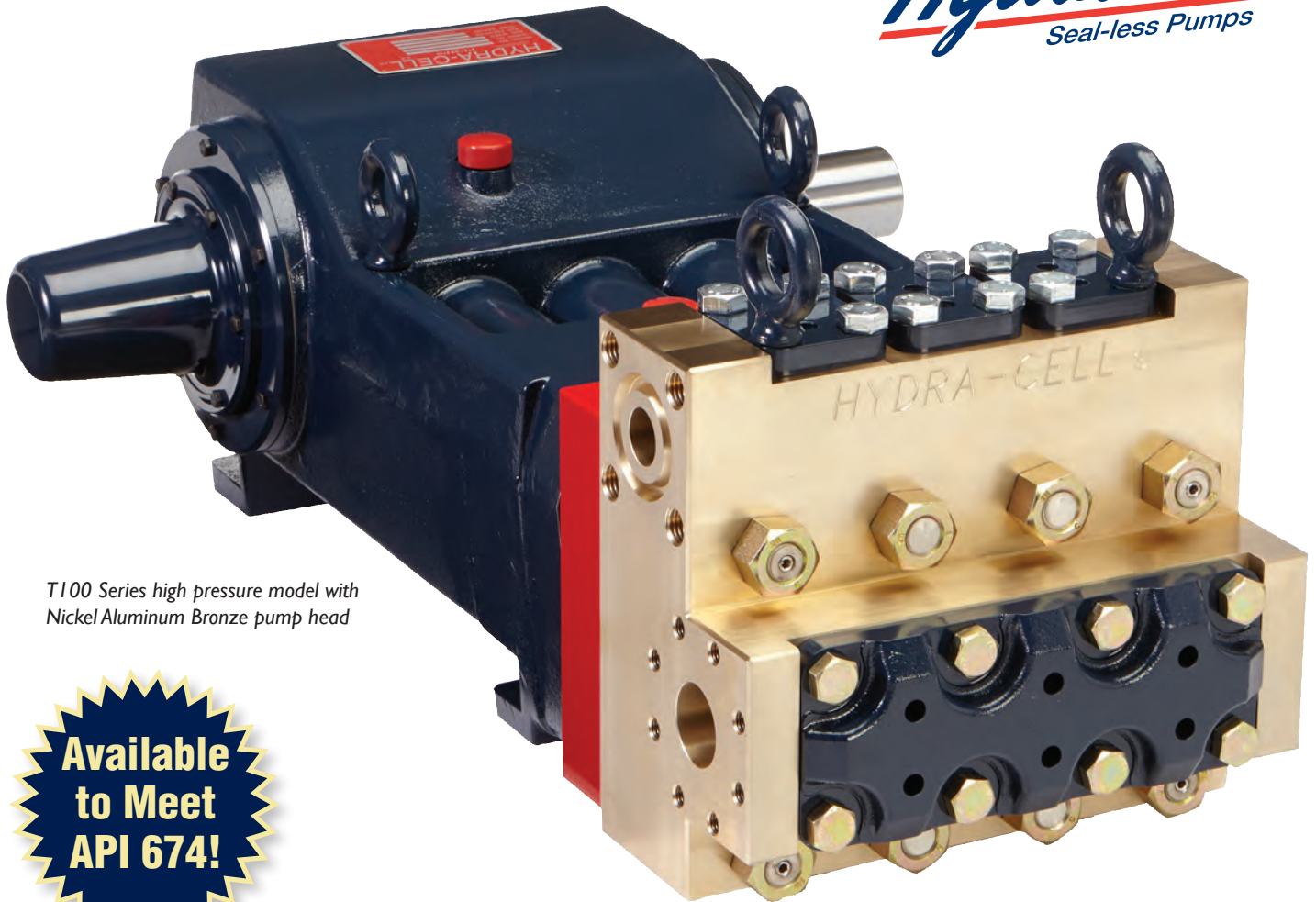


# T100 Series High Pressure

Maximum Flow Rate: 26 gpm (98.4 l/min)  
Maximum Pressure: 5000 psi (345 bar)

**Hydra-Cell**<sup>®</sup>  
Seal-less Pumps



T100 Series high 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

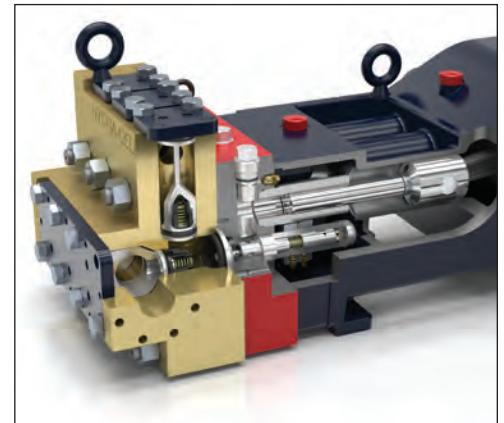
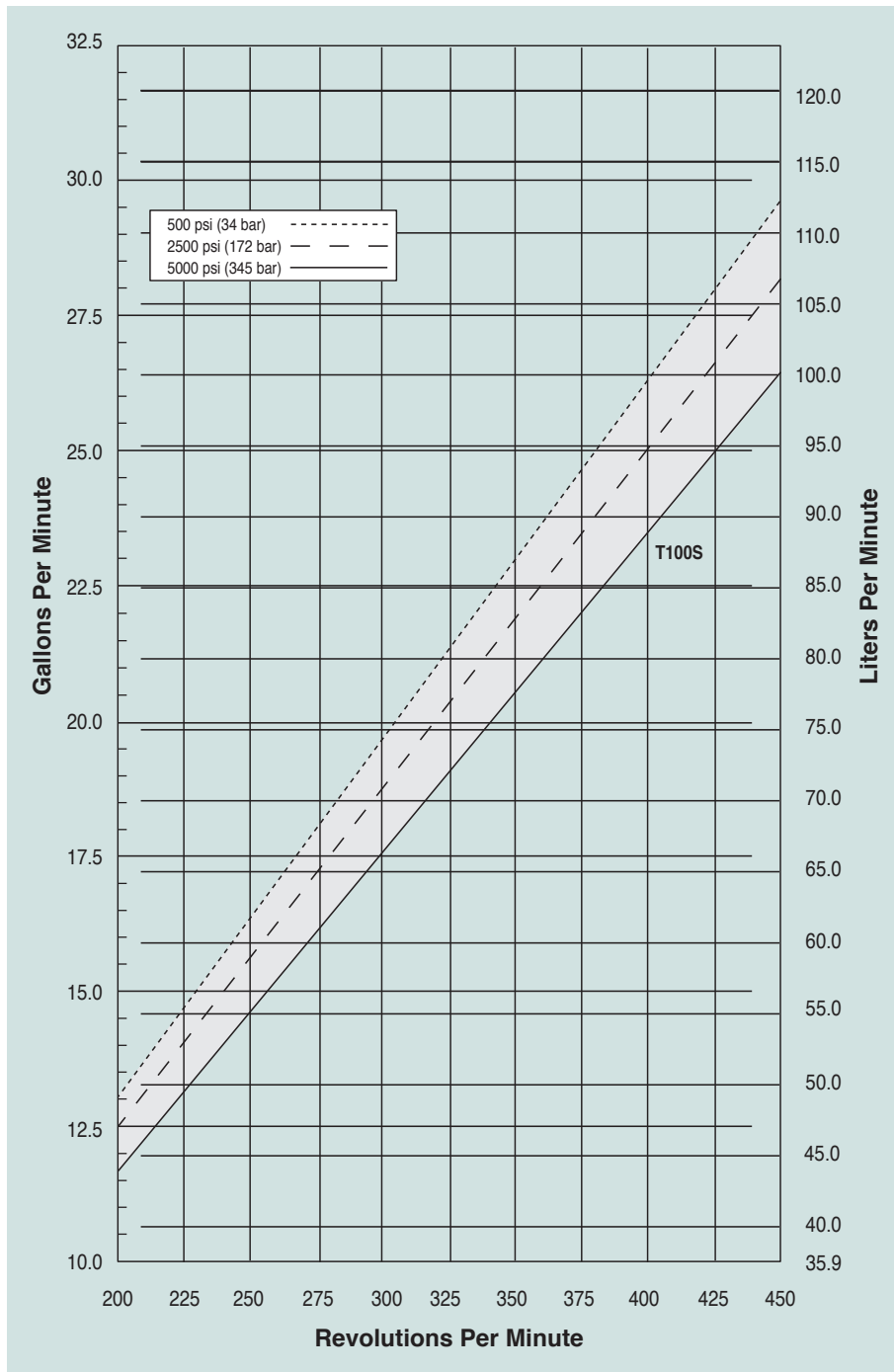
# T100 Series High Pressure Performance

## Capacities

Flow				Pressure
Model	Max. Input rpm	Max. Flow @ 5000 psi (345 bar)		Maximum Inlet Pressure
		gpm	l/min	
T100S	450	26.0	98.4	500 psi (34 bar)
				Maximum Discharge Pressure
				5000 psi (345 bar)

Consult factory when operating below 12 gpm (45.4 l/min).

## 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 High Pressure Specifications

## Flow Capacities @5000 psi (345 bar)

Model	rpm	gpm	l/min
T100S	450	26.0	98.4

## Delivery

Pressure psi (bar)	gal/rev	liters/rev
500 (34)	0.066	0.249
2500 (172)	0.063	0.237
5000 (345)	0.059	0.222

## rpm

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

## Maximum Discharge Pressure

Metallic Heads:	5000 psi (345 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 2 inch Class 300 FF ANSI Flange

## Discharge Ports 1-1/4 inch Class 2500 RTJ 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

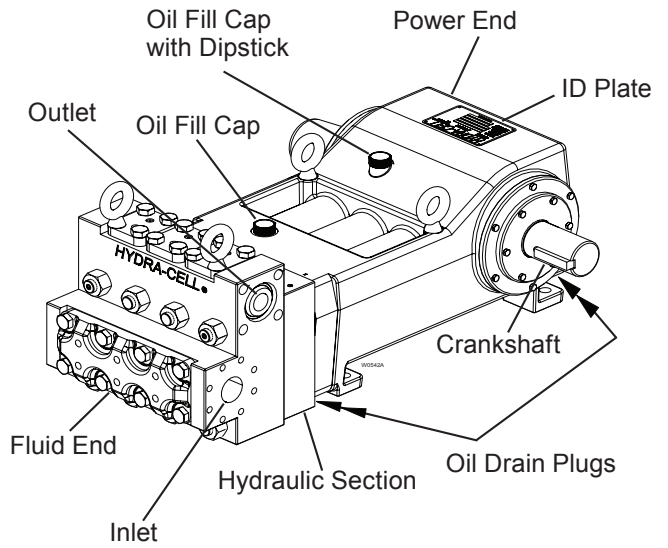
Metallic Heads:	1100 lbs. (499 kg)
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## Fluid End Materials

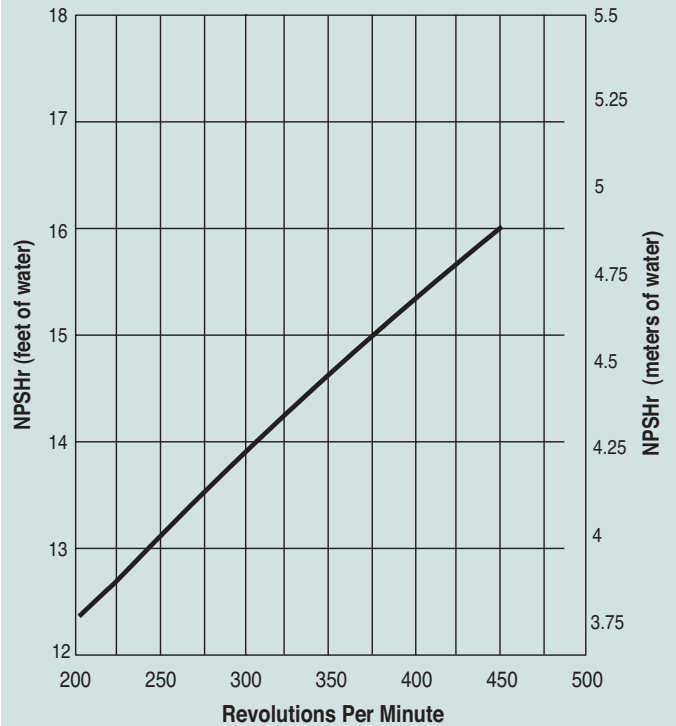
Manifold:	Nickel Aluminum Bronze (NAB) 316L Stainless Steel
Diaphragm/Elastomers:	FKM Buna-N
Diaphragm Follower Screw:	316 Stainless Steel
Valve Spring Retainer:	17-4 Stainless Steel PVDF Polypropylene 316 SST Hastelloy C
Check Valve Spring:	Elgiloy
Valve Disc/Seat:	Tungsten Carbide 17-4 Stainless Steel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

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

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

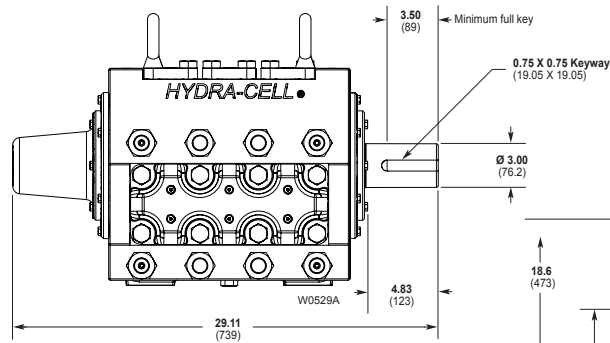
\* hp (kW) is required application power.

## Attention!

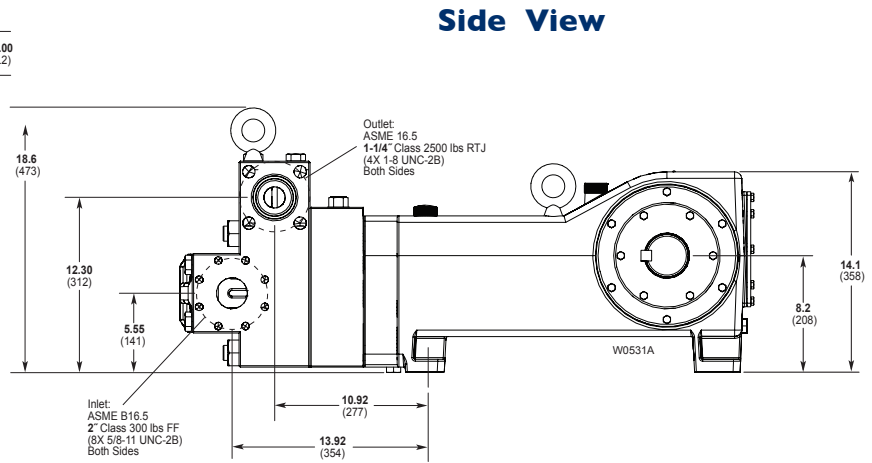
When sizing motors with variable speed drives (VFD): It is very important to select a motor and a VFD rated for constant torque inverter duty service and that the motor is rated to meet the torque requirements of the pump throughout desired speed range.

# T100 Series High Pressure Dimensions

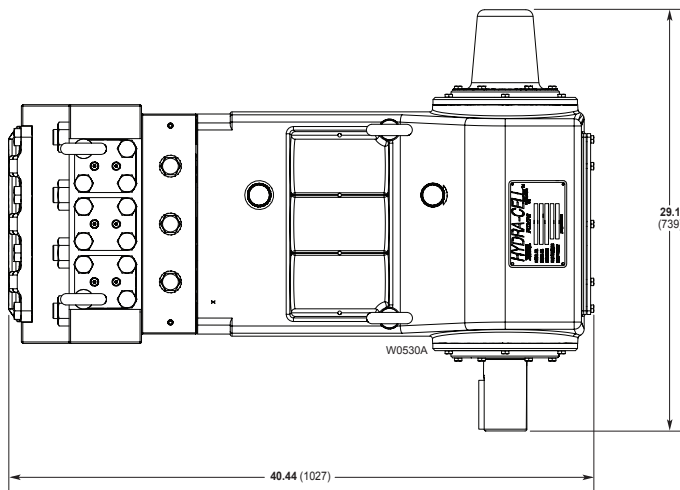
## Threaded Version Inches (mm)



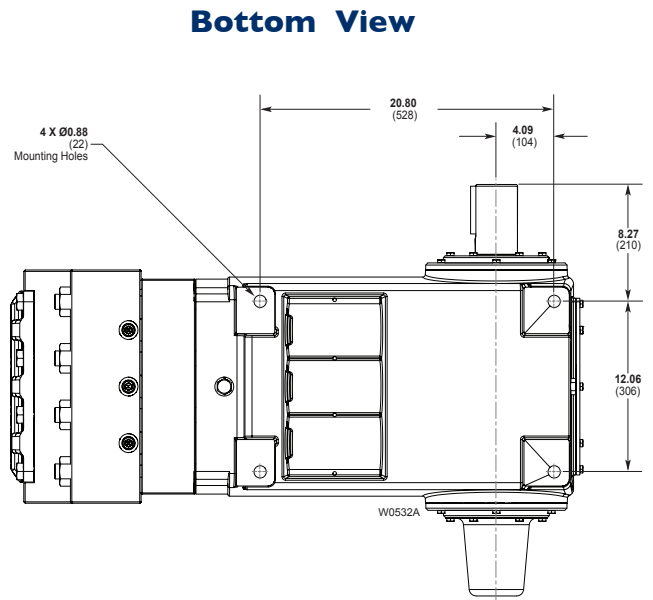
**Front View**



**Side View**



**Top View**



**Bottom View**



[www.Hydra-Cell.com](http://www.Hydra-Cell.com)



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# T100 Series High Pressure **How to Order**

## Ordering Information

<b>1</b> T	<b>2</b> 1	<b>3</b> 0	<b>4</b> 0	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>
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A complete T100 Series High Pressure Model Number contains 13 digits including 9 customer-specified design and materials options, for example: T100SRDTHFEPA.

## High Pressure

Digit	Order Code	Description
<b>1-4</b>	T100	<b>Pump Configuration</b> Shaft-driven
<b>5</b>	S	<b>Performance</b> Max. 26 gpm (98 l/min) @ 5000 psi (345 bar)
<b>6</b>	R	<b>Pump Head Version</b> ANSI Flange Ports (FF on Inlet / RTJ on Discharge)
<b>7</b>	D S	<b>Pump Head Material</b> Nickel Aluminum Bronze (NAB) 316L Stainless Steel
<b>8</b>	G T	<b>Diaphragm &amp; O-ring Material</b> FKM Buna-N
<b>9</b>	D H T	<b>Valve Seat Material</b> Tungsten Carbide* 17-4 Stainless Steel Hastelloy C
<b>10</b>	D F T	<b>Valve Material</b> Tungsten Carbide* 17-4 Stainless Steel Hastelloy C
<b>11</b>	E	<b>Valve Springs</b> Elgiloy
<b>12</b>	H M P S T	<b>Valve Spring Retainers</b> 17-4 Stainless Steel PVDF Polypropylene 316 SST Hastelloy C
<b>13</b>	A	<b>Hydra-Oil</b> 10W30 standard-duty oil

\*Tungsten Carbide valve seat and disc are a matched set and must be purchased together.