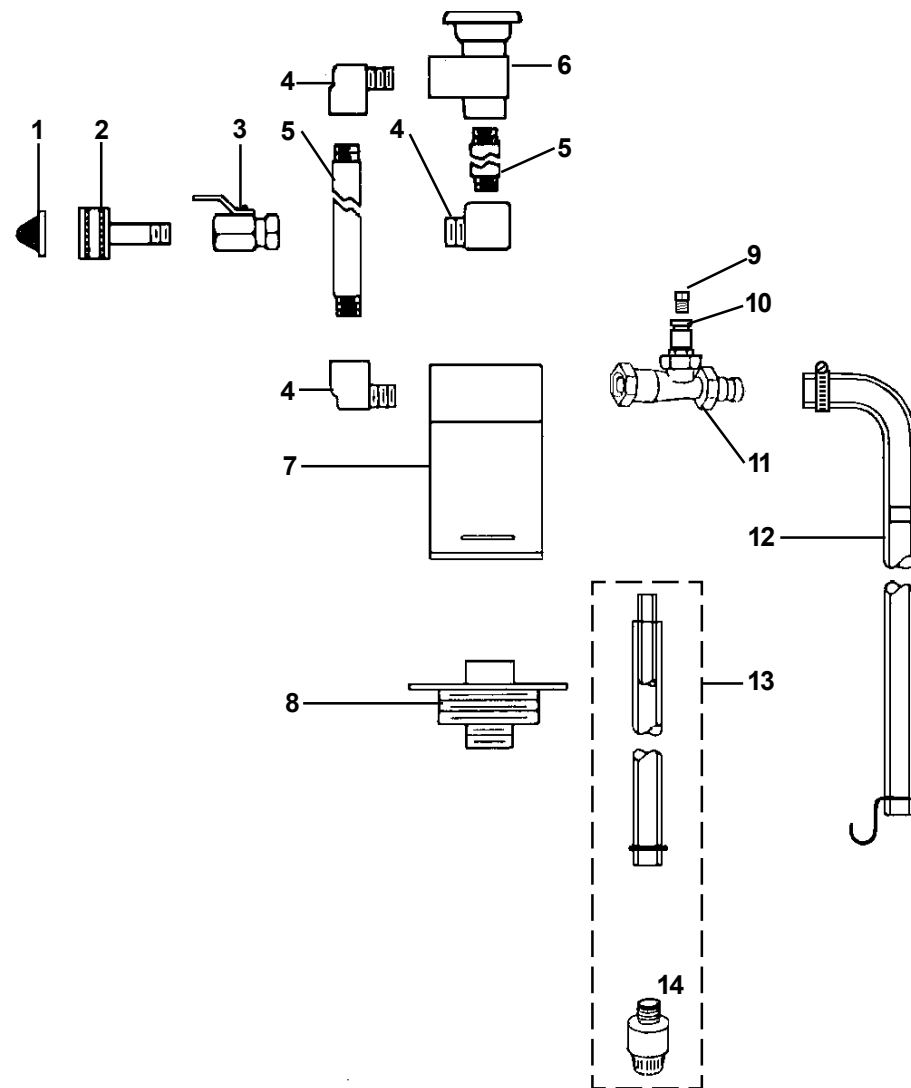


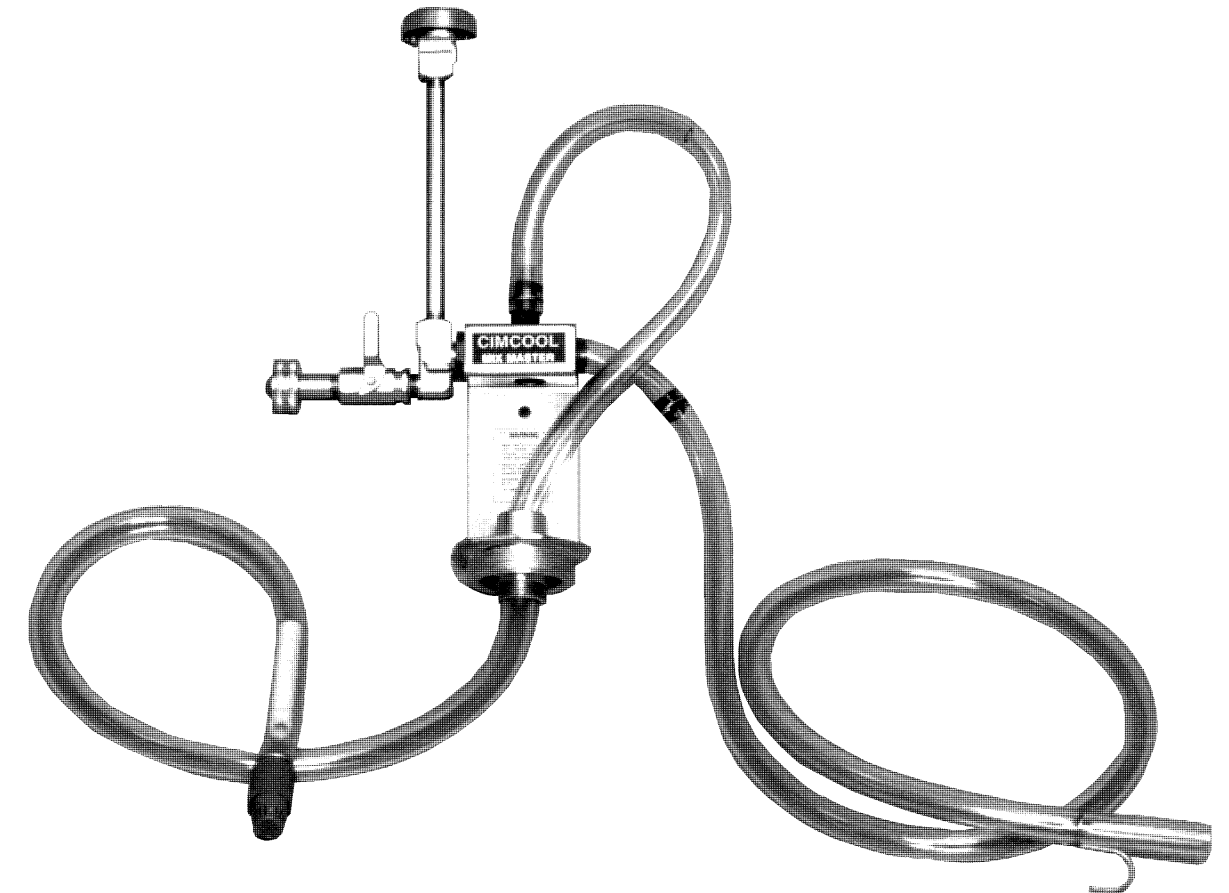
**FIGURE 2**  
**CIMCOOL Mix Master II Proportioner (EQ02549) Parts, Exploded View**

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 90083031 90083032	Bung Adapter Assy. (Plastic)
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.



# 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.

## OPERATING INSTRUCTIONS/INSTALLATION GUIDE

### DESCRIPTION

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

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 ¾ 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 ¾ 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 (½ inch (1.3 cm) I.D.) to the proportioner. The proportioner has a ¾ 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.

### MIX RATIOS

The CIMCOOL Mix Master II is a venturi type proportioner which depends on water pressure 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)

## 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	CORRECTIVE ACTION									
	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	X	X	X	X	X	X				
2. Mix ratio varies	X				X					
3. Proportioner leaks							X	X		
4. Water enters concentrate drum			X				X	X		
5. Scale forms on venturi or metering tip									X	
6. Unable to obtain water flow										X

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

## 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).