

Pipejacking - 5000 Series Pump Unit



The 5000 Series II Pump Unit is part of a complete, all-in-one pipejacking system containing TBM, hydraulic power unit, skid base sections and a thrust yoke. This versatile system easily adapts to any jacking pipe in any pipe joint length with an appropriately sized TBM and yoke.

The 5000 Pump Unit cylinders extend to advance the TBM and pipe along the skid base against the thrust yoke. The yoke, matched to the final product pipe diameter, provides a 360-degree surface to minimize point pressure on jacking pipes and transfer thrust from the pump unit to the pipe.

The 5000 Series II Pump Unit features two independent hydraulic systems for jacking and TBM supply functions. The high-pressure, 50 HP (37 kW) electric motor powers the two main jacking cylinders and auxiliary jacking functions. The two low-pressure 100 HP (74 kW) electric motors powers the TBM and conveyor. Both hydraulic systems offer a load sensing feature for optimum control. The operator can select various configurations of 30, 60 and 90 GPM (L/min) flow requirements to match the boring head cutter bit drive demands and additional GPM (L/min) for conveyor and auxiliary functions.

The skid serves as the foundation for the pump unit, yoke, haul unit, TBM, and pipe and transfers thrust to the reaction block.

The 5000 Pump Unit controls and gauges are accessible and clearly visible to the operator. It is housed in a heavy duty metal cab with locking folded doors to prevent vandalism.

Specifications

Product	Dimensions h x w x d	Weight	Thrust/ Hydraulic Supply	Reservoir Capacity
5000 Series II Pump Unit	90" x 102" x 62" (2,286 mm x 2,591 mm x 1,575 mm)	16,000 lbs. (7,257 kg)	(2) 200 ton (181 t) with 36" (914 mm) stroke cylinders (2) 100 HP (74 kW) low pressure electric motors for 30 or 60 GPM (114-227 L/min) load sense, variable volume @ 2,800 psi (19,306 kPa) for TBM functions 50 HP (37 kW) high pressure electric motor for 0-26 GPM (0-98 L/min) load sense, torque limiting, variable volume 5,500 psi (37,921 kPa)	TBM system = 200 gal (757 L) Jacking system = 100 gal (379 L)

Product	Width	Length	Height	Weight
Skid 2.5'	80" (2,032 mm)	30" (762 mm)	25.5" (648 mm)	1,500 lbs. (680 kg)
Skid 7.5'	91" (2,311 mm)	90" (2,286 mm)	25.5" (648 mm)	4,200 lbs. (1,905 kg)
Skid 15'	91" (2,311 mm)	180" (4,572 mm)	25.5" (648 mm)	8,400 lbs. (3,810 kg)
Skid 22.5'	91" (2,311 mm)	270" (6,858 mm)	25.5" (648 mm)	12,600 lbs. (5,715 kg)

*Note: Akkerman standard sizes can be customized to suit project needs.



The 5000 series is a complete pipejacking system featuring a TBM, hydraulic power unit and thrust yoke on top of a skid.

The pump unit is positioned on the back end of the skid, behind the yoke and houses the jacking cylinders and hydraulic power. The operators platform offers a safe location for access to controls.

The 5000 Series II Pump Unit features two 100 HP (74kW) low pressure electric motors for TBM and conveyor functions and one 50 HP (37kW) high pressure electric motor for the main hydraulic cylinders and auxiliary jacking functions.

The thrust yoke is pushed by hydraulic cylinders on the pump unit and is sized to match the pipe size. This yoke features extension rings for a larger pipe diameter.

This photo shows how the yoke provides a 360-degree surface against the pipe to minimize point pressure and transfer thrust to the pipe.

Extended skid base sections are available for long sections of pipe. Skids lengths range from 30-270 inches (762-6,858 mm).