

T100 Series Medium Pressure Models T100K & T100M

Maximum Flow Rate: 45 gpm (170.4 l/min)
Maximum Pressure: 3500 psi (241 bar)

Hydra-Cell[®]
Seal-less Pumps



T100 Series medium pressure model with
Nickel Aluminum Bronze pump head

**Available
to Meet
API 674!**

- Seal-less design eliminates leaks, hazards and the expense associated with seals and packing
- Low NPSH requirements allow for operation with a vacuum condition on the suction - positive suction pressure is not necessary
- Can operate with a closed or blocked suction line and run dry indefinitely without damage, eliminating downtime and repair costs
- Unique diaphragm design handles more abrasives with less wear than gear, screw or plunger pumps
- Hydraulically balanced diaphragms to handle high pressures with low stress
- Lower energy costs than centrifugal pumps
- Rugged construction for long life with minimal maintenance
- Compact design and double-ended shaft provide a variety of installation options

T100 Series Medium Pressure Performance

Capacities

Flow

Model	Max. Input rpm	Maximum Flow gpm	l/min
T100K	450	45.0	170.4
T100M	450	38.0	143.8

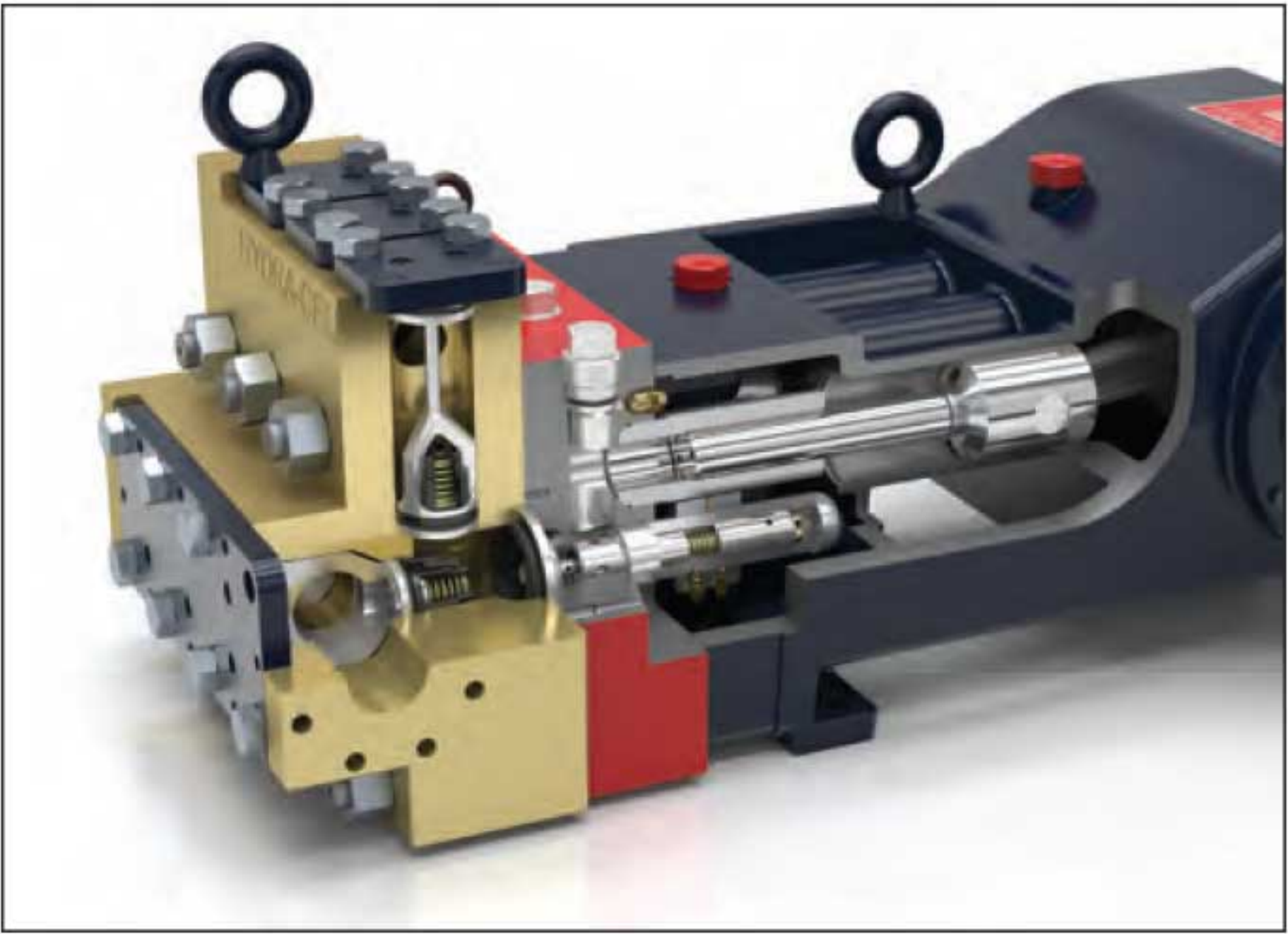
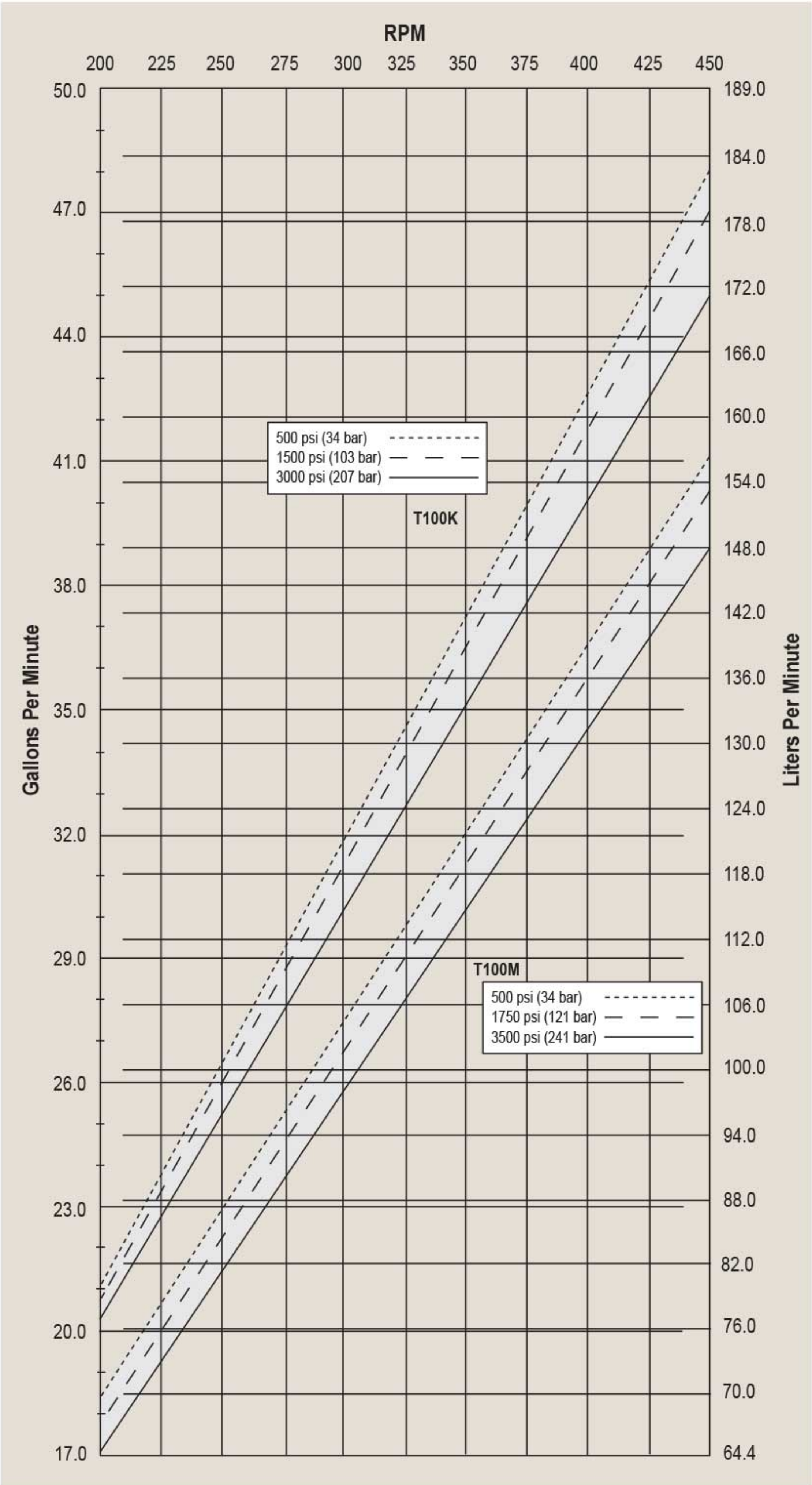
Consult factory when operating below 20 gpm (75.7 l/min).

Pressure

Maximum Inlet Pressure
500 psi (34 bar)

Maximum Discharge Pressure
T100K 3000 psi (207 bar)
T100M 3500 psi (241 bar)

Maximum Flow at Designated Pressure



T100 Series pumps feature the Hydra-Cell seal-less design, eliminating clean-up costs from leaking seals or packing and protecting operators from dangerous fluids such as those containing hydrogen sulfide.

Due to Wanner Engineering continuous improvement practices, performance data and specifications may change without notice.

T100 Series Medium Pressure Specifications

Flow Capacities @3000 psi (207 bar)

Model	rpm	gpm	l/min
T100K	450	45.0	170.4
T100M	450	38.0	143.8

Delivery

	Pressure psi (bar)	gal/rev	liters/rev
T100K	500 (34)	0.107	0.406
	1500 (103)	0.105	0.397
	3000 (207)	0.101	0.384
T100M	500 (34)	0.091	0.345
	1750 (121)	0.089	0.338
	3500 (241)	0.086	0.327

rpm

Maximum:	450
Minimum:	200 (Consult factory for speeds less than 200 rpm)

Maximum Discharge Pressure

Metallic Heads:	T100K	3000 psi (207 bar)
	T100M	3500 psi (241 bar)

Maximum Inlet Pressure 500 psi (34 bar)

Operating Temperature

Maximum:	180° F (82.2° C)
Minimum:	40° F (4.4° C)
Consult factory for temperatures outside this range	

Maximum Solids Size 800 microns

Input Shaft Left or Right Side

Inlet Ports 3-1/2 inch Class 300 RF ANSI Flange or 2-1/2 inch NPT

Discharge Ports 1-1/2 inch Class 2500 RTJ ANSI Flange or 1-1/2 inch NPT

Shaft Diameter 3 inch (76.2 mm)

Shaft Rotation Reverse (bi-directional)

Oil Capacity 18 US quarts (17 liters) 10W30 standard-duty oil

Weight

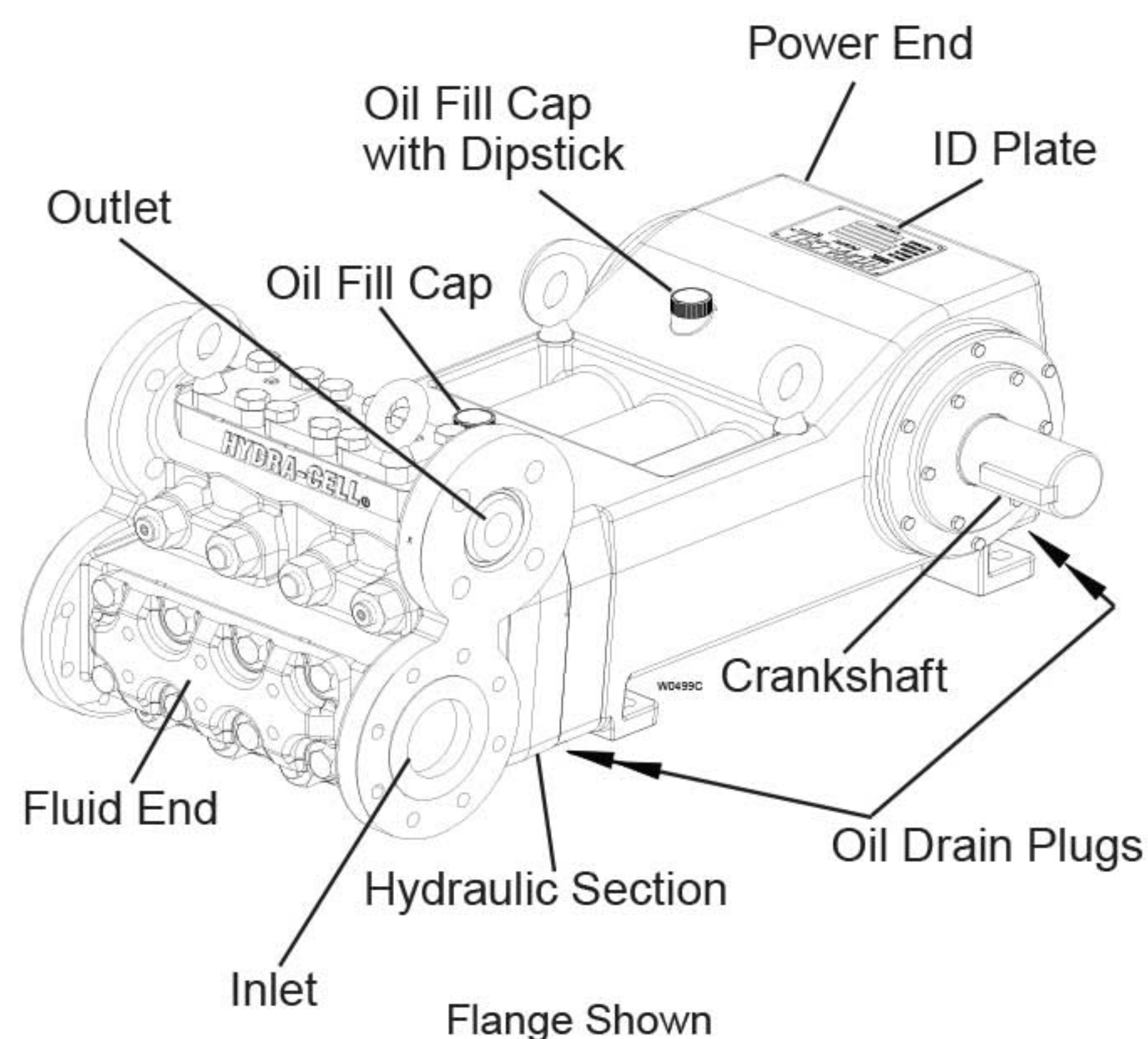
Metallic Heads:	1100 lbs. (499 kg)
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Fluid End Materials

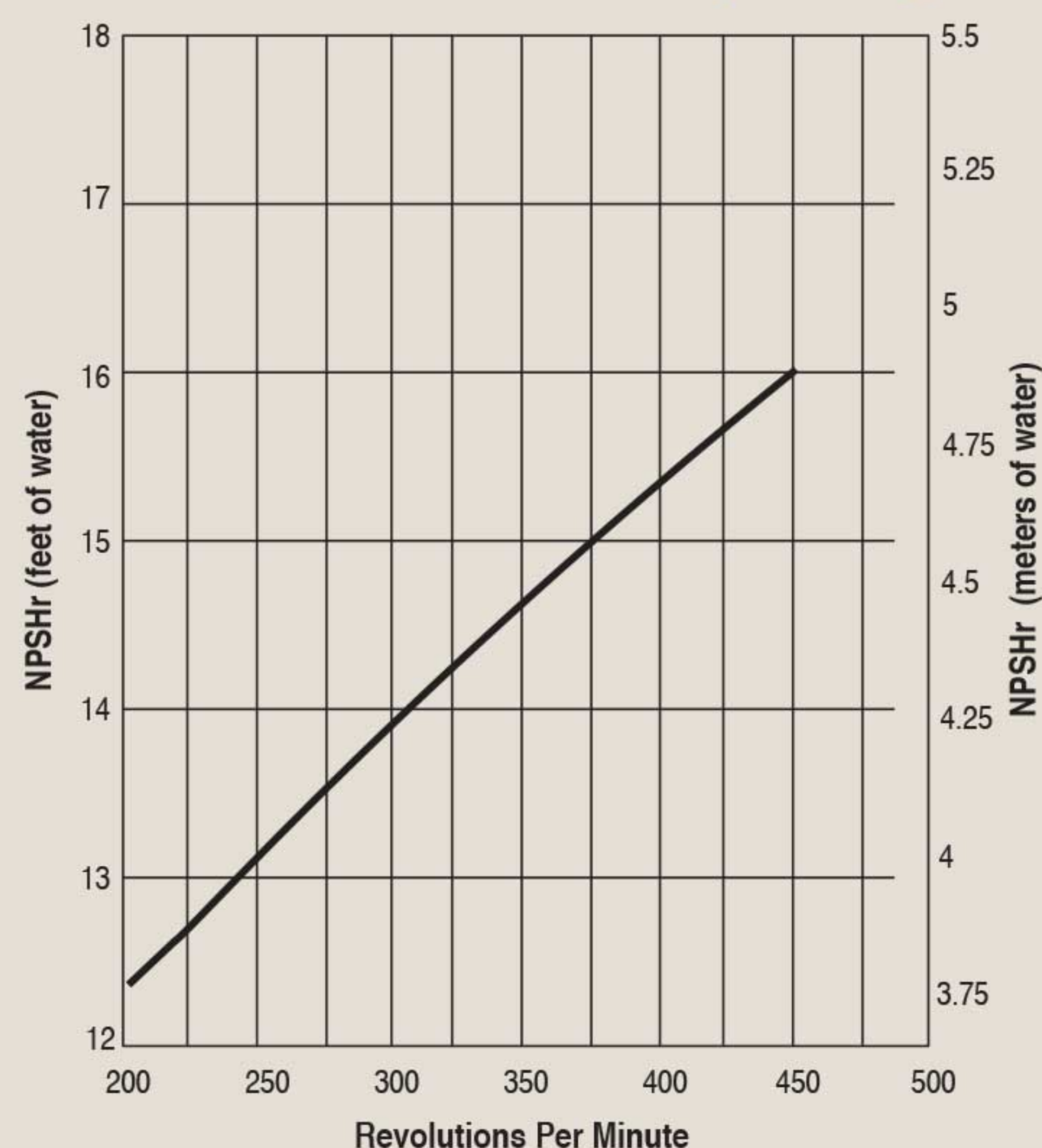
Manifold:	Nickel Aluminum Bronze (NAB) 316L Stainless Steel
Diaphragm/Elastomers:	FKM Buna-N
Valve Spring Retainer:	Polypropylene PVDF
Check Valve Spring:	Elgiloy
Valve Disc/Seat:	Tungsten Carbide 17-4 Stainless Steel Hastelloy C

Power End Materials

Crankshaft:	Forged Q&T Alloy Steel
Crankcase:	Ductile Iron
Bearings:	Spherical Roller/Journal (main)



Net Positive Suction Head (NPSHr)



Calculating Required Horsepower (kW)*

$$\frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor hp}^*$$

$$\frac{\text{lpm} \times \text{bar}}{511} = \text{electric motor kW}^*$$

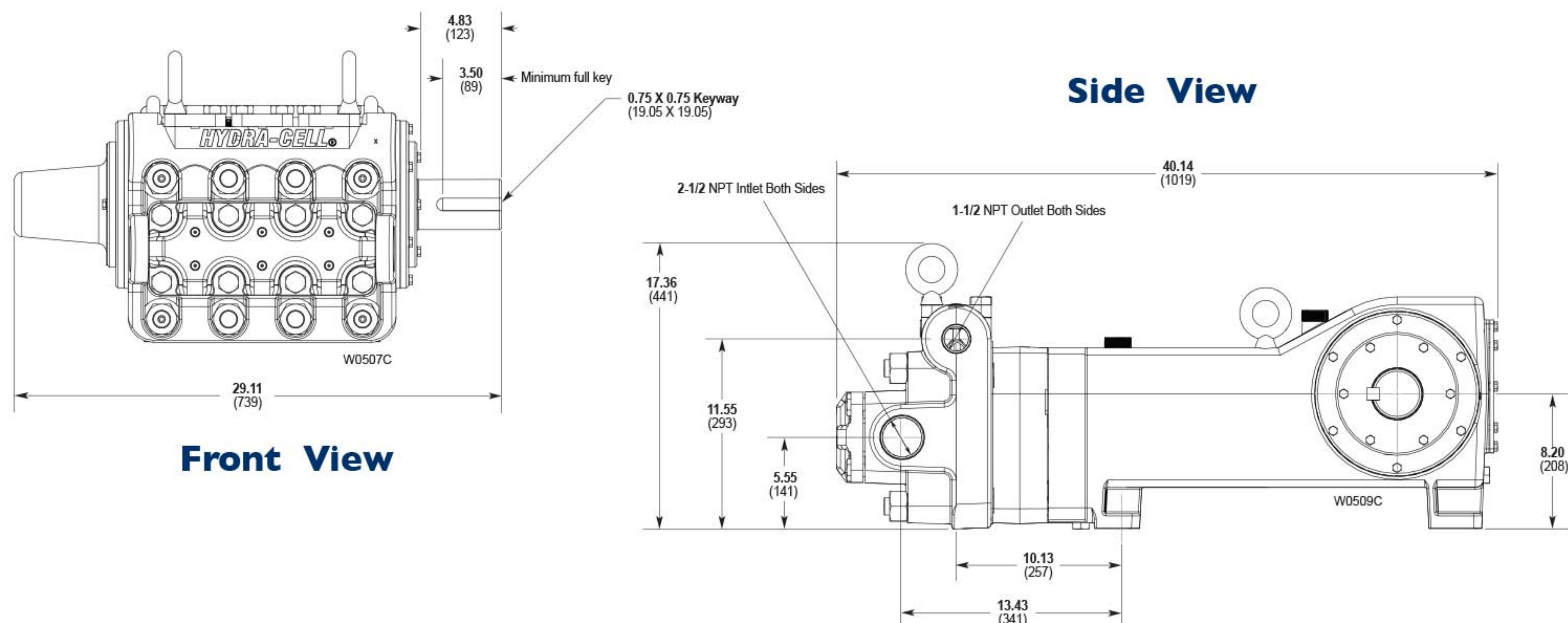
* hp (kW) is required application power.

Attention!

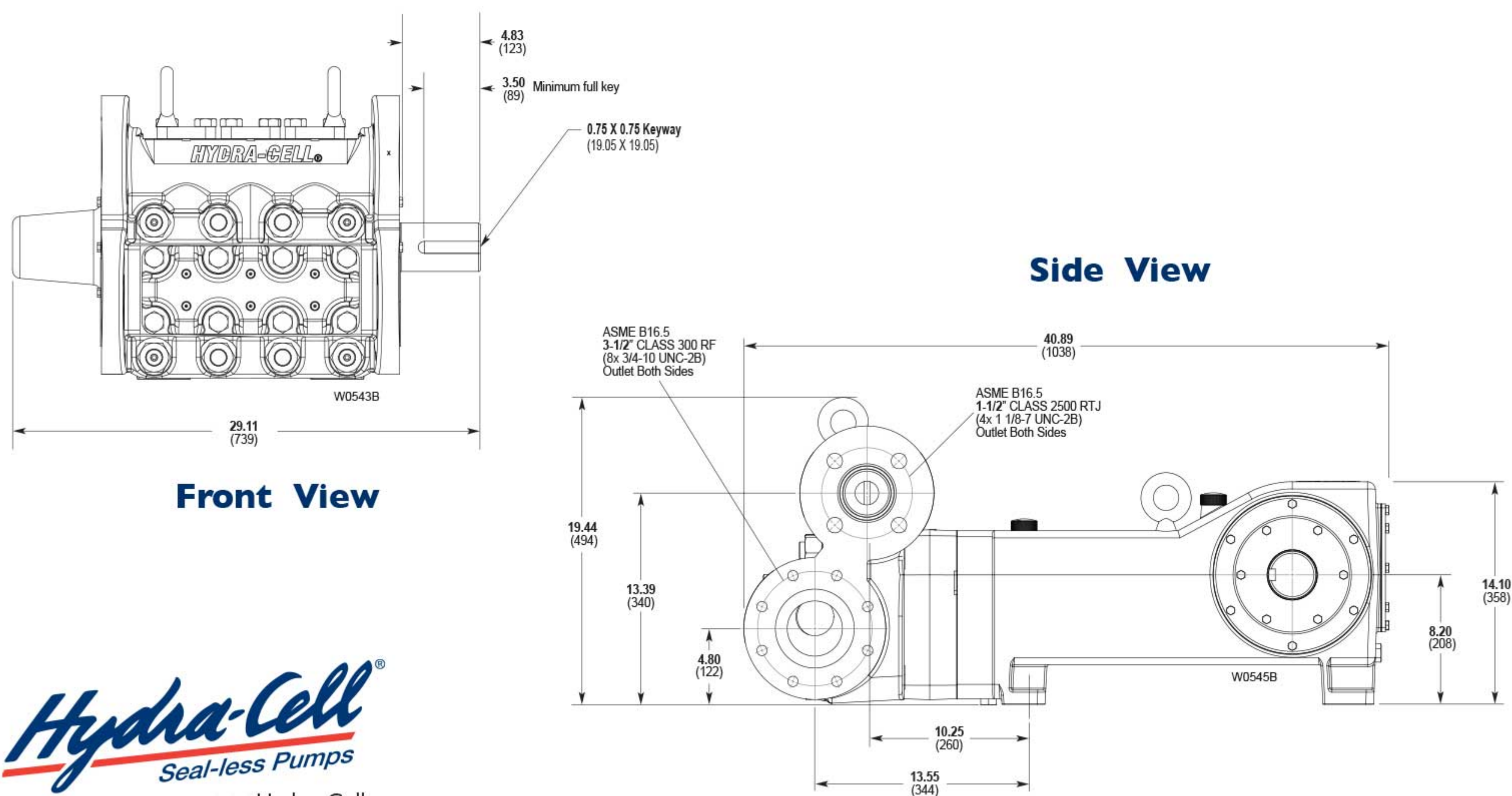
When sizing motors with variable speed drives (VFD): It is very important to select a motor and a VFD rated for constant torque inverter duty service and that the motor is rated to meet the torque requirements of the pump throughout desired speed range.

T100 Series Medium Pressure Dimensions

Threaded Version Inches (mm)



Flanged Version Inches (mm)



Hydra-Cell
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