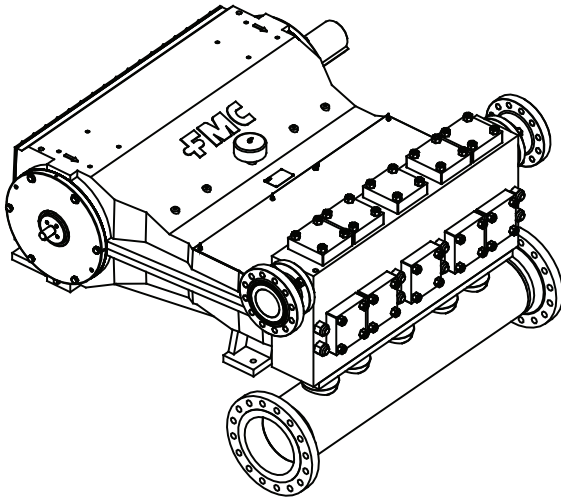


FMC Technologies

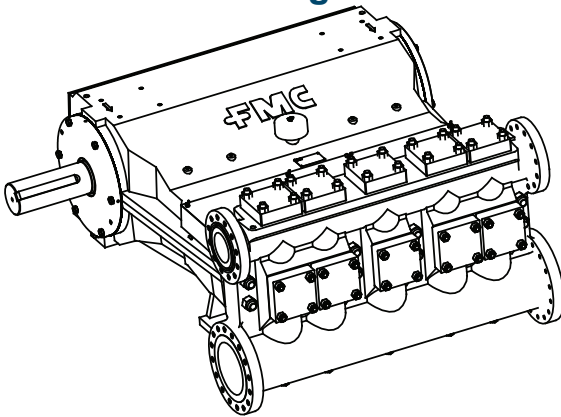
Q28 Plunger Pump Data

650 BHP Continuous Duty (800 BHP Intermittent Duty)

Forged ISO Drawing



Cast ISO Drawing



Specifications

Pump Model	Q28
Design Standard	API-674, Second Edition
Configuration	Horizontal Quintuplex Plunger
Number of Plungers	5
Stroke Length	7.0 Inches
Frame Load Rating	27,500 lbs
Forged Fluid Cylinder Pressure Rating	10,000 psi
Cast Fluid Cylinder Pressure Rating	3,000 psi
Pump Weight (Average)	13,000 lbs
Intermittent Duty Speed Rating	300 RPM
Continuous Duty Speed Rating	240 RPM
API-674 Max Recommended Speed	240 RPM
Minimum Speed *	100 RPM
Mechanical Efficiency	90%
Lubrication System (Standard)	Splash, Gravity Return
Lubrication System (Optional)	Pressurized, Motor or Crank Driven
Lube Oil Capacity	40 Gallons
Lube Oil Type	SAE 30
Maximum Fluid Temperature	200 °F (400 °F Capability)
Minimum Fluid Temperature	-20 °F (-50 °F Capability)
Valve Types	Disc Valves, Abrasion Resistant Valves

* Slower RPM can be achieved with the addition of a pressurized lubrication system

Forged Fluid End Material	Cast Fluid End Material
A105 Carbon Steel	Ductile Iron
A350-LF2 Carbon Steel	Nickel Aluminum Bronze
316L Stainless Steel	316L Stainless Steel
2205 Duplex Stainless Steel	2205 Duplex Stainless Steel
Alloy Steel	

* Special Materials available on request

Standard Connection Sizes	Suction	Discharge
Q2814-Q2820	4.0	3.0
Q2814-Q2824	6.0	3.0
Q2826-Q2836	8.0	4.0
Q2838-Q2842	10.0	6.0
Q2844-Q2850	12.0	6.0

* NPT Connections Available

* Consult us for specific exceptions to API-674 and NACE standards.

* Consult us for any application where inlet pressures will exceed 10% of rated discharge pressures.

* Horsepower based on 90% mechanical efficiency. Actual application horsepower requirements can be calculated using the equation: $BHP = (GPM * PSI) / (1714 * 0.90)$

* Direction of rotation is the top of the crankshaft towards the fluid head.

Q28 Performance Table

Pump Model	Plunger Diameter (in)	Displacement (GAL/REV)	Pressure (PSI)	Pump Capacity (GPM) @ Input Speed (RPM)					
				100 RPM	150RPM	200RPM	240RPM	250RPM	300RPM
Q2814	1.750	0.3644	10,000	36	55	73	87	91	109
Q2816	2.000	0.4760	8,750	48	71	95	114	119	143
Q2818	2.250	0.6024	6,920	60	90	120	145	151	181
Q2820	2.500	0.7437	5,600	74	112	149	178	186	223
Q2822	2.750	0.8999	4,630	90	135	180	216	225	270
Q2824	3.000	1.0710	3,890	107	161	214	257	268	321
Q2826	3.250	1.2569	3,310	126	189	251	302	314	377
Q2828	3.500	1.4577	2,860	146	219	292	350	364	437
Q2830	3.750	1.6734	2,490	167	251	335	402	418	502
Q2832	4.000	1.9040	2,190	190	286	381	457	476	571
Q2834	4.250	2.1494	1,940	215	322	430	516	537	645
Q2836	4.500	2.4097	1,730	241	361	482	578	602	723
Q2838	4.750	2.6849	1,550	268	403	537	644	671	805
Q2840	5.000	2.9750	1,400	297	446	595	714	744	892
Q2842	5.250	3.2799	1,270	328	492	656	787	820	984
Q2844	5.500	3.5997	1,160	360	540	720	864	900	1,080
Q2846	5.750	3.9344	1,060	393	590	787	944	984	1,180
Q2848	6.000	4.2840	970	428	643	857	1,028	1,071	1,285
Q2850	6.250	4.6484	900	465	697	930	1,116	1,162	1,395

FMC Bolt-on Gearbox Ratios Available

6.17 : 1

7.30 : 1

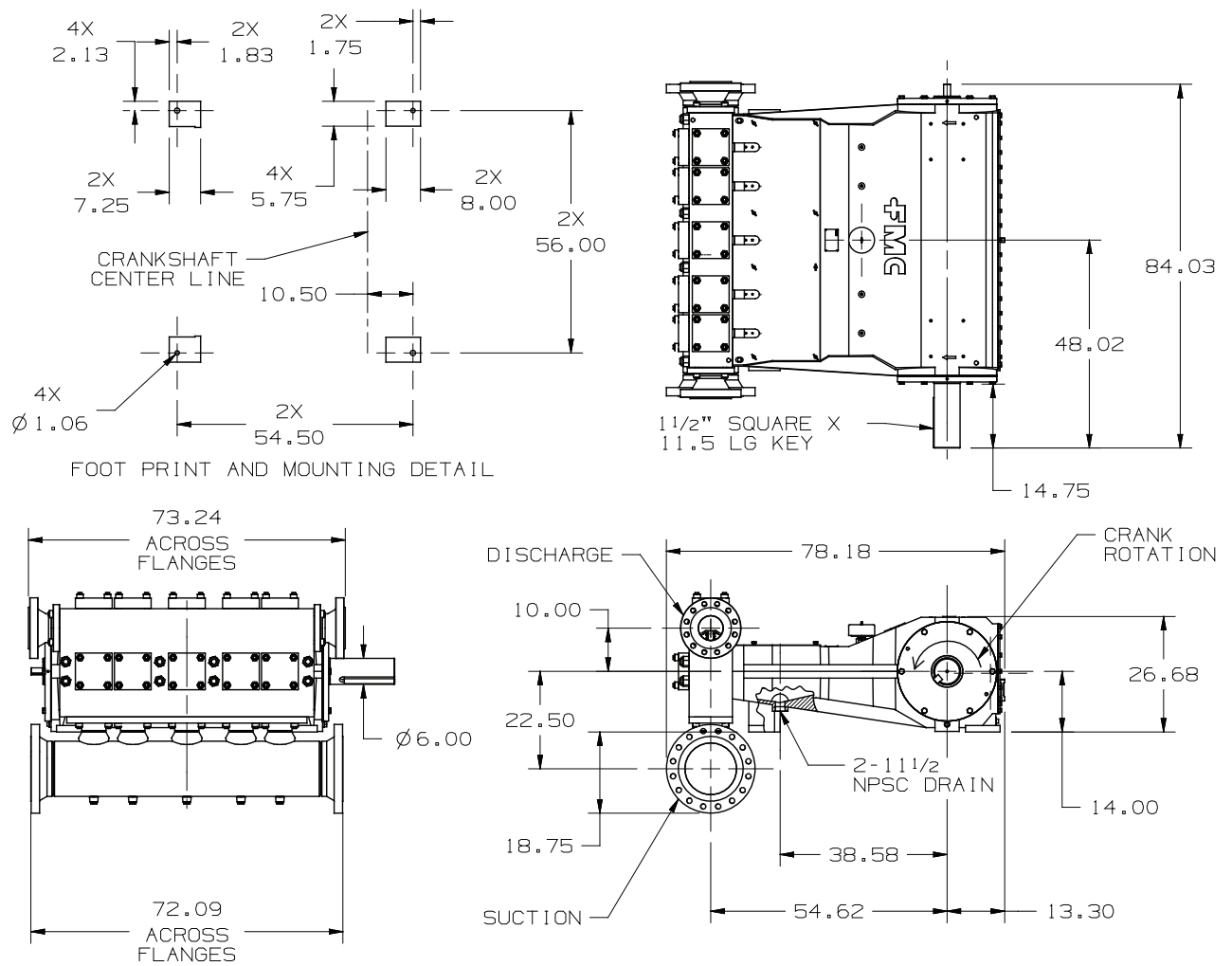
9.57 : 1

- * Pump capacities shown are based on 100% volumetric efficiency.
 - * FMC recommends NSPHa (available) exceeds NPSHr (required) by 5 feet of water.
 - * Take special consideration when calculating NPSHa. Recalculate NPSHa after pump model has been selected for more accurate values.
 - * NPSHr values are in feet of water. If you are pumping a different liquid than water, convert the required NPSHa from water to the liquid being pumped by dividing the published NPSHr value by the specific gravity of the liquid being pumped.
- FMC published NPSHr values are based on test data collected on specific pumps at the factory and are estimated values. Actual NPSHr values for an ordered pump can only be determined by a factor test. For NPSH critical applications, contact the factory for additional information and request a NPSHr test performed on your pump before shipment.

Q28 Plunger Pump Data

650 BHP Continuous Duty (800 BHP Intermittent Duty)

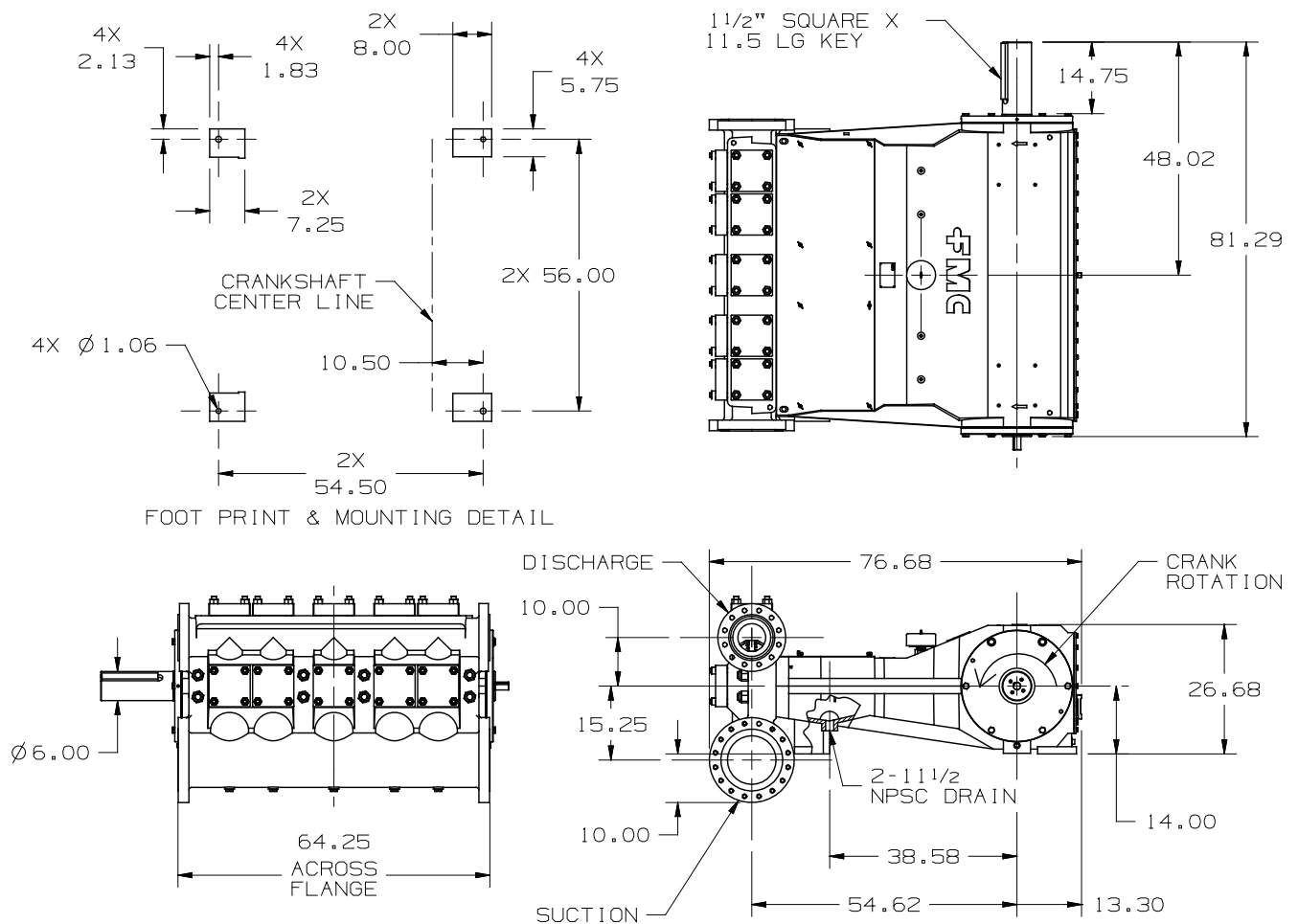
Forged Pump Engineering Dimensional Outline



Q28 Plunger Pump Data

650 BHP Continuous Duty (800 BHP Intermittent Duty)

Cast Pump Engineering Dimensional Outline



- Dimensions shown are for general sizing purposes and should not be used of construction. Contact FMC for actual dimensions of pump ordered.
- FMC reserves the right to modify this information without prior notice.
- Pump drawing dimensions in inches.