

THOMAS
24/7
XCHANGE

TGTO

HIGH
PRESSURE
PUMPS



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**THOMAS
PUMP**
THOMASPUMP.COM



HIGH PRESSURE PUMPS

T-GTO / T-GTO XD / T-GEAR

T-GTO / T-GTO XD / T-GEAR are high pressure pumps designed for critical applications, making them the most reliable high-pressure pumps in the marketplace.



FIELDS OF APPLICATION

T-GTO / T-GTO XD / T-GEAR

- Sanitation Cleaning
- Paper Mill Showering
- Truck Cleaning Facilities
- Brine Injection
- Environmental Waste Disposal
- Boiler Feed
- Mill De-scaling
- Oil and Gas

DESIGN

T-GTO series is a heavy duty oil lubricated Pitot tube pump designed for critical applications making it the most reliable high-pressure pump in the marketplace.

With a full range of capacities from 30-400 GPM (6-100 m³hr) and pressures reaching 1600-psi (110 bar) the T-GTO offers a variety of pump choices. A robust power frame, features that include only two basic working parts:

1) a rotating case and 2) a stationary pick-up tube, and a mechanical seal that only seals against suction pressure, ensure pump reliability in the most demanding applications.

Unlike conventional centrifugals and piston pumps that have a narrow window of operating performance, the T-GTO can operate at any point on the performance curve pulsation free and hydraulically stable resulting in years of trouble free service.

T-GTO XD series has been developed for low flow, high pressure applications. The Pitot tube design produces a stable, pulsation free flow. The ability to operate with low minimum flow makes the pump suitable for a wide variety of applications, within its performance envelope.

T-GEAR series is a single-stage, parallel shaft speed increaser. Heat dissipation is from a dynamically balanced fan blowing across the finned gearbox casing. The design is for horizontal installation only. The design, material, and workmanship incorporated in the construction of the T-GEAR make it capable of giving long, trouble-free service. The T-GEAR is typically used with the Thomas Pump & Machinery T-GTO, T-GTO XD, and GT-11 Pumps.

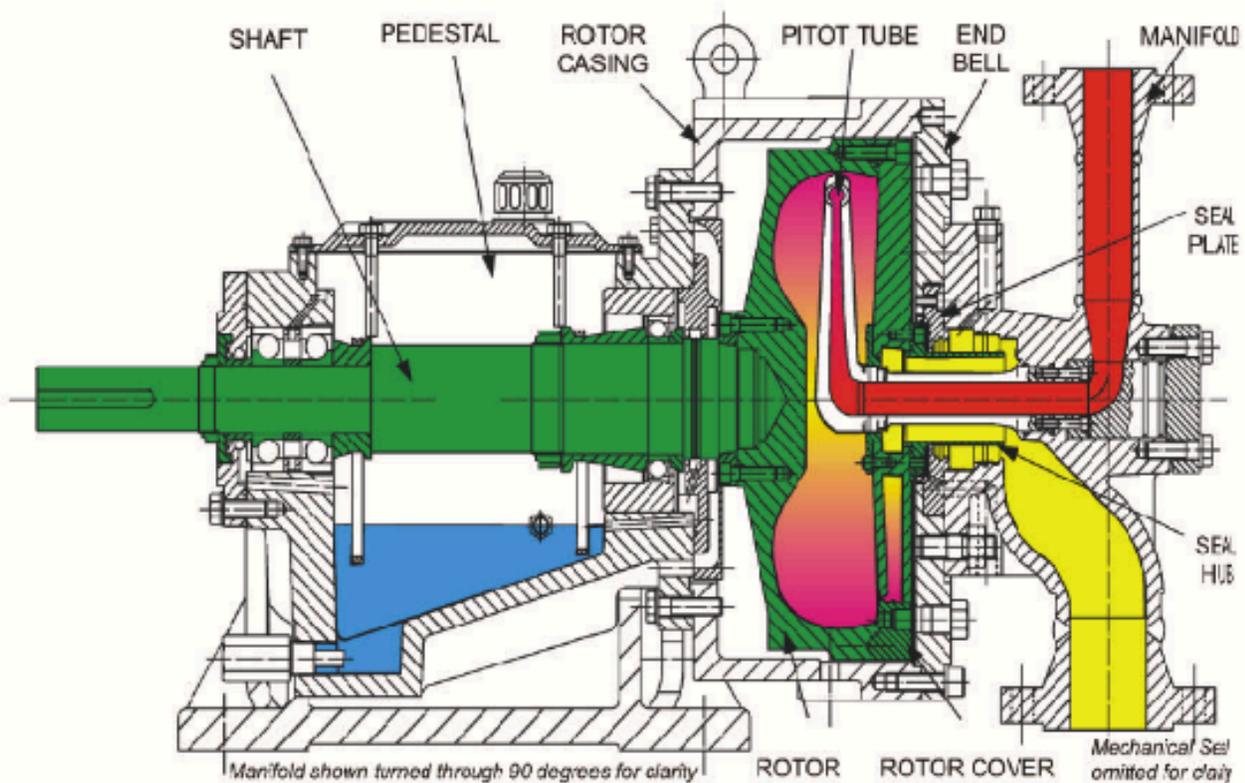
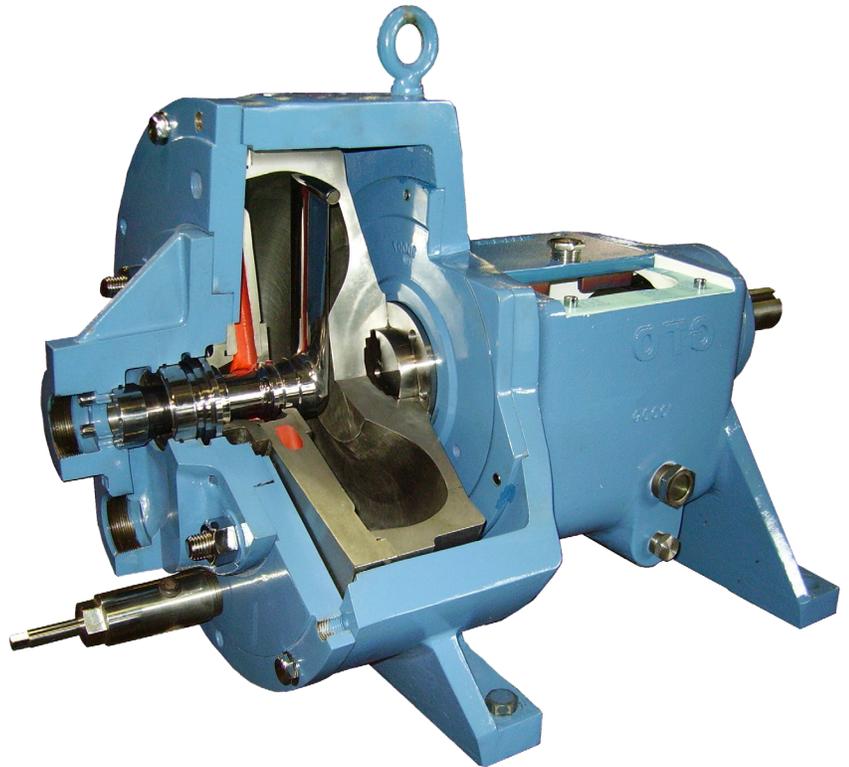
HOW IT WORKS

FIRST liquid enters the pump via the suction line (shown in yellow) where it is accelerated to a speed identical to the rotor speed creating a liquid ring, giving the fluid a velocity head.

NEXT the liquid enters the Pitot tube openings at the periphery of the rotating rotor.

AS THE liquid enters the Pitot tube (shown in red) much of its kinetic energy is converted into pressure energy by the internal shape of the Pitot tube creating relatively high pressures.

THIS GENERATES a pulsation free flow and has a stable NPSHr curve output.



HIGH PRESSURE PUMP FEATURES

T-GTO FEATURES

Large Sight Glass. Bull's-eye sight glass 1-1/4" simplifies oil level and oil condition monitoring that is critical to bearing life.

Magnetic Drain Plug. A safety feature designed to magnetically collect damaging metallic contaminants away from the bearings.

Heavy-Duty Shaft Bearings. X-Life Precision Bearings have extremely high reliability and extend bearing life with added benefits of smooth running, noise reduction, and reduced energy consumption.

Monitoring Locations. Power frame has bearing monitor feature to allow RTD insertion for bearing temperature monitoring and optional areas can be added for vibration monitoring.



THE T-GTO XD HAS THE ABOVE FEATURE PLUS:

- Meets API 610 Standards*
- Heavy Duty Power Frame
- Higher Operating Speeds / Pressures
- Two Year Power Frame Warranty
- Mechanical Seal Options & Flush Plans
- CE Compliant



HIGH PRESSURE PUMP PERFORMANCE

T-GTO

PUMP NAME	CAPACITY	HEAD	PRESSURE	PUMP SPEED
T060	30 GPM	1600 FT	695 PSI	3550 RPM
T060	40 GPM	2540 FT	1100 PSI	4500 RPM
T090	60 GPM	1475 FT	635 PSI	3550 RPM
T090	60 GPM	2360 FT	1022 PSI	4380 RPM
T120	100 GPM	1200 FT	541 PSI	3550 RPM
T120	100 GPM	2030 FT	878 PSI	4380 RPM
T150	150 GPM	1360 FT	589 PSI	3550 RPM
T150	150 GPM	2180 FT	944 PSI	4380 RPM
T242	200 GPM	1250 FT	541 PSI	3550 RPM
T242	200 GPM	2125 FT	920 PSI	4380 RPM
T302	300 GPM	1170 FT	506 PSI	3550 RPM
T302	300 GPM	2000 FT	865 PSI	4380 RPM

T-GTO XD

CAPACITY	HEAD	PRESSURE	PUMP SPEED	TEMP.
up to 400-GPM	4200 FT max	2300 PSI	6800 RPM	392 F max

Shaft Seal: Mechanical Seal only sees suction pressure
Connections: 1500 lbs. or DIN up to 250 BarG
Rotation: Counter clockwise facing shaft
Standards: API 610 8th Edition with exceptions

HIGH PRESSURE PUMP T-GTO SERIES



T-GTO



T-GTO XD

Description	Materials of Construction Code		
	Code 1 DI	Code 2 SS	Code 3 CD
*Rotor *Rotor Cover	Ductile Iron 65-45-12	Stainless Steel A351-CF8M	CD4 MCU ASTM A890 GRADE 1A/1B
*Pitot Tube	Alloy Stainless Steel 17-4 PH 17Cr4Ni		
2" X 2" NPT Manifold	Ductile Iron 65-45-12 Carbon Steel A216 WCB GS	Stainless Steel A351-CF8M	Stainless Steel A351- CF8N
2" X 2" NPT and flanged Manifold			
Seal Hub Seal Plate	Stainless Steel AISI 316 (not applicable on 2" x 2" screwed manifold)		CD4MCU
Pedestal Rotor Casing	Ductile Iron 65-45-12		
*End Bell	Steel A-105 St		
Shaft	High Tensile, Low Alloy Carbon Steel A576- 4140 HT 42 CrMo4V		
*O Rings	Viton is standard O-ring material but Teflon and Kalrez are available as options		

SPEED INCREASING GEARBOX
T-GEAR

RATIO CHART

SPEED INC. RATIO	OUTPUT SPEEDS AT:		
	1750 RPM	2950 RPM	3550 RPM
	200 HP MAX	300 HP MAX	400 HP MAX
1.0727	1877	3165	3808
1.1509	2014	3395	4086
1.2353	2162	3644	4385
1.3265	2321	3913	4709
1.4255	2495	4205	5060
1.5333	2683	4523	5443
1.6512	2890	4871	5862
1.7805	3116	5252	6321

*Gear teeth ground to AGMA class 10

1.9231	3365	5673	N/A
2.0811	3642	6139	N/A

*Contact Thomas Pump to discuss your specific application using these operating speeds



T-GEAR

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