

Technical data

Pump name

MATRIX 18-5T/4.0

| | | |
|----------|------------------|-----------|
| Customer | Date 29-May-2018 | Company |
| Contact | Item no. | Issued by |
| Phone | Project | Phone |
| E-mail | Project ID | E-mail |

Requested data

| | | | | |
|---|---------------------------|-----------------------------|--------------------|----------------------|
| 1 | Pump type | HORIZONTAL MULTISTAGE PUMPS | Fluid | "Water, clean" |
| 2 | Number of pumps / Reserve | 2 / 0 | Liquid temperature | °C 20 |
| 3 | Flow | m ³ /h 24 | Kin. viscosity | mm ² /s 1 |
| 4 | Head | m 50 | Vapour pressure | bar 0.022 |
| 5 | Static head | m 0 | PH value | 7 |
| 6 | Inlet pressure | bar 0 | Density | kg/dm ³ 1 |
| 7 | Available system NPSH | 0 | Solids | Weight % 0 |
| 8 | Environmental temperature | °C 20 | Altitude | m 1000 |

Pump

| | | | | |
|----|---------------------------|-----------------------------------|-----------------------------------|----------------------------------|
| 9 | Pump name | MATRIX 18-5T/4.0 | Frequency | Hz 50 |
| 10 | Design | HORIZONTAL MULTISTAGE PUMPS | Installation type | STANDARD |
| 11 | Manufacturer | EPE | Impeller Diameter | Max. mm 107 |
| 12 | Speed | 1/min 2850 | | Designed mm 107 |
| 13 | No. of Stage | 5 | | Min. mm 107 |
| 14 | Connection Suction side | UNI ISO 228 | Flow | Operating m ³ /h 12.1 |
| 15 | Connection Discharge side | UNI ISO 228 | | Max- m ³ /h 27 |
| 16 | Max Working Pressure | bar 10 | | Min- m ³ /h 7.8 |
| 17 | Shut-off head | bar 5.92 | Head | Operating m 50.6 |
| 18 | Total weight | kg See the table of "Dimensions". | | - (Qmax.) m 12.9 |
| 19 | Shaft power | kW 2.86 | | - (Qmin.) m 54.9 |
| 20 | | | Max. Shaft Power at max. impeller | kW 3.02 |
| 21 | Required NPSH | m 1.9 | Efficiency | % 57.9 |

Materials

| | | | |
|----|----------|------------------------|--|
| 22 | Impeller | AISI 304 | |
| 23 | Casing | AISI 304 | |
| 24 | Shaft | AISI 304 wet extension | |
| 25 | | | |
| 26 | | | |
| 27 | | | |

Motor

| | | | | |
|----|----------------------|---------------------------------------|------------------|--------|
| 28 | Manufacturer | EPE Standard | Insulation class | F |
| 29 | Type | TEFC_MATRIX 18-5T/4.0_230_Three Phase | Phases | 3~ |
| 30 | Specific design | IE3 / 50 Hz / Pole pairs 1 | Frame size | |
| 31 | Rated power | kW 4 | Weight | kg 0 |
| 32 | Number of poles | 2 | Electric voltage | V 230 |
| 33 | Speed | 1/min 2850 | Electric current | A 15.1 |
| 34 | Degree of protection | IP 55 | | |
| 35 | | | | |

Remarks

Performance curve Pump name MATRIX 18-5T/4.0

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Requested data

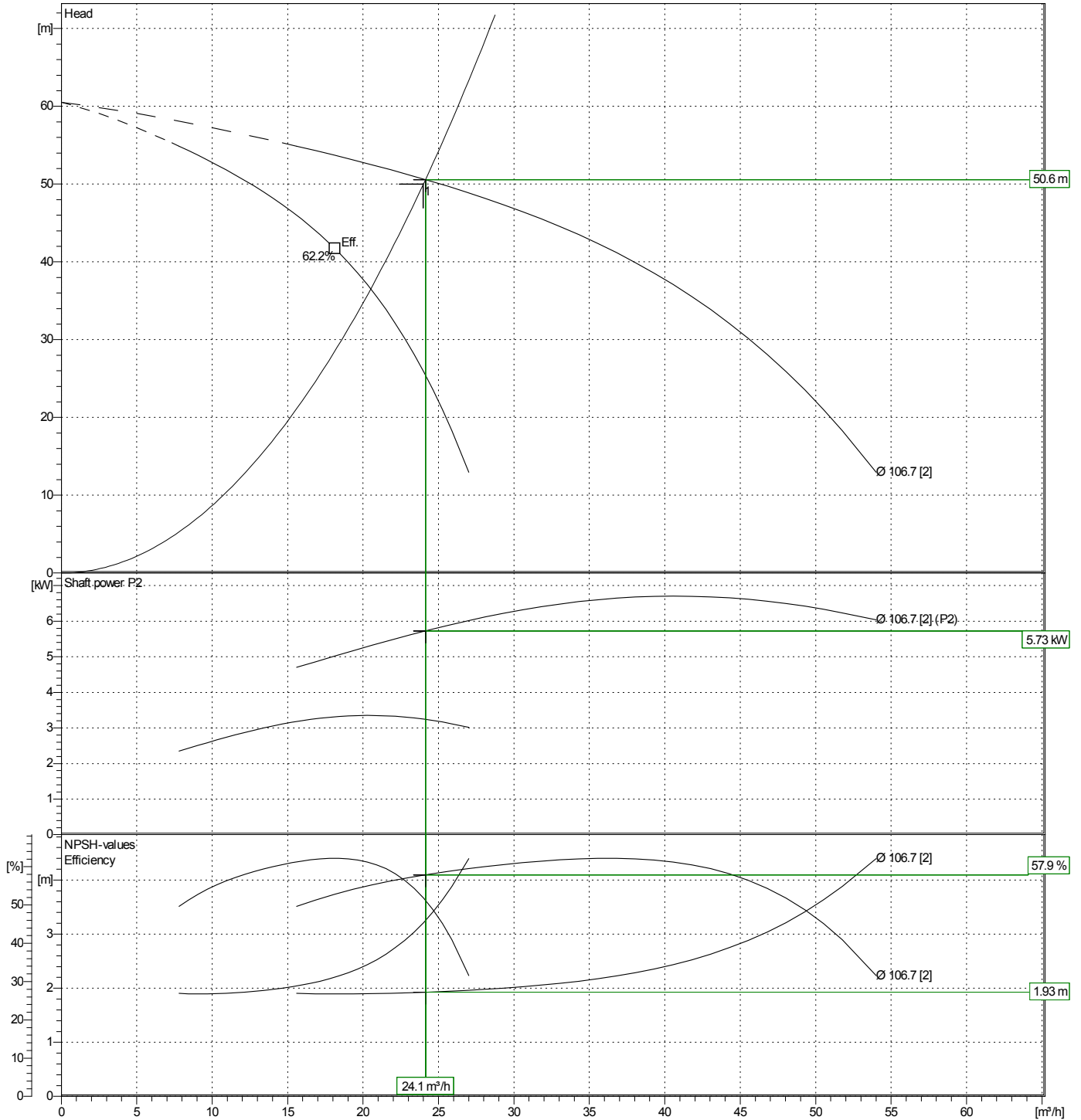
| | | | |
|---|-------------|-------------------|----|
| 1 | Flow | m ³ /h | 24 |
| 2 | Head | m | 50 |
| 3 | Static head | m | 0 |

Pump

| | | | | | |
|-------------------|-------------------|------|-----------------|-------|------|
| Operating Flow | m ³ /h | 12.1 | Frequency | Hz | 50 |
| Operating Head | m | 50.6 | Number of poles | | 2 |
| Impeller Diameter | Designed mm | 107 | Speed | 1/min | 2850 |

Test standard: ISO 9906:2012 - Grade3B

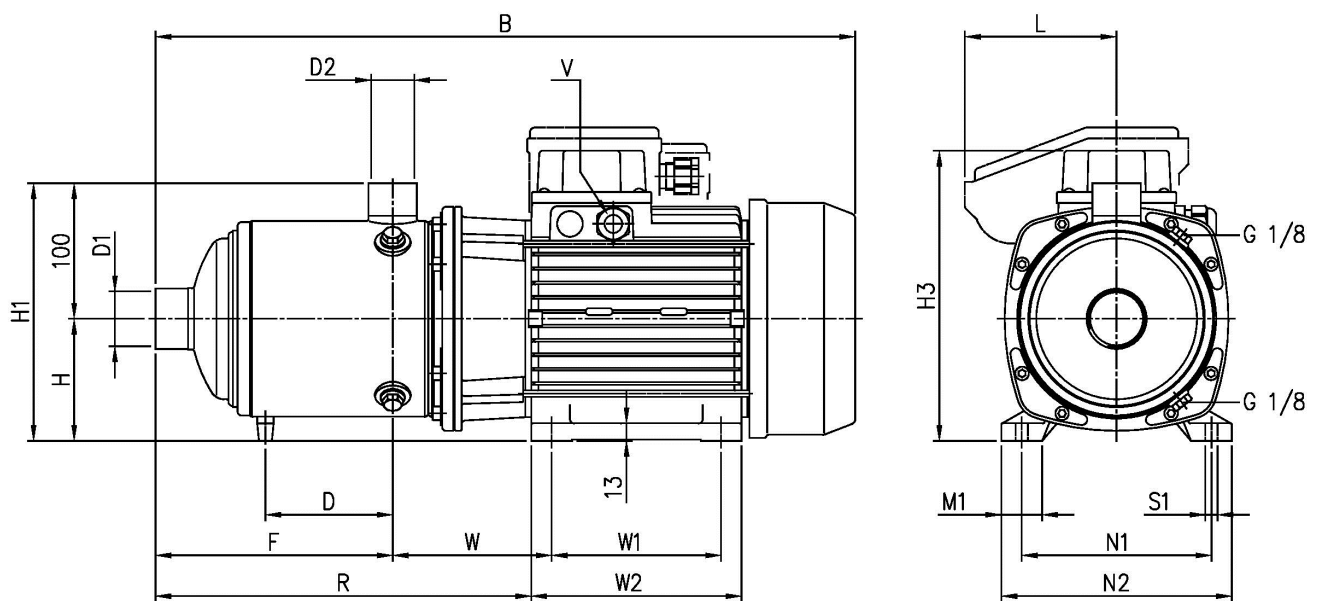
Water, clean [100%] ; 20°C; 0.9983kg/dm³; 1mm²/s



Dimensions

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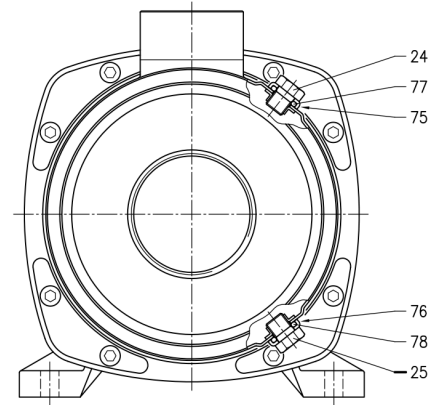
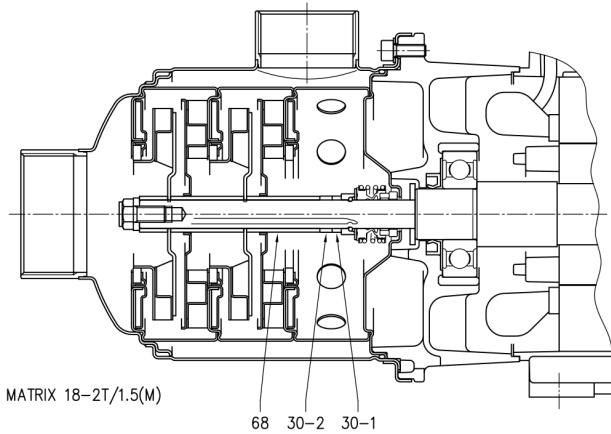
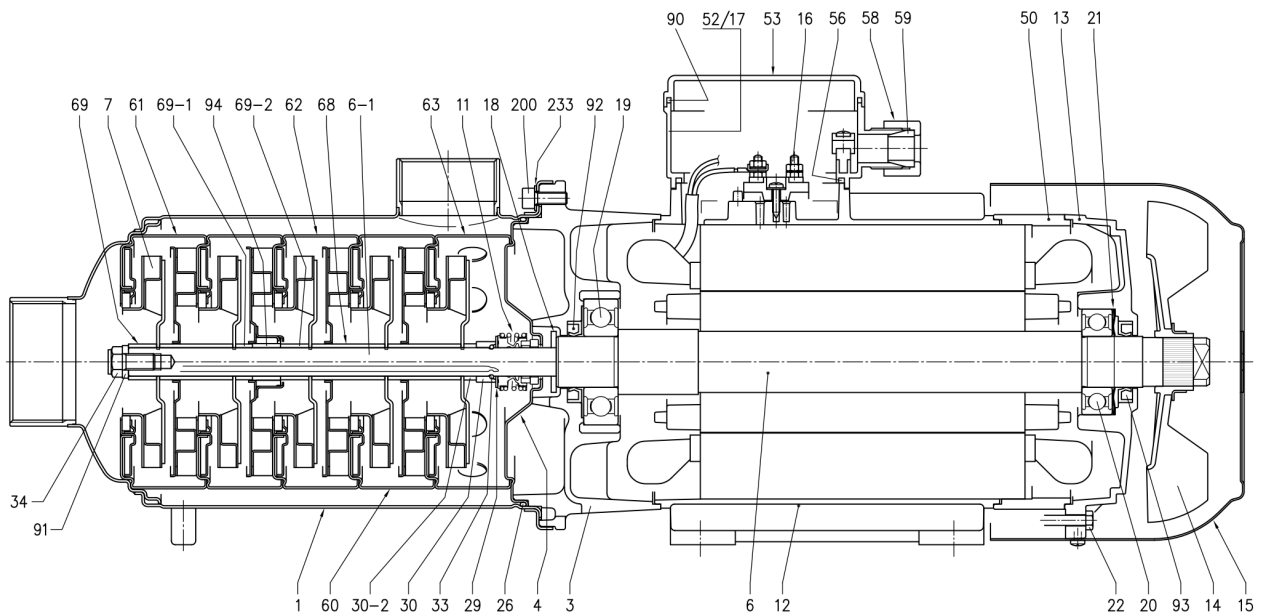


| Dimensions in | | mm | | | | | | |
|---------------|--------|--------|------------|---------|--|--|--|--|
| 1 | B | 615 | V | M20X1.5 | | | | |
| 2 | D | 123 | W | 114 | | | | |
| 3 | Dia D1 | 2" | W1 | 140 | | | | |
| 4 | Dia D2 | 1" 1/2 | W2 | 170 | | | | |
| 5 | F | 216 | Weight P&M | 33.2 kg | | | | |
| 6 | H | 100 | | | | | | |
| 7 | H1 | 200 | | | | | | |
| 8 | H3 | 241 | | | | | | |
| 9 | M1 | 35 | | | | | | |
| 10 | N1 | 160 | | | | | | |
| 11 | N2 | 192 | | | | | | |
| 12 | R | 315 | | | | | | |
| 13 | S1 | 11 | | | | | | |

(1/4) Construction

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(2/4)**Construction****Pump name MATRIX 18-5T/4.0**

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| N° | PART NAME | MATERIAL | DIMENSION | STANDARD | Q.TY |
|------|---------------------------------|---------------------------------------|-------------|----------|------|
| 1 | Casing | EN 1.4301 (AISI 304) | | | 1 |
| 3 | Bracket | EN AB-AISI11Cu2(Fe) | | | 1 |
| 4 | Casing cover | EN 1.4301 (AISI 304) | | | 1 |
| 6 | Shaft with rotor | - | | | 1 |
| 6-1 | Pump Shaft | EN 1.4301 (AISI 304) | | | 1 |
| 7 | Impeller | EN 1.4301 (AISI 304) | | | [1] |
| 11 | Mechanical seal [4] | Carbon/Ceramic/EPDM | | | 1 |
| 12 | Motor frame with stator | - | | | 1 |
| 13 | Motor cover | Aluminium | | | 1 |
| 14 | Fan | PA6 | | | 1 |
| 15 | Fan cover | Fe P04 Zinc-coated | | | 1 |
| 16 | Terminal board | - | | | 1 |
| 17 | Terminal box cover | Aluminium | | | [1] |
| 18 | Splash ring | NBR | 30x13.5x2.5 | | 1 |
| 19 | Bearing | - | | | 1 |
| 20 | Bearing | - | | | 1 |
| 21 | Adjusting ring | Steel C70 | | | 1 |
| 22 | Tie rod | Fe 42 Zinc-coated | | | 4 |
| 24 | Plug | EN 1.4301 (AISI 304) | | | 1 |
| 25 | Plug | EN 1.4301 (AISI 304) | | | 1 |
| 26 | O-ring | EPDM | | | 1 |
| 29 | Washer | EN 1.4301 (AISI 304) | 25.1x14x1 | | 1 |
| 30 | Ring holder | EN 1.4301 (AISI 304) | | | 1 |
| 30-1 | Shaft sleeve (adjustment) | EN 1.4301 (AISI 304) | | | [1] |
| 30-2 | Shaft sleeve (adjustment) | EN 1.4301 (AISI 304) | | | [1] |
| 33 | Ring | EN 1.4301 (AISI 304) | | | 2 |
| 34 | Screw | EN 1.4301 (AISI 304) | M 8x16 | UNI 5739 | 1 |
| 50 | Motor spacer [3] | Aluminium | | | 1 |
| 52 | Capacitor box [2] | ABS class V-0 | | | 1 |
| 53 | Capacitor box cover [2] | ABS class V-0 | | | 1 |
| 56 | Box gasket | NBR | | | 1 |
| 58 | Ring nut | - | | | [1] |
| 59 | Conic gasket | NBR | | | [1] |
| 60 | Intermediate casing | EN 1.4301 (AISI 304)+PPS | | | [1] |
| 61 | Intermediate casing (suction) | EN 1.4301 (AISI 304)+PPS | | | 1 |
| 62 | Intermediate casing (bearing) | EN 1.4301 (AISI 304)+PPS + Ceramic | | | [1] |
| 63 | Intermediate casing (discharge) | EN 1.4301 (AISI 304)+PPS | | | 1 |
| 68 | Shaft sleeve (intermediate) | EN 1.4301 (AISI 304) | | | [1] |
| 69 | Impeller spacer | EN 1.4301 (AISI 304) | | | 1 |
| 69-1 | Shaft sleeve (adjustment) [1] | EN 1.4301 (AISI 304) | | | [1] |
| 69-2 | Shaft sleeve (adjustment) [1] | EN 1.4301 (AISI 304) | | | [1] |
| 75 | Washer (plug) | EN 1.4301 (AISI 304) | | | 1 |
| 76 | Washer (plug) | EN 1.4301 (AISI 304) | | | 1 |
| 77 | O-ring | EPDM | 9.19x2.62 | | 1 |
| 78 | O-ring | EPDM | 9.19x2.62 | | 1 |
| 90 | Terminal box cover gasket [2] | NBR | - | | [1] |
| 91 | Shaft washer | EN 1.4301 (AISI 304) | | | 1 |
| 92 | Lip seal | 0.45-0.65-0.75-0.9 kW | - | 17x32x6 | 1 |
| | | 1.3-1.5-2.2 kW | | 20x30x4 | 1 |
| | | 2.2M-3-4 kW | | 25x40x7 | 1 |
| 93 | Lip seal | 0.45-0.65-0.75-0.9 kW | - | 15x30x5 | 1 |
| | | 1.3-1.5-2.2 kW | | 17x32x7 | 1 |
| | | 2.2M-3-4 kW | | 25x40x7 | 1 |
| 94 | Shaft sleeve (bearing) | WC - Tungsten carbide | | | [1] |
| 200 | Screw | EN 1.4301 (AISI 304) | M6x16 | UNI 5931 | 8 |
| 233 | Plate | EN 1.4301 (AISI 304) | | | 4 |

[1] SEE CONSTRUCTION 3

[2] Only for single phase

[3] Only for 18-5T/4 and 18-6T/4

[4] SEE CONSTRUCTION 4

(3/4)

Construction

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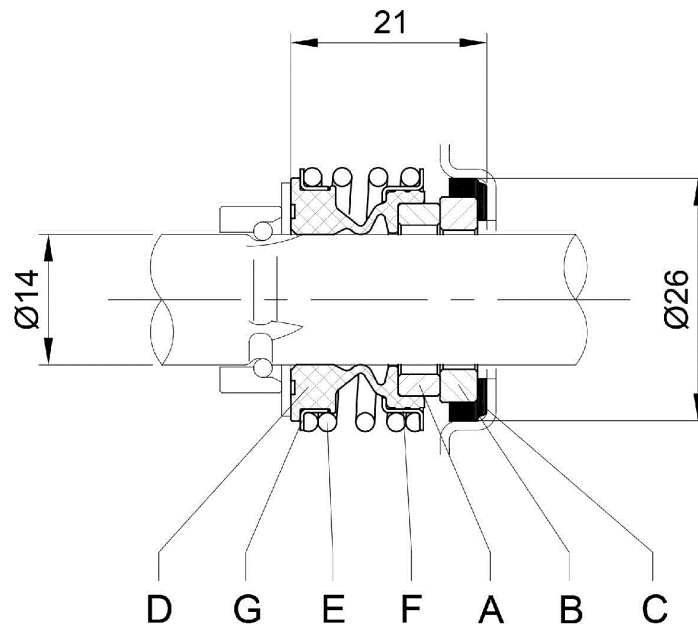
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| Pump type | N° 7 Impeller | N° 17 Terminal box cover | N° 30-1 Shaft sleeve (adjustment) | N° 30-2 Shaft sleeve (adjustment) | N° 42 Foot | N° 58 Ring nut | N° 59 Conic gasket | N° 60 Intermediate casing | N° 62 Intermediate casing (bearing) | N° 68 Shaft sleeve (intermediate) | N° 69-1 Shaft sleeve (adjustment) | N° 69-2 Shaft sleeve (adjustment) | N° 90 Terminal box cover gasket | N° 94 Shaft sleeve (adjustment) |
|-------------------|------------------|--------------------------------|---|---|---------------|----------------------|--------------------------|---------------------------------|---|---|---|---|---------------------------------------|---------------------------------------|
| MATRIX 18-2T/1.5M | 2 | - | 1 | 1 | 1 | 1 | 1 | 1 | - | 2 | - | - | 1 | - |
| MATRIX 18-2T/1.5 | 1 | 1 | 1 | 1 | 1 | - | - | 1 | - | 2 | - | - | - | - |
| MATRIX 18-3T/2.2M | 3 | - | - | 1 | - | 1 | 1 | 1 | - | 2 | - | - | 1 | - |
| MATRIX 18-3T/2.2 | 1 | - | 1 | 1 | 1 | - | - | 1 | - | 2 | - | - | - | - |
| MATRIX 18-4T/3 | 4 | 1 | - | 1 | - | - | - | 2 | - | 3 | - | - | - | - |
| MATRIX 18-5T/4 | 5 | 1 | - | 1 | - | - | - | 2 | 1 | 3 | 1 | 1 | - | 1 |
| MATRIX 18-6T/4 | 6 | 1 | - | 1 | - | - | - | 3 | 1 | 4 | 1 | 1 | - | 1 |

(4/4) Construction

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| A | B | C | Material Standard | | | |
|------------------|----------------------|--------|-------------------|----------------------|----------------------|----------------------|
| Rotary seal ring | Stationary seal ring | Gasket | D | E | F | G |
| Carbon | Ceramic | EPDM | Bellows | Spring | Frame | Retainer ring |
| | | | EPDM | EN 1.4402 (AISI 316) | EN 1.4402 (AISI 316) | EN 1.4402 (AISI 316) |