Zebra® Economy Mixer Manual

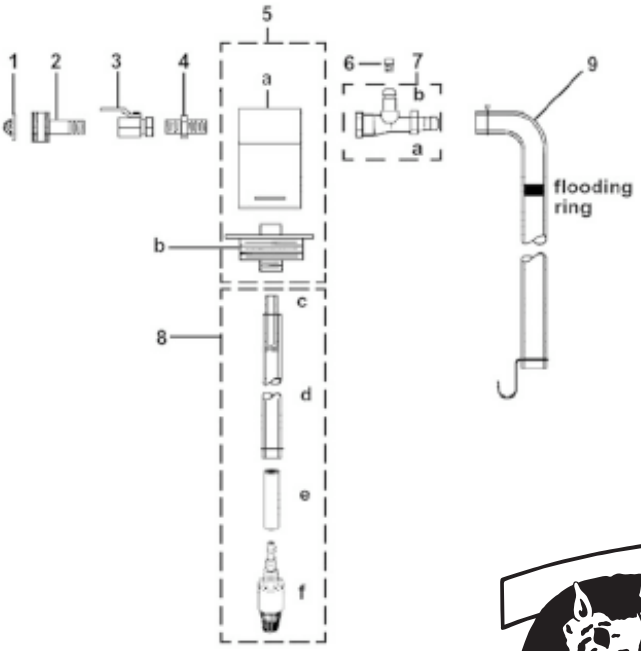
PARTS INFORMATION

Ref#	Zebra Part#	Description	Function
1	MIX05XSW	Strainer Washer	Strains pipe scale
2	MIX05XHSW	Hose Swivel	Connection to water supply
3	MIX05XBV	Ball Valve	Opens/closes off water supply
4	MIX05XN	Nipple	Connects water supply to eductor assembly
5	MIX05XMB	Mounting Bracket (5a)	Encases eductor assembly
		Bung Adaptor Assembly (5b)	Mounts unit to concentrate (drum) container
6	MIX05XMTK	Metering Tip Kit	Provides mixing ratio (see chart below)
7	MIX05XEDA	Eductor (7a)	This chamber is where vacuum is created
		Suction Stub (7b)	The metering tip is installed here
8	MIX05XSVIT	Suction Tube Assembly	
		1/4" x 7" tubing (8c)	Prevents crimping of the intake tube
		1/2" ID suction tube (8d)	Draws in concentrate
		Ceramic weight 8e)	Weights tube to suction from bottom of container
		Foot valve (8f)	Opens when water on allowing concentrate through intake tube; closes when water off to prevent concentrate from draining out suction tube
9	MIX05XDTA	Discharge Tube Assembly	Flooding ring prevents crimp in tube; hook prevents siphoning of concentrate

METERING TIP SELECTION

Concentration value of the mixed fluid is related to both the size of the metering tip orifice and the viscosity of the concentrate. The metering tips supplied are specified with use at 40 psi (a common pressure) on a water-thin (universal) viscosity concentrate. If your concentrate is more viscous than water, reference the tip that provides the nearest required concentration/ratio value, then use the next larger output size. You may also reference the Measurement of Concentration section of this manual for more information, and a tip that can be drilled to meet your specific need is also supplied.

Color	Drill Size	Dec. Equiv.	Ratio	% Value
(no tip)	-	-	4.5:1	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



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MEASUREMENT OF CONCENTRATION

You can determine the dispensed ratio for any metering tip and concentrate viscosity. Operate the mixer (after the suction tube is primed, or full) for a minute or so. Note the volume of dispensed water/concentrate mixture and the amount of concentrate used in preparation of the fluid actually dispensed. The water-to-concentrate ratio is then calculated as follows:

Dilution (X) = Amount of dispensed 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, select a different tip, accordingly, and repeat the test.

INSTALLATION & OPERATION

1. Place the metering tip that meets your desired ratio into the suction stub (7b).
2. Slide the open end of the suction tube (8) through the bung adaptor (5b), then over the suction stub.
3. Slide the end of the discharge tube (9) over the eductor stub discharge outlet. Note: For use with totes, remove the suction stub and rotate the eductor assembly.
4. Remove the 2" bung cap from the concentrate drum.
5. Unseat the breather hole cap of the drum.
6. Insert the foot valve (8f) end of the suction stub into the drum. Note: When installing a new mixing unit, it is recommended to blow air up through the foot valve first to unseat its rubber gasket, in the event it is sticking to the plastic portion of this component.
7. Screw the bung adaptor several turns until the mounting bracket (5a) is secure.
8. Install your 1/2" ID, minimum, water inlet hose into the hose swivel (2).
9. Place the discharge tube in your preferred receiving vessel.
10. Turn on your water supply, making sure the ball valve (3) is in the open position. Note: A minimum water pressure of 25 psi is required to create a vacuum for proper concentrate suction. Water pressure should be no greater than 75 psi to prevent excessive water flow, and thus little to no concentration value. Should your pressure be tested at or above 70 psi, we suggest installing a pressure limiting device to reduce the incoming pressure.
11. When finished dispensing mixed fluid, raise the discharge hose and hook it to the edge of your concentrate container to prevent concentrate siphoning.

TROUBLESHOOTING

Problem	Cause	Remedy
Low concentration value	Breather hole not open	Open breather hole.
	Clogged/stuck foot valve	Clean foot valve using air, blowing up into valve to remove debris/to unseat rubber gasket.
	Water pressure too low	Minimum 25 psi required. Should you not be able to relocate mixing unit, Zebra offers a proportioning pump which requires 10 psi minimum.
	Water pressure too high	Install pressure limiting device.
	Concentrate too viscous	Zebra offers a proportioning pump, handling to 700 SUS.
	Flooding ring not in place	Replace discharge tube.
	Mineral deposits in eductor	Descale* eductor.
	Metering tip obstructed	Clear debris from tip.
Water gets into concentrate	Mineral deposits in eductor, causing restriction	Descale* eductor.
	Faulty foot valve	Replace foot valve.
	Ball valve installed after eductor	Reinstall ball valve before eductor.
	Ball valve leaking	Teflon tape or replace ball valve.
Continuous draw of concentrate	End of discharge tube lower than eductor, causing a siphon effect	Hang discharge tube using the hook provided.

*Mineral deposits, known as scale, may form on the eductor, especially in hard water areas. Soak the eductor in a descaling, or deliming, solution until it is easily removed with a cloth.

If you have any questions or would like assistance, please contact us