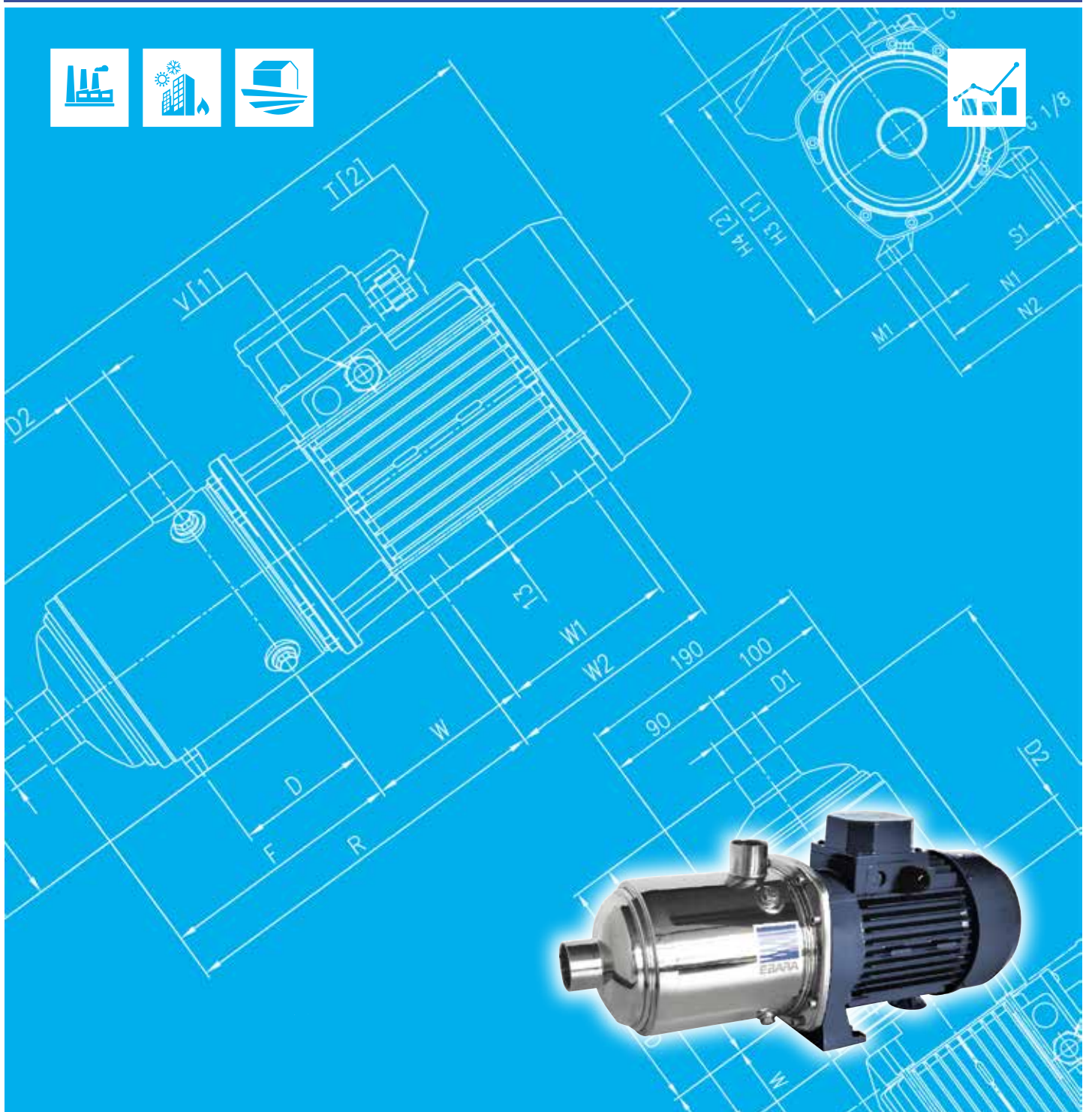




Japanese Technology since 1912

MATRIX

Data Book 60Hz



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SPECIFICATIONS

60Hz

Rev. K

| PUMP | | |
|--------------------------------|--|---|
| Liquid Handled | Type of liquid | Water, moderate aggressive solutions , glycol solutions , moderate viscous fluids |
| | Temperature [°C] | min.-15 max.+85 (STD*, H**, HS** version) max.+110 (-TE**, U3Q1EGG**, Q1AEGG** version) |
| Max chlorine content | | 500 ppm |
| Maximum working pressure [MPa] | | 1 |
| Construction | Impeller | Closed centrifugal |
| | Bearing | Screened ball bearing – greased for life |
| Pipe Connection | Suction | G 1" (Matrix 3) UNI ISO 228 |
| | | G 1"¼ (Matrix 5) UNI ISO 228 |
| | | G 1"½ (Matrix 10) UNI ISO 228 |
| | | G 2" (Matrix 18) UNI ISO 228 |
| Discharge | G 1" (Matrix 3) UNI ISO 228 | |
| | G 1" (Matrix 5) UNI ISO 228 | |
| | G 1"¼ (Matrix 10) UNI ISO 228 | |
| | G 1"½ (Matrix 18) UNI ISO 228 | |
| Material | Casing | AISI 304 (EN 1.4301) |
| | Impeller | AISI 304 (EN 1.4301) |
| | Intermediate casing | AISI 304 (EN 1.4301) |
| | O-Rings | EPDM |
| | Shaft seal | Ceramic / Carbon / EPDM |
| | Liner ring | AISI 304 (EN 1.4301) + PPS |
| | Casing cover | AISI 304 (EN 1.4301) |
| | Shaft | AISI 304 wet extension (EN 1.4301) |
| Bracket | EN AB-AISi11Cu2(Fe) (Die cast Aluminium) | |
| Applicable standard of test | | ISO 9906:2012 - Grade 3B |

* Approval for drinking water application
WRAS Approved product



** Approval for drinking water application
DM174/2004



SPECIFICATIONS

60Hz

Rev. K

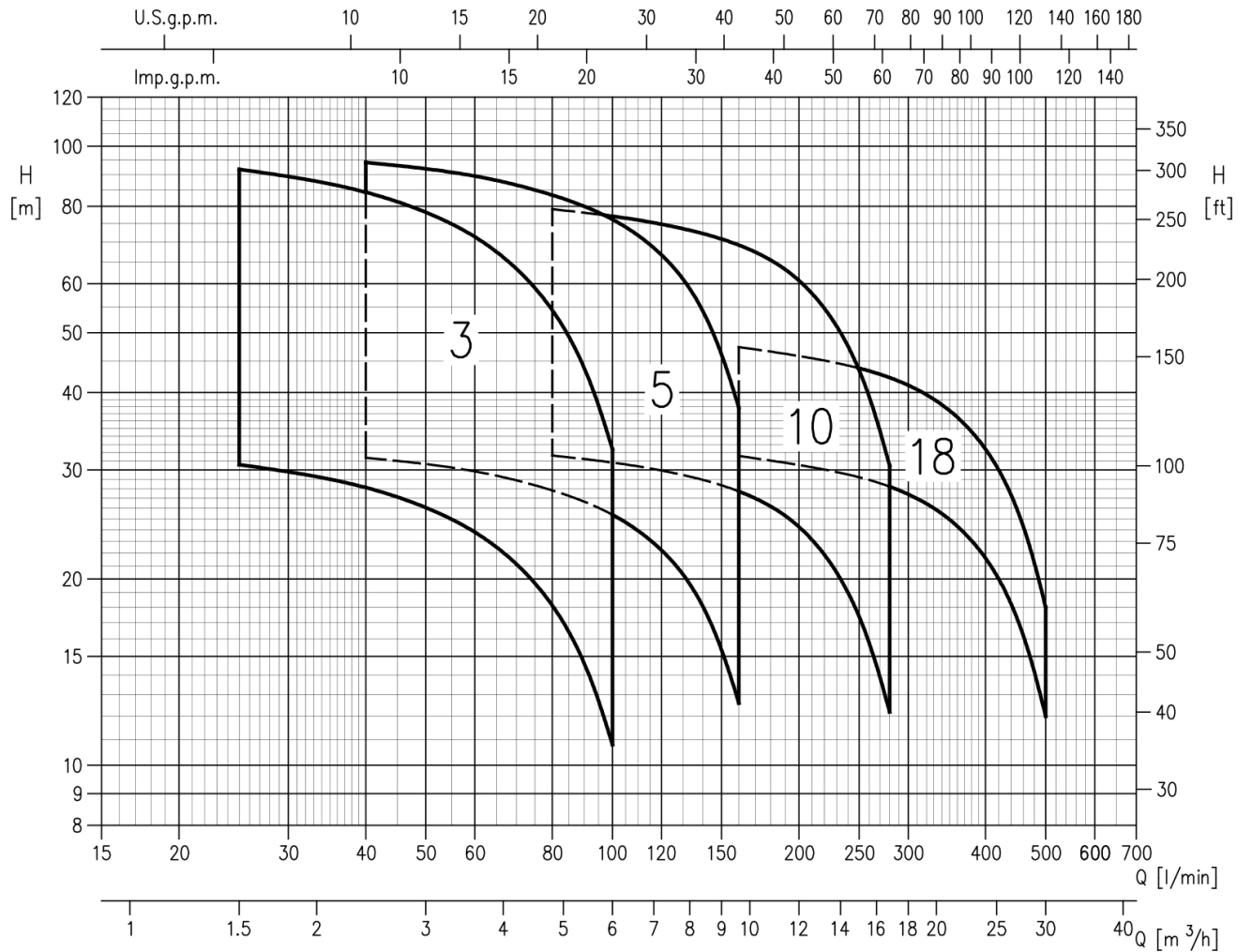
| MOTOR | | | |
|-------------------------------------|-----------------|---|------------|
| Type | Electric - TEFC | | |
| | Single Phase | Three Phase | |
| Efficiency Level (Reg. 1781/2019) | IE2*** | IE3* from 0.9 to 4.0 kW | |
| No. of Poles | 2 | | |
| Rotation speed [min ⁻¹] | ≈ 3500 | | |
| Insulation Class | F | | |
| Max temperature environment [°C] | 40 | | |
| Protection degree | IP 55 | | |
| Power rating | [kW] | 0.65 ÷ 1.5 | 0.65 ÷ 4.0 |
| | [HP] | 0.9 ÷ 2.0 | 0.9 ÷ 5.5 |
| Frequency [Hz] | 60 | | |
| Voltage [V] | 220-230 ±6% | 220/380-460** ±10% | |
| Capacitor | Built in | - | |
| Over load protection | Built in | Provided by the user | |
| Casing material | Aluminium | | |
| Base material/Motor support | Aluminium | | |
| Dimensions of cable entry | M20X1.5 | PG11 - PG13.5 - PG16 -M16x1.5 - M20x1.5 | |

* only for 460V

** IE3

*** IE2 only for 3-2/3-3/5-2 models

PERFORMANCE RANGE



SELECTION CHART

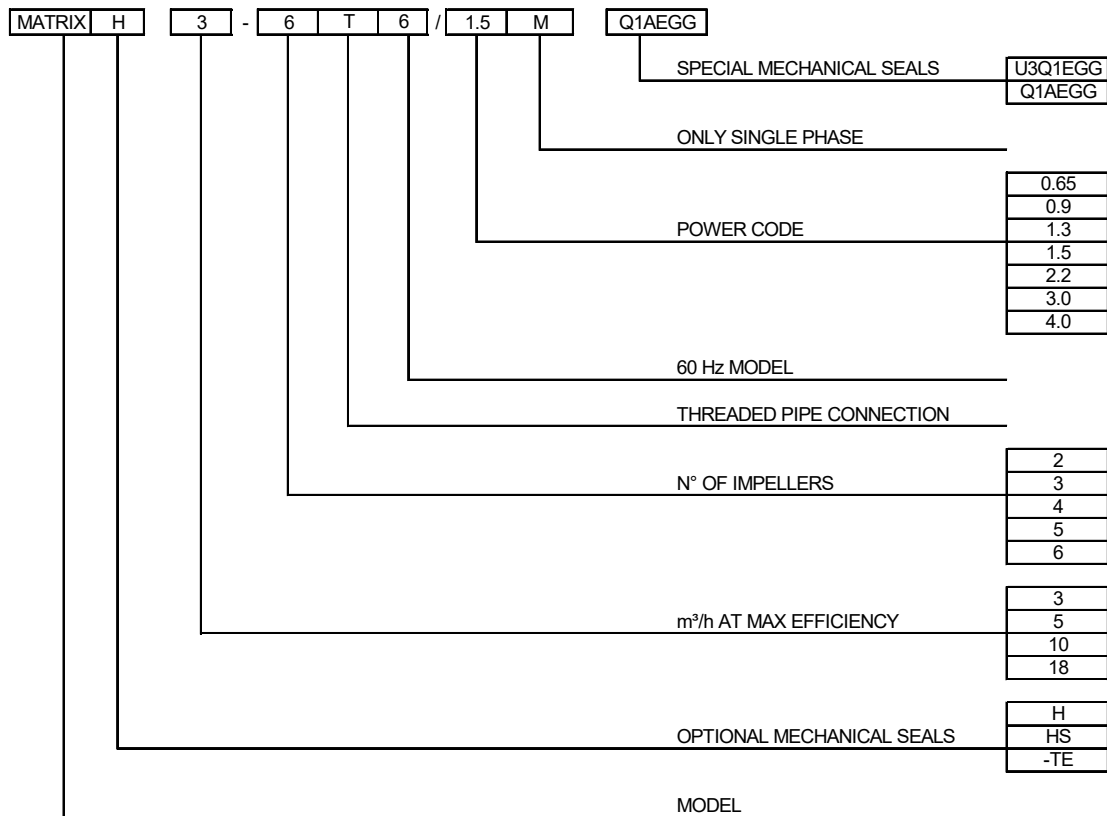
60Hz

Rev. K

SELECTION CHART

| Pump type | | Q=Capacity | | | | | | | | | | | | | | | |
|--------------|-------------|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|--|
| | | l/min | 0 | 25 | 40 | 60 | 80 | 100 | 130 | 160 | 220 | 280 | 340 | 400 | 460 | 500 | |
| Single phase | Three phase | m ³ /h | 0 | 1.5 | 2.4 | 3.6 | 4.8 | 6 | 7.8 | 9.6 | 13.2 | 16.8 | 20.4 | 24 | 27.6 | 30 | |
| | | H=Total manometric head in meters | | | | | | | | | | | | | | | |
| 3-2T6/0.65M | 3-2T6/0.65 | 33.4 | 30.6 | 28.1 | 23.8 | 18.1 | 10.8 | | | | | | | | | | |
| 3-3T6/0.9M | 3-3T6/0.9 | 50.0 | 46.0 | 42.0 | 35.7 | 27.2 | 16.2 | | | | | | | | | | |
| 3-4T6/1.3M | 3-4T6/1.3 | 67.0 | 61.0 | 56.0 | 47.5 | 36.2 | 21.6 | | | | | | | | | | |
| 3-5T6/1.5M | 3-5T6/1.5 | 83.5 | 76.5 | 70.5 | 59.5 | 45.5 | 27.0 | | | | | | | | | | |
| - | 3-6T6/2.2 | 100.0 | 92.0 | 84.5 | 71.5 | 54.5 | 32.4 | | | | | | | | | | |
| 5-2T6/0.9M | 5-2T6/0.9 | 33.5 | - | 31.4 | 29.8 | 27.8 | 25.4 | 20.3 | 12.6 | | | | | | | | |
| 5-3T6/1.3M | 5-3T6/1.3 | 50.0 | - | 47.0 | 45.0 | 41.5 | 38.1 | 30.5 | 18.9 | | | | | | | | |
| - | 5-4T6/2.2 | 67.0 | - | 63.0 | 59.5 | 55.5 | 51.0 | 40.5 | 25.2 | | | | | | | | |
| - | 5-5T6/2.2 | 83.5 | - | 78.5 | 74.5 | 69.5 | 63.5 | 51.0 | 31.5 | | | | | | | | |
| - | 5-6T6/3 | 100.0 | - | 94.0 | 89.5 | 83.5 | 76.0 | 61.0 | 37.8 | | | | | | | | |
| 10-2T6/1.5M | 10-2T6/1.5 | 34.4 | - | - | - | 31.7 | 30.8 | 29.4 | 27.7 | 21.9 | 12.2 | | | | | | |
| - | 10-3T6/2.2 | 51.5 | - | - | - | 47.5 | 46.5 | 44.0 | 41.5 | 32.8 | 18.3 | | | | | | |
| - | 10-4T6/3 | 69.0 | - | - | - | 63.5 | 61.5 | 59.0 | 55.5 | 43.5 | 24.4 | | | | | | |
| - | 10-5T6/4 | 86.0 | - | - | - | 79.0 | 77.0 | 73.5 | 69.5 | 54.5 | 30.5 | | | | | | |
| - | 18-2T6/3 | 34.6 | - | - | - | - | - | - | 31.6 | 30.0 | 28.2 | 25.5 | 21.6 | 16.2 | 12.0 | | |
| - | 18-3T6/4 | 52.0 | - | - | - | - | - | - | 47.5 | 45.0 | 42.5 | 38.3 | 32.4 | 24.3 | 18.0 | | |

TYPE KEY



CURVES SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906:2012 - Grade 3B

The curves refer to effective speed of asynchronous motors at 60 Hz.

Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt)

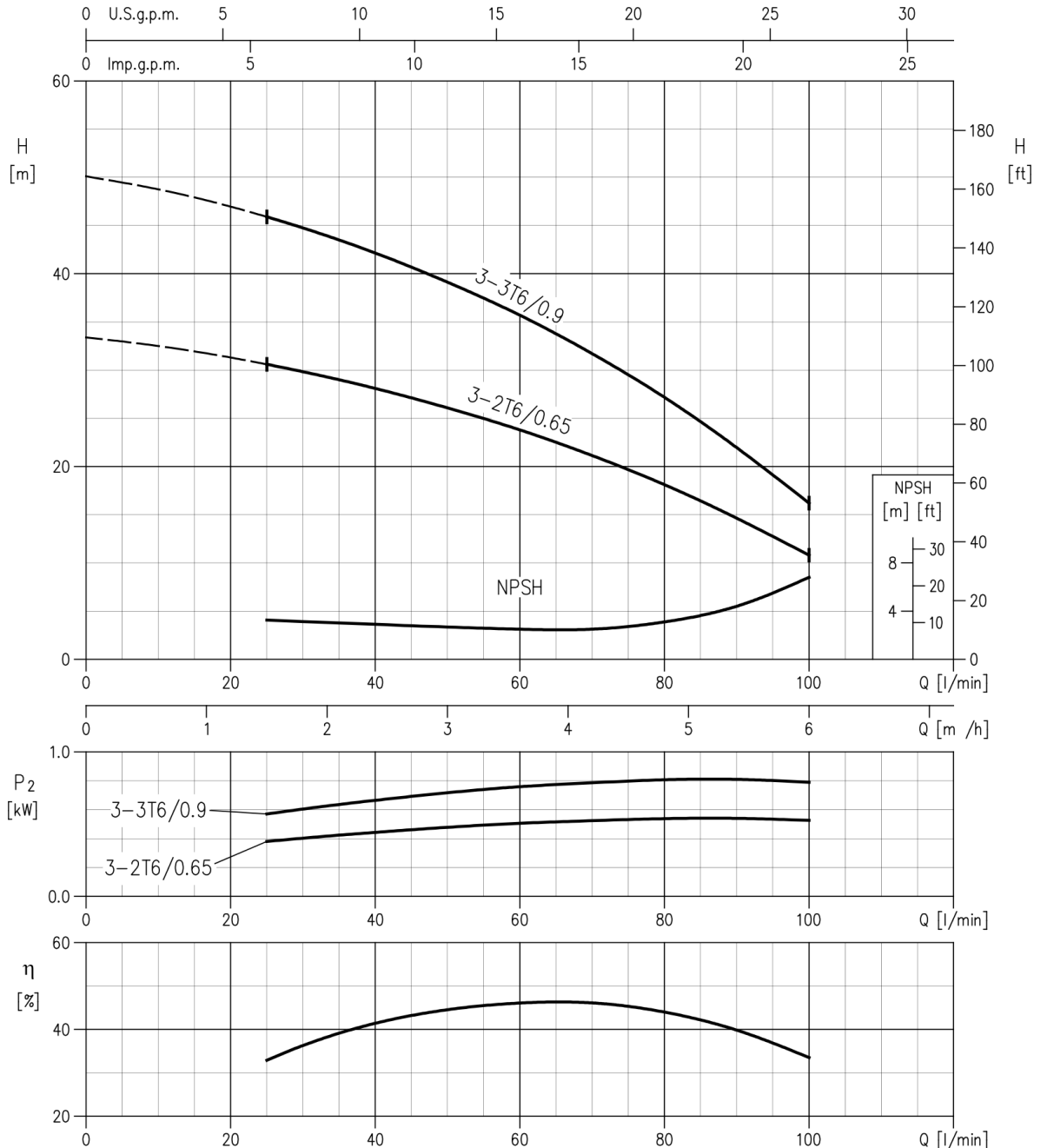
The continuous curves indicate the recommended working range. The dotted curve is only a guide.

In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

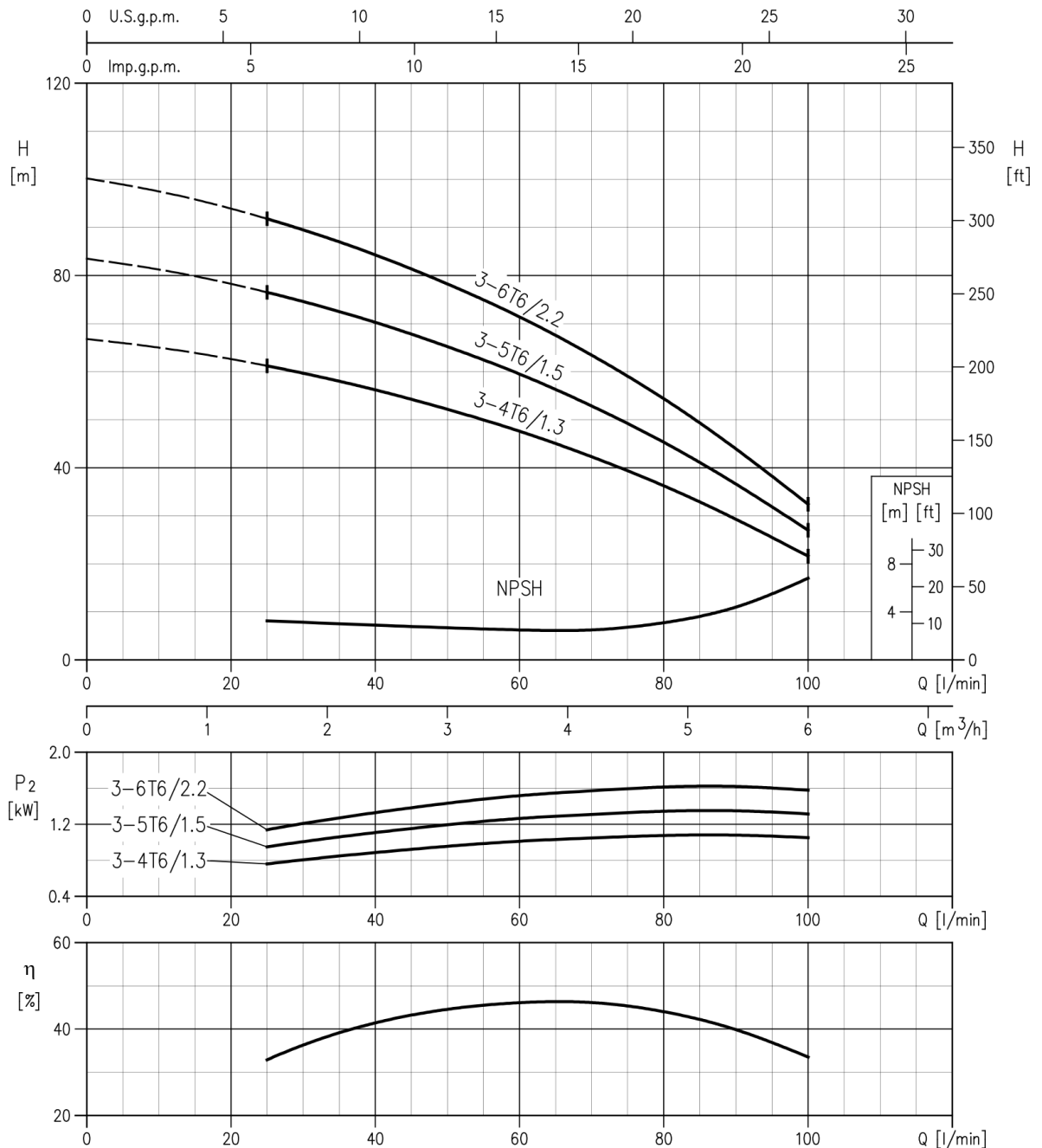
- Q = volume flow rate
- H = total head
- P_2 = pump power input (shaft power)
- η = pump efficiency
- NPSH = net positive suction head required by the pump

MATRIX 3-3T6/0.9 - Impeller diameter = 98.5 mm
MATRIX 3-2T6/0.65 - Impeller diameter = 98.5 mm



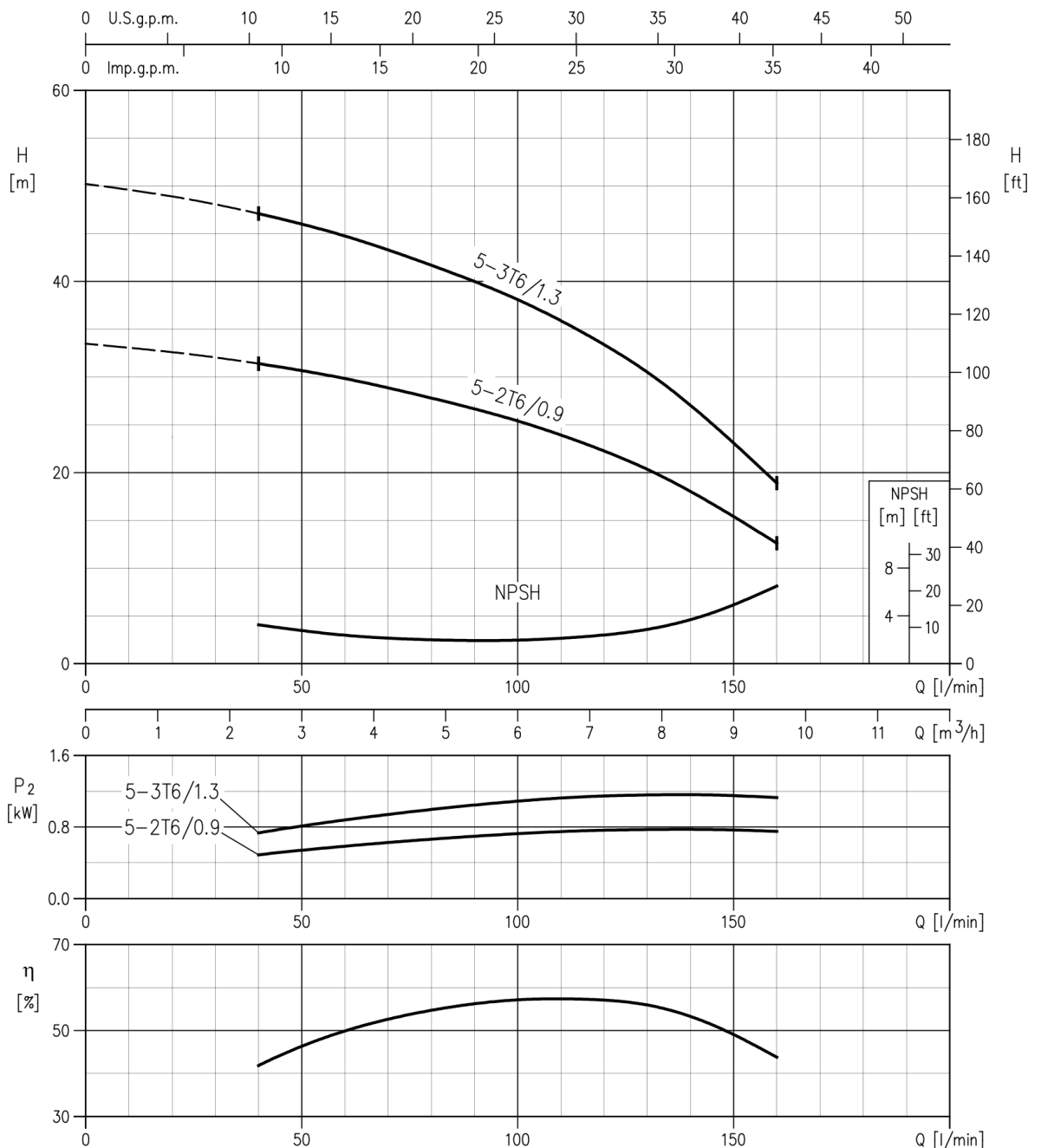
Rotation speed ≈ 3500 min⁻¹
 Test standard: ISO 9906:2012 - Grade 3B

MATRIX 3-6T6/2.2 - Impeller diameter = 98.5 mm
MATRIX 3-5T6/1.5 - Impeller diameter = 98.5 mm
MATRIX 3-4T6/1.3 - Impeller diameter = 98.5 mm



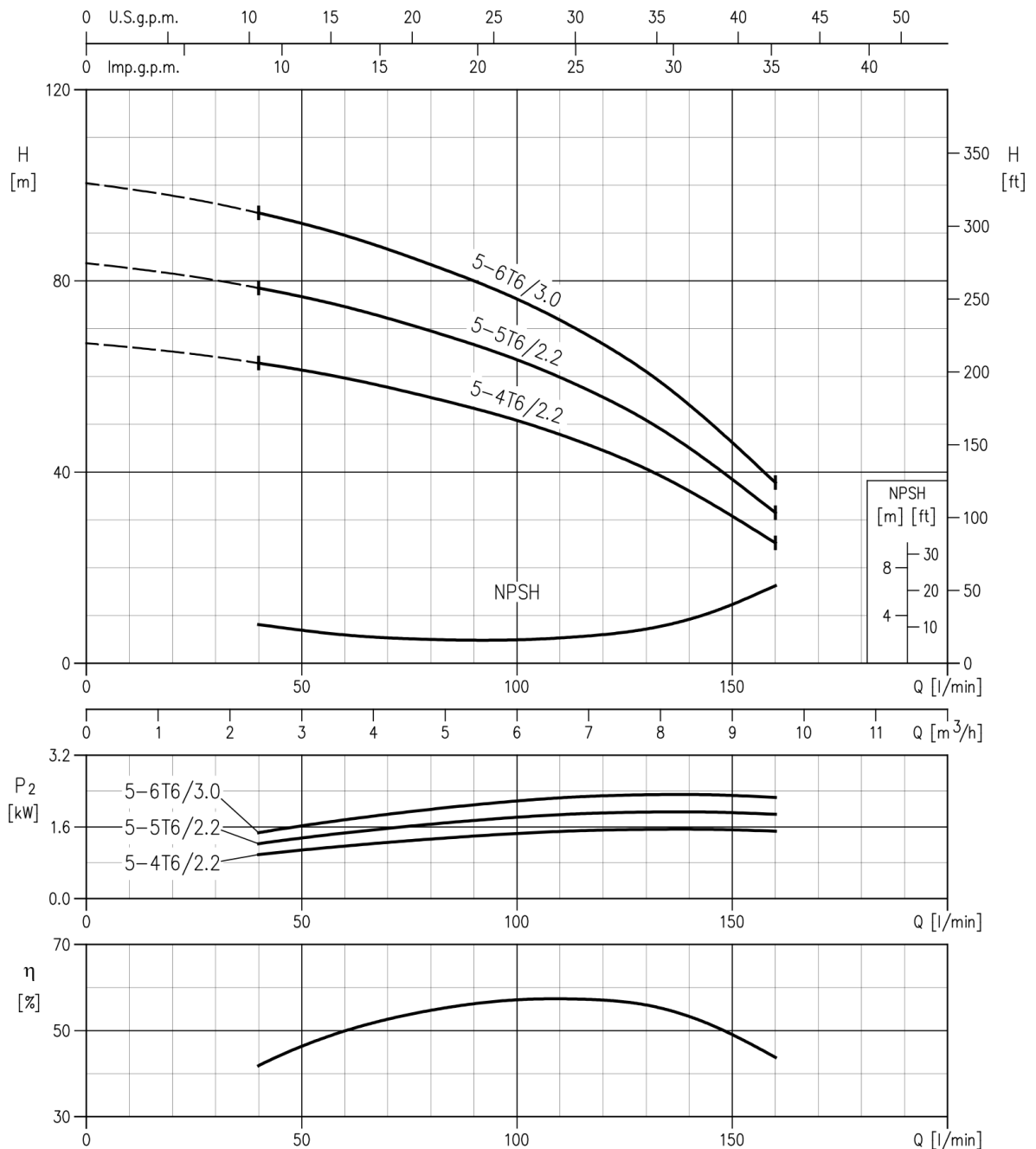
Rotation speed ≈ 3500 min⁻¹
 Test standard: ISO 9906:2012 - Grade 3B

MATRIX 5-3T6/1.3 - Impeller diameter = 97 mm
MATRIX 5-2T6/0.9 - Impeller diameter = 97 mm



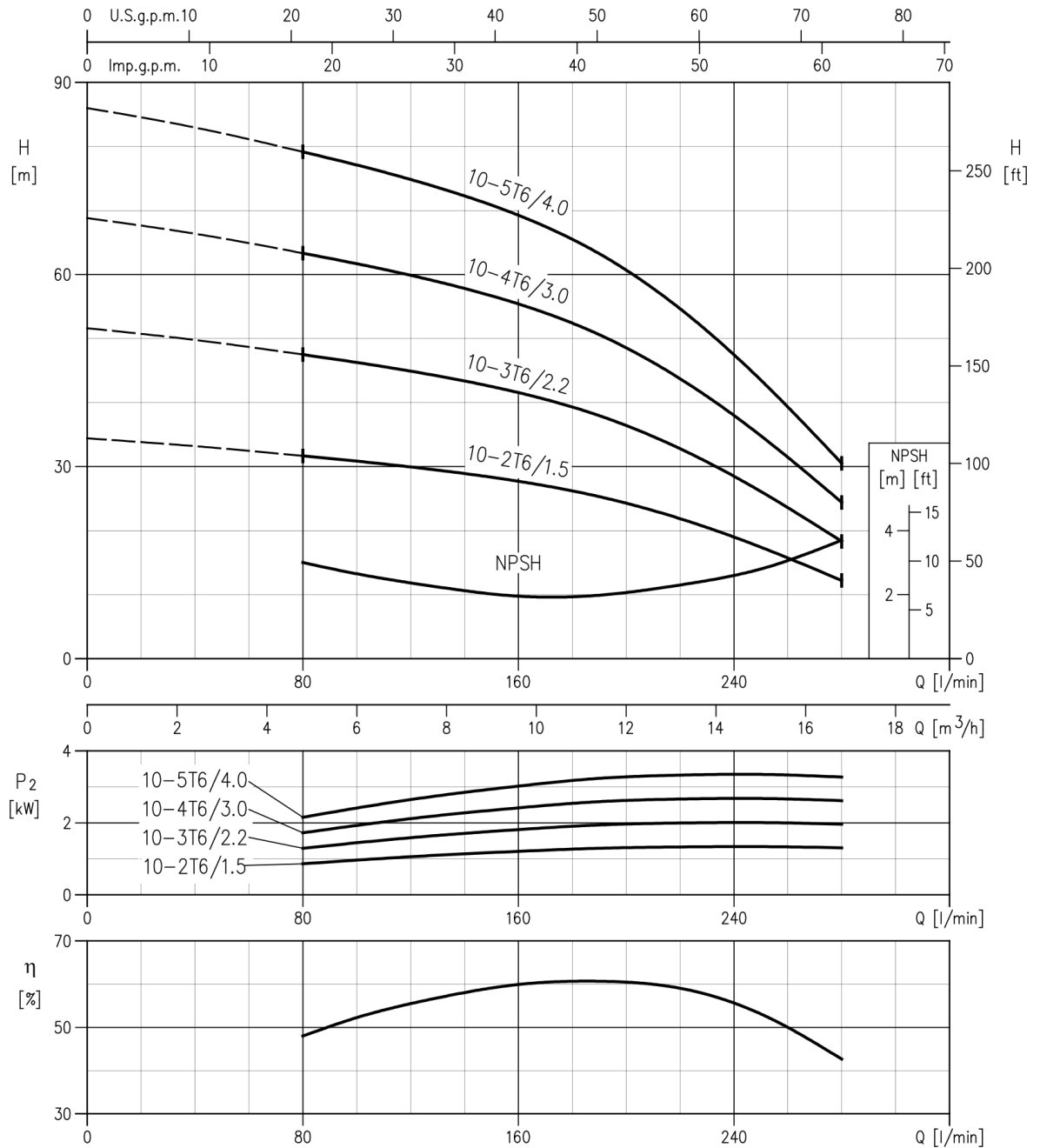
Rotation speed ≈ 3500 min⁻¹
 Test standard: ISO 9906:2012 - Grade 3B

MATRIX 5-6T6/3.0 - Impeller diameter = 97 mm
 MATRIX 5-5T6/2.2 - Impeller diameter = 97 mm
 MATRIX 5-4T6/2.2 - Impeller diameter = 97 mm



Rotation speed $\approx 3500 \text{ min}^{-1}$
 Test standard: ISO 9906:2012 - Grade 3B

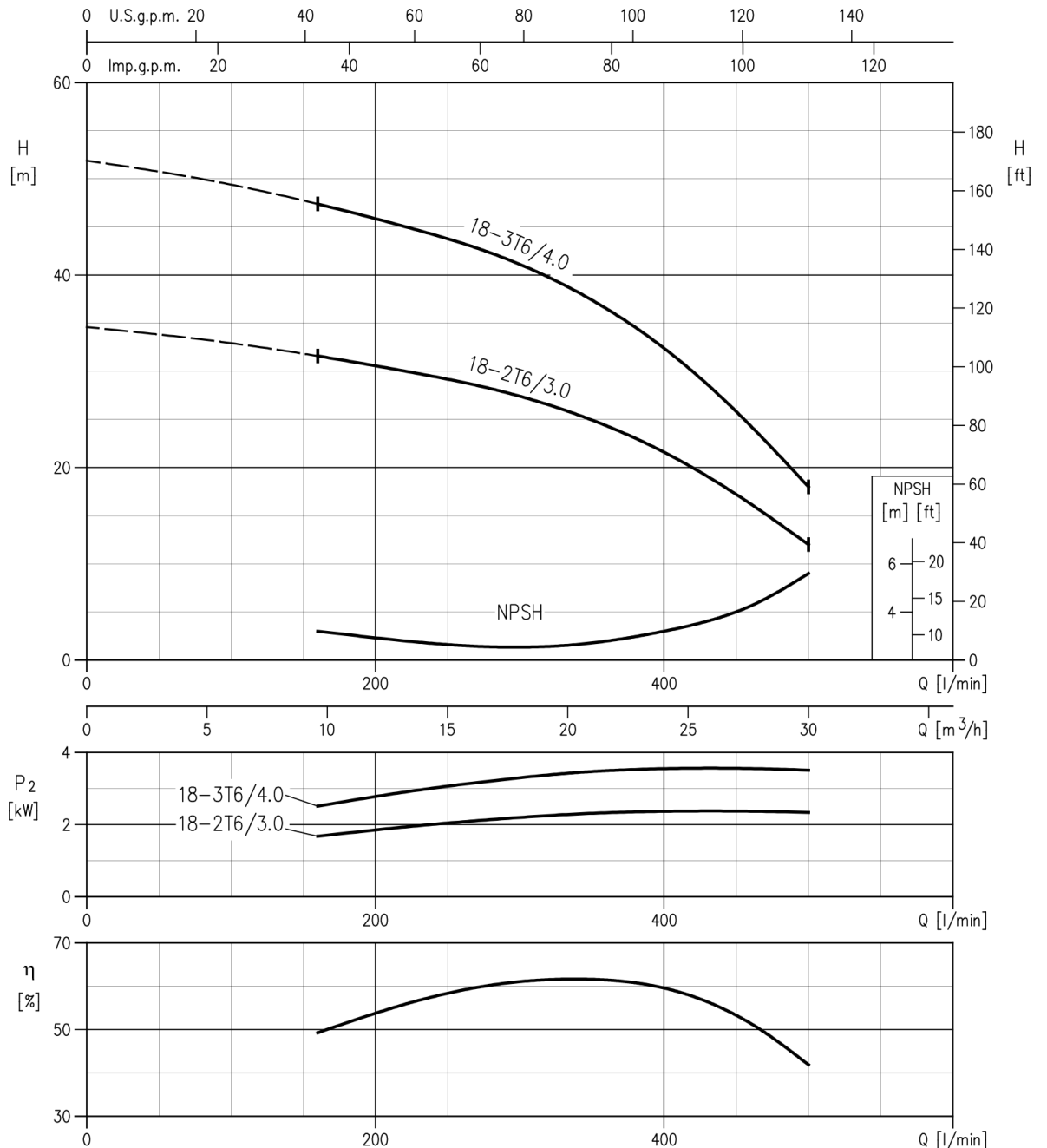
MATRIX 10-5T6/4.0 - Impeller diameter = 100.5 mm
MATRIX 10-4T6/3.0 - Impeller diameter = 100.5 mm
MATRIX 10-3T6/2.2 - Impeller diameter = 100.5 mm
MATRIX 10-2T6/1.5 - Impeller diameter = 100.5 mm



Rotation speed ≈ 3500 min⁻¹
 Test standard: ISO 9906:2012 - Grade 3B

MATRIX 18-3T6/4.0 - Impeller diameter = 106.7 mm

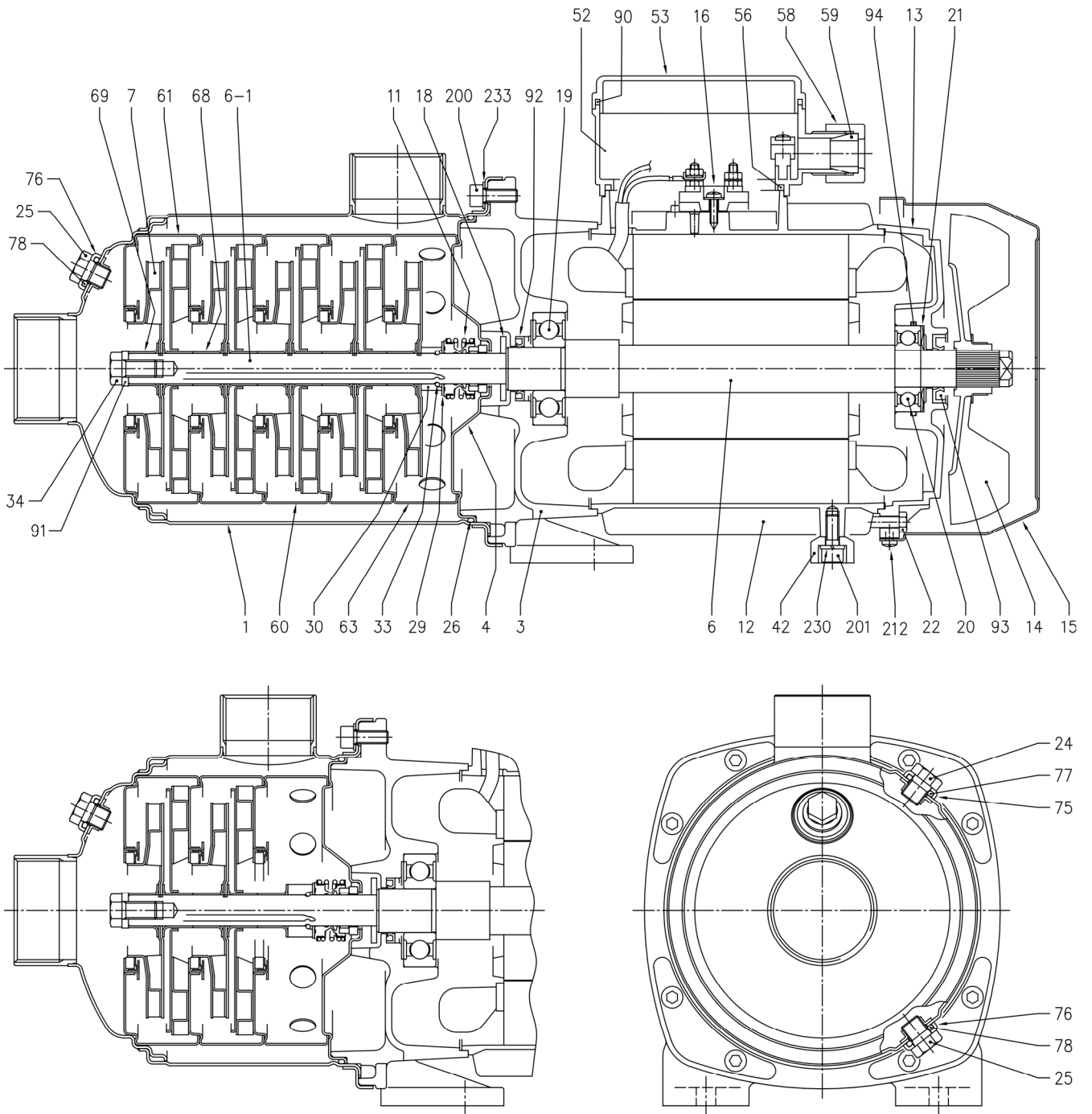
MATRIX 18-2T6/3.0 - Impeller diameter = 106.7 mm



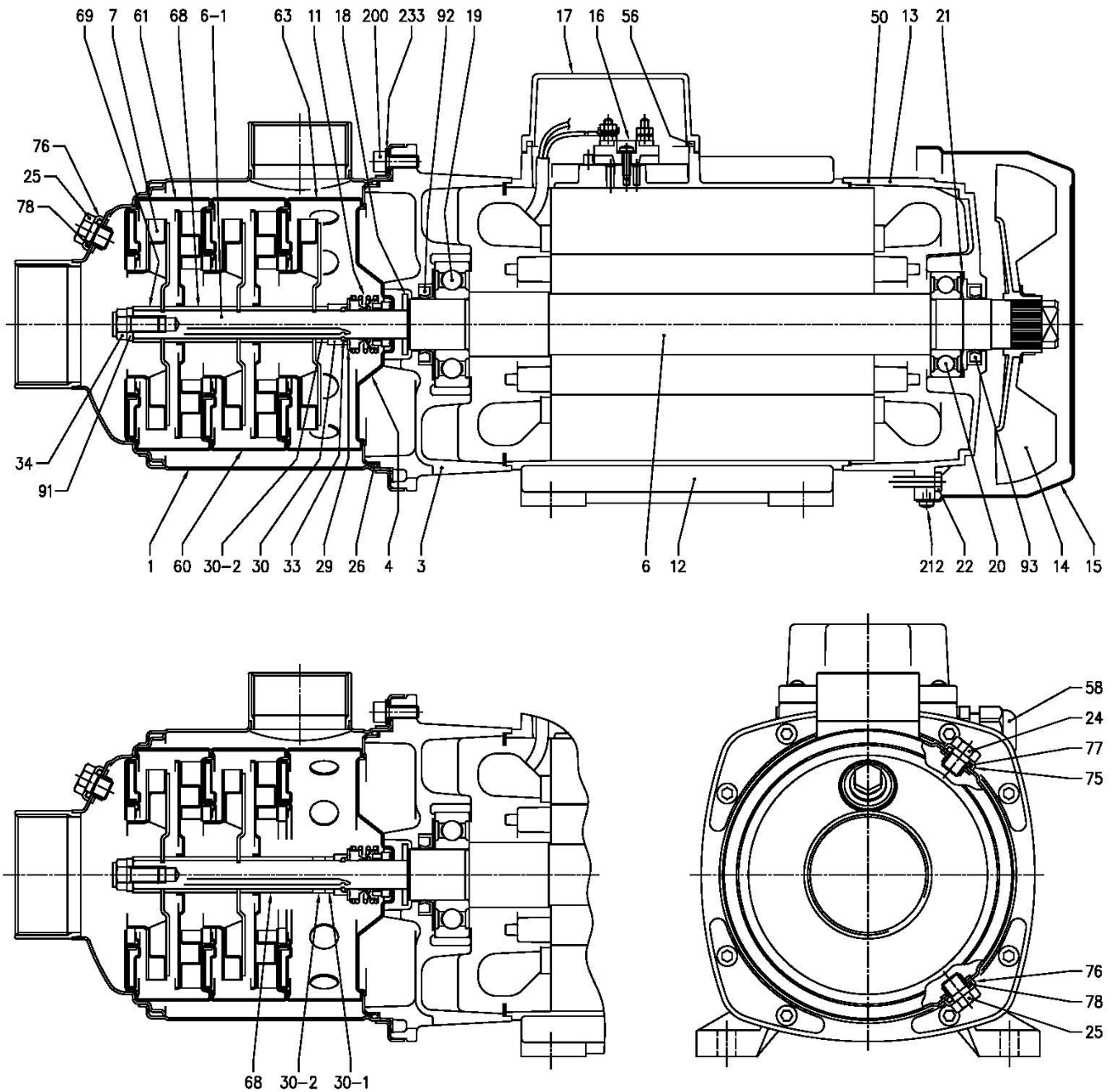
Rotation speed ≈ 3500 min⁻¹

Test standard: ISO 9906:2012 - Grade 3B

SECTIONAL VIEW DRAWING MATRIX 3/5/10



SECTIONAL VIEW DRAWING MATRIX 18



SECTIONAL VIEW TABLE

| | | | | | | |
|------|---------------------------------|------------------|------------------------------------|-------------|----------|-----|
| 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 | [2] | 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) | | | 2 |
| 26 | O-ring | | EPDM | 133.02X2.62 | | 1 |
| 29 | Washer | | EN 1.4401 (AISI 316) | 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 |
| 42 | Foot | | Aluminium | | | [1] |
| 50 | Motor spacer | [3] | Aluminium | | | 1 |
| 52 | Capacitor box | [4] | ABS class V-0 | | | 1 |
| 53 | Capacitor box cover | [4] [5] | ABS class V-0 | | | 1 |
| 56 | Box gasket | | NBR | | | 1 |
| 58 | Ring nut | | - | | | [1] |
| 59 | Conic gasket | [4] | NBR | | | 1 |
| 60 | Intermediate casing | | EN 1.4301 (AISI 304)+PPS | | | [1] |
| 61 | Intermediate casing (suction) | | EN 1.4301 (AISI 304)+PPS | | | 1 |
| 63 | Intermediate casing (discharge) | | EN 1.4301 (AISI 304)+PPS | | | 1 |
| 68 | Shaft sleeve (intermediate) | | EN 1.4404 (AISI 316L) | | | [1] |
| 69 | Impeller spacer | | EN 1.4301 (AISI 304) | | | 1 |
| 75 | Washer (plug) | | EN 1.4301 (AISI 304) | | | 1 |
| 76 | Washer (plug) | | EN 1.4301 (AISI 304) | | | 2 |
| 77 | O-ring | | EPDM | 9.19x2.62 | | 1 |
| 78 | O-ring | | EPDM | 9.19x2.62 | | 2 |
| 90 | Cover box gasket | [4] | NBR | - | | 1 |
| 91 | Shaft washer | | EN 1.4301 (AISI 304) | | | 1 |
| 92 | Lip seal | 0.65-0.75-0.9 kW | | 17x32x6 | | 1 |
| | | 1.3-1.5-2.2 kW | | 20x30x4 | | 1 |
| | | 3.0-4.0 kW | | 25x40x7 | | 1 |
| 93 | Lip seal | 0.65-0.75-0.9 kW | | 15x30x5 | | 1 |
| | | 1.3-1.5-2.2 kW | | 17x32x7 | | 1 |
| | | 3.0-4.0 kW | | 25x40x7 | | 1 |
| 94 | O-ring | [7] | NBR | 34.65x1.78 | | 1 |
| 200 | Screw | | EN 1.4301 (AISI 304) | M6x16 | UNI 5931 | 8 |
| 201 | Screw | | Steel 8.8 strenght class ISO 898/1 | M6x20 | UNI 5931 | [1] |
| 212 | Screw | | Zincate Steel | | | 4 |
| 230 | Washer | | Steel C70 | ∅ 6.4 | UNI 1751 | [1] |
| 233 | Plate | | EN 1.4301 (AISI 304) | | | 4 |

[1] See **QUANTITY FOR MODEL** page 303

[2] Only for three-phase

[3] Only for 10-5T6/4 and 18-3T6/4

[4] Only for single-phase

[5] With gasket in NBR only for version single phase 3-2T6/0.65M, 3-3T6/0.9M, 5-2T6/0.9M

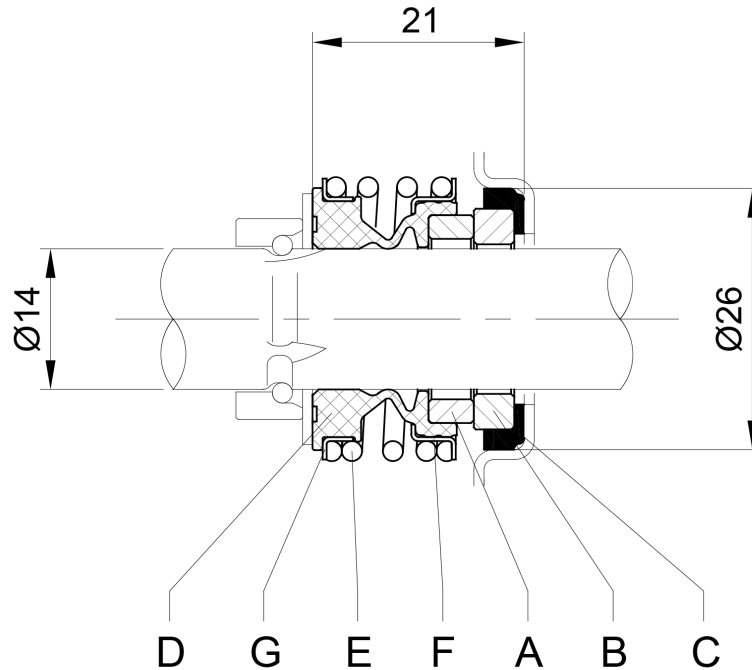
[6] See **MECHANICAL SEAL** pages 304 - 306

[7] Only for 3-3T6/0.9 and 5-2T6/0.9 models

QUANTITY FOR MODEL

| Pump type | 7 | 30-1 | 30-2 | 42 | 60 | 68 | 90 | 201 | 230 |
|--------------------|---|------|------|----|----|----|----|-----|-----|
| MATRIX 3-2T6/0.65M | 2 | - | - | 1 | 1 | 4 | 1 | 1 | 1 |
| MATRIX 3-2T6/0.65 | | - | - | 1 | 1 | 4 | - | 1 | 1 |
| MATRIX 3-3T6/0.9M | 3 | - | - | 1 | 1 | 4 | 1 | 1 | 1 |
| MATRIX 3-3T6/0.9 | | - | - | 1 | 1 | 4 | - | 1 | 1 |
| MATRIX 3-4T6/1.3M | 4 | - | - | 1 | 2 | 6 | 1 | 1 | 1 |
| MATRIX 3-4T6/1.3 | | - | - | 1 | 2 | 6 | - | 1 | 1 |
| MATRIX 3-5T6/1.5M | 5 | - | - | 1 | 3 | 8 | 1 | 1 | 1 |
| MATRIX 3-5T6/1.5 | | - | - | 1 | 3 | 8 | - | 1 | 1 |
| MATRIX 3-6T6/2.2 | 6 | - | - | 1 | 4 | 10 | - | 1 | 1 |
| MATRIX 5-2T6/0.9M | 2 | - | - | 1 | 1 | 4 | 1 | 1 | 1 |
| MATRIX 5-2T6/0.9 | | - | - | 1 | 1 | 4 | - | 1 | 1 |
| MATRIX 5-3T6/1.3M | 3 | - | - | 1 | 1 | 4 | 1 | 1 | 1 |
| MATRIX 5-3T6/1.3 | | - | - | 1 | 1 | 4 | - | 1 | 1 |
| MATRIX 5-4T6/2.2 | 4 | - | - | 1 | 2 | 6 | - | 1 | 1 |
| MATRIX 5-5T6/2.2 | 5 | - | - | 1 | 3 | 8 | - | 1 | 1 |
| MATRIX 5-6T6/3 | 6 | - | - | - | 4 | 10 | - | - | - |
| MATRIX 10-2T6/1.5M | 2 | - | - | 1 | 1 | 4 | 1 | 1 | 1 |
| MATRIX 10-2T6/1.5 | | - | - | 1 | 1 | 4 | - | 1 | 1 |
| MATRIX 10-3T6/2.2 | 3 | - | - | 1 | 1 | 4 | - | 1 | 1 |
| MATRIX 10-4T6/3 | 4 | - | - | - | 2 | 6 | - | - | - |
| MATRIX 10-5T6/4 | 5 | - | - | - | 3 | 8 | - | - | - |
| MATRIX 18-2T6/3 | 3 | 1 | 1 | - | 1 | 2 | - | - | - |
| MATRIX 18-3T6/4 | 4 | - | 1 | - | 1 | 2 | - | - | - |

MECHANICAL SEAL



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

| OPTIONAL** | Version | A | B | C | Material | | | |
|------------|---------|------------------|----------------------|--------|-----------|----------------------|----------------------|----------------------|
| | | Rotary seal ring | Stationary seal ring | Gasket | D Bellows | E Spring | F Frame | G Retainer ring |
| | H | Ceramic | Carbon | FPM | FPM | EN 1.4402 (AISI 316) | EN 1.4402 (AISI 316) | EN 1.4402 (AISI 316) |
| | HS | Silicon Carbide | Silicon Carbide | FPM | FPM | EN 1.4402 (AISI 316) | EN 1.4402 (AISI 316) | EN 1.4402 (AISI 316) |

*Approval for drinking water application
WRAS Approval product

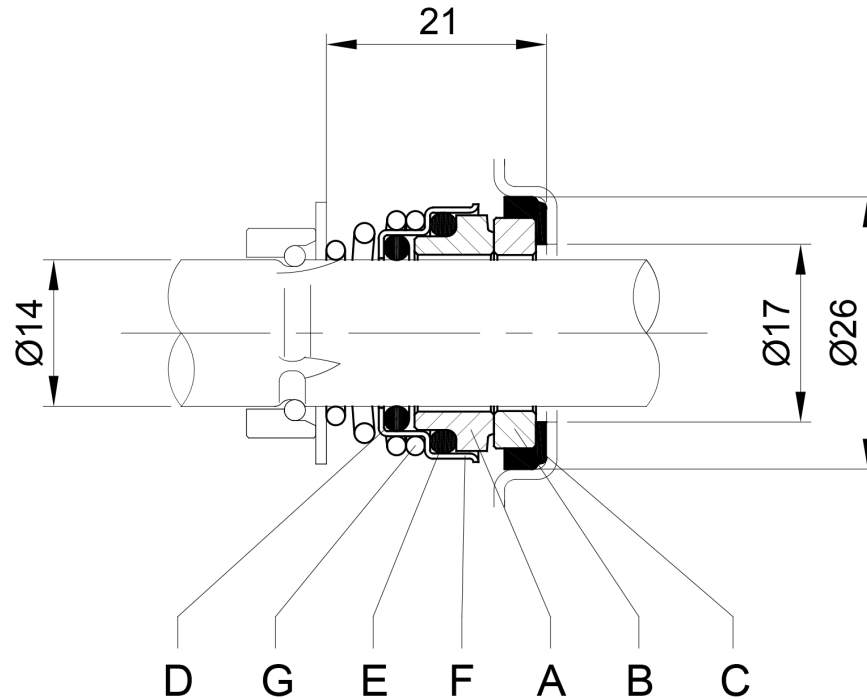


**Approval for drinking water application
DM174/2004



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D.M.174/2004

MECHANICAL SEAL



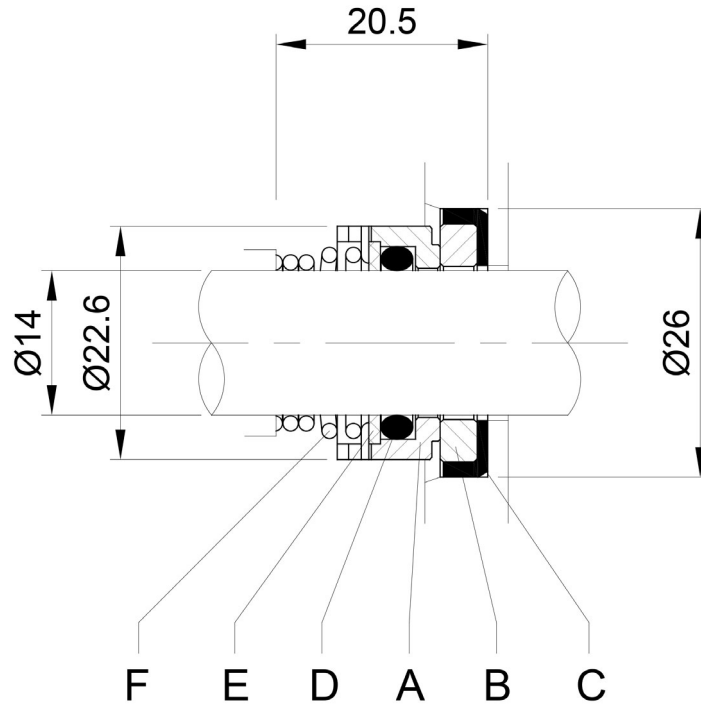
| Version | A Rotary seal ring | B Stationary seal ring | C Gasket | Material D O-ring | E O-ring | F Spring | G Retainer ring |
|-----------------------|--------------------------|------------------------------|-------------|-------------------------|-------------------------|-------------------------|-------------------------|
| OPTIONAL** -TE | Carbon | Ceramic | EPDM | EPDM | EN 1.4402 (AISI 316) | EN 1.4402 (AISI 316) | EN 1.4402 (AISI 316) |

| Version | A Rotary seal ring | B Stationary seal ring | C Gasket | Material D O-ring | E O-ring | F Spring | G Retainer ring |
|-------------------------|--------------------------|------------------------------|-------------|-------------------------|-------------------------|-------------------------|-------------------------|
| SPECIAL** Q1AEGG | Metalized Carbon | Silicon Carbide | EPDM | EPDM | EN 1.4402 (AISI 316) | EN 1.4402 (AISI 316) | EN 1.4402 (AISI 316) |

** Approval for drinking water application
DM174/2004



MECHANICAL SEAL



| Version | Material | | | | | |
|--------------------------|--------------------------|------------------------------|---------------------------|-------------|-------------------------|-------------------------|
| | A Rotary seal ring | B Stationary seal ring | C Stationary Gasket | D O-Ring | E Washer | F Spring |
| SPECIAL** U3Q1EGG | Tungsten Carbide | Silicon Carbide | EPDM | EPDM | EN 1.4402 (AISI 316) | EN 1.4402 (AISI 316) |

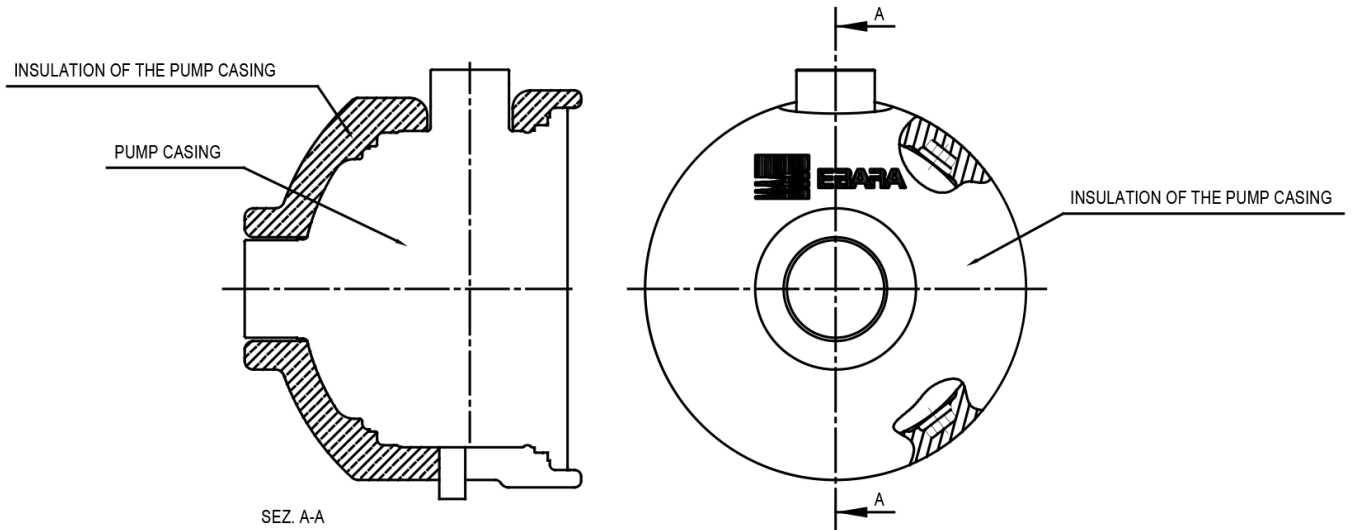
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BEARINGS

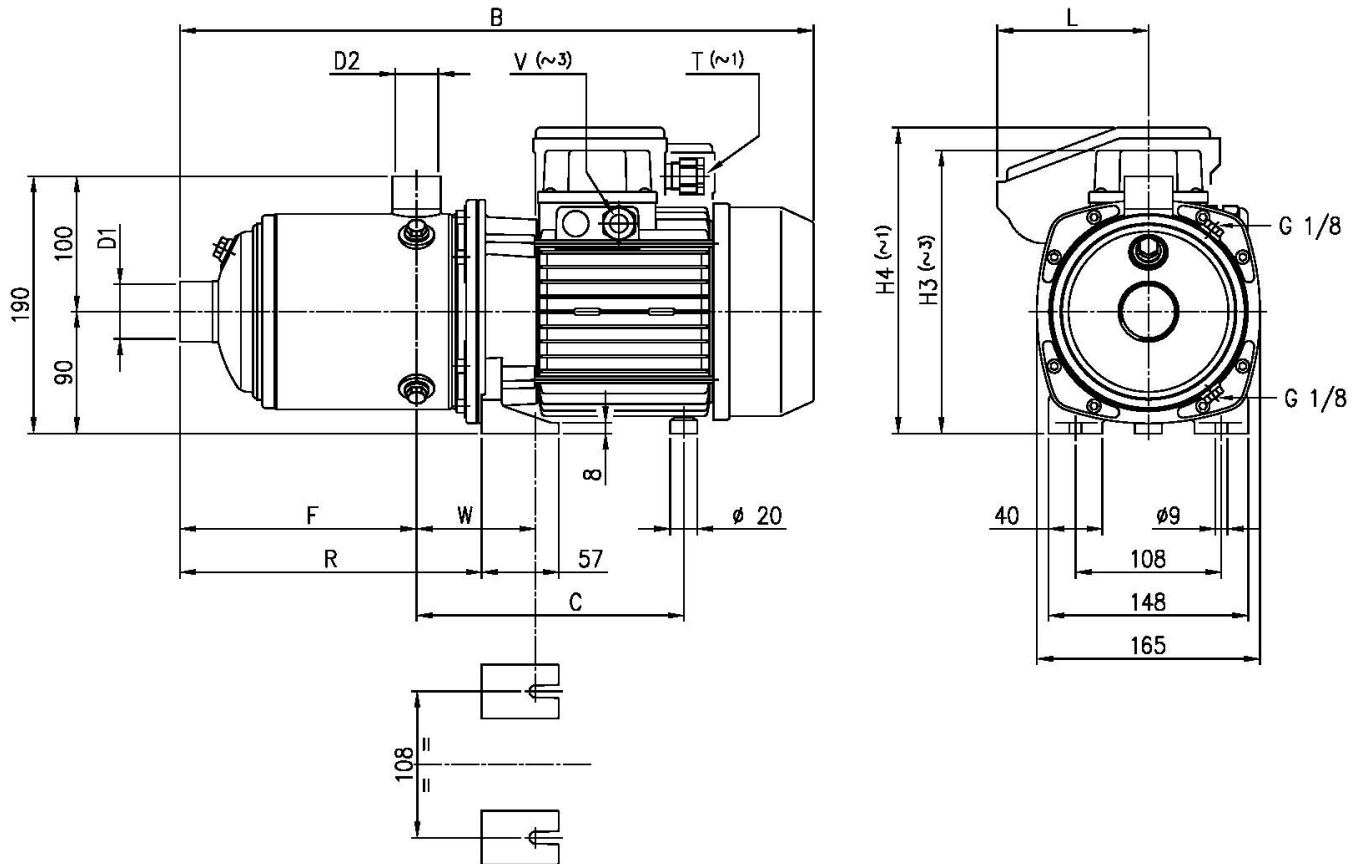
| Pump Type | Ball Bearing | | | |
|--------------------|--------------|------|----------|------|
| | Pump side | | Fan side | |
| | [1~] | [3~] | [1~] | [3~] |
| MATRIX 3-2T6/0.65M | 6203 | - | 6202 | - |
| MATRIX 3-2T6/0.65 | - | 6203 | - | 6203 |
| MATRIX 3-3T6/0.9M | 6203 | - | 6202 | - |
| MATRIX 3-3T6/0.9 | - | 6203 | - | 6202 |
| MATRIX 3-4T6/1.3M | 6204 | - | 6203 | - |
| MATRIX 3-4T6/1.3 | - | 6304 | - | 6203 |
| MATRIX 3-5T6/1.5M | 6304 | - | 6203 | - |
| MATRIX 3-5T6/1.5 | - | 6304 | - | 6203 |
| MATRIX 3-6T6/2.2 | - | 6304 | - | 6203 |
| MATRIX 5-2T6/0.9M | 6203 | - | 6202 | - |
| MATRIX 5-2T6/0.9 | - | 6203 | - | 6202 |
| MATRIX 5-3T6/1.3M | 6304 | - | 6203 | - |
| MATRIX 5-3T6/1.3 | - | 6304 | - | 6203 |
| MATRIX 5-4T6/2.2 | - | 6304 | - | 6203 |
| MATRIX 5-5T6/2.2 | - | 6304 | - | 6203 |
| MATRIX 5-6T6/3 | - | 6305 | - | 6205 |
| MATRIX 10-2T6/1.5M | 6304 | - | 6203 | - |
| MATRIX 10-2T6/1.5 | - | 6304 | - | 6203 |
| MATRIX 10-3T6/2.2 | - | 6304 | - | 6203 |
| MATRIX 10-4T6/3 | - | 6305 | - | 6205 |
| MATRIX 10-5T6/4 | - | 6305 | - | 6205 |
| MATRIX 18-2T6/3 | - | 6305 | - | 6205 |
| MATRIX 18-3T6/4 | - | 6305 | - | 6205 |

THERMAL INSULATION



| Pump type | | INSULATION OF PUMP CASING |
|--------------|-------------|---------------------------|
| Single phase | Three phase | |
| 3-2T6/0.65M | 3-2T6/0.65 | ON REQUEST |
| 3-3T6/0.9M | 3-3T6/0.9 | |
| 3-4T6/1.3M | 3-4T6/1.3 | |
| 3-5T6/1.5M | 3-5T6/1.5 | |
| - | 3-6T6/2.2 | |
| 5-2T6/0.9M | 5-2T6/0.9 | |
| 5-3T6/1.3M | 5-3T6/1.3 | |
| - | 5-4T6/2.2 | |
| - | 5-5T6/2.2 | |
| - | 5-6T6/3 | |
| 10-2T6/1.5M | 10-2T6/1.5 | |
| - | 10-3T6/2.2 | |
| - | 10-4T6/3 | |
| - | 10-5T6/4 | |
| - | 18-2T6/3 | |
| - | 18-3T6/4 | |

**PUMP DRAWING
MATRIX 3**



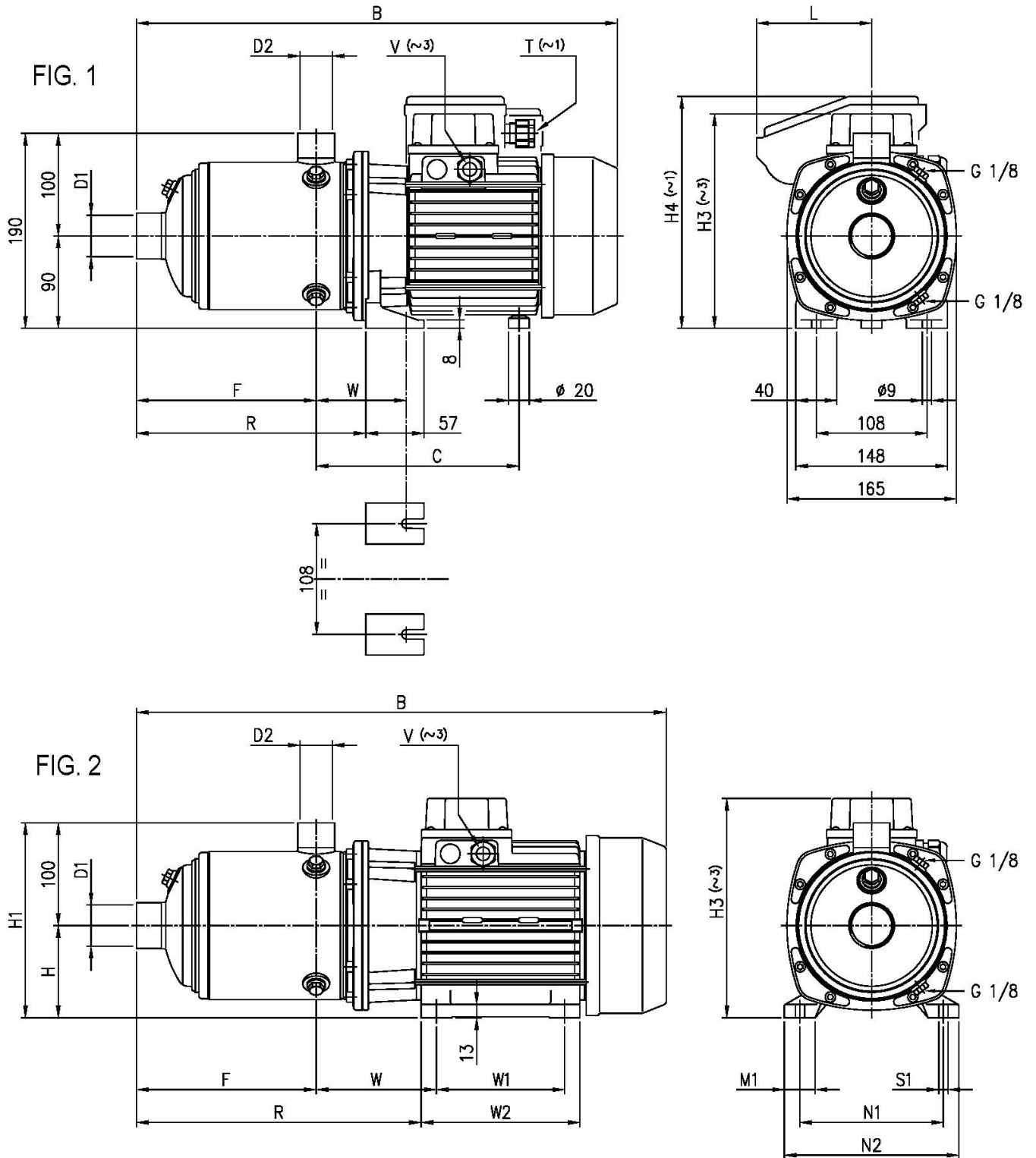
**PUMP TABLE
MATRIX 3**

| Pump Type | D1 | D2 | Dimensions [mm] | | | | | | | | | | Weight [kgf] |
|--------------------|----|----|-----------------|-----|-----|---------|---------|-----|-------|---------|---------|---------|--------------|
| | | | B | C | F | H4 [1~] | H3 [3~] | L | R | V [1~] | V [3~] | W | |
| MATRIX 3-2T6/0.65M | 1" | 1" | 360 | 171 | 103 | 198 | - | 85 | 151.5 | PG11 | - | 88 ÷ 97 | 10.2 |
| MATRIX 3-2T6/0.65 | | | 360 | 171 | 103 | - | 192 | - | 151.5 | - | M16x1.5 | 88 ÷ 97 | 9.7 |
| MATRIX 3-3T6/0.9M | | | 360 | 171 | 103 | 198 | - | 85 | 151.5 | M20x1.5 | - | 88 ÷ 97 | 10.2 |
| MATRIX 3-3T6/0.9 | | | 372 | 171 | 103 | - | 192 | - | 151.5 | - | M16x1.5 | 88 ÷ 97 | 12.4 |
| MATRIX 3-4T6/1.3M | | | 419 | 198 | 127 | 223 | - | 114 | 175.5 | M20x1.5 | - | 88 ÷ 97 | 14.7 |
| MATRIX 3-4T6/1.3 | | | 432 | 198 | 127 | - | 209 | - | 175.5 | - | M16x1.5 | 88 ÷ 97 | 15.3 |
| MATRIX 3-5T6/1.5M | | | 443 | 198 | 151 | 223 | - | 114 | 199.5 | M20x1.5 | - | 88 ÷ 97 | 16 |
| MATRIX 3-5T6/1.5 | | | 468 | 198 | 151 | - | 209 | - | 199.5 | - | M16x1.5 | 88 ÷ 97 | 18.7 |
| MATRIX 3-6T6/2.2 | | | 492 | 198 | 175 | - | 209 | - | 223.5 | - | M16x1.5 | 88 ÷ 97 | 19.2 |

[1~] Single phase
[3~] Three phase

PUMP DRAWING

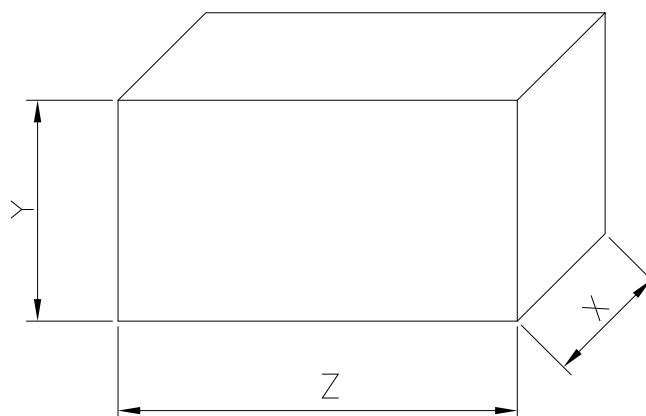
MATRIX 5/10/18



**PUMP TABLE
MATRIX 5/10/18**

| Pump Type | Fig. | D1 | D2 | Dimensions [mm] | | | | | | | | | | | | | | | | | Weight [kgf] | | | |
|--------------------|------|--------|--------|-----------------|-----|-----|-----|-----|-----|-----|-----|-------|---------|---------|--------|-----|-----|----|-----|-----|--------------|------|------|------|
| | | | | H | H1 | B | C | F | H4 | H3 | L | R | T [1~] | V [3~] | W | W1 | W2 | M1 | N1 | N2 | | S1 | | |
| MATRIX 5-2T6/0.9M | 1 | 1" 1/4 | 1" | - | - | 372 | 171 | 103 | 198 | - | 85 | 151.5 | M20x1.5 | - | 88±97 | - | - | - | - | - | - | - | 13.8 | |
| MATRIX 5-2T6/0.9 | | | | - | - | 372 | 171 | 103 | - | 191 | - | 151.5 | - | M16x1.5 | 88±97 | - | - | - | - | - | - | - | - | 12.3 |
| MATRIX 5-3T6/1.3M | | | | - | - | 395 | 198 | 103 | 223 | - | 114 | 151.5 | M20x1.5 | - | 88±97 | - | - | - | - | - | - | - | - | 14 |
| MATRIX 5-3T6/1.3 | | | | - | - | 408 | 198 | 103 | - | 209 | - | 151.5 | - | M16x1.5 | 88±97 | - | - | - | - | - | - | - | - | 14.7 |
| MATRIX 5-4T6/2.2 | | | | - | - | 444 | 198 | 127 | - | 209 | - | 175.5 | - | M16x1.5 | 88±97 | - | - | - | - | - | - | - | - | 17.6 |
| MATRIX 5-5T6/2.2 | | | | - | - | 468 | 198 | 151 | - | 209 | - | 199.5 | - | M16x1.5 | 88±97 | - | - | - | - | - | - | - | - | 17.8 |
| MATRIX 5-6T6/3 | 2 | | | 90 | 190 | 554 | - | 175 | - | 214 | - | 277.5 | - | M20x1.5 | 117.5 | 125 | 155 | 30 | 140 | 170 | 9 | 22.4 | | |
| MATRIX 10-2T6/1.5M | 1 | 1" 1/2 | 1" 1/4 | - | - | 414 | 202 | 118 | 223 | - | 114 | 170.5 | M20x1.5 | - | 92±101 | - | - | - | - | - | - | - | 14.8 | |
| MATRIX 10-2T6/1.5 | | | | - | - | 439 | 202 | 118 | - | 209 | - | 170.5 | - | M16x1.5 | 92±101 | - | - | - | - | - | - | - | 17.4 | |
| MATRIX 10-3T6/2.2 | | | | - | - | 439 | 202 | 118 | - | 209 | - | 170.5 | - | M16x1.5 | 92±101 | - | - | - | - | - | - | - | - | 17.2 |
| MATRIX 10-4T6/3 | | | | 90 | 190 | 531 | - | 148 | - | 214 | - | 254.5 | - | M20x1.5 | 121.5 | 125 | 155 | 30 | 140 | 170 | 9 | 22.7 | | |
| MATRIX 10-5T6/4 | 2 | | | 100 | 200 | 574 | - | 178 | - | 241 | - | 274 | - | M20x1.5 | 111 | 140 | 170 | 35 | 160 | 192 | 11 | 26 | | |
| MATRIX 18-2T6/3 | 2 | 2" | 1" 1/2 | 90 | 190 | 527 | - | 141 | - | 214 | - | 250.5 | - | M20x1.5 | 124.5 | 125 | 155 | 30 | 140 | 170 | 9 | 21.6 | | |
| MATRIX 18-3T6/4 | | | | 100 | 200 | 540 | - | 141 | - | 241 | - | 240 | - | M20x1.5 | 114 | 140 | 170 | 35 | 160 | 192 | 11 | 25.4 | | |

PACKING



| Pump Type | Packing [mm] | | | Weight [kgf] |
|--------------------|--------------|-----|-----|--------------|
| | X | Y | Z | |
| MATRIX 3-2T6/0.65M | 180 | 220 | 465 | 11 |
| MATRIX 3-2T6/0.65 | 180 | 220 | 465 | 10.3 |
| MATRIX 3-3T6/0.9M | 180 | 220 | 465 | 10.7 |
| MATRIX 3-3T6/0.9 | 180 | 220 | 465 | 13 |
| MATRIX 3-4T6/1.3M | 210 | 240 | 550 | 15.5 |
| MATRIX 3-4T6/1.3 | 210 | 240 | 570 | 15.8 |
| MATRIX 3-5T6/1.5M | 210 | 240 | 570 | 16.8 |
| MATRIX 3-5T6/1.5 | 210 | 240 | 570 | 19.2 |
| MATRIX 3-6T6/2.2 | 210 | 240 | 570 | 19.7 |
| MATRIX 5-2T6/0.9M | 180 | 220 | 465 | 14.5 |
| MATRIX 5-2T6/0.9 | 180 | 220 | 465 | 12.9 |
| MATRIX 5-3T6/1.3M | 210 | 240 | 550 | 14.8 |
| MATRIX 5-3T6/1.3 | 210 | 240 | 550 | 15.2 |
| MATRIX 5-4T6/2.2 | 210 | 240 | 570 | 18.1 |
| MATRIX 5-5T6/2.2 | 210 | 240 | 570 | 18.3 |
| MATRIX 5-6T6/3 | 210 | 240 | 660 | 23.2 |
| MATRIX 10-2T6/1.5M | 210 | 240 | 550 | 15.6 |
| MATRIX 10-2T6/1.5 | 210 | 240 | 570 | 18 |
| MATRIX 10-3T6/2.2 | 210 | 240 | 570 | 17.7 |
| MATRIX 10-4T6/3 | 210 | 240 | 660 | 23.5 |
| MATRIX 10-5T6/4 | 210 | 240 | 660 | 33.5 |
| MATRIX 18-2T6/3 | 210 | 240 | 660 | 22.4 |
| MATRIX 18-3T6/4 | 210 | 240 | 660 | 32.5 |

TECHNICAL DATA

60Hz

Rev. K

MOTOR DATA

| Pump type | Power | | Efficiency [IE2 / IE3] | Capacitor | | Efficiency (% load) and power factor | | | | Input [kW] | Full load current | | Locked rotor current | |
|--------------------|-------|------|---------------------------|-----------|-----|--------------------------------------|------|-------|-------|---------------|-------------------|-------|----------------------|------|
| | [kW] | [HP] | | [μF] | [V] | η % | | | cos-φ | | [A] | | [A] | |
| | | | 50% | | | 75% | 100% | 110 V | | 220 V | 110 V | 220 V | | |
| MATRIX 3-2T6/0.65M | 0,75 | 1,0 | IE2 | 60 | 250 | 72,3 | 77,3 | 80,7 | 0,92 | 0,93 | 9,3 | - | 60,5 | - |
| | | | | 25 | 450 | 63,1 | 69,8 | 78,3 | 0,94 | 0,96 | - | 4,7 | - | 32,3 |
| MATRIX 3-3T6/0.9M | 0,9 | 1,2 | IE2 | 31,5 | 450 | 64,1 | 73,2 | 79,4 | 0,86 | 1,17 | - | 5,9 | - | 45,3 |
| MATRIX 3-4T6/1.3M | 1,7 | 2,3 | - | 31,5 | 450 | - | - | - | 0,97 | 2,08 | - | 9,7 | - | 55,0 |
| MATRIX 3-5T6/1.5M | 1,8 | 2,4 | - | 40 | 450 | - | - | - | 0,95 | 2,29 | - | 10,5 | - | 69,0 |
| MATRIX 5-2T6/0.9M | 0,9 | 1,2 | IE2 | 31,5 | 450 | 64,1 | 73,2 | 79,4 | 0,86 | 1,17 | - | 5,9 | - | 45,3 |
| MATRIX 5-3T6/1.3M | 1,7 | 2,3 | - | 31,5 | 450 | - | - | - | 0,97 | 2,08 | - | 9,7 | - | 55,0 |
| MATRIX 10-2T6/1.5M | 1,8 | 2,4 | - | 40 | 450 | - | - | - | 0,95 | 2,29 | - | 10,5 | - | 69,0 |

| Pump type | Power | | Efficiency [IE2/IE3] | Efficiency (% load) Three phase (380 V) | | | Efficiency (% load) Three phase (460 V) | | | Input [kW] Three Phase | Full load current [A] | | | Locked rotor current [A] | | |
|-------------------|-------|------|-------------------------|---|------|------|---|------|-------|------------------------------|-----------------------|-------|-------|--------------------------|------|------|
| | [kW] | [HP] | | η % | | | η % | | | | Three Phase | | | Three Phase | | |
| | | | 50% | 75% | 100% | 50% | 75% | 100% | 220 V | 380 V | 460 V | 220 V | 380 V | 460 V | | |
| MATRIX 3-2T6/0.65 | 0.65 | 0.9 | IE3 | - | - | - | - | - | - | 0.9 | 2.8 | 1.6 | 1.5 | 16.1 | 9.3 | 11.3 |
| MATRIX 3-3T6/0.9 | 0.9 | 1.2 | IE3 | 84.8 | 84.5 | 82.7 | 82.0 | 84.4 | 84.5 | 1.30 | 4.0 | 2.3 | 2.2 | 24.6 | 14.2 | 17.2 |
| MATRIX 3-4T6/1.3 | 1.3 | 1.8 | IE3 | 84.2 | 84.7 | 84.5 | 83.2 | 84.7 | 85.7 | 1.75 | 5.3 | 3.1 | 2.9 | 40.2 | 23.2 | 28.1 |
| MATRIX 3-5T6/1.5 | 1.5 | 2.0 | IE3 | 86.5 | 86.8 | 86.2 | 86.9 | 87.8 | 87.4 | 2.48 | 7.5 | 4.3 | 4.1 | 55.7 | 32.2 | 38.9 |
| MATRIX 3-6T6/2.2 | 2.2 | 3.0 | IE3 | 86.5 | 86.8 | 86.2 | 86.9 | 87.8 | 87.4 | 2.48 | 7.5 | 4.3 | 4.1 | 55.7 | 32.2 | 38.9 |
| MATRIX 5-2T6/0.9 | 0.9 | 1.2 | IE3 | 84.8 | 84.5 | 82.7 | 82.0 | 84.4 | 84.5 | 1.30 | 4.0 | 2.3 | 2.2 | 24.6 | 14.2 | 17.2 |
| MATRIX 5-3T6/1.3 | 1.3 | 1.8 | IE3 | 84.2 | 84.7 | 84.5 | 83.2 | 84.7 | 85.7 | 1.75 | 5.3 | 3.1 | 2.9 | 40.2 | 23.2 | 28.1 |
| MATRIX 5-4T6/2.2 | 2.2 | 3.0 | IE3 | 86.5 | 86.8 | 86.2 | 86.9 | 87.8 | 87.4 | 2.48 | 7.5 | 4.3 | 4.1 | 55.7 | 32.2 | 38.9 |
| MATRIX 5-5T6/2.2 | 2.2 | 3.0 | IE3 | 86.5 | 86.8 | 86.2 | 86.9 | 87.8 | 87.4 | 2.48 | 7.5 | 4.3 | 4.1 | 55.7 | 32.2 | 38.9 |
| MATRIX 5-6T6/3 | 3.0 | 4.0 | IE3 | 86.8 | 87,0 | 87.5 | 87.0 | 87.9 | 88.5 | 3.42 | 10.2 | 5.9 | 5.6 | 75.7 | 43.7 | 52.8 |
| MATRIX 10-2T6/1.5 | 1.5 | 2.0 | IE3 | 86.5 | 86.8 | 86.2 | 86.9 | 87.8 | 87.4 | 2.48 | 7.5 | 4.3 | 4.1 | 55.7 | 32.2 | 38.9 |
| MATRIX 10-3T6/2.2 | 2.2 | 3.0 | IE3 | 86.5 | 86.8 | 86.2 | 86.9 | 87.8 | 87.4 | 2.48 | 7.5 | 4.3 | 4.1 | 55.7 | 32.2 | 38.9 |
| MATRIX 10-4T6/3 | 3.0 | 4.0 | IE3 | 86.8 | 87,0 | 87.5 | 87.0 | 87.9 | 88.5 | 3.42 | 10.2 | 5.9 | 5.6 | 75.7 | 43.7 | 52.8 |
| MATRIX 10-5T6/4 | 4.0 | 5.5 | IE3 | 89.7 | 89.6 | 88.6 | 86.1 | 88.4 | 88.5 | 4.52 | 13.5 | 7.8 | 7.6 | 107.1 | 61.8 | 74.9 |
| MATRIX 18-2T6/3 | 3.0 | 4.0 | IE3 | 86.8 | 87.0 | 87.5 | 87.0 | 87.9 | 88.5 | 3.42 | 10.2 | 5.9 | 5.6 | 75.7 | 43.7 | 52.8 |
| MATRIX 18-3T6/4 | 4.0 | 5.5 | IE3 | 89.7 | 89.6 | 88.6 | 86.1 | 88.4 | 88.5 | 4.52 | 13.5 | 7.8 | 7.6 | 107.1 | 61.8 | 74.9 |

NOISE DATA

| Pump type | | LpA-dB(A)* |
|--------------------|-------------------|------------|
| Single Phase | Three Phase | |
| MATRIX 3-2T6/0.65M | MATRIX 3-2T6/0.65 | 65 |
| MATRIX 3-3T6/0.9M | MATRIX 3-3T6/0.9 | |
| MATRIX 3-4T6/1.3M | MATRIX 3-4T6/1.3 | 68 |
| MATRIX 3-5T6/1.5M | MATRIX 3-5T6/1.5 | |
| - | MATRIX 3-6T6/2.2 | 69 |
| MATRIX 5-2T6/0.9M | MATRIX 5-2T6/0.9 | 65 |
| MATRIX 5-3T6/1.3M | MATRIX 5-3T6/1.3 | 68 |
| - | MATRIX 5-4T6/2.2 | 69 |
| - | MATRIX 5-5T6/2.2 | |
| - | MATRIX 5-6T6/3 | 72 |
| MATRIX 10-2T6/1.5M | MATRIX 10-2T6/1.5 | 68 |
| - | MATRIX 10-3T6/2.2 | 69 |
| - | MATRIX 10-4T6/3 | 72 |
| - | MATRIX 10-5T6/4 | 73 |
| - | MATRIX 18-2T6/3 | 72 |
| - | MATRIX 18-3T6/4 | 73 |

* Mean value of several measures at 1 m distance around the pump.
Tolerance ± 2.5 dB.



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