HENNIG

PROTECT YOUR SUCCESS

INSTALLATION GUIDE

ECOFLOW HIGH-PRESSURE COOLANT SYSTEMS

ECOFLOW

The Hennig EcoFlow Medium Pressure Coolant System has been designed to be a cost-effective solution to increase your machine's productivity without breaking the bank. The system is very compact and simple to install, making it an ideal choice for many different milling and turning applications. The simplistic design allows for a favorable price point while allowing for simple operation and maintenance. The EcoFlow is the perfect solution for your medium pressure coolant needs on most turning and milling applications.

Your Hennig system undergoes 100% end-of-line test and inspection to verify proper function, prior to packing and shipment.

For questions regarding your system, or assistance in new applications, contact a customer service representative: 815-636-9900 or info@hennig-inc.com

Table of Contents

SYSTEM OVERVIEW

Unit Specifications	
Voltage	3 Phase, 230 vac, 60 Hz
Full Load Amperage	14 amps
Max Pressure	500 PSI
Max Flow	8 gpm (30.3 l/min)
Filter	5 micron standard (10 micron option)
Inlet	1" hose barb, coolant fed from machine's flood coolant pump
Outlet	3/8" NPT

Included with your system

1. 1" feed hose
2. 5/8" relief hose
3. Hose clamps (feed and relief)
4. 10' High-pressure extension hose
5. 3/4" NPT to 1" Hose barb
6. 1" NPT to 1" Hose barb
7. 3/8",1/2" JIS/BSPP fittings
8. 3/8",1/2" JIS sealing cones
9. 3/8",1/2" JIC fittings
10. Tank mount for relief

UltraFlow Components

1. System outlet pressure
2. Filter pressure
3. System "on/off"
4. Electrical box
5. Access panel
6. Pressure relief valve
7. Pressure outlet
8. Pressure relief outlet
9. Feed hose/Coolant in
10. Power wires

REMOVE FROM PALLET

Hoist the system from both lift points.

The top of the system has two 3/8-16 threaded holes.

Eye bolts are included.

Both side doors must be mounted while lifting.

INSTALL RELIEF MOUNT

1. **Find a suitable location on the coolant tank to mount the relief pipe.**

   Overflow coolant from the relief valve needs to be plumbed back into the coolant tank.

2. **Install the relief mount.**

   Drilling may be required if the existing tank holes don't line up or none are available.

3. **Adjust height the relief pipe.**

   Ensure the barb fittings are at the top. Adjust height so that the opening is submerged roughly 2" to reduce foaming the coolant.

CONNECT HOSES & PUMP

1. Position the EcoFlow near the factory flood coolant pumps.

2. Plumb a 1" flexible line from the machine's flood coolant pump (coolant supply pump) to the EcoFlow's 1" hose barb located on the back of the system (9).

   If your machine does not have coolant pump, Hennig can supply a pump kit with the EcoFlow system. See pages 12-13 for installation.

3. Plumb the pressure outlet (7) to the machine's high pressure hose. The EcoFlow's output is a 3/8" NPT and various fittings are supplied to connect to most machine tools high pressure line.

   If the machine's line does not reach the EcoFlow use the provided extension line.

4. Plumb the relief valve (6) to the relief pipe and fasten into place.

CONNECT POWER

Using the supplied S/O cable (10), connect the EcoFlow to 3-phase, 230 VAC power. This can be in the machine tool or a separate power drop.

If the voltage is less than 230, system performance will be affected.

PRIMING THE SYSTEM

1. **Verify system is ready for priming.**

   Ensure all filters, O-rings, hoses, and clamps are in place and properly sealed.

2. **Fill with coolant.**

   Make sure the EcoFlow system is turned off. Turn the machine's feed pump on/off a few times to fill the filter and allow air to escape the system. Ensure all air bubbles are removed from the pump and the coolant feed hose.

CHECK SYSTEM PHASING

IMPORTANT! Upon first start-up, confirm system phasing to ensure coolant is properly flowing.

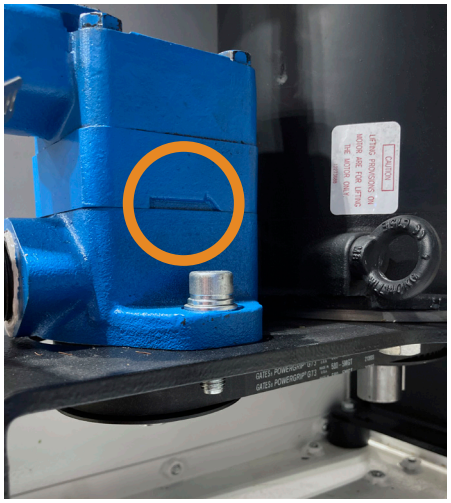
1. **Remove the right side cover.**
2. **Run the pump.**
3. **Check system phasing:**
   - Verify that the belt is turning counter-clockwise (it should be turning the same direction as the arrow on the pump).

   OR

   - Verify that the motor fan is turning counter-clockwise.

If the motor/belt is not turning counter-clockwise, **unplug the system** and swap two of the main power wires going into the main disconnect inside the EcoFlow electrical cabinet. Run the pump to verify the turning direction is correct.

Correct belt direction.



Belt direction reference (one on each side of the pump).

Correct motor fan rotation.

RUNNING THE SYSTEM

1. Turn the system on using the main power switch and test by running the machines' coolant supply pump.

   When the EcoFlow senses 30 PSI, it starts running automatically. When the coolant pressure at the filter drops below 30 PSI, the EcoFlow has a 1 second delay and then turns off.

   If the supply coolant pump is running BUT the EcoFlow is not turning on, this is an indication that the bag filter needs to be changed. See page 8 for filter replacement.

   Running the system over 150 PSI (feed pressure) can damage the filter.

ADJUSTING OUTPUT PRESSURE

1. Make sure system is running.

2. Loosen the jam-nut on the pressure relief valve (6).

3. Adjust pressure:
   Increase pressure: Tighten the body of the valve, then tighten the jam nut
   Decrease pressure: Loosen the body of the valve, then tighten the jam nut

   The output pressured is designed to run NO HIGHER than 500 PSI. Setting the pressure higher than 500 PSI could cause overloads or damage to the system.

CHANGING THE FILTER

The following routine maintenance should be performed every six weeks (depending on application) to prolong the life of this system and ensure proper operation.

1. **Turn off the system.**

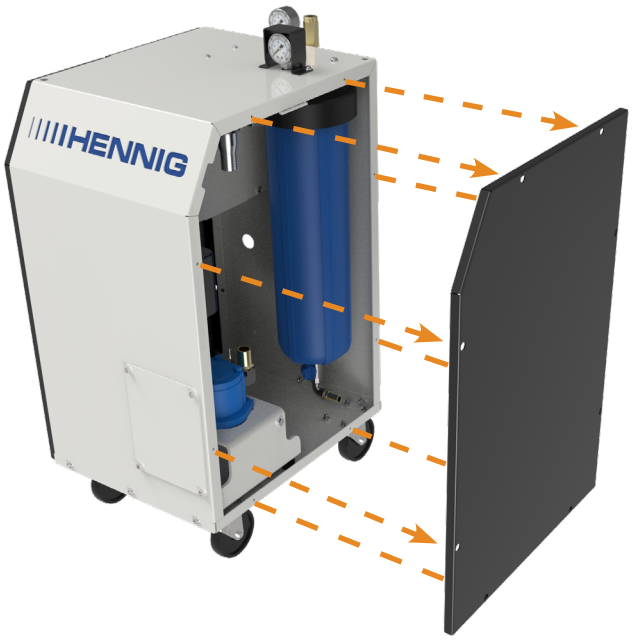
   Turn off the system using the main on/off switch located on the left side of the unit.

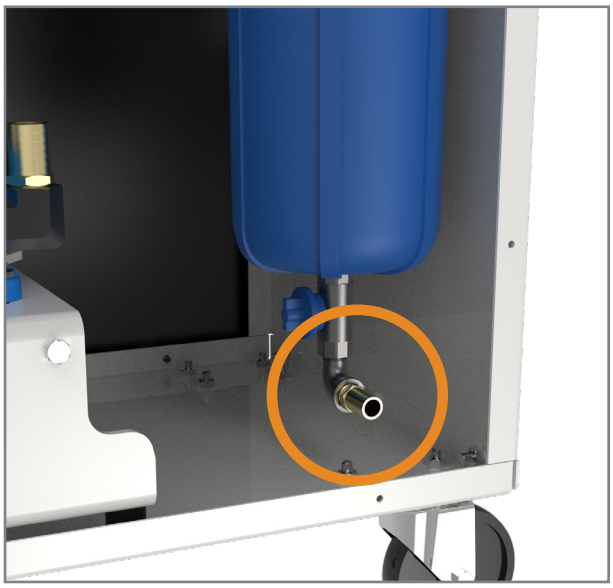
2. **Remove side cover.**

   To access the filter, remove the right-side cover by removing the 8 allen bolts.

3. **Drain coolant.**

   Place a container under the filter's drain valve. Drain coolant by opening the valve at the bottom of the filter housing.





CHANGING THE FILTER

4. Remove filter.

Use the supplied filter wrench to unscrew the filter housing.

Pull filter housing from enclosure, then remove filter bag.

5. Inspect filter/parts for wear or damage.

Inspect the o-rings and bag mesh basket. Replace if damaged or deformed.

6. Install new filter.

Simply lower the new filter into the filter bag mesh basket and set the o-ring into place.

Must use Hennig supplied 5 or 10 micron filter only!

7. Reinstall the filter housing.

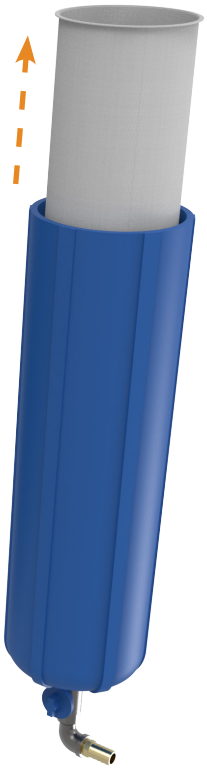
Screw the filter housing back onto the lid in the EcoFlow system.

Be sure that the o-ring does not get caught in the threads.

8. Run coolant.

To ensure the system is primed, run coolant for 2 seconds a couple of times before resuming operation.

Be sure that the drain valve is closed before running coolant.



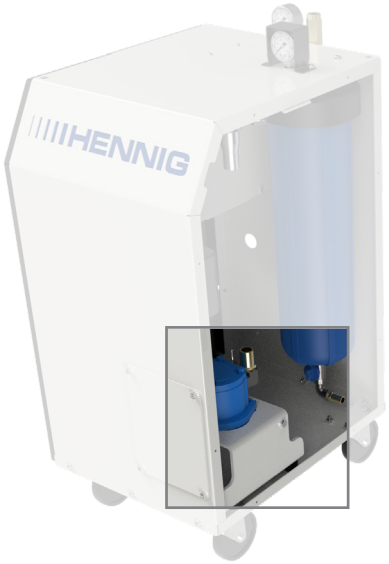
SETTING BELT TENSION

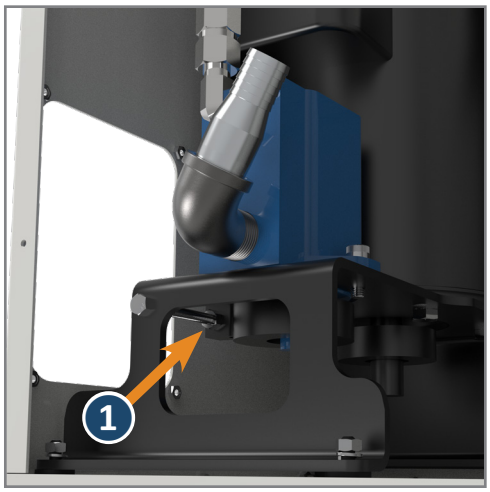
Belt tension set from factory. Adjustment only needed if slipping or replacing damaged component.

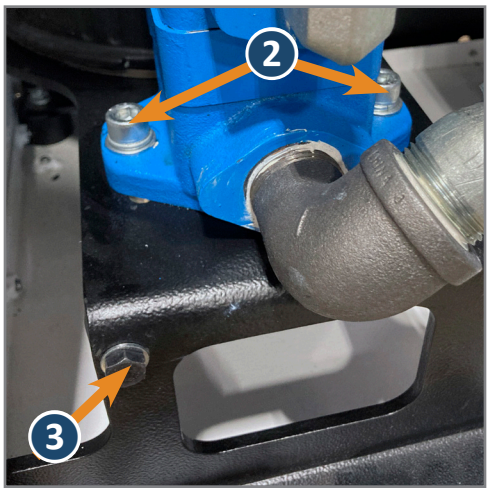
1. Turn the EcoFlow off using the main on/off switch located on the left side.
2. Open the right-side access cover.
3. Inspect the belt tension using a belt tension gauge. If belt is too tight or too loose, continue with steps below.

Belt Type	Minimum tension	Maximum tension
	at 1/8" deflection	
New belt	5 LBF	5.5 LBF
Used belt	3.6 LBF	4.1 LBF

4. Slightly loosen the adjuster bolt locking nut (1).
5. Slightly loosen the mounting bolts (2).
6. Adjust tension by turning the adjustment bolt (3):
   Increase tension: Turn the adjustment clockwise
   Decrease tension: Turn the adjustment bolt counter-clockwise
7. Tighten bolts and adjuster locking nut. Verify correct tension.







SPARE PARTS

Part #	Description
881414	5HP motor
881429	High-pressure Pump
885530	Filter Housing
885551	5 Micron Filter Bag
885529	10 Micron Filter Bag
885553	Filter Basket
885554	Filter O-ring
8571980	500 Psi Gauge
885555	Filter pressure gauge

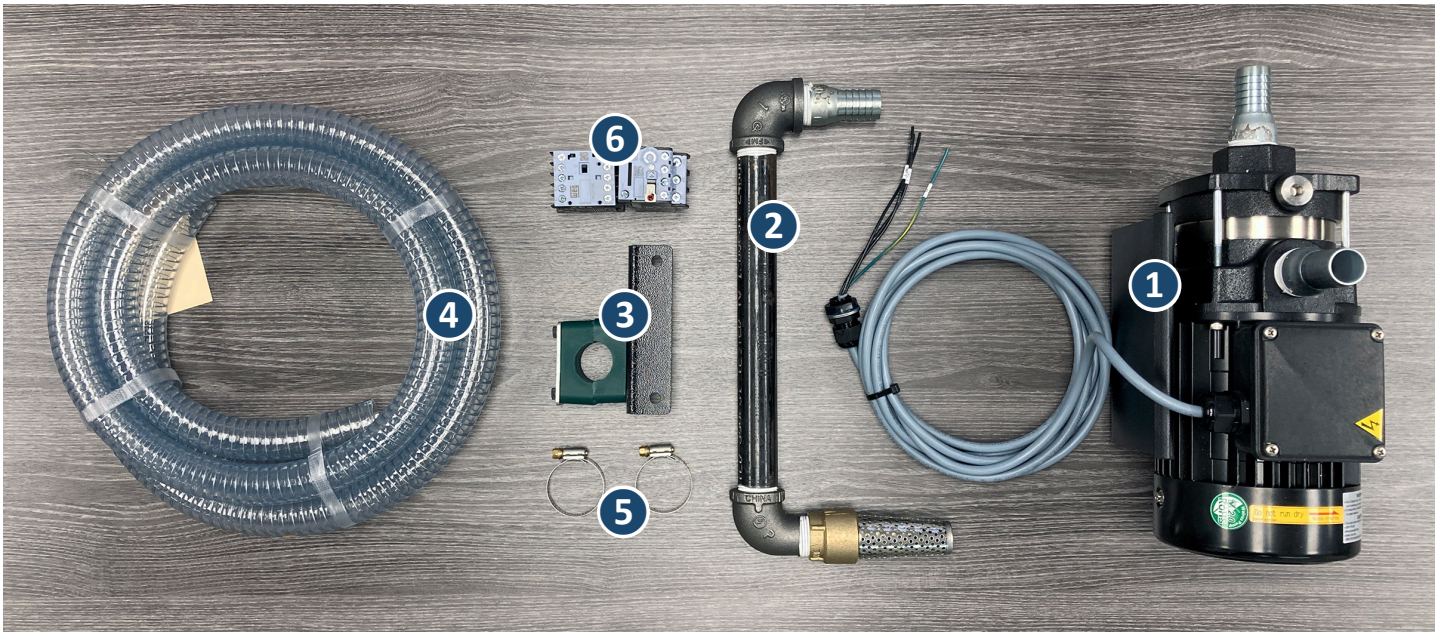
FEED PUMP KIT (OPTIONAL)

If you want to keep your existing flood coolant system intact, we offer a feed pump kit so you can add high pressure without making changes to your existing flood coolant system.

Unit Specifications	
Voltage	230V (460V optional)

Included with kit:

1. Pre-wired Feed pump with hang bracket
2. Pump pickup pipe
3. Pickup pipe mount
4. 1" hose
5. Hose clamps
6. Electrical contactor



FEED PUMP KIT INSTALLATION

Installation

1. **Install pickup pipe**
   Install the supplied pickup pipe onto the relief mount bracket (page 4)

2. **Mount the pump**
   Using the supplied hang bracket, find a suitable place to mount the pump.
   We recommend mounting on the lip of the tank, but the pump can be mounted/bolted anywhere that works with your application.

3. **Install feed hose**
   Install feed hose on the pickup pipe. Cut hose to appropriate length if needed. Fill hose with coolant and install on the feed side of the pump. Tighten clamps to secure hose.

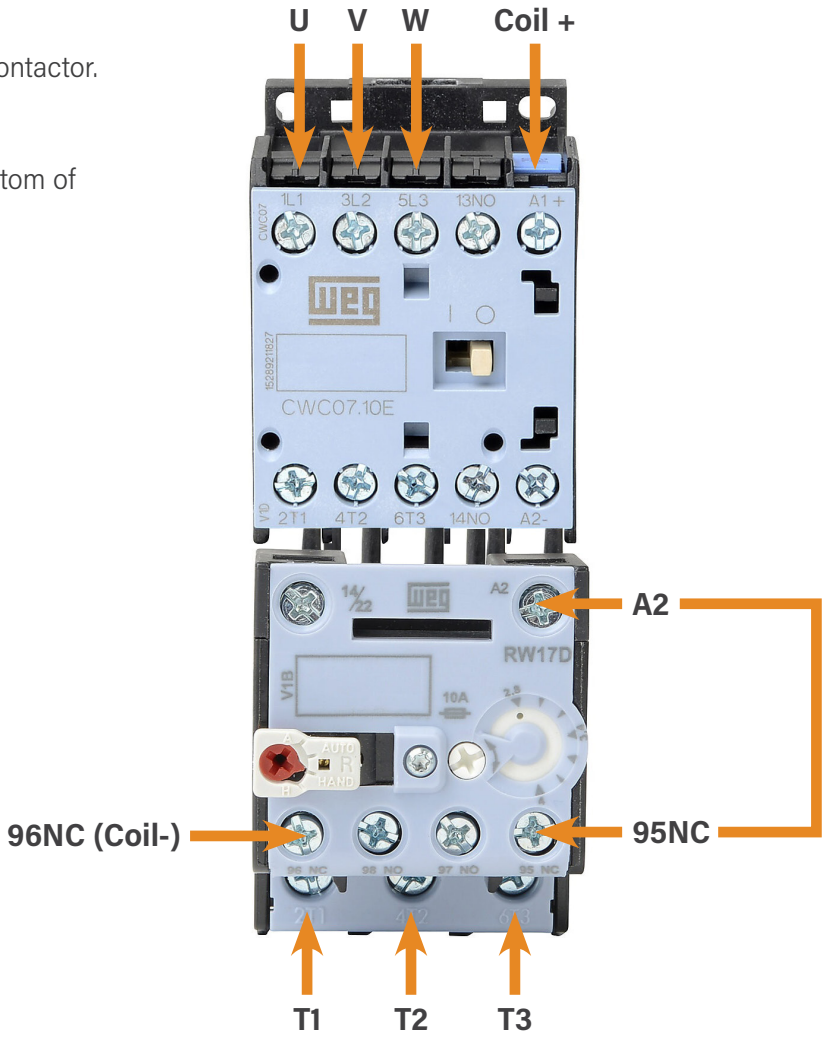
4. **Install feed hose**
   Install feed hose from EcoFlow on pump outlet.

5. **Feed power cord into electrical cabinet**
   Find a suitable place in the electrical cabinet for the contactor and feed the power cord from the pump into the electrical cabinet.

6. **Connect wires/power**
   Feed wires U, V, W (230V) to the top of the contactor.

7. **Connect pump power**
   Connect wires from pump power cord to bottom of contactor (T1, T2, T3).

8. **Wire M-code**
   Wire the run signal to the contactor
   Contactor included will have 24VDC coil.



TROUBLESHOOTING

Symptom	Issue	Solution
EcoFlow does not turn on when supply coolant pump is on	▪ EcoFlow disconnect switch is off ▪ Filter is clogged ▪ Overload is tripped	▪ Turn on EcoFlow disconnect switch ▪ Install new filter ▪ Reset overload by pressing reset button
EcoFlow creates too much pressure >500 PSI	The pressure relief valve is adjusted wrong	Using a tool with a small orifice size, turn the EcoFlow on and adjust to factory setting of 500 psi or less
EcoFlow doesn't create enough pressure	▪ The orifice size in the tool is too big to create the desired pressure ▪ The pressure relief valve is adjusted wrong ▪ System electrical phasing wrong	▪ Use a tool with a smaller orifice size ▪ Using a tool with a small orifice size, turn the EcoFlow on and adjust to factory setting of 500 psi or to your desired setting ▪ Check motor fan direction. Reverse phasing (page 6)
EcoFlow comes on for a few seconds and then shuts off	Filters are clogged	Refer to the routine maintenance section for replacement (page 8).
Overload continuously trips	The Pressure Relief Valve is not set correctly. The system must be set NO HIGHER than 500 PSI	Refer to the Pressure Adjustment portion of this manual (page 7).

NOTES

HENNIG®

PROTECT YOUR SUCCESS

WE'VE GOT YOUR BACK

Hennig Worldwide has been a global leader since 1950, specializing in chip and coolant management, machine protection, and facility safety. We work with a wide variety of manufacturers and other facilities worldwide, helping them create and maintain safe and efficient workplaces. Our commitment to excellence extends beyond our services—we actively contribute to local communities, create regional jobs, and support the global needs of machine tool customers.

ISO 9001 : 2015
REGISTERED

9900 North Alpine Road
Machesney Park, IL 61115
815.636.9900

hennigworldwide.com

EcoFlow_manual_0925