



# OPERATION MANUAL

## Magnetic Coolant Filter

**MAG-MATE™ GROUP Toll Free: 888.582.0822**

Operational Manual for model numbers:

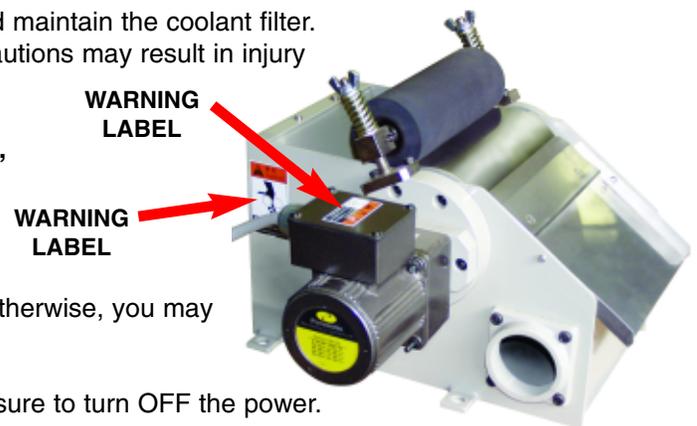
CFW11-240	CFW11-480
CFW16-240	CFW16-480
CFW21-240	CFW21-480
CFW32-240	CFW32-480

Please keep this manual in a safe place where you can refer to it whenever necessary. Before using your new Coolant Filter, please read this manual thoroughly.

### Safety Precautions

This operational manual explains how to install, operate and maintain the coolant filter. Failure to follow all operational instructions and safety precautions may result in injury to the user and/or damage to this equipment.

**There are warning labels located on the product, please read them before proceeding.**



**⚠ WARNING** - Never attempt to touch the squeegee roller or magnet drum while the Coolant Filter is running. Otherwise, you may get your hand caught, resulting in serious injury.

**⚠ WARNING** - Before performing any maintenance, be sure to turn OFF the power.

**⚠ WARNING** - If the ground wire is not connected, serious injury may occur due to electric shock.

**⚠ CAUTION** - Do not approach the Coolant Filter while carrying tools or iron pieces. The magnetic field may attract tools or iron pieces causing injury or damage to the unit.

### Specifications

The Coolant Filter removes fine iron particles from used liquid coolants by utilizing the attraction force of a permanent magnet. Captured particles pass under a squeegee to force excess coolant free to return to use in the machining operation. To ensure proper use and long life of this filter, please adhere to the following operational specifications.

- 1) Flow rate of coolant: Adjust the flow rate of the pumps of the machine tool to a suitable amount that will not exceed the capacity of the Coolant Filter. Exceeding the capacity will result in coolant spillage and loss of cleaning capacity of the unit.
- 2) Processing liquid: Viscosity and pH levels of coolant are very important to the operation of this unit. Use water-soluble grinding fluid with a pH6 to pH10 or cutting oil with a viscosity of  $\leq 20$  cSt.
- 3) Ambient temperature: 12 degrees to 104 degrees F (-10 to + 40 C)
- 4) Electrical connection: Units are supplied with AC 240V input 3-phase or AC 480V input 3-phase. A 10-foot AC cord is included.

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**AUTOMATION 888-582-0823**

**MAG-MATE™ 888-582-0822**

**TRAMP METAL 888-582-0821**

## Installation

Always use caution when installing a Coolant Filters because of the strong magnetic field and electrical connection. Please read all Safety Precautions prior to installation.

1) Mounting: Using the mounting holes provide on the mounting tabs, install the Coolant Filter directly on the coolant tank or on the floor but height adjustment screws should be used to level the unit.

2) Piping: Connect the correct diameter pipe to the coolant inlet opening. This unit is equipped with three coolant outlets (left, right and bottom). Two outlets have a cover over them and one has a threaded outlet flange. Choose the outlet direction most desirable to your equipment and mount the flanged outlet in that location. Be sure to cover outlets not being used. Coolant from machine tools should flow into unit without pressure.

3) Wiring: The terminal box can be located in different directions to facilitate easier wiring. Open the lid of the motor terminal box and make motor wiring connections as stated on the lid or in this diagram.



Rotating direction is shown from the motor side.

**⚠ WARNING** - If the ground wire is not connected, serious injury may occur due to electric shock.

4) Drum rotation: Looking from the side of the motor, the drum rotating around the magnet should be rotating in the direction of the discharge chute. If the rotation of the drum is away from the discharge chute exchange any two out of the three wires.

5) Squeegee roller: Adjust the roller pressure as needed to accomplish the desired results. The swarf should not be dripping with coolant, nor should globs of metal force the roller spring to accommodate globs repeatedly.

## Maintenance

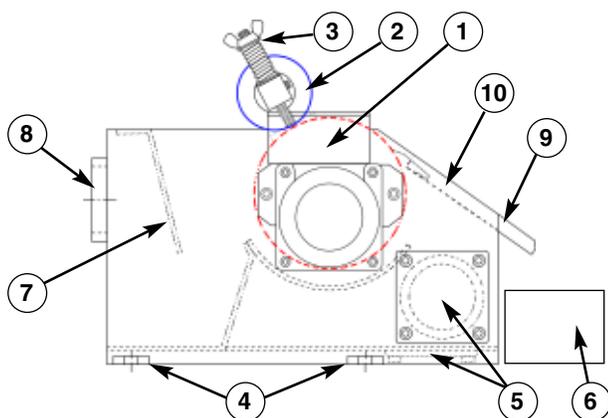
Prior to performing any maintenance on this unit, refer to the Safety Precautions section to prevent injury.

1) Daily maintenance: At the end of each shift, rake collected sludge from the scraper plate and discharge chute into the sludge box. Once a month, remove sludge adhering to various parts on the Coolant Filter.

2) Scraper plate: The scraper plate should be touching the rotating drum to prevent fine particles from getting below the scraper plate. From time to time remove scraper plate and clean off deposited particles. This will prolong the unit's life and keep particle removal at a high level.

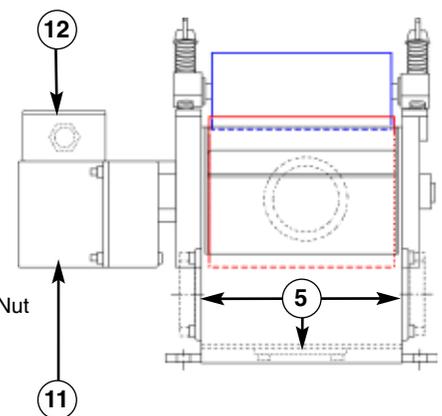
3) If the squeegee roller is letting to much coolant pass through or iron particles are clogging in front of the roller, adjust the roller pressure as needed to accomplish the desired results.

4) If fine particles are going by the scraper plate, check to see that no gaps appear between the scraper plate and the rotating drum. If the drum will not rotate, check the power cord for short circuit, loose wire contact or power interruption. Check for clogs between the squeegee roller and rotating drum, if the squeegee roller stops the magnetic drum rotation the motor may overload.



### Components List:

1. Magnet Drum
2. Wringing Roller
3. Wringing Adjustment Nut
4. Mounting Tabs with Holes
5. Coolant Outlets (3 places)
6. Sludge Box
7. Coolant Inlet
8. Inlet Straightening Plate
9. Scraper Plate
10. Scraper Plate Fixing Bolt & Nut
11. Motor
12. Motor Terminal Box



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