

# Technical data

Pump name 4BHS/A 15-6

|          |                                                  |           |
|----------|--------------------------------------------------|-----------|
| Customer | Date 2024-06-20                                  | Company   |
| Contact  | Item no.                                         | Issued by |
| Phone    | Project                                          | Phone     |
| E-mail   | Project ID Project redenunit 2024-06-20 14:51:28 | E-mail    |

## Requested data

|   |                           |                              |                       |        |
|---|---------------------------|------------------------------|-----------------------|--------|
| 1 | Pump type                 | SUBMERSIBLE MULTISTAGE PUMPS | 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                 | 4BHS/A 15-6                    | Frequency Hz                         | 60                     |
| 10 | Design                    | SUBMERSIBLE MULTISTAGE PUMPS   | Installation type                    | without motor          |
| 11 | Manufacturer              | EBARA                          | Impeller Diameter                    | Max. mm 72             |
| 12 | Speed rpm                 | 3450                           |                                      | Designed mm 72         |
| 13 | No. of Stage              | 6                              |                                      | Min. mm 72             |
| 14 | Connection Suction side   | -                              | Flow                                 | Operating m³/h         |
| 15 | Connection Discharge side | UNI ISO 228                    |                                      | Max- m³/h 21           |
| 16 | Max Working Pressure bar  |                                |                                      | Min- m³/h 7.2          |
| 17 | Shut-off head bar         | 4.61                           | Head                                 | Operating m            |
| 18 | Total weight kg           | See the table of "Dimensions". |                                      | - (Qmax.) m 13.8       |
| 19 | Shaft power kW            | ( Power / Stage )              |                                      | - (Qmin.) m 38.4       |
| 20 |                           |                                | Max. Shaft Power at max. impeller kW | 2.08 ( Power / Stage ) |
| 21 | Required pump NPSH m      |                                | Efficiency %                         |                        |

## Materials

|    |                     |          |  |  |
|----|---------------------|----------|--|--|
| 22 | Impeller            | AISI 304 |  |  |
| 23 | Intermediate casing | AISI 304 |  |  |
| 24 | Shaft               | AISI 316 |  |  |
| 25 |                     |          |  |  |
| 26 |                     |          |  |  |
| 27 |                     |          |  |  |

## Motor

|    |                      |                                      |                    |  |
|----|----------------------|--------------------------------------|--------------------|--|
| 28 | Manufacturer         | without motor                        | Insulation class   |  |
| 29 | Type                 | without motor 1                      | Phases             |  |
| 30 | Specific design      | without motor / 60 Hz / Pole pairs 1 | Frame size         |  |
| 31 | Rated power kW       |                                      | Weight kg          |  |
| 32 | Number of poles      | 2                                    | Electric voltage V |  |
| 33 | Speed rpm            |                                      | Electric current A |  |
| 34 | Degree of protection |                                      |                    |  |
| 35 |                      |                                      |                    |  |

## Remarks

# Performance curve

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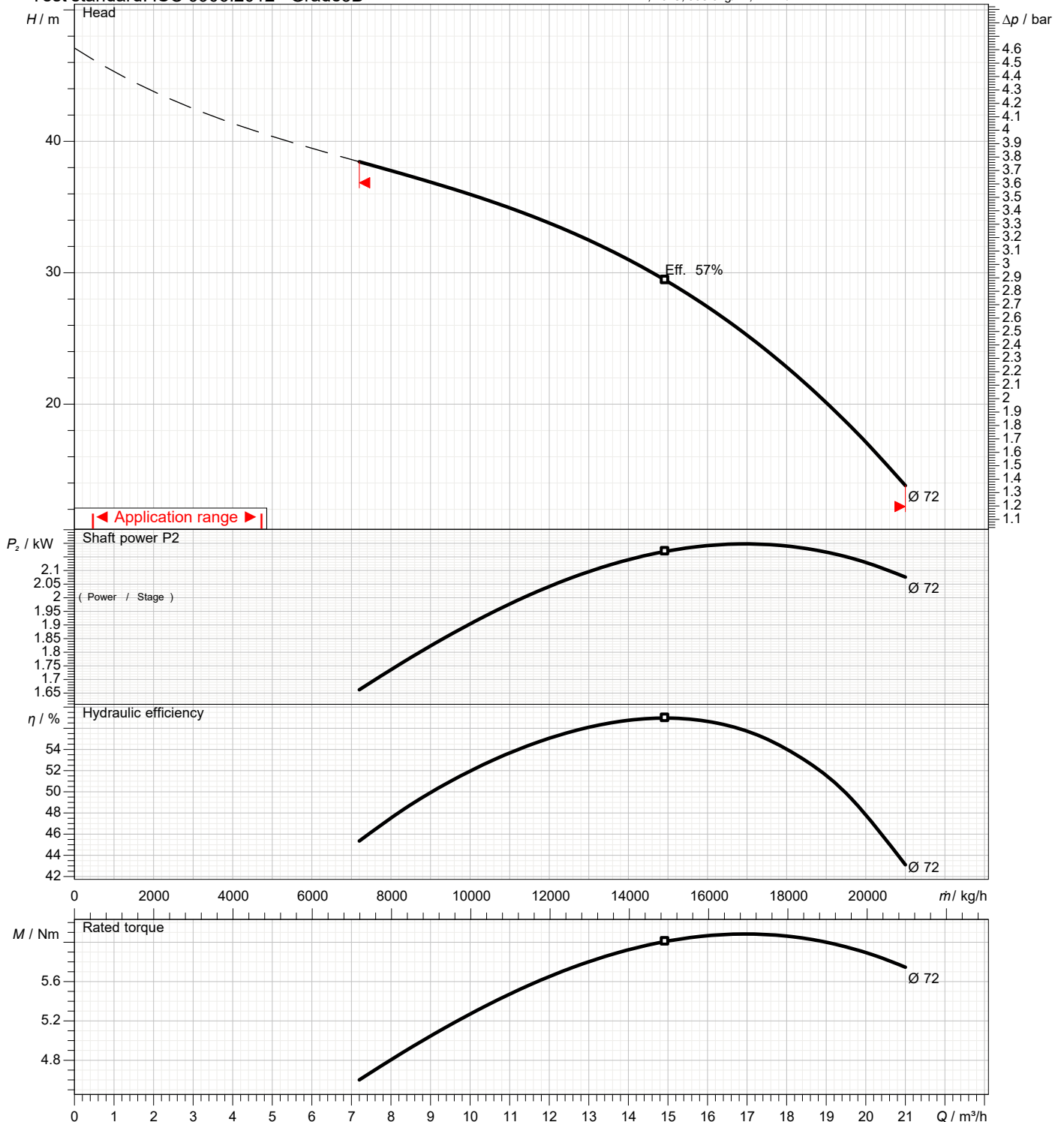
## Requested data

|   |               |      |  |                   |          |    |                 |       |     |      |
|---|---------------|------|--|-------------------|----------|----|-----------------|-------|-----|------|
| 1 | Flow          | m³/h |  | Operating flow    | m³/h     |    | Frequency       | Hz    | 60  |      |
| 2 | Head          | m    |  | Operating head    | m        |    | Number of poles |       | 2   |      |
| 3 | Geodetic head | m    |  | Impeller Diameter | Designed | mm | 72              | Speed | rpm | 3450 |

## Pump

Test standard: ISO 9906:2012 - Grade3B

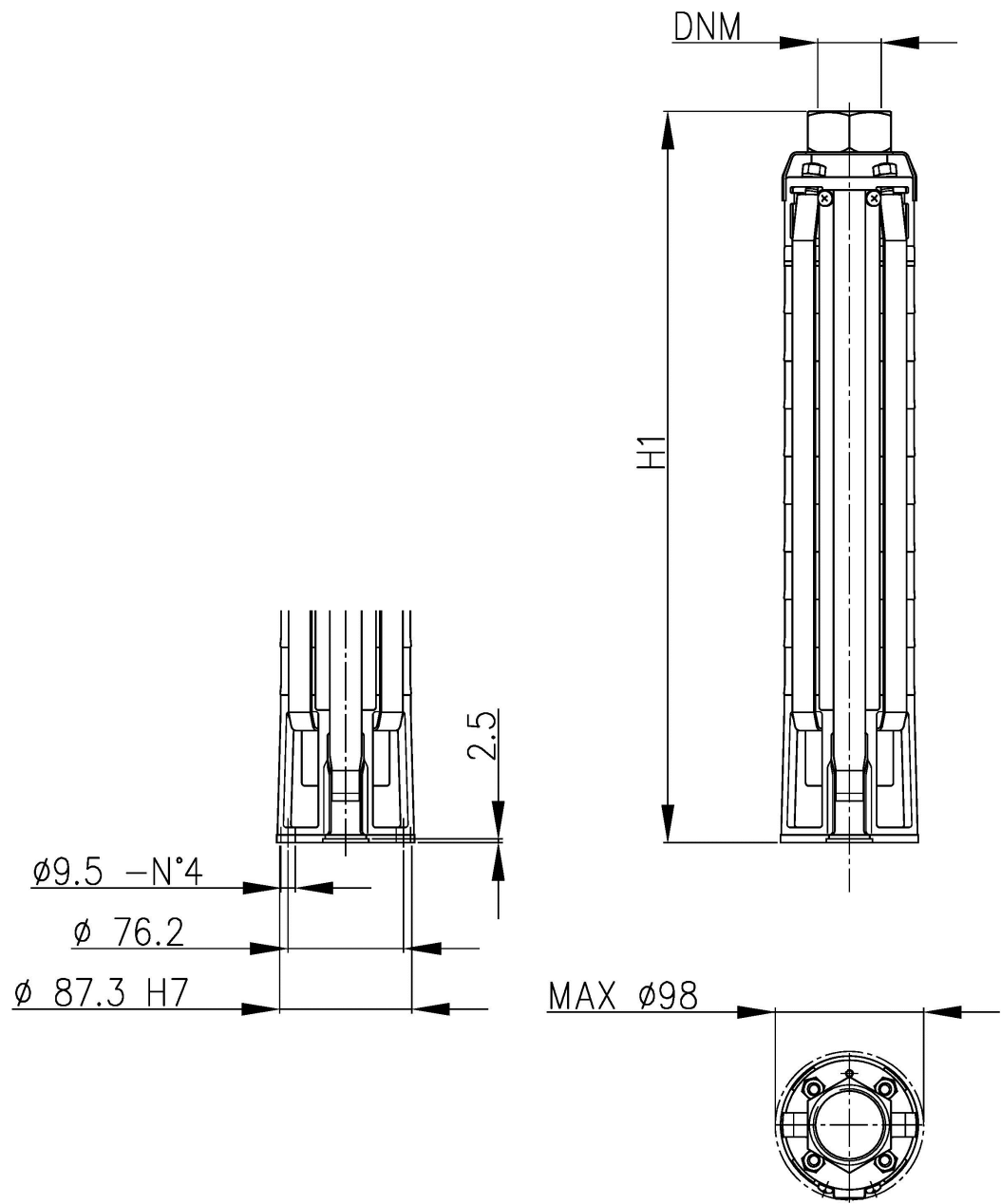
Water; 20°C; 998.3kg/m³; 1mm²/s



# Dimensions

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|          |                                                 |           |
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| Dimensions in mm |        |        |  |  |  |  |  |
|------------------|--------|--------|--|--|--|--|--|
| 1                | DNM    | G 2    |  |  |  |  |  |
| 2                | H1     | 552    |  |  |  |  |  |
| 3                | Weight | 5,4 kg |  |  |  |  |  |
| 4                |        |        |  |  |  |  |  |
| 5                |        |        |  |  |  |  |  |
| 6                |        |        |  |  |  |  |  |
| 7                |        |        |  |  |  |  |  |
| 8                |        |        |  |  |  |  |  |
| 9                |        |        |  |  |  |  |  |
| 10               |        |        |  |  |  |  |  |
| 11               |        |        |  |  |  |  |  |
| 12               |        |        |  |  |  |  |  |
| 13               |        |        |  |  |  |  |  |
| 14               |        |        |  |  |  |  |  |
| 15               |        |        |  |  |  |  |  |

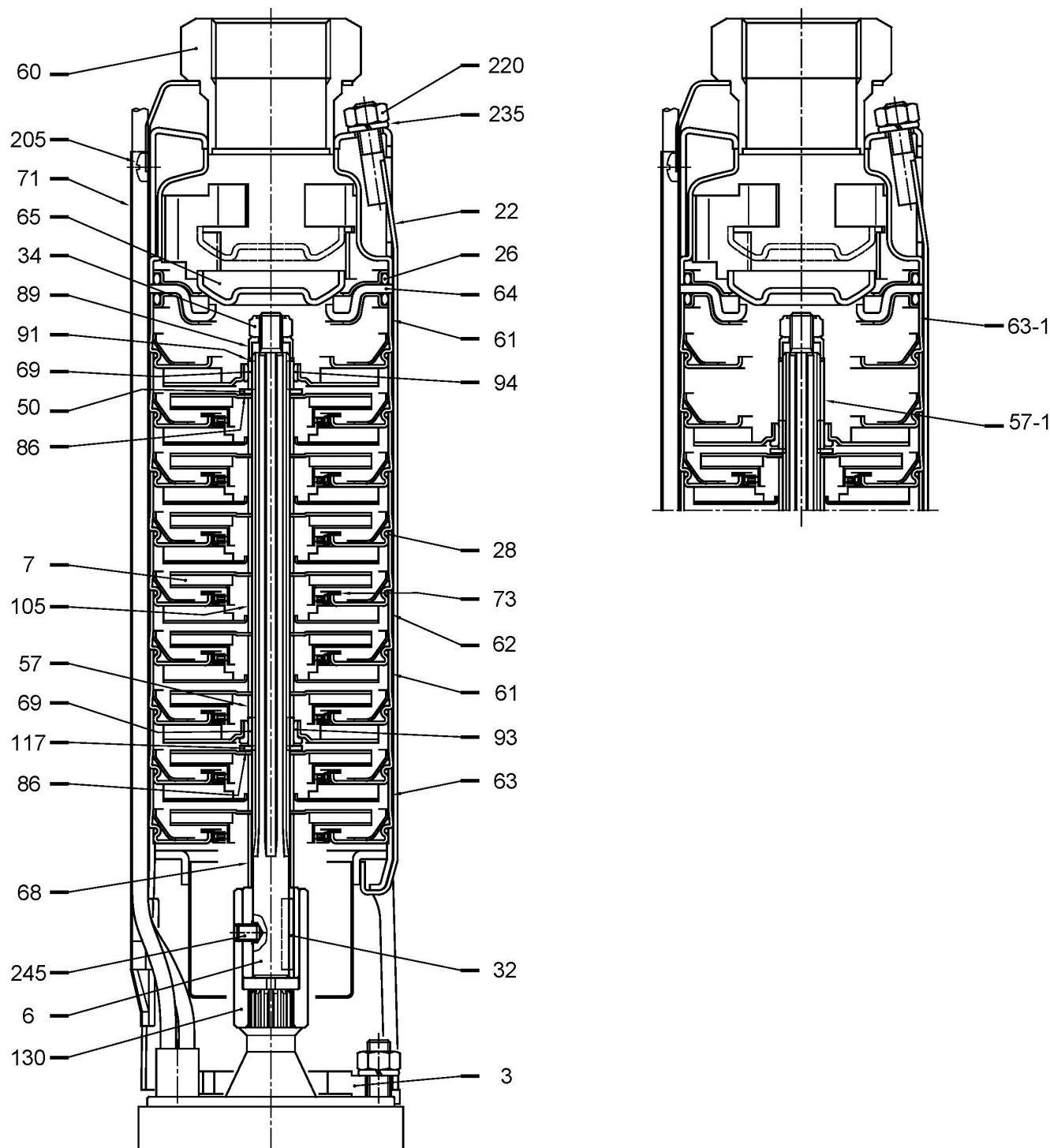
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Construction

Pump name

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|          |                                                 |           |
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## Construction

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|          |                                                  |           |
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| N.   | PART.NAME                   | MATERIAL                                                    | DIMENSIONS            | Q.TY |
|------|-----------------------------|-------------------------------------------------------------|-----------------------|------|
| 3    | Bracket                     | EN 1.4301 (AISI 304)                                        |                       | 1    |
| 6    | Pump shaft                  | EN 1.4401 (AISI 316)                                        |                       | 1    |
| 7    | Impeller                    | EN 1.4301 (AISI 304)                                        |                       | [1]  |
| 22   | Strap                       | EN 1.4301 (AISI 304)                                        |                       | 4    |
| 26   | "O" ring                    | NBR                                                         | 3 x 74.5              | 2    |
| 28   | "O" ring                    | NBR                                                         | 1.85 x 78.4           | [1]  |
| 32   | Key                         | EN 1.4401 (AISI 316)                                        | A 4 x 4 x 25 UNI 6604 | 1    |
| 34   | Impeller nut self locking   | A2-70 UNI EN ISO 3506-1<br>with EN 1.4301 (AISI 304) insert | M8 UNI 7474           | 1    |
| 50   | Washer                      | EN 1.4301 (AISI 304)                                        |                       | [1]  |
| 57   | Bearing spacer              | EN 1.4301 (AISI 304)                                        |                       | [1]  |
| 57-1 | Spacer                      | EN 1.4301 (AISI 304)                                        |                       | [1]  |
| 60   | Discharge casing            | EN 1.4301 (AISI 304)                                        |                       | 1    |
| 61   | Intermediate casing bearing | EN 1.4301 (AISI 304)                                        |                       | [1]  |
| 62   | Intermediate casing         | EN 1.4301 (AISI 304)                                        |                       | [1]  |
| 63   | Intermediate casing suction | EN 1.4301 (AISI 304)                                        |                       | 1    |
| 63-1 | Intermediate casing         | EN 1.4301 (AISI 304)                                        |                       | [1]  |
| 64   | Valve seat                  | EN 1.4301 (AISI 304) + NBR                                  |                       | 1    |
| 65   | Valve                       | EN 1.4301 (AISI 304)                                        |                       | 1    |
| 68   | Spacer                      | EN 1.4301 (AISI 304)                                        |                       | 1    |
| 69   | Shaft sleeve                | Tungsten carbide                                            |                       | [1]  |
| 71   | Cable cover                 | EN 1.4301 (AISI 304)                                        |                       | 1    |
| 73   | Liner ring                  | EN 1.4301 (AISI 304) + EPDM                                 |                       | [1]  |
| 86   | Spacer                      | EN 1.4301 (AISI 304)                                        |                       | [1]  |
| 89   | Washer                      | EN 1.4301 (AISI 304)                                        |                       | 1    |
| 91   | Spacer                      | EN 1.4301 (AISI 304)                                        |                       | [1]  |
| 93   | Axial bearing               | Tungsten carbide                                            |                       | 1    |
| 94   | Radial bearing              | Tungsten carbide                                            |                       | [1]  |
| 105  | Spacer                      | EN 1.4301 (AISI 304)                                        |                       | [1]  |
| 117  | Friction ring               | Tungsten carbide                                            |                       | 1    |
| 130  | Coupling                    | EN 1.4301 (AISI 304)                                        |                       | 1    |
| 205  | Screw                       | EN 1.4301 (AISI 304)                                        | M5 x 6 UNI 7687       | 2    |
| 220  | Nut                         | EN 1.4301 (AISI 304)                                        | M8 UNI 5588           | 4    |
| 235  | Washer                      | EN 1.4301 (AISI 304)                                        | 8,4 UNI 1751          | 4    |
| 245  | Set screw                   | EN 1.4301 (AISI 304)                                        | M6 x 8 UNI 5923       | 1    |

[1] See **CONSTRUCTION 3**

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Construction

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| Pump type    | POS. 7<br>Impeller | POS. 28<br>"O" ring | POS. 50<br>Washer | POS. 57<br>Bearing<br>spacer | POS. 57-1<br>Spacer | POS. 61<br>Intermediate<br>casing<br>bearing | POS. 62<br>Intermediate<br>casing | POS. 63-1<br>Intermediate<br>casing | POS. 69<br>Shaft<br>sleeve | POS. 73<br>Liner<br>ring | POS. 86<br>Spacer | POS. 91<br>Spacer | POS. 94<br>Radial<br>bearing | POS. 105<br>Spacer |
|--------------|--------------------|---------------------|-------------------|------------------------------|---------------------|----------------------------------------------|-----------------------------------|-------------------------------------|----------------------------|--------------------------|-------------------|-------------------|------------------------------|--------------------|
| 4BHS/A 15-4  | 4                  | 5                   | /                 | /                            | /                   | 1                                            | 3                                 | /                                   | 1                          | 4                        | /                 | /                 | /                            | 3                  |
| 4BHS/A 15-6  | 6                  | 8                   | /                 | /                            | 2                   | 1                                            | 5                                 | 1                                   | 1                          | 6                        | /                 | /                 | /                            | 5                  |
| 4BHS/A 15-9  | 9                  | 11                  | 1                 | 1                            | 2                   | 2                                            | 7                                 | 1                                   | 2                          | 9                        | /                 | /                 | 1                            | 7                  |
| 4BHS/A 15-12 | 12                 | 14                  | 1                 | 1                            | 2                   | 2                                            | 10                                | 1                                   | 2                          | 12                       | /                 | /                 | 1                            | 10                 |
| 4BHS/A 15-17 | 17                 | 18                  | 2                 | 2                            | /                   | 3                                            | 14                                | /                                   | 3                          | 17                       | /                 | /                 | 2                            | 14                 |