# Introduction to the VP line

Pentax offers a line of **vertical axis pumps** recently improved in hydraulic design and implemented with new models and solutions specifically developed for various industries such as firefighting equipment, petrochemical, mining plants, power plants.

High efficiency, reliability, and extreme ruggedness, are the main strengths of this suite. The VP line is available with electric motor and, through the Gear Box, with combustion engine.

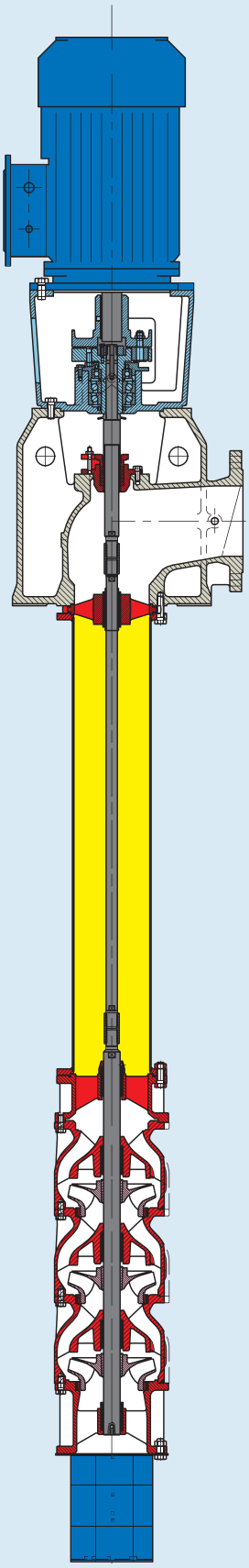
This wide variety of versions and executions, with many materials available, makes this line of pumps extremely versatile for use in areas not served by electricity as emergency units or stock and all major industry sectors.

## *Technical operational characteristics for standard version*

- All the hydraulic performance values below are guaranteed in accordance with standard **ISO 9906-Grade 2 - Annex A**
- The published hydraulic performance values do not take into account hydraulic leaking of the foot valves and axis lines
- The allowable **content of solids** in the pumped liquid is 40 g/m³
- The **maximum working time** with closed nozzle is 4 min
- All the components wetted with liquid are available in various types of **steel** and **bronze alloy**

# Main characteristics of the HP line

- **Capacity** up to 1.600 m³/h
- **Pressure** up to 400 m
- **Thrust bearing** (grease or oil with optional external cooling) for use of standard engines
- Axis lines with **threaded or tapered joints** for reliable and durable connection of the shaft
- Special **bushings** resistant to the wear of abrasive liquids and temperatures up to 180°C
- **Control unit** for electric motor, transmission angle or pulley
- **AISI 420 stainless steel shaft** for standard versions
- All the models in the range are available in cast iron, bronze and all kinds of stainless steel, including Duplex



# Main fields of application

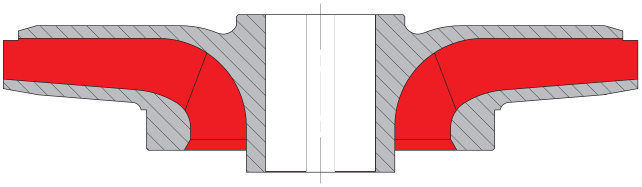
- Pumping units for fire-extinguishing equipment
- Water mains
- Agricultural irrigation
- Mines
- Geothermal water wells
- Petrochemical sector
- Chemical systems with aggressive and/or abrasive liquids
- Heat treatment facilities for steel factories and/or abrasive liquids

# Main technical and constructional features

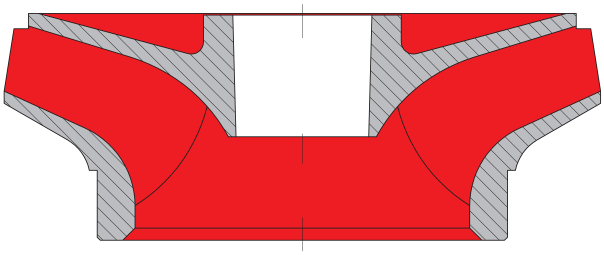
The **impeller** is available in **radial** or **semi-axial version** for maximum yield in the required working point. On the mouth it has a wearing ring that guarantees high efficiency and low wear even with abrasive liquids.

To allow maintenance and disassembly ease, even after years of use, it is secured on the shaft with a tapered bushing that guarantees a perfect alignment.

*Radial flow impeller*



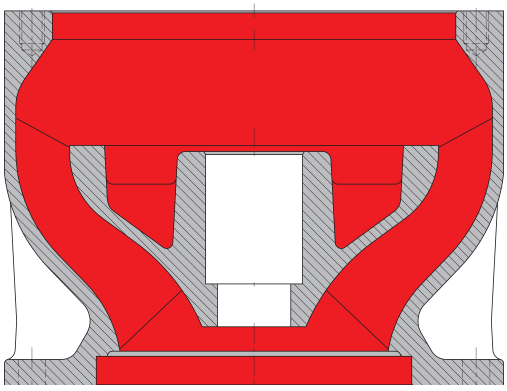
*Semi-axial flow impeller*



The **diffuser**, designed to grant high efficiency of the pump, has an abrasion resistant rubber bearing that guarantees long life-span of the shaft.

For extremely demanding applications “Ferroform” bearings are available on request.

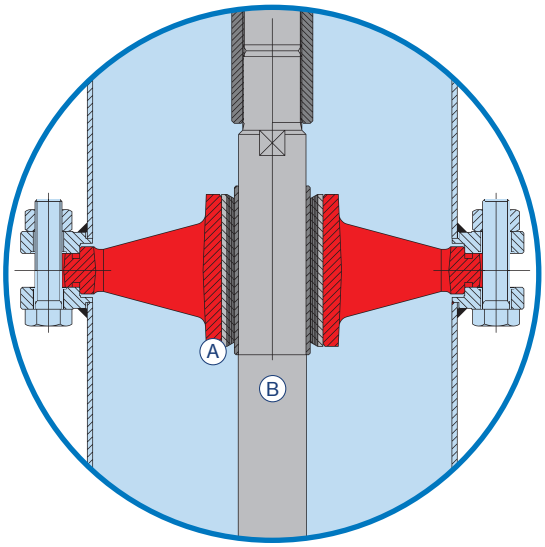
*Semi-axial flow diffuser*



Axis line houses the transmission shaft on special rubber bearings to ensure optimal lubrication. To optimize its life time, the shaft is protected by a chromed steel shield.

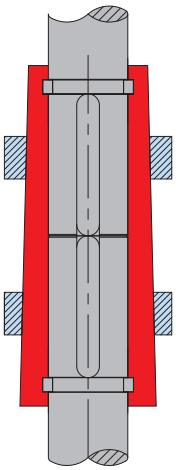
The modules of the axis lines are interconnected with screwed or tapered joints that guarantee perfect alignment and maintenance ease.

*A: abrasion resistant bushing*
*B: chromed sleeve*




The **conic coupling** is used for all heavy duty applications since it allows a perfect alignment of the shafts and performs with big transmitted power factor; moreover this type of coupling is very simple to service and disassemble even after many years of activity.

*Conic coupling*

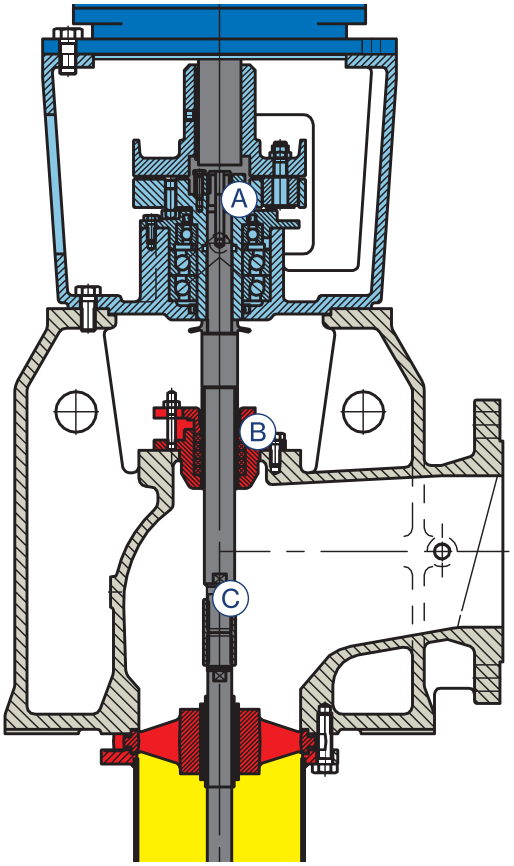


**Delivery drive unit** is a highly important part of the pump as it houses the sealing system and the thrust bearing.

Available in the version for electric motor or with gear box it has a type of bearing, grease or oil depending on the application, that can withstand axial trust up to 10,000 kg. The oil version permits external cooling of the liquid lubricant. The seals can be of packing or mechanical seal type.

### Drive unit

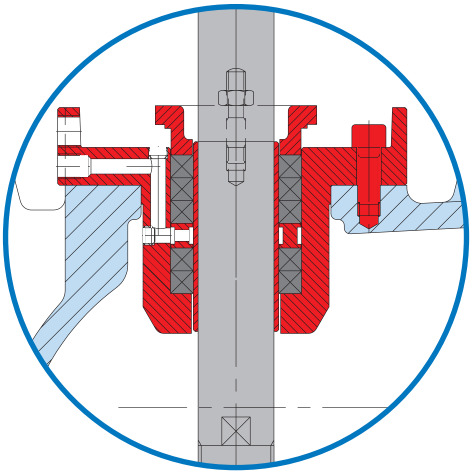
*A: thrust bearing*
*B: seal system*
*C: shaft coupling*



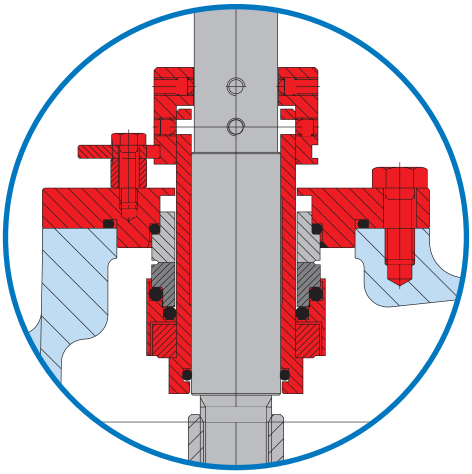

The seals can be of packing or mechanical seal type.

The packing type is lubricated by the pumped liquid or externally by means of a dedicated injection device. Mechanical seal, available in all the materials available in the market, has an axial positioning device that guarantee its perfect operation.

*Gland packing seal*



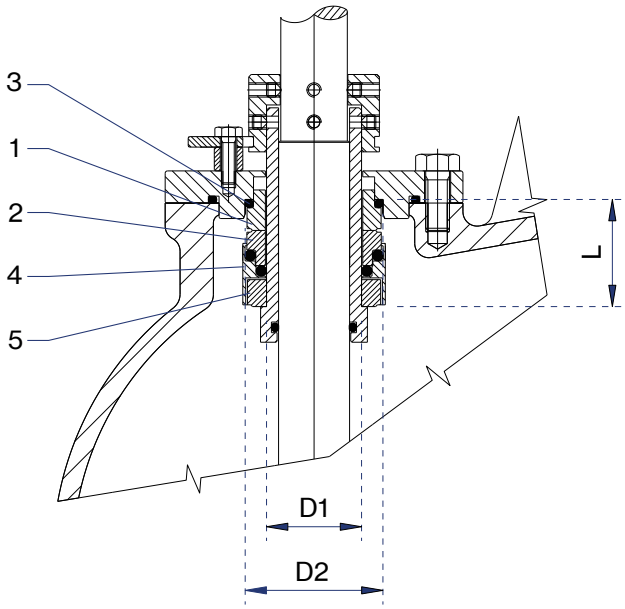
*Mechanical seal*



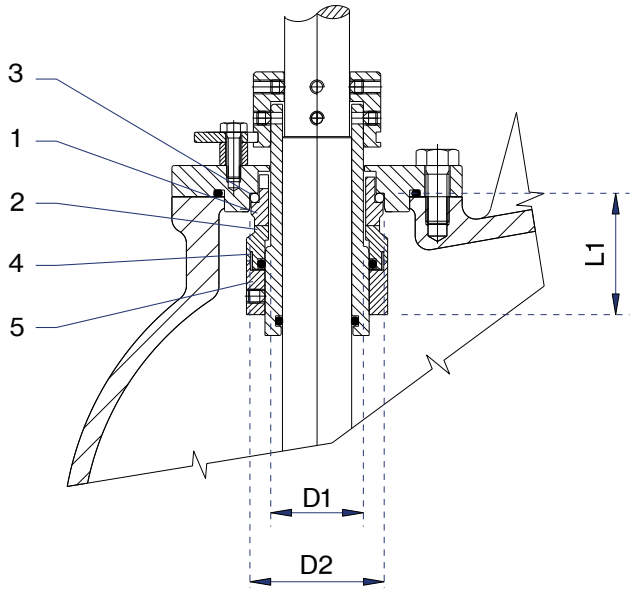
# Mechanical seal material

The mechanical seals are standardized according to EN 12756 and available on “Balanced” and “Non-balanced” types, with model codes MG12 e  H7N.

*Model MG12 – bi-directional non-balanced*




*Model H7N – bi-directional balanced*

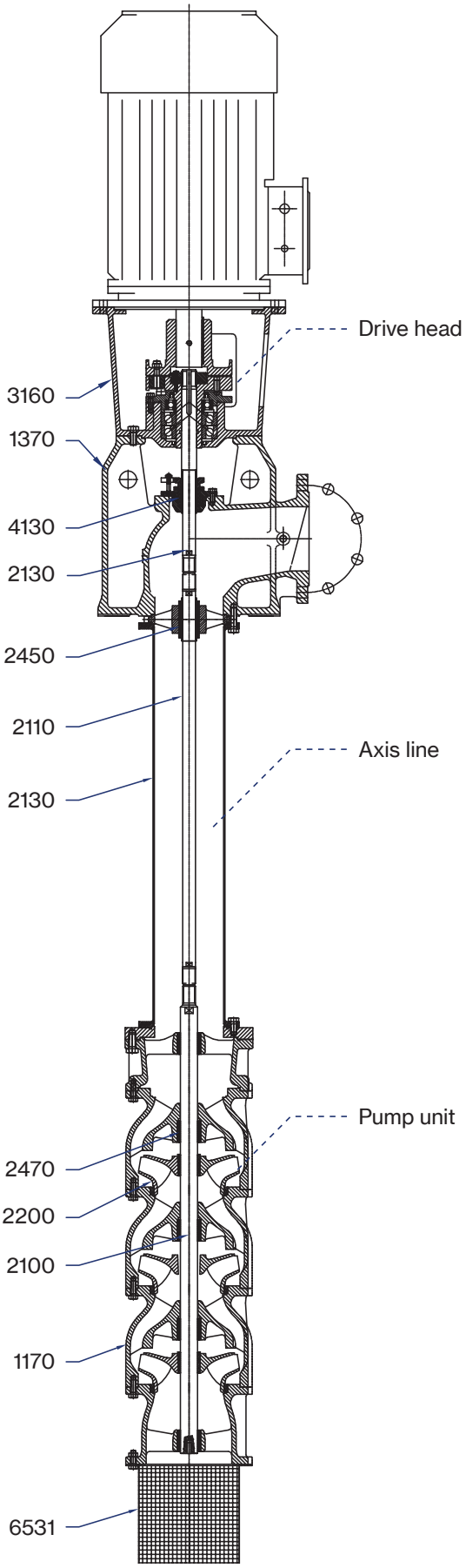


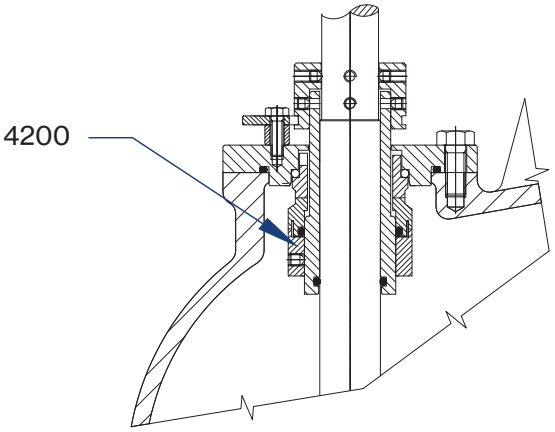

| Mechanical seals materials | | | |
|---|---|---|---|
| | **POSITION 1 - 2** | **POSITION 3** | **POSITION 4 - 5** |
| **A** | Antimony impregnated Carbon | E : EPDM | G : AISI 316 |
| **Q1** | Silicon-Carbide | V : FPM | |

| Available Materials Combinations : MG12 – H7N | | | | | | |
|---|---|---|---|---|---|---|
| **Type** | **POSITION** | | | | | **Temperature °C** |
| | **1** | **2** | **3** | **4** | **5** | |
| | **Rotating part** | **Stationary part** | **Elastomers** | **Spring** | **Other parts** | |
| **Standard mechanical seal** | | | | | | |
| **AQ1EGG** | A | Q1 | E | G | G | -30 +120 |
| **On demand mechanical seals** | | | | | | |
| **AQ1VGG** | A | Q1 | V | G | G | -10 +120 |
| **Q1Q1EGG** | Q1 | Q1 | E | G | G | -30 +120 |
| **Q1Q1VGG** | Q1 | Q1 | V | G | G | -10 +120 |

| Dimensions | | | |
|---|---|---|---|
| **D1** | **D2** | **L** | **L1** |
| 28 | 43 | 42.5 | 50 |
| 30 | 45 | 42.5 | 50 |
| 32 | 48 | 42.5 | 50 |
| 35 | 50 | 42.5 | 50 |
| 40 | 58 | 45 | 52.5 |
| 45 | 63 | 45 | 52.5 |
| 50 | 70 | 47.5 | 57.5 |
| 55 | 75 | 47.5 | 57.5 |
| 60 | 80 | 52.5 | 62.5 |

# Pump unit materials



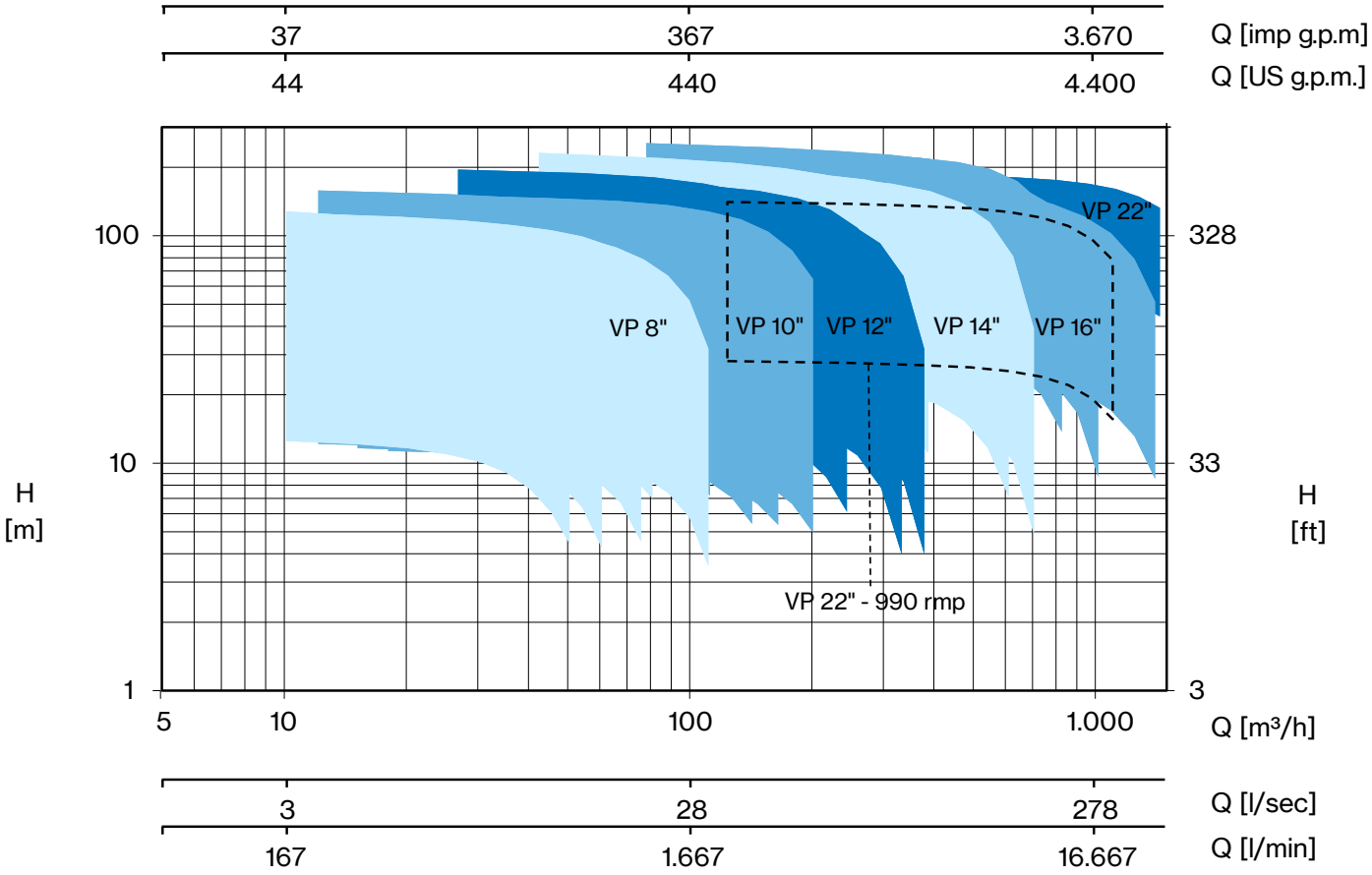
| Unit description | Part description | Ref. | STANDARD | | OPTIONAL | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Execution "X" AISI | | Execution "D" Duplex | |
| | | | EN | ASTM | EN | ASTM | EN | ASTM |
| **Drive head** | Delivery unit | 1370 | G GG42 | A536 : Gr.65-A5-12 | X2CrNiMo1711 | 316 | X2CrNiMoN2253 | S31803 |
| | Shaft | 2130 | X 30 Cr13 | 420 | X 30 Cr13 | 420 | X2CrNiMoN2253 | S31803 |
| | Motor bracket | 3160 | G GG42 | A536 : Gr.65-A5-12 | G GG42 | A536 : Gr.65-A5-12 | G GG42 | A536 : Gr.65-A5-12 |
| **Seals system** | Gland packing | 4130 | COTTON + GRAPHITE | | PTFE | | PTFE | |
| | Mechanical seal | 4200 | SILICON + SILICON + EPDM | | SILICON + SILICON + EPDM | | SILICON + SILICON + EPDM | |
| **Axis line** | Shaft | 2110 | X 30 Cr13 | 420 | X 30 Cr13 | 420 | X2CrNiMoN2253 | S31803 |
| | Pipe | 2130 | P235TR1 | A 53 Grade A | X2CrNiMo1711 | 316 | X2CrNiMoN2253 | S31803 |
| | Bushing | 2450 | Rubber | | Feroform | | Feroform | |
| **Pump unit** | Diffuser | 1170 | G G25 | A48 : Nr.35 | X2CrNiMo1711 | 316 | X2CrNiMoN2253 | S31803 |
| | Shaft | 2100 | X 30 Cr13 | 420 | X 30 Cr13 | 420 | X2CrNiMoN2253 | S31803 |
| | Impeller | 2200 | G G25 | A48 : Nr.35 | X2CrNiMo1711 | 316 | X2CrNiMoN2253 | S31803 |
| | Bushing | 2470 | Rubber | | Feroform | | Feroform | |
| | Strainer | 6531 | X5CrNi1810 | 304 | X2CrNiMo1711 | 316 | X2CrNiMoN2253 | S31803 |

# Name key

## VPLX 12A / 8D-TM-18-CO-4-X-6

- **pump series** — VPLX
- **Bowl assembly casting method**
  - **L** investment casting (micro-casting)
  - sand casting
- **Materials of the entire pump**
  - **X** AISI 316
  - **D** Duplex
  - **SD** super Duplex
  - **B** bronze
  - **G** cast iron (with bowl assembly in AISI 304 from 6" to 10")
- **Bowl assemble size** — 12A
  - **12** nominal diameter in inches with external diameter of 12”
  - **A** range of capacity
- **Stages: 8D** = 8 impellers and 8 diffusers, with impeller reduction of size D from the catalogue. (R or M for customized impeller trimming)
- **Seal** — TM
  - **TM** mechanical seal
  - gland packing
- **Rated power** — 18
  - **18** 18.5 kW (decimals are not shown)
  - **RA** with transmission angle
  - **BA** barrel version
  - without motor
- **Thrust bearing lubrication** — CO
  - **CO** oil
  - grease
- **Poles of electric motor if present** — 4
  - 2 poles
  - **4** 4 poles
- **Impeller material if different from the pump material** — X
  - **X** AISI 316
  - **D** Duplex
  - **B** Bronze
- **Frequency** — 6
  - 50Hz
  - **6** 60Hz

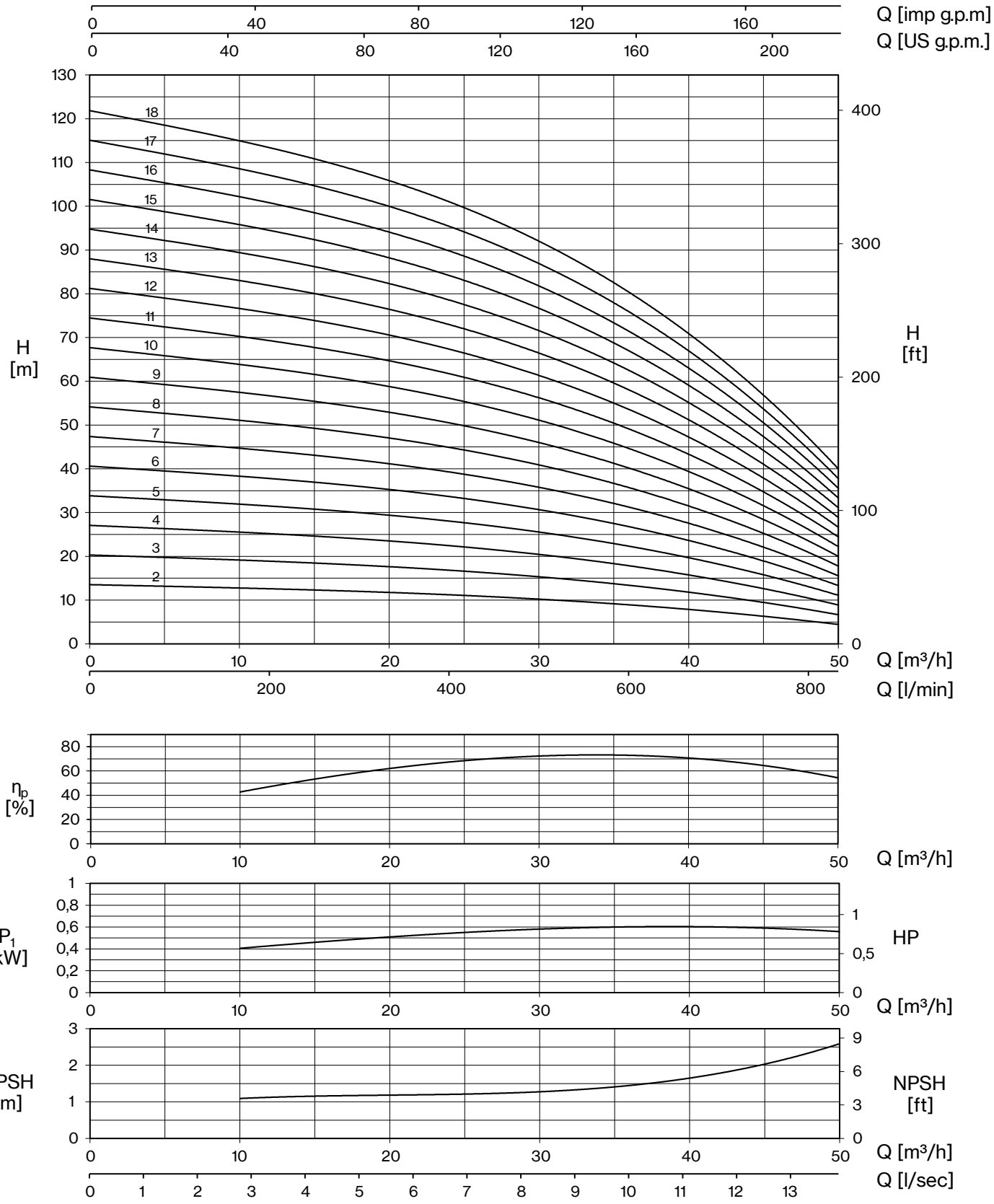
# Performance range 1.500 rpm



# VPL 8B 1.450 rpm

| 1.450 rpm | | | Q | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 10 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| | | l/sec | 0 | 2,78 | 5,56 | 6,94 | 8,33 | 9,72 | 11,1 | 12,5 | 13,9 |
| | | l/min | 0 | 167 | 333 | 417 | 500 | 583 | 667 | 750 | 833 |
| | | | H (m) / P1 (kW) | | | | | | | | |
| **VPL 8B / 2** | 1,5 | H (m) / P1 (kW) | 13,6<br>*0,6* | 12,7<br>*0,8* | 11,8<br>*1,0* | 11,1<br>*1,1* | 10,3<br>*1,2* | 9,2<br>*1,2* | 7,8<br>*1,2* | 6,2<br>*1,2* | 4,5<br>*1,1* |
| **VPL 8B / 3** | 2,2 | | 20,3<br>*0,9* | 19,1<br>*1,2* | 17,6<br>*1,5* | 16,7<br>*1,7* | 15,4<br>*1,8* | 13,8<br>*1,8* | 11,7<br>*1,8* | 9,4<br>*1,8* | 6,8<br>*1,7* |
| **VPL 8B / 4** | 3 | | 27,1<br>*1,3* | 25,4<br>*1,6* | 23,5<br>*2,0* | 22,2<br>*2,2* | 20,5<br>*2,3* | 18,4<br>*2,4* | 15,6<br>*2,4* | 12,5<br>*2,3* | 9,0<br>*2,2* |
| **VPL 8B / 5** | 3 | | 33,9<br>*1,6* | 31,8<br>*2,0* | 29,4<br>*2,5* | 27,8<br>*2,8* | 25,7<br>*2,9* | 23,1<br>*3,0* | 19,6<br>*3,0* | 15,6<br>*2,9* | 11,3<br>*2,8* |
| **VPL 8B / 6** | 4 | | 40,7<br>*1,9* | 38,2<br>*2,4* | 35,3<br>*3,0* | 33,3<br>*3,3* | 30,8<br>*3,5* | 27,7<br>*3,6* | 23,5<br>*3,6* | 18,7<br>*3,5* | 13,5<br>*3,4* |
| **VPL 8B / 7** | 5,5 | | 47,5<br>*2,2* | 44,5<br>*2,8* | 41,2<br>*3,5* | 38,9<br>*3,9* | 35,9<br>*4,1* | 32,3<br>*4,2* | 27,4<br>*4,2* | 21,8<br>*4,1* | 15,8<br>*3,9* |
| **VPL 8B / 8** | 5,5 | | 54,2<br>*2,5* | 50,9<br>*3,3* | 47,0<br>*4,0* | 44,4<br>*4,4* | 41,0<br>*4,7* | 36,9<br>*4,8* | 31,3<br>*4,8* | 25,0<br>*4,7* | 18,0<br>*4,5* |
| **VPL 8B / 9** | 5,5 | | 61,0<br>*2,8* | 57,2<br>*3,7* | 52,9<br>*4,5* | 50,0<br>*5,0* | 46,2<br>*5,3* | 41,5<br>*5,4* | 35,2<br>*5,4* | 28,1<br>*5,3* | 20,3<br>*5,0* |
| **VPL 8B / 10** | 7,5 | | 67,8<br>*3,2* | 63,6<br>*4,1* | 58,8<br>*5,0* | 55,5<br>*5,5* | 51,3<br>*5,9* | 46,1<br>*6,0* | 39,1<br>*6,0* | 31,2<br>*5,9* | 22,5<br>*5,6* |
| **VPL 8B / 11** | 7,5 | | 74,6<br>*3,5* | 70,0<br>*4,5* | 64,7<br>*5,5* | 61,1<br>*6,1* | 56,4<br>*6,5* | 50,7<br>*6,6* | 43,0<br>*6,6* | 34,3<br>*6,5* | 24,8<br>*6,2* |
| **VPL 8B / 12** | 7,5 | | 81,4<br>*3,8* | 76,3<br>*4,9* | 70,6<br>*6,0* | 66,6<br>*6,6* | 61,6<br>*7,0* | 55,3<br>*7,2* | 46,9<br>*7,2* | 37,4<br>*7,0* | 27,0<br>*6,7* |
| **VPL 8B / 13** | 11 | | 88,1<br>*4,1* | 82,7<br>*5,3* | 76,4<br>*6,5* | 72,2<br>*7,2* | 66,7<br>*7,6* | 59,9<br>*7,8* | 50,8<br>*7,8* | 40,6<br>*7,6* | 29,3<br>*7,3* |
| **VPL 8B / 14** | 11 | | 94,9<br>*4,4* | 89,0<br>*5,7* | 82,3<br>*7,0* | 77,7<br>*7,7* | 71,8<br>*8,2* | 64,5<br>*8,4* | 54,7<br>*8,4* | 43,7<br>*8,2* | 31,5<br>*7,9* |
| **VPL 8B / 15** | 11 | | 101,7<br>*4,7* | 95,4<br>*6,1* | 88,2<br>*7,5* | 83,3<br>*8,3* | 77,0<br>*8,8* | 69,2<br>*9,0* | 58,7<br>*9,0* | 46,8<br>*8,8* | 33,8<br>*8,4* |
| **VPL 8B / 16** | 11 | | 108,5<br>*5,0* | 101,8<br>*6,5* | 94,1<br>*8,0* | 88,8<br>*8,8* | 82,1<br>*9,4* | 73,8<br>*9,6* | 62,6<br>*9,6* | 49,9<br>*9,4* | 36,0<br>*9,0* |
| **VPL 8B / 17** | 11 | | 115,3<br>*5,4* | 108,1<br>*6,9* | 100,0<br>*8,6* | 94,4<br>*9,4* | 87,2<br>*10,0* | 78,4<br>*10,3* | 66,5<br>*10,2* | 53,0<br>*10,0* | 38,3<br>*9,5* |
| **VPL 8B / 18** | 11 | | 122,0<br>*5,7* | 114,5<br>*7,3* | 105,8<br>*9,1* | 99,9<br>*9,9* | 92,3<br>*10,6* | 83,0<br>*10,9* | 70,4<br>*10,8* | 56,2<br>*10,6* | 40,5<br>*10,1* |

| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 1,5 | 90 | LA 3/20 | E 0/3 | B 4/3 | DN 100 - PN 25 | VF4 | SU4 |
| 2,2 - 3 | 100 | LA 3/20 | E 1/3 | | | | |
| 4 | 112 | LA 3/20 | E 1/3 | | | | |
| 5,5 - 7,5 | 132 | LA 3/20 | E 2/3 | | | | |
| 11 | 160 | LA 3/20 | E 3/3 | | | | |
| 15 | 160 | LA 3/24 | E 3/3 | | | | |

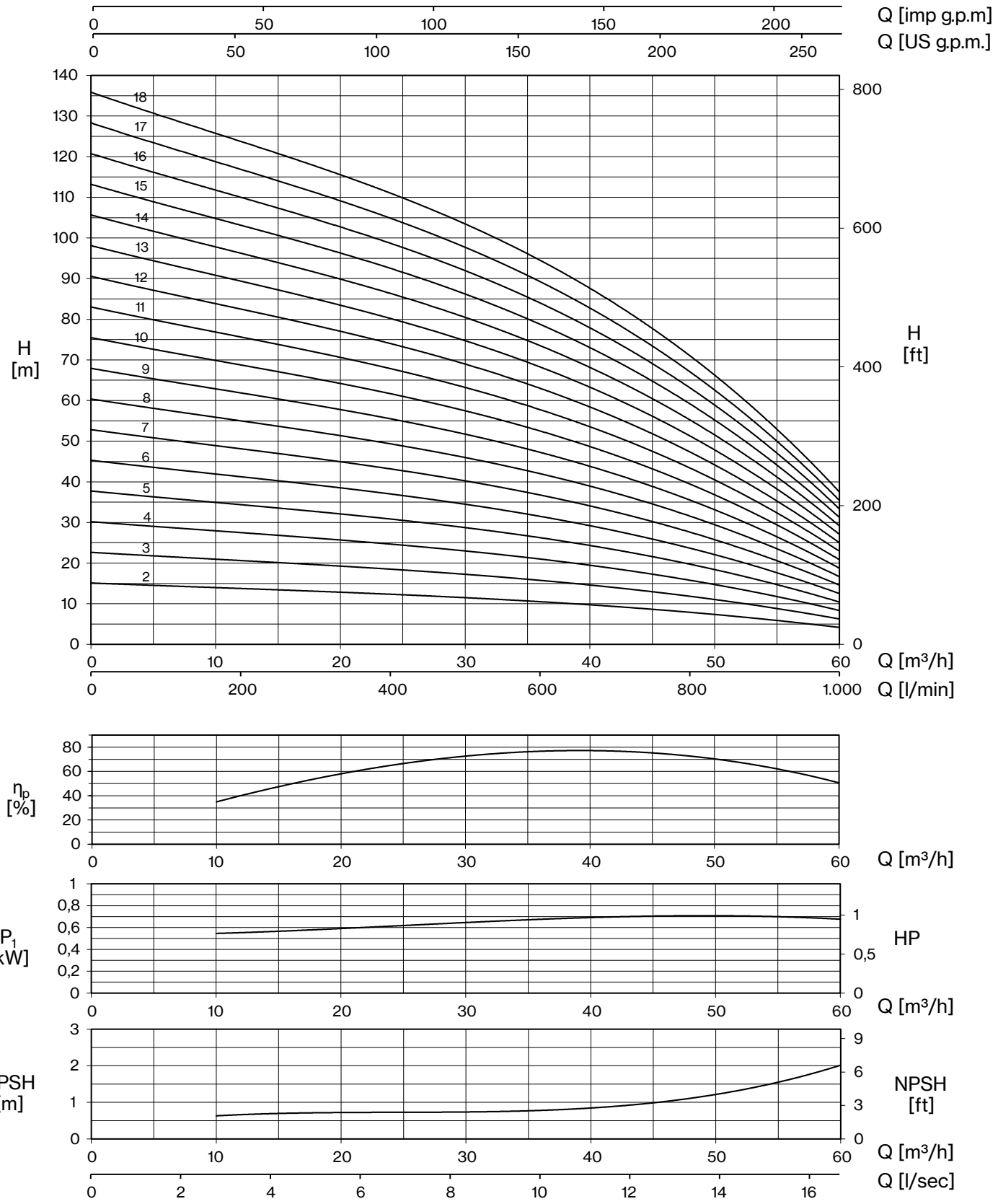



*Valid for: p=1 (kg/dm3), viscosity ≤20 mm²/sec) - Guarantee values according to ISO 9906, Grade 2 - Head based on SG=1*

# VPL 8C 1.450 rpm

| 1.450 rpm | | | Q | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 10 | 20 | 30 | 40 | 45 | 50 | 55 | 60 |
| | | l/sec | 0 | 2,78 | 5,56 | 8,33 | 11,1 | 12,5 | 13,9 | 15,3 | 16,7 |
| | | l/min | 0 | 167 | 333 | 500 | 667 | 750 | 833 | 917 | 1.000 |
| | | | H (m) / P1 (kW) | | | | | | | | |
| **VPL 8C / 2** | 1,5 | H (m) / P1 (kW) | 15,1 *1,0* | 14,0 *1,1* | 12,8 *1,2* | 11,5 *1,3* | 9,8 *1,4* | 8,6 *1,4* | 7,4 *1,4* | 5,9 *1,4* | 4,2 *1,4* |
| **VPL 8C / 3** | 2,2 | | 22,6 *1,6* | 21,0 *1,6* | 19,2 *1,8* | 17,2 *1,9* | 14,7 *2,1* | 12,9 *2,1* | 11,1 *2,1* | 8,8 *2,1* | 6,2 *2,0* |
| **VPL 8C / 4** | 3 | | 30,2 *2,1* | 28,0 *2,2* | 25,6 *2,3* | 23,0 *2,6* | 19,6 *2,8* | 17,2 *2,8* | 14,8 *2,8* | 11,8 *2,8* | 8,3 *2,7* |
| **VPL 8C / 5** | 4 | | 37,7 *2,6* | 35,1 *2,7* | 32,0 *2,9* | 28,7 *3,2* | 24,5 *3,5* | 21,5 *3,5* | 18,5 *3,5* | 14,7 *3,5* | 10,4 *3,4* |
| **VPL 8C / 6** | 5,5 | | 45,2 *3,1* | 42,1 *3,3* | 38,4 *3,5* | 34,4 *3,9* | 29,3 *4,2* | 25,8 *4,2* | 22,1 *4,2* | 17,6 *4,2* | 12,5 *4,1* |
| **VPL 8C / 7** | 5,5 | | 52,8 *3,6* | 49,1 *3,8* | 44,8 *4,1* | 40,2 *4,5* | 34,2 *4,9* | 30,1 *4,9* | 25,8 *4,9* | 20,6 *4,9* | 14,6 *4,8* |
| **VPL 8C / 8** | 7,5 | | 60,3 *4,1* | 56,1 *4,4* | 51,2 *4,7* | 45,9 *5,2* | 39,1 *5,6* | 34,4 *5,6* | 29,5 *5,6* | 23,5 *5,6* | 16,6 *5,4* |
| **VPL 8C / 9** | 7,5 | | 67,9 *4,7* | 63,1 *4,9* | 57,6 *5,3* | 51,7 *5,8* | 44,0 *6,3* | 38,7 *6,3* | 33,2 *6,3* | 26,5 *6,3* | 18,7 *6,1* |
| **VPL 8C / 10** | 11 | | 75,4 *5,2* | 70,1 *5,5* | 64,0 *5,9* | 57,4 *6,5* | 48,9 *7,0* | 43,0 *7,0* | 36,9 *7,0* | 29,4 *7,0* | 20,8 *6,8* |
| **VPL 8C / 11** | 11 | | 82,9 *5,7* | 77,1 *6,0* | 70,4 *6,4* | 63,1 *7,1* | 53,8 *7,7* | 47,3 *7,7* | 40,6 *7,7* | 32,3 *7,7* | 22,9 *7,5* |
| **VPL 8C / 12** | 11 | | 90,5 *6,2* | 84,1 *6,6* | 76,8 *7,0* | 68,9 *7,8* | 58,7 *8,4* | 51,6 *8,4* | 44,3 *8,4* | 35,3 *8,4* | 25,0 *8,1* |
| **VPL 8C / 13** | 11 | | 98,0 *6,7* | 91,1 *7,1* | 83,2 *7,6* | 74,6 *8,4* | 63,6 *9,1* | 55,9 *9,1* | 48,0 *9,2* | 38,2 *9,1* | 27,0 *8,8* |
| **VPL 8C / 14** | 11 | | 105,6 *7,2* | 98,1 *7,7* | 89,6 *8,2* | 80,4 *9,1* | 68,5 *9,8* | 60,2 *9,8* | 51,7 *9,9* | 41,2 *9,8* | 29,1 *9,5* |
| **VPL 8C / 15** | 15 | | 113,1 *7,8* | 105,2 *8,2* | 96,0 *8,8* | 86,1 *9,7* | 73,4 *10,5* | 64,5 *10,5* | 55,4 *10,6* | 44,1 *10,5* | 31,2 *10,2* |
| **VPL 8C / 16** | 15 | | 120,6 *8,3* | 112,2 *8,8* | 102,4 *9,4* | 91,8 *10,4* | 78,2 *11,2* | 68,8 *11,2* | 59,0 *11,3* | 47,0 *11,2* | 33,3 *10,9* |
| **VPL 8C / 17** | 15 | | 128,2 *8,8* | 119,2 *9,3* | 108,8 *9,9* | 97,6 *11,0* | 83,1 *11,8* | 73,1 *12,0* | 62,7 *12,0* | 50,0 *11,8* | 35,4 *11,5* |
| **VPL 8C / 18** | 15 | | 135,7 *9,3* | 126,2 *9,9* | 115,2 *10,5* | 103,3 *11,7* | 88,0 *12,5* | 77,4 *12,7* | 66,4 *12,7* | 52,9 *12,5* | 37,4 *12,2* |

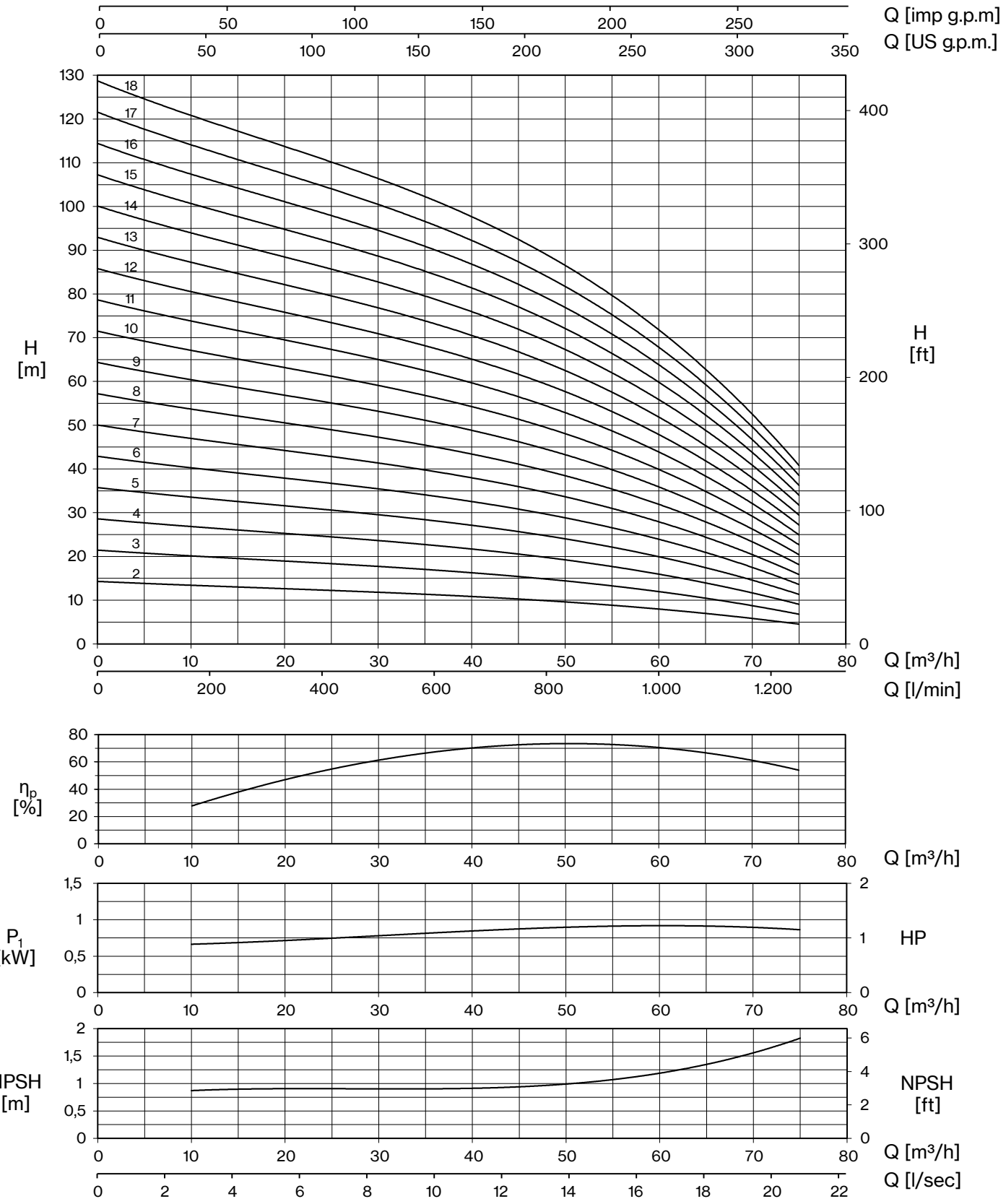
| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 1,5 | 90 | LA 3/20 | E 0/3 | B 4/3 | DN 100 - PN 25 | VF4 | SU4 |
| 2,2 - 3 | 100 | LA 3/20 | E 1/3 | | | | |
| 4 | 112 | LA 3/20 | E 1/3 | | | | |
| 5,5 - 7,5 | 132 | LA 3/20 | E 2/3 | | | | |
| 11 | 160 | LA 3/20 | E 3/3 | | | | |
| 15 | 160 | LA 3/24 | E 3/3 | | | | |


Q [imp g.p.m]
Q [US g.p.m.]
H [m]
H [ft]
Q [m³/h]
Q [l/min]
ηp [%]
P1 [kW]
HP
NPSH [m]
NPSH [ft]
Q [l/sec]

# VPL 8D 1.450 rpm

| 1.450 rpm | | | Q | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 75 |
| | | l/sec | 0 | 2,78 | 5,56 | 8,33 | 11,1 | 13,9 | 16,67 | 19,44 | 20,83 |
| | | l/min | 0 | 167 | 333 | 500 | 667 | 833 | 1.000 | 1.167 | 1.250 |
| | | | H (m) / P1 (kW) | | | | | | | | |
| **VPL 8D / 2** | 2,2 | H (m) / P1 (kW) | 14,3 *1,2* | 13,5 *1,3* | 12,7 *1,4* | 11,8 *1,6* | 10,8 *1,7* | 9,7 *1,8* | 8,0 *1,8* | 5,9 *1,8* | 4,5 *1,7* |
| **VPL 8D / 3** | 3 | | 21,4 *1,8* | 20,3 *2,0* | 19,0 *2,2* | 17,6 *2,3* | 16,2 *2,5* | 14,5 *2,7* | 12,0 *2,8* | 8,8 *2,7* | 6,8 *2,6* |
| **VPL 8D / 4** | 4 | | 28,5 *2,5* | 27,0 *2,7* | 25,3 *2,9* | 23,5 *3,1* | 21,6 *3,4* | 19,3 *3,6* | 16,0 *3,7* | 11,7 *3,6* | 9,0 *3,5* |
| **VPL 8D / 5** | 5,5 | | 35,7 *3,1* | 33,8 *3,3* | 31,7 *3,6* | 29,4 *3,9* | 27,0 *4,2* | 24,2 *4,5* | 20,0 *4,6* | 14,7 *4,5* | 11,3 *4,3* |
| **VPL 8D / 6** | 7,5 | | 42,8 *3,7* | 40,5 *4,0* | 38,0 *4,3* | 35,3 *4,7* | 32,4 *5,1* | 29,0 *5,4* | 24,0 *5,5* | 17,6 *5,3* | 13,5 *5,2* |
| **VPL 8D / 7** | 7,5 | | 49,9 *4,3* | 47,3 *4,6* | 44,3 *5,0* | 41,2 *5,4* | 37,8 *5,9* | 33,8 *6,3* | 28,0 *6,4* | 20,5 *6,2* | 15,8 *6,1* |
| **VPL 8D / 8** | 11 | | 57,0 *4,9* | 54,0 *5,3* | 50,6 *5,7* | 47,0 *6,2* | 43,2 *6,8* | 38,6 *7,2* | 32,0 *7,3* | 23,4 *7,1* | 18,0 *6,9* |
| **VPL 8D / 9** | 11 | | 64,2 *5,5* | 60,8 *6,0* | 57,0 *6,5* | 52,9 *7,0* | 48,6 *7,6* | 43,5 *8,1* | 36,0 *8,3* | 26,4 *8,0* | 20,3 *7,8* |
| **VPL 8D / 10** | 11 | | 71,3 *6,1* | 67,5 *6,6* | 63,3 *7,2* | 58,8 *7,8* | 54,0 *8,5* | 48,3 *9,0* | 40,0 *9,2* | 29,3 *8,9* | 22,5 *8,7* |
| **VPL 8D / 11** | 11 | | 78,4 *6,7* | 74,3 *7,3* | 69,6 *7,9* | 64,7 *8,5* | 59,4 *9,3* | 53,1 *9,9* | 44,0 *10,1* | 32,2 *9,8* | 24,8 *9,5* |
| **VPL 8D / 12** | 15 | | 85,6 *7,4* | 81,0 *8,0* | 76,0 *8,6* | 70,6 *9,3* | 64,8 *10,2* | 58,0 *10,8* | 48,0 *11,0* | 35,2 *10,7* | 27,0 *10,4* |
| **VPL 8D / 13** | 15 | | 92,7 *8,0* | 87,8 *8,6* | 82,3 *9,3* | 76,4 *10,1* | 70,2 *11,0* | 62,8 *11,7* | 52,0 *11,9* | 38,1 *11,6* | 29,3 *11,3* |
| **VPL 8D / 14** | 15 | | 99,8 *8,6* | 94,5 *9,3* | 88,6 *10,1* | 82,3 *10,9* | 75,6 *11,8* | 67,6 *12,6* | 56,0 *12,8* | 41,0 *12,5* | 31,5 *12,1* |
| **VPL 8D / 15** | 15 | | 107,0 *9,2* | 101,3 *9,9* | 95,0 *10,8* | 88,2 *11,6* | 81,0 *12,7* | 72,5 *13,5* | 60,0 *13,8* | 44,0 *13,4* | 33,8 *13,0* |
| **VPL 8D / 16** | 18,5 | | 114,1 *9,8* | 108,0 *10,6* | 101,3 *11,5* | 94,1 *12,4* | 86,4 *13,5* | 77,3 *14,4* | 64,0 *14,7* | 46,9 *14,3* | 36,0 *13,9* |
| **VPL 8D / 17** | 18,5 | | 121,2 *10,4* | 114,8 *11,3* | 107,6 *12,2* | 100,0 *13,2* | 91,8 *14,4* | 82,1 *15,3* | 68,0 *15,6* | 49,8 *15,1* | 38,3 *14,7* |
| **VPL 8D / 18** | 18,5 | | 128,3 *11,0* | 121,5 *11,9* | 113,9 *12,9* | 105,8 *14,0* | 97,2 *15,2* | 86,9 *16,2* | 72,0 *16,5* | 52,7 *16,0* | 40,5 *15,6* |

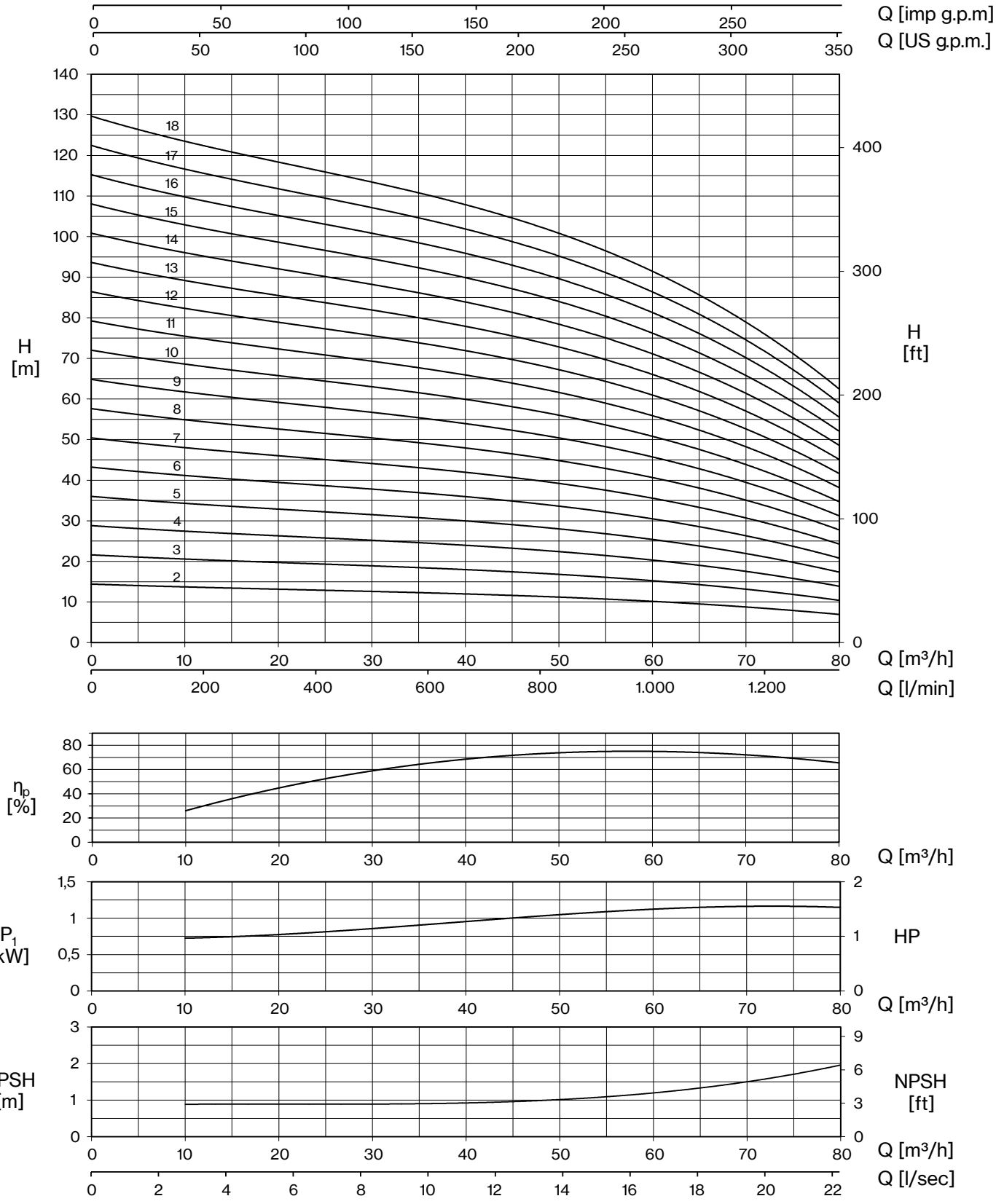
| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 2,2 - 3 | 100 | LA 3/20 | E 1/3 | B 4/3 | DN 100 - PN 25 | VF5 | SU5 |
| 4 | 112 | LA 3/20 | E 1/3 | | | | |
| 5,5 - 7,5 | 132 | LA 3/20 | E 2/3 | | | | |
| 11 | 160 | LA 3/20 | E 3/3 | | | | |
| 15 | 160 | LA 3/24 | E 3/3 | | | | |
| 18,5 - 22 | 180 | LA 3/24 | E 4/3 | | | | |


Q [imp g.p.m]
Q [US g.p.m.]
H [m]
H [ft]
Q [m³/h]
Q [l/min]
ηp [%]
P1 [kW]
HP
NPSH [m]
NPSH [ft]
Q [l/sec]

# VPL 8E 1.450 rpm

| 1.450 rpm | | | Q | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| | | l/sec | 0 | 2,78 | 5,56 | 8,33 | 11,1 | 13,9 | 16,7 | 19,4 | 22,2 |
| | | l/min | 0 | 167 | 333 | 500 | 667 | 833 | 1.000 | 1.167 | 1.333 |
| | | | H (m) / P1 (kW) | | | | | | | | |
| **VPL 8E / 2** | 3 | H (m) / P1 (kW) | 14,4<br>1,3 | 13,8<br>1,4 | 13,2<br>1,6 | 12,6<br>1,7 | 11,9<br>1,9 | 11,2<br>2,1 | 10,2<br>2,3 | 8,9<br>2,3 | 6,9<br>2,3 |
| **VPL 8E / 3** | 4 | | 21,5<br>2,0 | 20,7<br>2,2 | 19,8<br>2,4 | 18,8<br>2,6 | 17,9<br>2,8 | 16,8<br>3,1 | 15,3<br>3,4 | 13,3<br>3,5 | 10,3<br>3,4 |
| **VPL 8E / 4** | 5,5 | | 28,7<br>2,6 | 27,6<br>2,9 | 26,4<br>3,1 | 25,1<br>3,4 | 23,8<br>3,8 | 22,4<br>4,2 | 20,4<br>4,6 | 17,7<br>4,6 | 13,8<br>4,6 |
| **VPL 8E / 5** | 7,5 | | 35,9<br>3,3 | 34,5<br>3,6 | 33,1<br>3,9 | 31,4<br>4,3 | 29,8<br>4,7 | 28,0<br>5,2 | 25,5<br>5,7 | 22,2<br>5,8 | 17,2<br>5,7 |
| **VPL 8E / 6** | 11 | | 43,1<br>3,9 | 41,3<br>4,3 | 39,7<br>4,7 | 37,7<br>5,1 | 35,7<br>5,7 | 33,6<br>6,2 | 30,5<br>6,8 | 26,6<br>6,9 | 20,6<br>6,9 |
| **VPL 8E / 7** | 11 | | 50,3<br>4,6 | 48,2<br>5,0 | 46,3<br>5,5 | 44,0<br>6,0 | 41,7<br>6,6 | 39,2<br>7,3 | 35,6<br>8,0 | 31,0<br>8,1 | 24,1<br>8,0 |
| **VPL 8E / 8** | 11 | | 57,4<br>5,2 | 55,1<br>5,8 | 52,9<br>6,3 | 50,2<br>6,8 | 47,6<br>7,6 | 44,8<br>8,3 | 40,7<br>9,1 | 35,4<br>9,3 | 27,5<br>9,2 |
| **VPL 8E / 9** | 15 | | 64,6<br>5,9 | 62,0<br>6,5 | 59,5<br>7,1 | 56,5<br>7,7 | 53,6<br>8,5 | 50,4<br>9,4 | 45,8<br>10,3 | 39,9<br>10,4 | 31,0<br>10,3 |
| **VPL 8E / 10** | 15 | | 71,8<br>6,6 | 68,9<br>7,2 | 66,1<br>7,9 | 62,8<br>8,6 | 59,5<br>9,5 | 56,0<br>10,4 | 50,9<br>11,4 | 44,3<br>11,6 | 34,4<br>11,5 |
| **VPL 8E / 11** | 15 | | 79,0<br>7,2 | 75,8<br>7,9 | 72,7<br>8,7 | 69,1<br>9,4 | 65,5<br>10,4 | 61,6<br>11,4 | 56,0<br>12,5 | 48,7<br>12,7 | 37,8<br>12,6 |
| **VPL 8E / 12** | 15 | | 86,2<br>7,9 | 82,7<br>8,6 | 79,3<br>9,4 | 75,4<br>10,3 | 71,4<br>11,4 | 67,2<br>12,5 | 61,1<br>13,7 | 53,2<br>13,9 | 41,3<br>13,8 |
| **VPL 8E / 13** | 18,5 | | 93,3<br>8,5 | 89,6<br>9,4 | 85,9<br>10,2 | 81,6<br>11,1 | 77,4<br>12,3 | 72,8<br>13,5 | 66,2<br>14,8 | 57,6<br>15,0 | 44,7<br>14,9 |
| **VPL 8E / 14** | 18,5 | | 100,5<br>9,2 | 96,5<br>10,1 | 92,5<br>11,0 | 87,9<br>12,0 | 83,3<br>13,3 | 78,4<br>14,6 | 71,3<br>16,0 | 62,0<br>16,2 | 48,2<br>16,1 |
| **VPL 8E / 15** | 22 | | 107,7<br>9,8 | 103,4<br>10,8 | 99,2<br>11,8 | 94,2<br>12,8 | 89,3<br>14,2 | 84,0<br>15,6 | 76,4<br>17,1 | 66,5<br>17,4 | 51,6<br>17,2 |
| **VPL 8E / 16** | 22 | | 114,9<br>10,5 | 110,2<br>11,5 | 105,8<br>12,6 | 100,5<br>13,7 | 95,2<br>15,2 | 89,6<br>16,6 | 81,4<br>18,2 | 70,9<br>18,5 | 55,0<br>18,4 |
| **VPL 8E / 17** | 22 | | 122,1<br>11,1 | 117,1<br>12,2 | 112,4<br>13,4 | 106,8<br>14,5 | 101,2<br>16,1 | 95,2<br>17,7 | 86,5<br>19,4 | 75,3<br>19,7 | 58,5<br>19,5 |
| **VPL 8E / 18** | 30 | | 129,2<br>11,8 | 124,0<br>13,0 | 119,0<br>14,2 | 113,0<br>15,4 | 107,1<br>17,0 | 100,8<br>18,7 | 91,6<br>20,5 | 79,7<br>20,8 | 61,9<br>20,7 |

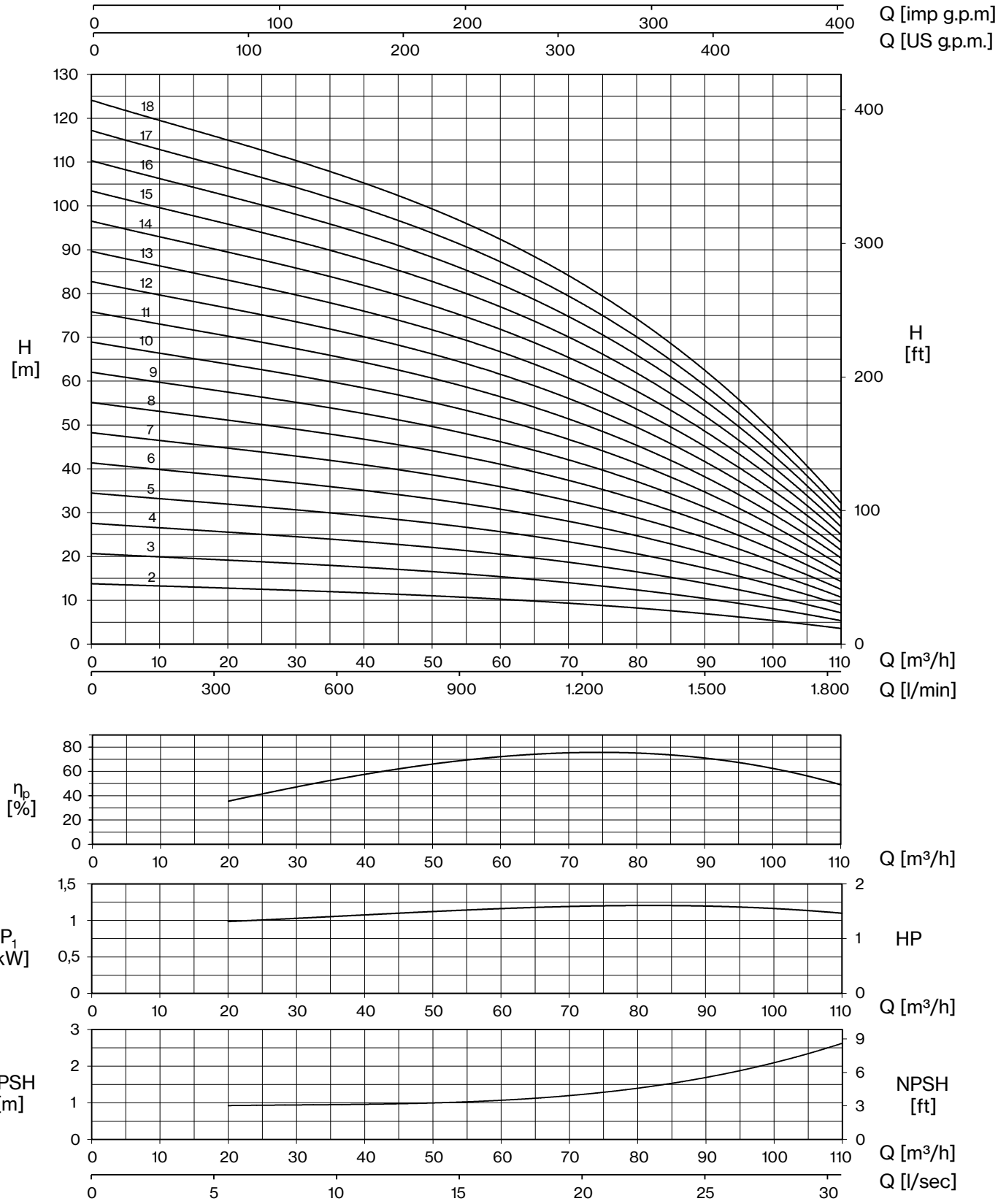
| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 2,2 - 3 | 100 | LA 3/20 | E 1/3 | B 4/3 | DN 100 - PN 25 | VF5 | SU5 |
| 4 | 112 | LA 3/20 | E 1/3 | | | | |
| 5,5 - 7,5 | 132 | LA 3/20 | E 2/3 | | | | |
| 11 | 160 | LA 3/20 | E 3/3 | | | | |
| 15 | 160 | LA 3/24 | E 3/3 | | | | |
| 18,5 - 22 | 180 | LA 3/24 | E 4/3 | | | | |


Q [imp g.p.m]
Q [US g.p.m.]
H [m]
H [ft]
Q [m³/h]
Q [l/min]
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
ηp [%]
P1 [kW]
HP
NPSH [m]
NPSH [ft]
Q [l/sec]

# VPL 8F 1.450 rpm

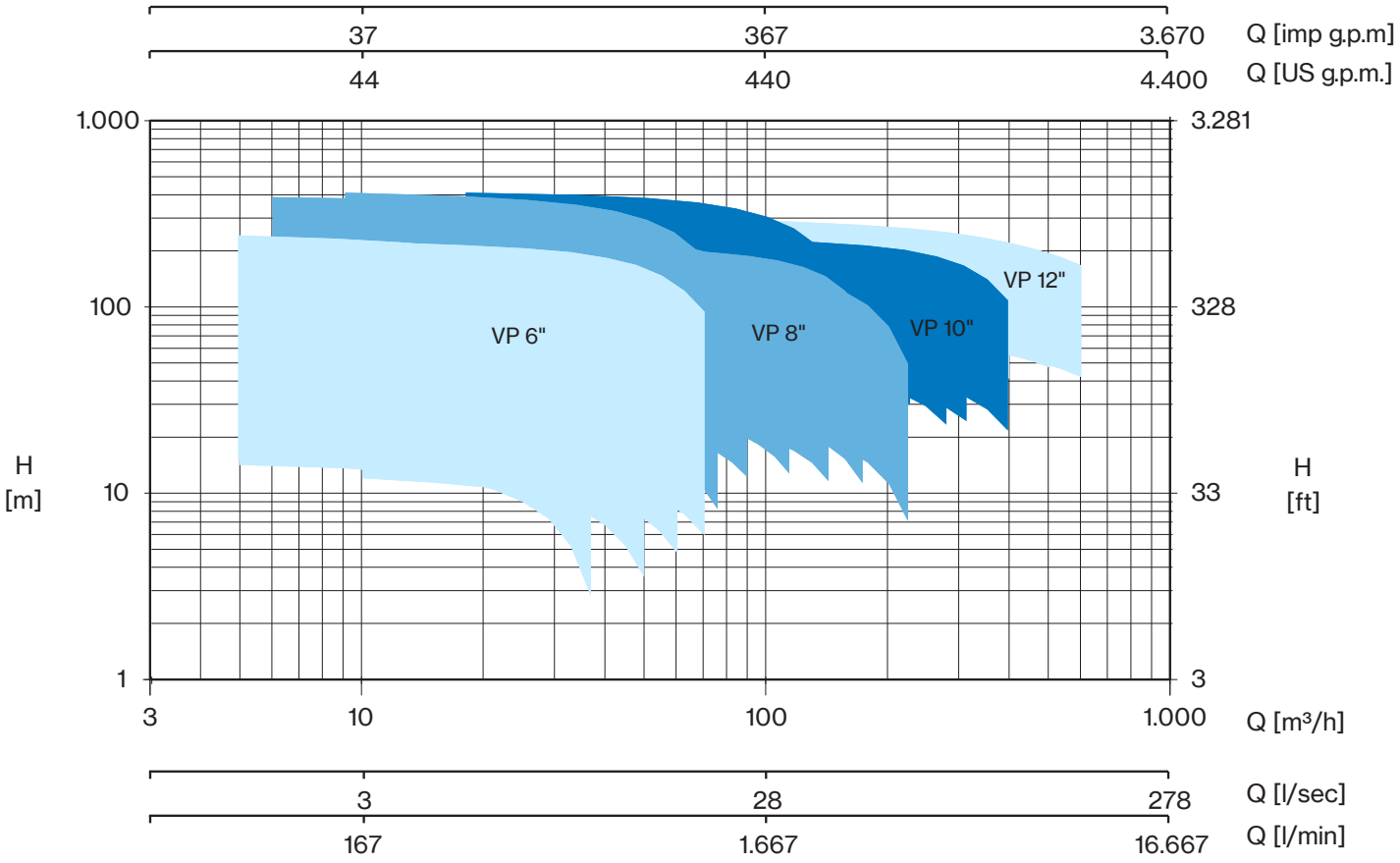
| 1.450 rpm | | | Q | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 20 | 40 | 60 | 70 | 80 | 90 | 100 | 110 |
| | | l/sec | 0 | 5,56 | 11,1 | 16,7 | 19,4 | 22,2 | 25,0 | 27,8 | 30,6 |
| | | l/min | 0 | 333 | 667 | 1.000 | 1.167 | 1.333 | 1.500 | 1.667 | 1.833 |
| | | | H (m) / P1 (kW) | | | | | | | | |
| **VPL 8F / 2** | 3 | H (m) / P1 (kW) | 13,8 *1,8* | 12,9 *2,0* | 11,6 *2,2* | 10,2 *2,3* | 9,3 *2,4* | 8,2 *2,4* | 7,0 *2,4* | 5,5 *2,3* | 3,5 *2,2* |
| **VPL 8F / 3** | 4 | | 20,6 *2,7* | 19,3 *3,0* | 17,5 *3,2* | 15,4 *3,5* | 14,0 *3,6* | 12,4 *3,6* | 10,4 *3,6* | 8,2 *3,5* | 5,3 *3,3* |
| **VPL 8F / 4** | 5,5 | | 27,5 *3,6* | 25,7 *3,9* | 23,3 *4,3* | 20,5 *4,7* | 18,7 *4,8* | 16,5 *4,8* | 13,9 *4,8* | 10,9 *4,7* | 7,0 *4,4* |
| **VPL 8F / 5** | 7,5 | | 34,4 *4,5* | 32,2 *4,9* | 29,1 *5,4* | 25,6 *5,8* | 23,4 *6,0* | 20,6 *6,0* | 17,4 *6,0* | 13,7 *5,9* | 8,8 *5,5* |
| **VPL 8F / 6** | 7,5 | | 41,3 *5,4* | 38,6 *5,9* | 34,9 *6,5* | 30,7 *7,0* | 28,0 *7,1* | 24,7 *7,2* | 20,9 *7,2* | 16,4 *7,0* | 10,6 *6,6* |
| **VPL 8F / 7** | 11 | | 48,2 *6,3* | 45,0 *6,9* | 40,7 *7,5* | 35,8 *8,2* | 32,7 *8,3* | 28,8 *8,4* | 24,4 *8,4* | 19,1 *8,2* | 12,3 *7,7* |
| **VPL 8F / 8** | 11 | | 55,0 *7,2* | 51,4 *7,9* | 46,6 *8,6* | 41,0 *9,3* | 37,4 *9,5* | 33,0 *9,6* | 27,8 *9,6* | 21,8 *9,4* | 14,1 *8,8* |
| **VPL 8F / 9** | 11 | | 61,9 *8,1* | 57,9 *8,9* | 52,4 *9,7* | 46,1 *10,5* | 42,0 *10,7* | 37,1 *10,8* | 31,3 *10,8* | 24,6 *10,5* | 15,8 *9,9* |
| **VPL 8F / 10** | 15 | | 68,8 *9,0* | 64,3 *9,9* | 58,2 *10,8* | 51,2 *11,7* | 46,7 *11,9* | 41,2 *12,0* | 34,8 *12,0* | 27,3 *11,7* | 17,6 *11,0* |
| **VPL 8F / 11** | 15 | | 75,7 *9,9* | 70,7 *10,8* | 64,0 *11,8* | 56,3 *12,8* | 51,4 *13,1* | 45,3 *13,2* | 38,3 *13,1* | 30,0 *12,9* | 19,4 *12,0* |
| **VPL 8F / 12** | 15 | | 82,6 *10,8* | 77,2 *11,8* | 69,8 *12,9* | 61,4 *14,0* | 56,0 *14,3* | 49,4 *14,4* | 41,8 *14,3* | 32,8 *14,0* | 21,1 *13,1* |
| **VPL 8F / 13** | 18,5 | | 89,4 *11,7* | 83,6 *12,8* | 75,7 *14,0* | 66,6 *15,1* | 60,7 *15,5* | 53,6 *15,6* | 45,2 *15,5* | 35,5 *15,2* | 22,9 *14,2* |
| **VPL 8F / 14** | 18,5 | | 96,3 *12,6* | 90,0 *13,8* | 81,5 *15,1* | 71,7 *16,3* | 65,4 *16,7* | 57,7 *16,8* | 48,7 *16,7* | 38,2 *16,4* | 24,6 *15,3* |
| **VPL 8F / 15** | 18,5 | | 103,2 *13,5* | 96,5 *14,8* | 87,3 *16,1* | 76,8 *17,5* | 70,1 *17,9* | 61,8 *18,0* | 52,2 *17,9* | 41,0 *17,6* | 26,4 *16,4* |
| **VPL 8F / 16** | 22 | | 110,1 *14,4* | 102,9 *15,8* | 93,1 *17,2* | 81,9 *18,6* | 74,7 *19,0* | 65,9 *19,2* | 55,7 *19,1* | 43,7 *18,7* | 28,2 *17,5* |
| **VPL 8F / 17** | 22 | | 117,0 *15,3* | 109,3 *16,7* | 98,9 *18,3* | 87,0 *19,8* | 79,4 *20,2* | 70,0 *20,4* | 59,2 *20,3* | 46,4 *19,9* | 29,9 *18,6* |
| **VPL 8F / 18** | 22 | | 123,8 *16,2* | 115,7 *17,7* | 104,8 *19,4* | 92,2 *21,0* | 84,1 *21,4* | 74,2 *21,6* | 62,6 *21,5* | 49,1 *21,1* | 31,7 *19,7* |

| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 3 | 100 | LA 4/20 | E 1/4 | B 4/4 | DN 100 - PN 25 | VF5 | SU5 |
| 4 | 112 | LA 4/20 | E 1/4 | | | | |
| 5,5 - 7,5 | 132 | LA 4/20 | E 2/4 | | | | |
| 11 | 160 | LA 4/20 | E 3/4 | | | | |
| 15 | 160 | LA 4/24 | E 3/4 | | | | |
| 18,5 - 22 | 180 | LA 4/24 | E 4/4 | | | | |
| 30 | 200 | LA 4/30 | E 5/4 | | | | |




*Valid for: p=1 (kg/dm3), viscosity ≤20 mm²/sec) - Guarantee values according to ISO 9906, Grade 2 - Head based on SG=1*

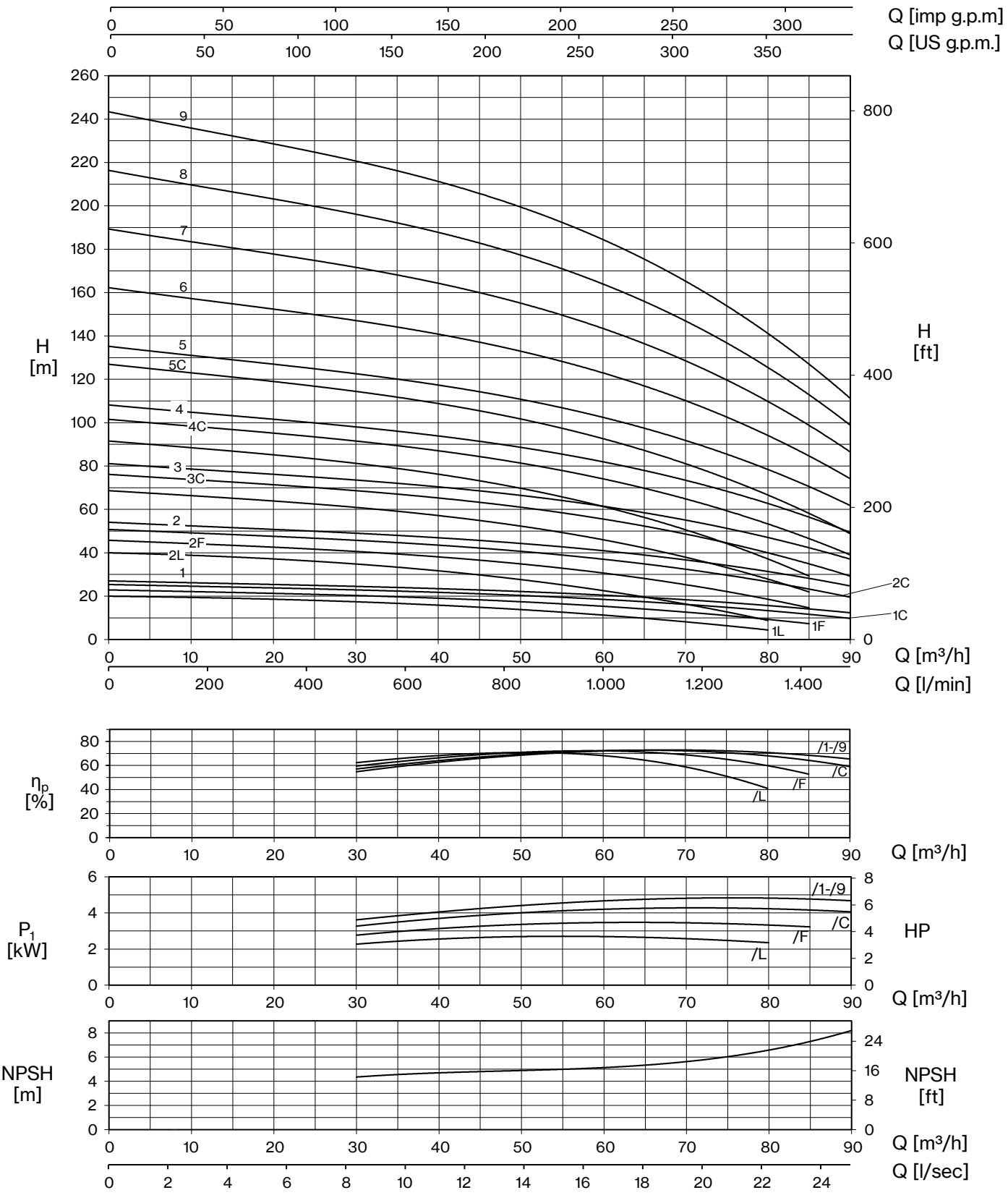
# Performance range 3.000 rpm



# VPL 8B 2.900 rpm

| 2.900 rpm | | | Q | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 30 | 40 | 50 | 60 | 70 | 80 | 85 | 90 |
| | | l/sec | 0 | 8,33 | 11,1 | 13,9 | 16,67 | 19,44 | 22,2 | 23,6 | 25 |
| | | l/min | 0 | 500 | 667 | 833 | 1.000 | 1.167 | 1.333 | 1.417 | 1.500 |
| | | | H (m) / P1 (kW) | | | | | | | | |
| **VPL 8B / 1L** | 3 | H (m) / P1 (kW) | 20,0<br>1,4 | 17,3<br>2,3 | 15,9<br>2,6 | 14,0<br>2,7 | 11,3<br>2,7 | 8,0<br>2,6 | 4,5<br>2,4 | | |
| **VPL 8B / 1F** | 4 | | 22,9<br>1,8 | 20,2<br>2,8 | 19,2<br>3,1 | 17,5<br>3,4 | 15,4<br>3,5 | 12,6<br>3,4 | 9,2<br>3,3 | 7,4<br>3,2 | |
| **VPL 8B / 1C** | 5,5 | | 25,4<br>2,3 | 22,8<br>3,3 | 21,8<br>3,7 | 20,4<br>4,0 | 18,6<br>4,2 | 16,3<br>4,3 | 13,2<br>4,2 | 11,6<br>4,2 | 9,9<br>4,1 |
| **VPL 8B / 1** | 5,5 | | 27,1<br>2,5 | 24,5<br>3,6 | 23,5<br>4,0 | 22,2<br>4,4 | 20,5<br>4,7 | 18,4<br>4,8 | 15,6<br>4,8 | 14,1<br>4,8 | 12,4<br>4,7 |
| **VPL 8B / 2L** | 5,5 | | 40,0<br>2,8 | 34,6<br>4,5 | 31,8<br>5,1 | 28,0<br>5,4 | 22,5<br>5,4 | 16,0<br>5,2 | 9,0<br>4,7 | | |
| **VPL 8B / 2F** | 7,5 | | 45,8<br>3,7 | 40,4<br>5,5 | 38,3<br>6,2 | 35,0<br>6,7 | 30,7<br>7,0 | 25,2<br>6,9 | 18,4<br>6,7 | 14,8<br>6,5 | |
| **VPL 8B / 2C** | 11 | | 50,8<br>4,5 | 45,6<br>6,6 | 43,6<br>7,3 | 40,8<br>8,0 | 37,1<br>8,5 | 32,5<br>8,6 | 26,4<br>8,4 | 23,2<br>8,3 | 19,7<br>8,1 |
| **VPL 8B / 2** | 11 | | 54,1<br>5,1 | 49,0<br>7,3 | 46,9<br>8,0 | 44,4<br>8,8 | 41,0<br>9,4 | 36,8<br>9,6 | 31,2<br>9,6 | 28,2<br>9,5 | 24,8<br>9,4 |
| **VPL 8B / 3F** | 11 | | 68,7<br>5,5 | 60,6<br>8,3 | 57,5<br>9,4 | 52,5<br>10,1 | 46,1<br>10,4 | 37,8<br>10,3 | 27,6<br>10,0 | 22,2<br>9,7 | |
| **VPL 8B / 3C** | 15 | | 76,2<br>6,8 | 68,4<br>9,8 | 65,4<br>11,0 | 61,2<br>12,0 | 55,7<br>12,7 | 48,8<br>12,8 | 39,6<br>12,6 | 34,8<br>12,5 | 29,6<br>12,2 |
| **VPL 8B / 3** | 18,5 | | 81,2<br>7,6 | 73,5<br>10,9 | 70,4<br>12,1 | 66,6<br>13,3 | 61,5<br>14,1 | 55,2<br>14,5 | 46,8<br>14,4 | 42,3<br>14,3 | 37,2<br>14,1 |
| **VPL 8B / 4F** | 15 | | 91,6<br>7,3 | 80,8<br>11,1 | 76,6<br>12,5 | 70,0<br>13,5 | 61,4<br>13,9 | 50,4<br>13,8 | 36,8<br>13,3 | 29,6<br>12,9 | |
| **VPL 8B / 4C** | 18,5 | | 101,6<br>9,0 | 91,2<br>13,1 | 87,2<br>14,7 | 81,6<br>16,0 | 74,2<br>16,9 | 65,0<br>17,1 | 52,8<br>16,8 | 46,4<br>16,6 | 39,4<br>16,3 |
| **VPL 8B / 4** | 22 | | 108,2<br>10,1 | 98,0<br>14,5 | 93,8<br>16,1 | 88,8<br>17,7 | 82,0<br>18,8 | 73,6<br>19,3 | 62,4<br>19,2 | 56,4<br>19,1 | 49,6<br>18,8 |
| **VPL 8B / 5C** | 22 | | 127,0<br>11,3 | 114,0<br>16,4 | 109,0<br>18,4 | 102,0<br>20,1 | 92,8<br>21,2 | 81,3<br>21,4 | 66,0<br>21,1 | 58,0<br>20,8 | 49,3<br>20,4 |
| **VPL 8B / 5** | 30 | | 135,3<br>12,7 | 122,5<br>18,2 | 117,3<br>20,1 | 111,0<br>22,1 | 102,5<br>23,5 | 92,0<br>24,1 | 78,0<br>24,0 | 70,5<br>23,9 | 62,0<br>23,5 |
| **VPL 8B / 6** | 30 | | 162,3<br>15,2 | 147,0<br>21,8 | 140,7<br>24,1 | 133,2<br>26,5 | 123,0<br>28,1 | 110,4<br>28,9 | 93,6<br>28,7 | 84,6<br>28,6 | 74,4<br>28,1 |
| **VPL 8B / 7** | 37 | | 189,35<br>17,71 | 171,5<br>25,41 | 164,15<br>28,14 | 155,4<br>30,94 | 143,5<br>32,83 | 128,8<br>33,74 | 109,2<br>33,53 | 98,7<br>33,39 | 86,8<br>32,83 |
| **VPL 8B / 8** | 45 | | 216,4<br>20,24 | 196<br>29,04 | 187,6<br>32,16 | 177,6<br>35,36 | 164<br>37,52 | 147,2<br>38,56 | 124,8<br>38,32 | 112,8<br>38,16 | 99,2<br>37,52 |
| **VPL 8B / 9** | 55 | | 243,45<br>22,77 | 220,5<br>32,67 | 211,05<br>36,18 | 199,8<br>39,78 | 184,5<br>42,21 | 165,6<br>43,38 | 140,4<br>43,11 | 126,9<br>42,93 | 111,6<br>42,21 |

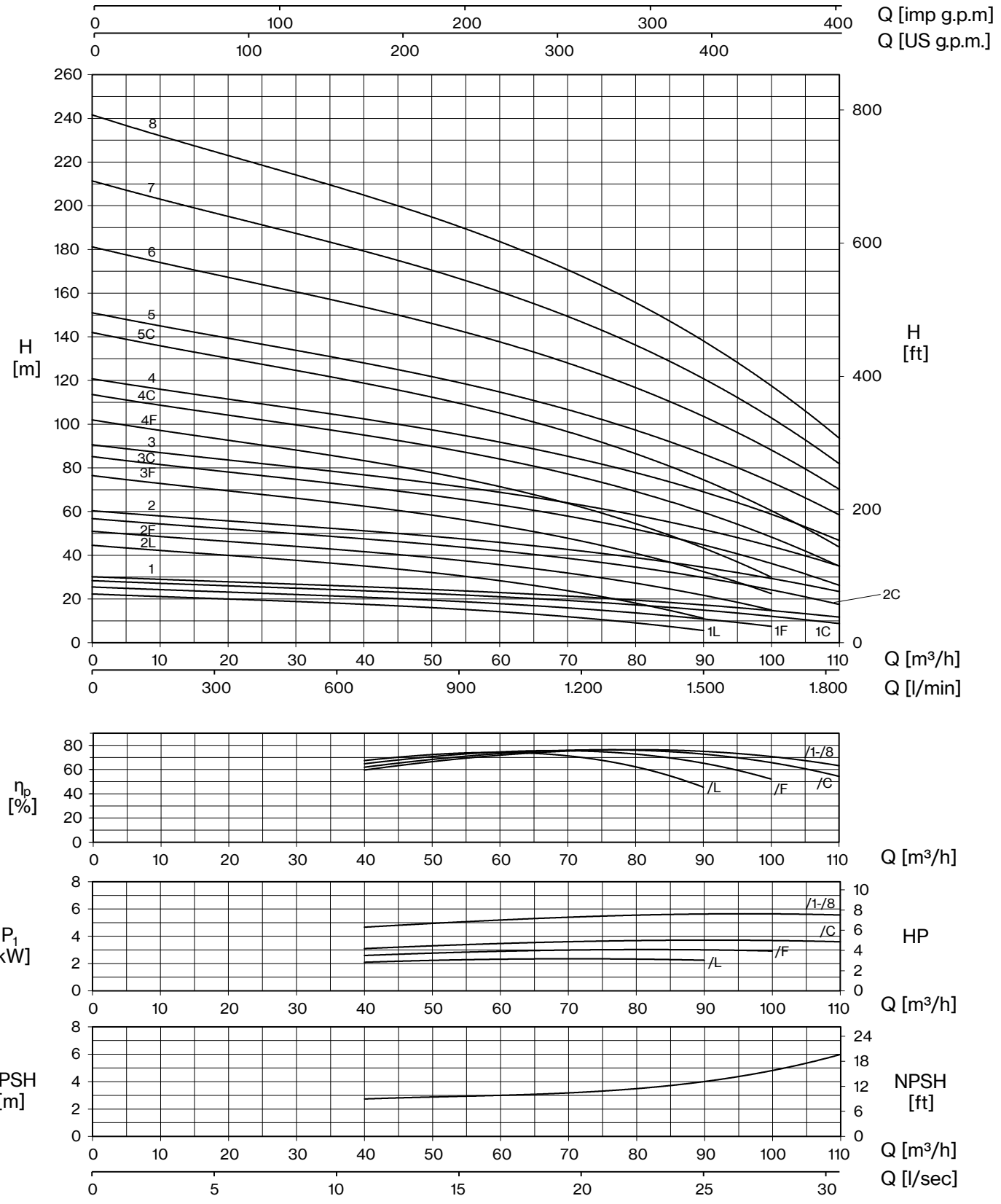
| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 1,5 - 2,2 | 90 | LA 4/20 | E 0/4 | B 4/4 | DN 100 - PN 25 | VF4 | SU4 |
| 3 | 100 | | E 1/4 | | | | |
| 4 | 112 | | E 1/4 | | | | |
| 5,5 - 7,5 | 132 | | E 2/4 | | | | |
| 11 - 15 - 18,5 | 160 | | E 3/4 | | | | |
| 22 | 180 | | E 4/4 | | | | |
| 30 - 37 | 200 | LA 4/24 | E 5/4 | | | | |
| 45 | 225 | | E 6/4 | | | | |
| 55 | 250 | LA 4/30 | E 7/4 | | | | |
| 75 | 280 | | E 7/4 | | | | |


Q [imp g.p.m]
Q [US g.p.m.]
H [m]
H [ft]
9
8
7
6
5
5C
4
4C
3
3C
2
2F
2L
1
2C
1C
1L
1F
Q [m³/h]
Q [l/min]
η p [%]
/1-/9
/C
/F
/L
P1 [kW]
HP
NPSH [m]
NPSH [ft]
Q [l/sec]

# VPL 8C 2.900 rpm

| 2.900 rpm | | | Q | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 |
| | | l/sec | 0 | 11,1 | 13,89 | 16,67 | 19,44 | 22,2 | 25 | 27,78 | 30,56 |
| | | l/min | 0 | 667 | 833 | 1.000 | 1.167 | 1.333 | 1.500 | 1.667 | 1.833 |
| | | | H (m) / P1 (kW) | | | | | | | | |
| **VPL 8C / 1L** | 4 | H (m) / P1 (kW) | 22,3<br>*2,3* | 17,5<br>*2,8* | 16,1<br>*3,0* | 14,3<br>*3,1* | 11,9<br>*3,2* | 9,0<br>*3,1* | 5,6<br>*3,0* | | |
| **VPL 8C / 1F** | 5,5 | | 25,5<br>*3,0* | 20,8<br>*3,5* | 19,5<br>*3,7* | 17,9<br>*3,9* | 16,0<br>*4,0* | 13,6<br>*4,1* | 10,9<br>*4,1* | 7,5<br>*3,9* | |
| **VPL 8C / 1C** | 5,5 | | 28,4<br>*3,7* | 23,8<br>*4,2* | 22,5<br>*4,4* | 21,1<br>*4,7* | 19,4<br>*4,9* | 17,3<br>*5,0* | 14,9<br>*5,0* | 12,1<br>*5,0* | 8,8<br>*4,9* |
| **VPL 8C / 1** | 7,5 | | 30,2<br>*4,1* | 25,6<br>*4,7* | 24,4<br>*4,9* | 23,0<br>*5,2* | 21,4<br>*5,4* | 19,5<br>*5,6* | 17,2<br>*5,6* | 14,7<br>*5,6* | 11,7<br>*5,6* |
| **VPL 8C / 2L** | 7,5 | | 44,6<br>*4,6* | 35,0<br>*5,7* | 32,2<br>*6,0* | 28,5<br>*6,3* | 23,7<br>*6,3* | 18,0<br>*6,3* | 11,2<br>*6,1* | | |
| **VPL 8C / 2F** | 11 | | 51,0<br>*6,0* | 41,6<br>*7,0* | 39,0<br>*7,5* | 35,7<br>*7,8* | 32,0<br>*8,1* | 27,1<br>*8,2* | 21,7<br>*8,1* | 15,0<br>*7,9* | |
| **VPL 8C / 2C** | 11 | | 56,8<br>*7,3* | 47,5<br>*8,4* | 44,9<br>*8,9* | 42,1<br>*9,4* | 38,7<br>*9,7* | 34,6<br>*10,0* | 29,7<br>*10,0* | 24,2<br>*10,0* | 17,5<br>*9,7* |
| **VPL 8C / 2** | 15 | | 60,4<br>*8,2* | 51,2<br>*9,4* | 48,7<br>*9,8* | 45,9<br>*10,4* | 42,7<br>*10,8* | 39,0<br>*11,1* | 34,4<br>*11,2* | 29,4<br>*11,3* | 23,4<br>*11,1* |
| **VPL 8C / 3F** | 15 | | 76,5<br>*8,9* | 62,4<br>*10,5* | 58,5<br>*11,2* | 53,6<br>*11,8* | 48,0<br>*12,1* | 40,7<br>*12,2* | 32,6<br>*12,2* | 22,5<br>*11,8* | |
| **VPL 8C / 3C** | 18,5 | | 85,2<br>*11,0* | 71,3<br>*12,6* | 67,4<br>*13,3* | 63,2<br>*14,1* | 58,1<br>*14,6* | 51,9<br>*14,9* | 44,6<br>*15,0* | 36,3<br>*14,9* | 26,3<br>*14,6* |
| **VPL 8C / 3** | 18,5 | | 90,6<br>*12,4* | 76,8<br>*14,0* | 73,1<br>*14,8* | 68,9<br>*15,6* | 64,1<br>*16,2* | 58,5<br>*16,7* | 51,6<br>*16,9* | 44,1<br>*16,9* | 35,1<br>*16,7* |
| **VPL 8C / 4F** | 18,5 | | 102,0<br>*11,9* | 83,2<br>*14,0* | 78,0<br>*14,9* | 71,4<br>*15,7* | 64,0<br>*16,2* | 54,2<br>*16,3* | 43,4<br>*16,2* | 30,0<br>*15,8* | |
| **VPL 8C / 4C** | 22 | | 113,6<br>*14,6* | 95,0<br>*16,8* | 89,8<br>*17,8* | 84,2<br>*18,8* | 77,4<br>*19,5* | 69,2<br>*19,9* | 59,4<br>*20,0* | 48,4<br>*19,9* | 35,0<br>*19,4* |
| **VPL 8C / 4** | 30 | | 120,8<br>*16,5* | 102,4<br>*18,7* | 97,4<br>*19,7* | 91,8<br>*20,8* | 85,4<br>*21,6* | 78,0<br>*22,3* | 68,8<br>*22,5* | 58,8<br>*22,5* | 46,8<br>*22,3* |
| **VPL 8C / 5C** | 30 | | 142,0<br>*18,3* | 118,8<br>*21,0* | 112,3<br>*22,2* | 105,3<br>*23,5* | 96,8<br>*24,4* | 86,5<br>*24,9* | 74,3<br>*25,1* | 60,5<br>*24,9* | 43,8<br>*24,3* |
| **VPL 8C / 5** | 30 | | 151,0<br>*20,6* | 128,0<br>*23,4* | 121,8<br>*24,6* | 114,8<br>*26,0* | 106,8<br>*27,1* | 97,5<br>*27,9* | 86,0<br>*28,1* | 73,5<br>*28,2* | 58,5<br>*27,9* |
| **VPL 8C / 6** | 37 | | 181,2<br>*24,7* | 153,6<br>*28,1* | 146,1<br>*29,5* | 137,7<br>*31,1* | 128,1<br>*32,5* | 117,0<br>*33,4* | 103,2<br>*33,7* | 88,2<br>*33,8* | 70,2<br>*33,4* |
| **VPL 8C / 7** | 45 | | 211,4<br>*28,84* | 179,2<br>*32,76* | 170,45<br>*34,44* | 160,65<br>*36,33* | 149,45<br>*37,87* | 136,5<br>*38,99* | 120,4<br>*39,34* | 102,9<br>*39,41* | 81,9<br>*38,99* |
| **VPL 8C / 8** | 55 | | 241,6<br>*32,96* | 204,8<br>*37,44* | 194,8<br>*39,36* | 183,6<br>*41,52* | 170,8<br>*43,28* | 156<br>*44,56* | 137,6<br>*44,96* | 117,6<br>*45,04* | 93,6<br>*44,56* |

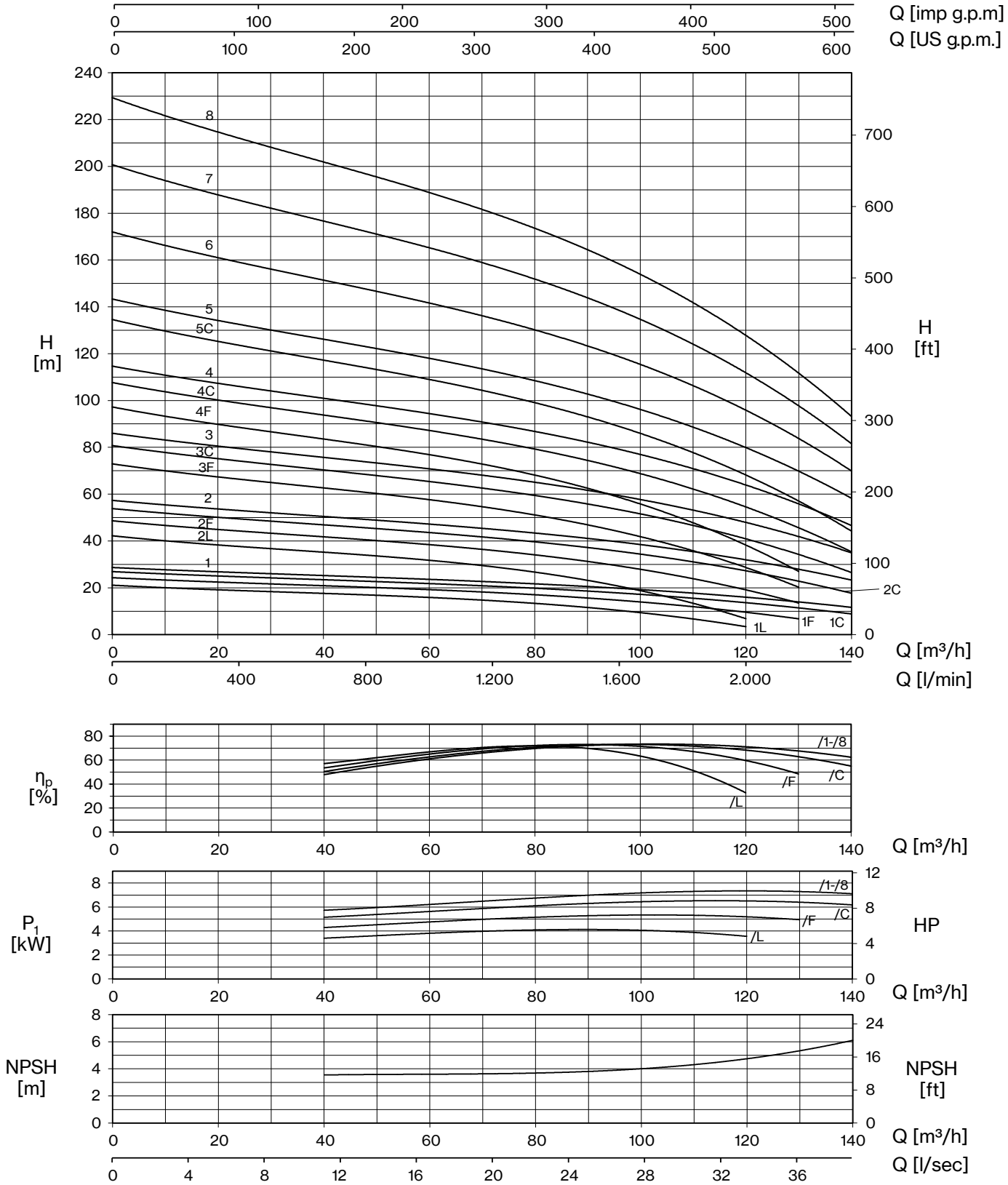
| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 1,5 - 2,2 | 90 | LA 4/20 | E 0/4 | B 4/4 | DN 100 - PN 25 | VF4 | SU4 |
| 3 | 100 | | E 1/4 | | | | |
| 4 | 112 | | E 1/4 | | | | |
| 5,5 - 7,5 | 132 | | E 2/4 | | | | |
| 11 - 15 - 18,5 | 160 | | E 3/4 | | | | |
| 22 | 180 | | E 4/4 | | | | |
| 30 - 37 | 200 | LA 4/24 | E 5/4 | | | | |
| 45 | 225 | | E 6/4 | | | | |
| 55 | 250 | LA 4/30 | E 7/4 | | | | |
| 75 | 280 | | E 7/4 | | | | |


Q [imp g.p.m]
Q [US g.p.m.]
H [m]
H [ft]
8
7
6
5
5C
4
4C
4F
3
3C
3F
2
2F
2L
1
2C
1L
1F
1C
Q [m³/h]
Q [l/min]
ηp [%]
/1-/8
/L
/F
/C
P1 [kW]
HP
NPSH [m]
NPSH [ft]
Q [l/sec]

# VPL 8D 2.900 rpm

| 2.900 rpm | | | Q | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 40 | 60 | 80 | 100 | 110 | 120 | 130 | 140 |
| | | l/sec | 0 | 11,1 | 16,67 | 22,2 | 27,78 | 30,56 | 33,33 | 36,11 | 38,89 |
| | | l/min | 0 | 667 | 1.000 | 1.333 | 1.667 | 1.833 | 2.000 | 2.167 | 2.333 |
| | | | H (m) / P1 (kW) | | | | | | | | |
| **VPL 8D / 1L** | 4 | H (m) / P1 (kW) | 21,1 *2,8* | 17,7 *3,4* | 15,8 *3,8* | 13,3 *4,1* | 9,4 *4,1* | 6,9 *3,9* | 3,3 *3,6* | | |
| **VPL 8D / 1F** | 5,5 | | 24,3 *3,6* | 21,0 *4,3* | 19,2 *4,7* | 17,1 *5,2* | 13,9 *5,3* | 12,0 *5,3* | 9,6 *5,2* | 6,7 *5,0* | |
| **VPL 8D / 1C** | 7,5 | | 26,9 *4,4* | 23,6 *5,2* | 21,7 *5,6* | 19,8 *6,1* | 17,3 *6,5* | 15,6 *6,5* | 13,7 *6,5* | 11,4 *6,4* | 8,9 *6,2* |
| **VPL 8D / 1** | 11 | | 28,7 *4,9* | 25,4 *5,7* | 23,5 *6,2* | 21,7 *6,8* | 19,3 *7,2* | 17,7 *7,3* | 16,0 *7,3* | 14,0 *7,3* | 11,6 *7,1* |
| **VPL 8D / 2L** | 11 | | 42,2 *5,5* | 35,4 *6,8* | 31,6 *7,6* | 26,6 *8,2* | 18,8 *8,1* | 13,7 *7,8* | 6,6 *7,1* | | |
| **VPL 8D / 2F** | 11 | | 48,6 *7,2* | 41,9 *8,6* | 38,3 *9,5* | 34,1 *10,4* | 27,8 *10,7* | 24,0 *10,6* | 19,2 *10,4* | 13,4 *9,9* | |
| **VPL 8D / 2C** | 15 | | 53,8 *8,8* | 47,1 *10,3* | 43,4 *11,2* | 39,5 *12,2* | 34,6 *13,0* | 31,1 *13,0* | 27,3 *13,0* | 22,7 *12,8* | 17,7 *12,4* |
| **VPL 8D / 2C** | 18,5 | | 57,3 *9,8* | 50,7 *11,5* | 47,0 *12,4* | 43,3 *13,5* | 38,6 *14,4* | 35,4 *14,6* | 32,0 *14,7* | 28,0 *14,5* | 23,2 *14,3* |
| **VPL 8D / 3F** | 18,5 | | 72,9 *10,7* | 62,9 *12,9* | 57,5 *14,2* | 51,2 *15,6* | 41,7 *16,0* | 36,0 *15,9* | 28,8 *15,6* | 20,1 *14,9* | |
| **VPL 8D / 3C** | 22 | | 80,7 *13,1* | 70,7 *15,5* | 65,1 *16,8* | 59,3 *18,4* | 51,9 *19,4* | 46,7 *19,6* | 41,0 *19,4* | 34,1 *19,2* | 26,6 *18,6* |
| **VPL 8D / 3C** | 30 | | 86,0 *14,7* | 76,1 *17,2* | 70,5 *18,6* | 65,0 *20,3* | 57,9 *21,6* | 53,1 *21,9* | 48,0 *22,0* | 42,0 *21,8* | 34,8 *21,4* |
| **VPL 8D / 4F** | 22 | | 97,2 *14,3* | 83,8 *17,2* | 76,6 *18,9* | 68,2 *20,8* | 55,6 *21,3* | 48,0 *21,2* | 38,4 *20,8* | 26,8 *19,8* | |
| **VPL 8D / 4C** | 30 | | 107,6 *17,5* | 94,2 *20,6* | 86,8 *22,4* | 79,0 *24,5* | 69,2 *25,9* | 62,2 *26,1* | 54,6 *25,9* | 45,4 *25,6* | 35,4 *24,8* |
| **VPL 8D / 4** | 37 | | 114,6 *19,6* | 101,4 *23,0* | 94,0 *24,8* | 86,6 *27,0* | 77,2 *28,8* | 70,8 *29,2* | 64,0 *29,3* | 56,0 *29,1* | 46,4 *28,5* |
| **VPL 8D / 5C** | 37 | | 134,5 *21,9* | 117,8 *25,8* | 108,5 *28,0* | 98,8 *30,6* | 86,5 *32,4* | 77,8 *32,6* | 68,3 *32,4* | 56,8 *32,0* | 44,3 *31,0* |
| **VPL 8D / 5** | 45 | | 143,3 *24,5* | 126,8 *28,7* | 117,5 *31,0* | 108,3 *33,8* | 96,5 *36,1* | 88,5 *36,6* | 80,0 *36,7* | 70,0 *36,4* | 58,0 *35,7* |
| **VPL 8D / 6** | 55 | | 171,9 *29,4* | 152,1 *34,4* | 141,0 *37,2* | 129,9 *40,5* | 115,8 *43,3* | 106,2 *43,9* | 96,0 *44,0* | 84,0 *43,6* | 69,6 *42,8* |
| **VPL 8D / 7** | 55 | | 200,55 *34,3* | 177,45 *40,18* | 164,5 *43,4* | 151,55 *47,25* | 135,1 *50,47* | 123,9 *51,17* | 112 *51,31* | 98 *50,89* | 81,2 *49,91* |
| **VPL 8D / 8** | 75 | | 229,2 *39,2* | 202,8 *45,92* | 188 *49,6* | 173,2 *54* | 154,4 *57,68* | 141,6 *58,48* | 128 *58,64* | 112 *58,16* | 92,8 *57,04* |

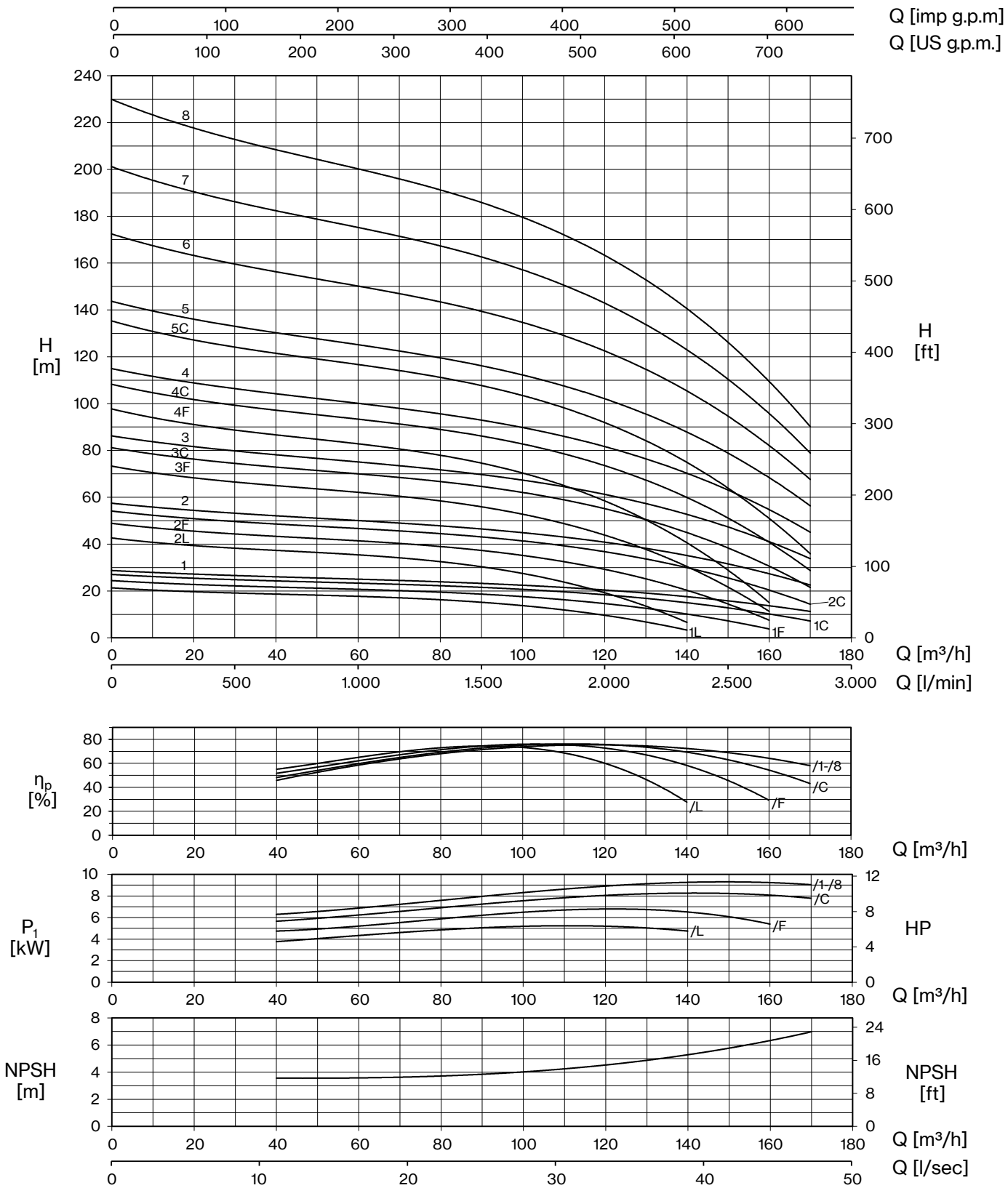
| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 1,5 - 2,2 | 90 | LA 5/20 | E 0/5 | B 6/5 | DN 150 - PN 25 | VF5 | SU5 |
| 3 | 100 | | E 1/5 | | | | |
| 4 | 112 | | E 1/5 | | | | |
| 5,5 - 7,5 | 132 | | E 2/5 | | | | |
| 11 - 15 - 18,5 | 160 | | E 3/5 | | | | |
| 22 | 180 | | E 4/5 | | | | |
| 30 - 37 | 200 | LA 5/24 | E 5/5 | | | | |
| 45 | 225 | | E 6/5 | | | | |
| 55 | 250 | LA 5/30 | E 7/5 | | | | |
| 75 | 280 | | E 7/5 | | | | |


Q [imp g.p.m]
Q [US g.p.m.]
H [m]
H [ft]
8
7
6
5
5C
4
4C
4F
3
3C
3F
2
2F
2L
1
2C
1L
1F
1C
Q [m³/h]
Q [l/min]
ηp [%]
/1-/8
/F
/C
/L
P1 [kW]
HP
NPSH [m]
NPSH [ft]
Q [l/sec]

# VPL 8E 2.900 rpm

| 2.900 rpm | | | Q | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 170 |
| | | l/sec | 0 | 11,1 | 16,67 | 22,2 | 27,8 | 33,3 | 38,9 | 44,4 | 47,2 |
| | | l/min | 0 | 667 | 1.000 | 1.333 | 1.667 | 2.000 | 2.333 | 2.667 | 2.833 |
| | | | H (m) / P1 (kW) | | | | | | | | |
| **VPL 8E / 1L** | 5,5 | H (m) / P1 (kW) | 21,3<br>3,0 | 18,8<br>3,8 | 17,6<br>4,3 | 16,1<br>4,9 | 14,0<br>5,2 | 9,5<br>5,2 | 3,3<br>4,8 | | |
| **VPL 8E / 1F** | 7,5 | | 24,4<br>3,8 | 21,8<br>4,7 | 20,7<br>5,3 | 19,4<br>5,9 | 17,5<br>6,4 | 14,8<br>6,7 | 10,2<br>6,6 | 3,7<br>5,4 | |
| **VPL 8E / 1C** | 11 | | 27,0<br>4,7 | 24,5<br>5,7 | 23,4<br>6,2 | 22,1<br>6,9 | 20,6<br>7,6 | 18,4<br>8,1 | 15,1<br>8,2 | 10,5<br>8,1 | 6,9<br>7,8 |
| **VPL 8E / 1** | 11 | | 28,7<br>5,6 | 26,2<br>6,3 | 25,0<br>6,9 | 23,8<br>7,6 | 22,4<br>8,3 | 20,4<br>8,9 | 17,7<br>9,3 | 13,7<br>9,2 | 11,2<br>9,1 |
| **VPL 8E / 2L** | 11 | | 42,6<br>5,9 | 37,6<br>7,5 | 35,2<br>8,6 | 32,2<br>9,7 | 28,0<br>10,4 | 19,0<br>10,4 | 6,6<br>9,5 | | |
| **VPL 8E / 2F** | 15 | | 48,8<br>7,6 | 43,6<br>9,4 | 41,4<br>10,5 | 38,7<br>11,8 | 35,0<br>12,9 | 29,5<br>13,4 | 20,4<br>13,3 | 7,4<br>10,7 | |
| **VPL 8E / 2C** | 18,5 | | 54,0<br>9,3 | 49,0<br>11,3 | 46,7<br>12,4 | 44,2<br>13,8 | 41,1<br>15,1 | 36,7<br>16,2 | 30,2<br>16,5 | 21,0<br>16,1 | 13,8<br>15,6 |
| **VPL 8E / 2C** | 22 | | 57,4<br>11,2 | 52,4<br>12,6 | 50,0<br>13,7 | 47,6<br>15,2 | 44,8<br>16,6 | 40,8<br>17,9 | 35,4<br>18,5 | 27,4<br>18,4 | 22,4<br>18,1 |
| **VPL 8E / 3F** | 22 | | 73,2<br>11,5 | 65,4<br>14,2 | 62,1<br>15,8 | 58,1<br>17,7 | 52,5<br>19,3 | 44,3<br>20,2 | 30,6<br>19,9 | 11,1<br>16,1 | |
| **VPL 8E / 3C** | 30 | | 81,0<br>14,0 | 73,5<br>17,0 | 70,1<br>18,6 | 66,3<br>20,7 | 61,7<br>22,7 | 55,1<br>24,2 | 45,3<br>24,7 | 31,5<br>24,2 | 20,7<br>23,4 |
| **VPL 8E / 3C** | 30 | | 86,1<br>16,8 | 78,6<br>18,9 | 75,0<br>20,6 | 71,4<br>22,7 | 67,2<br>25,0 | 61,2<br>26,8 | 53,1<br>27,8 | 41,1<br>27,6 | 33,6<br>27,2 |
| **VPL 8E / 4F** | 30 | | 97,6<br>15,3 | 87,2<br>18,9 | 82,8<br>21,0 | 77,4<br>23,6 | 70,0<br>25,8 | 59,0<br>26,9 | 40,8<br>26,5 | 14,8<br>21,4 | |
| **VPL 8E / 4C** | 37 | | 108,0<br>18,6 | 98,0<br>22,7 | 93,4<br>24,8 | 88,4<br>27,6 | 82,2<br>30,3 | 73,4<br>32,3 | 60,4<br>32,9 | 42,0<br>32,2 | 27,6<br>31,2 |
| **VPL 8E / 4** | 45 | | 114,8<br>22,4 | 104,8<br>25,2 | 100,0<br>27,4 | 95,2<br>30,3 | 89,6<br>33,3 | 81,6<br>35,7 | 70,8<br>37,0 | 54,8<br>36,8 | 44,8<br>36,3 |
| **VPL 8E / 5C** | 45 | | 135,0<br>23,3 | 122,5<br>28,4 | 116,8<br>31,0 | 110,5<br>34,6 | 102,8<br>37,9 | 91,8<br>40,4 | 75,5<br>41,2 | 52,5<br>40,3 | 34,5<br>39,0 |
| **VPL 8E / 5** | 55 | | 143,5<br>28,0 | 131,0<br>31,5 | 125,0<br>34,3 | 119,0<br>37,9 | 112,0<br>41,6 | 102,0<br>44,7 | 88,5<br>46,3 | 68,5<br>46,0 | 56,0<br>45,4 |
| **VPL 8E / 6** | 75 | | 172,2<br>33,6 | 157,2<br>37,8 | 150,0<br>41,2 | 142,8<br>45,5 | 134,4<br>49,9 | 122,4<br>53,6 | 106,2<br>55,6 | 82,2<br>55,1 | 67,2<br>54,4 |
| **VPL 8E / 7** | 75 | | 200,9<br>39,2 | 183,4<br>44,1 | 175<br>48,02 | 166,6<br>53,06 | 156,8<br>58,24 | 142,8<br>62,51 | 123,9<br>64,82 | 95,9<br>64,33 | 78,4<br>63,49 |
| **VPL 8E / 8** | 90 | | 229,6<br>44,8 | 209,6<br>50,4 | 200<br>54,88 | 190,4<br>60,64 | 179,2<br>66,56 | 163,2<br>71,44 | 141,6<br>74,08 | 109,6<br>73,52 | 89,6<br>72,56 |

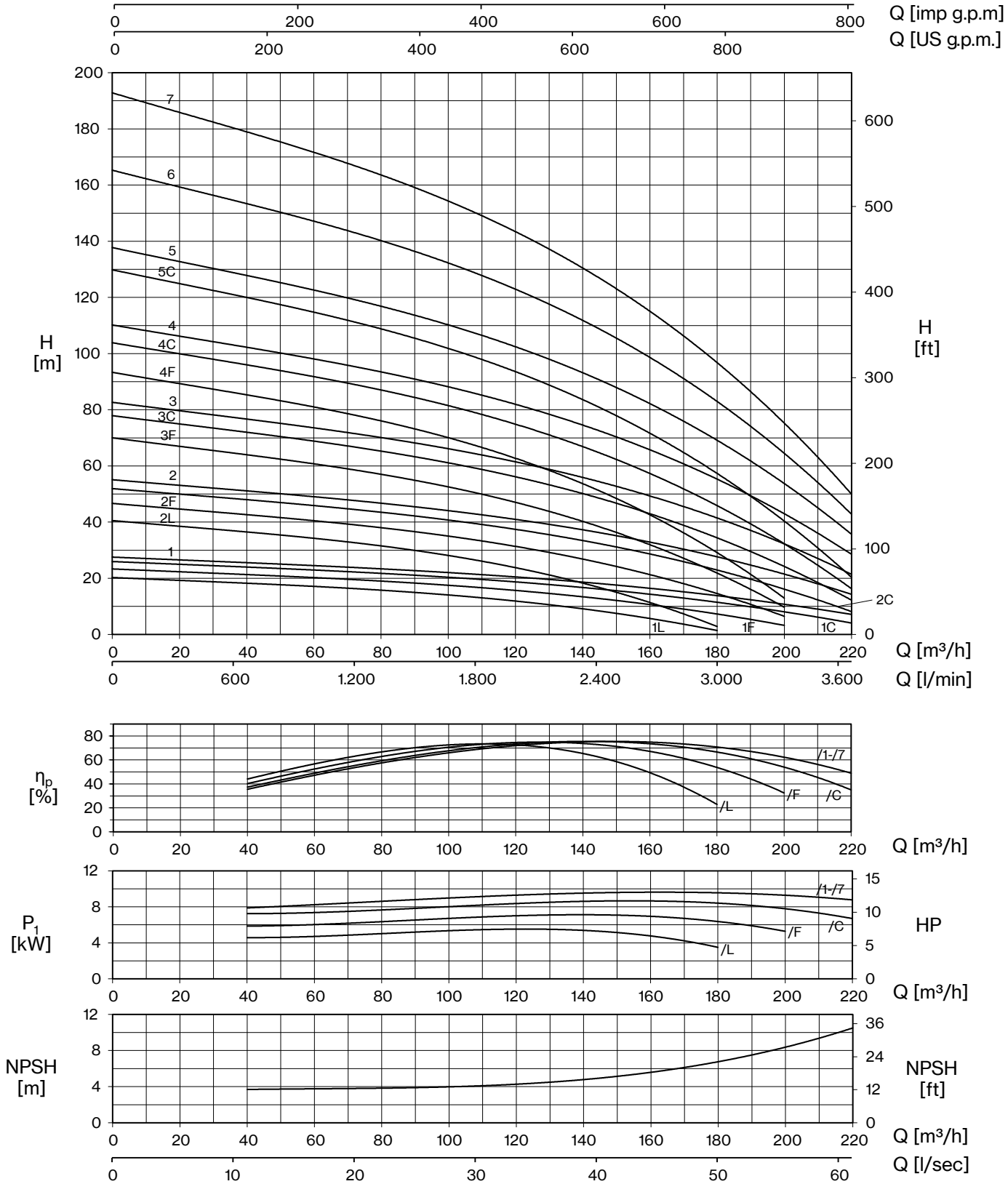
| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 1,5 - 2,2 | 90 | LA 5/20 | E 0/5 | B 6/5 | DN 150 - PN 25 | VF5 | SU5 |
| 3 | 100 | | E 1/5 | | | | |
| 4 | 112 | | E 1/5 | | | | |
| 5,5 - 7,5 | 132 | | E 2/5 | | | | |
| 11 - 15 - 18,5 | 160 | | E 3/5 | | | | |
| 22 | 180 | | E 4/5 | | | | |
| 30 - 37 | 200 | LA 5/24 | E 5/5 | | | | |
| 45 | 225 | | E 6/5 | | | | |
| 55 | 250 | LA 5/30 | E 7/5 | | | | |
| 75 | 280 | | E 7/5 | | | | |


Q [imp g.p.m]
Q [US g.p.m.]
H [m]
H [ft]
8
7
6
5
5C
4
4C
4F
3
3C
3F
2
2F
2L
1
2C
1C
1L
1F
Q [m³/h]
Q [l/min]
ηp [%]
/1-/8
/C
/L
/F
P1 [kW]
HP
NPSH [m]
NPSH [ft]
Q [l/sec]

# VPL 8F 2.900 rpm

| 2.900 rpm | | | Q | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 40 | 80 | 120 | 140 | 160 | 180 | 200 | 220 |
| | | l/sec | 0 | 11,1 | 22,2 | 33,3 | 38,9 | 44,4 | 50 | 55,6 | 61,1 |
| | | l/min | 0 | 667 | 1.333 | 2.000 | 2.333 | 2.667 | 3.000 | 3.333 | 3.666 |
| | | | H (m) / P1 (kW) | | | | | | | | |
| **VPL 8F / 1L** | 4 | H (m) / P1 (kW) | 20,3<br>*4,1* | 18,4<br>*4,6* | 15,7<br>*5,1* | 11,9<br>*5,4* | 9,2<br>*5,3* | 5,7<br>*5,0* | 1,4<br>*3,4* | | |
| **VPL 8F / 1F** | 7,5 | | 23,3<br>*5,2* | 21,5<br>*5,8* | 18,9<br>*6,5* | 15,7<br>*7,0* | 13,5<br>*7,0* | 10,7<br>*6,9* | 7,3<br>*6,7* | 3,2<br>*5,2* | |
| **VPL 8F / 1C** | 7,5 | | 25,9<br>*6,4* | 24,2<br>*7,2* | 21,6<br>*7,8* | 18,7<br>*8,4* | 16,7<br>*8,5* | 14,4<br>*8,5* | 11,5<br>*8,4* | 8,2<br>*8,1* | 4,0<br>*6,6* |
| **VPL 8F / 1** | 11 | | 27,5<br>*7,2* | 25,7<br>*7,9* | 23,3<br>*8,6* | 20,4<br>*9,3* | 18,6<br>*9,5* | 16,6<br>*9,6* | 13,9<br>*9,6* | 10,8<br>*9,4* | 7,1<br>*8,8* |
| **VPL 8F / 2L** | 7,5 | | 40,5<br>*8,1* | 36,7<br>*9,1* | 31,3<br>*10,3* | 23,8<br>*10,7* | 18,4<br>*10,6* | 11,4<br>*10,0* | 2,8<br>*6,8* | | |
| **VPL 8F / 2F** | 15 | | 46,6<br>*10,4* | 42,9<br>*11,6* | 37,8<br>*12,9* | 31,3<br>*13,9* | 26,9<br>*14,0* | 21,4<br>*13,8* | 14,6<br>*13,3* | 6,4<br>*10,3* | |
| **VPL 8F / 2C** | 15 | | 51,8<br>*12,8* | 48,4<br>*14,4* | 43,2<br>*15,5* | 37,4<br>*16,7* | 33,4<br>*17,0* | 28,7<br>*17,1* | 23,0<br>*16,9* | 16,3<br>*16,1* | 8,0<br>*13,1* |
| **VPL 8F / 2C** | 22 | | 55,0<br>*14,4* | 51,4<br>*15,8* | 46,6<br>*17,2* | 40,8<br>*18,6* | 37,2<br>*19,0* | 33,1<br>*19,2* | 27,7<br>*19,1* | 21,5<br>*18,7* | 14,2<br>*17,5* |
| **VPL 8F / 3F** | 22 | | 69,9<br>*15,7* | 64,4<br>*17,5* | 56,7<br>*19,4* | 47,0<br>*20,9* | 40,4<br>*21,0* | 32,1<br>*20,7* | 21,9<br>*20,0* | 9,6<br>*15,5* | |
| **VPL 8F / 3C** | 22 | | 77,7<br>*19,2* | 72,6<br>*21,6* | 64,8<br>*23,3* | 56,1<br>*25,1* | 50,1<br>*25,6* | 43,1<br>*25,6* | 34,5<br>*25,3* | 24,5<br>*24,2* | 12,0<br>*19,7* |
| **VPL 8F / 3C** | 30 | | 82,5<br>*21,6* | 77,1<br>*23,6* | 69,9<br>*25,9* | 61,2<br>*28,0* | 55,8<br>*28,6* | 49,7<br>*28,8* | 41,6<br>*28,7* | 32,3<br>*28,1* | 21,3<br>*26,3* |
| **VPL 8F / 4F** | 30 | | 93,2<br>*20,9* | 85,8<br>*23,3* | 75,6<br>*25,9* | 62,6<br>*27,8* | 53,8<br>*28,0* | 42,8<br>*27,6* | 29,2<br>*26,6* | 12,8<br>*20,6* | |
| **VPL 8F / 4C** | 30 | | 103,6<br>*25,6* | 96,8<br>*28,8* | 86,4<br>*31,1* | 74,8<br>*33,5* | 66,8<br>*34,1* | 57,4<br>*34,2* | 46,0<br>*33,7* | 32,6<br>*32,2* | 16,0<br>*26,2* |
| **VPL 8F / 4** | 45 | | 110,0<br>*28,8* | 102,8<br>*31,5* | 93,2<br>*34,5* | 81,6<br>*37,3* | 74,4<br>*38,1* | 66,2<br>*38,4* | 55,4<br>*38,2* | 43,0<br>*37,4* | 28,4<br>*35,0* |
| **VPL 8F / 5C** | 37 | | 129,5<br>*32,0* | 121,0<br>*36,0* | 108,0<br>*38,9* | 93,5<br>*41,9* | 83,5<br>*42,6* | 71,8<br>*42,7* | 57,5<br>*42,2* | 40,8<br>*40,3* | 20,0<br>*32,8* |
| **VPL 8F / 5** | 55 | | 137,5<br>*36,0* | 128,5<br>*39,4* | 116,5<br>*43,1* | 102,0<br>*46,6* | 93,0<br>*47,6* | 82,8<br>*48,0* | 69,3<br>*47,8* | 53,8<br>*46,8* | 35,5<br>*43,8* |
| **VPL 8F / 6** | 75 | | 165,0<br>*43,2* | 154,2<br>*47,3* | 139,8<br>*51,7* | 122,4<br>*55,9* | 111,6<br>*57,1* | 99,3<br>*57,6* | 83,1<br>*57,3* | 64,5<br>*56,1* | 42,6<br>*52,5* |
| **VPL 8F / 7** | 75 | | 192,5<br>*50,4* | 179,9<br>*55,16* | 163,1<br>*60,34* | 142,8<br>*65,24* | 130,2<br>*66,64* | 115,85<br>*67,2* | 96,95<br>*66,85* | 75,25<br>*65,45* | 49,7<br>*61,25* |

| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 1,5 - 2,2 | 90 | LA 5/20 | E 0/5 | B 6/5 | DN 150 - PN 25 | VF5 | SU5 |
| 3 | 100 | | E 1/5 | | | | |
| 4 | 112 | | E 1/5 | | | | |
| 5,5 - 7,5 | 132 | | E 2/5 | | | | |
| 11 - 15 - 18,5 | 160 | | E 3/5 | | | | |
| 22 | 180 | | E 4/5 | | | | |
| 30 - 37 | 200 | LA 5/24 | E 5/5 | | | | |
| 45 | 225 | | E 6/5 | | | | |
| 55 | 250 | LA 5/30 | E 7/5 | | | | |
| 75 | 280 | | E 7/5 | | | | |

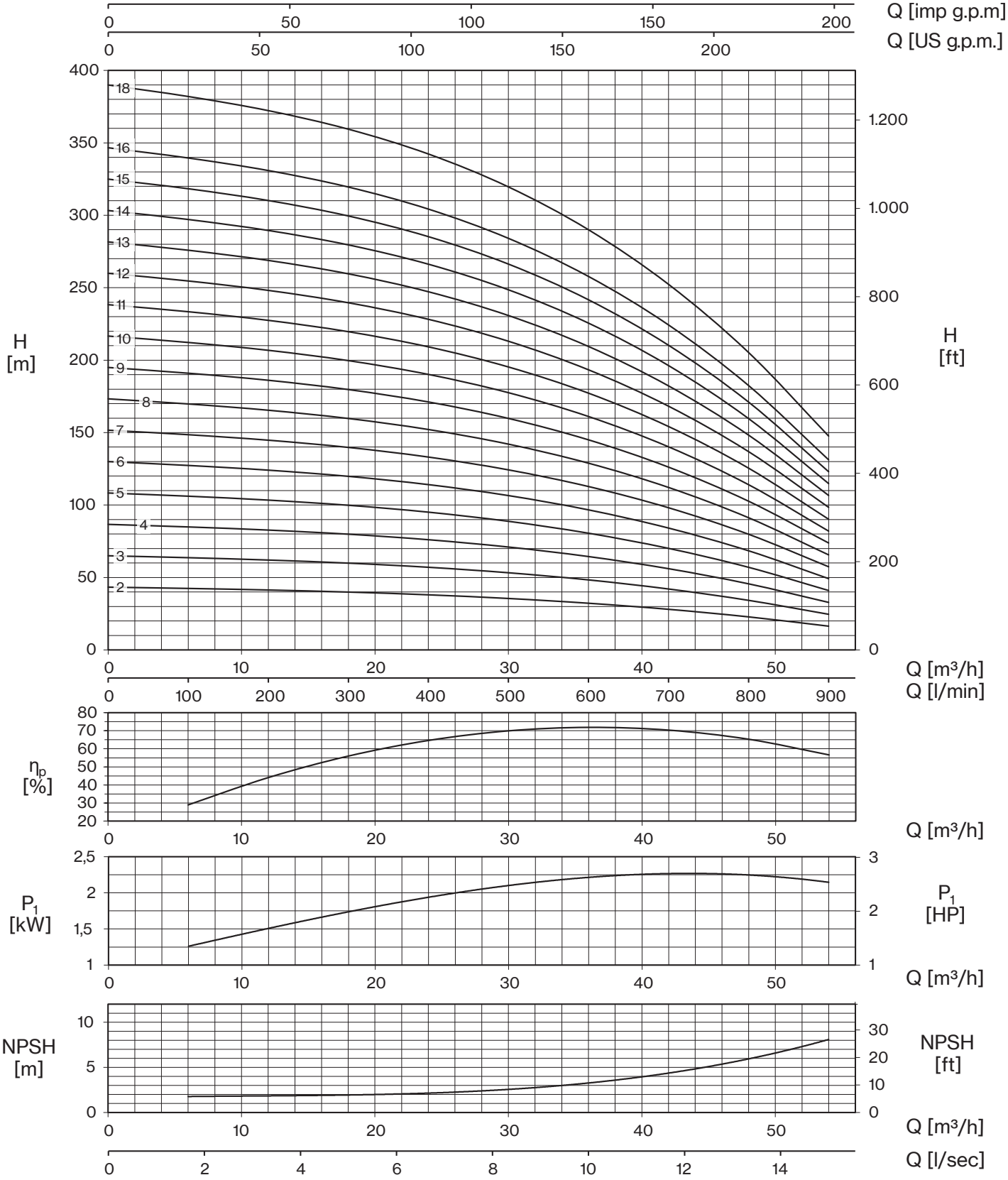

Q [imp g.p.m]
Q [US g.p.m.]
H [m]
H [ft]
7
6
5
5C
4
4C
4F
3
3C
3F
2
2F
2L
1
1L
1F
1C
2C
Q [m³/h]
Q [l/min]
ηp [%]
/1-/7
/F
/C
/L
P1 [kW]
HP
NPSH [m]
NPSH [ft]
Q [l/sec]

# VPL 8RNB 2.900 rpm

| 2.900 rpm | | | Q | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 |
| | | l/sec | 0 | 1,7 | 3,3 | 5,0 | 6,7 | 8,3 | 10,0 | 11,7 | 13,3 | 15,0 |
| | | l/min | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
| | | | H (m) / P1 (kW) | | | | | | | | | |
| **VPL 8RNB / 2** | 5,5 | H (m) / P1 (kW) | 43,3<br>*2,0* | 42,4<br>*2,5* | 41,4<br>*3,0* | 39,9<br>*3,5* | 38,0<br>*3,9* | 35,5<br>*4,2* | 32,2<br>*4,4* | 28,0<br>*4,5* | 22,8<br>*4,5* | 16,4<br>*4,3* |
| **VPL 8RNB / 3** | 7,5 | | 65,0<br>*3,0* | 63,7<br>*3,8* | 62,0<br>*4,5* | 59,9<br>*5,2* | 57,0<br>*5,8* | 53,3<br>*6,3* | 48,3<br>*6,6* | 42,1<br>*6,8* | 34,2<br>*6,7* | 24,6<br>*6,4* |
| **VPL 8RNB / 4** | 11 | | 86,6<br>*4,0* | 84,9<br>*5,0* | 82,7<br>*6,0* | 79,9<br>*7,0* | 76,1<br>*7,8* | 71,0<br>*8,4* | 64,4<br>*8,9* | 56,1<br>*9,1* | 45,6<br>*9,0* | 32,8<br>*8,6* |
| **VPL 8RNB / 5** | 15 | | 108,3<br>*5,0* | 106,1<br>*6,3* | 103,4<br>*7,5* | 99,8<br>*8,7* | 95,1<br>*9,7* | 88,8<br>*10,5* | 80,6<br>*11,1* | 70,1<br>*11,3* | 57,0<br>*11,2* | 41,0<br>*10,7* |
| **VPL 8RNB / 6** | 15 | | 130,0<br>*6,0* | 127,3<br>*7,6* | 124,1<br>*9,0* | 119,8<br>*10,4* | 114,1<br>*11,6* | 106,5<br>*12,6* | 96,7<br>*13,3* | 84,1<br>*13,6* | 68,4<br>*13,5* | 49,2<br>*12,9* |
| **VPL 8RNB / 7** | 18,5 | | 151,6<br>*7,0* | 148,5<br>*8,8* | 144,8<br>*10,6* | 139,8<br>*12,2* | 133,1<br>*13,6* | 124,3<br>*14,7* | 112,8<br>*15,5* | 98,1<br>*15,9* | 79,8<br>*15,7* | 57,4<br>*15,0* |
| **VPL 8RNB / 8** | 22 | | 173,3<br>*8,1* | 169,8<br>*10,1* | 165,4<br>*12,1* | 159,7<br>*13,9* | 152,1<br>*15,5* | 142,0<br>*16,8* | 128,9<br>*17,7* | 112,1<br>*18,1* | 91,2<br>*18,0* | 65,6<br>*17,2* |
| **VPL 8RNB / 9** | 22 | | 195,0<br>*9,1* | 191,0<br>*11,3* | 186,1<br>*13,6* | 179,7<br>*15,6* | 171,1<br>*17,5* | 159,8<br>*18,9* | 145,0<br>*19,9* | 126,2<br>*20,4* | 102,6<br>*20,2* | 73,8<br>*19,3* |
| **VPL 8RNB / 10** | 30 | | 216,6<br>*10,1* | 212,2<br>*12,6* | 206,8<br>*15,1* | 199,7<br>*17,4* | 190,2<br>*19,4* | 177,5<br>*21,0* | 161,1<br>*22,1* | 140,2<br>*22,7* | 114,0<br>*22,5* | 82,0<br>*21,5* |
| **VPL 8RNB / 11** | 30 | | 238,3<br>*11,1* | 233,4<br>*13,9* | 227,5<br>*16,6* | 219,7<br>*19,1* | 209,2<br>*21,3* | 195,3<br>*23,1* | 177,2<br>*24,4* | 154,2<br>*24,9* | 125,5<br>*24,7* | 90,2<br>*23,6* |
| **VPL 8RNB / 12** | 30 | | 259,9<br>*12,1* | 254,7<br>*15,1* | 248,2<br>*18,1* | 239,6<br>*20,9* | 228,2<br>*23,3* | 213,1<br>*25,2* | 193,3<br>*26,6* | 168,2<br>*27,2* | 136,9<br>*27,0* | 98,4<br>*25,8* |
| **VPL 8RNB / 13** | 37 | | 281,6<br>*13,1* | 275,9<br>*16,4* | 268,8<br>*19,6* | 259,6<br>*22,6* | 247,2<br>*25,2* | 230,8<br>*27,3* | 209,5<br>*28,8* | 182,2<br>*29,5* | 148,3<br>*29,2* | 106,6<br>*27,9* |
| **VPL 8RNB / 14** | 37 | | 303,3<br>*14,1* | 297,1<br>*17,6* | 289,5<br>*21,1* | 279,6<br>*24,3* | 266,2<br>*27,1* | 248,6<br>*29,4* | 225,6<br>*31,0* | 196,3<br>*31,7* | 159,7<br>*31,5* | 114,8<br>*30,0* |
| **VPL 8RNB / 15** | 37 | | 324,9<br>*15,1* | 318,3<br>*18,9* | 310,2<br>*22,6* | 299,5<br>*26,1* | 285,2<br>*29,1* | 266,3<br>*31,5* | 241,7<br>*33,2* | 210,3<br>*34,0* | 171,1<br>*33,7* | 123,0<br>*32,2* |
| **VPL 8RNB / 16** | 45 | | 346,6<br>*16,1* | 339,5<br>*20,2* | 330,9<br>*24,1* | 319,5<br>*27,8* | 304,3<br>*31,0* | 284,1<br>*33,6* | 257,8<br>*35,4* | 224,3<br>*36,3* | 182,5<br>*36,0* | 131,2<br>*34,3* |
| **VPL 8RNB / 18** | 45 | | 389,9<br>*18,1* | 382,0<br>*22,7* | 372,2<br>*27,1* | 359,4<br>*31,3* | 342,3<br>*34,9* | 319,6<br>*37,8* | 290,0<br>*39,9* | 252,3<br>*40,8* | 205,3<br>*40,4* | 147,6<br>*38,6* |

| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 5,5 - 7,5 | 132 | LA 4/20 | E 2/4 | B 4/4 | DN 100 - PN 25 | VF4 | SU4 |
| 11 - 15 - 18,5 | 160 | | E 3/4 | | | | |
| 22 | 180 | | E 4/4 | | | | |
| 30 - 37 | 200 | LA 4/24 | E 5/4 | | | | |
| 45 | 225 | | E 6/4 | | | | |
| 55 | 250 | LA 4/30 | E 7/4 | | | | |
| 75 | 280 | | E 7/4 | | | | |

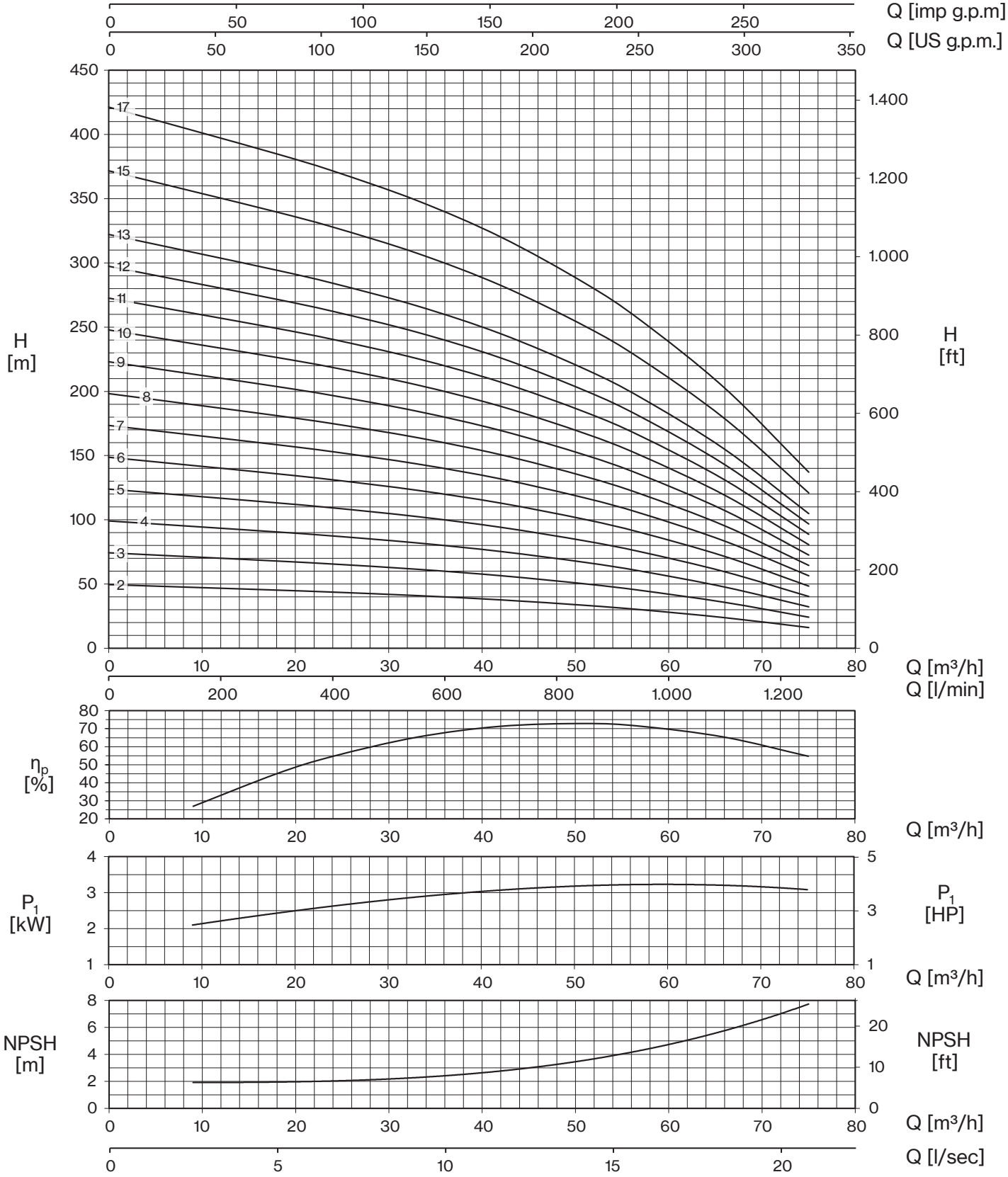
# VPL 8RNB 2.900 rpm



# VPL 8RNC 2.900 rpm

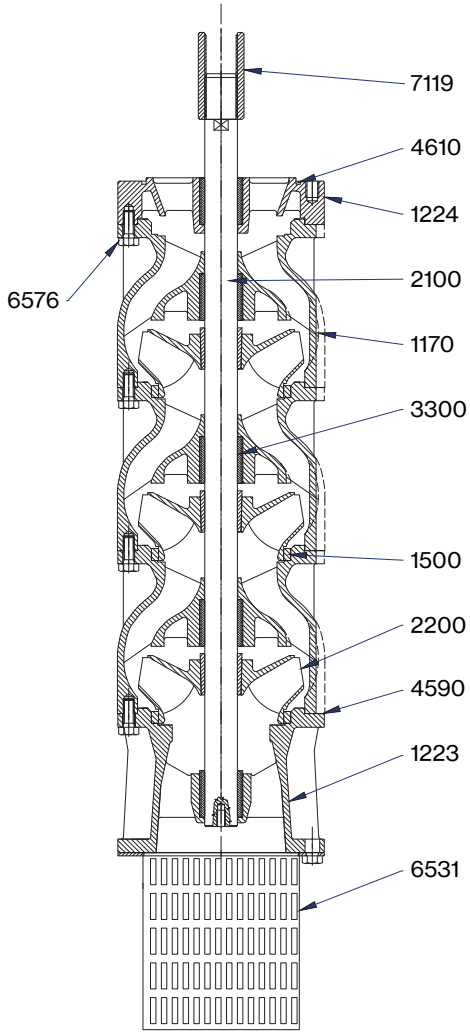
| 2.900 rpm | | | Q | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | kW | m³/h | 0 | 9 | 18 | 24 | 33 | 42 | 51 | 57 | 66 | 75 |
| | | l/sec | 0 | 2,5 | 5,0 | 6,7 | 9,2 | 11,7 | 14,2 | 15,8 | 18,3 | 20,8 |
| | | l/min | 0 | 150 | 300 | 400 | 550 | 700 | 850 | 950 | 1.100 | 1.250 |
| | | | H (m) / P1 (kW) | | | | | | | | | |
| **VPL 8RNC / 2** | 7,5 | H (m) / P1 (kW) | 49,6<br>*3,5* | 47,4<br>*4,2* | 45,3<br>*4,9* | 43,7<br>*5,2* | 41,0<br>*5,8* | 37,7<br>*6,1* | 33,4<br>*6,4* | 30,0<br>*6,4* | 23,8<br>*6,4* | 16,1<br>*6,2* |
| **VPL 8RNC / 3** | 11 | | 74,3<br>*5,2* | 71,1<br>*6,3* | 67,9<br>*7,3* | 65,6<br>*7,9* | 61,5<br>*8,6* | 56,5<br>*9,2* | 50,2<br>*9,6* | 45,0<br>*9,7* | 35,7<br>*9,6* | 24,2<br>*9,2* |
| **VPL 8RNC / 4** | 15 | | 99,1<br>*7,0* | 94,9<br>*8,4* | 90,6<br>*9,7* | 87,4<br>*10,5* | 82,0<br>*11,5* | 75,3<br>*12,3* | 66,9<br>*12,8* | 60,1<br>*12,9* | 47,7<br>*12,8* | 32,3<br>*12,3* |
| **VPL 8RNC / 5** | 18,5 | | 123,9<br>*8,7* | 118,6<br>*10,5* | 113,2<br>*12,1* | 109,3<br>*13,1* | 102,5<br>*14,4* | 94,2<br>*15,3* | 83,6<br>*15,9* | 75,1<br>*16,1* | 59,6<br>*16,0* | 40,3<br>*15,4* |
| **VPL 8RNC / 6** | 22 | | 148,7<br>*10,4* | 142,3<br>*12,6* | 135,8<br>*14,6* | 131,2<br>*15,7* | 123,0<br>*17,3* | 113,0<br>*18,4* | 100,3<br>*19,1* | 90,1<br>*19,3* | 71,5<br>*19,2* | 48,4<br>*18,5* |
| **VPL 8RNC / 7** | 30 | | 173,5<br>*12,2* | 166,0<br>*14,7* | 158,5<br>*17,0* | 153,0<br>*18,4* | 143,6<br>*20,1* | 131,8<br>*21,5* | 117,1<br>*22,3* | 105,1<br>*22,6* | 83,4<br>*22,4* | 56,5<br>*21,6* |
| **VPL 8RNC / 8** | 30 | | 198,2<br>*13,9* | 189,7<br>*16,8* | 181,1<br>*19,4* | 174,9<br>*21,0* | 164,1<br>*23,0* | 150,7<br>*24,5* | 133,8<br>*25,5* | 120,1<br>*25,8* | 95,3<br>*25,6* | 64,5<br>*24,7* |
| **VPL 8RNC / 9** | 30 | | 223,0<br>*15,7* | 213,4<br>*18,9* | 203,8<br>*21,9* | 196,7<br>*23,6* | 184,6<br>*25,9* | 169,5<br>*27,6* | 150,5<br>*28,7* | 135,1<br>*29,0* | 107,2<br>*28,8* | 72,6<br>*27,7* |
| **VPL 8RNC / 10** | 37 | | 247,8<br>*17,4* | 237,2<br>*21,0* | 226,4<br>*24,3* | 218,6<br>*26,2* | 205,1<br>*28,8* | 188,3<br>*30,7* | 167,2<br>*31,9* | 150,1<br>*32,2* | 119,1<br>*32,0* | 80,6<br>*30,8* |
| **VPL 8RNC / 11** | 37 | | 272,6<br>*19,1* | 260,9<br>*23,1* | 249,0<br>*26,7* | 240,5<br>*28,9* | 225,6<br>*31,6* | 207,2<br>*33,7* | 184,0<br>*35,1* | 165,2<br>*35,5* | 131,1<br>*35,2* | 88,7<br>*33,9* |
| **VPL 8RNC / 12** | 45 | | 297,4<br>*20,9* | 284,6<br>*25,2* | 271,7<br>*29,1* | 262,3<br>*31,5* | 246,1<br>*34,5* | 226,0<br>*36,8* | 200,7<br>*38,3* | 180,2<br>*38,7* | 143,0<br>*38,4* | 96,8<br>*37,0* |
| **VPL 8RNC / 13** | 45 | | 322,1<br>*22,6* | 308,3<br>*27,3* | 294,3<br>*31,6* | 284,2<br>*34,1* | 266,6<br>*37,4* | 244,8<br>*39,9* | 217,4<br>*41,5* | 195,2<br>*41,9* | 154,9<br>*41,6* | 104,8<br>*40,1* |
| **VPL 8RNC / 15** | 45 | | 371,7<br>*26,1* | 355,7<br>*31,5* | 339,6<br>*36,4* | 327,9<br>*39,4* | 307,6<br>*43,1* | 282,5<br>*46,0* | 250,8<br>*47,8* | 225,2<br>*48,4* | 178,7<br>*48,0* | 121,0<br>*46,2* |
| **VPL 8RNC / 17** | 55 | | 421,3<br>*29,6* | 403,2<br>*35,7* | 384,9<br>*41,3* | 371,6<br>*44,6* | 348,6<br>*48,9* | 320,2<br>*52,2* | 284,3<br>*54,2* | 255,2<br>*54,8* | 202,5<br>*54,5* | 137,1<br>*52,4* |

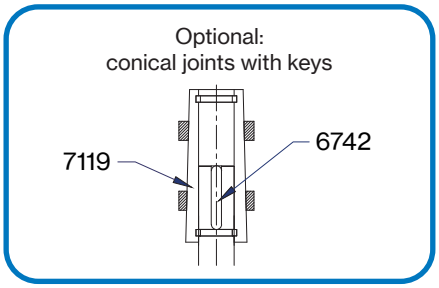
| MOTOR | | Axis line | Drive unit | Base | Flange discharge | Foot valve | Strainer |
|---|---|---|---|---|---|---|---|
| kW | Gr. / Size | | | | | | |
| 5,5 - 7,5 | 132 | LA 4/20 | E 2/4 | B 4/4 | DN 100 - PN 25 | VF4 | SU4 |
| 11 - 15 - 18,5 | 160 | | E 3/4 | | | | |
| 22 | 180 | | E 4/4 | | | | |
| 30 - 37 | 200 | LA 4/24 | E 5/4 | | | | |
| 45 | 225 | | E 6/4 | | | | |
| 55 | 250 | LA 4/30 | E 7/4 | | | | |
| 75 | 280 | | E 7/4 | | | | |

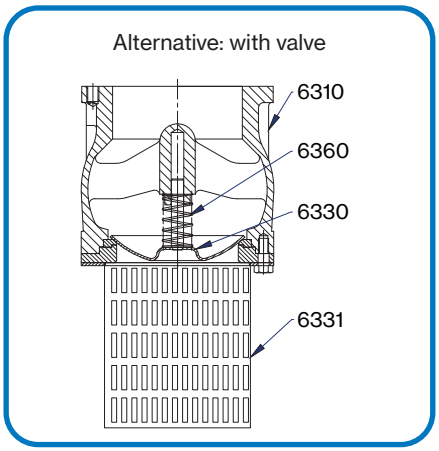

Q [imp g.p.m]
Q [US g.p.m.]
H [m]
H [ft]
Q [m³/h]
Q [l/min]
ηp [%]
Q [m³/h]
P1 [kW]
P1 [HP]
Q [m³/h]
NPSH [m]
NPSH [ft]
Q [m³/h]
Q [l/sec]

# COMPONENTS CODES AND SPARE PARTS

# Pump body VP 6/8/10/12/14/16/22



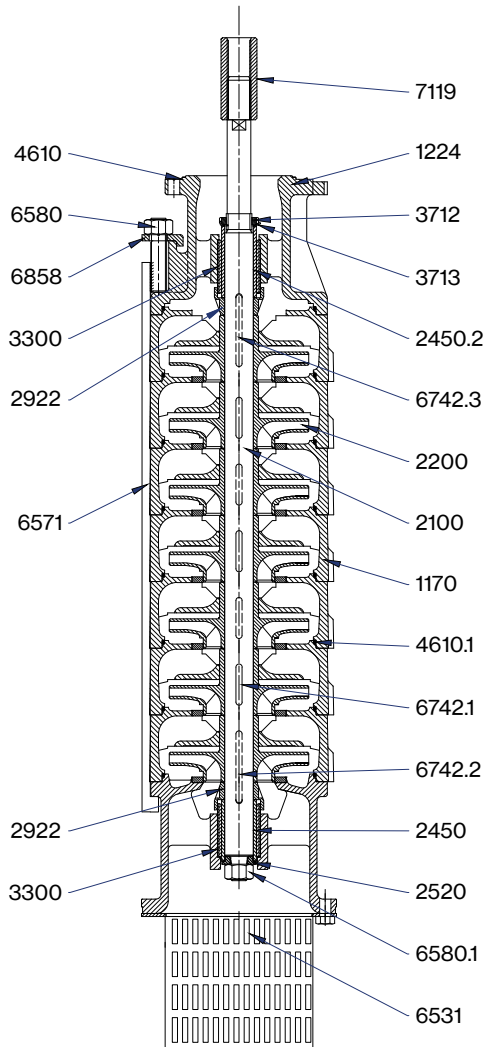



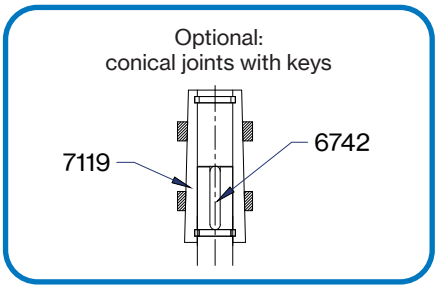



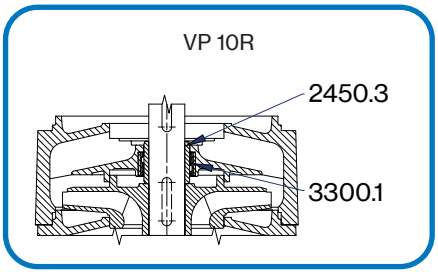

| Ref. | Component | Materials | Recomanded spare part | Q.ty |
|---|---|---|---|---|
| **1170** | Diffuser | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **1223** | Suction support | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **1224** | Discharge Casing | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **1500** | Wear rings | Gomma / Rubber | Yes | N |
| **2100** | Shaft | EN (X 30 Cr13) ASTM (420) | Yes | 1 |
| **2200** | Impeller | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **3300** | Bearing | Rubber | Yes | N |
| **6310** | Valve body | - | | |
| **6330** | Valve | - | | |
| **6531** | Strainer | EN (X5CrNi1810) ASTM (304) | | |
| **4590** | Gasket | Carta / Paper | Yes | N+1 |
| **4610** | OR - Ring | NBR | Yes | N+1 |
| **6576** | Screw | A2 - A4 if not specified | | |
| **6360** | Spring | - | | |
| **6742** | Key | A2 - A4 if not specified | | |
| **7119** | Coupling | EN (X 30 Cr13) ASTM (420) | | |

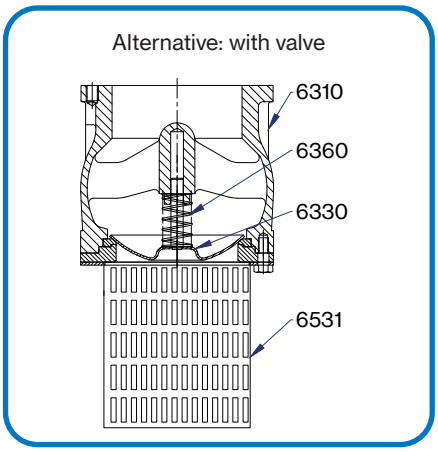
N = stages number

# Pump body VP 8RN/10R



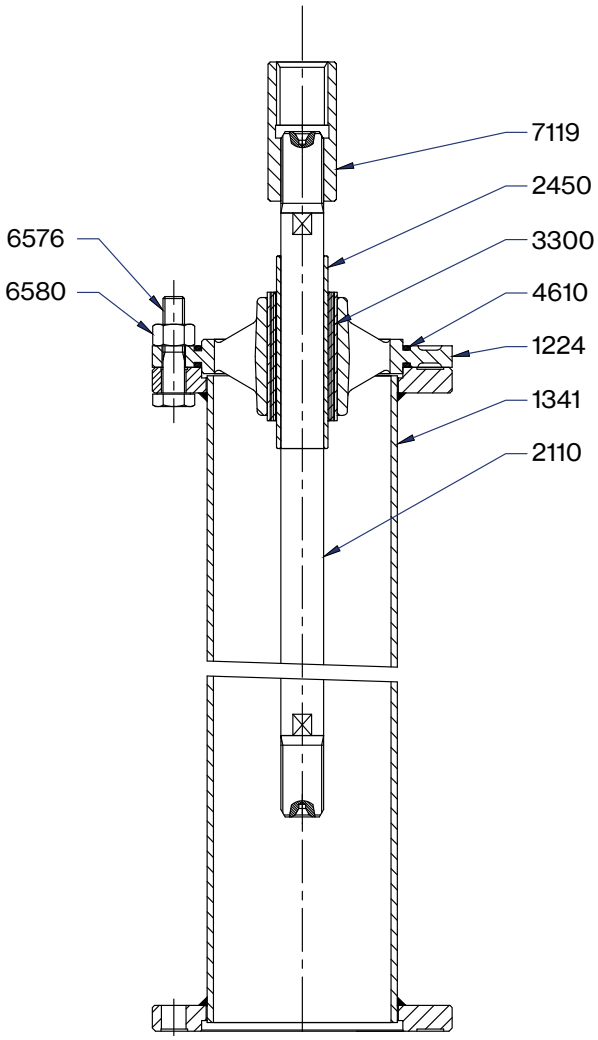



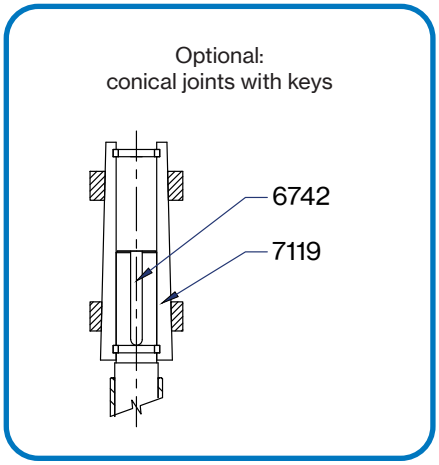




| Ref. | Component | Materials | Recomanded spare part | Q.ty |
|---|---|---|---|---|
| **1170** | Diffuser | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **1223** | Suction support | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **1224** | Discharge Casing | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **2100** | Shaft | EN (X 30 Cr13) ASTM (420) | | |
| **2200** | Impeller | EN (G G25) - ASTM (A48 : Nr. 35) | Yes | N |
| **2450** | Shaft Sleeve | - | Yes | 1 |
| **2450.2** | Shaft Sleeve | - | Yes | 1 |
| **2450.3** | Shaft Sleeve | - | Yes if present | 1 |
| **2520** | Washer | EN (X 30 Cr13) ASTM (420) | | |
| **2922** | Sandguard | Noryl | Yes | 2+2 |
| **3300** | Bearing | Rubber | Yes | 2 |
| **3300.1** | Bearing | Rubber | Yes | N |
| **3712** | Nut | Steel | | |
| **3713** | Lockwasher | Steel | | |
| **4610** | OR - Ring | NBR | Yes | N+1 |
| **6310** | Valve body | - | | |
| **6330** | Valve | - | | |
| **6360** | Spring | - | | |
| **6531** | Strainer | EN (X5CrNi1810) ASTM (304) | | |
| **6571** | Tie bolt | Acciaio / Steel | | |
| **6580** | Nut | A2 - A4 if not specified | | |
| **6580.1** | Nut | A2 - A4 if not specified | Yes | 1 |
| **6742** | Key | A2 - A4 f not specified | Yes | 1 |
| **6742.1** | Key | A2 - A4 if not specified | Yes | N |
| **6742.2** | Key | A2 - A4 if not specified | Yes | 1 |
| **6742.3** | Key | A2 - A4 if not specified | Yes | 1 |
| **6858** | Plaque | Steel | | |

N = stages number

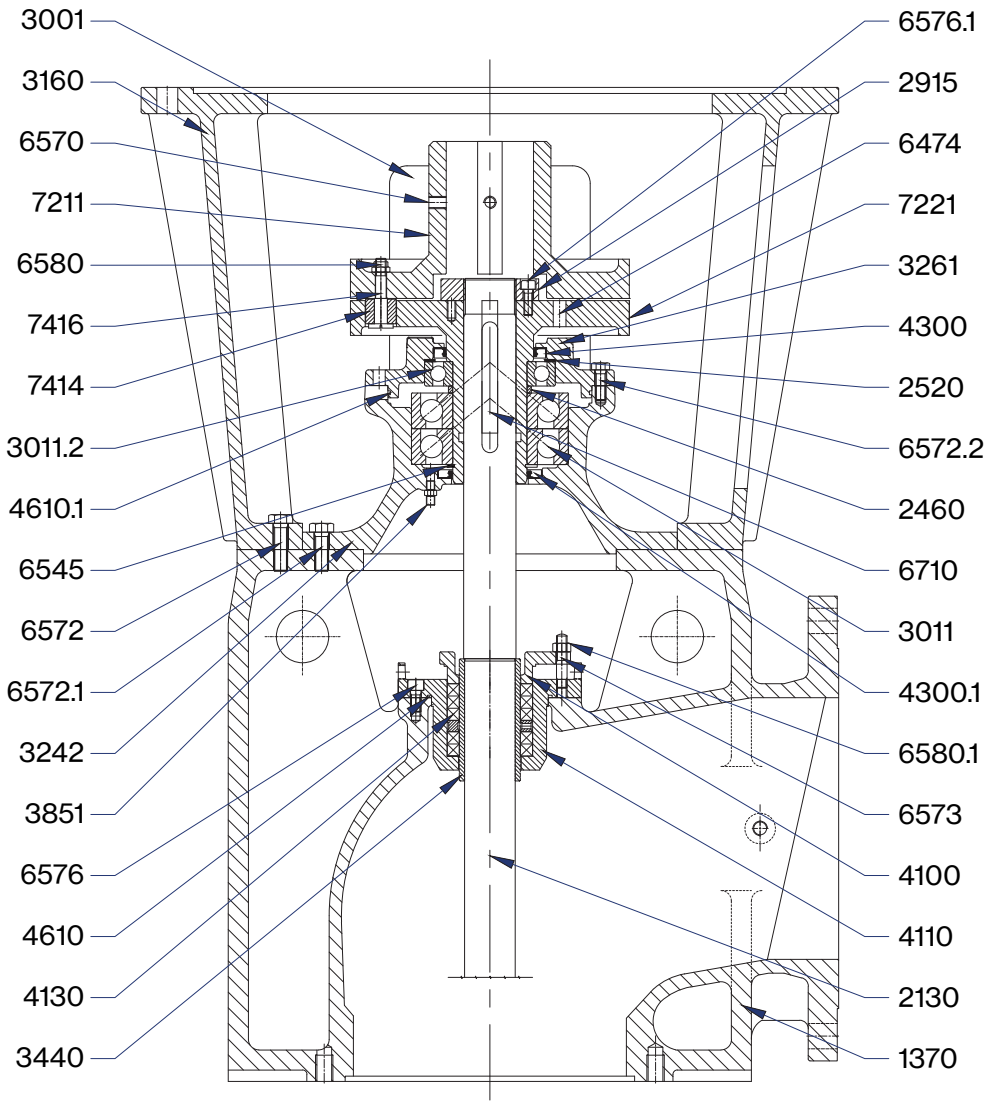
# Axis line

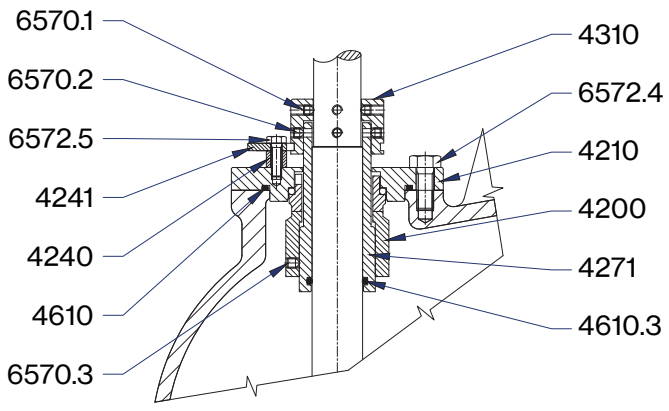



| Ref. | Component | Materials | Recomanded spare part | Q.ty |
|---|---|---|---|---|
| **1224** | Support | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **1341** | Pipe | EN (P235TR1) - ASTM (A 53 Grade A) | | |
| **2110** | Shaft | C45E EN (Ck45) ASTM (1045) | | |
| **2450** | Shaft Sleeve | ø≤30 mm Brass<br>ø>30 mm EN (X 30 Cr13) ASTM (420) | Yes | 1 |
| **3300** | Bearing | Rubber | Yes | 1 |
| **4610** | OR - Ring | NBR | Yes | 1 |
| **6576** | Screw | A2 - A4 if not specified | | |
| **6580** | Nut | A2 - A4 if not specified | | |
| **6742** | Key | A2 - A4 if not specified | | |
| **7119** | Coupling | C45E EN (Ck45) ASTM (1045) | | |

# Motor drive grease type



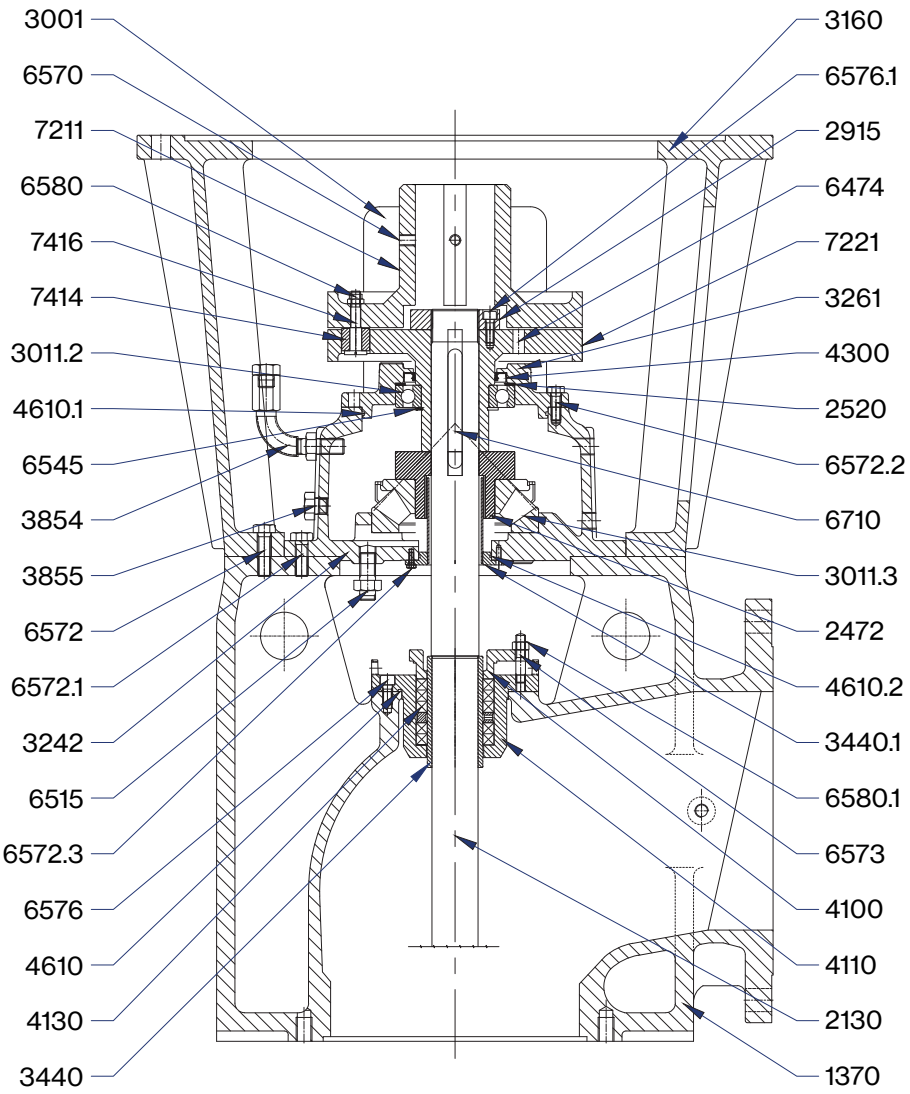



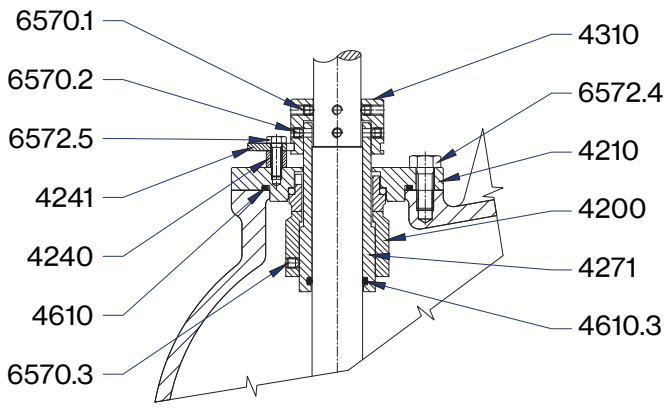

Optional: mechanical seal

# MOTOR DRIVE GREASE TYPE

| Ref. | Component | Materials | Recomanded spare part | Q.ty |
|---|---|---|---|---|
| **1370** | Motor drive | EN (G GG42) ASTM (A536 : Gr. 65-A5-12) | | |
| **2130** | Shaft | EN (X 30 Cr13) ASTM (420) | | |
| **2460** | Space ring | Steel | | |
| **2520** | Shoulder ring | Steel | | |
| **2915** | Adjusting nut | Steel | | |
| **3001** | Safety net | Steel | | |
| **3011** | Bearing | - | Yes | 2 |
| **3011.2** | Bearing | - | Yes | 1 |
| **3160** | Electric motor support | EN (G GG42) ASTM (A536 : Gr. 65-A5-12) | | |
| **3242** | Bearing housing | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **3261** | Bearing cover | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **3440** | Shaft Sleeve | EN (X 30 Cr13) ASTM (420) | Yes | 1 |
| **3851** | Grease cup | Steel | | |
| **4100** | Stuffing box | EN (G GG42) ASTM (A536 : Gr. 65-A5-12) | | |
| **4110** | Stuffing box housing | EN (G GG42) ASTM (A536 : Gr. 65-A5-12) | | |
| **4130** | Gland packing | Cotton-graphite | Yes | 1 |
| **4300** | Radial shaft seal | NBR | Yes | 1 |
| **4300.1** | Radial shaft seal | NBR | Yes | 1 |
| **4610** | OR - Ring | Paper | Yes | 1 |
| **6474** | Pin | Steel | Yes | 2/4/6 |
| **6545** | Lock ring | Steel | Yes | 1 |
| **6570** | Screw | A2 - A4: if not specified | | |
| **6572** | Screw | A2 - A4: if not specified | | |
| **6572.1** | Screw | A2 - A4: if not specified | | |
| **6572.2** | Screw | A2 - A4: if not specified | | |
| **6573** | Stud bolt | A2 - A4: if not specified | | |
| **6576** | Screw | A2 - A4: if not specified | | |
| **6576.1** | Screw | A2 - A4: if not specified | | |
| **6580** | Nut | A2 - A4: if not specified | Yes | 4/6/8/10 |
| **6580.1** | Nut | A2 - A4: if not specified | | |
| **6710** | Key | A2 - A4: if not specified | Yes | 1 |
| **7211** | Motor coupling | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **7221** | Pump coupling | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **7414** | Coupling bush | Rubber | Yes | 4/6/8/10 |
| **7416** | Coupling bolt | A2 - A4: if not specified | Yes | 4/6/8/10 |
| **4200** | Mechanical seal | - | Yes | 1 |
| **4210** | Flange mechanical seal | Steel | | |
| **4240** | Spacer | Steel | | |
| **4241** | Washer | A2 - A4: if not specified | | |
| **4271** | Shaft sleeve mechanical seal | Steel | | |
| **4310** | Drive sleeve | Steel | | |
| **4610.3** | OR - Ring | Paper | Yes | 1 |
| **-** | Washer Ring | Rubber | Yes | 1 |
| **6570.1** | Screw | A2 - A4: if not specified | | |
| **6570.2** | Screw | A2 - A4: if not specified | | |
| **6570.3** | Screw | A2 - A4: if not specified | | |
| **6572.4** | Screw | A2 - A4: if not specified | | |
| **6572.5** | Screw | A2 - A4: if not specified | | |

# Motor drive oil type



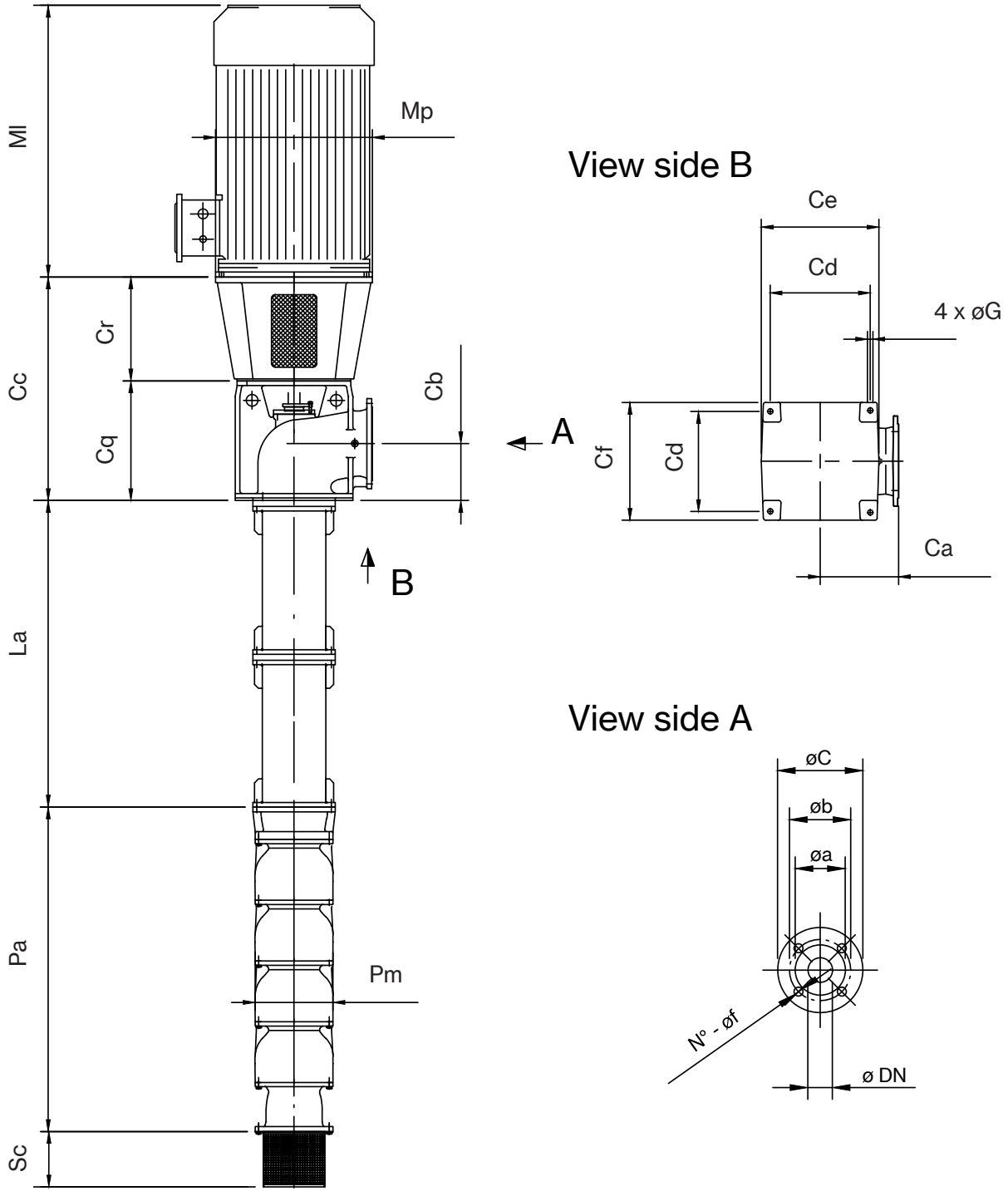




Optional: mechanical seal

# MOTOR DRIVE OIL TYPE

| Ref. | Component | Materials | Recomanded spare part | Q.ty |
|---|---|---|---|---|
| **1370** | Motor drive | EN (G GG42) ASTM (A536 : Gr. 65-A5-12) | | |
| **2130** | Shaft | EN (X 30 Cr13) ASTM (420) | | |
| **2472** | Shaft sleeve bearing | Steel | Yes | 1 |
| **2520** | Shoulder ring | Steel | Yes | 1 |
| **2915** | Adjusting nut | Steel | | |
| **3001** | Safety net | Steel | | |
| **3011.2** | Bearing | - | Yes | 1 |
| **3011.3** | Bearing | - | Yes | 1 |
| **3160** | Electric motor support | EN (G GG42) ASTM (A536 : Gr. 65-A5-12) | | |
| **3242** | Bearing housing | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **3261** | Bearing cover | EN (G G25) - ASTM (A48 : Nr. 35) | | |
| **3440** | Shaft Sleeve | EN (X 30 Cr13) ASTM (420) | Yes | 1 |
| **3440.1** | Oil glass | Steel | Yes | 1 |
| **3854** | Oil filling plug | Plastic | | |
| **3855** | Oil indicator | Plastic-Steel | | |
| **4100** | Stuffing box | EN (G GG42) ASTM (A536 : Gr. 65-A5-12) | | |
| **4110** | Stuffing box housing | EN (G GG42) ASTM (A536 : Gr. 65-A5-12) | | |
| **4130** | Gland packing | Cotton-graphite | Yes | 1 |
| **4300** | Radial shaft seal | NBR | Yes | 1 |
| **4610** | OR - Ring | Paper | Yes | 1 |
| **4610.1** | OR - Ring | NBR | Yes | 1 |
| **4610.2** | OR - Ring | NBR | Yes | 1 |
| **6474** | Pin | Steel | Yes | 8/10 |
| **6515** | Discharge plug | Steel | | |
| **6545** | Lock ring | Steel | | |
| **6570** | Screw | A2 - A4: if not specified | | |
| **6572** | Screw | A2 - A4: if not specified | | |
| **6572.1** | Screw | A2 - A4: if not specified | | |
| **6572.2** | Screw | A2 - A4: if not specified | | |
| **6572.3** | Screw | A2 - A4: if not specified | | |
| **6573** | Stud bolt | A2 - A4: if not specified | | |
| **6576** | Screw | A2 - A4: if not specified | | |
| **6576.1** | Screw | A2 - A4: if not specified | | |
| **6580** | Nut | A2 - A4: if not specified | | |
| **6580.1** | Nut | A2 - A4: if not specified | | |
| **6710** | Key | A2 - A4: if not specified | | |
| **7211** | Motor coupling | EN (G G25) - ASTM (A48 : Nr.35) | | |
| **7221** | Pump coupling | EN (G G25) - ASTM (A48 : Nr.35) | | |
| **7414** | Coupling bush | Rubber | Yes | 4/6/8/10 |
| **7416** | Coupling bolt | A2 - A4: if not specified | Yes | 4/6/8/10 |
| **4200** | Mech. seal | Paper | Yes | 1 |
| **4210** | Flange mech. seal | Steel | | |
| **4240** | Spacer | Steel | | |
| **4241** | Washer | Steel | | |
| **4271** | Shaft sleeve mechanical seal | Steel | | |
| **4310** | Drive sleeve | Steel | | |
| **4610.3** | OR - Ring | Paper | Yes | 1 |
| **-** | Washer Ring | Rubber | Yes | 1 |
| **6570.1** | Screw | A2 - A4: if not specified | | |
| **6570.2** | Screw | A2 - A4: if not specified | | |
| **6570.3** | Screw | A2 - A4: if not specified | | |
| **6572.4** | Screw | A2 - A4: if not specified | | |
| **6572.5** | Screw | A2 - A4: if not specified | | |

# Overall dimensions




| Flanges dimensions | | | | | | |
|---|---|---|---|---|---|---|
| DN | PN | a | b | C | N° | ø f |
| | | mm | | | | mm |
| 100 | 25 | 156 | 190 | 235 | 8 | 22 |
| 150 | 25 | 211 | 250 | 300 | 8 | 28 |
| 200 | 25 | 274 | 310 | 360 | 12 | 28 |
| 250 | 25 | 330 | 370 | 425 | 12 | 30 |
| 300 | 25 | 389 | 430 | 485 | 16 | 30 |

# Pump unit dimensions

| VPL 6 3.000 rpm | | | | [A-B-C-D-E] |
|---|---|---|---|---|
| TYPE | Pa | Pm | Sc | Kg |
| **VPL 6... / 1** | 242 | 144 | 163 | 13 |
| **VPL 6... / 2** | 334 | 144 | 163 | 18,5 |
| **VPL 6... / 3** | 426 | 144 | 163 | 24 |
| **VPL 6... / 4** | 518 | 144 | 163 | 29,5 |
| **VPL 6... / 5** | 610 | 144 | 163 | 35 |
| **VPL 6... / 6** | 702 | 144 | 163 | 40,5 |
| **VPL 6... / 7** | 794 | 144 | 163 | 46 |
| **VPL 6... / 8** | 886 | 144 | 163 | 51,5 |
| **VPL 6... / 9** | 978 | 144 | 163 | 57 |
| **VPL 6... / 10** | 1070 | 144 | 163 | 62,5 |
| **VPL 6... / 11** | 1162 | 144 | 163 | 68 |
| **VPL 6... / 12** | 1254 | 144 | 163 | 73,5 |
| **VPL 6... / 13** | 1346 | 144 | 163 | 79 |
| **VPL 6... / 14** | 1438 | 144 | 163 | 84,5 |
| **VPL 6... / 15** | 1530 | 144 | 163 | 90 |
| **VPL 6... / 16** | 1622 | 144 | 163 | 95,5 |

| VPL 8 1.500 / 3.000 rpm | [B-C] | | [D-E-F] | | [B-C-D-E-F] | |
|---|---|---|---|---|---|---|
| TYPE | Pa | Pm | Pa | Pm | Sc | Kg |
| **VPL 8... / 1** | 298 | 187 | 318 | 190 | 163 | 30 |
| **VPL 8... / 2** | 428 | 187 | 468 | 190 | 163 | 43 |
| **VPL 8... / 3** | 558 | 187 | 618 | 190 | 163 | 56 |
| **VPL 8... / 4** | 688 | 187 | 768 | 190 | 163 | 69 |
| **VPL 8... / 5** | 818 | 187 | 918 | 190 | 163 | 82 |
| **VPL 8... / 6** | 948 | 187 | 1068 | 190 | 163 | 95 |
| **VPL 8... / 7** | 1078 | 187 | 1218 | 190 | 163 | 108 |
| **VPL 8... / 8** | 1208 | 187 | 1368 | 190 | 163 | 121 |
| **VPL 8... / 9** | 1338 | 187 | 1518 | 190 | 163 | 134 |
| **VPL 8... / 10** | 1468 | 187 | 1668 | 190 | 163 | 147 |
| **VPL 8... / 11** | 1598 | 187 | 1818 | 190 | 163 | 160 |
| **VPL 8... / 12** | 1728 | 187 | 1968 | 190 | 163 | 173 |
| **VPL 8... / 13** | 1858 | 187 | 2118 | 190 | 163 | 186 |
| **VPL 8... / 14** | 1988 | 187 | 2268 | 190 | 163 | 199 |
| **VPL 8... / 15** | 2118 | 187 | 2418 | 190 | 163 | 212 |
| **VPL 8... / 16** | 2248 | 187 | 2568 | 190 | 163 | 225 |
| **VPL 8... / 17** | 2378 | 187 | 2718 | 190 | 163 | 238 |
| **VPL 8... / 18** | 2508 | 187 | 2868 | 190 | 163 | 251 |

| VPL 10 1.500 / 3.000 rpm | | | | [A-B-C-D] |
|---|---|---|---|---|
| TYPE | Pa | Pm | Sc | Kg |
| **VPL 10... / 1** | 435 | 245 | 230 | 52 |
| **VPL 10... / 2** | 620 | 245 | 230 | 78 |
| **VPL 10... / 3** | 805 | 245 | 230 | 104 |
| **VPL 10... / 4** | 990 | 245 | 230 | 130 |
| **VPL 10... / 5** | 1175 | 245 | 230 | 156 |
| **VPL 10... / 6** | 1360 | 245 | 230 | 182 |
| **VPL 10... / 7** | 1545 | 245 | 230 | 208 |
| **VPL 10... / 8** | 1730 | 245 | 230 | 234 |
| **VPL 10... / 9** | 1915 | 245 | 230 | 260 |
| **VPL 10... / 10** | 2100 | 245 | 230 | 286 |
| **VPL 10... / 11** | 2285 | 245 | 230 | 312 |
| **VPL 10... / 12** | 2470 | 245 | 230 | 338 |
| **VPL 10... / 13** | 2655 | 245 | 230 | 364 |

| VP 12 1.500 / 3.000 rpm | | | | [A-B-C] |
|---|---|---|---|---|
| TYPE | Pa | Pm | Sc | Kg |
| **VP 12... / 1** | 530 | 295 | 254 | 89 |
| **VP 12... / 2** | 760 | 295 | 254 | 134 |
| **VP 12... / 3** | 990 | 295 | 254 | 179 |
| **VP 12... / 4** | 1220 | 295 | 254 | 224 |
| **VP 12... / 5** | 1450 | 295 | 254 | 269 |
| **VP 12... / 6** | 1680 | 295 | 254 | 314 |
| **VP 12... / 7** | 1910 | 295 | 254 | 359 |
| **VP 12... / 8** | 2140 | 295 | 254 | 404 |
| **VP 12... / 9** | 2370 | 295 | 254 | 449 |
| **VP 12... / 10** | 2600 | 295 | 254 | 494 |
| **VP 12... / 11** | 2830 | 295 | 254 | 539 |

| VP 14 1.500 rpm | | | | [A-B-C] |
|---|---|---|---|---|
| TYPE | Pa | Pm | Sc | Kg |
| **VP 14... / 1** | 640 | 346 | 250 | 143 |
| **VP 14... / 2** | 910 | 346 | 250 | 215 |
| **VP 14... / 3** | 1180 | 346 | 250 | 287 |
| **VP 14... / 4** | 1450 | 346 | 250 | 359 |
| **VP 14... / 5** | 1720 | 346 | 250 | 431 |
| **VP 14... / 6** | 1990 | 346 | 250 | 503 |
| **VP 14... / 7** | 2260 | 346 | 250 | 575 |
| **VP 14... / 8** | 2530 | 346 | 250 | 647 |
| **VP 14... / 9** | 2800 | 346 | 250 | 719 |
| **VP 14... / 10** | 3070 | 346 | 250 | 791 |

| VP 16 1.500 rpm | [A-B-C] | | | [D] | | | [A-B-C-D] |
|---|---|---|---|---|---|---|---|
| TYPE | Pa | Pm | Kg | Pa | Pm | Kg | Sc |
| **VP 16... / 1** | 725 | 396 | 198 | 765 | 415 | 215 | 282 |
| **VP 16... / 2** | 1035 | 396 | 306 | 1135 | 415 | 334 | 282 |
| **VP 16... / 3** | 1345 | 396 | 414 | 1505 | 415 | 453 | 282 |
| **VP 16... / 4** | 1655 | 396 | 522 | 1875 | 415 | 572 | 282 |
| **VP 16... / 5** | 1965 | 396 | 630 | 2245 | 415 | 691 | 282 |
| **VP 16... / 6** | 2275 | 396 | 738 | 2615 | 415 | 810 | 282 |
| **VP 16... / 7** | 2585 | 396 | 846 | 2985 | 415 | 929 | 282 |
| **VP 16... / 8** | 2895 | 396 | 954 | 3355 | 415 | 1048 | 282 |
| **VP 16... / 9** | 3205 | 396 | 1062 | 3725 | 415 | 1167 | 282 |
| **VP 16... / 10** | 3515 | 396 | 1170 | 4095 | 415 | 1286 | 282 |

| VPL 8RN 3.000 rpm | | | | [B-C] |
|---|---|---|---|---|
| TYPE | Pa | Pm | Sc | Kg |
| **VPL 8RN... / 1** | 325 | 185 | 163 | 36 |
| **VPL 8RN... / 2** | 390 | 185 | 163 | 41 |
| **VPL 8RN... / 3** | 455 | 185 | 163 | 46 |
| **VPL 8RN... / 4** | 520 | 185 | 163 | 51 |
| **VPL 8RN... / 5** | 585 | 185 | 163 | 56 |
| **VPL 8RN... / 6** | 650 | 185 | 163 | 61 |
| **VPL 8RN... / 7** | 715 | 185 | 163 | 66 |
| **VPL 8RN... / 8** | 780 | 185 | 163 | 71 |
| **VPL 8RN... / 9** | 845 | 185 | 163 | 76 |
| **VPL 8RN... / 10** | 910 | 185 | 163 | 81 |
| **VPL 8RN... / 11** | 975 | 185 | 163 | 86 |
| **VPL 8RN... / 12** | 1040 | 185 | 163 | 91 |
| **VPL 8RN... / 13** | 1105 | 185 | 163 | 96 |
| **VPL 8RN... / 14** | 1170 | 185 | 163 | 101 |
| **VPL 8RN... / 15** | 1235 | 185 | 163 | 106 |
| **VPL 8RN... / 16** | 1300 | 185 | 163 | 111 |
| **VPL 8RN... / 17** | 1365 | 185 | 163 | 116 |
| **VPL 8RN... / 18** | 1430 | 185 | 163 | 121 |

| VPL 10R 3.000 rpm | | | | [A-B-C] |
|---|---|---|---|---|
| TYPE | Pa | Pm | Sc | Kg |
| **VPL 10R... / 1** | 388 | 230 | 230 | 83 |
| **VPL 10R... / 2** | 466 | 230 | 230 | 94 |
| **VPL 10R... / 3** | 544 | 230 | 230 | 105 |
| **VPL 10R... / 4** | 622 | 230 | 230 | 116 |
| **VPL 10R... / 5** | 700 | 230 | 230 | 127 |
| **VPL 10R... / 6** | 778 | 230 | 230 | 138 |
| **VPL 10R... / 7** | 856 | 230 | 230 | 149 |
| **VPL 10R... / 8** | 934 | 230 | 230 | 160 |
| **VPL 10R... / 9** | 1012 | 230 | 230 | 171 |
| **VPL 10R... / 10** | 1090 | 230 | 230 | 182 |
| **VPL 10R... / 11** | 1168 | 230 | 230 | 193 |
| **VPL 10R... / 12** | 1246 | 230 | 230 | 204 |

| VP 22 950 / 1500 rpm | | | | |
|---|---|---|---|---|
| TYPE | Pa | Pm | Sc | Kg |
| **VP 22-400 / 1** | 1112 | 545 | 480 | 366 |
| **VP 22-400 / 2** | 1462 | 545 | 480 | 561 |
| **VP 22-400 / 3** | 1812 | 545 | 480 | 756 |
| **VP 22-400 / 4** | 2162 | 545 | 480 | 951 |
| **VP 22-400 / 5** | 2512 | 545 | 480 | 1146 |

# Overall dimensions for the axis line, drive head and electric motor 1.500 rpm

| Motor | | | | Drive Delivery Head Unit | | | | | | | | | | | Motor | | Weight Kg | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| kW | Size | Type | Lenght La | Type | Flange DN | C a | C b | C c | C d | C e | C f | C g | C q | C r | Ml | Mp | Axis line | Drive unit | Motor |
| 1,5 | 90 | LA 3 | 3050 | E 0/3 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 340 | 250 | 36 | 73,5 | 29 |
| | | LA 4 | 3050 | E 0/4 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 340 | 250 | 46 | 73,5 | 29 |
| 2,2 - 3 - 4 | 100-112 | LA 3 | 3050 | E 1/3 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 375 - 400 | 250 | 36 | 73,5 | 35 - 45 |
| | | LA 4 | 3050 | E 1/4 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 375 - 400 | 250 | 46 | 73,5 | 35 - 45 |
| | | LA 5 | 3050 | E 1/5 | 150 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | 420 | 200 | 375 - 400 | 250 | 64 | 117,5 | 35 - 45 |
| | | LA 6 | 3050 | E 1/6 | 150 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | 420 | 200 | 375 - 400 | 250 | 85 | 117,5 | 35 - 45 |
| 5,5 - 7,5 | 132 | LA 3 | 3050 | E 2/3 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 465 - 505 | 300 | 36 | 87 | 62 - 74 |
| | | LA 4 | 3050 | E 2/4 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 465 - 505 | 300 | 46 | 87 | 62 - 74 |
| | | LA 5 | 3050 | E 2/5 | 150 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | 420 | 200 | 465 - 505 | 300 | 64 | 131 | 62 - 74 |
| | | LA 6 | 3050 | E 2/6 | 150 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | 420 | 200 | 465 - 505 | 300 | 85 | 131 | 62 - 74 |
| | | LA 8 | 3000 | E 2/8 | 200 | 300 | 200 | 675 | 400 | 480 | 470 | 23 | 475 | 200 | 465 - 505 | 300 | 140 | 176 | 62 - 74 |
| 11 - 15 | 160 | LA 3 | 3050 | E 3/3 | 100 | 220 | 130 | 562 | 265 | 320 | 320 | 18 | 310 | 252 | 608 - 652 | 350 | 36 | 103 | 115 - 135 |
| | | LA 4 | 3050 | E 3/4 | 100 | 220 | 130 | 562 | 265 | 320 | 320 | 18 | 310 | 252 | 608 - 652 | 350 | 46 | 103 | 115 - 135 |
| | | LA 5 | 3050 | E 3/5 | 150 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | 420 | 252 | 608 - 652 | 350 | 64 | 147 | 115 - 135 |
| | | LA 6 | 3050 | E 3/6 | 150 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | 420 | 252 | 608 - 652 | 350 | 85 | 147 | 115 - 135 |
| | | LA 8 | 3000 | E 3/8 | 200 | 300 | 200 | 727 | 400 | 480 | 470 | 23 | 475 | 252 | 608 - 652 | 350 | 140 | 192 | 115 - 135 |
| | | LA 10 | 3000 | E 3/10 | 250 | 400 | 250 | 802 | 550 | 620 | 620 | 30 | 550 | 252 | 608 - 652 | 350 | 189 | 316 | 115 - 135 |
| 18,5 - 22 | 180 | LA 4 | 3050 | E 4/4 | 100 | 220 | 130 | 562 | 265 | 320 | 320 | 18 | 310 | 252 | 690 - 730 | 350 | 46 | 103 | 170 - 184 |
| | | LA 5 | 3050 | E 4/5 | 150 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | 420 | 252 | 690 - 730 | 350 | 64 | 147 | 170 - 184 |
| | | LA 6 | 3050 | E 4/6 | 150 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | 420 | 252 | 690 - 730 | 350 | 85 | 147 | 170 - 184 |
| | | LA 8 | 3000 | E 4/8 | 200 | 300 | 200 | 727 | 400 | 480 | 470 | 23 | 475 | 252 | 690 - 730 | 350 | 140 | 192 | 170 - 184 |
| | | LA 10 | 3000 | E 4/10 | 250 | 400 | 250 | 802 | 550 | 620 | 620 | 30 | 550 | 252 | 690 - 730 | 350 | 189 | 316 | 170 - 184 |
| 30 | 200 | LA 4 | 3050 | E 5/4 | 100 | 220 | 130 | 610 | 265 | 320 | 320 | 18 | 310 | 300 | 760 | 400 | 46 | 125 | 235 |
| | | LA 5 | 3050 | E 5/5 | 150 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | 420 | 300 | 760 | 400 | 64 | 169 | 235 |
| | | LA 6 | 3050 | E 5/6 | 150 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | 420 | 300 | 760 | 400 | 85 | 169 | 235 |
| | | LA 8 | 3000 | E 5/8 | 200 | 300 | 200 | 775 | 400 | 480 | 470 | 23 | 475 | 300 | 760 | 400 | 140 | 214 | 235 |
| | | LA 10 | 3000 | E 5/10 | 250 | 400 | 250 | 850 | 550 | 620 | 620 | 30 | 550 | 300 | 760 | 400 | 189 | 338 | 235 |
| 37 - 45 | 225 | LA 4 | 3050 | E 6/4 | 100 | 220 | 130 | 610 | 265 | 320 | 320 | 18 | 310 | 300 | 810 - 835 | 450 | 46 | 125 | 290 - 326 |
| | | LA 5 | 3050 | E 6/5 | 150 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | 420 | 300 | 810 - 835 | 450 | 64 | 169 | 290 - 326 |
| | | LA 6 | 3050 | E 6/6 | 150 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | 420 | 300 | 810 - 835 | 450 | 85 | 169 | 290 - 326 |
| | | LA 8 | 3000 | E 6/8 | 200 | 300 | 200 | 775 | 400 | 480 | 470 | 23 | 475 | 300 | 810 - 835 | 450 | 140 | 214 | 290 - 326 |
| | | LA 10 | 3000 | E 6/10 | 250 | 400 | 250 | 850 | 550 | 620 | 620 | 30 | 550 | 300 | 810 - 835 | 450 | 189 | 338 | 290 - 326 |
| | | LA 12 | 2500 | E 6/12 | 300 | 400 | 290 | 910 | 510 | 600 | 600 | 28 | 610 | 300 | 810 - 835 | 450 | 277 | 384 | 290 - 326 |
| 55<br>75 - 90 | 250<br>280 | LA 5 | 3050 | E 7/5 | 150 | 280 | 180 | 752 | 345 | 425 | 415 | 21 | 420 | 332 | 910 - 1060 | 550 | 64 | 218 | 385 - 605 |
| | | LA 6 | 3050 | E 7/6 | 150 | 280 | 180 | 752 | 345 | 425 | 415 | 21 | 420 | 332 | 910 - 1060 | 550 | 85 | 218 | 385 - 605 |
| | | LA 8 | 3000 | E 7/8 | 200 | 300 | 200 | 807 | 400 | 480 | 470 | 23 | 475 | 332 | 910 - 1060 | 550 | 140 | 263 | 385 - 605 |
| | | LA 10 | 3000 | E 7/10 | 250 | 400 | 250 | 882 | 550 | 620 | 620 | 30 | 550 | 332 | 910 - 1060 | 550 | 189 | 387 | 385 - 605 |
| | | LA 12 | 2500 | E 7/12 | 300 | 400 | 290 | 942 | 510 | 600 | 600 | 28 | 610 | 332 | 910 - 1060 | 550 | 277 | 433 | 385 - 605 |
| 110 - 132<br>160 - 200 | 315 | LA 6 | 3050 | E 8/6 | 150 | 280 | 180 | 752 | 345 | 425 | 415 | 21 | 420 | 332 | 1210 - 1320 | 660 | 85 | 238 | 931 - 1200 |
| | | LA 8 | 3000 | E 8/8 | 200 | 300 | 200 | 807 | 400 | 480 | 470 | 23 | 475 | 332 | 1210 - 1320 | 660 | 140 | 283 | 931 - 1200 |
| | | LA 10 | 3000 | E 8/10 | 250 | 400 | 250 | 882 | 550 | 620 | 620 | 30 | 550 | 332 | 1210 - 1320 | 660 | 189 | 407 | 931 - 1200 |
| | | LA 12 | 2500 | E 8/12 | 300 | 400 | 290 | 942 | 510 | 600 | 600 | 28 | 610 | 332 | 1210 - 1320 | 660 | 277 | 453 | 931 - 1200 |
| | | LA 14 | 2500 | E 8/14 | 400 | 510 | 370 | 1127 | 650 | 800 | 800 | 37 | 795 | 332 | 1210 - 1320 | 660 | 365 | 715 | 931 - 1200 |
| 250 - 280<br>315 | 355 | LA 10 | 3000 | E 9/10 | 250 | 400 | 250 | 1080 | 550 | 620 | 620 | 30 | 550 | 530 | 1596 - 1596 | 800 | 189 | 598 | 1740 - 1975 |
| | | LA 12 | 2500 | E 9/12 | 300 | 400 | 290 | 1140 | 510 | 600 | 600 | 28 | 610 | 530 | 1596 - 1596 | 800 | 277 | 644 | 1740 - 1975 |
| | | LA 14 | 2500 | E 9/14 | 400 | 510 | 370 | 1325 | 650 | 800 | 800 | 37 | 795 | 530 | 1596 - 1596 | 800 | 365 | 906 | 1740 - 1975 |
| 355 - 375 | 400 | LA 14 | 2500 | E 10/14 | 400 | 510 | 370 | 1325 | 650 | 800 | 800 | 37 | 795 | 530 | 1925 - 1925 | 1000 | 365 | 1050 | 2930 - 2980 |

All data in mm

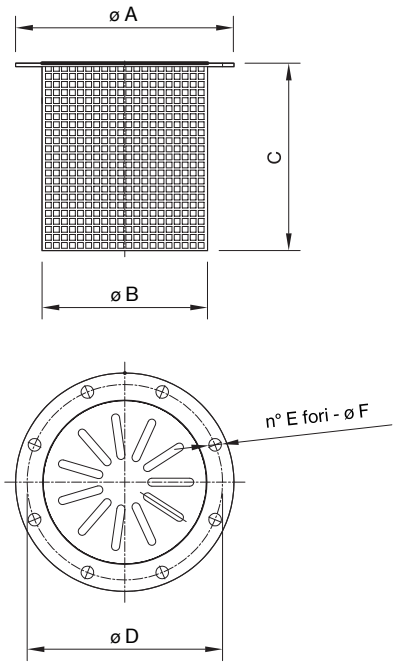
# Overall dimensions for the axis line, drive head and electric motor 3.000 rpm

| Motor | | | | Drive Delivery Head Unit | | | | | | | | | | | Motor | | Weight Kg | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| kW | Size | Type | Lenght L a | Type | Flange DN | C a | C b | C c | C d | C e | C f | C g | C q | C r | Ml | Mp | Axis line | Drive unit | Motor |
| 1,5 - 2,2 | 90 | LA 3 | 3050 | E 0/3 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 315 - 340 | 200 - 250 | 36 | 73,5 | 23 - 26 |
| | | LA 4 | 3050 | E 0/4 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 315 - 340 | 200 - 250 | 46 | 73,5 | 23 - 26 |
| 3 - 4 | 100-112 | LA 3 | 3050 | E 1/3 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 375 - 400 | 250 | 36 | 73,5 | 34 - 41 |
| | | LA 4 | 3050 | E 1/4 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 375 - 400 | 250 | 46 | 73,5 | 34 - 41 |
| | | LA 5 | 3050 | E 1/5 | 150 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | 420 | 200 | 375 - 400 | 250 | 64 | 117,5 | 34 - 41 |
| | | LA 6 | 3050 | E 1/6 | 150 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | 420 | 200 | 375 - 400 | 250 | 85 | 117,5 | 34 - 41 |
| 5,5 - 7,5 | 132 | LA 3 | 3050 | E 2/3 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 465 - 465 | 300 | 36 | 87 | 60 - 63 |
| | | LA 4 | 3050 | E 2/4 | 100 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 310 | 200 | 465 - 465 | 300 | 46 | 87 | 60 - 63 |
| | | LA 5 | 3050 | E 2/5 | 150 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | 420 | 200 | 465 - 465 | 300 | 64 | 131 | 60 - 63 |
| | | LA 6 | 3050 | E 2/6 | 150 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | 420 | 200 | 465 - 465 | 300 | 85 | 131 | 60 - 63 |
| | | LA 8 | 3000 | E 2/8 | 200 | 300 | 200 | 675 | 400 | 480 | 470 | 23 | 475 | 200 | 465 - 465 | 300 | 140 | 176 | 60 - 63 |
| | | LA 10 | 3000 | E 2/10 | 250 | 400 | 250 | 750 | 550 | 620 | 620 | 30 | 550 | 200 | 465 - 465 | 300 | 189 | 300 | 60 - 63 |
| 11 - 15 18,5 | 160 | LA 3 | 3050 | E 3/3 | 100 | 220 | 130 | 562 | 265 | 320 | 320 | 18 | 310 | 252 | 608 - 652 | 350 | 36 | 103 | 109 - 136 |
| | | LA 4 | 3050 | E 3/4 | 100 | 220 | 130 | 562 | 265 | 320 | 320 | 18 | 310 | 252 | 608 - 652 | 350 | 46 | 103 | 109 - 136 |
| | | LA 5 | 3050 | E 3/5 | 150 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | 420 | 252 | 608 - 652 | 350 | 64 | 147 | 109 - 136 |
| | | LA 6 | 3050 | E 3/6 | 150 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | 420 | 252 | 608 - 652 | 350 | 85 | 147 | 109 - 136 |
| | | LA 8 | 3000 | E 3/8 | 200 | 300 | 200 | 727 | 400 | 480 | 470 | 23 | 475 | 252 | 608 - 652 | 350 | 140 | 192 | 109 - 136 |
| | | LA 10 | 3000 | E 3/10 | 250 | 400 | 250 | 802 | 550 | 620 | 620 | 30 | 550 | 252 | 608 - 652 | 350 | 189 | 316 | 109 - 136 |
| 22 | 180 | LA 4 | 3050 | E 4/4 | 100 | 220 | 130 | 562 | 265 | 320 | 320 | 18 | 310 | 252 | 690 | 350 | 46 | 103 | 172 |
| | | LA 5 | 3050 | E 4/5 | 150 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | 420 | 252 | 690 | 350 | 64 | 147 | 172 |
| | | LA 6 | 3050 | E 4/6 | 150 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | 420 | 252 | 690 | 350 | 85 | 147 | 172 |
| | | LA 8 | 3000 | E 4/8 | 200 | 300 | 200 | 727 | 400 | 480 | 470 | 23 | 475 | 252 | 690 | 350 | 140 | 192 | 172 |
| | | LA 10 | 3000 | E 4/10 | 250 | 400 | 250 | 802 | 550 | 620 | 620 | 30 | 550 | 252 | 690 | 350 | 189 | 316 | 172 |
| | | LA 12 | 2500 | E 4/12 | 300 | 400 | 290 | 862 | 510 | 600 | 600 | 28 | 610 | 252 | 690 | 350 | 277 | 362 | 172 |
| 30 - 37 | 200 | LA 4 | 3050 | E 5/4 | 100 | 220 | 130 | 610 | 265 | 320 | 320 | 18 | 310 | 300 | 760 - 760 | 400 | 46 | 125 | 223 - 242 |
| | | LA 5 | 3050 | E 5/5 | 150 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | 420 | 300 | 760 - 760 | 400 | 64 | 169 | 223 - 242 |
| | | LA 6 | 3050 | E 5/6 | 150 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | 420 | 300 | 760 - 760 | 400 | 85 | 169 | 223 - 242 |
| | | LA 8 | 3000 | E 5/8 | 200 | 300 | 200 | 775 | 400 | 480 | 470 | 23 | 475 | 300 | 760 - 760 | 400 | 140 | 214 | 223 - 242 |
| | | LA 10 | 3000 | E 5/10 | 250 | 400 | 250 | 850 | 550 | 620 | 620 | 30 | 550 | 300 | 760 - 760 | 400 | 189 | 338 | 223 - 242 |
| | | LA 12 | 2500 | E 5/12 | 300 | 400 | 290 | 910 | 510 | 600 | 600 | 28 | 610 | 300 | 760 - 760 | 400 | 277 | 384 | 223 - 242 |
| 45 | 225 | LA 4 | 3050 | E 6/4 | 100 | 220 | 130 | 610 | 265 | 320 | 320 | 18 | 310 | 300 | 805 | 450 | 46 | 125 | 302 |
| | | LA 5 | 3050 | E 6/5 | 150 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | 420 | 300 | 805 | 450 | 64 | 169 | 302 |
| | | LA 6 | 3050 | E 6/6 | 150 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | 420 | 300 | 805 | 450 | 85 | 169 | 302 |
| | | LA 8 | 3000 | E 6/8 | 200 | 300 | 200 | 775 | 400 | 480 | 470 | 23 | 475 | 300 | 805 | 450 | 140 | 214 | 302 |
| | | LA 10 | 3000 | E 6/10 | 250 | 400 | 250 | 850 | 550 | 620 | 620 | 30 | 550 | 300 | 805 | 450 | 189 | 338 | 302 |
| | | LA 12 | 2500 | E 6/12 | 300 | 400 | 290 | 910 | 510 | 600 | 600 | 28 | 610 | 300 | 805 | 450 | 277 | 384 | 302 |
| 55 75 - 90 | 250 280 | LA 5 | 3050 | E 7/5 | 150 | 280 | 180 | 752 | 345 | 425 | 415 | 21 | 420 | 332 | 910 - 1030 | 550 | 64 | 218 | 382 - 545 |
| | | LA 6 | 3050 | E 7/6 | 150 | 280 | 180 | 752 | 345 | 425 | 415 | 21 | 420 | 332 | 910 - 1030 | 550 | 85 | 218 | 382 - 545 |
| | | LA 8 | 3000 | E 7/8 | 200 | 300 | 200 | 807 | 400 | 480 | 470 | 23 | 475 | 332 | 910 - 1030 | 550 | 140 | 263 | 382 - 545 |
| | | LA 10 | 3000 | E 7/10 | 250 | 400 | 250 | 882 | 550 | 620 | 620 | 30 | 550 | 332 | 910 - 1030 | 550 | 189 | 387 | 382 - 545 |
| | | LA 12 | 2500 | E 7/12 | 300 | 400 | 290 | 942 | 510 | 600 | 600 | 28 | 610 | 332 | 910 - 1030 | 550 | 277 | 433 | 382 - 545 |
| 110 - 132 160 - 200 | 315 | LA 6 | 3050 | E 8/6 | 150 | 280 | 180 | 752 | 345 | 425 | 415 | 21 | 420 | 332 | 1180 - 1290 | 660 | 85 | 238 | 930 - 1190 |
| | | LA 8 | 3000 | E 8/8 | 200 | 300 | 200 | 807 | 400 | 480 | 470 | 23 | 475 | 332 | 1180 - 1290 | 660 | 140 | 283 | 930 - 1190 |
| | | LA 10 | 3000 | E 8/10 | 250 | 400 | 250 | 882 | 550 | 620 | 620 | 30 | 550 | 332 | 1180 - 1290 | 660 | 189 | 407 | 930 - 1190 |
| | | LA 12 | 2500 | E 8/12 | 300 | 400 | 290 | 942 | 510 | 600 | 600 | 28 | 610 | 332 | 1180 - 1290 | 660 | 277 | 453 | 930 - 1190 |
| | | LA 14 | 2500 | E 8/14 | 400 | 510 | 370 | 1127 | 650 | 800 | 800 | 37 | 795 | 332 | 1180 - 1290 | 660 | 365 | 715 | 930 - 1190 |
| 250 - 280 315 | 355 | LA 10 | 3000 | E 9/10 | 250 | 400 | 250 | 1080 | 550 | 620 | 620 | 30 | 550 | 530 | 1526 - 1526 | 800 | 189 | 598 | 1710 - 1920 |
| | | LA 12 | 2500 | E 9/12 | 300 | 400 | 290 | 1140 | 510 | 600 | 600 | 28 | 610 | 530 | 1526 - 1526 | 800 | 277 | 644 | 1710 - 1920 |
| | | LA 14 | 2500 | E 9/14 | 400 | 510 | 370 | 1325 | 650 | 800 | 800 | 37 | 795 | 530 | 1526 - 1526 | 800 | 365 | 906 | 1710 - 1920 |
| 355 | 400 | LA 14 | 2500 | E 10/14 | 400 | 510 | 370 | 1325 | 650 | 800 | 800 | 37 | 795 | 530 | 1526 | 800 | 365 | 1050 | 1975 |

All data in mm

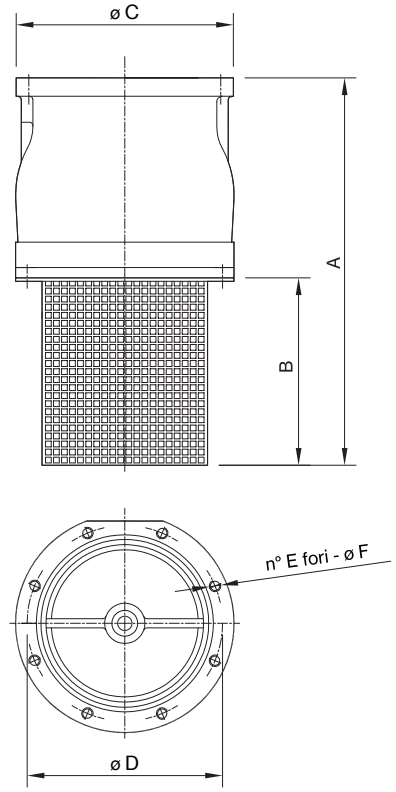
# Dimensions of the components

## STRAINER



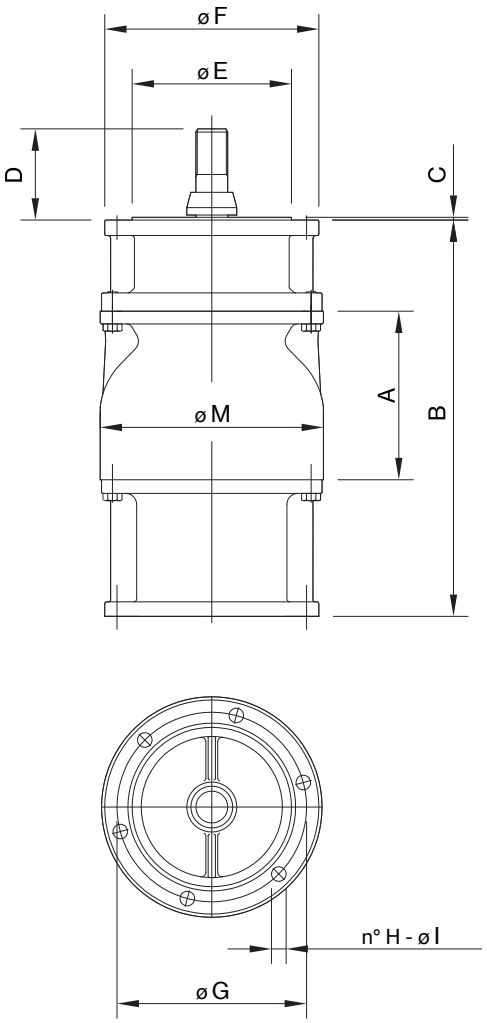

| STRAINER | FOR PUMP | A | B | C | D | E | F | Kg |
|---|---|---|---|---|---|---|---|---|
| | | mm | | | | n° | mm | |
| SU3 | **VPL 6A** | 142 | 105 | 163 | 126 | 8 | 9 | 0,9 |
| | **VPL 6B** | 142 | 105 | 163 | 126 | 8 | 9 | 0,9 |
| | **VPL 6C** | 142 | 105 | 163 | 126 | 8 | 9 | 0,9 |
| | **VPL 6D** | 142 | 105 | 163 | 126 | 8 | 9 | 0,9 |
| | **VPL 6E** | 142 | 105 | 163 | 126 | 8 | 9 | 0,9 |
| SU4 | **VPL 8B** | 170 | 129 | 163 | 154 | 8 | 9 | 1,1 |
| | **VPL 8C** | 170 | 129 | 163 | 154 | 8 | 9 | 1,1 |
| | **VPL 8RNB** | 170 | 129 | 163 | 154 | 8 | 9 | 1,1 |
| | **VPL 8RNC** | 170 | 129 | 163 | 154 | 8 | 9 | 1,1 |
| SU5 | **VPL 8D** | 190 | 144 | 163 | 170 | 8 | 11 | 1,6 |
| | **VPL 8E** | 190 | 144 | 163 | 170 | 8 | 11 | 1,6 |
| | **VPL 8F** | 190 | 144 | 163 | 170 | 8 | 11 | 1,6 |
| SU6 | **VPL 10A** | 240 | 161 | 230 | 208 | 6 | 16 | 2,8 |
| | **VPL 10B** | 240 | 161 | 230 | 208 | 6 | 16 | 2,8 |
| | **VPL 10C** | 240 | 161 | 230 | 208 | 6 | 16 | 2,8 |
| | **VPL 10D** | 240 | 161 | 230 | 208 | 6 | 16 | 2,8 |
| | **VPL 10RA** | 240 | 161 | 230 | 208 | 6 | 16 | 2,8 |
| | **VPL 10RB** | 240 | 161 | 230 | 208 | 6 | 16 | 2,8 |
| | **VPL 10RC** | 240 | 161 | 230 | 208 | 6 | 16 | 2,8 |
| SU8 | **VP 12A** | 295 | 235 | 254 | 260 | 8 | 14 | 3,7 |
| | **VP 12B** | 295 | 235 | 254 | 260 | 8 | 14 | 3,7 |
| | **VP 12C** | 295 | 235 | 254 | 260 | 8 | 14 | 3,7 |
| SU9 | **VP 14A** | 338 | 270 | 250 | 310 | 12 | 16 | 4,2 |
| | **VP 14B** | 338 | 270 | 250 | 310 | 12 | 16 | 4,2 |
| | **VP 14C** | 338 | 270 | 250 | 310 | 12 | 16 | 4,2 |
| SU10 | **VP 16A** | 396 | 315 | 282 | 360 | 12 | 18 | 6,5 |
| | **VP 16B** | 396 | 315 | 282 | 360 | 12 | 18 | 6,5 |
| | **VP 16C** | 396 | 315 | 282 | 360 | 12 | 18 | 6,5 |
| SU11 | **VP 16D** | 465 | 352 | 282 | 420 | 6 | 18 | 8 |
| SU12 | **VP 22-400** | 600 | 520 | 480 | 565 | 12 | 22 | 9,7 |

## FOOT VALVE




| STRAINER | FOR PUMP | A | B | C | D | E | F | Kg |
|---|---|---|---|---|---|---|---|---|
| | | mm | | | | n° | mm | |
| VF3 | **VPL 6A** | 293 | 163 | 141 | 126 | 8 | 9 | 7,5 |
| | **VPL 6B** | 293 | 163 | 141 | 126 | 8 | 9 | 7,5 |
| | **VPL 6C** | 293 | 163 | 141 | 126 | 8 | 9 | 7,5 |
| | **VPL 6D** | 293 | 163 | 141 | 126 | 8 | 9 | 7,5 |
| | **VPL 6E** | 293 | 163 | 141 | 126 | 8 | 9 | 7,5 |
| VF4 | **VPL 8B** | 306 | 166 | 169 | 145 | 6 | 11 | 9,4 |
| | **VPL 8C** | 306 | 166 | 169 | 145 | 6 | 11 | 9,4 |
| | **VPL 8RNB** | 306 | 166 | 169 | 145 | 6 | 11 | 9,4 |
| | **VPL 8 RNC** | 306 | 166 | 169 | 145 | 6 | 11 | 9,4 |
| VF5 | **VPL 8D** | 343 | 169 | 189 | 167 | 6 | M 12 | 13 |
| | **VPL 8E** | 343 | 169 | 189 | 167 | 6 | M 12 | 13 |
| | **VPL 8F** | 343 | 169 | 189 | 167 | 6 | M 12 | 13 |
| VF6 | **VPL 10A** | 465 | 245 | 235 | 208 | 6 | 16 | 22 |
| | **VPL 10B** | 465 | 245 | 235 | 208 | 6 | 16 | 22 |
| | **VPL 10C** | 465 | 245 | 235 | 208 | 6 | 16 | 22 |
| | **VPL 10D** | 465 | 245 | 235 | 208 | 6 | 16 | 22 |
| | **VPL 10RA** | 465 | 245 | 235 | 208 | 6 | 16 | 22 |
| | **VPL 10RB** | 465 | 245 | 235 | 208 | 6 | 16 | 22 |
| | **VPL 10RC** | 465 | 245 | 235 | 208 | 6 | 16 | 22 |
| VF8 | **VP 12A** | 512 | 254 | 295 | 260 | 8 | 14 | 42 |
| | **VP 12B** | 512 | 254 | 295 | 260 | 8 | 14 | 42 |
| | **VP 12C** | 512 | 254 | 295 | 260 | 8 | 14 | 42 |
| VF9 | **VP 14A** | 545 | 250 | 346 | 310 | 12 | 18 | 82 |
| | **VP 14B** | 545 | 250 | 346 | 310 | 12 | 18 | 82 |
| | **VP 14C** | 545 | 250 | 346 | 310 | 12 | 18 | 82 |
| VF11 | **VP 16D** | - | - | - | - | - | - | - |
| VF12 | **VP 22-400** | - | - | - | - | - | - | - |

# Pump body overall dimensions and weight




| TYPE | TYPE AXIS LINE | WELL NOMINAL Ø | A | B | C | D | E | F | G | H | I | M | Y | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | mm | | | | | | | n° | mm | | Kg | |
| **VPL 6A** | LA 3 | 6" | 92 | 242 | 4 | 100 | 95 | 144 | 120 | 5 | 12 | 144 | 13 | 5 |
| **VPL 6B** | | | 92 | 242 | 4 | 100 | 95 | 144 | 120 | 5 | 12 | 144 | 13 | 5 |
| **VPL 6C** | | | 92 | 242 | 4 | 100 | 95 | 144 | 120 | 5 | 12 | 144 | 13 | 5 |
| **VPL 6D** | | | 92 | 242 | 4 | 100 | 95 | 144 | 120 | 5 | 12 | 144 | 13 | 5 |
| **VPL 6E** | | | 92 | 242 | 4 | 100 | 95 | 144 | 120 | 5 | 12 | 144 | 13 | 5 |
| **VPL 8B** | LA 3 | 8" | 130 | 298 | 3 | 100 | 95 | 190 | 120 | 5 | 12 | 187 | 30 | 13 |
| **VPL 8B** | LA 4 | | 130 | 298 | 3 | 100 | 122 | 190 | 145 | 6 | 12 | 187 | 30 | 13 |
| **VPL 8C** | | | 130 | 298 | 3 | 100 | 122 | 190 | 145 | 6 | 12 | 187 | 30 | 13 |
| **VPL 8D** | | | 150 | 318 | 3 | 100 | 122 | 190 | 145 | 6 | 12 | 190 | 30 | 13 |
| **VPL 8E** | | | 150 | 318 | 3 | 100 | 122 | 190 | 145 | 6 | 12 | 190 | 30 | 13 |
| **VPL 8D** | LA 5 | | 150 | 318 | 3 | 100 | 140 | 190 | 168 | 6 | 14 | 190 | 30 | 13 |
| **VPL 8E** | | | 150 | 318 | 3 | 100 | 140 | 190 | 168 | 6 | 14 | 190 | 30 | 13 |
| **VPL 8F** | | | 150 | 318 | 3 | 100 | 140 | 190 | 168 | 6 | 14 | 191 | 30 | 13 |
| **VPL 8RNB** | LA 3 | | 65 | 325 | 3 | 100 | 95 | 144 | 120 | 5 | 12 | 185 | 36 | 5 |
| **VPL 8RNC** | | | 65 | 325 | 3 | 100 | 95 | 144 | 120 | 5 | 12 | 185 | 36 | 5 |
| **VPL 10A** | LA 5 | 10" | 185 | 435 | 3 | 100 | 140 | 235 | 168 | 6 | 14 | 245 | 52 | 26 |
| **VPL 10B** | | | 185 | 435 | 3 | 100 | 140 | 235 | 168 | 6 | 14 | 245 | 52 | 26 |
| **VPL 10A** | LA 6 | | 185 | 435 | 3 | 100 | 176 | 235 | 206 | 6 | 16 | 245 | 52 | 26 |
| **VPL 10B** | | | 185 | 435 | 3 | 100 | 176 | 235 | 206 | 6 | 16 | 245 | 52 | 26 |
| **VPL 10C** | | | 185 | 435 | 3 | 100 | 176 | 235 | 206 | 6 | 16 | 245 | 52 | 26 |
| **VPL 10D** | | | 185 | 435 | 3 | 100 | 176 | 235 | 206 | 6 | 16 | 245 | 52 | 26 |
| **VPL 10D** | LA 8 | | 185 | 435 | 3 | 120 | 228 | 235 | 265 | 8 | 18 | 245 | 52 | 26 |
| **VPL 10RA** | LA 3 | | 78 | 388 | 3 | 100 | 95 | 205 | 120 | 5 | 12 | 230 | 83 | 11 |
| **VPL 10RB** | | | 78 | 388 | 3 | 100 | 95 | 205 | 120 | 5 | 12 | 230 | 83 | 11 |
| **VPL 10RC** | | | 78 | 388 | 3 | 100 | 95 | 205 | 120 | 5 | 12 | 230 | 83 | 11 |
| **VP 12A** | LA 6 | 12" | 230 | 530 | 4 | 100 | 176 | 298 | 206 | 6 | 16 | 295 | 89 | 45 |
| **VP 12B** | | | 230 | 530 | 4 | 100 | 176 | 298 | 206 | 6 | 16 | 295 | 89 | 45 |
| **VP 12C** | | | 230 | 530 | 4 | 100 | 176 | 298 | 206 | 6 | 16 | 295 | 89 | 45 |
| **VP 12A** | LA 8 | | 230 | 530 | 4 | 120 | 228 | 298 | 265 | 8 | 18 | 295 | 89 | 45 |
| **VP 12B** | | | 230 | 530 | 4 | 120 | 228 | 298 | 265 | 8 | 18 | 295 | 89 | 45 |
| **VP 12C** | | | 230 | 530 | 4 | 120 | 228 | 298 | 265 | 8 | 18 | 295 | 89 | 45 |
| **VP 14A** | LA 6 | 14" | 270 | 640 | 4 | 100 | 176 | 298 | 206 | 6 | 16 | 346 | 143 | 72 |
| **VP 14A** | LA 8 | | 270 | 640 | 4 | 120 | 228 | 298 | 265 | 8 | 18 | 346 | 143 | 72 |
| **VP 14B** | | | 270 | 640 | 4 | 120 | 228 | 298 | 265 | 8 | 18 | 346 | 143 | 72 |
| **VP 14C** | | | 270 | 640 | 4 | 120 | 228 | 298 | 265 | 8 | 18 | 346 | 143 | 72 |
| **VP 14B** | LA 10 | | 270 | 640 | 4 | 150 | 282 | 298 | 320 | 12 | 18 | 346 | 143 | 72 |
| **VP 14C** | | | 270 | 640 | 4 | 150 | 282 | 298 | 320 | 12 | 18 | 346 | 143 | 72 |
| **VP 16A** | LA 8 | 16" | 310 | 725 | 4 | 120 | 228 | 355 | 265 | 8 | 18 | 396 | 198 | 108 |
| **VP 16A** | LA 10 | | 310 | 725 | 4 | 150 | 282 | 355 | 320 | 12 | 18 | 396 | 198 | 108 |
| **VP 16B** | | | 310 | 725 | 4 | 120 | 228 | 355 | 265 | 8 | 18 | 396 | 198 | 108 |
| **VP 16C** | | | 310 | 725 | 4 | 150 | 282 | 355 | 320 | 12 | 18 | 396 | 198 | 108 |
| **VP 16C** | LA 12 | | 310 | 725 | 4 | 120 | 332 | 355 | 380 | 12 | 22 | 396 | 198 | 108 |
| **VP 16D** | | | 370 | 765 | 4 | 150 | 332 | 355 | 380 | 12 | 22 | 415 | 215 | 119 |
| **VP 22-400** | LA 12 | 22" | 350 | 1112 | 5 | 150 | 332 | 470 | 380 | 12 | 22 | 545 | 366 | 195 |
| | LA 14 | | 350 | 1112 | 5 | 170 | 365 | 470 | 425 | 12 | 22 | 545 | 366 | 195 |

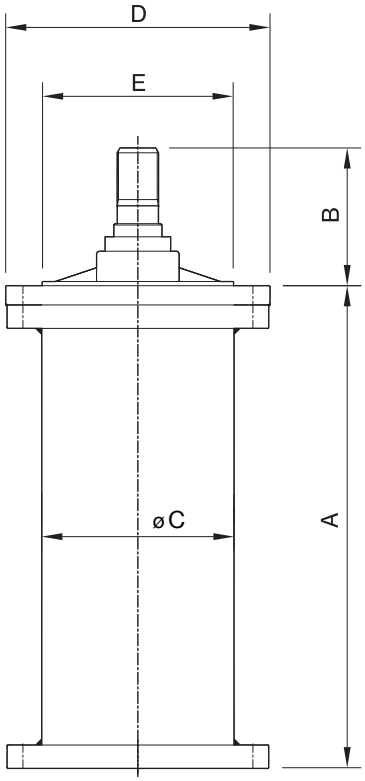
B = is refered to 1 stage pump lenght

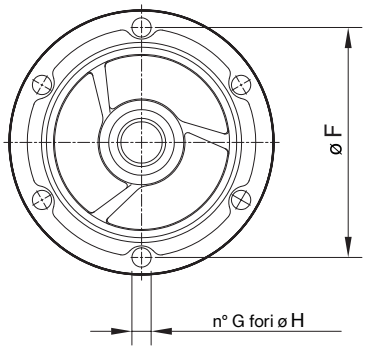
Y = Weight for 1 stage pump lenght

Z = Weight for each stage

$$\text{Pump weight} = Y + \left[\text{stage n.} - 1\right] \cdot Z$$

# Axis line overall dimensions and weight



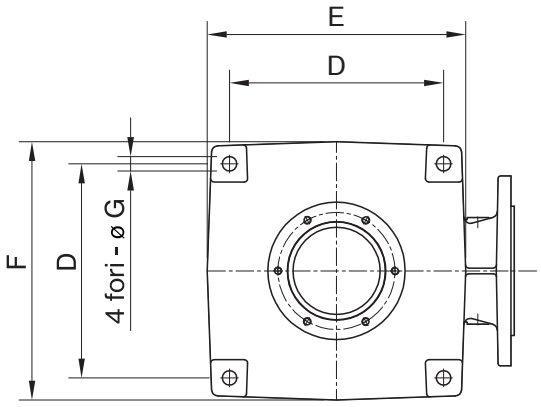



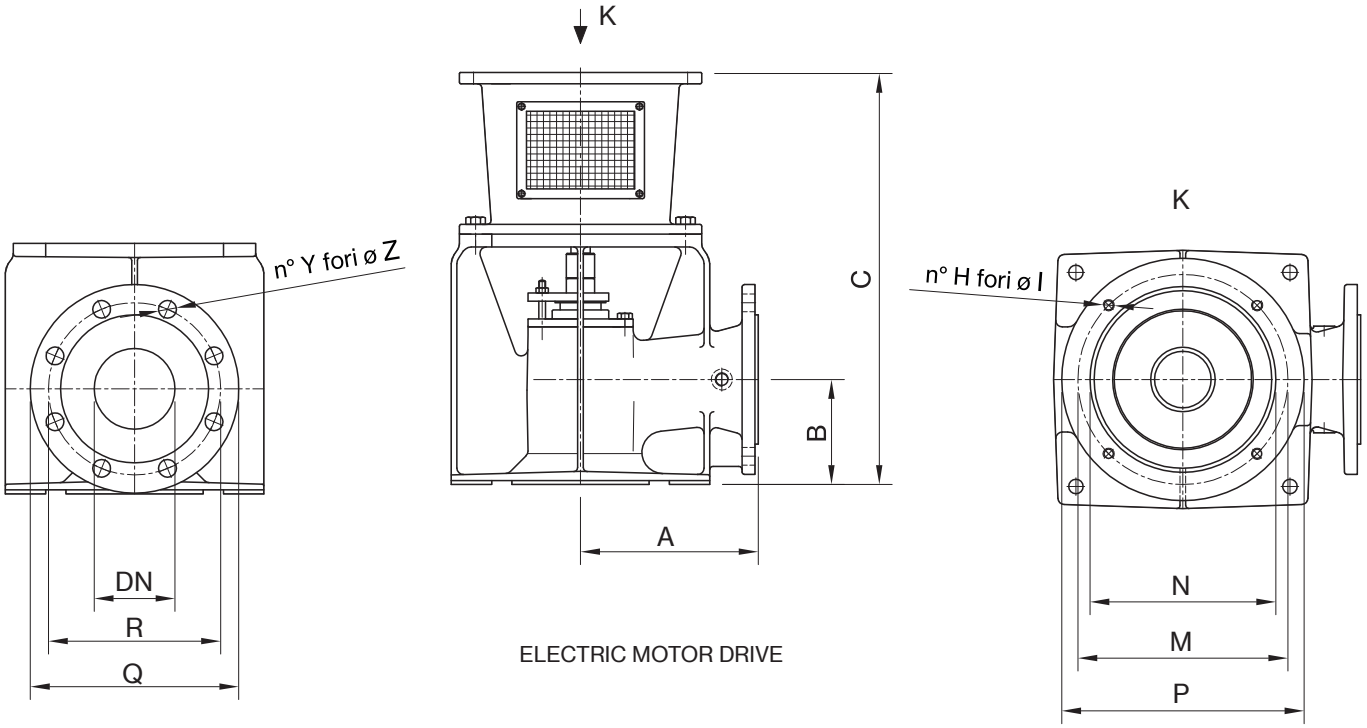

| TYPE | A | B | C | D | E | F | G | H | Kg/1 m |
|---|---|---|---|---|---|---|---|---|---|
| | mm | | | | | | n° | mm | |
| **LA 3 / 20** | 3050 | 100 | 89 | 140 | 95 | 120 | 5 | 12 | 11,8 |
| **LA 3 / 24** | 3050 | 100 | 89 | 140 | 95 | 120 | 5 | 12 | 11,8 |
| **LA 4 / 20** | 3050 | 100 | 114 | 166 | 122 | 145 | 6 | 12 | 15,1 |
| **LA 4 / 24** | 3050 | 100 | 114 | 166 | 122 | 145 | 6 | 12 | 15,1 |
| **LA 4 / 30** | 3050 | 100 | 114 | 166 | 122 | 145 | 6 | 12 | 15,1 |
| **LA 5 / 20** | 3050 | 100 | 140 | 190 | 140 | 168 | 6 | 14 | 21 |
| **LA 5 / 24** | 3050 | 100 | 140 | 190 | 140 | 168 | 6 | 14 | 21 |
| **LA 5 / 30** | 3050 | 100 | 140 | 190 | 140 | 168 | 6 | 14 | 21 |
| **LA 6 / 24** | 3050 | 100 | 168 | 234 | 176 | 206 | 6 | 16 | 27,9 |
| **LA 6 / 30** | 3050 | 100 | 168 | 234 | 176 | 206 | 6 | 16 | 27,9 |
| **LA 6 / 35** | 3050 | 100 | 168 | 234 | 176 | 206 | 6 | 16 | 27,9 |
| **LA 8 / 30** | 3000 | 120 | 219 | 298 | 228 | 265 | 8 | 18 | 46,7 |
| **LA 8 / 35** | 3000 | 120 | 219 | 298 | 228 | 265 | 8 | 18 | 46,7 |
| **LA 8 / 40** | 3000 | 120 | 219 | 298 | 228 | 265 | 8 | 18 | 46,7 |
| **LA 8 / 45** | 3000 | 120 | 219 | 298 | 228 | 265 | 8 | 18 | 46,7 |
| **LA 10 / 30** | 3000 | 150 | 273 | 355 | 282 | 320 | 12 | 18 | 63 |
| **LA 10 / 35** | 3000 | 150 | 273 | 355 | 282 | 320 | 12 | 18 | 63 |
| **LA 10 / 40** | 3000 | 150 | 273 | 355 | 282 | 320 | 12 | 18 | 63 |
| **LA 10 / 45** | 3000 | 150 | 273 | 355 | 282 | 320 | 12 | 18 | 63 |
| **LA 10 / 50** | 3000 | 150 | 273 | 355 | 282 | 320 | 12 | 18 | 63 |
| **LA 12 / 35** | 2500 | 150 | 324 | 420 | 332 | 380 | 12 | 22 | 110,8 |
| **LA 12 / 40** | 2500 | 150 | 324 | 420 | 332 | 380 | 12 | 22 | 110,8 |
| **LA 12 / 45** | 2500 | 150 | 324 | 420 | 332 | 380 | 12 | 22 | 110,8 |
| **LA 12 / 50** | 2500 | 150 | 324 | 420 | 332 | 380 | 12 | 22 | 110,8 |
| **LA 12 / 60** | 2500 | 150 | 324 | 420 | 332 | 380 | 12 | 22 | 110,8 |
| **LA 12 / 70** | 2500 | 150 | 324 | 420 | 332 | 380 | 12 | 22 | 110,8 |
| **LA 14 / 50** | 2500 | 170 | 355 | 470 | 365 | 425 | 12 | 22 | 146 |
| **LA 14 / 60** | 2500 | 170 | 355 | 470 | 365 | 425 | 12 | 22 | 146 |
| **LA 14 / 70** | 2500 | 170 | 355 | 470 | 365 | 425 | 12 | 22 | 146 |
| **LA 14 / 80** | 2500 | 170 | 355 | 470 | 365 | 425 | 12 | 22 | 146 |

## SHAFT WEIGHT

| Ø mm SHAFT | WEIGHT Kg/1 m |
|---|---|
| 20 | 2,5 |
| 24 | 3,5 |
| 30 | 5,5 |
| 35 | 7,5 |
| 40 | 9,8 |
| 45 | 12,4 |
| 50 | 15,3 |
| 60 | 22,1 |
| 70 | 30 |
| 80 | 39,2 |

# Electric motor drive unit overall dimensions




BASE

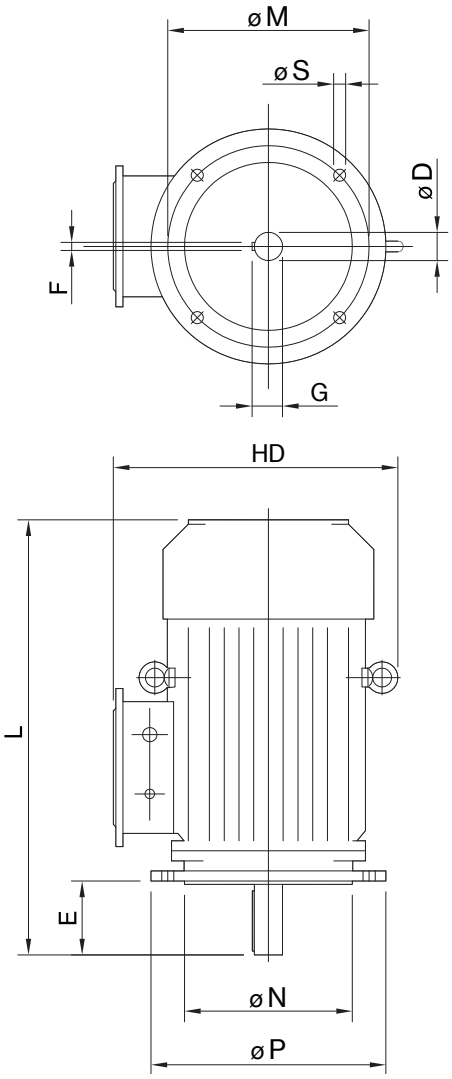
ELECTRIC MOTOR DRIVE

# Electric motor drive unit overall dimensions and total weight

| ELECTRIC MOTOR DRIVE | FLANGE DISCHARGE | BASE TYPE | A | B | C | D | E | F | G | H | I | M | N | P | STAINLESS STEEL TOTAL WEIGHT | CAST IRON TOTAL WEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DN | | mm | | | | | | | n° | | mm | | | Kg | |
| **E 0 / 3** | 100 | B 4 / 3 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 4 | M10 | 165 | 130 | 250 | 73,5 | 68 |
| **E 1 / 3** | 100 | B 4 / 3 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | | | | | | 73,5 | 68 |
| **E 1 / 4** | 100 | B 4 / 4 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | 4 | M12 | 215 | 180 | 250 | 73,5 | 68 |
| **E 1 / 5** | 150 | B 6 / 5 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | | | | | | 117,5 | 107 |
| **E 1 / 6** | 150 | B 6 / 6 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | | | | | | 117,5 | 107 |
| **E 2 / 3** | 100 | B 4 / 3 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | | | | | | 87 | 81,5 |
| **E 2 / 4** | 100 | B 4 / 4 | 220 | 130 | 510 | 265 | 320 | 320 | 18 | | | | | | 87 | 81,5 |
| **E 2 / 5** | 150 | B 6 / 5 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | 4 | M12 | 265 | 230 | 300 | 131 | 120,5 |
| **E 2 / 6** | 150 | B 6 / 6 | 280 | 180 | 620 | 345 | 425 | 415 | 21 | | | | | | 131 | 120,5 |
| **E 2 / 8** | 200 | B 8 / 8 | 300 | 200 | 675 | 400 | 480 | 470 | 23 | | | | | | 176 | 160,5 |
| **E 3 / 3** | 100 | B 4 / 3 | 220 | 130 | 562 | 265 | 320 | 320 | 18 | | | | | | 103 | 97,5 |
| **E 3 / 4** | 100 | B 4 / 4 | 220 | 130 | 562 | 265 | 320 | 320 | 18 | | | | | | 103 | 97,5 |
| **E 3 / 5** | 150 | B 6 / 5 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | 4 | M16 | 300 | 250 | 350 | 147 | 136,5 |
| **E 3 / 6** | 150 | B 6 / 6 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | | | | | | 147 | 136,5 |
| **E 3 / 8** | 200 | B 8 / 8 | 300 | 200 | 727 | 400 | 480 | 470 | 23 | | | | | | 192 | 176,5 |
| **E 3 / 10** | 250 | B 10 / 10 | 400 | 250 | 802 | 550 | 620 | 620 | 30 | | | | | | 316 | 286,5 |
| **E 4 / 3** | 100 | B 4 / 3 | 220 | 130 | 562 | 265 | 320 | 320 | 18 | | | | | | 103 | 97,5 |
| **E 4 / 3** | 100 | B 4 / 3 | 220 | 130 | 562 | 265 | 320 | 320 | 18 | | | | | | 103 | 97,5 |
| **E 4 / 4** | 100 | B 4 / 4 | 220 | 130 | 562 | 265 | 320 | 320 | 18 | | | | | | 103 | 97,5 |
| **E 4 / 5** | 150 | B 6 / 5 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | 4 | M16 | 300 | 250 | 350 | 147 | 136,5 |
| **E 4 / 6** | 150 | B 6 / 6 | 280 | 180 | 672 | 345 | 425 | 415 | 21 | | | | | | 147 | 136,5 |
| **E 4 / 8** | 200 | B 8 / 8 | 300 | 200 | 727 | 400 | 480 | 470 | 23 | | | | | | 192 | 176,5 |
| **E 4 / 10** | 250 | B 10 / 10 | 400 | 250 | 802 | 550 | 620 | 620 | 30 | | | | | | 316 | 286,5 |
| **E 5 / 3** | 100 | B 4 / 3 | 220 | 130 | 610 | 265 | 320 | 320 | 18 | | | | | | 125 | 119,5 |
| **E 5 / 4** | 100 | B 4 / 4 | 220 | 130 | 610 | 265 | 320 | 320 | 18 | | | | | | 125 | 119,5 |
| **E 5 / 5** | 150 | B 6 / 5 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | 4 | M16 | 350 | 300 | 400 | 169 | 158,5 |
| **E 5 / 6** | 150 | B 6 / 6 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | | | | | | 169 | 158,5 |
| **E 5 / 8** | 200 | B 8 / 8 | 300 | 200 | 775 | 400 | 480 | 470 | 23 | | | | | | 214 | 198,5 |
| **E 5 / 10** | 250 | B 10 / 10 | 400 | 250 | 850 | 550 | 620 | 620 | 30 | | | | | | 338 | 308,5 |
| **E 6 / 4** | 100 | B 4 / 4 | 220 | 130 | 610 | 265 | 320 | 320 | 18 | | | | | | 125 | 119,5 |
| **E 6 / 5** | 150 | B 6 / 5 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | | | | | | 169 | 158,5 |
| **E 6 / 6** | 150 | B 6 / 6 | 280 | 180 | 720 | 345 | 425 | 415 | 21 | 8 | M16 | 400 | 350 | 450 | 169 | 158,5 |
| **E 6 / 8** | 200 | B 8 / 8 | 300 | 200 | 775 | 400 | 480 | 470 | 23 | | | | | | 214 | 198,5 |
| **E 6 / 10** | 250 | B 10 / 10 | 400 | 250 | 850 | 550 | 620 | 620 | 30 | | | | | | 338 | 308,5 |
| **E 6 / 12** | 300 | B 12 / 12 | 400 | 290 | 910 | 510 | 600 | 600 | 28 | | | | | | 384 | 349,5 |
| **E 7 / 4** | 100 | B 4 / 4 | 220 | 130 | 642 | 265 | 320 | 320 | 18 | | | | | | 174 | 168,5 |
| **E 7 / 5** | 150 | B 6 / 5 | 280 | 180 | 752 | 345 | 425 | 415 | 21 | | | | | | 218 | 207,5 |
| **E 7 / 6** | 150 | B 6 / 6 | 280 | 180 | 752 | 345 | 425 | 415 | 21 | 8 | M16 | 500 | 450 | 550 | 218 | 207,5 |
| **E 7 / 8** | 200 | B 8 / 8 | 300 | 200 | 807 | 400 | 480 | 470 | 23 | | | | | | 263 | 247,5 |
| **E 7 / 10** | 250 | B 10 / 10 | 400 | 250 | 882 | 550 | 620 | 620 | 30 | | | | | | 387 | 357,5 |
| **E 7 / 12** | 300 | B 12 / 12 | 400 | 290 | 942 | 510 | 600 | 600 | 28 | | | | | | 433 | 398,5 |
| **E 8 / 6** | 150 | B 6 / 6 | 280 | 180 | 752 | 345 | 425 | 415 | 21 | | | | | | 238 | 227,5 |
| **E 8 / 8** | 200 | B 8 / 8 | 300 | 200 | 807 | 400 | 480 | 470 | 23 | | | | | | 283 | 267,5 |
| **E 8 / 10** | 250 | B 10 / 10 | 400 | 250 | 882 | 550 | 620 | 620 | 30 | 8 | M20 | 600 | 550 | 660 | 407 | 377,5 |
| **E 8 / 12** | 300 | B 12 / 12 | 400 | 290 | 942 | 510 | 600 | 600 | 28 | | | | | | 453 | 418,5 |
| **E 8 / 14** | 400 | B 16 / 14 | 510 | 370 | 1127 | 650 | 800 | 800 | 37 | | | | | | 715 | 651 |
| **E 9 / 8** | 200 | B 8 / 8 | 300 | 200 | 1005 | 400 | 480 | 470 | 23 | | | | | | 474 | 458,5 |
| **E 9 / 12** | 300 | B 12 / 12 | 400 | 290 | 1140 | 510 | 600 | 600 | 28 | 8 | M20 | 740 | 680 | 800 | 644 | 609,5 |
| **E 9 / 14** | 400 | B 16 / 14 | 510 | 370 | 1325 | 650 | 800 | 800 | 37 | | | | | | 906 | 842 |
| **E 10 / 14** | 400 | B 16 / 14 | 510 | 370 | 1325 | 650 | 800 | 800 | 37 | 8 | M24 | 940 | 880 | 1000 | 1050 | 986 |

| FLANGE DISCHARGE | PN | Q | R | Y | Z |
|---|---|---|---|---|---|
| DN | | mm | | | |
| 100 | 25 | 235 | 190 | 8 | 22 |
| 150 | 25 | 300 | 250 | 8 | 26 |
| 200 | 25 | 360 | 310 | 12 | 26 |
| 300 | 25 | 485 | 430 | 16 | 30 |
| 400 | 25 | 620 | 550 | 16 | 36 |

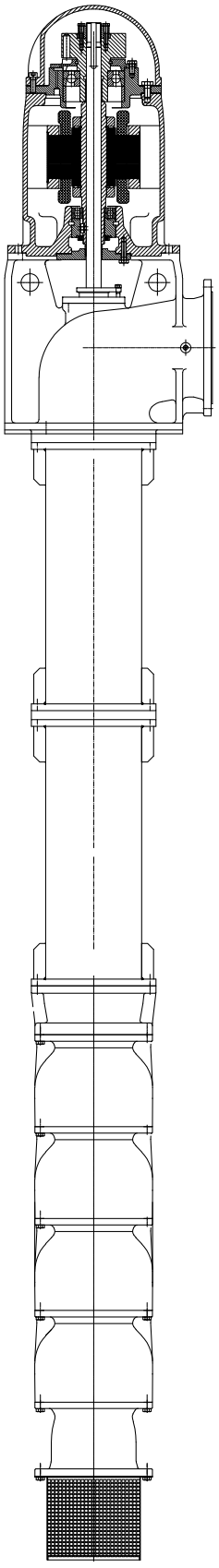
# Electric motor overall dimensions



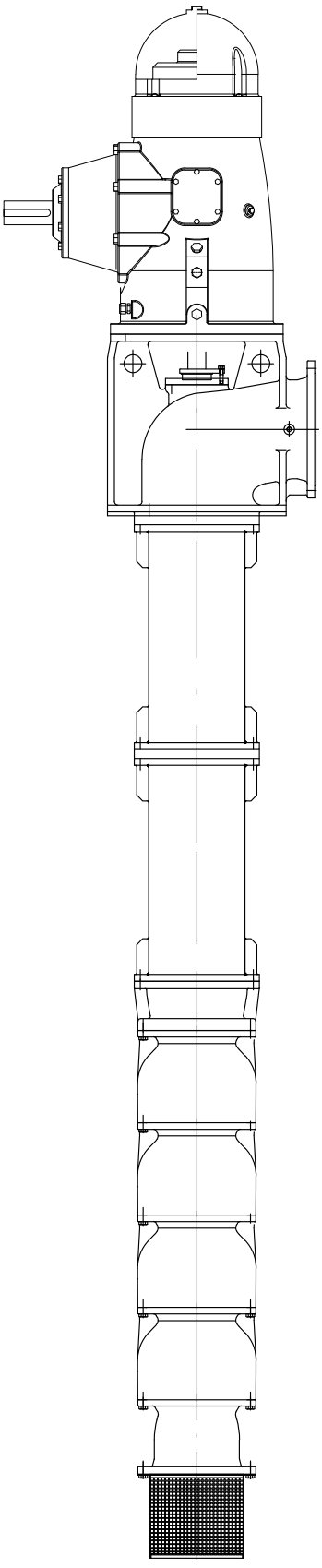

| FRAME SIZE | POLE | DIMENSIONS (mm) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | D | E | F | G | M | N | P | S | HD | L |
| 112M | 2....6 | 28 | 60 | 8 | 24 | 215 | 180 | 250 | 4-Ø15 | 305 | 450 |
| 132S | 2....6 | 38 | 80 | 10 | 33 | 265 | 230 | 300 | 4-Ø15 | 365 | 510 |
| 132M | 4....6 | 38 | 80 | 10 | 33 | 265 | 230 | 300 | 4-Ø15 | 365 | 550 |
| 160M | 2....6 | 42 | 110 | 12 | 37 | 300 | 250 | 350 | 4-Ø19 | 445 | 660 |
| 160L | 2....6 | 42 | 110 | 12 | 37 | 300 | 250 | 350 | 4-Ø19 | 445 | 705 |
| 180M | 2....4 | 48 | 110 | 14 | 42,5 | 300 | 250 | 350 | 4-Ø19 | 480 | 750 |
| 180L | 4....6 | 48 | 110 | 14 | 42,5 | 300 | 250 | 350 | 4-Ø19 | 480 | 790 |
| 200L | 2....6 | 55 | 110 | 16 | 49 | 350 | 300 | 400 | 4-Ø19 | 530 | 840 |
| 225S | 4....6 | 60 | 140 | 18 | 53 | 400 | 350 | 450 | 8-Ø19 | 575 | 905 |
| 225M | 2 | 55 | 110 | 16 | 49 | 400 | 350 | 450 | 8-Ø19 | 575 | 910 |
| | 4....6 | 60 | 140 | 18 | 53 | 400 | 350 | 450 | 8-Ø19 | 575 | 935 |
| 250M | 2 | 60 | 140 | 18 | 53 | 500 | 450 | 550 | 8-Ø19 | 635 | 1005 |
| | 4....6 | 65 | 140 | 18 | 53 | 500 | 450 | 550 | 8-Ø19 | 635 | 1005 |
| 280M | 2 | 65 | 140 | 18 | 58 | 500 | 450 | 550 | 8-Ø19 | 725 | 1155 |
| | 4....6 | 75 | 140 | 20 | 67,5 | 500 | 450 | 550 | 8-Ø19 | 725 | 1185 |
| 315S | 2 | 65 | 140 | 18 | 58 | 600 | 550 | 660 | 8-Ø24 | 865 | 1340 |
| | 4....6 | 80 | 170 | 22 | 71 | 600 | 550 | 660 | 8-Ø24 | 865 | 1370 |
| 315M/L | 2 | 65 | 140 | 18 | 58 | 600 | 550 | 660 | 8-Ø24 | 865 | 1450 |
| | 4....6 | 80 | 170 | 22 | 71 | 600 | 550 | 660 | 8-Ø24 | 865 | 1480 |
| 315M/L | 2 | 65 | 140 | 18 | 58 | 600 | 550 | 660 | 8-Ø24 | 865 | 1450 |
| | 4....6 | 80 | 170 | 22 | 71 | 600 | 550 | 660 | 8-Ø24 | 865 | 1480 |
| 355M/L | 2 | 75 | 140 | 20 | 67,5 | 740 | 680 | 800 | 8-Ø24 | 970 | 1665 |
| | 4....6 | 95 | 170 | 25 | 86 | 740 | 680 | 800 | 8-Ø24 | 970 | 1740 |
| 400M/L | 2 | 80 | 170 | 22 | 71 | 940 | 880 | 1000 | 8-Ø28 | 1150 | 2150 |
| | 4....6 | 110 | 210 | 28 | 100 | 940 | 880 | 1000 | 8-Ø28 | 1150 | 2220 |

# Applications and special versions

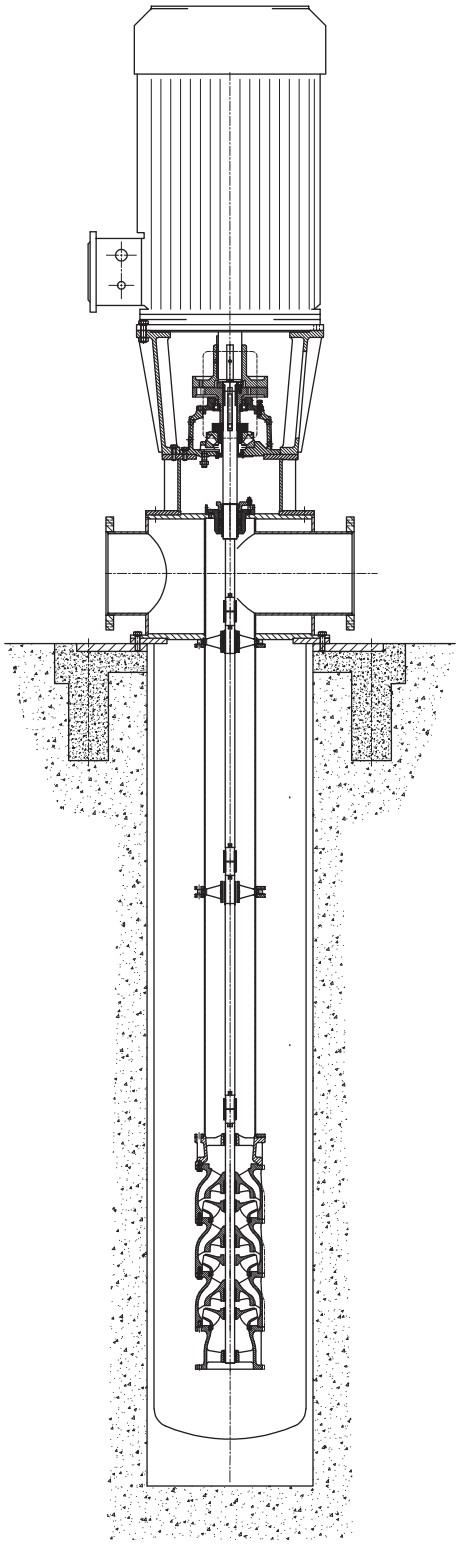
## WITH MOTOR HOLLOW SHAFT



## WITH ANGLE GEAR



## BARREL VERSION



## SPECIAL MATERIALS AVAILABLE

- Bronze
- AISI 316
- Duplex
- Super Duplex
- Ceramic hydraulic parts for abrasive liquid

# TECHNICAL APPENDIX

# Moment of inertia “J”

| PUMP TYPE | STANDARD IMPELLER | | BRONZE IMPELLER | |
|---|---|---|---|---|
| | 1 STAGE PUMP | FOR EACH ADDITIONAL STAGE | 1 STAGE PUMP | FOR EACH ADDITIONAL STAGE |
| **VPL 6A** | 0,0008034 | 0,0007628 | 0,0009654 | 0,0009248 |
| **VPL 6B** | 0,0009436 | 0,0009029 | 0,001137 | 0,001096 |
| **VPL 6C** | 0,0009619 | 0,0009212 | 0,001159 | 0,001118 |
| **VPL 6D** | 0,001221 | 0,001190 | 0,001460 | 0,001430 |
| **VPL 6E** | 0,001385 | 0,001354 | 0,001659 | 0,001628 |
| **VPL 8B** | 0,005197 | 0,005047 | 0,006322 | 0,006172 |
| **VPL 8C** | 0,005497 | 0,005347 | 0,006622 | 0,006472 |
| **VPL 8D** | 0,006020 | 0,005870 | 0,007255 | 0,007105 |
| **VPL 8E** | 0,006761 | 0,006611 | 0,008127 | 0,007977 |
| **VPL 8F** | 0,007229 | 0,007079 | 0,008660 | 0,008510 |
| **VPL 10A** | 0,020750 | 0,020320 | 0,025130 | 0,024690 |
| **VPL 10B** | 0,019800 | 0,019360 | 0,023790 | 0,023350 |
| **VPL 10C** | 0,020020 | 0,019580 | 0,023930 | 0,023490 |
| **VPL 10D** | 0,020250 | 0,019800 | 0,024070 | 0,023630 |
| **VP 12A** | 0,039220 | 0,034150 | 0,047070 | 0,040980 |
| **VP 12B** | 0,040450 | 0,035380 | 0,048540 | 0,042450 |
| **VP 14A** | 0,131700 | 0,126000 | 0,158000 | 0,151200 |
| **VP 14B** | 0,132500 | 0,123800 | 0,158900 | 0,152200 |

*In order to keep its products constantly ahead of technical evolutions, the manufacturer has reserved right, without any prior notification, to modify dimensions and characteristics of the products described in this catalogue.*

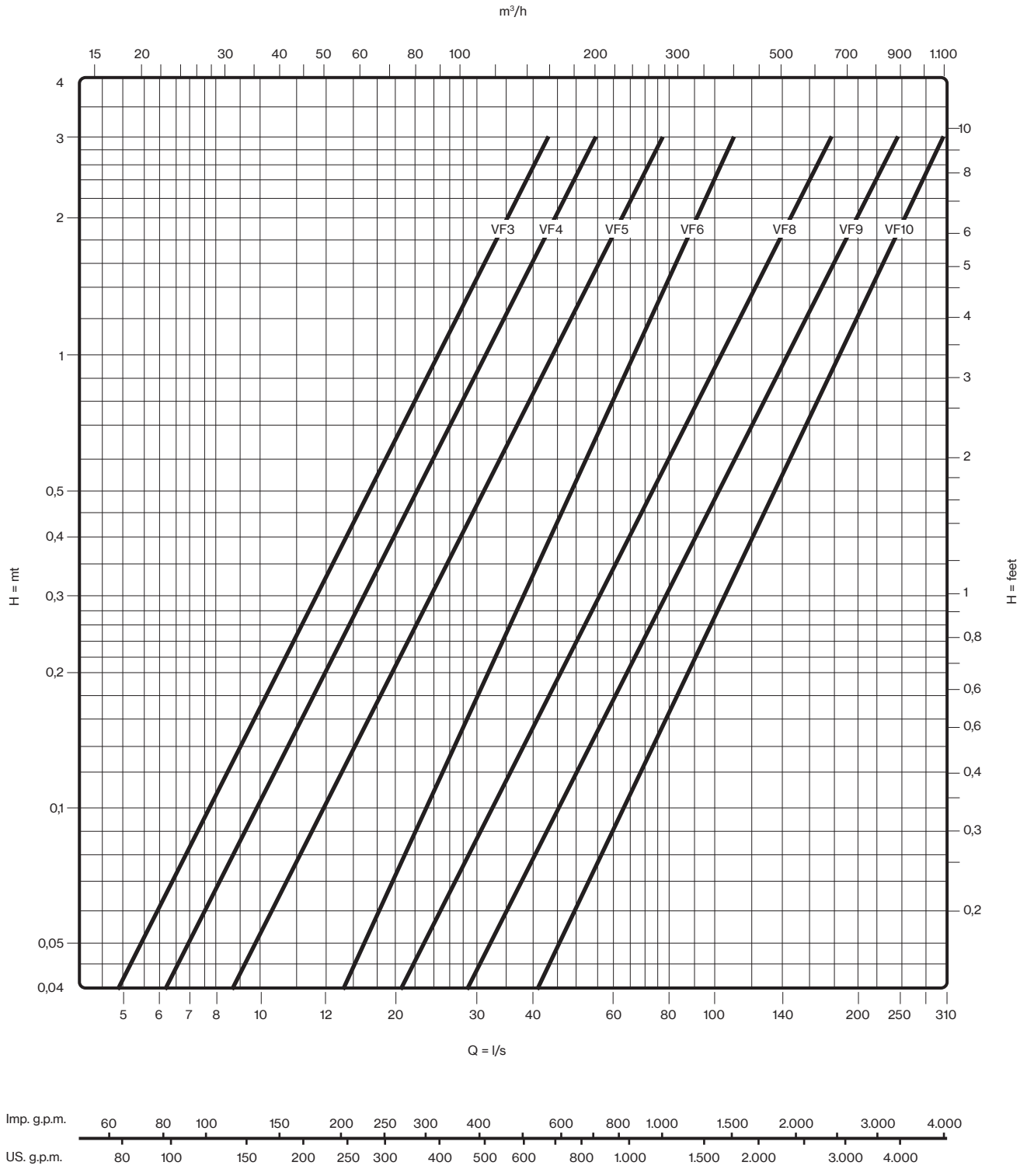
# Pumps installation depth

| PUMP BODY | AXIS LINE | TOTAL MANOMETRIC HEAD IN METERS | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 |
| **TYPE** | **AXIS mm** | **INSTALLATION DEPTH IN METERS** | | | | | | | | | | | | | | | | | | |
| **VPL 8B** | 20 | 90 | | | | | | | | 80 | | | | | | | | | | |
| | 24 | 100 | | | | | | | | | | 90 | | | 80 | | 70 | | | |
| | 30 | 120 | | | | | | | | | | | 110 | | 100 | | | | | |
| **VPL 8G** | 20 | 90 | | | | | | | 80 | | | | | | | | | | | |
| | 24 | 80 | | | | | | | 70 | | | | | | | | | | | |
| | 30 | 120 | | | | | | | | | | 110 | | | 100 | | | | | |
| **VPL 8D** | 20 | 80 | | | | | | | 70 | | | | | | | | | | | |
| | 24 | 100 | | | | | | | | | | 90 | | | 80 | | | | | |
| | 30 | 120 | | | | | | | | | 110 | | | 100 | | | 90 | | | |
| **VPL 8E** | 20 | 70 | | | | | | 60 | | | | | | | | | | | | |
| | 24 | 100 | | | | | | | | 90 | | | | | | | | | | |
| | 30 | 90 | | | | | | | | 100 | | | | 90 | | | | | | |
| **VPL 8F** | 20 | 60 | | | | | | | | | | | | | | | | | | |
| | 24 | 90 | | | | | | | | | | | | | | | | | | |
| | 30 | 100 | | | | | | | | | | | 90 | | | 80 | | 70 | | |
| **VPL 10A** | 24 | 50 | | | | | | | | | | | | | | | | | | |
| | 30 | 80 | | | | | | | | | | | | | | | | | | |
| | 35 | 90 | | | | | | | | | 80 | | | | 70 | | | | | |
| **VPL 10C** | 24 | 50 | | | | | | | | | | | | | | | | | | |
| | 30 | 90 | | | | | | | | | 80 | | | | | | | | | |
| | 35 | 100 | | | | | | | | | 90 | | 80 | | 70 | | | | | |
| **VPL 10D** | 24 | 50 | | | | | | | | | | | | | | | | | | |
| | 30 | 90 | | | | | | | | 80 | | 70 | | | | | | | | |
| | 35 | 100 | | | | | | | | | 90 | | | 80 | | | 70 | | | |

# PUMPS INSTALLATION DEPTH

| PUMP BODY | AXIS LINE | TOTAL MANOMETRIC HEAD IN METERS | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 |
| TYPE | AXIS mm | INSTALLATION DEPTH IN METERS | | | | | | | | | | | | | | | | | | |
| VP 12A | 30 | 70 | | | | | | | | | | | | | | | | | | |
| | 35 | 80 | | | | | | | 70 | | 60 | | | | | | | | | |
| | 40 | 80 | | | | | | | | | 70 | | | 60 | | | | | | |
| VP 12B | 30 | 70 | | | | | | | | | | | | | | | | | | |
| | 35 | 80 | | | | | | | | 70 | | 60 | | | | | | | | |
| | 40 | 80 | | | | | | | | | | 70 | | | 60 | | | | | |
| VP 14A | 35 | 70 | | | | | | 60 | | | | | | | | | | | | |
| | 40 | 70 | | | | | | | | 60 | | | | | | | | | | |
| | 45 | 80 | | | | | | | | | 70 | | 60 | | | | | | | |
| VP 14B | 35 | 70 | | | | | | 60 | | | | | | | | | | | | |
| | 40 | 70 | | | | | | | | | 60 | | | | | | | | | |
| | 45 | 80 | | | | | | | | | 70 | | | 60 | | | | | | |
| VP 14C | 35 | 70 | | | | | | 60 | | | | | | | | | | | | |
| | 40 | 70 | | | | | | | | | 60 | | | | | | | | | |
| | 45 | 80 | | | | | | | | | 70 | | | 60 | | | | | | |
| VP 16A | 40 | 70 | | | | | | | 60 | | | | | | | | | | | |
| | 45 | 80 | | | | | | | 70 | | | 60 | | | | | | | | |
| | 50 | 90 | | | | | | | | 80 | | | 70 | | 60 | | | | | |
| | 60 | 100 | | | | | | | | | 90 | | | 80 | | 70 | | | | |
| VP 16B | 40 | 70 | | | | | | | 60 | | | | | | | | | | | |
| | 45 | 80 | | | | | | | | 70 | | | 60 | | | | | | | |
| | 50 | 90 | | | | | | | | 80 | | | | 70 | | | | | | |
| | 60 | 100 | | | | | | | | | 90 | | | 80 | | | | | | |
| VP 16C | 40 | 70 | | | | | | | 60 | | | | | | | | | | | |
| | 45 | 80 | | | | | | | | | 70 | | | 60 | | | | | | |
| | 50 | 90 | | | | | | | | | 80 | | | | 70 | | | | | |
| | 60 | 100 | | | | | | | | | 90 | | | 80 | | | | | | |
| VP 16D | 40 | 70 | | | | | | | | | 60 | | | | | | | | | |
| | 45 | 80 | | | | | | | | | 70 | | | 60 | | | | | | |
| | 50 | 90 | | | | | | | | | 80 | | | | 70 | | | | | |
| | 60 | 100 | | | | | | | | | 90 | | | 80 | | | | | | |

# Foot valve pressure losses



# Head losses in metres for every 100 metres of straight piping

| V | Q / h | Diameter of the pipes in mm | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 20 | 25 | 30 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 175 | 200 | 250 |
| 0,5 | Q | 9,4 | 14,7 | 21,2 | 37.7 | 59 | 115 | 151 | 235 | 369 | 530 | 723 | 940 | 1480 |
| | h | 2,4 | 1,,9 | 1,5 | 1 | 0,8 | 0,56 | 0,46 | 0,36 | 0,28 | 0,23 | 0,19 | 0,16 | 0,13 |
| 0,6 | Q | 11,3 | 17,7 | 25,4 | 45,3 | 70,7 | 138 | 181 | 282 | 442 | 636 | 887 | 1130 | 1770 |
| | h | 3,3 | 2,6 | 2,1 | 1,5 | 1,12 | 0,78 | 0,65 | 0,5 | 0,39 | 0,32 | 0,27 | 0,23 | 0,18 |
| 0,7 | Q | 13,2 | 20,6 | 29,7 | 52,9 | 82,5 | 161 | 211 | 329 | 516 | 742 | 1010 | 1315 | 2070 |
| | h | 4,4 | 3,4 | 2,7 | 1,9 | 1,5 | 1 | 0,86 | 0,67 | 0,52 | 0,43 | 0,36 | 0,31 | 0,24 |
| 0,8 | Q | 15,05 | 23,6 | 33,9 | 60,4 | 94,5 | 184 | 241 | 377 | 590 | 848 | 115 | 1505 | 2360 |
| | h | 5,6 | 4,3 | 3,4 | 2,5 | 1,9 | 1,3 | 1,1 | 0,86 | 0,67 | 0,55 | 0,46 | 0,4 | 0,31 |
| 0,9 | Q | 16,95 | 26,5 | 38,2 | 68 | 106 | 207 | 272 | 423 | 664 | 955 | 1300 | 1695 | 2660 |
| | h | 6,9 | 5,3 | 4,3 | 3 | 2,4 | 1,7 | 1,4 | 1,1 | 0,84 | 0,69 | 0,58 | 0,5 | 0,39 |
| 1 | Q | 18,8 | 29,5 | 42,4 | 75,5 | 117,7 | 230 | 302 | 471 | 737 | 1060 | 1445 | 1880 | 2950 |
| | h | 8,3 | 6,4 | 5,1 | 3,7 | 2,9 | 2,1 | 1,7 | 1,3 | 1 | 0,84 | 0,71 | 0,61 | 0,48 |
| 1,1 | Q | 20,7 | 32,4 | 46,6 | 83 | 129,5 | 252 | 332 | 518 | 811 | 1165 | 1585 | 2070 | 3250 |
| | h | 9,9 | 7,6 | 6,2 | 4,4 | 3,4 | 2,4 | 2 | 1,6 | 1,2 | 1 | 0,85 | 0,74 | 0,58 |
| 1,2 | Q | 22,6 | 35,4 | 50,9 | 90,6 | 141 | 276 | 362 | 565 | 885 | 1272 | 1730 | 2260 | 3550 |
| | h | 11,7 | 9 | 7,2 | 5,2 | 4 | 2,9 | 2,4 | 1,9 | 1,5 | 1,2 | 1 | 0,87 | 0,69 |
| 1,3 | Q | 24,5 | 38,3 | 55 | 98 | 153 | 299 | 392 | 612 | 960 | 1378 | 1875 | 2450 | 3840 |
| | h | 13,5 | 10,4 | 8,4 | 6 | 4,7 | 3,3 | 2,8 | 2,2 | 1,71 | 1,4 | 1,15 | 1 | 0,8 |
| 1,4 | Q | 26,35 | 41,3 | 59,3 | 105,5 | 165 | 302 | 422 | 660 | 1032 | 1473 | 2020 | 2635 | 4140 |
| | h | 15,4 | 11,9 | 9,6 | 6,9 | 5,4 | 3,8 | 3,2 | 2,5 | 2 | 1,6 | 13 | 1,17 | 0,92 |
| 1,5 | Q | 28,25 | 44,2 | 63,6 | 113 | 176,5 | 345 | 452 | 707 | 1106 | 1590 | 2165 | 2825 | 4430 |
| | h | 17,4 | 13,5 | 10,9 | 7,8 | 6,1 | 4,4 | 3,6 | 2,8 | 2,25 | 1,82 | 1,5 | 1,34 | 1,05 |
| 1,6 | Q | 30,1 | 47,1 | 67,8 | 121 | 188,5 | 368 | 483 | 753 | 1180 | 1695 | 2310 | 3010 | 4730 |
| | h | 19,6 | 15,3 | 12,4 | 8,9 | 6,9 | 4,9 | 4,1 | 3,2 | 2,55 | 2,05 | 1,7 | 1,53 | 1,18 |
| 1,7 | Q | 32 | 50,1 | 72 | 128 | 200 | 392 | 513 | 800 | 1253 | 1802 | 2455 | 3200 | 5020 |
| | h | 21,9 | 17,2 | 13,9 | 10 | 7,8 | 5,4 | 4,6 | 3,6 | 2,85 | 2,3 | 1,95 | 1,7 | 1,33 |
| 1,8 | Q | 33,9 | 53 | 76,3 | 136 | 212 | 415 | 543 | 848 | 1327 | 1905 | 2600 | 3390 | 5320 |
| | h | 24,2 | 19,1 | 15,4 | 11,1 | 8,7 | 6 | 5,1 | 4 | 3,15 | 2,6 | 2,2 | 1,9 | 1,48 |
| 1,9 | Q | 35,8 | 56 | 80,5 | 143,5 | 224 | 438 | 573 | 895 | 1400 | 2015 | 2740 | 3580 | 5610 |
| | h | 26,8 | 21 | 17 | 12,3 | 9,6 | 6,8 | 5,6 | 4,4 | 3,45 | 2,85 | 2,45 | 2,1 | 1,64 |
| 2 | Q | 37,7 | 59 | 84,8 | 151 | 235,5 | 461 | 603 | 943 | 1475 | 2120 | 2885 | 3765 | 5910 |
| | h | 29,6 | 23 | 18,6 | 13,4 | 10,5 | 7,5 | 6,2 | 4,9 | 3,8 | 3,17 | 2,7 | 2,33 | 1,8 |
| 2,1 | Q | 39,5 | 62 | 89 | 158,5 | 247,5 | 484 | 633 | 990 | 1548 | 2225 | 3030 | 3955 | 6200 |
| | h | 33,2 | 25,1 | 20,4 | 14,8 | 11,5 | 8,2 | 6,8 | 5,4 | 4,2 | 3,5 | 2,95 | 2,55 | 2 |
| 2,2 | Q | 41,5 | 64,9 | 93,2 | 176 | 259 | 507 | 663 | 1036 | 1620 | 2330 | 3175 | 4145 | 6500 |
| | h | 35 | 27,3 | 22,3 | 16,2 | 12,5 | 9,1 | 7,4 | 5,9 | 4,6 | 3,85 | 3,25 | 2,8 | 2,2 |
| 2,3 | Q | 43,3 | 67,9 | 97,5 | 173,5 | 271 | 530 | 694 | 1082 | 1695 | 2440 | 3320 | 4330 | 6800 |
| | h | 38 | 29,7 | 24,2 | 17,7 | 13,6 | 9,8 | 8,1 | 6,4 | 5 | 4,15 | 3,5 | 3,05 | 2,4 |
| 2,4 | Q | 45,2 | 70,8 | 101,5 | 181 | 282,5 | 553 | 724 | 1130 | 1170 | 2545 | 3460 | 4520 | 7090 |
| | h | 42,1 | 32,1 | 26,2 | 19,1 | 14,7 | 10,6 | 8,8 | 6,9 | 5,45 | 4,55 | 3,8 | 3,3 | 2,62 |
| 2,5 | Q | 47,1 | 73,7 | 105,8 | 189 | 294,5 | 576 | 755 | 1178 | 1843 | 2650 | 3610 | 4710 | 7390 |
| | h | 45 | 34,7 | 28,3 | 20,5 | 16 | 11,4 | 9,6 | 7,5 | 5,9 | 4,9 | 4,1 | 3,58 | 2,84 |
| 2,6 | Q | 49 | 76,6 | 110 | 196 | 306 | 599 | 785 | 1225 | 1915 | 2755 | 3755 | 4900 | 7680 |
| | h | 48,3 | 37,3 | 30,4 | 22,2 | 17,2 | 12,3 | 10,4 | 8,1 | 6,35 | 5,25 | 4,4 | 3,85 | 3,07 |
| 2,7 | Q | 50,9 | 79,6 | 114,3 | 204 | 318 | 622 | 815 | 1271 | 1990 | 2860 | 3900 | 5090 | 7980 |
| | h | 51,7 | 40 | 32,5 | 23,8 | 18,5 | 13,2 | 11,2 | 8,7 | 6,85 | 5,65 | 4,75 | 4,15 | 3,3 |
| 2,8 | Q | 52,7 | 82,6 | 118,5 | 211,5 | 330 | 645 | 845 | 1320 | 2060 | 2970 | 4040 | 5280 | 8270 |
| | h | 55,2 | 42,5 | 34,8 | 25,5 | 19,9 | 14 | 12 | 9,3 | 7,35 | 6,05 | 5,10 | 4,45 | 3,56 |
| 2,9 | Q | 54,6 | 85,5 | 123 | 219 | 342 | 668 | 875 | 1365 | 2140 | 3075 | 4190 | 5460 | 8560 |
| | h | 58,7 | 45,1 | 37,1 | 27,1 | 21,3 | 15,2 | 12,8 | 10 | 7,85 | 6,45 | 5,5 | 4,75 | 3,82 |
| 3 | Q | 56,5 | 88,5 | 127 | 226,5 | 354 | 691 | 905 | 1414 | 2210 | 3180 | 4330 | 5650 | 8850 |
| | h | 62,9 | 47,9 | 39,6 | 28,8 | 22,6 | 16,3 | 13,6 | 10,7 | 8,4 | 6,9 | 5,9 | 5,1 | 4,1 |

**Q=** Capacity in litre per min

**V=** Water velocity in m/sec

**h=** Head loss in m of water for every 100m of striaght piping

*Note: above data are relevant to completely smooth and cast-iron piping.*
*For a general estimation, multiply the head losses data by:*

*0,8 flat rolled new steel piping*
*1,25 slightly rusty steel piping*
*0,7 piping in aluminium*
*0,65 piping in PVC*
*1,25 piping in concrete fibre*

# Axis line head losses

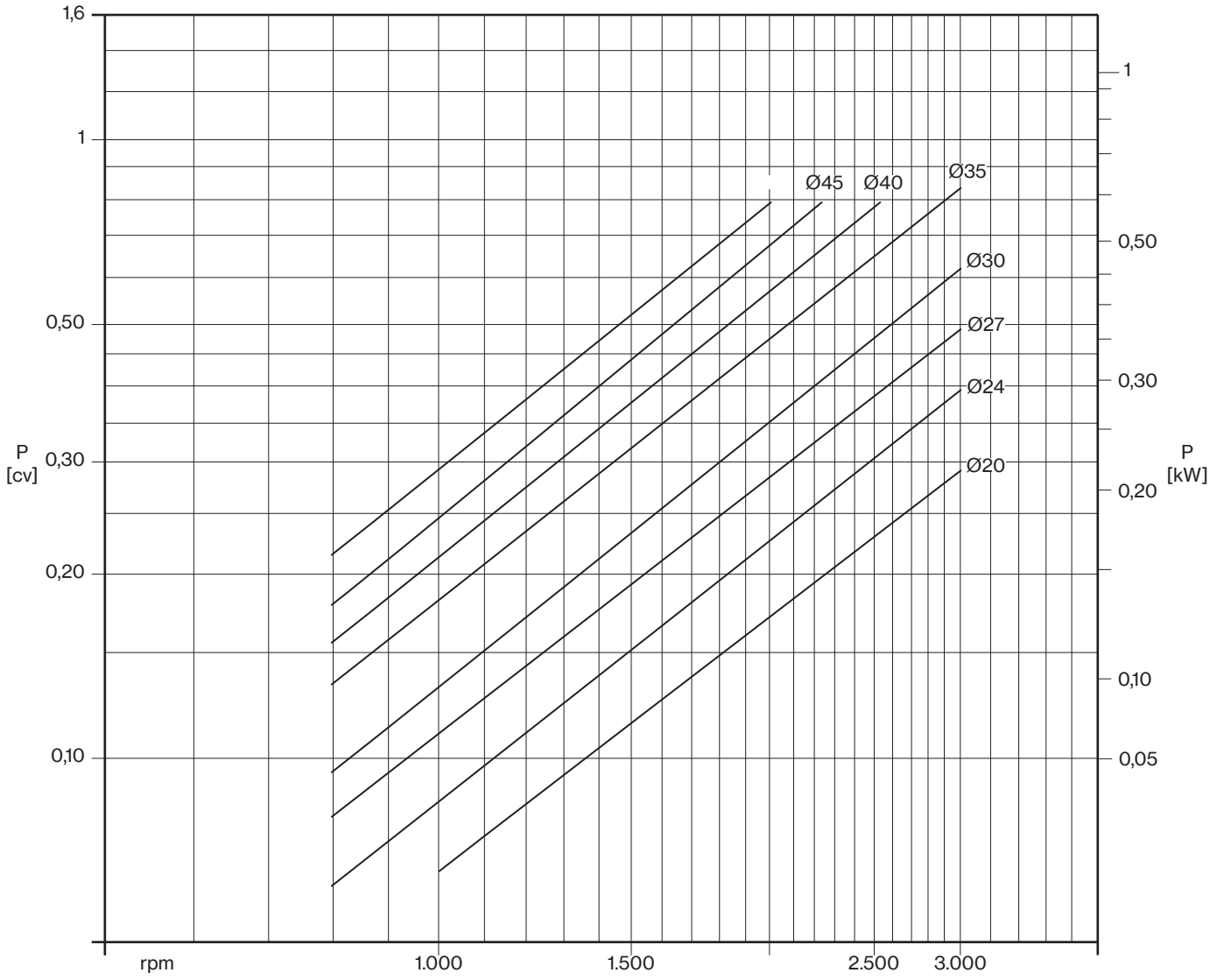
| CAPACITY | | AXIS LINE TYPE | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LA3/20 | LA3/24 | LA4/20 | LA4/24 | LA4/30 | LA5/20 | LA5/24 | LA5/30 | LA6/24 | LA6/30 | LA6/35 | LA8/40 | LA10/45 | LA10/50 | LA12/45 | LA12/50 | LA12/60 | LA14/55 | LA14/65 | LA14/70 |
| m³/h | l/min | HEAD LOSSES IN METERS EVERY 100 METRES OF AXIS LINE | | | | | | | | | | | | | | | | | | | |
| 18 | 300 | 2 | 2,5 | | | | | | | | | | | | | | | | | | |
| 24 | 400 | 3,6 | 4,6 | | | | | | | | | | | | | | | | | | |
| 30 | 500 | 5,5 | 7 | | | | | | | | | | | | | | | | | | |
| 36 | 600 | 8 | 9,8 | | | | | | | | | | | | | | | | | | |
| 42 | 700 | 10,7 | 12,8 | 3 | 3,6 | 5,4 | | | | | | | | | | | | | | | |
| 48 | 800 | 14 | 16,6 | 4 | 4,6 | 6,6 | | | | | | | | | | | | | | | |
| 54 | 900 | 17 | 20,7 | 4,8 | 5,8 | 7,8 | | | | | | | | | | | | | | | |
| 60 | 1000 | 21 | 25 | 5,8 | 7 | 9,3 | | | | | | | | | | | | | | | |
| 72 | 1200 | | | 8 | 9,8 | 12,5 | 3,4 | 3,8 | 4,6 | | | | | | | | | | | | |
| 84 | 1400 | | | 10,8 | 13 | 16,4 | 4,6 | 5 | 6,1 | | | | | | | | | | | | |
| 96 | 1600 | | | 14 | 17 | 21 | 5,9 | 6,5 | 8 | | | | | | | | | | | | |
| 108 | 1800 | | | 18,2 | 22 | 27,7 | 7,3 | 8,2 | 10 | 1,8 | 2,3 | 2,5 | | | | | | | | | |
| 120 | 2000 | | | | | | 8,8 | 10 | 12,2 | 2,2 | 2,8 | 3,1 | | | | | | | | | |
| 135 | 2250 | | | | | | 11 | 12,6 | 15,4 | 2,8 | 3,4 | 3,8 | | | | | | | | | |
| 150 | 2500 | | | | | | 13,6 | 15,6 | 19 | 3,4 | 4,2 | 4,6 | | | | | | | | | |
| 165 | 2750 | | | | | | 16,5 | 19 | 23 | 4,1 | 5 | 5,6 | | | | | | | | | |
| 180 | 3000 | | | | | | 20 | 23 | 28 | 5 | 5,8 | 6,6 | 2,1 | | | | | | | | |
| 195 | 3250 | | | | | | 23,8 | 27,7 | 34 | 5,7 | 6,8 | 7,7 | 2,4 | | | | | | | | |
| 210 | 3500 | | | | | | | | | 6,6 | 7,8 | 8,9 | 2,8 | | | | | | | | |
| 225 | 3750 | | | | | | | | | 7,5 | 8,8 | 10,2 | 3,3 | | | | | | | | |
| 240 | 4000 | | | | | | | | | 8,5 | 10 | 11,5 | 3,7 | | | | | | | | |
| 255 | 4250 | | | | | | | | | 9,5 | 11,2 | 12,8 | 4,2 | | | | | | | | |
| 270 | 4500 | | | | | | | | | 10,5 | 12,5 | 14,2 | 4,6 | | | | | | | | |
| 285 | 4750 | | | | | | | | | 11,6 | 13,8 | 15,8 | 5,2 | | | | | | | | |
| 300 | 5000 | | | | | | | | | 12,8 | 15,2 | 17,5 | 5,7 | 2 | 2,2 | | | | | | |
| 330 | 5500 | | | | | | | | | 15 | 18,4 | 20,8 | 6,8 | 2,4 | 2,5 | | | | | | |
| 360 | 6000 | | | | | | | | | | | | 8 | 2,8 | 3 | | | | | | |
| 390 | 6500 | | | | | | | | | | | | 9,4 | 3,4 | 3,6 | | | | | | |
| 420 | 7000 | | | | | | | | | | | | 10,6 | 3,8 | 4,1 | 1,2 | 1,3 | 1,4 | | | |
| 450 | 7500 | | | | | | | | | | | | 12,3 | 4,4 | 4,6 | 1,3 | 1,4 | 1,5 | | | |
| 480 | 8000 | | | | | | | | | | | | 13,5 | 4,9 | 5,2 | 1,5 | 1,6 | 1,7 | | | |
| 510 | 8500 | | | | | | | | | | | | 15,2 | 5,5 | 5,9 | 1,7 | 1,8 | 1,9 | | | |
| 540 | 9000 | | | | | | | | | | | | 17 | 6,2 | 6,5 | 1,9 | 2 | 2,1 | | | |
| 570 | 9500 | | | | | | | | | | | | | 6,9 | 7,2 | 2,1 | 2,2 | 2,3 | | | |
| 600 | 10000 | | | | | | | | | | | | | 7,5 | 7,9 | 2,3 | 2,4 | 2,5 | | | |
| 660 | 11000 | | | | | | | | | | | | | 9 | 9,5 | 2,7 | 2,8 | 2,9 | | | |
| 720 | 12000 | | | | | | | | | | | | | 10,5 | 11 | 3,2 | 3,4 | 3,6 | | | |
| 780 | 13000 | | | | | | | | | | | | | 12 | 12,7 | 3,8 | 4 | 4,2 | | | |
| 840 | 14000 | | | | | | | | | | | | | 14 | 14,8 | 4,4 | 4,6 | 4,8 | | | |
| 900 | 15000 | | | | | | | | | | | | | 15,8 | 16,7 | 4,9 | 5,2 | 5,5 | 1,5 | 2,5 | 3,2 |
| 960 | 16000 | | | | | | | | | | | | | | | 5,5 | 5,8 | 6,1 | 1,7 | 2,8 | 3,8 |
| 1020 | 17000 | | | | | | | | | | | | | | | 6,4 | 6,7 | 7 | 1,8 | 3,1 | 4 |
| 1080 | 18000 | | | | | | | | | | | | | | | 7 | 7,3 | 7,6 | 2,2 | 3,5 | 4,6 |
| 1140 | 19000 | | | | | | | | | | | | | | | 7,7 | 8,1 | 8,5 | 2,4 | 3,8 | 5 |
| 1200 | 20000 | | | | | | | | | | | | | | | 9 | 9,4 | 9,8 | 2,5 | 4,4 | 5,5 |
| 1320 | 22000 | | | | | | | | | | | | | | | 10,3 | 10,8 | 11,3 | 3 | 5 | 6,5 |
| 1380 | 26000 | | | | | | | | | | | | | | | | | | 3,5 | 6 | 7,5 |
| 1500 | 25000 | | | | | | | | | | | | | | | | | | 4 | 6,5 | 8,5 |
| 1620 | 27000 | | | | | | | | | | | | | | | | | | 4,2 | 7 | 9 |
| 1740 | 29000 | | | | | | | | | | | | | | | | | | 5,2 | 8,5 | 10,1 |
| 1800 | 30000 | | | | | | | | | | | | | | | | | | 5,5 | 9 | 10,3 |

# Head losses on the base

| | CAPACITY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L/min | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2250 | 2500 | 2750 | 3000 | 3250 | 3500 | 3750 | 4000 | 4500 | 5000 | 5500 | 6000 | 6500 | 7000 | 7500 | 8000 | 9000 | 10000 | 11000 | 12000 | 13000 | 14000 | 15000 | 16000 | 17000 | 18000 | 19000 | 20000 | 21000 | 22000 | | | |
| $m^3/h$ | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 135 | 150 | 165 | 180 | 195 | 210 | 225 | 240 | 270 | 300 | 330 | 360 | 390 | 420 | 450 | 480 | 540 | 600 | 660 | 720 | 780 | 840 | 900 | 960 | 1020 | 1080 | 1140 | 1200 | 1260 | 1320 | | | |

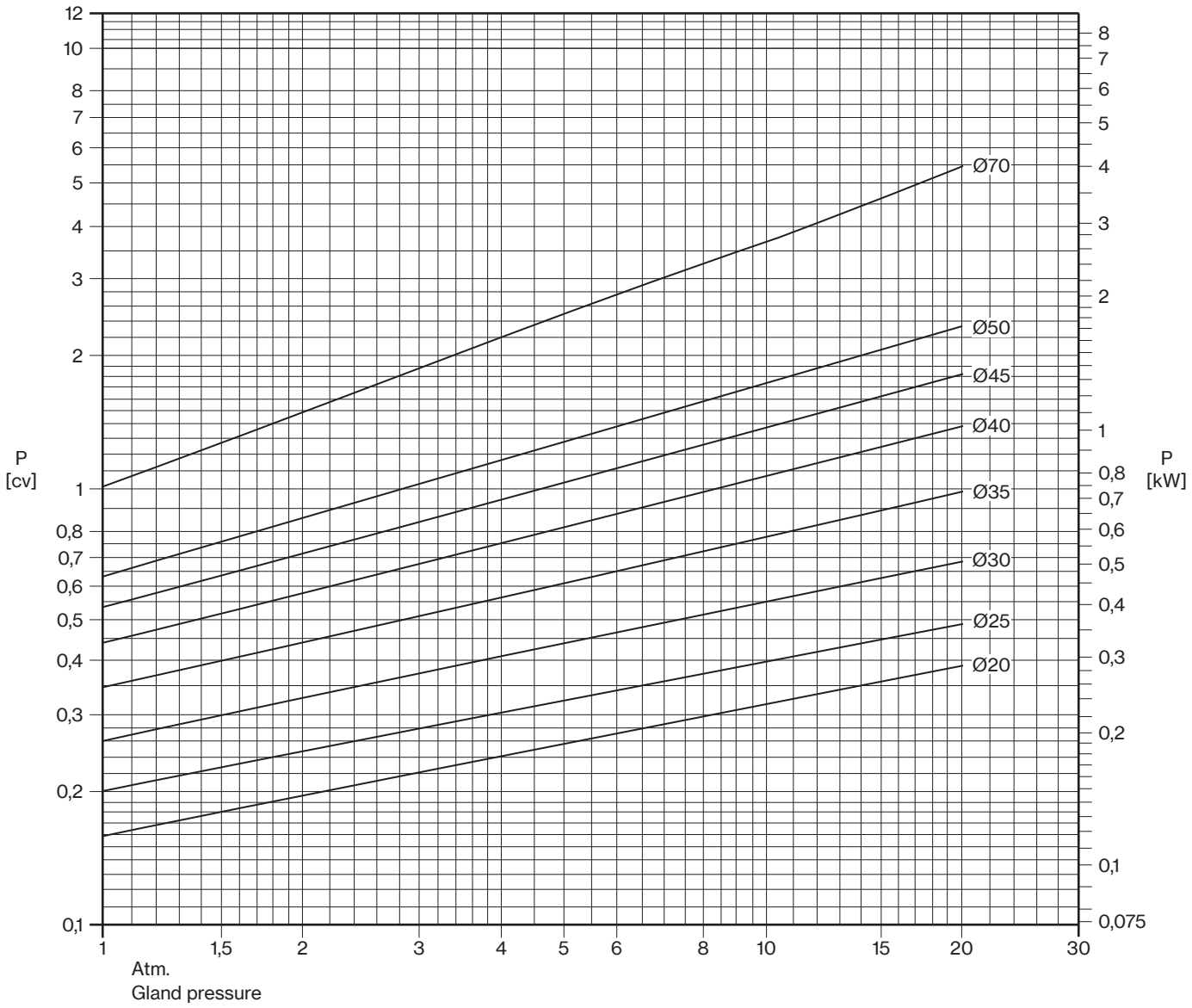
| BASE TYPE | HEAD LOSSES IN METERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B4/3 | 0,2 | 0,27 | 0,35 | 0,47 | 0,6 | 0,8 | 1 | 1,23 | 1,54 | 1,9 | 2,25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B4/4 | 0,15 | 0,22 | 0,31 | 0,42 | 0,54 | 0,68 | 0,82 | 1,04 | 1,28 | 1,58 | 1,94 | 2,4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B5/4 | | | | 0,25 | 0,31 | 0,38 | 0,43 | 0,56 | 0,68 | 0,81 | 0,97 | 1,12 | 1,29 | 1,47 | 1,66 | 2,06 | | | | | | | | | | | | | | | | | | | | | | | | |
| B5/5 | | | | 0,22 | 0,28 | 0,34 | 0,4 | 0,51 | 0,63 | 0,76 | 0,9 | 1,04 | 1,2 | 1,37 | 1,54 | 1,9 | | | | | | | | | | | | | | | | | | | | | | | | |
| B6/6 | | | | | | | 0,15 | 0,2 | 0,26 | 0,33 | 0,38 | 0,44 | 0,53 | 0,6 | 0,69 | 0,89 | 1,1 | 1,3 | | | | | | | | | | | | | | | | | | | | | | | |
| B8/8 | | | | | | | | | | 0,13 | 0,15 | 0,17 | 0,20 | 0,24 | 0,27 | 0,34 | 0,43 | 0,52 | 0,62 | 0,70 | 0,84 | 0,97 | 1,10 | 1,42 | 1,75 | 2,15 | 2,6 | 3,07 | | | | | | | | | | | | |
| B12/12 | | | | | | | | | | | | | | | | | | | 0,11 | 0,14 | 0,17 | 0,19 | 0,22 | 0,27 | 0,33 | 0,41 | 0,49 | 0,57 | 0,66 | 0,75 | 0,84 | 0,96 | 1,06 | 1,17 | 1,28 | 1,42 | 1,53 | | | |

# Absorbed power every 10 meters of axis line



# Power absorbed by the gland

SHOWN IN THE DIAGRAM HAVING A SPEED 1450 Rpm

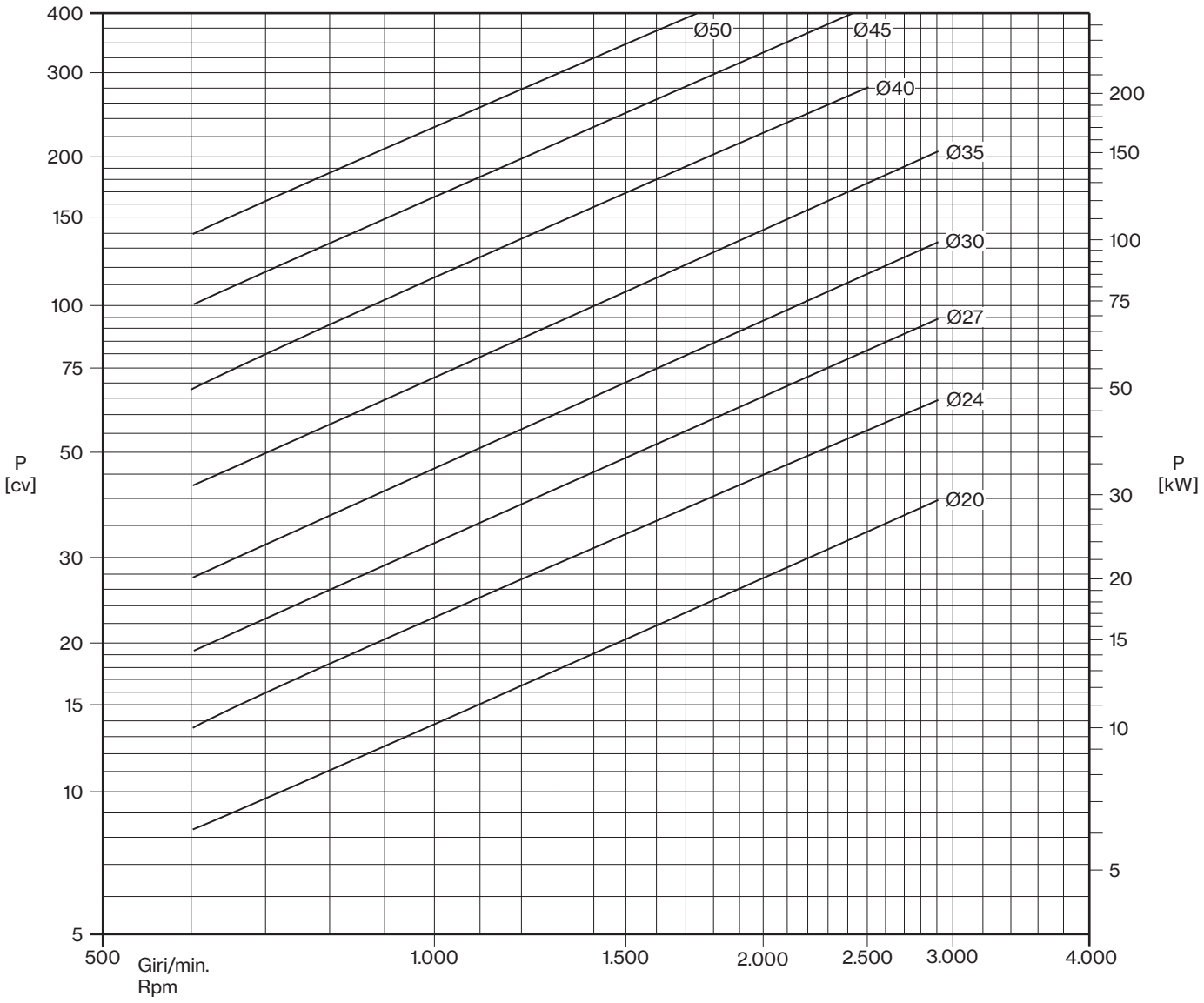



P = Absorbed power at 1450 Rpm in CV

For differents rpm (n) the loss (px) can be calculated with: $Px = \frac{P}{1450} \times n$

| HEAD BASE | HEADS | | | | |
|---|---|---|---|---|---|
| | VE1<br>OR1<br>OM1 | VE2-VEO2<br>OR2-OM2<br>ME2N-ME20 | VE3<br>OR3-OM3<br>OM35-ME3N | OR4<br>OM4<br>ME4 | OR5<br>ME5 |
| | Ø GLAND | | | | |
| 3” | 20 | 25 | 30 | - | - |
| 4” | | | | | |
| 5” | | | | 35 | |
| 6” | - | | | | 35 |
| 8” | | 50 | | | |
| 10” | | 40 | | | |
| 12” | | - | 70 | | |

# Axis line transmissible powers



# Measurement comparison in unit

| Measurement comparison in unit | | | | |
|---|---|---|---|---|
| | CV | HP | kW | kgm/s |
| CV | 1 | 0,9863 | 0,7355 | 75 |
| HP | 1,0139 | 1 | 0,7457 | 76,05 |
| kW | 1,36 | 1,341 | 1 | 101,98 |

| Pressure | |
|---|---|
| Unit | Comparison |
| 1 kg/cm² = 9,81 · N/cm² =0,981 bar = 98100 Pa | 1 Pa = 1 · N/cm² = 1 Pascal |
| 1 kg/cm² = 1 at = 10000 kg/m² =techn. atmosphere = 10 m water col at 4° C = 735,56 Torr (mm Hg at 0°C) | |
| 1 lb per square inch = 1 psi = 0,0703 kg/cm² | 1 kg/cm² = 14,2 psi |

| Capacity measures compared at litre | | | | |
|---|---|---|---|---|
| Unit | Comparison | Unit | Comparison | |
| **Imperial fluid once** | 0,0284 litre | litre | 35,2 | Imp. fl. oz |
| **U.S. fluid once** | 0,0295 litre | litre | 33,81 | U.S. fl. oz. |
| **Imperial pinte** | 0,568 litre | litre | 1,76 | Imp. pinte |
| **U.S. gallon** | 3,785 litre | litre | 0,2642 | U.S. gal. |
| **Imperial gallon** | 4,546 litre | litre | 0,22 | Imp. gal |
| **U.S. bushel** | 35,24 litre | litre | 0,0284 | U.S. bu. |
| **Imperial bushel** | 36,35 litre | litre | 0,0275 | Imp. bu. |
| **U.S. barrel** | 119,22 litre | litre | 0,0083 | U.S. bbl. |
| **Imperial barrel** | 163,65 litre | litre | 0,00611 | Imp. bbl. |

# Technical appendix

## *Notices on centrifugal pumps*

***Efficiency calculation** (known):*

***Q** - capacity l/s*
***H** - total head in m*
***Pa** - absorbed power in kW*
***g** - density in Kg/dm³*

$$\eta = g \cdot \frac{Q \cdot H}{102 \cdot Pa} \quad [kW]$$

***Absorbed power calculation Pa** (known):*

***Q** - capacity l/s*
***H** - total head in m*
**η** - *efficiency*
***g** - density in Kg/dm³*

$$Pa = g \cdot \frac{Q \cdot H}{102 \cdot \eta} \quad [kW]$$

***Working curves***

Between the working curves of a centrifugal pump at different speed, is in force the affinity law, provided that there aren't cavitation effects, and that could be like this:

curves Q-H and Q-Pa at n. rounds are changed in Q'-H' and Q'-Pa' at n' rounds.
According to:

$$Q' = \left(\frac{n'}{n}\right) \cdot Q \qquad H' = \left(\frac{n'}{n}\right)^2 \cdot H \qquad Pa' = \left(\frac{n'}{n}\right)^3 \cdot Pa$$