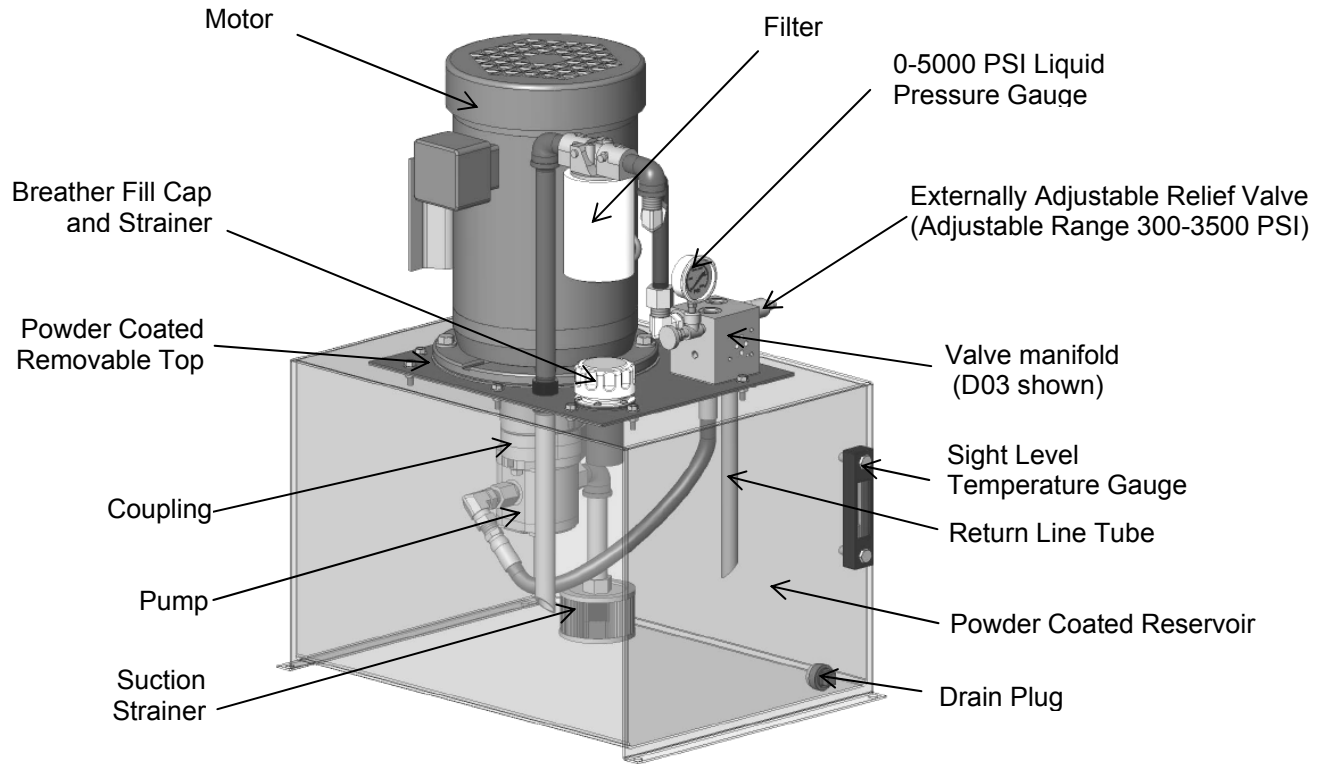


## MT & T Series Power Units



## STANDARD POWER UNIT



### Options:

- Water / Oil heat exchangers
- Air / Oil heat exchangers
- Pressure switches
- D03 and D05 directional control valves
- Subplate mounted D03 and D05 stack valves:
  - Cross port relief
  - Port relief
  - Pressure reducing
  - Single and double flow control
  - Direct and pilot operated check
  - Counterbalance relief
- Float type level switches
- Wide range of pressure gauges
- Accumulators
- Custom manifolds
- Heaters
- Viton seals
- NPT ports
- Synthetic fluids (consult factory)

### Recommended Operating Conditions for T Power Units

Oil Temperature Range: ..... 10°F -170°F  
 Recommended Operating Temperature: ..... 50°F -130°F

Oil Viscosity: Optimum: ..... 100 - 350 SUS  
 Minimum: ..... 100 SUS  
 Maximum Start Up: ..... 3500 SUS

Recommended Filtration: ..... 10 Micron nominal or better

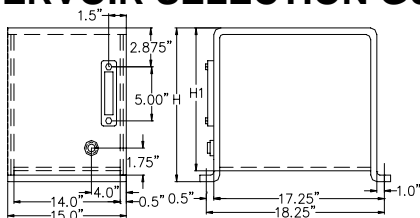
## 1. PUMP / MOTOR SELECTION GUIDE

PUMP CODE	DISPLACEMENT (IN <sup>3</sup> /REV)	RPM	FLOW (GPM)	HP REQUIRED AT NOTED PRESSURE AND FLOW					
				@500PSI	@1000PSI	@1500PSI	@2000PSI	@2500PSI	@3000PSI
14	0.056	1750	0.43	0.17	0.33	0.50	0.66	0.83	0.99
		3450	0.84	0.33	0.65	0.98	1.31	1.63	1.96
01	0.077	1750	0.59	0.23	0.46	0.67	0.91	1.14	1.37
		3450	1.16	0.45	0.90	1.35	1.80	2.25	2.71
02	0.099	1750	0.75	0.29	0.58	0.88	1.17	1.46	1.75
		3450	1.48	0.58	1.15	1.73	2.30	2.88	3.45
03	0.124	1750	0.94	0.37	0.73	1.10	1.47	1.83	2.20
		3450	1.86	0.72	1.45	2.17	2.89	3.62	4.34
04	0.137	1750	1.04	0.40	0.81	1.21	1.61	2.01	2.42
		3450	2.04	0.79	1.59	2.38	3.17	3.97	4.76
05	0.193	1750	1.46	0.57	1.14	1.70	2.27	2.84	3.41
		3450	2.88	1.12	2.24	3.36	4.48	5.60	6.72
15	0.248	1750	1.88	0.73	1.46	2.19	2.92	3.65	4.38
		3450	3.70	1.44	2.88	4.32	5.76	7.20	8.64
41	0.087	1750	0.66	0.23	0.45	0.68	0.90	1.13	1.36
		3450	1.30	0.45	0.89	1.34	1.78	2.23	2.68
42	0.131	1750	0.99	0.34	0.68	1.02	1.36	1.71	2.05
		3450	1.96	0.67	1.35	2.02	2.69	3.36	4.04
43	0.175	1750	1.33	0.46	0.91	1.37	1.82	2.28	2.74
		3450	2.62	0.90	1.80	2.70	3.60	4.50	5.40
44	0.264	1750	2.00	0.69	1.37	2.06	2.74	3.43	4.12
		3450	3.94	1.35	2.70	4.06	5.41	6.76	8.11
45	0.395	1750	3.00	1.03	2.05	3.08	4.11	5.14	6.16
		3450	5.90	2.03	4.05	6.08	8.10	10.13	12.15
08	0.273	1750	2.07	0.71	1.42	2.13	2.84	3.55	4.26
		3450	4.08	1.40	2.80	4.20	5.60	7.00	8.40
09	0.430	1750	3.26	1.12	2.24	3.35	4.47	5.59	6.70
		3450	6.42	2.20	4.41	6.61	8.81	11.02	13.22
16	0.586	1750	4.44	1.52	3.05	4.57	6.10	7.62	9.15
		3450	8.76	3.01	6.01	9.02	12.02	15.03	18.04
10	0.703	1750	5.33	1.83	3.66	5.48	7.31	9.14	10.97
		3450	10.50	3.60	7.21	10.81	14.41	18.02	21.62
18	0.860	1750	6.51	2.24	4.47	6.71	8.94	11.18	13.41
11	0.977	1750	7.40	2.54	5.08	7.62	10.16	12.70	15.24
12	1.094	1750	8.29	2.84	5.69	8.53	11.38	14.22	17.07
13	1.289	1750	9.77	3.35	6.71	10.06	13.41	16.77	20.12
06	1.718	1750	13.02	4.47	8.93	13.40	17.87		
21/22*	1.004	1750	7.61	2.47	4.93	7.40	9.87	12.33	14.80
27/28*	1.406	1750	10.65	3.45	6.91	10.36	13.81	17.26	20.72
29/30*	2.008	1750	15.22	4.93	9.86	14.80	19.73		

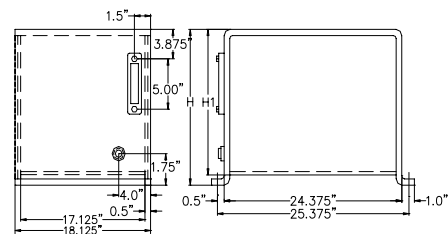
\* Piston pumps supplied with adjustable maximum displacement stop can be set to less than max. flow (Consult factory).

**Note:** When selecting a motor, choose the HP required or the next highest nominal HP available, ie. for 2.8HP, use 3HP.

## 2. RESERVOIR SELECTION GUIDE

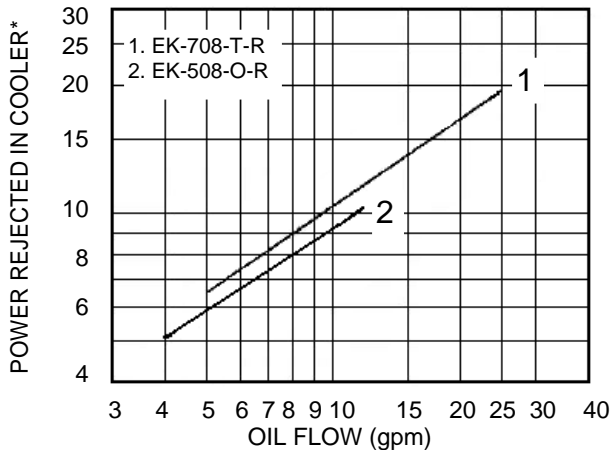


DIM. IN INCHES	RESERVOIR CAPACITY / USABLE VOLUME		
	8 / 4.4 GAL	10 / 5.2 GAL	15 / 9.8 GAL
H	12 3/4	14 1/4	19
H <sub>1</sub>	12	13 1/2	18 1/4

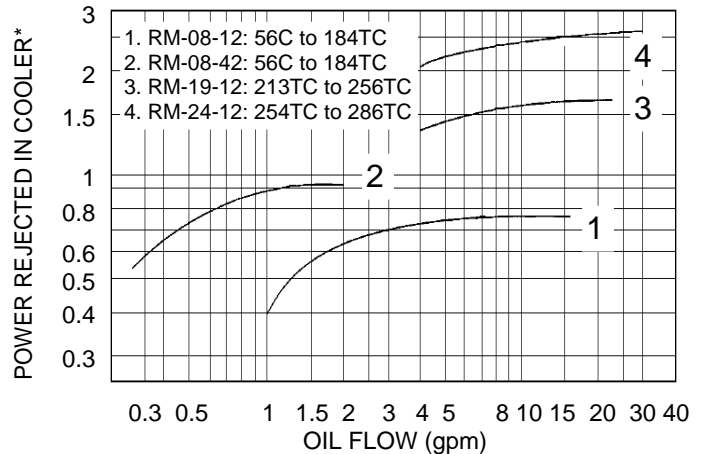


DIM. IN INCHES	RESERVOIR CAPACITY / USABLE VOLUME		
	20 / 12 GAL	30 / 22 GAL	50 / 42 GAL
H	16 3/4	22 1/4	34
H <sub>1</sub>	16	21 1/2"	33 1/4

### 3. HEAT EXCHANGER SELECTION CHARTS



3.1 Water/Oil Heat Exchanger



3.2 Air/Oil Heat Exchanger

\* Performance curves are based on 100SSU oil leaving the cooler 40°F higher than the ambient air temperature used for cooling. This is also referred to as a 40°F approach temperature. Air/oil heat exchangers are not recommended where ambient temperature exceeds 90°F.

### 4. VALVES

4.1 Standard directional control valves are conduit box connection type, DIN style coils also are available.

		4-Way/3-Position Tandem Center	4-Way/3-Position Open Center	4-Way/3-Position Closed Center	4-Way/3-Position P Blocked.	4-Way/2-Position P to A Spring Offset
D03	12VDC	00962	00963	00961	01040	00460
	24VDC	00965	00966	00964	01039	00461
	110VAC	00970	00967	00968	00969	01041
D05	12VDC	00462	00463	00464	00465	00475
	24VDC	00476	00477	00478	00479	00480
	110VAC	01060	01061	01062	01063	01064

Alternate coil voltages such as 220VAC and 24VAC are also available (Consult factory).

4.2 Auxiliary valve modules (consult factory for additional options).

	Flow Control	P.O. Check	Counterbalance	Pressure Reducing
D03	00469	00468	XOVCDEFC301	00471
D05	00769	00768	XOVCDEFC501	00771

### 5. OPTIONAL MANIFOLDS FOR REMOTE MOUNTING

Standard D03, D05 and D08 manifolds are available from stock in parallel and series configurations. These manifolds are typically used with power units equipped with only P and T ported manifolds.

### T & MT SERIES SELECTION GUIDE

PUMP		RESERVOIR		MOTOR				PUMP & MOTOR DRIVE CODES		VALVE MANIFOLD		TOP PLATE CODES		FILTER / COOLER CODES		SEQUENCE CODES						
TOTAL CAPACITY / USABLE GALLONS		(ALL STANDARD MOTORS ARE TEFC)																				
CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	PART #	HP	VOLTAGE	PHASE	FRAME	CODE	PART #	DESCRIPTION	CODE	PART #	DESCRIPTION	CODE	PART #	DESCRIPTION & CAPACITY				
14	0.43 / 0.84 gpm @ 1750 / 3450	A	8 gallons (4.4 gallons usable)*	101	FPAC101	0.5	115/230	1	56C	A	FPTN020-SA	Motor Drive Kit for 56C frames	01	FP0760	P&T Manifold	A	FPTN001-SA	Use with all MT Series	1	FPTN030-SA	9 GPM rated return filter	Assigned by Factory
01	0.59 / 1.16 gpm @ 1750 / 3450	B	10 gallons(5.2 gallons usable)*	102	FPAC102	0.5	230/460	3	56C	B	FPTN021-SA	Motor Drive Kit for 143TC/145TC or 182C/184C frames	02	FP0758	D03 Single Station	B	FPTN002-SA	Standard Top Plate	2	FPTN031-SA	9 GPM rated return filter with RM-08-42 cooler	
02	0.75 / 1.48 gpm @ 1750 / 3450	C	15 gallons(9.8 gallons usable)	103	FPAC103	0.5	575	3	56C	C	FPTN022-SA	Motor Drive Kit for 182/184tc frames	03	FP0744	D05 Single Station	C	FPTN003-SA	All but manifold holes	3	FPTN032-SA	9 GPM rated return filter with RM-08-12 Air/Oil Cooler	
03	0.94 / 1.86 gpm @ 1750 / 3450	D	20 gallons(12 gallons usable)	104	FPAC104	0.5	115/230	1	56C				04	FP0757	D03 2 Station Parallel	D	FPTN004-SA	Top Plate with Motor Hole	4	FPTN033-SA	30 GPM rated return filter	
04	1.04 / 2.04 gpm @ 1750 / 3450	E	30 gallons(22 gallons usable)	105	FPAC105	0.5	230/460	3	56C				05	FP0755	D03 3 Station Parallel	E	FPTN005-SA	Blank Top, Mounting holes only	5	FPTN034-SA	30 GPM rated return filter with RM-08-12 Air/Oil Cooler	
05	1.46 / 2.88 gpm @ 1750 / 3450	F	50 gallons(42 gallons usable)	106	FPAC106	0.5	575	3	56C				06	FP0753	D03 4 Station Parallel	F	FPTN006-SA	Top Plate Kit, code 08, 10, 16 or 09 pumps	6	FPTN035-SA	30 GPM rated return filter with RM-08-12 Air/Oil Cooler	
15	1.88 / 3.70 gpm @ 1750 / 3450			201	FPAC201	1	115/230	1	56C				08	FP0728	D03 5 Station Parallel				7	FPTN036-SA	30 GPM rated return filter with RM-19-12 Air/Oil Cooler	
		0	Without reservoir	202	FPAC202	1	230/460	3	56C	D	FPTN023-SA	Motor Drive Kit for 213TC or 215TC frame	09	FP0751	D03 2 Station Series	G	FPTN007-SA	Top Plate Kit, code 22 pump with up to 215TC motor	8	FPTN037-SA	9 GPM rated return filter with EK-708-T-R Water Cooler	
41	0.66 / 1.30 gpm @ 1750 / 3450	+	SPECIAL	203	FPAC203	1	575	3	56C	E	FPTN024-SA	Motor Drive Kit for 182TC/184TC w/PVP16 Pumps	10	FP0749	D03 3 Station Series	H	FPTN008-SA	Top Plate Kit, code 21 pump with up to 215TC motor	9	FPTN038-SA	30 GPM rated return filter with RM-24-12 Air/Oil Cooler	
42	0.99 / 1.96 gpm @ 1750 / 3450	* Do not specify code A or B for piston pump applications																				
43	1.33 / 2.62 gpm @ 1750 / 3450																					
44	2.00 / 3.94 gpm @ 1750 / 3450																					
45	3.00 / 5.90 gpm @ 1750 / 3450																					
08	2.07 / 4.08 gpm @ 1750 / 3450																					
09	3.26 / 6.42 gpm @ 1750 / 3450																					
16	4.44 / 8.76 gpm @ 1750 / 3450																					
10	5.33 / 10.50 gpm @ 1750 / 3450																					
18	6.51 gpm @ 1750																					
11	7.40 gpm @ 1750																					
12	8.29 gpm @ 1750																					
13	9.77 gpm @ 1750																					
06	13.02 gpm @ 1750																					
21	7.61 gpm @ 1750, RAC *(1)																					
22	7.61 gpm @ 1750, FPC *(1)																					
27	10.65 gpm @ 1750, RAC *(1)																					
28	10.65 gpm @ 1750, FPC *(1)																					
29	15.22 gpm @ 1750, RAC *(1)																					
30	15.22 gpm @ 1750, FPC *(1)																					
++	SPECIAL																					
NOTE: RAC means the pump pressure compensator can be adjusted via a valve through the lid. FPC means pump pressure compensator is factory preset. (non-adjustable)																						
If the system pressure is to be non-adjustable, select the factory preset compensator (FPC) code. If the system pressure may need to be field adjusted, select the remote adjustable compensator (RAC) code.																						
NOTE: Pumps in T-series are available with Viton seals. Consult factory for use with synthetic fluids.																						
				NOTE: PART NUMBERS ENDING IN 1, 2 OR 3 ARE 3600 RPM MOTORS. PART NUMBERS ENDING IN 4, 5 OR 6 ARE 1800 RPM MOTORS. PLEASE SEE PRICE LIST FOR MORE INFORMATION.																		

**Ordering Example:**

<b>I</b>	<b>1 0</b>	<b>D</b>	<b>4 0 5</b>	<b>C</b>	<b>3 4</b>	<b>F</b>	<b>1</b>	<b>- X X</b>
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Complete with 2 Directional valves (00968-Y) and 2 modules (00468-Y) and 2 modules (00469-Y).  
\* unloader valve to be 110VAC conduit connection

CANADA: BUCHER HYDRAULICS CORPORATION 460 Newbold St. London, Ontario, Canada N6E 1K3 Telephone: (519)686-5900 Fax: (519)686-8976 <a href="http://www.fluidpack.com">http://www.fluidpack.com</a>	U.S.A.: BUCHER HYDRAULICS 1363 MICHIGAN ST. NE., GRAND RAPIDS MICHIGAN 49503 Telephone: (616)458-1306 Fax: (616)458-0079 <a href="http://www.monarchhyd.com">http://www.monarchhyd.com</a>
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