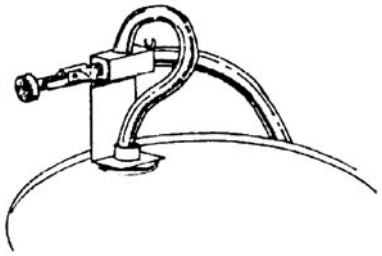
Zebra® Economy Mixer Manual

Package Contains:

1. **Drum proportioner**
2. **Suction tube (4 ft.) with foot valve**
3. **Discharge tube (4 ft.) max length for delivery**
4. **Metering tip kit (14 tips)**
5. **Product information sheet**



THANK YOU FOR YOUR SUPPORT OF OUR PRODUCTS

Please use this equipment carefully and observe all warnings and cautions.

NOTE

WEAR	protective clothing and eyewear when dispensing chemicals or other materials.
ALWAYS	observe safety and handling instructions of the chemical manufacturers.
ALWAYS	direct discharge away from you or other persons or into approved containers.
ALWAYS	dispense cleaners and chemicals in accordance with manufacturer's instructions. Exercise **CAUTION** when maintaining your equipment.
CLEAN	equipment after each use in accordance with instruction sheet.
WEAR	protective clothing and eyewear when working in the vicinity of all chemicals, filling or emptying equipment or changing metering tips.
ALWAYS	re-assemble equipment according to instruction procedures. Be sure all components are firmly screwed or latched into position.
ATTACH	only to tap water outlets (75 PSI maximum).

Installation and Operation:

1. Select a metering tip (see next section), and insert it into the suction stub. Slide the open end of the suction tube through the bung adaptor, then over the suction stub.
2. Slide end of discharge tube over the eductor discharge outlet.
3. Remove either the 3/4 or 2-inch bung from an upright drum.
4. Insert the foot valve end of the suction tube into the drum.
5. Swivel the drum adapter several turns in the bung opening until the bracket is secure.
6. Install minimum 1/2-inch ID water hose between the inlet swivel and water supply spigot. (Minimum 25 PSI flowing water pressure is required to operate the unit.)
7. Turn on water supply. To begin dispensing solution, open ball valve at inlet to unit. Do not keep discharge hose in liquid! The concentrate will siphon from the container.

Metering Tip Selection:

The final concentration of the dispensed liquid is related to both the size of the metering tip opening (orifice) and the viscosity of the liquid being siphoned. If product viscosity is noticeably greater than that of water, consult the procedure for Measurement of Concentration on the next page to achieve your desired water-to-product ratio. For waterthin products, use the chart below as a guideline. Because such factors as inlet water pressure and temperature can affect dilution ratios, the figures listed below are only approximate. Test the actual dilution you are achieving using the Measurement of Concentration procedure for best results. Two undrilled, clear tips are supplied for drilling sizes not listed.

Tip Color	Drill Size	Decimal Equivellent	Approximate Dilution Ratio at 40 PSI, water-thin viscosity (1.0 cp)
No tip			4.5:1 or 22.2%
Gray	30	.1285	5:1 20.0
Black	40	.0980	6:1 16.6
Beige	50	.0700	9:1 11.1
Red	55	.0520	20:1 5.0
White	57	.0430	24:1 4.16
Blue	60	.0400	26:1 3.84
Tan	65	.0350	31:1 3.23
Green	70	.0280	50:1 2.0
Orange	72	.0250	70:1 1.43
Brown	74	.0225	90:1 1.11
Yellow	76	.0200	100:1 1.0
Purple	80	.0135	200:1 .50
Pink	87	.0100	400:1 .25

Zebra-Skimmers Corporation

PO Box 833
Chagrin Falls, OH 44022
888-249-4855
www.ZebraSkimmers.com

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Measurement of Concentration

You can determine the dispensed water-to-product ratio for any metering tip size and product viscosity. All that is required is to operate the primed dispenser for a minute or so and note two things: the amount of dispensed water/ product mixture, and the amount of concentrate used in preparation of the solution dispensed. The water-to-product ratio is then calculated as follows:

Dilution (X) = Amount of Mixed Solution - Amount of Concentrate Drawn

Dilution ratio, then, equals X parts water to one part concentrate (X:1). If the test does not yield the desired ratio, choose a different tip and repeat the test. Alternative methods to this test are 1) pH (using litmus paper), and 2) titration. Contact your concentrate supplier for further information on these alternative methods and the materials required to perform them.

Troubleshooting:

Problem	Cause	Remedy
1. Unit does not draw concentrate	a. Clogged foot valve strainer	a. Clean or replace
	b. Metering tip orifice obstructed	b. Rinse orifice or replace with new tip
	c. Water pressure too low	c. Minimum 25 PSI required. Replumb line or use different source
	d. Mineral deposits in eductor	d. Descale* or replace eductor
	e. Flooding ring not in place	e. Replace discharge tube
	f. Breather hole unopened	f. Open breather hole in concentrate container
	g. Concentrate too viscous	g. Max. viscosity 500 SUS
2. Water gets into concentrate container	a. Heavy mineral deposits in eductor	a. Descale* or replace eductor
	b. Faulty or missing foot valve	b. Repair or replace foot valve
3. Unit continuously draws concentrate	a. End of discharge tube lower than eductor	a. Always hang discharge tube from unit using hook provided on end

* Mineral deposits, known as scale, may form at the discharge of the eductor, particularly in hard water areas. To remove scale, soak the eductor in a descaling or deliming solution. Alternately, the descaling solution can be siphoned into the eductor by operating the unit with the foot valve in the descaling solution. After operating the unit in this manner for a minute, put foot valve in clear water and operate for another minute to flush the unit. Return the foot valve to the concentrate for normal use.

Parts Information:

KEY	DESCRIPTION
1	Strainer washer - MIX05XSW
2	Hose swivel - MIX05XHSW
3	Ball valve - MIX05XBV
4	Nipple - MIX05XN
5	Mounting bracket - MIX05XMB
6	Bung adapter assy. - MIX05XBAA
7	Metering tip (kit) - MIX05XMTK
8	Eductor assy. (includes a & b) - MIX05XEDA
a	Eductor only
b	Suction stub
9	Suction tube assy. (includes c, d, e & f) - MIX05XSVIT
c	1/4” x 7” tubing
d	1/2” ID tubing
e	Ceramic weight
f	Foot valve, Viton*
10	Discharge tube assy. - MIX05XDTA