

FMC Pump Specifications

52-240 HP

Pump Selection Procedure

1. Determine your HP requirement using the following equation:

$$HP = \frac{GPM \times PSI}{1714 \times \text{Mechanical Efficiency}}$$

For preliminary sizing, use 85% for the mechanical efficiency, then adjust based on actual efficiency of pump selected.

2. Determine the duty cycle of your application. Intermittent duty applications may operate up to 8 hours a day. All other services should be considered continuous duty.

3. Find the Pump Series under the first column with a HP rating that meets or exceeds the conditions of your application. Continuous HP is listed first. Intermittent HP is listed second.

4. Scan down the Rated Pressure column in the Pump Series selected until you find a model whose maximum pressure rating exceeds the maximum pressure required by your application.

5. Check the appropriate capacity column (Continuous Duty Capacity or Intermittent Duty Capacity) to determine if the pump you selected meets the flow requirements of your application. If not, go to the next larger pump series and repeat Steps 4 and 5.

6. Determine the speed at which the pump will need to operate to produce the desired flow.

$$RPM = \frac{\text{Desired Flow (GPM)}}{\text{Displacement}}$$

Notes:

1. Ratings are based on nominal speeds and pressures and may vary on FMC written approval.
2. Capacities and speeds indicated are based on 100% volumetric efficiency.
3. Intermittent duty is defined as 0-8 operational hours per day. Any service that falls outside of this range should use continuous duty ratings.
4. Dimensions are approximate and based on standard pump models with cast fluid cylinders. Width is measured parallel to the axis of the drive shaft and does not include the shaft extension.

Pump Series Continuous HP/ Intermittent HP	Model	Rated Pressure (psf)	Continuous Duty Capacity	Intermittent Duty Capacity	Displacement (gal/rev)	Seal Diameter (in)	Number of Cylinders	Stroke Length (in)	Mechanical Efficiency	Pump Type	Overall Dimensions				Fluid End Material Options						
											Length (in)	Width (in)	Height (in)	Weight (lbs)	Ductile Iron	Aluminum Bronze	Stainless Steel	HP Carbon Steel	HP Stainless Steel	API Carbon Steel	API Stainless Steel
L12 49/61 HP	L1214	2,500	30.5 GPM @ 325 RPM	37.5 GPM @ 400 RPM	0.0937	1.750	3	3.00	90%	Piston	34.0	20.0	13.0	475				◆	◆		
	L1218	1,500	50.3 GPM @ 325 RPM	62.0 GPM @ 400 RPM	0.1549	2.250	3	3.00	90%	Piston	34.0	20.0	13.0	475	◆	◆		◆	◆		
	L1222	1,000	75.2 GPM @ 325 RPM	92.6 GPM @ 400 RPM	0.2314	2.750	3	3.00	90%	Piston	34.0	20.0	13.0	475	◆	◆		◆	◆		
M12 62/77 HP	M1207	10,000	9.4 GPM @ 400 RPM	11.7 GPM @ 500 RPM	0.0234	0.875	3	3.00	90%	Plunger	37.5	22.0	20.5	950				◆	◆	◆	◆
	M1208	7,600	12.2 GPM @ 400 RPM	15.3 GPM @ 500 RPM	0.0306	1.000	3	3.00	90%	Plunger	37.5	22.0	20.5	950				◆	◆	◆	◆
	M1210	4,900	19.1 GPM @ 400 RPM	23.9 GPM @ 500 RPM	0.0478	1.250	3	3.00	90%	Plunger	37.5	22.0	20.5	950				◆	◆	◆	◆
	M1212	3,400	27.5 GPM @ 400 RPM	34.4 GPM @ 500 RPM	0.0688	1.500	3	3.00	90%	Plunger	37.5	22.0	20.5	950	◆		◆	◆	◆	◆	◆
	M1214	2,500	37.5 GPM @ 400 RPM	46.9 GPM @ 500 RPM	0.0937	1.750	3	3.00	90%	Plunger	37.5	22.0	20.5	950	◆	◆	◆	◆	◆	◆	◆
	M1216	1,900	49.0 GPM @ 400 RPM	61.2 GPM @ 500 RPM	0.1224	2.000	3	3.00	90%	Plunger	37.5	22.0	20.5	950	◆	◆	◆	◆	◆	◆	◆
	M1218	1,500	62.0 GPM @ 400 RPM	77.5 GPM @ 500 RPM	0.1549	2.250	3	3.00	90%	Plunger	37.5	22.0	20.5	950	◆	◆	◆	◆	◆	◆	◆
	M1220	1,250	76.5 GPM @ 400 RPM	95.6 GPM @ 500 RPM	0.1912	2.500	3	3.00	90%	Plunger	37.5	22.0	20.5	950	◆	◆	◆	◆	◆	◆	◆
	M1222	1,000	92.6 GPM @ 400 RPM	115.7 GPM @ 500 RPM	0.2314	2.750	3	3.00	90%	Plunger	37.5	22.0	20.5	950	◆	◆	◆	◆	◆	◆	◆
L16 66/87 HP	L1614	2,500	34.9 GPM @ 1100 RPM	46.0 GPM @ 1450 RPM	0.0317	1.750	3	4.00	85%	Piston	38.5	18.0	15.5	705	◆			◆	◆		
	L1616	2,100	45.5 GPM @ 1100 RPM	60.0 GPM @ 1450 RPM	0.0414	2.000	3	4.00	85%	Piston	38.5	18.0	15.5	705	◆	◆		◆	◆		
	L1618	1,650	57.6 GPM @ 1100 RPM	76.0 GPM @ 1450 RPM	0.0524	2.250	3	4.00	85%	Piston	38.5	18.0	15.5	705	◆	◆		◆	◆		
M16 117/142 HP	M1609	10,000	18.1 GPM @ 350 RPM	21.9 GPM @ 425 RPM	0.0516	1.125	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400				◆	◆	◆	◆
	M1610	8,000	22.3 GPM @ 350 RPM	27.1 GPM @ 425 RPM	0.0637	1.250	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400				◆	◆	◆	◆
	M1612	5,500	32.1 GPM @ 350 RPM	39.0 GPM @ 425 RPM	0.0918	1.500	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400				◆	◆	◆	◆
	M1614	4,065	43.7 GPM @ 350 RPM	53.1 GPM @ 425 RPM	0.1249	1.750	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆			◆	◆	◆	◆
	M1616	3,115	57.1 GPM @ 350 RPM	69.4 GPM @ 425 RPM	0.1632	2.000	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆	◆		◆	◆	◆	◆
	M1618	2,460	72.3 GPM @ 350 RPM	87.8 GPM @ 425 RPM	0.2065	2.250	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆	◆		◆	◆	◆	◆
	M1620	1,990	89.3 GPM @ 350 RPM	108.4 GPM @ 425 RPM	0.2550	2.500	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆	◆		◆	◆	◆	◆
	M1622	1,650	108.0 GPM @ 350 RPM	131.1 GPM @ 425 RPM	0.3085	2.750	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆	◆		◆	◆	◆	◆
	M1624	1,385	128.5 GPM @ 350 RPM	156.1 GPM @ 425 RPM	0.3672	3.000	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆	◆		◆	◆	◆	◆
	M1626	1,180	150.8 GPM @ 350 RPM	183.1 GPM @ 425 RPM	0.4309	3.250	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆	◆		◆	◆	◆	◆
	M1628	1,015	174.9 GPM @ 350 RPM	212.4 GPM @ 425 RPM	0.4998	3.500	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆	◆		◆	◆	◆	◆
	M1630	885	200.8 GPM @ 350 RPM	243.8 GPM @ 425 RPM	0.5737	3.750	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆	◆		◆	◆	◆	◆
M1632	775	228.5 GPM @ 350 RPM	277.4 GPM @ 425 RPM	0.6528	4.000	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆	◆		◆	◆	◆	◆	
M1634	650	257.9 GPM @ 350 RPM	313.2 GPM @ 425 RPM	0.7369	4.250	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆	◆		◆	◆	◆	◆	
M1636	570	289.2 GPM @ 350 RPM	351.1 GPM @ 425 RPM	0.8262	4.500	3	4.00	90%	Plunger	53.5	29.0	26.0	2,400	◆	◆		◆	◆	◆	◆	
Q16 198/240 HP	Q1609	10,000	30.1 GPM @ 350 RPM	36.6 GPM @ 425 RPM	0.0861	1.125	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500				◆	◆	◆	◆
	Q1610	8,150	37.2 GPM @ 350 RPM	45.1 GPM @ 425 RPM	0.1062	1.250	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500				◆	◆	◆	◆
	Q1612	5,650	53.6 GPM @ 350 RPM	65.0 GPM @ 425 RPM	0.1530	1.500	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500				◆	◆	◆	◆
	Q1614	4,160	72.9 GPM @ 350 RPM	88.5 GPM @ 425 RPM	0.2082	1.750	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500				◆	◆	◆	◆
	Q1616	3,190	95.2 GPM @ 350 RPM	115.6 GPM @ 425 RPM	0.2720	2.000	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500				◆	◆	◆	◆
	Q1618	2,520	120.5 GPM @ 350 RPM	146.3 GPM @ 425 RPM	0.3442	2.250	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500				◆	◆	◆	◆
	Q1620	2,040	148.8 GPM @ 350 RPM	180.6 GPM @ 425 RPM	0.4250	2.500	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500	◆	◆		◆	◆	◆	◆
	Q1622	1,690	180.0 GPM @ 350 RPM	218.5 GPM @ 425 RPM	0.5142	2.750	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500	◆	◆		◆	◆	◆	◆
	Q1624	1,420	214.2 GPM @ 350 RPM	260.1 GPM @ 425 RPM	0.6120	3.000	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500	◆	◆		◆	◆	◆	◆
	Q1626	1,210	251.4 GPM @ 350 RPM	305.2 GPM @ 425 RPM	0.7182	3.250	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500	◆	◆		◆	◆	◆	◆
	Q1628	1,040	291.6 GPM @ 350 RPM	354.0 GPM @ 425 RPM	0.8330	3.500	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500	◆	◆		◆	◆	◆	◆
	Q1630	910	334.7 GPM @ 350 RPM	406.4 GPM @ 425 RPM	0.9562	3.750	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500	◆	◆		◆	◆	◆	◆
Q1632	800	380.8 GPM @ 350 RPM	462.4 GPM @ 425 RPM	1.0880	4.000	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500	◆	◆		◆	◆	◆	◆	
Q1634	710	429.9 GPM @ 350 RPM	522.0 GPM @ 425 RPM	1.2282	4.250	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500	◆	◆		◆	◆	◆	◆	
Q1636	630	482.0 GPM @ 350 RPM	585.2 GPM @ 425 RPM	1.3770	4.500	5	4.00	90%	Plunger	53.5	52.0	27.0	4,500	◆	◆		◆	◆	◆	◆	