T100 Series High Pressure

Maximum Flow Rate: 98 l/min (26 gpm)
Maximum Pressure: 345 bar (5000 psi)

API 674

ATEX

WANNER Hydra-Cell® Seal-less Pump Technology

T100 Series high pressure model with Stainless Steel 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
- Hydra-Cell T100 Series pumps can be configured to meet API 674 standards – consult factory for details

T100 HP Version 3 7/16

WANNER INTERNATIONAL

T100 Series High Pressure Performance

Capacities

Flow

Model	Max. Input rpm	Max. Flow @ 345 bar (5000 psi) gpm	l/min
T100S	450	26	98

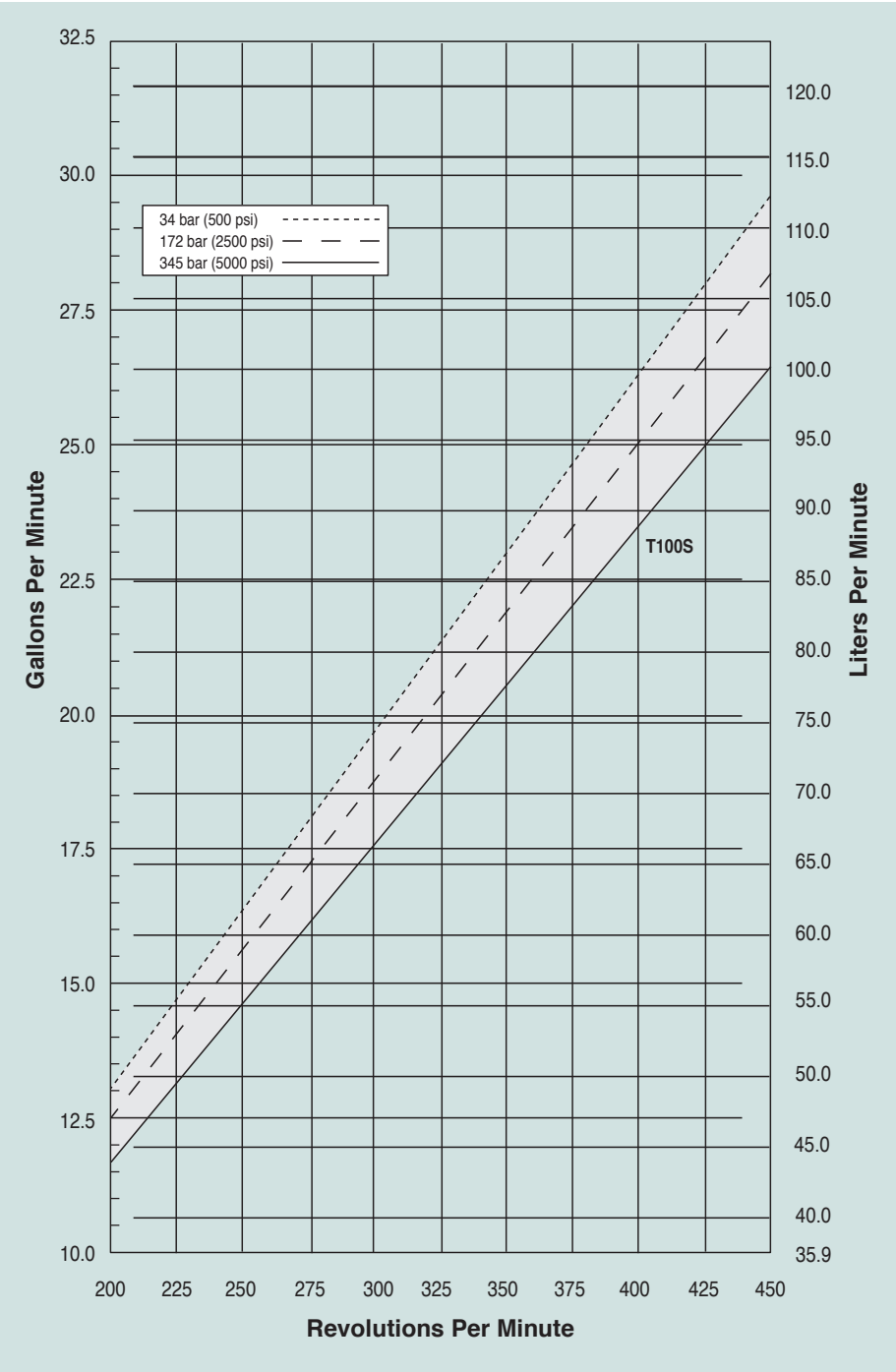
Consult factory when operating below 12 gpm (45.4 l/min).

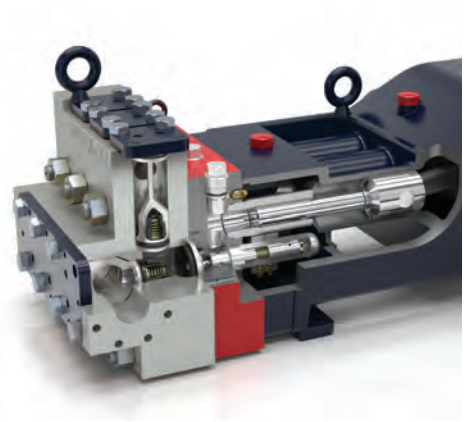
Pressure

Maximum Inlet Pressure
34 bar (500 psi)

Maximum Discharge Pressure
345 bar (5000 psi)

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 API 674 Performance

Capacities

Flow

Model	Max. Input rpm	Duty	Max. Flow @ 5000 psi (345 bar) gpm	l/min
T100S	450	Intermittent	26	98
	375	Continuous	22	83

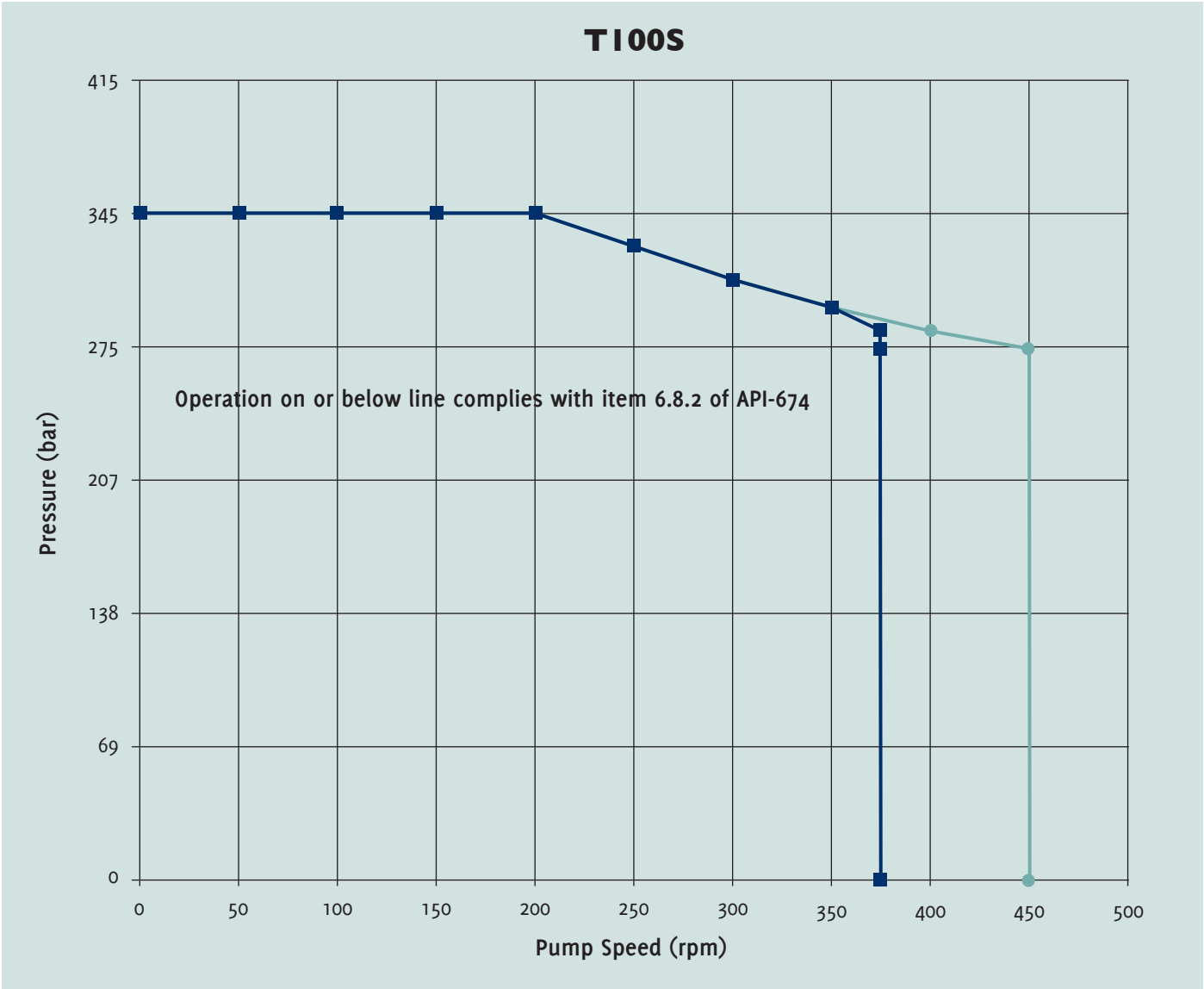
Consult factory when operating below 12 gpm (45.4 l/min).

Pressure

Maximum Inlet Pressure
34 bar (500 psi)

Maximum Discharge Pressure
345 bar (5000 psi)

Maximum RPM at Designated Pressure



Intermittent duty 1.375" plunger
Defined as up to 24/7 365 days pa

Continuous duty 1.375" plunger
Defined as 24/7 365 days pa

T100 Series High Pressure Specifications

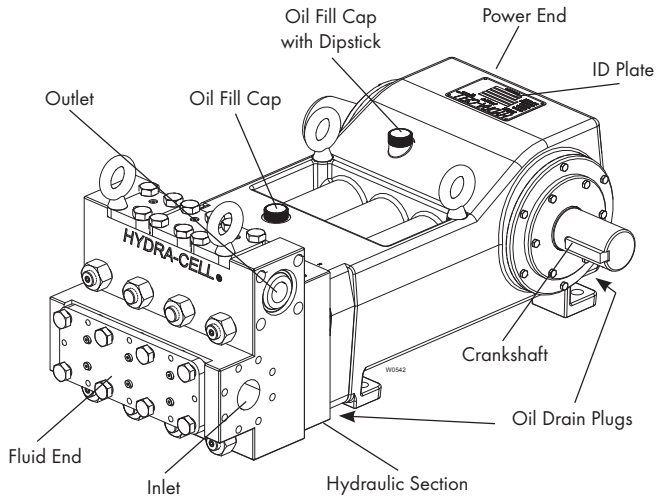
Flow Capacities @ 345 bar (5000 psi)			
Model	**rpm**	**gpm**	**l/min**
T100S	450	26	98

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

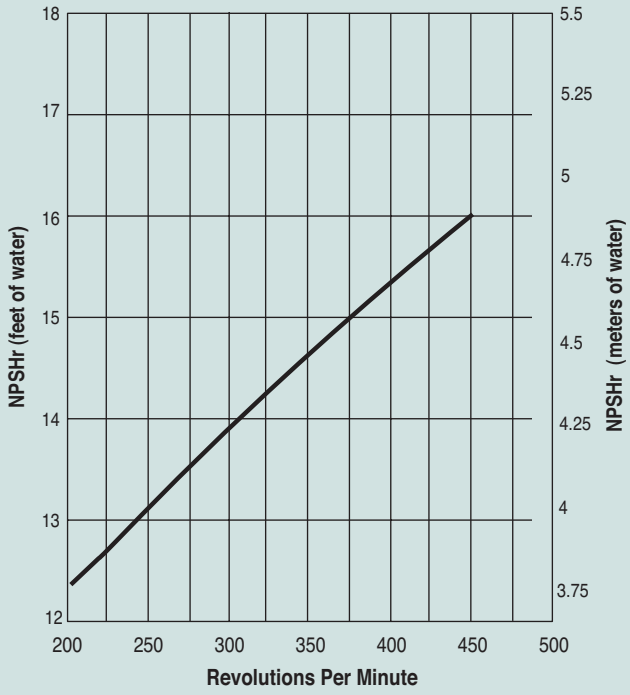
rpm	
Maximum:	450
Minimum:	200 Consult factory for speeds less than 200 rpm
Maximum Discharge Pressure	
Metallic Heads:	345 bar (5000 psi)
Maximum Inlet Pressure	34 bar (500 psi)
Liquid Operating Temperature	
Maximum:	82.2 °C (180 °F)
Minimum:	4.4 °C (40 °F)
Consult factory for temperatures outside this range	
Maximum Solids Size	800 microns
Input Shaft	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	76.2 mm (3 inch)
Shaft Rotation	Reverse (bi-directional)
Oil Capacity	7.7 litres (18 US quarts)
	10W30 standard-duty oil
Weight	
Metallic Heads:	499 kg (1100 lbs.)

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:	17-7 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 How to Order

Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13
T	1	0	0	S	R					E		A

A complete T100 Series High Pressure Model Number contains 13 digits including 9 customer-specified design and materials options, for example: T100SRDTHFEPA.

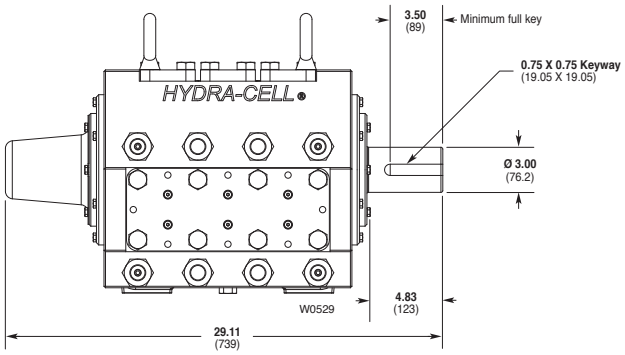
High Pressure

Digit	Order Code	Description
1-4		**Pump Configuration**
	T100	Shaft-driven
5		**Performance**
	S	Max. 98 l/min (26 gpm) @ 345 bar (5000 psi)
	-	ATEX - Contact Wanner International
		(Note: ATEX 94/9/EC Certified, Category 2, Zone 1)
6		**Pump Head Version**
	R	ANSI Flange Ports (FF on Inlet / RTJ on Discharge)
7		**Pump Head Material**
	D	Nickel Aluminum Bronze (NAB)
	S	316L Stainless Steel
8		**Diaphragm & O-ring Material**
	G	FKM
	T	Buna-N
9		**Valve Seat Material**
	D	Tungsten Carbide*
	H	17-4 Stainless Steel
	T	Hastelloy C
10		**Valve Material**
	D	Tungsten Carbide*
	F	17-4 Stainless Steel
	T	Hastelloy C
11		**Valve Springs**
	E	Elgiloy
12		**Valve Spring Retainers**
	H	17-7 Stainless Steel
	M	PVDF
	P	Polypropylyene
	S	316 SST
	T	Hastelloy C
13		**Hydra-Oil**
	A	10W30 standard-duty oil

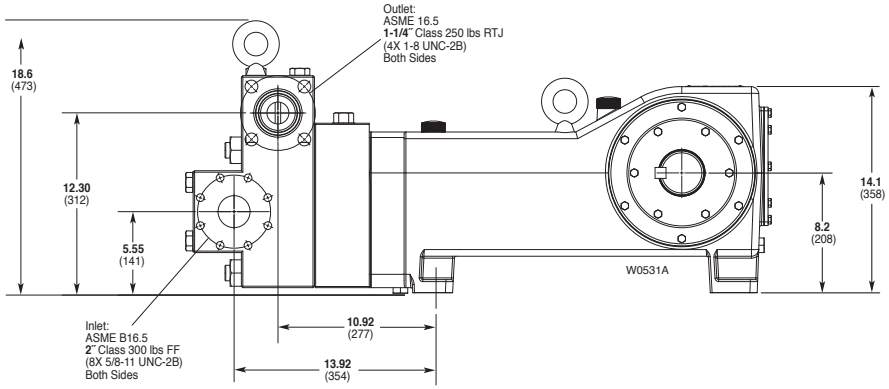
*Tungsten Carbide valve seat and disc are a matched set and must be purchased together.

T100 Series High Pressure Dimensions

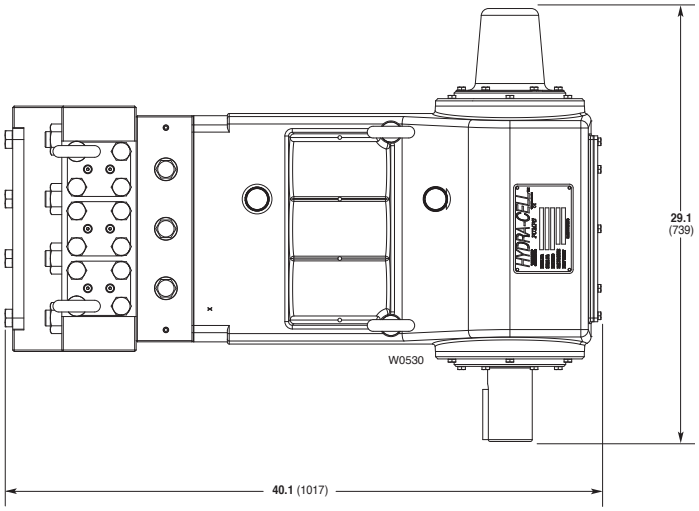
Threaded Version inches (mm)



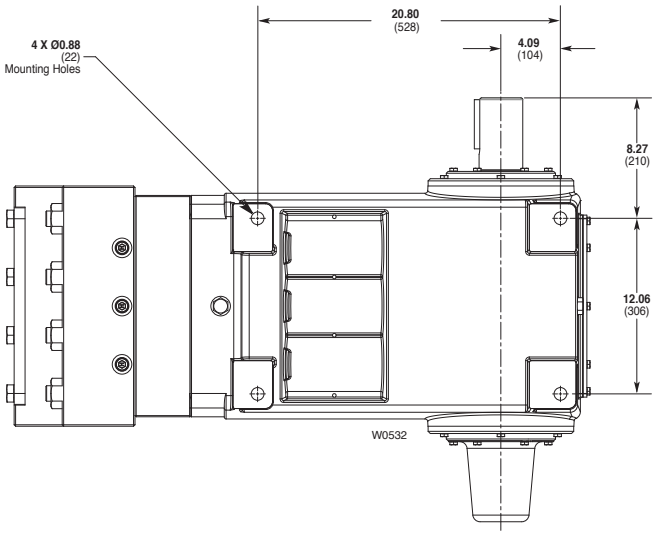
Front View



Side View



Top View



Bottom View

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T100 HP Version 3 7/16

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