

FLUID CONCENTRATION-CONTROL

UNIMIX™ AND
MASTER MIX™
FLUID MIXERS



FLUID RECYCLING EQUIPMENT

Master Chemical, the pioneers of coolant technology, offer a complete line of XYBEX® concentrate mixers to meet the needs of all metalworking shops.

Maintaining tight fluid concentration control ensures that fluid never becomes too lean or too rich. (A lean concentration often leads to rust, bacterial infestation, and poor tool life; a too rich concentration often causes eye, nose, and skin irritation for the operator and simply is a waste of product.) XYBEX mechanical mixers ensure consistent concentration under all types of conditions.

UNIMIX™

UNIMIX pumps provide accurate, automatic metering and mixing. The water-driven, positive-displacement proportioners dispense coolant or cleaner fluids on demand at the desired concentration, despite varying water pressures or fluid levels in supply containers.

UNIMIX achieves a mixing accuracy not possible with Venturi-style mixers.

Average flow rate through is 5 GPM with mixing ranges available from 1%–19%.

UNIMIX dispenses coolant on demand at the desired concentration.



How positive-displacement works

Water, under pressure, drives the reciprocating piston in the water metering cylinder. This piston then drives the piston in the concentrate-metering cylinder to draw and meter concentrate from the drum and inject it into the metered water from the water cylinder.

FEATURES

- > for a wide range of concentrate viscosities
- > unaffected by water pressure changes
- > unaffected by level of concentrate in drums and totes
- > feeds mixture through plant piping without an additional pump

BENEFITS

- > extremely accurate; reduces concentrate waste
- > easy to install
- > reliable and consistent
- > nonelectrical
- > adjustable

OPTIONS

Special units are available for: high-alkalinity parts washing fluids; mixing down to .5%; and for hard-to-mix materials, such as concrete.

12 and 25 GPM units also available.

*** NOTE:** For best results, most soluble oil coolants require mixing with water warmer than 65°F (18°C).

**** Required installation dimensions**

***** The list dilution capabilities presume chemicals with the approximate viscosity of water. A substantial increase in viscosity and correspondingly increased friction loss limits the proportioning abilities of a given model.**

SPECIFICATIONS AND UTILITIES

Water temperature: 40°F–140°F*
(4°C–60°C)

Water filtration requirement: 10-microns

Water pressure:

30 psi (2 bar) min./60 psi (4 bar) max.

Fluid flow rate:

2.0 GPM (7.6 LPM) @ min. pressure

7.0 GPM (26 LPM) @ max. pressure

5.0 GPM (19 LPM) noted average flow

pH limit: 10 for standard models

UNIMIX EM (8 oz.)

Dimension: 15 1/4" l x 5 3/4" w x 7" h**
(387mm x 146mm x 178mm)

Mixture range: 1%–4%***

UNIMIX SS (16 oz.)

Dimension: 16" l x 5 3/4" w x 7" h**
(406mm x 146mm x 178mm)

Mixture range: 1%–8%***

UNIMIX XL (32 oz.)

Dimension: 17 1/2" l x 5 3/4" w x 7" h**
(445mm x 146mm x 178mm)

Mixture range: 2%–15%***

UNIMIX XX (47 oz.)

Dimension: 19 1/2" l x 5 3/4" w x 7" h
(495mm x 146mm x 178mm)

Mixture range: 4%–19%***

DUAL UNIMIX

Dimension: 16" l x 6.5" wide x 7" h
(406mm x 165mm x 178mm)

Mixture range Unit A: 1%–6%***

Mixture range Unit B: 2%–5%***

UNIMIX EMC (for cleaners)

Dimension: 15 1/4" l x 5 3/4" w x 7" h**
(387mm x 146mm x 178mm)

Mixture range: 1%–6%***

pH: up to 12

UNIMIX PH (for cleaners)

Dimension: 15 1/4" l x 5 3/4" w x 7" h**
(387mm x 146mm x 178mm)

Mixture range: 1%–6%***

pH: 13+



MASTER MIX SIMPLE-TO-OPERATE PROPORTIONERS

MASTER MIX™

Master Mix is a compact, easy-to-use Venturi-type mixer that combines water with coolant concentrates. Water jetting through the unit creates a vacuum that siphons concentrate from the drum. A needle valve allows minute adjustments across the mixture range.

The Master Mix is a simple, inexpensive mixer effective for many applications, but factors such as water pressure, flow rate, varying liquid levels, material viscosity, and related room temperature can effect the accuracy of the venturi-style unit.

Available in 3 and 10 GPM versions, with mixing ranges adjustable from 2%–25%.

The Venturi principle

Venturi effect is the reduction in fluid pressure that results when a fluid flows through a constricted section of pipe. It is a jet effect; as with an air funnel (or a thumb on a garden hose) the velocity of the fluid increases as the cross-sectional area decreases, with static pressure correspondingly decreasing.

Master Mix is an economical, easy-to-use venturi mixer.



FEATURES

- > all metal construction
- > 2" NPT sliding-bung drum adapter
- > discharge hose assembly
- > inlet shut-off valve with garden-hose thread adapter
- > lockable adjusting dial

BENEFITS

- > reduces concentrate waste
- > easy to use and install
- > nonelectrical, no moving parts
- > adjustable

OPTIONS

A special order stainless steel version is available for mixing with deionized water and for cleaner concentrates not compatible with yellow metals.

Optional antitampering lockout assembly available.

SPECIFICATIONS AND UTILITIES

Mixture range: 2%–25%***
 Water pressure: 25 psi (1.7 bar) min.
 Static pressure: 31 psi (2.2 bar)
 Discharge hose: 4 ft. (1.2 m) max.
 Viscosity: 550 SSU @ 100°F max.
 (120 cSt @ 40°C)

Master Mix 3 GPM

3 GPM (11 LPM)
 3/8" NPT inlet
 1/2" NPT outlet
 1/2" ID (13 mm) hose

Master Mix 10 GPM

10 GPM (38 LPM)
 1/2" NPT inlet
 1/2" NPT outlet
 3/4" ID (19 mm) hose

SKRAMBLER2™

Skrambler2 is an easy to install and use dual-ratio, dual product mixer for dispensing Master STAGES™ cleaners.

The unit's 3.5 GPM patented air gap proportioners dispense the same product at differing ratios or two different products at the same or differing ratios.

FEATURES

- > rugged, industrial grade construction
- > stainless steel cabinet protects nozzles and connections
- > chemical resistant components
- > meets ANSI A112.1.2 Standard for back-flow prevention
- > assorted insert tips for mix ratios of .5%–22%
- > hoses and mounting hooks included

SPECIFICATIONS AND UTILITIES

3.5 GPM
 Water pressure: 25 psi (1.7 bar) min.
 85 psi (5.9 bar) max.
 Mounting: air gap eductors must be mounted above highest level of product being dispensed

Skrambler2 allows precise and efficient mixing of cleaning fluids.



Committed Today for a Greener Tomorrow

Our corporation is committed to sustaining our natural resources, protecting our environment, and leaving a smaller footprint on the places we all call home. As a manufacturer of fluids and fluid recycling equipment, we are committed to promoting conservation in manufacturing and helping customers maximize productivity while minimizing waste. Just visit masterchemical.com and click on "Green Policy" to learn more about our commitment to environmental stewardship.



Cutting and Grinding Fluids that Lead the Industry

Master Chemical has been recognized for more than 60 years for its TRIM® family of metalworking fluids for all types of cutting and grinding operations. Known worldwide for superior performance, TRIM meets the demands of specialized industries such as automotive, aerospace, and medical parts manufacturers. For the full range of cutting and grinding applications for synthetics, semisynthetics, and soluble oils, TRIM products deliver longer tool and sump life, better finished parts, and a better bottom line.



CUTTING & GRINDING FLUIDS



CLEAN • COAT • PROTECT

Master STAGES: Products to Clean, Coat, and Protect

Master STAGES™ surface treatments include cleaners and corrosion inhibitors to keep you environmentally compliant, up and running at peak performance, and more profitable.

Have health and safety issues? High disposal costs? Need to prevent rust or clean lubricant from parts? Whatever your production problems and concerns, we have a performance-proven product sure to make the difference. The Master STAGES difference—the right solution for the job at the right price.

For prices or additional information on special units or special applications, contact your Master Chemical Corporation Distributor:



FLUID RECYCLING EQUIPMENT

Master Chemical Corporation

501 West Boundary
Perrysburg, OH 43551-1200 USA
Tel: 419-874-7902

www.xybex.com

TECH SERVICE HOT LINE: 1-800-537-3365