T100 Series Low Pressure
Models T100E, T100F & T100H

Maximum Flow Rate: 96 gpm (366.1 l/min)
Maximum Pressure: 2100 psi (145 bar)

Hydra-Cell® Seal-less Pumps

T100 Series low-pressure model with Nickel Aluminum Bronze (NAB) 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 Low Pressure Performance

Capacities

Flow

Model	Max. Input rpm	Max. Flow gpm	Max. Flow l/min
		@ 1500 psi (103 bar)	
T100E	450	96.0	366.4
		@ 1850 psi (128 bar)	
T100F	450	76.5	289.6
		@ 2100 psi (145 bar)	
T100H	450	68.0	257.8

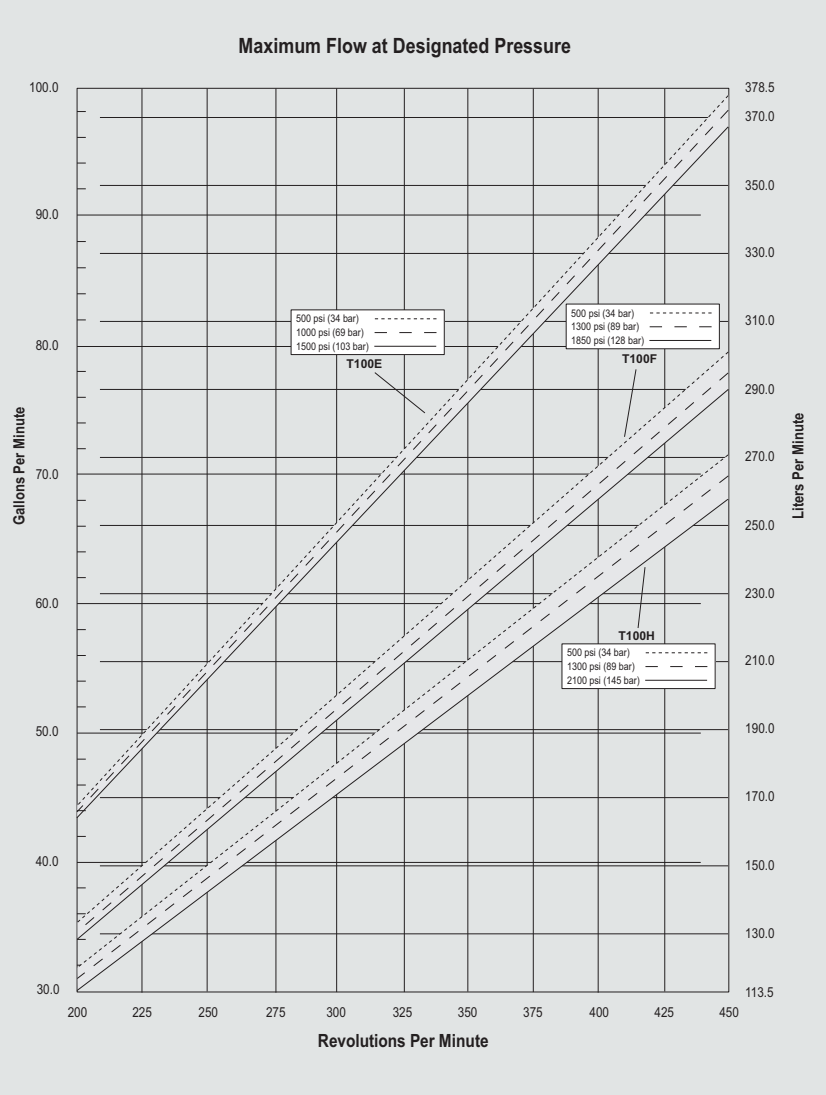
Consult factory when operating below 44 gpm (166.6 l/min).

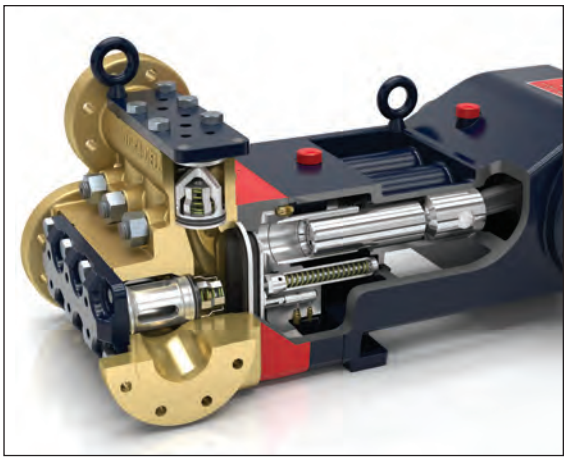
Pressure

Maximum Inlet Pressure
500 psi (34 bar)

Maximum Discharge Pressure
T100E: 1500 psi (103 bar)
T100F: 1850 psi (128 bar)
T100H: 2100 psi (145 bar)

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 Low Pressure Specifications

Flow Capacities

Model	Pressure bar (psi)	rpm	gpm	l/min
T100E	103 (1500)	450	96.0	366.4
T100F	128 (1850)	450	76.5	289.6
T100H	145 (2100)	450	68.0	257.8

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: T100E 1500 psi (103 bar)
T100F 1850 psi (128 bar)
T100H 2100 psi (145 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 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

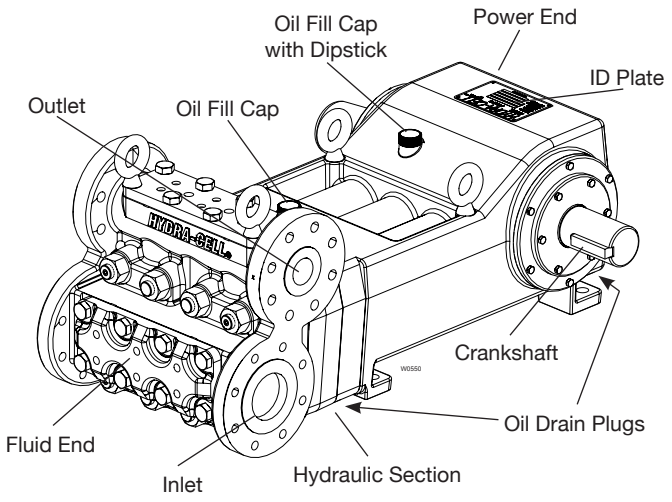
Metallic Heads: 1100 lbs. (499 kg)

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
316 SST
Hastelloy C
Check Valve Spring: Elgiloy
Valve Disc/Seat : Tungsten Carbide
17-4 PH Stainless Steel
Hastelloy C
Outlet Valve Retainer: 316 Stainless Steel
Plug-Outlet Valve Port: 316 Stainless Steel
Inlet Valve Retainer: 316 Stainless Steel

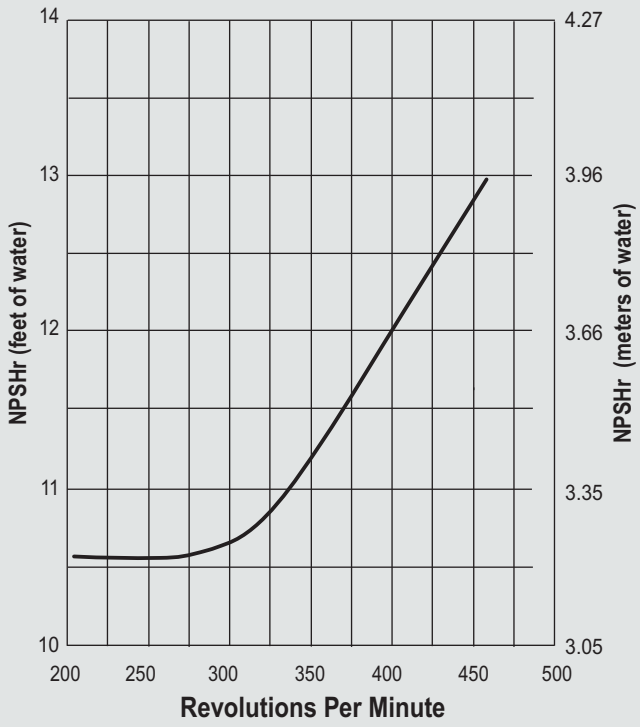
Power End Materials

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)



Flange Shown

Net Positive Suction Head (NPSHr)



Calculating Required Horsepower (kW)*

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

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

** hp (kW) is required application power.*

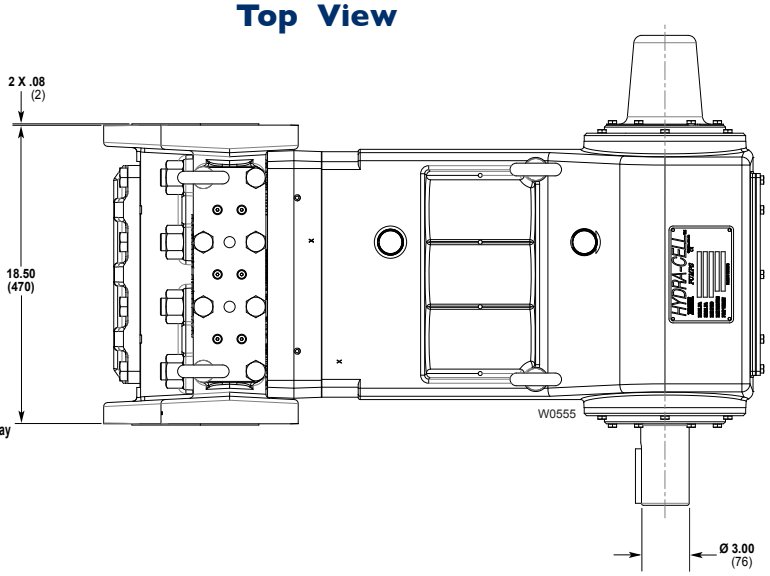
Attention!

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.

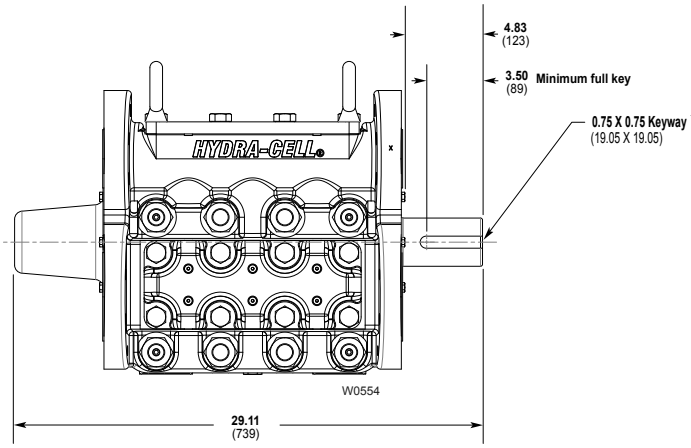
T100 Series Low Pressure Dimensions

Flanged Version inches (mm)

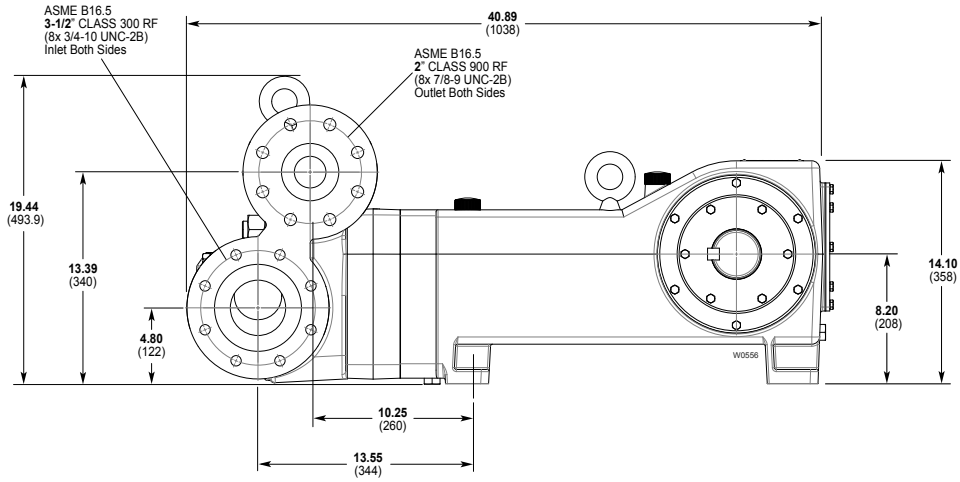
Top View



Front View



Side View



Hydra-Cell® Seal-less Pumps

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T100 Series Low Pressure How to Order

Ordering Information

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

A complete T100 Series Low Pressure Model Number contains 13 digits including 9 customer-specified design and materials options, for example: T100ERDGHFEHA.

Low Pressure

Digit	Order Code	Description
1-4		**Pump Configuration**
	T100	Shaft-driven
5		**Performance**
	E	Max. 96.0 gpm (366.1 l/min) @ 1500 psi (103 bar)
	F	Max. 76.5 gpm (289.6 l/min) @ 1850 psi (128 bar)
	H	Max. 68.0 gpm (257.8 l/min) @ 2100 psi (145 bar)
6		**Pump Head Version**
	R	ANSI Flange Ports (RF)
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 PH Stainless Steel
	T	Hastelloy C
10		**Valve Material**
	D	Tungsten Carbide*
	F	17-4 PH Stainless Steel
	T	Hastelloy C
11		**Valve Springs**
	E	Elgiloy
12		**Valve Spring Retainers**
	H	17-4 Stainless Steel
	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.