PRODUCT DATA SHEET

# Ebara EVMS-K1 20F5 Q1BEG E/1.1 TT Multistage Pump 28151100204

| | |
|---|---|
| **SKU** | 28151100204 |
| **Manufacturer** | EBARA Pumps Europe S.p.A. |
| **Configuration** | EVMS vertical multistage pump with on-board E-SPD+ inverter and pressure transducer |
| **Pump model (EBARA)** | EVMS-K1 20F5 Q1BEG |
| **Pipe connection** | Round flange (F) |
| **Inverter** | E-SPD+ TT inverter - 400 V three-phase supply |

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* Rows or curves for this model are highlighted in yellow on these pages.


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Compiled by Anglian Pumping Services Ltd | anglianpumping.com | October 2026

## PRODUCT SPECIFICATIONS

## PUMP WITH INVERTER

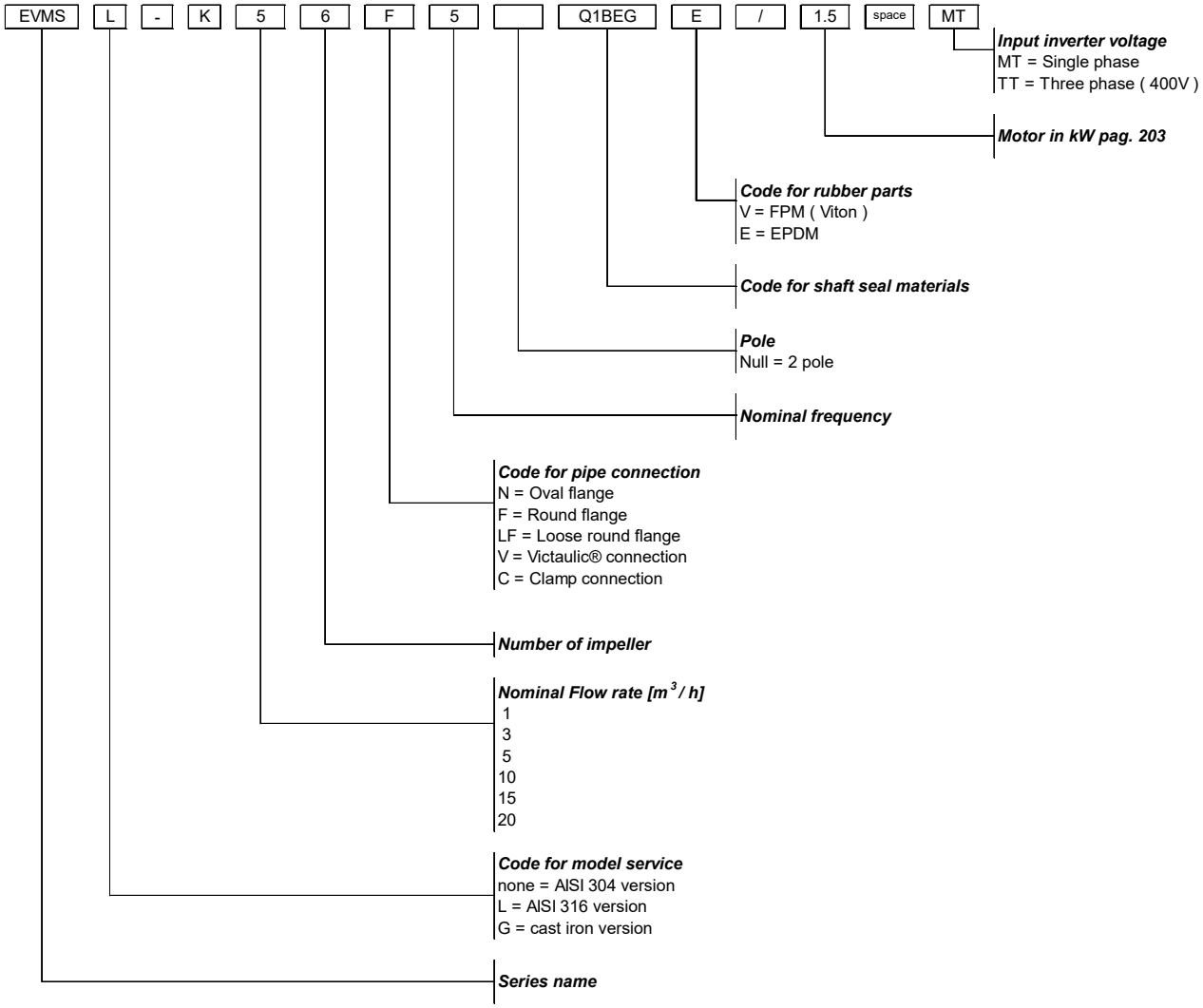
| PUMP WITH INVERTER | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Version | | EVMS(.)-K | | | | | | |
| Operating range | Nominal flow rate (m3/h ) | 1 | 3 | 5 | 10 | 15 | 20 | |
| | Maximum working pressure | 16 bar / 25 bar | | | 16 bar | | | |
| | Liquid temperature range | -30°C÷135°C | | | | | | |
| | Ambient operating temperature (no higher than 1000 m above sea level) | -10°C÷40°C | | | | | | |
| Pump | EVMS | • | • | • | • | • | • | |
| | EVMSL | ○ | ○ | ○ | ○ | ○ | ○ | |
| | EVMSG | ○ | ○ | ○ | ○ | ○ | ○ | |
| Motor | ETM | From 0.75 to 4 kW | | | | | | |
| Control | Pressure transmitter | Up to 16 bar EN 10088-1.4301 (AISI 304) / 1.4404 (AISI 316L) | | | | | | |
| | | Upper 16 bar to 25 bar EN 10088-1.4301 (AISI 304) / 1.4404 (AISI 316L) | | | - | | | |
| Inverter | E-SPD+ | Single-phase Supply inverter up to 2.2 kW | | | | | | |
| | | Three-phase Supply inverter up to 4 kW | | | | | | |

● : Standard ○ : Optional


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## TYPE KEY

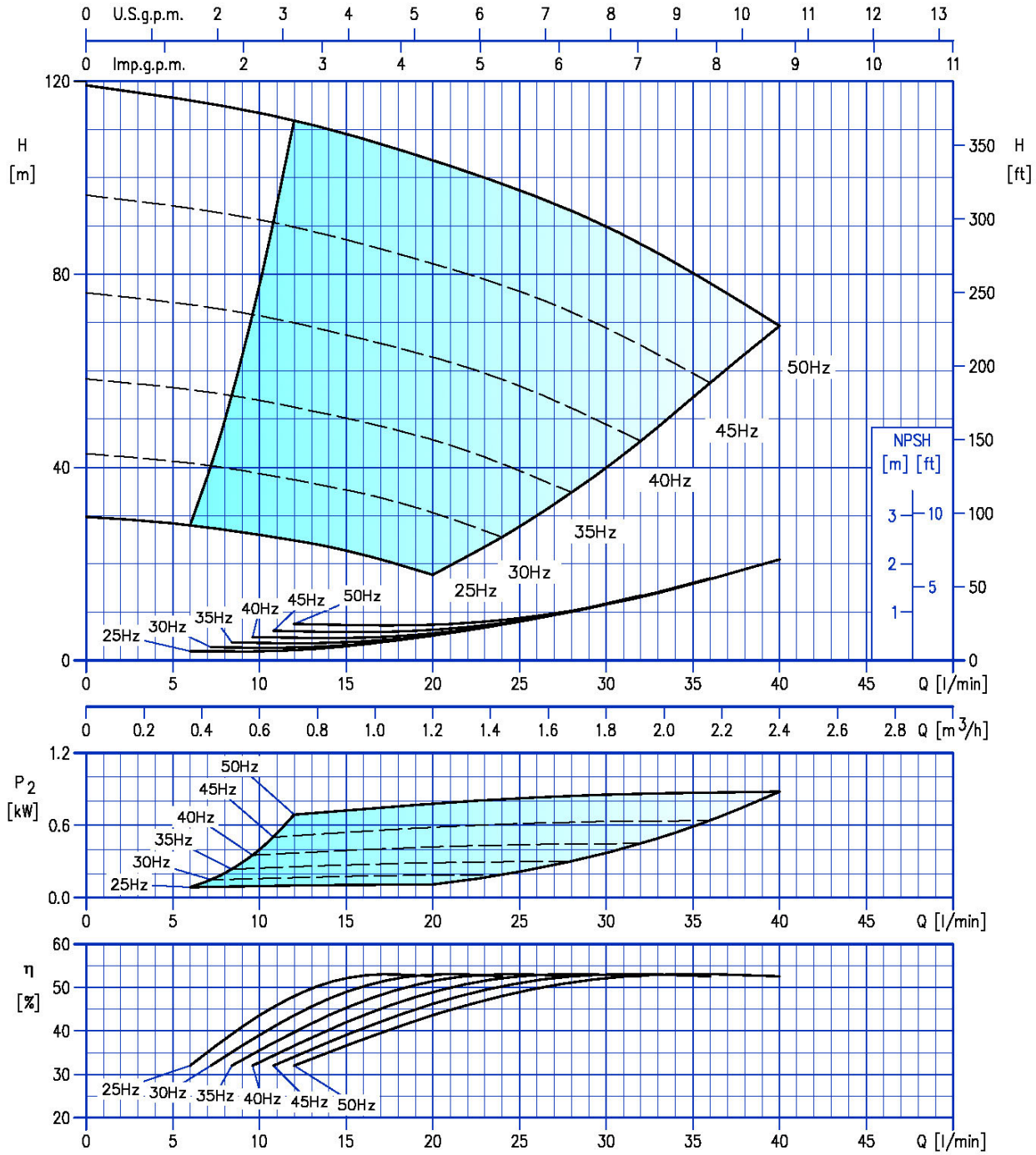
## EVMS-K






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## EVMS(.)-K1 20/1.1



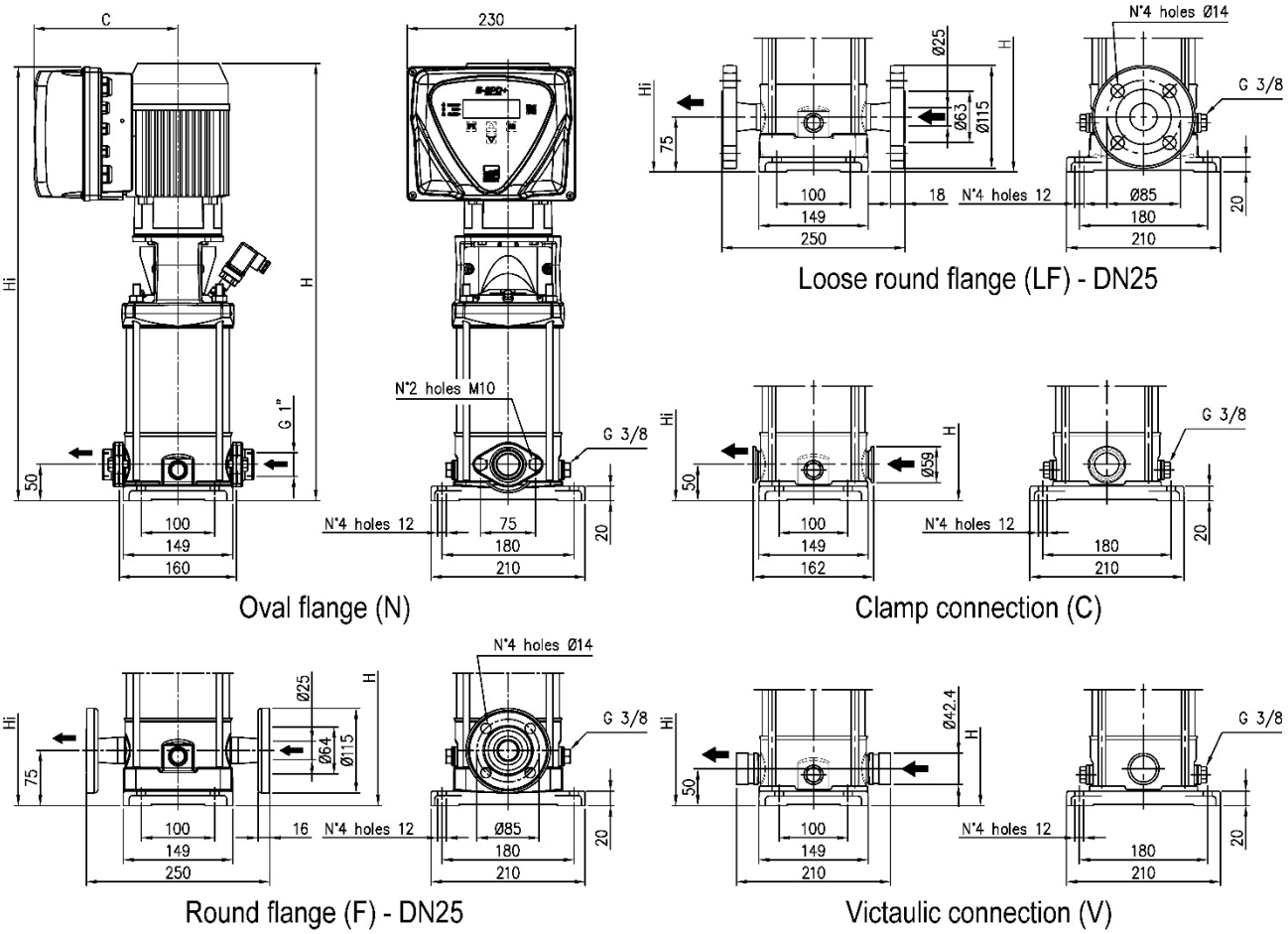

Test standard: ISO 9906: 2012 - Grade 3B



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## OVERALL DIMENSIONS PUMP WITH INVERTER

## EVMS(L)-K1



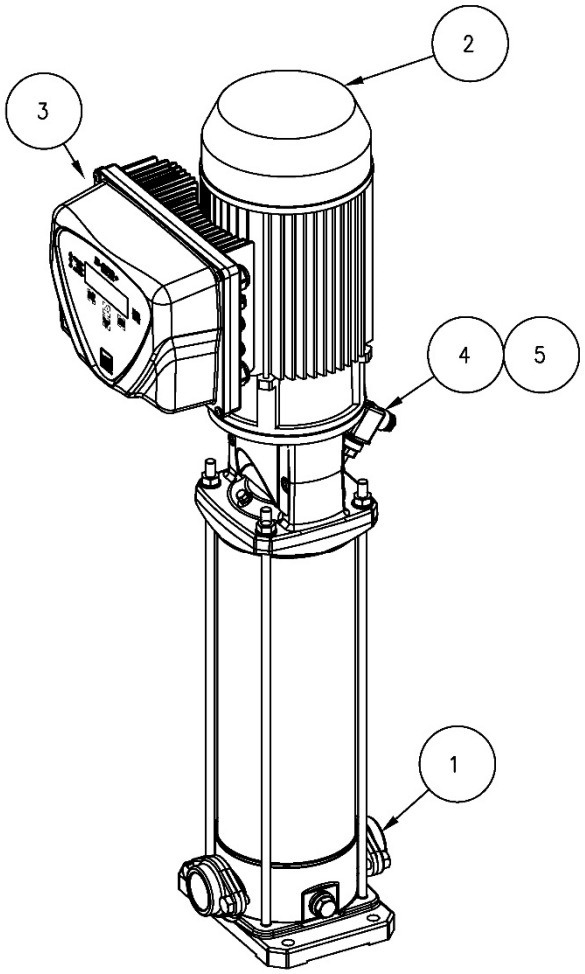

| Pump with Inverter | kW | C | Dimensions [mm] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Oval flange (N) | | | Victaulic® connection (V) Clamp connection (C) | | | Loose Round flange (LF) Round flange (F) | | |
| | | | H | Hi | Weight [kg] | H | Hi | Weight [kg] | H | Hi | Weight [kg] |
| EVMS(L)-K1 14/0.75 (.)T | 0.75 | 191 | 745 | 740 | 26.9 | 745 | 740 | 26.9 | 770 | 765 | 27.6 |
| EVMS(L)-K1 16/0.75 (.)T | 0.75 | 191 | 787 | 782 | 27.9 | 787 | 782 | 27.9 | 812 | 807 | 28.6 |
| EVMS(L)-K1 18/1.1 (.)T | 1.1 | 191 | 840 | 824 | 30.5 | 840 | 824 | 30.5 | 865 | 849 | 31.2 |
| EVMS(L)-K1 20/1.1 (.)T | 1.1 | 191 | 882 | 866 | 31.5 | 882 | 866 | 31.5 | 907 | 891 | 32.2 |
| EVMS(L)-K1 22/1.1 (.)T | 1.1 | 191 | 924 | 908 | 32.7 | 924 | 908 | 32.7 | 949 | 933 | 33.4 |
| EVMS(L)-K1 24/1.1 (.)T | 1.1 | 191 | 966 | 950 | 33.7 | 966 | 950 | 33.7 | 991 | 975 | 34.4 |
| EVMS(L)-K1 26/1.1 (.)T | 1.1 | 191 | 1008 | 992 | 34.7 | 1008 | 992 | 34.7 | 1033 | 1017 | 35.4 |
| EVMS(L)-K1 27/1.5 (.)T | 1.5 | 203 | - | - | - | 1086 | 1041 | 38.6 | 1111 | 1066 | 39.3 |
| EVMS(L)-K1 29/1.5 (.)T | 1.5 | 203 | - | - | - | 1128 | 1083 | 39.6 | 1153 | 1108 | 40.3 |
| EVMS(L)-K1 32/1.5 (.)T | 1.5 | 203 | - | - | - | 1191 | 1146 | 40.9 | 1216 | 1171 | 41.6 |
| EVMS(L)-K1 34/1.5 (.)T | 1.5 | 203 | - | - | - | 1233 | 1188 | 41.8 | 1258 | 1213 | 42.5 |
| EVMS(L)-K1 37/2.2 (.)T | 2.2 | 203 | - | - | - | 1296 | 1250 | 44.7 | 1321 | 1275 | 45.4 |
| EVMS(L)-K1 39/2.2 (.)T | 2.2 | 203 | - | - | - | 1338 | 1293 | 45.7 | 1363 | 1318 | 46.4 |

- : not avable model

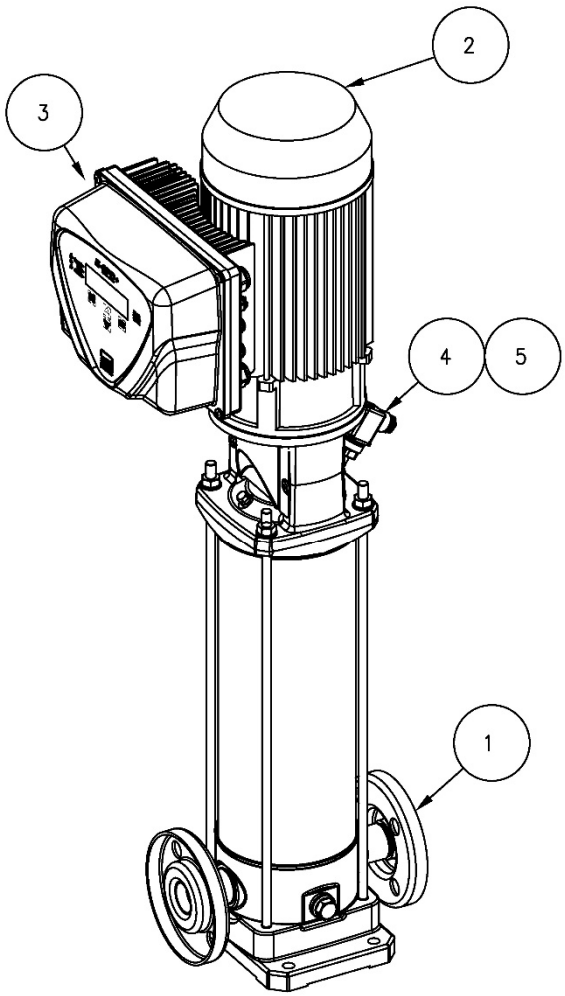


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## PUMP WITH INVERTER CONSTRUCTION




Oval flange (N)




Round flange (F)

| N° | PART NAME | Quantity |
|---|---|---|
| 1 | Pump | 1 |
| 2 | Electric motor | 1 |
| 3 | E-SPD+ | 1 |
| 4 | Pressure transducer [1] | 1 |
| 5 | Stainless steel reducer [2] | 1 |

[1] Only electrically connected
[2] Not assembled


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## TECHNICAL PUMP DATA

## EVMS(.) 1-3-5-10-15-20

| PUMP | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Version | | | EVMSG | | | | | | EVMS | | | | | | EVMSL | | | | | |
| Operating range | Nominal flow rate (m3/h ) | | 1 | 3 | 5 | 10 | 15 | 20 | 1 | 3 | 5 | 10 | 15 | 20 | 1 | 3 | 5 | 10 | 15 | 20 |
| | Maximum working pressure | | 16 bar / 25 bar | | | | | | | | | | | | | | | | | |
| | Liquid temperature range | | -30°C÷140°C [1] | | | | | | | | | | | | | | | | | |
| Key Components Material | Impeller | | EN 1.4301 (AISI 304) | | | | | | | | | | | | EN 1.4404 (AISI 316L) | | | | | |
| | Intermediate casing | | EN 1.4301 (AISI 304) | | | | | | | | | | | | EN 1.4404 (AISI 316L) | | | | | |
| | Liner ring | | EN 1.4301 (AISI 304) + PPS | | | | | | | | | | | | EN 1.4301 (AISI 304) + PPS | | | | | |
| | Bottom casing | | Cast iron | | | | | | EN 1.4301 (AISI 304) | | | | | | EN 1.4404 (AISI 316L) | | | | | |
| | Casing cover | | EN 1.4301 (AISI 304) | | | | | | | | | | | | EN 1.4404 (AISI 316L) | | | | | |
| | Shaft | EN 1.4301 (AISI 304) | EVMSG / EVMS 1-3-10 . EVMSG / EVMS 5-15-20 (depend on models) | | | | | | | | | | | | | | | | | |
| | | EN 1.4404 (AISI 316L) | EVMSL 1-3-10 . EVMSL 5-15-20 (depend on models) | | | | | | | | | | | | | | | | | |
| | | EN 1.4462 (AISI 329A) | EVMSG / EVMS / EVMSL 5-15-20 (depend on models) | | | | | | | | | | | | | | | | | |
| | Shaft sleeve bearing | | Tungsten carbide | | | | | | | | | | | | | | | | | |
| | Shaft seal | | See the shaft seal options | | | | | | | | | | | | | | | | | |
| | O-ring | EPDM | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | FPM | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | Outer casing | | EN 1.4301 (AISI 304) | | | | | | | | | | | | EN 1.4404 (AISI 316L) | | | | | |
| | Motor Bracket | | Cast iron | | | | | | | | | | | | | | | | | |
| | Tie rod | | Galvanized steel 6.8 strenght class ISO 898/1 | | | | | | | | | | | | | | | | | |
| | Coupling | | Die cast aluminium | | | | | | | | | | | | | | | | | |
| | Base | | Cast Iron | | | | | | Die cast aluminium | | | | | | | | | | | |
| Pipe Connetion | Oval Flange | Up to 16 bar | ○ | ○ | ○ | ○ | ○ | ○ | ● | ● | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ |
| | Round Flange (DIN) | Up to 16 bar | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | | From 16 bar to 25 bar | ○ | ○ | ○ | ○ | ○ | ○ | ● | ● | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ |
| | Loose round Flange (DIN) | Up to 16 bar | - | - | - | - | - | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | | From 16 bar to 25 bar | - | - | - | - | - | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Victaulic® | Up to 16 bar | - | - | - | - | - | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Clamp | Up to 16 bar | - | - | - | - | - | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

● : Standard ○ : Optional
[1] : Verify the compatibly with the pressure trasmitter used.
- : Not available



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## TECHNICAL MOTOR DATA

## ETM MOTOR

| ETM MOTOR | | |
|---|---|---|
| **Version** | | **EVMS(.)** |
| **Power source** | Frequency | 50 Hz |
| | Phase | Three-phase |
| | Rotation speed | 2900 min-1 |
| | Power rating | 0.75 ÷ 4 kW |
| | | 1.0 ÷ 5.5 HP |
| | Voltage | 230/400 ± 10% V |
| **Type** | Type | Electric - TEFC |
| | Efficiency level | IE3 |
| | N°of poles | 2 |
| | Protection degree | IP 55 |
| | Insulation class | F ( temperature rise class B ) |
| **Others** | Thermal Protection | PTC sensor pre-installed for motors of 1.5 kW and above |
| | Casing Material | Aluminium |
| | Flange mount (IEC motor) | IM B14 ( up to 4 kW ) |
| | Terminal Box fixing | Unlosable screw and sealing from 0.75 ÷ 4 kW |

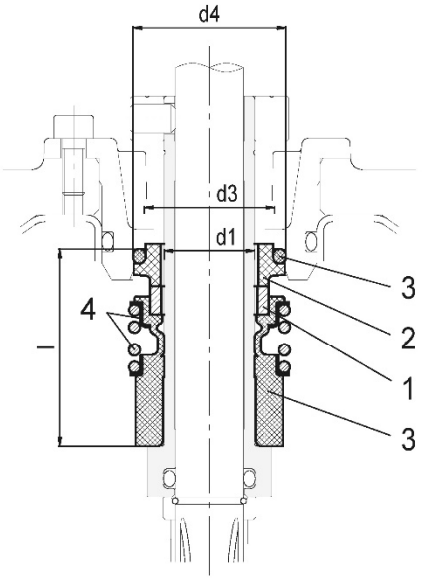
| Motor Model | Size | Motor Coupling Flange Size | Power [kW] | Power [HP] | Eff. | Load efficency and power-factor (400V) η% 50% | η% 75% | η% 100% | cos-ϕ 100% | Full load current [A] 230 V | Full load current [A] 400V | Locked rotor current [A] 230 V | Locked rotor current [A] 400V | Rotation speed min-1 | Input [kW] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ETM 3 71-0,75-2 | 71 | 80 | 0,75 | 1 | IE3 | 80,2 | 82,5 | 82,1 | 0,76 | 3,0 | 1,7 | 19,7 | 11,4 | 2845 | 0,92 |
| ETM 3 71-1,1-2 | | 80 | 1,1 | 1,5 | IE3 | 81,3 | 82,8 | 82,7 | 0,77 | 4,3 | 2,5 | 28,8 | 16,6 | 2830 | 1,35 |
| ETM 3 80-1,5-2 | 80 | 90 | 1,5 | 2 | IE3 | 83,5 | 84,3 | 84,6 | 0,77 | 5,8 | 3,3 | 44,1 | 25,5 | 2885 | 1,77 |
| ETM 3 80-2,2-2 | | 90 | 2,2 | 3 | IE3 | 85,7 | 86,8 | 86 | 0,78 | 8,2 | 4,7 | 63,3 | 36,6 | 2875 | 2,59 |
| ETM 3 90-3-2 | 90 | 100 | 3,0 | 4 | IE3 | 85,9 | 87,5 | 87,1 | 0,78 | | 6,4 | | 51,8 | 2890 | 3,43 |
| ETM 3 100-4-2 | 100 | 112 | 4,0 | 5,5 | IE3 | 86 | 88,3 | 88,1 | 0,75 | | 8,7 | | 76,1 | 2920 | 4,65 |


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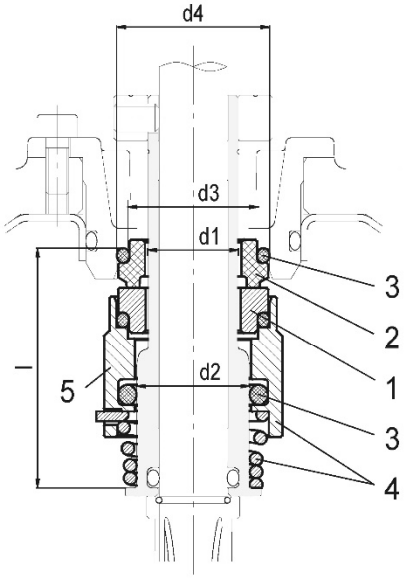
## MECHANICAL SEAL DATA

### SHAFT SEAL
### EVMS(.)1-3-5-10-15-20

1. Shaft Seal




up to 16 bar
Cartridge Unbalanced type




up to 25 bar
Cartridge Balanced type

2. Type of Shaft Seal and Dimensions [mm]

| Type key | Availability | Max operating pressure | Max operating temperature | Shaft seal type | | Shaft seal material | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Cartridge | | 1 | | 2 | | 3 | | 4 | 5 | |
| | | | | Type | Code | Rotating part | Code | Stationary part | Code | Elastomers | Code | Compression spring | Collar | Code |
| Q1BEG | ● | 16 bar | - 30°C to + 120°C | Unbalanced | (-) | SiC | (Q1) | Carbon | (B) | EPDM | (E) | AISI 316 | | (G) |
| BQ1VG | ○ | 16 bar | - 30°C to + 80°C | Unbalanced | (-) | Carbon | (B) | SiC | (Q1) | FPM | (V) | AISI 316 | | (G) |
| HQ1BEG | ● | 25 bar | - 30°C to + 140°C | Balanced | (H) | SiC | (Q1) | Carbon | (B) | EPDM | (E) | AISI 316 | | (G) |
| HQ1BVG | ○ | 25 bar | - 30°C to + 80°C | Balanced | (H) | SiC | (Q1) | Carbon | (B) | FPM | (V) | AISI 316 | | (G) |
| HQgQ1EG | ○ | 25 bar | - 30°C to + 140°C | Balanced | (H) | SiC with graphite | (Qg) | SiC | (Q1) | EPDM | (E) | AISI 316 | | (G) |
| HQgQ1VG | ○ | 25 bar | - 30°C to + 80°C | Balanced | (H) | SiC with graphite | (Qg) | SiC | (Q1) | FPM | (V) | AISI 316 | | (G) |

● Standard ○ On request

| Pump model | Shaft seal type | | Max operating pressure | d1 [mm] | d2 [mm] | d3 [mm] | d4 [mm] | l [mm] |
|---|---|---|---|---|---|---|---|---|
| EVMS 1/3/5 | Cartridge | Unbalanced | 16 bar | 16 | - | 23 | 27 | 35 |
| | | Balanced | 25 bar | | 20 | | | 42.5 |
| EVMS 10/15/20 | Cartridge | Unbalanced | 16 bar | 20 | - | 29 | 35 | 37.5 |
| | | Balanced | 25 bar | | 24 | | | 45 |



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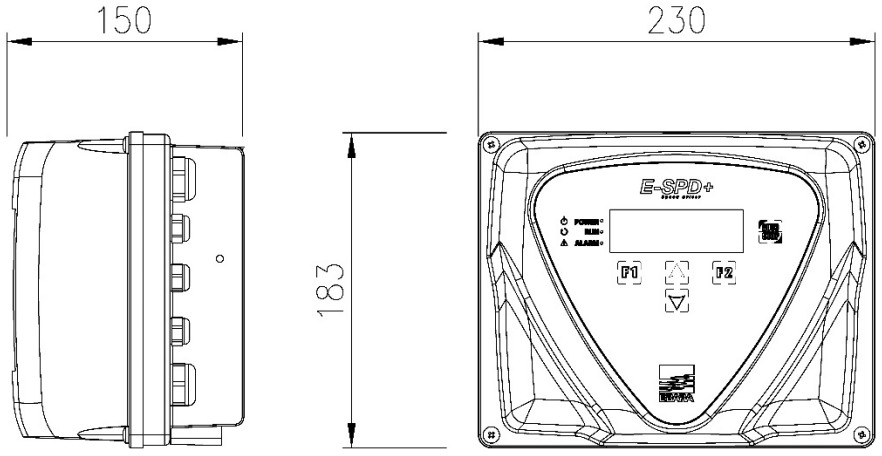
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## CONTROL PANEL VARIABLE SPEED

## E-SPD+ SPECIFICATION

In-line electronic device for controlling electropumps, employing inverter technology. Starts and stops the pump and modulates the speed of the motor in relation to the water demand on the system, to maintain the operating pressure setting. Provides excellent comfort for the end user, significant energy savings and increased service life, the typical advantages of inverter controlled systems. E-SPD+ is an inverter that could be installed on the terminal box. It can be adapted on horizontal and vertical pumps. E-SPD+ can protect the system against overpressure, overcurrent, voltage fluctuation, dry run and water leak. The connection for this mode is made by communication line ON/OFF.

| E-SPD+ | | | |
|---|---|---|---|
| **Power** | Version | MT | TT |
| | Power Voltage | Single-phase 230 V | Three-phase 400 V |
| | Output Voltage (pump) | Three-phase 230 V | Three-phase 400 V |
| | Output frequence | 50 ÷ 60Hz | |
| | Maximum pump power | 2.2 kW | 4 kW |
| | Max I in | 20 A | 12 A |
| | Max I out | 11 A | 11 A |
| **Others** | Pressure setpoint | 0.5 ÷ 25 bar | |
| | Protection degree | IP 55 | |
| | Ambient Temperature | -10 ÷ 40°C | |
| | Pressurisation units | 2-3 pumps | |
| | Weight | 2,7 Kg | |
| | Protection | Dry-running | |
| | | Over/under voltage | |
| | | Short-circuit | |
| | | Overload | |
| | | Overtemperature | |
| | | Low pressure | |
| | | Pressure sensor fault | |
| **Directives** | 2014/35/EU (LVD), 2014/30/EU (EMC), 2011/65/EU (RoHS II) | | |








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