

Technical data

Pump name EVMS64 4-1LF5BQ1EG E/22

| | | |
|----------|--|-----------|
| Customer | Date 2024-06-14 | Company |
| Contact | Item no. | Issued by |
| Phone | Project | Phone |
| E-mail | Project ID Proiect redenumit 2024-06-14 09:53: | E-mail |

Requested data

| | | | | |
|---|---------------------------|--------------------------|-----------------------------------|--------|
| 1 | Pump type | VERTICAL MULTISTAGE PUMP | Fluid | Water |
| 2 | Number of pumps / Reserve | 1 / 0 | Liquid temperature °C | 20 |
| 3 | Flow m ³ /h | | Kin. viscosity mm ² /s | 1.005 |
| 4 | Head m | | Vapour pressure bar | 0.0234 |
| 5 | Geodetic head m | | PH value | |
| 6 | Inlet pressure (pin) bar | 0 | Density kg/m ³ | 998.3 |
| 7 | Available system NPSH | | Solids Weight % | 0 |
| 8 | Ambient temperature °C | 20 | | |

Pump

| | | | | |
|----|---------------------------|--------------------------------|--------------------------------------|-----------------------------|
| 9 | Pump name | EVMS64 4-1LF5BQ1EG E/22 | Frequency Hz | 50 |
| 10 | Design | VERTICAL MULTISTAGE PUMP | Installation type | Loose flange |
| 11 | Manufacturer | EBARA | Impeller Diameter | Max. mm - |
| 12 | Speed rpm | 2950 | | Designed mm |
| 13 | No. of Stage | 4 | | Min. mm - |
| 14 | Connection Suction side | | Flow | Operating m ³ /h |
| 15 | Connection Discharge side | | | Max- m ³ /h 84 |
| 16 | Max Working Pressure bar | 16 | | Min- m ³ /h 30 |
| 17 | Shut-off head bar | 11.36 | Head | Operating m |
| 18 | Total weight kg | See the table of "Dimensions". | | - (Qmax.) m 56.3 |
| 19 | Shaft power kW | | | - (Qmin.) m 101.7 |
| 20 | | | Max. Shaft Power at max. impeller kW | 19.58 |
| 21 | Required pump NPSH m | | Efficiency % | |

Materials

| | | | | |
|----|---------------------|----------------------|--|--|
| 22 | Impeller | AISI 304 | | |
| 23 | Intermediate casing | AISI 304 | | |
| 24 | Bottom casing | EN 1.4308 (ASTM CF8) | | |
| 25 | Casing cover | AISI 304 | | |
| 26 | Shaft | AISI 304 | | |
| 27 | O-ring | EPDM | | |

Motor

| | | | | |
|----|----------------------|------------------------------------|--------------------|------|
| 28 | Manufacturer | ATB | Insulation class | F |
| 29 | Type | TEFC_EVMS64 4-1/22_400_Three Phase | Phases | 3~ |
| 30 | Specific design | IE3 / 50 Hz / Pole pairs 1 | Frame size | 180 |
| 31 | Rated power kW | 22 | Weight kg | 135 |
| 32 | Number of poles | 2 | Electric voltage V | 400 |
| 33 | Speed rpm | 2950 | Electric current A | 38.5 |
| 34 | Degree of protection | IP56 | | |
| 35 | | | | |

Remarks

Performance curve

Pump name EVMS64 4-1LF5BQ1EG E/22

| | | | |
|----------|------------|-------------------------------------|-----------|
| Customer | Date | 2024-06-14 | Company |
| Contact | Item no. | | Issued by |
| Phone | Project | | Phone |
| E-mail | Project ID | Proiect redenumit 2024-06-14 09:53: | E-mail |

Requested data

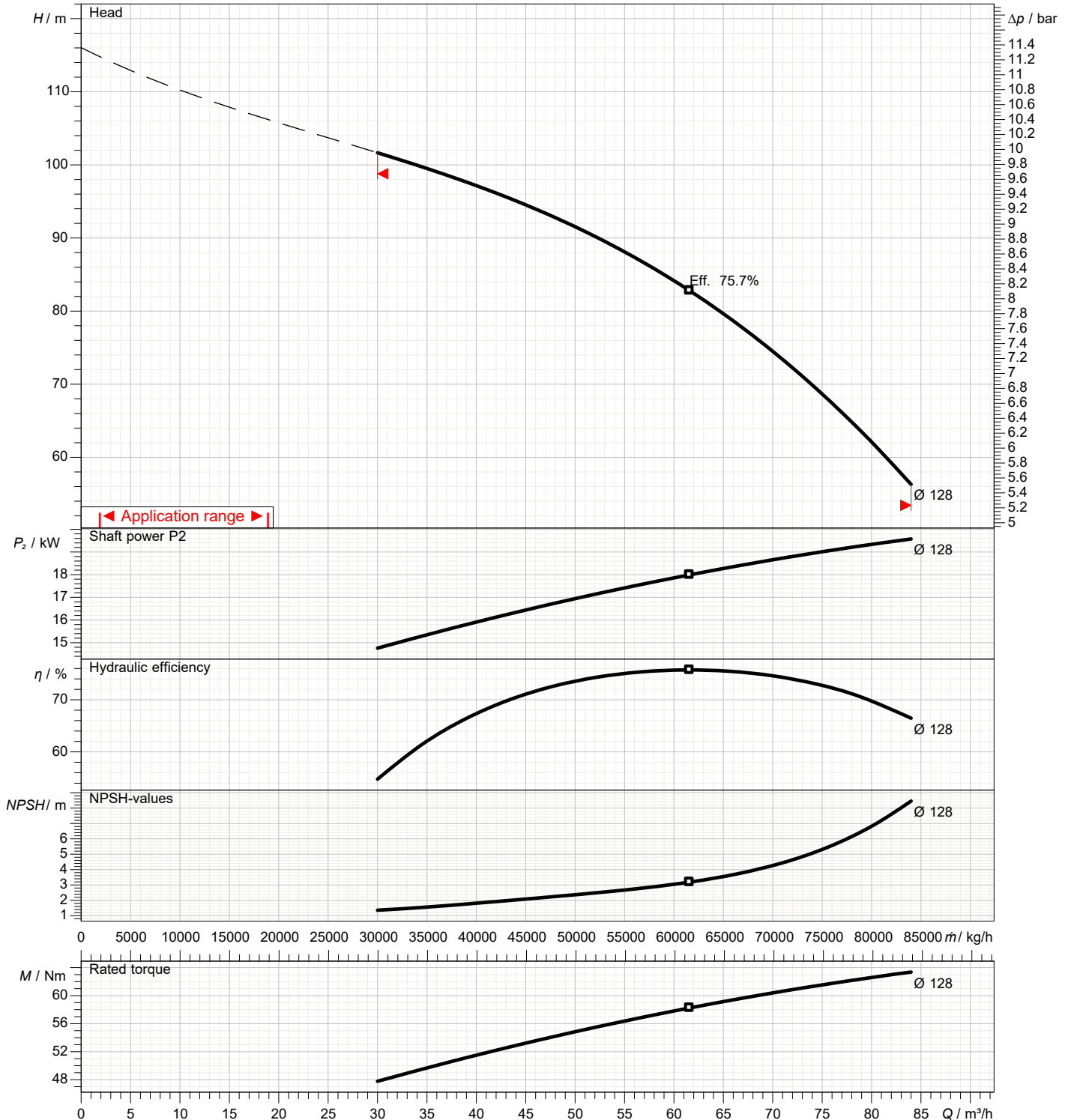
| | | | |
|---|---------------|-------------------|--|
| 1 | Flow | m ³ /h | |
| 2 | Head | m | |
| 3 | Geodetic head | m | |

Pump

| | | | | | |
|----------------|-------------------|--|----------------------------|-----|------|
| Operating flow | m ³ /h | | Impeller Diameter Designed | mm | |
| Operating head | m | | Frequency | Hz | 50 |
| | | | Speed | rpm | 2950 |

Test standard: ISO 9906:2012 - Grade3B

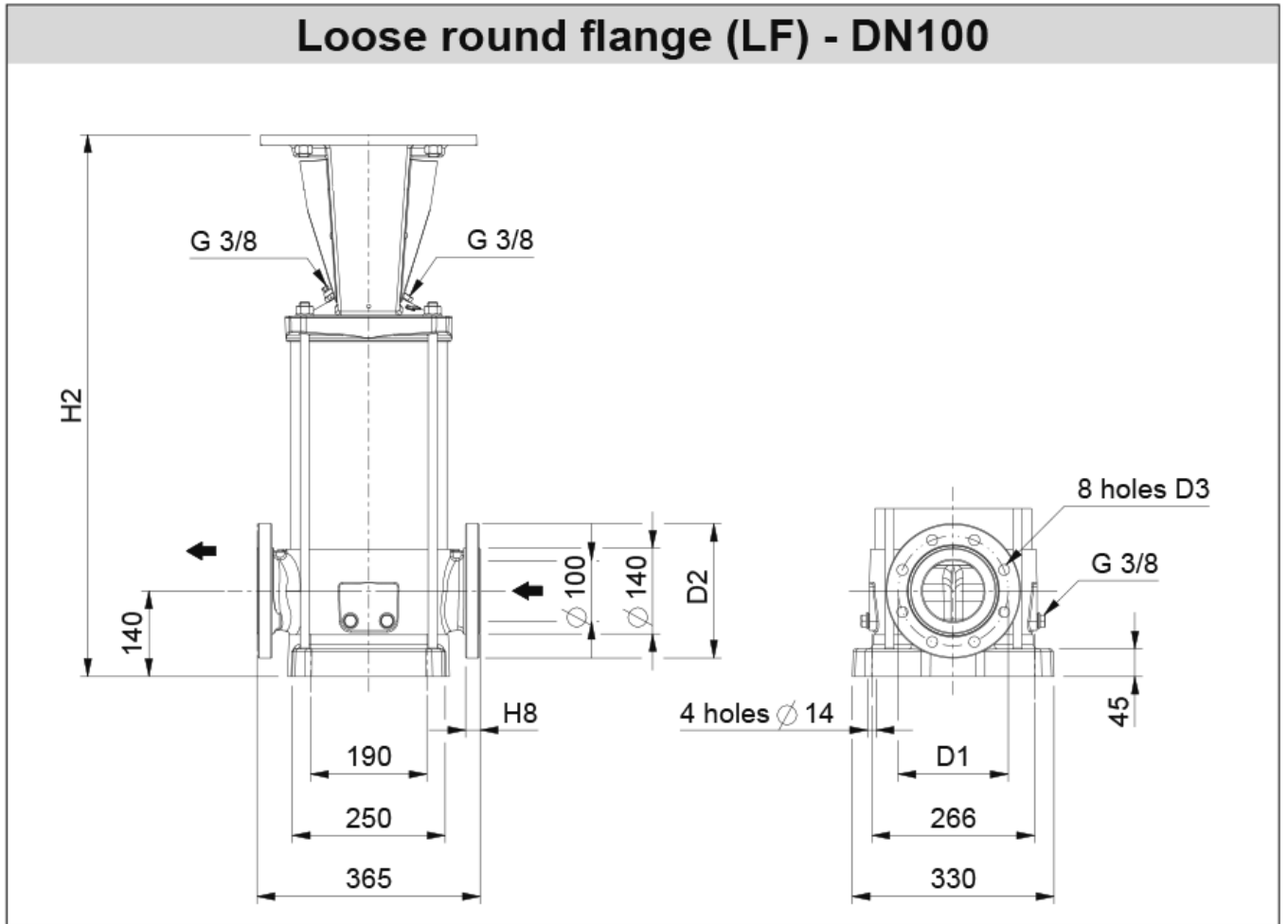
Water; 20°C; 998.3kg/m³; 1mm²/s



Dimensions

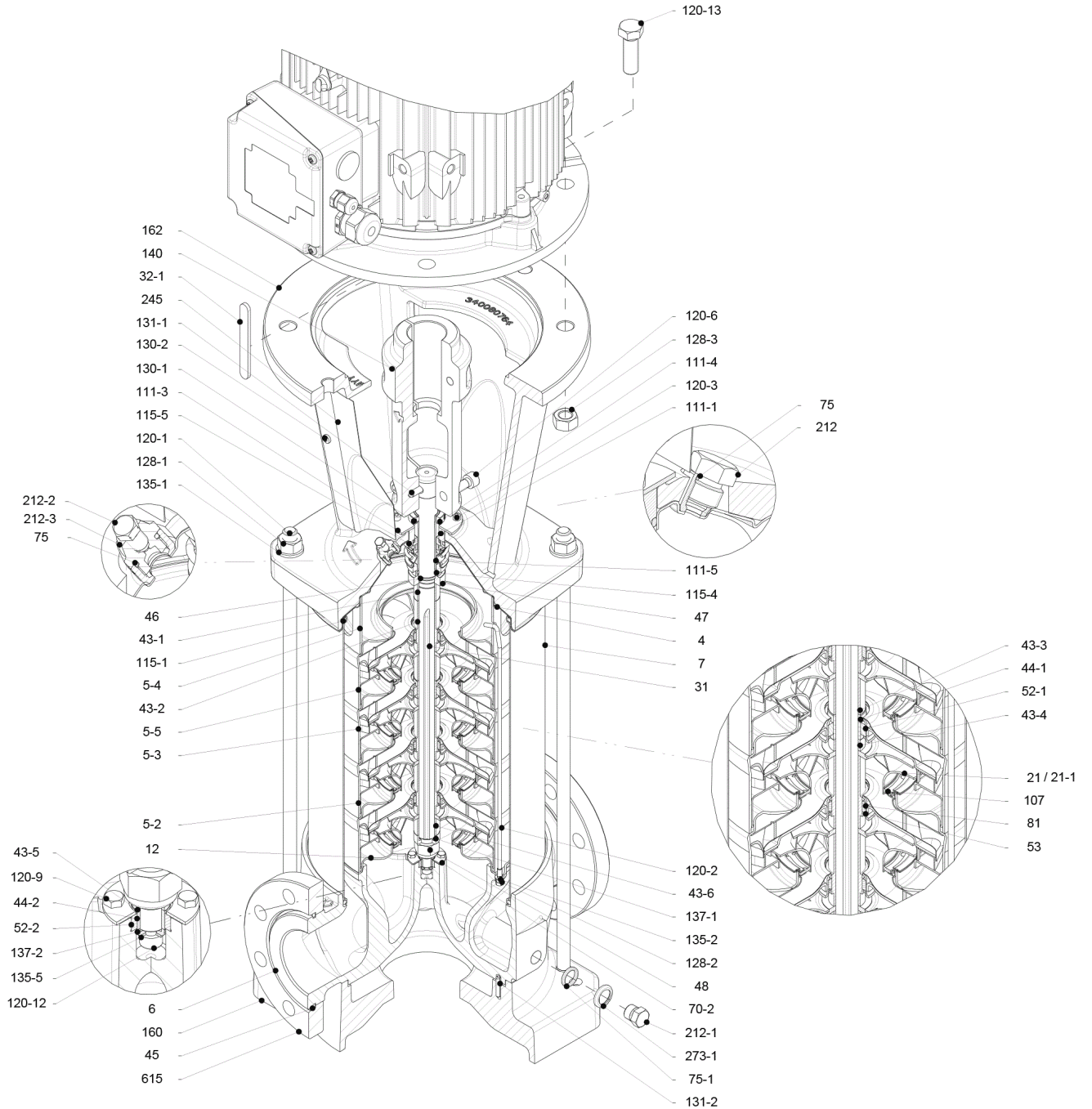
Pump Name EVMS64 4-1LF5BQ1EG E/22

| | | |
|----------|--|-----------|
| Customer | Date 2024-06-14 | Company |
| Contact | Item no. | Issued by |
| Phone | Project | Phone |
| E-mail | Project ID Proiect redenumit 2024-06-14 09:53:20 | E-mail |



| Dimensions in | | mm | | | | | | |
|---------------|----------------|--------|--|--|--|--|--|--|
| 1 | A | Dia350 | | | | | | |
| 2 | B | 354 | | | | | | |
| 3 | C | 260 | | | | | | |
| 4 | D1 | 180 | | | | | | |
| 5 | D2 | 220 | | | | | | |
| 6 | D3 | 18 | | | | | | |
| 7 | H2 | 896 | | | | | | |
| 8 | H2+H3 | 1448 | | | | | | |
| 9 | H8 | 24 | | | | | | |
| 10 | Weight P&M(kg) | 235.4 | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |

| | | |
|----------|--|-----------|
| Customer | Date 2024-06-14 | Company |
| Contact | Item no. | Issued by |
| Phone | Project | Phone |
| E-mail | Project ID Proiect redenumit 2024-06-14 09:53:20 | E-mail |



(2/3)

Construction

Pump Name EVMS64 4-1LF5BQ1EG E/22

| | | | |
|----------|------------|---------------------------------------|-----------|
| Customer | Date | 2024-06-14 | Company |
| Contact | Item no. | | Issued by |
| Phone | Project | | Phone |
| E-mail | Project ID | Proiect redenumit 2024-06-14 09:53:20 | E-mail |

| N° | PART NAME | MATERIAL | | DIMENSIONS | STANDARD | QTY |
|--------|----------------------------------|---------------------------------------|---|--------------|----------|-----|
| | | EVMS | EVMSL | | | |
| 4 | Casing cover | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 5-2 | Intermediate casing | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 2 |
| 5-3 | Intermediate casing with bearing | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 5-4 | Discharge casing | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 5-5 | Top intermediate casing | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 6 | Bottom casing | EN 1.4308 (ASTM CF8) | EN 1.4408 (ASTM CF8M) | | | 1 |
| 7 | Outer casing | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 12 | Suction cover | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 21 | Impeller | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 3 |
| 21-1 | Reduced impeller | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 31 | Shaft | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) - EN 1.4462 (AISI 329A) | | | 1 |
| 32-1 | Adjuster key | EN 1.4301 (AISI 304) | | | | 1 |
| 43-1 | Shaft sleeve (mechanical seal) | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 43-2 | Shaft sleeve (intermediate) | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 3 |
| 43-3 | Shaft sleeve (bearing) | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 43-4 | Shaft sleeve (adjustment) | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 43-5 | Shaft sleeve (last stage) | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 43-6 | Shaft sleeve (adjustment) | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 44-1 | Shaft sleeve bearing | Tungsten carbide | | | | 1 |
| 44-2 | Shaft sleeve (bearing) | Tungsten carbide | | | | 1 |
| 45 | Flange holder | EN 1.4301 (AISI 304) | | | | 4 |
| 46 | Ring (mechanical seal) | EN 1.4404 (AISI 316L) | | | | 1 |
| 47 | Ring holder | EN 1.4404 (AISI 316L) | | | | 1 |
| 48 | Impeller nut | EN 1.4301 (AISI 304) with inox insert | EN 1.4401 (AISI 316) with inox insert | | | 1 |
| 52-1 | Sleeve bearing | Tungsten carbide | | | | 1 |
| 52-2 | Bearing sleeve (bottom casing) | Tungsten carbide | | | | 1 |
| 53 | Bush holder | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 4 |
| 70-2 | Ring for bearing sleeve | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 75 | O-Ring (priming plug) | EPDM / FPM ** | | Ø12.37x2.62 | OR 3050 | 2 |
| 75-1 | O-Ring (drainage plug) | EPDM / FPM ** | | | | 4 |
| 81 | Bush | PTFE | | | | 3 |
| 107 | Liner ring | EN 1.4301 (AISI 304) + PPS | EN 1.4404 (AISI 316L) + PPS | | | 4 |
| 111-1 | Mechanical seal | --- | | | | 1 |
| 111-3 | Mechanical seal seat | EN 1.4301 (AISI 304) | EN 1.4401 (AISI 316) | | | 1 |
| 111-4 | Seal holder | EN 1.4404 (AISI 316L) | | | | 1 |
| 111-5 | Mechanical seal cartridge sleeve | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 115-1 | O-Ring (outer casing) | EPDM / FPM ** | | Ø240.66x5.34 | OR 6945 | 2 |
| 115-4 | O-Ring (cartridge sleeve) | EPDM / FPM ** | | Ø23.39x3.53 | OR 4093 | 1 |
| 115-5 | O-Ring (seal flange) | EPDM / FPM ** | | Ø44.04x3.53 | OR 4175 | 1 |
| 120-1 | Tie rod | EN 1.4057 (AISI 431) | | | | 4 |
| 120-2 | Tie rod (stage) | EN 1.4301 (AISI 304) | EN 1.4401 (AISI 316) | | | 2 |
| 120-3 | Screw (seal flange) | A2-70 | | M5x12 | ISO 4762 | 4 |
| 120-6 | Screw (pump coupling) | from 11 kW to 30 kW | Galvanized steel 8.8 strength class ISO 898/1 | M10x30 | ISO 4762 | 4 |
| 120-9 | Screw (bottom casing) | A2-70 | | M5x8 | ISO 4017 | 4 |
| 120-12 | Screw (shaft) | A2-70 | | M6x16 | ISO 4762 | 1 |
| 120-13 | Screw for motor | MEC 160-180 | Galvanized steel 8.8 strength class ISO 898/1 | M16x50 | ISO 4017 | 4 |
| 128-1 | Nut (tie rod) | A2-70 | | M16 | ISO 4032 | 4 |
| 128-2 | Nut (casing tie rod) | A2-70 UNI 7323 | | M5 | ISO 4032 | 4 |
| 128-3 | Nut (motor) | MEC 160-180-200-225 | Galvanized steel | M16 | ISO 4032 | 4 |
| 130-1 | Set screw | EN 1.4301 (AISI 304) | | M6x8 | ISO 4026 | 3 |
| 130-2 | Screw for coupling guard | A2-70 | | M5x6 | UNI 7687 | 4 |
| 131-1 | Pin for shaft | above 5.5 kW | Carbon Steel | Ø8X50 | ISO 2338 | 1 |
| 131-2 | Elastic pin | EN 1.4301 (AISI 304) | | Ø6x26 | ISO 8752 | 1 |
| 135-1 | Washer (tie rod) | EN 1.4301 (AISI 304) | | Ø16 | ISO 7089 | 4 |
| 135-2 | Washer (casing tie rod) | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316) | Ø5.1 | UNI 1751 | 1 |
| 135-3 | Washer (extension coupling) | above 37 kW | Galvanized steel | Ø10.2 | UNI 1751 | 2 |
| 135-6 | Washer (aluminium coupling) | up to 4.0 kW | Carbon Steel | | | 1 |
| 137-2 | Shaft spacer | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 140 | Coupling | from 5.5 kW to 30 kW | Cast Iron EN GJL250 EN 1561 | | | 2 |
| 160 | Base | Cast Iron EN GJL200 EN 1561 | | | | 1 |
| 162 | Motor bracket | up to 30 kW | Cast Iron EN GJS 400-15 EN 1563 | | | 1 |
| 212 | Priming plug | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 212-1 | Drainage plug | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 4 |
| 212-2 | Venting plug | EN 1.4401 (AISI 316) | | | | 1 |
| 212-3 | Priming plug | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 1 |
| 245 | Coupling guard | EN 1.4301 (AISI 304) | | | | 2 |
| 273-1 | Washer (drainage plug) | EN 1.4301 (AISI 304) | EN 1.4404 (AISI 316L) | | | 4 |
| 615 | Loose flange | Cast Iron EN GJS 500-7 EN 1563 | | | | 2 |

* EPDM (standard)
FPM (option)

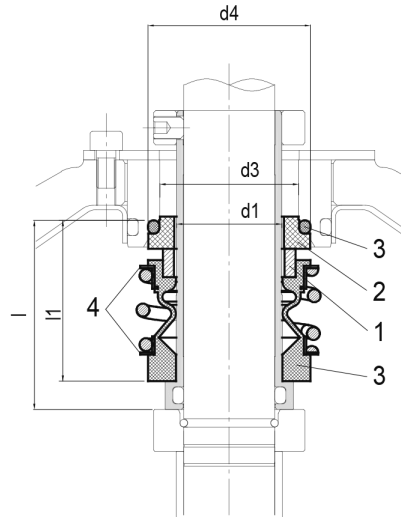
** see CONSTRUCTION 3/3

(3/3)

Construction

Pump Name EVMS64 4-1LF5BQ1EG E/22

| | | |
|----------|--|-----------|
| Customer | Date 2024-06-14 | Company |
| Contact | Item no. | Issued by |
| Phone | Project | Phone |
| E-mail | Project ID Proiect redenumit 2024-06-14 09:53:20 | E-mail |



- Standard

| Type key | Availability | Max operating pressure | Max operating temperature | Shaft seal type | | Shaft seal material | | | | | | | |
|----------|--------------|------------------------|---------------------------|-----------------|------|---------------------|------|----------------------|------|-----------------|------|-------------------------|-------------|
| | | | | Type | Code | 1 Rotating part | Code | 2 Stationary part | Code | 3 Elastomers | Code | 4 Compression spring | 5 Collar |
| BQ1EG | ● | 16 bar | - 30°C to + 120°C | Unbalanced | (-) | Carbon | (B) | SiC | Q1 | EPDM | (E) | AISI 316 | (G) |

| Max operating pressure | d1 [mm] | d3 [mm] | d4 [mm] | l [mm] | l1 [mm] |
|------------------------|---------|---------|---------|--------|---------|
| 16 bar | 28 | 37 | 43 | 50 | 42.5 |