

# Technical Data

Pump Name

BHSE 8160-9 5/74.6 Mi8S

|          |            |                                       |           |
|----------|------------|---------------------------------------|-----------|
| Customer | Date       | 2024-06-13                            | Company   |
| Contact  | Item no.   |                                       | Issued by |
| Phone    | Project    |                                       | Phone     |
| E-mail   | Project ID | Proiect redenumit 2024-06-13 13:12:02 | 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            |                | BHSE 8160-9 5/74.6 Mi8S        | Frequency                         | Hz             | 50       |
| 10 | Design               |                | SUBMERSIBLE MULTISTAGE PUMPS   | Installation type                 |                | STANDARD |
| 11 | Manufacturer         |                | EBARA                          | Impeller Diameter                 | Max. mm        | 137      |
| 12 | Speed                | rpm            | 2900                           |                                   | Designed mm    | 137      |
| 13 | No. of Stage         |                | 9                              |                                   | Min. mm        | 137      |
| 14 | Connection           | Suction side   |                                | Flow                              | Operating m³/h |          |
| 15 | Connection           | Discharge side |                                |                                   | Max- m³/h      | 150      |
| 16 | Max Working Pressure | bar            |                                |                                   | Min- m³/h      | 60       |
| 17 | Shut-off head        | bar            | 22.32                          | Head                              | Operating m    |          |
| 18 | Total weight         | kg             | See the table of "Dimensions". |                                   | - (Qmax.) m    | 153.7    |
| 19 | Shaft power          | kW             |                                |                                   | - (Qmin.) m    | 213.3    |
| 20 |                      |                |                                | Max. Shaft Power at max. impeller | kW             | 77.19    |
| 21 | Required pump NPSH   | m              |                                | Efficiency                        | %              |          |

## Materials

|    |          |  |                                     |               |  |                 |
|----|----------|--|-------------------------------------|---------------|--|-----------------|
| 22 | Casing   |  | Casting iron                        | Washers       |  | Stainless steel |
| 23 | Impeller |  | Stainless steel - precision casting | Paint (Motor) |  | Synthetic alkyd |
| 24 | Shaft    |  | Stainless steel                     |               |  |                 |
| 25 | Stainet  |  | Stainless steel                     |               |  |                 |
| 26 | Screw    |  | Stainless steel                     |               |  |                 |
| 27 | Nuts     |  | Stainless steel                     |               |  |                 |

## Motor

|    |                      |     |  |                  |    |       |
|----|----------------------|-----|--|------------------|----|-------|
| 28 | Manufacturer         |     | EBAS   | Insulation class |    | Y     |
| 29 | Type                 |     | Mi8S 100HP 220V TRIF. 50Hz                           | Phases           |    | 3~    |
| 30 | Specific design      |     | Submersible water filled type / 50 Hz / Pole pairs 1 | Frame size       |    | 8     |
| 31 | Rated power          | kW  | 74.6   | Weight           | kg | 223   |
| 32 | Number of poles      |     | 2  | Electric voltage | V  | 220   |
| 33 | Speed                | rpm | 2913   | Electric current | A  | 263.3 |
| 34 | Degree of protection |     | IP 68  |                  |    |       |
| 35 |                      |     |  |                  |    |       |

## Remarks

# Performance Curve

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## Requested data

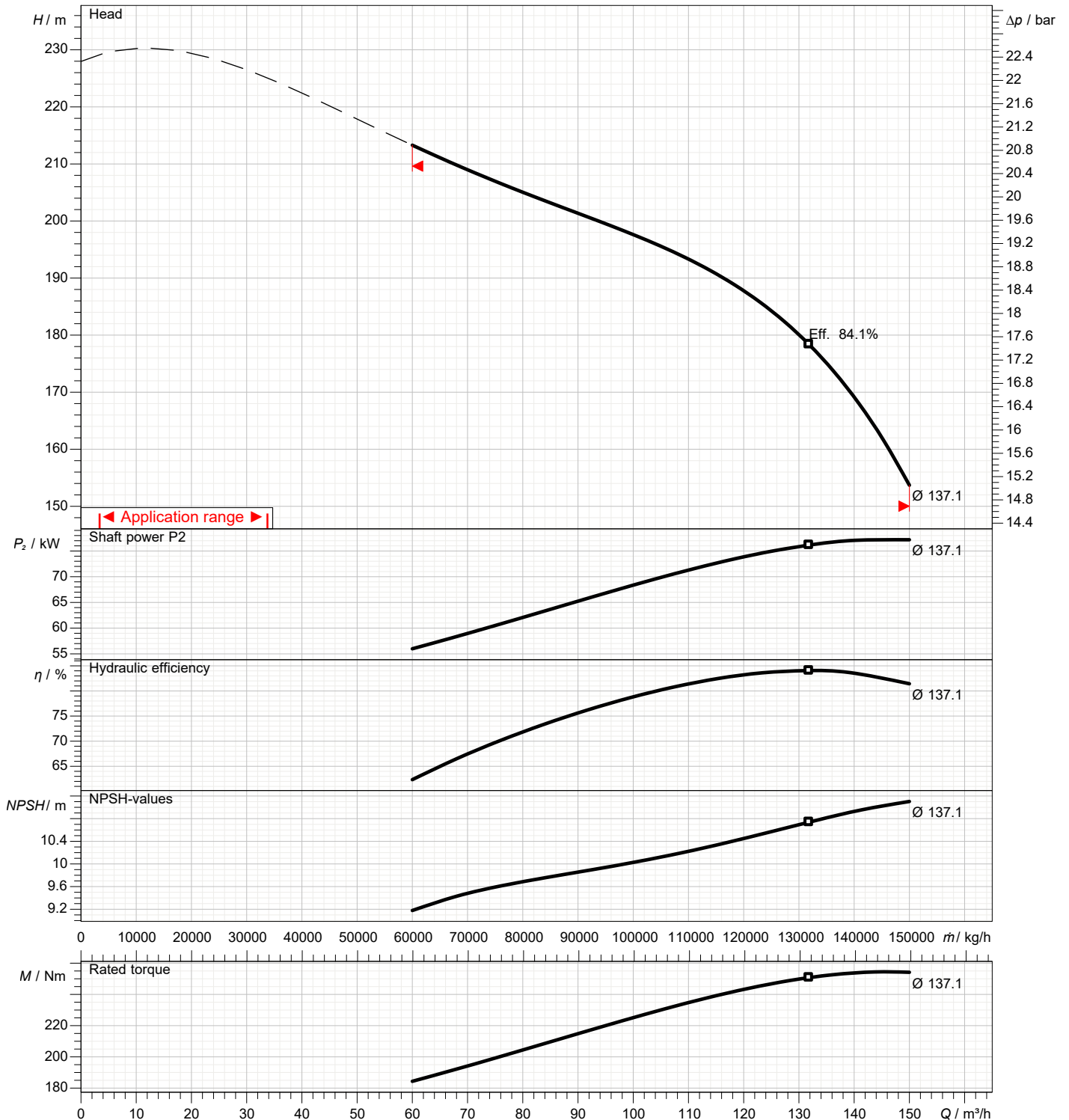
|   |               |      |  |
|---|---------------|------|--|
| 1 | Flow          | m³/h |  |
| 2 | Head          | m    |  |
| 3 | Geodetic head | m    |  |

## Pump

|                            |      |     |                 |     |      |
|----------------------------|------|-----|-----------------|-----|------|
| Operating flow             | m³/h |     | Frequency       | Hz  | 50   |
| Operating head             | m    |     | Number of poles |     | 2    |
| Impeller diameter designed | mm   | 137 | Speed           | rpm | 2900 |

Test standard: ISO 9906:2012 - Grade3B

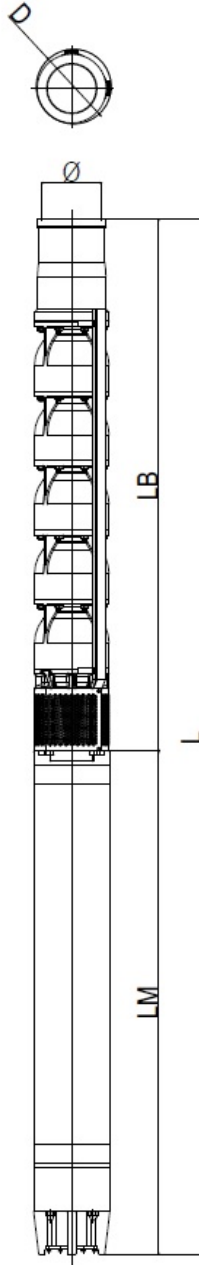
Water; 20°C; 998.3kg/m³; 1mm²/s



# Dimensions

Pump name BHSE 8160-9 5/74.6 Mi8S

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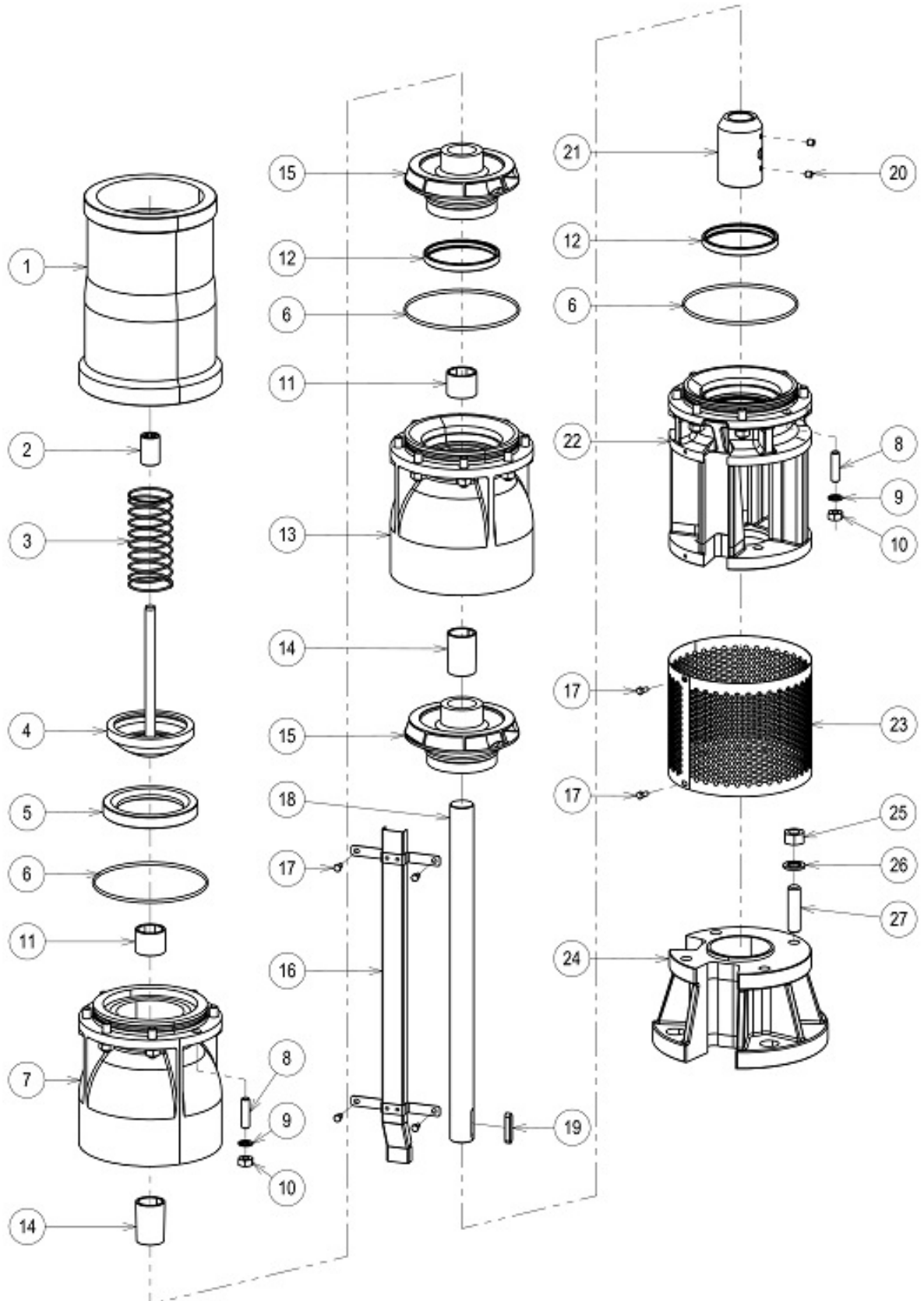
| Dimensions in |                   | mm       |  |  |  |  |  |  |
|---------------|-------------------|----------|--|--|--|--|--|--|
| 1             | D_01 Cable        | 193      |  |  |  |  |  |  |
| 2             | L                 | 3553     |  |  |  |  |  |  |
| 3             | LB                | 2068     |  |  |  |  |  |  |
| 4             | LM                | 1485     |  |  |  |  |  |  |
| 5             | M Weight (kg)     | 223      |  |  |  |  |  |  |
| 6             | P Weight (kg)     | 155.1    |  |  |  |  |  |  |
| 7             | Total Weight (kg) | 378.1    |  |  |  |  |  |  |
| 8             | Φ (inch)          | 5 (inch) |  |  |  |  |  |  |
| 9             |                   |          |  |  |  |  |  |  |
| 10            |                   |          |  |  |  |  |  |  |
| 11            |                   |          |  |  |  |  |  |  |
| 12            |                   |          |  |  |  |  |  |  |
| 13            |                   |          |  |  |  |  |  |  |
| 14            |                   |          |  |  |  |  |  |  |
| 15            |                   |          |  |  |  |  |  |  |

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# Construction

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# Construction

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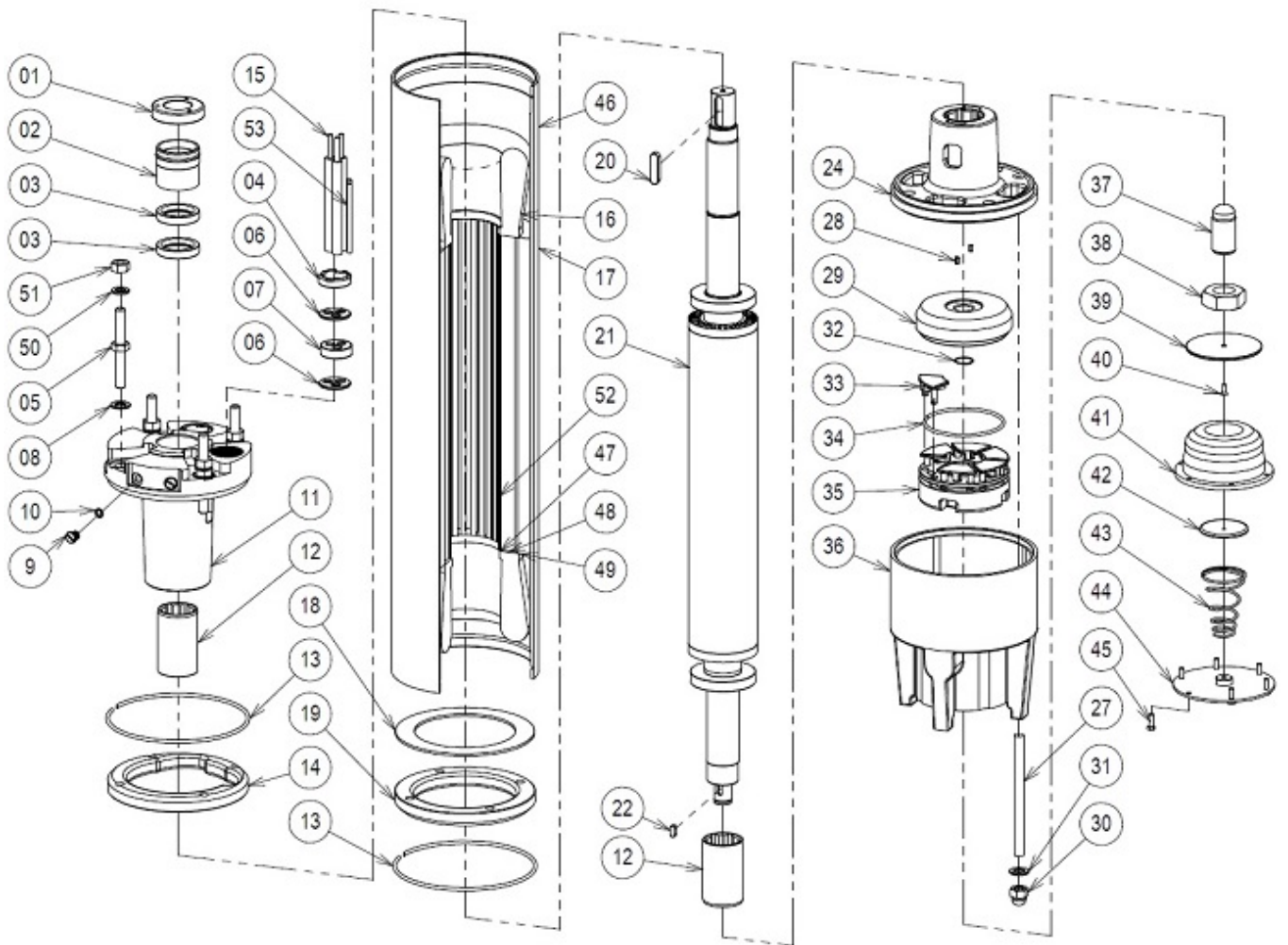
| BHSE8_Parts Table |                       |                 |
|-------------------|-----------------------|-----------------|
| No.               | Name                  | MATERIAL        |
| 1                 | DISCHARGE CASING      | CAST IRON       |
| 2                 | VALVE ROD GUIDE       | BRASS           |
| 3                 | SPRING                | STAINLESS STEEL |
| 4                 | VALVE DISK            | STAINLESS STEEL |
| 5                 | VALVE SHEET           | NBR RUBBER      |
| 6                 | O-RING                | NBR             |
| 7                 | INTERMEDIATE CASING 2 | CAST IRON       |
| 8                 | STUD BOLT             | STAINLESS STEEL |
| 9                 | SPRING WASHER         | STAINLESS STEEL |
| 10                | NUT                   | STAINLESS STEEL |
| 11                | BEARING SLEEVE        | NBR             |
| 12                | CASING WEARING RING   | BRASS           |
| 13                | INTERMEDIATE CASING   | CAST IRON       |
| 14                | TAPER COLLET          | STAINLESS STEEL |
| 15                | IMPELLER              | STAINLESS STEEL |
| 16                | CABLE COVER           | STAINLESS STEEL |
| 17                | BOLT                  | STAINLESS STEEL |
| 18                | SHAFT                 | STAINLESS STEEL |
| 19                | KEY                   | STAINLESS STEEL |
| 20                | BOLT                  | CARBON STEEL    |
| 21                | COUPLING              | STAINLESS STEEL |
| 22                | SUCTION CASING        | CAST IRON       |
| 23                | STRAINER              | STAINLESS STEEL |
| 24                | ADAPTER               | CAST IRON       |
| 25                | NUT                   | STAINLESS STEEL |
| 26                | SPRING WASHER         | STAINLESS STEEL |
| 27                | STUD BOLT             | STAINLESS STEEL |

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| Motor Mi8S_Parts Table |                         |                              |
|------------------------|-------------------------|------------------------------|
| No.                    | Name                    | MATERIAL                     |
| 1                      | SAND SLINGER            | CARBON STEEL/NBR             |
| 2                      | SEAL COVER              | CARBON STEEL                 |
| 3                      | OIL SEAL                | NBR                          |
| 4                      | CABLE NUT               | STAINLESS STEEL              |
| 5                      | STUD BOLT               | STAINLESS STEEL              |
| 6                      | PRESSURE RING FOR CABLE | BRASS                        |
| 7                      | CABLE GLAND             | NBR                          |
| 8                      | METAL GASKET            | BRASS                        |
| 9                      | PLUG                    | BRASS                        |
| 10                     | O-RING                  | NBR                          |
| 11                     | UPPER BRACKET           | CAST IRON                    |
| 12                     | UPPER BEARING           | GRAPHITE                     |
| 13                     | STOP RING               | CARBON STEEL                 |
| 14                     | UPPER FRAME RING        | CARBON STEEL                 |
| 15                     | LEAD CABLE              | CUPPER                       |
| 16                     | COIL                    | CUPPER                       |
| 17                     | MOTOR FRAME             | STAINLESS STEEL              |
| 18                     | COIL PROTECTOR          | PVC                          |
| 19                     | LOWER FRAME RING        | CARBON STEEL                 |
| 20                     | KEY                     | STAINLESS STEEL              |
| 21                     | ROTOR WITH SHAFT        | STAINLESS STEEL/CARBON STEEL |
| 22                     | KEY                     | STAINLESS STEEL              |
| 23                     | LOWER BEARING           | GRAPHITE                     |
| 24                     | LOWER BRACKET           | CAST IRON                    |
| 27                     | STUD BOLT               | STAINLESS STEEL              |
| 28                     | LOCKING PIN             | STAINLESS STEEL              |
| 29                     | THRUST DISK             | STAINLESS STEEL/GRAPHITE     |
| 30                     | NUT CAP                 | CARBON STEEL                 |
| 31                     | METAL GASKET            | BRASS                        |
| 32                     | STOP RING               | CARBON STEEL                 |
| 33                     | THRUST PAD              | STAINLESS STEEL              |
| 34                     | O-RING                  | NBR                          |
| 35                     | OSCILLATING DISC        | CAST IRON                    |
| 36                     | THRUST BEARING HOUSING  | CAST IRON                    |
| 37                     | ADJUSTING NUT           | CARBON STEEL                 |
| 38                     | NUT                     | CARBON STEEL                 |
| 39                     | DIAPHRAGM PROTECTOR     | STAINLESS STEEL              |
| 40                     | PLUG                    | BRASS                        |
| 41                     | DIAPHRAGM               | CR                           |
| 42                     | SPRING DISC             | STAINLESS STEEL              |
| 43                     | SPRING                  | STAINLESS STEEL              |
| 44                     | DIAPHRAGM COVER         | STAINLESS STEEL              |
| 45                     | BOLT                    | CARBON STEEL                 |
| 46                     | COMPLETE STATOR         | -                            |
| 47                     | SLOT ISOLATOR           | POLYESTER                    |
| 48                     | WEDGE ISOLATOR          | POLYESTER                    |
| 49                     | WEDGE                   | PLASTIC                      |
| 50                     | SPRING WASHER           | STAINLESS STEEL              |
| 51                     | NUT                     | STAINLESS STEEL              |