PRODUCT CATALOG

Franklin Electric

EV SERIES 50 Hz

VERTICAL MULTISTAGE PUMPS





E-Tech®

MENU

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NOTE: Franklin Electric S.r.l. reserves the right to amend specification without prior notice

PRODUCT OVERVIEW

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

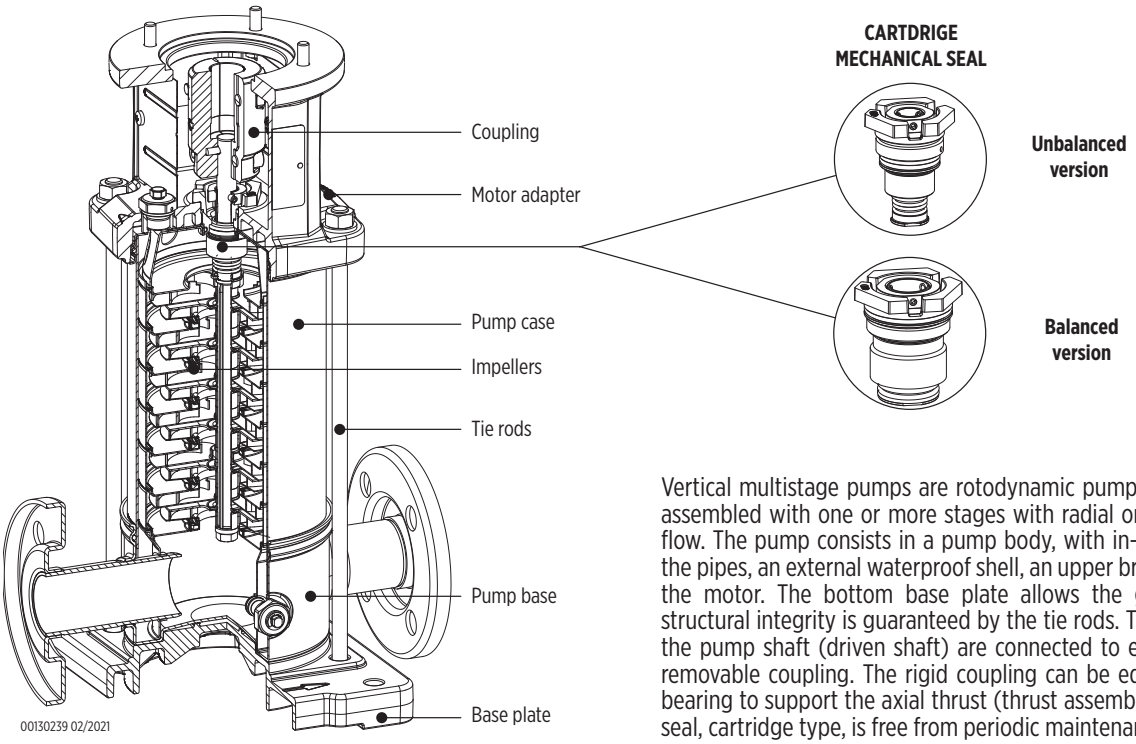
Circulation of hot and cold water for heating, cooling, conditioning systems

ROBUST AND RELIABLE

- Compact and solid structure
- Easy installation in-line ports
- All wetted parts in Stainless Steel
- Shaft bearing and guide bushing in silicon 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

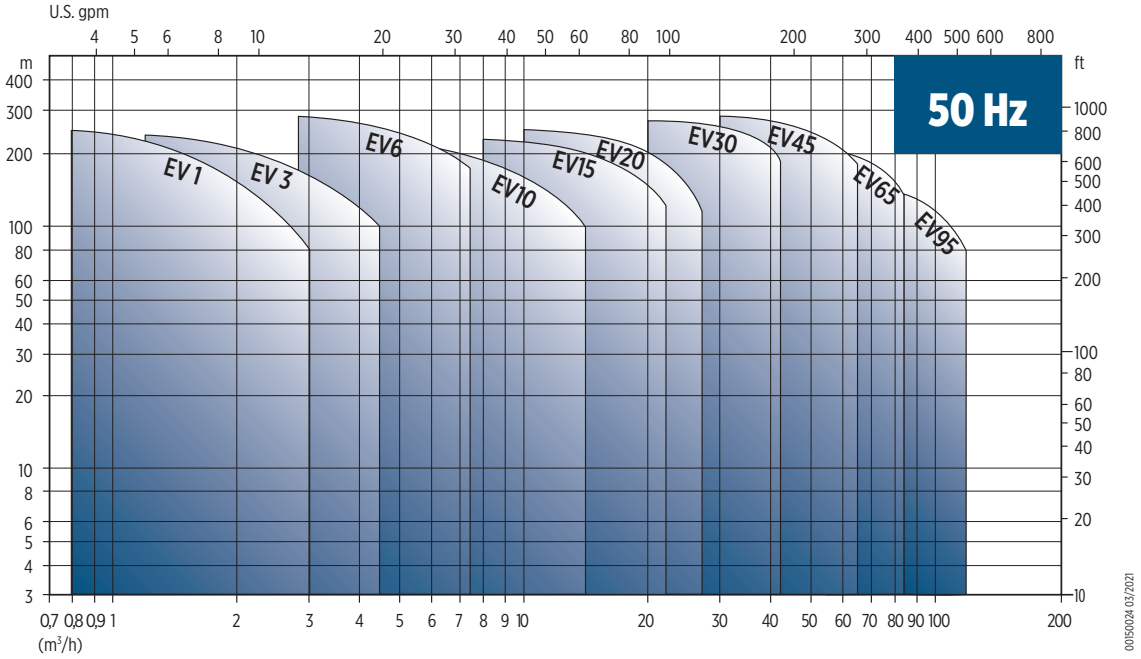
- Stainless steel impeller and diffuser for corrosion resistance
- Standard mechanical seal (EN 12756 ex DIN 24960) WRAS approved; balanced version for EV 30-45-65-95
- Standard IE3 motor, size B14 up to 4 kW / size B5 from 5.5 kW and above
- Intermediate bearing in silicon carbide to stabilize the pump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



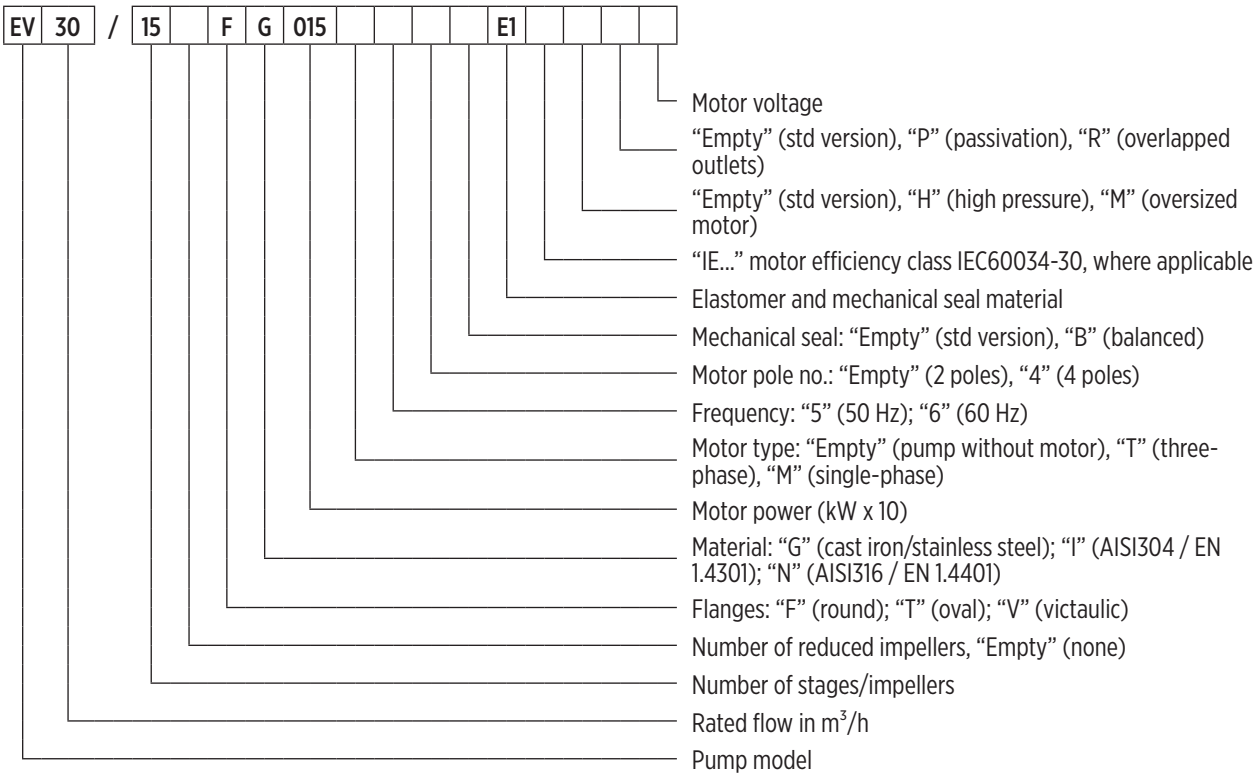
Vertical multistage pumps are rotodynamic pumps, not self-priming, assembled with one or more stages with radial or semiaxial (mixed) flow. The pump consists in a pump body, with in-line connections to the pipes, an external waterproof shell, an upper bracket that supports the motor. The bottom base 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.

PRODUCT OVERVIEW

FAMILY CURVES



PUMP IDENTIFICATION CODE



00140019IT 01/2020

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	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	-	-	-	-

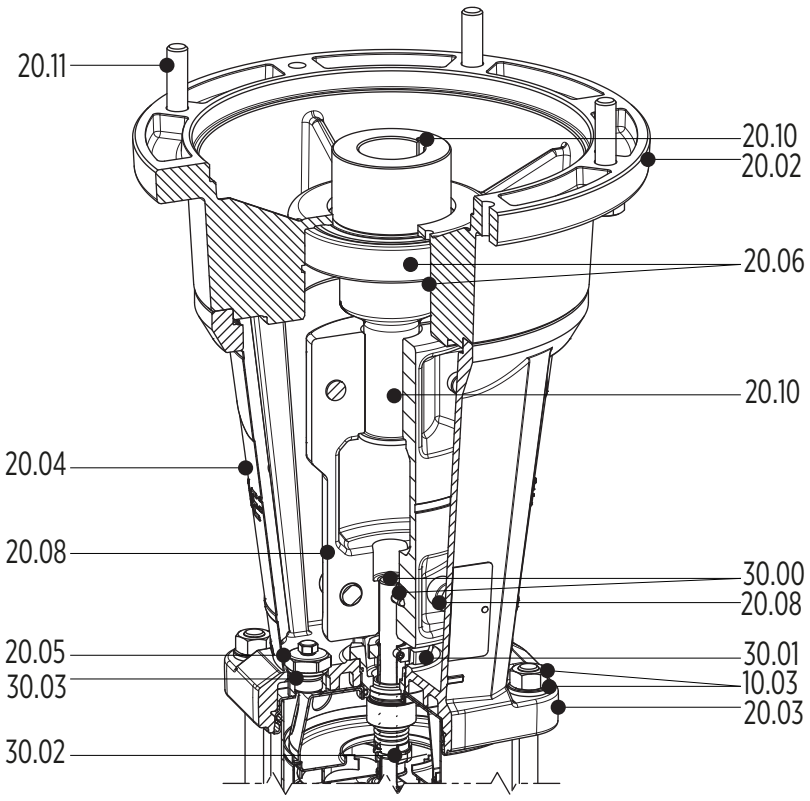
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MENU

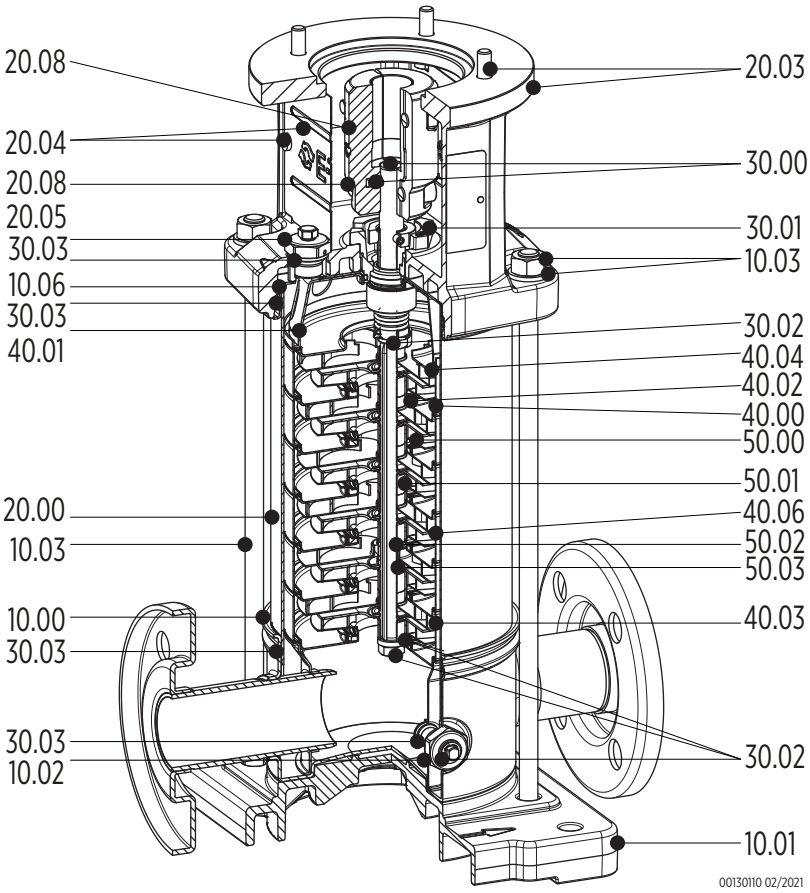
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Spare parts and materials

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

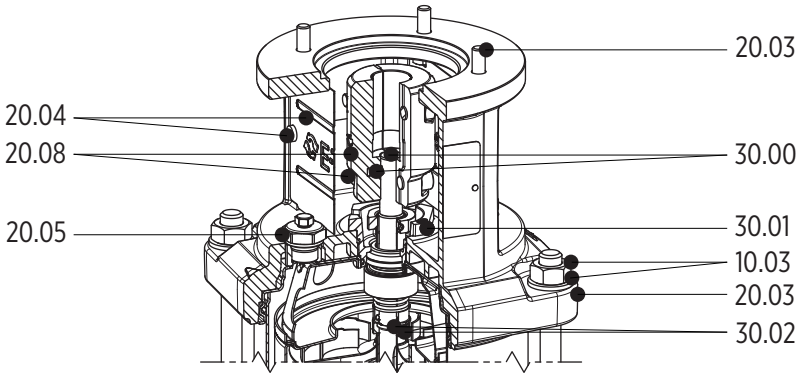
Ref. No	Parts description	Material	Reference standard			
			I version		N version	
			ASTM	DIN/EN	ASTM	DIN/EN
10.00	Pump casing	Stainless Steel	AISI 304	1.4301	AISI 316L	1.4401
10.02	Drain plug	Stainless Steel	AISI 304	1.4301	AISI 316	1.4401
10.06	Upper flange	Stainless Steel	AISI 304	1.4301	AISI 316L	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 / Silicon Carbide	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	Silicon Carbide				
50.03	Intermediate sleeve spacer	Stainless Steel	AISI 304	1.4301	AISI 316L	1.4401

SPARE PARTS LIST

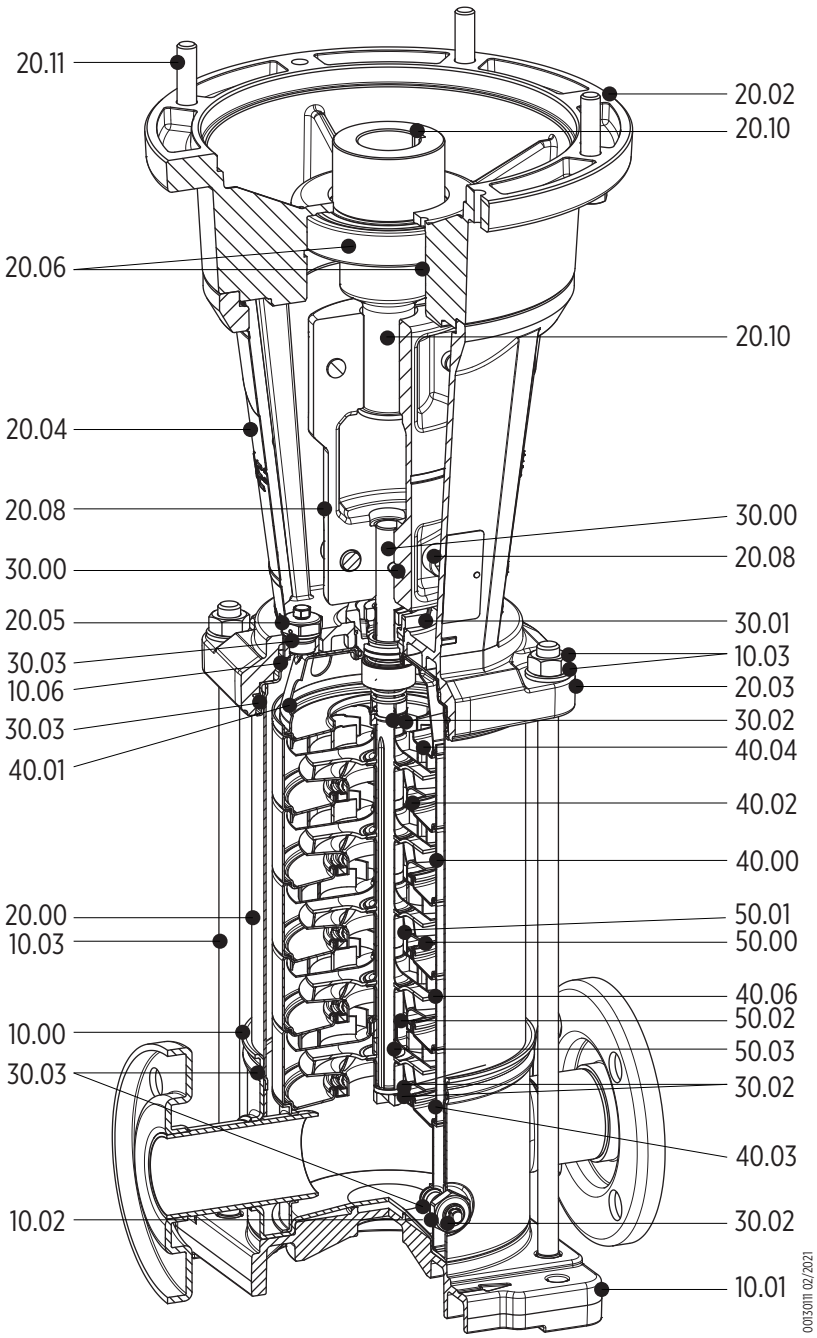
Ref. No	Parts description
10.00	Pump casing
10.01	Pump base
10.02	Drain plug
10.03	Tie bolts, washers and nuts
10.06	Upper flange
20.00	Outer case
20.02	Motor flange
20.03	Motor bracket
20.04	Coupling guard
20.05	Filling plug
20.06	Kit bearings
20.08	Coupling
20.10	Motor shaft adapter
20.11	Lifting eyelets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

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PARTS IN CONTACT WITH LIQUID

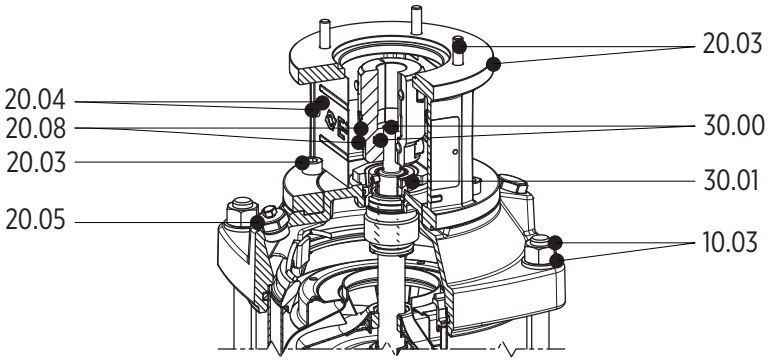
Ref. No	Parts description	Material	Reference standard			
			I version		N version	
			ASTM	DIN/EN	ASTM	DIN/EN
10.00	Pump casing	Stainless Steel	AISI 304	1.4301	AISI 316L	1.4401
10.02	Drain plug	Stainless Steel	AISI 304	1.4301	AISI 316	1.4401
10.06	Upper flange	Stainless Steel	AISI 304	1.4301	AISI 316L	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 / Silicon Carbide	AISI 304	1.4301	AISI 316L	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	Silicon Carbide				
50.03	Intermediate sleeve spacer	Stainless Steel	AISI 304	1.4301	AISI 316	1.4401

SPARE PARTS LIST

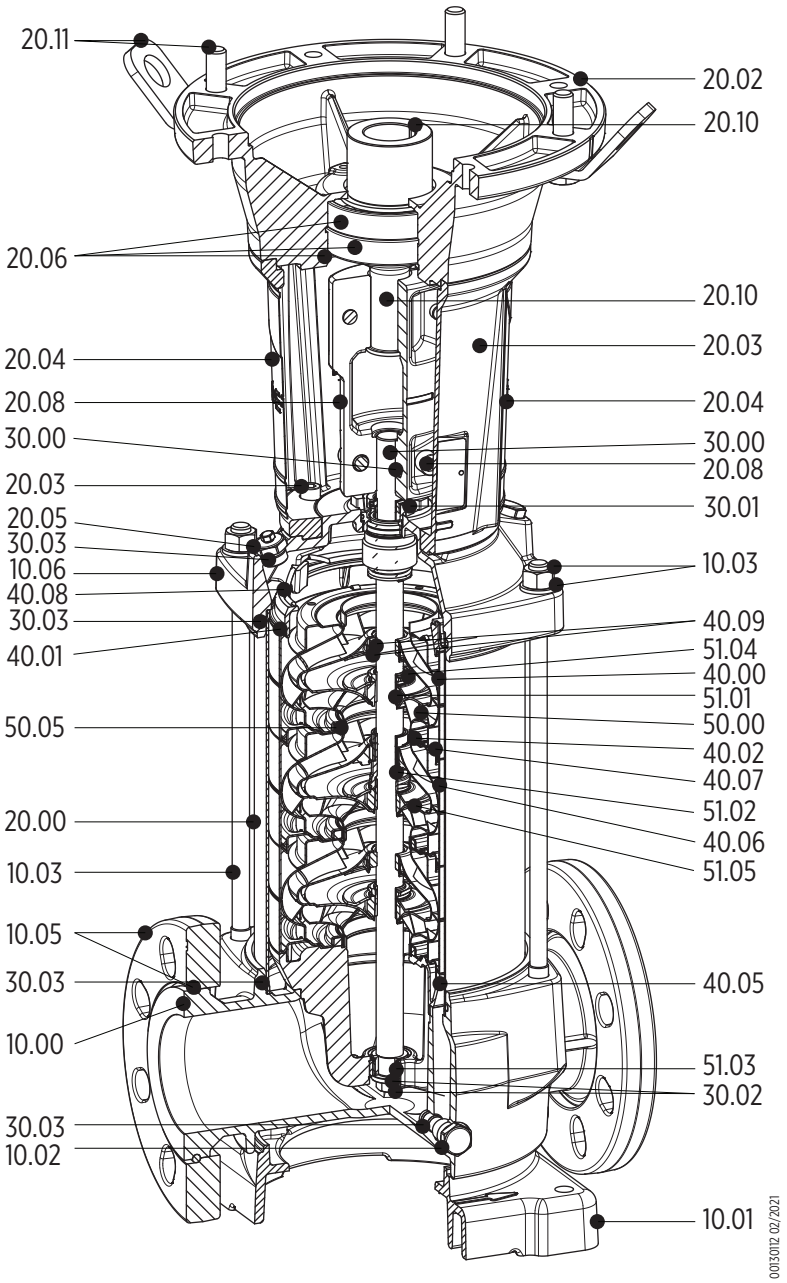
Ref. No	Parts description
10.00	Pump casing
10.01	Pump base
10.02	Drain plug
10.03	Tie bolts, washers and nuts
10.06	Upper flange
20.00	Outer case
20.02	Motor flange
20.03	Motor bracket
20.04	Coupling guard
20.05	Filling plugs
20.06	Kit bearings
20.08	Coupling
20.10	Motor shaft adapter
20.11	Lifting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

MENU

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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	1.4301	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 (Only 65/95 vers.)	Stainless Steel	CF 8 / AISI 304	14308	CF 8M / AISI 316	1.4408
40.02	Floating neck ring	PTFE				
40.05	Inlet spider bearing	Stainless Steel / Silicon Carbide	AISI 316	1.4301	AISI 316	1.4401
40.06	Stage housing and diffuser with bearing	Stainless Steel / Silicon Carbide	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	1.4301	AISI 316	1.4401
40.09	Secondary sleeve with ring	Stainless Steel / Carbon graphite	AISI 316	1.4301	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 / Silicon Carbide	AISI 316	1.4301	AISI 316	1.4401
51.03	Journal sleeve	Stainless Steel / Silicon Carbide	AISI 316	1.4301	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

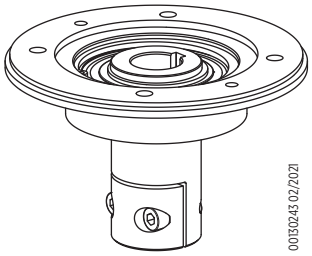
The pump must be coupled with a synchronous or asynchronous electric motor single-phase (up to 2.2 kW) or three-phase (up to 45 kW); dimensions according to IEC 60034-1 or Nema standard, based on motor type.

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.



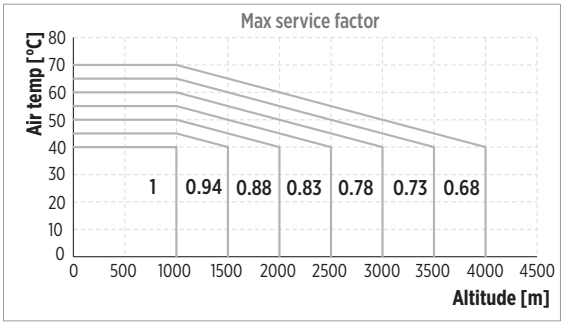
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For IEC 60034-1 standard, available:

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

Power		Phases	IEC Size	Design	[min-1]	Pump side bearing	Starting torque [Nm]	N %
[kW]	[HP]							
SINGLE-PHASE MOTORS								
0.55	**0.75**	1	71	B14	2890	6203-2Z	0.7	74.1
0.75	**1**	1	71	B14	2850	6204-2Z	0.8	77.4
1.1	**1.5**	1	80	B14	2790	6204-2Z	0.7	79.6
1.5	**2**	1	80	B14	2870	6205-2Z	0.5	81.3
2.2	**3**	1	90	B14	2920	6205-2Z	0.4	83.2
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.

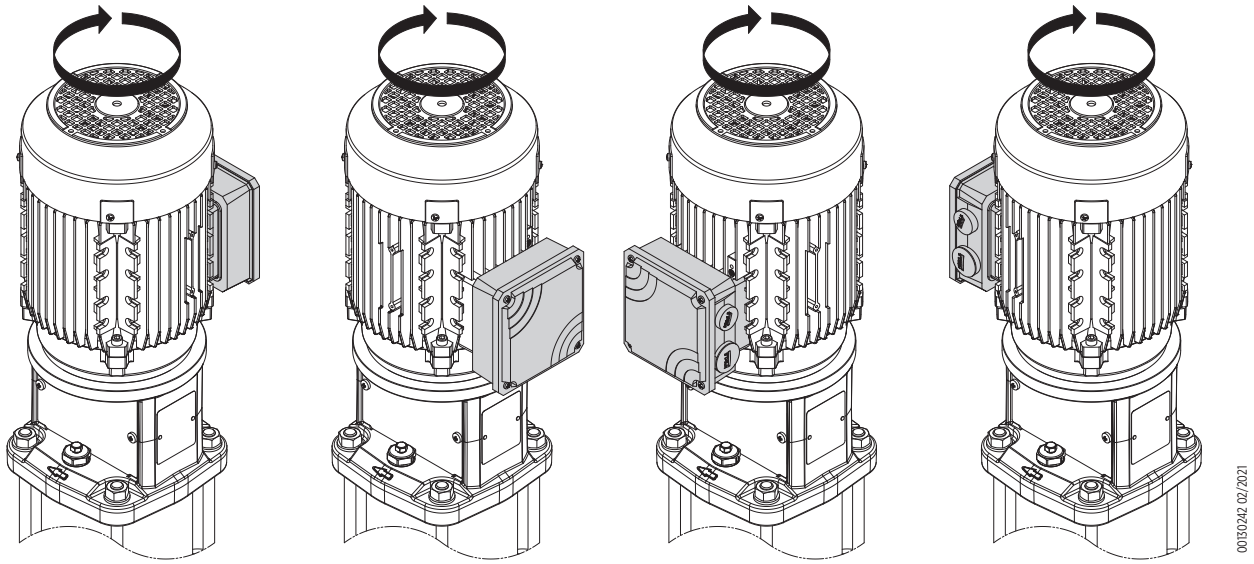
The graph shows how to choose the right maximum service factor applicable (share of the nominal power).

MOTORS

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

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AEG LAFERT MOTORS

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

- High efficiency single-phase motors of 0.55kW according to EU Regulation 2019/1781
- Voltage: 230 V
- Capacitor inside terminal box

Efficiency class	SINGLE-PHASE MOTORS DESIGNED FOR RANGE OF RATED VOLTAGE 230 V 50 Hz												
	POWER		IEC Size	Design	IN [A] 230 V	[min-1]	µF	M_N	Ɒ %	cos ϕ	I_A/I_N	M_A/M_N	Weight [kg]
	[kW]	[HP]											
IE2	0.55	0.75	71	B14	3.2	2890	20	1.8	74.1	0.99	4.3	0.7	8.6
	0.75	1	71	B14	4.3	2850	31.5	2.5	77.4	0.96	5.6	0.8	11.8
	1.1	1.5	80	B14	6.4	2790	36	3.8	79.6	0.97	3.9	0.7	12
	1.5	2	80	B14	8.5	2870	31,5	5	81.3	0.95	4.9	0.5	18.7
	2.2	3	90	B14	11.8	2920	60	7.2	83.2	0.97	5.3	0.4	19.7

THREE-PHASE MOTORS

- High efficiency three-phase motors of 0.37kW according to EU Regulation 2019/1781
- 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	Design	IN [A] Δ 230 V	IN [A] Y 400 V	IN [A] Δ 400 V	IN [A] Y 690 V	[min-1]	MN	Ɒ %	cos ϕ	IA/IN	MA/MN	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	1.6	-	-	2910	2.5	82.0	0.78	8.9	4.7	9.5
	1.1	1.5	80	B14	4.2	2.3	-	-	2870	3.7	82.7	0.76	9.3	5	11.1
	1.5	2	90	B14	5.2	3.2	-	-	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	6.1	-	-	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

MENU

E-Tech®

WAT MOTOR

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)

THREE-PHASE MOTORS

- High efficiency three-phase motors of 0.37kW according to EU Regulation 2019/1781
- 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	Design	IN [A] Δ 230 V	IN [A] Y 400 V	IN [A] Δ 400 V	IN [A] Y 690 V	[min-1]	MN	ɲ %	Weight [kg]
	[kW]	[HP]										
IE3	**0.75**	**1**	80	B14	2.7	1.6	-	-	2890	2.48	80.7	8.6
	1.1	**1.5**	80	B14	3.9	2.3	-	-	2890	3.63	82.7	12.9
	1.5	**2**	90	B14	5.6	3.2	-	-	2895	4.95	84.2	15.4
	2.2	**3**	90	B14	7.9	4.6	-	-	2900	7.24	85.9	18.5
	3	**4**	100	B14	10.5	6.1	-	-	2880	9.95	87.1	24.8
	4	**5.5**	112	B14	-	-	7.95	4.6	2936	13.01	88.1	28.6
	5.5	**7.5**	132	B5	-	-	10.5	6.1	2920	18	89.2	35.6
	7.5	**10**	132	B5	-	-	13.9	8	2918	24.54	91	41.8
	11	**15**	160	B5	-	-	20.7	11.9	2925	35.91	91.2	70.5
	15	**20**	160	B5	-	-	27.8	16	2955	48.47	91.9	95
	18.5	**25**	160	B5	-	-	32.8	18.9	2960	59.68	92.4	102.9
	22	**30**	180	B5	-	-	39.1	22.5	2961	70.95	92.7	119.4
	30	**40**	200	B5	-	-	50.1	28.9	2957	96.88	93.3	163.6
	37	**50**	200	B5	-	-	65.2	37.6	2950	119.77	93.7	176.6
	45	**60**	225	B5	-	-	78.8	45.5	2976	144.39	94	233

MOTORS EFFICIENCY

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	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

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.

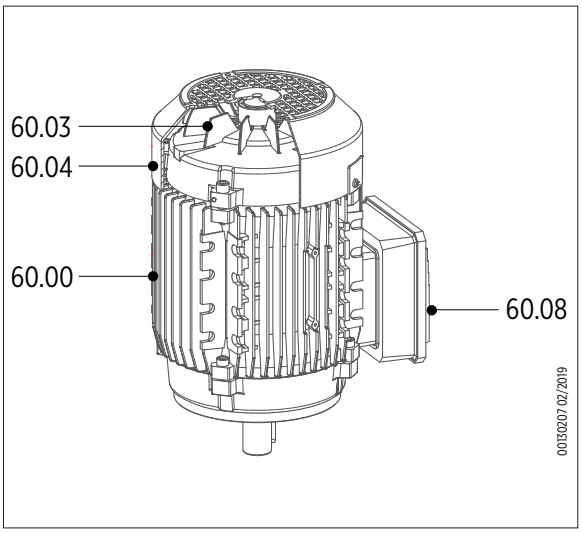
Noise levels

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.

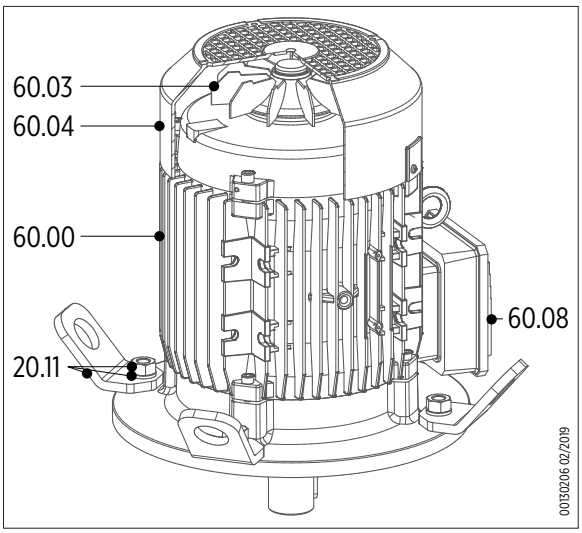
Frame size	2 poles		4 poles	
	LWA	LpA	LWA	LpA
56	57	48	47	38
63	58	49	47	38
71	61	52	51	42
80	72	60	60	48
90	74	62	61	49
100	78	66	62	50
112	80	68	65	53
132	81	72	71	59
160	87	74	75	62
180	90	77	78	66
200	91	78	80	68
225	92	80	88	76

MOTORS SPARE PARTS

UP TO 4 KW



FROM 5.5 KW



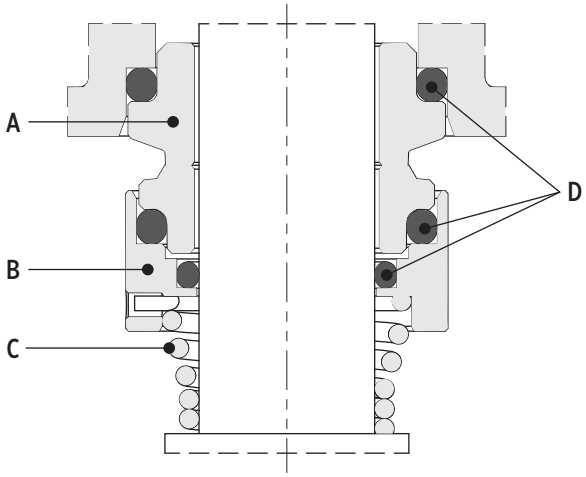
Ref. No	Parts description
20.11	Lifting eyelets and bolts
60.00	Motor assembly
60.03	Fan
60.04	Fan cover and screws
60.08	Terminal box cover and base

CARTRIDGE MECHANICAL SEAL SPECIFICATIONS

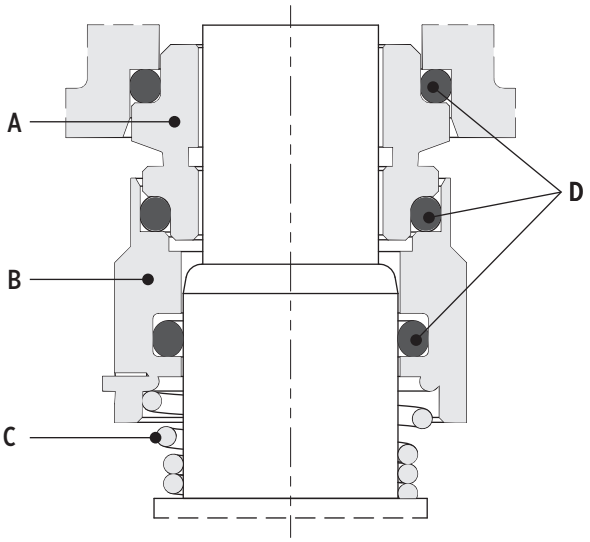
(fixed and rotating parts according to EN 12756)



UNBALANCED



BALANCED



00130241 02/2021

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 Models 30-95, Vers. N: 85°C 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
LAMMABLE 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]

COMPATIBILITY OF FLUIDS AND MATERIALS

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.

MENU

E-Tech®

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. ---.

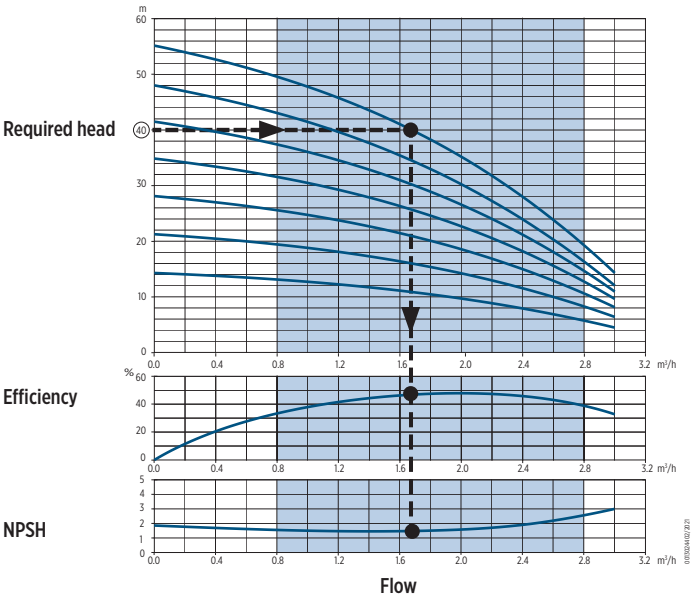
PERFORMANCE SELECTION

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		P1max * 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	

* P1max = maximum suction pressure at full speed

HYDRAULIC PERFORMANCE AT 50 HZ

EV 6-10

Pump model	Rated power		P1max * 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	

* P1max = maximum suction pressure at full speed

HYDRAULIC PERFORMANCE AT 50 HZ

EV 15-20

Pump model	Rated power		P1max * Bar	Q = Delivery														
				l/min 0	70.0	120.0	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	4.2	7.2	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	18.5	31.7	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]															
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				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				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				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	

* P1max = maximum suction pressure at full speed

MENU

E-Tech®

HYDRAULIC PERFORMANCE AT 50 HZ

EV 30-45

Pump model	Rated power		P1max * Bar	Q = Delivery											
				l/min 0	350.0	417.0	500	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
				US gpm 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

HYDRAULIC PERFORMANCE AT 50 HZ

EV 65-95

Pump model	Rated power		P1max * Bar	Q = Delivery													
				l/min 0	417.0	500	666.7	750.0	833.3	1000.0	1166.7	1333.3	1466.7	1666.7	1833.3	1916.7	2000.0
				m³/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 gpm 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	

* P1max = maximum suction pressure at full speed

MENU

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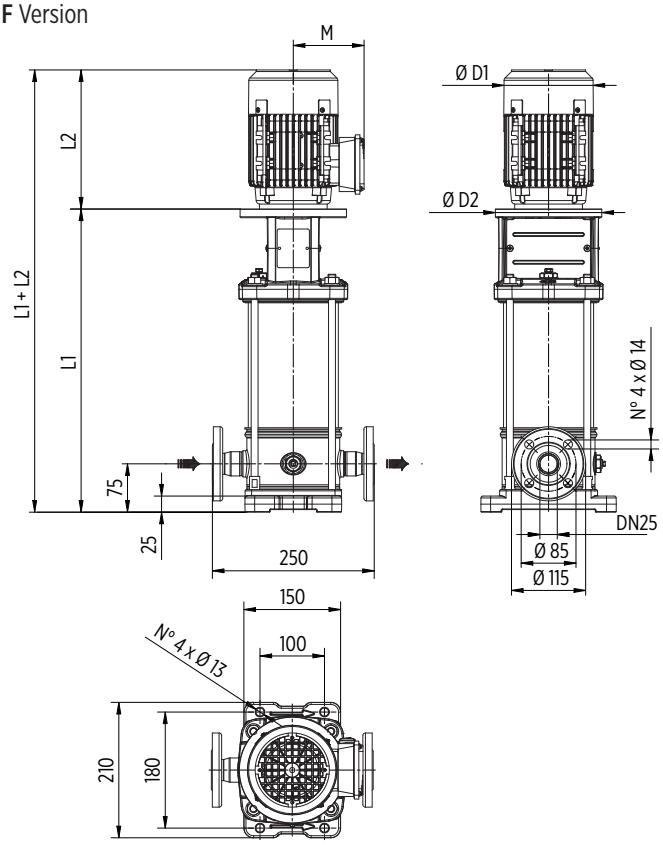
EV 1 - 50 HZ

TECHNICAL DATA

Pump model	Motor		Dimensions												Weight [kg]		
			L1	L2		L3	L4	L3	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

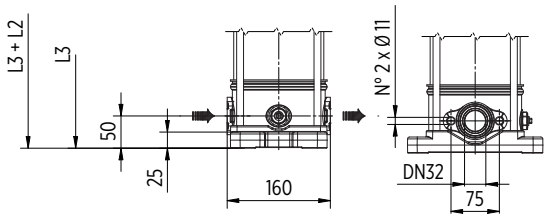
F Version



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

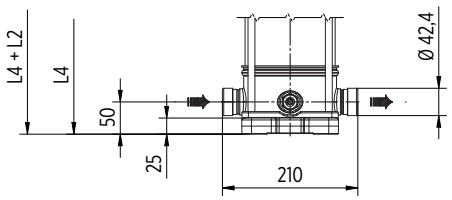
T Version

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

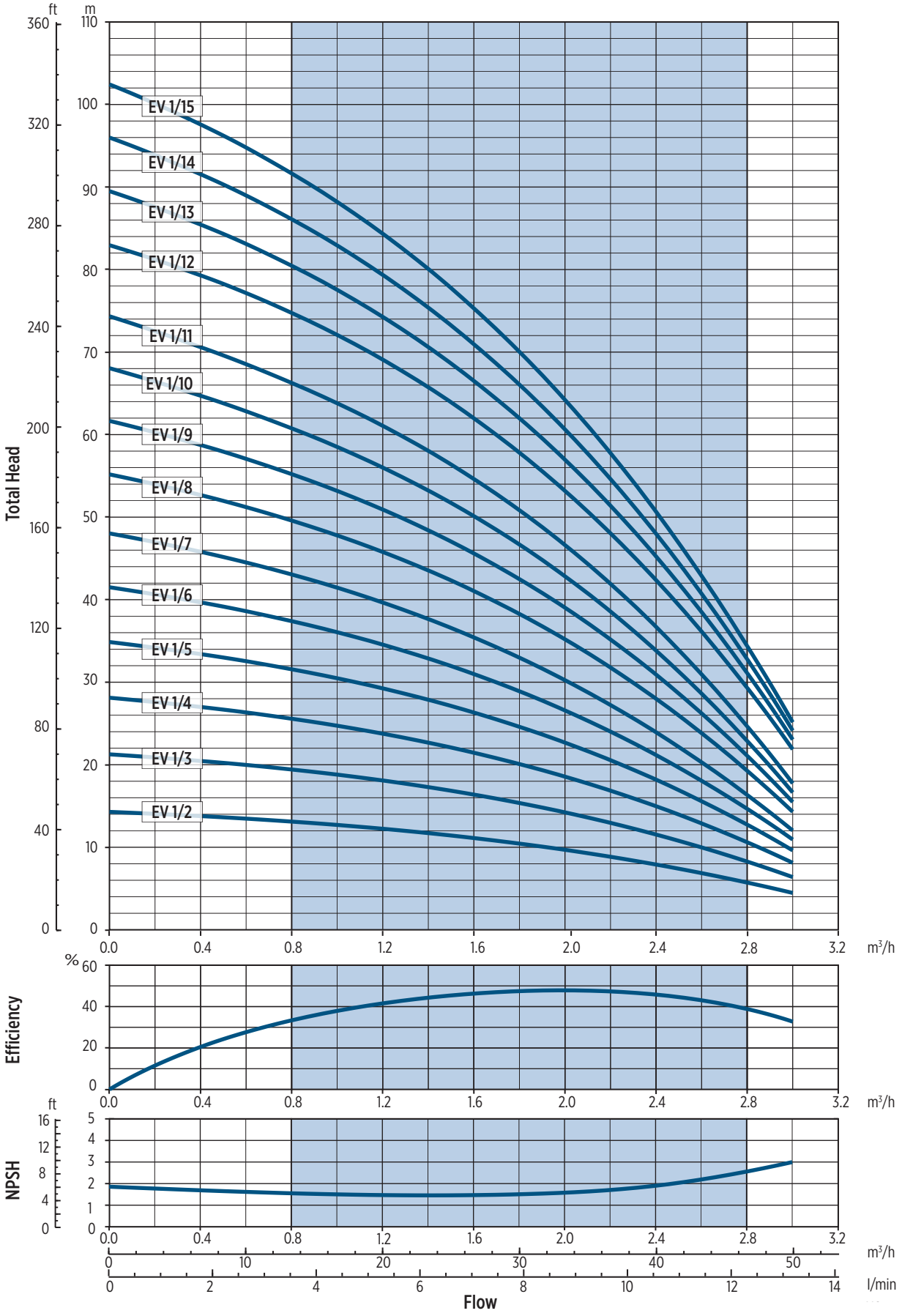


Connections with rapid fittings type "Victaulic": the pump is supplied without the collars (Optional accessories)

00130099 09/2023

EV 1 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70

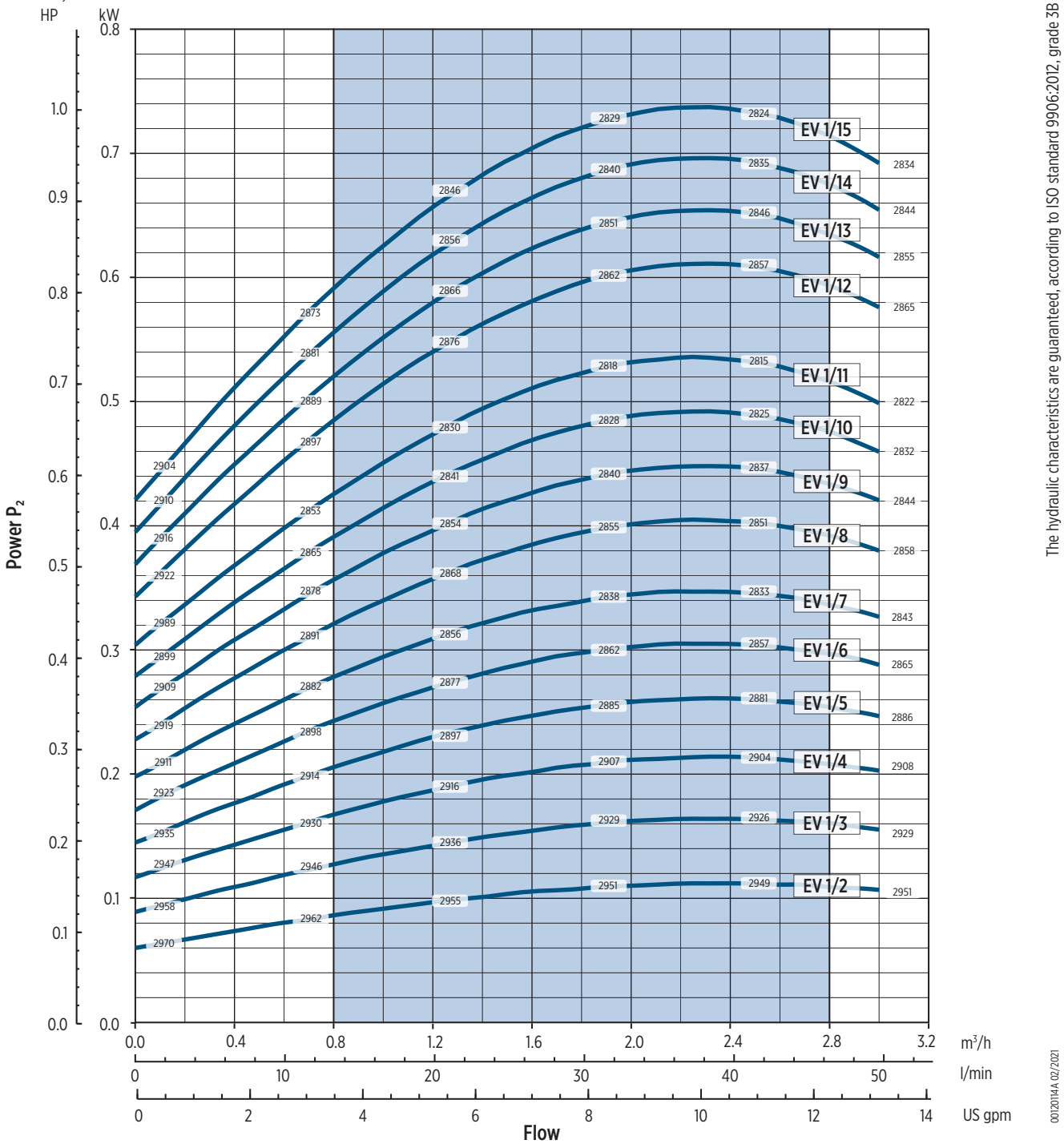


The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

120114A 02/2021

EV 1 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

0012014A 02/2021

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

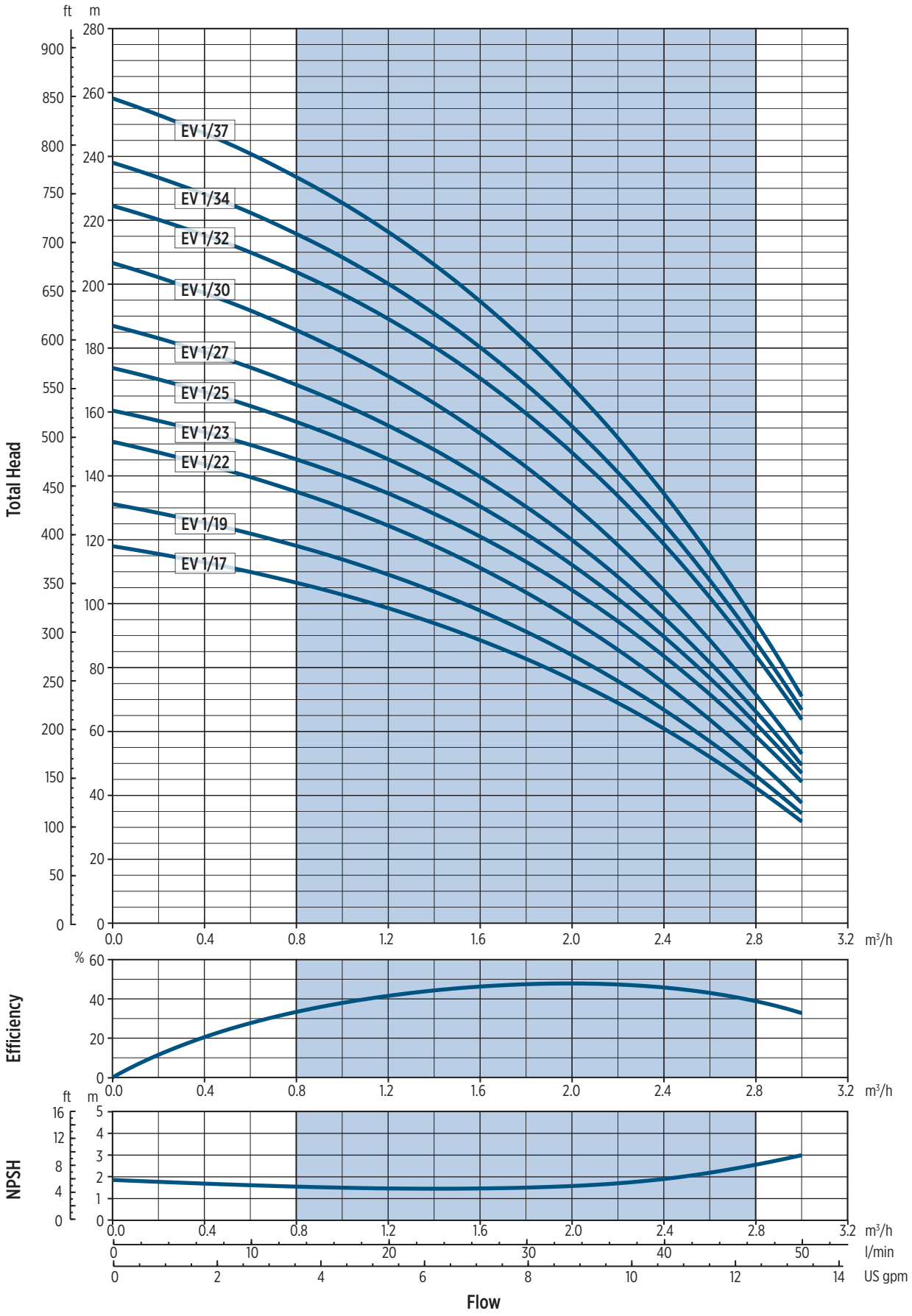
Performance curves of Q, H and P depend on the rpm number according to the following formula:

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

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=Flow, H=Head, P=Power, η=Efficiency

EV 1 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70

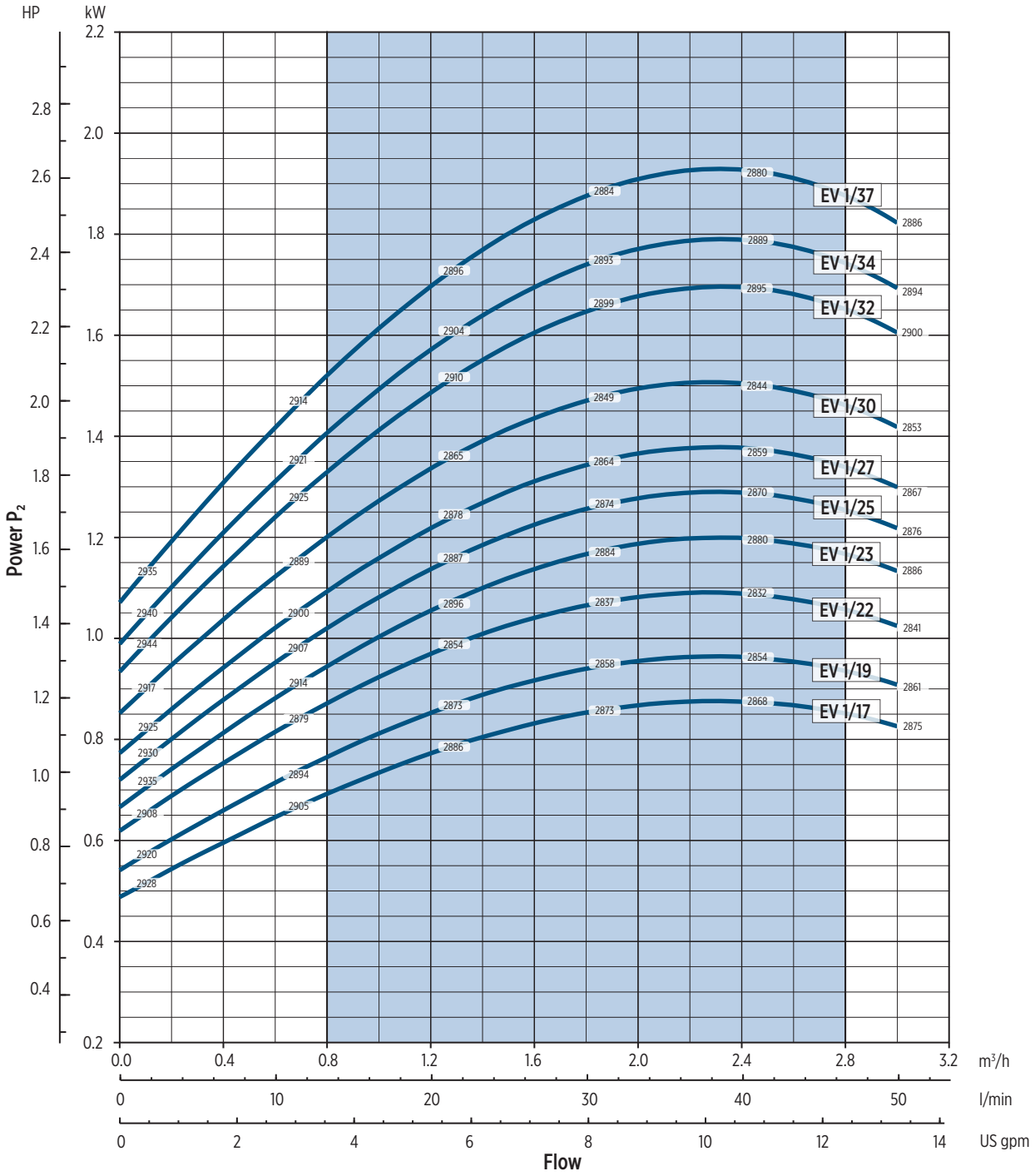


The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

00120148 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

00120148 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=Flow, H=Head, P=Power, η=Efficiency

MENU

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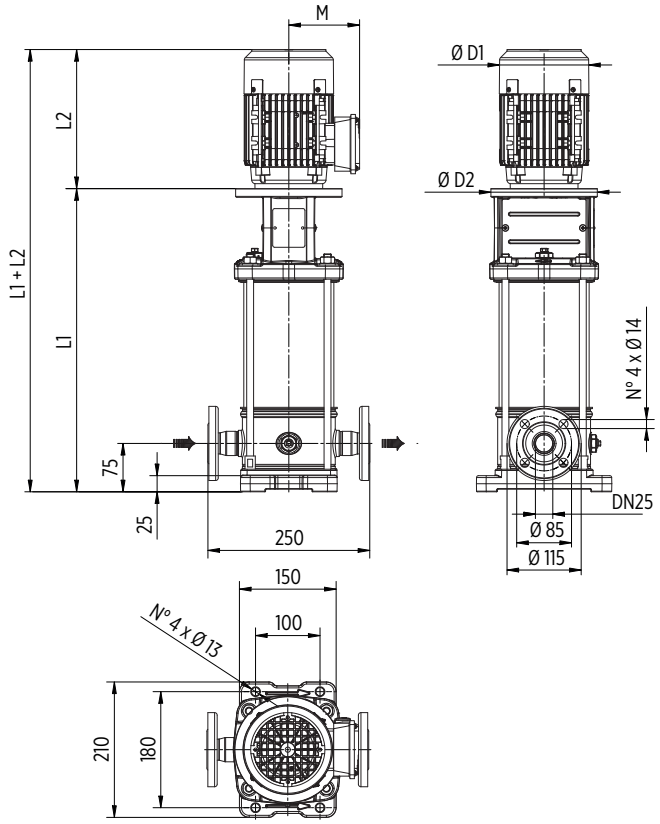
EV 3 - 50 HZ

TECHNICAL DATA

Pump model	Motor		Dimensions												Weight [kg]		
			L1	L2		L3	L4	L3	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

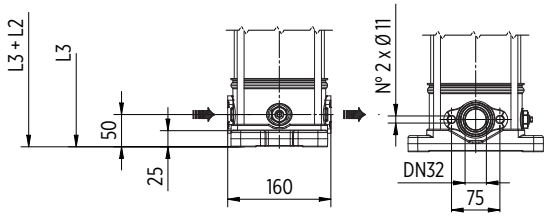
F Version



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

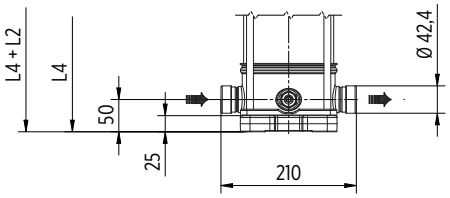
T Version

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

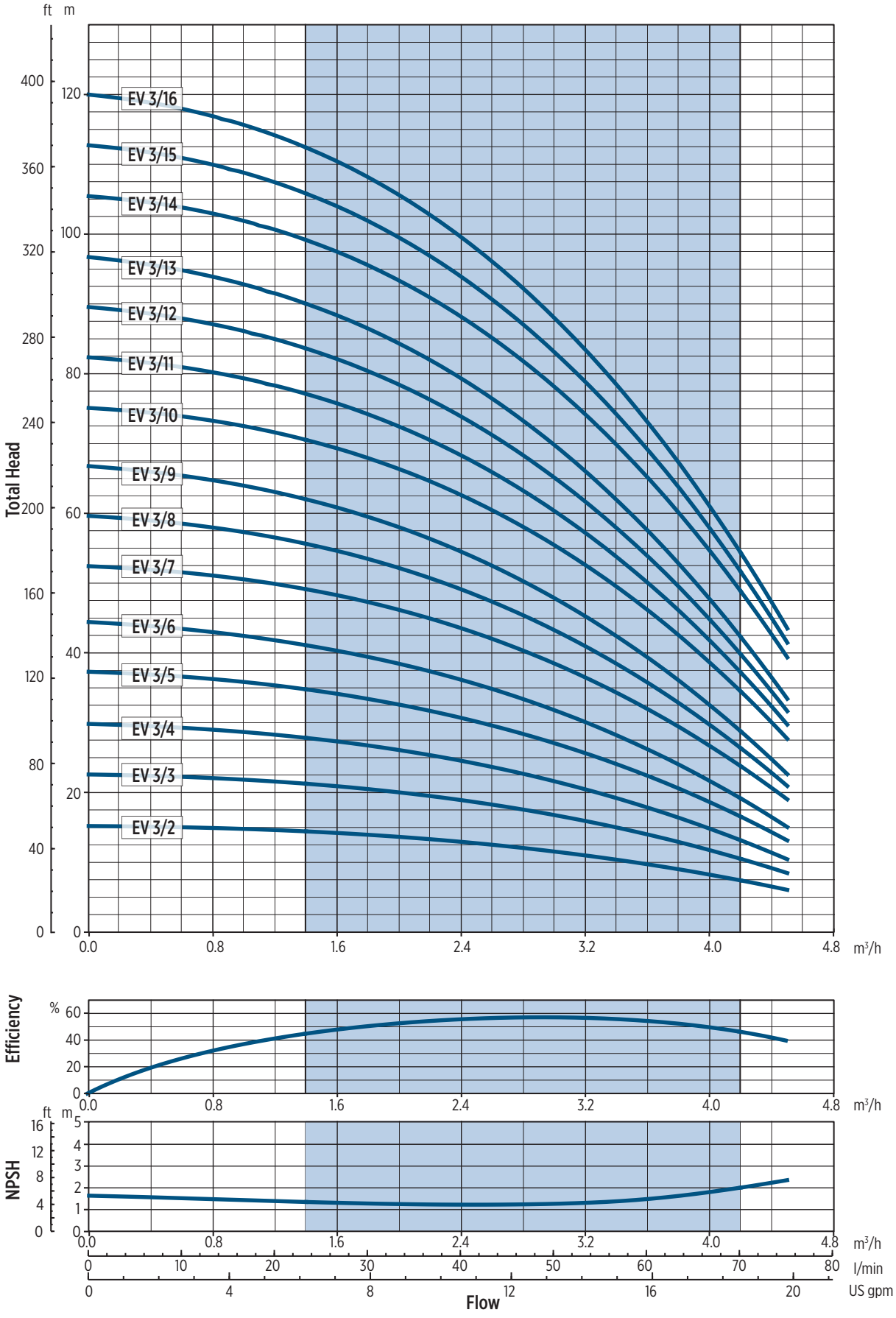


Connections with rapid fittings type "Victaulic": the pump is supplied without the collars (Optional accessories)

00150099 09/2023

EV 3 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



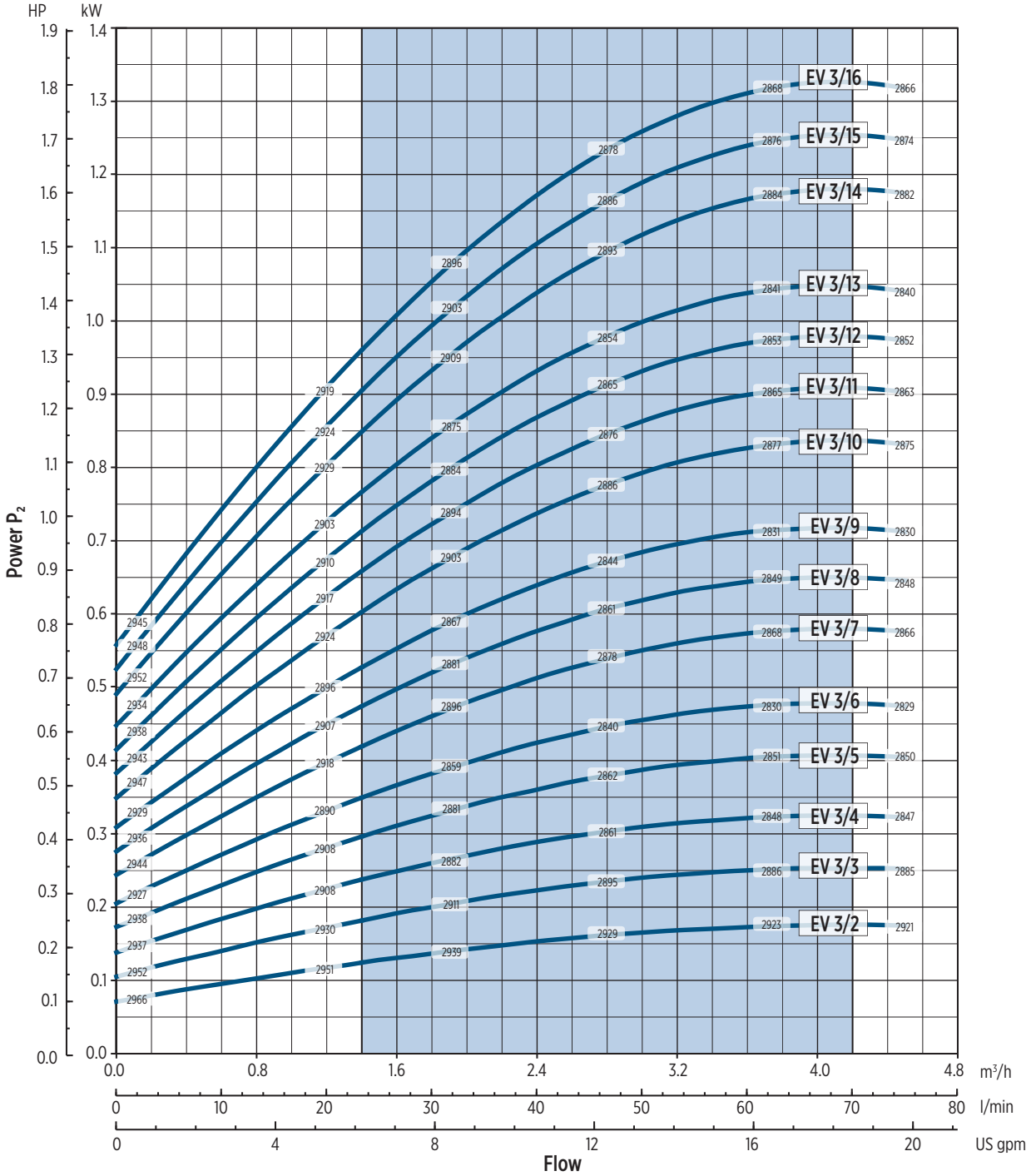
The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

120115A 05/2021

MENU

EV 3 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

00120115-EN 02/2018

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

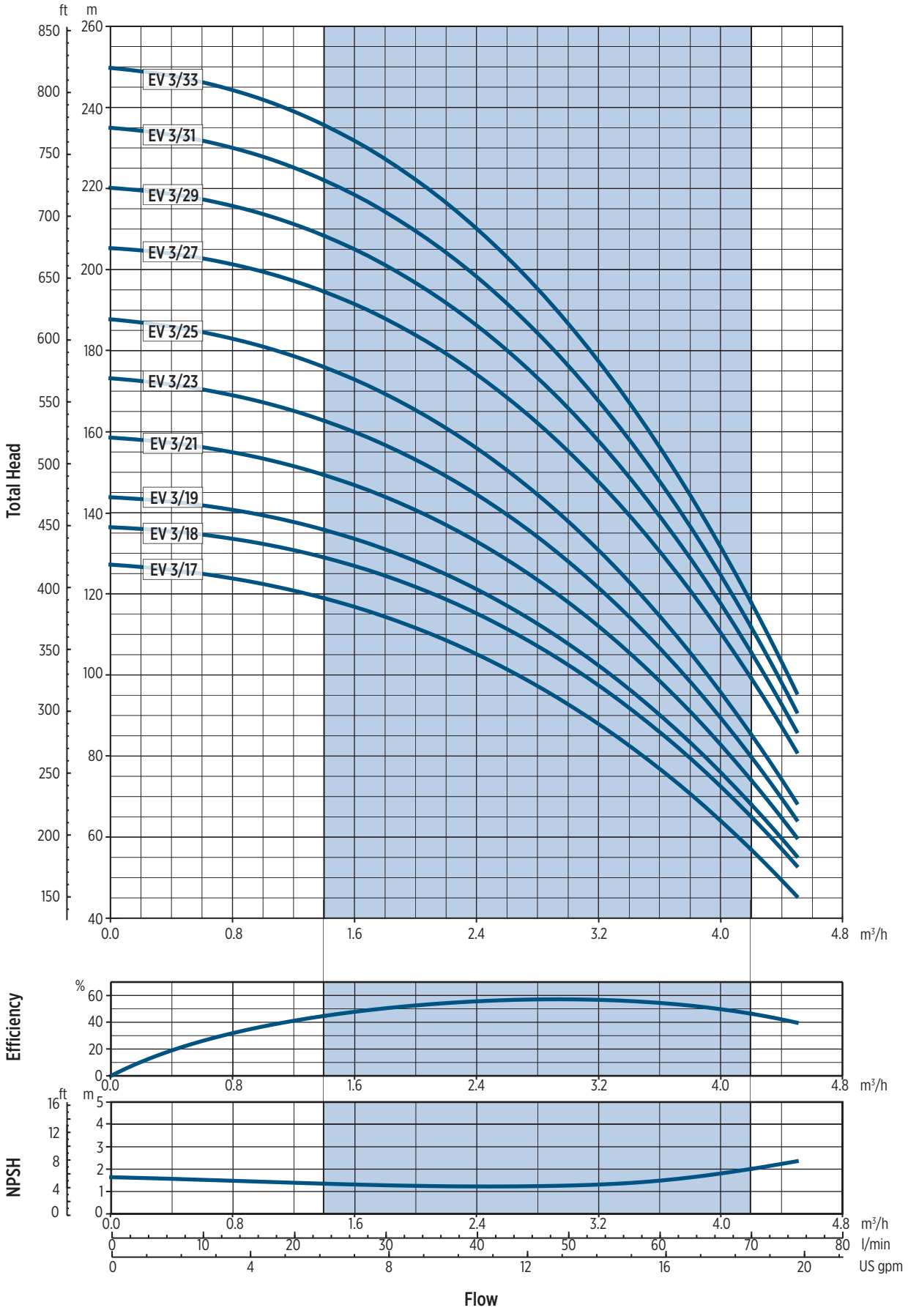
Performance curves of Q, H and P depend on the rpm number according to the following formula:

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

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=Flow, H=Head, P=Power, η=Efficiency

EV 3 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70

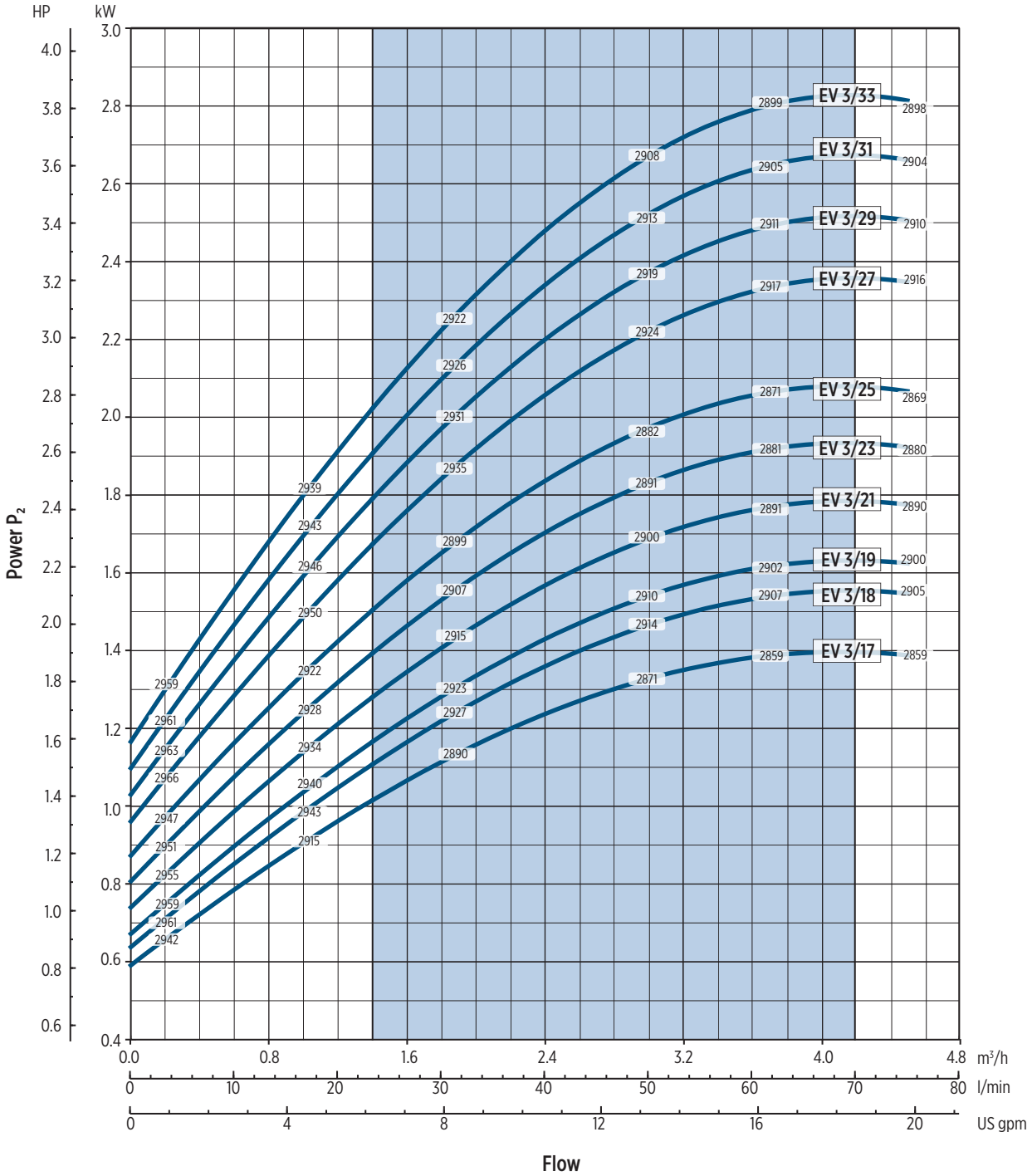


The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

00120158 03/2021

EV 3 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

00120115B 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=Flow, H=Head, P=Power, η=Efficiency

MENU

E-Tech®

EV 6 - 50 HZ

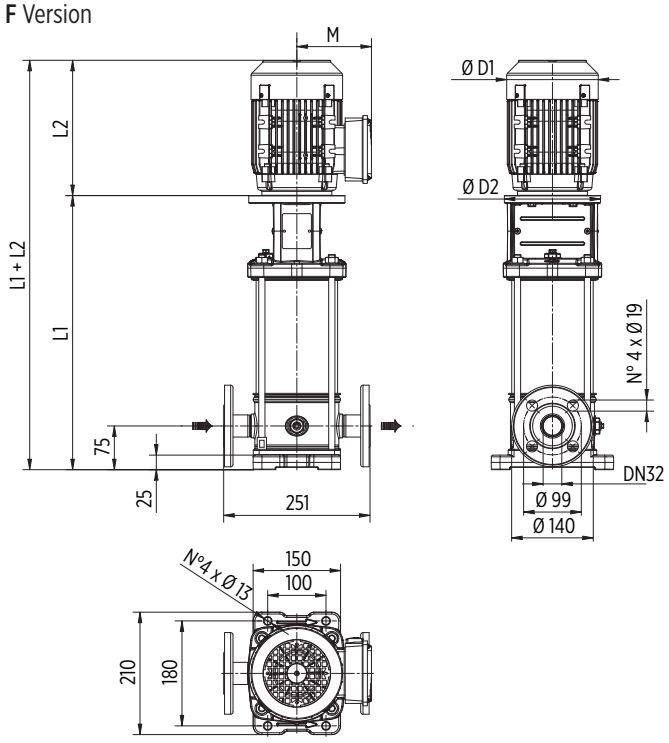
TECHNICAL DATA

Pump model	Motor		Dimensions												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

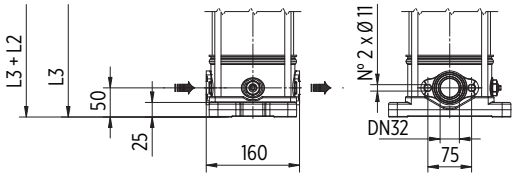
F Version



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

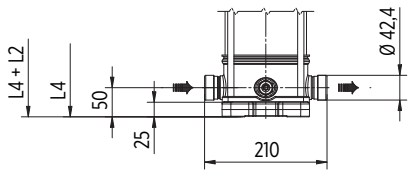
T Version

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

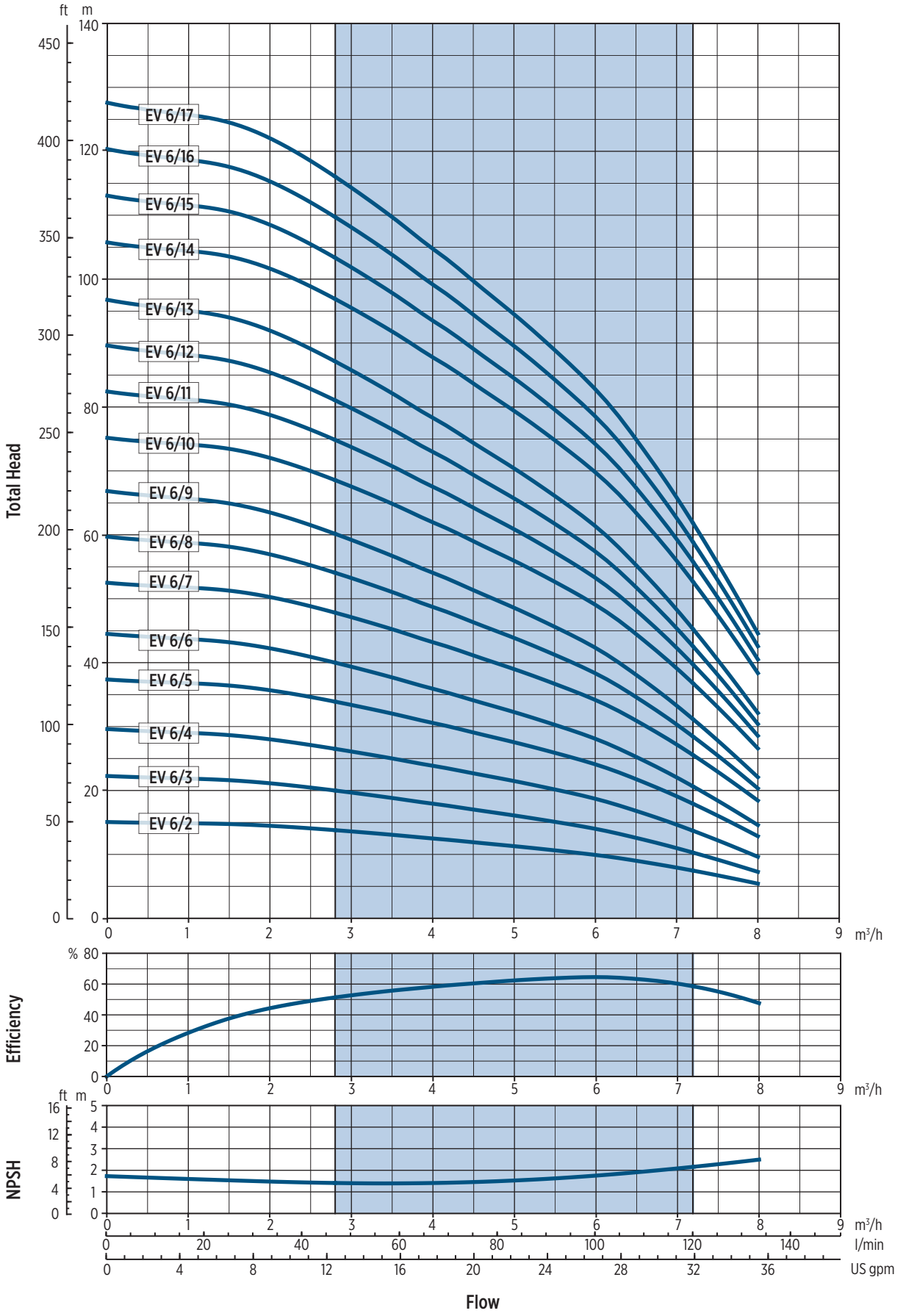


Connections with rapid fittings type "Victaulic": the pump is supplied without the collars (Optional accessories)

00130100 09/2023

EV 6 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70

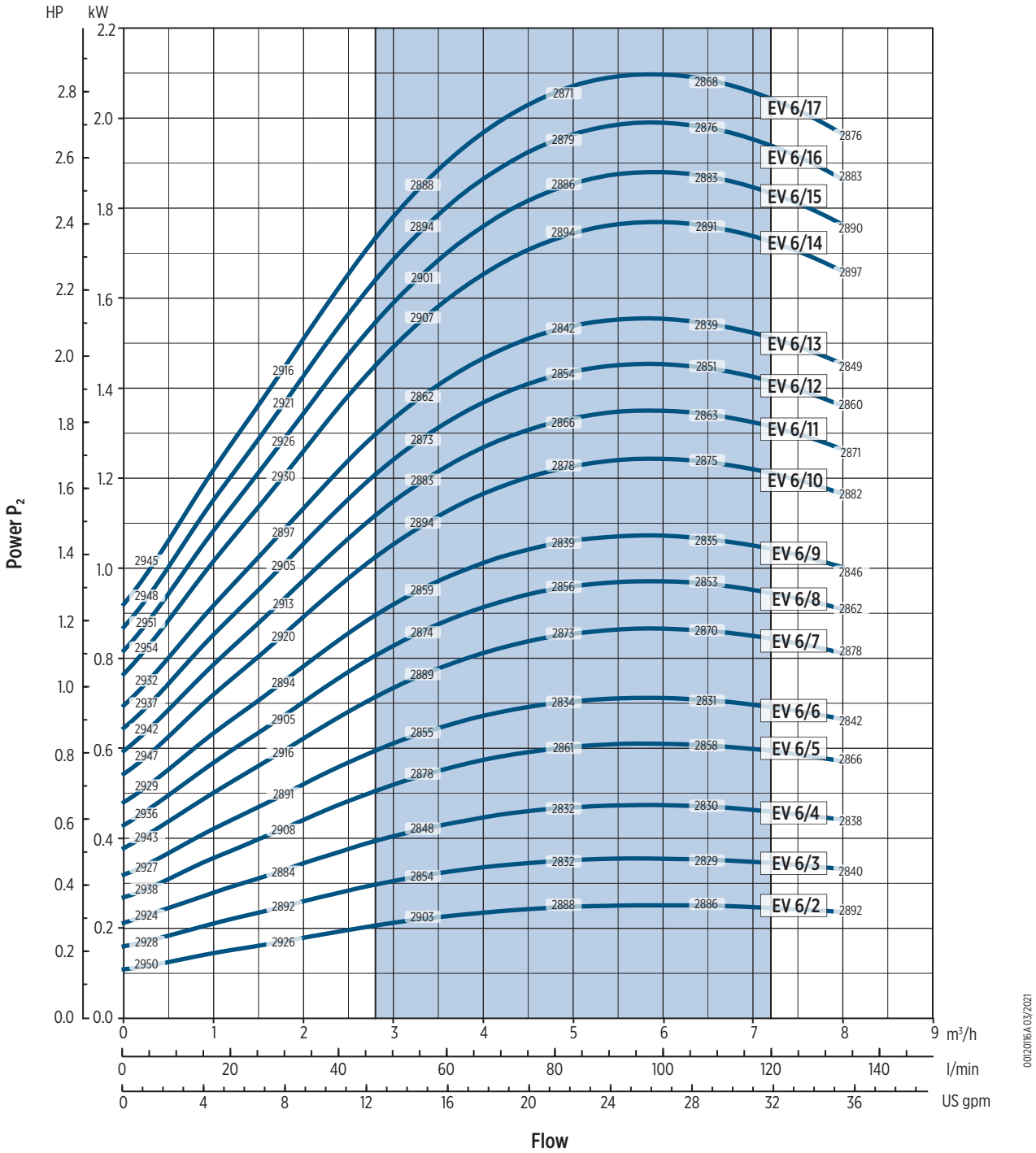


The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

0012016A 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

0012016A 03/2021

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

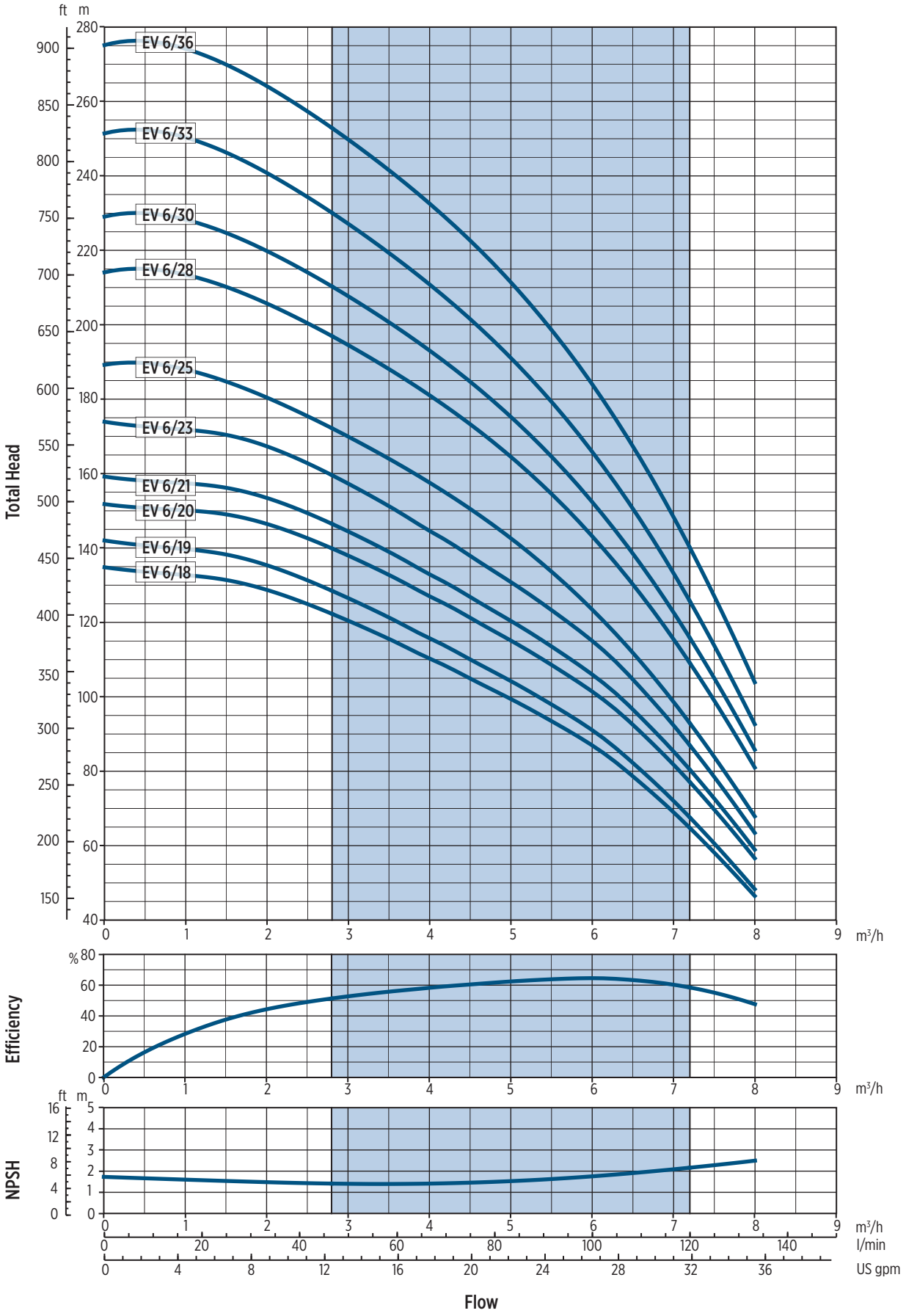
Performance curves of Q, H and P depend on the rpm number according to the following formula:

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

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=Flow, H=Head, P=Power, η=Efficiency

EV 6 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

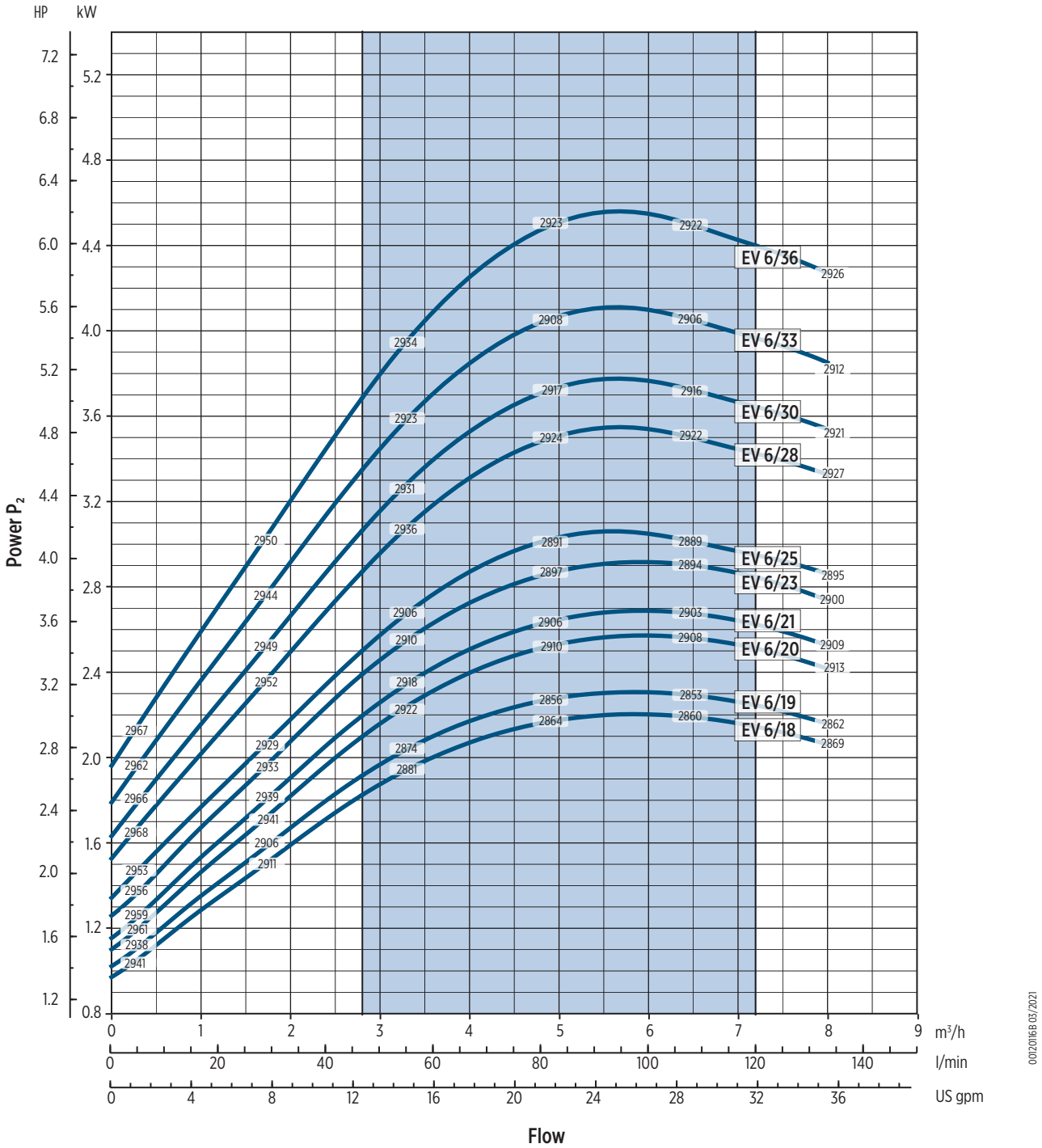
00120116B 03/2021

MENU

E-Tech®

EV 6 – PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

0012016B 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=Flow, H=Head, P=Power, η=Efficiency

MENU

E-Tech®

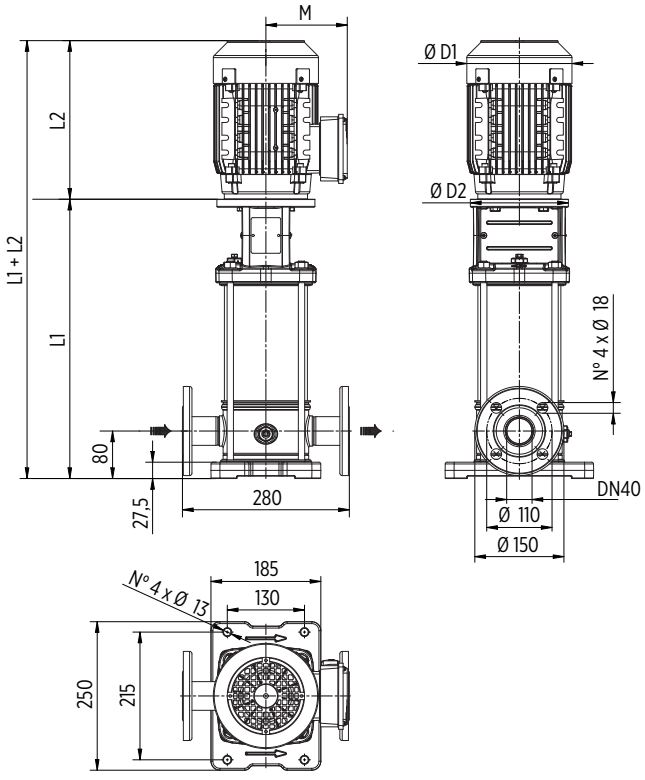
EV 10 - 50 HZ

TECHNICAL DATA

Pump model	Motor		Dimensions												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

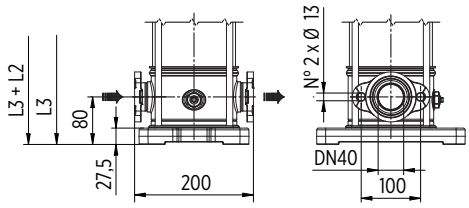
F Version



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

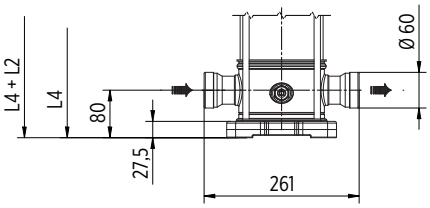
T Version

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

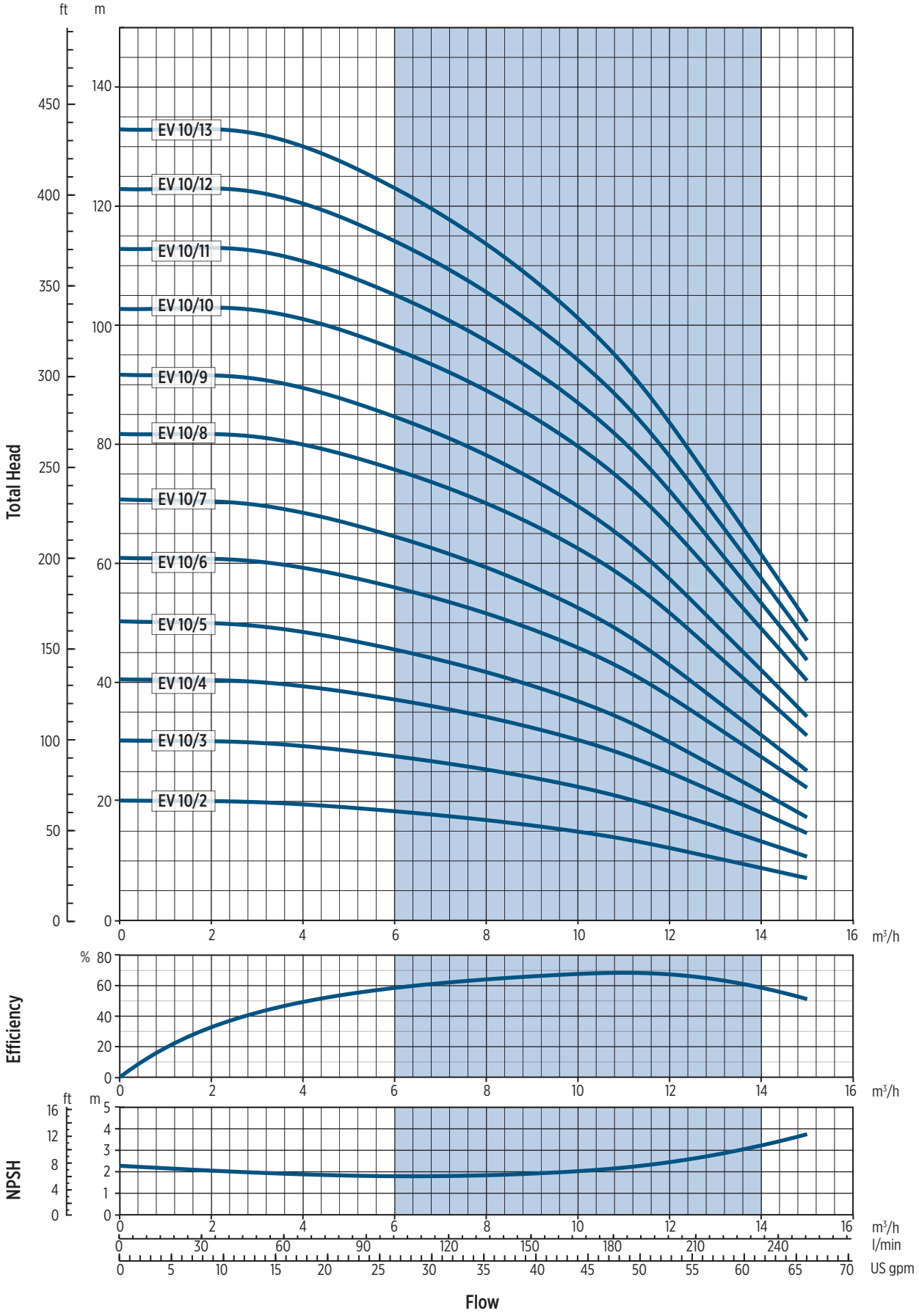


Connections with rapid fittings type “Victaulic”: the pump is supplied without the collars (Optional accessories)

0015010 03/2021

EV 10 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



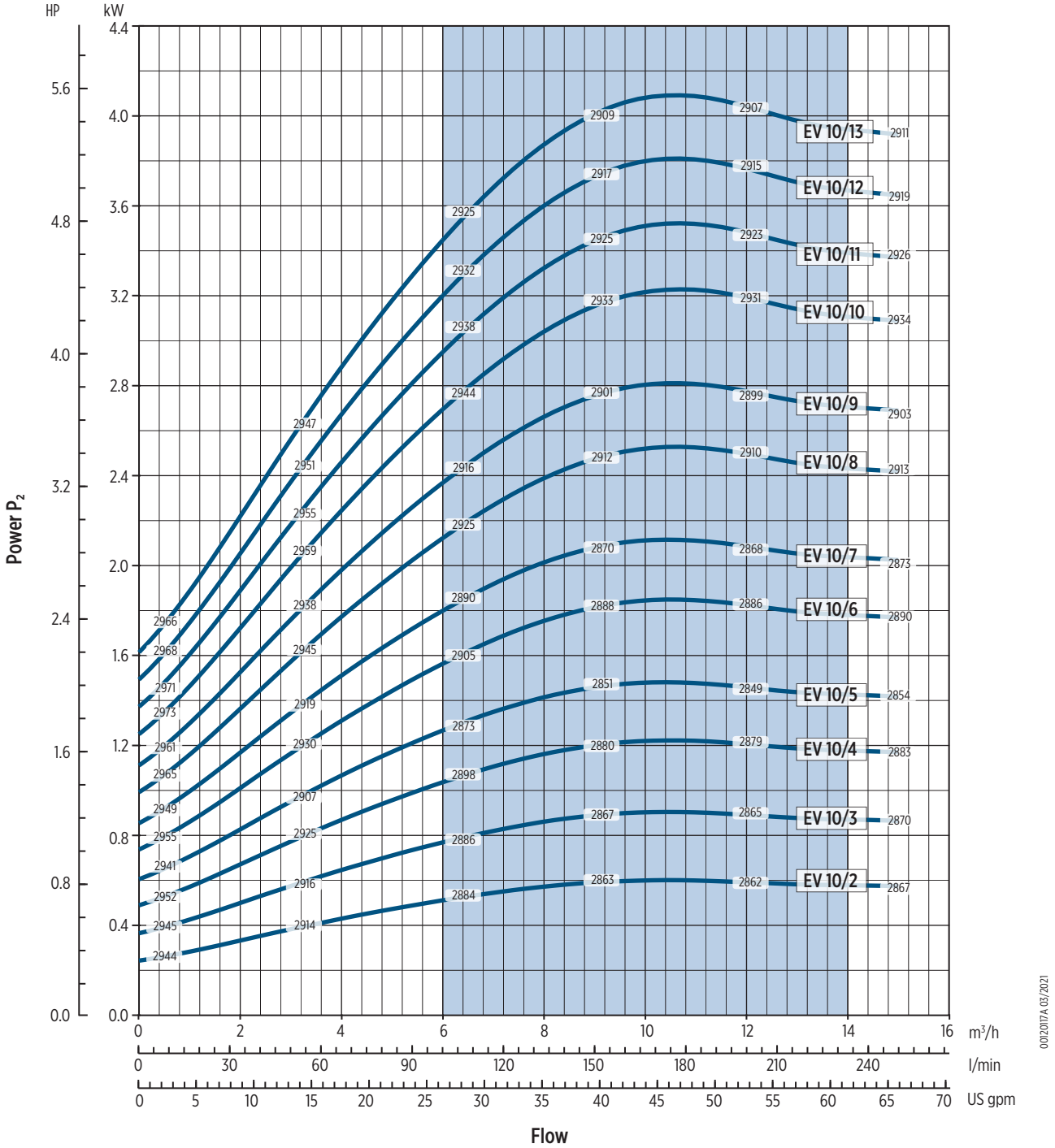
The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

0012017A 03/2021

MENU

EV 10 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

0012017A 03/2021

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

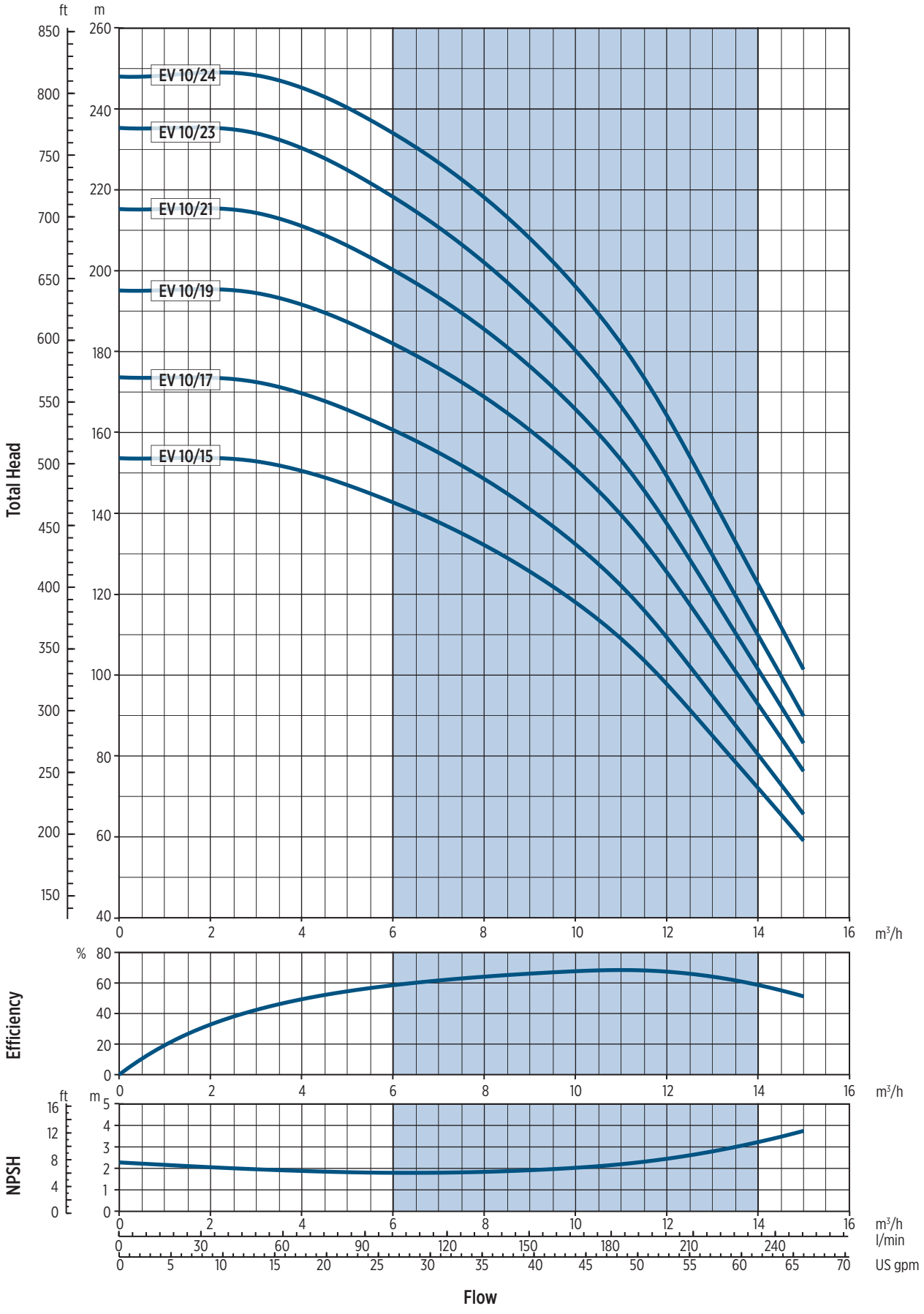
Performance curves of Q, H and P depend on the rpm number according to the following formula:

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

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=Flow, H=Head, P=Power, η=Efficiency

EV 10 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



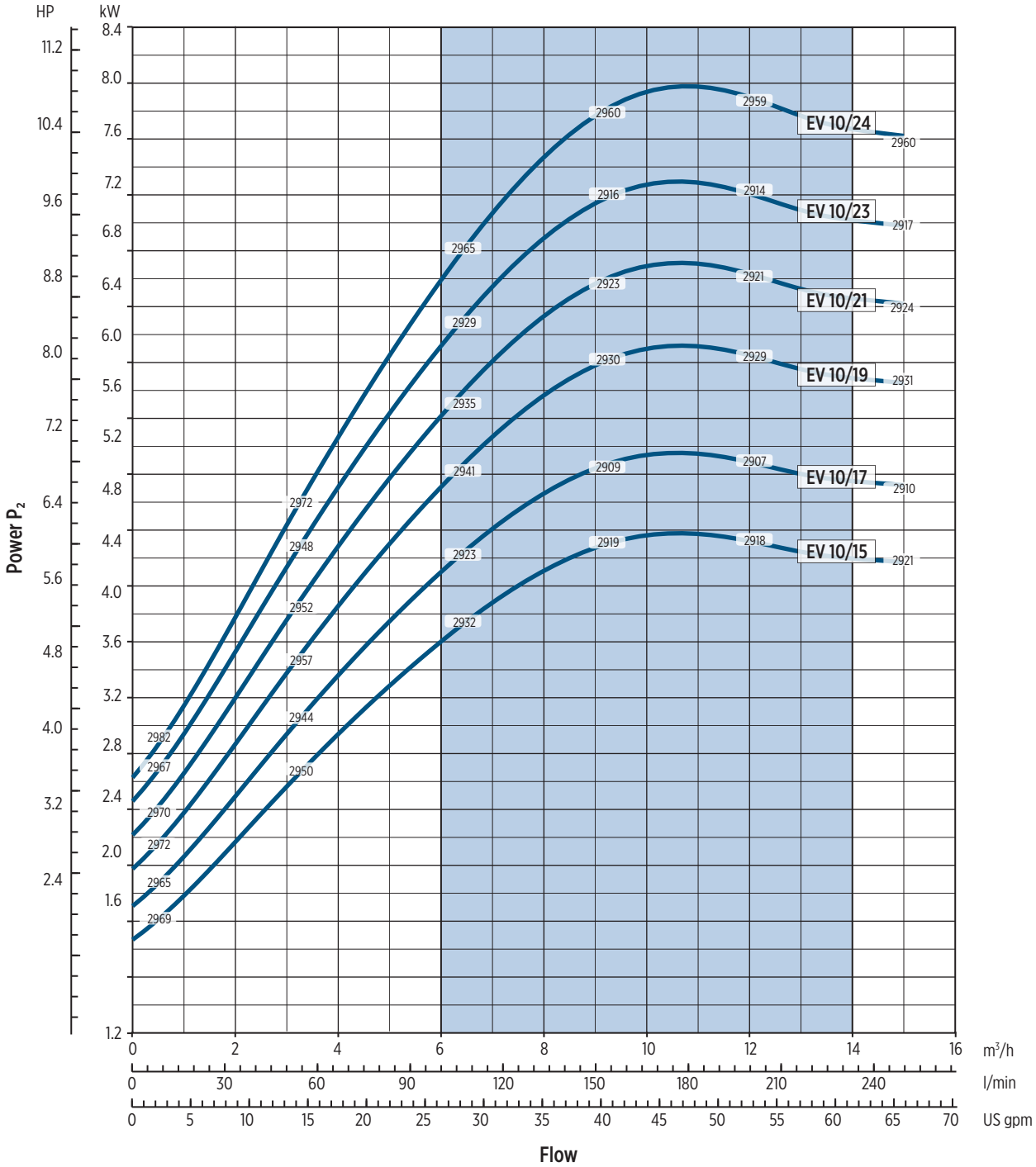
The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

00120178 03/2021

MENU

EV 10 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

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=Flow, H=Head, P=Power, η=Efficiency

MENU

E-Tech®

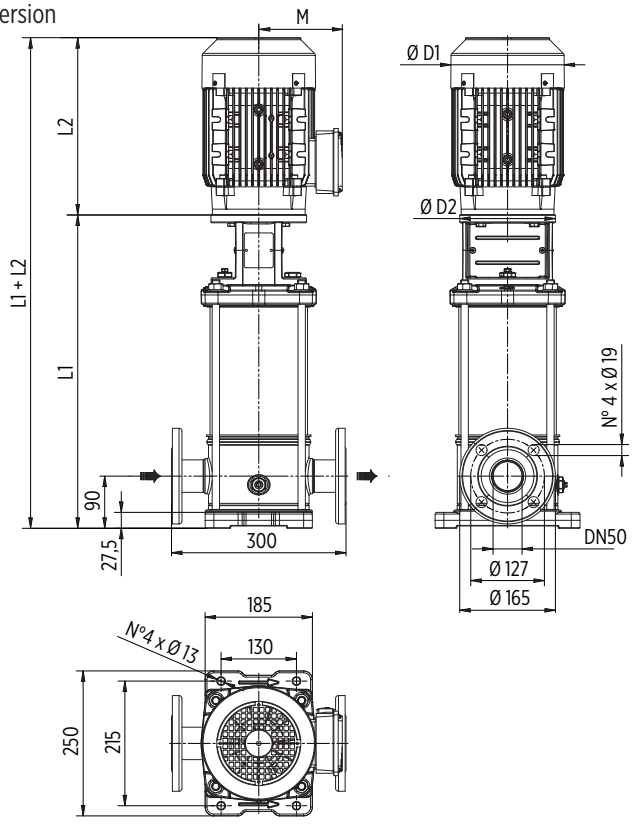
EV 15 - 50 HZ

TECHNICAL DATA

Pump model	Motor		Dimensions												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	444	444	444	-	138	-	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

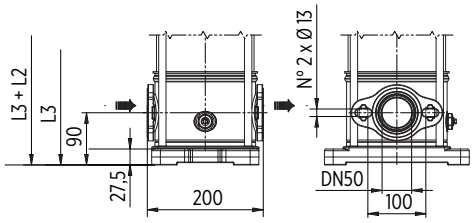
F Version



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

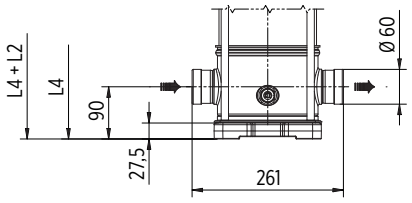
T Version

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

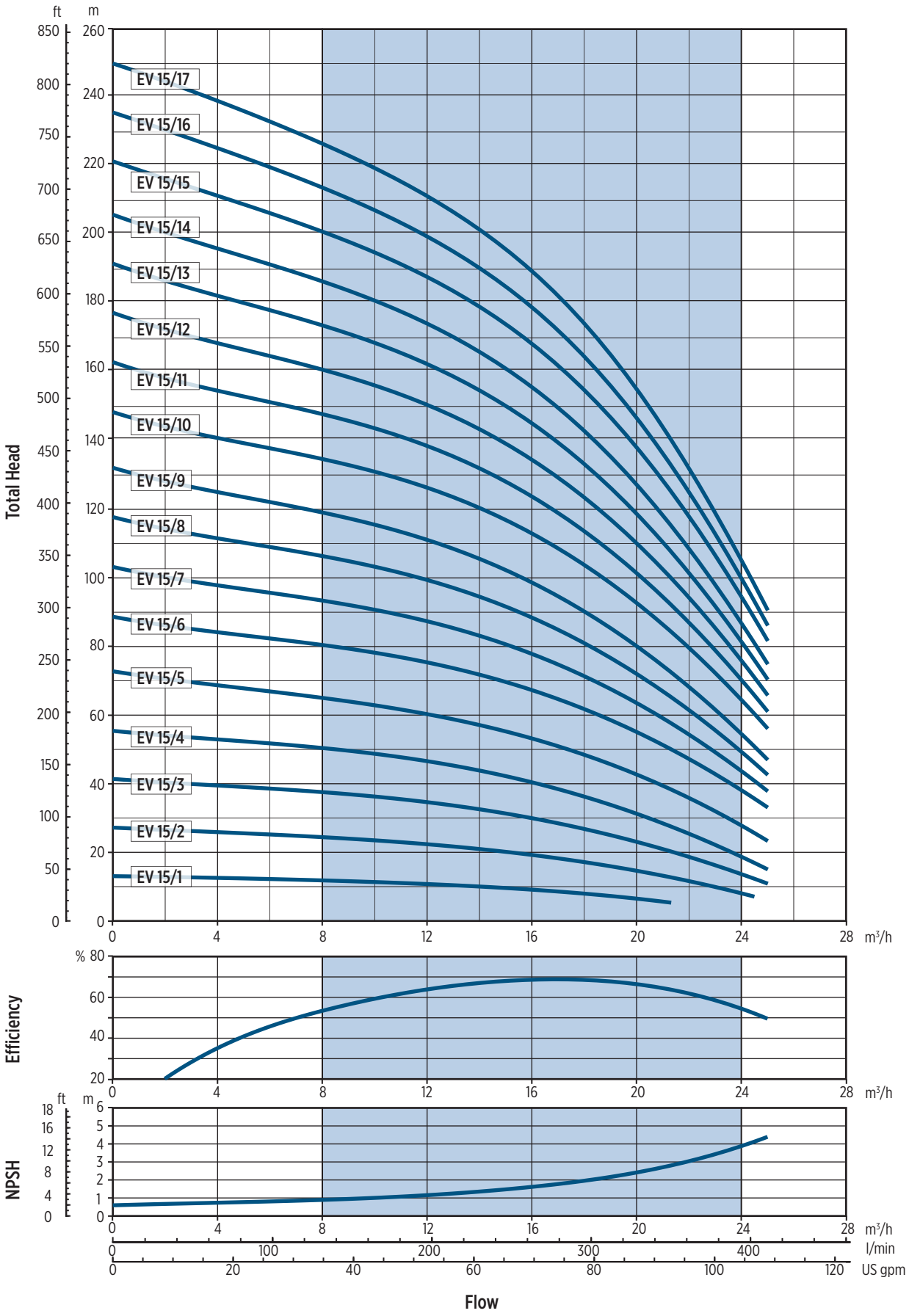


Connections with rapid fittings type “Victaulic”: the pump is supplied without the collars (Optional accessories)

00130102 03/2021

EV 15 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70

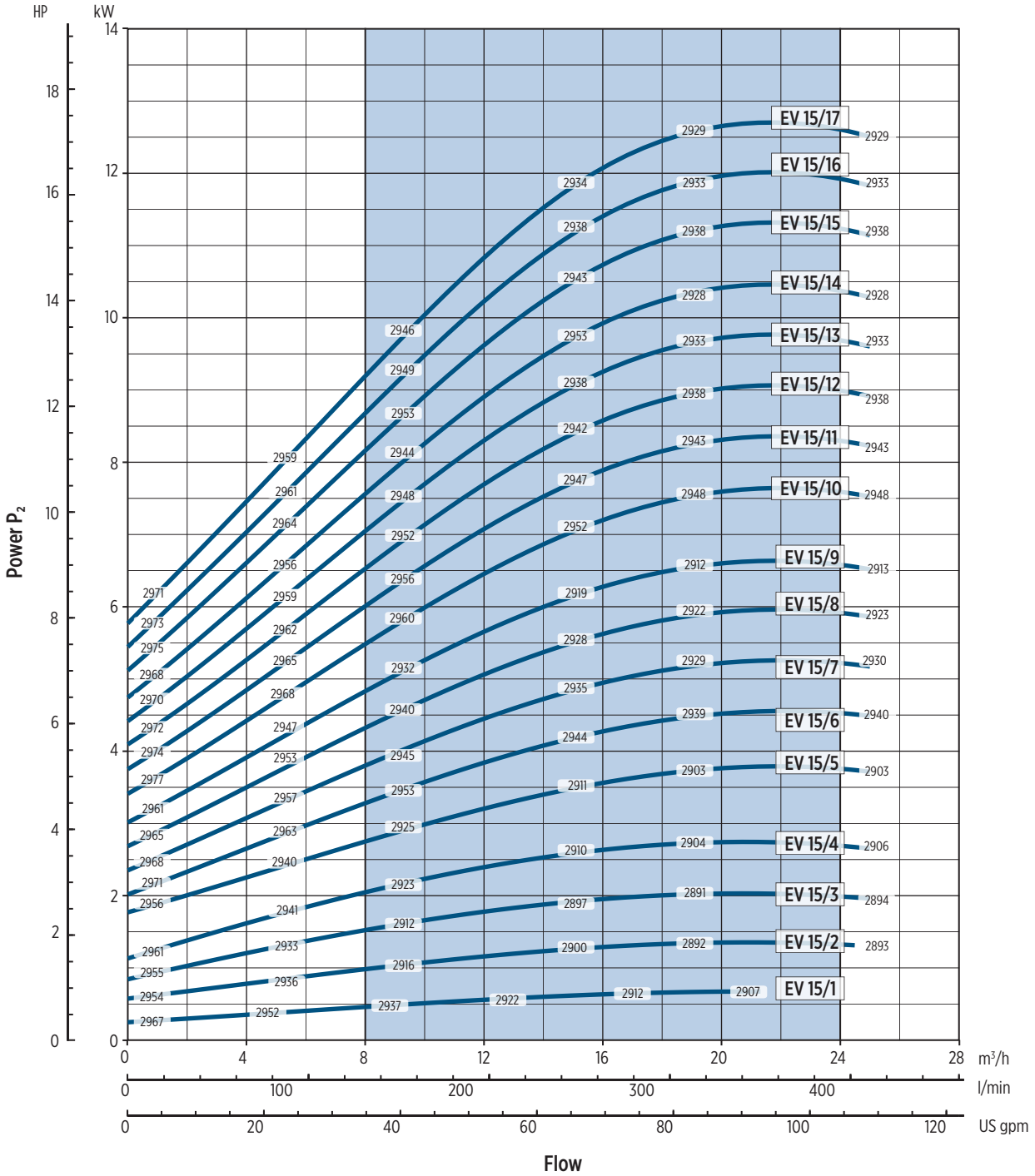


The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

0012018 03/2021

EV 15 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

0012018 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=Flow, H=Head, P=Power, η=Efficiency

MENU

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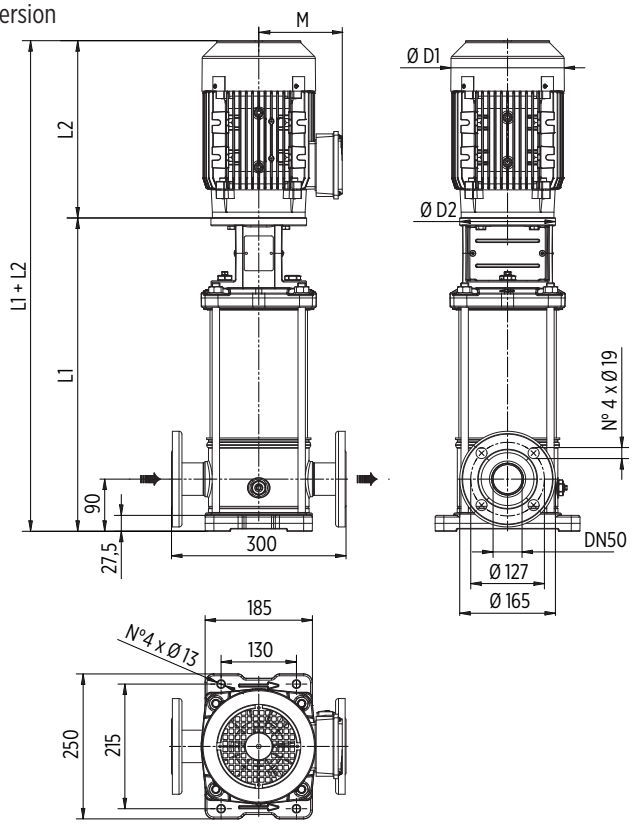
EV 20 - 50 HZ

TECHNICAL DATA

Pump model	Motor		Dimensions												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

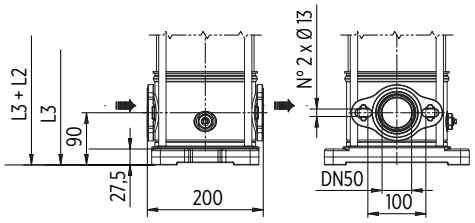
F Version



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

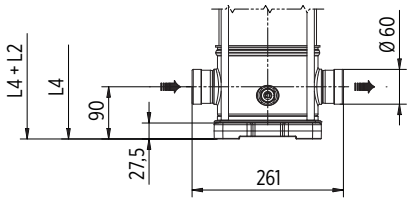
T Version

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

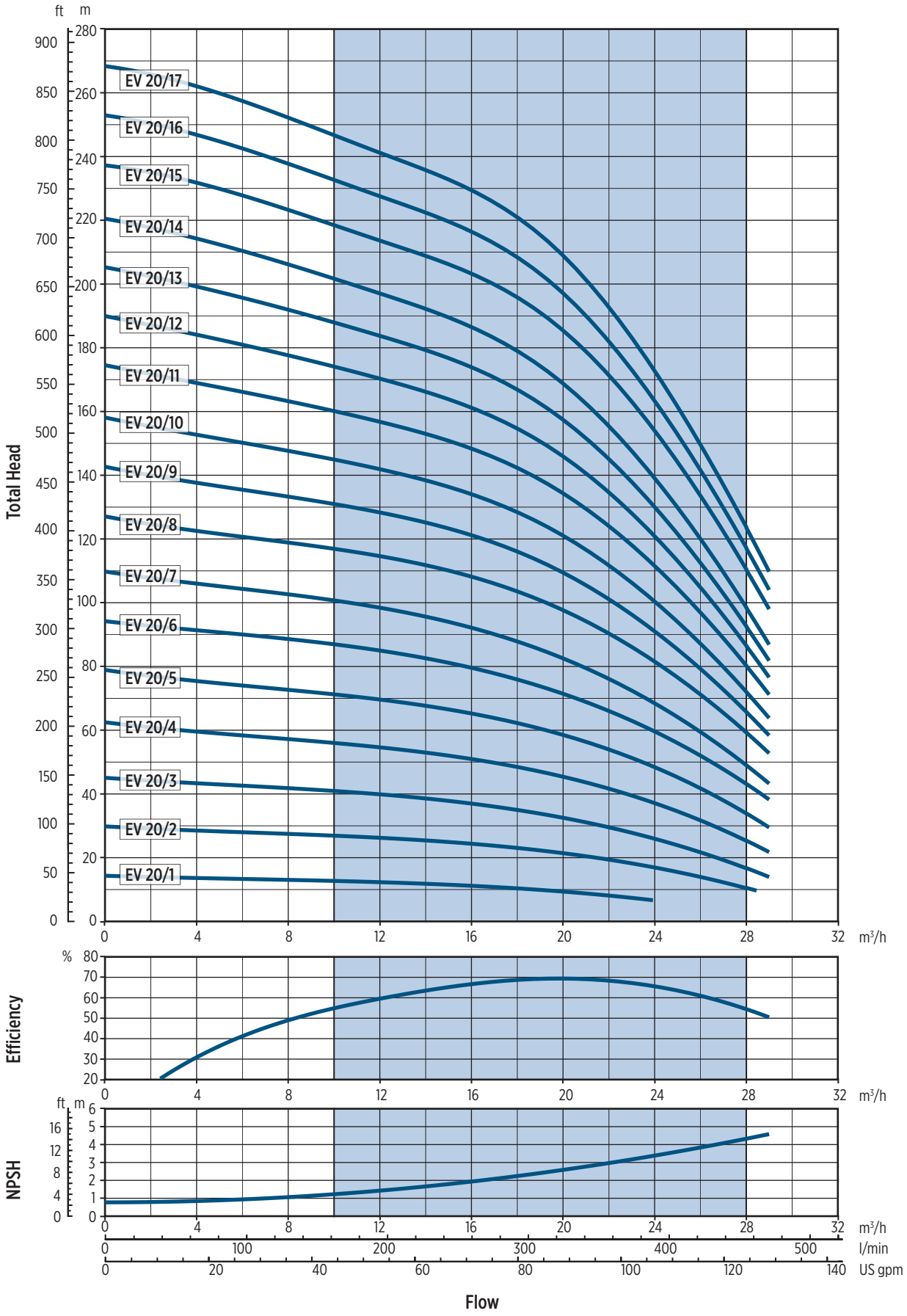


Connections with rapid fittings type “Victaulic”: the pump is supplied without the collars (Optional accessories)

00130102 03/2021

EV 20 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70

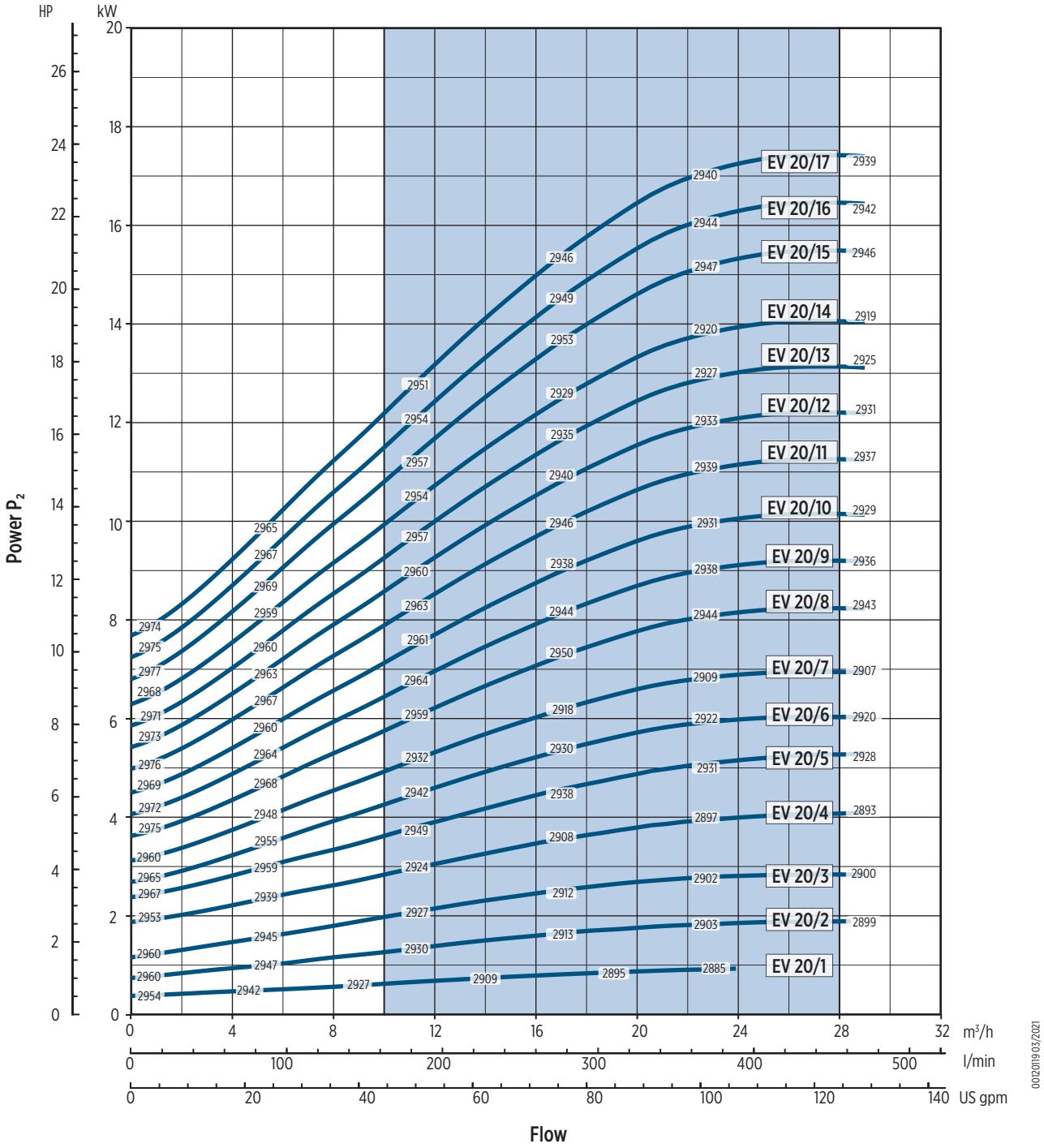


The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

00120119 03/2021

EV 20 – PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

* 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=Flow, H=Head, P=Power, η=Efficiency

MENU

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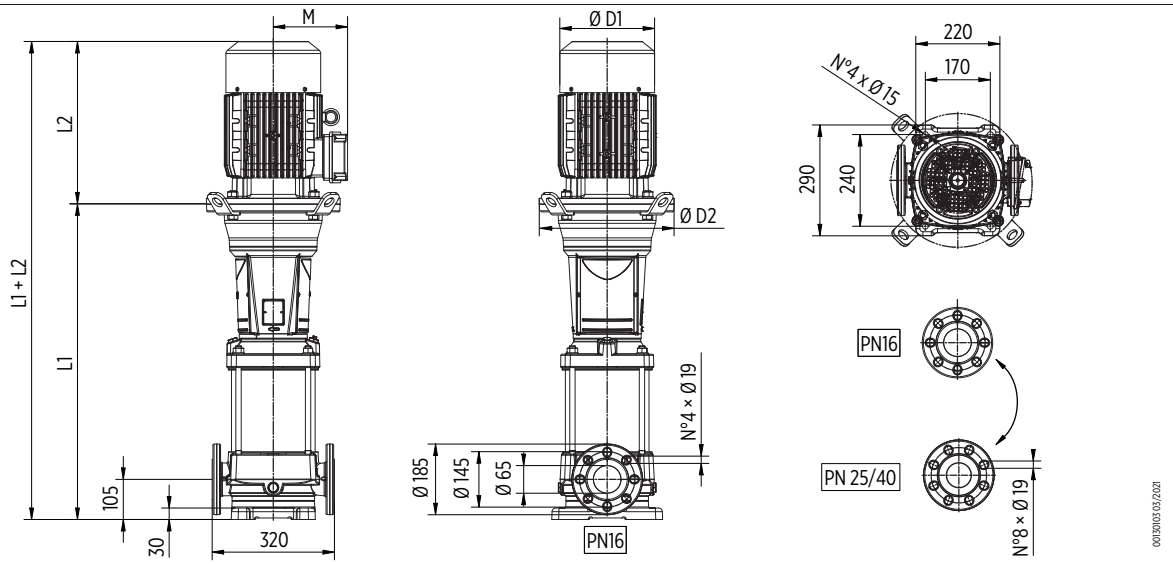
EV 30 - 50 HZ

TECHNICAL DATA

Pump model	Motor		Dimensions						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

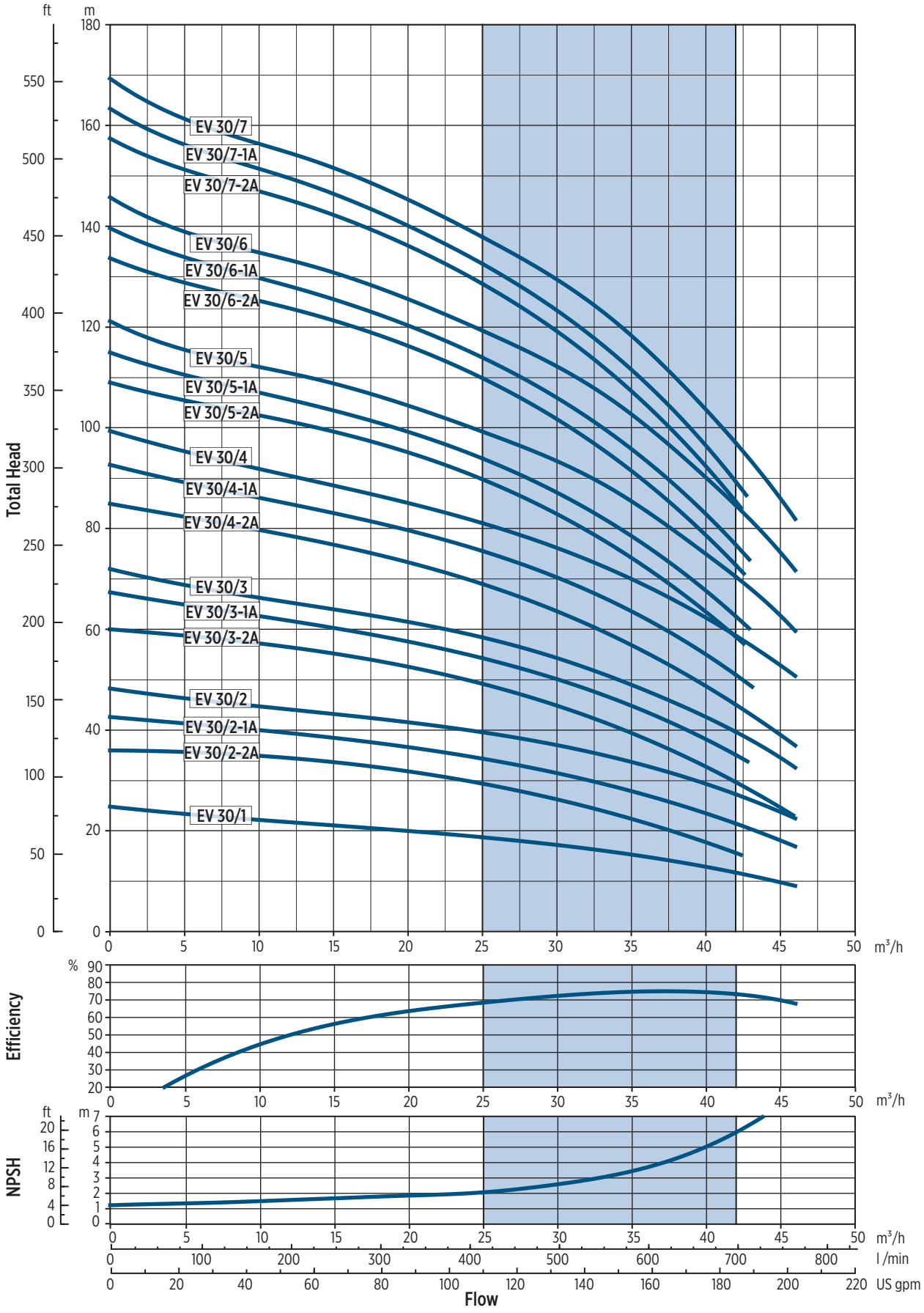
F Version



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

EV 30 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

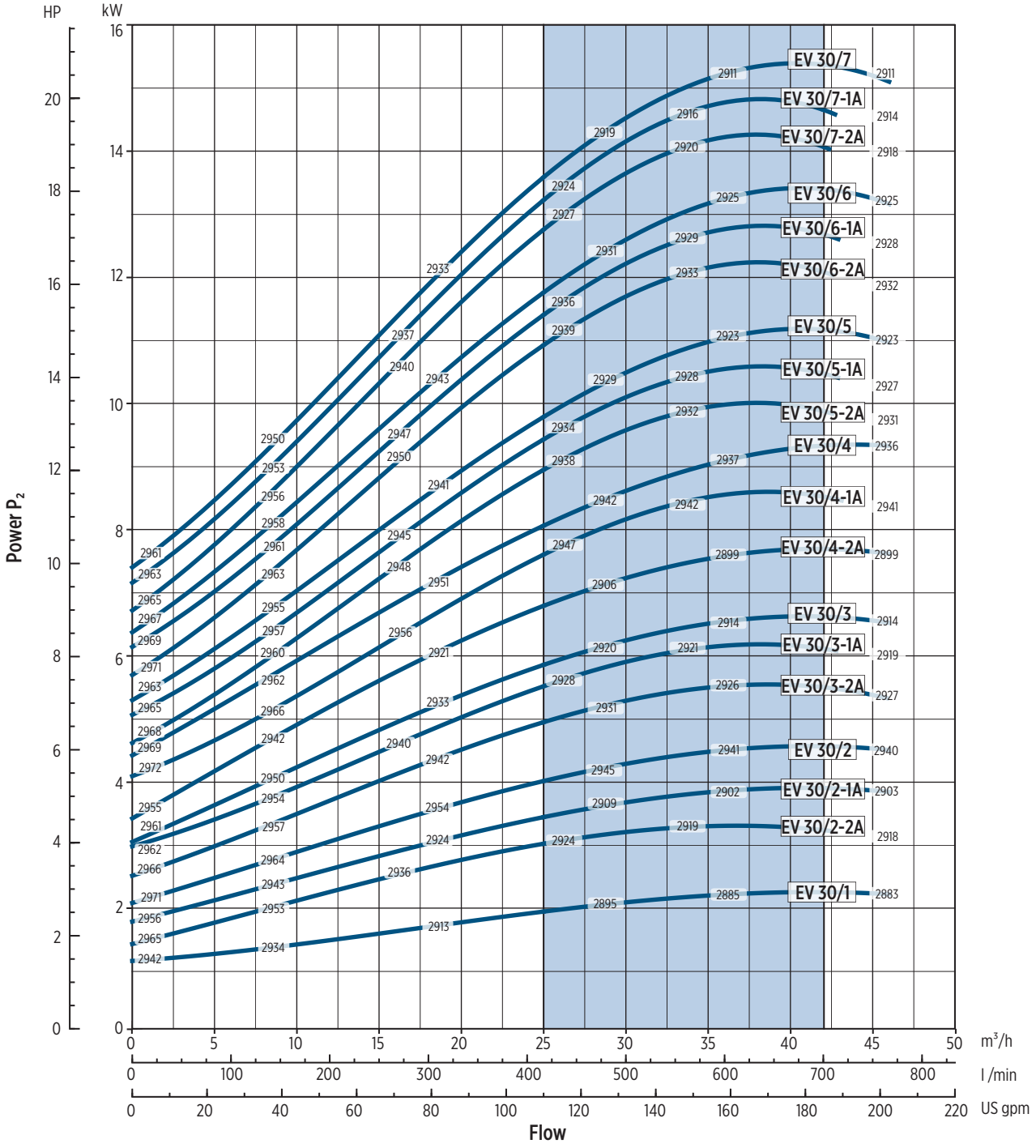
0120120A 05/2021

MENU

E-Tech®

EV 30 – PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

00120120A 05/2021

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

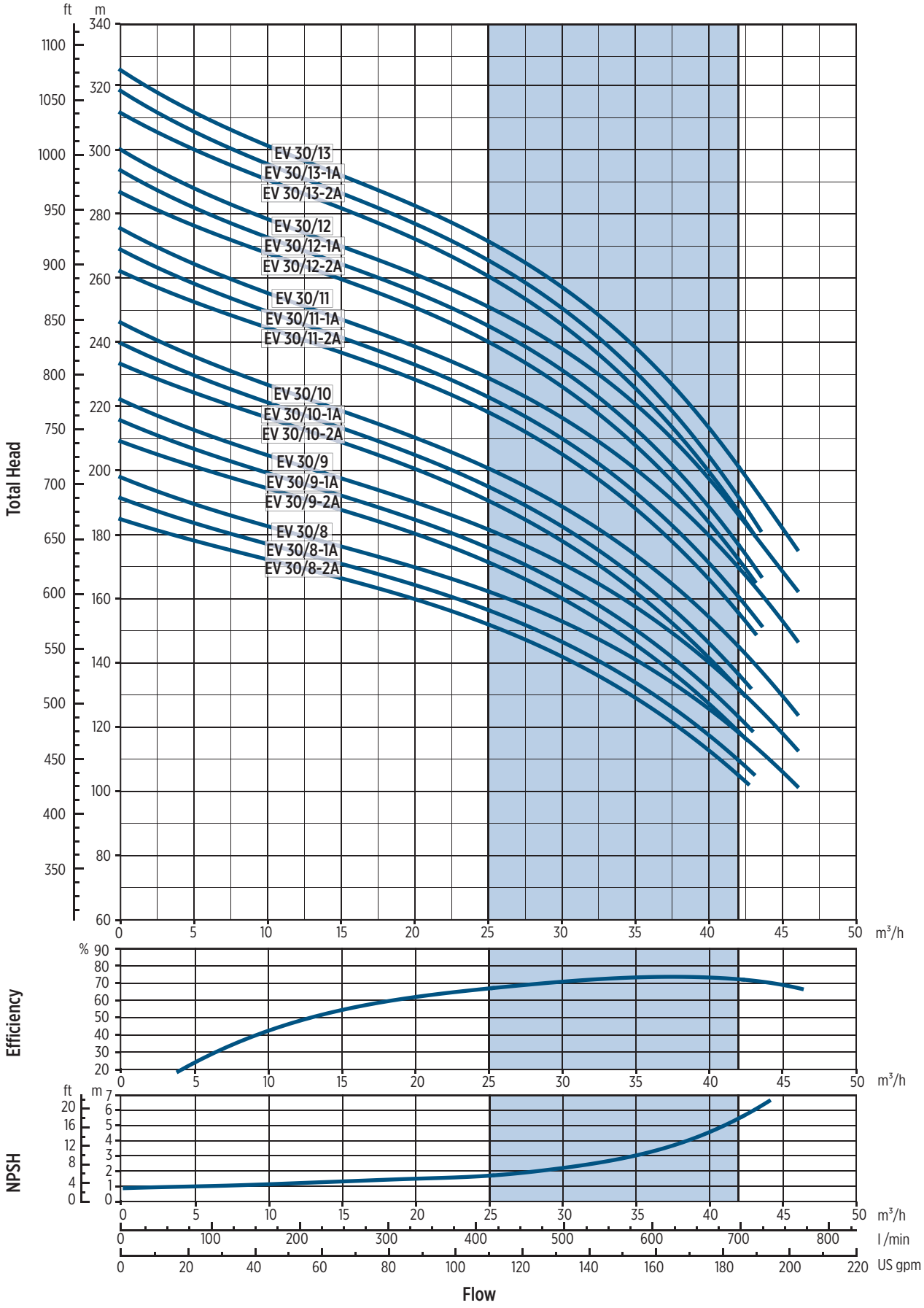
Performance curves of Q, H and P depend on the rpm number according to the following formula:

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

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=Flow, H=Head, P=Power, η=Efficiency

EV 30 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

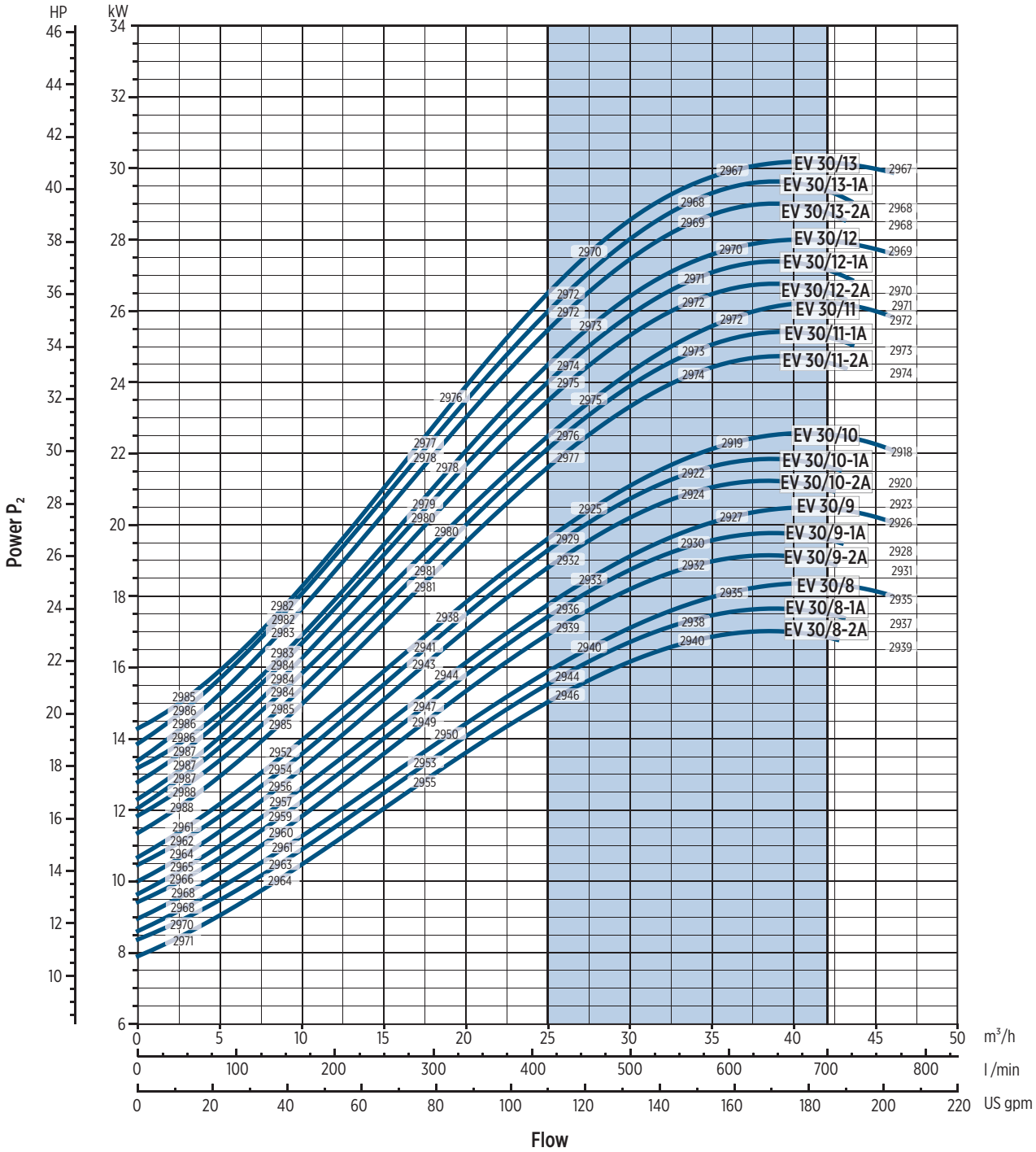
00120208 02/2021

MENU

E-Tech®

EV 30 – PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

00120108 02/2021

* 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=Flow, H=Head, P=Power, η=Efficiency

MENU

E-Tech®

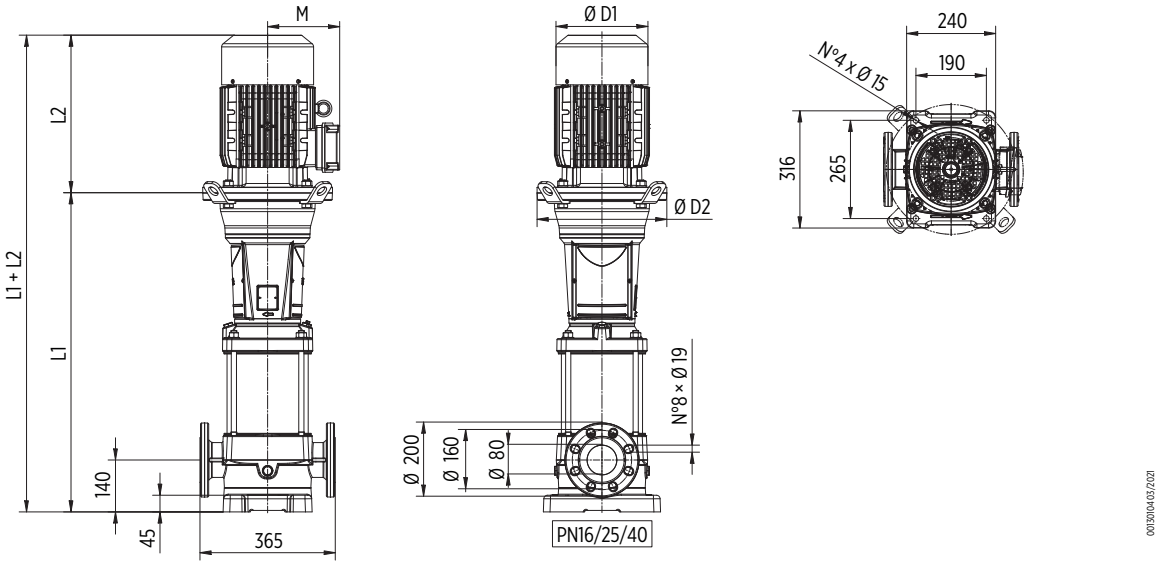
EV 45 - 50 HZ

TECHNICAL DATA

Pump model	Motor		Dimensions						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

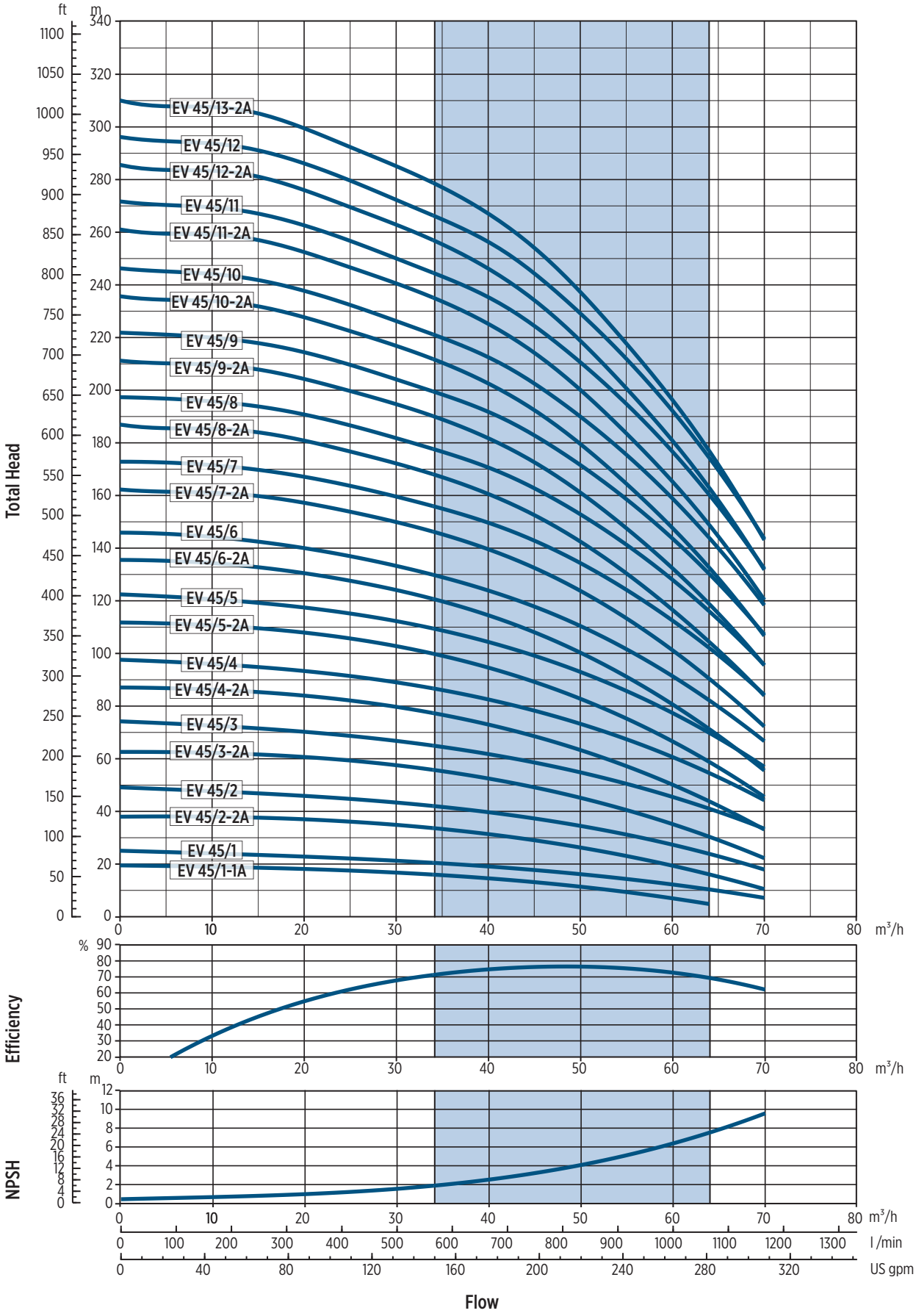
F Version



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

EV 45 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70

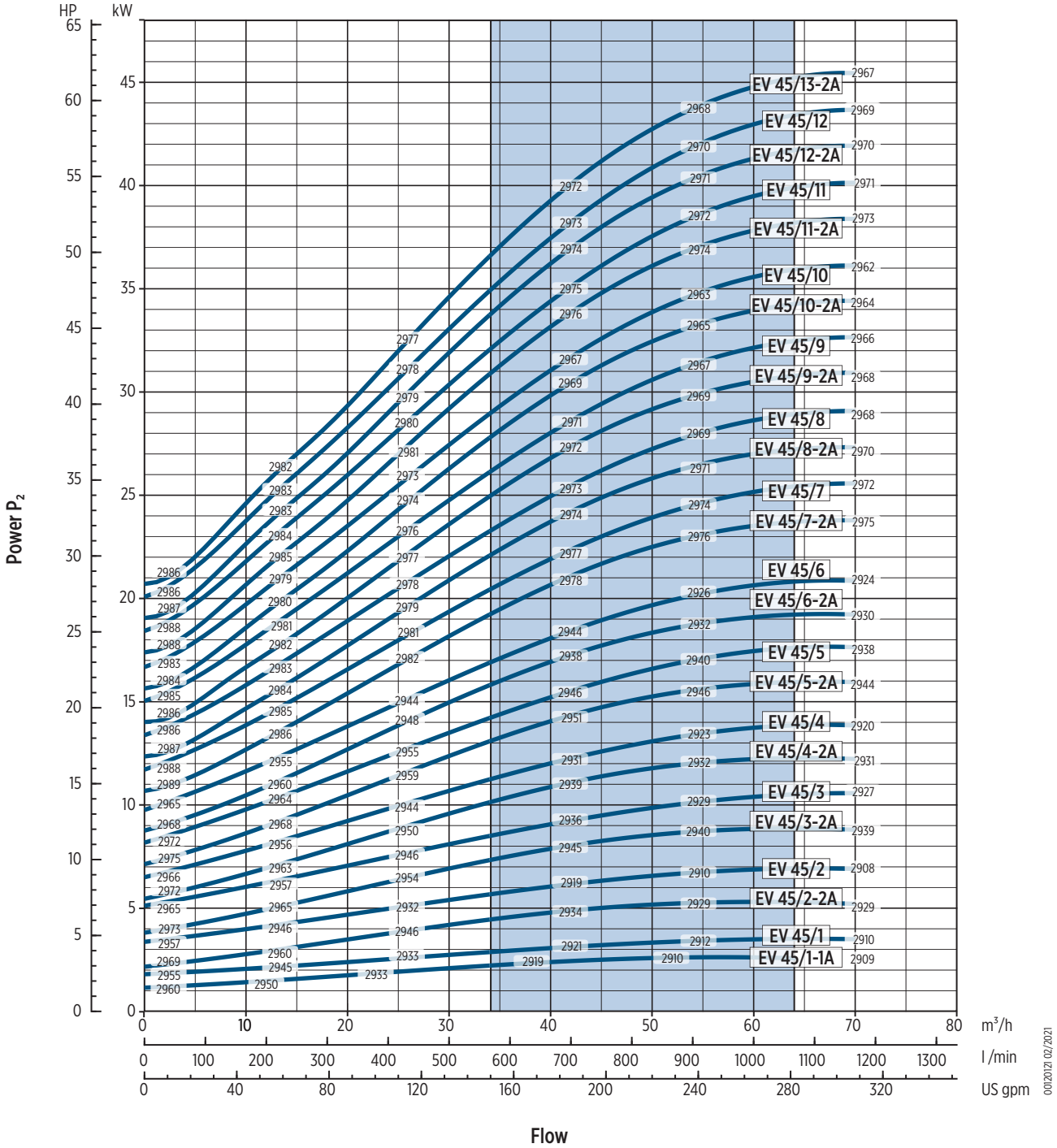


The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

0012021 02/2021

EV 45 – PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

00120121 02/2021

* 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=Flow, H=Head, P=Power, η=Efficiency

MENU

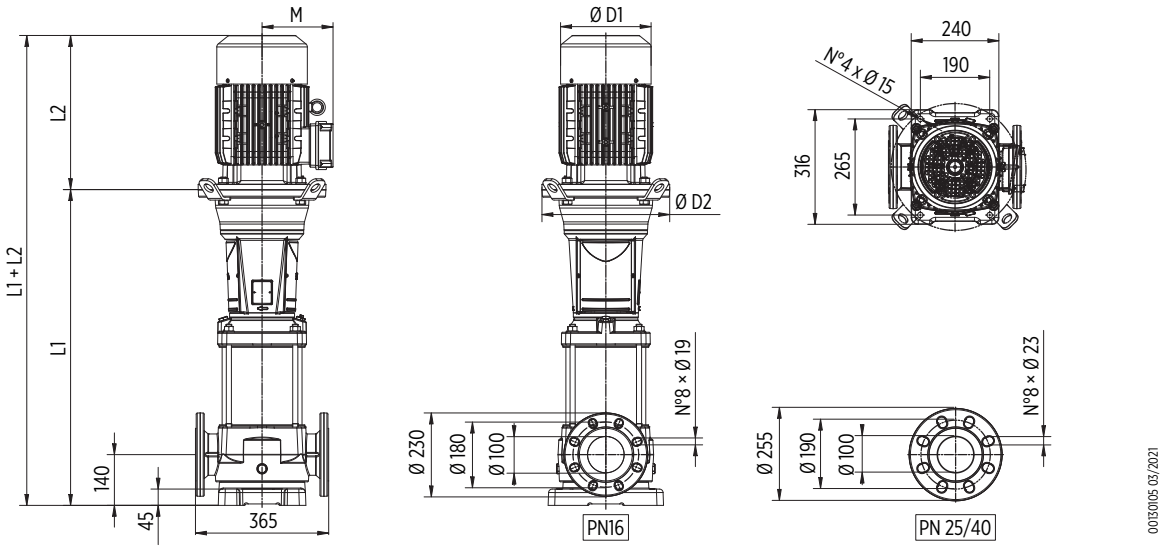
EV 65 - 50 HZ

TECHNICAL DATA

Pump model	Motor		Dimensions						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

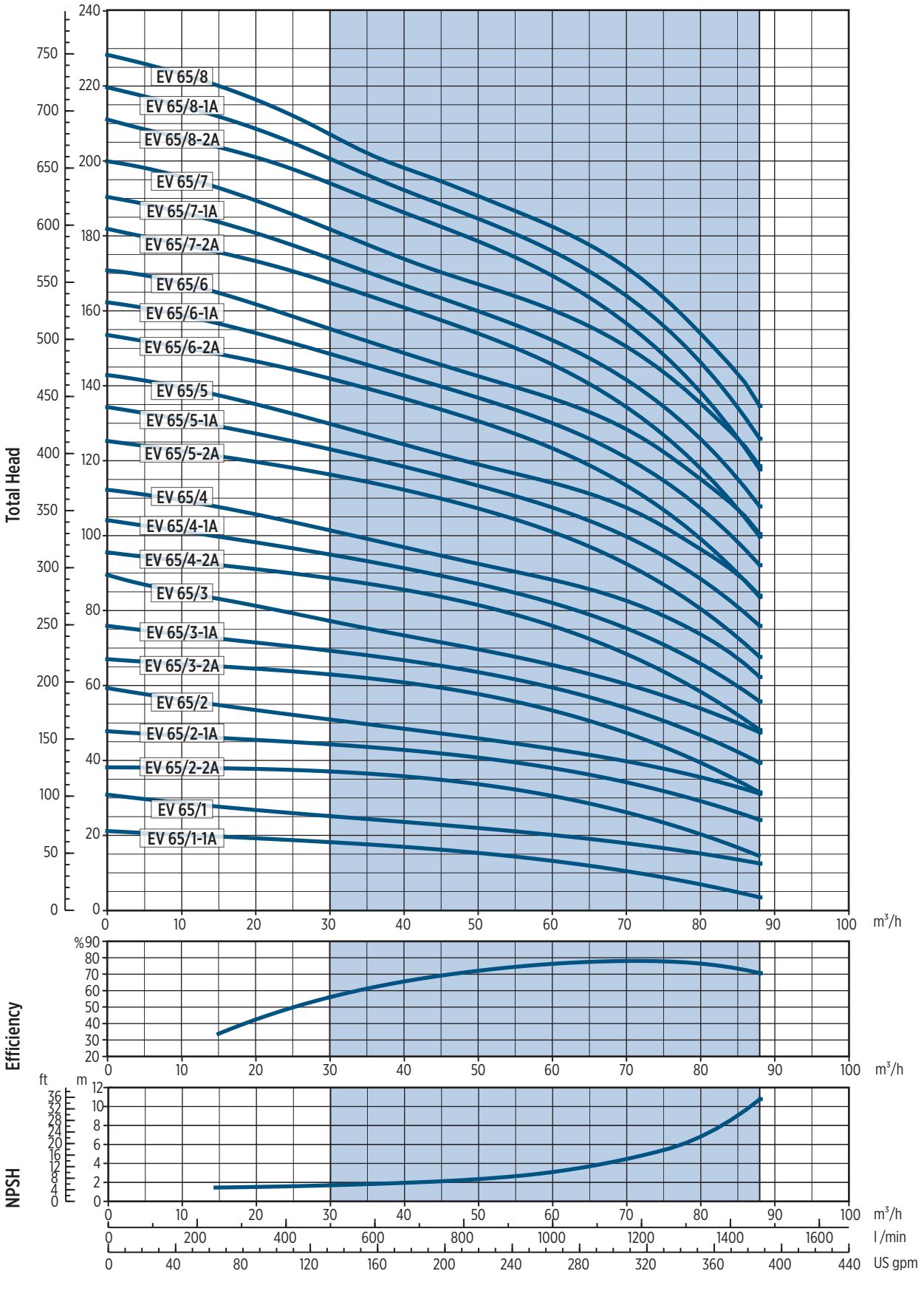
F Version



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

EV 65 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70

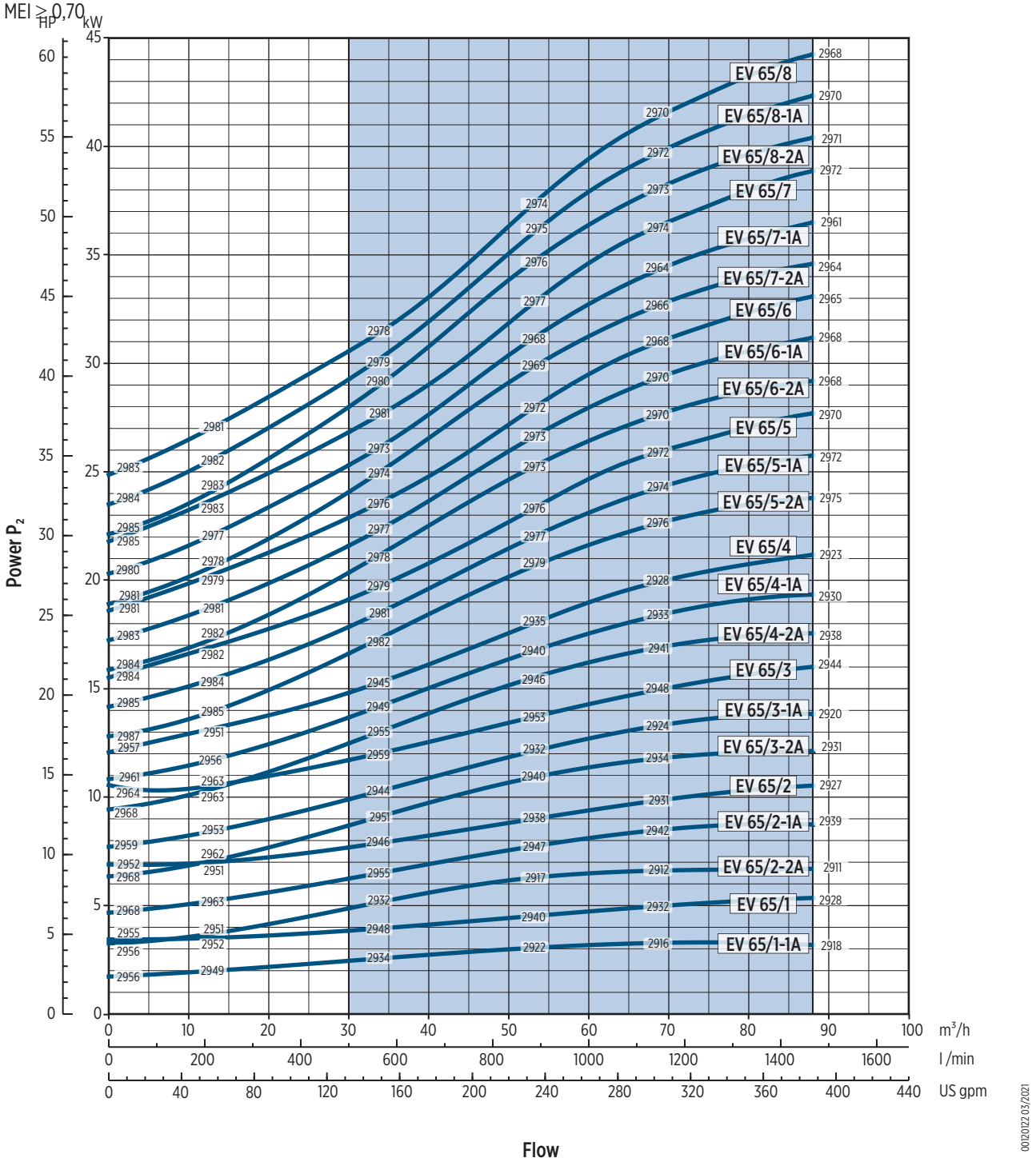


The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

0012012 03/2021

EV 65 – PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

00120122 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=Flow, H=Head, P=Power, η=Efficiency

MENU

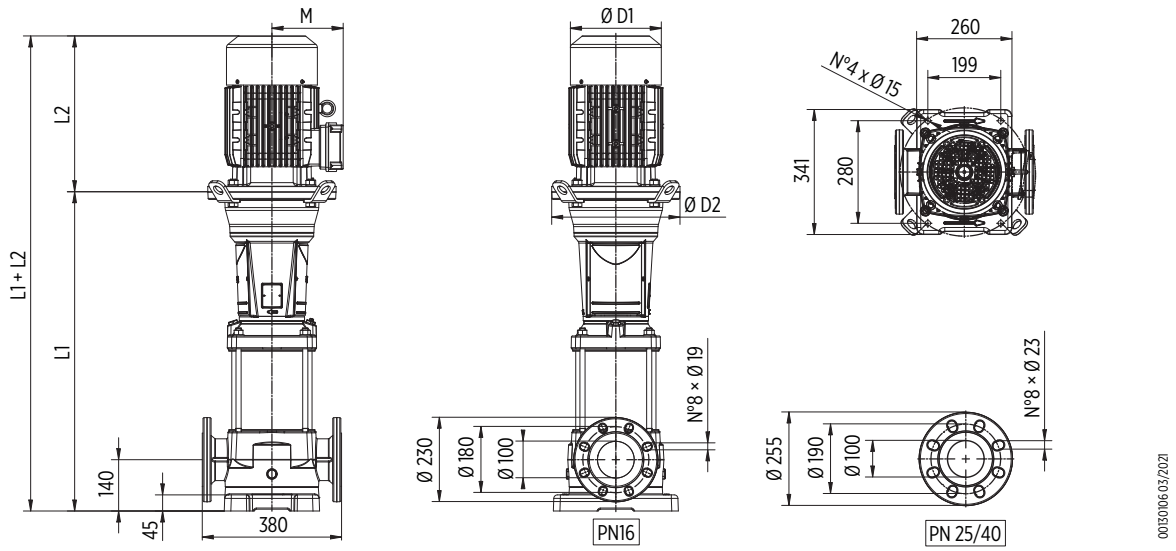
EV 95 - 50 HZ

TECHNICAL DATA

Pump model	Motor		Dimensions						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

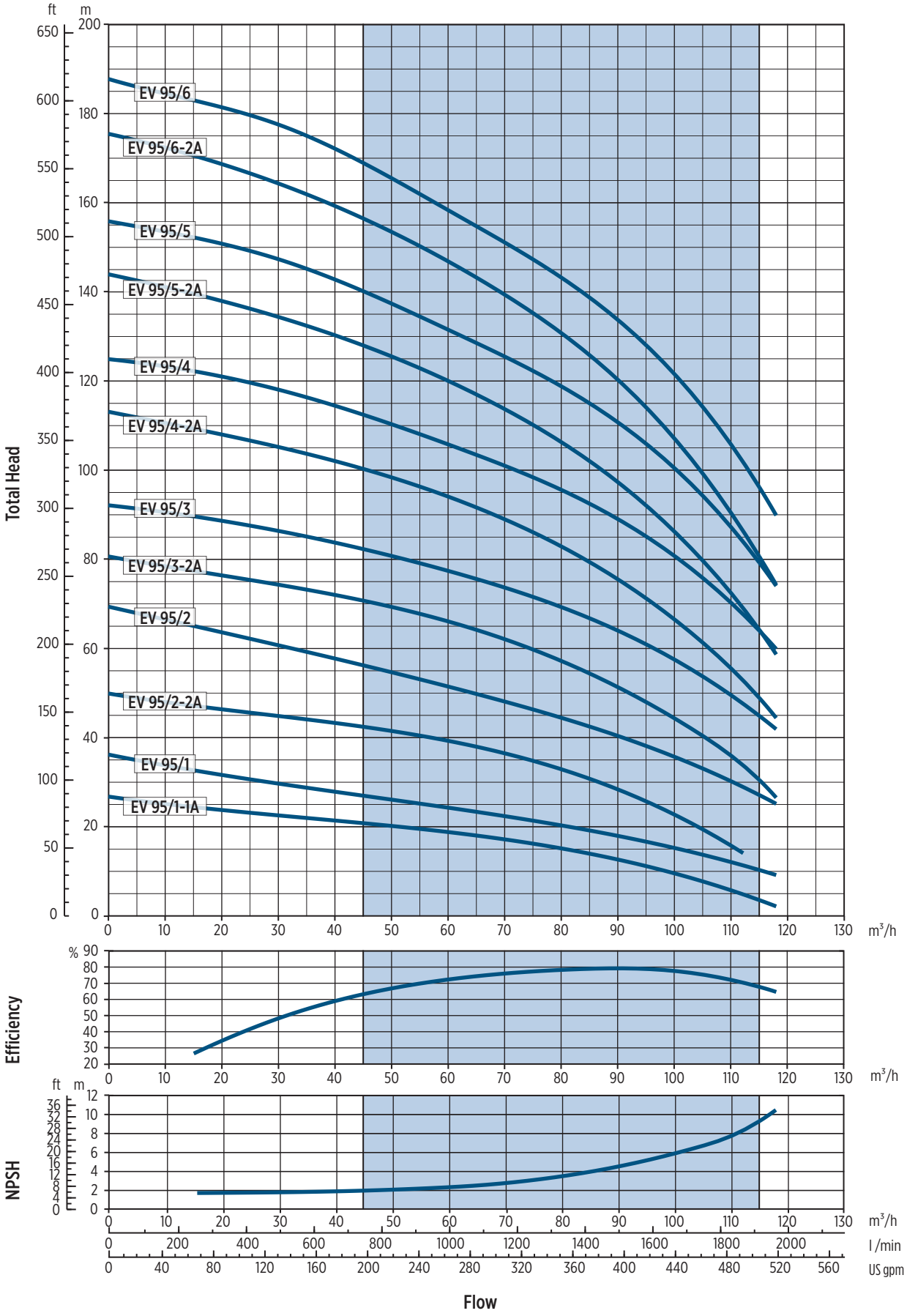
F Version



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

EV 95 - PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



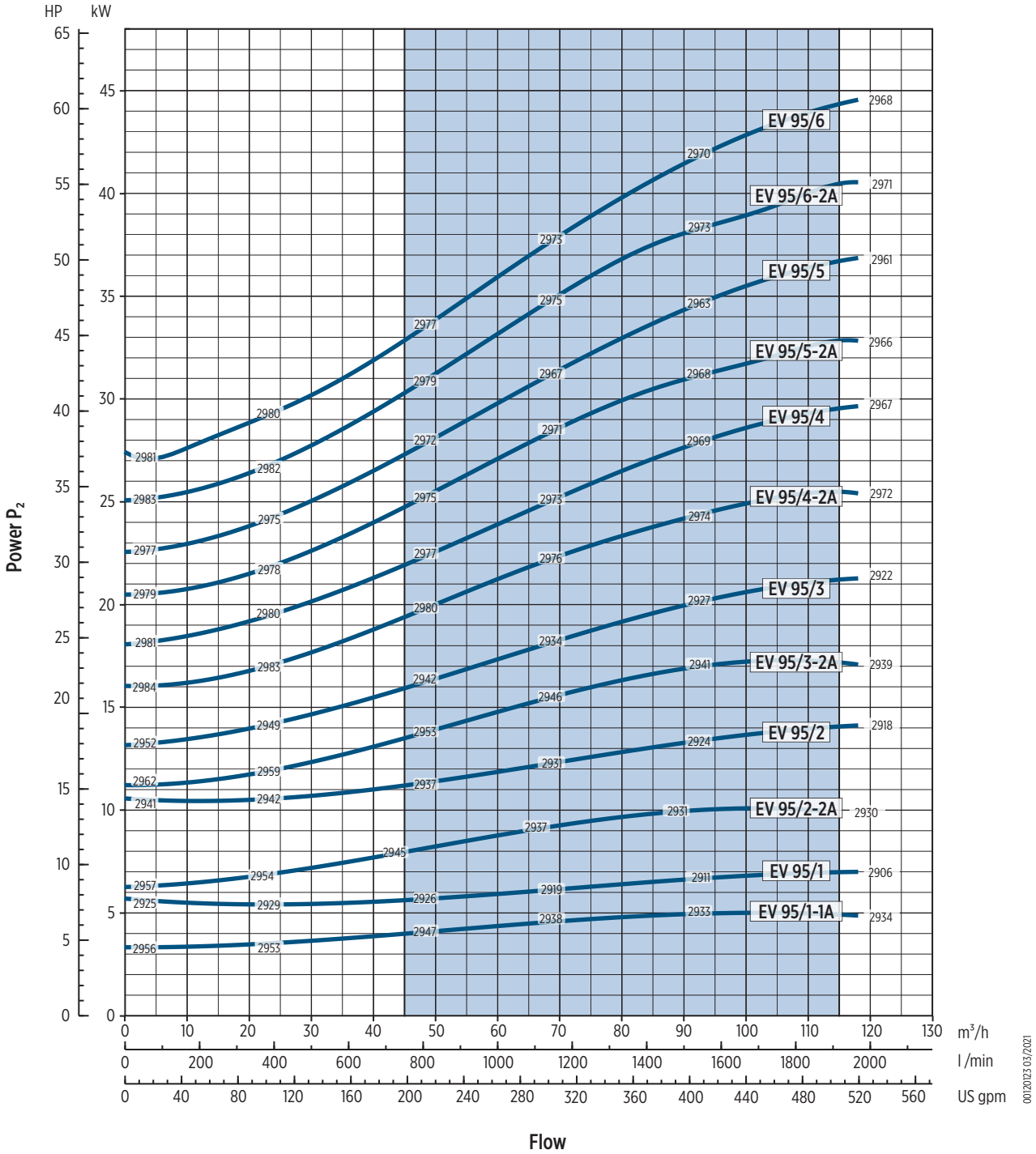
The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

00120123 03/2021

MENU

EV 95 – PERFORMANCE CURVES AT 50 HZ

MEI ≥ 0,70



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

00120123 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=Flow, H=Head, P=Power, η=Efficiency

MENU

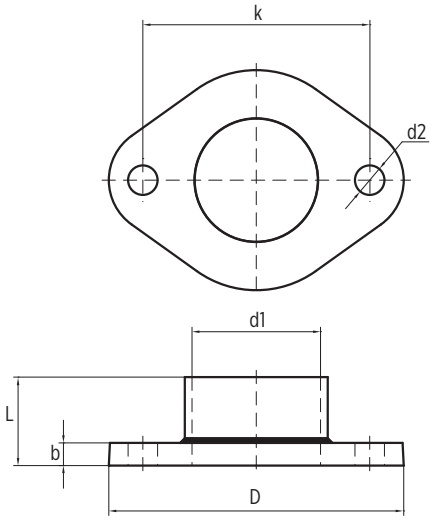
Accessories

HYDRAULIC CONNECTION

OVAL COUNTERFLANGES

DN	COLLARS					HOLES		PN
	D	dl	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				

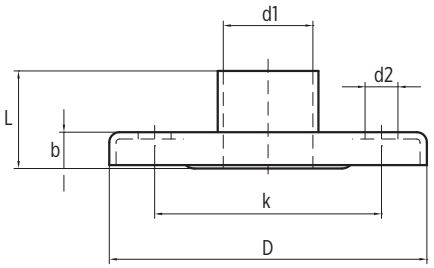
Kit round counterflanges available on request; AISI 304 (EN 1.4301)



001300107 02/2018

ROUND THREADED COUNTERFLANGES ACCORDING TO EN 1092-1

DN	DIMENSIONS					HOLES		PN
	D	dl	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				



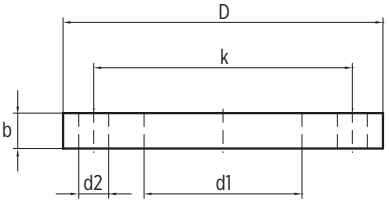
001300108 02/2018

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					HOLES		PN
	D	dl	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)

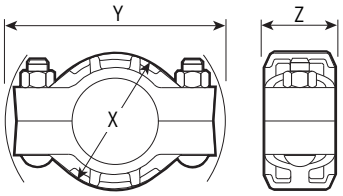


001300109 02/2018

HYDRAULIC CONNECTION

VICTAULIC COUNTERFLANGES

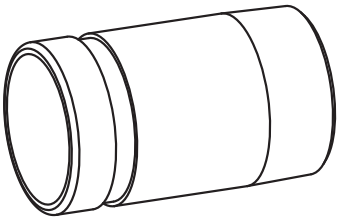
COLLARS			
DN	DIMENSIONS		
	X	Y	Z
32	67	127	48
50	92	149	48

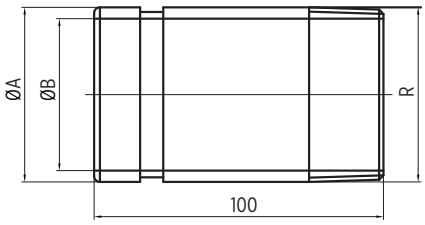


001300247 03/2021

NIPPLE			
DN	DIMENSIONS		
	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





001300246 03/2021

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.

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

SPECIFICATION

- **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

MENU

VARIABLE FREQUENCY DRIVES (VFD) - DRIVE-TECH INVERTER

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

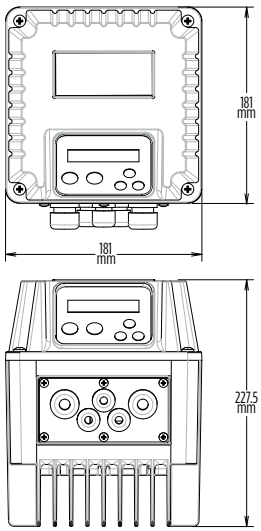
ELECTRICAL FEATURES AND PERFORMANCE

DrivE-Tech Model	Vin [Vac] ± 15 %	Max Vout [VAC]	Max current at input	Max current at output	Typical motor * P_2	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	3 x 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	

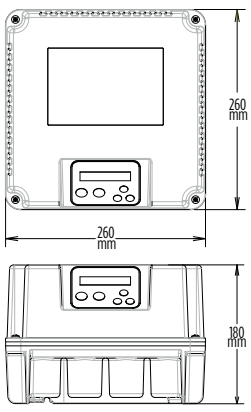
* Typical power. Refer to the motor current when selecting the appropriate DrivE-Tech model

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

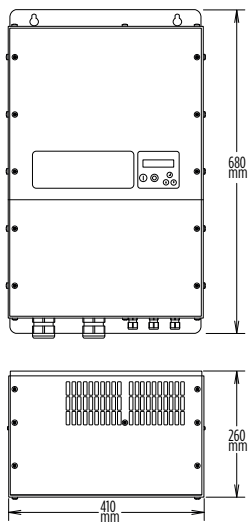
Size 1



Size 2



Size 3



VARIABLE FREQUENCY DRIVES (VFD) - DRIVE-TECH INVERTER

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.

ERP REGULATION

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 frequencies: 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
03	Description updated	2, 3, 14, 16
	Values in the table “Parts in contact with liquid” modified	7, 9, 11
	“WAT Motor” table added	15
	“AEG Lafert Motor” tables updated	14



Franklin Electric

10000007873 EN REV.03_08-2023