

HUMPHREY SELECTION GUIDE

Organized by Port Size

SOLENOID

2-, 3-way

M3	C _v	10-32	C _v	1/8"	C _v	1/4"	C _v	3/8"	C _v	1/2"	C _v	3/4"	C _v
H010E1	0.01	3E1	0.01	31E1	0.09	(V)062E1	0.12			(VA/VV)500(A)E1	2.16	(VA)590(A)E1	2.56
H041E1	0.08	M3E1	0.01	M31E1	0.06	T062E1	0.11			500E2	2.16	(VA)590(A)E2	2.56
H040 E1	0.08	M3E1-81-MTL	0.01	310	0.12	125E1	0.19			501E1	2.20		
		3E1-PCM	0.01	S310	0.15	T125E1	0.17			501E2	2.20		
		3E1-39-BOU	0.01	M310	0.12	(VA/VV)250(A)E	0.63						
		3E1-TSD	0.01	(VA)125(A)E1L	0.24	250E2	0.63						
		H(V)030E1	0.03	M125E1LW	0.17	320	1.00						
		H110E1	0.23	H181E1	0.57								
		H111E1	0.23										

4-way

M3	C _v	10-32	C _v	1/8"	C _v	1/4"	C _v	3/8"	C _v	1/2"	C _v	3/4"	C _v
H040 4E1	0.08	401	0.05	41E1	0.03	42E1	0.43			501-4E1	1.80		
H040 4E2	0.08	M401	0.05	M41E1	0.03	M42E1	0.39			501-4E2	1.80		
		402	0.04	MC41E1	0.03	42E2	0.43						
		M402	0.04	410	0.14	062-4E1	0.07						
		H030-4E1	0.03	410-70	0.14	125-4E1	0.11						
		H110-4E1	0.23	S410	0.13	T062-4E1	0.07						
		H110-4E2	0.23	S410-70	0.13	T125-4E1	0.11						
		H113-4E2	0.21	M410	0.13	M42E2	0.39						
				M410-70	0.13	250-4E1	0.58						
				H180-4E1	0.57	250-4E2	0.88						
				H180-4E2	0.57	H240-4E1	0.88						
				H183-4E2	0.50	H243-4E2	0.83						
						S420	1.00						
						M420	1.00						

AIR PILOTED

2-, 3-way

M3	C _v	10-32	C _v	1/8"	C _v	1/4"	C _v	3/8"	C _v	1/2"	C _v	3/4"	C _v
		2P	0.09	31P	0.29	(VA/VV)250A	0.63			(VA)500A	2.20	(VA)590A	3.73
		3P	0.09	(VA)125A	0.22	250AA	0.85			500AB	2.20	590AB	3.73
				125AA	0.23	250AL	0.65			500AG	2.20	590AG	3.73
				125LA	0.15	250AH	0.50			501A	2.41		
				125AH	0.17					501AA	2.49		

4-way

M3	C _v	10-32	C _v	1/8"	C _v	1/4"	C _v	3/8"	C _v	1/2"	C _v	3/4"	C _v
		4P	0.11	41P	0.29	42A	0.38			501-4A	1.89		
		4PP	0.11	41PP	0.28	42A2	0.35			501-4AA	1.89		
		110-4A	0.23	H180-4A	0.50	M42A2	0.32						
		110-4A2	0.23	H180-4A2	0.50	250-4A	0.49						
						250-4AA	0.75						

MANUAL/MECHANICAL

2-, 3-way

M3	C _v	10-32	C _v	1/8"	C _v	1/4"	C _v	3/8"	C _v	1/2"	C _v	3/4"	C _v
		2P	0.09	31P	0.29	250PL	0.83			501V	2.20	590C	3.85
		2V	0.09	31V	0.29	250P	0.84			(V)500C	2.20		
		3P	0.09	125PLG	0.22	250HO	0.83						
		3V	0.09	125P	0.22	250F	0.83						
				125HO	0.22	(V)250C	0.83						
				125B	0.23	250T	0.83						
				125MP	0.22	(V)250V	0.83						
				125MC	0.22								
				125MOC	0.22								
				125C	0.22								
				125T	0.22								
				(V)125V	0.22								

4-way

M3	C _v	10-32	C _v	1/8"	C _v	1/4"	C _v	3/8"	C _v	1/2"	C _v	3/4"	C _v
		4P	0.11	41P	0.29	42P	0.39						
		4PP	0.11	41PP	0.29	42PP	0.39						
		4PPX	0.29	41PPX	0.29	M42P	0.32						
		4PP/PPX	0.29	41PP/PPX	0.29	M42PP	0.29						
		4V	0.11	41V	0.29	M42PA	0.29						
				41T	0.09	250-4F	0.75						
				41R	0.09	250-4H	0.75						

Humphrey General Guidelines

Don't take chances

Compressed air is an extremely powerful medium. Always take maximum precautions when handling any component of a compressed air system.

Never attempt to construct, replace, operate or service any component of a compressed air system unless you have been specifically and properly trained to do so.

Always disconnect the supply air and exhaust the air system before attempting to remove or service a component of that system.

Failure to heed these warnings could result in **SERIOUS, EVEN FATAL, PERSONAL INJURY.**

Use the right valve

Humphrey valves are general purpose air valves designed for use in general industrial applications in accordance with the limitations described in this catalog for each valve. The specifications of individual products are subject to change without notice. Consult factory for specific information concerning valve/application compatibility

Each Humphrey valve is tested before it leaves our factory to assure the valve's conformance to catalog specifications.

Any use or application which deviates from the valve's specifications will void the warranty unless Humphrey has provided specific and written authorization beforehand.

Use the right lubrication

Except where model specifications state "No lubrication required," all Humphrey valves require appropriate lubrication. Humphrey recommends a non-detergent, 20w or 30w, mineral-based petroleum oil for most of its valves.

Some lubricants may cause swelling or deterioration of the valve's seals, therefore lubricant/seal compatibility must be confirmed. Read specifications carefully. If there is any doubt, consult factory.

Use the right air supply

The valved medium, including the lubricants and other substances it may contain, must be compatible with the materials of which the valve is constructed. Read the specifications carefully; if there is any doubt, consult factory.

Some valve models are vulnerable to contaminated or moisture-laden compressed air. To promote proper functioning and long life in such instances, appropriate air

treatment equipment should be installed. Consult your supplier of air filters, regulators, and lubricators.

Use proper service procedures

Never attempt to service a Humphrey valve or any system component unless you have been properly trained to do so. A properly trained person will never attempt to remove or service a component of a compressed air system unless the compressed air has been disconnected and the system thoroughly exhausted.

Some Humphrey valves can be repaired in the field. Humphrey makes available factory seal repair kits (SRKs) and individual valve components for this purpose. All repaired valves should be tested for conformance to specifications before they are returned to service. Field repairing of Humphrey valves voids their warranty.

Design a proper system

Always strive to design systems which are safe as well as efficient. Either eliminate potential hazards completely or install safety features which neutralize them.

Give special consideration to any potential for accidental actuation of a valve. Either select a model that resists accidental actuation or mount the valve to prevent unintended actuation.

Consider the adverse consequences of individual component failure and design to prevent or minimize these consequences. Design a system that will fail safe under conditions of pressure variation, pressure loss, or other system failures.

Read the component literature carefully. If a model is not completely understood, do not apply it without first consulting the factory.

Size valves properly. A model having a capacity insufficient to the system may cause the entire system to be inefficient. Always note the size of the valve orifice — this is often more important than the pipe connection.

The circuit drawings in this catalog are intended *only* as examples of circuits in which certain components might typically be used. They are not to be considered recommendations of specific applications. The proper, safe functioning of any system must be insured by the system's designer or user.

The following are registered trademarks of the companies indicated: Delrin, Zytel, E.I., duPont; Rylton, Phillips Petroleum.

Specifications subject to change without notice.

All port connections are available in metric sizes. Specify metric port threads by using letter E as a model number prefix. The bottom number in all drawing dimensions is shown in millimeters.

HUMPHREY PRODUCTS**MH6681 (N)
CSA LR41336
KILGORE AND SPRINKLE ROADS P O BOX 2008,
KALAMAZOO MI 49003**

The following models are UL RECOGNIZED for component use.

Models 3E1, M3E1 valves; Models DMZ1, MZ1 manifolds.

Models 31E1, 41E1, M31E1, M41E1, MC41E1 valves; Models MM-2 through -7, MMC-2 through -7 manifolds.

Models 062-4E1, 062-4E2, 062E1, 062E2, VO62E1 valves, may be prefixed by T. Models TM-1R through -12R manifolds.

Models 125-4E1, 125E1, V125E1 valves, may be prefixed by T. Models TM-1R through -12R manifolds.

Model 310 may be prefixed by E, EM, ES, ESMP, EV, EVM, EVS, EVSMP, M, S, SMP, V, VM, VS, VSMP, may be suffixed by 2, 21, 39, 50, 81, 87, LL, MOV, RC, or SA, suffixed by UR.

Model 410 may be prefixed by E, EM, ES, ESMP, M, S, SMP, may be suffixed by 21, 39, 50, 70, 81, 87, LL, MOV, RC, or SA, suffixed by UR.

Models 250E1, 250E2.

The following models are UL LISTED for General use.

Model 062-4E1 with or without suffix 21, followed by 36, with or without suffixes 61 and/or 70.

Models 062E1, VO62E1 followed by 2 or 3, followed by 10 or 11, with or without suffix 20 or 21, followed by 36, with or without suffix 61.

Model 125-4E1 may be prefixed by T, with or without suffix 21, followed by 36, with or without suffix 60 or 70,

Model 125E1 may be prefixed by T, suffixed by 2 or 3, followed by 10 or 11, with or without suffix 20 or 21, followed by 36, may be followed by 60.

Model V125E1 followed by 2 or 3, followed by 10 or 11, with or without suffix 20 or 21, followed by 36, may be followed by 60.

Model V125E1 followed by 2 or 3, followed by 10 or 11, with or without suffix 20 or 21, followed by 36.

Models 250-4E1, 250-4E2 with or without suffix 21.

Model 250E1 followed by 2 or 3, followed by 10 or 11, followed by 20 or 21, followed by 36, with or without suffix 61.

Models TM-1L thru -12L manifolds.

Humphrey Tyna-Myte Air Valves

* Available with U.L. Rating, consult factory

Tyna-Myte valves are a series of direct-operating 2-way, 3-way, and 4-way, two-position, spring-return air valves, featuring the unique Humphrey Electropact single- or double-solenoid operator. Tyna-Myte air valves require no lubrication and provide quiet operation with no AC hum.

Tyna-Myte valves are available in two orifice sizes: full 1/8-inch or 1/16-inch. Mounting options include base mounting (supplied loose), mounting with body holes, mounting directly in-line, or mounting on either of two manifold styles. One manifold has a common inlet, the other has both a common inlet and a common (captured) exhaust.



062E1 062E1-3-10-20-36

Model 062E1 Tyna-Myte is a 2-way or 3-way, 3-port, single-solenoid valve available either normally open or normally closed. Having a full 1/8-inch orifice, this rugged, fast cycling valve has a longer service life than competitive coil and plunger valve designs. No lubrication required.

Also available as a double-solenoid valve, Model 062E2.



All 062

062-4E1 062-4E1

Model 062-4E1 is a 4-way, 4-port, common inlet, common exhaust, single-solenoid valve. Cylinder port #1 is normally open; cylinder port #2 is normally closed. With its full 1/8-inch orifice, this rugged, fast cycling valve has a longer service life than competitive coil and plunger valve designs. No lubrication required. A convenient optional exhaust port flow control (specify Code 70) independently meters the exhaust of cylinder ports #1 and #2 while saving space and eliminating the need for externally mounted and plumbed flow controls.

Also available as a double-solenoid valve, Model 062-4E2.



All 062-4

125E1 125E1-3-10-20-36

Model 125E1 is a 2-way or 3-way, 3-port, single-solenoid valve available either normally open or normally closed. Having a full 1/8-inch orifice, 125 Series valves offer twice the flow of 062 models. Furnished with cover seal (Code 61); protects against external dirt and moisture.

Also available as a double-solenoid valve, Model 125E2.



125-4E1 125-4E1-21-70

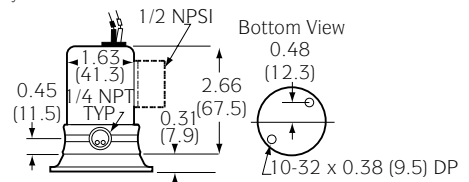
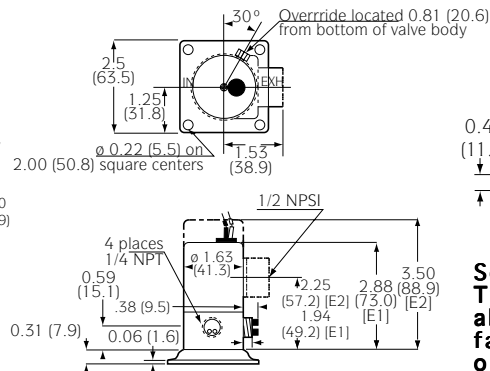
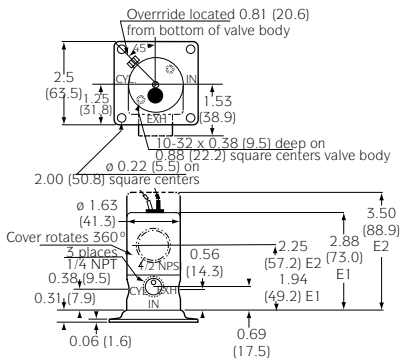
Model 125-4E1 is a 4-way, 4-port, common inlet, common exhaust, single-solenoid valve. Cylinder port #1 is normally open; cylinder port #2 is normally closed. Having a full 1/8-inch orifice, a 125 Series valve offers twice the flow of 062 models. Furnished with a cover seal (Code 61) to protect against external dirt and moisture.

A convenient exhaust port flow control (specify Code 70) independently meters the exhaust of cylinder ports #1 and #2 while saving space and eliminating the need for externally mounted and plumbed flow controls.

Available as a single-solenoid valve only.



All 062-4/125-4E1



See following Pages for more Tyna-Myte Air Valve Models and all specifications. Consult factory for air piloted vacuum options.

Humphrey Tyna-Myte Air Valves (Continued)

* Available with U.L. Rating, consult factory



T062E1 T062E1-3-10-36
Model T062E1 is a version of the single-solenoid 062E1 valve for mounting on manifolds. This valve mounts on the manifold in one way only to prevent incorrect mounting and can be installed or replaced in seconds. Available with captured exhaust (specify Code 60) for use on Humphrey Model TMC manifolds.

Also available as a double-solenoid valve, Model T062E2.



T062-4E1 T062-4E1-36
Model T062-4E1 is a version of the single-solenoid 062-4E1 valve for mounting on manifolds. The valve mounts on the manifold in one way only to prevent incorrect mounting, and can be installed or replaced in seconds.

A convenient optional exhaust port flow control (specify Code 70) independently meters the exhaust of cylinder ports #1 and #2 while saving space and eliminating the need for externally mounted and plumbed flow controls.

Available with captured exhaust (specify Code 60) for use on Humphrey Model TMC manifolds.

Also available as a double-solenoid valve, Model T062-4E2.



T125E1 T125E1-3-10-36-80
Model T125E1 is a version of the single-solenoid 125E1 valve for mounting on manifolds. The valve mounts on the manifold in one way only to prevent incorrect mounting and can be installed or replaced in seconds. Available with captured exhaust (specify Code 60) for use on Humphrey Model TMC manifolds.

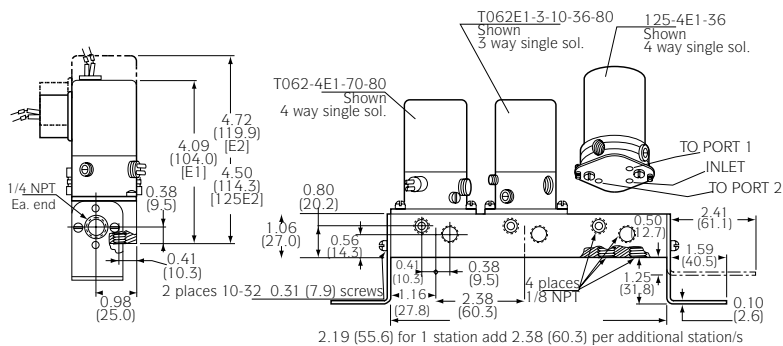
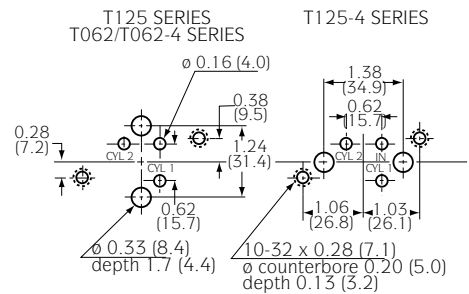
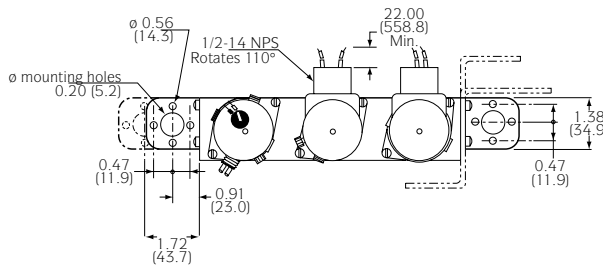
Also available as a double-solenoid valve, Model T125E2.



T125-4E1 T125-4E1-36
Model T125-4E1 is a version of the single-solenoid 125-4E1 valve for mounting on manifolds. The valve mounts on the manifold in one way only to prevent incorrect mounting and can be installed or replaced in seconds.

Available with captured exhaust (specify Code 60) for use on Humphrey Model TMC manifolds.

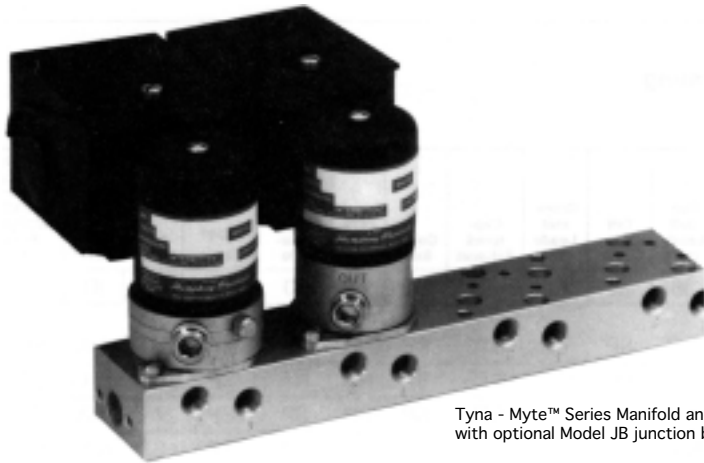
Available as a single-solenoid valve only.



MODEL	PORT #1	#2
T062-4E1	N/O	N/C
T125-4E1	N/O	N/C
T 062E1 N/C	N/C	"BLIND"
T 062E1 N/O	N/O	"BLIND"
T 062-4E2	(A) OPEN TO PSI	OPEN TO EXH
T 062E2	(A) CLOSED	"BLIND"

(A) WITH BOTTOM COIL LAST ENERGIZED

*Same for equivalent 125 model



Tyna - Myte™ Series Manifold and valves shown with optional Model JB junction boxes.



JB Junction Box

General purpose NEMA 1 junction box provides easy access to valve wiring and presents a neat, attractive appearance. Adjacent boxes may be connected together with the wire raceway connector furnished with each box. The junction box has a standard 1-inch diameter, 1/2-inch NPSI conduit coupling to accommodate any manufacturer's solenoid valve. Junction boxes may be ordered separately or with valve. To order with valve, add "JB" to valve model number: e.g., "T062-4E1-36-JB, 120/60."

Tyna-Myte TM and TMC 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, unitized control units, saving the time and labor involved in installing valves individually.

TM Manifolds

TM Series manifolds are of rugged, one-piece extruded aluminum construction. For installation versatility, both side and bottom

cylinder outlet ports are provided (unused ports are to be plugged). TM manifolds have a common inlet and are available in models ranging from one to twelve stations. Any combination of Tyna-Myte Series manifold valves may be installed on TM manifolds either on-site or at the factory.

TMC Manifolds

TMC Series manifolds are similar to TM manifolds but feature common (captured) exhaust.

TMC Series Manifold

A captured exhaust is desirable when the exhausting medium must be piped away to avoid contamination of the ambient area, as in clean rooms. TMC manifolds are available in models ranging from one to twelve stations. Any combination of Tyna-Myte Series manifold valves with captured exhaust (Code 60) may be installed on TMC manifolds, either on-site or at the factory.

Specifications

MEDIA:
Compressed Air (Consult factory for others)

PRESSURE RANGE:
All E1: 0 to 125 psig (0 to 8.6 bars)
All E2: 30 to 125 psig (2.1 to 8.6 bars)

TEMPERATURE RANGE:
-30 to 150°F (-34.4 to 65.6°C)

OPERATING SPEEDS:
To 600 CPM

MATERIALS:
Aluminum, Brass, Stainless Steel, Zinc Plated Steel, Buna N

LUBRICATION: Not required for 062 series; recommended for 125 series

FILTRATION: Recommended, 40 Microns Minimum

Fill/Exhaust Times (Seconds)

MODEL	SUPPLY PRESSURE							
	At 50 psig (3.5 bars)				At 100 psig (7.0 bars)			
	Chamber Fill 0-40 psig (0-2.8 bars)		Exhaust 50-10 psig (3.5-7 bars)		Chamber Fill 0-80 psig (0-5.5 bars)		Exhaust 100-20 psig (7.0-1.4 bars)	
	10 Cubic Inches (164cc)	100 Cubic Inches (1640cc)	10 Cubic Inches (164cc)	100 Cubic Inches (1640cc)	FILL	EXHAUST	FILL	EXHAUST
T/062/E1/E2	0.225	0.215	2.183	2.078	0.235	0.263	2.280	2.690
T/062-4E1/4E2	0.366	0.428	3.700	4.420	0.396	0.504	3.890	5.440
T125E1	0.123	0.171	1.030	1.660	0.135	0.209	1.160	2.110
T125-4E1	0.203	0.300	1.830	2.980	0.219	0.353	2.030	3.530

Lead Wire: # 18 AWG, 16-30 TC, 1/32, 105°C, PVC, UL & CSA.

Air Flow to Atmosphere

MODEL	25 PSIG	(1.7 BARS)	125 PSIG	(8.6 BARS)	ACTUAL	
	CFM	LPM	CFM	LPM	LBS	KGS
All 062s	1.2	34.0	6.0	160.0	0.62 . . . 0.70	0.30
All 125s	2.1	58.0	20.0	250.0	T062 . . . 0.80	0.40
					T125 . . . 0.70	0.30
					T125 . . . 0.80	0.40

Weight

MODEL	ACTUAL	
	LBS	KGS
All 062s	0.62 . . . 0.70	0.30
All 125s	T062 . . . 0.80	0.40
	T125 . . . 0.70	0.30
	T125 . . . 0.80	0.40

Electrical Specifications

MODEL	VOLTAGE	COIL NUMBER	WATTS	AMPS	OHMS	HEAT RISE (°C)	ON TIME SECONDS	OFF TIME SECONDS
T/062E1	24 DC	46-8A	6.7	0.296	86	85.9	0.019	0.015
	120 AC	46-4	8.2	0.161	255	102.0	0.006	0.026
T/062E2	24 DC	46-8A	6.7	0.296	86	85.9	0.014	0.017
	120 AC	46-3	23.0	0.236	105	77.8	0.005	0.005
T/062-4E1/4E2	24 DC	46-108A	6.7	0.296	86	85.9	0.024	0.018
T/062-4E1	120 AC	46-104	8.2	0.161	255	102.0	0.006	0.033
	120 AC	46-103	23.0	0.236	105	77.8	0.006	0.033
T125E1	24 DC	46-8A	6.7	0.296	86	85.9	0.018	0.014
	120 AC	46-4	8.2	0.161	255	102.0	0.006	0.016
T125-4E1	24 DC	46-8A	6.7	0.296	86	85.9	0.022	0.015
	120 AC	46-4	8.2	0.161	255	102.0	0.016	0.006

Tyna-Myte Series 1/4-inch ports, 2-way, 3-way, 4-way, Direct operating

VALVES

Option Code	2 Way	3 Way	Norm. Closed	Norm. Open	w/Out Mount. Base	With Mount. Base	Grom-met Leads (18")	Con-duit Leads (18")	DIN Con-ector	Grom-met Leads (72")	Cap-tured Exhaust	Cover Seal	Flow Con-trols	Manual Over-ride	FKM* Seals	Specify Voltage with option code				
																120v 50/60Hz, 240/50/60 (ID not avail-able on E1)	24VAC 50/60 w/"Flywheel" Rectifiers for CD	12VDC 24VDC		
Option Code	2	3	10	11	20	21	35	36	39	LL	60	61	70	80	w/VAI	CD	ID	CD	ID	
Model																				
062E1	SP	N/C	N/C	N/C	N/C	SP	N/C	SP	SP	SP	STD	SP	NA	SP	SP	N/C	NA	SP	NA	N/C
062E2	SP	N/C	NA	NA	N/C	SP	NA	N/C	SP	SP	STD	SP	NA	NA	SP	SP	N/C	SP	SP	N/C
062-4E1	NA	NA	NA	NA	N/C	SP	N/C	SP	SP	SP	STD	SP	SP	SP	SP	N/C	NA	SP	NA	N/C
062-4E2	NA	NA	NA	NA	N/C	SP	NA	N/C	SP	SP	STD	SP	SP	NA	SP	SP	N/C	SP	SP	N/C
T062E1	SP	N/C	N/C	N/C	NA	NA	N/C	SP	SP	SP	SP	SP	NA	SP	SP	N/C	NA	SP	NA	N/C
T062E2	SP	N/C	NA	NA	NA	NA	NA	N/C	SP	SP	SP	SP	NA	NA	SP	SP	N/C	SP	SP	N/C
T062-4E1	NA	NA	NA	NA	NA	NA	NA	N/C	SP	SP	SP	SP	SP	SP	SP	N/C	NA	SP	NA	N/C
T062-4E2	NA	NA	NA	NA	NA	NA	NA	N/C	SP	SP	SP	SP	SP	NA	SP	SP	N/C	SP	SP	N/C
125E1	SP	N/C	N/C	N/C	N/C	SP	N/C	SP	SP	SP	STD	STD	NA	SP	SP	N/C	NA	SP	NA	N/C
125E2	SP	N/C	NA	NA	N/C	SP	NA	N/C	SP	SP	STD	STD	NA	NA	SP	SP	N/C	SP	SP	N/C
125-4E1	NA	NA	NA	NA	N/C	SP	N/C	SP	SP	SP	STD	STD	SP	NA	SP	N/C	NA	SP	NA	N/C
T125E1	SP	N/C	N/C	N/C	NA	NA	N/C	SP	SP	SP	SP	STD	NA	SP	SP	N/C	NA	SP	NA	N/C
T125E2	SP	N/C	NA	NA	NA	NA	NA	N/C	SP	SP	SP	STD	NA	NA	SP	SP	N/C	SP	SP	N/C
T125-4E1	NA	NA	NA	NA	NA	NA	NA	N/C	SP	SP	SP	STD	SP	NA	SP	N/C	NA	SP	NA	N/C

CD=Continuous Duty; ID=Intermittent Duty

Note: Code 39 not available on Models T/062E2, T/062-4E2, and T/125E2 when specifying Option "CD" (continuous coils).

*Fluoroelastomer

MANIFOLDS

Model			
TM1		TM7	TMC1
TM2		TM8	TMC2
TM3		TM9	TMC3
TM4		TM10	TMC4
TM5		TM11	TMC5
TM6		TM12	TMC6

Manifold Selection: includes screws, mounting legs, and 1/8" NPT plugs (two per station).

Multi-Pressure Manifold — (Non-Stock Item) — Specify. TM Series Manifold only. Example: TM5.

ACCESSORIES

Model	Description
HS4	DIN Connector for use with Code 39 Valves.
8-32A	Block-off Plate.
JB	Junction Box — Add "JB" to model number of any solenoid valve with conduit connection (Code 36).

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 062E1-3-11-21-36

3-Way Operation	(062E1-3)
Normally Open	(062E1-3-11)
Mounting Base	(062E1-3-11-21)
Conduit	(062E1-3-11-21-36)
Captured EXH, and that is STD	(062E1-3-11-21-36)
Voltage 12VDC	(062E1-3-11-21-36 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	