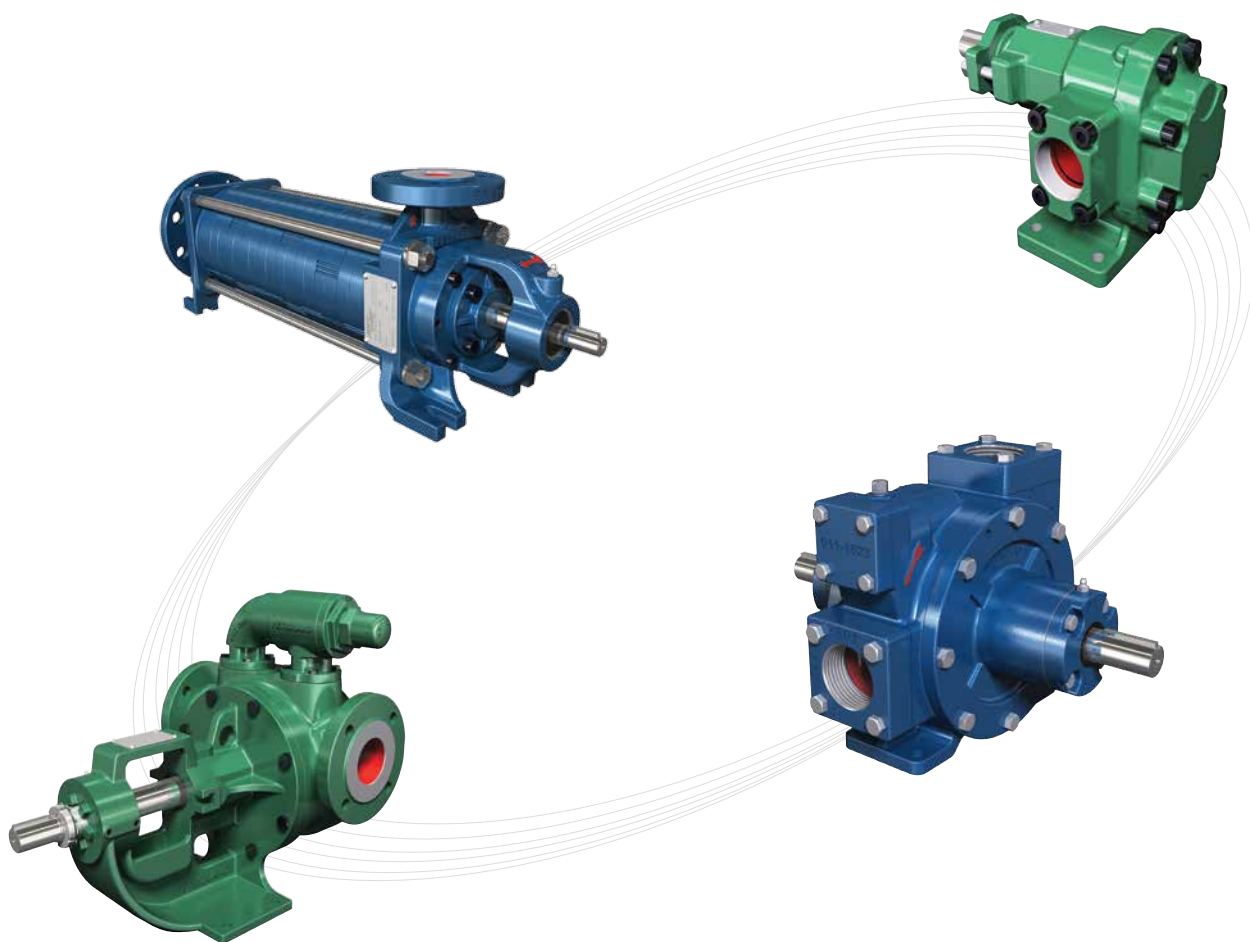




# Industrial Pumps



**PETRO**<sup>®</sup>  
**LAND**



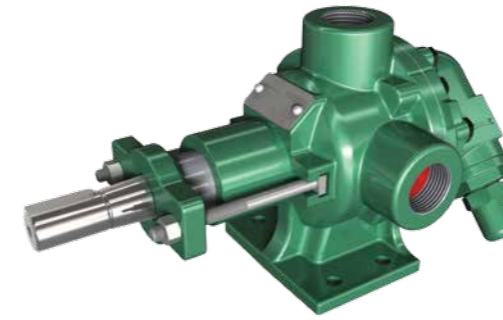
# PD SERIES Internal Gear Pumps



- Max. Capacity: 390 m<sup>3</sup>/h
- Max. Differential Pressure: 14 bar
- Max. Viscosity: 450.000 cSt
- Temperature Range: -50°C to +350°C



With Bracket Design



Without Bracket Design



High Speed Design



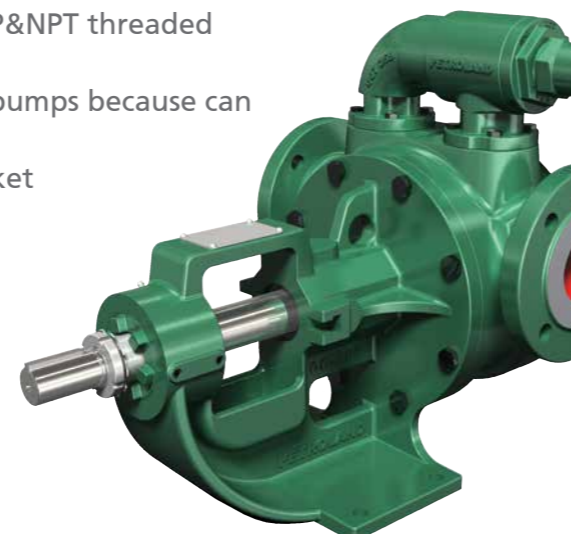
Mono-Block Design

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

### FEATURES 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 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



In-Line Design

Model	Inlet / Outlet Size		Capacity (at Max. Speed)		Max. Speed (rpm)	Max. Differential Pressure	
	Inch	mm	m <sup>3</sup> /h	GPM		PSI	Bar
AS	½"	15	0.7	3	1750	100	7
A	¾"	20	1.5	6.5			
GL	1"	25	3.5	15			
FL	1 ½"	40	7	30			
B	1"	25	2.4	10			
BM	1"	25	2.4	10			
TL	1"	25	2.4	10			
CL	1"	25	3.5	15	1150	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			
JL	2"	50	17	75			
K	2"	50	19	85			
KL	2"	50	26	115	900	750	500
S	2 ½"	65	36	160			
SL	2 ½"	65	52	230	750	400	300
M	3"	80	52	230			
ML	3"	80	65	290			
N	4"	100	65	290	500	400	300
NL	4"	100	113	495			
NM	5"	125	113	495	400	300	125
P	5"	125	120	525			
R	6"	150	157	695	300	8.5	
Z	8"	200	267	1180			
ZL	10"	250	390	1720			



# PM SERIES External Gear Pumps



- Max. Capacity: 50 m³/h
- Max. Differential Pressure: 10 bar
- Max. Viscosity: 450.000 cSt
- Temperature Range: -30°C to +250°C



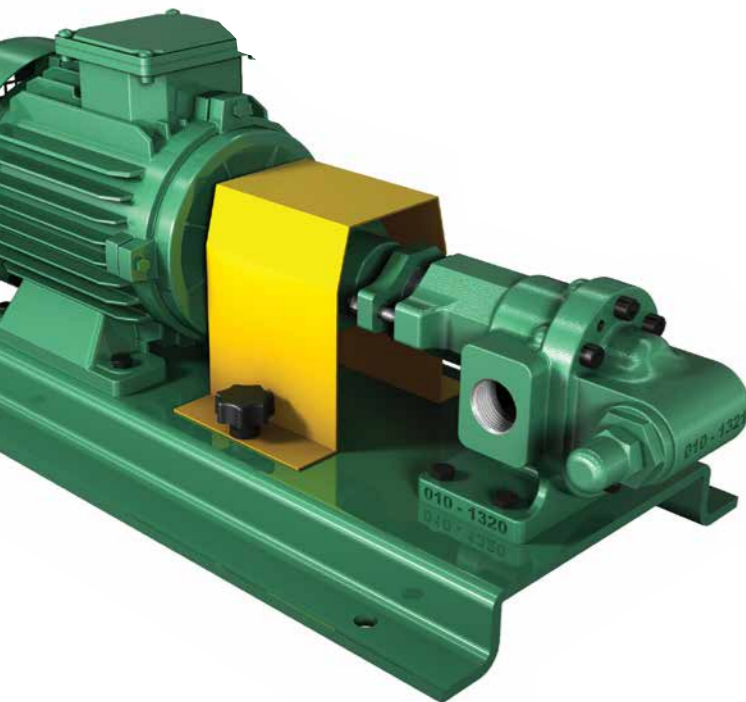
> With Cartridge Mechanical Seal



> With Flanged & Single Mechanical Seal



> With Cover Jacketed



> Direct Coupling With Relief Valve

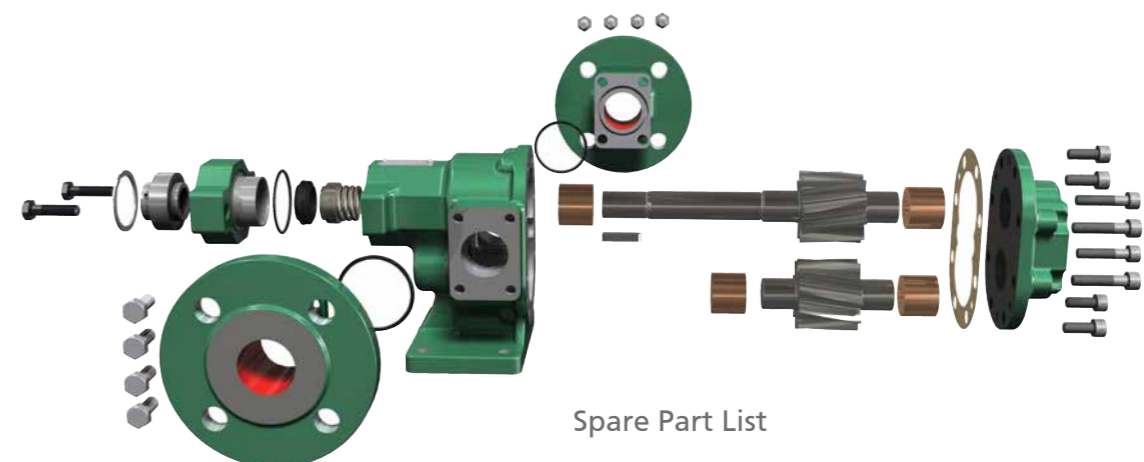
External Gear Pumps are self-priming positive displacement pumps and they have very good vacuum capability. Can be used for low, medium and high viscosity applications with adjustable clearances. They require less parts in order to compact design and to save space. Can be used for both direction with suitable seal. Application variety with helical and spur gear options

### FEATURES AND ADVANTAGES:

- > Applications variety with 12 different case size
- > Operating wide range of viscosity
- > Easy of usage and maintenance with only two moving parts
- > 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 (lip seal, packing gland, single mechanical seal, double mechanical seal)
- > 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
- > Not required special tools for maintenance
- > Connection design is adjustable only for 180°
- > Self-priming is up to 720 mbar
- > Relief Valve can be applied to pump cover
- > The design is allowed for dosing applications

Model	Inlet / Outlet Size		Capacity (at Max. Speed)		Max. Speed (rpm)	Max. Differential Pressure *	
	mm	Inch	m³/h	GPM		PSI	Bar
PM 15	15	½"	0.7	3	1750	145	10
PM 15L	15	½"	1.5	6.5			
PM 20	20	¾"	2.4	10			
PM 25	25	1"	3.5	15			
PM 32	32	1 ¼"	4.8	21			
PM 32L	32	1 ¼"	7	31	1450	145	10
PM 40	40	1 ½"	9,5	42			
PM 50	50	2"	10	44	950	145	10
PM 50L	50	2"	18	80			
PM 65	65	2 ½"	25	110			
PM 80	80	3"	35	155			
PM 100	100	4"	50	220			

\* (Higher pressures are available with factory approval.)



Spare Part List

# PV SERIES Sliding Vane Pumps



- Max. Capacity: 65 m<sup>3</sup>/h
- Max. Differential Pressure: 8,5 bar
- Max. Viscosity: 100 cSt
- Temperature Range: -40 °C to +150 °C



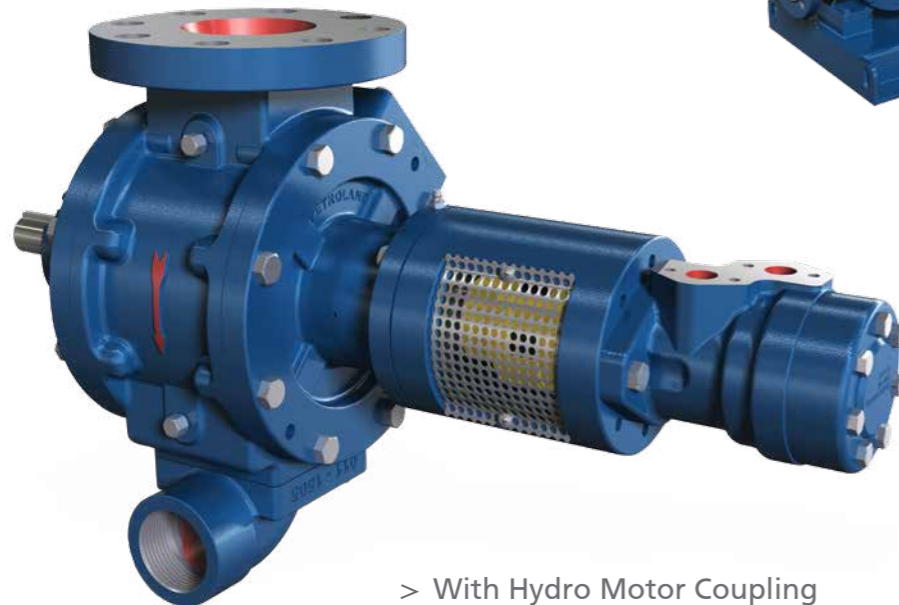
> With Flange Connection

Sliding vane pumps are specifically designed to comply with the pumping requirements demanded by the LPG industry. Bulk delivery of LPG requires the use of heavy duty, reliable equipment and is an important part of every LPG marketer. The equipment used in modern bulk trucks must be designed and constructed to perform in a broad spectrum of operating conditions. Sliding vane design is ideal for butane, propane, freon, fuel, gasoline, DME, anhydrous ammonia, propellants, refrigerants and similar liquefied gases.

Utilizing Petroland's unique sliding vane design, these positive displacement pumps offer the best combined characteristics of sustained high-level performance, energy efficiency, trouble-free operation and low maintenance cost.



> With V-Belt Coupling



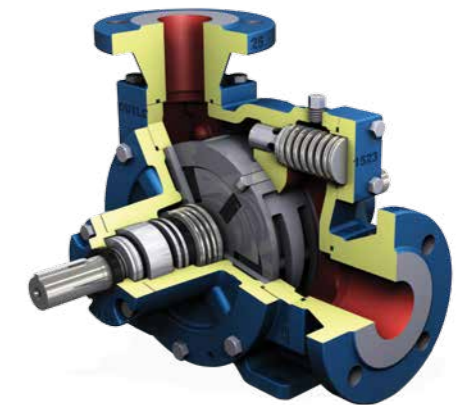
> With Hydro Motor Coupling

## FEATURES AND ADVANTAGES:

- > Applications variety with 8 different case size
- > They require less horsepower than other positive displacement pumps. So you spend less on motors initially and less on electricity to operate the pumps after they are installed.
- > High capacity at lower speeds. These lower operating speeds mean quieter operation, longer service life, and reduced maintenance requirements
- > Can be used same pump for filling and discharge with both direction properties
- > Self-adjusting vanes keep performance high
- > Vane replacement in easy inspection and no special tools require
- > Replaceable casing liner and end discs
- > Advanced polymer
- > Internal relief valve
- > Cavitation suppression liner
- > The design allows only mechanical seal. (Dual mechanical seals)
- > Dual-Ended shaft allows for both directions
- > External ball bearings
- > These vane pumps can be couplings with V-Belt, Hydro Motor and Gearbox.
- > Connection type options, ANSI&DIN Flanged connection or BSP&NPT threaded connection



> With Threaded Connection







> With Flanged Cutted Way

Model	Inlet / Outlet Size	Capacity (at 0 bar)		Max. Speed (rpm)	Max. Differential Pressure	
		LT/1 rev.	GPM/1 rev.		PSI	Bar
PV 150	DN50 / DN40	0.088	0.023	1750	120	8.5
PV 200	DN50 / DN50	0.42	0.11	750		
PV 220	DN50 / DN50	0.43	0.11			
PV 320	DN80 / DN50	0.6	0.15			
PV 330	DN80 / DN50	0.65	0.17			
PV 350	DN80 / DN80	0.9	0.23			
PV 360	DN80 / DN80	0.89	0.23			
PV 450	DN100 / DN80	1.85	0.49			



# PS SERIES Side Channel Pumps



-  Max. Capacity: 42 m<sup>3</sup>/h
-  Max. Differential Pressure: 40 bar
-  Max. Viscosity: 100 cSt
-  Temperature Range: -40 °C to +220 °C



> PSC Design

PS series pump is a self-priming side channel pump capable of handling gas along with the medium and operates at a low noise level. PS pumps are used for problem-free pumping of clean liquids at unfavorable suction side conditions. They are also very suitable for positive suction heads below 0,5m. PS pumps provide the most appropriate solutions for liquefied gases, liquids under vapor pressure, refrigerants and especially LPG applications.

Side channel designs fill the hydraulic performance void between positive displacement pumps and centrifugal pumps. Fully open "star" impellers interact with the side channel casing creating an intense transfer of energy to the pumped liquid or liquid / gas mixture. The corresponding pressure increase (pump head) equals 5 to 10 times the amount generated by a similar size centrifugal pump at the same rpm.

## FEATURES AND ADVANTAGES:

- > The range comprises of 21 sizes each with 1 to 8 hydraulic stages whereby an optimum rating is obtained, ensuring the pump selected meets the required capacity and head.
- > Applications variety with 168 different case size
- > High pressure at low capacity
- > Liquefied gas handling
- > High resistant materials for the critical conditions
- > Performance curve characteristic
- > High efficiency
- > Modular hydraulic design allows easy maintenance
- > Low NPSHr value
- > Ability to pump vapour laden liquids (up to 50%)
- > The pump design is suitable for every type of seal (packing gland, single mechanical seal, double mechanical seal)
- > Self-priming is up to 740 mbar



> PSV Design



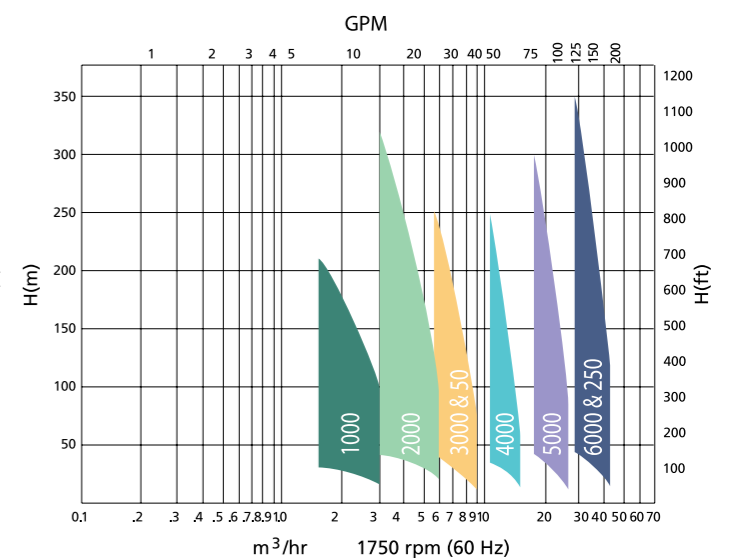
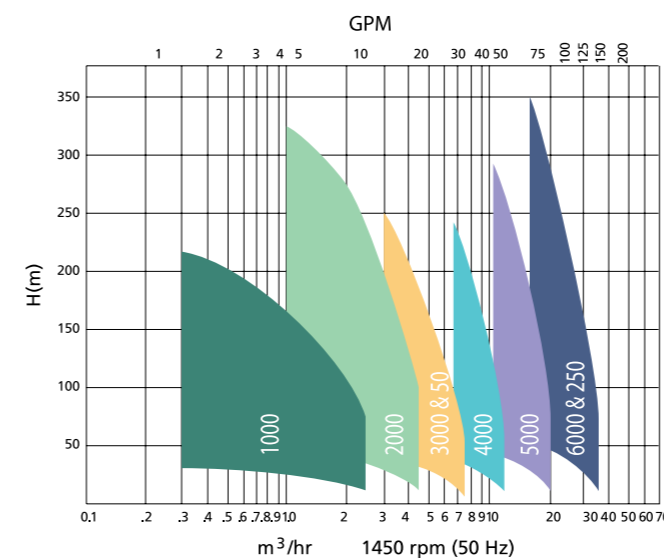
> PSD Design



> LPG 150 Design



> LPG 50 & LPG 250 Design



\* Performance curves are prepared for water (1 cSt)



## ACCESSORIES

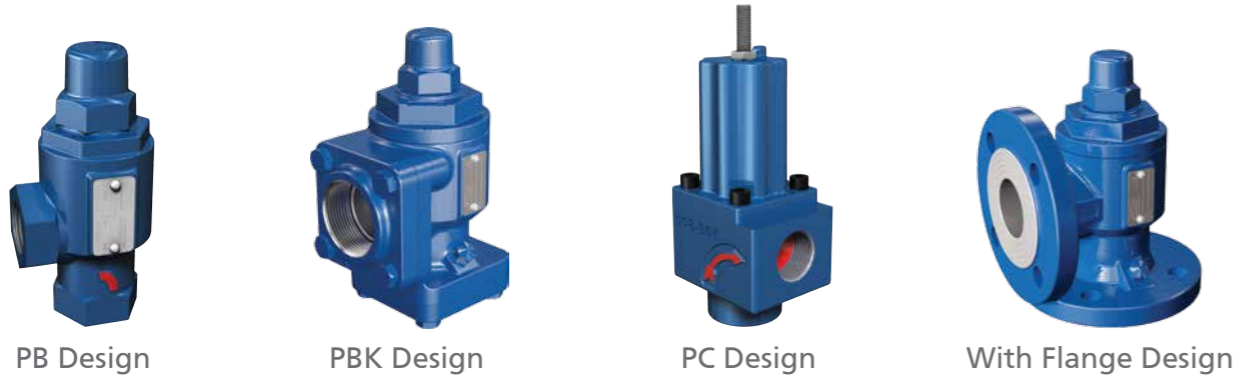
### By-Pass:

Differential by-pass valves are designed to protect pumps and system components from excessive pressure damage.

Petroland by-pass valves can be set between 0-25 bar.

With only two moving parts, operations simple and reliable..

By-pass should not be open continuously to protect system against any damage or explosion.



PB Design

PBK Design

PC Design

With Flange Design

#### BY-PASS MODEL AND FEATURES

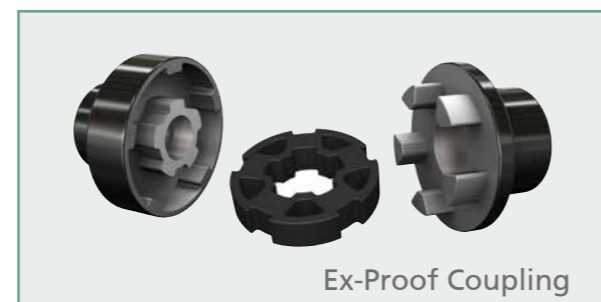
By-Pass Type		Inlet / Outlet Size		Max. Working Pressure	
Threaded Connection	Flange Connection	Inch	mm	PSI	Bar
PB 20	PC 20	-----	¾"	360	25
PB 25	PC 25	PB 25F	1"		
PB 32	PC 32	PB 32F	1 ¼"		
PB 40	PC 40	PB 40F	1 ½"		
PB 50K	-----	PB 50F	2"		



Orifis Set



Reduction



Ex-Proof Coupling

## APPLICATIONS & INDUSTRY



ASPHALT & BITUMEN INDUSTRY

PAINT INDUSTRY

FOOD INDUSTRY

PHARMACEUTICAL INDUSTRY

PAPER INDUSTRY

CHEMICAL INDUSTRY

COSMETICS INDUSTRY

LPG INDUSTRY

LUBRICATION OIL INDUSTRY

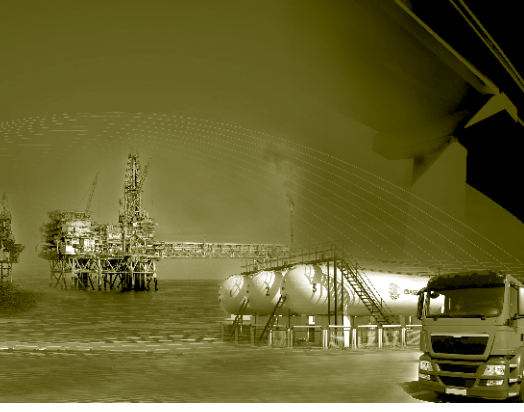
MARINE INDUSTRY

PETRO-CHEMICAL INDUSTRY

SUGAR INDUSTRY

AGRICULTURAL INDUSTRY





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