FIGURE 2 CIMCOOL Mix Master II Proportioner (EQ02549) Parts, Exploded View

| KEY | PART NUMBER | DESCRIPTION | | | |
|-----|-------------|------------------------------|--|--|--|
| 1 | 238100 | Strainer Washer | | | |
| 2 | 506500 | Hose swivel | | | |
| 3 | 502000 | Ball valve | | | |
| 4 | 505600 | Street Elbow | | | |
| 5 | 505900 | Nipple | | | |
| 6 | 506300 | Vacuum Breaker | | | |
| 7 | 6150-K | Mounting Bracket | | | |
| 8 | 90083030 | Bung Adapter Assy. (Plastic) | | | |
| | 90083031 | | | | |
| | 90083032 | | | | |
| 9 | 690015 | Metering Tip Kit | | | |
| 10 | 441101 | Orifice Retainer | | | |
| 11 | 441100-CM | Venturi (Eductor Body) Assy. | | | |
| 12 | 5058-4DA | Discharge Hose Assy. | | | |
| 13 | 5058-4DM | Siphon Hose/Foot Valve Assy. | | | |
| 14 | 10076305 | Foot Valve Assy. | | | |



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⁹⁶⁵⁶²¹ Rev. E 2/10

CIMCOOL® MIX MASTER PROPORTIONER II Part Number EQ02549 UPC 66250502549



WARNING:

Do not use the proportioner where water pressure exceeds 90 psig (620 KPa). Do not use the proportioner with a water supply temperature above 170°F (77°C). Use caution when handling chemicals; wear protective eyewear and gloves to prevent contact with the chemicals. Failure to follow these instructions may result in personal injury.

For more specific information on the safety of the various CIMCOOL metalworking fluids, obtain the Product Information Folder(s) and follow the recommendations provided.

The CIMCOOL Mix Master II is a simple, economical, and accurate method to mix CIMCOOL metalworking fluid concentrate with water. The most important requirement in the use of metalworking fluids is maintaining the proper mix ratio. The Mix Master II siphons concentrate from a 55 gallon (208 L) drum and mixes it with water to supply approximately 3 to 4* gallons per minute of premixed fluid for an individual machine tool reservoir, central system, or premix tank. This is accomplished by a siphoning venturi operating on water pressure.

The two main requirements for



OPERATING INSTRUCTIONS/INSTALLATION GUIDE

DESCRIPTION

successful operation of the equipment are a minimum water pressure of 15 psig (101 KPa) (flow pressure) and selection of the proper metering tip.

The unit features a vacuum breaker to prevent backflow of fluid concentrate to the tap water line (in compliance with OSHA regulation 29 CFR section 1910.141 (b)(2)(iii)).

The unit also features a foot valve/ strainer to prevent backflow of concentrate into the drum.

* 3.7 gpm at 40 psig flow pressure (14 LPM at 275 KPa)

INSTALLATION

MOUNTING

The CIMCOOL Mix Master II is designed to be installed in the bung opening (either two inch (5.0 cm) or ³/₄ inch (1.9 cm)) of a 55 gallon (208 L) fluid concentrate drum. Alternately, the proportioner can be mounted on a wall.

The CIMCOOL Mix Master II has a bung swivel connector that makes it unnecessary to remove the tap water supply hose when changing from an empty to a full drum.

Two ¼ inch (.6 cm) holes are provided on the proportioner retaining bracket for wall mounting. The 2 inch (5.0 cm)

bung connector must be removed to mount the proportioner to the wall.

For proportioner installation:

- 1. Remove either the two inch (5.0 cm) or ³/₄ inch (1.9 cm) bung from the upright drum.
- 2. Insert the foot valve/siphon hose into the bung opening.
- 3. When mounting on a drum, tighten the bung swivel connector (turn clockwise to the drum).
- 4. Install a water line (1/2 inch (1.3 cm) I.D.) to the proportioner. The proportioner has a ³/₄ inch (1.9 cm) female garden hose fitting water supply connection.
- 5. Select and insert the proper metering tip to use with the proportioner. Thread the metering tip into the orifice retainer by hand. Do not over-tighten.

MAINTENANCE

The CIMCOOL Mix Master II Proportioner features simple operation and low maintenance. With few moving parts there is little to wear out. However, it is recommended that the venturi assembly and metering tip area are inspected periodically to insure that no

residue is forming on the unit. If a residue or scale is forming (most likely due to hard water reacting with the product), cleaning with warm water and a cleaning fluid designed to remove scale is recommended. As the tubing shows signs of deterioration, replacement is recommended.

| TROUBLESHOOTING | | | | | | | | | | |
|---|--------------------------|------------------------------|---------------------------|------------------------------------|-------------------------|---|--|--|--|----------------------|
| PROBLEM | Check water pressure (1) | Check metering tip (Table 1) | Check foot valve/strainer | Check discharge hose/flooding ring | Check fluid temperature | Check venturi/metering tip for residue or scale | Inspect/tighten water hose fitting and on/off ball valve | Clean/replace gasket on vacuum breaker | Clean with warm cleaning fluid (consider use of deionized water) | Clean inlet strainer |
| 1. Unable to obtain proper mix ratio | х | х | х | х | х | х | | | | |
| 2. Mix ratio varies | Х | | | | Х | | | | | |
| 3. Proportioner leaks | | | | | | | Х | Х | | |
| 4. Water enters concentrate drum | | | Х | | | | Х | Х | | |
| 5. Scale forms on venturi or metering tip | | | | | | | | | Х | |
| 6. Unable to obtain water flow | | | | | | | | | | Х |
| | | | | | | | | | | |

(1) Install pressure regulator to minimize changes in tap pressure. Minimum flow pressure to be 15 psig (101 KPa).

MIX RATIOS

The CIMCOOL Mix Master II is a venturi type proportioner which depends on water prsesure and a metering tip to obtain a particular mix ratio. One set of color-coded plastic metering tips is enclosed with each unit. Please refer to Table 1 for Tip Identification Chart.

Contact CIMCOOL Technical Service (513-458-8199) for selecting the proper metering tip to obtain the recommended metalworking fluid concentration. The mix ratios were obtained at a flow pressure of 40 psig (275 KPa). Checking the actual mix ratio or concentration obtained at startup with a refractometer or titration kit is recommended.

Variation in fluid temperatures and water pressures will have a slight affect on the mix ratio. These variations can be minimized by

- 1. Installing a pressure regulator on the water line (remembering that the minimum water pressure is 15 psig (101 KPa) to operate the proportioner).
- 2. Using the fluid concentrate at room temperature.

Please be aware that changing the discharge hose length will affect the mix ratio. The discharge hose must have an open or gravity discharge and the flooding ring must be installed in the discharge hose for proper operation of the proportioner.

TABLE 1: TIP IDENTIFICATION CHART

| COLOR | ORIFICE DIAMETER | DRILL SIZE | | | |
|-------------------|-------------------------|------------|--|--|--|
| Gray | .128 | 30 | | | |
| Black | .098 | 40 | | | |
| Light Brown/Beige | .070 | 50 | | | |
| Red | .052 | 55 | | | |
| White | .043 | 57 | | | |
| Blue | .040 | 60 | | | |
| Medium Brown/Tan | .035 | 65 | | | |
| Green | .028 | 70 | | | |
| Orange | .025 | 72 | | | |
| Dark Brown | .023 | 74 | | | |
| Yellow | .020 | 76 | | | |
| Purple | .014 | 79 | | | |
| Pink | .010 | 87 | | | |
| Clear | Your Choice | (No Hole) | | | |

SALES

The CIMCOOL Mix Master II Proportioner item number is EQ02549. Use this part number when placing an order with your Milacron Industrial Distributor.

SERVICE

For additional information contact: your Milacron Industrial Distributor or Milacron Customer Service: 888-246-2665

SPARE PARTS

Spare parts are available from your Milacron Industrial Distributor. (See Figure 2).