

# Technical Data

Pump Name

EVMS32 5-0LF6BQ1EG/15

|          |            |                                       |           |
|----------|------------|---------------------------------------|-----------|
| Customer | Date       | 2024-07-01                            | Company   |
| Contact  | Item no.   |                                       | Issued by |
| Phone    | Project    |                                       | Phone     |
| E-mail   | Project ID | Proiect redenumit 2024-07-01 19:11:46 | 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 m³/h                 |                          | Kin. viscosity mm²/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/m³         | 998.3  |
| 7 | Available system NPSH     |                          | Solids Weight %       | 0      |
| 8 | Ambient temperature °C    | 20                       |                       |        |

## Pump

|    |                           |                                |                                      |                   |
|----|---------------------------|--------------------------------|--------------------------------------|-------------------|
| 9  | Pump Name                 | EVMS32 5-0LF6BQ1EG/15          | Frequency Hz                         | 60                |
| 10 | Design                    | VERTICAL MULTISTAGE PUMP       | Installation type                    | Loose flange      |
| 11 | Manufacturer              | EBARA                          | Impeller Diameter                    | Max. mm 118       |
| 12 | Speed rpm                 | 3540                           |                                      | Designed mm 118   |
| 13 | No. of Stage              | 5                              |                                      | Min. mm 118       |
| 14 | Connection Suction side   |                                | Flow                                 | Operating m³/h    |
| 15 | Connection Discharge side |                                |                                      | Max- m³/h 48      |
| 16 | Max Working Pressure bar  | 16                             |                                      | Min- m³/h 18      |
| 17 | Shut-off head bar         | 15.35                          | Head                                 | Operating m       |
| 18 | Total weight kg           | See the table of "Dimensions". |                                      | - (Qmax.) m 82.5  |
| 19 | Shaft power kW            |                                |                                      | - (Qmin.) m 142.6 |
| 20 |                           |                                | Max. Shaft Power at max. impeller kW | 15.00             |
| 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_EVMS32 5-0/15_380_Three Phase | Phases             | 3~   |
| 30 | Specific design      | - / 60 Hz / Pole pairs 1           | Frame size         | 160  |
| 31 | Rated power kW       | 15                                 | Weight kg          | 101  |
| 32 | Number of poles      | 2                                  | Electric voltage V | 380  |
| 33 | Speed rpm            | 3545                               | Electric current A | 27.5 |
| 34 | Degree of protection | IP56                               |                    |      |
| 35 |                      |                                    |                    |      |

## Remarks

# Performance Curve

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## Requested data

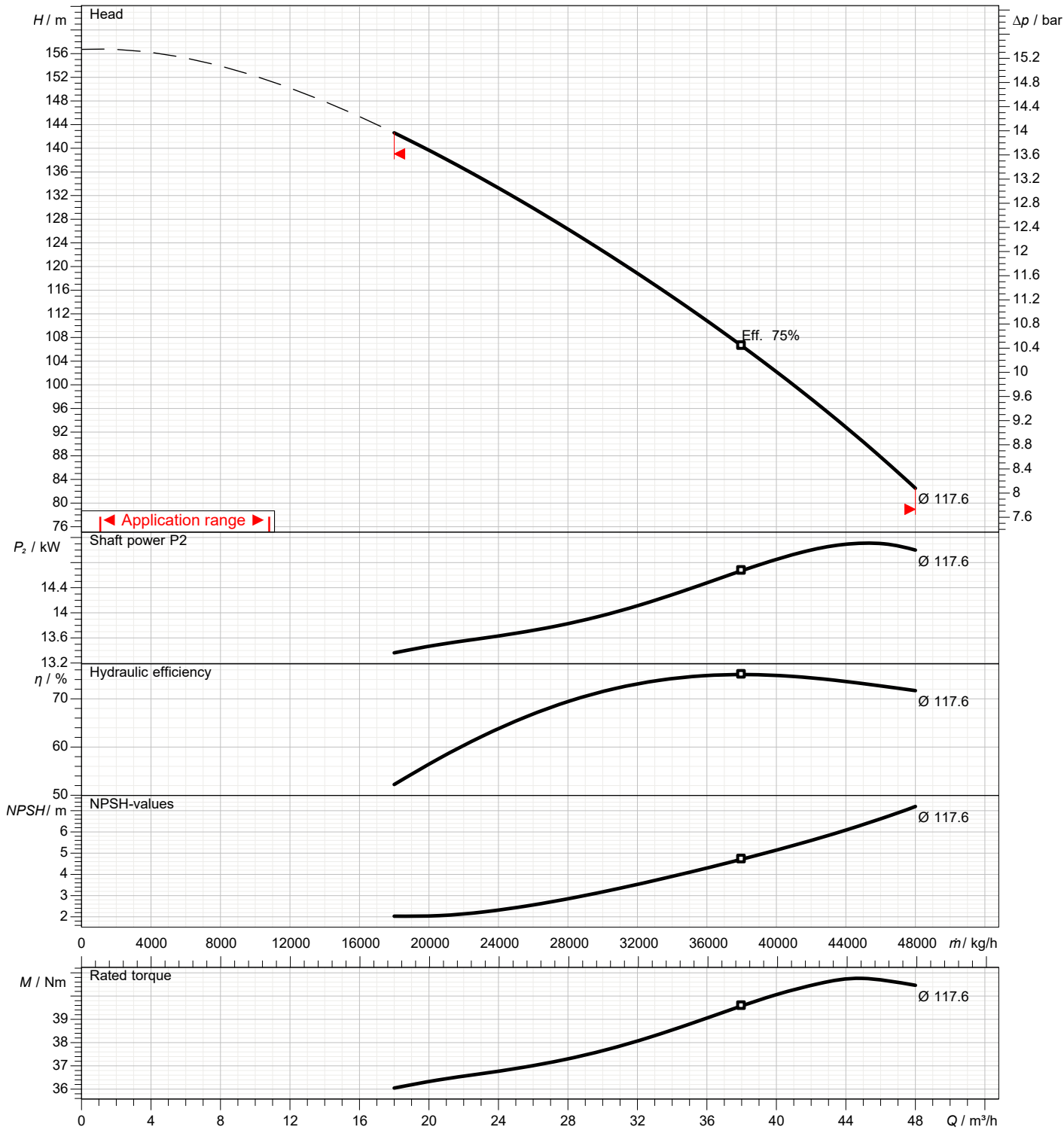
|   |               |      |  |
|---|---------------|------|--|
| 1 | Flow          | m³/h |  |
| 2 | Head          | m    |  |
| 3 | Geodetic head | m    |  |

## Pump

|                            |      |     |                 |     |      |
|----------------------------|------|-----|-----------------|-----|------|
| Operating flow             | m³/h |     | Frequency       | Hz  | 60   |
| Operating head             | m    |     | Number of poles |     | 2    |
| Impeller diameter designed | mm   | 118 | Speed           | rpm | 3540 |

Test standard: ISO 9906:2012 - Grade3B

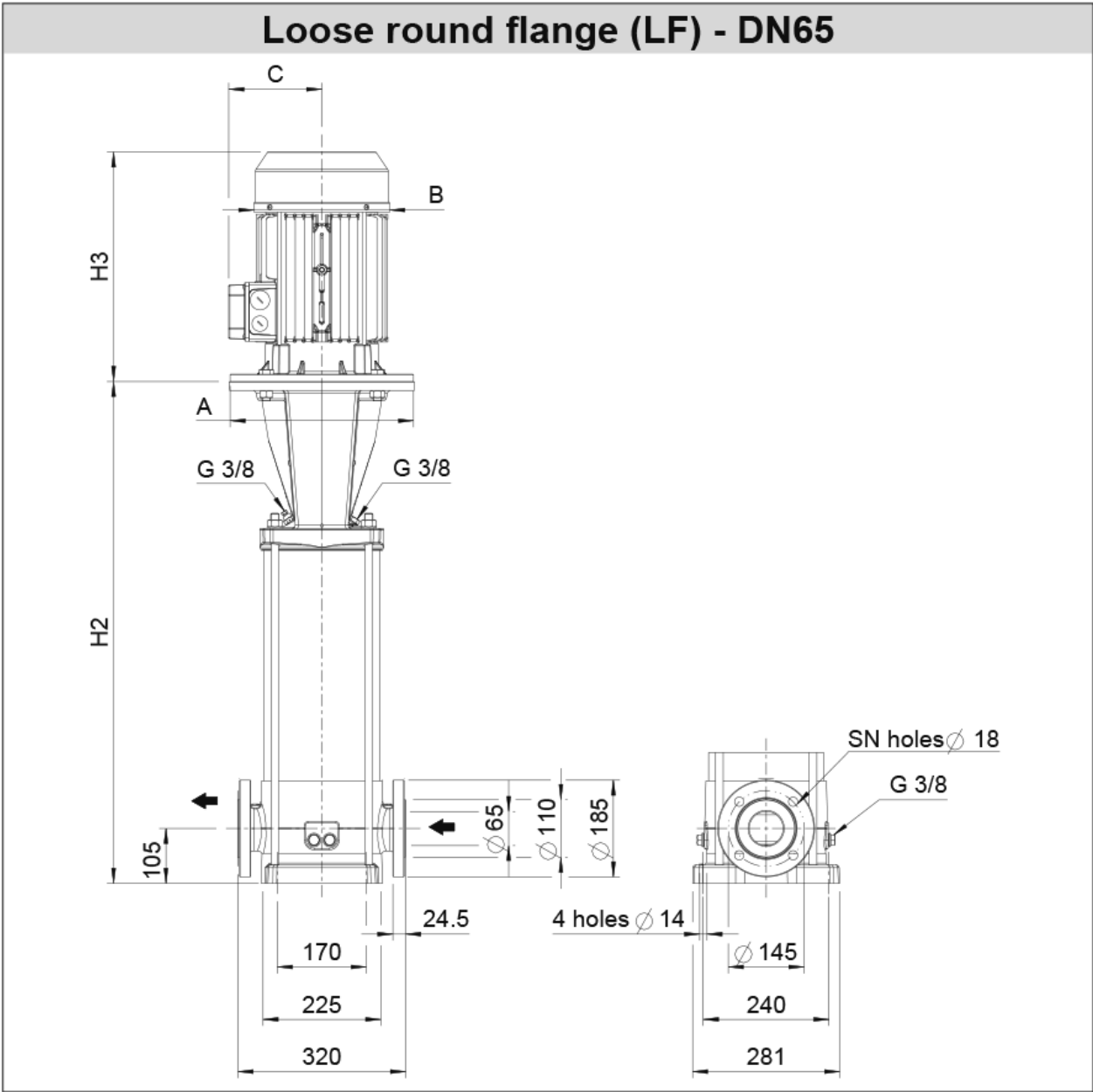
Water; 20°C; 998.3kg/m³; 1mm²/s



# Dimensions

Pump Name EVMS32 5-0LF6BQ1EG/15

|          |                                                 |           |
|----------|-------------------------------------------------|-----------|
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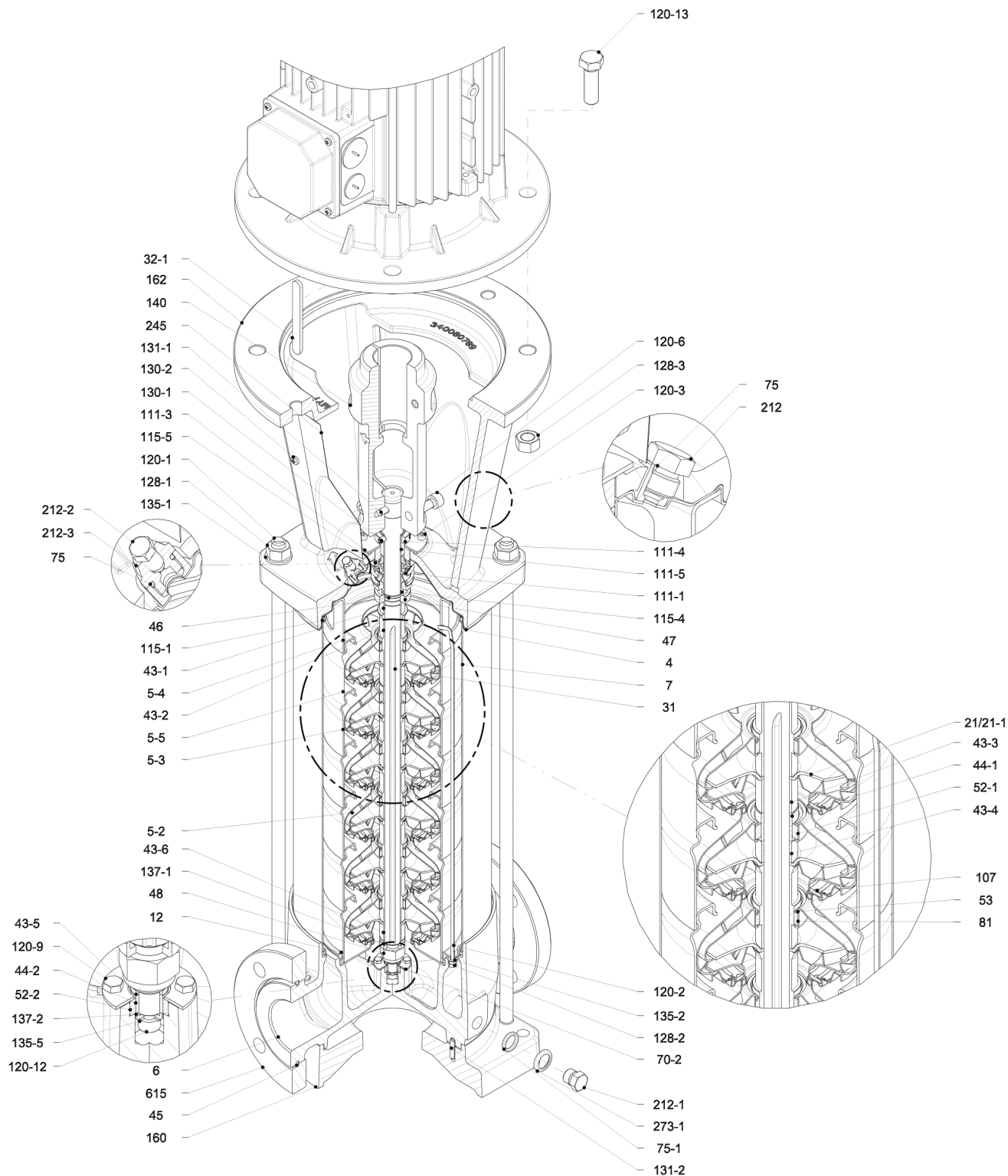


| Dimensions in mm |                 |        |  |  |  |  |  |
|------------------|-----------------|--------|--|--|--|--|--|
| 1                | A               | Dia350 |  |  |  |  |  |
| 2                | B               | 311    |  |  |  |  |  |
| 3                | C               | 240    |  |  |  |  |  |
| 4                | H2              | 875    |  |  |  |  |  |
| 5                | H2+H3           | 1370   |  |  |  |  |  |
| 6                | SN              | 4      |  |  |  |  |  |
| 7                | Weight P&M (kg) | 169.1  |  |  |  |  |  |
| 8                |                 |        |  |  |  |  |  |
| 9                |                 |        |  |  |  |  |  |
| 10               |                 |        |  |  |  |  |  |
| 11               |                 |        |  |  |  |  |  |
| 12               |                 |        |  |  |  |  |  |
| 13               |                 |        |  |  |  |  |  |
| 14               |                 |        |  |  |  |  |  |
| 15               |                 |        |  |  |  |  |  |

(1/3)  
Construction

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|          |                                                  |           |
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| E-mail   | Project ID Proiect redenumit 2024-07-01 19:11:46 | E-mail    |



(2/3)

Construction

Pump Name EVMS32 5-OLF6BQ1EG/15

|          |            |                                       |           |
|----------|------------|---------------------------------------|-----------|
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| E-mail   | Project ID | Proiect redenumit 2024-07-01 19:11:46 | 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)                    |              |          | 3   |
| 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)                    |              |          | 5   |
| 31     | Shaft                            | EN 1.4301 (AISI 304)                                         | EN 1.4404 (AISI 316L)                    |              |          | 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)                    |              |          | 4   |
| 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)<br>with inox insert                     | EN 1.4401 (AISI 316)<br>with inox insert |              |          | 1   |
| 52-1   | Sleeve bearing                   | Tungsten carbide                                             |                                          |              |          | 1   |
| 52-2   | Sleeve bearing (bottom casing)   | Tungsten carbide                                             |                                          |              |          | 1   |
| 53     | Bush holder                      | EN 1.4301 (AISI 304)                                         | EN 1.4404 (AISI 316L)                    |              |          | 5   |
| 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                                                         |                                          |              |          | 4   |
| 107    | Liner ring                       | EN 1.4301 (AISI 304) + PPS                                   | EN 1.4404 (AISI 316L) + PPS              |              |          | 5   |
| 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   |
| 120-9  | 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<br>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                                                        |                                          | M5           | ISO 4032 | 4   |
| 128-3  | Nut (motor)                      | MEC 160-180-200<br>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<br>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 | 2   |
| 135-5  | Washer (impeller nut)            | EN 1.4301 (AISI 304)                                         | EN 1.4404 (AISI 316L)                    |              |          | 1   |
| 137-1  | Impeller spacer                  | EN 1.4301 (AISI 304)                                         | EN 1.4404 (AISI 316L)                    |              |          | 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<br>Cast Iron EN GJL250 EN 1561          |                                          |              |          | 2   |
| 160    | Base                             | Cast Iron EN GJL200 EN 1561                                  |                                          |              |          | 1   |
| 162    | Motor bracket                    | up to 30 kW<br>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

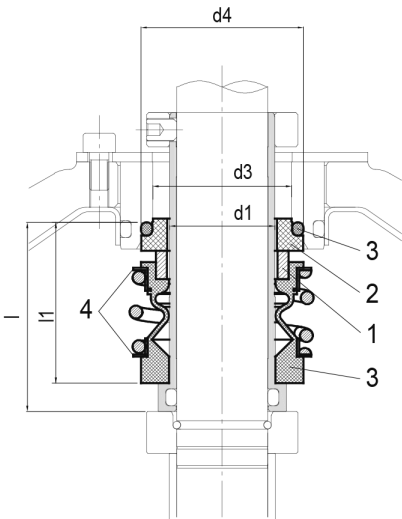
(3/3)

Construction

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● Standard

| 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 |  |
| 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    |