

T80 Series Model T80100

Maximum Flow Rate: 96 gpm (366.1 l/min)

Maximum Pressure: 1500 psi (103 bar)

BETA

Hydra-Cell
Seal-less Pumps



T80100 with Nickel Aluminum
Bronze pump head

- 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

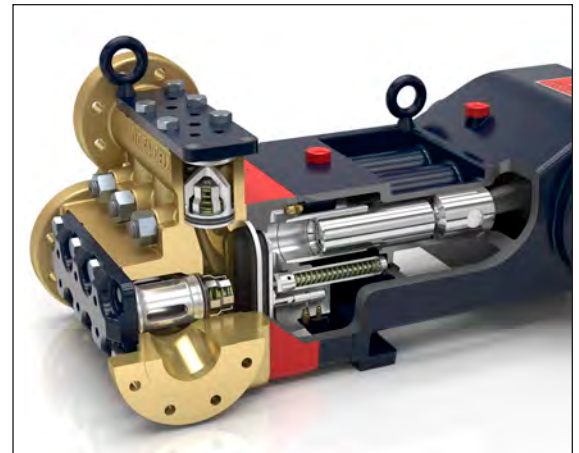
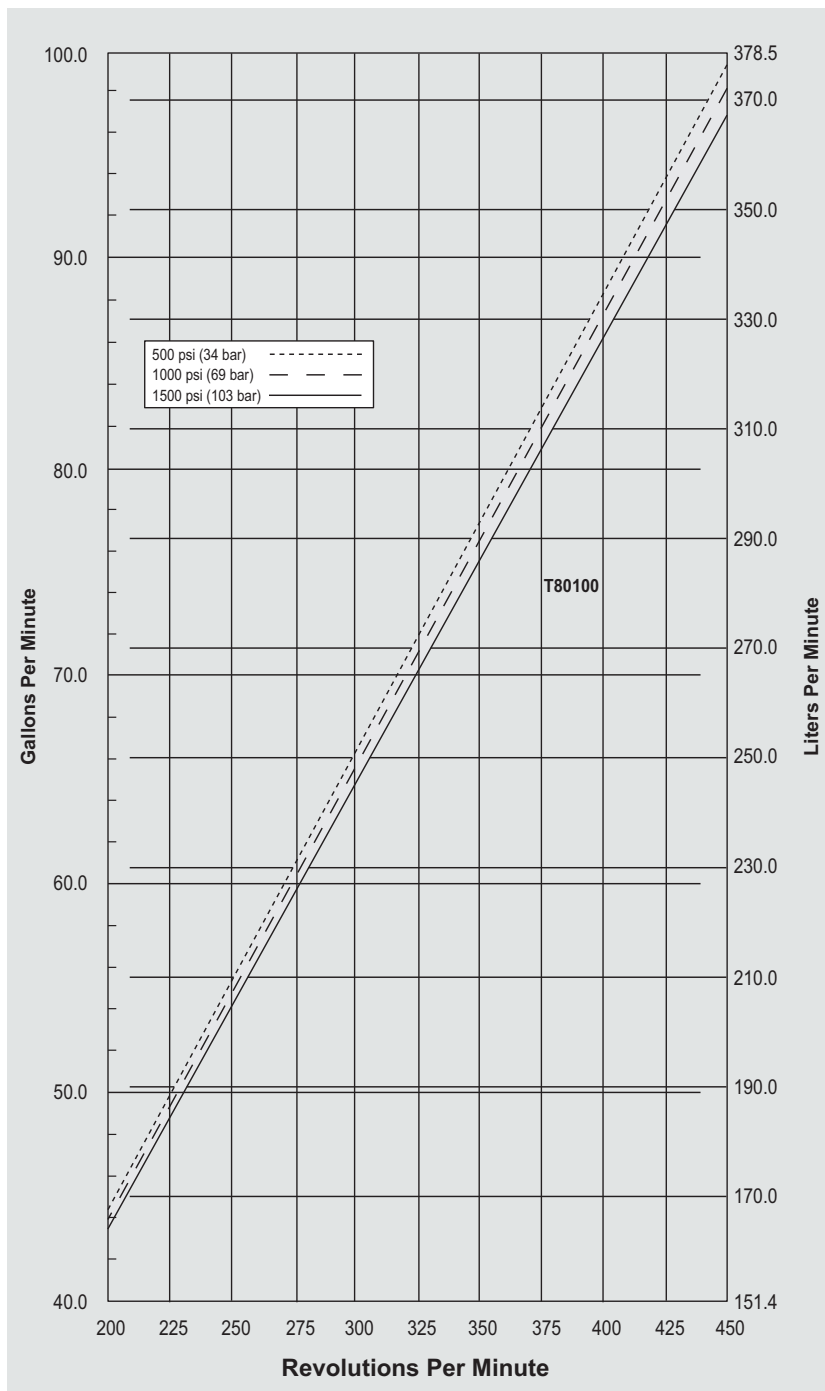
T80 Series Model T80100 Performance

Capacities

Flow				Pressure	
Model	Max. Input rpm	Max. Flow @ 1500 psi (103 bar)		Maximum Inlet Pressure	Maximum Discharge Pressure
		gpm	l/min		
T80100	450	96.0	366.4	500 psi (34 bar)	1500 psi (103 bar)

Consult factory when operating below 44 gpm (166.6 l/min).

Maximum Flow at Designated Pressure



T80 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.

T80 Series Model T80100 Specifications

Flow Capacities @1500 psi (103 bar)

Model	rpm	gpm	l/min
T80100	450	96.0	366.4

Delivery

Pressure psi (bar)	gal/rev	liters/rev
500 (34)	0.221	0.835
1000 (69)	0.218	0.825
1500 (103)	0.215	0.814

rpm

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

Maximum Discharge Pressure

Metallic Heads:	1500 psi (103 bar)
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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

Discharge Ports 2 inch Class 900 RF ANSI Flange

Shaft Diameter 3 inch (76.2 mm)

Shaft Rotation Reverse (bi-directional)

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

Weight

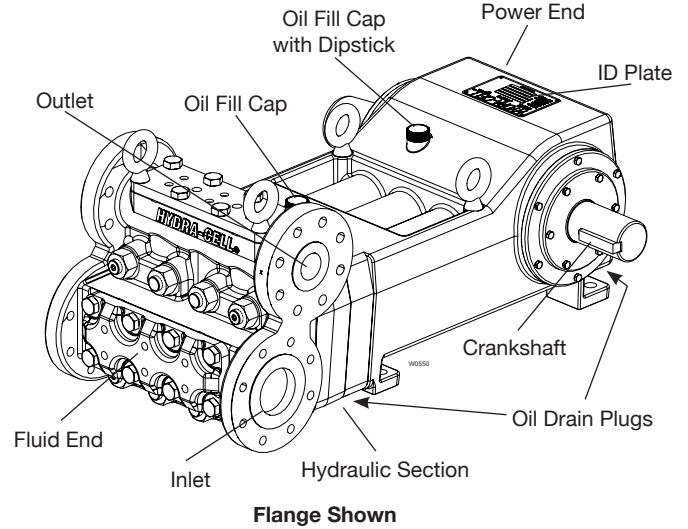
Metallic Heads:	1100 lbs. (499 kg)
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Fluid End Materials

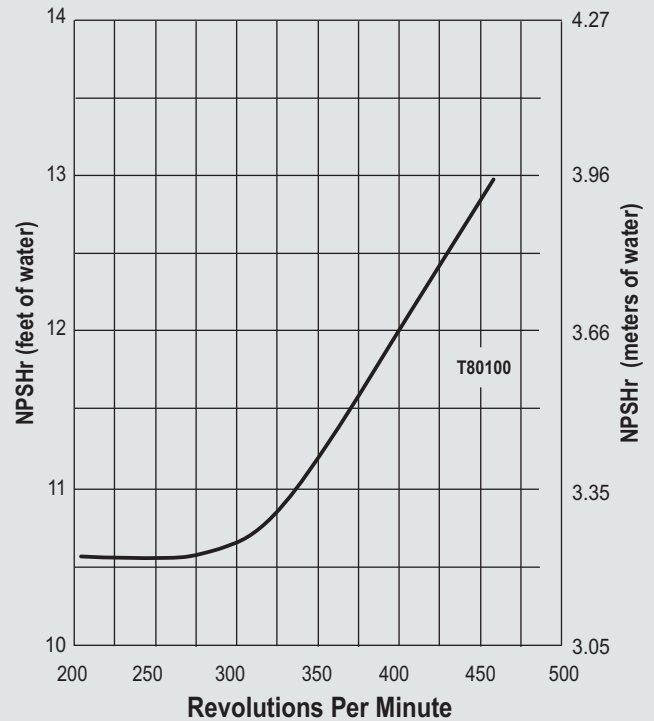
Manifold:	Nickel Aluminum Bronze (NAB)
Diaphragm/Elastomers:	FKM Buna-N
Diaphragm Follower Screw:	316 Stainless Steel
Valve Spring Retainer:	17-7 PH Stainless Steel
Check Valve Spring:	Elgiloy
Valve Disc/Seat :	17-4 Stainless Steel
Outlet Valve Retainer:	316 Stainless Steel
Plug-Outlet Valve Port:	316 Stainless Steel
Inlet Valve Retainer:	316 Stainless Steel

Power End Materials

Crankshaft:	Forged Q&T Alloy Steel
Connecting Rods:	Ductile Iron
Crossheads:	12L14 Steel
Crankcase:	Ductile Iron
Bearings:	Spherical Roller/Journal (main) Steel Backed Babbit (crankpin) Bronze (wristpin)



Net Positive Suction Head (NPSHr)



Calculating Required Horsepower (kW)*

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

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

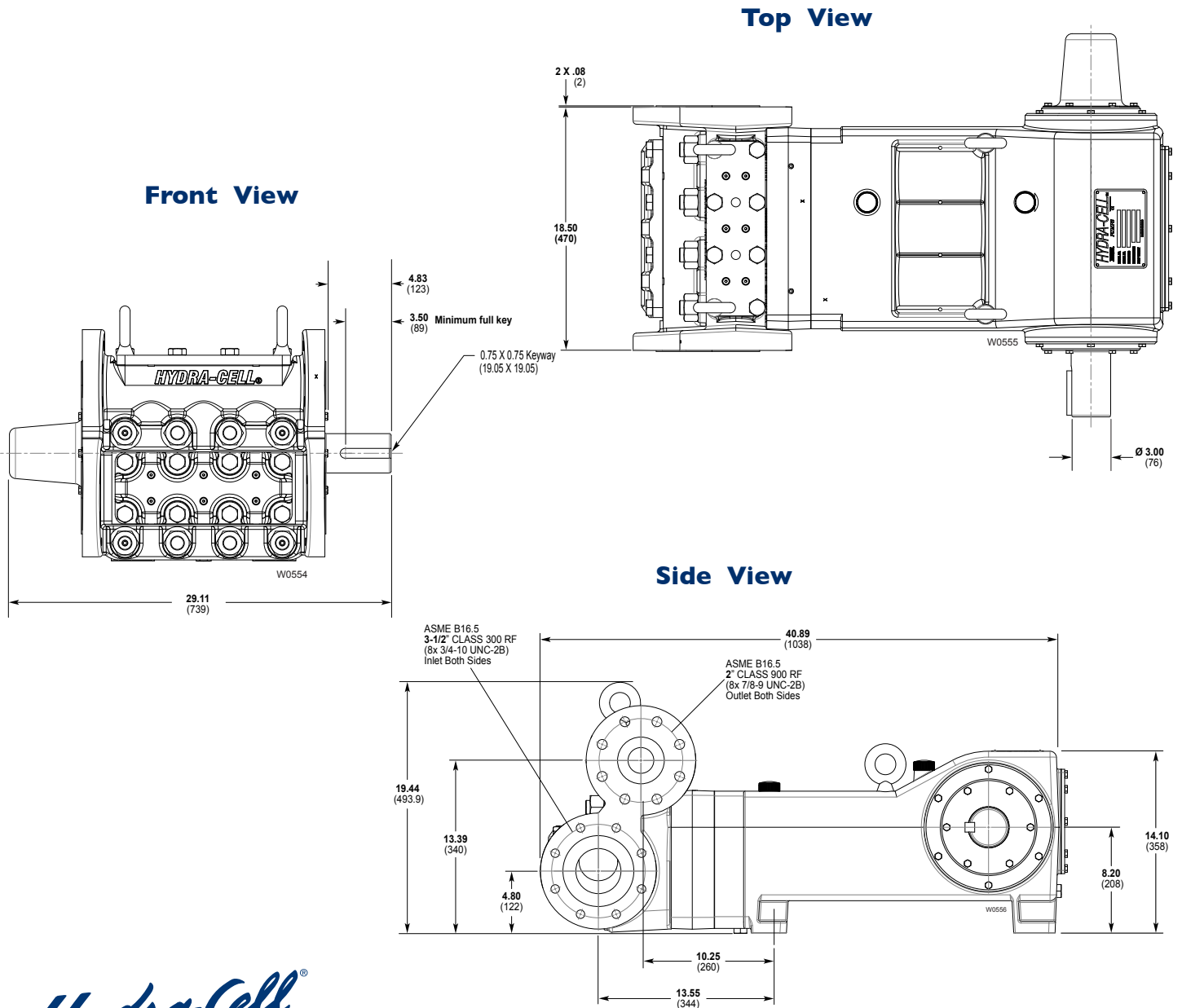
* hp (kW) is required application power.

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.

T80 Series Model T80I00 Dimensions

Model T80I00 Flanged Version inches (mm)



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