

Technical Data

Pump Name

MATRIX 5-4T/0.9

| | | | |
|----------|------------|---------------------------------------|-----------|
| Customer | Date | 2024-06-16 | Company |
| Contact | Item no. | | Issued by |
| Phone | Project | | Phone |
| E-mail | Project ID | Proiect redenumit 2024-06-16 15:45:44 | E-mail |

Requested data

| | | | | |
|---|---------------------------|-----------------------------|--------------------|----------|
| 1 | Pump type | HORIZONTAL MULTISTAGE PUMPS | Fluid | Water |
| 2 | Number of pumps / Reserve | 1 / 0 | Liquid temperature | °C |
| 3 | Flow | m³/h | Kin. viscosity | mm²/s |
| 4 | Head | m | Vapour pressure | bar |
| 5 | Geodetic head | m | PH value | |
| 6 | Inlet pressure (pin) | bar | Density | kg/m³ |
| 7 | Available system NPSH | | Solids | Weight % |
| 8 | Ambient temperature | °C | | |

Pump

| | | | | | | |
|----|----------------------|-----------------------------|--------------------------------|-----------------------------------|-----------|------|
| 9 | Pump Name | MATRIX 5-4T/0.9 | Frequency | Hz | 50 | |
| 10 | Design | HORIZONTAL MULTISTAGE PUMPS | Installation type | | STANDARD | |
| 11 | Manufacturer | EBARA | Impeller Diameter | Max. | mm | |
| 12 | Speed | rpm | | 2850 | Designed | mm |
| 13 | No. of Stage | 4 | | Min. | mm | 97 |
| 14 | Connection | Suction side | UNI ISO 228 | Flow | Operating | m³/h |
| 15 | Connection | Discharge side | UNI ISO 228 | | Max- | m³/h |
| 16 | Max Working Pressure | bar | 10 | | Min- | m³/h |
| 17 | Shut-off head | bar | 4.51 | Head | Operating | m |
| 18 | Total weight | kg | See the table of "Dimensions". | | - (Qmax.) | m |
| 19 | Shaft power | kW | | | - (Qmin.) | m |
| 20 | | | | Max. Shaft Power at max. impeller | kW | 0.87 |
| 21 | Required pump NPSH | m | | Efficiency | % | |

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 5-4T/0.9M_230_Single Phase | Phases | 1~ | |
| 30 | Specific design | IE2 / 50 Hz / Pole pairs 1 | Frame size | | |
| 31 | Rated power | kW | 0.9 | Weight | kg |
| 32 | Number of poles | 2 | Electric voltage | V | 230 |
| 33 | Speed | rpm | 2850 | Electric current | A |
| 34 | Degree of protection | IP 55 | | | |
| 35 | | | | | |

Remarks

Performance Curve

Pump Name

MATRIX 5-4T/0.9

| | | | |
|----------|------------|---------------------------------------|-----------|
| Customer | Date | 2024-06-16 | Company |
| Contact | Item no. | | Issued by |
| Phone | Project | | Phone |
| E-mail | Project ID | Proiect redenumit 2024-06-16 15:45:44 | E-mail |

Requested data

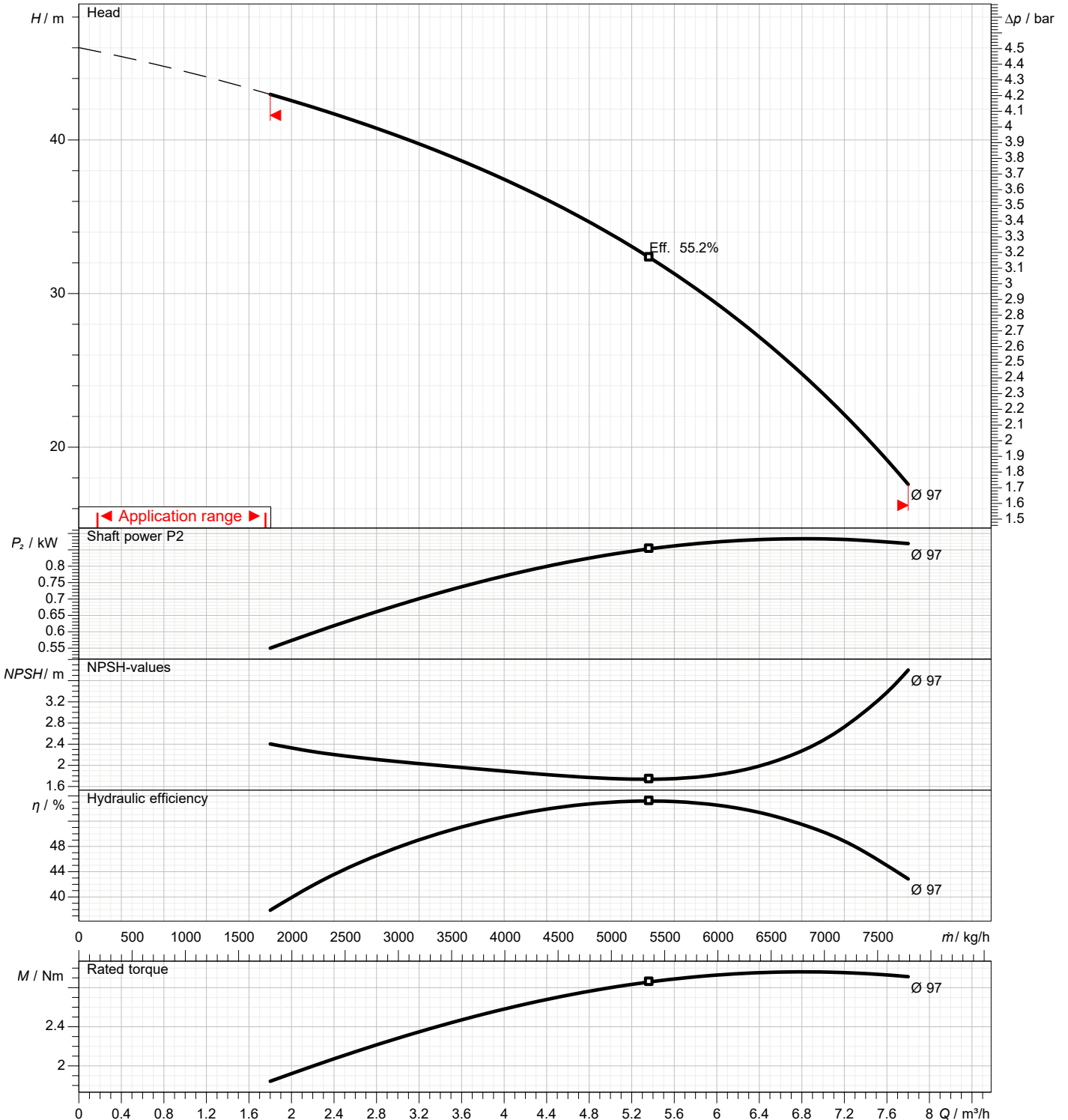
| | | | |
|---|---------------|------|--|
| 1 | Flow | m³/h | |
| 2 | Head | m | |
| 3 | Geodetic head | m | |

Pump

| | | | | | |
|----------------------------|------|----|-----------------|-----|------|
| Operating flow | m³/h | | Frequency | Hz | 50 |
| Operating head | m | | Number of poles | | 2 |
| Impeller diameter designed | mm | 97 | Speed | rpm | 2850 |

Test standard: ISO 9906:2012 - Grade3B

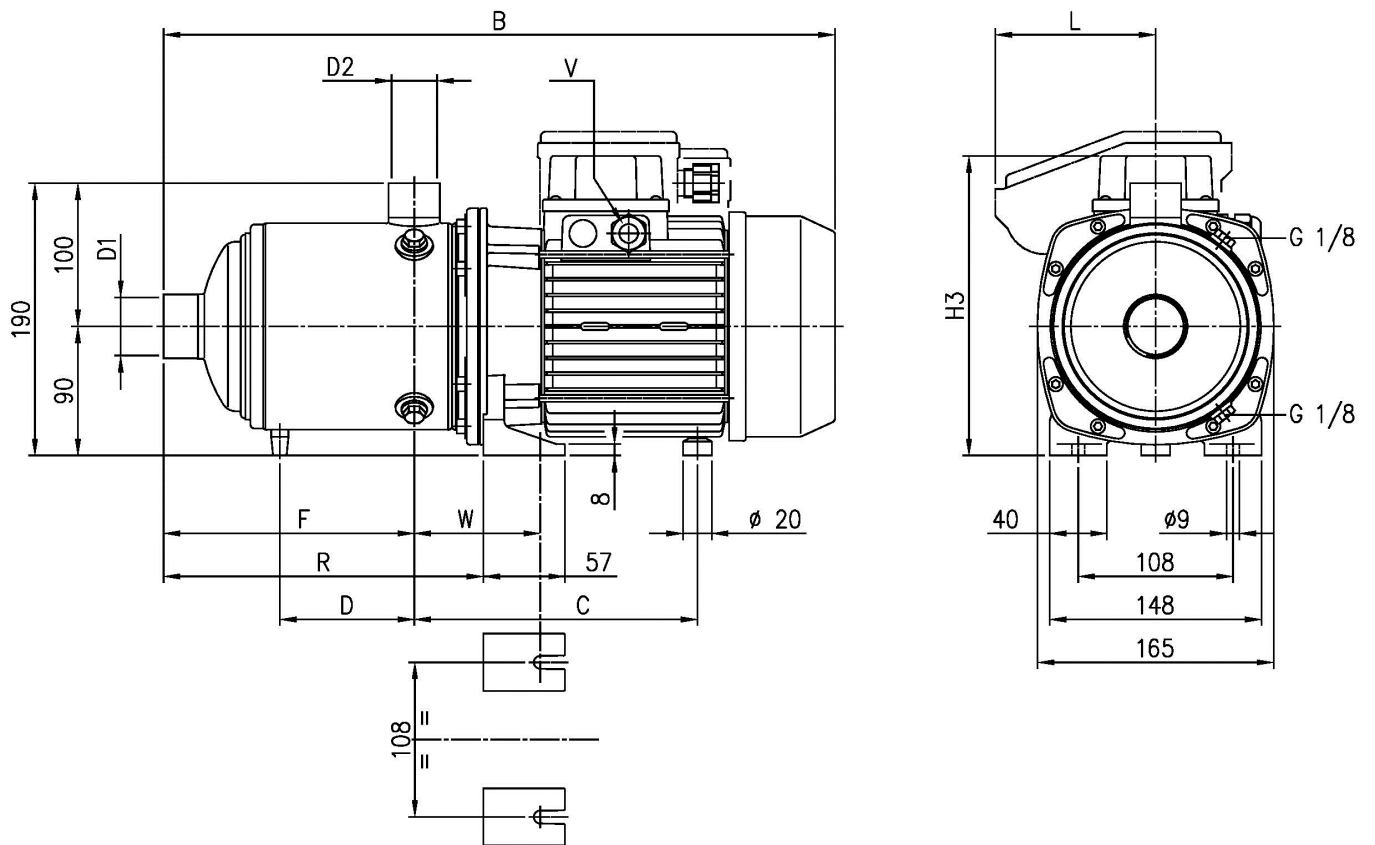
Water; 20°C; 998.3kg/m³; 1mm²/s



Dimensions

Pump name **MATRIX 5-4T/0.9**

| | | |
|----------|--|-----------|
| Customer | Date 2024-06-16 | Company |
| Contact | Item no. | Issued by |
| Phone | Project | Phone |
| E-mail | Project ID Proiect redenumit 2024-06-16 15:45:44 | E-mail |



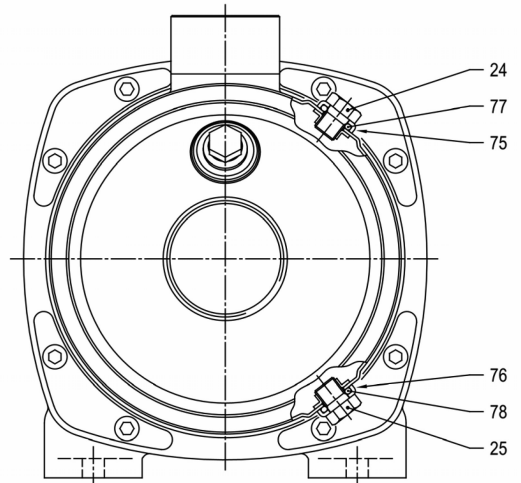
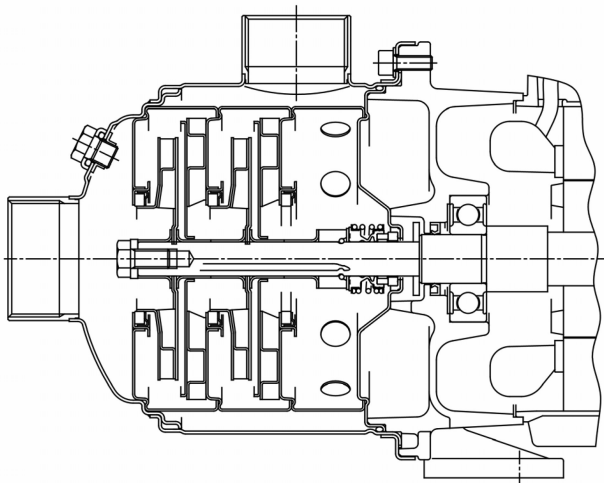
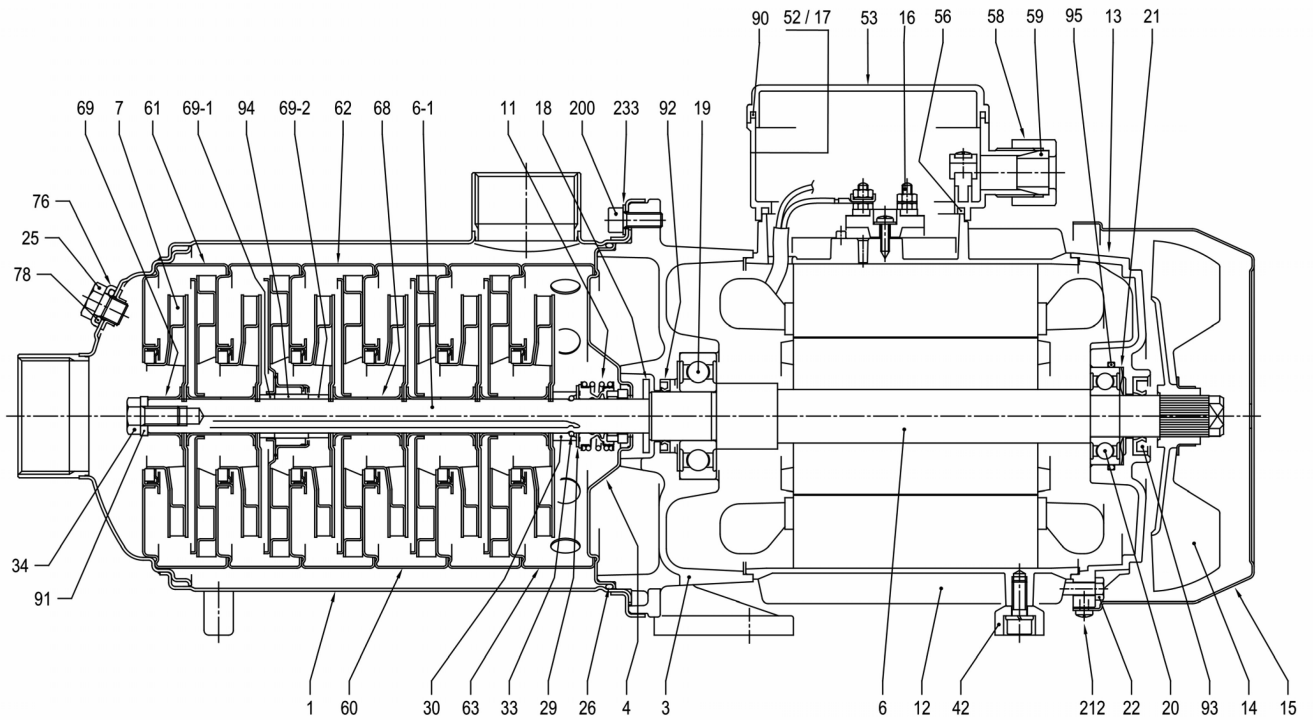
| Dimensions in | | mm | | | | | | |
|---------------|------------|---------|--|--|--|--|--|--|
| 1 | B | 396 | | | | | | |
| 2 | C | 171 | | | | | | |
| 3 | Dia D1 | 1" 1/4 | | | | | | |
| 4 | Dia D2 | 1" | | | | | | |
| 5 | F | 127 | | | | | | |
| 6 | H3 | 192 | | | | | | |
| 7 | R | 175.5 | | | | | | |
| 8 | V | M16X1.5 | | | | | | |
| 9 | W | 0 | | | | | | |
| 10 | Weight P&M | 12.4 kg | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |

(1/4)

Construction

Pump name **MATRIX 5-4T/0.9**

| | | |
|----------|--|-----------|
| Customer | Date 2024-06-16 | Company |
| Contact | Item no. | Issued by |
| Phone | Project | Phone |
| E-mail | Project ID Proiect redenumit 2024-06-16 15:45:44 | E-mail |



VERSION FOR PUMP TYPE: MATRIX 3-2T/0.45(M)
MATRIX 5-2T/0.45(M)
MATRIX 10-2T/0.75(M)

(2/4)**Construction****Pump name MATRIX 5-4T/0.9**

| | | |
|----------|--|-----------|
| Customer | Date 2024-06-16 | Company |
| Contact | Item no. | Issued by |
| Phone | Project | Phone |
| E-mail | Project ID Proiect redenumit 2024-06-16 15:45:44 | E-mail |

| 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 [3] | 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 |
| 33 | Ring | EN 1.4301 (AISI 304) | | | 2 |
| 34 | Screw | EN 1.4301 (AISI 304) | M 8x16 | UNI 5739 | 1 |
| 42 | Foot | 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) | EN 1.4301 (AISI 304) | | | [1] |
| 69-2 | Shaft sleeve (adjustment) | 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 |
| 212 | Screw | Zincate Steel | | | 4 |
| 233 | Plate | EN 1.4301 (AISI 304) | | | 4 |

[1] See **CONSTRUCTION 3**

[2] Only for Single Phase

[3] See **CONSTRUCTION 4**

(3/4)

Construction

Pump name **MATRIX 5-4T/0.9**

| | | | |
|----------|------------|---------------------------------------|-----------|
| Customer | Date | 2024-06-16 | Company |
| Contact | Item no. | | Issued by |
| Phone | Project | | Phone |
| E-mail | Project ID | Proiect redenumit 2024-06-16 15:45:44 | E-mail |

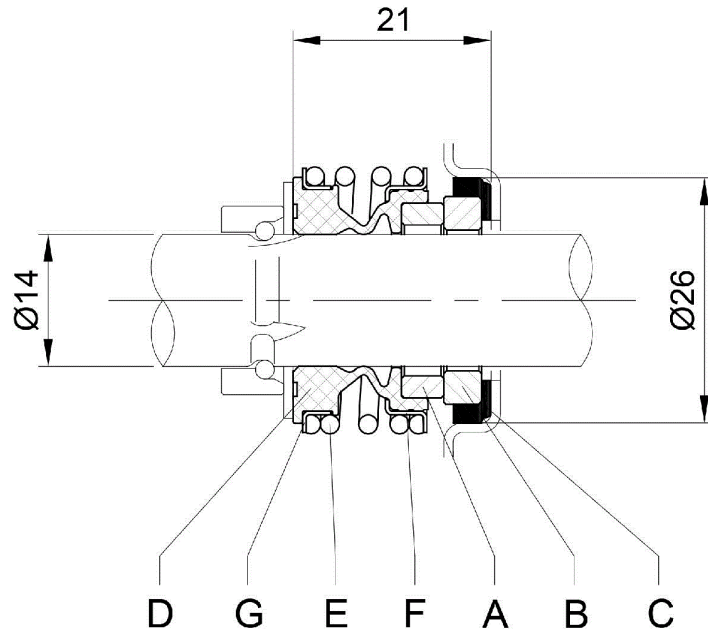
| Pump type | N° 7 Impeller | N° 17 Terminal box cover | N° 30-1 Shaft sleeve (adjustment) | N° 30-2 Shaft sleeve (adjustment) | N° 42 Foot | N° 58 Ring nut | N° 59 Conic gasket | N° 60 Intermediate casing | N° 62 Intermediate casing (bearing) | N° 68 Shaft sleeve (intermediate) | N° 69-1 Shaft sleeve (adjustment) | N° 69-2 Shaft sleeve (adjustment) | N° 90 Terminal box cover gasket | N° 94 Shaft sleeve (adjustment) |
|-------------------|------------------|--------------------------------|---|---|---------------|----------------------|--------------------------|---------------------------------|---|---|---|---|---------------------------------------|---------------------------------------|
| MATRIX 5-2T/0.45M | 2 | - | - | - | 1 | 1 | 1 | 1 | - | 4 | - | - | 1 | - |
| MATRIX 5-2T/0.45 | | 1 | - | - | 1 | - | - | 1 | - | 4 | - | - | - | - |
| MATRIX 5-3T/0.65M | 3 | - | - | - | 1 | 1 | 1 | 1 | - | 4 | - | - | 1 | - |
| MATRIX 5-3T/0.65 | | 1 | - | - | 1 | - | - | 1 | - | 4 | - | - | - | - |
| MATRIX 5-4T/0.9M | 4 | - | - | - | 1 | 1 | 1 | 2 | - | 6 | - | - | 1 | - |
| MATRIX 5-4T/0.9 | | 1 | - | - | 1 | - | - | 2 | - | 6 | - | - | - | - |
| MATRIX 5-5T/1.3M | 5 | - | - | - | 1 | 1 | 1 | 3 | - | 8 | - | - | 1 | - |
| MATRIX 5-5T/1.3 | | 1 | - | - | 1 | - | - | 3 | - | 8 | - | - | - | - |
| MATRIX 5-6T/1.3M | 6 | - | - | - | 1 | 1 | 1 | 4 | - | 10 | - | - | 1 | - |
| MATRIX 5-6T/1.3 | | 1 | - | - | 1 | - | - | 4 | - | 10 | - | - | - | - |
| MATRIX 5-7T/1.5M | 7 | - | - | - | 1 | 1 | 1 | 4 | 1 | 10 | 1 | 1 | 1 | 1 |
| MATRIX 5-7T/1.5 | | 1 | - | - | 1 | - | - | 4 | 1 | 10 | 1 | 1 | - | 1 |
| MATRIX 5-8T/2.2M | 8 | - | - | - | - | 1 | 1 | 5 | 1 | 12 | 1 | 1 | 1 | 1 |
| MATRIX 5-8T/2.2 | | 1 | - | - | 1 | - | - | 5 | 1 | 12 | 1 | 1 | - | 1 |
| MATRIX 5-9T/2.2M | 9 | - | - | - | - | 1 | 1 | 6 | 1 | 14 | 1 | 1 | 1 | 1 |
| MATRIX 5-9T/2.2 | | 1 | - | - | 1 | - | - | 6 | 1 | 14 | 1 | 1 | - | 1 |

(4/4)

Construction

Pump name **MATRIX 5-4T/0.9**

| | | |
|----------|--|-----------|
| Customer | Date 2024-06-16 | Company |
| Contact | Item no. | Issued by |
| Phone | Project | Phone |
| E-mail | Project ID Proiect redenumit 2024-06-16 15:45:44 | E-mail |



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