

# T200 Series Medium Pressure Models T200K & T200M

API 674

Maximum Flow Rate: 359 l/min (95 gpm) 3258 BPD  
Maximum Pressure: 241 bar (3500 psi)



**WANNER**  
*Hydra-Cell*<sup>®</sup>  
Seal-less Pump Technology



T200 Series medium-pressure model with  
Nickel Aluminium 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, and there is no need for a booster or charge pump.
- Patented Diaphragm Positioning Control (DPC) protects the diaphragms against a closed or blocked suction line.
- Can 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.
- Significantly lower energy costs than centrifugal pumps.
- Rugged construction for long life with minimal maintenance.
- Compact design offers a variety of installation options.

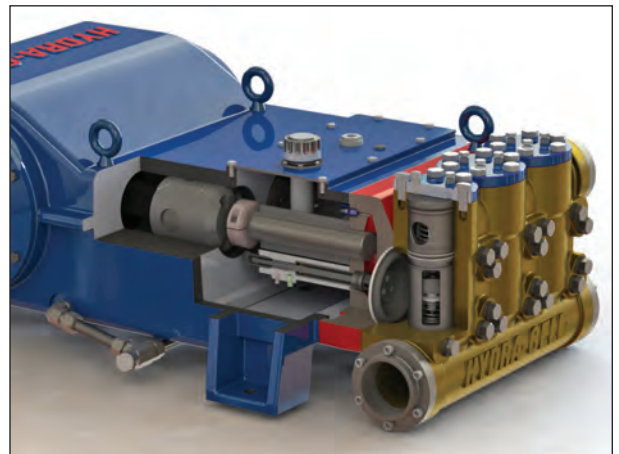
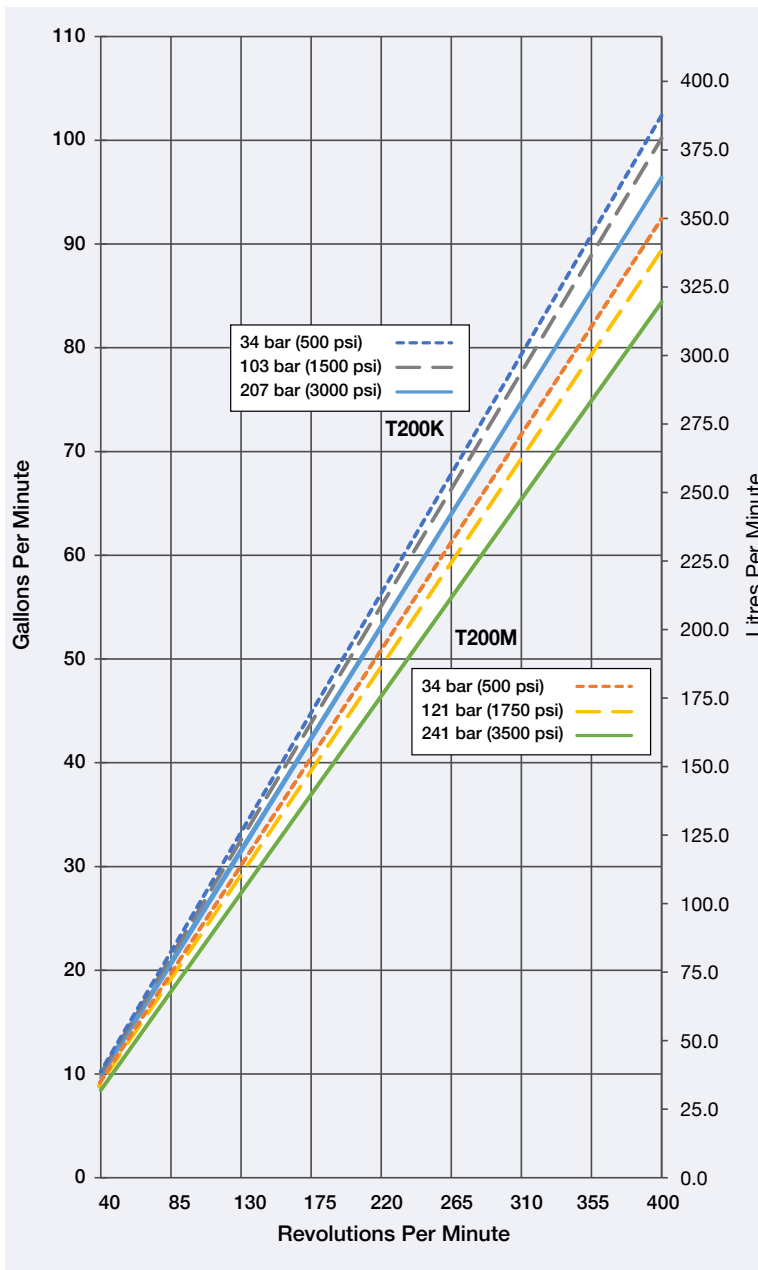
# T200 Series Medium Pressure Performance

## Capacities

Model	Max. Input rpm	Plunger Dia.		Max. Flow Capacities			Max. Pressure Ratings			
		Inches	mm	gpm	l/min	BPD	Discharge		Inlet	
							bar	psi	bar	psi
T200K	400	2.250	57	95	359	3258	207	3000	34	500
T200M	400	2.125	54	85	321	2915	241	3500	34	500

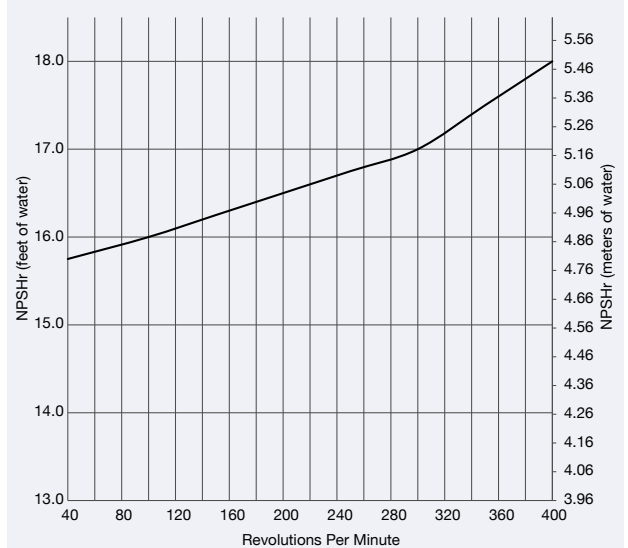
Consult factory when operating below 40 rpm.

## 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)



**Note: Each pump complies with item 6.8.2 of API 674 across the full performance range.**

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

# T200 Series Medium Pressure Specifications

## Flow Capacities

Model	Pressure bar (psi)	rpm	gpm	l/min	BPD
T200K	207 (3000)	400	95	359	3258
T200M	241 (3500)	400	85	321	2915

## Delivery

	Pressure bar (psi)	gal/rev	liters/rev
T200K	34 (500)	0.256	0.969
	103 (1500)	0.251	0.949
	207 (3000)	0.241	0.914
T200M	34 (500)	0.231	0.874
	121 (1750)	0.223	0.845
	241 (3500)	0.211	0.800

## rpm

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

## Maximum Discharge Pressure

Metallic Heads:	T200K	207 bar (3000 psi)
	T200M	241 bar (3500 psi)

## Maximum Inlet Pressure

34 bar (500 psi)

## Liquid Operating Temperature

Maximum:	82.2 °C (180 °F)
Minimum:	4.4 °C (40 °F)

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

127 mm (5 Inches)

## Shaft Diameter

101.6 mm (4 inch)

## Shaft Rotation

Uni-directional (See rotation arrow.)

## Oil Capacity

75.7 litres (80 US quarts) - blank back cover

See page 5 for oil selection and specification.

## Weight

Metallic Heads: 1361 kg (3000 lbs.)

## 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!

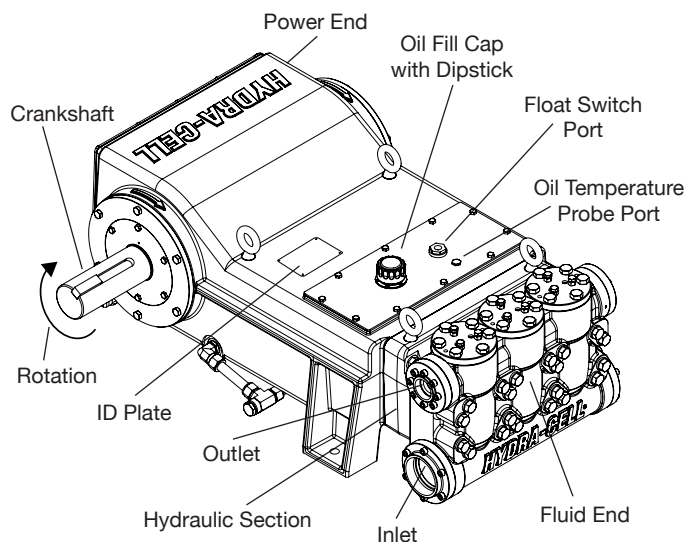
When sizing motors with variable speed drives (VFD): It is very important to select a motor and a VFD rated for constant torque inverter duty service and that the motor is rated to meet the torque requirements of the pump throughout desired speed range.

## Fluid End Materials

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

## Power End Materials

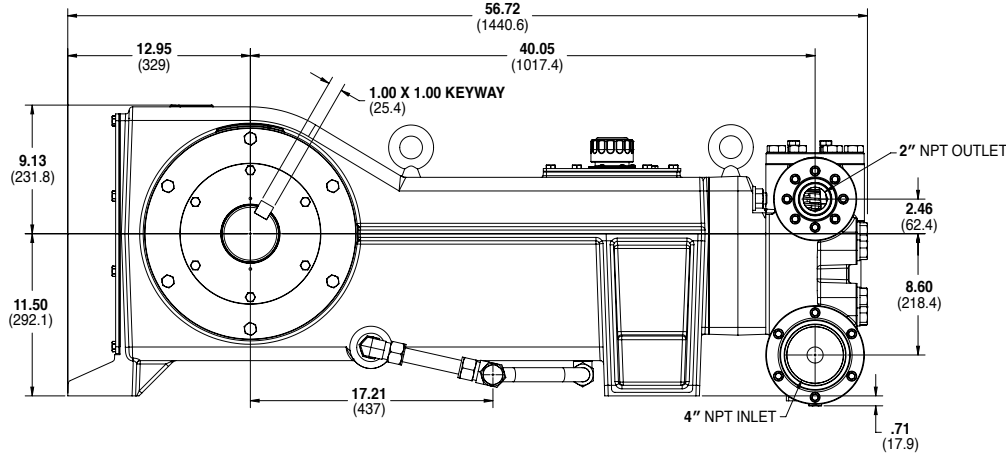
Crankshaft:	Ductile Iron
Crankcase:	Ductile Iron
Bearings:	Spherical Roller (crankshaft main)
	Steel-backed Tri-metal (crankpin)
	Bronze (wrist pin)
Crossheads:	Ductile Iron
Connecting Rods:	Ductile Iron



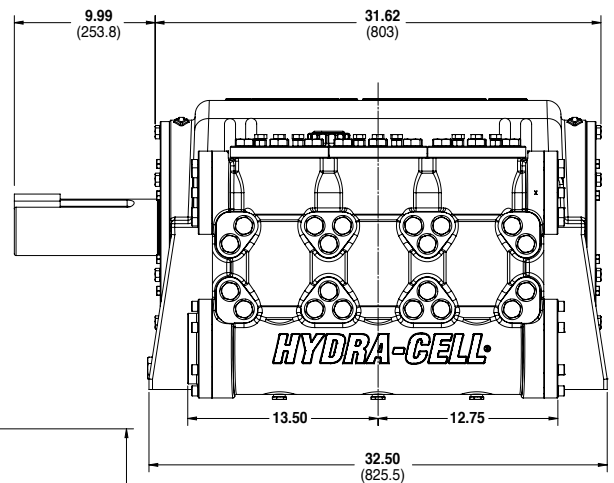
# T200 Series Medium Pressure Representative Drawings

## Threaded Version Inches (mm)

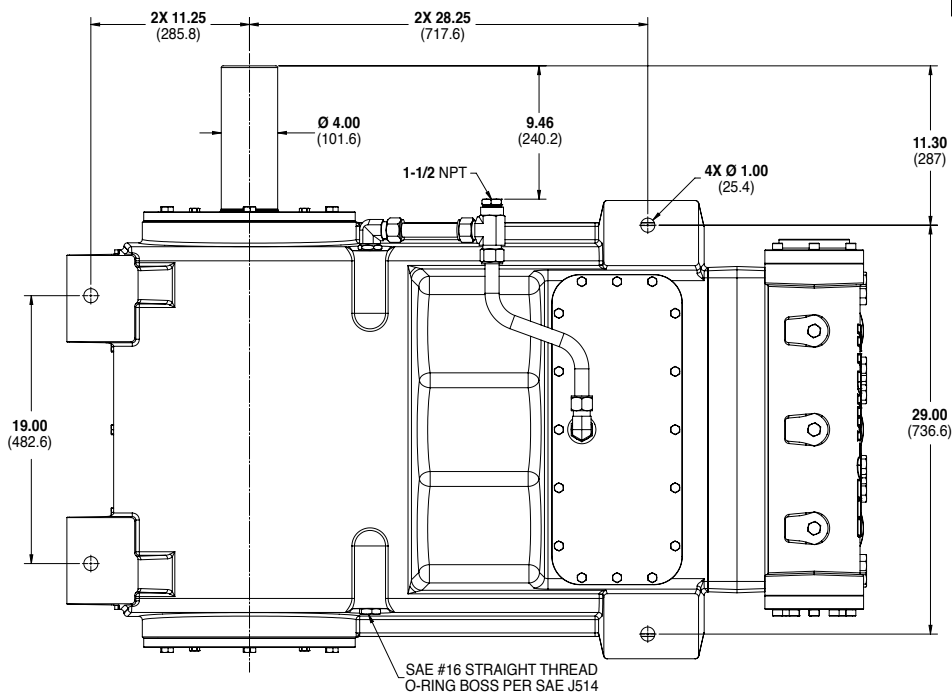
### Side View



### Front View



### Bottom View



**Note:** Representative drawings only. Contact factory for additional drawings of specific models and configurations.

# T200 Series Medium Pressure How to Order

## Ordering Information

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

A complete T200 Series Medium Pressure Model Number contains 14 digits including 9 customer-specified design and materials options, for example: T200KADGHFESAC.

## Medium Pressure

Digit	Order Code	Description
<b>1-4</b>		<b>Pump Configuration</b>
	T200	Shaft-driven API 674 - Contact Wanner International
<b>5</b>		<b>Performance</b>
	K	Max. 359 l/min (95 gpm) 3258 BPD @ 207 bar (3000 psi)
	M	Max. 321 l/min (85 gpm) 2915 BPD @ 241 bar (3500 psi)
<b>6</b>		<b>Pump Head Version</b>
	A	NPT Threaded Ports (Steel)
	C	Weld Neck (Steel)
	D	Weld Neck (316L Stainless Steel)
	R	ANSI Flange Ports (Steel)
	S	ANSI Flange Ports (316L Stainless Steel)
<b>7</b>		<b>Pump Head Material</b>
	D	Nickel Aluminium Bronze (NAB)
<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
<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

Digit	Order Code	Description
<b>12</b>		<b>Valve Spring Retainers</b>
	S	316 SST / Celcon
	T	Hastelloy C / Celcon
<b>13</b>		<b>Hydra-Oil</b>
	A	10W30 standard-duty oil
	B	40-wt.
	H	15W50 high-temp severe-duty synthetic oil
<b>14</b>		<b>Oil Level Monitoring</b>
	C	Float Switch, normally closed (preferred)
	O	Float Switch, normally open





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