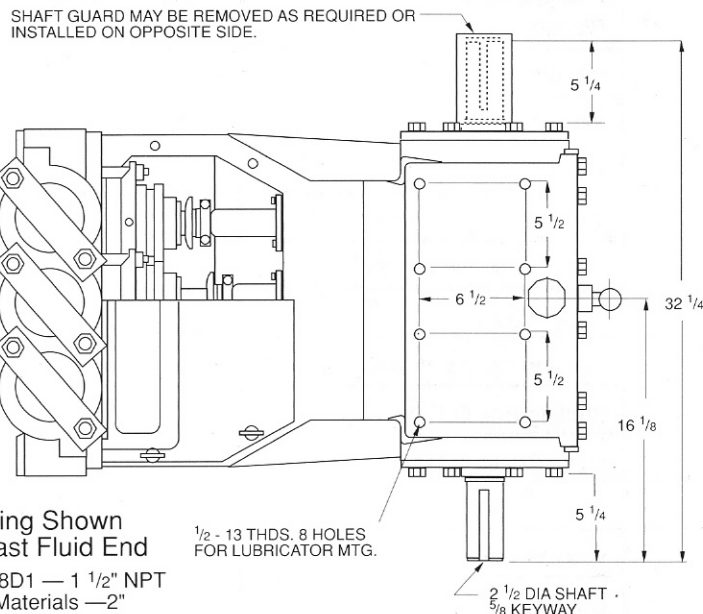
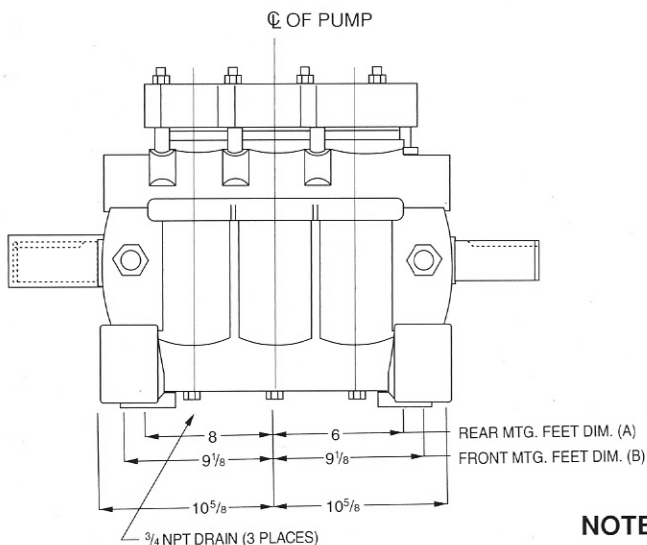
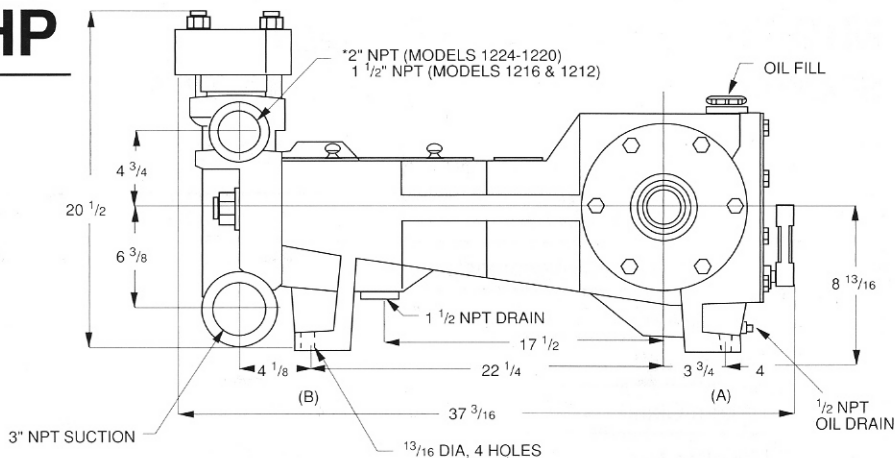


# Pump data 75 BHP

## Model M12

### Plunger Pump



**NOTE:** Drawing Shown for Cast Fluid End

\*M1218D1 — 1 1/2" NPT  
Enter Materials — 2"

**Pump type: Triplex plunger**

### Drive-end specifications

Stroke — 3"

Oil Type — SAE 30

Direction of Rotation — Top of Shaft toward Head

Shaft Extension — Double Ended

Shipping Weight — 950 lbs

Maximum Speed — 500 RPM

Minimum Speed — 100 RPM

No. of Plungers — 3

Crankcase Material — Cast Iron

Oil Capacity — 3 gallons

### M12 TRIPLEX POWER PUMP

3" , (76.2 mm) STROKE 6000 lb. (26700N) FRAME (PLUNGER) LOAD

	PLUNGER DIAMETER		Displacement		Maximum Discharge Pressure		STD VALVE DATA			CYLINDER CONNECTIONS		
	INCH	MM	GAL/REV	L/REV	PSIG	BAR	DISC. DIAMETER	SEAT HOLE AREA	% Area	SUCTION	DISCHARGE	
<b>A</b>	1212	1.50	38.10	.069	.261	3400	234	2" (50.8 mm)	1.25 IN <sup>2</sup> (806 mm <sup>2</sup> )	71	3"	1 1/2"
	1214	1.75	44.45	.094	.356	2500	172			52		
	1216	2.00	50.80	.122	.462	1900	131			40		
<b>B</b>	1218	2.25	57.15	.155	.587	1500	103	2 3/4" (69.9 mm)	2.53 IN <sup>2</sup> (1632 mm <sup>2</sup> )	64	3"	2"
	1220	2.50	63.50	.191	.723	1250	86.2			52		
	1222	2.75	69.85	.231	.874	1000	69.0			43		
	1224	3.00	76.20	.275	1.040	850	58.6			36		

# M12 TRIPLEX POWER PUMP

## STANDARD MATERIAL OF CONSTRUCTION

REF#	DESCRIPTION	MATERIAL			
		DI	AB	DI/AI	SS
	<b>FLUID END</b>				
	Fluid Cylinder (valve chamber)	A536 GR 80-55-06, Ductile Iron	CDA 958 Ni-Alum Bronze	A536 GR 80-55-06, Ductile Iron	316 Stn Stl
	Stuffing Box	316 Stn Stl	316 Stn Stl	A536 GR 80-55-06, Ductile Iron	316 Stn Stl
	Throat Ring	CDA 954 Alum Bronze	CDA 954 Alum Bronze	Glass Filled PPS	Glass Filled PPS
	Lantern Gland	CDA 954 Alum Bronze	CDA 954 Alum Bronze	Carbon Steel	316 Stn Stl
	Adjusting Nut	CDA 954 Alum Bronze	CDA 954 Alum Bronze	Carbon Steel	316 Stn Stl
	Plunger	Solid Ceramic w. 316 SS Quill or Hard Faced 1018 Stl			
	Valve Disc	Celcon or 316 Stn Stl or 17-4 Ph			
	Valve Seat	316 Stn Stl or 17-4 Ph			
	Valve Spring	Inconel 600			
	Valve Spring Retainer	316 Stn Stl			
	Valve Fastener (Stud)	6Al-4V Titanium			
	Valve Cover	Carbon Steel	316 Stn Stl	Carbon Steel	316 Stn Stl
	Packing Spring (if used)	Inconel X-750			
	Stuffing Box O-Ring	Teflon			Teflon
	Valve Cover O-Ring	Teflon			Teflon
	<b>POWER END</b>				
	Power Frame (pump case)	A48 Class 30 Cast Iron			
	Crank	A536 GR 100-70-03 Ductile Iron			
	Main Bearings	Steel-Tapered Roller Type			
	Connecting Rod	A536 GR 80-55-06 Ductile Iron			
	Crosshead	A48 Class 30 Cast Iron			
	Crosshead Extension (pony rod)	17-4 Ph			

## Brake Horsepower Required For Specific Applications

**EXAMPLE: M1220, 76 gpm @ 1250 PSI**

$$= \frac{(GPM) (PSI)}{1543} \text{ or } \frac{(BPD) (PSI)}{52903} = \frac{(76 \text{ gpm}) (1250 \text{ PSI})}{1543} = 61.6 \text{ BHP}$$

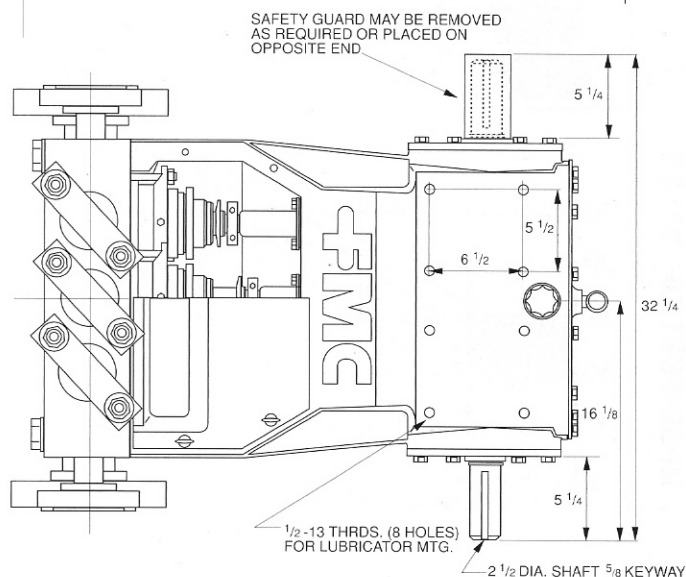
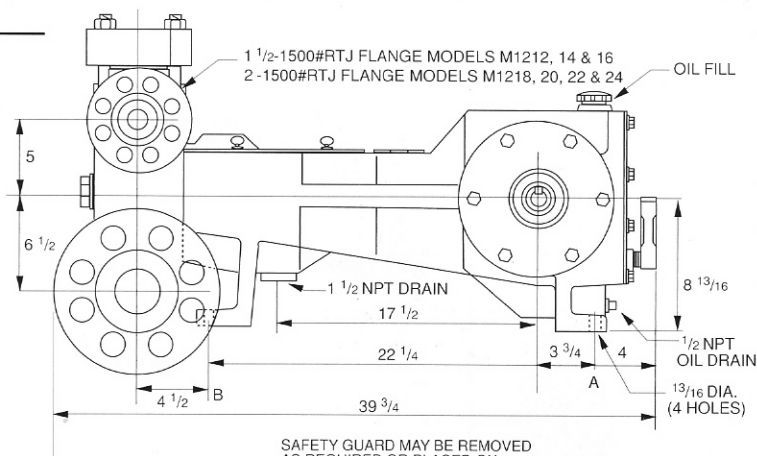
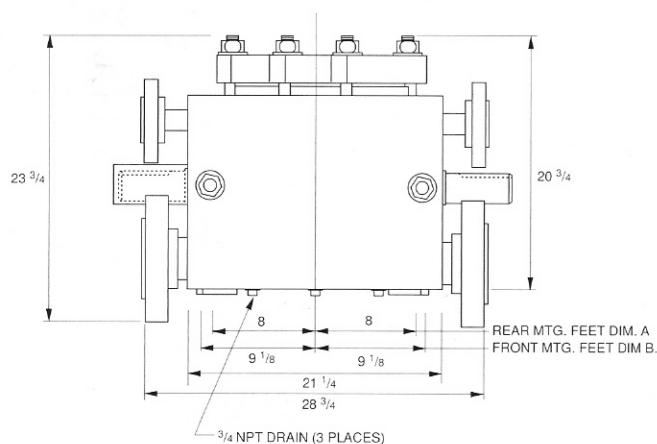
## Technical Notes

1. Volumes indicated are based on 100% Volumetric Efficiency.
2. Horsepower required based on 90% Mechanical Efficiency.
3. Ratings are nominal speeds and pressures and may vary on FMC written approval.

FMC Corporation Fluid Control Division. P.O. Box 1377, Stephenville, Texas 76401, Phone: 817/968-2181, Fax: 817/968-5709

# Pump data 75 BHP

## Model M12 API



**Pump type:** Triplex plunger

### Drive-end specifications

Stroke — 3"  
 Oil Type — SAE 30  
 Direction of Rotation — Top of Shaft toward Head

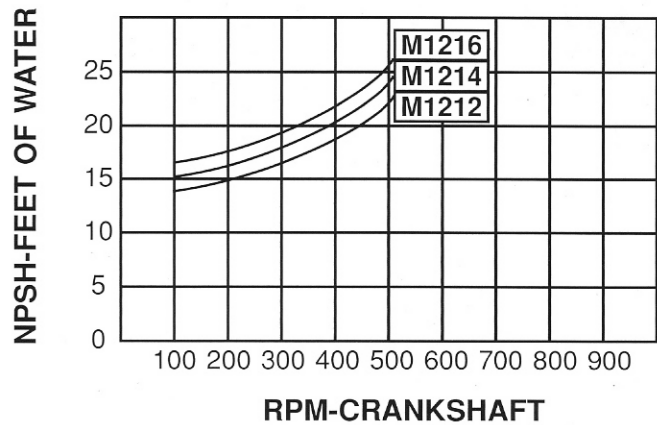
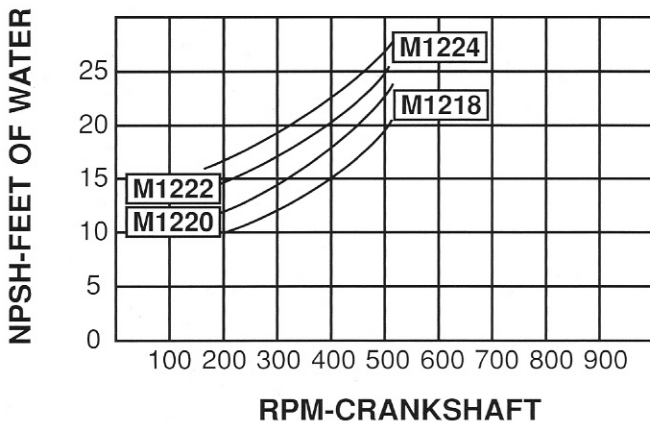
No. of Plungers — 3  
 Crankcase Material — Cast Iron  
 Oil Capacity — 12 Quarts  
 Shaft Extension — Double Ended

### Fluid-end specifications

Fluid-end materials	— Forged-Steel, Stainless Steel, Duplex Stainless
Valves Available	— 316 Stainless Steel Valve with Celcon Plates — Hastelloy Valve with Celcon Plates — 17-4 Wing Guide (Abrasion Resistant)
Seal Materials	
O-Rings	— Teflon
Gaskets	— None
Packing	— Kevlar & Teflon
Plunger Material	— Solid Ceramic or Hard Faced Stainless Steel (opt.)
Connections	— Suction 3" Flanged, Discharge 2" and 1 1/2" Flanged
Estimated Shipping Weight	— 1050 lbs.

# Performance Specifications

	Displacement		Input RPM		PLUNGER DIAMETER INCHES	MAXIMUM PSI	DISPLACEMENT GALLONS PER REVOLUTION
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM			
M1212	6.9 GPM 237 BPD	34.5 GPM 1180 BPD	100	500	1 1/2	3400	.069
M1214	9.3 GPM 321 BPD	46.5 GPM 1604 BPD	100	500	1 3/4	2500	.094
M1216	12.2 GPM 418 BPD	61.0 GPM 2100 BPD	100	500	2	1900	.122
M1218	15.4 GPM 531 BPD	77.0 GPM 2656 BPD	100	500	2 1/4	1500	.155
M1220	19.1 GPM 655 BPD	96.0 GPM 3280 BPD	100	500	2 1/2	1250	.191
M1222	23.0 GPM 793 BPD	115.0 GPM 3967 BPD	100	500	2 3/4	1000	.231
M1224	27.5 GPM 943 BPD	137.5 GPM 4715 BPD	100	500	3	850	.275



## Horsepower

M1212 requires 75 HP @ 3400 PSI; 34.5 GPM  
 M1214 requires 75 HP @ 2500 PSI; 46.5 GPM  
 M1216 requires 75 HP @ 1900 PSI; 61.0 GPM  
 M1218 requires 75 HP @ 1500 PSI; 77.0 GPM

M1220 requires 75 HP @ 1250 PSI; 96.0 GPM  
 M1222 requires 75 HP @ 1000 PSI; 115.0 GPM  
 M1224 requires 75 HP @ 850 PSI; 137.5 GPM

## Brake Horsepower Required For Specific Applications

$$= \frac{(\text{GPM}) (\text{PSI})}{1543} \text{ or } \frac{(\text{BPD}) (\text{PSI})}{52903}$$

## Technical Notes

1. Volumes indicated are based on 100% Volumetric Efficiency.
2. Horsepower required based on 90% Mechanical Efficiency.
3. Ratings are nominal speeds and pressures and may vary on FMC written approval.

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