



VERTICAL CRUDE OIL PIPELINE Injection Pumps

Heavy Duty Gear Pumps

EXPERIENCE

RELIABILITY

SAFETY

FEATURES & BENEFITS

- A single unit simplifies the system
- A single unit reduces cost
- Discharge pressure up to 1440 PSI
- Smooth pulse free flow increases piping life cycle
- Eliminates the need for accessory components
- Easily varied flow output using a VFD
- Competitively priced
- Short lead times
- Environmentally friendly



For over 85 years Northern has been manufacturing the most reliable gear pump in the industry. We pride ourselves on regularly accomplishing for our customers what no other pump company can achieve. Northern's ability to produce discharge pressures up to 1440 psig and a broad turn-down ratio has made it the ideal pump for crude oil injection for pipeline applications. Whether the application is discharging from a LACT unit or providing boost for systems that have become inadequate due to increasing line pressures, Northern has performed flawlessly and we have now adopted our technology into a vertical configuration.

Evacuating crude oil sumps has traditionally been accomplished by a legacy system that uses a vertical centrifugal pump as a feed pump to a triplex piston pump which injects the oil into the pipeline. This system is not only complicated but expensive. The legacy system also contains inherent environmental concerns from leaks. Accessory equipment like pulsation dampeners are needed adding cost and complexity to the system as well.

Northern's Vertical Pump can simply be placed in your sump and piped directly into your pipeline. The simplicity offered by Northern's Vertical Pump reduces your system to one pump with no accessory equipment. The Northern pump is also always fully contained in your sump eliminating any environmental risk. This combination of benefits makes Northern the BEST CHOICE when selecting a pump for crude oil sump evacuation.



VERTICAL CRUDE OIL PUMPS



EXPERIENCE
RELIABILITY
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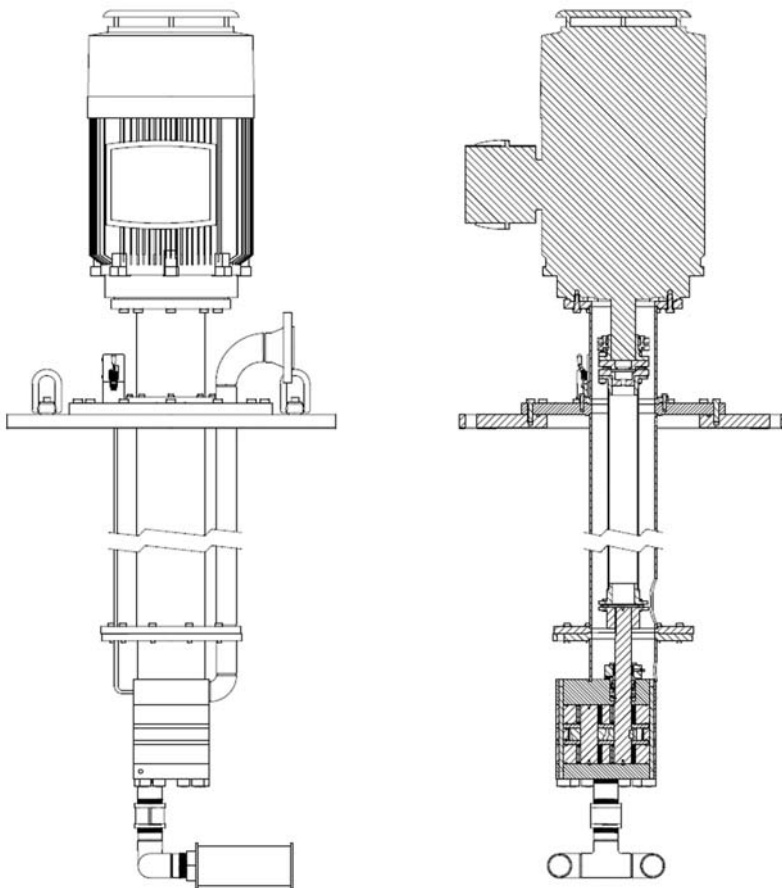
Specifications:

Flow: Up to 193 GPM

Pressure: Up to 1440 PSI

Pressure Differential (psi)	Flow Rates (GPM)			
	4900-10	4900-15	4900-20	4900-30
200	62	95	128	193
400	57	89	121	184
600	52	83	114	-
800	47	77	107	-
1000	42	71	-	-

**Flow calculations are at 1750 RPM, assuming 3 cP crude oil.*



Materials of Construction:

Pump Body: All steel housing

Gears: Hardened and Ground 8620 Alloy Steel

Shafts: Hardened and Ground 8620 Alloy Steel

Bearings: AISI 52100 Roller Bearings

Shaft Seal: Type 21 Mechanical Seal

Inlet/Outlet Connections: NPT or Flanged available.

Northern is 100% US manufactured which provides for quick deliveries and easy serviceability.
Contact us with your application today!



ALL STEEL
HOUSING

RUGGED
DESIGN

PRECISION
MANUFACTURING

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Made in the USA



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