

# T200 Series High Pressure Models T200P & T200Q

Maximum Flow Rate: 72 gpm (272 l/min) 2469 BPD  
Maximum Pressure: 4500 psi (310 bar)

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



T200 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 offers a variety of installation options.

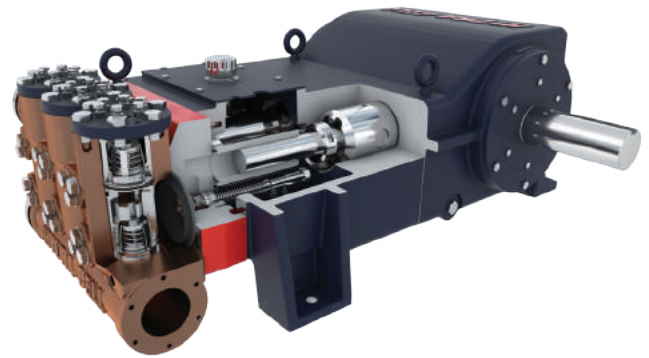
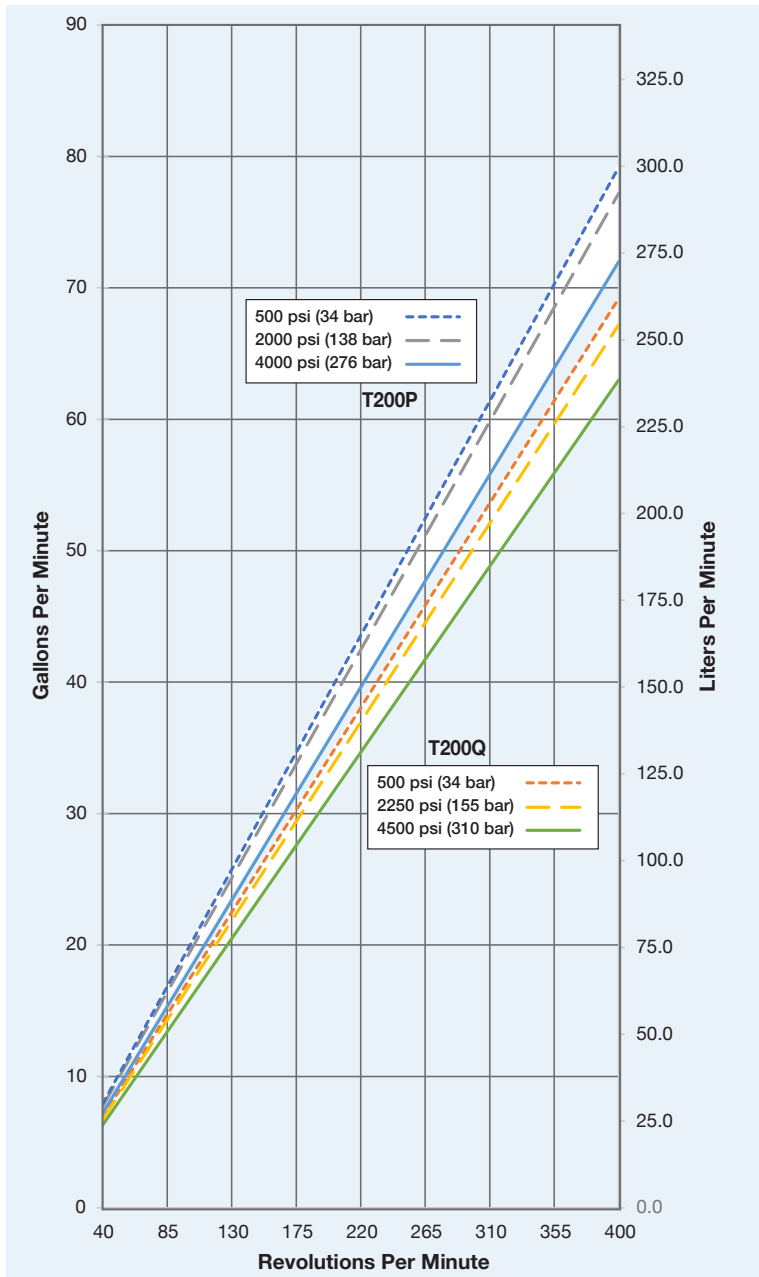
# T200 Series High Pressure Performance

## Capacities

Model	Max. Input rpm	Plunger Dia.		Max. Flow Capacities			Max. Pressure Ratings Discharge		Max. Pressure Ratings Inlet	
		Inches	mm	gpm	l/min	BPD	psi	bar	psi	bar
T200P	400	2.000	51	72	272	2469	4000	276	500	34
T200Q	400	1.875	48	63	238	2160	4500	310	500	34

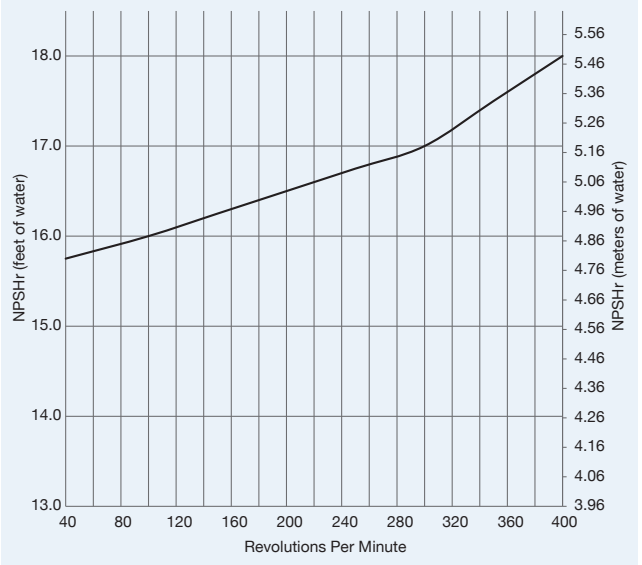
Consult factory when operating below 40 rpm.

## Maximum Flow at Designated Pressure



T200 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.

## Net Positive Suction Head (NPSHr)



Due to the Wanner Engineering Continuous Improvement Program, specifications and other data may change without notice.

# T200 Series High Pressure Specifications

## Flow Capacities

Model	Pressure psi (bar)	rpm	gpm	l/min	BPD
T200P	4000 (276)	400	72	272	2469
T200Q	4500 (310)	400	63	238	2160

## Delivery

	Pressure psi (bar)	gal/rev	liters/rev
T200P	500 (34)	0.198	0.749
	2000 (138)	0.193	0.731
	4000 (276)	0.180	0.681
T200Q	500 (34)	0.173	0.655
	2250 (155)	0.168	0.636
	4500 (310)	0.158	0.596

## rpm

Maximum:	400
Maximum API 674:	310
Minimum:	40 (Consult factory for speeds less than 40 rpm.)

## Maximum Discharge Pressure

Metallic Heads:	T200P	4000 psi (276 bar)
	T200Q	4500 psi (310 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

Right Side

## Inlet Ports

Weld-On: 4" / SCH. 40  
4" NPT, 4" Class 300 RF ANSI

## Discharge Ports

Weld-On: 2" / SCH. 160  
2" NPT, 2" Class 2500 RTJ ANSI

## Plunger Stroke Length

5 Inches (127 mm)

## Shaft Diameter

4 inch (101.6 mm)

## Shaft Rotation

Uni-directional (See rotation arrow.)

## Oil Capacity

80 US quarts (75.7 liters) - blank back cover  
See page 5 for oil selection and specification.

## Weight

Metallic Heads:	3000 lbs. (1361 kg)
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## 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!

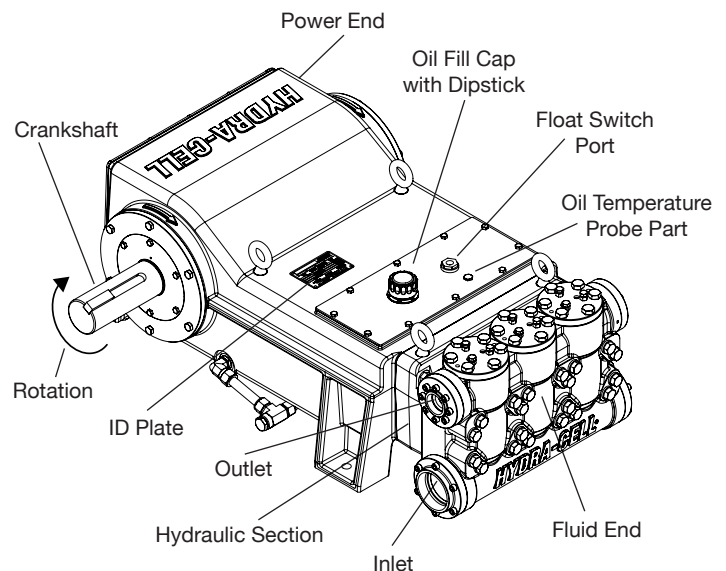
When sizing motors with variable speed drives (VFD): It is very important to select a motor and a VFD rated for constant torque inverter duty service and that the motor is rated to meet the torque requirements of the pump throughout desired speed range.

## Fluid End Materials

Manifold:	Nickel Aluminum Bronze (NAB)
	Duplex Alloy 2205 Stainless Steel
	316L Stainless Steel CF3M
	Hastelloy CX2M
Diaphragm/Elastomers:	FKM
	Buna-N
Diaphragm Follower Screw:	316 Stainless Steel
	Duplex Alloy 2205 Stainless Steel
	Hastelloy C
Valve Spring Retainer:	Hastelloy C / PVDF
Check Valve Spring:	Elgiloy
	Hastelloy C
Valve Disc/Seat:	17-4 Stainless Steel
	Nitronic 50
	Hastelloy C
Inlet/Outlet Valve Retainer:	316 Stainless Steel
	Duplex Alloy 2205 Stainless Steel
	Hastelloy C

## Power End Materials

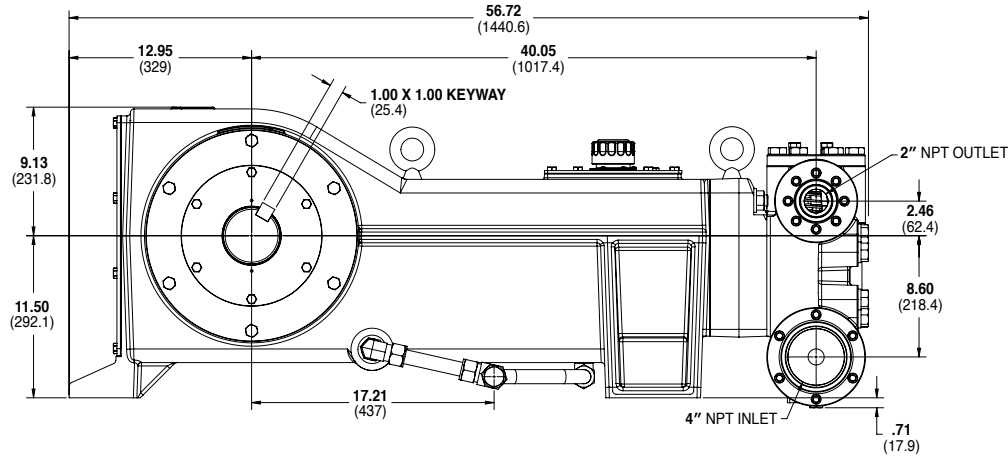
Crankshaft:	Ductile Iron
Connecting Rods:	Ductile Iron
Crossheads:	Ductile Iron
Crankcase:	Ductile Iron
Bearings:	Spherical Roller (main)
	Steel-backed Tri-metal (crankpin)
	Bronze (wristpin)



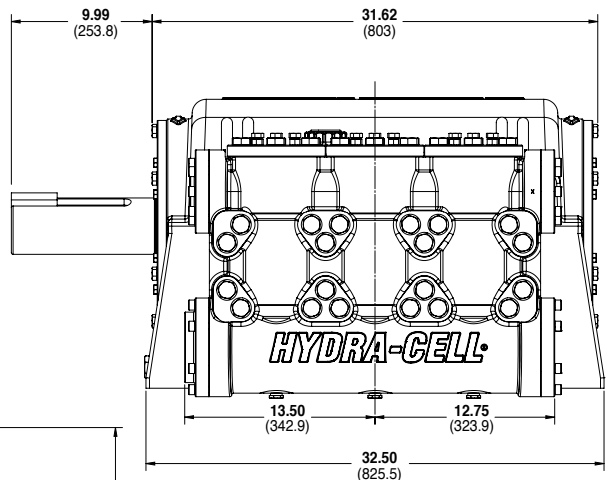
# T200 Series High Pressure Representative Drawings

Threaded Version Inches (mm)

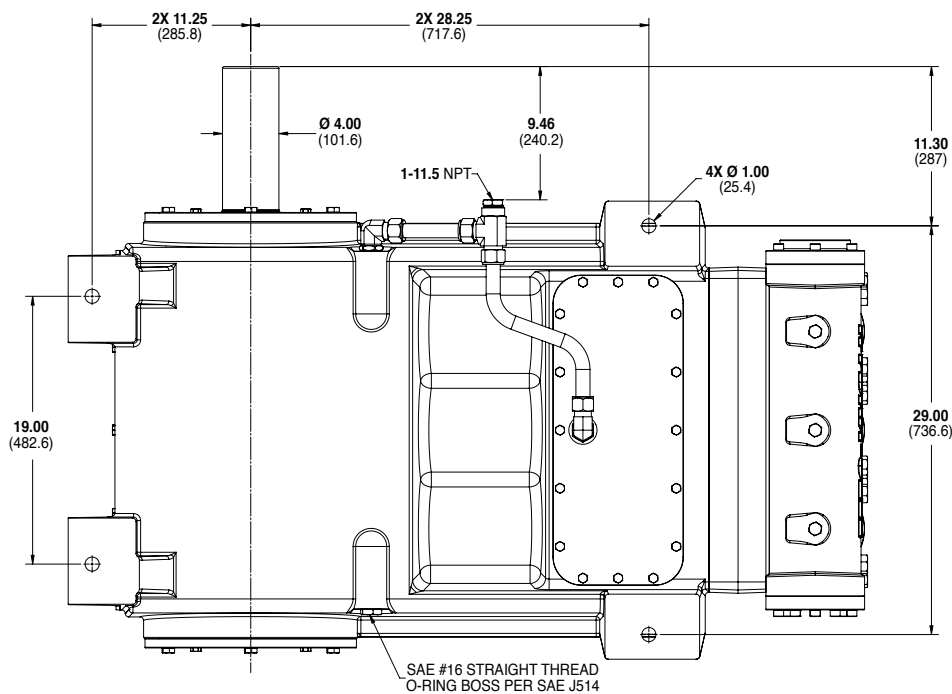
## Side View



## Front View



## Bottom View



**Note:** Dimensions are for reference only. Contact factory for certified drawings.

# T200 Series High Pressure **How to Order**

## Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14
T	2	0	0								T		

A complete T200 Series High Pressure Model Number contains 14 digits including 9 customer-specified design and materials options, for example: T200PADGHFETAC.

## High Pressure

Digit	Order Code	Description
<b>1-4</b>		<b>Pump Configuration</b>
	T200	Shaft-driven
<b>5</b>		<b>Performance</b>
	P	Max. 72 gpm (272 l/min) 2469 BPD @ 4000 psi (276 bar)
	Q	Max. 63 gpm (238 l/min) 2160 BPD @ 4500 psi (310 bar)
<b>6</b>		<b>Pump Head Version</b>
	A	NPT Threaded Ports (Steel)
	C	Weld Neck (Steel)
	D	Weld Neck (316L Stainless Steel)
	E	Weld Neck (Hastelloy C)
	F	Weld Neck (Duplex Alloy 2205 Stainless Steel)
	G	ANSI Flange Ports (Duplex Alloy 2205 Stainless Steel)
	R	ANSI Flange Ports (Steel)
	S	ANSI Flange Ports (316L Stainless Steel)
	T	ANSI Flange Ports (Hastelloy C)
<b>7</b>		<b>Pump Head Material</b>
	D	Nickel Aluminum Bronze (NAB)
	G	Duplex Alloy 2205 Stainless Steel
	S	316L Stainless Steel CF3M
	T	Hastelloy CX2M
<b>8</b>		<b>Diaphragm &amp; O-ring Material</b>
	G	FKM
	T	Buna-N
<b>9</b>		<b>Valve Seat Material</b>
	H	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C

Digit	Order Code	Description
<b>10</b>		<b>Valve Material</b>
	F	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
<b>11</b>		<b>Valve Springs</b>
	E	Elgiloy
	T	Hastelloy C
<b>12</b>		<b>Valve Spring Retainers</b>
	T	Hastelloy C / PVDF
<b>13</b>		<b>Hydra-Oil</b>
	A	10W30 standard-duty oil
	B	40-wt. oil
	H	15W50 high-temp severe-duty synthetic oil
<b>14</b>		<b>Oil Level Monitoring</b>
	C	Float switch, normally closed (recommended)
	O	Float Switch, normally open
	Y	No switch, flat back cover



# Hydra-Cell®

## Seal-less Pumps

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