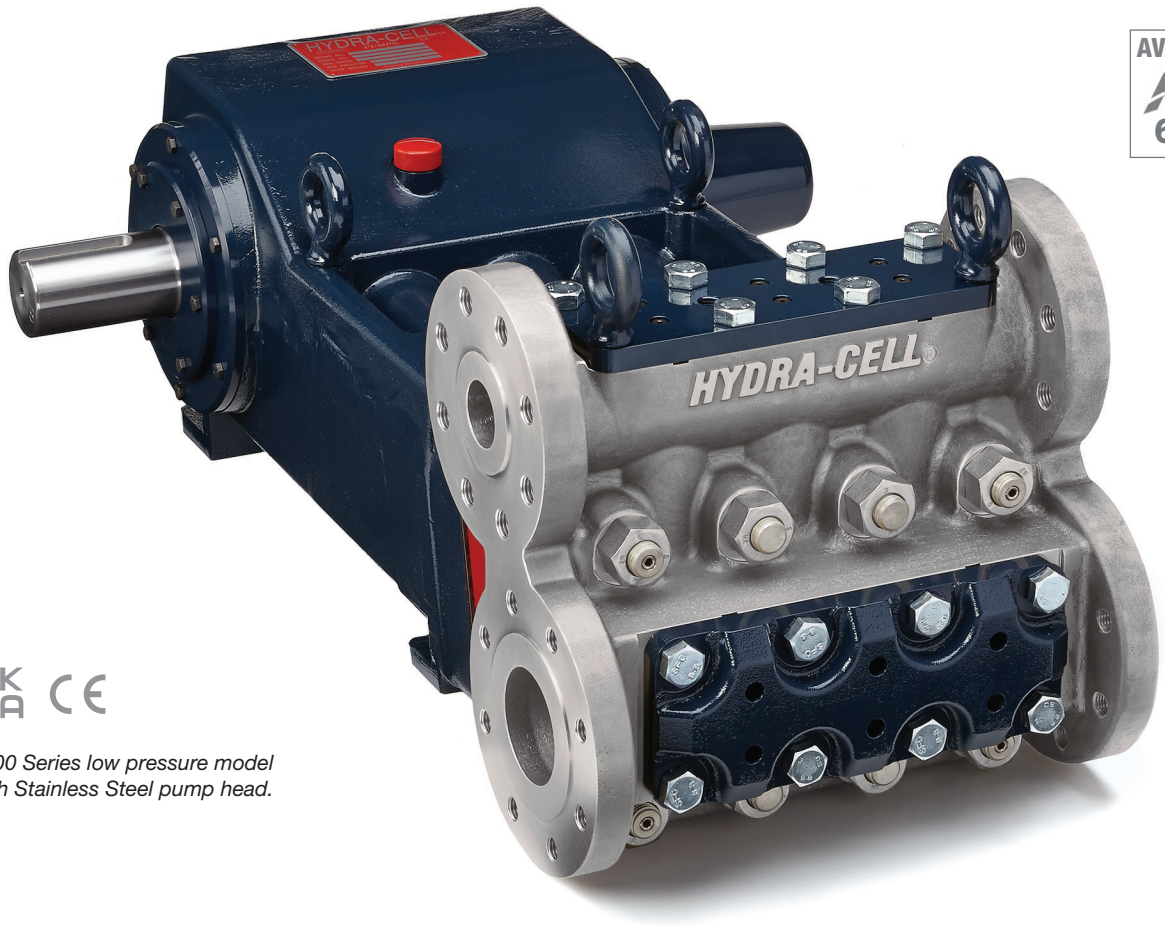
T100 PRO SERIES
LOW PRESSURE

Maximum Flow Rate: 363 l/min (96 US gpm) 3292 BPD
Maximum Pressure: 145 bar (2100 psi)

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

AVAILABLE TO MEET API 674



UK CA CE

T100 Series low pressure model with Stainless Steel pump head.

A higher standard of pump performance and energy efficiency.

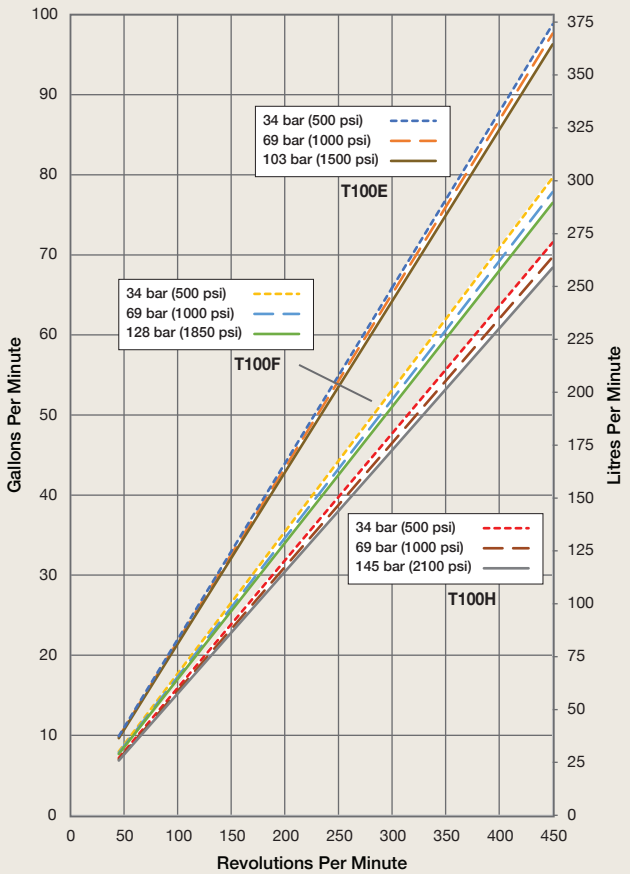
- Integrates **Wanner Hydra-Cell® Pro** seal-less pump technologies for the highest levels of volumetric and energy efficiencies across a full rpm range.
- Patented ADPC (Advanced Diaphragm Position Control) and hydraulic oil management systems protect diaphragms under closed or restricted inlet conditions.
- 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.

Capacities

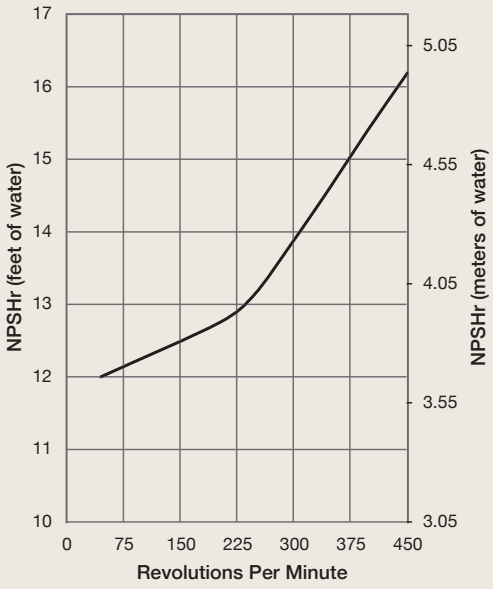
Model	Max. Input rpm	Plunger Dia. inches	mm	Max. Flow Capacities US gpm	l/min	BPD	Max. Pressure Ratings Discharge bar	psi	Inlet bar	psi
T100E	450	2.500	64	96	363	3292	103	1500	34	500
T100F	450	2.250	57	76	287	2605	128	1850	34	500
T100H	450	2.125	54	67	253	2297	145	2100	34	500

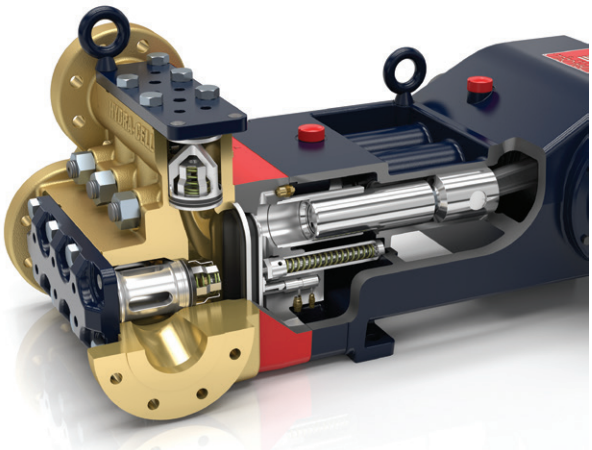
Consult factory when operating below 40 rpm

Maximum Flow at Designated Pressure



Net Positive Suction Head (NPSHr)





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

T100 Pro Low Pressure | Specifications

Flow Capacities

Model	Pressure bar (psi)	rpm	US gpm	l/min	BPD
T100E	103 (1500)	450	96	363	3292
T100F	128 (1850)	450	76	287	2605
T100H	145 (2100)	450	67	253	2297

Delivery

	Pressure bar (psi)	gal/rev	litres/rev
T100E	34 (500)	0.219	0.829
	69 (1000)	0.216	0.818
	103 (1500)	0.213	0.807
T100F	34 (500)	0.176	0.665
	69 (1000	0.173	0.656
	128 (1850)	0.170	0.645
T100H	34 (500)	0.159	0.600
	1000 (69)	0.154	0.584
	145 (2100)	0.149	0.565

rpm

Maximum: 450
Minimum: 45
Consult factory for speeds less than 45 rpm.

Maximum Discharge Pressure

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

Maximum Inlet Pressure 34 bar (500 psi)

Temperature Limits

Maximum Liquid Temperature: 82.2˚C (180˚F)
Consult factory 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 factory for temperatures outside this range.

Maximum Solids Size 800 microns

Input Shaft Left or Right Side

Inlet Ports 3-½ inch Class 300 RF ANSI Flange

Discharge Ports 2 inch Class 900 RF ANSI Flange

Plunger Stroke Length 88.9 mm (3-½ inch)

Shaft Diameter 76.2 mm (3 inch)

Shaft Rotation Uni-directional (See rotation arrow.)

Oil Capacity 17 litres (18 US quarts)
- blank back cover.
19.4 litres (20.5 US quarts)
- oil level back cover.

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:	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)

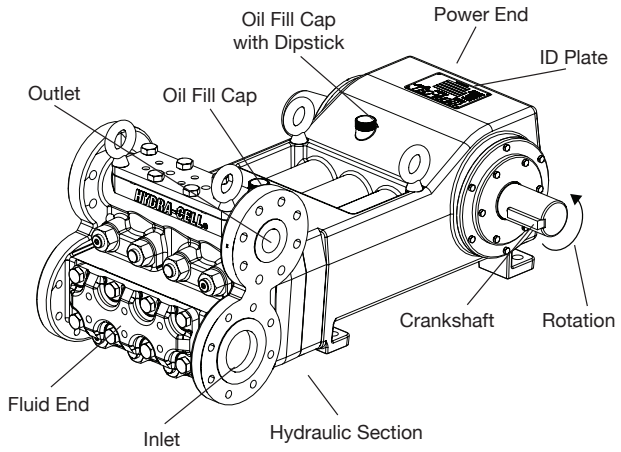
Calculating Required Horsepower (kW)*

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

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

** 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.



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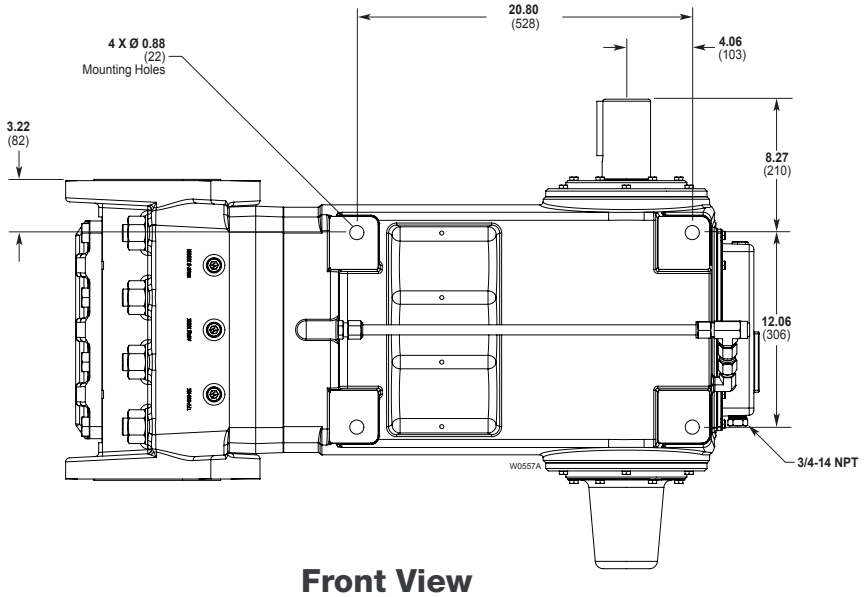
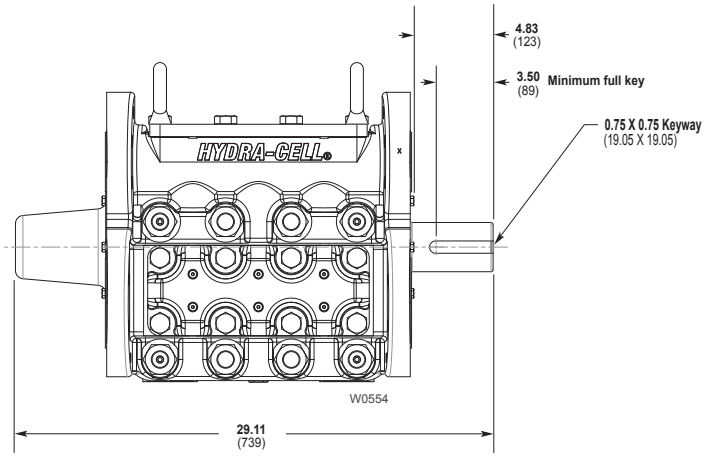
Flanged Version inches (mm)

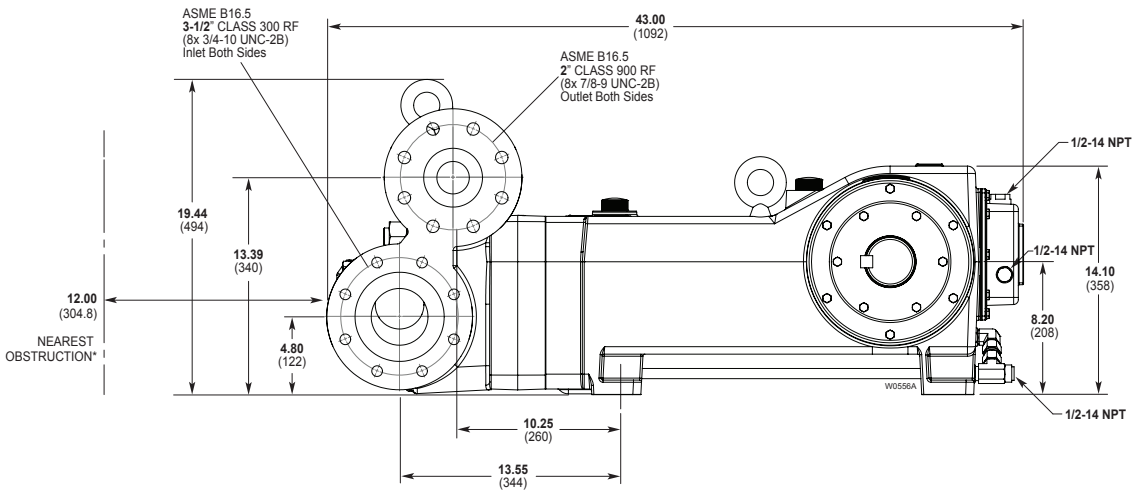
Bottom View



Front View



Side View



*Contact factory for obstruction distances closer than 12 inches (304.8 mm).

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

Ordering Information

A complete T100 Series Low Pressure Model Number contains 14 digits including 9 customer-specified design and materials options, for example: T100ERDGHFESAC.

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

T100 Low Pressure

Digit	Order Code	Description
1-4		**Pump Configuration**
	T100	Shaft-driven API 674 - Contact Wanner International
5		**Performance**
	E	Max. 363 l/min (96 US gpm) 3292 BPD 103 bar (1500 psi)
	F	Max. 287 l/min (76 US gpm) 2605 BPD @ 128 bar (1850 psi)
	H	Max. 253 l/min (67 US gpm) 2297 BPD @ 145 bar (2100 psi)
6		**Pump Head Version**
	R	ANSI Flange Ports (RF on Inlet / RF on Discharge)
7		**Pump Head Material**
	D	Nickel Aluminium Bronze (NAB)
	G	Duplex Alloy 2205 Stainless Steel
	S	316L Stainless Steel CF3M
	T	Hastelloy CX2M
8		**Diaphragm & O-ring Material**
	A	Aflas
	E	EPDM (requires EPDM-compatible oil - digit 13 code D)
	G	FKM
	T	Buna-N
9		**Valve Seat Material**
	D	Tungsten Carbide*
	H	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
10		**Valve Material**
	D	Tungsten Carbide*
	F	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
11		**Valve Springs**
	D	Elgiloy for Tungsten Carbide valves*
	E	Elgiloy
	T	Hastelloy C
12		**Valve Spring Retainers**
	S	316 SST
	T	Hastelloy C

Digit	Order Code	Description
13		**Hydra-Oil**
	A	10W30 standard-duty oil
	B	40-wt. oil
	D	EPDM-compatible oil
	M	Food-contact oil
	H	15W50 high-temp severe-duty synthetic oil
14		**Oil Level Monitoring**
	C	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 (qualification required ***)
	X	Float switch, ATEX/IECEx, discrete output (qualification required**)

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

** ATEX instrument only, pump as standard.

*** ATEX-compliant pump and float switch.

Note: The Oil Level Monitor Cover is an assembly that replaces the previous back cover on T100 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.

ATEX Certification Kit Options

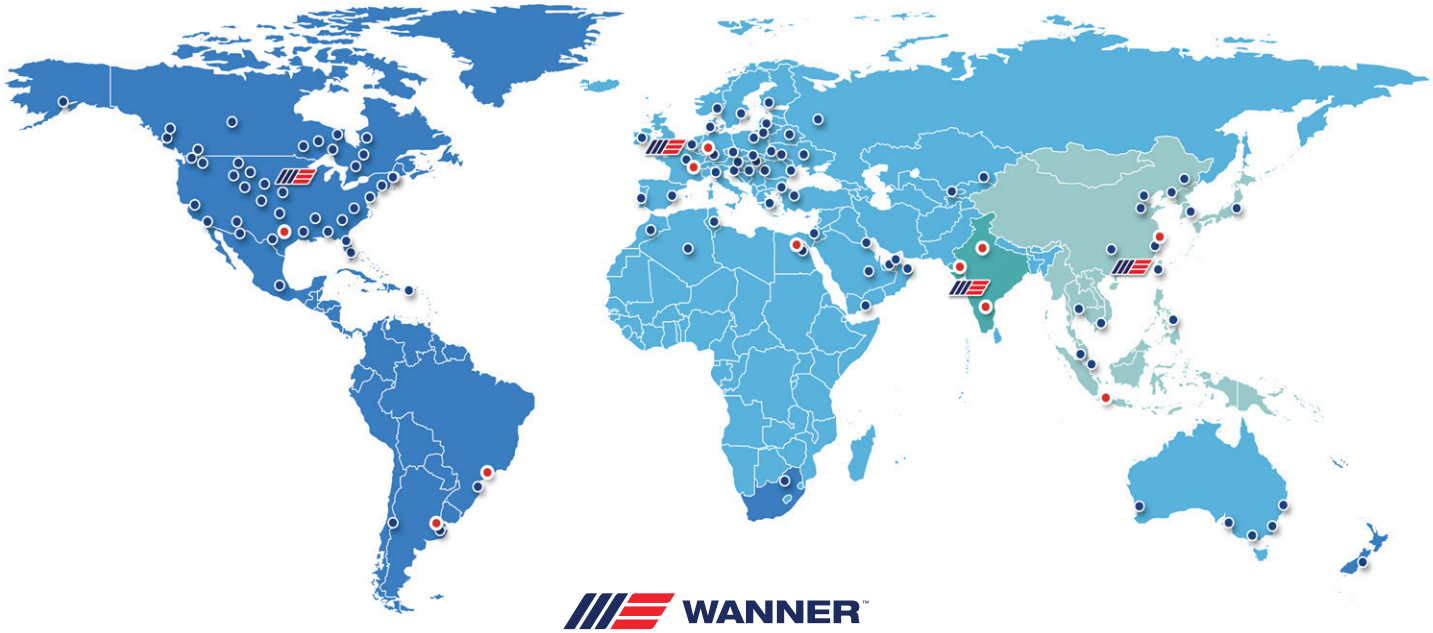
As a separate line on your order, please add the required ATEX Certification Kit Option.

– ATEX 2014/34/EU Certified, Category 2, Zone 1

– ATEX 2014/34/EU Certified, Category 3, Zone 2

- *All options include Certificate, Oil Level Monitor or Sight Glass, Earth Stud & Secondary ATEX Label.*
- *Extra oil is required to fill the oil bowl during installation of ATEX pumps. This oil is not included and must be ordered separately.*

Partners in over 70 countries



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