PRODUCT CATALOG

E-Tech

# EV SERIES 50 HZ

## VERTICAL MULTISTAGE PUMPS

Franklin Electric

# INDEX



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For the most up-to-date product information, visit **franklinwater.eu**.

# VERTICAL MULTISTAGE PUMPS

## FEATURES AND BENEFITS

## APPLICATIONS

Water Distribution, Pressure Boosting, Drinking water

Irrigation Water treatment plants Gardening, Sprinklers

Wash down unit Boiler Feed

Domestic, industrial and agricultural systems

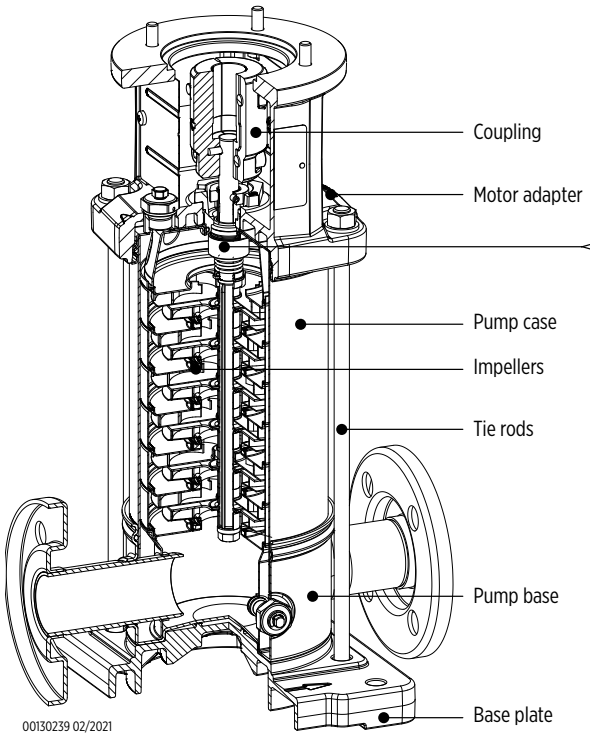
Circulation of hot and cold water for heating, cooling, conditioning systems

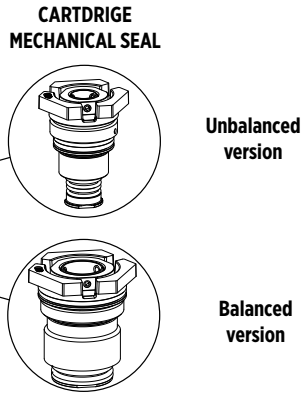
## ROBUST AND RELIABLE

- Compact and solid structure
- Easy installation in-line ports
- All wetted parts in Stainless Steel
- Shaft bearing and journal sleeve made of tungsten carbide
- WRAS approved PPS (EV 1-3-6-10-15-20) / PTFE (EV 30-45-65-95)
- Easily replaceable cartridge mechanical seal, no need to disassemble the pump; for models higher than 4 kW no need to remove the motor
- Reduced service and maintenance time
- Replaceable Stainless Steel wear ring in the neck of the impeller (only for EV 30-45-65-95)

## HIGH QUALITY MATERIALS

- Stainless steel impeller and diffuser for corrosion resistance
- Standard mechanical seal (EN 12756 ex DIN 24960) WRAS approved; balanced version for EV 30-45-65-95
- Standard IE3 motor, size B14 up to 4 kW / size B5 from 5.5 kW and above
- Tungsten carbide intermediate bearing to stabilize the hydraulic with large number of stages

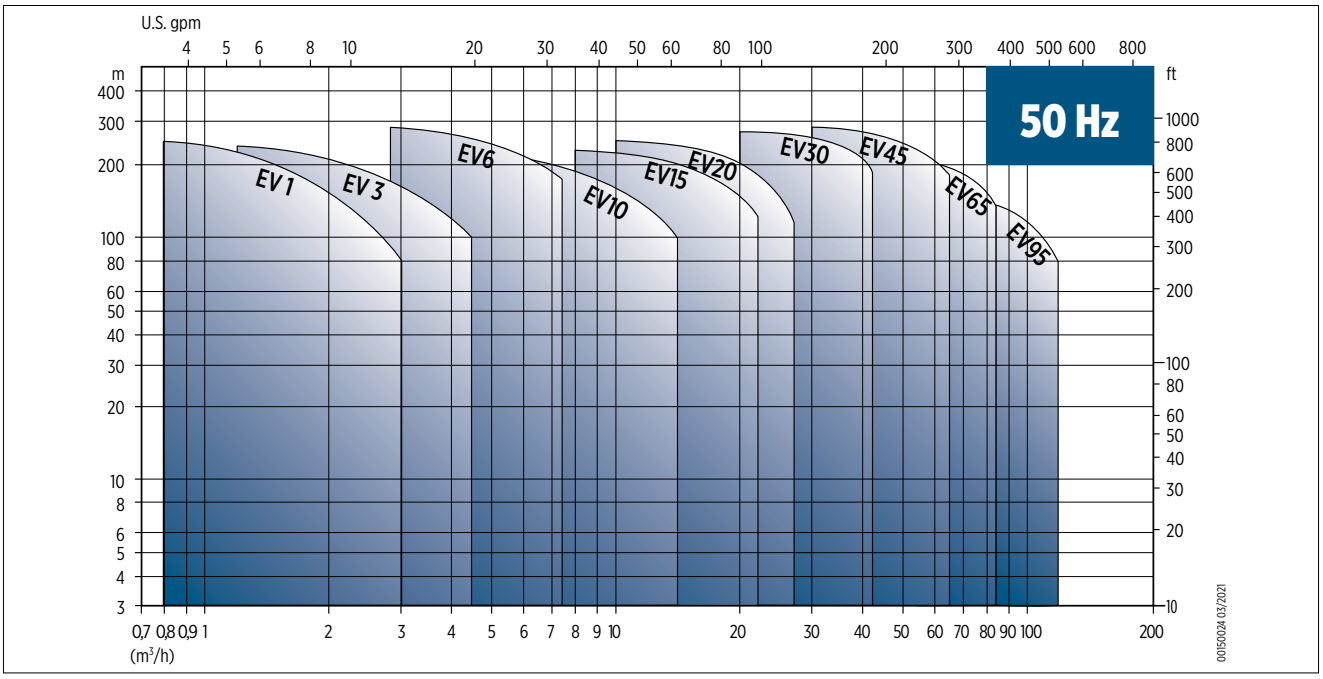


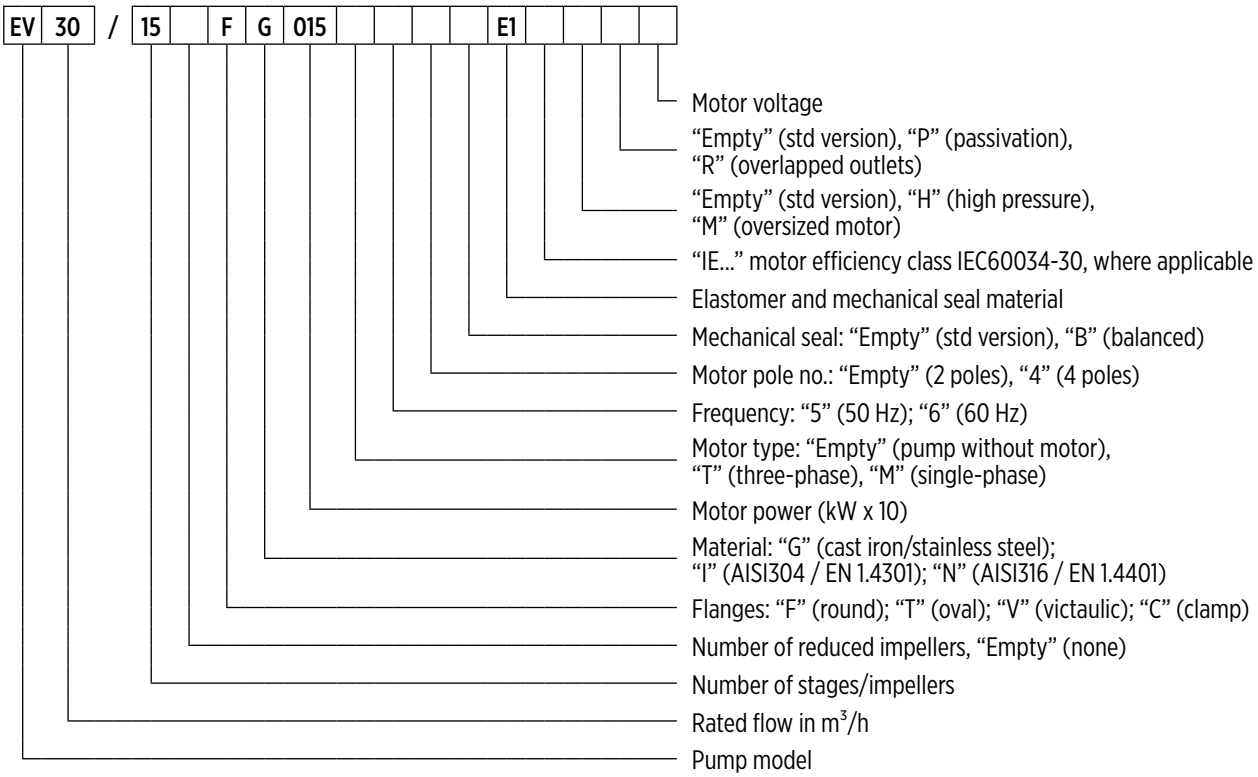

Vertical multistage pumps are rotodynamic pumps, not self-priming, assembled with one or more stages with radial or semiaxial (mixed) flow. The pump consists in a pump body, with in-line connections to the pipes, an external waterproof shell, an upper bracket that supports the motor. The bottom base plate allows the ground fixing. The structural integrity is guaranteed by the tie rods. The motor shaft and the pump shaft (driven shaft) are connected to each other by rigid, removable coupling. The rigid coupling can be equipped with a ball bearing to support the axial thrust (thrust assembly). The mechanical seal, cartridge type, is free from periodic maintenance.

E-Tech

## FAMILY CURVES




## PUMP IDENTIFICATION CODE

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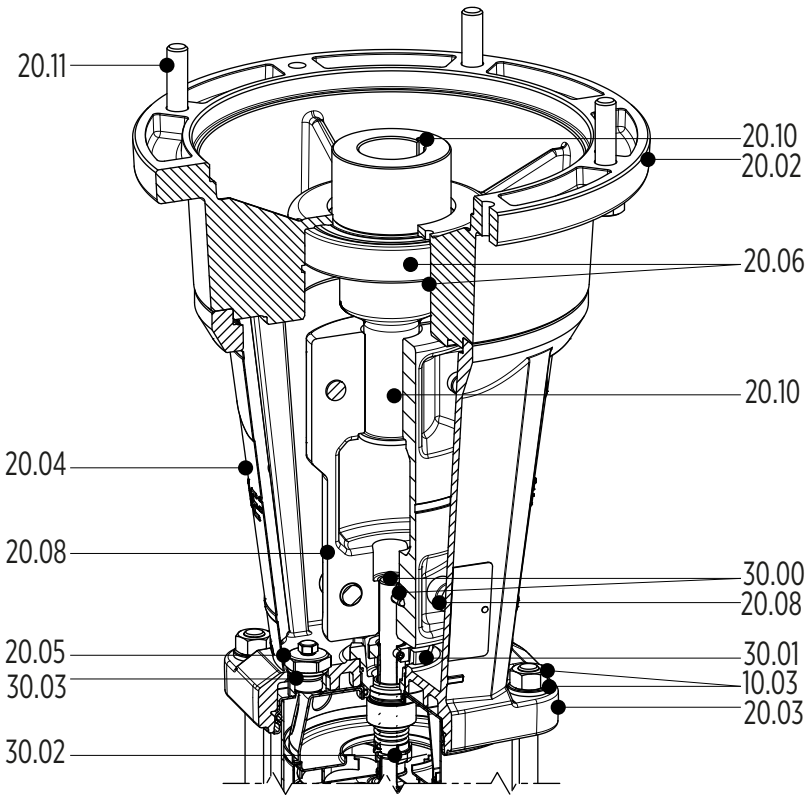
## GENERAL FEATURES

| Model | | 1 | 3 | 6 | 10 | 15 | 20 | 30 | 45 | 65 | 95 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nominal flow [m³/h] | | 2 | 3 | 6 | 11 | 17 | 20 | 36 | 48 | 70 | 90 |
| Maximum liquid temperature [°C] | Domestic uses | 85 °C | | | | | | | | | |
| | Other uses | 120 °C | | | | | | | | | |
| Max. ɳ hydraulic [%] | | 47.8 | 57.1 | 64.6 | 68.5 | 69.0 | 69.0 | 75.4 | 76.3 | 78.4 | 79.4 |
| Range [m³/h] | | 0.8 - 2.8 | 1.4 - 4.2 | 2.8 - 7.2 | 7.0 - 14.0 | 8.0 - 24.0 | 9.0 - 28.0 | 25.0 - 42.0 | 34.0 - 64.0 | 30.0 - 88.0 | 45.0 - 115.0 |
| Max. pressure [bar] | Standard version | 26 | 26 | 26 | 26 | 26 | 26 | 32 | 32 | 25 | 25 |
| Motor power [kW] (2 poles) | | 0.37 - 2.2 | 0.37 - 3.0 | 0.37 - 5.5 | 0.75 - 7.5 | 1.1 - 15 | 1.1 - 18.5 | 2.2 - 30.0 | 3.0 - 45.0 | 4.0 - 45.0 | 5.5 - 45.0 |
| Material versions | G (cast-iron + AISI 304 SS) | - | - | - | - | - | - | • | • | • | • |
| | I (AISI 304 SS) | • | • | • | • | • | • | - | - | - | - |
| | N (AISI 316L SS) | • | • | • | • | • | • | • | • | • | • |
| | P (AISI 316L SS passivated) | • | • | • | • | • | • | • | • | • | • |
| Hydraulic connection (dimensions) | F (round flange) I (AISI 304 SS) version N (AISI 316L SS) version | DN 25 PN 25/40 | DN 25 PN 25/40 | DN 32 PN 25/40 | DN 40 PN 25/40 | DN 50 PN 25/40 | DN 50 PN 25/40 | - | - | - | - |
| | F (round flange) G (cast-iron) version N (AISI 316L SS) version | - | - | - | - | - | - | DN 65 PN16 - PN 25/40 | DN 80 PN16 - PN 25/40 | DN 100 PN16 - PN 25/40 | DN 100 PN16 - PN 25/40 |
| | T (oval flange) I (AISI 304 SS) version | Rp 1" (DN 25) PN 16 | Rp 1" (DN 25) PN 16 | Rp 1" (DN 25) PN 16 | Rp 1" ½ (DN 40) PN 16 | Rp 2" (DN 50) PN 16 | Rp 2" (DN 50) PN 16 | - | - | - | - |
| | V (Victaulic) N (AISI 316L SS) version | 1" (DN 25) PN 25 | 1" (DN 25) PN 25 | 1" ¼ (DN 32) PN 25 | 1" ½ (DN 40) PN 25 | 2" (DN 50) PN 25 | 2" (DN 50) PN 25 | - | - | - | - |
| | C (Clamp) N (AISI 316L SS) version | 1" (DN 25) PN 25 | 1" (DN 25) PN 25 | 1" ¼ (DN 32) PN 25 | 1" ½ (DN 40) PN 25 | 2" (DN 50) PN 25 | 2" (DN 50) PN 25 | - | - | - | - |

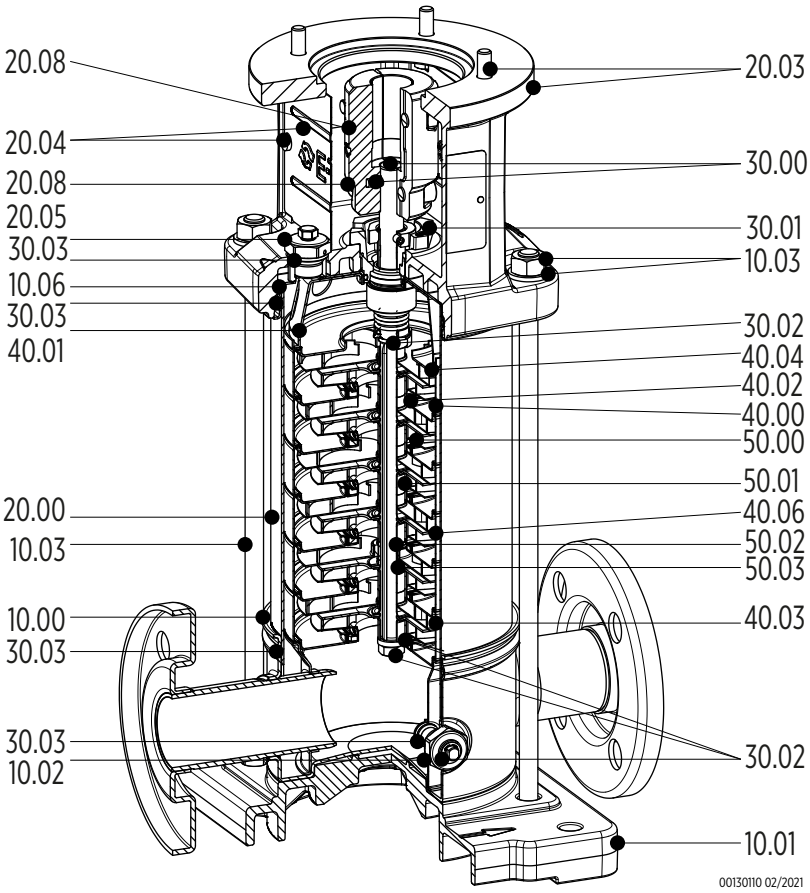
"-" = not available
• = available

# Spare parts and materials

## EV 1-3-6-10




CONFIGURATION 5.5 KW AND ABOVE WITH THRUST BEARING




CONFIGURATION UP TO 4 KW WITHOUT THRUST BEARING

## PARTS IN CONTACT WITH LIQUID

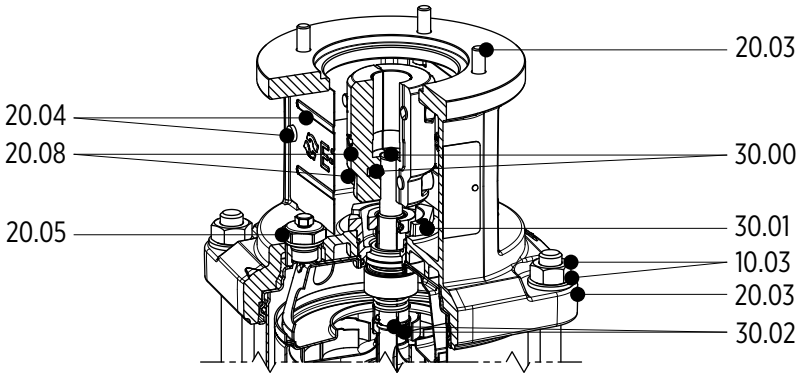
| Ref. No | Parts description | Material | Reference standard | | | |
|---|---|---|---|---|---|---|
| | | | I version | | N version | |
| | | | ASTM | DIN/EN | ASTM | DIN/EN |
| **10.00** | **Pump casing** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **10.02** | **Drain plug** | Stainless Steel | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| **10.06** | **Upper flange** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **20.00** | **Outer case** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **20.05** | **Filling plug** | Stainless Steel | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| **30.00** | **Pump shaft & Pin** | Stainless Steel | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| **30.01** | **Cartridge mechanical seal** | Stainless Steel / Carbon graphite / Silicon Carbide / EPDM | | | | |
| **30.02** | **Mechanical seal fastening kit** | Stainless Steel | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| **30.03** | **Kit O-rings** | EPDM | | | | |
| **40.00** | **Stage housing and diffuser** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **40.01** | **Stage Centering outlet** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **40.02** | **Floating neck ring** | Stainless steel, PPS | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| **40.03** | **Initial stage housing** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **40.04** | **Last Stage with diffuser** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **40.06** | **Stage housing and diffuser with bearing** | Stainless Steel / Tungsten carbide (WC) | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| **50.00** | **Impeller** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **50.01** | **Impeller spacer** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **50.02** | **Intermediate sleeve** | Tungsten Carbide (WC) | | | | |
| **50.03** | **Intermediate sleeve spacer** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |

## SPARE PARTS LIST

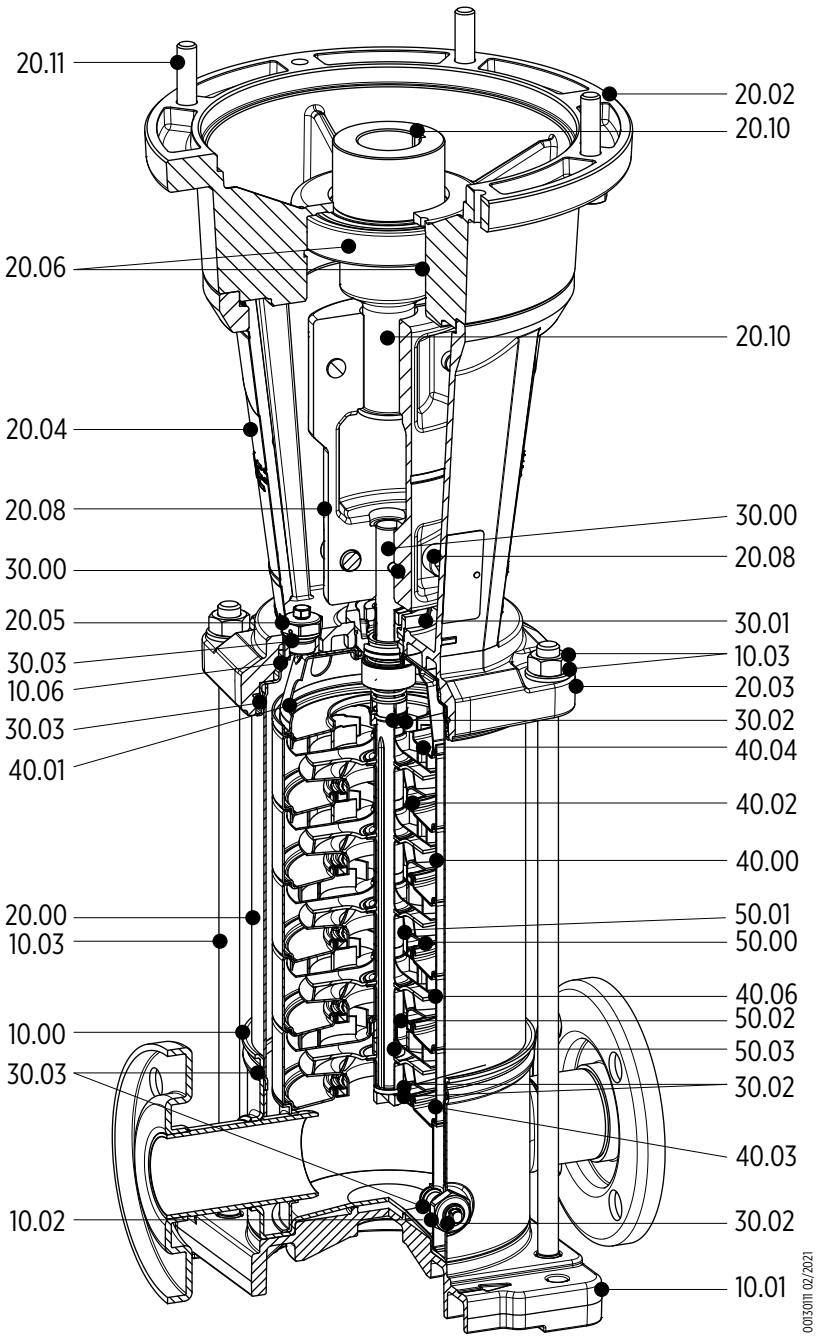
| Ref. No | Parts description |
|---|---|
| **10.00** | Pump casing |
| **10.01** | Pump base |
| **10.02** | Drain plug |
| **10.03** | Tie bolts, washers and nuts |
| **10.06** | Upper flange |
| **20.00** | Outer case |
| **20.02** | Motor flange |
| **20.03** | Motor bracket |
| **20.04** | Coupling guard |
| **20.05** | Filling plug |
| **20.06** | Kit bearings |
| **20.08** | Coupling |
| **20.10** | Motor shaft adapter |
| **20.11** | Lifting eyelets and bolts |

| Ref. No | Parts description |
|---|---|
| **30.00** | Pump shaft & Pin |
| **30.01** | Cartridge mechanical seal |
| **30.02** | Kit screws, lower disks and rings |
| **30.03** | Kit O-rings |
| **40.00** | Stage housing and diffuser |
| **40.01** | Stage Centering outlet |
| **40.02** | Floating neck ring |
| **40.03** | Initial stage housing |
| **40.04** | Last Stage with diffuser |
| **40.06** | Stage housing and diffuser with bearing |
| **50.00** | Impeller |
| **50.01** | Impeller spacer |
| **50.02** | Intermediary sleeve |
| **50.03** | Intermediary sleeve spacer |

## EV 15-20




CONFIGURATION UP TO 4 KW
WITHOUT THRUST BEARING




CONFIGURATION 5.5 KW AND ABOVE
WITH THRUST BEARING

## PARTS IN CONTACT WITH LIQUID

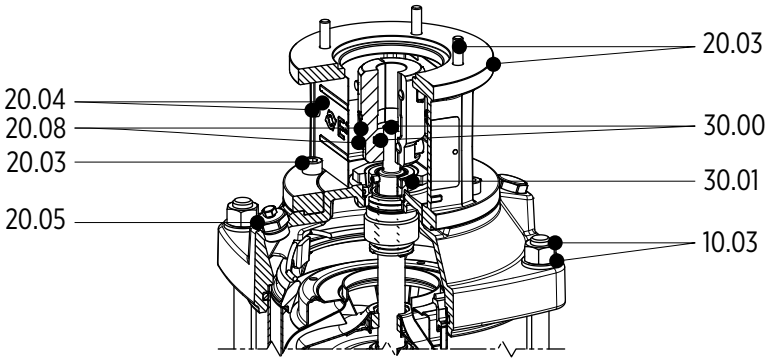
| Ref. No | Parts description | Material | Reference standard | | | |
|---|---|---|---|---|---|---|
| | | | I version | | N version | |
| | | | ASTM | DIN/EN | ASTM | DIN/EN |
| **10.00** | **Pump casing** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **10.02** | **Drain plug** | Stainless Steel | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| **10.06** | **Upper flange** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **20.00** | **Outer case** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **20.05** | **Filling plug** | Stainless Steel | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| **30.00** | **Pump shaft & Pin** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **30.01** | **Cartridge mechanical seal** | Stainless Steel / Carbon graphite / Silicon Carbide / EPDM | | | | |
| **30.02** | **Mechanical seal fastening kit** | Stainless Steel | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| **30.03** | **Kit O-rings** | EPDM | | | | |
| **40.00** | **Stage housing and diffuser** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **40.01** | **Stage Centering outlet** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **40.02** | **Floating neck ring** | Stainless steel, PPS | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| **40.03** | **Initial stage housing** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **40.04** | **Last Stage with diffuser** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **40.06** | **Stage housing and diffuser with bearing** | Stainless Steel / Tungsten carbide (WC) | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| **50.00** | **Impeller** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **50.01** | **Impeller spacer** | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| **50.02** | **Intermediate sleeve** | Tungsten Carbide (WC) | | | | |
| **50.03** | **Intermediate sleeve spacer** | Stainless Steel | AISI 304 | 1.4301 | AISI 316 | 1.4401 |

## SPARE PARTS LIST

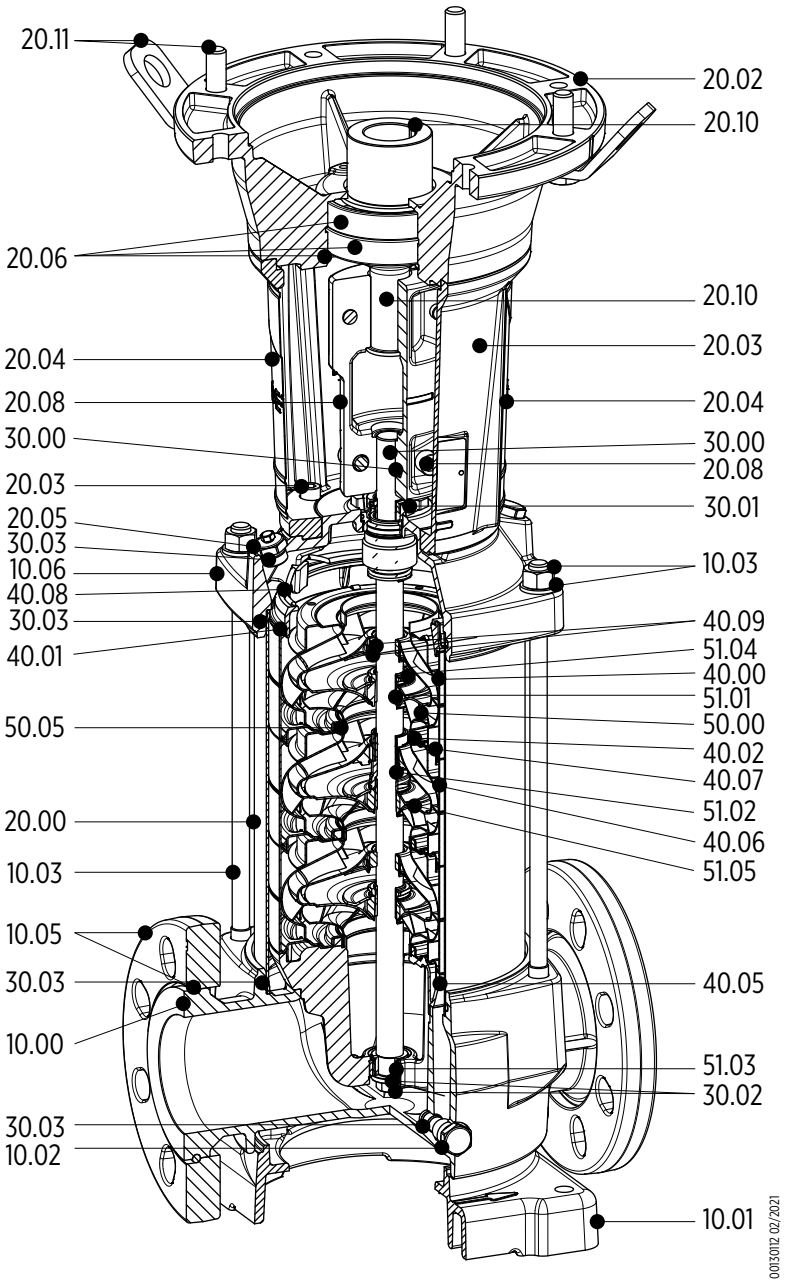
| Ref. No | Parts description |
|---|---|
| **10.00** | Pump casing |
| **10.01** | Pump base |
| **10.02** | Drain plug |
| **10.03** | Tie bolts, washers and nuts |
| **10.06** | Upper flange |
| **20.00** | Outer case |
| **20.02** | Motor flange |
| **20.03** | Motor bracket |
| **20.04** | Coupling guard |
| **20.05** | Filling plugs |
| **20.06** | Kit bearings |
| **20.08** | Coupling |
| **20.10** | Motor shaft adapter |
| **20.11** | Lifting eyelets and bolts |

| Ref. No | Parts description |
|---|---|
| **30.00** | Pump shaft & Pin |
| **30.01** | Cartridge mechanical seal |
| **30.02** | Mechanical seal fastening kit |
| **30.03** | Kit O-rings |
| **40.00** | Stage housing and diffuser |
| **40.01** | Stage Centering outlet |
| **40.02** | Floating neck ring |
| **40.03** | Initial stage housing |
| **40.04** | Last Stage with diffuser |
| **40.06** | Stage housing and diffuser with bearing |
| **50.00** | Impeller |
| **50.01** | Impeller spacer |
| **50.02** | Intermediate sleeve |
| **50.03** | Intermediate sleeve spacer |

## EV 30-45-65-95




CONFIGURATION UP TO 4 KW
WITHOUT THRUST BEARING




CONFIGURATION 5.5 KW AND ABOVE
WITH THRUST BEARING

## PARTS IN CONTACT WITH LIQUID

| Ref. No | Parts description | Material | Reference standard | | | |
|---|---|---|---|---|---|---|
| | | | G version | | N version | |
| | | | ASTM | DIN/EN | ASTM | DIN/EN |
| 10.00 | Pump casing | Cast Iron / Stainless Steel | A48 Class 35 | GJL-250 | CF 8M / AISI 316 | 1.4408 |
| 10.02 | Drain plug | Stainless Steel | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| 10.06 | Upper flange | Cast Iron / Stainless Steel | A48 Class 35 | GJL-250 | CF 8M / AISI 316 | 1.4408 |
| 20.00 | Outer case | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| 20.05 | Filling plugs | Stainless Steel | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| 30.00 | Pump shaft & Pin | Stainless Steel | AISI 431 | 1.4057 | AISI 329 | 1.4460 |
| 30.01 | Cartridge mechanical seal | Stainless steel / Carbon graphite, Silicon Carbide / EPDM | | | | |
| 30.02 | Mechanical seal fastening kit | Stainless Steel | AISI 316 | 1.4401 | AISI 316 | 1.4401 |
| 30.03 | Kit O-rings | EPDM | | | | |
| 40.00 | Stage housing and diffuser | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| 40.01 | Stage Centering outlet (ONLY 65/95 vers.) | Stainless Steel | CF 8 / AISI 304 | 1.4308 | CF 8M / AISI 316 | 1.4408 |
| 40.02 | Floating neck ring | PTFE | | | | |
| 40.05 | Inlet spider bearing | Stainless Steel / Tungsten Carbide (WC) | AISI 316 | 1.4401 | AISI 316 | 1.4401 |
| 40.06 | Stage housing and diffuser with bearing | Stainless Steel / Tungsten Carbide (WC) | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| 40.07 | Flange clamping neck ring | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| 40.08 | Spring ring | Stainless Steel | AISI 316 | 1.4401 | AISI 316 | 1.4401 |
| 40.09 | Secondary sleeve with ring | Stainless Steel, Carbon graphite | AISI 316 | 1.4401 | AISI 316 | 1.4401 |
| 50.00 | Impeller | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| 50.05 | Wear ring | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| 51.01 | Split cone | Stainless Steel | AISI 304 | 1.4301 | AISI 316 | 1.4401 |
| 51.02 | Intermediate sleeve nut | Stainless Steel / Tungsten Carbide (WC) | AISI 316 | 1.4401 | AISI 316 | 1.4401 |
| 51.03 | Journal sleeve | Stainless Steel / Tungsten Carbide (WC) | AISI 316 | 1.4401 | AISI 316 | 1.4401 |
| 51.04 | Split cone nut | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |
| 51.05 | Intermediate impeller with screw | Stainless Steel | AISI 304 | 1.4301 | AISI 316L | 1.4401 |

## SPARE PARTS LIST

| Ref. No | Parts description |
|---|---|
| 10.00 | Pump casing |
| 10.01 | Pump base |
| 10.02 | Drain plug |
| 10.03 | Tie bolts, washers and nuts |
| 10.05 | Kit flanges ring |
| 10.06 | Upper flange |
| 20.00 | Outer case |
| 20.02 | Motor flange |
| 20.03 | Motor bracket |
| 20.04 | Coupling guard |
| 20.05 | Filling plugs |
| 20.06 | Kit bearings |
| 20.08 | Coupling |
| 20.10 | Motor shaft adapter |
| 20.11 | Lifting eyelets and bolts |
| 30.00 | Pump shaft & Pin |
| 30.01 | Cartridge mechanical seal |

| Ref. No | Parts description |
|---|---|
| 30.02 | Mechanical seal fastening kit |
| 30.03 | Kit O-rings |
| 40.00 | Stage housing and diffuser |
| 40.01 | Stage Centering outlet (ONLY 65/95 vers.) |
| 40.02 | Floating neck ring |
| 40.05 | Stage Centering inlet |
| 40.06 | Stage housing and diffuser with bearing |
| 40.07 | Flange clamping neck ring |
| 40.08 | Spring ring |
| 40.09 | Secondary sleeve with ring |
| 50.00 | Impeller |
| 50.05 | Wear ring |
| 51.01 | Split cone |
| 51.02 | Intermediate sleeve nut |
| 51.03 | Journal sleeve |
| 51.04 | Split cone nut |
| 51.05 | Intermediate impeller with screw |

# MOTORS

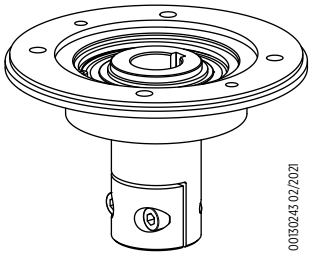
The pump must be coupled with a synchronous or asynchronous electric motor single-phase (up to 2.2 kW) or three-phase (up to 45 kW); dimensions according to IEC 60034-1 or Nema standard, based on motor type.

The default motors (Lafert brand) are Totally Enclosed Fan Cooled, air cooled, asynchronous, for non-explosive risk environments. However, explosion proof (ATEX) and three-phase synchronous motors are available on request.

The features of the original equipment motors up to 4 kW are indicated in the table below. If a different motor is used, it must have equivalent features. The drive-end side bearing must be blocked and the non drive-end side bearing must be spring loaded, otherwise you can order the up thrust bearing kit as optional device (see example in figure).

PTC 155 °C sensor are available on request from 0.75 kW uo to 7.5 kW.

PTC is standard from 11 kW.



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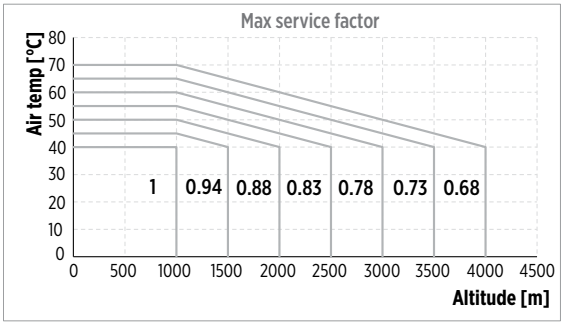
For IEC 60034-1 standard, available:

MEC 71/ MEC 80 / MEC 90 / MEC 100-112

| Power [kW] | Power [HP] | Phases | IEC | Design | min$^{-1}$ | Pump side bearing | Starting torque [Nm] | N % |
|---|---|---|---|---|---|---|---|---|
| SINGLE-PHASE MOTORS | | | | | | | | |
| **0.37** | **0.5** | 1 | 71 | B14 | 2780 | 6203-2Z | 1.0 | 57.6 |
| **0.55** | **0.75** | 1 | 71 | B14 | 2740 | 6203-2Z | 1.3 | 69.0 |
| **0.75** | **1** | 1 | 80 | B14 | 2800 | 6204-2Z | 1.6 | 65.0 |
| **1.1** | **1.5** | 1 | 80 | B14 | 2730 | 6204-2Z | 1.9 | 74.0 |
| **1.5** | **2** | 1 | 90 | B14 | 2835 | 6205-2Z | 2.6 | 73.0 |
| **2.2** | **3** | 1 | 90 | B14 | 2770 | 6205-2Z | 1.5 | 73.0 |
| THREE-PHASE MOTORS | | | | | | | | |
| **0.37** | **0.5** | 3 | 71 | B14 | 2810 | 6203-2Z | 3.6 | 69.5 |
| **0.55** | **0.75** | 3 | 71 | B14 | 2790 | 6203-2Z | 3.2 | 74.1 |
| **0.75** | **1** | 3 | 80 | B14 | 2910 | 6204-2Z | 12 | 82.0 |
| **1.1** | **1.5** | 3 | 80 | B14 | 2870 | 6204-2Z | 18 | 82.7 |
| **1.5** | **2** | 3 | 90 | B14 | 2875 | 6205-2Z | 18 | 84.2 |
| **2.2** | **3** | 3 | 90 | B14 | 2880 | 6205-2Z | 29 | 86.5 |
| **3** | **4** | 3 | 100 | B14 | 2900 | 6206-2Z | 54 | 87.1 |
| **4** | 5.5 | 3 | 112 | B14 | 2900 | 6206-27 | 66 | 88.1 |

## HEAVY DUTY MOTOR SIZING




00130240 02/2021

All values indicated on motor label and in the table refer to clean water and maximum working temperature according to the nameplate.

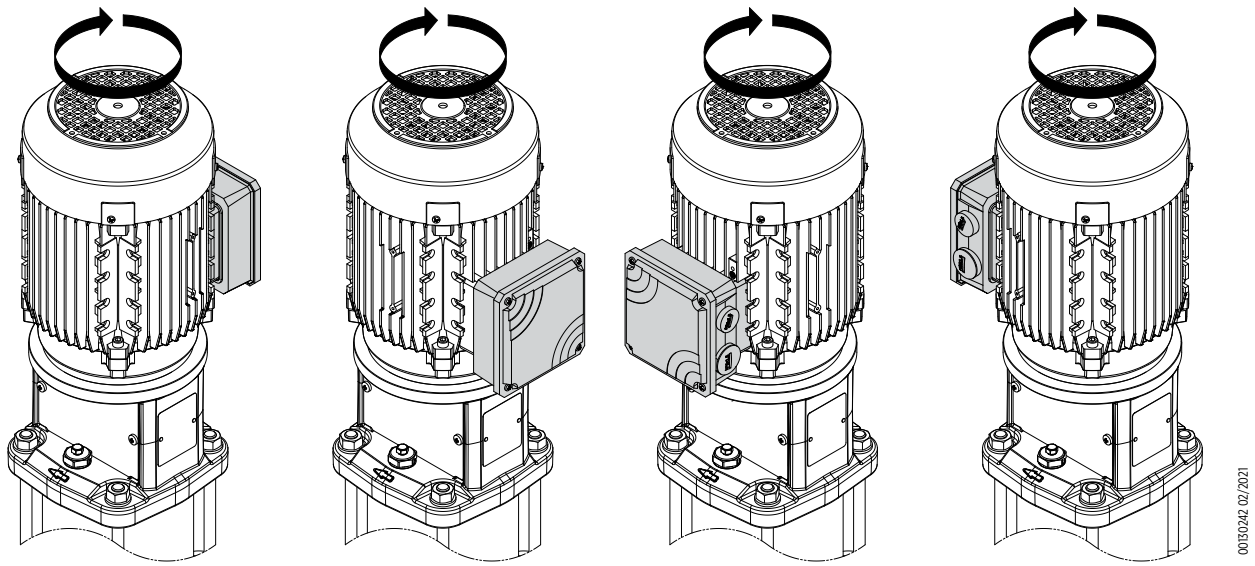
In case of high density and viscous liquids, please contact the manufacturer. When the ambient temperature and/or altitude overcome the nameplate values, it's necessesary to reduce the motor service factor below the nominal power.

The graph shows how to choose the right maximum service factor applicable (share of the nominal power).

## TERMINAL BOX POSITION *

It's possible to rotate the position of the motor in order to change the position of the terminal box.

* See operation manual for instructions



RIGHT (Standard) | FRONT | LEFT | BACK

00130242 02/2021

# AEG LAFERT MOTORS (original equipment)

## FEATURES

- Protection degree: IP55
- Max ambient temperature: 40 °C
- Insulation class: F
- Size B14 up to 4 kW, size B5 from 5.5 kW and above
- PTC 155°C default from MEC160 (from 11 kW)

## SINGLE-PHASE MOTORS

- Voltage: 230 V
- Capacitor inside terminal box

| SINGLE-PHASE MOTORS DESIGNED FOR RANGE OF RATED VOLTAGE 230 V 50 Hz | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| POWER | | IEC Size | Constr.design | $I_N$ [A] 230 V | $min^{-1}$ | $M_N$ [Nm] | η % | cos φ | $I_A/I_N$ | $M_A/M_N$ | Weight [Kg] |
| [kW] | [HP] | | | | | | | | | | |
| **0.37** | **0.5** | 71 | B14 | 3.1 | 2780 | 1.3 | 57.6 | 0.89 | 3.1 | 0.8 | 7.1 |
| **0.55** | **0.75** | 71 | B14 | 3.9 | 2740 | 1.9 | 69.0 | 0.89 | 3.5 | 0.7 | 8.5 |
| **0.75** | **1** | 80 | B14 | 5.3 | 2800 | 2.6 | 65.0 | 0.95 | 4.1 | 0.6 | 11.4 |
| **1.1** | **1.5** | 80 | B14 | 6.5 | 2730 | 3.8 | 74.0 | 0.97 | 3.6 | 0.5 | 11.8 |
| **1.5** | **2** | 90 | B14 | 9.3 | 2835 | 5.1 | 73.0 | 0.90 | 3.9 | 0.5 | 17.3 |
| **2.2** | **3** | 90 | B14 | 14.6 | 2770 | 7.6 | 73.0 | 0.90 | 4.3 | 0.2 | 19.3 |

## THREE-PHASE MOTORS – ENERGY EFFICIENT

- High Efficiency three-phase motors from 0.75 kW in compliance with Eco design Directive N. 640/2009.
- The standard design includes the following basic features to give a high level of fexibility:
- Multi Mount Construction for an easy change of terminal box position
- Terminal box rotates by 90° to allow cable entry from any direction
- Voltage: up to 3 kW 230/400 V, 400/690 V from 4 kW and above
- Special voltage and special version on request

| THREE-PHASE MOTORS DESIGNED FOR RANGE OF RATED VOLTAGE 400 V 50 Hz | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Efficiency class | POWER | | IEC Size | Constr. Design | $I_N$ [A] Δ 230 V | $I_N$ [A] Y 400 V | $I_N$ [A] Δ 400V | $I_N$ [A] Y 690V | $min^{-1}$ | $M_N$ [Nm] | η % | cos φ | $I_A/I_N$ | $M_A/M_N$ | Weight [Kg] |
| | [kW] | [HP] | | | | | | | | | | | | | |
| **IE2** | **0.37** | **0.5** | 71 | B14 | 1.7 | 1.0 | - | - | 2810 | 1.3 | 69.5 | 0.78 | 2.7 | 2.8 | 5.8 |
| | **0.55** | **0.75** | 71 | B14 | 2.4 | 1.4 | - | - | 2780 | 1.9 | 74.1 | 0.77 | 2.0 | 1.7 | 6.2 |
| **IE3** | **0.75** | **1** | 80 | B14 | 2.9 | 1.7 | - | - | 2910 | 2.5 | 82.0 | 0.78 | 8.9 | 4.7 | 9.5 |
| | **1.1** | **1.5** | 80 | B14 | 4.2 | 2.4 | - | - | 2870 | 3.7 | 82.7 | 0.76 | 9.3 | 5 | 11.1 |
| | **1.5** | **2** | 90 | B14 | 5.2 | 3.0 | - | - | 2875 | 5.0 | 84.2 | 0.85 | 8.4 | 3.6 | 14.0 |
| | **2.2** | **3** | 90 | B14 | 8.0 | 4.6 | - | - | 2880 | 7.3 | 86.5 | 0.82 | 9.2 | 4 | 16.0 |
| | **3** | **4** | 100 | B14 | 9.7 | 5.6 | - | - | 2900 | 9.9 | 87.1 | 0.89 | 8.8 | 5.5 | 22.8 |
| | **4** | **5.5** | 112 | B14 | - | - | 8 | 4.6 | 2900 | 13 | 88.1 | 0.83 | 10.7 | 5.1 | 26.5 |
| | **5.5** | **7.5** | 132 | B5 | - | - | 10.2 | 5.9 | 2935 | 17.9 | 89.2 | 0.87 | 11.2 | 4.2 | 33.6 |
| | **7.5** | **10** | 132 | B5 | - | - | 14.4 | 8.3 | 2930 | 24.5 | 90.1 | 0.84 | 10.4 | 4.5 | 36.0 |
| | **11** | **15** | 160 | B5 | - | - | 19.9 | 11.5 | 2935 | 35.8 | 91.2 | 0.89 | 9.7 | 4.4 | 62.0 |
| | **15** | **20** | 160 | B5 | - | - | 26.8 | 15.5 | 2915 | 49.2 | 91.9 | 0.88 | 9.6 | 3.7 | 68.0 |
| | **18.5** | **25** | 160 | B5 | - | - | 33.0 | 19.1 | 2950 | 59.9 | 92.4 | 0.88 | 10.7 | 4.6 | 104.0 |
| | **22** | **30** | 180 | B5 | - | - | 39.4 | 22.8 | 2950 | 71.3 | 92.7 | 0.87 | 10.4 | 4.5 | 106.0 |
| | **30** | **40** | 200 | B5 | - | - | 52.7 | 30.5 | 2925 | 97.9 | 93.3 | 0.88 | 6.7 | 2.4 | 276.0 |
| | **37** | **50** | 200 | B5 | - | - | 63.3 | 36.6 | 2930 | 120.6 | 93.7 | 0.90 | 6.3 | 2.3 | 283.0 |
| | **45** | **60** | 225 | B5 | - | - | 78.5 | 45.4 | 2930 | 146.7 | 94.0 | 0.88 | 6.9 | 2.3 | 370.0 |

## NEW INTERNATIONAL EFFICIENCY CLASSES OF MOTORS – IE CODE

IEC 60034-30:2008 defines the efficiency classes of motors worldwide.
IE1 = Standard Efficiency (comparable to EFF2)
IE2 = High Efficiency (comparable to EFF1)
IE3 = Premium Efficiency
The efficiency levels according to IEC 60034-30 are measured based on the test methods defined in IEC 60034-2-1:2007.
The IEC 60034-30 only defines requirements of efficiency classes and aims to create provisions for international consistency.
It does not define which motors must be supplied with which efficiency level. This is subject to respective regional legislation.

| OUTPUT [kW] | IE2 code Standard Efficiency | | | IE3 code Standard Efficiency | | |
|---|---|---|---|---|---|---|
| | 2 poles | 4 poles | 6 poles | 2 poles | 4 poles | 6 poles |
| **0.37** | 69.5 | 72.7 | 67.6 | 73.8 | 77.3 | 73.5 |
| **0.55** | 74.1 | 77.1 | 73.1 | 77.8 | 80.8 | 77.2 |
| **0.75** | - | - | - | 80.7 | 82.5 | 78.9 |
| **1.1** | - | - | - | 82.7 | 84.1 | 81.0 |
| **1.5** | - | - | - | 84.2 | 85.3 | 82.5 |
| **2.2** | - | - | - | 85.9 | 86.7 | 84.3 |
| **3** | - | - | - | 87.1 | 87.7 | 85.6 |
| **4** | - | - | - | 88.1 | 88.6 | 86.8 |
| **5.5** | - | - | - | 89.2 | 89.6 | 88.0 |
| **7.5** | - | - | - | 90.1 | 90.4 | 89.1 |
| **11** | - | - | - | 91.2 | 91.4 | 90.3 |
| **15** | - | - | - | 91.9 | 92.1 | 91.2 |
| **18.5** | - | - | - | 92.4 | 92.6 | 91.7 |
| **22** | - | - | - | 92.7 | 93.0 | 92.2 |
| **30** | - | - | - | 93.3 | 93.6 | 92.9 |
| **37** | - | - | - | 93.7 | 93.9 | 93.3 |
| **45** | - | - | - | 94.0 | 94.2 | 93.7 |

Efficiency values according to IEC 60034-30;2008.
Efficiency standard calculation: IEC 60034-2-1;2007

## NOISE

The noise level of an electrical machine is determined by measuring the sound pressure level in accordance with curve A of the sound level meter to EN 60651 and is indicated in dB (A). The permitted noise levels of electrical machines are fixed in EN 60034 - 9 (IEC 34-9). The noise level of the motors is below these limit values. Structure-borne sound measurements are carried out in an an anechoic testing chamber to EN 21680-ISO 1680. The speed is corresponding to a main frequency of 50 Hz and the number of poles.

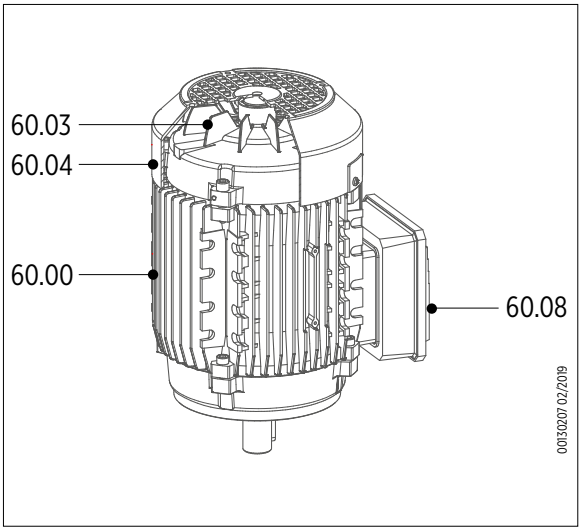
**Noise levels**

The noise values listed below refer to 50 Hz at rated voltage with a tolerance of up to +3 dB (A). Values for pole-changing motors are available on request. For 60 Hz supply, the values are 3-5 dB (A) higher. Sound pressure level (LpA) and sound power level (LWA) refers to three-phase motors with single-speed, dimensions and output ratings as per IEC 60072.

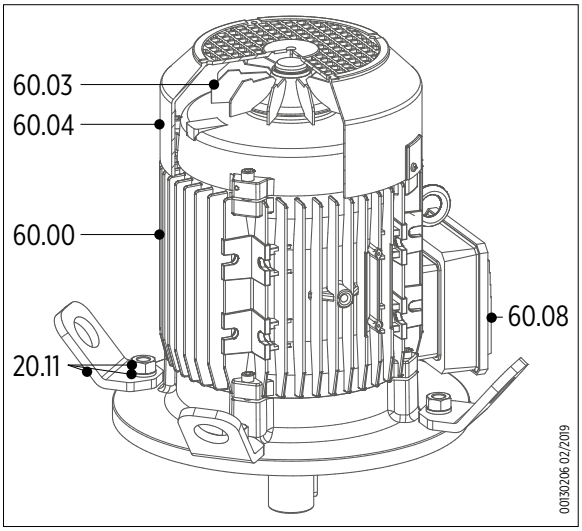
| Frame size | 2 pole | | 4 pole | |
|---|---|---|---|---|
| | LWA | LpA | LWA | LpA |
| 56 | 57 | 48 | 47 | 38 |
| 63 | 58 | 49 | 47 | 38 |
| 71 | 61 | 52 | 51 | 42 |
| 80 | 72 | 60 | 60 | 48 |
| 90 | 74 | 62 | 61 | 49 |
| 100 | 78 | 66 | 62 | 50 |
| 112 | 80 | 68 | 65 | 53 |
| 132 | 81 | 72 | 71 | 59 |
| 160 | 87 | 74 | 75 | 62 |
| 180 | 90 | 77 | 78 | 66 |
| 200 | 91 | 78 | 80 | 68 |
| 225 | 92 | 80 | 88 | 76 |

## AEG LAFERT MOTORS SPARE PARTS

### UP TO 4 KW




### FROM 5.5 KW



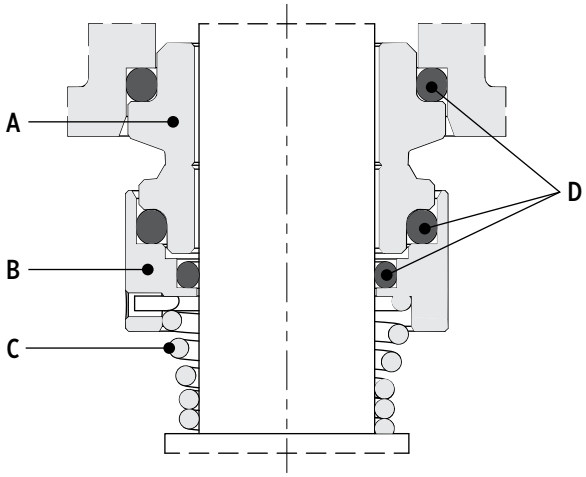

| Ref. N. | Parts description |
|---|---|
| **20.11** | Lifting eyelets and bolts |
| **60.00** | Motor assembly |
| **60.03** | Fan |
| **60.04** | Fan cover and screws |
| **60.08** | Terminal box cover and base |

E-Tech

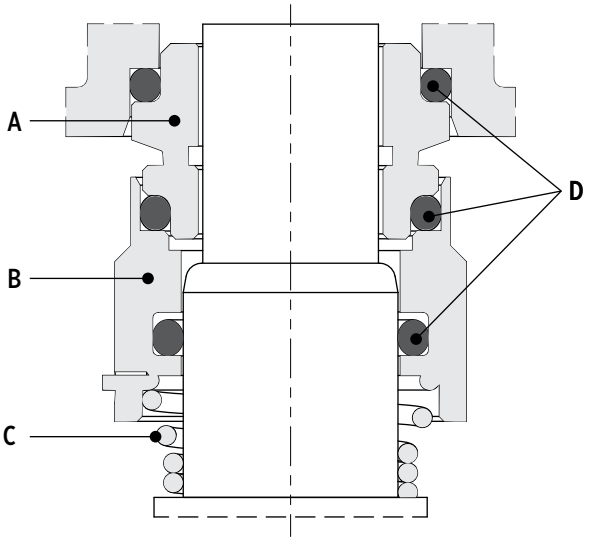
# CARTRIDGE MECHANICAL SEAL SPECIFICATIONS

(fixed and rotating parts according to EN 12756)

## UNBALANCED




## BALANCED

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## STANDARD VERSION (UNBALANCED)

| Model | Type | | | | Position | | | | Temperature |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | A Stationary part | B Rotating part | C Spring | D Elastomers | |
| **E1*** | B | Q | G | E | Graphite | Silicon carbide | AISI 316 | EPDM | -30 °C / +120 °C |

## AVAILABLE ON REQUEST

| Model | Type | | | | Position | | | | Temperature |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | A Stationary part | B Rotating part | C Spring | D Elastomers | |
| **E2*** | Q | Q | G | E | Silicon carbide | Silicon carbide | AISI 316 | EPDM | -30 °C / +120 °C |
| **V3*** | Q | Q | G | V | Silicon carbide | Silicon carbide | AISI 316 | FKM | -10 °C / +120 °C |
| **V4*** | B | Q | G | V | Graphite | Silicon carbide | AISI 316 | FKM | -10 °C / +120 °C |
| **E5*** | U | U | G | E | Tungsten carbide | Tungsten carbide | AISI 316 | EPDM | -30 °C / +120 °C |
| **E7 *** | Q | U | G | E | Silicon carbide | Tungsten carbide | AISI 316 | EPDM | -30 °C / +120 °C |
| **V6*** | U | U | V | G | Tungsten carbide | Tungsten carbide | AISI 316 | FKM | -10 °C / +120 °C |
| **V8 *** | Q | U | V | G | Silicon carbide | Tungsten carbide | AISI 316 | FKM | -10 °C / +120 °C |

* Available in balanced version "B..." (ex. E1 - standard version --> BE1 - balanced version)

| Type | Material |
|---|---|
| **B** | Graphite |
| **E** | EPDM |
| **G** | AISI 316 |
| **Q** | Silicon carbide |
| **V** | FKM |
| **U** | Tungsten carbide |

# COMPATIBILITY OF FLUIDS AND MATERIALS

| APPLICATION AND SECTORS | PUMP VERSION | | | | CONCENTRATION (%) TEMPERATURE [°C] |
|---|---|---|---|---|---|
| | I | G | N | P | |
| | MECHANICAL SEAL TYPE | | | | |
| **WATER SUPPLY (CLEAN WATER)** | | | | | |
| Water systems filtration and transfer; water works distribution and pressure boosting; residential, commercial buildings and industrial processes pressure boosting | E1 | E1 | E1 | E1 | 100 %; +5 / +120 °C |
| Firefighting systems | E1 | E1 | E1 | E1 | 100 %; +5 / +120 °C |
| Fountains | E1 | E1 | E1 | E1 | 100 %; +5 / +120 °C |
| Drinkable water (only version approved for the application) | E1 | E1 | E1 | E1 | Models 1-20, Vers. I, N: 85°C<br>Models 30-95, Vers. N: 85°C<br>Models 30-95, Vers. G: 23°C |
| **PRESSURE BOOSTING, TRANSFER AND RECIRCULATION - NON-FLAMMABLE, NON-CORROSIVE LIQUIDS** | | | | | |
| Proccess-water systems (distilled, deionized, ...) | E1 | E1 | E1 | E1 | 100 %; -25 / +110 °C |
| Car wash tunnels | E1 | E1 | E1 | E1 | 100 %; +5 / +100 °C |
| Boiler feed systems (treated water) and condensate removal | E1 | (S) | E1 | E1 | 100 %; -5 / +100 °C |
| Machine tools (cooling lubricants) | V6 | (S) | V6 | V6 | 100 %; -5 / +100 °C |
| Coolant ( Ethylene glycol-water solution) | - | - | E1 | E1 | max. 30 %; -20 / +120 °C |
| Coolant ( Propylene glycol-water solution) | E1 | E1 | E1 | E1 | max. 30 %; -20 / +120 °C |
| **FLAMMABLE AND CORROSIVE LIQUID TRANSFER** | | | | | |
| Flammable liquids | - | - | - | - | - |
| Mineral oils (1) | V4 | V4 | V4 | V4 | 100 %; -5 / +110 °C |
| Acid or basic solutions, aggressive liquids: | | | | | |
| Acetic acid | - | - | E1 | E1 (P) | max 80%; -10 / +70 °C |
| Aluminium sulfate | - | - | E2 | E2 | max 30%; -5 / +50 °C |
| Ammonia in water | E1 | - | E1 | E1 | max 25%; -20 / +50 °C |
| Ammonium sulfate | - | - | E2 | E2 | max 10%; -10 / +60 °C |
| Benzoic acid | - | - | V4 | V4 | max 70%; 0 / +70 °C |
| Brackish water | - | - | - | E1 | max 5%; 0 / +40 °C |
| Brine | - | - | - | E1 | max 5%; 0 / +40 °C |
| Caustic soda | E2 | E2 | E2 | E2 | max 25%; 0 / +70 °C |
| Chloroform | V4 | V4 | V4 | V4 | max 100%; -10 / +30 °C |
| Citric acid | E1 | - | E1 | E1 | max 5%; -10 / +70 °C |
| Copper sulfate | - | - | V3 | V3 | max 20%; +0 / +30 °C |
| Ferrous sulfate and ferric sulfate | - | - | E1 | E1 | max 10%; +5 / +30 °C |
| Formic acid | E1 | - | E1 | E1 | max 5%; -15 / +25 °C |
| Glycerine | E1 | E1 | E1 | E1 | max 100%; +20 / +90 °C |
| Hydrochloric acid | - | - | V3 | V3 | max 2%; -5 / +25 °C |
| Nitric acid | V3 | - | V3 | V3 | max 50%; -5 / +30 °C |
| Perchloroethylene | V4 | V4 | V4 | V4 | max 100%; -10 / +30 °C |
| Phosphates-polyphosphates | V3 | - | V3 | V3 | max 10%; -5 / +90 °C |
| Phosphoric acid | - | - | E1 | E1 | max 10%; -5 / +30 °C |
| Propylene glycol | E1 | E1 | E1 | E1 | max 30%; -30 / +120 °C |
| Sodium hypochlorite | - | - | V3 | V3 | max 1%; -10 / +25 °C |
| Sodium nitrate | - | - | E2 | E2 | max 10%; +5 / +60 °C |
| Sodium sulfate | E2 | E2 (S) | E2 | E2 (P) | max 15%; -10 / +40 °C |
| Sulphuric acid | V3 | V3 (S) | V3 | V3 (P) | max 2%; -10 / +25 °C |
| Tannic acid | - | - | E1 | E1 | max 20%; 0 / +50 °C |
| Tartaric acid | V3 | - | V3 | V3 | max 50%; -10 / +25 °C |
| Trichloroethylene | V4 | V4 | V4 | V4 | max 100%; -10 / +40 °C |

"-" = application not possible
(S) = Not recommended application
(P) = Racommended choice
(1) = Only for temperature < 0.2 times flash point [°C]

| APPLICATION AND SECTORS | PUMP VERSION | | | | CONCENTRATION (%) TEMPERATURE [°C] |
|---|---|---|---|---|---|
| | I | G | N | P | |
| | MECHANICAL SEAL TYPE | | | | |
| **AGRICULTURE AND FISH FARMING** | | | | | |
| Clean water irrigation | E1 | E1 | E1 | E1 | 100 %; +5 / +100 °C |
| Irrigation with added water (plant protection products, fertilizers, ...) | - | - | - | - | - |
| Fish farm (fresh water) | E1 | E1 | E1 | E1 | 100 %; +5 / +100 °C |
| **PROCESS-WATER TREATMENT** * | | | | | |
| Ultra-filtration systems (maximum concentration of chlorides) * | - | - | - | E1 | - |
| Reverse osmosis systems (maximum concentration of chlorides) * | - | - | - | E1 | - |
| Softening, ionising, demineralising, distillation systems (fresh water pumping) * | E1 | E1 | E1 | E1 | - |
| Wash down and cleaning units ( high aggressive detergents) * | - | - | E2 | E2 (P) | - |
| Transfer or processing of sea or saline water * | - | - | - | - | - |
| Gas separators * | E1 | E1 | E1 | E1 | - |
| Swimmings (max. Chlorine concentration) | - | - | E1, V4 | E1, V4 | - |

"-" = application not possible
(S) = Not recommended application
(P) = Racommended choice
(1) = Only for temperature < 0.2 times flash point [°C]

* Please contact the Technical Department.

The table is to be considered as a general guide. It is important to consider the specific working conditions, in particular the concentration of the pumped liquid, the specific weight of the liquid and/or viscosity, the liquid temperature and pressure. All these conditions are relevant for the motor and pump performance. When pumping dangerous liquids, it is recommended to take safety precautions. For further details, please contact Franklin Electric.

# Performance Curves and Technical Data

# ErP REGULATION

**Information related to energy performance of the pump, according to Reg. 547/2012 CE:**

1. Minimum efficiency index: MEI ≥ 0.7;
2. The benchmark for most efficient water pumps is MEI ≥ 0,70;
3. Year of manufacture: see nameplate or the label in the Instruction manual;
4. Manufacturer's name or trade mark, commercial registration number and place of manufacture: see nameplate or the label in the Instruction manual;
5. Product's type and size identificatory: see nameplate or the label in the Instruction manual;
6. Hydraulic pump efficiency with trimmed impeller: see nameplate or the label in the Instruction manual;
7. Pump performance curves for the pump, including efficiency characteristics: see technical datasheet (http://franklinwater.eu/products/);
8. The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter;
9. The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system;
10. Information relevant for disassembly, recycling or disposal at end-of-life: see the Instruction manual;
11. ---;
12. ---;
13. ---;
14. Information on benchmark efficiency is available at http://europump.net/uploads/Fingerprints.pdf;
15. Benchmark efficiency graph for MEI = 0,7 and for MEI = 0,4 available at: http://europump.net/uploads/Fingerprints.pdf;

**Information related to energy performance of the motor, according to Reg. 2019/1781 CE and modifications:**

1. nominal efficiency (η) at the full, 75 % and 50 % rated load and voltage (UN): see motor nameplate or the catalogue (http://franklinwater.eu/products/);
2. efficiency level: see motor nameplate or the catalogue;
3. the year of manufacture: see motor nameplate
4. manufacturer's name or trade mark, commercial registration number and place of manufacturer: see the motor nameplate;
5. product's model number: see motor nameplate or the catalogue (http://franklinwater.eu/products/);
6. number of poles of the motor: see motor nameplate or the catalogue (http://franklinwater.eu/products/);
7. the rated power output(s) or range of rated power output (kW): see motor nameplate or the catalogue (http://franklinwater.eu/products/);
8. the rated input frequency(s) of the motor (Hz): see motor nameplate or the catalogue (http://franklinwater.eu/products/);
9. the rated voltage(s) or range of rated voltage (V): see motor nameplate or the catalogue (http://franklinwater.eu/products/);
10. the rated speed(s) or range of rated speed (rpm): see motor nameplate or the catalogue (http://franklinwater.eu/products/);
11. information relevant for disassembly, recycling or disposal at end-of-life: see the motor Instruction manual;
12. information on the range of operating conditions for which the motor is specifically designed (http://franklinwater.eu/products/):

    a. altitudes above sea-level: 0-1000 m;
    b. ambient air temperatures, including for motors with air cooling: max. 40°C;
    c. ---;
    d. maximum operating temperature: max. 60°C;
    e. ---.

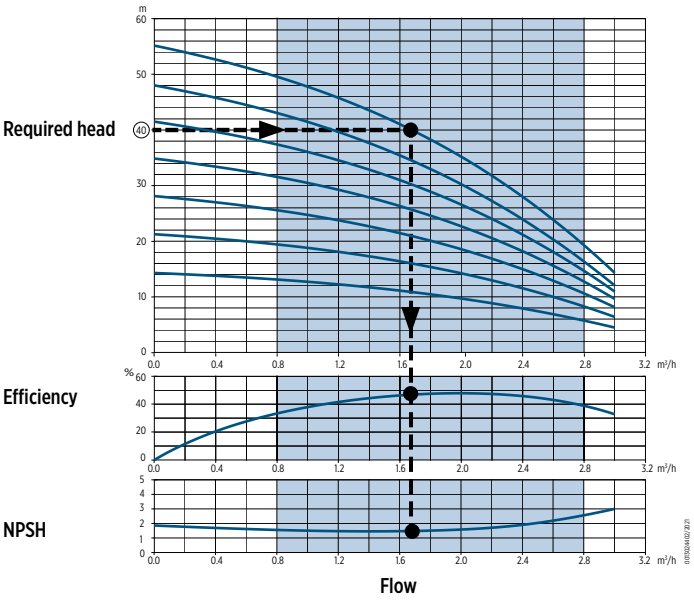
# PERFORMANCE SELECTION

This section describes **how to select the pump model that better suits your needs**.

The required information are:

- The required flow
- The input and output pressure
- The fluid features (density, viscosity, temperature, chemical aggressiveness and presence of abrasive particles)
- The connection type

Check if the pump piping type selected is able to withstand the maximum working pressure required (pump nominal pressure PN ≥ application nominal pressure).




The difference between the outlet required pressure and the input pressure allows to determine the head the pump must supply to the fluid. The duty point is determined crossing the values of flow and head.

For the best selection of multistage pump, proceed in this way:

1. Select the pump family according to the requested flow (close as much as possible to the best efficiency point).
2. Choose the number of stages nearest to the requested head.
3. Draw a vertical line from duty point to determine the absorbed power, the pump efficiency and the NPSH required.

If the viscosity of fluid is significantly different from clean water at ambient temperature, it's necessesary to change the selection parameters (contact the manufacturer). Moreover, in case the density or viscosity are higher than water values, it will be necessesary to consider a higher power sizing (contact the manufacturer).

NPSH check:

The available pump input NPSH value must be compared with the pump required value in order to avoid performance losses and wearing of the pump.

The maximum height of the pump from the liquid level (H) can be calculated with the following formula:

**H = pb x 10.2 – NPSH – Hf – Hv – Hs**

Where:

pb: Absolute barometric pressure or absolute pressure of the liquid on suction side [bar].

NPSH: Suction head at maximum duty flow rate [m]

Hf: Pressure drop in the suction pipe at maximum flow rate [m]

Hv: Vapour pressure [m] depending on the temperature of the liquid [m]

Hs: Safety margin [m] (minimum 0.5)

If the calculated value is less than "0", the pump must be positioned below the liquid level by the value of H.

**Construction materials selection:**

The mechanical seal and elastomers must be selected based on the chemical compatibility with the pumped fluid and the presence of abrasive particles.

In the same way, the pump materials (metal alloy) must be choosen according to the liquid aggressivity. The liquid aggressivity usually increases with the acidity or the basicity, the concentration of chlorides and salts dissolved, and the working temperature.

Use the table "Compatibility of fluids and materials" (page 18) for the right selection.

# HYDRAULIC PERFORMANCE AT 50 HZ

## EV 1-3

| Pump model | RATED POWER | | $P1_{max}$ * Bar | Q = DELIVERY | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | l/min 0 | 8.3 | 13.3 | 23.3 | 26.7 | 33.3 | 40.0 | 46.7 | 53.3 | 60.0 | 70.0 | 83.3 |
| | | | | $m^3/h$ 0 | 0.5 | 0.8 | 1.4 | 1.6 | 2.0 | 2.4 | 2.8 | 3.2 | 3.6 | 4.2 | 5.0 |
| | | | | US gpm 0 | 2.2 | 3.5 | 6.2 | 7.0 | 8.8 | 10.6 | 12.3 | 14.1 | 15.8 | 18.5 | 83.3 |
| | [kW] | [HP] | | H = TOTAL METERS HEAD OF WATER COLUMN [m] | | | | | | | | | | | |
| **EV 1/2** | 0.37 | 0.5 | 2 | 14.3 | | 13.1 | 11.7 | 11.1 | 9.7 | 7.9 | 5.7 | | | | |
| **EV 1/3** | 0.37 | 0.5 | 3 | 21.3 | | 19.4 | 17.3 | 16.4 | 14.2 | 11.5 | 8.3 | | | | |
| **EV 1/4** | 0.37 | 0.5 | 4 | 28.1 | | 25.6 | 22.7 | 21.5 | 18.6 | 15.0 | 10.6 | | | | |
| **EV 1/5** | 0.37 | 0.5 | 5 | 34.9 | | 31.6 | 27.9 | 26.3 | 22.7 | 18.2 | 12.7 | | | | |
| **EV 1/6** | 0.37 | 0.5 | 6 | 41.5 | | 37.4 | 32.9 | 31.0 | 26.6 | 21.2 | 14.6 | | | | |
| **EV 1/7** | 0.37 | 0.5 | 7 | 48.6 | | 43.8 | 38.5 | 36.4 | 31.3 | 25.0 | 17.3 | | | | |
| **EV 1/8** | 0.55 | 0.75 | 8 | 55.1 | | 49.5 | 43.5 | 41.0 | 35.2 | 28.0 | 19.3 | | | | |
| **EV 1/9** | 0.55 | 0.75 | 9 | 61.6 | | 55.1 | 48.4 | 45.6 | 39.1 | 31.0 | 21.1 | | | | |
| **EV 1/10** | 0.55 | 0.75 | 10 | 67.9 | | 60.7 | 53.3 | 50.2 | 42.9 | 33.9 | 22.9 | | | | |
| **EV 1/11** | 0.55 | 0.75 | 11 | 76.4 | | 69.0 | 60.8 | 57.4 | 49.3 | 39.4 | 27.4 | | | | |
| **EV 1/12** | 0.75 | 1 | 12 | 83.0 | | 74.8 | 65.7 | 62.0 | 53.2 | 42.4 | 29.3 | | | | |
| **EV 1/13** | 0.75 | 1 | 14 | 89.5 | | 80.5 | 70.6 | 66.5 | 57.0 | 45.3 | 31.1 | | | | |
| **EV 1/14** | 0.75 | 1 | 15 | 96.0 | | 86.1 | 75.4 | 71.0 | 60.6 | 48.0 | 32.8 | | | | |
| **EV 1/15** | 0.75 | 1 | 16 | 102.4 | | 91.7 | 80.1 | 75.3 | 64.2 | 50.7 | 34.4 | | | | |
| **EV 1/17** | 1.1 | 1.5 | 18 | 118.0 | | 106.6 | 93.9 | 88.6 | 76.2 | 60.9 | 42.4 | | | | |
| **EV 1/19** | 1.1 | 1.5 | 20 | 131.2 | | 118.1 | 103.8 | 97.8 | 83.9 | 66.8 | 46.1 | | | | |
| **EV 1/22** | 1.1 | 1.5 | 19 | 150.7 | | 135.1 | 118.2 | 111.2 | 94.9 | 75.1 | 51.2 | | | | |
| **EV 1/23** | 1.5 | 2 | 19 | 160.4 | | 145.2 | 128.1 | 121.0 | 104.2 | 83.6 | 58.5 | | | | |
| **EV 1/25** | 1.5 | 2 | 18 | 173.8 | | 156.9 | 138.3 | 130.5 | 112.1 | 89.7 | 62.4 | | | | |
| **EV 1/27** | 1.5 | 2 | 18 | 187.0 | | 168.5 | 148.2 | 139.7 | 119.9 | 95.6 | 66.2 | | | | |
| **EV 1/30** | 1.5 | 2 | 17 | 206.6 | | 185.6 | 162.7 | 153.3 | 131.1 | 104.1 | 71.5 | | | | |
| **EV 1/32** | 3 | 4 | 16 | 224.5 | | 203.8 | 180.4 | 170.6 | 147.3 | 118.6 | 83.7 | | | | |
| **EV 1/34** | 3 | 4 | 16 | 238.0 | | 215.8 | 190.7 | 180.3 | 155.5 | 125.0 | 87.9 | | | | |
| **EV 1/37** | 3 | 4 | 15 | 258.1 | | 233.6 | 206.1 | 194.6 | 167.6 | 134.4 | 94.1 | | | | |
| | | | | | | | | | | | | | | | |
| **EV 3/2** | 0.37 | 0.5 | 2 | 15.2 | | | 14.4 | 14.2 | 13.7 | 12.9 | 12.1 | 11.0 | 9.7 | 7.4 | |
| **EV 3/3** | 0.37 | 0.5 | 3 | 22.6 | | | 21.3 | 20.9 | 20.0 | 18.9 | 17.6 | 15.9 | 14.0 | 10.5 | |
| **EV 3/4** | 0.37 | 0.5 | 4 | 29.8 | | | 27.8 | 27.3 | 26.1 | 24.5 | 22.7 | 20.5 | 17.8 | 13.2 | |
| **EV 3/5** | 0.55 | 0.75 | 5 | 37.3 | | | 34.7 | 34.1 | 32.5 | 30.7 | 28.4 | 25.6 | 22.4 | 16.5 | |
| **EV 3/6** | 0.55 | 0.75 | 6 | 44.4 | | | 41.1 | 40.3 | 38.4 | 36.2 | 33.4 | 30.1 | 26.2 | 19.2 | |
| **EV 3/7** | 0.75 | 1 | 7 | 52.4 | | | 49.1 | 48.3 | 46.2 | 43.5 | 40.3 | 36.5 | 32.0 | 23.8 | |
| **EV 3/8** | 0.75 | 1 | 8 | 59.6 | | | 55.6 | 54.6 | 52.2 | 49.1 | 45.4 | 41.0 | 35.8 | 26.4 | |
| **EV 3/9** | 0.75 | 1 | 9 | 66.8 | | | 62.0 | 60.8 | 58.0 | 54.5 | 50.3 | 45.2 | 39.4 | 28.8 | |
| **EV 3/10** | 1.1 | 1.5 | 10 | 75.1 | | | 70.5 | 69.3 | 66.3 | 62.6 | 58.1 | 52.6 | 46.1 | 34.5 | |
| **EV 3/11** | 1.1 | 1.5 | 11 | 82.3 | | | 77.1 | 75.8 | 72.4 | 68.3 | 63.2 | 57.2 | 50.1 | 37.2 | |
| **EV 3/12** | 1.1 | 1.5 | 12 | 89.6 | | | 83.6 | 82.1 | 78.4 | 73.9 | 68.3 | 61.7 | 53.9 | 39.8 | |
| **EV 3/13** | 1.1 | 1.5 | 14 | 96.7 | | | 90.0 | 88.4 | 84.3 | 79.3 | 73.3 | 66.0 | 57.6 | 42.3 | |
| **EV 3/14** | 1.5 | 2 | 15 | 105.4 | | | 99.2 | 97.5 | 93.3 | 88.2 | 81.8 | 74.2 | 65.2 | 48.8 | |
| **EV 3/15** | 1.5 | 2 | 16 | 112.7 | | | 105.8 | 104.0 | 99.5 | 93.9 | 87.0 | 78.8 | 69.1 | 51.6 | |
| **EV 3/16** | 1.5 | 2 | 17 | 120.0 | | | 112.4 | 110.4 | 105.6 | 99.6 | 92.2 | 83.4 | 73.1 | 54.4 | |
| **EV 3/17** | 1.5 | 2 | 18 | 127.2 | | | 118.9 | 116.8 | 111.6 | 105.2 | 97.3 | 87.9 | 76.9 | 57.0 | |
| **EV 3/18** | 2.2 | 3 | 18 | 136.4 | | | 129.0 | 126.9 | 121.7 | 115.2 | 107.2 | 97.4 | 86.0 | 65.1 | |
| **EV 3/19** | 2.2 | 3 | 18 | 143.8 | | | 135.8 | 133.6 | 128.1 | 121.2 | 112.6 | 102.4 | 90.2 | 68.2 | |
| **EV 3/21** | 2.2 | 3 | 17 | 158.5 | | | 149.3 | 146.8 | 140.7 | 132.9 | 123.5 | 112.0 | 98.6 | 74.1 | |
| **EV 3/23** | 2.2 | 3 | 17 | 173.2 | | | 162.7 | 159.9 | 153.1 | 144.5 | 134.1 | 121.5 | 106.7 | 79.9 | |
| **EV 3/25** | 2.2 | 3 | 16 | 187.7 | | | 176.0 | 172.9 | 165.4 | 156.0 | 144.5 | 130.8 | 114.6 | 85.4 | |
| **EV 3/27** | 3 | 4 | 15 | 205.3 | | | 194.6 | 191.5 | 183.8 | 174.1 | 162.2 | 147.7 | 130.5 | 99.3 | |
| **EV 3/29** | 3 | 4 | 14 | 220.1 | | | 208.4 | 205.0 | 196.7 | 186.3 | 173.3 | 157.7 | 139.3 | 105.7 | |
| **EV 3/31** | 3 | 4 | 13 | 235.0 | | | 222.1 | 218.5 | 209.5 | 198.3 | 184.4 | 167.6 | 147.9 | 111.9 | |
| **EV 3/33** | 3 | 4 | 13 | 249.7 | | | 235.7 | 231.8 | 222.2 | 210.1 | 195.3 | 177.4 | 156.3 | 118.0 | |

* $P1_{max}$ = maximum suction pressure at full speed

## EV 6-10

| Pump model | RATED POWER | | $P1_{max}$ * Bar | Q = DELIVERY | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | l/min 0 | 40.0 | 46.7 | 53.3 | 60.0 | 70.0 | 83.3 | 100.0 | 120.0 | 133.3 | 150.0 | 166.7 | 183.3 | 200.0 | 216.7 | 233.3 | 266,7 |
| | | | | $m^3/h$ 0 | 2.4 | 2.8 | 3.2 | 3.6 | 4.2 | 5.0 | 6.0 | 7.2 | 8.0 | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 16,0 |
| | | | | US gpm 0 | 10.6 | 12.3 | 14.1 | 15.8 | 18.5 | 83.3 | 26.4 | 31.7 | 35.2 | 39.6 | 44.0 | 48.4 | 52.8 | 57.2 | 61.6 | 70,3 |
| | [kW] | [HP] | | H = TOTAL METERS HEAD OF WATER COLUMN [m] | | | | | | | | | | | | | | | | |
| **EV 6/2** | 0.37 | 0.5 | 3 | 15.1 | | 13.8 | 13.4 | 13.0 | 12.3 | 11.3 | 9.9 | 7.5 | | | | | | | | |
| **EV 6/3** | 0.37 | 0.5 | 4 | 22.3 | | 20.0 | 19.3 | 18.6 | 17.6 | 16.1 | 14.0 | 10.3 | | | | | | | | |
| **EV 6/4** | 0.55 | 0.75 | 6 | 29.6 | | 26.5 | 25.7 | 24.8 | 23.4 | 21.5 | 18.7 | 13.7 | | | | | | | | |
| **EV 6/5** | 0.75 | 1 | 8 | 37.4 | | 33.9 | 32.9 | 31.7 | 30.0 | 27.6 | 24.1 | 17.9 | | | | | | | | |
| **EV 6/6** | 0.75 | 1 | 9 | 44.5 | | 40.0 | 38.7 | 37.3 | 35.2 | 32.3 | 28.1 | 20.7 | | | | | | | | |
| **EV 6/7** | 1.1 | 1.5 | 11 | 52.5 | | 47.8 | 46.4 | 44.8 | 42.4 | 39.0 | 34.2 | 25.6 | | | | | | | | |
| **EV 6/8** | 1.1 | 1.5 | 12 | 59.7 | | 54.1 | 52.4 | 50.6 | 47.8 | 43.9 | 38.3 | 28.5 | | | | | | | | |
| **EV 6/9** | 1.1 | 1.5 | 14 | 66.8 | | 60.2 | 58.2 | 56.2 | 53.1 | 48.6 | 42.3 | 31.2 | | | | | | | | |
| **EV 6/10** | 1.5 | 2 | 16 | 75.2 | | 68.6 | 66.5 | 64.3 | 60.9 | 56.0 | 49.1 | 36.8 | | | | | | | | |
| **EV 6/11** | 1.5 | 2 | 17 | 82.4 | | 74.9 | 72.6 | 70.1 | 66.3 | 60.9 | 53.3 | 39.8 | | | | | | | | |
| **EV 6/12** | 1.5 | 2 | 19 | 89.6 | | 81.0 | 78.5 | 75.8 | 71.6 | 65.7 | 57.4 | 42.6 | | | | | | | | |
| **EV 6/13** | 1.5 | 2 | 20 | 96.8 | | 87.1 | 84.4 | 81.4 | 76.9 | 70.4 | 61.4 | 45.3 | | | | | | | | |
| **EV 6/14** | 2.2 | 3 | 19 | 105.7 | | 96.9 | 94.1 | 91.0 | 86.3 | 79.4 | 69.8 | 52.7 | | | | | | | | |
| **EV 6/15** | 2.2 | 3 | 19 | 113.1 | | 103.3 | 100.3 | 97.0 | 91.9 | 84.5 | 74.2 | 55.8 | | | | | | | | |
| **EV 6/16** | 2.2 | 3 | 19 | 120.3 | | 109.7 | 106.4 | 102.9 | 97.4 | 89.6 | 78.5 | 58.9 | | | | | | | | |
| **EV 6/17** | 2.2 | 3 | 18 | 127.6 | | 116.0 | 112.5 | 108.8 | 102.9 | 94.5 | 82.8 | 61.9 | | | | | | | | |
| **EV 6/18** | 2.2 | 3 | 18 | 134.8 | | 122.3 | 118.5 | 114.5 | 108.3 | 99.4 | 87.0 | 64.8 | | | | | | | | |
| **EV 6/19** | 3 | 4 | 18 | 142.0 | | 128.5 | 124.5 | 120.2 | 113.6 | 104.2 | 91.1 | 67.6 | | | | | | | | |
| **EV 6/20** | 3 | 4 | 17 | 151.8 | | 139.9 | 135.9 | 131.7 | 124.9 | 115.1 | 101.4 | 77.2 | | | | | | | | |
| **EV 6/21** | 3 | 4 | 16 | 159.2 | | 146.5 | 142.3 | 137.8 | 130.7 | 120.4 | 106.0 | 80.5 | | | | | | | | |
| **EV 6/23** | 3 | 4 | 16 | 173.9 | | 159.6 | 154.9 | 150.0 | 142.1 | 130.8 | 115.1 | 87.0 | | | | | | | | |
| **EV 6/25** | 3 | 4 | 15 | 189.2 | | 172.2 | 167.6 | 162.8 | 154.8 | 142.6 | 123.5 | 92.9 | | | | | | | | |
| **EV 6/28** | 4 | 5.5 | 14 | 214.2 | | 196.8 | 191.9 | 186.6 | 177.9 | 164.4 | 143.2 | 109.0 | | | | | | | | |
| **EV 6/30** | 4 | 5.5 | 13 | 229.1 | | 210.1 | 204.8 | 199.1 | 189.8 | 175.3 | 152.5 | 115.9 | | | | | | | | |
| **EV 6/33** | 4 | 5.5 | 12 | 251.5 | | 229.9 | 224.0 | 217.7 | 207.4 | 191.3 | 166.1 | 125.9 | | | | | | | | |
| **EV 6/36** | 5.5 | 7.5 | 10 | 275.2 | | 252.9 | 246.6 | 239.8 | 228.7 | 211.4 | 184.0 | 140.2 | | | | | | | | |
| **EV 10/2** | 0.75 | 1 | 4 | 20.1 | | | | | | | 18.3 | 17.5 | 16.9 | 16.0 | 14.9 | 13.7 | 12.2 | 10.5 | 8.8 | |
| **EV 10/3** | 1.1 | 1.5 | 6 | 30.2 | | | | | | | 27.6 | 26.3 | 25.4 | 24.0 | 22.5 | 20.6 | 18.3 | 15.8 | 13.3 | |
| **EV 10/4** | 1.5 | 2 | 8 | 40.5 | | | | | | | 37.1 | 35.4 | 34.2 | 32.4 | 30.3 | 27.9 | 24.9 | 21.5 | 18.1 | |
| **EV 10/5** | 1.5 | 2 | 10 | 50.3 | | | | | | | 45.5 | 43.3 | 41.7 | 39.4 | 36.8 | 33.7 | 29.9 | 25.8 | 21.6 | |
| **EV 10/6** | 2.2 | 3 | 12 | 60.9 | | | | | | | 55.9 | 53.5 | 51.6 | 48.9 | 45.8 | 42.2 | 37.6 | 32.6 | 27.5 | |
| **EV 10/7** | 2.2 | 3 | 15 | 70.7 | | | | | | | 64.5 | 61.5 | 59.3 | 56.1 | 52.5 | 48.2 | 42.9 | 37.1 | 31.2 | |
| **EV 10/8** | 3 | 4 | 17 | 81.7 | | | | | | | 75.7 | 72.5 | 70.1 | 66.6 | 62.5 | 57.7 | 51.7 | 44.9 | 38.0 | |
| **EV 10/9** | 3 | 4 | 19 | 91.7 | | | | | | | 84.6 | 81.0 | 78.2 | 74.2 | 69.6 | 64.1 | 57.4 | 49.8 | 42.1 | |
| **EV 10/10** | 4 | 5.5 | 20 | 102.8 | | | | | | | 95.9 | 92.0 | 89.0 | 84.6 | 79.6 | 73.6 | 66.2 | 57.6 | 49.0 | |
| **EV 10/11** | 4 | 5.5 | 19 | 112.9 | | | | | | | 105.0 | 100.7 | 97.3 | 92.5 | 87.0 | 80.4 | 72.2 | 62.8 | 53.3 | |
| **EV 10/12** | 4 | 5.5 | 19 | 122.9 | | | | | | | 114.1 | 109.3 | 105.6 | 100.3 | 94.2 | 87.0 | 78.0 | 67.8 | 57.5 | |
| **EV 10/13** | 4 | 5.5 | 18 | 132.9 | | | | | | | 123.0 | 117.7 | 113.7 | 108.0 | 101.3 | 93.5 | 83.8 | 72.8 | 61.6 | |
| **EV 10/15** | 5.5 | 7.5 | 17 | 153.6 | | | | | | | 142.7 | 136.8 | 132.2 | 125.6 | 118.0 | 109.0 | 97.8 | 85.1 | 72.1 | |
| **EV 10/17** | 5.5 | 7.5 | 16 | 173.6 | | | | | | | 160.7 | 153.8 | 148.5 | 141.0 | 132.4 | 122.1 | 109.4 | 95.0 | 80.4 | |
| **EV 10/19** | 7.5 | 10 | 15 | 195.1 | | | | | | | 182.0 | 174.6 | 168.8 | 160.6 | 151.0 | 139.7 | 125.5 | 109.3 | 92.9 | |
| **EV 10/21** | 7.5 | 10 | 14 | 215.2 | | | | | | | 200.2 | 191.9 | 185.5 | 176.4 | 165.8 | 153.2 | 137.5 | 119.6 | 101.5 | |
| **EV 10/23** | 7.5 | 10 | 14 | 235.3 | | | | | | | 218.3 | 209.1 | 202.1 | 192.0 | 180.3 | 166.5 | 149.3 | 129.7 | 109.9 | |
| **EV 10/24** | 11 | 15 | 12 | 248.2 | | | | | | | 234.0 | 225.0 | 218.0 | 207.8 | 195.9 | 181.8 | 164.1 | 143.5 | 122.4 | |

* $P1_{max}$ = maximum suction pressure at full speed

## EV 15-20

| Pump model | RATED POWER | | $P1_{max}$ * Bar | Q = DELIVERY | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | l/min 0 | 120.0 | 133.3 | 150.0 | 166.7 | 183.3 | 200.0 | 216.7 | 233.3 | 266.7 | 300.0 | 350.0 | 400.0 | 433.3 | 466.7 | 500 |
| | | | | $m^3/h$ 0 | 7.2 | 8.0 | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 16.0 | 18.0 | 21.0 | 24.0 | 26.0 | 28.0 | 30.0 |
| | | | | US gpm 0 | 31.7 | 35.2 | 39.6 | 44.0 | 48.4 | 52.8 | 57.2 | 61.6 | 70.3 | 79.1 | 92.3 | 105.5 | 114.3 | 123.1 | 131.9 |
| | [kW] | [HP] | | H = TOTAL METERS HEAD OF WATER COLUMN [m] [m] | | | | | | | | | | | | | | | |
| **EV 15/1** | 0.75 | 1 | 5 | 13.0 | | 11.7 | 11.6 | 11.4 | 11.1 | 10.8 | 10.4 | 10.1 | 9.1 | 7.9 | 5.6 | - | | | |
| **EV 15/2** | 1.5 | 2 | 11 | 27.1 | | 24.3 | 23.9 | 23.5 | 22.9 | 22.3 | 21.7 | 21.1 | 19.3 | 17.2 | 13.1 | 8.0 | | | |
| **EV 15/3** | 2.2 | 3 | 16 | 41.2 | | 37.4 | 36.7 | 36.1 | 35.3 | 34.4 | 33.6 | 32.7 | 30.1 | 27.1 | 20.8 | 13.5 | | | |
| **EV 15/4** | 3 | 4 | 20 | 55.1 | | 50.2 | 49.3 | 48.5 | 47.5 | 46.3 | 45.2 | 44.0 | 40.6 | 36.6 | 28.2 | 18.5 | | | |
| **EV 15/5** | 4 | 5.5 | 20 | 72.3 | | 64.7 | 63.7 | 62.6 | 61.5 | 60.1 | 58.5 | 57.2 | 53.6 | 48.7 | 38.9 | 27.6 | | | |
| **EV 15/6** | 5.5 | 7.5 | 20 | 88.0 | | 80.1 | 78.9 | 77.7 | 76.4 | 74.9 | 73.3 | 71.7 | 68.0 | 62.4 | 51.3 | 37.5 | | | |
| **EV 15/7** | 5.5 | 7.5 | 20 | 102.5 | | 93.0 | 91.5 | 90.1 | 88.6 | 86.8 | 84.9 | 83.0 | 78.6 | 72.0 | 59.1 | 43.0 | | | |
| **EV 15/8** | 7.5 | 10 | 20 | 116.9 | | 105.9 | 104.2 | 102.6 | 100.8 | 98.8 | 96.5 | 94.4 | 89.3 | 81.7 | 66.9 | 48.5 | | | |
| **EV 15/9** | 7.5 | 10 | 19 | 131.2 | | 118.5 | 116.6 | 114.8 | 112.7 | 110.4 | 107.9 | 105.5 | 99.7 | 91.1 | 74.3 | 53.6 | | | |
| **EV 15/10** | 11 | 15 | 18 | 147.3 | | 134.1 | 132.1 | 130.1 | 127.9 | 125.5 | 122.8 | 120.2 | 114.1 | 104.8 | 86.3 | 63.4 | | | |
| **EV 15/11** | 11 | 15 | 18 | 161.7 | | 147.1 | 144.9 | 142.7 | 140.3 | 137.6 | 134.6 | 131.7 | 125.0 | 114.7 | 94.4 | 69.2 | | | |
| **EV 15/12** | 11 | 15 | 17 | 176.2 | | 160.0 | 157.6 | 155.2 | 152.6 | 149.6 | 146.3 | 143.2 | 135.7 | 124.5 | 102.3 | 74.8 | | | |
| **EV 15/13** | 11 | 15 | 16 | 190.6 | | 172.9 | 170.3 | 167.7 | 164.8 | 161.6 | 158.0 | 154.6 | 146.4 | 134.2 | 110.1 | 80.3 | | | |
| **EV 15/14** | 11 | 15 | 16 | 204.9 | | 185.7 | 182.9 | 180.0 | 176.9 | 173.4 | 169.5 | 165.9 | 157.0 | 143.8 | 117.8 | 85.7 | | | |
| **EV 15/15** | 15 | 20 | 15 | 220.7 | | 200.2 | 197.2 | 194.2 | 190.8 | 187.1 | 183.0 | 179.0 | 169.7 | 155.7 | 127.8 | 93.4 | | | |
| **EV 15/16** | 15 | 20 | 15 | 235.1 | | 213.1 | 209.8 | 206.6 | 203.0 | 199.0 | 194.6 | 190.4 | 180.3 | 165.3 | 135.6 | 98.9 | | | |
| **EV 15/17** | 15 | 20 | 14 | 249.4 | | 225.9 | 222.4 | 219.0 | 215.1 | 210.9 | 206.1 | 201.6 | 190.9 | 174.8 | 143.3 | 104.2 | | | |
| | | | | | | | | | | | | | | | | | | | |
| **EV 20/1** | 1.1 | 2 | 5 | 14,3 | | | | 12.9 | 12.8 | 12.5 | 12.2 | 11.9 | 11.4 | 10.5 | 9.0 | 6.7 | 4.0 | - | |
| **EV 20/2** | 2.2 | 3 | 11 | 29,7 | | | | 26.9 | 26.6 | 26.3 | 26.0 | 25.5 | 24.5 | 23.3 | 20.7 | 17.1 | 13.9 | 10.6 | |
| **EV 20/3** | 3 | 4 | 16 | 45,0 | | | | 40.9 | 40.4 | 39.9 | 39.2 | 38.5 | 37.2 | 35.5 | 31.6 | 25.8 | 21.5 | 16.6 | |
| **EV 20/4** | 4 | 5.5 | 20 | 62,2 | | | | 55.7 | 54.9 | 54.2 | 53.7 | 52.8 | 50.9 | 49.0 | 44.0 | 36.8 | 31.1 | 25.2 | |
| **EV 20/5** | 5.5 | 7.5 | 20 | 78,6 | | | | 70.8 | 69.9 | 69.0 | 68.5 | 67.4 | 65.1 | 62.8 | 56.9 | 47.9 | 41.0 | 33.5 | |
| **EV 20/6** | 7.5 | 10 | 19 | 94,2 | | | | 86.2 | 85.1 | 84.1 | 83.2 | 82.2 | 79.7 | 77.3 | 70.0 | 59.4 | 51.3 | 42.0 | |
| **EV 20/7** | 7.5 | 10 | 19 | 109,5 | | | | 99.8 | 98.5 | 97.4 | 96.3 | 95.1 | 92.2 | 89.2 | 80.6 | 68.2 | 58.7 | 47.9 | |
| **EV 20/8** | 11 | 15 | 17 | 126,5 | | | | 116.1 | 114.7 | 113.5 | 112.3 | 111.0 | 107.9 | 104.8 | 95.4 | 81.4 | 70.7 | 58.3 | |
| **EV 20/9** | 11 | 15 | 17 | 142,0 | | | | 130.2 | 128.6 | 127.2 | 125.9 | 124.4 | 120.8 | 117.3 | 106.7 | 90.8 | 78.7 | 64.8 | |
| **EV 20/10** | 11 | 15 | 16 | 157,5 | | | | 144.2 | 142.4 | 140.8 | 139.3 | 137.7 | 133.6 | 129.6 | 117.7 | 100.1 | 86.6 | 71.1 | |
| **EV 20/11** | 15 | 20 | 15 | 174,0 | | | | 159.4 | 157.4 | 155.7 | 154.1 | 152.3 | 147.9 | 143.5 | 130.5 | 111.2 | 96.4 | 79.3 | |
| **EV 20/12** | 15 | 20 | 14 | 189,5 | | | | 173.4 | 171.2 | 169.3 | 167.6 | 165.5 | 160.7 | 155.8 | 141.6 | 120.4 | 104.2 | 85.6 | |
| **EV 20/13** | 15 | 20 | 13 | 204,9 | | | | 187.3 | 184.9 | 182.8 | 180.9 | 178.7 | 173.4 | 168.1 | 152.5 | 129.5 | 111.9 | 91.7 | |
| **EV 20/14** | 15 | 20 | 13 | 220,3 | | | | 201.1 | 198.5 | 196.2 | 194.1 | 191.7 | 186.0 | 180.2 | 163.2 | 138.4 | 119.4 | 97.7 | |
| **EV 20/15** | 18.5 | 25 | 11 | 237,4 | | | | 218.1 | 215.4 | 213.1 | 211.0 | 208.6 | 202.6 | 196.8 | 179.4 | 153.1 | 133.0 | 109.7 | |
| **EV 20/16** | 18.5 | 25 | 10 | 252,9 | | | | 232.2 | 229.4 | 226.9 | 224.6 | 222.0 | 215.6 | 209.4 | 190.7 | 162.7 | 141.1 | 116.3 | |
| **EV 20/17** | 18.5 | 25 | 10 | 268,5 | | | | 246.3 | 243.3 | 240.6 | 238.2 | 235.4 | 228.6 | 221.9 | 202.0 | 172.1 | 149.2 | 122.8 | |

* $P1_{max}$ = maximum suction pressure at full speed

E-Tech

## EV 30-45

| Pump model | RATED POWER | | $P1_{max}$ * | Q = DELIVERY | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | l/min 0 | 350.0 | 417.0 | 500.0 | 566.7 | 666.7 | 700.0 | 800.0 | 900.0 | 1000.0 | 1066.7 | 1166.7 |
| | | | | $m^3/h$ 0 | 21.0 | 25.0 | 30.0 | 34.0 | 40.0 | 42.0 | 48.0 | 54.0 | 60.0 | 64.0 | 70.0 |
| | | | Bar | US gmp 0 | 92.3 | 109.9 | 131.9 | 149.5 | 175.9 | 184.7 | 211.0 | 237.4 | 263.8 | 281.4 | 307.8 |
| | [kW] | [HP] | | H = TOTAL METERS HEAD OF WATER COLUMN [m] | | | | | | | | | | | |
| **EV 30/1** | 2.2 | 3 | 3 | 24.8 | | 18.6 | 17.2 | 15.8 | 12.7 | 11.6 | | | | | |
| **EV 30/2-2A** | 4 | 5.5 | 3 | 36.2 | | 29.3 | 26.3 | 23.1 | 17.8 | 15.7 | | | | | |
| **EV 30/2-1A** | 4 | 5.5 | 7 | 42.8 | | 34.3 | 31.6 | 28.8 | 23.4 | 21.3 | | | | | |
| **EV 30/2** | 5.5 | 7.5 | 9 | 48.5 | | 39.6 | 36.9 | 34.4 | 29.1 | 27.2 | | | | | |
| **EV 30/3-2A** | 5.5 | 7.5 | 9 | 60.3 | | 49.0 | 44.9 | 40.6 | 32.7 | 29.6 | | | | | |
| **EV 30/3-1A** | 7.5 | 10 | 13 | 67.5 | | 54.1 | 50.1 | 46.1 | 38.0 | 35.0 | | | | | |
| **EV 30/3** | 7.5 | 10 | 14 | 72.2 | | 58.2 | 54.2 | 50.3 | 42.4 | 39.5 | | | | | |
| **EV 30/4-2A** | 7.5 | 10 | 14 | 85.1 | | 68.6 | 63.9 | 58.4 | 48.8 | 44.7 | | | | | |
| **EV 30/4-1A** | 11 | 15 | 18 | 92.8 | | 75.3 | 70.2 | 65.2 | 54.8 | 50.8 | | | | | |
| **EV 30/4** | 11 | 15 | 20 | 99.4 | | 81.0 | 76.3 | 71.8 | 62.2 | 58.5 | | | | | |
| **EV 30/5-2A** | 11 | 15 | 20 | 109.2 | | 89.5 | 82.9 | 76.2 | 63.5 | 58.5 | | | | | |
| **EV 30/5-1A** | 11 | 15 | 20 | 115.1 | | 93.6 | 87.0 | 80.6 | 67.5 | 62.4 | | | | | |
| **EV 30/5** | 15 | 20 | 20 | 121.1 | | 99.3 | 93.1 | 87.4 | 74.9 | 70.0 | | | | | |
| **EV 30/6-2A** | 15 | 20 | 20 | 133.8 | | 109.6 | 101.7 | 93.9 | 78.7 | 72.7 | | | | | |
| **EV 30/6-1A** | 15 | 20 | 20 | 139.7 | | 113.7 | 105.8 | 98.3 | 82.7 | 76.6 | | | | | |
| **EV 30/6** | 15 | 20 | 20 | 145.6 | | 119.3 | 111.9 | 105.0 | 90.1 | 84.2 | | | | | |
| **EV 30/7-2A** | 15 | 20 | 20 | 157.5 | | 128.3 | 119.1 | 110.1 | 92.3 | 85.3 | | | | | |
| **EV 30/7-1A** | 15 | 20 | 20 | 163.3 | | 132.3 | 123.2 | 114.4 | 96.2 | 89.1 | | | | | |
| **EV 30/7** | 18.5 | 25 | 20 | 169.2 | | 137.9 | 129.1 | 121.0 | 103.5 | 96.6 | | | | | |
| **EV 30/8-2A** | 18.5 | 25 | 20 | 185.5 | | 152.0 | 142.0 | 132.5 | 112.8 | 105.1 | | | | | |
| **EV 30/8-1A** | 18.5 | 25 | 20 | 191.9 | | 156.4 | 146.6 | 137.4 | 117.4 | 109.6 | | | | | |
| **EV 30/8** | 18.5 | 25 | 20 | 198.4 | | 162.5 | 153.0 | 144.6 | 125.4 | 117.8 | | | | | |
| **EV 30/9-2A** | 22 | 30 | 20 | 209.8 | | 171.4 | 160.2 | 149.5 | 127.4 | 118.7 | | | | | |
| **EV 30/9-1A** | 22 | 30 | 18 | 216.2 | | 175.8 | 164.7 | 154.4 | 131.9 | 123.1 | | | | | |
| **EV 30/9** | 22 | 30 | 18 | 222.7 | | 181.8 | 171.1 | 161.5 | 139.8 | 131.3 | | | | | |
| **EV 30/10-2A** | 22 | 30 | 18 | 234.0 | | 190.6 | 178.1 | 166.3 | 141.7 | 132.1 | | | | | |
| **EV 30/10-1A** | 22 | 30 | 18 | 240.3 | | 194.9 | 182.6 | 171.1 | 146.1 | 136.4 | | | | | |
| **EV 30/10** | 30 | 40 | 17 | 246.8 | | 200.9 | 188.9 | 178.2 | 154.0 | 144.5 | | | | | |
| **EV 30/11-2A** | 30 | 40 | 16 | 262.9 | | 218.3 | 205.1 | 192.7 | 166.3 | 155.8 | | | | | |
| **EV 30/11-1A** | 30 | 40 | 15 | 269.5 | | 222.9 | 209.9 | 197.8 | 171.2 | 160.5 | | | | | |
| **EV 30/11** | 30 | 40 | 15 | 276.2 | | 229.2 | 216.5 | 205.3 | 179.4 | 169.1 | | | | | |
| **EV 30/12-2A** | 30 | 40 | 14 | 288.1 | | 240.0 | 226.0 | 213.0 | 184.4 | 173.3 | | | | | |
| **EV 30/12-1A** | 30 | 40 | 14 | 294.7 | | 244.8 | 230.9 | 218.4 | 189.7 | 178.6 | | | | | |
| **EV 30/12** | 30 | 40 | 13 | 301.4 | | 251.1 | 237.8 | 226.0 | 197.6 | 188.0 | | | | | |
| **EV 30/13-2A** | 30 | 40 | 13 | 313.0 | | 260.4 | 245.3 | 231.3 | 200.3 | 188.3 | | | | | |
| **EV 30/13-1A** | 30 | 40 | 12 | 319.6 | | 265.2 | 250.2 | 236.6 | 205.6 | 193.6 | | | | | |
| **EV 30/13** | 30 | 40 | 11 | 326.3 | | 271.5 | 257.0 | 244.2 | 213.5 | 202.9 | | | | | |
| | | | | | | | | | | | | | | | |
| **EV 45/1-1A** | 3 | 4 | 7 | 19.6 | | | | 16.0 | 14.6 | 14.0 | 12.1 | 9.7 | 7.0 | 4.9 | |
| **EV 45/1** | 4 | 5.5 | 7 | 25.1 | | | | 20.4 | 19.0 | 18.5 | 16.8 | 14.8 | 12.5 | 10.4 | |
| **EV 45/2-2A** | 5.5 | 7.5 | 14 | 38.4 | | | | 33.9 | 31.5 | 30.5 | 27.4 | 23.7 | 19.3 | 16.0 | |
| **EV 45/2** | 7.5 | 10 | 14 | 49.0 | | | | 42.0 | 39.8 | 38.8 | 35.5 | 31.8 | 27.5 | 24.1 | |
| **EV 45/3-2A** | 11 | 15 | 20 | 63.0 | | | | 55.9 | 52.7 | 51.4 | 46.8 | 41.5 | 35.1 | 30.3 | |
| **EV 45/3** | 11 | 15 | 20 | 74.2 | | | | 65.0 | 62.1 | 60.9 | 56.5 | 51.3 | 45.5 | 41.0 | |
| **EV 45/4-2A** | 15 | 20 | 20 | 87.5 | | | | 77.4 | 73.3 | 71.6 | 65.5 | 58.4 | 50.1 | 43.8 | |
| **EV 45/4** | 15 | 20 | 20 | 97.5 | | | | 86.4 | 82.8 | 81.3 | 75.4 | 68.5 | 60.8 | 54.7 | |
| **EV 45/5-2A** | 18.5 | 25 | 20 | 112.1 | | | | 99.9 | 95.0 | 92.9 | 85.5 | 76.7 | 66.6 | 58.8 | |
| **EV 45/5** | 18.5 | 25 | 20 | 122.3 | | | | 109.1 | 104.7 | 102.9 | 95.6 | 87.1 | 77.5 | 70.0 | |
| **EV 45/6-2A** | 22 | 30 | 20 | 136.0 | | | | 120.7 | 114.9 | 112.4 | 103.4 | 92.9 | 80.8 | 71.5 | |
| **EV 45/6** | 22 | 30 | 20 | 146.0 | | | | 129.8 | 124.5 | 122.2 | 113.3 | 103.0 | 91.6 | 82.5 | |
| **EV 45/7-2A** | 30 | 40 | 20 | 162.6 | | | | 146.4 | 140.1 | 137.3 | 127.2 | 115.2 | 101.3 | 90.8 | |
| **EV 45/7** | 30 | 40 | 20 | 173.0 | | | | 155.9 | 150.1 | 147.7 | 137.7 | 126.0 | 112.7 | 102.5 | |
| **EV 45/8-2A** | 30 | 40 | 20 | 187.2 | | | | 168.3 | 161.1 | 158.0 | 146.4 | 132.7 | 116.8 | 104.8 | |
| **EV 45/8** | 30 | 40 | 20 | 197.5 | | | | 177.7 | 171.1 | 168.2 | 156.8 | 143.4 | 128.2 | 116.5 | |
| **EV 45/9-2A** | 37 | 50 | 20 | 211.7 | | | | 190.2 | 182.2 | 178.7 | 165.7 | 150.3 | 132.6 | 119.1 | |
| **EV 45/9** | 37 | 50 | 18 | 222.0 | | | | 199.7 | 192.2 | 188.9 | 176.1 | 161.0 | 143.9 | 130.7 | |
| **EV 45/10-2A** | 37 | 50 | 18 | 236.1 | | | | 211.9 | 203.0 | 199.1 | 184.6 | 167.5 | 147.9 | 132.9 | |
| **EV 45/10** | 37 | 50 | 17 | 246.4 | | | | 221.3 | 212.9 | 209.3 | 195.0 | 178.1 | 159.1 | 144.4 | |
| **EV 45/11-2A** | 45 | 60 | 17 | 261.5 | | | | 235.3 | 225.7 | 221.5 | 205.7 | 187.0 | 165.5 | 149.1 | |
| **EV 45/11** | 45 | 60 | 15 | 271.8 | | | | 244.8 | 235.7 | 231.8 | 216.2 | 197.7 | 176.9 | 160.9 | |
| **EV 45/12-2A** | 45 | 60 | 15 | 286.0 | | | | 257.2 | 246.7 | 242.1 | 224.8 | 204.5 | 181.0 | 163.2 | |
| **EV 45/12** | 45 | 60 | 14 | 296.3 | | | | 266.6 | 256.7 | 252.4 | 235.3 | 215.2 | 192.4 | 174.9 | |
| **EV 45/13-2A** | 45 | 60 | 14 | 310.4 | | | | 278.9 | 267.6 | 262.7 | 243.9 | 221.8 | 196.5 | 177.2 | |

* H1 = maximum suction pressure at full speed

## EV 65-95

| Pump model | RATED POWER | | $P1_{max}$ * Bar | Q = DELIVERY | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | l/min 0 | 417.0 | 500.0 | 666.7 | 750.0 | 833.3 | 1000.0 | 1166.7 | 1333.3 | 1466.7 | 1666.7 | 1833.3 | 1916.7 | 2000.0 |
| | | | | $m^3/h$ 0 | 25.0 | 30.0 | 40.0 | 45.0 | 50.0 | 60.0 | 70.0 | 80.0 | 88.0 | 100.0 | 110.0 | 115.0 | 120.0 |
| | | | | US gmp 0 | 109.9 | 131.9 | 175.9 | 197.9 | 219.8 | 263.8 | 307.8 | 351.7 | 386.9 | 439.7 | 483.6 | 505.6 | 528.4 |
| | [kW] | [HP] | | H = TOTAL METERS HEAD OF WATER COLUMN [m] | | | | | | | | | | | | | |
| **EV 65/1-1A** | 4 | 5.5 | 3 | 21.3 | | 18.2 | 17.0 | 16.3 | 15.5 | 13.3 | 10.3 | 6.8 | 3.7 | | | | |
| **EV 65/1** | 5.5 | 7.5 | 7 | 30.2 | | 24.8 | 23.0 | 22.3 | 21.7 | 20.3 | 18.3 | 15.4 | 12.2 | | | | |
| **EV 65/2-2A** | 7.5 | 10 | 7 | 38.9 | | 37.2 | 35.8 | 34.8 | 33.8 | 30.5 | 25.8 | 20.3 | 14.6 | | | | |
| **EV 65/2-1A** | 11 | 15 | 11 | 47.8 | | 44.3 | 42.6 | 41.6 | 40.6 | 38.0 | 34.2 | 29.3 | 24.0 | | | | |
| **EV 65/2** | 11 | 15 | 15 | 59.3 | | 51.2 | 48.0 | 46.8 | 45.5 | 43.2 | 39.9 | 35.3 | 30.8 | | | | |
| **EV 65/3-2A** | 15 | 20 | 15 | 67.3 | | 63.0 | 60.6 | 59.1 | 57.6 | 53.4 | 47.2 | 39.5 | 31.4 | | | | |
| **EV 65/3-1A** | 15 | 20 | 19 | 75.5 | | 69.2 | 66.3 | 64.8 | 63.2 | 59.5 | 54.1 | 46.9 | 38.7 | | | | |
| **EV 65/3** | 18.5 | 25 | 20 | 89.6 | | 77.6 | 72.8 | 70.9 | 69.0 | 65.7 | 60.7 | 53.9 | 47.2 | | | | |
| **EV 65/4-2A** | 18.5 | 25 | 20 | 95.5 | | 88.6 | 85.1 | 83.2 | 81.1 | 76.0 | 68.3 | 58.5 | 47.9 | | | | |
| **EV 65/4-1A** | 22 | 30 | 19 | 103.7 | | 94.7 | 90.9 | 88.8 | 86.7 | 82.1 | 75.2 | 65.9 | 55.3 | | | | |
| **EV 65/4** | 22 | 30 | 18 | 111.8 | | 100.8 | 96.7 | 94.5 | 92.4 | 88.4 | 82.3 | 73.3 | 62.9 | | | | |
| **EV 65/5-2A** | 30 | 40 | 18 | 125.3 | | 116.2 | 111.8 | 109.5 | 107.0 | 101.1 | 92.1 | 80.4 | 68.0 | | | | |
| **EV 65/5-1A** | 30 | 40 | 17 | 133.9 | | 122.7 | 117.9 | 115.5 | 113.0 | 107.6 | 99.5 | 88.4 | 76.2 | | | | |
| **EV 65/5** | 30 | 40 | 16 | 142.4 | | 129.2 | 124.0 | 121.5 | 119.0 | 114.1 | 106.9 | 96.3 | 84.6 | | | | |
| **EV 65/6-2A** | 30 | 40 | 16 | 153.5 | | 141.6 | 136.2 | 133.3 | 130.3 | 123.4 | 112.9 | 99.0 | 84.1 | | | | |
| **EV 65/6-1A** | 37 | 50 | 15 | 162.1 | | 148.2 | 142.4 | 139.4 | 136.4 | 130.0 | 120.4 | 107.1 | 92.5 | | | | |
| **EV 65/6** | 37 | 50 | 14 | 170.6 | | 154.7 | 148.5 | 145.4 | 142.3 | 136.5 | 127.8 | 115.0 | 100.9 | | | | |
| **EV 65/7-2A** | 37 | 50 | 14 | 181.7 | | 167.0 | 160.6 | 157.2 | 153.6 | 145.7 | 133.7 | 117.7 | 100.3 | | | | |
| **EV 65/7-1A** | 37 | 50 | 14 | 190.1 | | 173.5 | 166.6 | 163.1 | 159.5 | 152.1 | 141.0 | 125.5 | 108.3 | | | | |
| **EV 65/7** | 45 | 60 | 13 | 199.5 | | 181.1 | 173.8 | 170.3 | 166.7 | 160.0 | 149.9 | 135.1 | 118.9 | | | | |
| **EV 65/8-2A** | 45 | 60 | 13 | 210.6 | | 193.5 | 186.0 | 182.2 | 178.1 | 169.3 | 156.0 | 137.9 | 118.4 | | | | |
| **EV 65/8-1A** | 45 | 60 | 12 | 219.2 | | 200.0 | 192.1 | 188.2 | 184.1 | 175.8 | 163.4 | 145.9 | 126.6 | | | | |
| **EV 65/8** | 45 | 60 | 11 | 227.7 | | 206.5 | 198.2 | 194.1 | 190.1 | 182.3 | 170.7 | 153.8 | 135.1 | | | | |
| | | | | | | | | | | | | | | | | | |
| **EV 95/1-1A** | 5.5 | 7.5 | 7 | 26.4 | | | | 20.5 | 19.9 | 18.7 | 17.3 | 15.5 | 13.2 | 9.5 | 5.7 | 3.5 | |
| **EV 95/1** | 7.5 | 10 | 13 | 35.6 | | | | 27.0 | 25.6 | 23.2 | 21.9 | 20.4 | 18.8 | 15.7 | 12.4 | 10.5 | |
| **EV 95/2-2A** | 11 | 15 | 15 | 49.6 | | | | 42.4 | 41.3 | 39.0 | 36.6 | 33.2 | 29.4 | 22.7 | 15.7 | 11.7 | |
| **EV 95/2** | 15 | 20 | 20 | 69.2 | | | | 56.6 | 54.5 | 50.5 | 47.3 | 44.3 | 41.6 | 36.3 | 30.5 | 27.3 | |
| **EV 95/3-2A** | 18.5 | 25 | 20 | 80.4 | | | | 70.8 | 69.1 | 65.6 | 62.2 | 57.7 | 53.0 | 44.3 | 34.9 | 30.4 | |
| **EV 95/3** | 22 | 30 | 20 | 92.4 | | | | 82.6 | 80.6 | 76.7 | 73.2 | 69.4 | 65.5 | 57.8 | 49.7 | 45.2 | |
| **EV 95/4-2A** | 30 | 40 | 19 | 113.1 | | | | 100.6 | 98.2 | 93.5 | 89.0 | 83.5 | 77.5 | 66.5 | 54.6 | 48.5 | |
| **EV 95/4** | 30 | 40 | 17 | 125.6 | | | | 113.0 | 110.4 | 105.2 | 100.6 | 95.7 | 90.7 | 80.8 | 70.2 | 64.4 | |
| **EV 95/5-2A** | 37 | 50 | 17 | 144.1 | | | | 128.4 | 125.4 | 119.3 | 113.7 | 106.9 | 99.7 | 86.1 | 71.6 | 64.1 | |
| **EV 95/5** | 37 | 50 | 16 | 156.6 | | | | 140.7 | 137.4 | 130.9 | 125.2 | 119.1 | 112.8 | 100.3 | 87.1 | 79.8 | |
| **EV 95/6-2A** | 45 | 60 | 16 | 175.9 | | | | 157.0 | 153.4 | 146.1 | 139.3 | 131.4 | 122.9 | 107.0 | 89.8 | 80.8 | |
| **EV 95/6** | 45 | 60 | 14 | 188.4 | | | | 169.5 | 165.6 | 157.8 | 150.9 | 143.6 | 136.2 | 121.3 | 105.5 | 96.7 | |

* $P1_{max}$ = maximum suction pressure at full speed

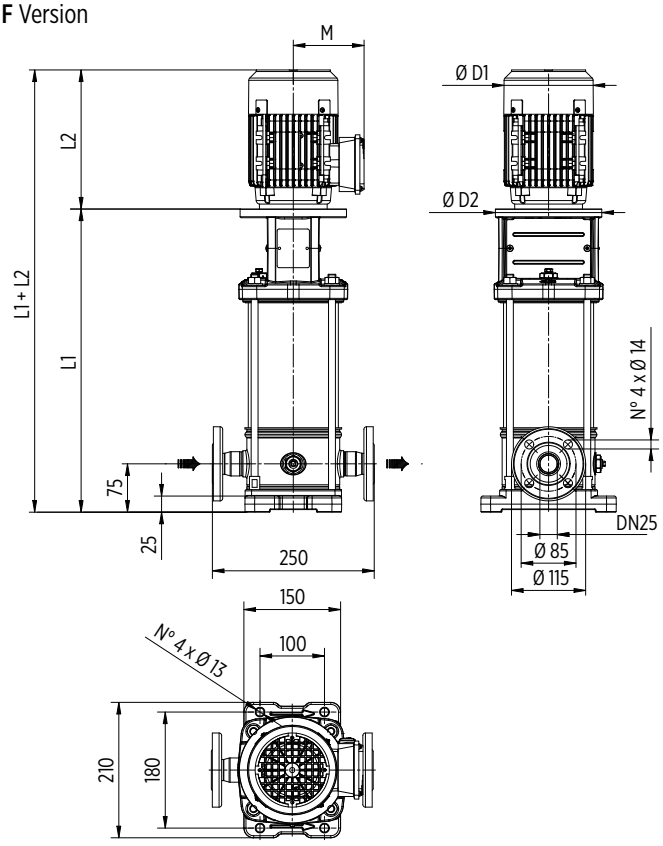
# EV 1 - 50 Hz

## TECHNICAL DATA

| Pump Model | MOTOR | | Dimensions [mm] | | | | | | | | | | | | Weight [kg] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L1 | L2 | | L3 | L4 | L5 | M | | D1 | | D2 | L1+L2 | Pump | Motor | Electric Pump |
| | [kW] | Dim | F | 1-PHASE | 3-PHASE | T | V | C | 1-PHASE | 3-PHASE | 1-PHASE | 3-PHASE | | | | | |
| **EV 1/2** | 0.37 | 71 | 322 | 216 | 216 | 297 | 297 | 297 | 134 | 110 | 139 | 139 | 170 | 538 | 12.5 | 5.8 | 18.3 |
| **EV 1/3** | 0.37 | 71 | 345 | 216 | 216 | 320 | 320 | 320 | 134 | 110 | 139 | 139 | 170 | 561 | 13 | 5.8 | 18.8 |
| **EV 1/4** | 0.37 | 71 | 367 | 216 | 216 | 342 | 342 | 342 | 134 | 110 | 139 | 139 | 170 | 583 | 13.5 | 5.8 | 19.3 |
| **EV 1/5** | 0.37 | 71 | 390 | 216 | 216 | 365 | 365 | 365 | 134 | 110 | 139 | 139 | 170 | 606 | 14 | 5.8 | 19.8 |
| **EV 1/6** | 0.37 | 71 | 412 | 216 | 216 | 387 | 387 | 387 | 134 | 110 | 139 | 139 | 170 | 628 | 14.5 | 5.8 | 20.3 |
| **EV 1/7** | 0.37 | 71 | 435 | 216 | 216 | 410 | 410 | 410 | 134 | 110 | 139 | 139 | 170 | 651 | 15 | 5.8 | 20.8 |
| **EV 1/8** | 0.55 | 71 | 457 | 216 | 216 | 432 | 432 | 432 | 134 | 110 | 139 | 139 | 170 | 673 | 15.5 | 6.2 | 21.7 |
| **EV 1/9** | 0.55 | 71 | 480 | 216 | 216 | 455 | 455 | 455 | 134 | 110 | 139 | 139 | 170 | 696 | 15.5 | 6.2 | 21.7 |
| **EV 1/10** | 0.55 | 71 | 502 | 216 | 216 | 477 | 477 | 477 | 134 | 110 | 139 | 139 | 170 | 718 | 16 | 6.2 | 22.2 |
| **EV 1/11** | 0.55 | 71 | 525 | 216 | 216 | 500 | 500 | 500 | 134 | 110 | 139 | 139 | 170 | 741 | 16.5 | 6.2 | 22.7 |
| **EV 1/12** | 0.75 | 80 | 547 | 232 | 232 | 522 | 522 | 522 | 150 | 129 | 160 | 160 | 170 | 779 | 17 | 9.5 | 26.5 |
| **EV 1/13** | 0.75 | 80 | 570 | 232 | 232 | 545 | 545 | 545 | 150 | 129 | 160 | 160 | 170 | 802 | 17.5 | 9.5 | 27 |
| **EV 1/14** | 0.75 | 80 | 592 | 232 | 232 | 567 | 567 | 567 | 150 | 129 | 160 | 160 | 170 | 824 | 18 | 9.5 | 27.5 |
| **EV 1/15** | 0.75 | 80 | 615 | 232 | 232 | 590 | 590 | 590 | 150 | 129 | 160 | 160 | 170 | 847 | 18.5 | 9.5 | 28 |
| **EV 1/17** | 1.1 | 80 | 660 | 232 | 232 | 635 | 635 | 635 | 150 | 129 | 160 | 160 | 170 | 892 | 19.5 | 11.1 | 30.6 |
| **EV 1/19** | 1.1 | 80 | 705 | 232 | 232 | 680 | 680 | 680 | 150 | 129 | 160 | 160 | 170 | 937 | 20.5 | 11.1 | 31.6 |
| **EV 1/22** | 1.1 | 80 | 772 | 232 | 232 | 747 | 747 | 747 | 150 | 129 | 160 | 160 | 170 | 1004 | 22 | 11.1 | 33.1 |
| **EV 1/23** | 1.5 | 90 | 795 | 267 | 267 | 770 | 770 | 770 | 160 | 138 | 180 | 180 | 170 | 1062 | 22 | 14 | 36 |
| **EV 1/25** | 1.5 | 90 | 840 | 267 | 267 | - | 815 | 815 | 160 | 138 | 180 | 180 | 170 | 1107 | 23 | 14 | 37 |
| **EV 1/27** | 1.5 | 90 | 885 | 267 | 267 | - | 860 | 860 | 160 | 138 | 180 | 180 | 170 | 1152 | 24 | 14 | 38 |
| **EV 1/30** | 1.5 | 90 | 952 | 267 | 267 | - | 927 | 927 | 160 | 138 | 180 | 180 | 170 | 1219 | 25.5 | 14 | 39.5 |
| **EV 1/32** | 3 | 100 | 997 | - | 306 | - | 972 | 972 | - | 145 | - | 196 | 170 | 1303 | 26 | 22.8 | 48.8 |
| **EV 1/34** | 3 | 100 | 1042 | - | 306 | - | 1017 | 1017 | - | 145 | - | 196 | 170 | 1348 | 27 | 22.8 | 49.8 |
| **EV 1/37** | 3 | 100 | 1110 | - | 306 | - | 1085 | 1085 | - | 145 | - | 196 | 170 | 1416 | 28.5 | 22.8 | 51.3 |

## DIMENSIONAL DRAWINGS

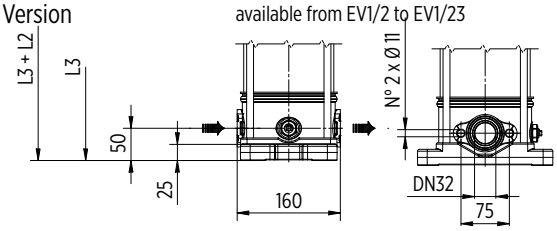
**F** Version




Round flanges on body type PN25/40: the pump is supplied without counterflanges (Optional accessories, including bolts and joints)

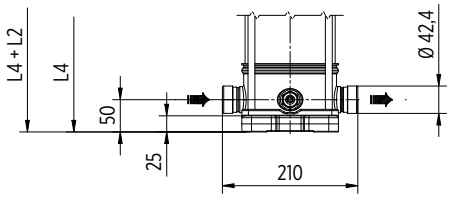
**T** Version

available from EV1/2 to EV1/23



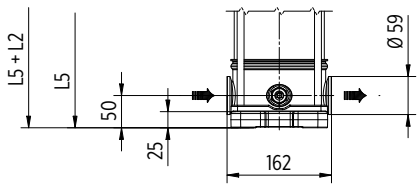

Oval flanges on body type PN16: the pump is supplied without threaded oval counter flanges (Optional accessories, including bolts and joints)

**V** Version




Connections with rapid fittings type "Victaulic": the pump is supplied without the collars (Optional accessories)

**C** Version

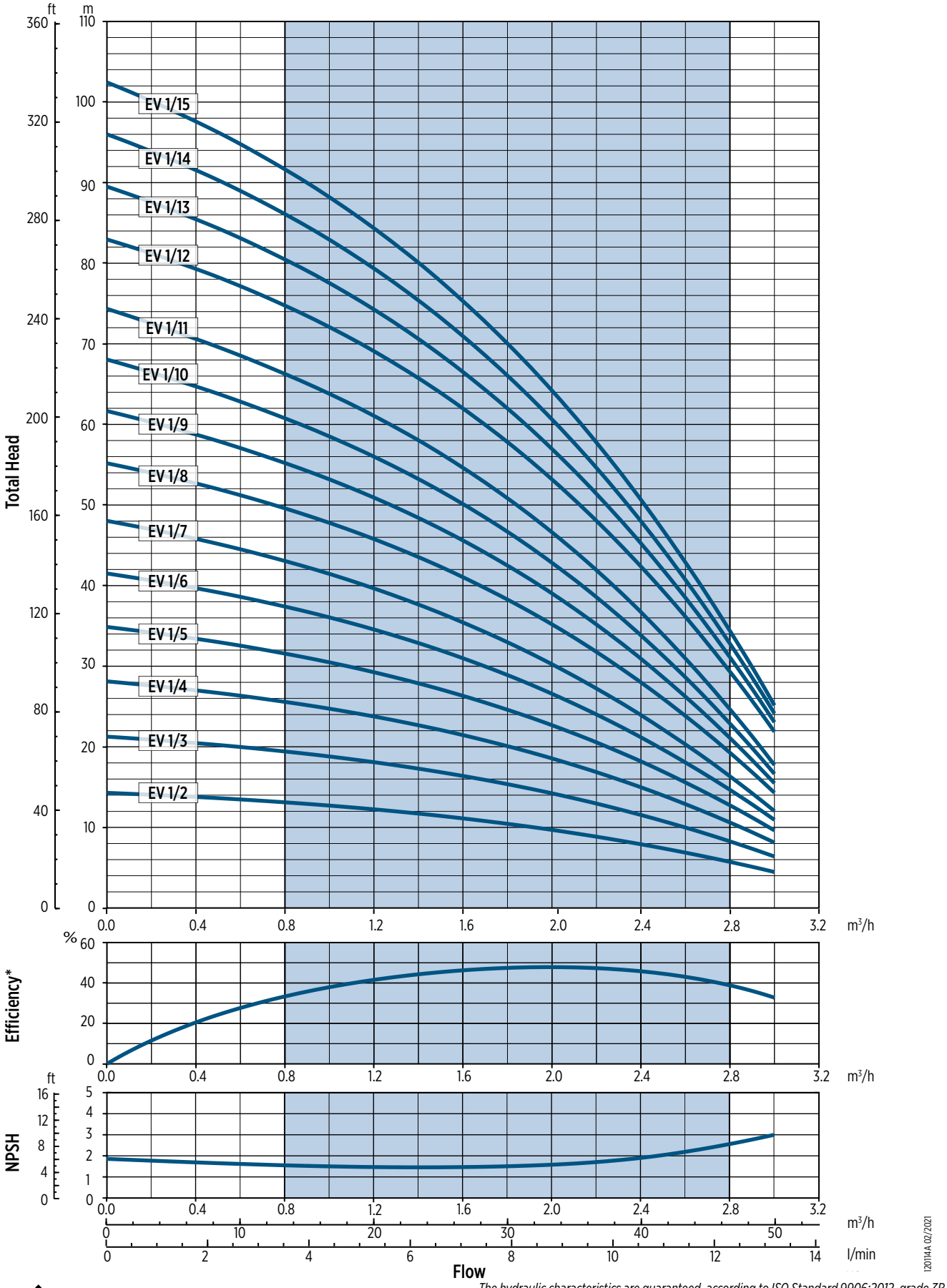



Connections with round fittings type Clamp-FlexiClamp: the pump is supplied without collars (Optional accessories)

00130099 03/2021

# EV 1 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70

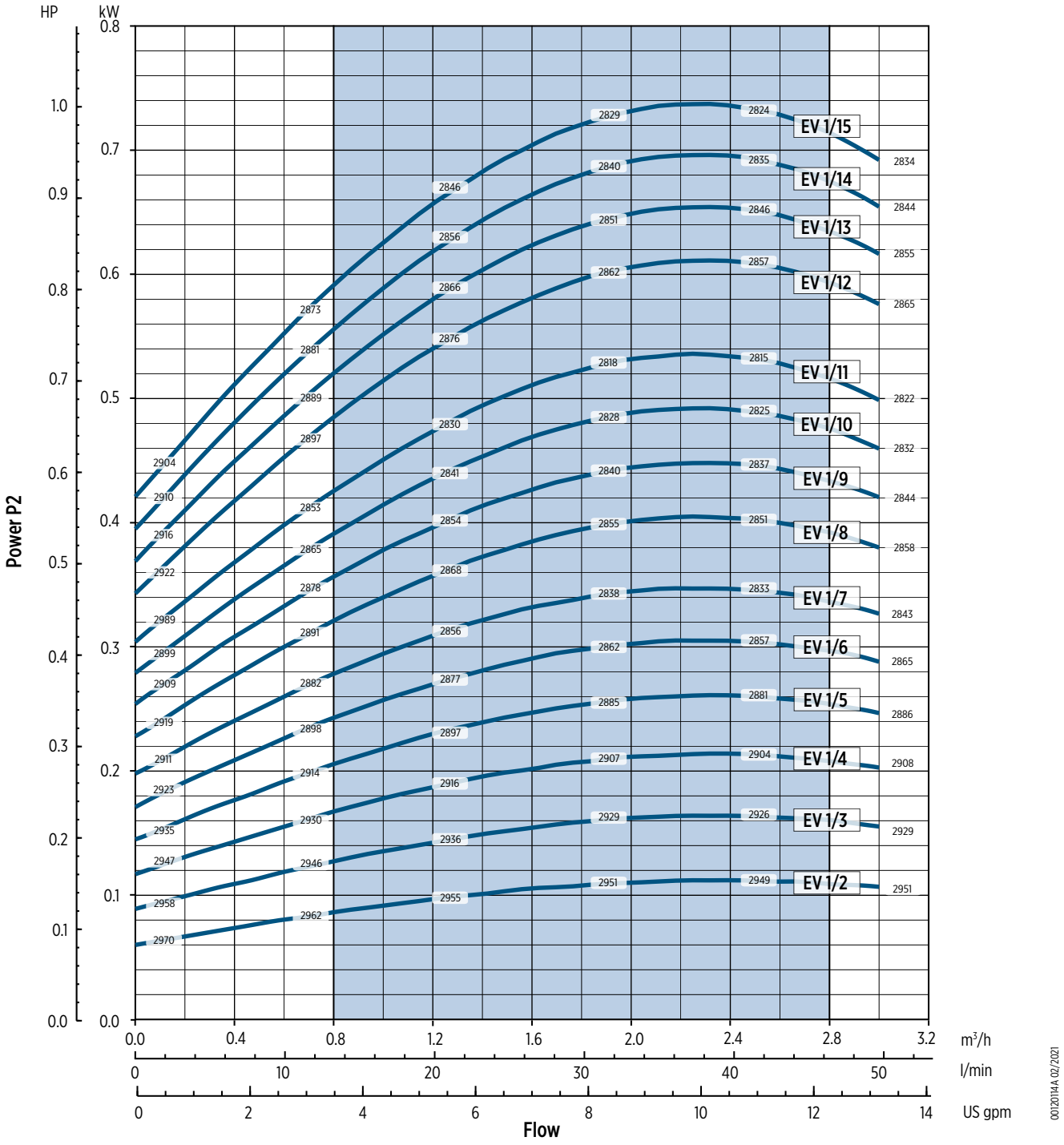



*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

120114A 02/2021

# EV 1 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

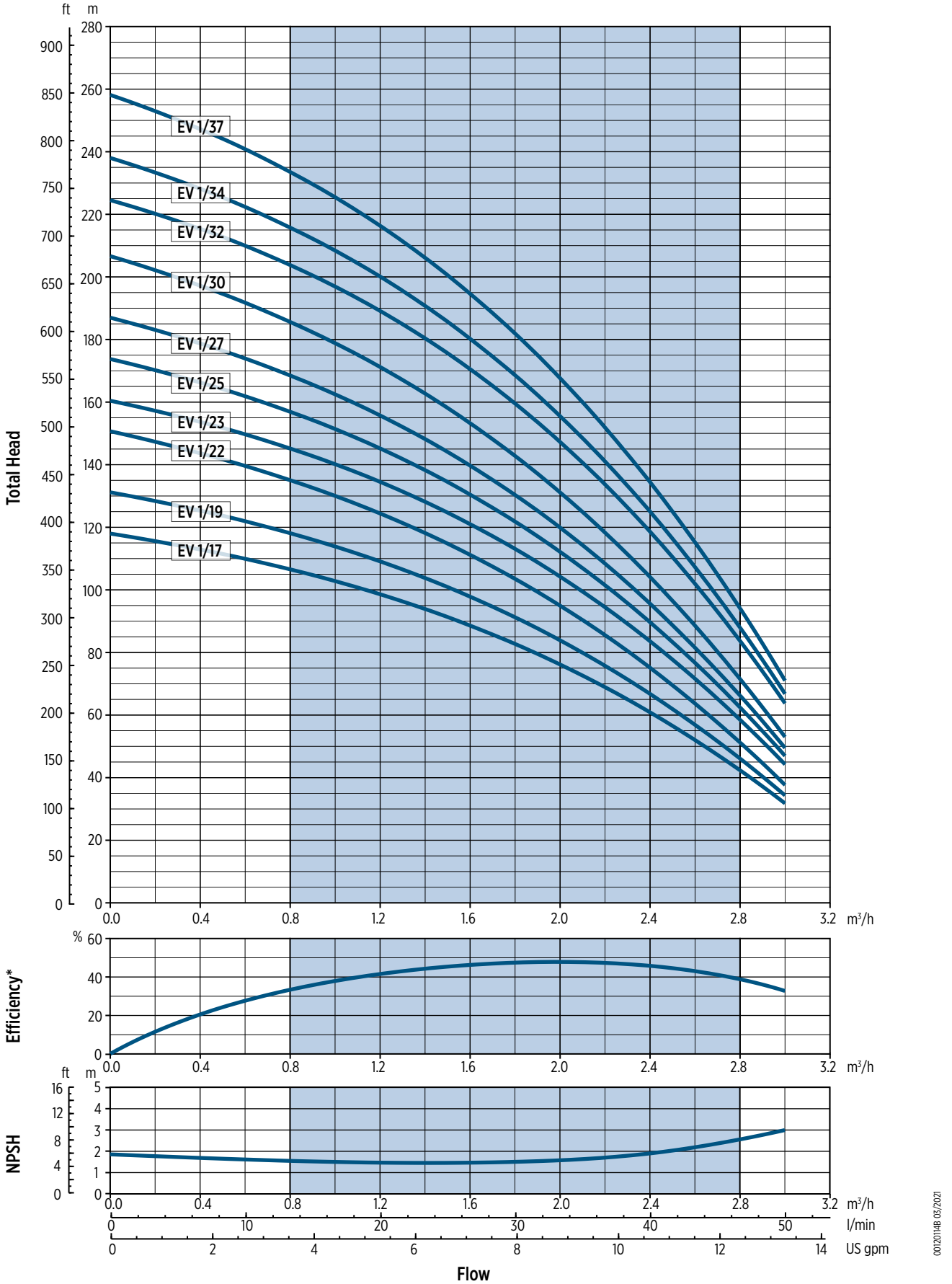
$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 1 - PERFORMANCE CURVES AT 50 Hz

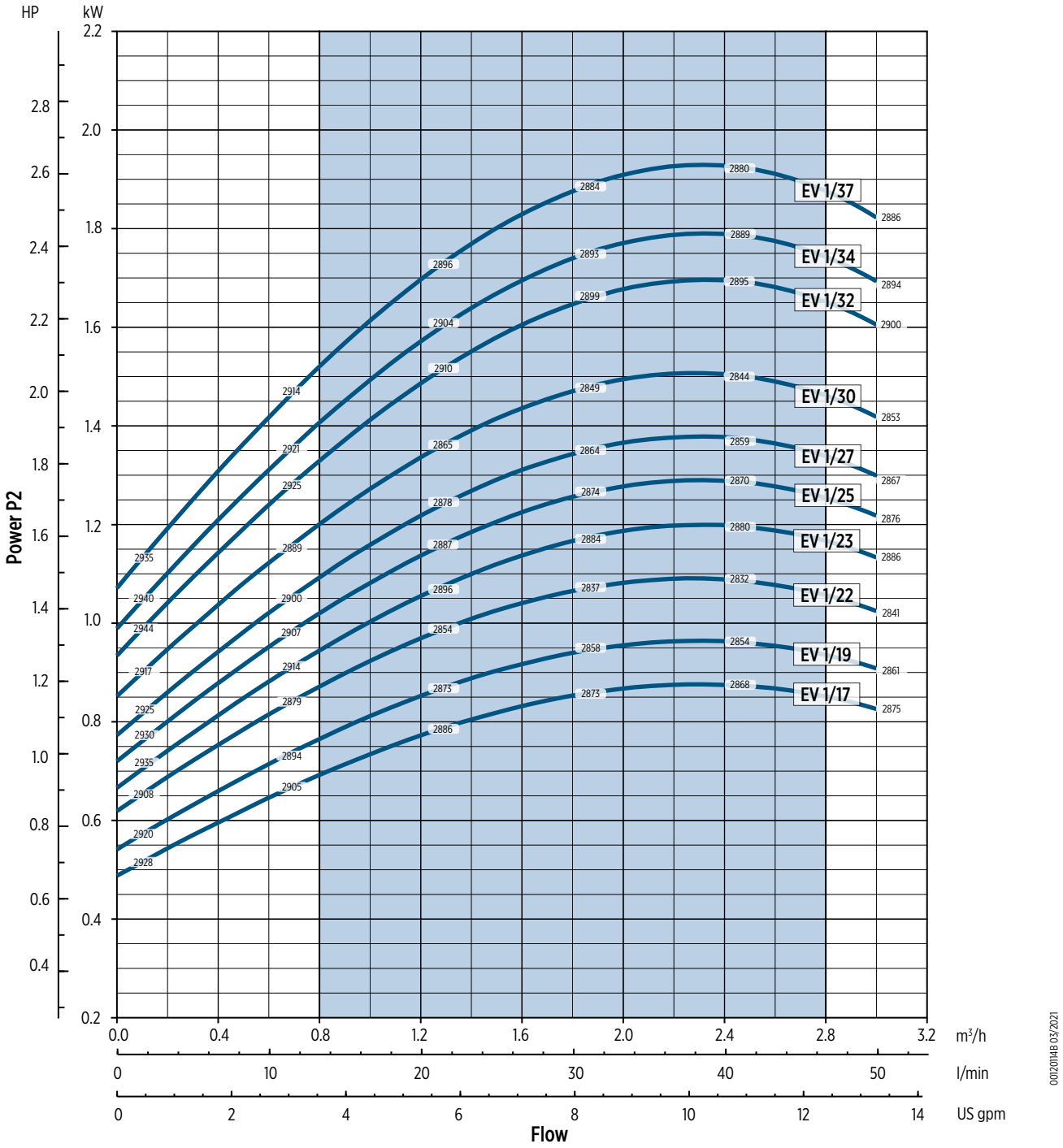
MEI ≥ 0,70




*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 1 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

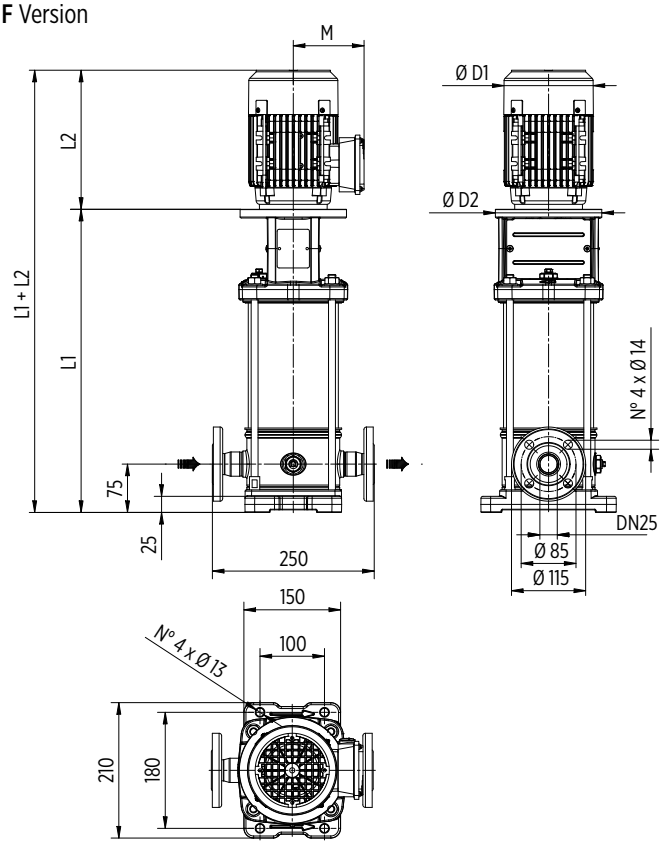
# EV 3 - 50 Hz

## TECHNICAL DATA

| Pump Model | MOTOR | | Dimensions [mm] | | | | | | | | | | | | Weight [kg] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L1 | L2 | | L3 | L4 | L5 | M | | D1 | | D2 | L1+L2 | Pump | Motor | Electric Pump |
| | [kW] | Dim | F | 1-PHASE | 3-PHASE | T | V | C | 1-PHASE | 3-PHASE | 1-PHASE | 3-PHASE | | | | | |
| **EV 3/2** | 0.37 | 71 | 322 | 216 | 216 | 297 | 297 | 297 | 134 | 110 | 139 | 139 | 170 | 538 | 12.5 | 5.8 | 18.3 |
| **EV 3/3** | 0.37 | 71 | 345 | 216 | 216 | 320 | 320 | 320 | 134 | 110 | 139 | 139 | 170 | 561 | 13 | 5.8 | 18.8 |
| **EV 3/4** | 0.37 | 71 | 367 | 216 | 216 | 342 | 342 | 342 | 134 | 110 | 139 | 139 | 170 | 583 | 13.5 | 5.8 | 19.3 |
| **EV 3/5** | 0.55 | 71 | 390 | 216 | 216 | 365 | 365 | 365 | 134 | 110 | 139 | 139 | 170 | 606 | 14 | 6.2 | 20.2 |
| **EV 3/6** | 0.55 | 71 | 412 | 216 | 216 | 387 | 387 | 387 | 134 | 110 | 139 | 139 | 170 | 628 | 14.5 | 6.2 | 20.7 |
| **EV 3/7** | 0.75 | 80 | 435 | 232 | 232 | 410 | 410 | 410 | 150 | 129 | 160 | 160 | 170 | 667 | 15 | 9.5 | 24.5 |
| **EV 3/8** | 0.75 | 80 | 457 | 232 | 232 | 432 | 432 | 432 | 150 | 129 | 160 | 160 | 170 | 689 | 15.5 | 9.5 | 25 |
| **EV 3/9** | 0.75 | 80 | 480 | 232 | 232 | 455 | 455 | 455 | 150 | 129 | 160 | 160 | 170 | 712 | 15.5 | 9.5 | 25 |
| **EV 3/10** | 1.1 | 80 | 502 | 232 | 232 | 477 | 477 | 477 | 150 | 129 | 160 | 160 | 170 | 734 | 16 | 11.1 | 27.1 |
| **EV 3/11** | 1.1 | 80 | 525 | 232 | 232 | 500 | 500 | 500 | 150 | 129 | 160 | 160 | 170 | 757 | 16.5 | 11.1 | 27.6 |
| **EV 3/12** | 1.1 | 80 | 547 | 232 | 232 | 522 | 522 | 522 | 150 | 129 | 160 | 160 | 170 | 779 | 17 | 11.1 | 28.1 |
| **EV 3/13** | 1.1 | 80 | 570 | 232 | 232 | 545 | 545 | 545 | 150 | 129 | 160 | 160 | 170 | 802 | 17.5 | 11.1 | 28.6 |
| **EV 3/14** | 1.5 | 90 | 592 | 267 | 267 | 567 | 567 | 567 | 160 | 138 | 180 | 180 | 170 | 859 | 18 | 14 | 32 |
| **EV 3/15** | 1.5 | 90 | 615 | 267 | 267 | 590 | 590 | 590 | 160 | 138 | 180 | 180 | 170 | 882 | 18.5 | 14 | 32.5 |
| **EV 3/16** | 1.5 | 90 | 637 | 267 | 267 | 612 | 612 | 612 | 160 | 138 | 180 | 180 | 170 | 904 | 19 | 14 | 33 |
| **EV 3/17** | 1.5 | 90 | 660 | 267 | 267 | 635 | 635 | 635 | 160 | 138 | 180 | 180 | 170 | 927 | 19.5 | 14 | 33.5 |
| **EV 3/18** | 2.2 | 90 | 682 | 267 | 267 | 657 | 657 | 657 | 160 | 138 | 180 | 180 | 170 | 949 | 20 | 16 | 36 |
| **EV 3/19** | 2.2 | 90 | 705 | 267 | 267 | 680 | 680 | 680 | 160 | 138 | 180 | 180 | 170 | 972 | 20.5 | 16 | 36.5 |
| **EV 3/21** | 2.2 | 90 | 750 | 267 | 267 | 725 | 725 | 725 | 160 | 138 | 180 | 180 | 170 | 1017 | 21.5 | 16 | 37.5 |
| **EV 3/23** | 2.2 | 90 | 795 | 267 | 267 | - | 770 | 770 | 160 | 138 | 180 | 180 | 170 | 1062 | 22.5 | 16 | 38.5 |
| **EV 3/25** | 2.2 | 90 | 840 | 267 | 267 | - | 815 | 815 | 160 | 138 | 180 | 180 | 170 | 1107 | 23 | 16 | 39 |
| **EV 3/27** | 3 | 100 | 885 | - | 306 | - | 860 | 860 | - | 145 | - | 196 | 170 | 1191 | 24 | 22.8 | 46.8 |
| **EV 3/29** | 3 | 100 | 930 | - | 306 | - | 905 | 905 | - | 145 | - | 196 | 170 | 1236 | 25 | 22.8 | 47.8 |
| **EV 3/31** | 3 | 100 | 975 | - | 306 | - | 950 | 950 | - | 145 | - | 196 | 170 | 1281 | 26 | 22.8 | 48.8 |
| **EV 3/33** | 3 | 100 | 1020 | - | 306 | - | 995 | 995 | - | 145 | - | 196 | 170 | 1326 | 27 | 22.8 | 49.8 |

## DIMENSIONAL DRAWINGS

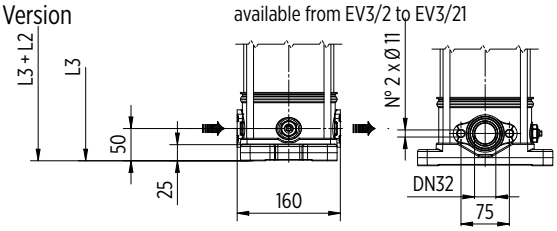
**F** Version




Round flanges on body type PN25/40: the pump is supplied without counterflanges (Optional accessories, including bolts and joints)

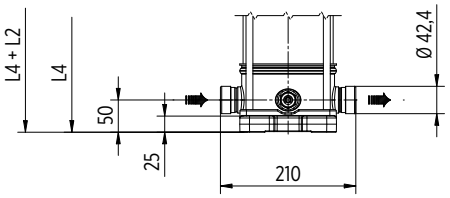
**T** Version

available from EV3/2 to EV3/21



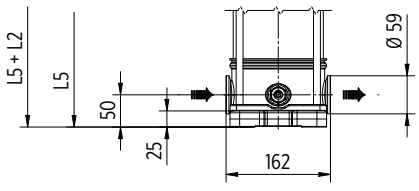

Oval flanges on body type PN16: the pump is supplied without threaded oval counter flanges (Optional accessories, including bolts and joints)

**V** Version




Connections with rapid fittings type "Victaulic": the pump is supplied without the collars (Optional accessories)

**C** Version

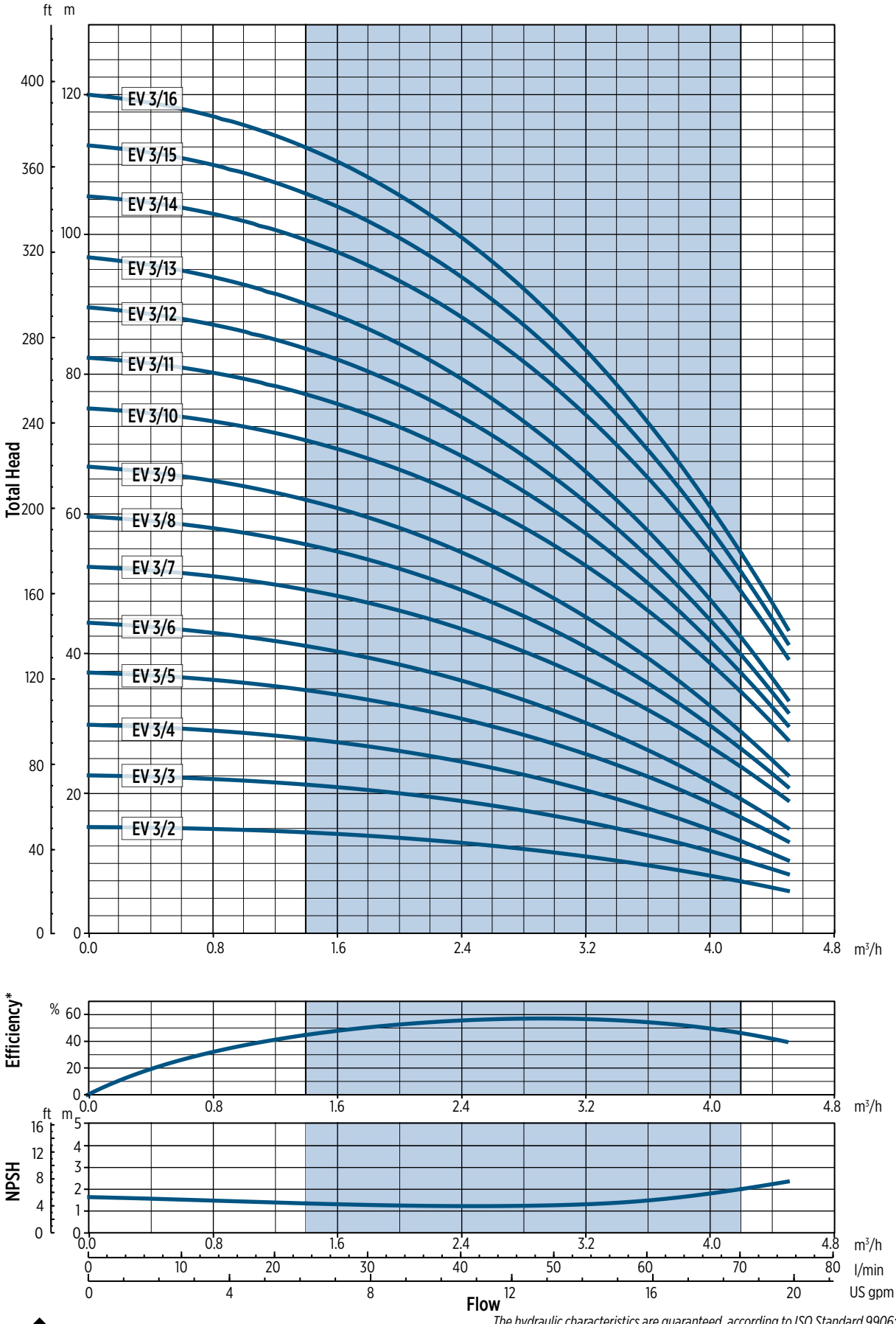



Connections with round fittings type Clamp-FlexiClamp: the pump is supplied without collars (Optional accessories)

00130099 03/2021

# EV 3 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70

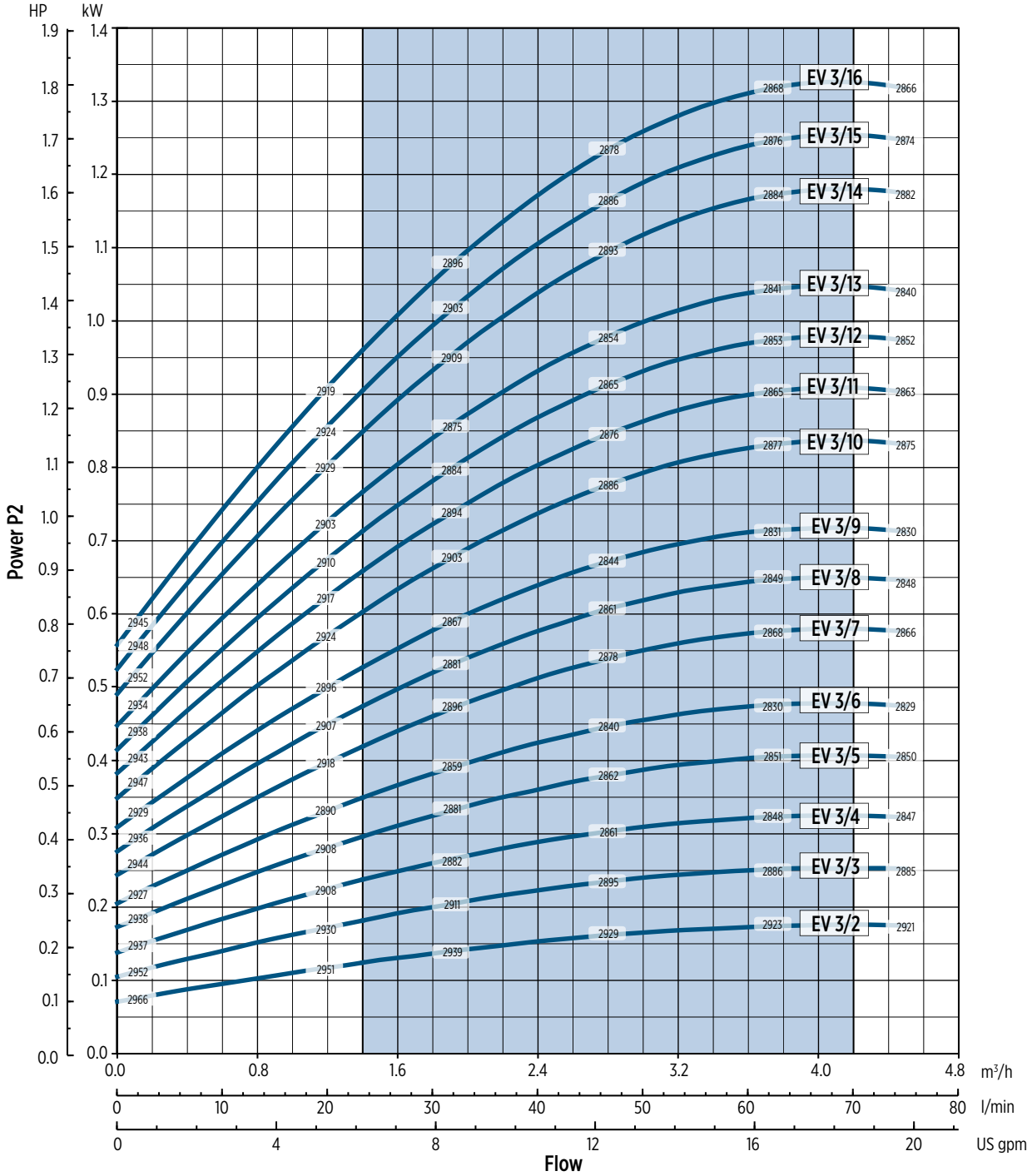



120115A 05/2021

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 3 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




00120115-EN 02/2018

* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

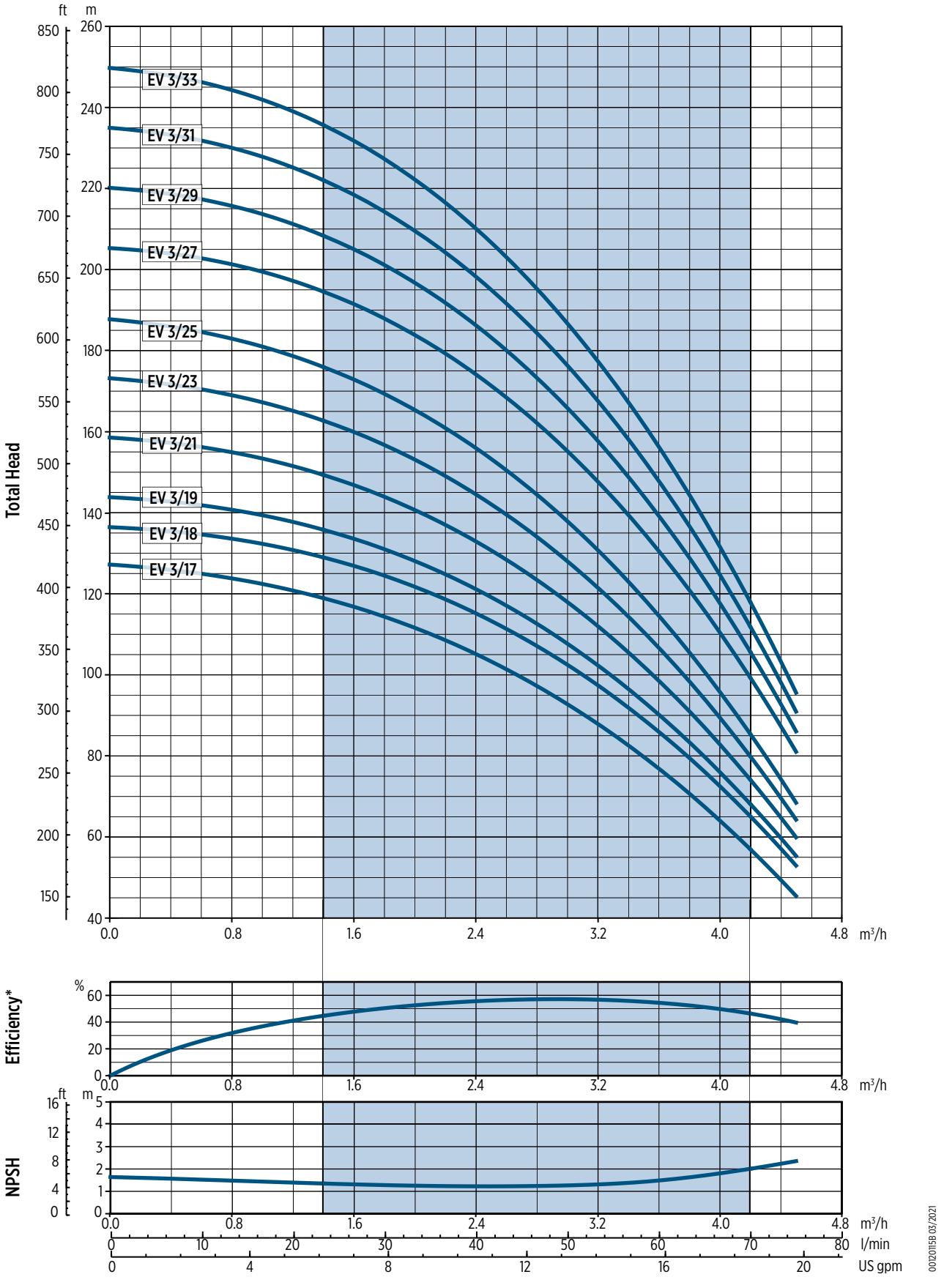
$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 3 - PERFORMANCE CURVES AT 50 Hz

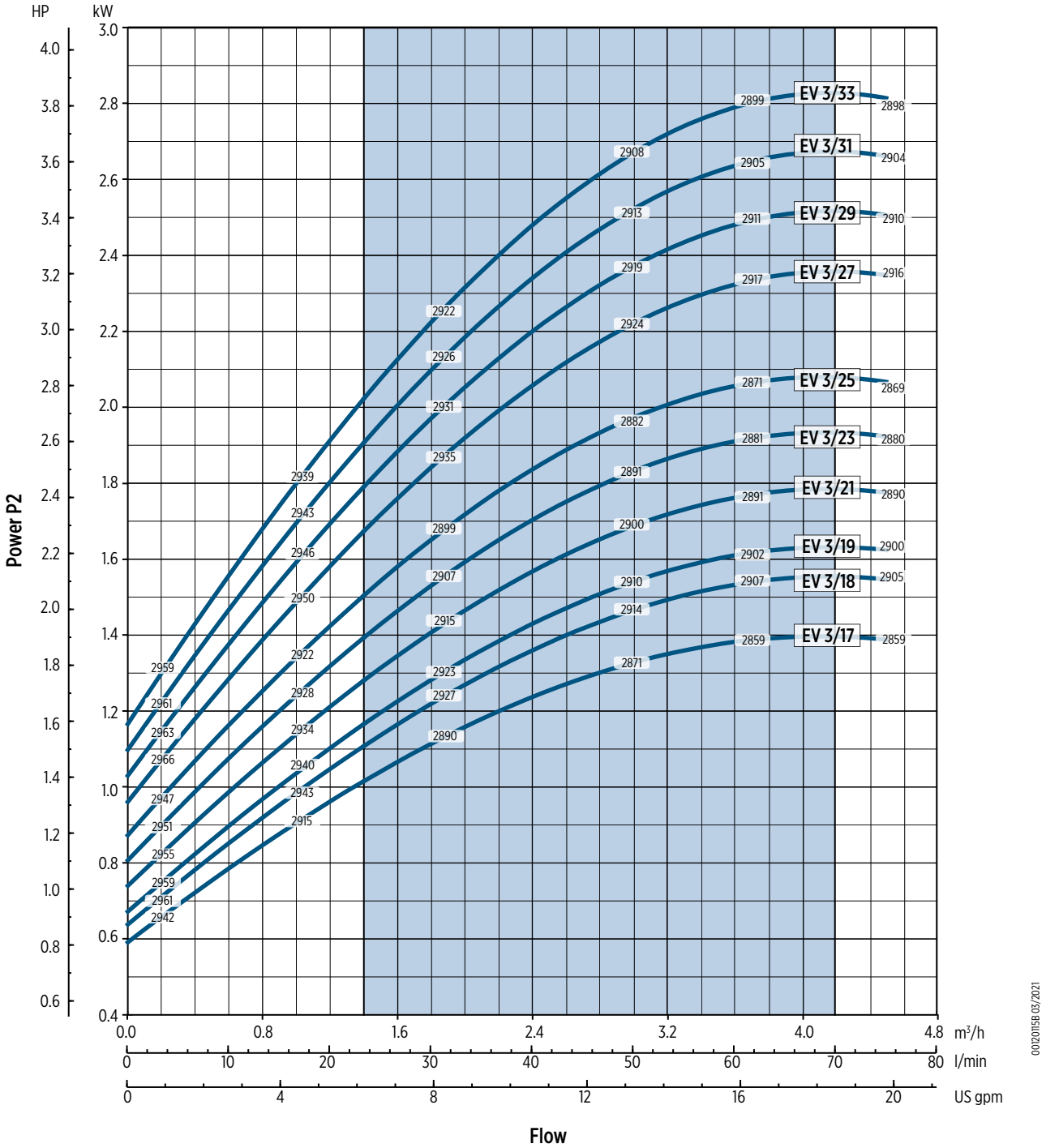
MEI ≥ 0,70




*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 3 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




001201158 05/2021

* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 6 - 50 Hz

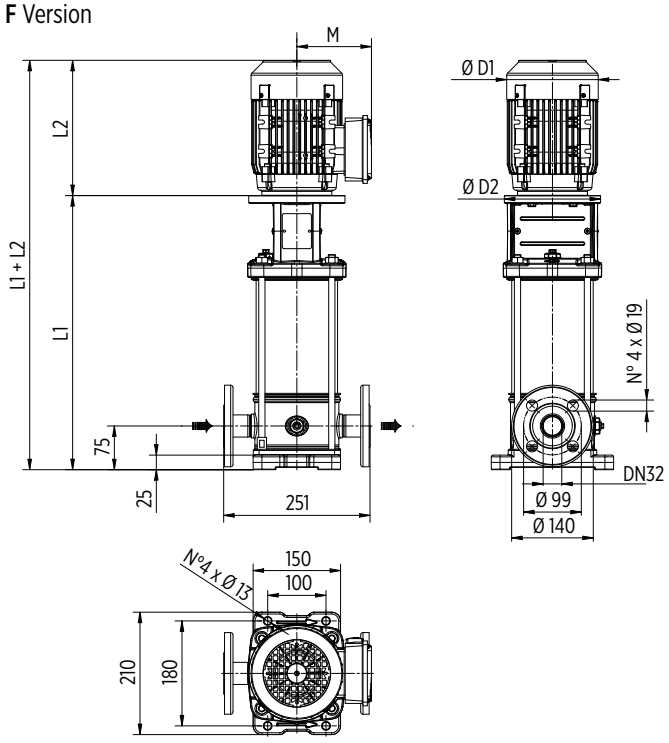
## TECHNICAL DATA

| Pump Model | MOTOR | | Dimensions [mm] | | | | | | | | | | | | Weight [kg] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L1 | L2 | | L3 | L4 | L5 | M | | D1 | | D2 | L1+L2 | Pump | Motor | Electric Pump |
| | [kW] | Dim | F | 1-PHASE | 3-PHASE | T | V | C | 1-PHASE | 3-PHASE | 1-PHASE | 3-PHASE | | | | | |
| **EV 6/2** | 0.37 | 71 | 329 | 216 | 216 | 304 | 304 | 304 | 134 | 110 | 139 | 139 | 170 | 545 | 13 | 5.8 | 18.8 |
| **EV 6/3** | 0.37 | 71 | 355 | 216 | 216 | 330 | 330 | 330 | 134 | 110 | 139 | 139 | 170 | 571 | 13.5 | 5.8 | 19.3 |
| **EV 6/4** | 0.55 | 71 | 381 | 216 | 216 | 356 | 356 | 356 | 134 | 110 | 139 | 139 | 170 | 597 | 14 | 6.2 | 20.2 |
| **EV 6/5** | 0.75 | 80 | 407 | 232 | 232 | 382 | 382 | 382 | 150 | 129 | 160 | 160 | 170 | 639 | 14.5 | 9.5 | 24 |
| **EV 6/6** | 0.75 | 80 | 433 | 232 | 232 | 408 | 408 | 408 | 150 | 129 | 160 | 160 | 170 | 665 | 15 | 9.5 | 24.5 |
| **EV 6/7** | 1.1 | 80 | 459 | 232 | 232 | 434 | 434 | 434 | 150 | 129 | 160 | 160 | 170 | 691 | 15.5 | 11.1 | 26.6 |
| **EV 6/8** | 1.1 | 80 | 485 | 232 | 232 | 460 | 460 | 460 | 150 | 129 | 160 | 160 | 170 | 717 | 16 | 11.1 | 27.1 |
| **EV 6/9** | 1.1 | 80 | 511 | 232 | 232 | 486 | 486 | 486 | 150 | 129 | 160 | 160 | 170 | 743 | 16.5 | 11.1 | 27.6 |
| **EV 6/10** | 1.5 | 90 | 537 | 267 | 267 | 512 | 512 | 512 | 160 | 138 | 180 | 180 | 170 | 804 | 17 | 14 | 31 |
| **EV 6/11** | 1.5 | 90 | 563 | 267 | 267 | 538 | 538 | 538 | 160 | 138 | 180 | 180 | 170 | 830 | 17.5 | 14 | 31.5 |
| **EV 6/12** | 1.5 | 90 | 589 | 267 | 267 | 564 | 564 | 564 | 160 | 138 | 180 | 180 | 170 | 856 | 18 | 14 | 32 |
| **EV 6/13** | 1.5 | 90 | 615 | 267 | 267 | 590 | 590 | 590 | 160 | 138 | 180 | 180 | 170 | 882 | 18.5 | 14 | 32.5 |
| **EV 6/14** | 2.2 | 90 | 641 | 267 | 267 | 616 | 616 | 616 | 160 | 138 | 180 | 180 | 170 | 908 | 19 | 16 | 35 |
| **EV 6/15** | 2.2 | 90 | 667 | 267 | 267 | 642 | 642 | 642 | 160 | 138 | 180 | 180 | 170 | 934 | 19.5 | 16 | 35.5 |
| **EV 6/16** | 2.2 | 90 | 693 | 267 | 267 | 668 | 668 | 668 | 160 | 138 | 180 | 180 | 170 | 960 | 20 | 16 | 36 |
| **EV 6/17** | 2.2 | 90 | 719 | 267 | 267 | 694 | 694 | 694 | 160 | 138 | 180 | 180 | 170 | 986 | 20.5 | 16 | 36.5 |
| **EV 6/18** | 2.2 | 90 | 745 | 267 | 267 | 720 | 720 | 720 | 160 | 138 | 180 | 180 | 170 | 1012 | 21 | 16 | 37 |
| **EV 6/19** | 3 | 100 | 771 | - | 306 | 746 | 746 | 746 | - | 145 | - | 196 | 169 | 1077 | 21.5 | 22.8 | 44.3 |
| **EV 6/20** | 3 | 100 | 797 | - | 306 | 772 | 772 | 772 | - | 145 | - | 196 | 170 | 1103 | 22 | 22.8 | 44.8 |
| **EV 6/21** | 3 | 100 | 823 | - | 306 | 798 | 798 | 798 | - | 145 | - | 196 | 170 | 1129 | 22.5 | 22.8 | 45.3 |
| **EV 6/23** | 3 | 100 | 875 | - | 306 | - | 850 | 850 | - | 145 | - | 196 | 170 | 1181 | 23.5 | 22.8 | 46.3 |
| **EV 6/25** | 3 | 100 | 927 | - | 306 | - | 902 | 902 | - | 145 | - | 196 | 170 | 1233 | 24.5 | 22.8 | 47.3 |
| **EV 6/28** | 4 | 112 | 1005 | - | 306 | - | 980 | 980 | - | 145 | - | 196 | 170 | 1311 | 26 | 26.5 | 52.5 |
| **EV 6/30** | 4 | 112 | 1057 | - | 306 | - | 1032 | 1032 | - | 145 | - | 196 | 170 | 1363 | 27 | 26.5 | 53.5 |
| **EV 6/33** | 4 | 112 | 1135 | - | 306 | - | 1110 | 1110 | - | 145 | - | 196 | 170 | 1441 | 28.5 | 26.5 | 55 |
| **EV 6/36 *** | 5.5 | 132 | 1425 | - | 328 | - | 1400 | 1400 | - | 160 | - | 225 | 300 | 1753 | 50 | 33.6 | 83.6 |

* EV 6/36 available only with Victaulic® connections

## DIMENSIONAL DRAWINGS

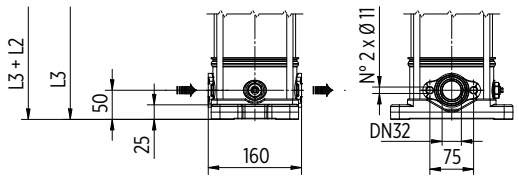
**F** Version




Round flanges on body type PN25/40: the pump is supplied without counterflanges (Optional accessories, including bolts and joints)

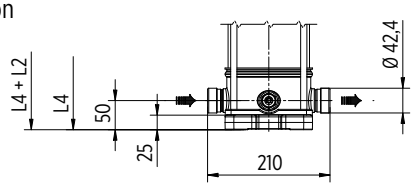
**T** Version

Available from EV6/2 to EV6/21



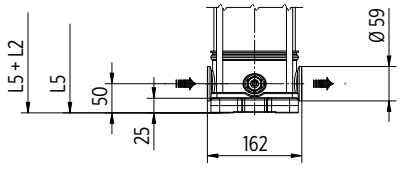

Oval flanges on body type PN16: the pump is supplied without threaded oval counter flanges (Optional accessories, including bolts and joints)

**V** Version




Connections with rapid fittings type "Victaulic": the pump is supplied without the collars (Optional accessories)

**C** Version

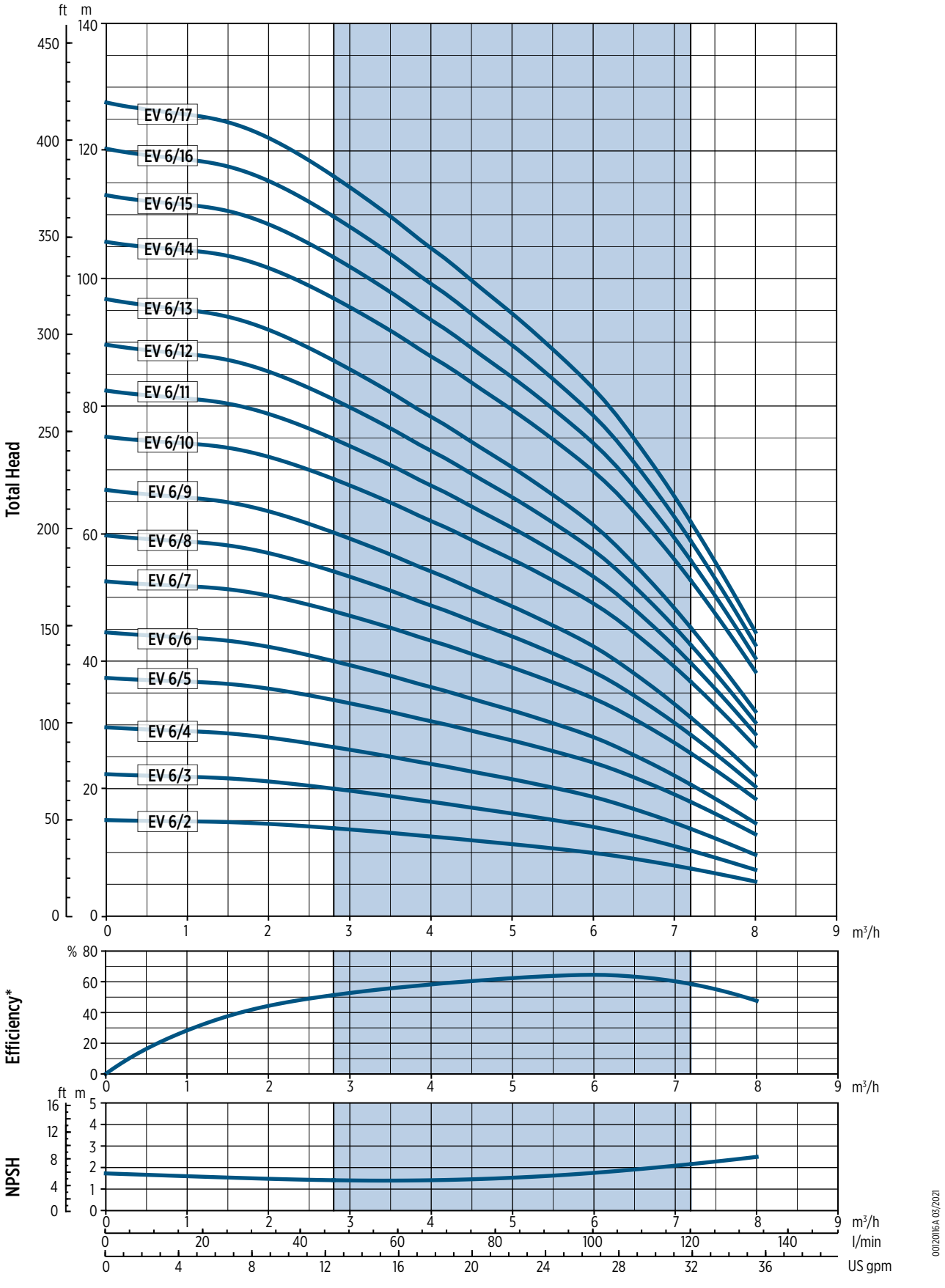



Connections with round fittings type Clamp-FlexiClamp: the pump is supplied without collars (Optional accessories)

00130100 03/2021

# EV 6 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70

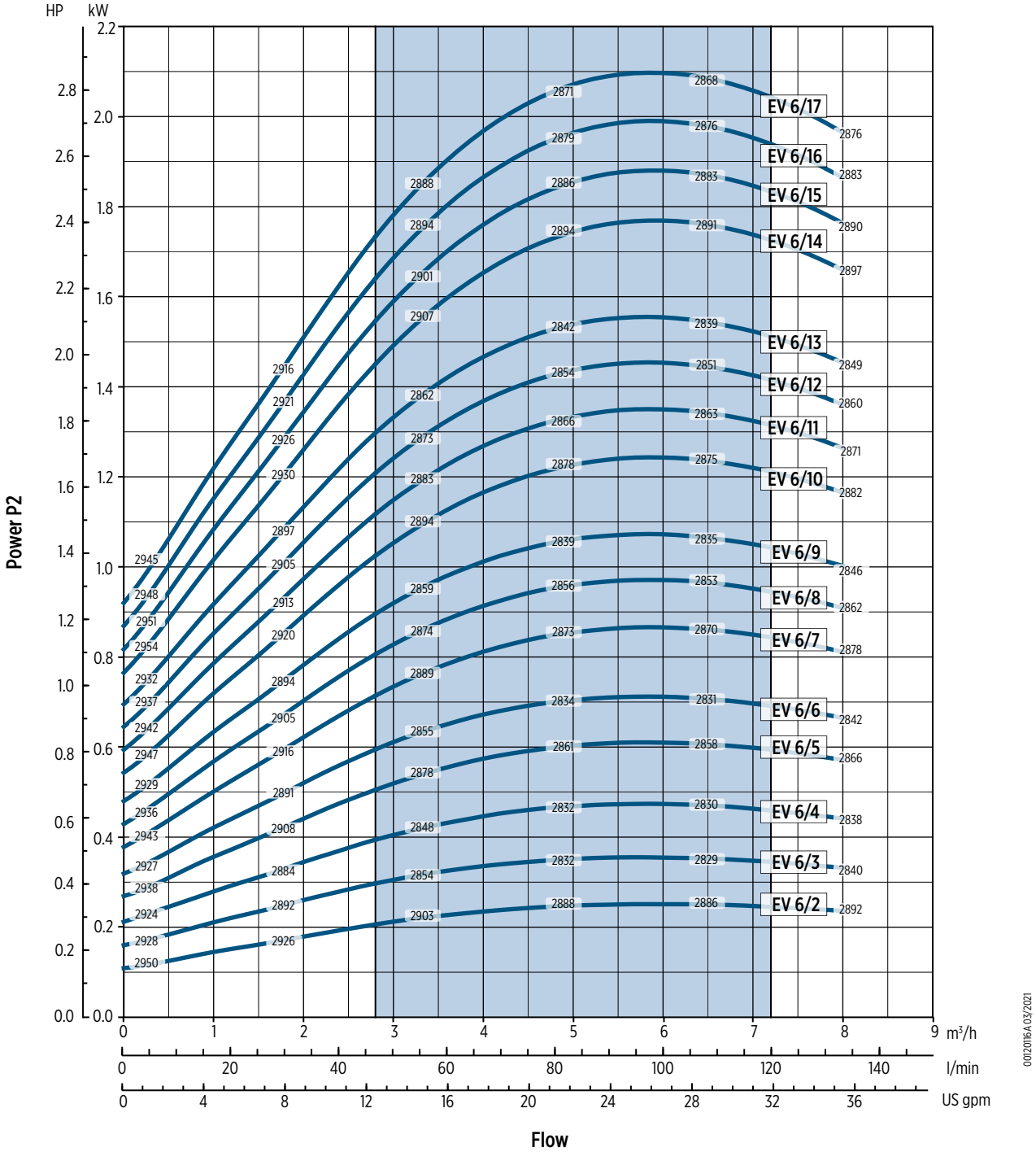



*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

00120116A 03/2021

# EV 6 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

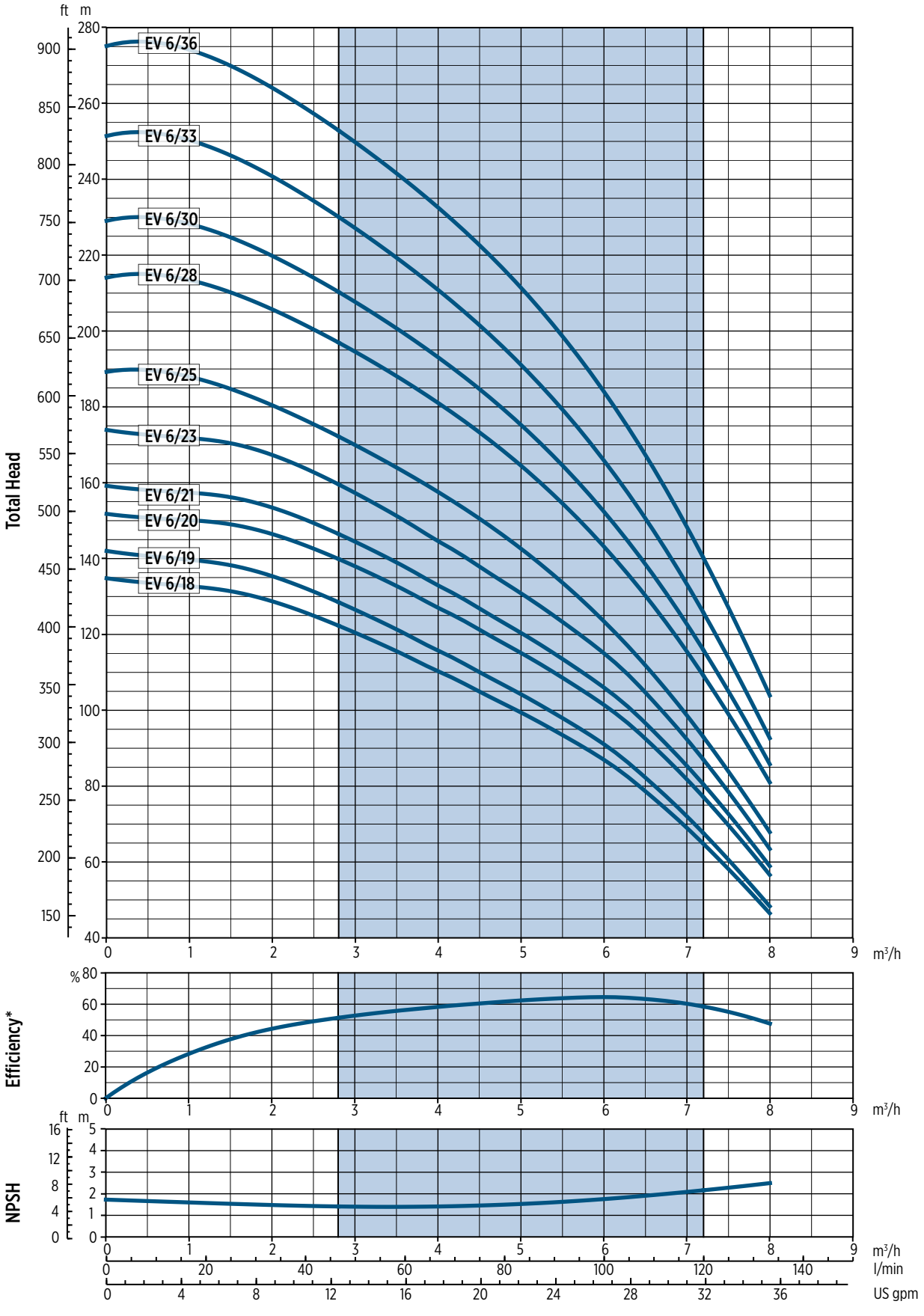
$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 6 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70

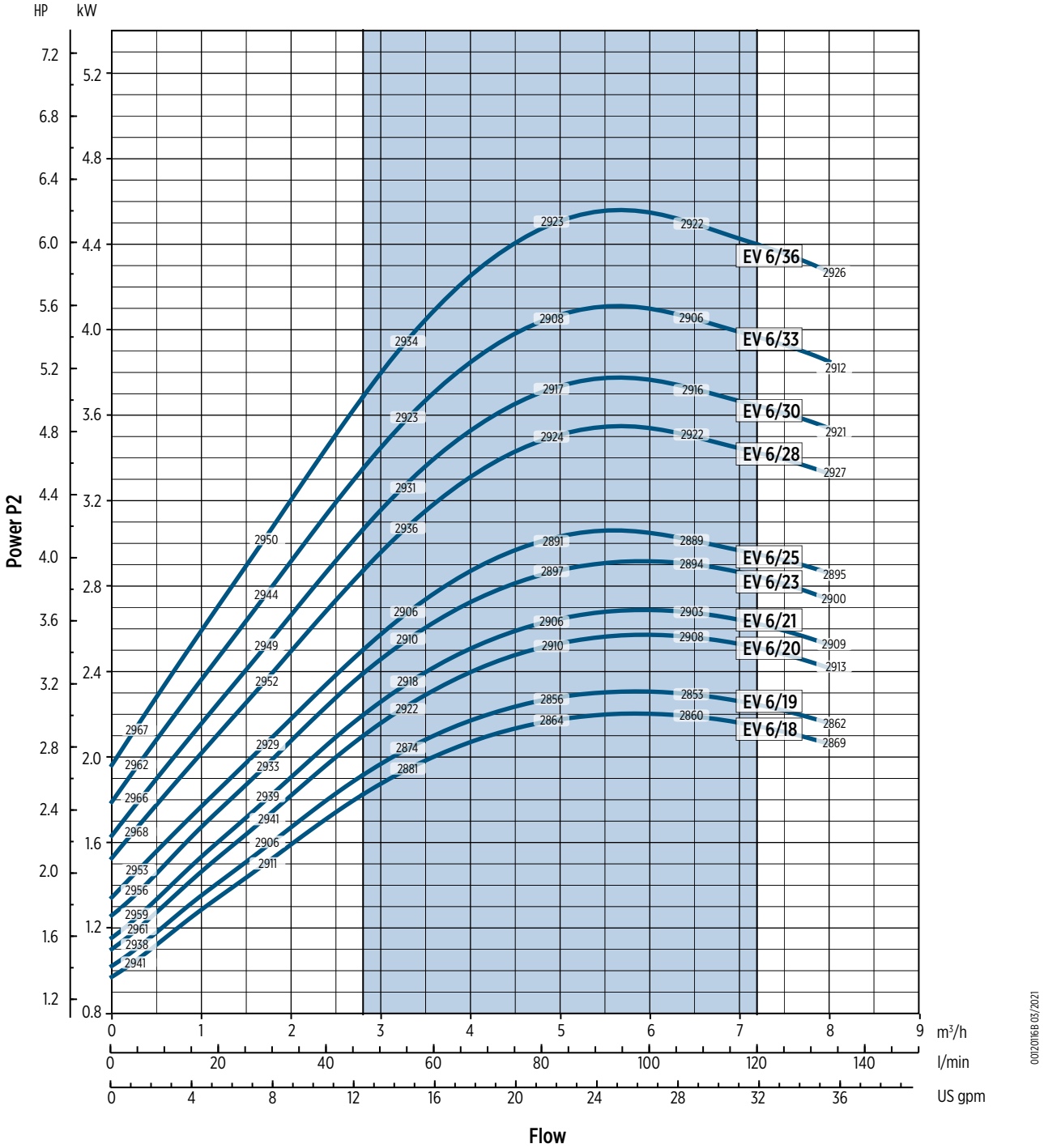



*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

00120166 03/2021

# EV 6 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

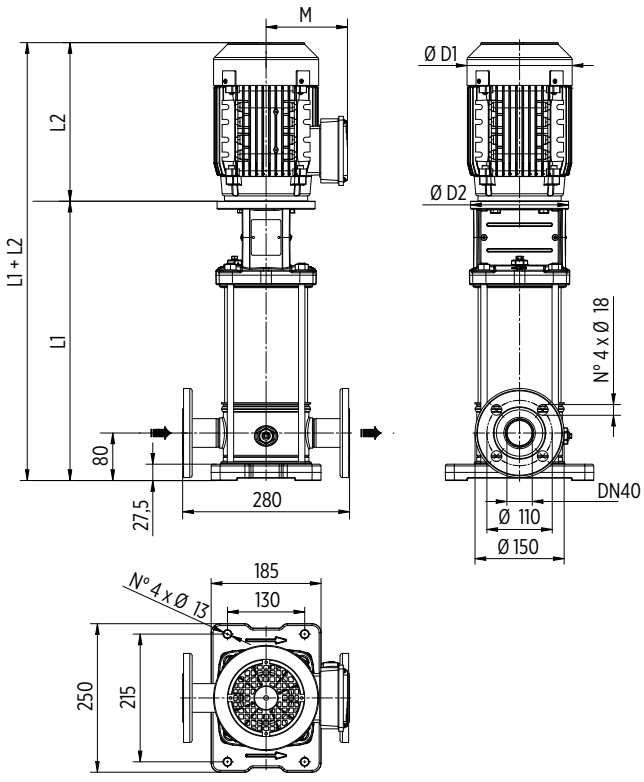
# EV 10 - 50 Hz

## TECHNICAL DATA

| Pump Model | MOTOR | | Dimensions [mm] | | | | | | | | | | | | Weight [kg] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L1 | L2 | | L3 | L4 | L5 | M | | D1 | | D2 | L1+L2 | Pump | Motor | Electric Pump |
| | [kW] | Dim | F | 1-PHASE | 3-PHASE | T | V | C | 1-PHASE | 3-PHASE | 1-PHASE | 3-PHASE | | | | | |
| **EV 10/2** | 0.75 | 80 | 350 | 232 | 232 | 350 | 350 | 350 | 150 | 129 | 160 | 160 | 170 | 582 | 14 | 9.5 | 23.5 |
| **EV 10/3** | 1.1 | 80 | 380 | 232 | 232 | 380 | 380 | 380 | 150 | 129 | 160 | 160 | 170 | 612 | 14.5 | 11.1 | 25.6 |
| **EV 10/4** | 1.5 | 90 | 410 | 267 | 267 | 410 | 410 | 410 | 160 | 138 | 180 | 180 | 170 | 677 | 15 | 14 | 29 |
| **EV 10/5** | 1.5 | 90 | 440 | 267 | 267 | 440 | 440 | 440 | 160 | 138 | 180 | 180 | 170 | 707 | 16 | 14 | 30 |
| **EV 10/6** | 2.2 | 90 | 470 | 267 | 267 | 470 | 470 | 470 | 160 | 138 | 180 | 180 | 170 | 737 | 16.5 | 16 | 32.5 |
| **EV 10/7** | 2.2 | 90 | 500 | 267 | 267 | 500 | 500 | 500 | 160 | 138 | 180 | 180 | 170 | 767 | 17 | 16 | 33 |
| **EV 10/8** | 3 | 100 | 530 | - | 306 | 530 | 530 | 530 | - | 145 | - | 196 | 170 | 836 | 17.5 | 22.8 | 40.3 |
| **EV 10/9** | 3 | 100 | 560 | - | 306 | 560 | 560 | 560 | - | 145 | - | 196 | 170 | 866 | 18 | 22.8 | 40.8 |
| **EV 10/10** | 4 | 112 | 590 | - | 306 | 590 | 590 | 590 | - | 145 | - | 196 | 170 | 896 | 19 | 26.5 | 45.5 |
| **EV 10/11** | 4 | 112 | 620 | - | 306 | 620 | 620 | 620 | - | 145 | - | 196 | 170 | 926 | 19.5 | 26.5 | 46 |
| **EV 10/12** | 4 | 112 | 650 | - | 306 | 650 | 650 | 650 | - | 145 | - | 196 | 170 | 956 | 20 | 26.5 | 46.5 |
| **EV 10/13** | 4 | 112 | 680 | - | 306 | 680 | 680 | 680 | - | 145 | - | 196 | 170 | 986 | 21 | 26.5 | 47.5 |
| **EV 10/15** | 5.5 | 132 | 952 | - | 328 | 952 | 952 | 952 | - | 160 | - | 225 | 300 | 1280 | 42 | 33.6 | 75.6 |
| **EV 10/17** | 5.5 | 132 | 1012 | - | 328 | - | 1012 | 1012 | - | 160 | - | 225 | 300 | 1340 | 43 | 33.6 | 76.6 |
| **EV 10/19** | 7.5 | 132 | 1072 | - | 350 | - | 1072 | 1072 | - | 160 | - | 225 | 300 | 1422 | 44.5 | 36 | 80.5 |
| **EV 10/21** | 7.5 | 132 | 1132 | - | 350 | - | 1132 | 1132 | - | 160 | - | 225 | 300 | 1482 | 46 | 36 | 82 |
| **EV 10/23** | 7.5 | 132 | 1192 | - | 350 | - | 1192 | 1192 | - | 160 | - | 225 | 300 | 1542 | 47 | 36 | 83 |
| **EV 10/24** | 11 | 160 | 1242 | - | 425 | - | 1242 | 1242 | - | 194 | - | 248 | 350 | 1667 | 51 | 59 | 110 |

## DIMENSIONAL DRAWINGS

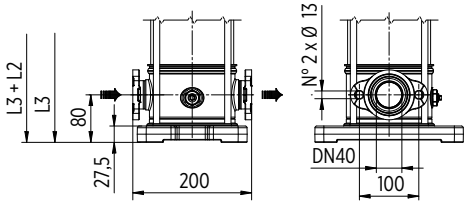
**F** Version




Round flanges on body type PN25/40: the pump is supplied without counterflanges (Optional accessories, including bolts and joints)

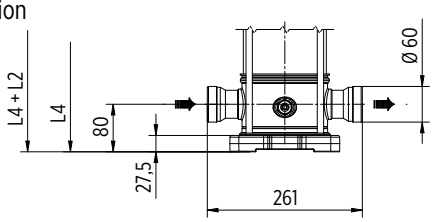
**T** Version

Available from EV10/2 to EV10/15



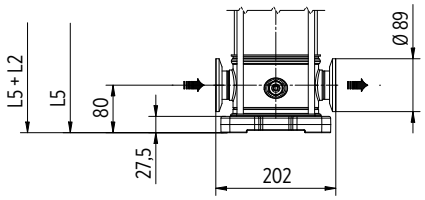

Oval flanges on body type PN16: the pump is supplied without threaded oval counter flanges (Optional accessories, including bolts and joints)

**V** Version




Connections with rapid fittings type "Victaulic": the pump is supplied without the collars (Optional accessories)

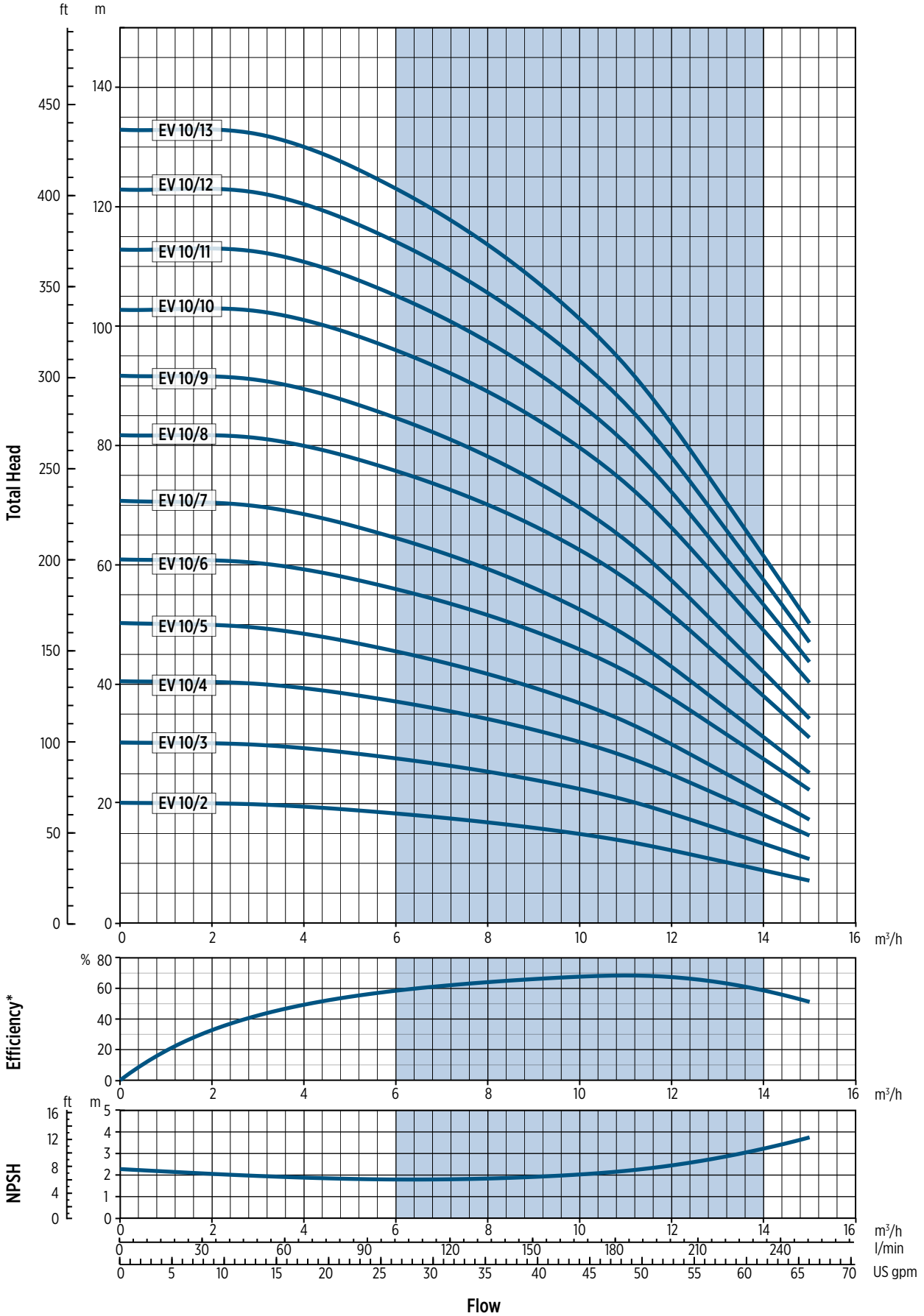
**C** Version




Connections with round fittings type Clamp-FlexiClamp: the pump is supplied without collars (Optional accessories)

# EV 10 - PERFORMANCE CURVES AT 50 Hz

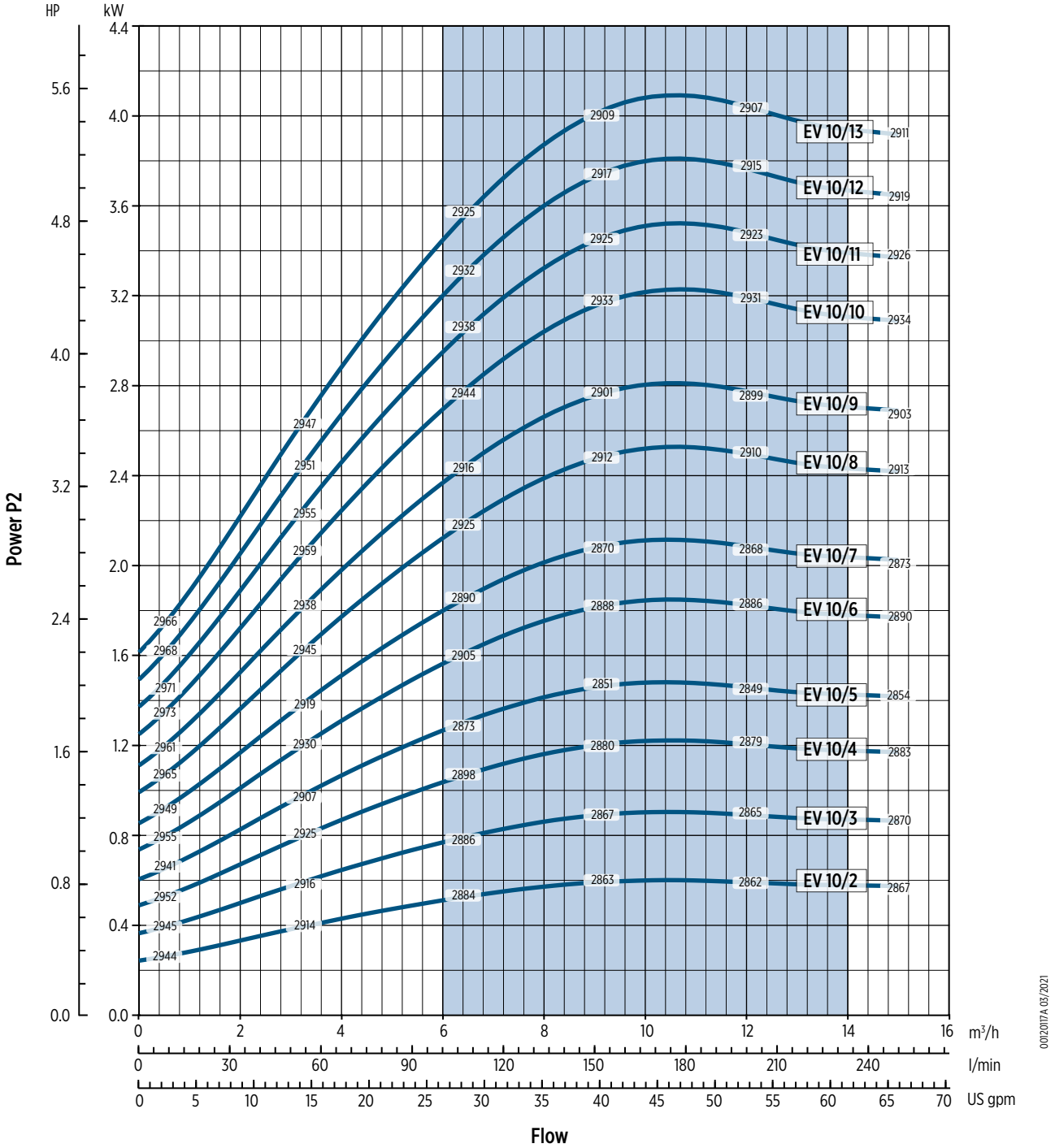
MEI ≥ 0,70




*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 10 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

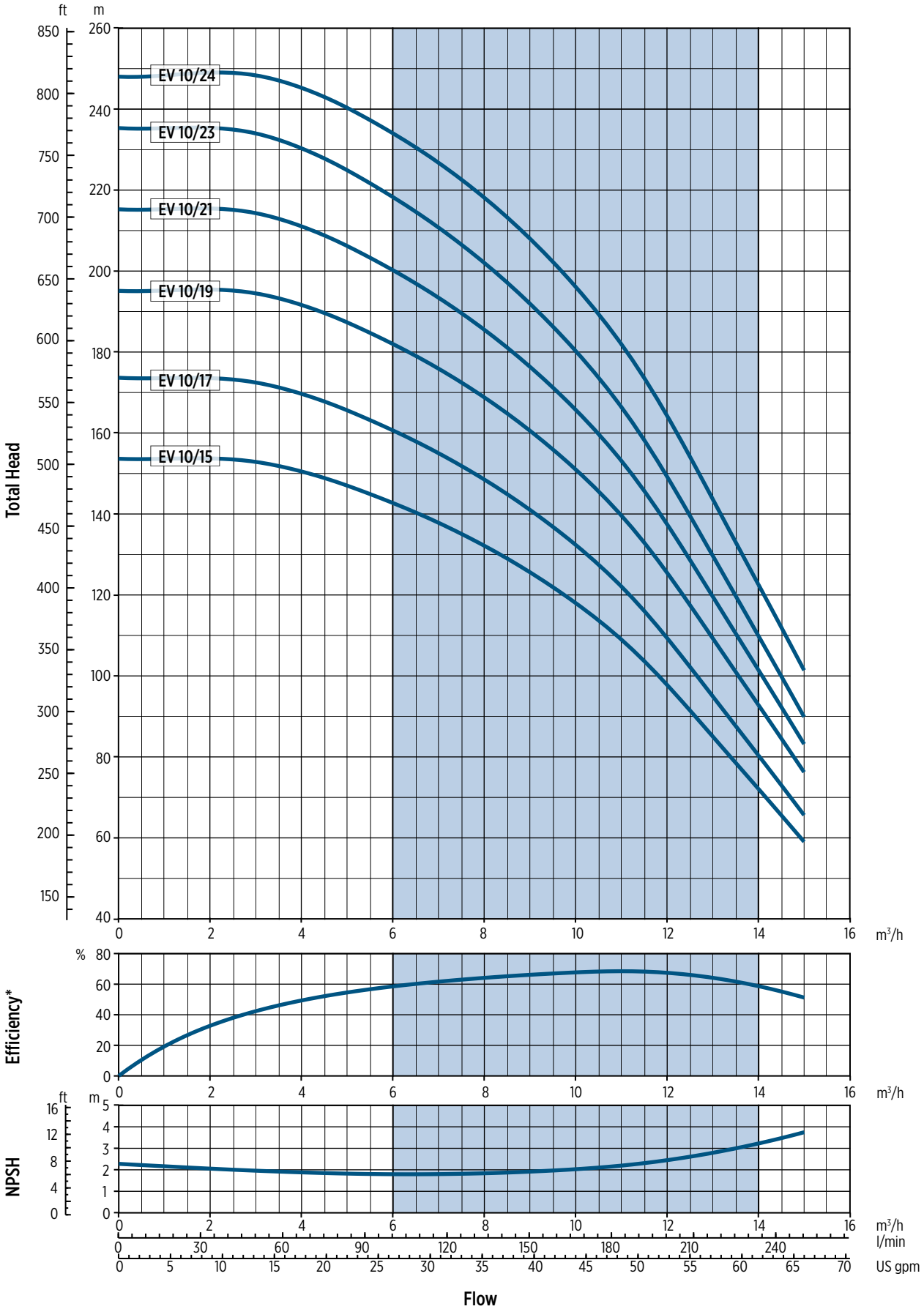
$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 10 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70

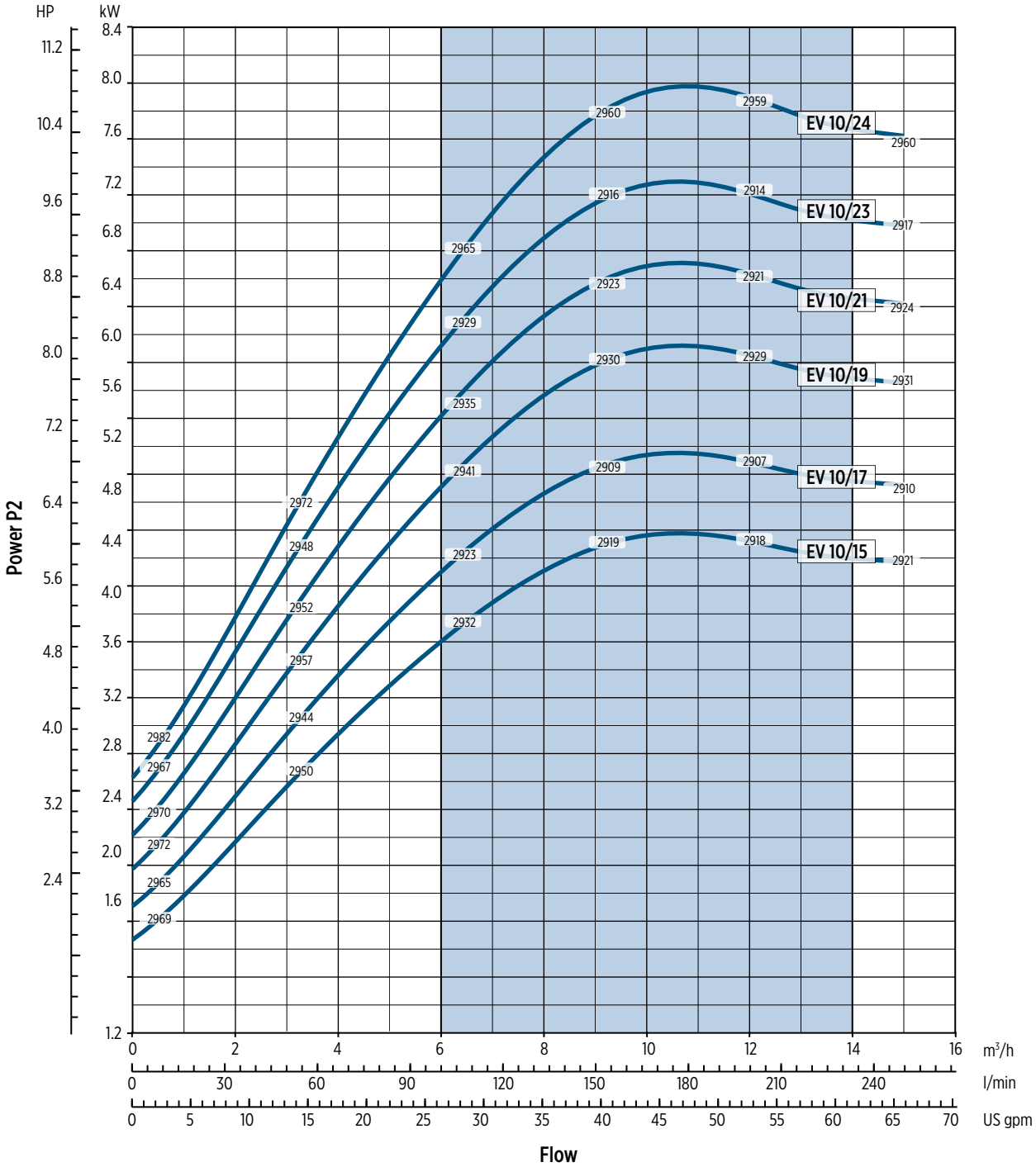



00120117B 03/2021

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 10 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




0012011TB 03/2021

* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

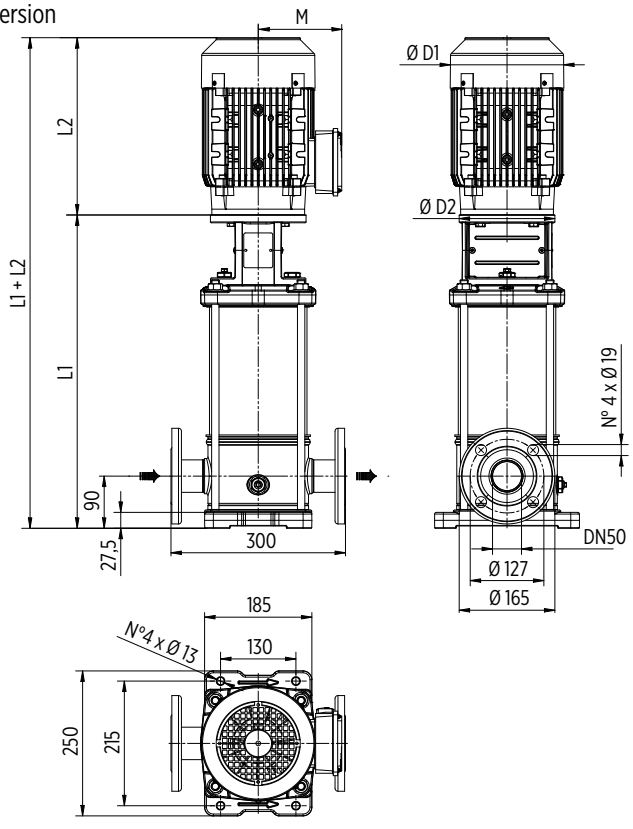
# EV 15 - 50 Hz

## TECHNICAL DATA

| Pump Model | MOTOR | | Dimensions [mm] | | | | | | | | | | | | Weight [kg] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L1 | L2 | | L3 | L4 | L5 | M | | D1 | | D2 | L1+L2 | Pump | Motor | Electric Pump |
| | [kW] | Dim | F | 1-PHASE | 3-PHASE | T | V | C | 1-PHASE | 3-PHASE | 1-PHASE | 3-PHASE | | | | | |
| **EV 15/1** | 0.75 | 80 | 396 | 232 | 232 | 396 | 396 | 396 | 150 | 129 | 160 | 160 | 170 | 628 | 19 | 9.5 | 28.5 |
| **EV 15/2** | 1.5 | 90 | 396 | 267 | 267 | 396 | 396 | 396 | 160 | 138 | 180 | 180 | 170 | 663 | 20 | 14 | 34 |
| **EV 15/3** | 2.2 | 90 | 444 | 267 | 267 | 444 | 444 | 444 | 160 | 138 | 180 | 180 | 170 | 711 | 21.5 | 16 | 37.5 |
| **EV 15/4** | 3 | 100 | 492 | - | 306 | 492 | 492 | 492 | - | 145 | - | 196 | 170 | 798 | 22.5 | 22.8 | 45.3 |
| **EV 15/5** | 4 | 112 | 540 | - | 306 | 540 | 540 | 540 | - | 145 | - | 196 | 170 | 846 | 24 | 26.5 | 50.5 |
| **EV 15/6** | 5.5 | 132 | 800 | - | 328 | 800 | 800 | 800 | - | 160 | - | 225 | 300 | 1128 | 45.5 | 33.6 | 79.1 |
| **EV 15/7** | 5.5 | 132 | 848 | - | 328 | 848 | 848 | 848 | - | 160 | - | 225 | 300 | 1176 | 46.5 | 33.6 | 80.1 |
| **EV 15/8** | 7.5 | 132 | 896 | - | 350 | 896 | 896 | 896 | - | 160 | - | 225 | 300 | 1246 | 48 | 36 | 84 |
| **EV 15/9** | 7.5 | 132 | 944 | - | 350 | 944 | 944 | 944 | - | 160 | - | 225 | 300 | 1294 | 49.5 | 36 | 85.5 |
| **EV 15/10** | 11 | 160 | 1012 | - | 425 | 1012 | 1012 | 1012 | - | 194 | - | 248 | 350 | 1437 | 54 | 59 | 113 |
| **EV 15/11** | 11 | 160 | 1060 | - | 425 | - | 1060 | 1060 | - | 194 | - | 248 | 350 | 1485 | 55.5 | 59 | 114.5 |
| **EV 15/12** | 11 | 160 | 1108 | - | 425 | - | 1108 | 1108 | - | 194 | - | 248 | 350 | 1533 | 57 | 59 | 116 |
| **EV 15/13** | 11 | 160 | 1156 | - | 425 | - | 1156 | 1156 | - | 194 | - | 248 | 350 | 1581 | 58.5 | 59 | 117.5 |
| **EV 15/14** | 11 | 160 | 1204 | - | 425 | - | 1204 | 1204 | - | 194 | - | 248 | 350 | 1629 | 60 | 59 | 119 |
| **EV 15/15** | 15 | 160 | 1252 | - | 476 | - | 1252 | 1252 | - | 194 | - | 248 | 350 | 1728 | 61 | 68 | 129 |
| **EV 15/16** | 15 | 160 | 1300 | - | 476 | - | 1300 | 1300 | - | 194 | - | 248 | 350 | 1776 | 62.5 | 68 | 130.5 |
| **EV 15/17** | 15 | 160 | 1348 | - | 476 | - | 1348 | 1348 | - | 194 | - | 248 | 350 | 1824 | 64 | 68 | 132 |

## DIMENSIONAL DRAWINGS

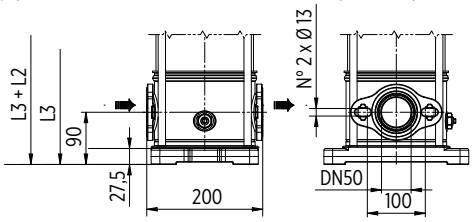
**F** Version




Round flanges on body type PN25/40: the pump is supplied without counterflanges (Optional accessories, including bolts and joints)

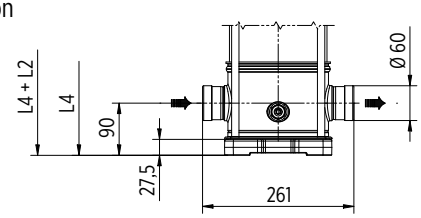
**T** Version

Available from EV15/1 to EV15/10



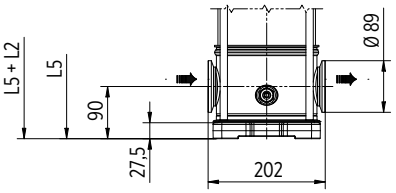

Oval flanges on body type PN16: the pump is supplied without threaded oval counter flanges (Optional accessories, including bolts and joints)

**V** Version




Connections with rapid fittings type "Victaulic": the pump is supplied without the collars (Optional accessories)

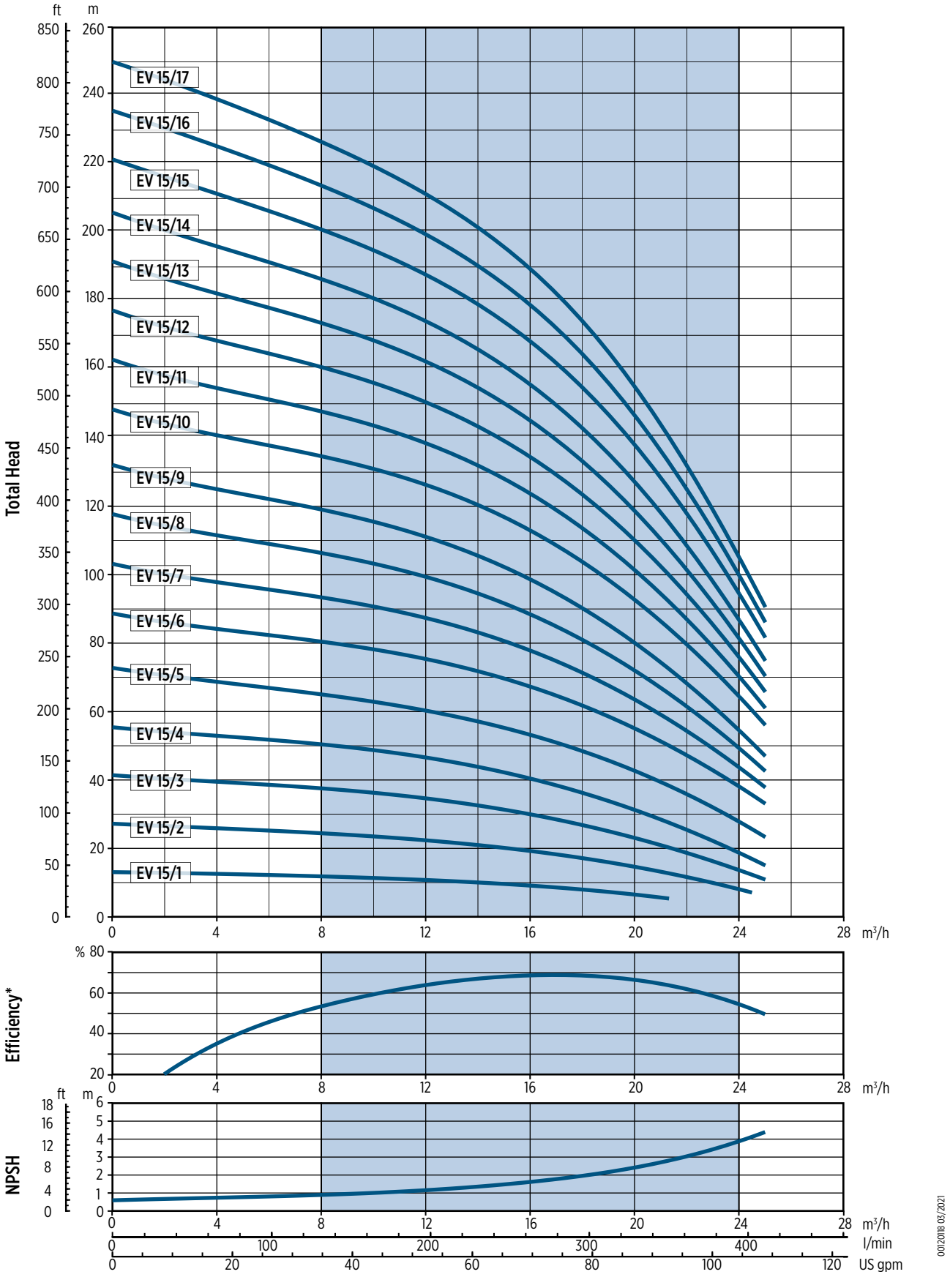
**C** Version




Connections with round fittings type Clamp-FlexiClamp: the pump is supplied without collars (Optional accessories)

# EV 15 - PERFORMANCE CURVES AT 50 Hz

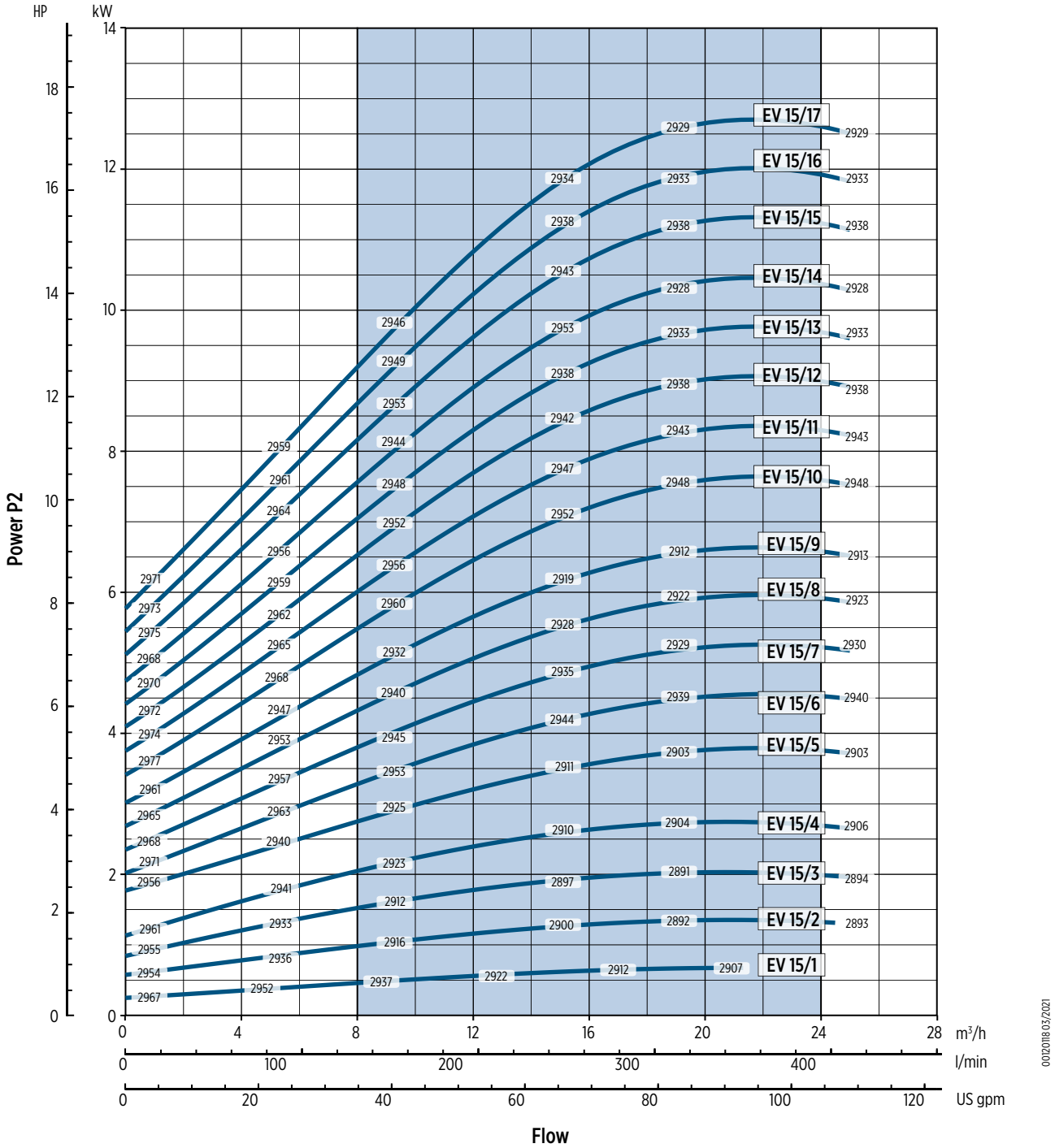
MEI ≥ 0,70




*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 15 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

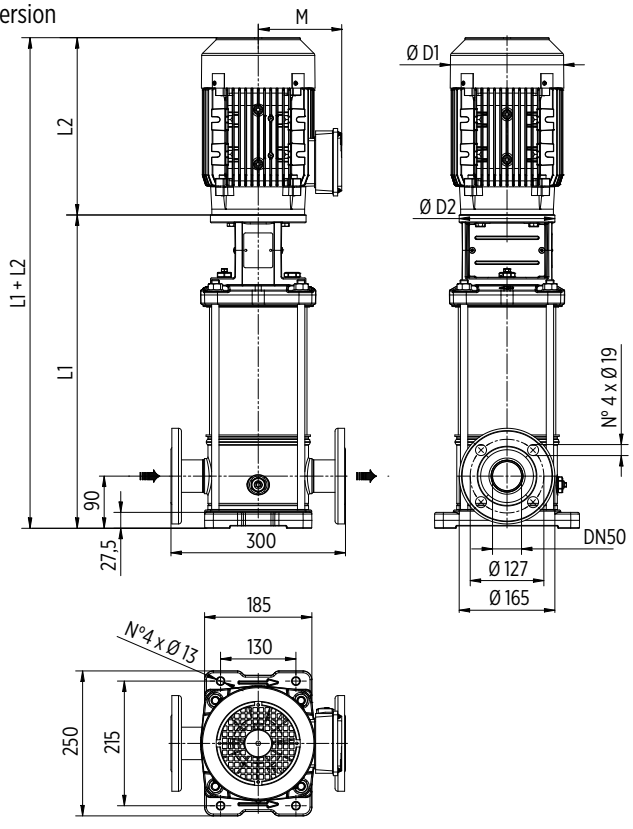
# EV 20 - 50 Hz

## TECHNICAL DATA

| Pump Model | MOTOR | | Dimensions [mm] | | | | | | | | | | | | Weight [kg] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L1 | L2 | | L3 | L4 | L5 | M | | D1 | | D2 | L1+L2 | Pump | Motor | Electric Pump |
| | [kW] | Dim | F | 1-PHASE | 3-PHASE | T | V | C | 1-PHASE | 3-PHASE | 1-PHASE | 3-PHASE | | | | | |
| **EV 20/1** | 1.1 | 80 | 396 | 232 | 232 | 396 | 396 | 396 | 150 | 129 | 160 | 160 | 170 | 628 | 19 | 11.1 | 30.1 |
| **EV 20/2** | 2.2 | 90 | 396 | 267 | 267 | 396 | 396 | 396 | 160 | 138 | 180 | 180 | 170 | 663 | 20 | 16 | 36 |
| **EV 20/3** | 3 | 100 | 444 | - | 306 | 444 | 444 | 444 | - | 145 | - | 196 | 170 | 750 | 21.5 | 22.8 | 44.3 |
| **EV 20/4** | 4 | 112 | 492 | - | 306 | 492 | 492 | 492 | - | 145 | - | 196 | 170 | 798 | 22.5 | 26.5 | 49 |
| **EV 20/5** | 5.5 | 132 | 752 | - | 328 | 752 | 752 | 752 | - | 160 | - | 225 | 300 | 1080 | 44 | 33.6 | 77.6 |
| **EV 20/6** | 7.5 | 132 | 800 | - | 350 | 800 | 800 | 800 | - | 160 | - | 225 | 300 | 1150 | 45.5 | 36 | 81.5 |
| **EV 20/7** | 7.5 | 132 | 848 | - | 350 | 848 | 848 | 848 | - | 160 | - | 225 | 300 | 1198 | 46.5 | 36 | 82.5 |
| **EV 20/8** | 11 | 160 | 916 | - | 425 | 916 | 916 | 916 | - | 194 | - | 248 | 350 | 1341 | 51.5 | 59 | 110.5 |
| **EV 20/9** | 11 | 160 | 964 | - | 425 | 964 | 964 | 964 | - | 194 | - | 248 | 350 | 1389 | 53 | 59 | 112 |
| **EV 20/10** | 11 | 160 | 1012 | - | 425 | 1012 | 1012 | 1012 | - | 194 | - | 248 | 350 | 1437 | 54.5 | 59 | 113.5 |
| **EV 20/11** | 15 | 160 | 1060 | - | 476 | - | 1060 | 1060 | - | 194 | - | 248 | 350 | 1536 | 55.5 | 68 | 123.5 |
| **EV 20/12** | 15 | 160 | 1108 | - | 476 | - | 1108 | 1108 | - | 194 | - | 248 | 350 | 1584 | 57 | 68 | 125 |
| **EV 20/13** | 15 | 160 | 1156 | - | 476 | - | 1156 | 1156 | - | 194 | - | 248 | 350 | 1632 | 58.5 | 68 | 126.5 |
| **EV 20/14** | 15 | 160 | 1204 | - | 476 | - | 1204 | 1204 | - | 194 | - | 248 | 350 | 1680 | 60 | 68 | 128 |
| **EV 20/15** | 18.5 | 160 | 1252 | - | 542 | - | 1252 | 1252 | - | 238 | - | 317 | 350 | 1794 | 61.5 | 104 | 165.5 |
| **EV 20/16** | 18.5 | 160 | 1300 | - | 542 | - | 1300 | 1300 | - | 238 | - | 317 | 350 | 1842 | 62.5 | 104 | 166.5 |
| **EV 20/17** | 18.5 | 160 | 1348 | - | 542 | - | 1348 | 1348 | - | 238 | - | 317 | 350 | 1890 | 64 | 104 | 168 |

## DIMENSIONAL DRAWINGS

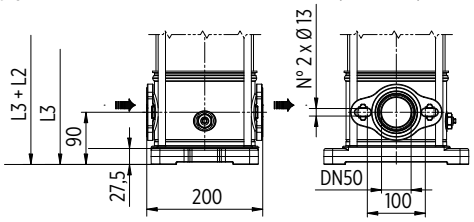
**F** Version




Round flanges on body type PN25/40: the pump is supplied without counterflanges (Optional accessories, including bolts and joints)

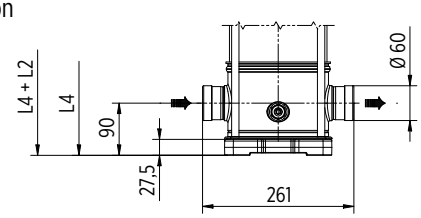
**T** Version

Available from EV20/1 to EV20/10



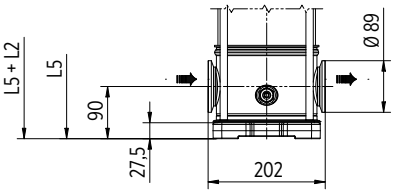

Oval flanges on body type PN16: the pump is supplied without threaded oval counter flanges (Optional accessories, including bolts and joints)

**V** Version




Connections with rapid fittings type "Victaulic": the pump is supplied without the collars (Optional accessories)

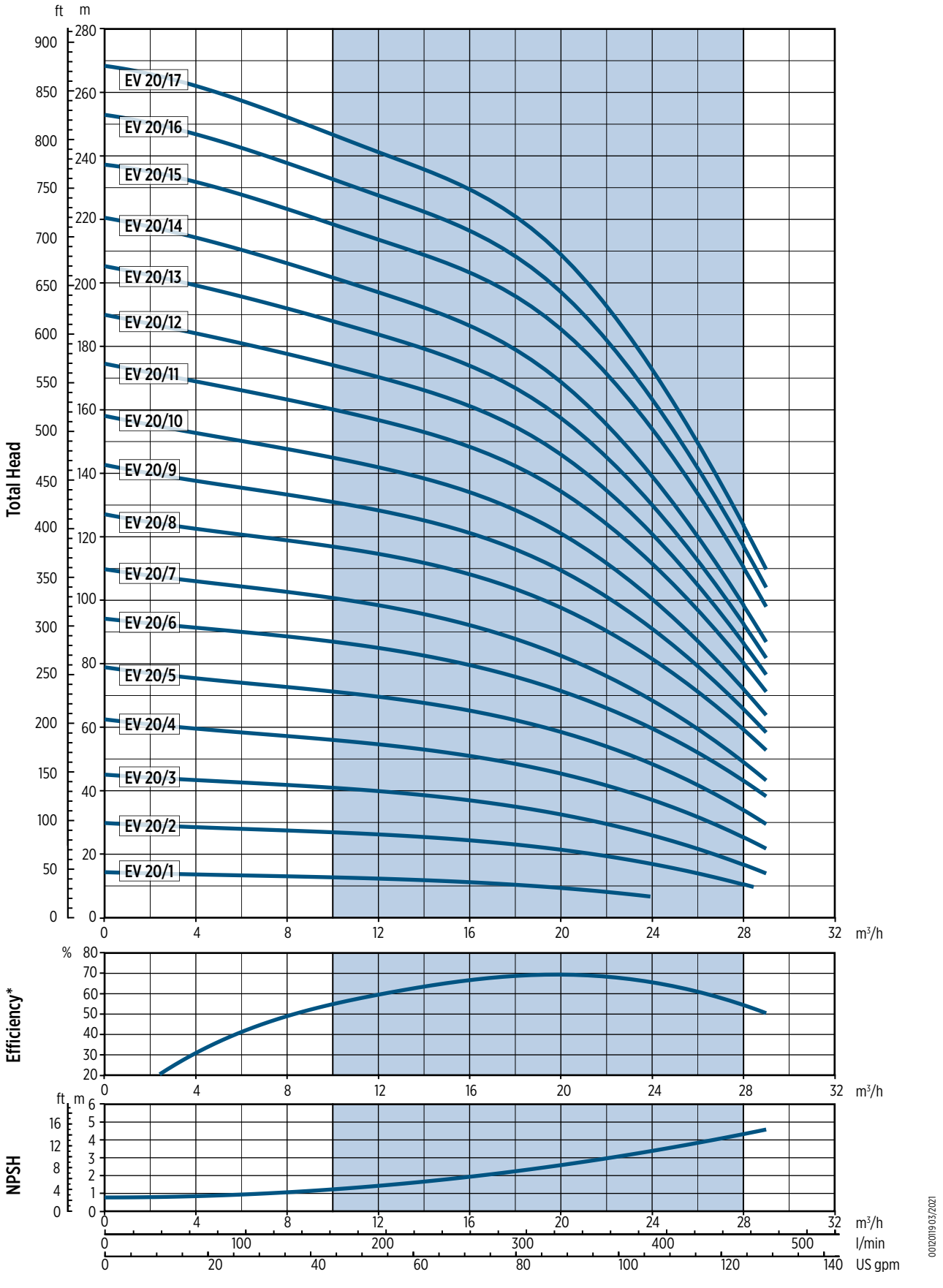
**C** Version




Connections with round fittings type Clamp-FlexiClamp: the pump is supplied without collars (Optional accessories)

# EV 20 – PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70

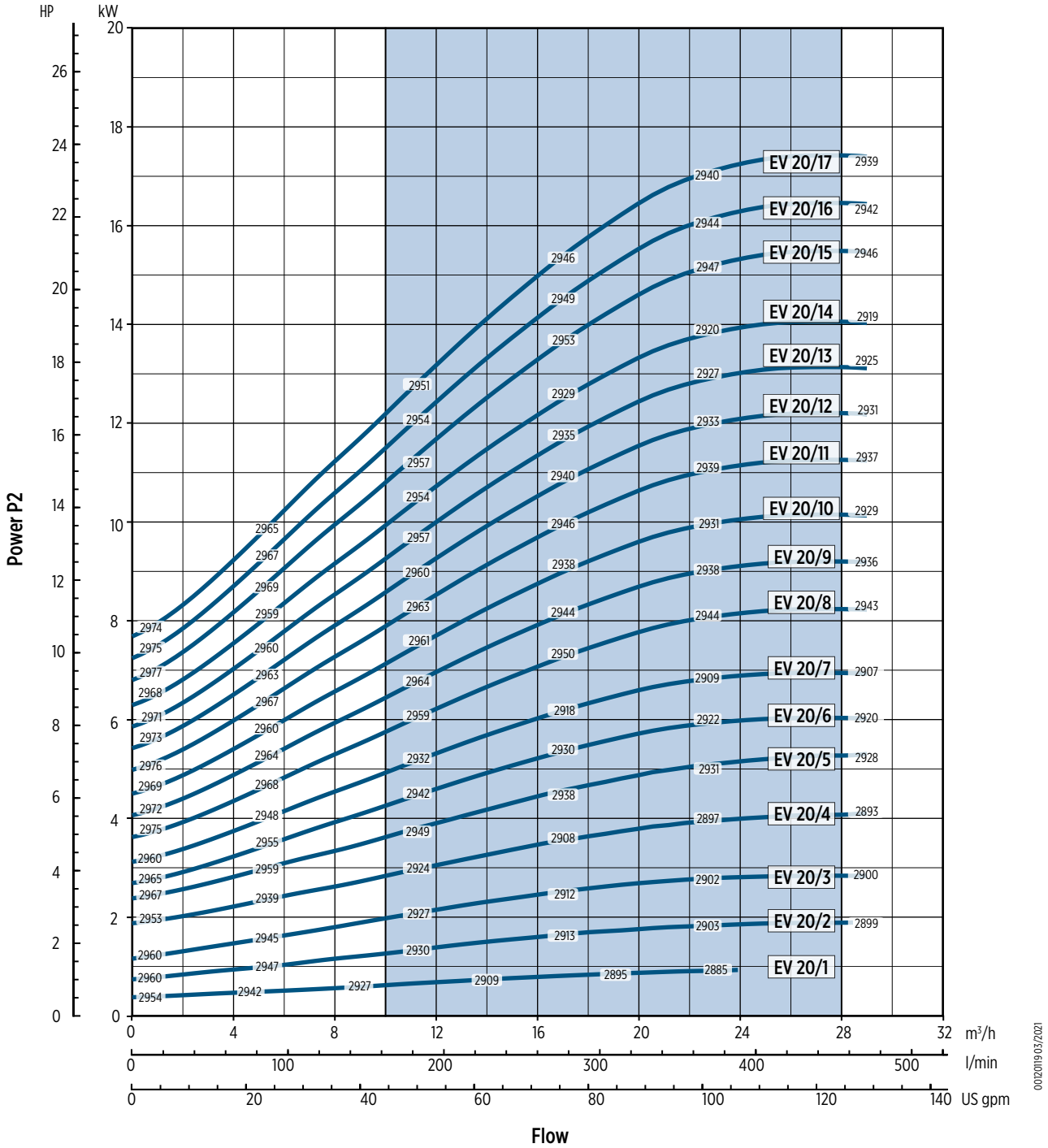



*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

00120119 03/2021

# EV 20 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

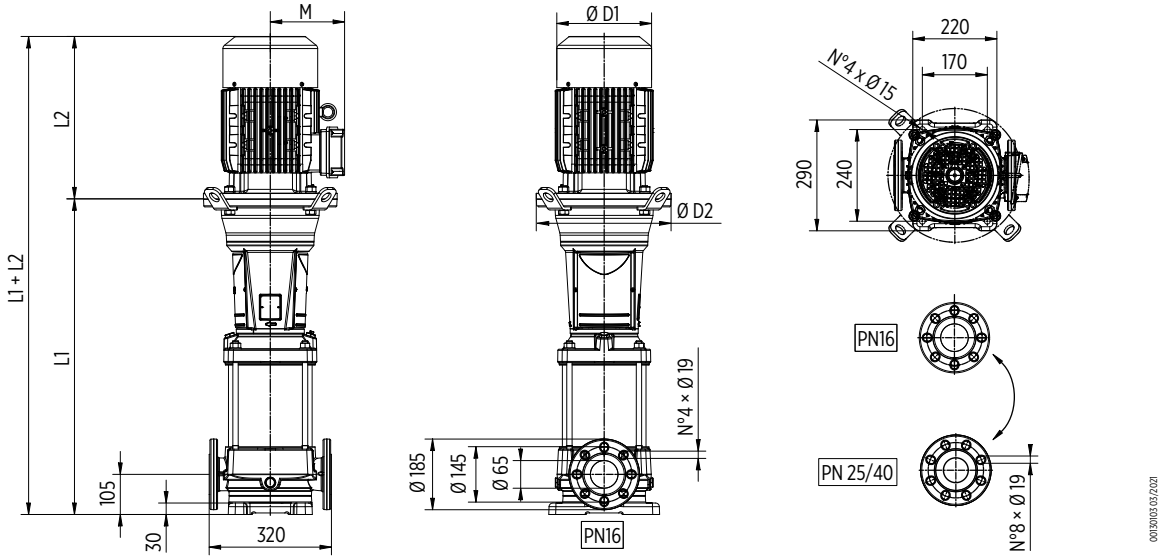
# EV 30 - 50 Hz

## TECHNICAL DATA

| Pump Model | MOTOR | | Dimensions [mm] | | | | | | Weight [kg] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | [kW] | Dim | L1 | L2 | M | D1 | D2 | L1+L2 | Pump | Motor | Electric Pump |
| **EV 30/1** | 2.2 | 90 | 431 | 267 | 138 | 180 | 170 | 698 | 48.5 | 16 | 64.5 |
| **EV 30/2-2a** | 4 | 112 | 513 | 306 | 145 | 196 | 170 | 819 | 52 | 26.5 | 78.5 |
| **EV 30/2-1a** | 4 | 112 | 513 | 306 | 145 | 196 | 170 | 819 | 52 | 26.5 | 78.5 |
| **EV 30/2** | 5.5 | 132 | 724 | 328 | 160 | 225 | 300 | 1052 | 72.5 | 33.6 | 106.1 |
| **EV 30/3-2a** | 5.5 | 132 | 806 | 328 | 160 | 225 | 300 | 1134 | 76.5 | 33.6 | 110.1 |
| **EV 30/3-1a** | 7.5 | 132 | 806 | 350 | 160 | 225 | 300 | 1156 | 76.5 | 36 | 112.5 |
| **EV 30/3** | 7.5 | 132 | 806 | 350 | 160 | 225 | 300 | 1156 | 76.5 | 36 | 112.5 |
| **EV 30/4-2a** | 7.5 | 132 | 888 | 350 | 160 | 225 | 300 | 1238 | 80.5 | 36 | 116.5 |
| **EV 30/4-1a** | 11 | 160 | 908 | 425 | 194 | 248 | 350 | 1333 | 84 | 59 | 143 |
| **EV 30/4** | 11 | 160 | 908 | 425 | 194 | 248 | 350 | 1333 | 84 | 59 | 143 |
| **EV 30/5-2a** | 11 | 160 | 991 | 425 | 194 | 248 | 350 | 1416 | 88 | 59 | 147 |
| **EV 30/5-1a** | 11 | 160 | 991 | 425 | 194 | 248 | 350 | 1416 | 88 | 59 | 147 |
| **EV 30/5** | 15 | 160 | 991 | 476 | 194 | 248 | 350 | 1467 | 88 | 68 | 156 |
| **EV 30/6-2a** | 15 | 160 | 1073 | 476 | 194 | 248 | 350 | 1549 | 92 | 68 | 160 |
| **EV 30/6-1a** | 15 | 160 | 1073 | 476 | 194 | 248 | 350 | 1549 | 92 | 68 | 160 |
| **EV 30/6** | 15 | 160 | 1073 | 476 | 194 | 248 | 350 | 1549 | 92 | 68 | 160 |
| **EV 30/7-2a** | 15 | 160 | 1155 | 476 | 194 | 248 | 350 | 1631 | 96 | 68 | 164 |
| **EV 30/7-1a** | 15 | 160 | 1155 | 476 | 194 | 248 | 350 | 1631 | 96 | 68 | 164 |
| **EV 30/7** | 18.5 | 160 | 1155 | 542 | 238 | 317 | 350 | 1697 | 96 | 104 | 200 |
| **EV 30/8-2a** | 18.5 | 160 | 1237 | 542 | 238 | 317 | 350 | 1779 | 100 | 104 | 204 |
| **EV 30/8-1a** | 18.5 | 160 | 1237 | 542 | 238 | 317 | 350 | 1779 | 100 | 104 | 204 |
| **EV 30/8** | 18.5 | 160 | 1237 | 542 | 238 | 317 | 350 | 1779 | 100 | 104 | 204 |
| **EV 30/9-2a** | 22 | 180 | 1319 | 542 | 238 | 317 | 350 | 1861 | 103.5 | 106 | 209.5 |
| **EV 30/9-1a** | 22 | 180 | 1319 | 542 | 238 | 317 | 350 | 1861 | 103.5 | 106 | 209.5 |
| **EV 30/9** | 22 | 180 | 1319 | 542 | 238 | 317 | 350 | 1861 | 103.5 | 106 | 209.5 |
| **EV 30/10-2a** | 22 | 180 | 1401 | 542 | 238 | 317 | 350 | 1943 | 107.5 | 106 | 213.5 |
| **EV 30/10-1a** | 22 | 180 | 1401 | 542 | 238 | 317 | 350 | 1943 | 107.5 | 106 | 213.5 |
| **EV 30/10** | 30 | 200 | 1406 | 658 | 297 | 399 | 400 | 2064 | 111 | 276 | 387 |
| **EV 30/11-2a** | 30 | 200 | 1488 | 658 | 297 | 399 | 400 | 2146 | 115 | 276 | 391 |
| **EV 30/11-1a** | 30 | 200 | 1488 | 658 | 297 | 399 | 400 | 2146 | 115 | 276 | 391 |
| **EV 30/11** | 30 | 200 | 1488 | 658 | 297 | 399 | 400 | 2146 | 115 | 276 | 391 |
| **EV 30/12-2a** | 30 | 200 | 1570 | 658 | 297 | 399 | 400 | 2228 | 119 | 276 | 395 |
| **EV 30/12-1a** | 30 | 200 | 1570 | 658 | 297 | 399 | 400 | 2228 | 119 | 276 | 395 |
| **EV 30/12** | 30 | 200 | 1570 | 658 | 297 | 399 | 400 | 2228 | 119 | 276 | 395 |
| **EV 30/13-2a** | 30 | 200 | 1652 | 658 | 297 | 399 | 400 | 2310 | 122.5 | 276 | 398.5 |
| **EV 30/13-1a** | 30 | 200 | 1652 | 658 | 297 | 399 | 400 | 2310 | 122.5 | 276 | 398.5 |
| **EV 30/13** | 30 | 200 | 1652 | 658 | 297 | 399 | 400 | 2310 | 122.5 | 276 | 398.5 |

## DIMENSIONAL DRAWINGS

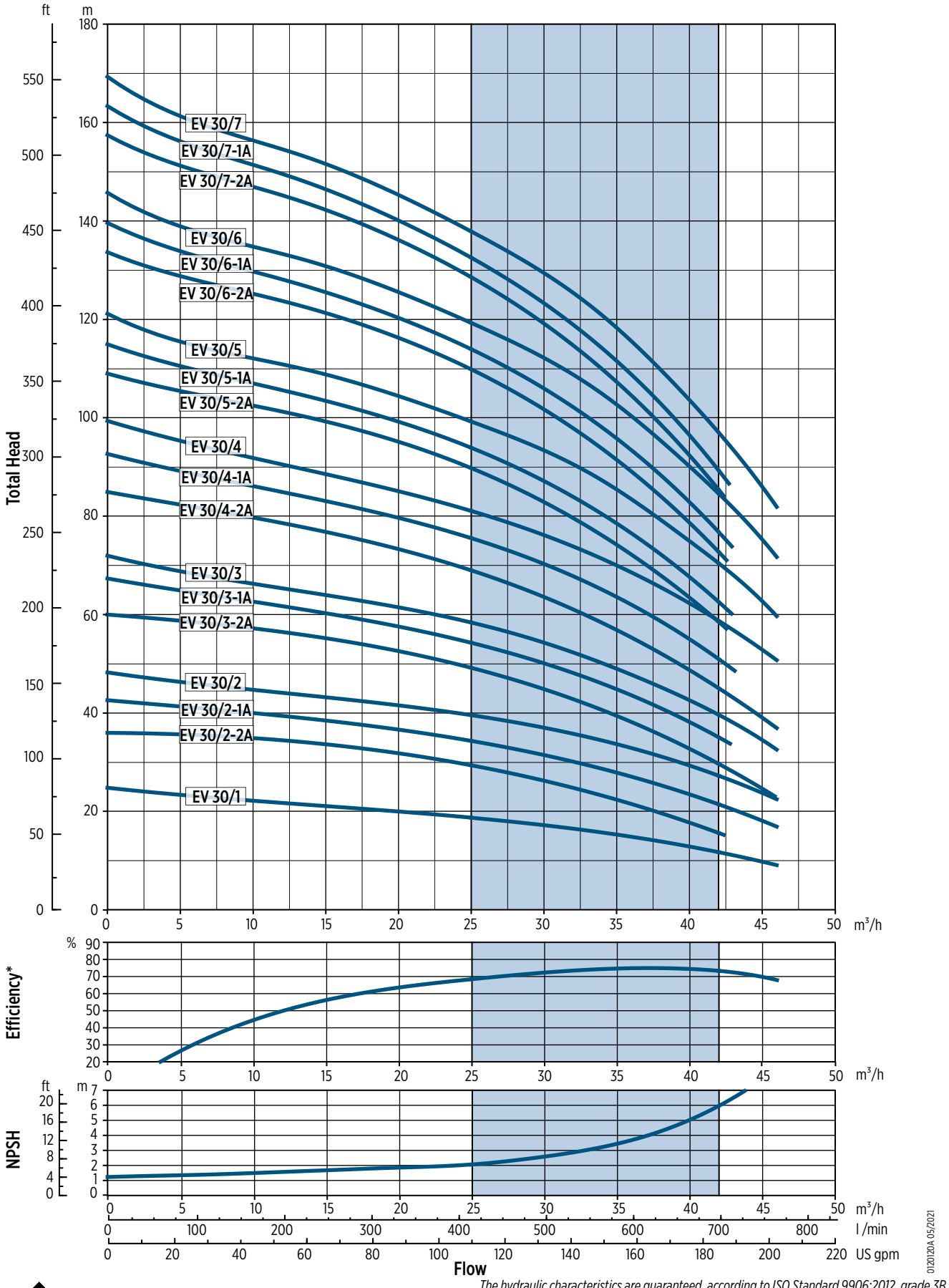
**F** Version




The pump is supplied without counterflanges (Optional accessories, including bolts and joints)

# EV 30 – PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70

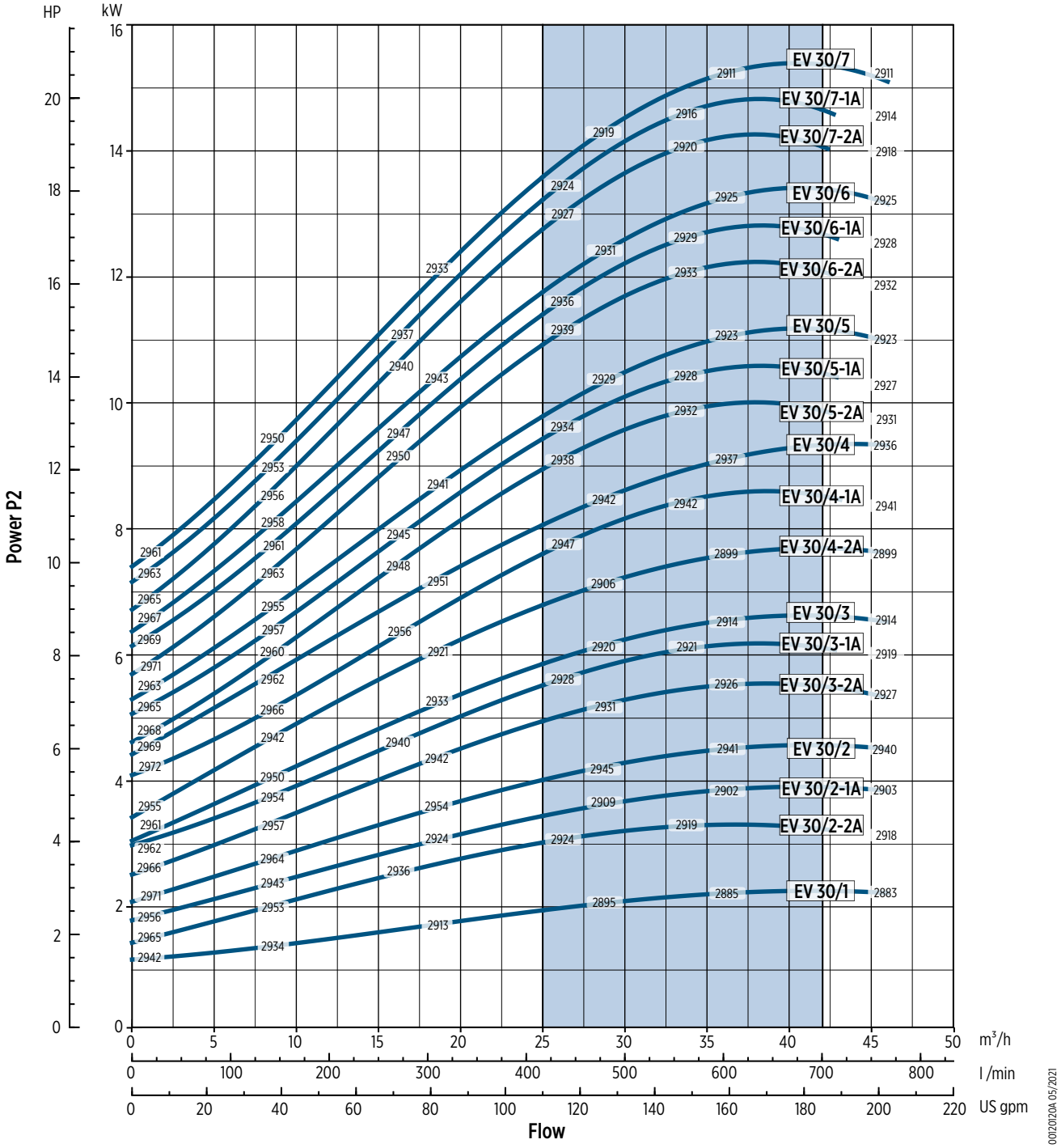



0120120A 05/2021

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 30 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

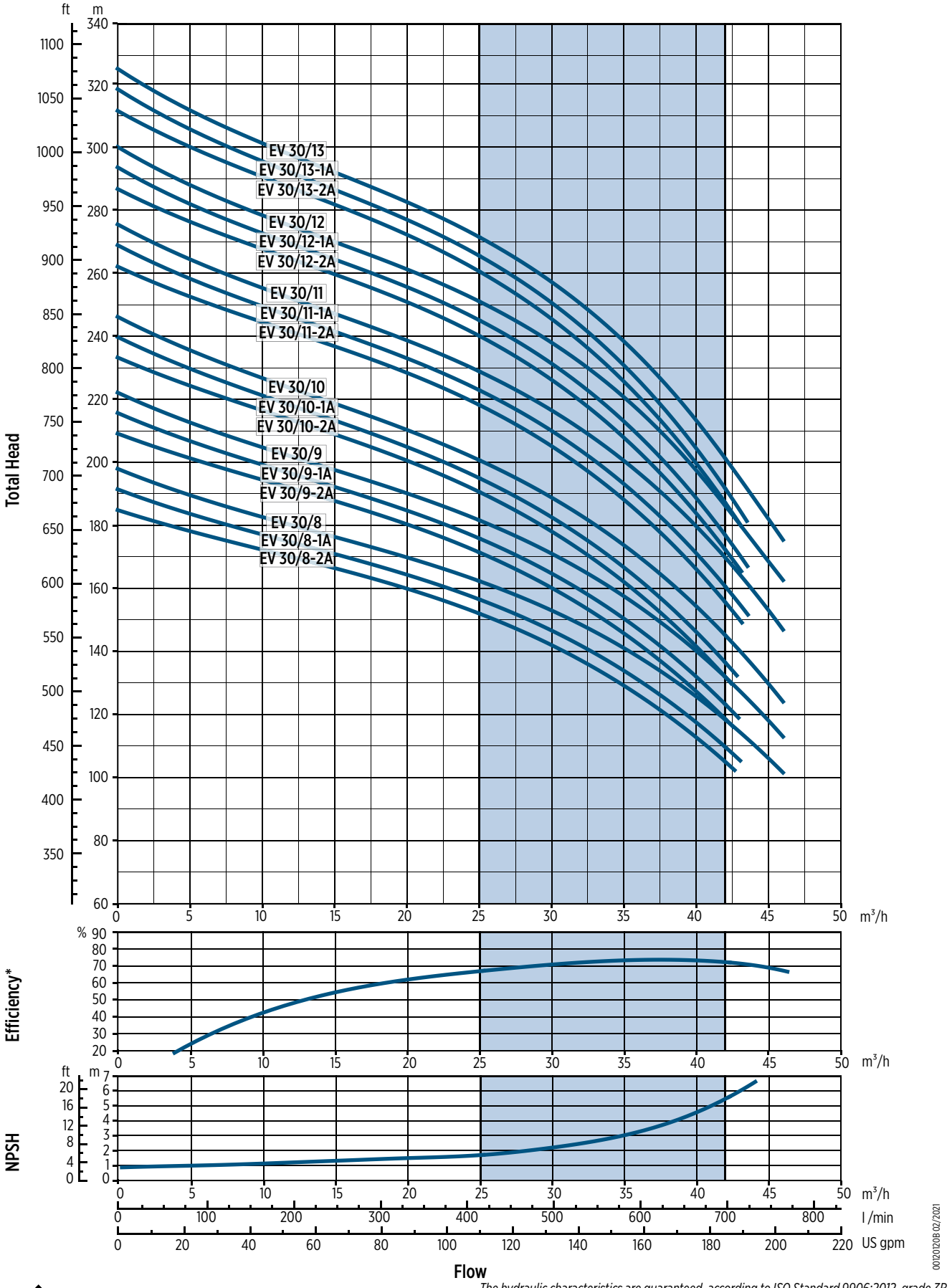
$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 30 – PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70

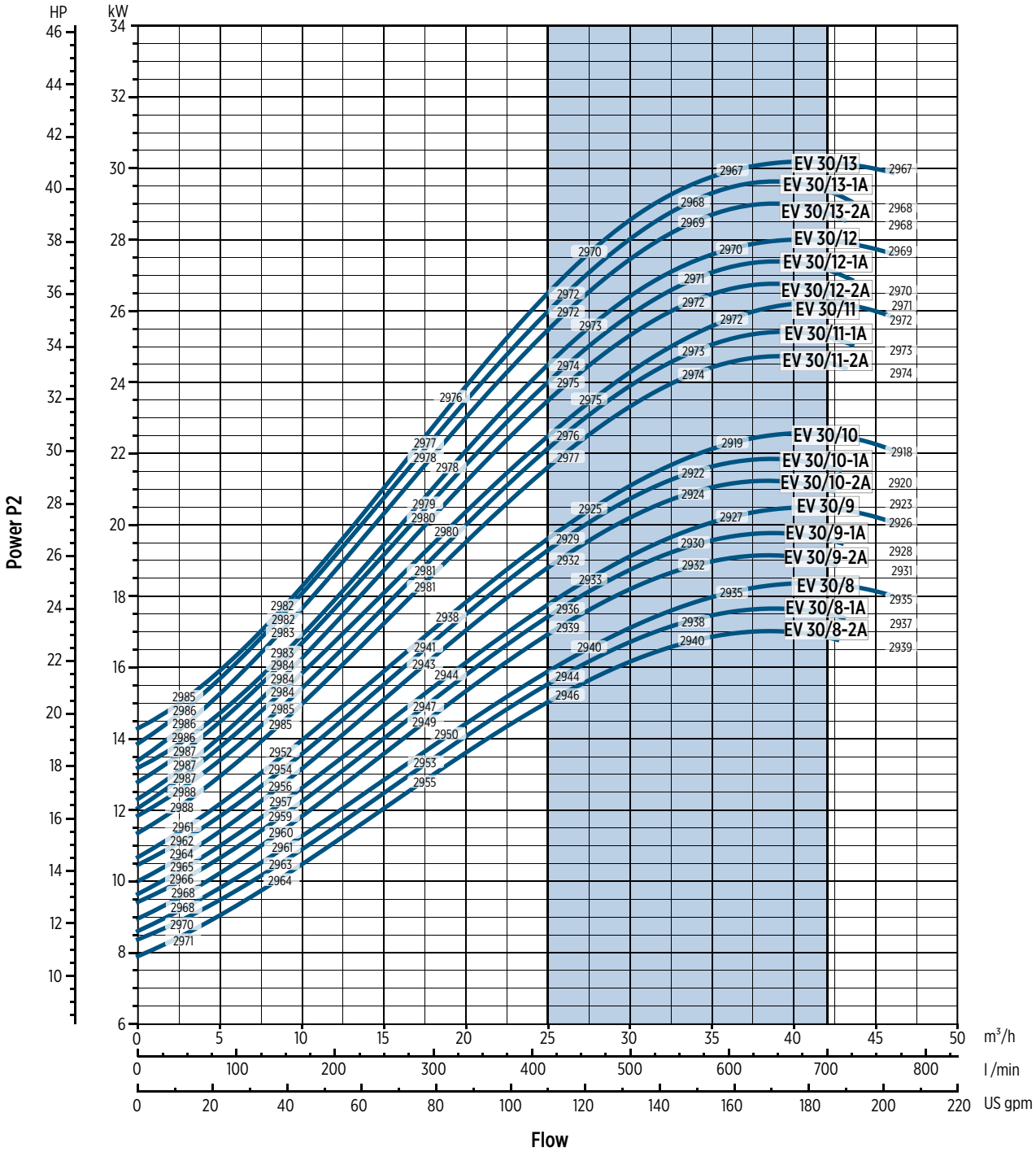



*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

00120208 02/2021

# EV 30 – PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

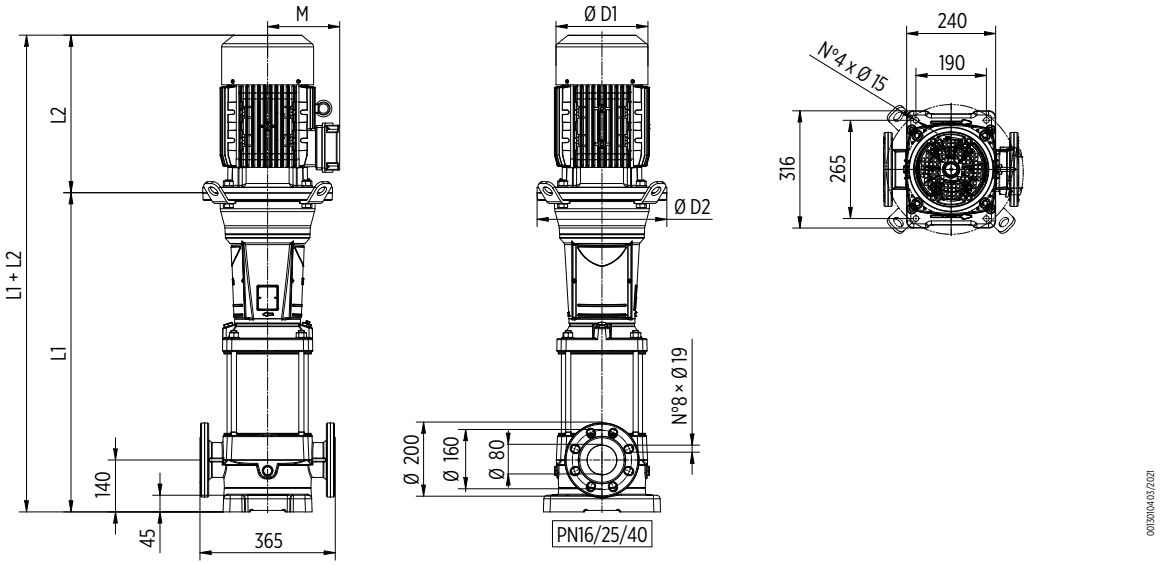
# EV 45 - 50 Hz

## TECHNICAL DATA

| Pump Model | MOTOR | | Dimensions [mm] | | | | | | Weight [kg] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | [kW] | Dim | L1 | L2 | M | D1 | D2 | L1+L2 | Pump | Motor | Electric Pump |
| **EV 45/1-1a** | 3 | 100 | 466 | 306 | 145 | 196 | 170 | 772 | 54 | 22.8 | 76.8 |
| **EV 45/1** | 4 | 112 | 466 | 306 | 145 | 196 | 170 | 772 | 54 | 26.5 | 80.5 |
| **EV 45/2-2a** | 5.5 | 132 | 759 | 328 | 160 | 225 | 300 | 1087 | 78.5 | 33.6 | 112.1 |
| **EV 45/2** | 7.5 | 132 | 759 | 350 | 160 | 225 | 300 | 1109 | 78.5 | 36 | 114.5 |
| **EV 45/3-2a** | 11 | 160 | 861 | 425 | 194 | 248 | 350 | 1286 | 85.5 | 59 | 144.5 |
| **EV 45/3** | 11 | 160 | 861 | 425 | 194 | 248 | 350 | 1286 | 85.5 | 59 | 144.5 |
| **EV 45/4-2a** | 15 | 160 | 943 | 476 | 194 | 248 | 350 | 1419 | 89.5 | 68 | 157.5 |
| **EV 45/4** | 15 | 160 | 943 | 476 | 194 | 248 | 350 | 1419 | 89.5 | 68 | 157.5 |
| **EV 45/5-2a** | 18.5 | 160 | 1026 | 542 | 238 | 317 | 350 | 1568 | 93.5 | 104 | 197.5 |
| **EV 45/5** | 18.5 | 160 | 1026 | 542 | 238 | 317 | 350 | 1568 | 93.5 | 104 | 197.5 |
| **EV 45/6-2a** | 22 | 180 | 1108 | 542 | 238 | 317 | 350 | 1650 | 97.5 | 106 | 203.5 |
| **EV 45/6** | 22 | 180 | 1108 | 542 | 238 | 317 | 350 | 1650 | 97.5 | 106 | 203.5 |
| **EV 45/7-2a** | 30 | 200 | 1195 | 658 | 297 | 399 | 400 | 1853 | 104.5 | 276 | 380.5 |
| **EV 45/7** | 30 | 200 | 1195 | 658 | 297 | 399 | 400 | 1853 | 104.5 | 276 | 380.5 |
| **EV 45/8-2a** | 30 | 200 | 1277 | 658 | 297 | 399 | 400 | 1935 | 108.5 | 276 | 384.5 |
| **EV 45/8** | 30 | 200 | 1277 | 658 | 297 | 399 | 400 | 1935 | 108.5 | 276 | 384.5 |
| **EV 45/9-2a** | 37 | 200 | 1359 | 658 | 297 | 399 | 400 | 2017 | 112.5 | 283 | 395.5 |
| **EV 45/9** | 37 | 200 | 1359 | 658 | 297 | 399 | 400 | 2017 | 112.5 | 283 | 395.5 |
| **EV 45/10-2a** | 37 | 200 | 1441 | 658 | 297 | 399 | 400 | 2099 | 116.5 | 283 | 399.5 |
| **EV 45/10** | 37 | 200 | 1441 | 658 | 297 | 399 | 400 | 2099 | 116.5 | 283 | 399.5 |
| **EV 45/11-2a** | 45 | 225 | 1523 | 699 | 328 | 465 | 450 | 2222 | 122.5 | 370 | 492.5 |
| **EV 45/11** | 45 | 225 | 1523 | 699 | 328 | 465 | 450 | 2222 | 122.5 | 370 | 492.5 |
| **EV 45/12-2a** | 45 | 225 | 1605 | 699 | 328 | 465 | 450 | 2304 | 126.5 | 370 | 496.5 |
| **EV 45/12** | 45 | 225 | 1605 | 699 | 328 | 465 | 450 | 2304 | 126.5 | 370 | 496.5 |
| **EV 45/13-2a** | 45 | 225 | 1687 | 699 | 328 | 465 | 450 | 2386 | 130.5 | 370 | 500.5 |

## DIMENSIONAL DRAWINGS

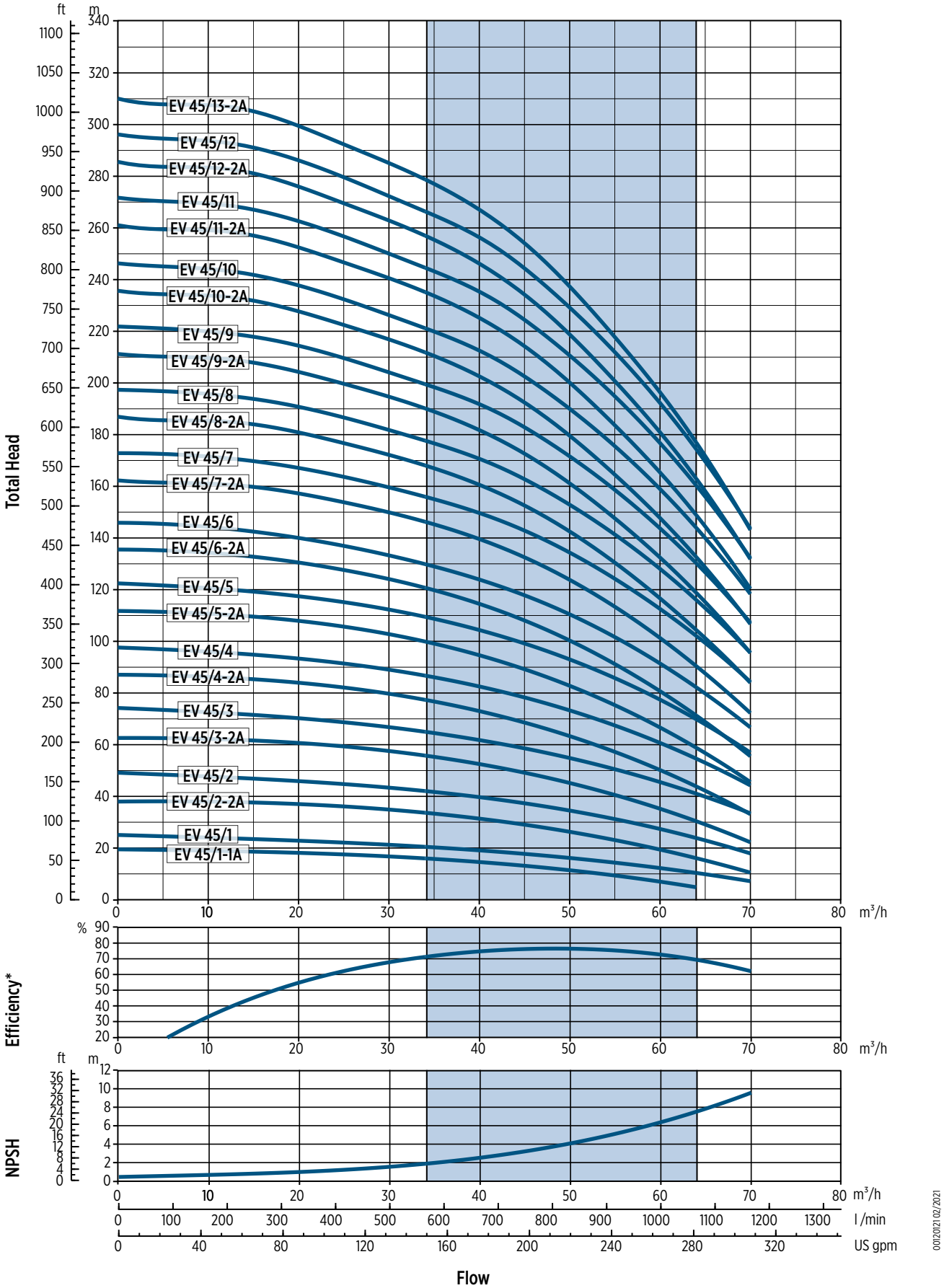
**F** Version




The pump is supplied without counterflanges (Optional accessories, including bolts and joints)

# EV 45 – PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70

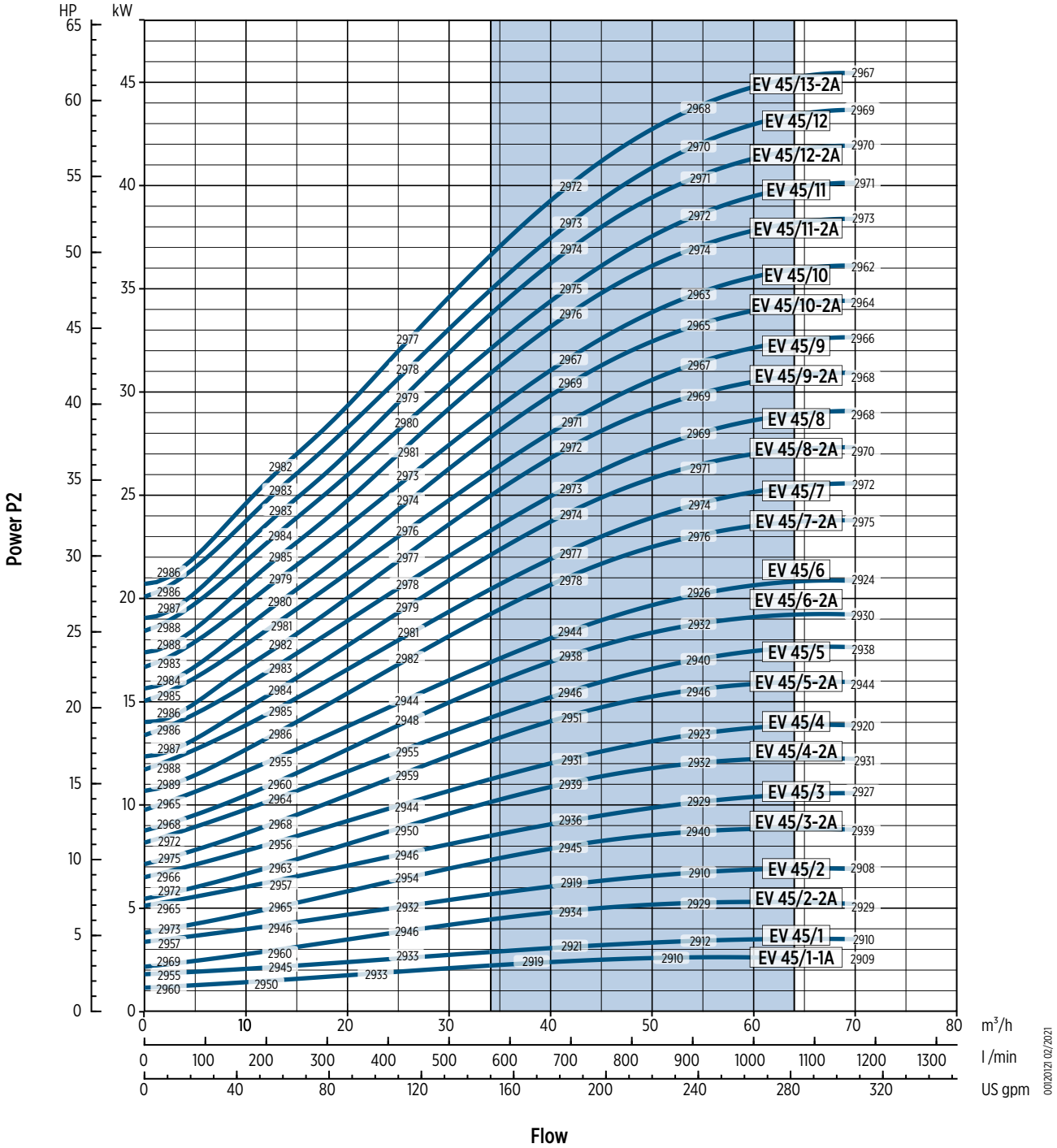



*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

0012021 02/2021

# EV 45 – PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

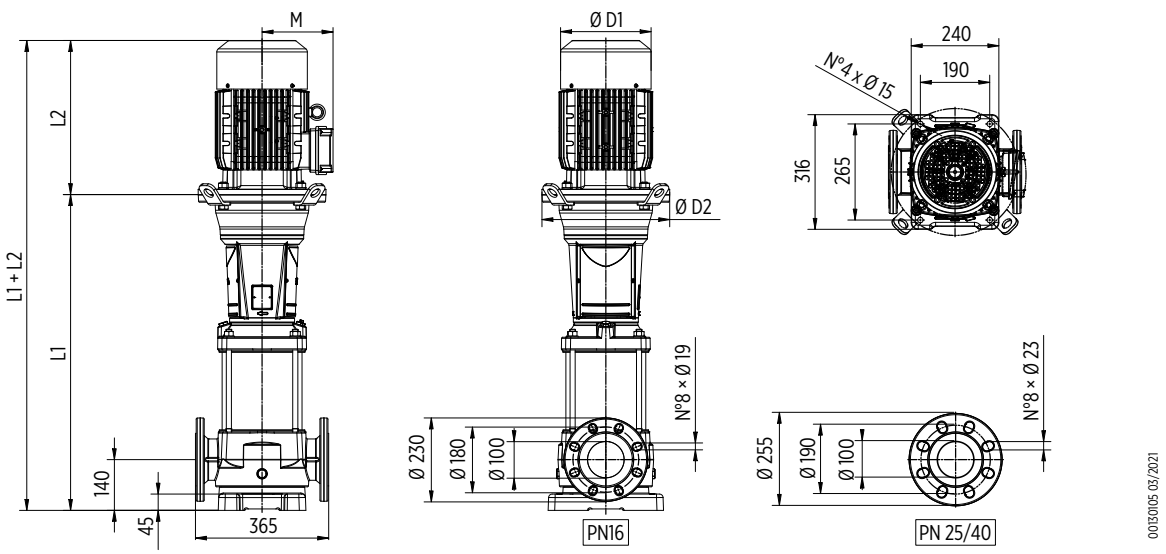
# EV 65 - 50 Hz

## TECHNICAL DATA

| Pump Model | MOTOR | | Dimensions [mm] | | | | | | Weight [kg] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | [kW] | Dim | L1 | L2 | M | D1 | D2 | L1+L2 | Pump | Motor | Electric Pump |
| **EV 65/1-1a** | 4 | 112 | 526 | 306 | 145 | 196 | 170 | 832 | 60 | 26.5 | 86.5 |
| **EV 65/1** | 5.5 | 132 | 737 | 328 | 160 | 225 | 300 | 1065 | 80.5 | 33.6 | 114.1 |
| **EV 65/2-2a** | 7.5 | 132 | 829 | 350 | 160 | 225 | 300 | 1179 | 85 | 36 | 121 |
| **EV 65/2-1a** | 11 | 160 | 849 | 425 | 194 | 248 | 350 | 1274 | 88.5 | 59 | 147.5 |
| **EV 65/2** | 11 | 160 | 849 | 425 | 194 | 248 | 350 | 1274 | 88.5 | 59 | 147.5 |
| **EV 65/3-2a** | 15 | 160 | 941 | 476 | 194 | 248 | 350 | 1417 | 93 | 68 | 161 |
| **EV 65/3-1a** | 15 | 160 | 941 | 476 | 194 | 248 | 350 | 1417 | 93 | 68 | 161 |
| **EV 65/3** | 18.5 | 160 | 941 | 542 | 238 | 317 | 350 | 1483 | 93 | 104 | 197 |
| **EV 65/4-2a** | 18.5 | 160 | 1033 | 542 | 238 | 317 | 350 | 1575 | 97.5 | 104 | 201.5 |
| **EV 65/4-1a** | 22 | 180 | 1033 | 542 | 238 | 317 | 350 | 1575 | 97 | 106 | 203 |
| **EV 65/4** | 22 | 180 | 1033 | 542 | 238 | 317 | 350 | 1575 | 97 | 106 | 203 |
| **EV 65/5-2a** | 30 | 200 | 1131 | 658 | 297 | 399 | 400 | 1789 | 105 | 276 | 381 |
| **EV 65/5-1a** | 30 | 200 | 1131 | 658 | 297 | 399 | 400 | 1789 | 105 | 276 | 381 |
| **EV 65/5** | 30 | 200 | 1131 | 658 | 297 | 399 | 400 | 1789 | 105 | 276 | 381 |
| **EV 65/6-2a** | 30 | 200 | 1223 | 658 | 297 | 399 | 400 | 1881 | 109.5 | 276 | 385.5 |
| **EV 65/6-1a** | 37 | 200 | 1223 | 658 | 297 | 399 | 400 | 1881 | 109.5 | 283 | 392.5 |
| **EV 65/6** | 37 | 200 | 1223 | 658 | 297 | 399 | 400 | 1881 | 109.5 | 283 | 392.5 |
| **EV 65/7-2a** | 37 | 200 | 1315 | 658 | 297 | 399 | 400 | 1973 | 113.5 | 283 | 396.5 |
| **EV 65/7-1a** | 37 | 200 | 1315 | 658 | 297 | 399 | 400 | 1973 | 113.5 | 283 | 396.5 |
| **EV 65/7** | 45 | 225 | 1315 | 699 | 328 | 465 | 450 | 2014 | 116 | 370 | 486 |
| **EV 65/8-2a** | 45 | 225 | 1407 | 699 | 328 | 465 | 450 | 2106 | 120.5 | 370 | 490.5 |
| **EV 65/8-1a** | 45 | 225 | 1407 | 699 | 328 | 465 | 450 | 2106 | 120.5 | 370 | 490.5 |
| **EV 65/8** | 45 | 225 | 1407 | 699 | 328 | 465 | 450 | 2106 | 120.5 | 370 | 490.5 |

## DIMENSIONAL DRAWINGS

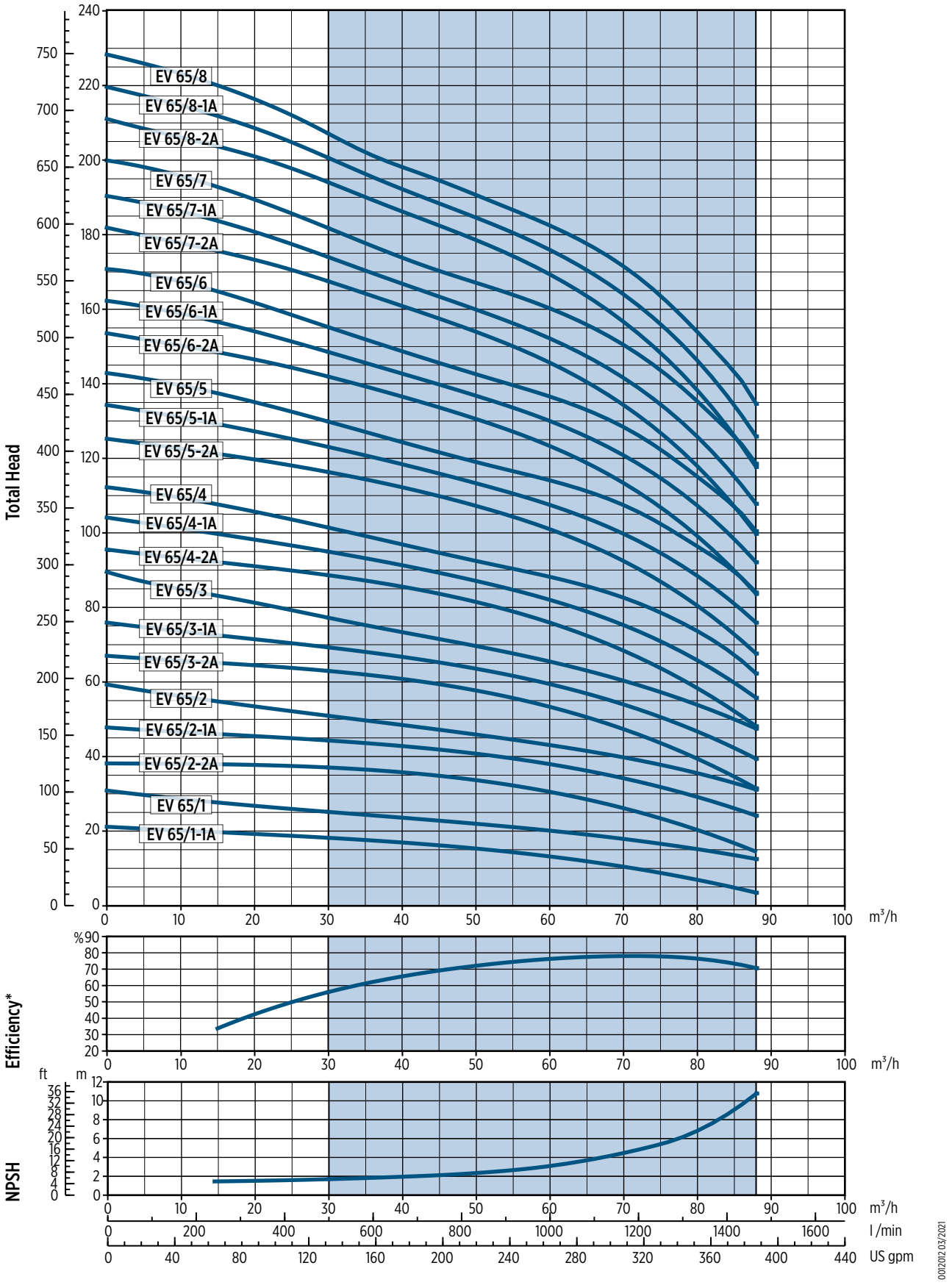
**F** Version




The pump is supplied without counterflanges (Optional accessories, including bolts and joints)

# EV 65 - PERFORMANCE CURVES AT 50 Hz

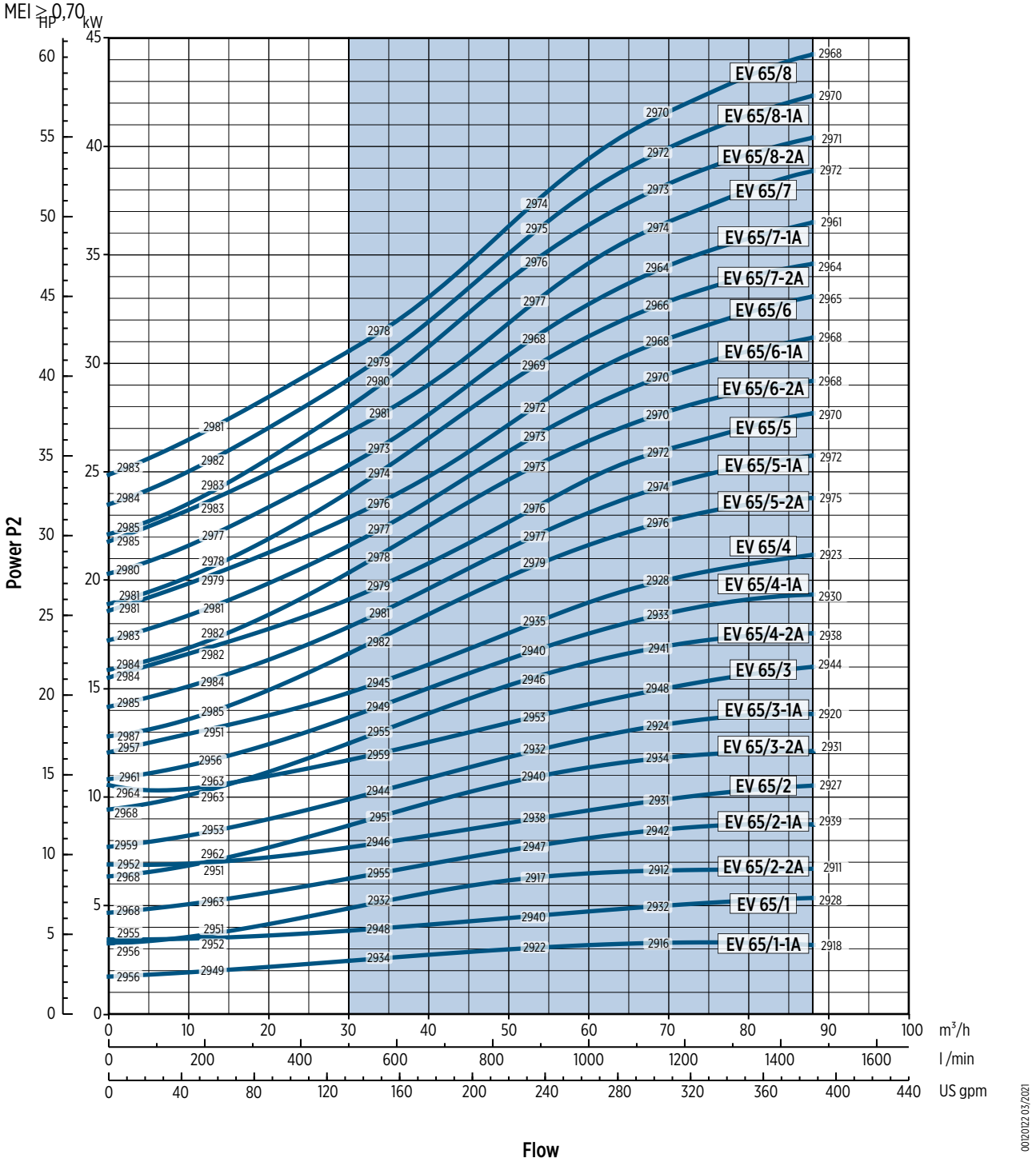
MEI ≥ 0,70




*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 65 - PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

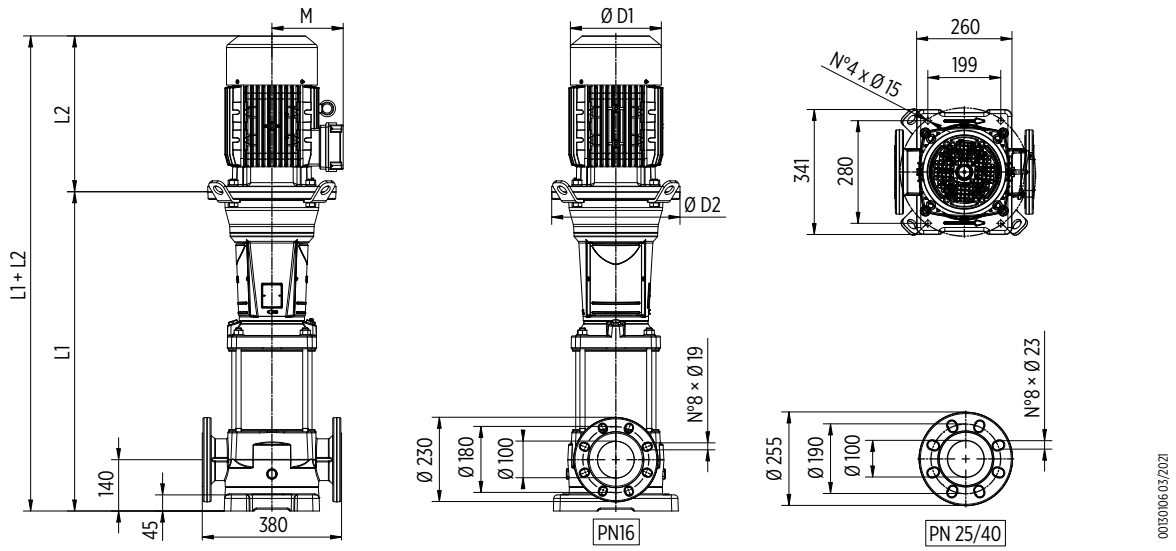
# EV 95 - 50 Hz

## TECHNICAL DATA

| Pump Model | MOTOR | | Dimensions [mm] | | | | | | Weight [kg] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | [kW] | Dim | L1 | L2 | M | D1 | D2 | L1+L2 | Pump | Motor | Electric Pump |
| **EV 95/1-1a** | 5.5 | 132 | 737 | 328 | 160 | 225 | 300 | 1065 | 82 | 33.6 | 115.6 |
| **EV 95/1** | 7.5 | 132 | 737 | 350 | 160 | 225 | 300 | 1087 | 82 | 36 | 118 |
| **EV 95/2-2a** | 11 | 160 | 849 | 425 | 194 | 248 | 350 | 1274 | 89 | 59 | 148 |
| **EV 95/2** | 15 | 160 | 849 | 476 | 194 | 248 | 350 | 1325 | 89 | 68 | 157 |
| **EV 95/3-2a** | 18.5 | 160 | 941 | 542 | 238 | 317 | 350 | 1483 | 93 | 104 | 197 |
| **EV 95/3** | 22 | 180 | 941 | 542 | 238 | 317 | 350 | 1483 | 92.5 | 106 | 198.5 |
| **EV 95/4-2a** | 30 | 200 | 1038 | 658 | 297 | 399 | 400 | 1696 | 99.5 | 276 | 375.5 |
| **EV 95/4** | 30 | 200 | 1038 | 658 | 297 | 399 | 400 | 1696 | 99.5 | 276 | 375.5 |
| **EV 95/5-2a** | 37 | 200 | 1131 | 658 | 297 | 399 | 400 | 1789 | 103 | 283 | 386 |
| **EV 95/5** | 37 | 200 | 1131 | 658 | 297 | 399 | 400 | 1789 | 103 | 283 | 386 |
| **EV 95/6-2a** | 45 | 225 | 1223 | 699 | 328 | 465 | 450 | 1922 | 109 | 370 | 479 |
| **EV 95/6** | 45 | 225 | 1223 | 699 | 328 | 465 | 450 | 1922 | 109 | 370 | 479 |

## DIMENSIONAL DRAWINGS

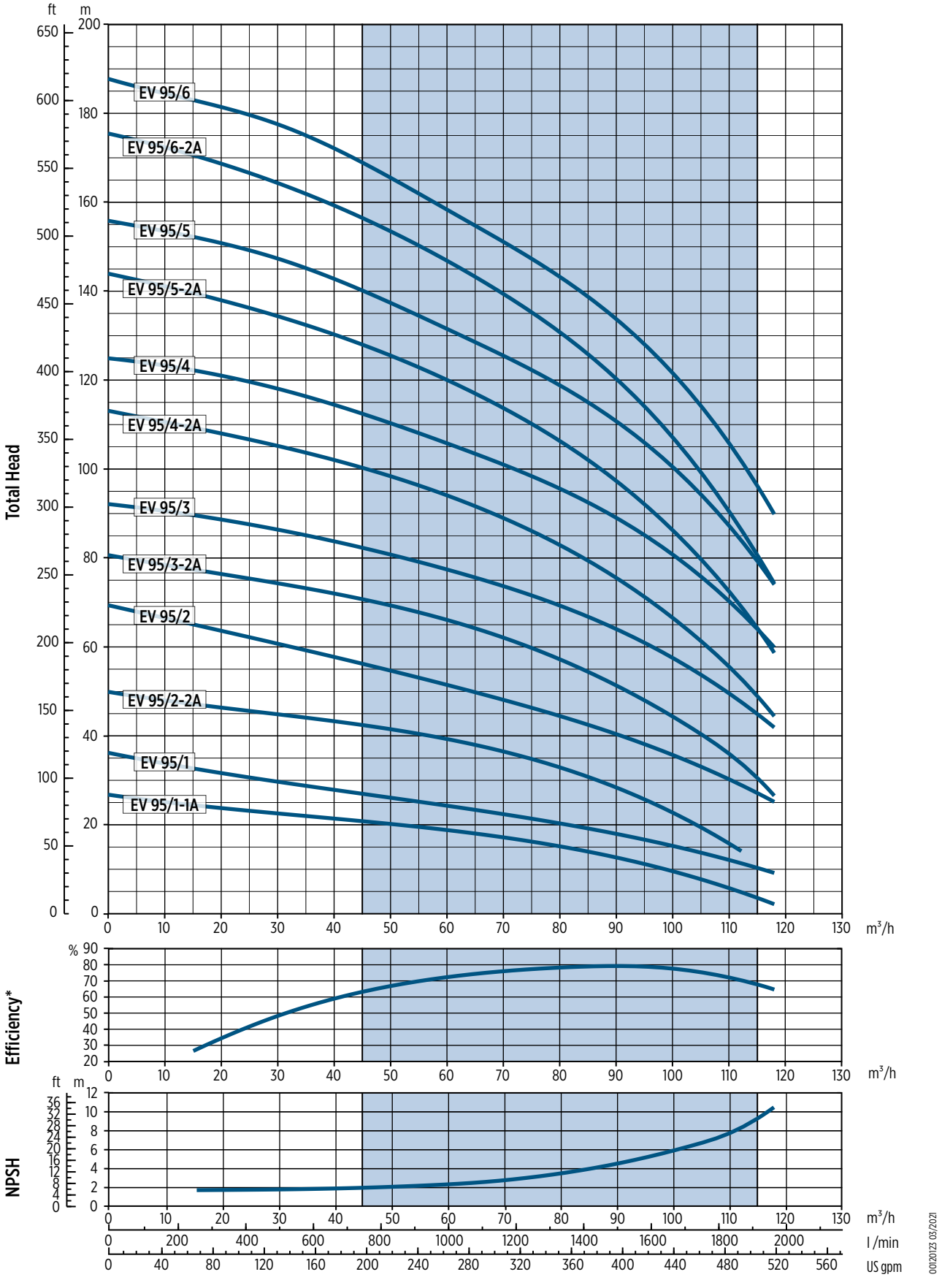
**F** Version




The pump is supplied without counterflanges (Optional accessories, including bolts and joints)

# EV 95 – PERFORMANCE CURVES AT 50 Hz

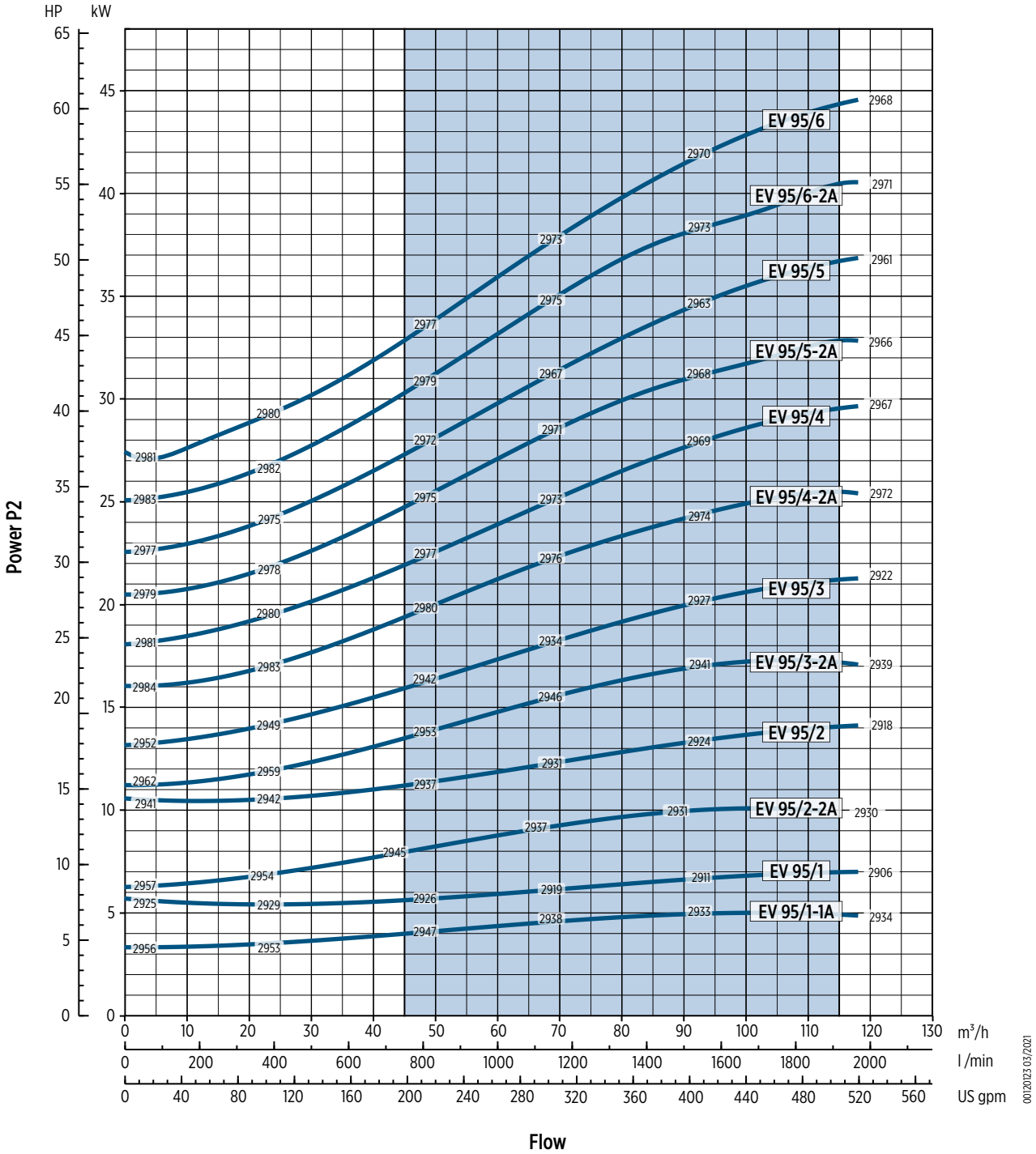
MEI ≥ 0,70




*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# EV 95 – PERFORMANCE CURVES AT 50 Hz

MEI ≥ 0,70




* The efficiency value is referred to 5 or more stages only for full diameter impeller

*Performance curves of Q, H and P depend on the rpm number according to the following formula:*

$$Q_2 = Q_1 \cdot \left(\frac{n_2}{n_1}\right) \quad , \quad H_2 = H_1 \cdot \left(\frac{n_2}{n_1}\right)^2 \quad , \quad P_2 = P_1 \cdot \left(\frac{n_2}{n_1}\right)^3 \quad , \quad \eta \text{ remains approximately the same.}$$

*The rpm number related to the performance curves (Q-H-P) is indicated in the power chart.*
*Performance curves (Q-H-P) will change according to the formulas above.*
*Q=Capacity, H=Head, P=Power, h=Efficiency*

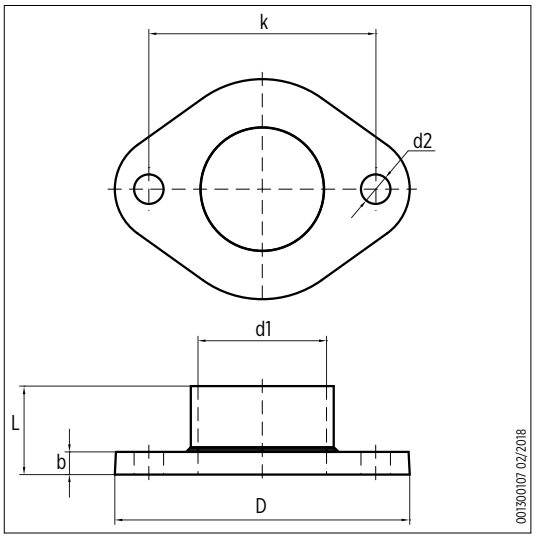
*The hydraulic characteristics are guaranteed, according to ISO Standard 9906:2012, grade 3B*

# HYDRAULIC CONNECTION

## OVAL COUNTERFLANGES

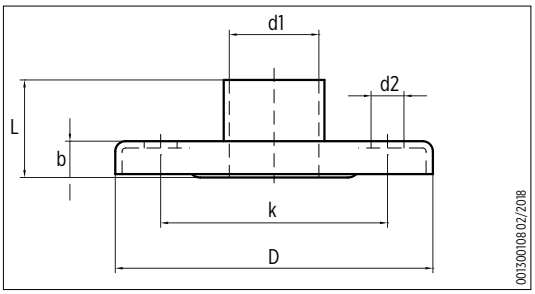
| DN | DIMENSIONS [mm] | | | | | HOLES | | PN |
|---|---|---|---|---|---|---|---|---|
| | D | d1 | k | L | b | d2 | N° | |
| **32** | 99 | Rp 1" ¼ / NPT1" ¼ | 75 | 33 | 8 | 11 | 2 | 16 |
| **40** | 130 | Rp 1" ½ / NPT1" ½ | 100 | 35 | 10 | 13 | | |
| **50** | | Rp 2" / NPT 2" | | 39 | | | | |

Kit round counterflanges available on request; AISI 304 (EN 1.4301)




## ROUND THREADED COUNTERFLANGES ACCORDING TO EN 1092-1

| DN | DIMENSIONS [mm] | | | | | HOLES | | PN |
|---|---|---|---|---|---|---|---|---|
| | D | d1 | k | L | b | d2 | N° | |
| **25** | 115 | Rp 1" / NPT 1" | 85 | 43 | 16 | 14 | 4 | 25 |
| **32** | 140 | Rp 1" ¼ / NPT 1" ¼ | 100 | | | 18 | | |
| **40** | 150 | Rp 1" ½ / NPT 1" ½ | 110 | | | | | |
| **50** | 165 | Rp 2" / NPT 2" | 127 | | 18 | 19 | 8 | |
| **65** | 185 | Rp 2" ½ / NPT 2" ½ | 145 | 32 | 18 | 18 | 8 | 16 |
| **80** | 200 | Rp 3" / NPT 3" | 160 | 34 | 20 | | | |
| **100** | 220 | Rp 4" / NPT 4" | 180 | 40 | | | | |

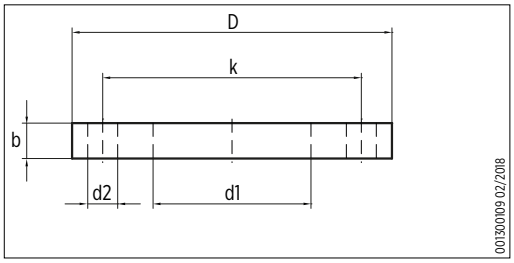



**Kit round counterflanges available on request:**
DN 25-32-40-50: galvanized steel, AISI 304 (EN 1.4301), AISI 316L (EN 1.4404)
DN 65-80-100: galvanized steel, AISI 316 (EN 1.4401)

## WELD-ON ROUND COUNTERFLANGES ACCORDING TO EN 1092-1

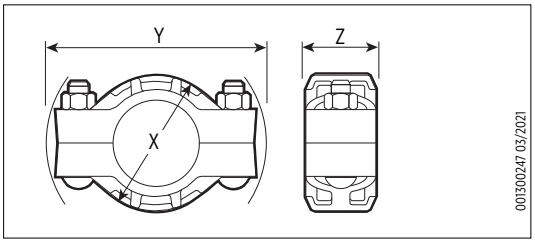
| DN | DIMENSIONS [mm] | | | | | HOLES | | PN |
|---|---|---|---|---|---|---|---|---|
| | D | d1 | k | L | b | d2 | N° | |
| **65** | 185 | 77,5 | 145 | - | 22 | 18 | 8 | 25/40 |
| **80** | 200 | 90,5 | 160 | | 24 | | | |
| **100** | 235 | 116 | 190 | | 26 | 22 | | |

Kit round counterflanges available on request; AISI 316 (EN 1.4401)



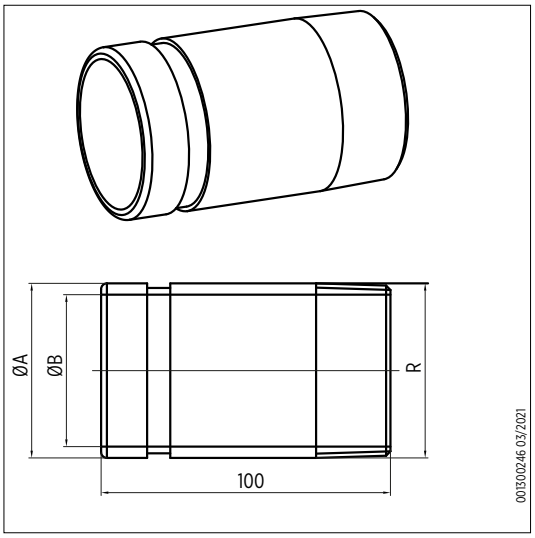
## VICTAULIC COUNTERFLANGES

| COLLARS | | | |
|---|---|---|---|
| DN | DIMENSIONS [mm] | | |
| | X | Y | Z |
| **32** | 67 | 127 | 48 |
| **50** | 92 | 149 | 48 |




| NIPPLE | | | |
|---|---|---|---|
| DN | DIMENSIONS [mm] | | |
| | Ø A | Ø B | R * |
| **32** | 42.2 | 35.0 | 1" ¼ |
| **50** | 60.3 | 52.5 | 2" -11 |

* Pipe threads UNI EN 10226-1




## CLAMP COUNTERFLANGES

For technical information about Clamp version, please contact Franklin Electric.

## HIGH PRESSURE KIT

Assembling kit for high pressure set with two pumps. This kit allows the hydraulic connection between the pumps. Please contact Franklin Electric for more information.

## HORIZONTAL INSTALLATION KIT

This kit allows the horizontal installation of pumps and assure the correct operation of the product. Please contact Franklin Electric for more information.

# VARIABLE FREQUENCY DRIVES (VFD) – DRIVE-TECH INVERTER

**Available for motor or wall instalaltion.**

## APPLICATIONS

- Booster sets
- HVAC systems with electric circulation pumps
- Control of electric pumps (wall-mounted inverter with kit)

## FEATURES

- Energy saving thanks to variable speed control
- Smooth start-up and stop
- Longer system life and greater system reliability
- Simplified installation on the motor or on the wall
- Quick commissioning through guided initial configuration
- Installation possible in damp and dusty environments due to IP55 degree protection
- High thermal and mechanical performance thanks to all-aluminium casing

## SPECIFICATIONS

- **Advanced user experience due to:**
  - Programming and monitoring via display or smartphone and FE Connect, available for Android, iOS devices
  - Remote control using a smartphone placed nearby as a modem
  - Copy / pasting pre-imposed programmes between different devices
  - Ability to send reports via email
  - Multilingual support
- **Multiple control methods:**
  - Constant pressure control
  - Constant or proportional differential pressure control
  - Constant temperature control
  - Control at constant differential temperature
  - Constant flow control
  - Control with external frequency signal or pre-set at 1 or 2 values
- **Integrated protections against:**
  - Overvoltage and undervoltage
  - Overcurrent and no load
  - Dry running
  - Overheating
- **EMC compatibility:**
  - Each inverter is equipped with an integrated EMI filter to comply with EN55011 Class A (or EN61800-3 Category C2). By installing an additional input filter, it is possible to achieve class B (C1)
- **Group operation (COMBO):**
  - Up to 8 connected units
  - Alternated operation to equalise electric pump wear
  - Automatic exchange between Master and Slave units in case of failure of one unit to guarantee the continued operation of the set
- **Advanced motor controls:**
  - Control of new generation asynchronous motors

E-Tech

## SYSTEM PERFORMANCE

- Mains supply frequency: 50-60 Hz (± 2%)
- Maximum working temperature at nominal load: +40 °C
- Maximum altitude at nominal load: 1000 metres above sea level
- Relative humidity: max 95% (without condensation)
- Degree of protection: IP55 (NEMA 4) or degree of motor protection if mounted on the motor (protect the device from direct exposure to sunlight and atmospheric influences)
- Connectivity: RS 485 serial port for COMBO operation (up to 8 units) + SMART Bluetooth communication + RS485 serial port for MODBUS RTU communication

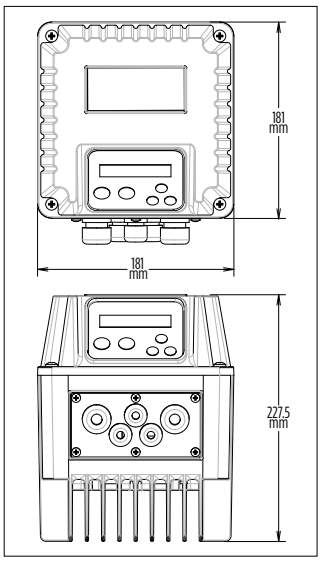
## ELECTRICAL FEATURES AND PERFORMANCE

| DrivE-Tech model | $V_{in}$ ± 15% [V] | max $V_{out}$ [V] | Max current at input [A] | Max current at output [A] | Typical motor * $P_2$ [kW] | Size |
|---|---|---|---|---|---|---|
| **2.015** | 1 X 230 | 1 x 230 | 15 | 9 | 1.1 | 1 |
| | | 3 x 230 | | 7 | 1.5 | |
| **2.030** | 1 x 230 | 1 x 230 | 20 | 9 | 1.5 | |
| | | 3 x 230 | | 11 | 3 | |
| **2.040** | 1 x 230 | 3 x 230 | 38 | 18 | 4 | 2 |
| **2.055** | 3x 230 | 3 x 230 | 53 | 25 | 5.5 | |
| **3.040** | 3 x 230 | 3 x 230 | 21 | 18 | 4 | |
| **3.055** | 3 x 230 | 3 x 230 | 31 | 25 | 5.5 | |
| **3.075** | 3 x 230 | 3 x 230 | 35 | 30 | 7.5 | |
| **4.022** | 3 x 400 | 3 x 400 | 10 | 6 | 2.2 | 1 |
| **4.040** | 3 x 400 | 3 x 400 | 13.5 | 9 | 4 | |
| **4.055** | 3 x 400 | 3 x 400 | 16 | 14 | 5.5 | 2 |
| **4.075** | 3 x 400 | 3 x 400 | 21 | 18 | 7.5 | |
| **4.110** | 3 x 400 | 3 x 400 | 31 | 25 | 11 | |
| **4.150** | 3 x 400 | 3 x 400 | 35 | 30 | 15 | |
| **4.185** | 3 x 400 | 3 x 400 | 42 | 38 | 18.5 | 3 |
| **4.220** | 3 x 400 | 3 x 400 | 52 | 48 | 22 | |
| **4.300** | 3 x 400 | 3 x 400 | 68 | 65 | 30 | |
| **4.370** | 3 x 400 | 3 x 400 | 78 | 75 | 37 | |
| **4.450** | 3 x 400 | 3 x 400 | 88 | 85 | 45 | |

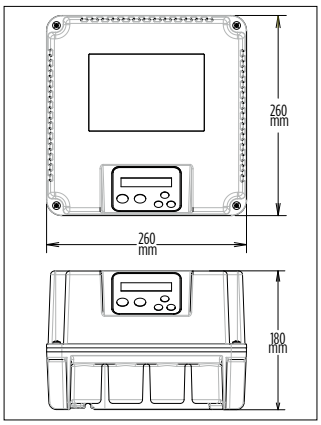
* Typical power. Refer to the motor current when selecting the appropriate DrivE-Tech model

** EV pumps equipped with DrivE-Tech mounted on motor fan are available on request only for models 1-20, up to 15 kW

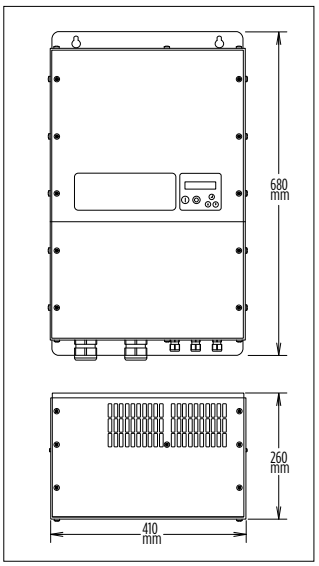
Size 1




Size 2




Size 3



## TECHNICAL FEATURES

- Power supply frequency: 50/60 Hz (± 2%)
- Maximum ambient temperature at nominal current: 40 °C (104 °F)
- Maximum altitude at nominal current: 1000 metres above sea level
- Degree of protection: IP55 (size 1, 2); IP54 (size 3)
- Settable digital output signals (normally open or normally closed):
  - Motor start signal
  - Alarm signal
  - DOL 1 pump signal
  - DOL 2 pump signal
- Analogue input (10 or 15 V cc):
  - 4-20 mA
  - 4-20 mA
  - 4-20 mA / 0-10 Vdc (settable)
  - 4-20 mA / 0-10 Vdc (settable)
  - 4 digital inputs, normally open or normally closed (settable), for starting and stopping the motor
- RS485 serial communication

## INSTALLATION

- DrivE-Tech can be installed directly on the motor fan cover or fixed to the wall.
- **Motor mounting kit:**:
  - The motor cooling fan also cools the DrivE-Tech.
  - The special assembly kit allows a solid coupling between the two units.

# ErP REGULATION

**Information related to energy performance of the motor, according to Reg. 2019/1781 CE and modifications:**

### EFFICIENCY REQUIREMENTS FOR VARIABLE SPEED DRIVES

Efficiency requirements for variable speed drives shall apply as follows: From 1 July 2021, the power losses of variable speed drives rated for operating with motors with a rated output power equal to or above 0,12 kW and equal to or below 1 000 kW shall not exceed the maximum power losses corresponding to the IE2 efficiency level. Energy efficiency for VSDs, expressed in International Energy efficiency classes (IE), is determined based on the power losses as follows: The maximum power losses of the IE2 class are 25 % lower than the reference value referred to in table:

| Reference VSD losses and test load displacement factor for the IE class determination of VSDs | | | |
|---|---|---|---|
| Apparent output power of VSD (kVA) | Rated power of Motor (kW) (indicative) | Reference power losses (kW), at 90 % rated motor stator frequency and 100 % rated torque-producing current | "Test load displacement factor cos phi (+/- 0,08)" |
| **0,278** | 0,12 | 0,100 | 0,73 |
| **0,381** | 0,18 | 0,104 | 0,73 |
| **0,500** | 0,25 | 0,109 | 0,73 |
| **0,697** | 0,37 | 0,117 | 0,73 |
| **0,977** | 0,55 | 0,129 | 0,73 |
| **1,29** | 0,75 | 0,142 | 0,79 |

If the apparent output power of a VSD is between two values in Table 6, the higher power loss value and the lower value of the test load displacement factor shall be used for the IE class determination.

1. power losses in % of the rated apparent output power: see the documentation of the VSD;
2. efficiency level: 'IE2';
3. manufacturer's name or trade mark, commercial registration number and address: see the nameplate;
4. product's model identifier: see the nameplate;
5. apparent output power or range of apparent output power (kVA): see the nameplate and the catalog;
6. indicative motor rated power output(s) PN or range of rated power output (kW): see the nameplate and the catalog;
7. rated output current (A): see the nameplate and the catalog;
8. maximum operating temperature (40 °C);
9. rated supply fequencies: 50-60 Hz;
10. rated supply voltage(s) or range of rated supply voltage (V): see the nameplate;

# CONSTRUCTION OPTIONS

## MOTORS

- ATEX version (explosive enviroments)
- With PTC sensor
- Heavy duty (for heavy application)
- 4 poles

## VFD

- Installed on motor and wired

## PUMPS

- Mechanical seal, wear parts and elastomers are available in EPDM or FKM, combined with wear parts in SiC/Graphite, SiC/SiC, WC/WC.
- Balanced mechanical seal: the design allows to reduce the liquid trust on wear parts, extending the product life.
- Optional upperthrust bearings for motors up to 4 kW: to save the motor bearing from the pump upper thrust and in the cases where the motor doesn't fulfil the minimum conditions requested, it's availabe the optional upper thrust bearing. The instalaltion of upperthrust bearing is reversible (it's ever possible to come back to the standard version or install it).
- High pressure pumps: reinforced desing pumps with PN 50 bar maximum working pressure (only Victaulic connections and available models).
- Passivated pumps: for pumping of corrosive liquids (eg. reverse osmosis systems) are available pumps in AISI 316 / CF-8M, with chemical treatment and special design features, for higher corrosion resistant.

## CATALOG REVISION CHANGE NOTICE

| Rev. No. | Changes | Page |
|---|---|---|
| 01 | Updating mechanical seal “Available on request” materials | 17 |
| | Updating performance tables EV 30-45-65 | 27-28 |
| | Updating performance curves EV 30 (1 - 7 stages) | 62-63 |
| 02 | Updating ErP motor regulation | 22 |
| | Updating “motors” tables | 12-15 |
| | Updating performance curves EV 30 (8-13 stages) | 65 |
| | Updating “ELECTRICAL FEATURES AND PERFORMANCE” VFD table | 83 |
| | Added “ErP Regulaton” for VFD | 84-85 |

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