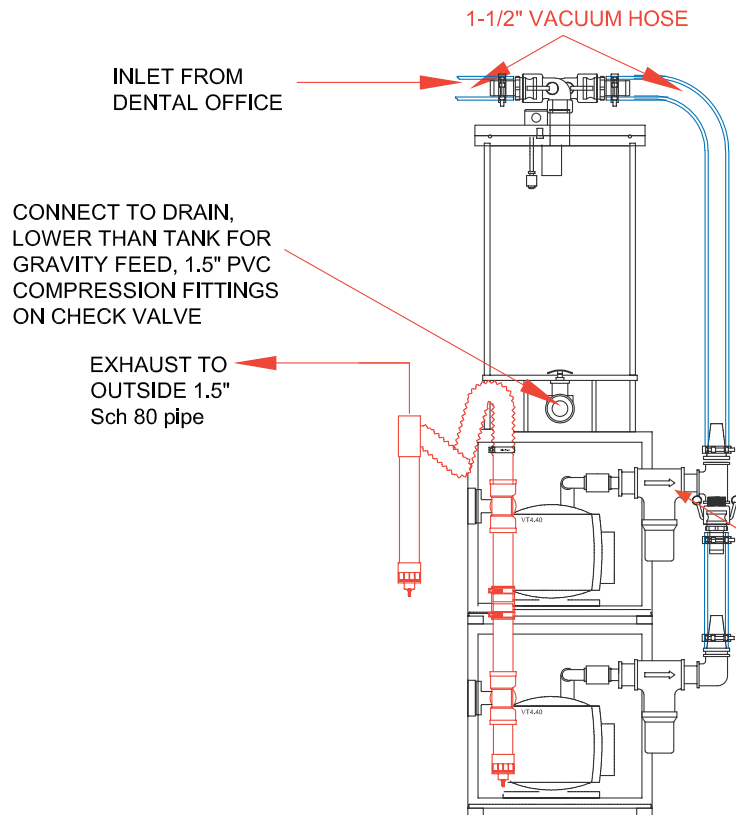
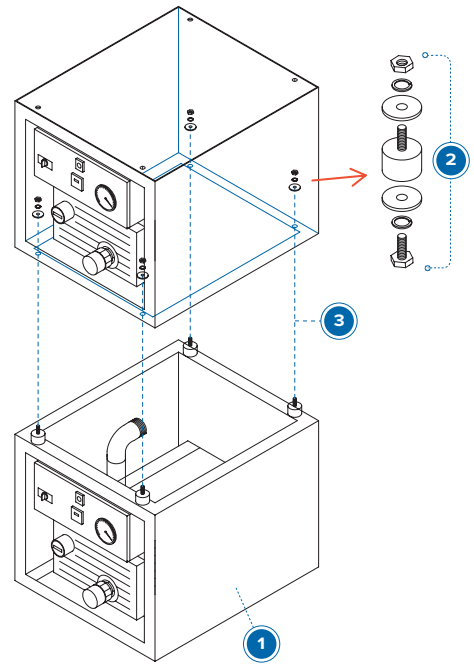
Inlet Piping Assembly

- 5 Use the vacuum hose to connect the inlet assembly to the Vacuum Pump connection on the tank as shown. Use clamps to fasten hose to the hose barbs.



Multi Pump System Setup

1	Place bottom pump into final position.
2	Remove nut, lock washer and flat washer from anti-vibration foot.
3	Place top pump on the bottom pump aligning the holes into the studs of the anti vibration feet. Then securely fasten the two pumps together using the hardware provided.
4	Assemble the 2 vacuum inlet parts by threading them together as shown.
5	Mount this assembly onto the pump inlet. Rotate until assembly is tightly fastened to the inlet connection.
6	Use the vacuum hose to connect the inlet assembly to the Vacuum Pump connection on the tank as shown. Use clamps to fasten hose to the hose barbs.

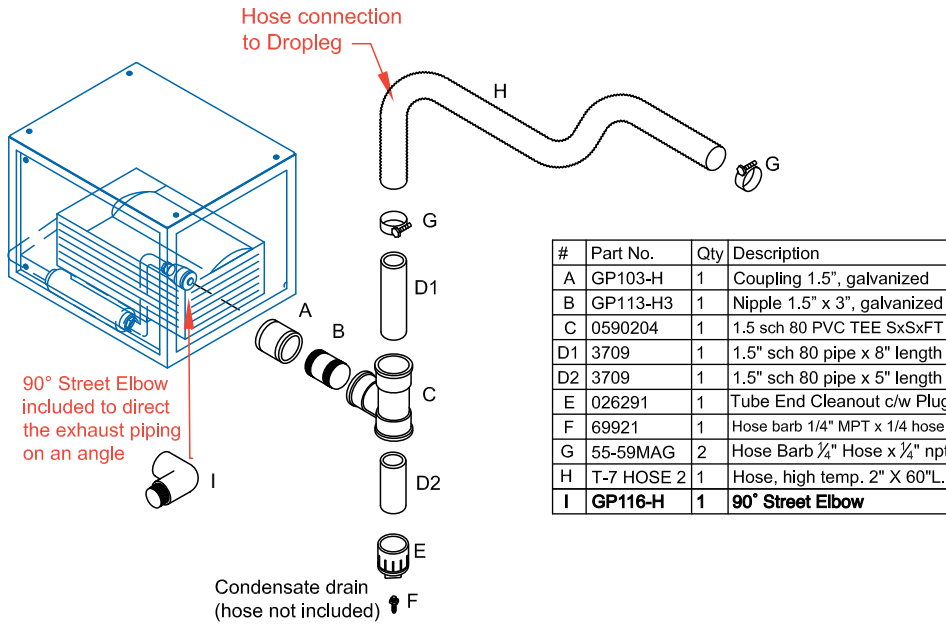


Note

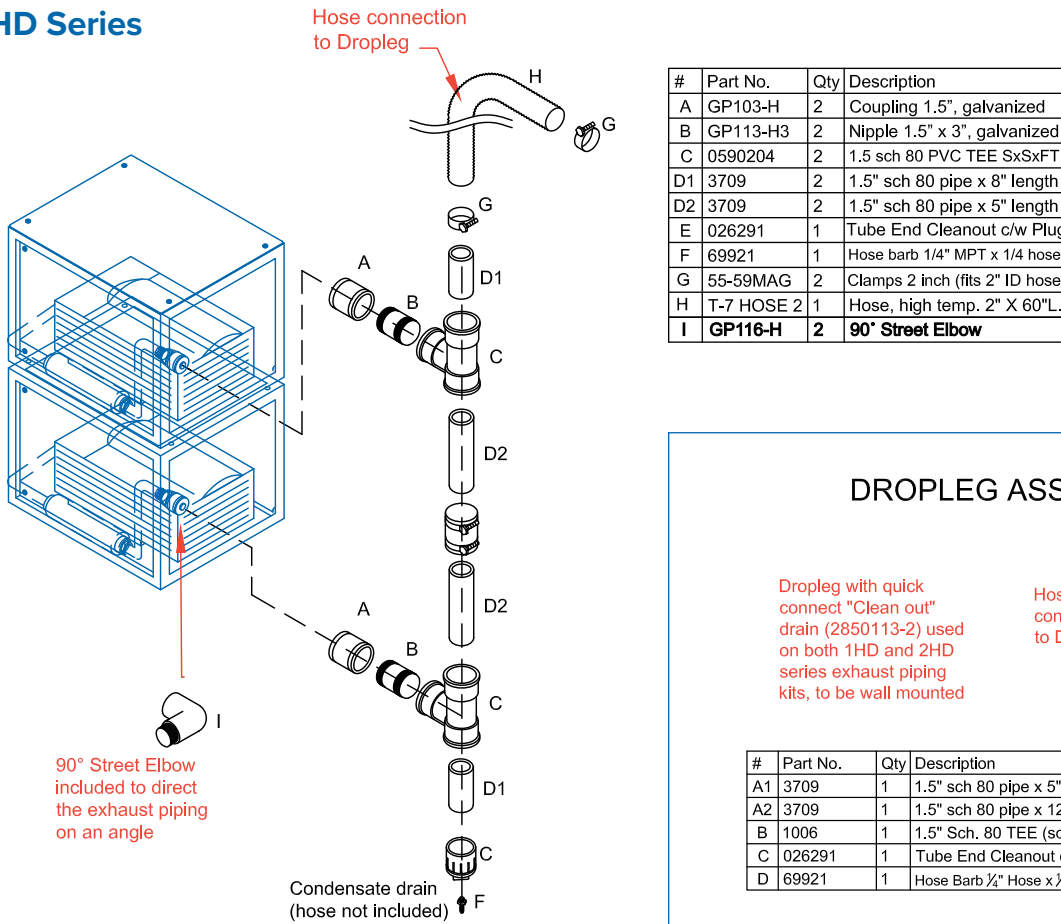
The directional arrow on the filter housing is pointing away from the pump even though the direction of flow is opposite. This is done intentionally so if any liquid were to enter this line it would hit the baffle on the inside of the filter housing and disperse into the filter.

Exhaust Piping Assembly

1HD Series



2HD Series



DROPLEG ASSEMBLY

Dropleg with quick connect "Clean out" drain (2850113-2) used on both 1HD and 2HD series exhaust piping kits, to be wall mounted

Hose connection to Dropleg

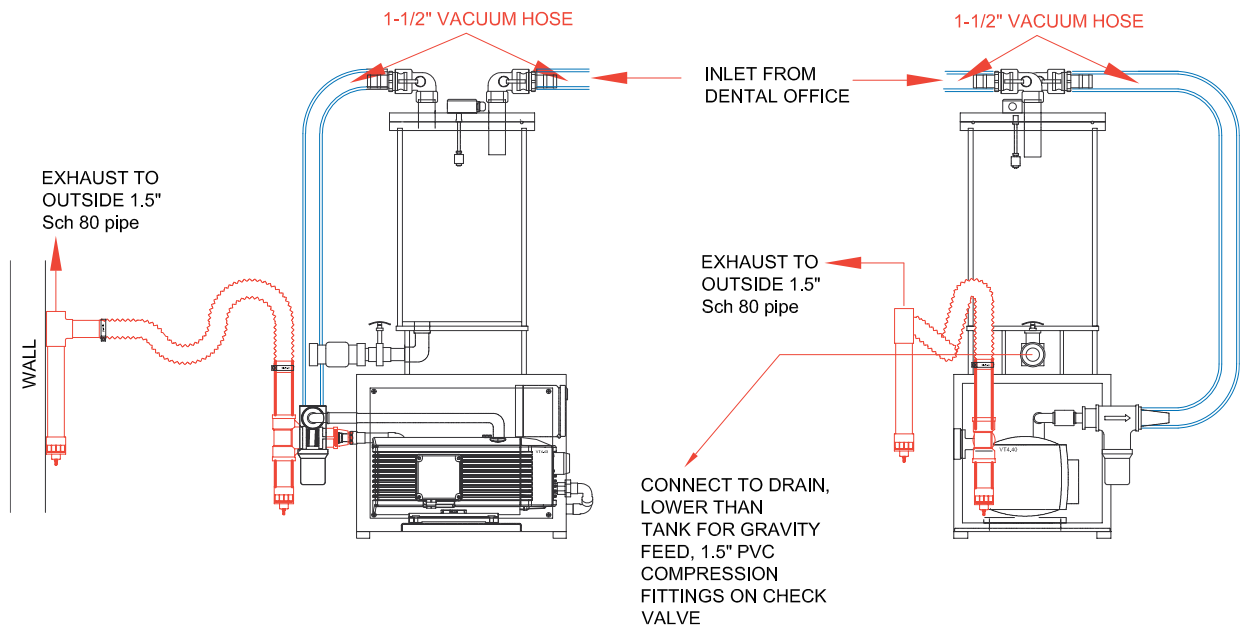
Piping to an outside source to be done by Other's

#	Part No.	Qty	Description
A1	3709	1	1.5" sch 80 pipe x 5" length
A2	3709	1	1.5" sch 80 pipe x 12" length
B	1006	1	1.5" Sch. 80 TEE (soc x soc x soc)
C	026291	1	Tube End Cleanout c/w Plug
D	69921	1	Hose Barb 1/4" Hose x 1/4" npt

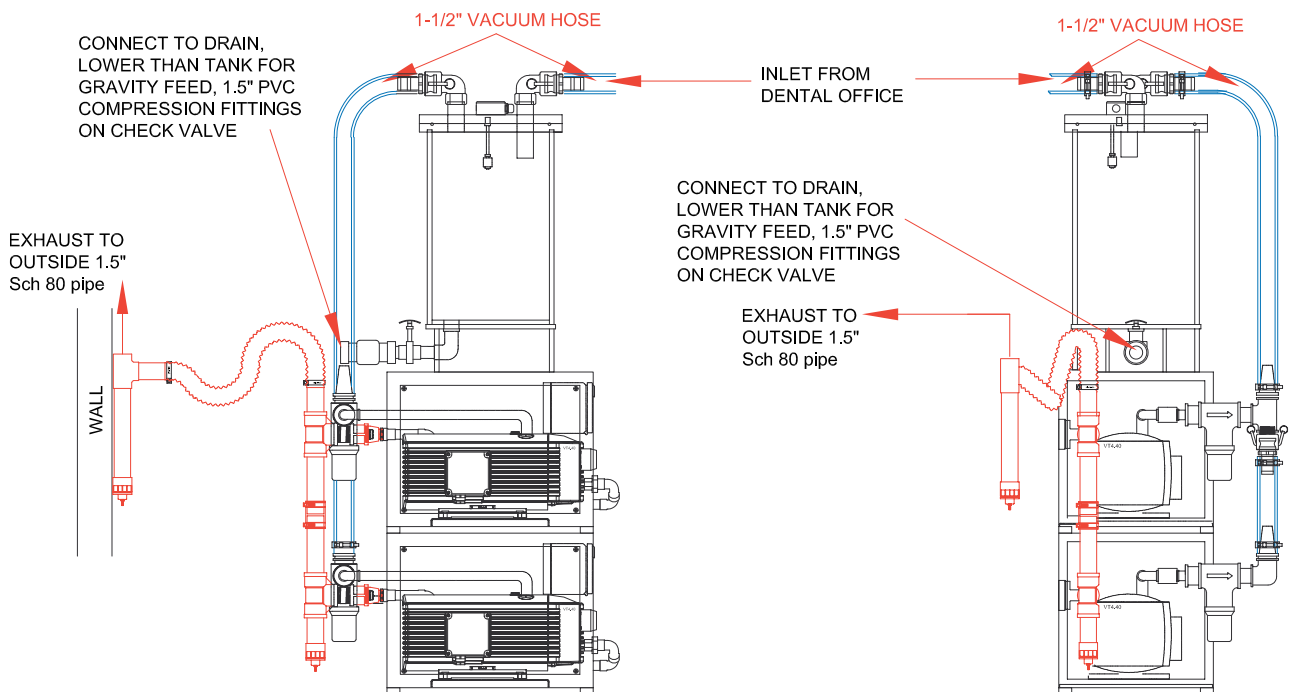
Condensate drain (hose not included)

Exhaust Piping Assembly

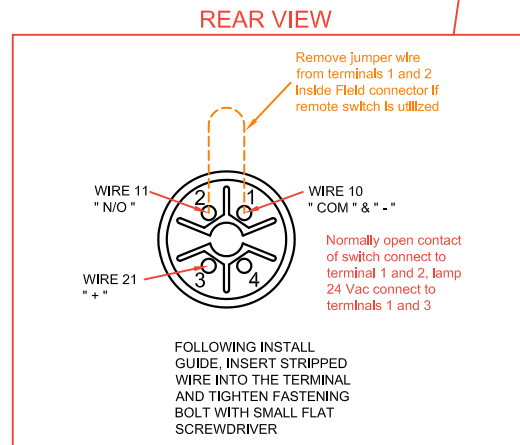
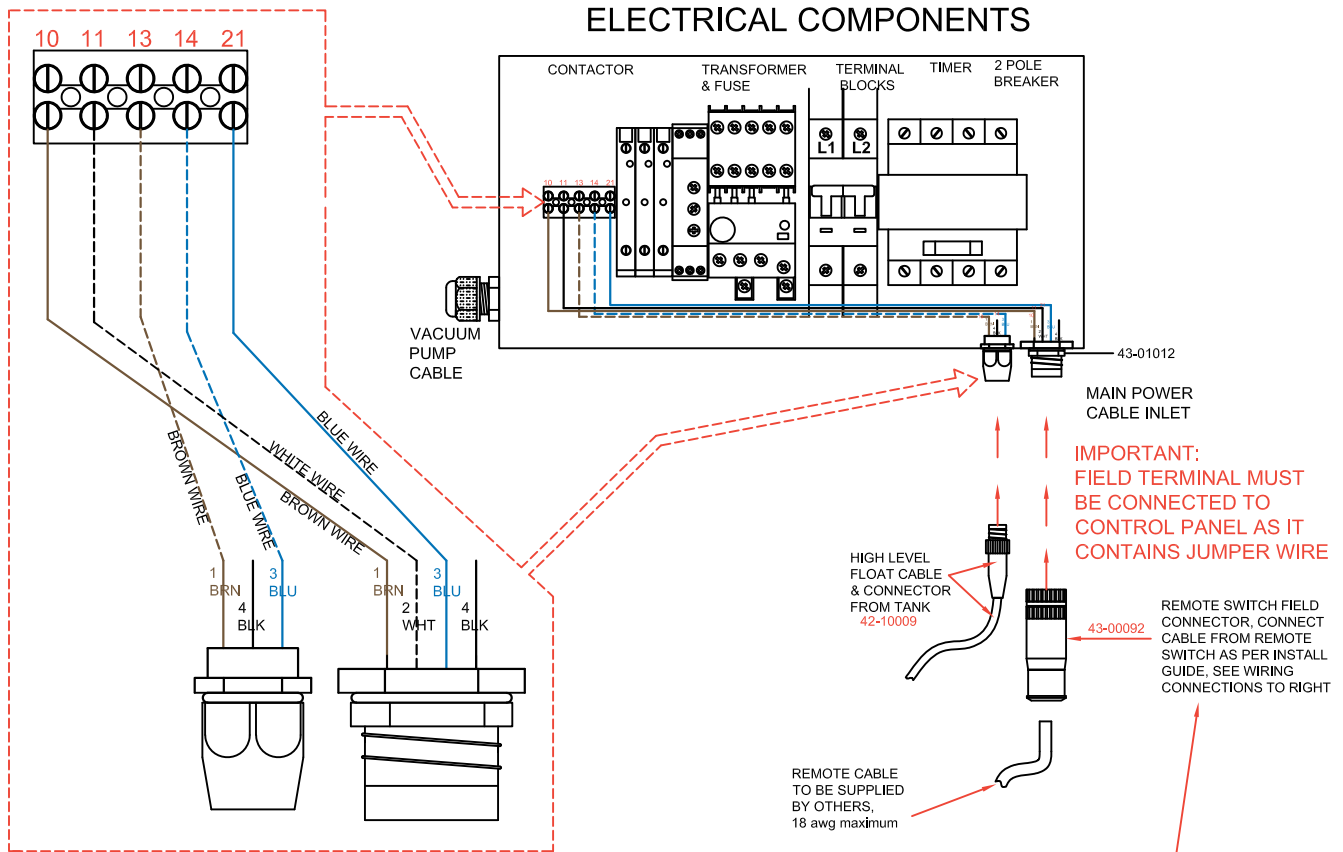
1HD Series



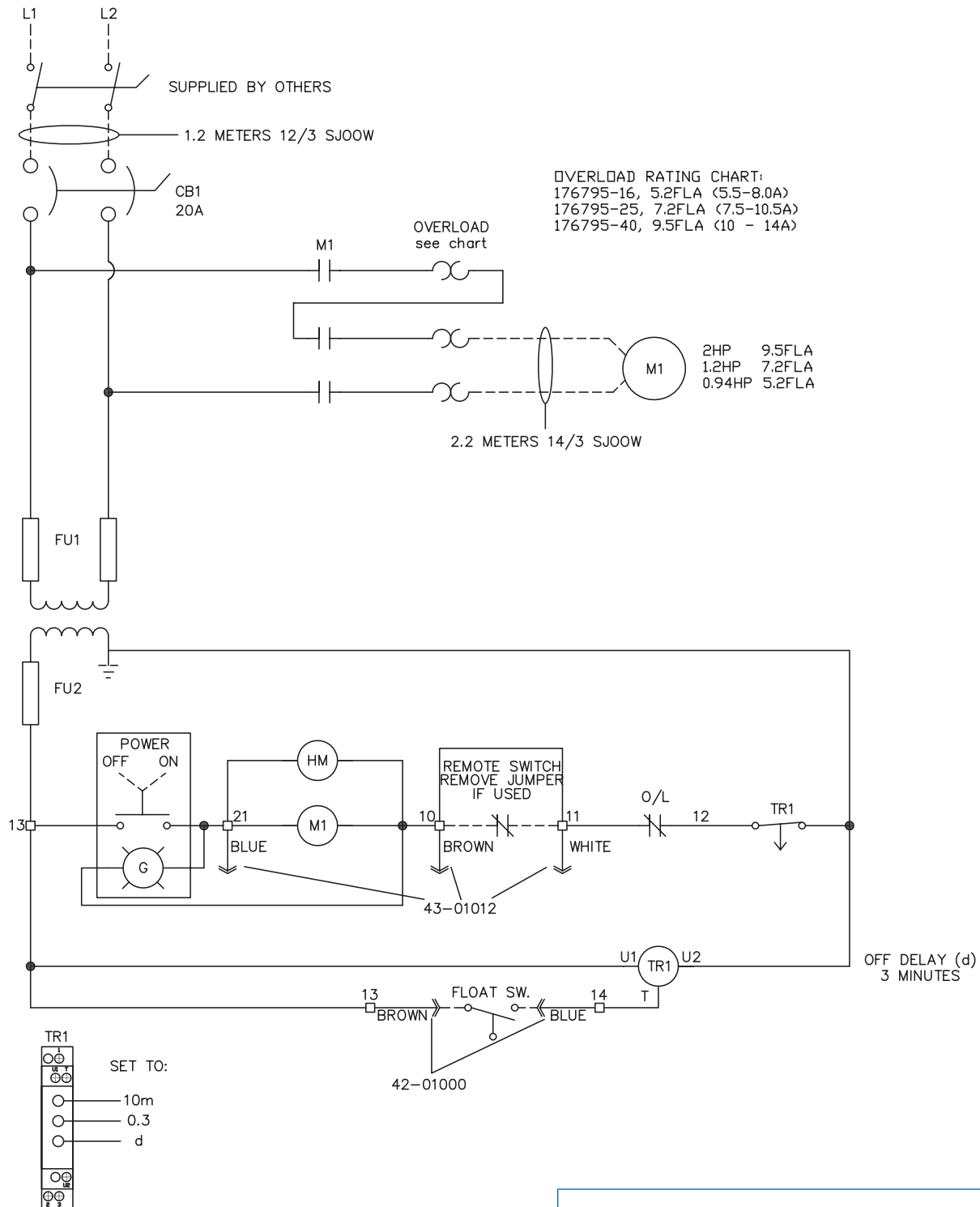
2HD Series



Electrical Connections



Electrical Diagram



NOTE: All starters are shipped without fuses. Fuse sizes are a guide only. Fuse size should be determined by applicable electrical codes.

Note 1 - If remote switch is utilized remove jumper inside the 43-00092 connector

Note 2 - Tank float cable to be connected to 42-10009 connector on the bottom of the control panel

Product Specifications



1HD Series

2HD Series

3HD Series

Model	1HD4.25P	1HD4.40P	2HD4.25P	2HD4.40P	3HD4.40P
SKU	2800004	2800005	2800012	2800006	2800030
Max (HV) Users	2.5	4	2 x 2.5	2 x 4	3 x 4
Operatories	3 to 4	4 to 6	5 to 6	8 to 12	10 to 18
"Hg	5 - 25 "Hg *	5 - 25 "Hg *	5 - 25 "Hg *	5 - 25 "Hg *	5 - 25 "Hg *
Power (hp)	1.2 hp	2.0 hp	2 x 1.2 hp	2 x 2 hp	3 x 2 hp
Power (Amps)	7.2 A	9.5 A	2 x 7.2 A	2 x 9.5 A	3 x 9.5 A
Electrical	220V, 1 Phase5	220V, 1 Phase5	220V, 1 Phase5	220V, 1 Phase5	220V, 1 Phase5
Noise Level	67 dBA	69 dBA	72 dBA	74 dBA	74 dBA
Vac L x W x H	24" x 18" x 18"	24" x 18" x 18"	24" x 18" x 36"	24" x 18" x 36"	24" x 18" x 57"
Vac Weight	114 lbs	142 lbs	2 x 114 lbs	2 x 142 lbs	3 x 142 lbs
Tank L x W x H	17" x 17" x 39"	17" x 17" x 39"	17" x 17" x 39"	17" x 17" x 39"	17" x 17" x 57"
Tank Weight	38 lbs	38 lbs	38 lbs	38 lbs	58 lbs

Troubleshooting

Problem	Potential Cause	Symptom	Solution
Pump will not start	Electrical -Main fuse failure	Activate remote switch, nothing happens	- Check main fuse or breaker, reset or replace
	Electrical -Breaker OK, pump still will not start	Activate Pump panel switch to ON, nothing happens	- Check and reset overload in pump control panel.
	Mechanical -Vaness worn or broken	Pump keeps tripping breaker when turned on	If hour meter shows 6000 to 7000, vanes may have broken and need to be replaced, follow vane replacement guide.
	Pump internals have been flooded or seized with rust.	Pump keeps tripping; vanes are OK. Pump rusted inside	Remove vanes (see vane replacement guide). Use sand paper to remove visible rust. Using an Allen key, free the rotor with centre shaft bolt. Clean and replace vanes.
Low or Poor Vacuum	Clogging of filters and separators	Gradual drop in suction	- Clean all air filters in the line - Inspect amalgam separator to insure it is not full - Clean air-water separator
	Air Water separator full, float blocking inlet	Low or no vacuum	Turn pump off, wait 4 minutes for tank to drain and make sure drain valve is open (handle up)
	Pump problem	Sudden drop in suction, vanes noise sounds different	- Inspect the pump for broken vanes using vane replacement guide - Insure vacuum regulating valve is turned all the way in
Pump room is excessively hot	Exhaust piping	The pump room heats up during the day.	- Look for and correct leaks, crack or separation in exhaust or piping - Remove outside obstructions, example bird nest, garbage receptacle
Liquid leaking from front of pump	Air water separator malfunction	Pump continues to run water leaks from pump exhaust and filter cover. Pump in-line "white" filter bowl full.	- Inspect float switch in air water separator, clean and or replace - If using remote drain pump, check fuse - Remote drain pump - Check for drain obstructions Important: Correct problem and drain water from pump by following steps in vane replacement guide. Dry the pump with rags. Reassemble pump and immediately run the pump for minimum of 4 hours until it is dry.
	Condensation in exhaust line	Water is leaking from front of pump but inline "white" filter is dry.	- Inspect and drain drop leg condensate traps on exhaust piping - Insure exhaust piping slopes away from pump exhaust port - Review exhaust piping guidelines
Noise in exhaust piping	Vibration from Pump transferred to piping	The resonating sound changes with pump load.	- Check for rigid mounting connections and remove them. - Replace a section of rigid pipe with flex hose. - Install exhaust silencer
		The vibration sound never changes.	- Inspect pump to insure it is installed level with no brackets connected from the pump frame to wall or floor - Insure nothing is leaning against the pump or exhaust piping