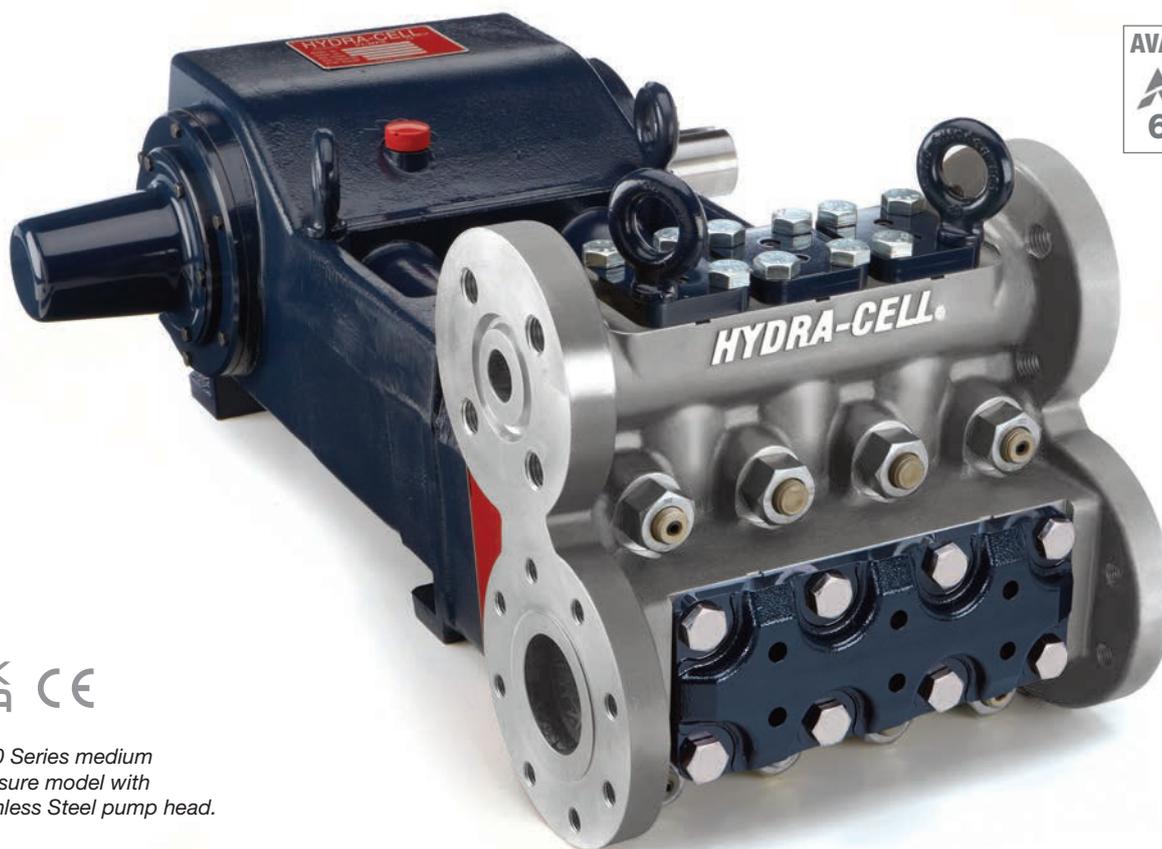


T100 PRO SERIES MEDIUM PRESSURE

Maximum Flow Rate: 170 l/min (45 US gpm) 1543 BPD
Maximum Pressure: 241 bar (3500 psi)

 **WANNER** HYDRA-CELL PRO®
SEAL-LESS PUMP TECHNOLOGIES



UK
CA CE

*T100 Series medium
pressure model with
Stainless Steel pump head.*

A higher standard of pump performance and energy efficiency.

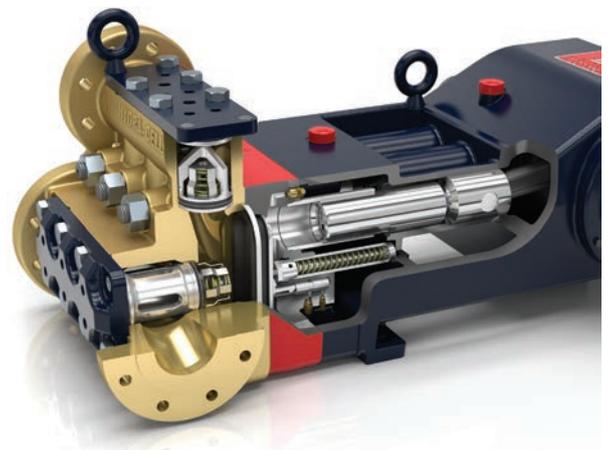
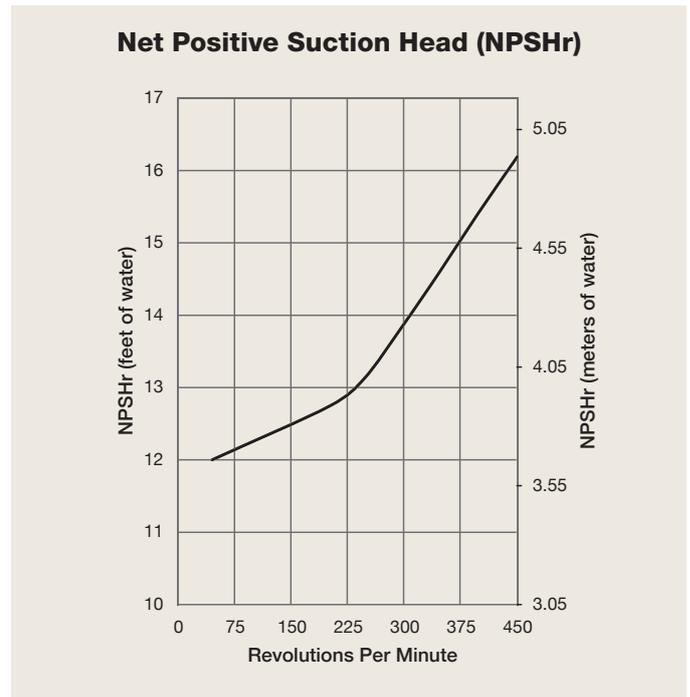
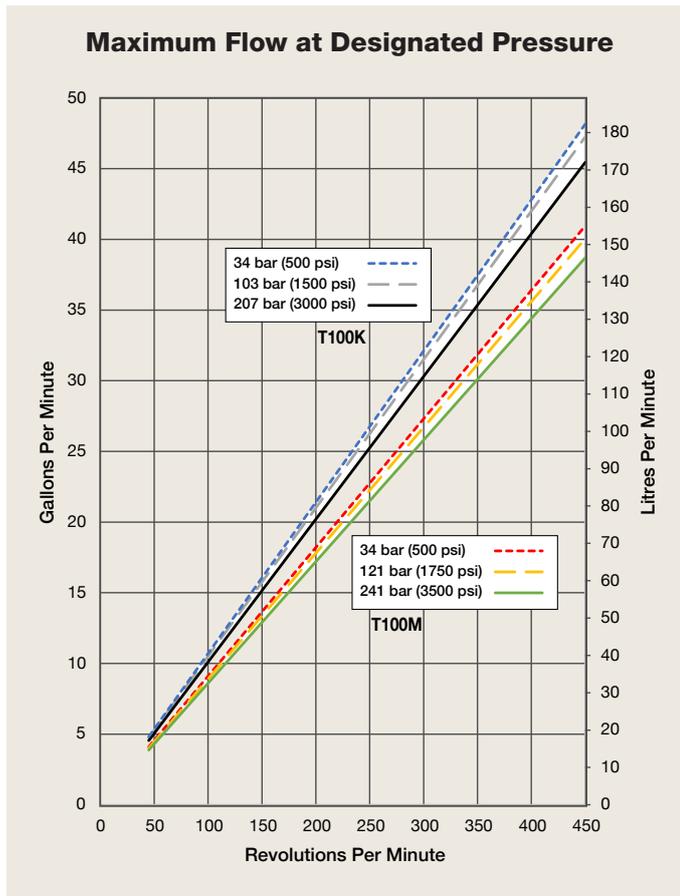
- Integrates **Wanner Hydra-Cell Pro**® seal-less pump technologies for the highest levels of volumetric and energy efficiencies across a full rpm range.
- Patented ADPC (Advanced Diaphragm Position Control) and hydraulic oil management systems protect diaphragms under closed or restricted inlet conditions.
- Can run dry indefinitely without damage to the pump, eliminating downtime and repair costs.
- Pumped liquid is 100% contained, eliminating environmental risks, ground contamination and volatile emissions.
- Seal-less design eliminates leaks, hazards and costs associated with seals and plunger packing.
- Exceeds API 675 standards for accuracy, linearity and repeatability.
- Wider range and higher inlet pressures to 34 barg.
- Self-priming – eliminates need for charge pumps.
- Unique diaphragm design reliably handles a wide range of viscosities and shear sensitivities, corrosive liquids, abrasives, slurries and suspended solids.
- Lower total cost of ownership in acquisition, operation, service, maintenance, and energy use.

T100 Pro Medium Pressure | Performance

Capacities

Model	Max. Input rpm	Plunger Dia.		Max. Flow Capacities			Max. Pressure Ratings			
		inches	mm	US gpm	l/min	BPD	Discharge		Inlet	
							bar	psi	bar	psi
T100K	450	1.750	44	45	170	1543	207	3000	34	500
T100M	450	1.625	41	38	144	1302	241	3500	34	500

Consult Wannner when operating below 45 rpm



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 the Wannner Engineering Continuous Improvement Program, specifications and other data are subject to change.

T100 Pro Medium Pressure | Specifications

Flow Capacities

Model	Pressure bar (psi)	rpm	US gpm	l/min	BPD
T100K	207 (3000)	450	45	170	1543
T100M	241 (3500)	450	38	144	1302

Delivery

	Pressure bar (psi)	gal/rev	litres/rev
T100K	34 (500)	0.107	0.406
	103 (1500)	0.105	0.397
	207 (3000)	0.101	0.384
T100M	34 (500)	0.091	0.345
	121 (1750)	0.089	0.338
	241 (3500)	0.086	0.327

rpm

Maximum:	450
Minimum:	45

Consult Wanner for speeds less than 45 rpm.

Maximum Discharge Pressure

Metallic Heads:	T100K 207 bar (3000 psi)
	T100M 241 bar (3500 psi)

Maximum Inlet Pressure 34 bar (500 psi)

Operating Temperature

Maximum Liquid Temperature: 82.2°C (180°F)
Consult Wanner for use with higher liquid temperatures

Diaphragm Material Minimum Service Temperature (Ambient & Liquid):

Aflas	30°C
EPDM	-20°C
FKM	5°C
Buna-N (HBNR)	-5°C

Consult Wanner for temperatures outside of these ranges

Maximum Solids Size 800 microns

Input Shaft Left or Right Side

Inlet Ports 3-½ inch Class 300 RF ANSI Flange or 2-½ inch NPT

Discharge Ports 1-½ inch Class 2500 RTJ ANSI Flange or 1-½ inch NPT

Plunger Stroke Length 88.9 mm (3-½ inch)

Shaft Diameter 76.2 mm (3 inch)

Shaft Rotation Uni-directional (See rotation arrow.)

Calculating Required Horsepower (kW)*

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

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

* 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.

Oil Capacity 19.4 litres (20.5 US quarts)

See page 5 for oil selection and specification.

Weight

Metallic Heads: 499 kg (1100 lbs.)

Fluid End Materials

Manifold: Nickel Aluminum Bronze (NAB)
Duplex Alloy 2205 Stainless Steel
316L Stainless Steel CF3M
Hastelloy CX2MW

Diaphragm/Elastomers: FKM
Buna-N
Aflas
EPDM

Diaphragm Follower Screw: 316 Stainless Steel
Duplex Alloy 2205 Stainless Steel
Hastelloy C

Valve Spring Retainer: PVDF
Polypropylene
316 SST
Hastelloy C

Check Valve Spring: Elgiloy
Hastelloy C

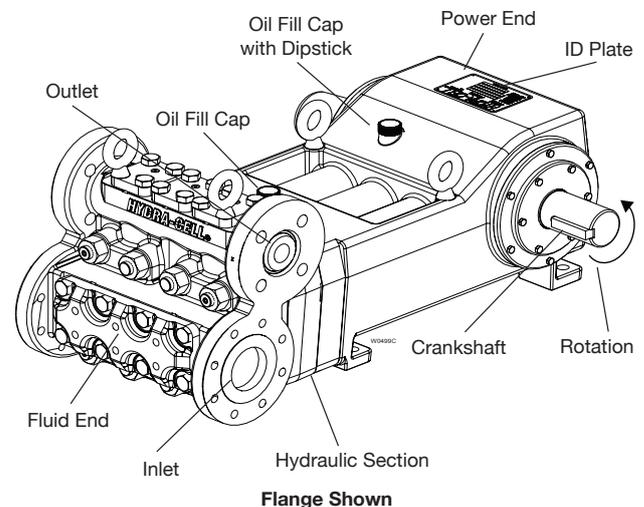
Valve Disc/Seat: Tungsten Carbide
17-4 Stainless Steel
Nitronic 50
Hastelloy C

Plug-Outlet Valve Port: 316 Stainless Steel
Duplex Alloy 2205 Stainless Steel
Hastelloy C

Inlet/Outlet Valve Retainer: 316 Stainless Steel
Duplex Alloy 2205 Stainless Steel
Hastelloy C

Power End Materials

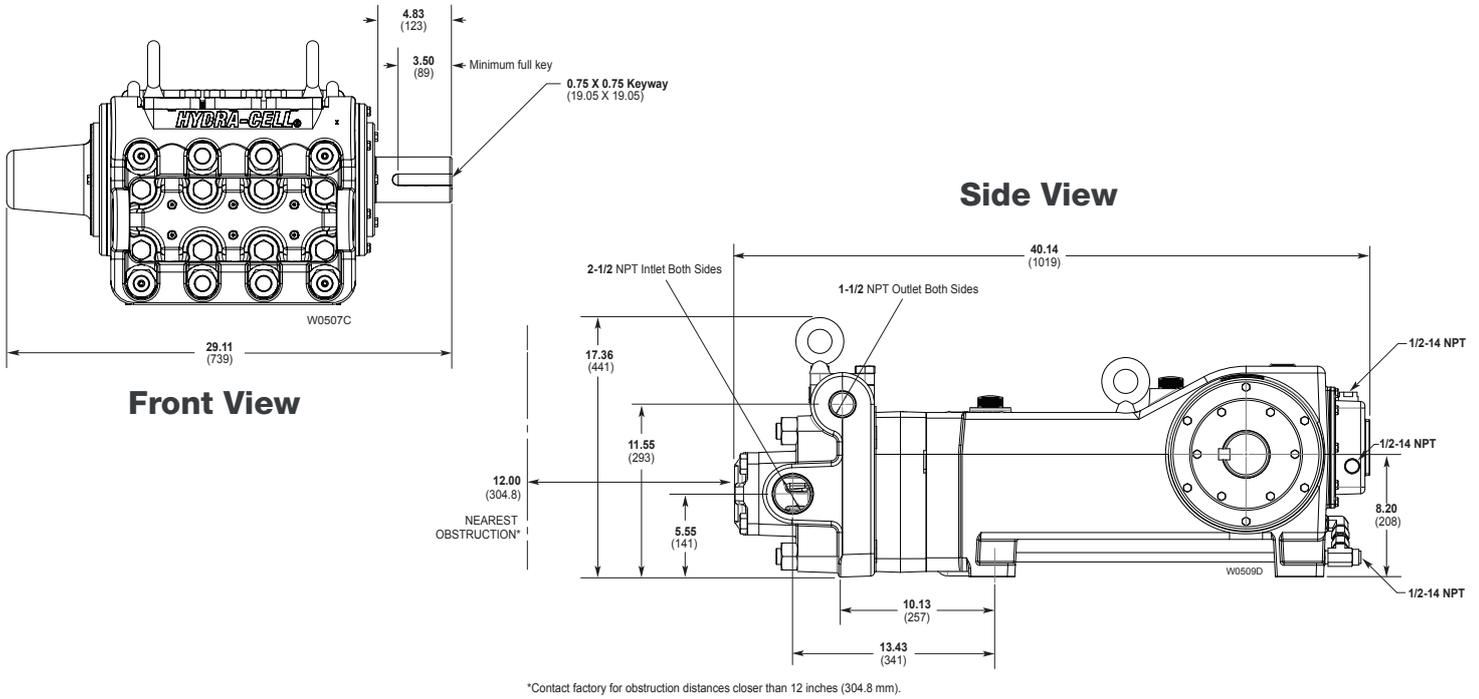
Crankshaft: Forged Q&T Alloy Steel
Connecting Rods: Ductile Iron
Crossheads: 12L14 Steel
Crankcase: Ductile Iron
Bearings: Spherical Roller/Journal (main)
Steel Backed Babbit (crankpin)
Bronze (wristpin)



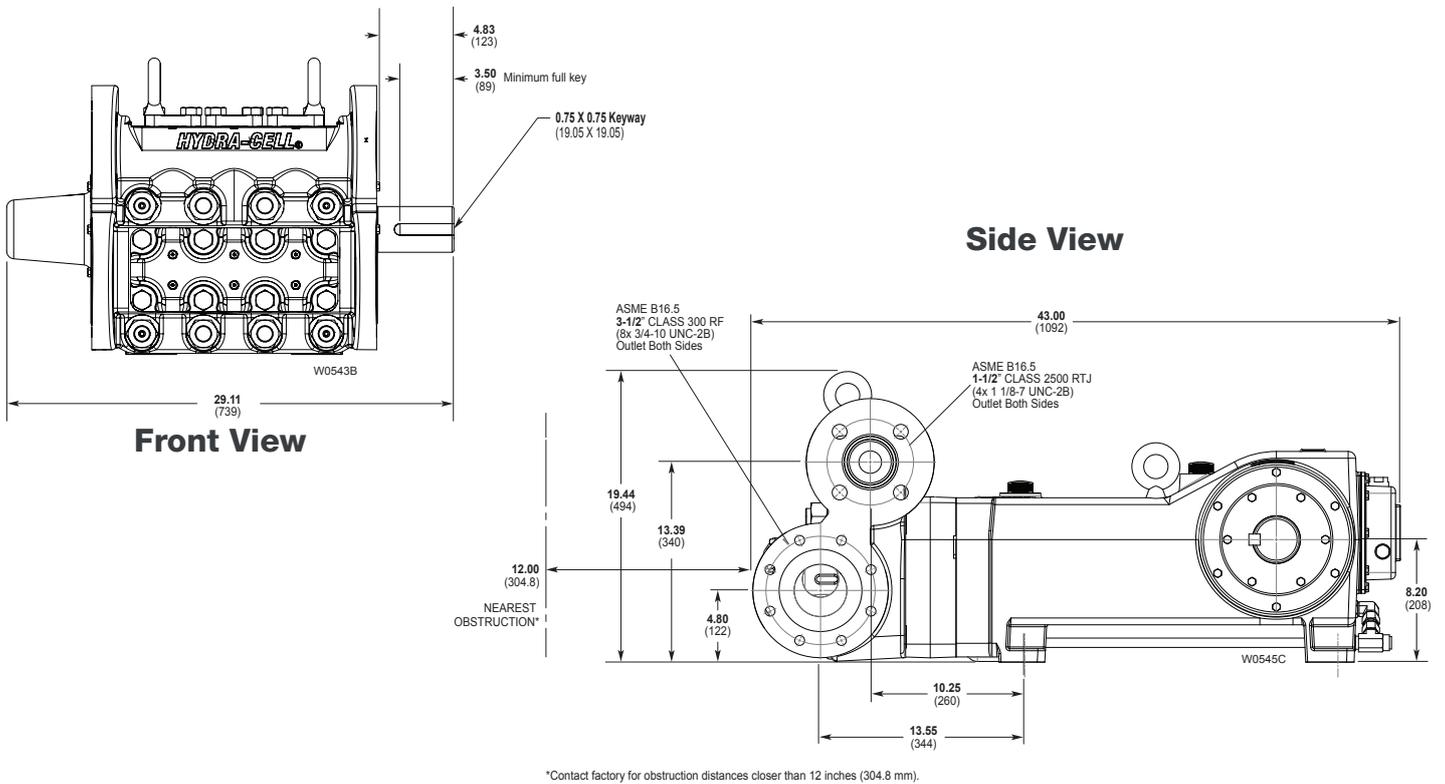
Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

T100 Pro Medium Pressure | Representative Drawings

Threaded Version inches (mm)



Flanged Version inches (mm)



Note: Dimensions are for reference only. Contact Wanner for certified drawings.

T100 Pro Medium Pressure | How to Order

Ordering Information

A complete T100 Series Medium Pressure Model Number contains 14 digits including 10 customer-specified design and materials options, for example: T100KADGDDEPAO.

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

T100 Medium Pressure

Digit	Order Code	Description
1-4	T100	Pump Configuration Shaft-driven API 674 - Contact Wanner International
5	K	Performance Max. 170 l/min (45 US gpm) 1543 BPD @ 207 bar (3000 psi)
	M	Max. 144 l/min (38 US gpm) 1302 BPD @ 241 bar (3500 psi)
6	A	Pump Head Version NPT Ports (for NAB only)
	R	ANSI Flanged Ports (RF on Inlet / RTJ on Discharge)
7	D	Pump Head Material Nickel Aluminium Bronze (NAB)
	G	Duplex Alloy 2205 Stainless Steel
	S	316L Stainless Steel CF3M
	T	Hastelloy CX2M
8	A	Diaphragm & O-ring Material Aflas
	E	EPDM (requires EPDM-compatible oil - digit 13 code D)
	G	FKM
	T	Buna-N (HBNR)
9	D	Valve Seat Material Tungsten Carbide*
	H	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
10	D	Valve Material Tungsten Carbide*
	F	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
11	D	Valve Springs Elgiloy for Tungsten Carbide valves*
	E	Elgiloy
	H	Hastelloy C for Tungsten Carbide valves*
	T	Hastelloy C

Digit	Order Code	Description
12	M	Valve Spring Retainers* PVDF
	P	Polypropylene
	S	316 SST
	T	Hastelloy C
13	A	Hydra-Oil 10W30 standard-duty oil
	B	40-wt. oil
	D	EPDM-compatible oil
	H	15W50 high-temp severe-duty synthetic oil
	M	Food-contact oil
14	C	Oil Level Monitor Cover Float Switch, normally closed (recommended)
	O	Float Switch, normally open
	S	Float switch, Class I, Div. 1, Groups A, B, C, D, normally closed
	T	Float switch, Class I, Div. 1, Groups A, B, C, D, normally open
	W	Float switch, ATEX/IECEx, 4-20 mA analog output (ATEX-certified instrument only, pump as non-ATEX)
	X	Float switch, ATEX, discrete output (ATEX-certified pump and float switch)

Note: The Oil Level Monitor Cover is an assembly that replaces the previous back cover on Q155 Series pumps. It contains a float switch assembly that can trigger an alarm or shutdown when pre-defined levels of high or low oil are reached. It may also be ordered without a float switch cover.

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



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