

## NEW MINI-MIZER

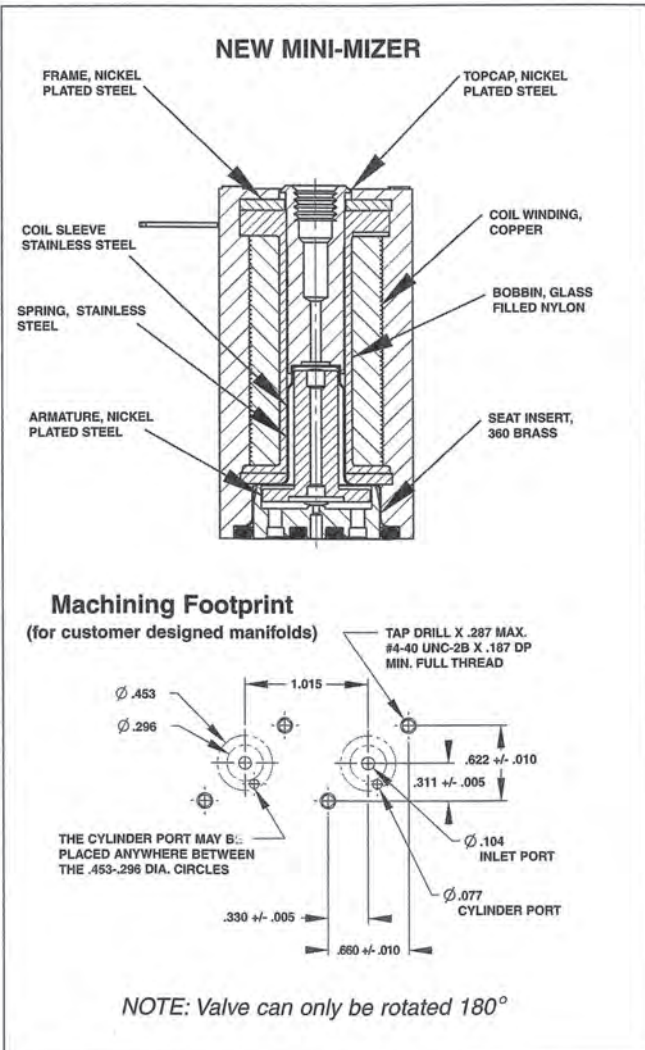
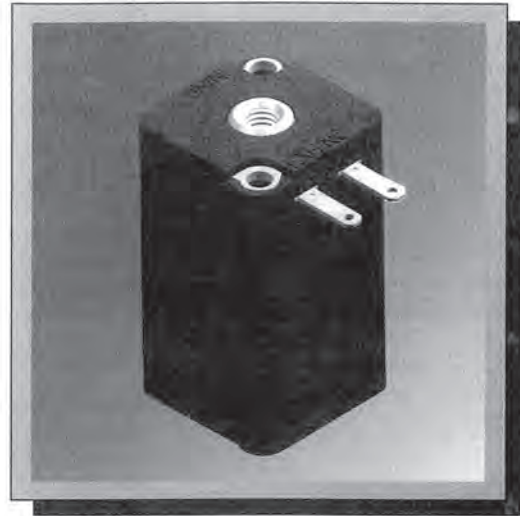
*Interchangeable with Current MINI-MIZER*

The new 2-way and 3-way MINI-MIZER valve was designed to accommodate a wide range of pneumatic applications that require high cycling, small flow, and low wattage type valving. This valve is ideal for battery operation, micro-processor controlled and printed circuit board type applications.

The new MINI-MIZER provides enhanced performance, interchangeability with the old series Mizer, a wide offering of coil voltages, and power consumption as low as .5 watt. Increased coil forces provide consistent actuation. The one piece construction and metal coil frame makes the MINI-MIZER a more sturdy and durable product.

The enhanced MINI-MIZER design is very adaptable to customer specific applications. This new robust design allows the MINI-MIZER to function in a wider temperature range (-40 to +150° F). Humphrey has the ability to provide product modifications such as different media, wattage, orifice sizes, pressures and temperatures. The captured seal construction allows for easy design of custom manifolds. Please consult the factory for custom modifications.

## NEW MINI-MIZER



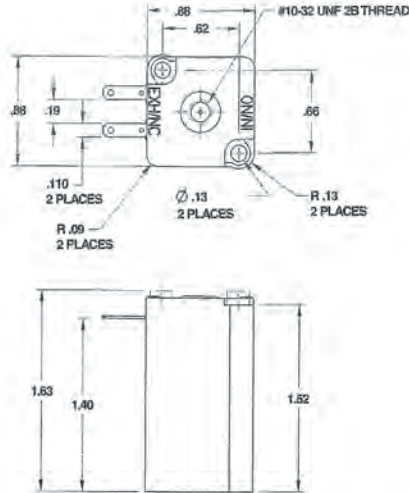
### STANDARD SPECIFICATIONS

<b>PRESSURE RANGE:</b>	0-100 psi
<b>MEDIA:</b>	Dry Air (Inert gases)
<b>LUBRICATION:</b>	Not Required
<b>FILTRATION:</b>	40 Microns minimum (Recommended)
<b>FLOW CHARACTERISTICS:</b>	@ 100psi Cv=0.01, CFM=1.3, 36.8 LPM
<b>LEAK RATE:</b>	Maximum 4cc/min. @100psi
<b>SEALS:</b>	Buna-N (NBR)
<b>TEMPERATURE RANGE:</b>	-40°F to 150°F (-40°C to 66°C) Media or Ambient
<b>POWER:</b>	DC = 0.5 watt, AC = 1.0 watt
<b>VOLTAGE TOLERANCE:</b>	+10% / -15%
<b>RESPONSE TIME:</b>	On: 5 MS Off: 6 MS
<b>OPERATING SPEED:</b>	600 CPM
<b>VOLTAGES AVAILABLE:</b>	1.5, 5, 12, 24VDC, 24, 120, 240VAC
<b>ORIFICE SIZE:</b>	N/C = IN to CYL .031 CYL to EXH .028 N/O = IN to CYL .028 CYL to EXH .031
<b>INTERNAL VOLUME:</b>	0.458 cm <sup>3</sup>
<b>WEIGHT:</b>	0.147 lb. (average)
<b>LEAD WIRE GAGE:</b>	22 AWG

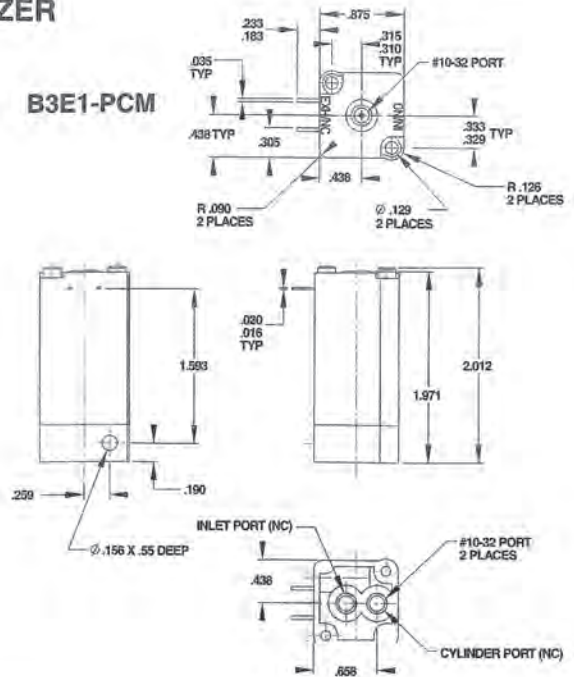
*Consult factory for special specifications.*

# NEW MINI-MIZER

## MINI-MIZER



## B3E1-PCM



## HOW TO ORDER

Model	Bottom Inlet	Two-Way	Normally Open/ Multi-Purpose	Spade Terminals	(18") Lead Wires	DIN Connector	Transient Suppression Diode (DC only)	Specify Voltage 1.5VDC, 5VDC, 12VDC, 24VDC, 24V 50/60, 120V 50/60, 240V 50/60	
Option Code	BIN	2	11		38	39	50	AC	DC
B3E1	SP	SP	N/C	STD	SP	SP	SP	SP	N/C
B3E1BOU	NA	SP	N/C	STD	SP	SP	SP	SP	N/C
B3E1PCM	SP	SP	N/C	STD	NA	NA	SP	SP	N/C
MB3E1	NA	SP	N/C	STD	SP	SP	SP	SP	N/C
MB3E1MTL	NA	SP	N/C	STD	SP	SP	SP	SP	N/C

STD=Standard N/A=Not Available SP=Specify (additional charges for this option) N/C=No Charge  
 All port connections are available in metric sizes. Specify metric port threads by using letter E as a model number prefix.  
 BOU = Threaded Bottom Outlet  
 PCM = Printed Circuit Board Mount

**ORDER EXAMPLE:** B3E1-39-12VDC  
 3-Way Option = B3E1  
 Din Connector = B3E1-39  
 Voltage 12VDC = B3E1-39-12VDC

## ACCESSORIES

Model	Description
8-5A	Mounting base, with 2 screws (Bag of 10)
PF**	Plug Fitting, #10-32 w/gasket (Bag of 10)
BF**	Barbed Fitting, #10-32 thread to 1/8" O.D. hose
BF1**	Barbed Fitting, 1/4" O.D. hose
PBF**	Barbed Fitting, 1/8" pipe (Bag of 10)
150-30A**	Muffler, #10-32 thread (Bag of 10)
HS-2	DIN Connector for use w/Code 39
HS-2LED	DIN Connector w/LED for use w/Code 39 (5VDC, 12VDC, 24VDC only)
28-650A**	Insulated receptacles (Bag of 10)
28-651A**	Suppression, Diode Terminal (Bag of 10)
47-63A**	1000V, 1 amp, Silicon Diode (Bag of 10)
35680***	Adapter Gasket (B-Series Mizer to current manifold MTL)

## MANIFOLDS

Model	Description
MTL <input type="checkbox"/>	Metal manifold. Accepts one "M" type valve per station
DMTL <input type="checkbox"/>	Metal manifold. Accepts two "M" type valves per station

Specify number of stations (1-16) to complete model number. Example: MTL-4

Specifications subject to change without notice.

**Humphrey**

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### Mini-Mizer MTL, DMTL, and MCTL Series Metal Manifolds

Manifolds permit centralized location of control valves, simplify plumbing and reduce installation and maintenance costs. Valves and manifolds can be sub-assembled and placed in the end product as complete, control units, saving the time and labor involved by installing valves individually.

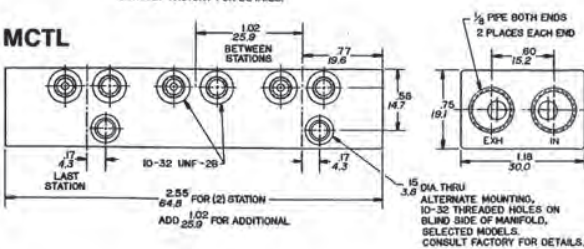
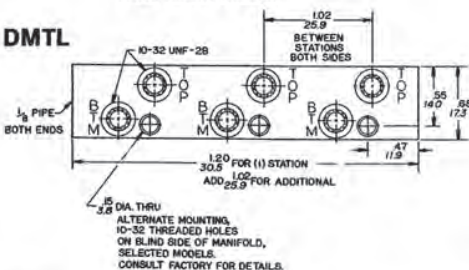
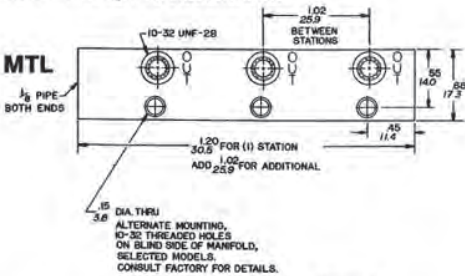
Three different series of durable aluminum manifolds are offered as alternatives to the MZ1 and DMZ1 manifold modules. The one-piece aluminum design eliminates the assembly time required for manifold modules. Valves mount to manifold easily with machine threaded mounting screws.

**MTL Series.** For use with M3E1-MTL valves. Mount one valve per manifold station. Available 1 through 16 stations. Inter-

changeable with MZ1 manifold module, except mounting holes.

**DMTL Series.** For use with M3E1-MTL valves. Mount two valves per station, one on each side of manifold. Available 1 through 16 stations; accommodates up to 32 valves. Interchangeable with DMZ1 manifold module, except mounting holes.

**MCTL Series.** For use with M3E1-MTL 3-way valves. Mount one valve per station. Available 2 through 8 stations.



### MZ1

Model MZ1 is a manifold module that accepts one Mini-Mizer valve. Individual MZ1 modules snap together and assemble into as many stations as application requires. This design permits easy installation and replacement of valves. Each common station should be connected with a #31-663A Port Connector (one supplied per MZ1), and valves should be mounted only after manifold assembly is complete.

Manifolds and valves can be sub-assembled and placed in the end-product as a unified control element, thereby saving the time and labor of installing components individually. For use with M3E1 or M4E1 valves.



### DMZ1

Model DMZ1 is similar to the Model MZ1, but accepts two M3E1 valves, one on each major surface of the module. Model DMZ1 may be used in combination with Model MZ1. For use with two M3E1s.

### 8-5A

Model 8-5A is a mounting base for the 3E1 valve. Furnished with two screws machined for metal and two plastite screws to use with the 3E1 valve.



### 8-65A

Model 8-65A is a block-off plate for use on MZ1, DMZ1, MTL, DMTL, and MCTL manifolds to suspend the use of a station. It is frequently used to provide for future addition of valves as control functions are added.



### 31-663A

Model 31-663A is a port connector for use with MZ1 and DMZ1 manifold modules to supply pressure from one 1/8-inch port to the next.



### 31-662A

Model 31-662A is a station separator for use with MZ1 and DM1 manifold modules to isolate a station

### MINI-MIZER SERIES

#10-32 ports, 3-way & 4-way, Direct operating

### VALVES

Option Code	Mounting Base	Spade Terminals	Flying Leads (18")	DIN Connector	Flow Control	Manual Override		Specify Voltage with option code	
						non-locking	locking	AC	DC
			38	39	70	80	81	AC	DC
<b>Model 3E1</b>	OS	STD	SP	SP	NA	SP	SP	SP	N/C
<b>3E1-BOU</b>	NA	STD	SP	SP	NA	SP	SP	SP	N/C
<b>3E1-PCM</b>	NA	STD	NA	NA	NA	SP	SP	SP	N/C
<b>3E1-ADP</b>	NA	STD	SP	SP	NA	SP	SP	SP	N/C
<b>3E1-TSD</b>	OS	STD	SP	SP	NA	SP	SP	SP	N/C
<b>M3E1</b>	NA	STD	SP	SP	NA	SP	SP	SP	N/C
<b>M3E1-MTL</b>	NA	STD	SP	SP	NA	SP	SP	SP	N/C

### MANIFOLDS

Model	Description
<b>MZ1</b>	Manifold module. Accepts one M3E1 valve.
<b>DMZ1</b>	Manifold module. Accepts two M3E1 valves.
<b>MTL*</b>	Metal manifold. Accepts one M3E1-MTL valve per station.
<b>DMTL*</b>	Metal manifold. Accepts two M3E1-MTL valves per station.
<b>MCTL*</b>	Metal manifold with captured exhaust.

\*You put in number of stations to complete model number. Example: MTL-4 Multi-pressure application (MZ1 only), specify "w/separate supply."

### ACCESSORIES

Model	Description
<b>8-5A</b>	Mounting Base, with 2 screws.
<b>PF**</b>	Plug Fitting, #10-32.
<b>BF**</b>	Barbed Fitting, #10-32 thread to 1/8" O.D. hose.
<b>BF1**</b>	Barbed Fitting, 1/4" O.D. hose.
<b>PBF**</b>	Barbed Fitting, 1/8" pipe.
<b>150-30A**</b>	Muffler, #10-32 thread.
<b>31-663A</b>	Port Connector for MZ1 or DMZ1 (formerly 31-661A).
<b>31-662A</b>	Station Separator for MZ1 or DMZ1 (formerly 31-660A).
<b>8-65A</b>	Block-off Plate for MZ1 or DMZ1.
<b>HS-2</b>	DIN Connector for use w/Code 39.
<b>HS-2L</b>	DIN Connector . . . w/light for use w/Code 39 (5VDC, 12VDC, 24VDC only).
<b>28-650A**</b>	Insulated receptacles.
<b>28-651A**</b>	Suppression, Diode Terminal.
<b>47-63A**</b>	1000V, 1 amp, Silicon Diode.

\*\*Order by quantity of bags only.

NOTE: Valves, Manifolds, and Accessories are shipped detached, ready to be mounted according to specific application requirements.

### HOW TO ORDER

Starting with Model Number specify options in order from left to right.

Example: To Order Model 3E1-81 12VDC

3-Way Operation	3E1
Rotating locking manual override	(3E1-81)
Voltage 12VDC	(3E1-81 12VDC)

Remember: Option Codes marked STD and NA are not used as part of the Model Number when ordering. N/C indicates no charge but Option Code must be included in the Model Number. OS indicates that Option must be ordered separately and is not used as part of the Model Number.

N/C=No charge	STD=Standard
NA =Not available	SP=Specify, additional charge for this option
OS =Order separately, additional charge for this option	