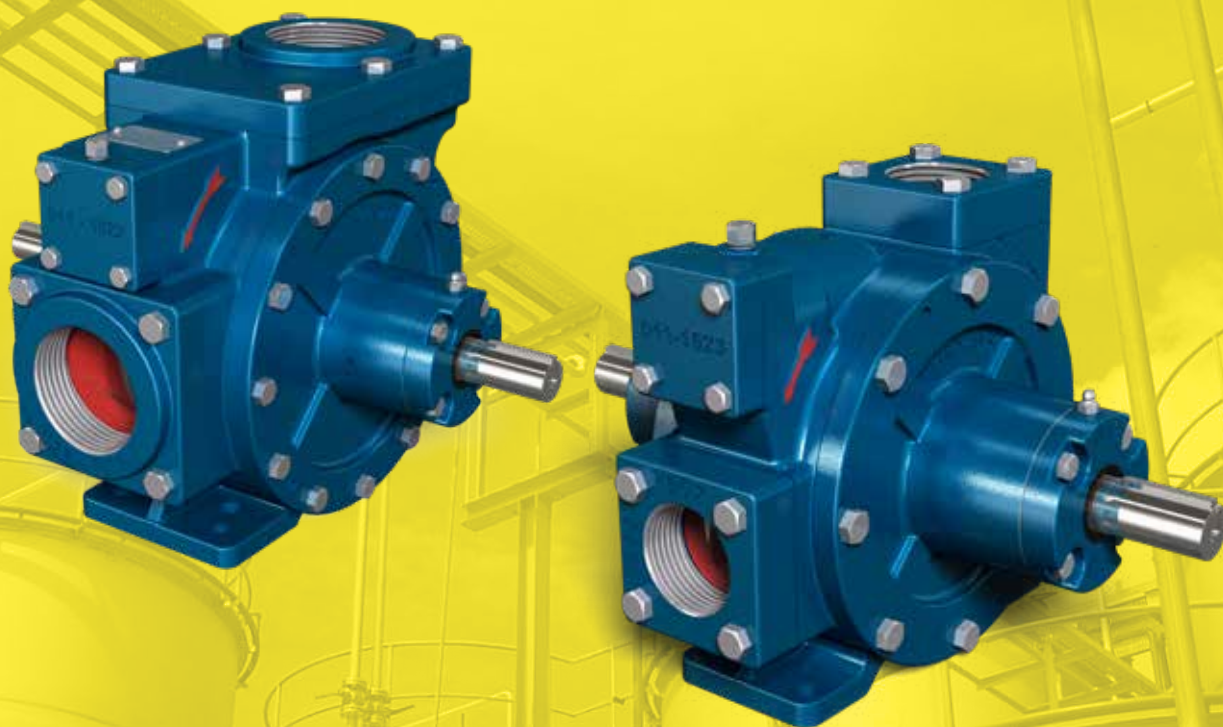


tapflo®

PV VANE PUMPS

2020| 2



» All about your flow™

www.tapflo.hu

» All about your flow™

We began our journey 40 years ago in Kungälv, a small town on the Swedish west coast, as a family company with an ambition to one day become a global player on the pump market.

Since 1980, we have taken pride in delivering a wealth of knowledge and passion for pumps to the industry, whilst supplying a wide range of premium products for various industrial applications.

Over the years, the company has developed into a global Tapflo Group with branches and distributors present in nearly every region of the world.

One thing did not change - we are still a family company.

Our solutions are designed and manufactured in Europe and distributed globally to offer the best service and flow solutions to our customers for a variety of applications.

Our values, Commitment, Quality and Simplicity are reflected both in our product and business approach.



For fast and flexible service and high-quality products readily available worldwide, choose Tapflo.

Quality commitment

At Tapflo we are simply committed to quality. As a result, our production standards, as well as products quality, comply with various globally recognised certification and quality control standards. The Tapflo manufacturing process is certified according to ISO 9001:2015, confirming that our processes are appropriate, effective, customer-focused and continuously improved.



Tapflo values

Our culture is concluded in Our values

Commitment

We are different from our competitors because of our willingness to exceed the customers' expectations, move fast and be flexible. Our culture is based on the spirit of togetherness, enthusiasm and integrity. We come from all over the world but we share the same values and we respect each other. We are committed.

Quality

We understand that the quality in our work is never better than the weakest link, that's why we focus on every small detail. We share a common passion for continuously finding more efficient and effective ways to provide value to our customers. As a manufacturer we have control of the complete process both in terms of our products and the way we operate internally. That is why we manufacture the highest quality pumps in our segment.

Simplicity

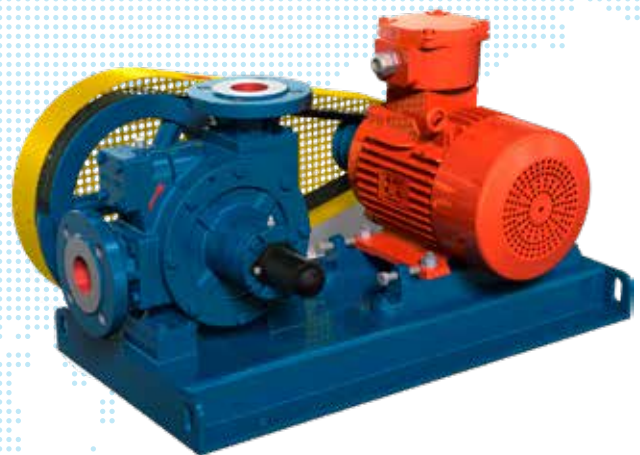
We have a saying, "Simple is art" which means we try to find smooth and uncomplicated solutions in everything. By keeping it simple we can focus on the essential, like designing uncomplicated pumps with few components. For us it is a key to success; strive to simplify what is complex.

PV series – Vane Pumps

Meeting the requirements for LPG industry

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.

Utilizing 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.



Fast facts

Max. Capacity	65 m ³ /h
Max. Differential Pressure:	8.5 bar
Max. Viscosity:	100 cSt
Temperature Range:	-30 to + 150 °C

Features & Benefits

- ✓ Pumps require less horsepower
Less spend money on motors initially and less on electricity to operate the pumps after they are installed.
- ✓ Self-adjusting vanes keep performance high
- ✓ High capacity at lower speeds.
Quieter operation, longer service life, and reduced maintenance requirements.
- ✓ Vane replacement in easy inspection and no special tools require.
- ✓ The same pump can be used for filling and discharge with both direction properties

Working principle



Vane contact with the chamber wall is maintained by three forces:

- Centrifugal force from the rotor's rotation
- Push rods moving between opposing pairs of vanes
- Liquid pressure entering through the vane grooves and acting on the rear of the vanes.

Each revolution of a Petroland pump displaces a constant volume of fluid.

Petroland pumps use a rotor with sliding vanes that draw the liquid in behind each vane, through the inlet port and into the pumping chamber.

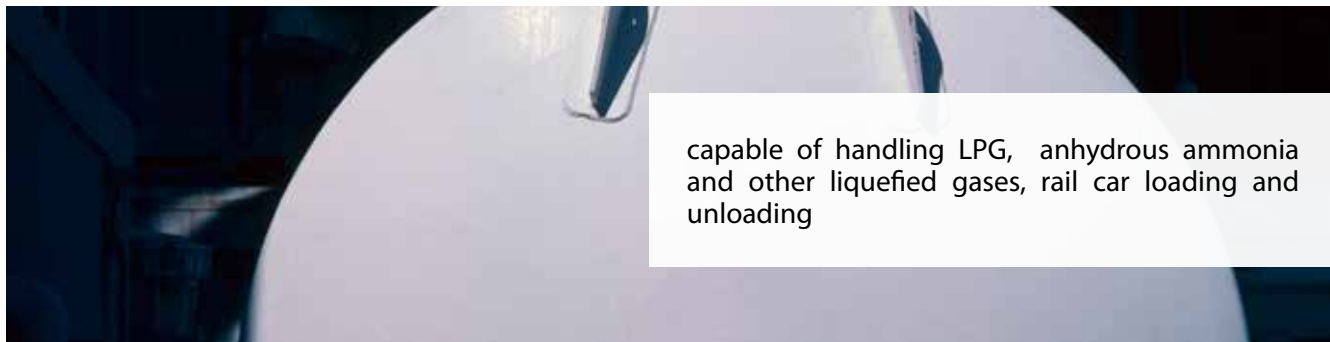
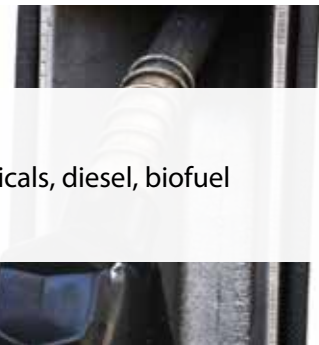
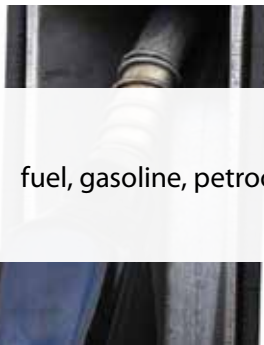
As the rotor turns, the liquid is transferred between the vanes to the outlet where it is discharged as the pumping chamber is squeezed down.

Each vane provides a positive mechanical push to the liquid before it.

Wide range of applications



fuel, gasoline, petrochemicals, diesel, biofuel



capable of handling LPG, anhydrous ammonia and other liquefied gases, rail car loading and unloading



lube oil, solvent, refrigeration coolants



anhydrous ammonia, propellants, aerosol filling



refrigerant gases (R132, R152 etc.) and DME, propane, butane and butane/propane mixes, refrigerants freon,

Constuction

- » Application variety with 8 different casing size
- » Replaceable Casing Liner and End Discs
- » Advanced Polymer
- » Internal Relief Valve
- » Cavitation Suppression Liner
- » Ductile Iron Construction
- » The design allows only mechanica seal (Dual).
- » Dual-Ended Shaft allows for both direction
- » External Ball Bearings
- » Pump models are available in 2 to 3-inch port sizes. All models have ductile iron construction for thermal shock resistance, low friction ball bearings for high efficiency and quiet operation
- » These vane pumps can be coupling with V-Belt, Hydro motor or Gearbox
- » Connection type options are ANSI & DIN Flange or BSP&NPT threaded connection
- » V-Belt coupling mostly used for truck application to less space
- » Hydromotor coupling is mostly used where the no electric.



Couplings

These vane pumps can be couplings with V-Belt, Hydro Motor and Reducer. By the way, it is suitable coupling direct motor (750 rpm). V-Belt coupling is suitable especially for tanker unloading because of the construction. All couplings are available with or without motors.

Materials specification

Part Name	Material
Case	Ductile Iron GGG 41.3
Head	Ductile Iron GGG 41.3
Rotor	Ductile Iron GGG 41.3
Relief Valve Cap	Ductile Iron GGG 41.3
Bearing Cap	Ductile Iron GGG 41.3
Cam	Ductile Iron GGG 41.3
Side Plate	Cast Iron GG26
Inlet / Outlet Connecion	Ductile Iron GGG 41.3

Part Name	Material
Shaft	8620 Steel
Vane	Advanced Polimer
Vane Driver	Advanced Polimer
Relief Valve Spring	Steel
Bearing	Steel
Thrust Bearing	Steel
O-Rings	Viton *

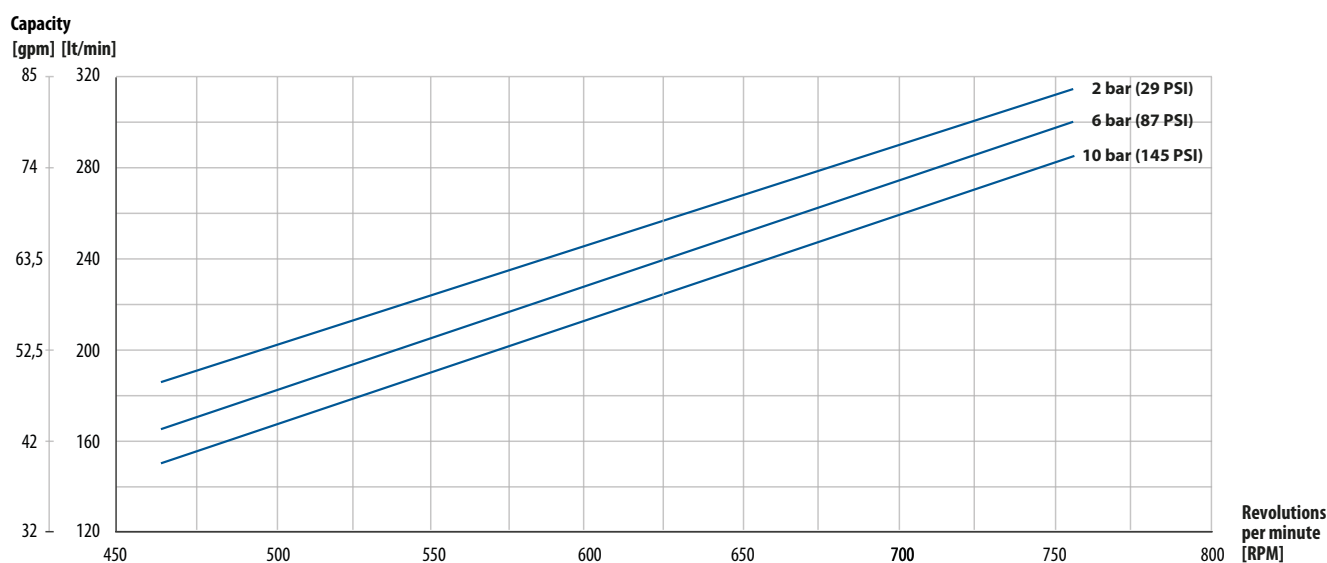
* It is available EPDM or Kalrez.

PV 200

- » Inlet / Outlet sizes is 2".
- » Max. differential pressure 8.5 bar (125 psi).
- » Both directions of suction (left & right) are available because of the dual shaft especially in the truck applications.
- » Available BSP, NPT, DIN and ANSI 150 & 300 norms.

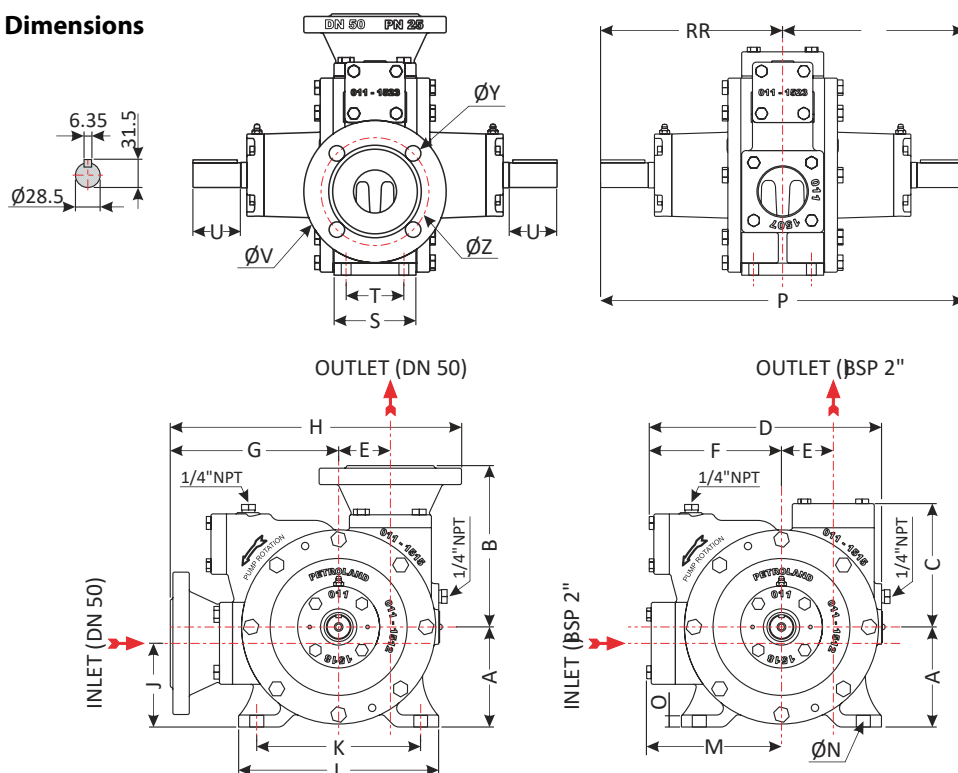


Performance curves



Note: The viscosity is 0.5 cSt and the density is 0.56 gr/cm³

Dimensions



A	116
B	187
C	143
D	267
E	60
F	151
G	195
H	338
J	97
K	203
L	232
M	158
N	13
O	12
P	422
R	211
S	95
T	70
U	55
V	165
Y	18
Z	125
Pump weight	44

Dimensions are mm.

PV 320

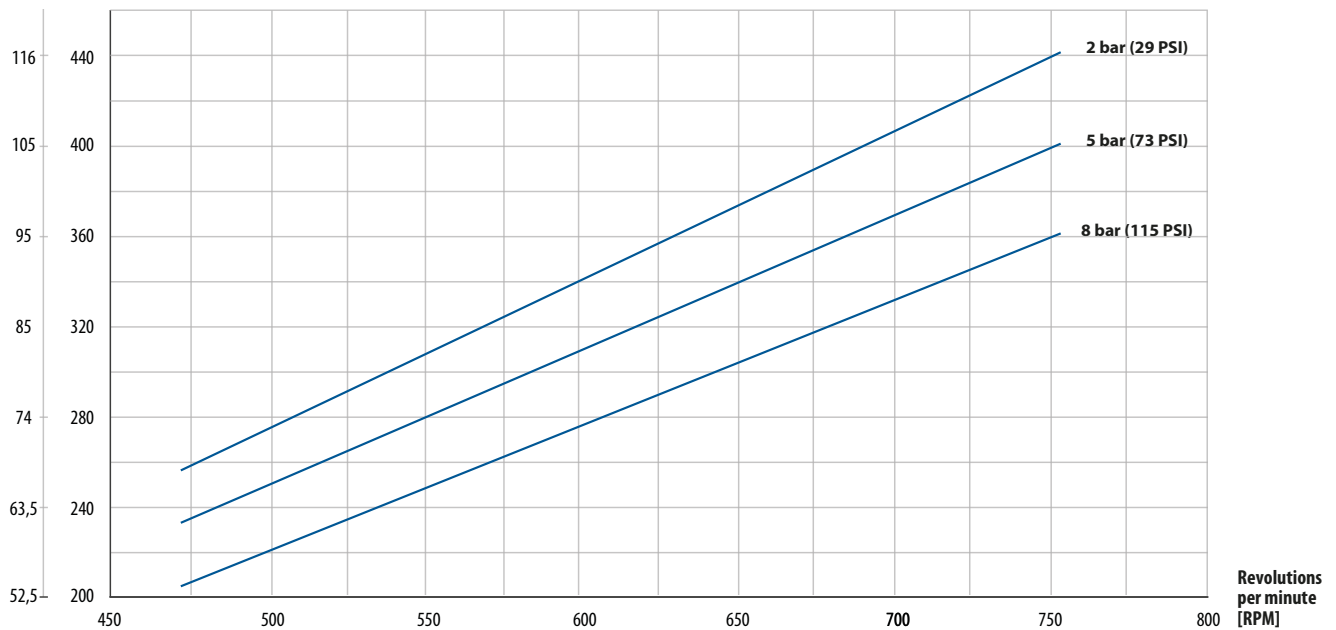
- » Inlet size is 3", Outlet size is 2"
- » Max. differential pressure 8.5 bar (125 psi).
- » it is coupling to the main storage directly without require any fittings in the truck applications.
- » Available BSP, NPT, DIN and ANSI 150 & 300 norms.
- » Can transfer liquid to the main truck which inside unloading storage because of the double suction.



Performance curves

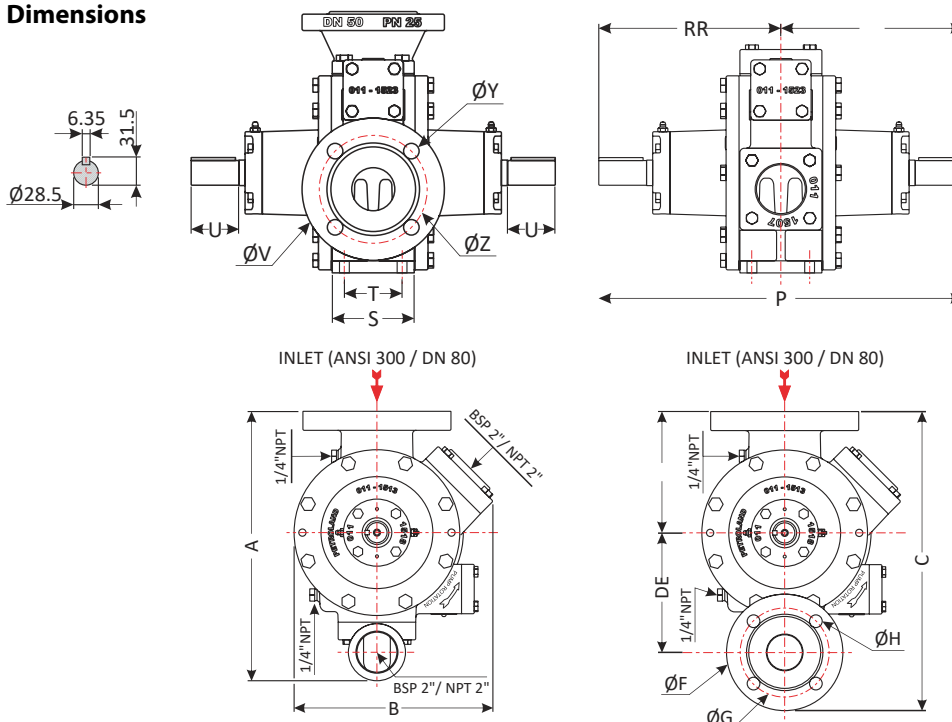
Capacity

[gpm] [lt/min]



Note: The viscosity is 0.5 cSt and the density is 0.56 gr/cm³

Dimensions



A	382
B	282
C	424
D	170
E	172
F	165
G	125
H	18
J	444
K*	100
L	55
M	222
N	210
P	22
R	191
S	141
Pump weight	56

* Flanged outlet is 148 mm.

PV 320 model standard pump suction flange in accordance with DN 80 ve ANSI 300.

Flange dimensions in accordance with DIN 2545 norm at standard products.

Dimensions are mm.

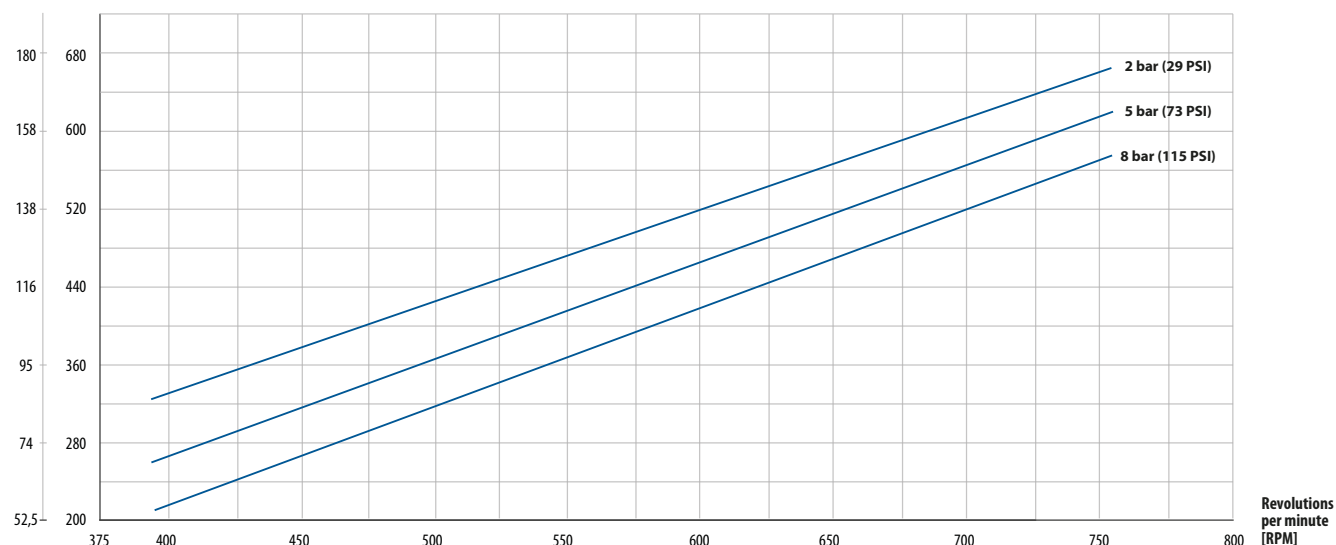
PV 350

- » Inlet / Outlet sizes is 3".
- » More capacity at same rpm accordance in with similar 3".
- » Both directions of suction (left & right) are available because of the dual shaft especially in the truck applications.
- » Available BSP, NPT, DIN and ANSI 150 & 300 norms.



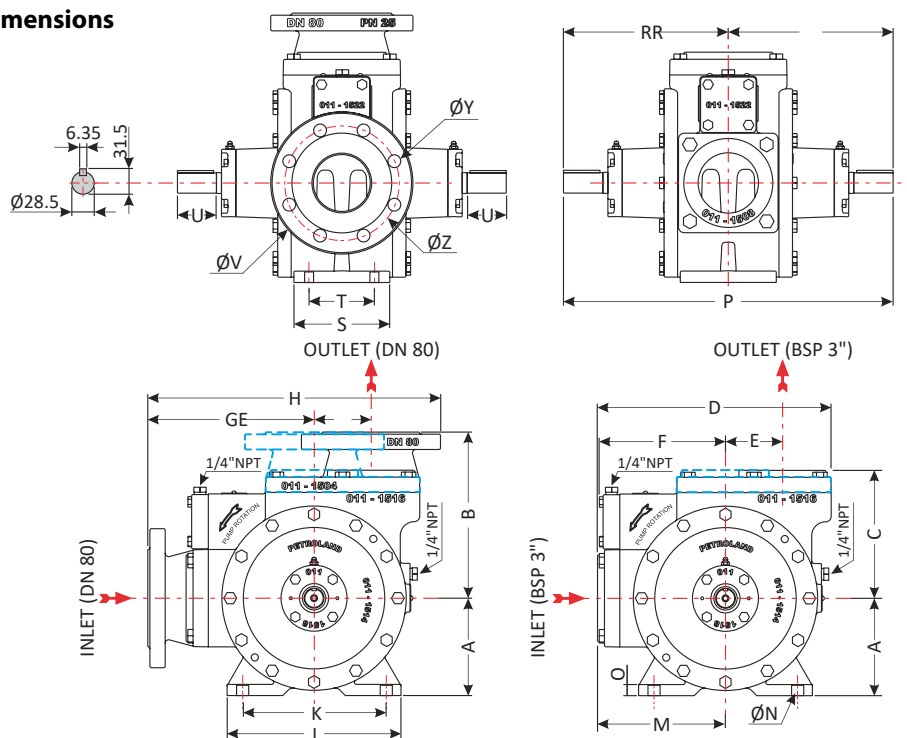
Performance curves

Capacity
[gpm] [lt/min]



Note: The viscosity is 0.5 cSt and the density is 0.56 gr/cm³

Dimensions



A	140
B	240
C	184
D	330
E	82
F	180
G	239
H	391
K	210
L	250
M	184
N	14
O	16
P	462
R	231
S	136
T	90
U	55
V	200
Y	18
Z	160
Pump weight	78

Flange dimensions in accordance with DIN 2545 norm at standard products. Dimensions are mm.

Outlet flange of PV 350 Model pump can be mounted 2 directions:
1) Outlet from pump axis. 2) It is 82 mm. (E) far from pump axis.

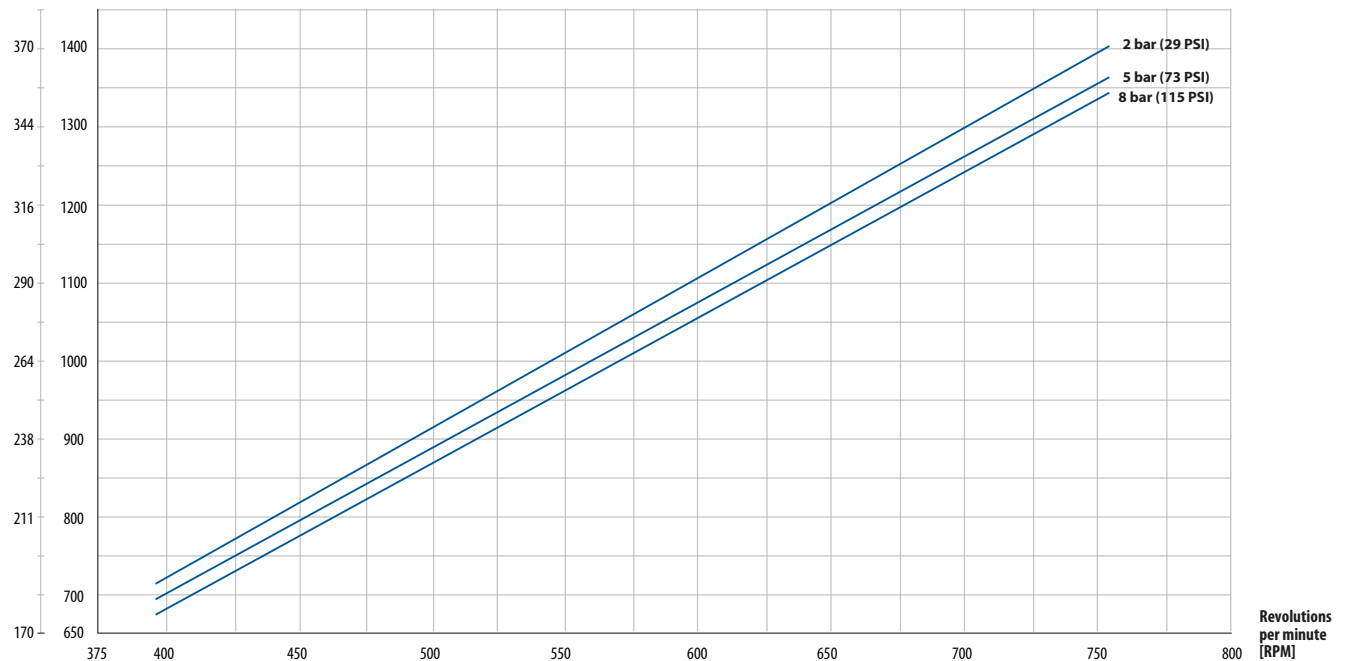
PV 450

- » Inlet size is 4". Outlet size is 3.
- » Max. differential pressure 8.5 bar (125 psi).
- » Both directions of suction (left & right) are available because of the dual shaft especially in the truck applications.
- » Available DIN and ANSI 150&300 flange connections.



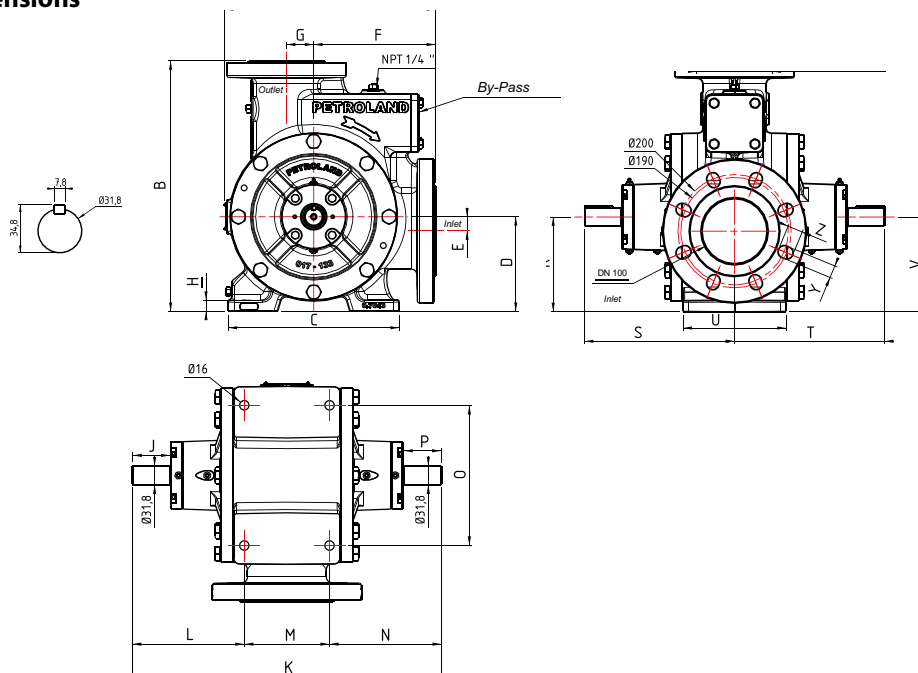
Performance curves

Capacity
[gpm] [lt/min]



Note: The viscosity is 0.5 cSt and the density is 0.56 gr/cm³

Dimensions



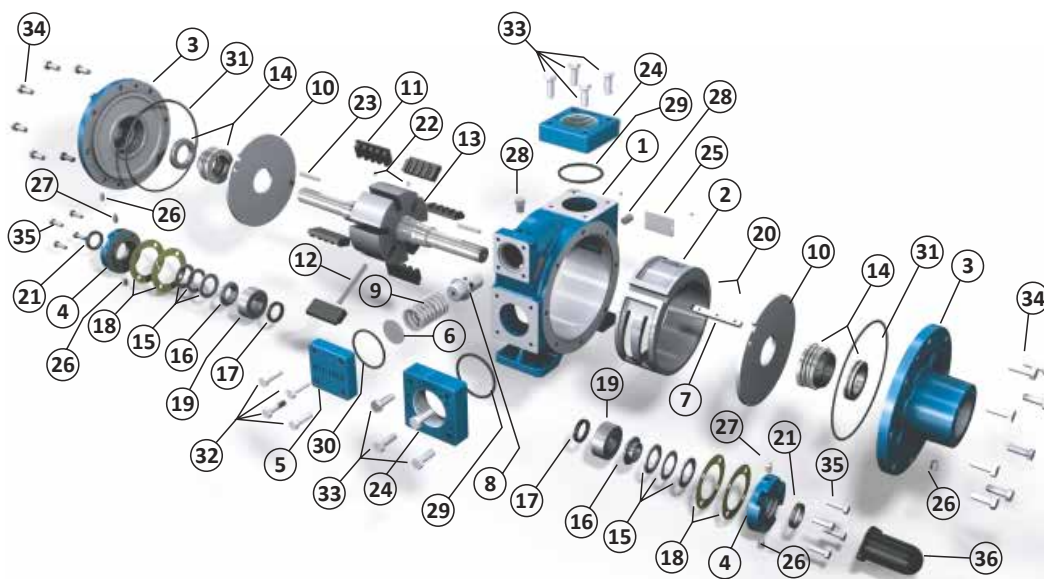
A	373
B	442
C	302
D	167
E	25
F	215
G	48
H	20
J	64
K	530
L	192
M	146
N	192
O	238
P	64
R	167
S	265
T	265
U	182
V	167
Y	22
Z	27
Pump weight	124

Dimensions are mm.

Pump code

I.	II.	III.	IV.	V.	VI.	VII.	VIII.
P	V	200	S	1	1	V	2
I. Petroland		V. Inlet Size:		3 = NPT			VIII. Coupling:
II. Vane		1 = DIN		4 = ANSI 150			1 = Bare Shaft
III. Pump size:		2 = BSP		5 = ANSI 300			2 = V-Belt
200		3 = NPT		VII. Mechanical Seal			3 = Reducer
320		4 = ANSI 150		O-Ring Material:			4 = Hydro Motor
350		5 = ANSI 300		V = Viton			5 = Direct Coupling
IV. Pump material:		VI. Outlet Size:		E = EPDM			
S = Sfero GG41.3		1 = DIN		K = Kalrez			
D = Cast Iron GG26		2 = BSP					

Part List



No	Description	Qty
1	Case	1
2	Cam	1
3	Head	2
4	Bearing Cap	2
5	Relief Valve Cap	1
6	Shim	1
7	Cam Key	1
8	Poppet	1
9	Relief Valve Spring	1
10	Sideplate	2
11	Vane	6
12	Vane Driver	3
13	Rotor-Shaft Assembly	1
14	Mechanical Seal	2
15	Thrust Bearing	2
16	Bearing Race Mounting	2
17	Grease Seal	2
18	Bearing Cap Shim	*

No	Description	Qty
19	Bearing	2
20	Cam Key Pin	2
21	Grease Seal	2
22	Mechanical Seal Fitting Pin	2
23	Shaft Key	2
24	Inlet / Outlet Flange	2
25	Label	1
26	Relief Fitting	4
27	Grease Zerk	2
28	Lubricap	2
29	O-Ring - Flange	2
30	O-Ring - Relief Valve Cap	1
31	O-Ring - Case	2
32	Relief Valve Cap Bolt	4
33	Inlet-Outlet Flange Bolt (1)	4
34	Head Bolt (2)	8
35	Bearing Head Bolt	4
36	Shaft Shield	1

* Thickness of line shim are available 0.05 / 0.10 / 0.20 mm. at variable quantities.

(1) These are 6 pcs bolt on the outlet flange of PV 350 model pump.

(2) These are 8 pcs in PV 200 and PV 320 model pumps, these are 12 pcs in PV 350 model pump.

Positive Displacement Pumps



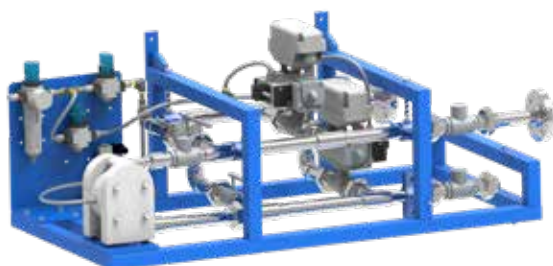
Centrifugal Pumps



Accessories



Unique constructions at a high level



Custom design aims to adapt standard solutions for non-standard needs in industrial processes. This is often achieved by making small modifications to standard products and thus becoming applicable to specific process requirements.

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Tapflo products and services are available in 75 countries on 6 continents.

Tapflo is represented worldwide by own Tapflo Group Companies and carefully selected distributors assuring highest Tapflo service quality for our customers' convenience.

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