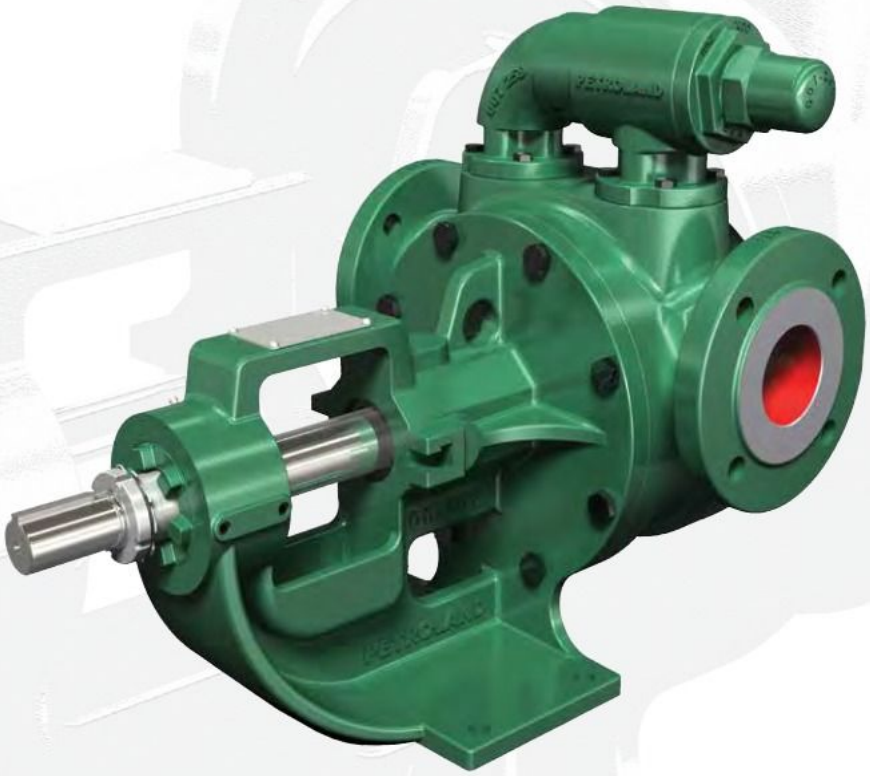
PETROL LAND®

PD SERIES

Internal Gear Pumps



TSE CE Ex TÜV NORD ISO 9001

APPLICATIONS & INDUSTRY

ASPHALT & BITUMEN INDUSTRY

PAINT INDUSTRY

FOOD INDUSTRY

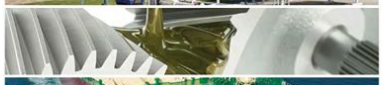
PHARMACEUTICAL INDUSTRY

PAPER INDUSTRY

CHEMICAL INDUSTRY

COSMETICS INDUSTRY

LPG INDUSTRY



LUBRICATION OIL INDUSTRY

MARINE INDUSTRY

PETRO-CHEMICAL INDUSTRY

SUGAR INDUSTRY

AGRICULTURAL INDUSTRY

PD SERIES
Internal Gear Pumps

Internal Gear Pumps are self-priming positive displacement pumps and they have reliable design with only two moving parts. Because of both direction properties, they are suitable for filling and discharge.

Internal gear pumps are used for low viscosity mediums (solvent, fuel... etc.) and high viscosity mediums (asphalt, chocolate, honey... etc.) with adjustable clearance. They can transfer the fluids, which viscosity is between 1 cSt- 450.000 cSt

FEAUTURES AND ADVANTAGES:

> Applications variety with 56 different case size
> Easy of usage and maintenance with only two moving parts
> Operating wide range of viscosity
> Can be used same pump for filling and discharge with both direction properties
> Cavitation possibility is less because of low NPSHr
> Can be apply many different material option (cast iron, ductile iron, steel or stainless steel)
> The pump design is suitable for every type of seal (Special design, lip seal, packing gland, single mechanical seal, double mechanical seal)
> The design is suitable for many applications
> The pump isn't effected any pressure drops in order to positive displacement feature
> Suitable for all kind of coupling (with motor, gearbox, v-belt)
> Connection type options, ANSI&DIN Flanged connection or BSP&NPT threaded connection
> They are more economical than rotary lobe pumps and screw pumps because can be applied only one seal
> Heating / Cooling jackets can be applied to cover, case or bracket
> The rotor case can rotate 360°
> Not required special tools for maintenance
> Connection design is adjustable 90° or 180°
> Self-priming is up to 720mbar
> Relief Valve can be applied to pump cover or case

Working Principle

Inlet Side – Outlet Up

Inlet and Outlet Side (In-Line)

1- Liquid enters the suction port between the rotor (large exterior gear) and idler (small interior gear) teeth. The orange arrows indicate the direction of the pump and liquid.
2- Liquid travels through the pump between the teeth of the "gear-within-a-gear" principle. The crescent shape divides the liquid and acts as a seal between the suction and discharge ports.
3- Rotor and idler teeth mesh completely to form a seal equidistant from the discharge and suction ports. This seal forces the liquid out of the discharge port.

MONOBLOCK DESIGN

Max. Capacity: 17 m³/h

Max. Viscosity: 2.500 cSt

Max. Differential Pressure: 10 bar

Temperature Range: -20°C to +180°C

FEATURES:

> Applications variety with 6 different case size
> Can be apply many different material option (cast iron, ductile iron, steel or stainless steel)
> Operating low and medium viscosity
> Self-priming is up to 720mbar
> It requires less space in order to design
> The pump design is suitable for lip seal and mechanical seal
> It is economical solution with direct coupling

OPTIONS:

> Heating / Cooling jacket can be applied to cover
> Relief Valve can be applied to pump cover or casing
> Connection type options, ANSI&DIN Flanged connection or BSP&NPT threaded connection.

> Cover Jacketed, Relief Valve on Casing

> The Cutted Way with Relief Valve on Casing

CODE SYSTEM

H	5	722	F	1	B	V
Model	**Sealing**	**Construction**	**Connection**	**Casing Mat.**	**Bushing**	**By-Pass**
B H HM HL J JL	5 : Internal Mechanical 9 : Lip Seal	722 : Standard 732 : Cover Jacketed	G: BSP N: NPT F : DIN Flange A : ANSI Flange	1 : Cast Iron 2 :Ductile Iron 3 : Steel 4 : Stainless Steel	B : Bronze K : Carbon Graphite T : Tungsten	- : No Relief Valve V : Relief Valve on Cover X : Relief Valve on Casing

Model	Inlet / Outlet Size		Capacity (at Max. Speed)		Max. Speed (rpm)	Max. Differential Pressure	
	Inch	mm	m³/h	GPM		PSI	Bar
B	1"	25	2.4	10	1750	140	10
H	1 ½"	40	3.5	15			
HM	1 ½"	40	5	22			
HL	1 ½"	40	7	30			
J	2"	50	11	50	1150		
JL	2"	50	17	75			

HIGH SPEED DESIGN

Max. Capacity: 17 m³/h

Max. Viscosity: 2.500 cSt

Max. Differential Pressure: 14 bar

Temperature Range: -20°C to +180°C

FEATURES:

> Applications variety with 6 different case size
> Can be apply different material option (cast iron and ductile iron)
> Operating low and medium viscosity
> Self-priming is up to 720mbar
> The pump design is suitable for only mechanical seal
> It is economical solution with direct coupling

OPTIONS:

> Relief Valve can be applied to pump cover
> Connection type option is with BSP&NPT threaded connection

> Cutted Way with Relief Valve on Cover

> Relief Valve on Cover (Direct Coupling)

CODE SYSTEM

TL	522	G	1	B	V
Model	**Construction**	**Connection**	**Casing Mat.**	**Bushing**	**By-Pass**
TL H HM HL J JL	522 : Standard	G : BSP N : NPT	1 : Cast Iron 2 : Ductile Iron	B : Bronze K : Carbon Graphite T : Tungsten	- : No Relief Valve V : Relief Valve on Cover

Model	Inlet / Outlet Size		Capacity (at Max. Speed)		Max. Speed (rpm)	Max. Differential Pressure	
	Inch	mm	m³/h	GPM		PSI	Bar
TL	1"	25	2.4	10	1750	200	14
H	1 ½"	40	3.5	15			
HM	1 ½"	40	5	22			
HL	1 ½"	40	7	30			
J	2"	50	11	50	1150		
JL	2"	50	17	75			