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Find the *Humphrey B3E1* at our website: *Click HERE*

Humphrey®

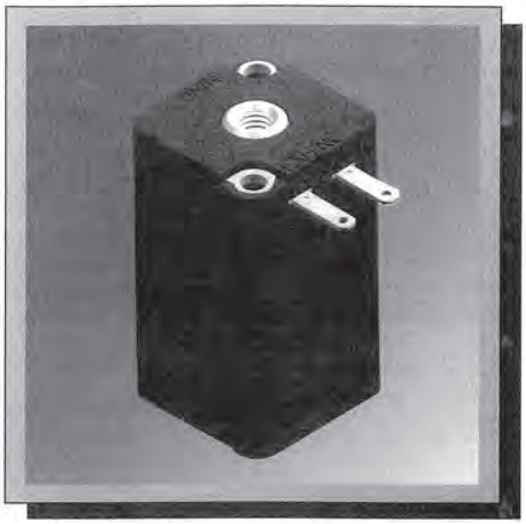
NEW MINI-MIZER

NEW MINI-MIZER
Interchangeable with Current MINI-MIZER

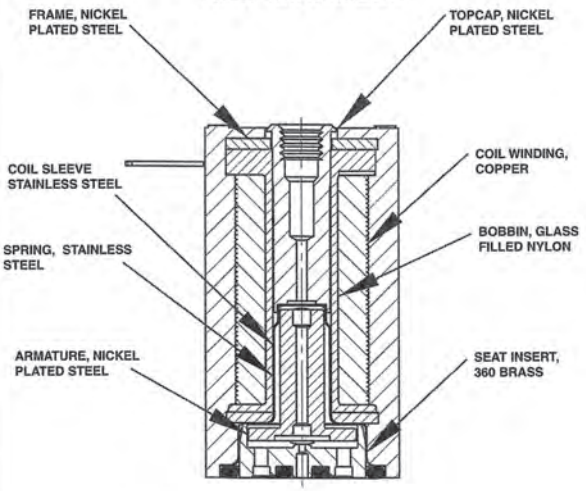
The *new* 2-way and 3-way MINI-MIZER valve was designed to accommodate a wide range of pneumatic applications that require high cycling, small flow, and low wattage type valving. This valve is ideal for battery operation, micro-processor controlled and printed circuit board type applications.

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.

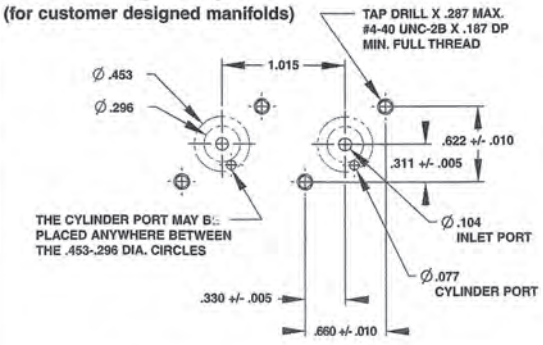
The enhanced MINI-MIZER design is very adaptable to customer specific applications. This new robust design allows the MINI-MIZER to function in a wider temperature range (-40 to +150° F). Humphrey has the ability to provide product modifications such as different media, wattage, orifice sizes, pressures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



NEW MINI-MIZER



Machining Footprint
(for customer designed manifolds)



NOTE: Valve can only be rotated 180°

STANDARD SPECIFICATIONS

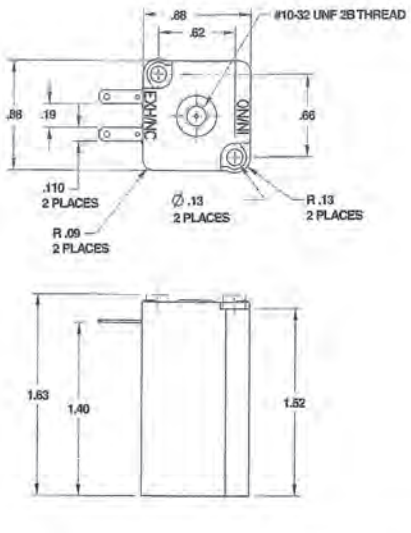
PRESSURE RANGE:	0-100 psi
MEDIA:	Dry Air (Inert gases)
LUBRICATION:	Not Required
FILTRATION:	40 Microns minimum (Recommended)
FLOW CHARACTERISTICS:	@ 100psi Cv=0.01, CFM=1.3, 36.8 LPM
LEAK RATE:	Maximum 4cc/min. @100psi
SEALS:	Buna-N (NBR)
TEMPERATURE RANGE:	-40˚F to 150˚F (-40˚C to 66˚C) Media or Ambient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

Consult factory for special specifications.

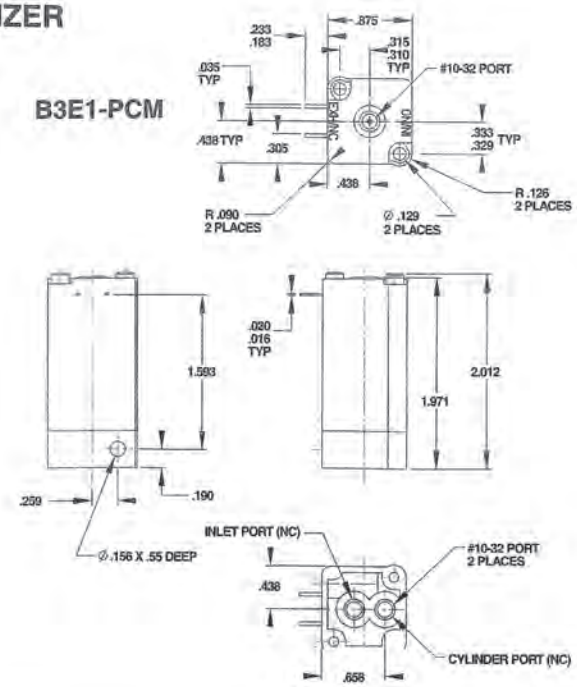
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NEW MINI-MIZER

MINI-MIZER



B3E1-PCM



HOW TO ORDER

Model	Bottom Inlet	Two-Way	Normally Open/ Multi-Purpose	Spade Terminals	(18") Lead Wires	DIN Connector	Transient Supression 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
B3E1B0U	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☐	Metal manifold. Accepts one "M" type valve per station
DMTL☐	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.

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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.

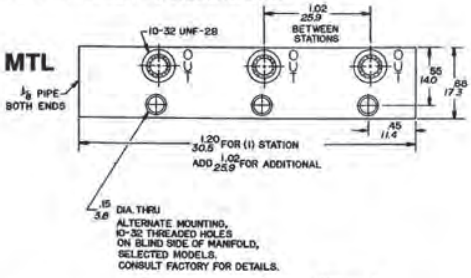
Three different series of durable aluminum manifolds are offered as alternatives to the MZ1 and DMZ1 manifold modules. The one-piece aluminum design eliminates the assembly time required for manifold modules. Valves mount to manifold easily with machine threaded mounting screws.

MTL Series. For use with M3E1-MTL valves. Mount one valve per manifold station. Available 1 through 16 stations. Interchangeable with MZ1 manifold module, except mounting holes.

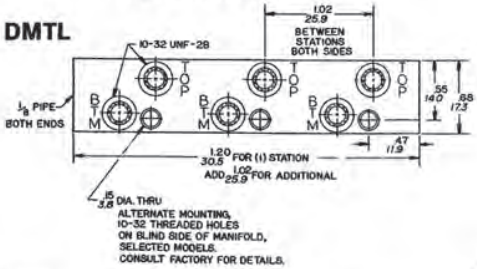
DMTL Series. For use with M3E1-MTL valves. Mount two valves per station, one on each side of manifold. Available 1 through 16 stations; accommodates up to 32 valves. Interchangeable with DMZ1 manifold module, except mounting holes.

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

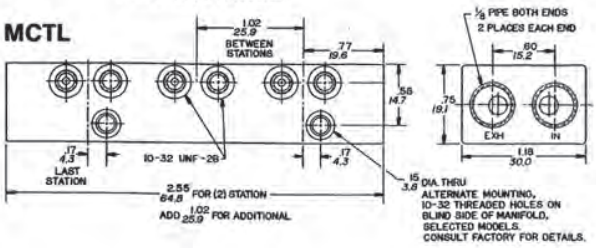
MTL



DMTL



MCTL





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 ⅛-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

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

VALVES

	Mounting Base	Spade Terminals	Flying Leads (18″)	DIN Connector	Flow Control	Manual Override		Specify Voltage with option code	
						non-locking	locking	Voltage 5VDC, 12VDC, 24VDC, 24V/50/60, 120VDC, 240V/50/60	
Option Code			38	39	70	80	81	AC	DC
Model 3E1	OS	STD	SP	SP	NA	SP	SP	SP	N/C
3E1-BOU	NA	STD	SP	SP	NA	SP	SP	SP	N/C
3E1-PCM	NA	STD	NA	NA	NA	SP	SP	SP	N/C
3E1-ADP	NA	STD	SP	SP	NA	SP	SP	SP	N/C
3E1-TSD	OS	STD	SP	SP	NA	SP	SP	SP	N/C
M3E1	NA	STD	SP	SP	NA	SP	SP	SP	N/C
M3E1-MTL	NA	STD	SP	SP	NA	SP	SP	SP	N/C

MANIFOLDS

Model	Description
MZ1	Manifold module. Accepts one M3E1 valve.
DMZ1	Manifold module. Accepts two M3E1 valves.
MTL*	Metal manifold. Accepts one M3E1-MTL valve per station.
DMTL*	Metal manifold. Accepts two M3E1-MTL valves per station.
MCTL*	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
8-5A	Mounting Base, with 2 screws.
PF**	Plug Fitting, #10-32.
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.
150-30A**	Muffler, #10-32 thread.
31-663A	Port Connector for MZ1 or DMZ1 (formerly 31-661A).
31-662A	Station Separator for MZ1 or DMZ1 (formerly 31-660A).
8-65A	Block-off Plate for MZ1 or DMZ1.
HS-2	DIN Connector for use w/Code 39.
HS-2L	DIN Connector . . . w/light for use w/Code 39 (5VDC, 12VDC, 24VDC only).
28-650A**	Insulated receptacles.
28-651A**	Suppression, Diode Terminal.
47-63A**	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
NA = Not available
OS = Order separately, additional charge for this option
STD = Standard
SP = Specify, additional charge for this option

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