

Tentec®

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Air Driven Pump Unit

Model: HTT.627X Series

HTT.6271 Maximum Working Pressure = 1500bar (21750 psi)

HTT.6272 Maximum Working Pressure = 2275bar (33000 psi)

The Principle

The New Tentec air operated pump units are designed and constructed to be failsafe, user friendly, lightweight and compact. They work on a simple but efficient principle, power is magnified through differential piston areas. A large pneumatic piston drives a smaller hydraulic piston, which provides fluid flow at high pressure. Pump assemblies can be supplied in many combinations, a choice of air motors and pressure gauges are available to ensure that the correct assembly is specified to meet the Bolt Tensioning requirements



Part Identifier

- 1 - Frame
- 2 - Oil outlet, female quick release coupling
- 3 - Pressure release valve
- 4 - On/Off Valve
- 5 - Pump Unit
- 6 - Oil reservoir
- 7 - Filler cap
- 8 - Air Inlet
- 9 - Air pressure gauge
- 10 - Air Regulator
- 11 - Pressure Gauge
- 12 - Pressure Relief Valve

Why use Air Driven Liquid Pumps ?

- Hydraulic pressure is held without energy consumption
- Explosion Proof, requires no electrical power or connections.
- Intrinsically Safe
- Compact and lightweight
- Contamination tolerant
- Outlet stall pressure predetermined by the air drive regulator
- Ideal for stop start applications under full load
- Easy to install and operate



Tentec are an innovative designer of special purpose bolt tensioning equipment with a high level of focus on quality. The company have accreditation to ISO 9001, ISO 14001:2004 & ISO 18001.

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Tentec Mini Air Driven Pump Unit

Tentec Air Driven Pump Units operate on the simple but efficient principle of power magnification through the use of differential areas. A relatively large air-operated piston drives the smaller piston, which provides fluid flow at high pressures. All Tentec air driven pump units are fitted into an easily transportable, tubular steel frame.

The pump units are available, fitted with a large choice of pressure gauges and are supplied complete with an air pressure regulator which can be set to stall the pump unit when it reaches the pressure required for each particular tensioning application.

Technical Specifications

Tentec supply many different air driven pump units, of varying pressure and fluid discharge specifications.

This document details the main tensioning air pump, the model HTT.627x Series.

The Tentec standard tensioning pump configuration is the model HTT.6271, with a maximum working pressure of 1500bar fitted with a suitable gauge and outlet connection.

For higher pressure needs the model HTT.627x series pump can be configured with a 2275bar max working pressure, fitted with a suitable gauge and outlet connection. Part number HTT.6272

Approximate Air to Hydraulic Pressure Ratios Static Condition

Ratio	Air Pressure (psi)									
	10	20	30	40	50	60	70	80	90	100
440:1	5000	8000	12500	16500	21000	25500	30000	34000	38000	42500

Note: When operating from 0 to rated hydraulic pressure, air consumption will be approx 28scfm of free air at 100psi input. At lower air pressures and higher hydraulic pressure, air consumption will reduce proportionally

Specification

Model Ratio	Hydraulic Piston Diameter (In)	Hydraulic Piston Area (In ²)	Volume per Stroke (In ³)
440:1	0.25	0.049	0.061



Approximate size - 42cm x 42cm x 45cm
Weight (reservoir empty) - 22.5kg
Reservoir capacity - 9 litres
Hydraulic piston diameter - 6.35mm
Hydraulic piston area - 31.67mm²
Volume per stroke - 999.6mm³

Recommended Oil

ISO Grade 10, 32 and 68

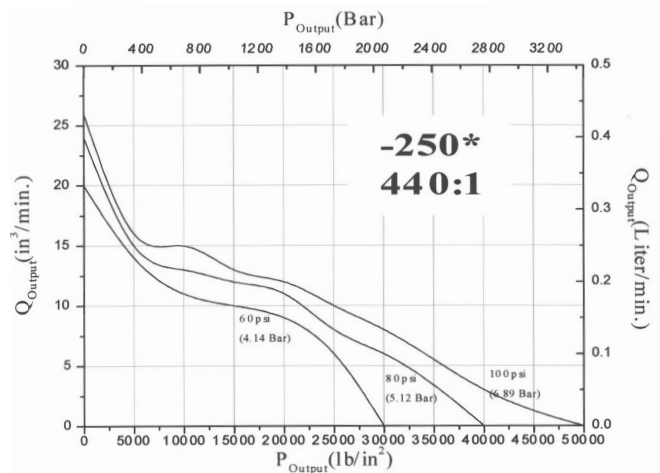
Example: Shell Morlina oil 10

Air Consumption

When operating from zero to rated hydraulic pressure, air consumption will be approximately 28ft³/Min of free air at 100 PSI input. At lower air pressures and higher hydraulic pressures, air consumption will be reduced proportionally to flow rates included.



Approximate Rate of Discharge



Associated Equipment



Hydraulic Nuts

Refer to associated technical datasheet



Topside Bolt Tensioning Tools



Subsea Bolt Tensioning