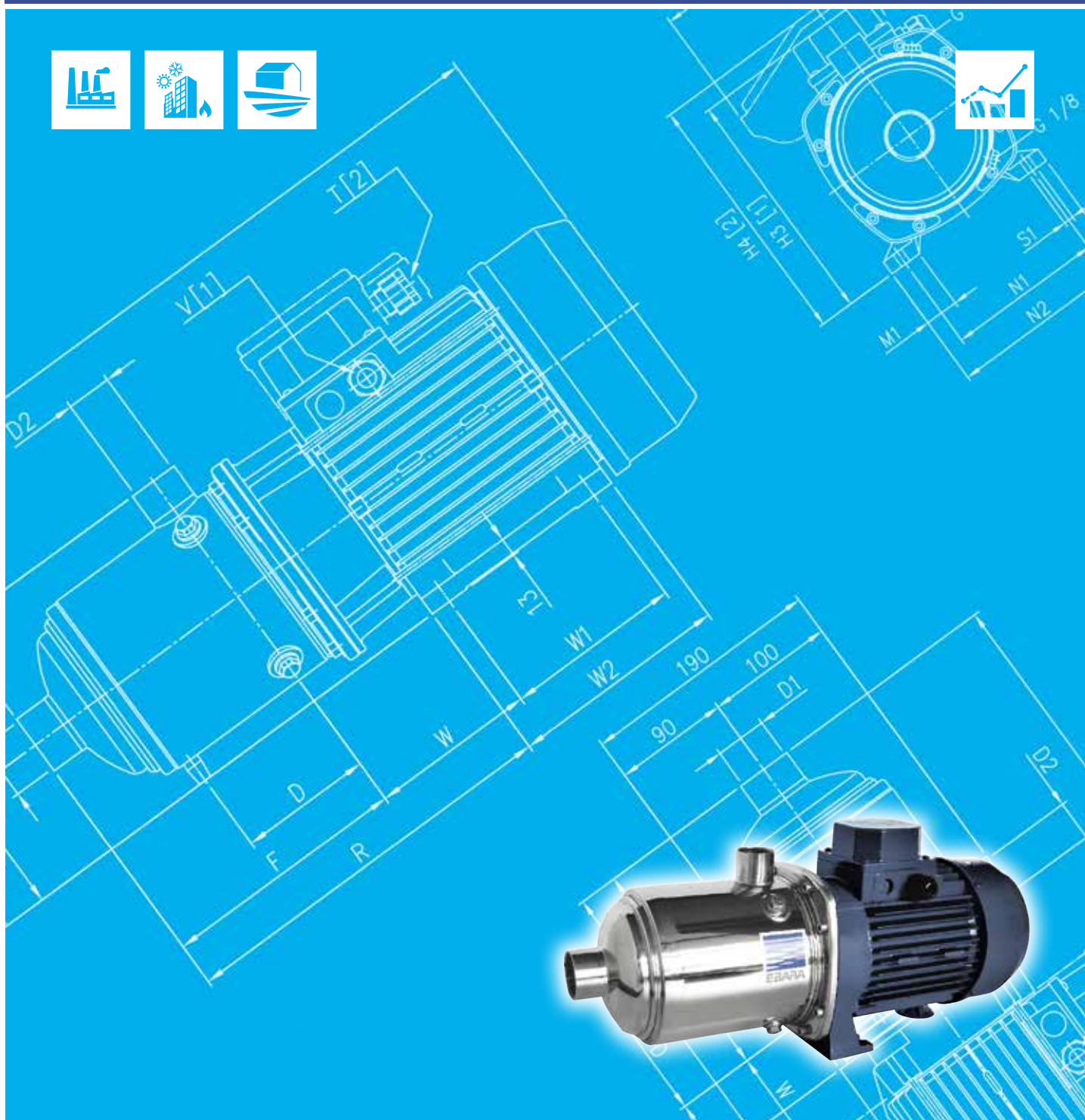




Japanese Technology since 1912

MATRIX

Data Book 60Hz



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SPECIFICATIONS

60Hz

Rev. N

PUMP		
Liquid Handled	Type of liquid	Water, moderate aggressive solutions , glycol solutions , moderate viscous fluids
	Temperature [°C]	min. -15 max. +110 For full details see section "FLUID TEMPERATURE RANGE"
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

SPECIFICATIONS

60Hz

Rev. N

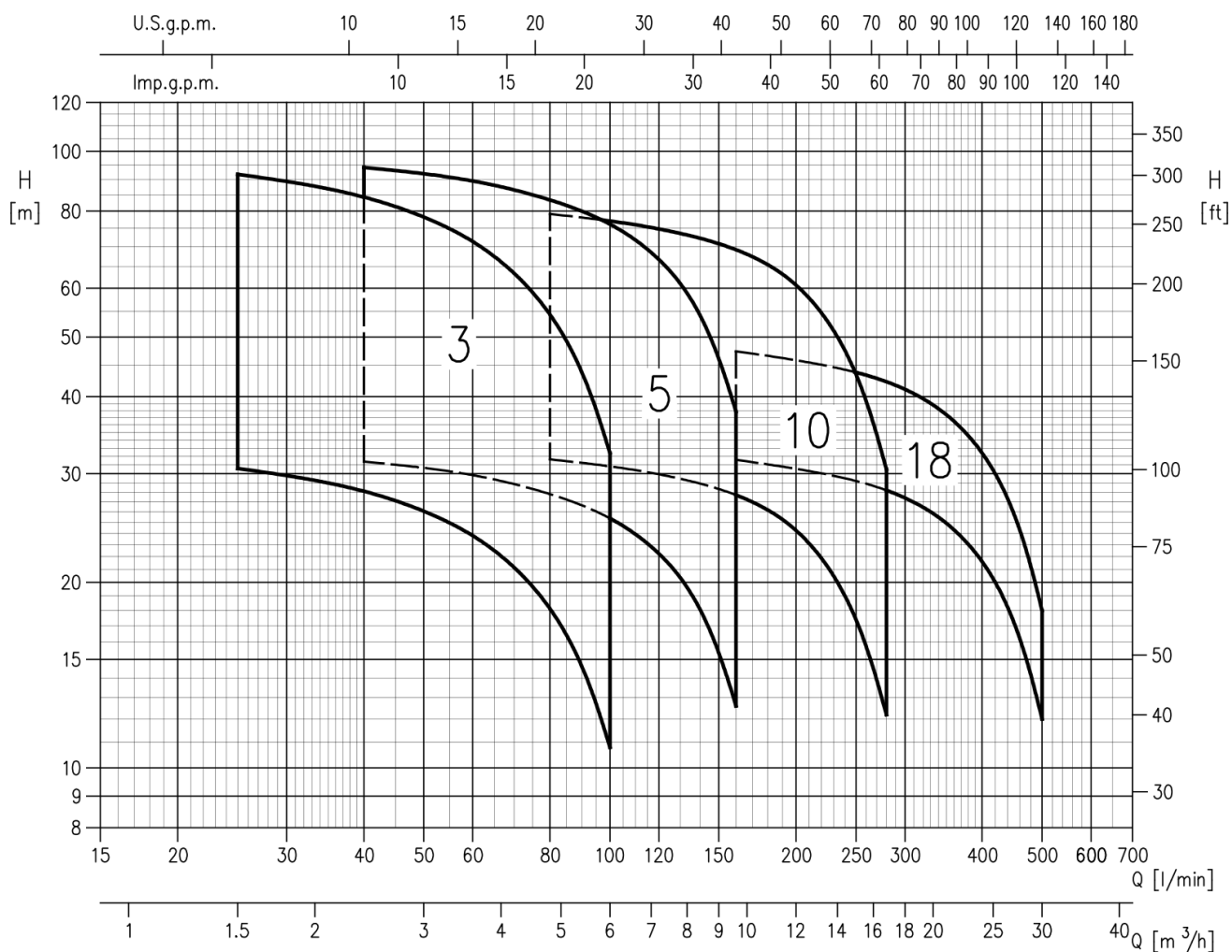
MOTOR			
Type	Electric - TEFC		
	Single Phase	Three Phase	
Efficiency Level (Reg. 1781/2019)	IE2**	IE3*	
No. of Poles	2		
Rotation speed [min ⁻¹]	≈ 3500		
Insulation Class	F		
Max temperature environment [°C]	40		
Protection degree	IP 55		
Power rating	[kW]	0.75 ÷ 1.8	0.65 ÷ 4.0
	[HP]	1 ÷ 2.4	0.9 ÷ 5.5
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	

* From 1.1kW to 3kW at 220/380V efficiency level is IE2; IE3 only at 460V

** IE2 only for sizes 3-2; 3-3; 5-2

Sizes 3-4; 3-5, 5-3, 10-2 single phase not available for the European market

PERFORMANCE RANGE



SELECTION CHART

60Hz

Rev. N

SELECTION CHART

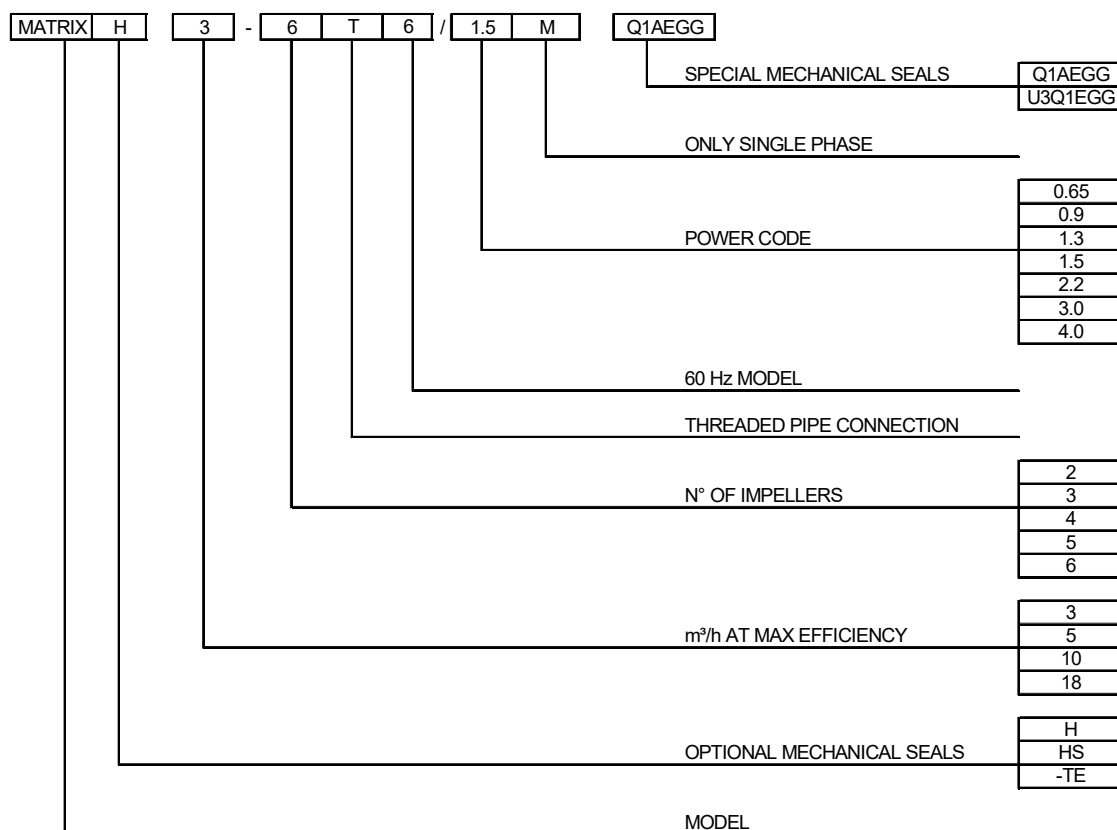
Pump type		Q=Capacity														
		l/min	0	25	40	60	80	100	130	160	220	280	340	400	460	500
Single phase	Three phase	m³/h	0	1.5	2.4	3.6	4.8	6	7.8	9.6	13.2	16.8	20.4	24	27.6	30
		H=Total manometric head in meters														
3-2T6/0.65M	3-2T6/0.65	33.4	30.6	28.1	23.8	18.1	10.8									
3-3T6/0.9M	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 and CURVES SPECIFICATIONS

60Hz

Rev. N

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.

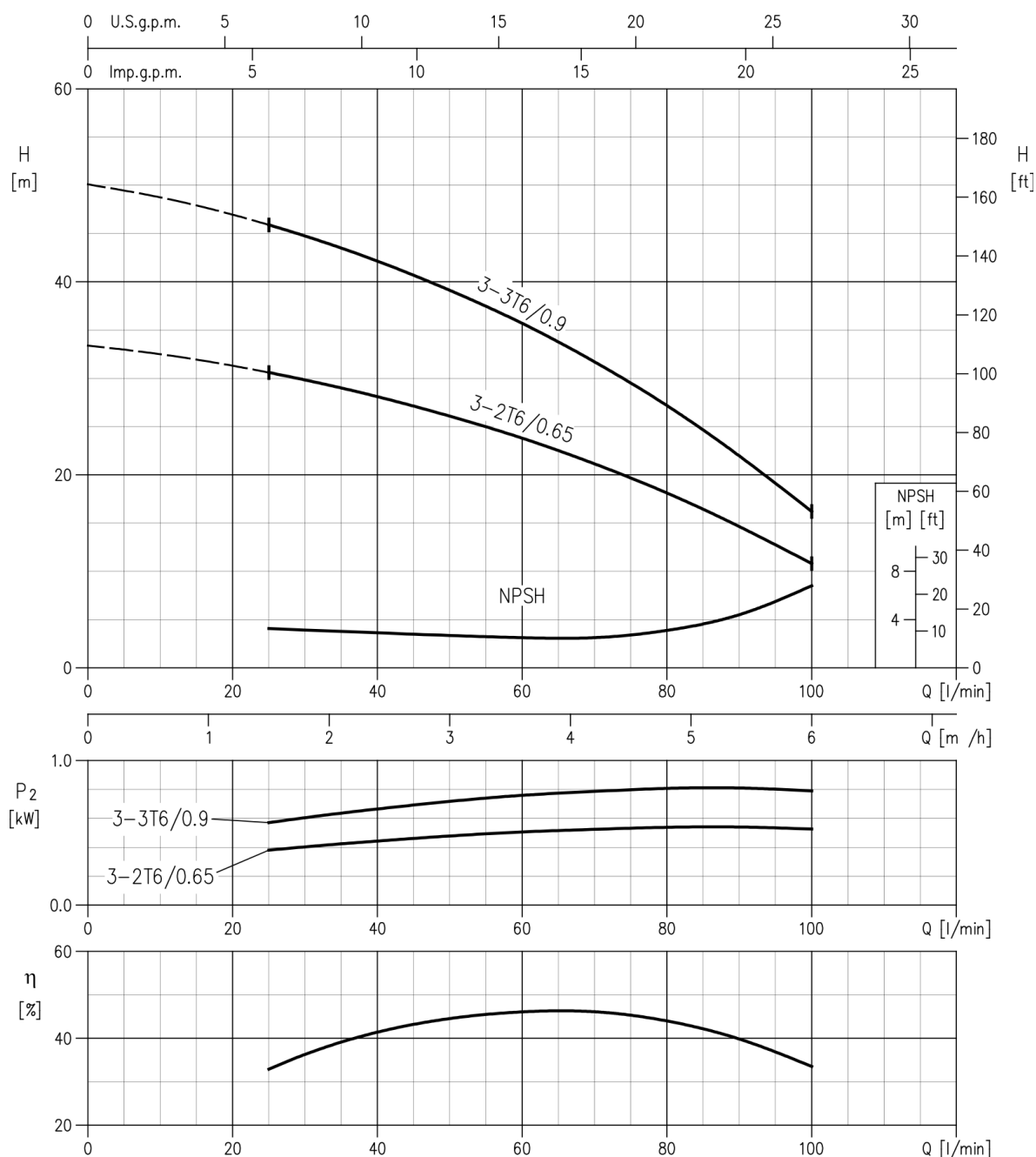
In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

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

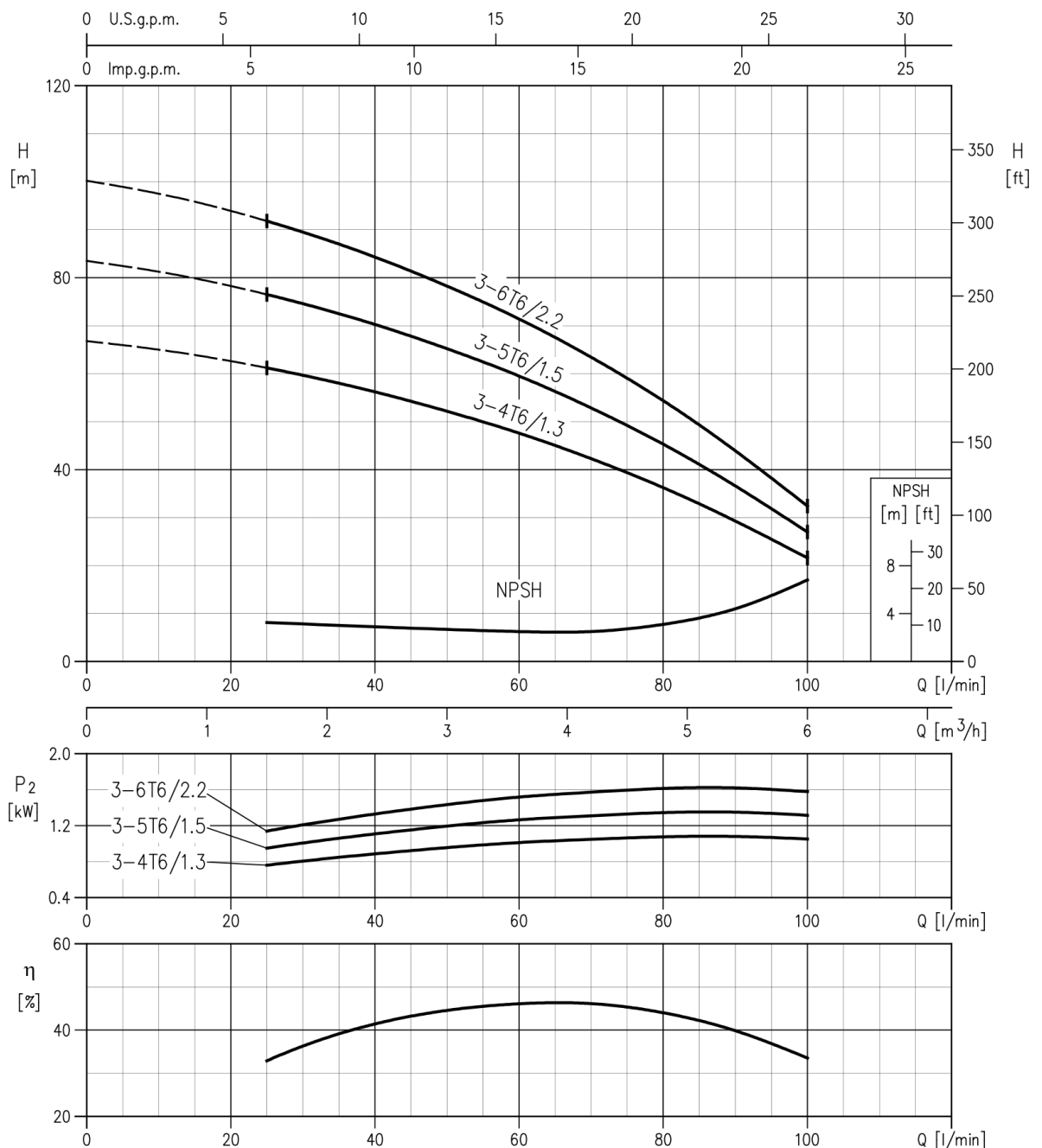


Rotation speed ≈ 3500 min⁻¹
Test standard: ISO 9906:2012 - Grade 3B

MATRIX 3-6T6/2.2 - Impeller diameter = 98.5 mm

MATRIX 3-5T6/1.5 - Impeller diameter = 98.5 mm

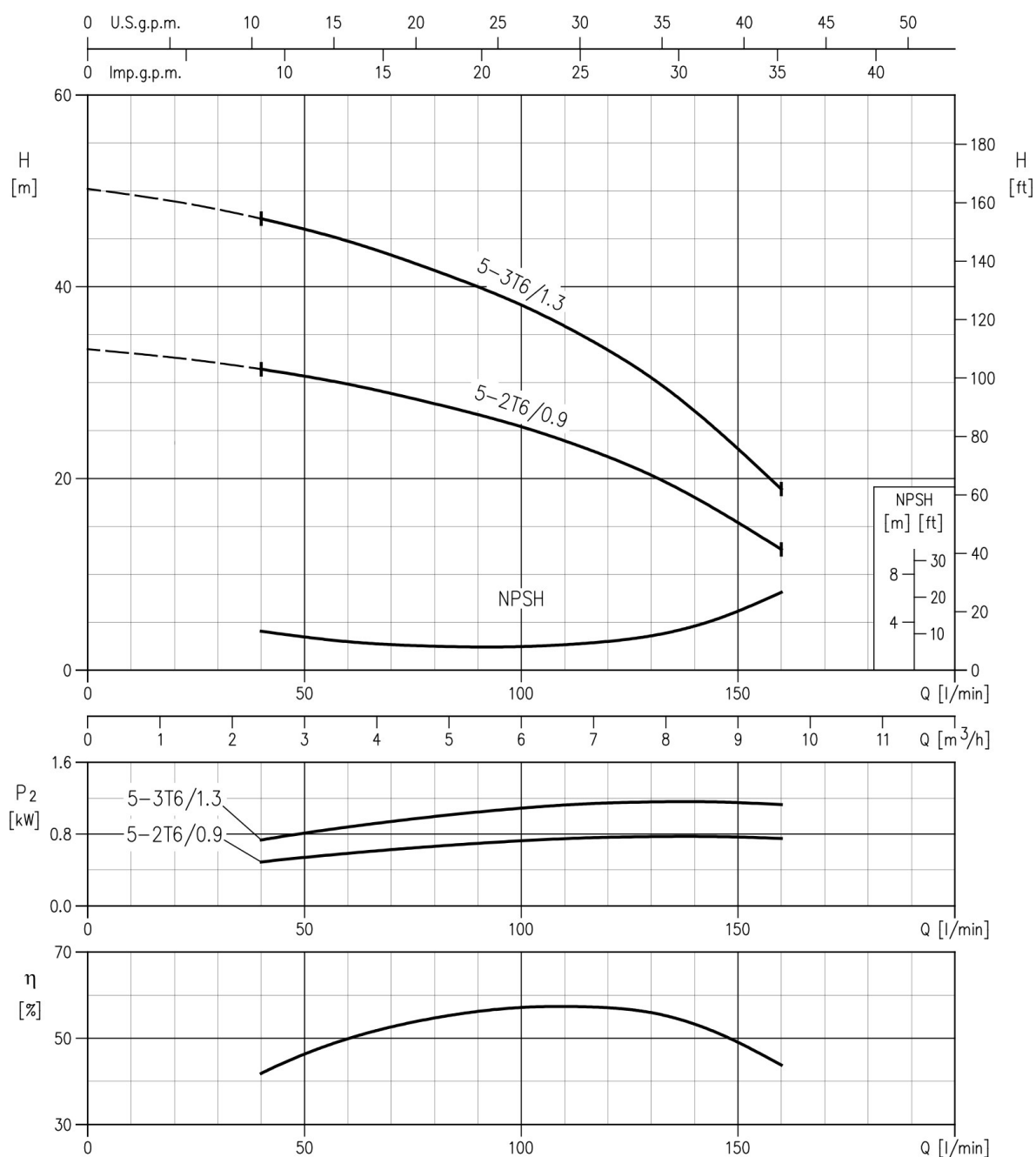
MATRIX 3-4T6/1.3 - Impeller diameter = 98.5 mm



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

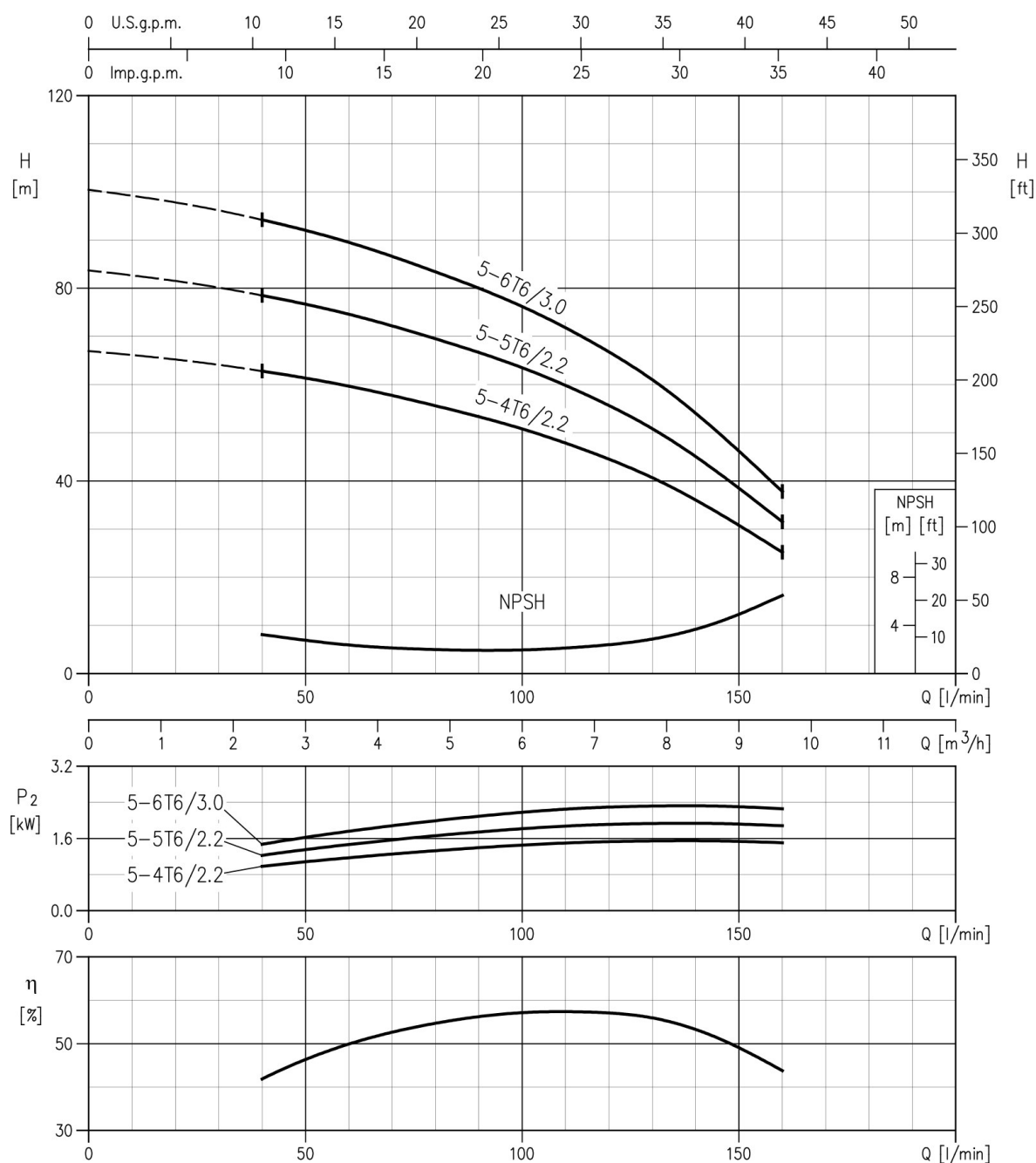


Rotation speed ≈ 3500 min⁻¹
Test standard: ISO 9906:2012 - Grade 3B

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



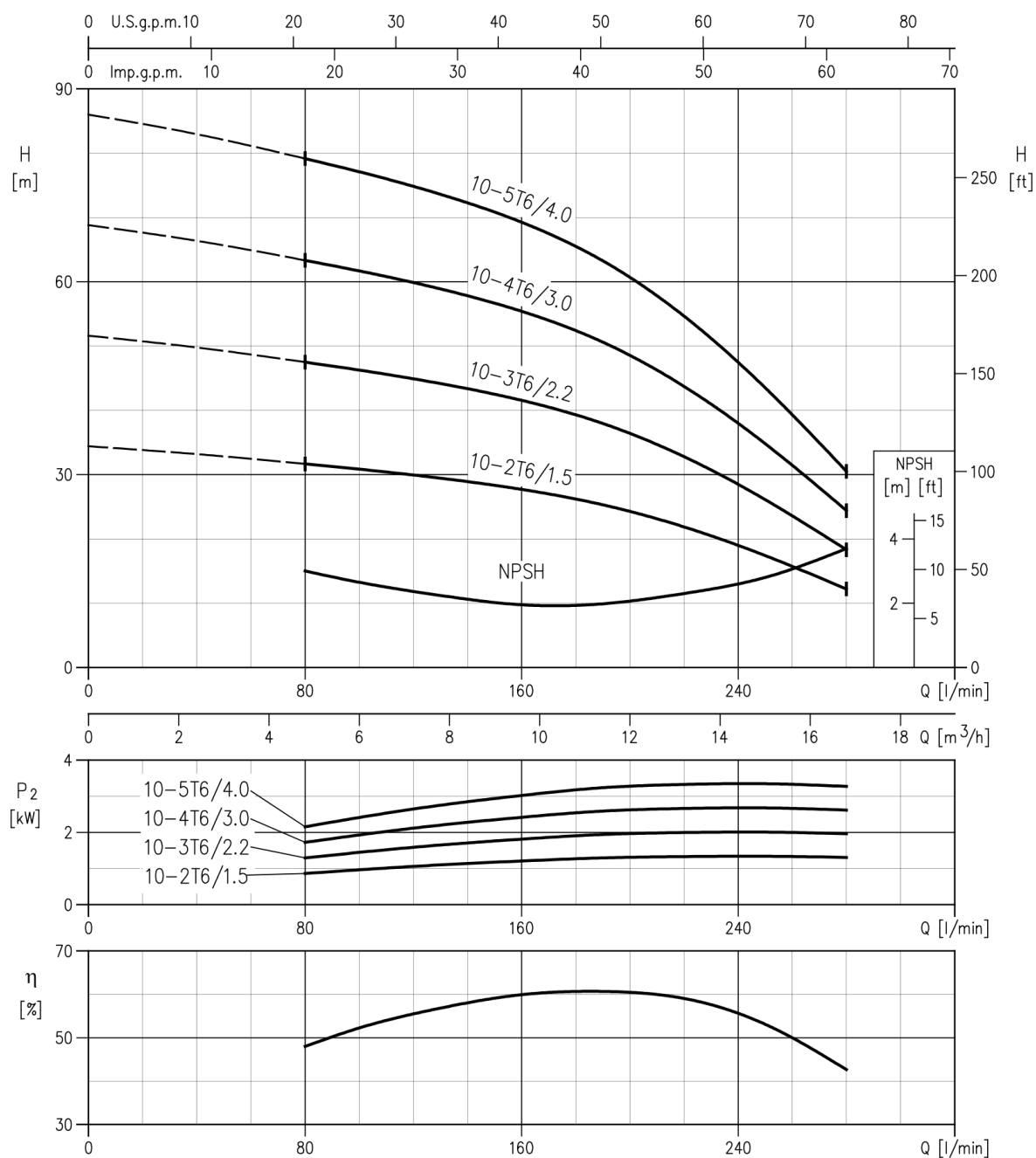
Rotation speed ≈ 3500 min⁻¹
Test standard: ISO 9906:2012 - Grade 3B

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

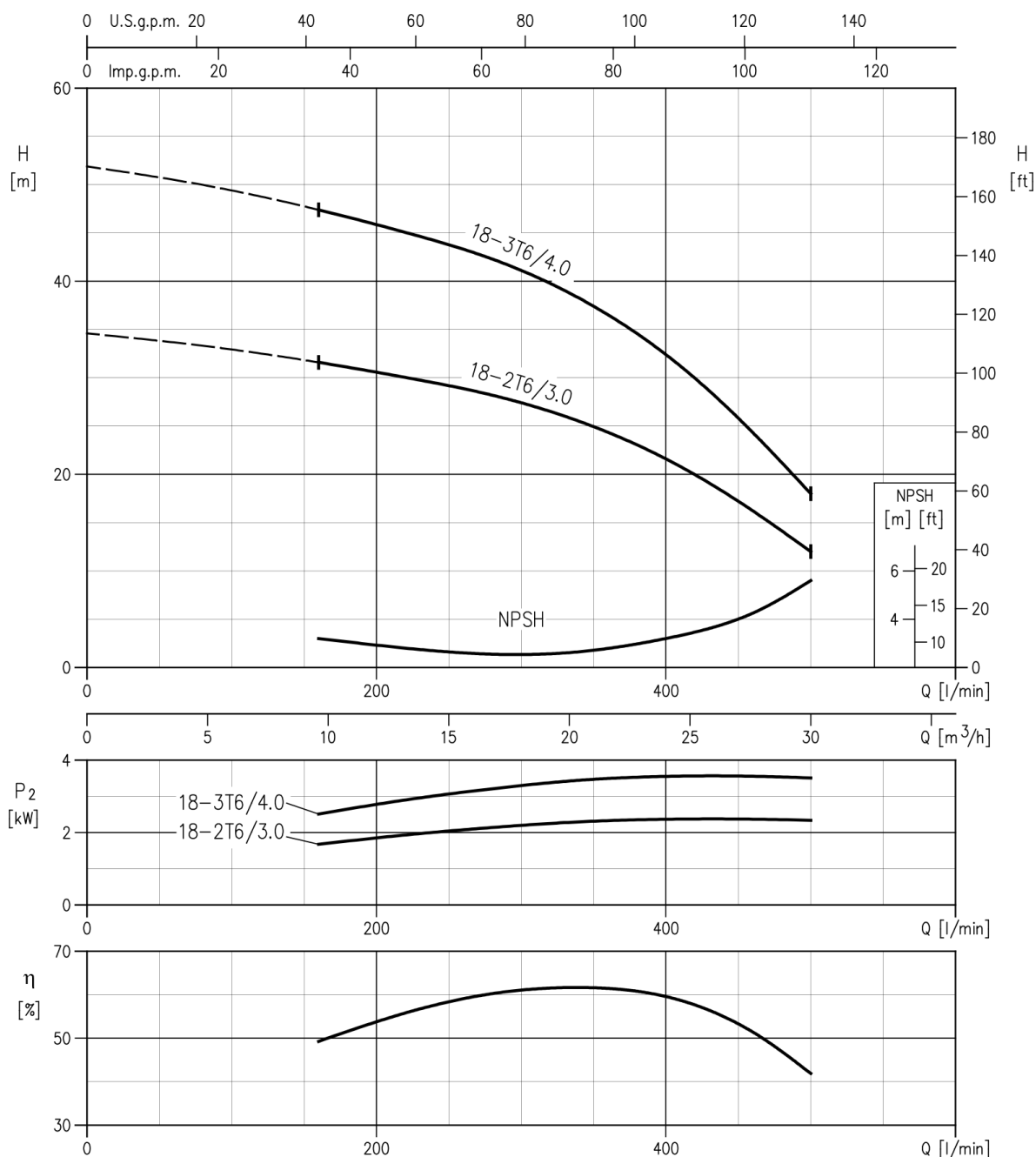
MATRIX 10-2T6/1.5 - Impeller diameter = 100.5 mm



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

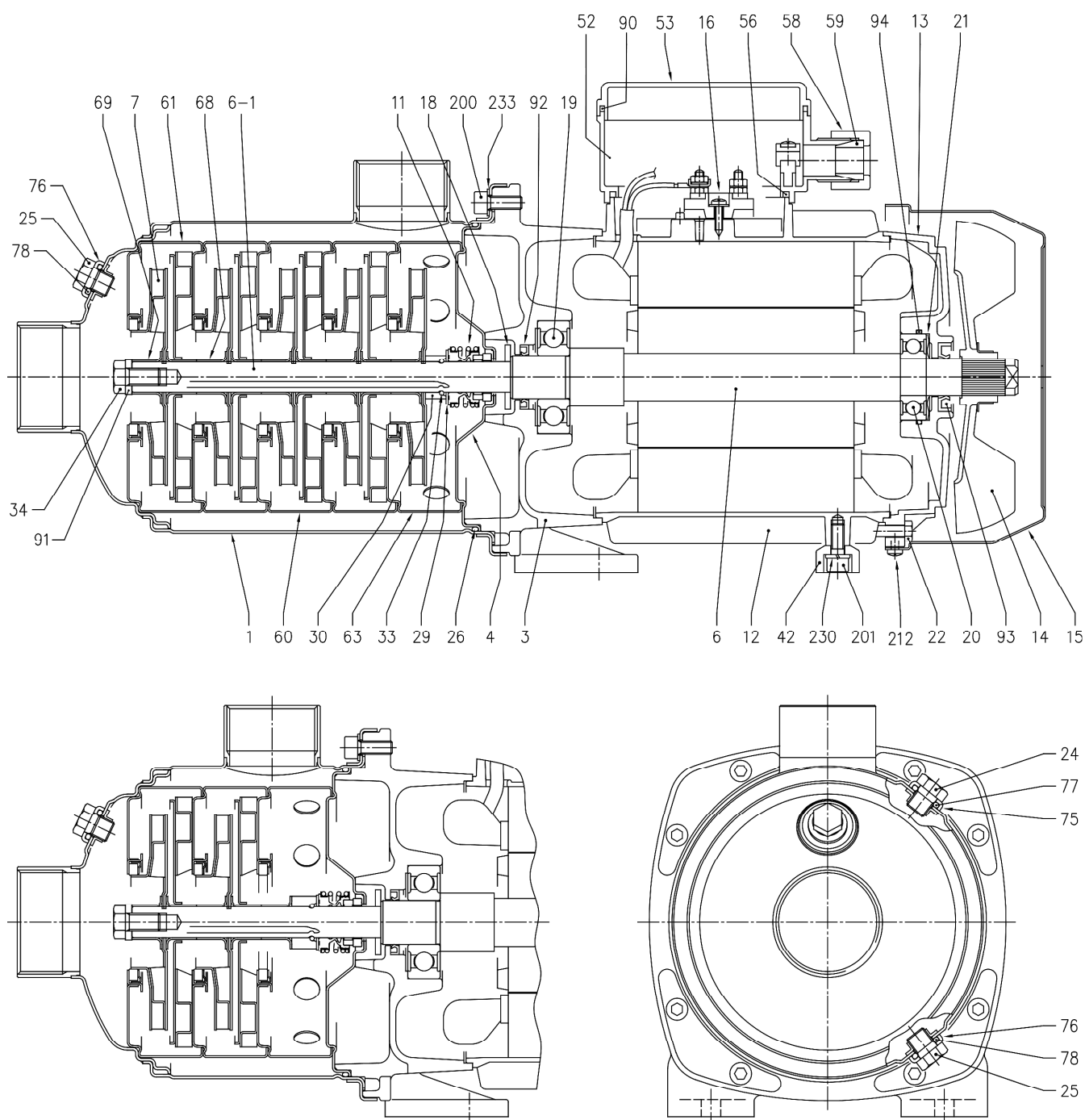
MATRIX 18-3T6/4.0 - Impeller diameter = 106.7 mm

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

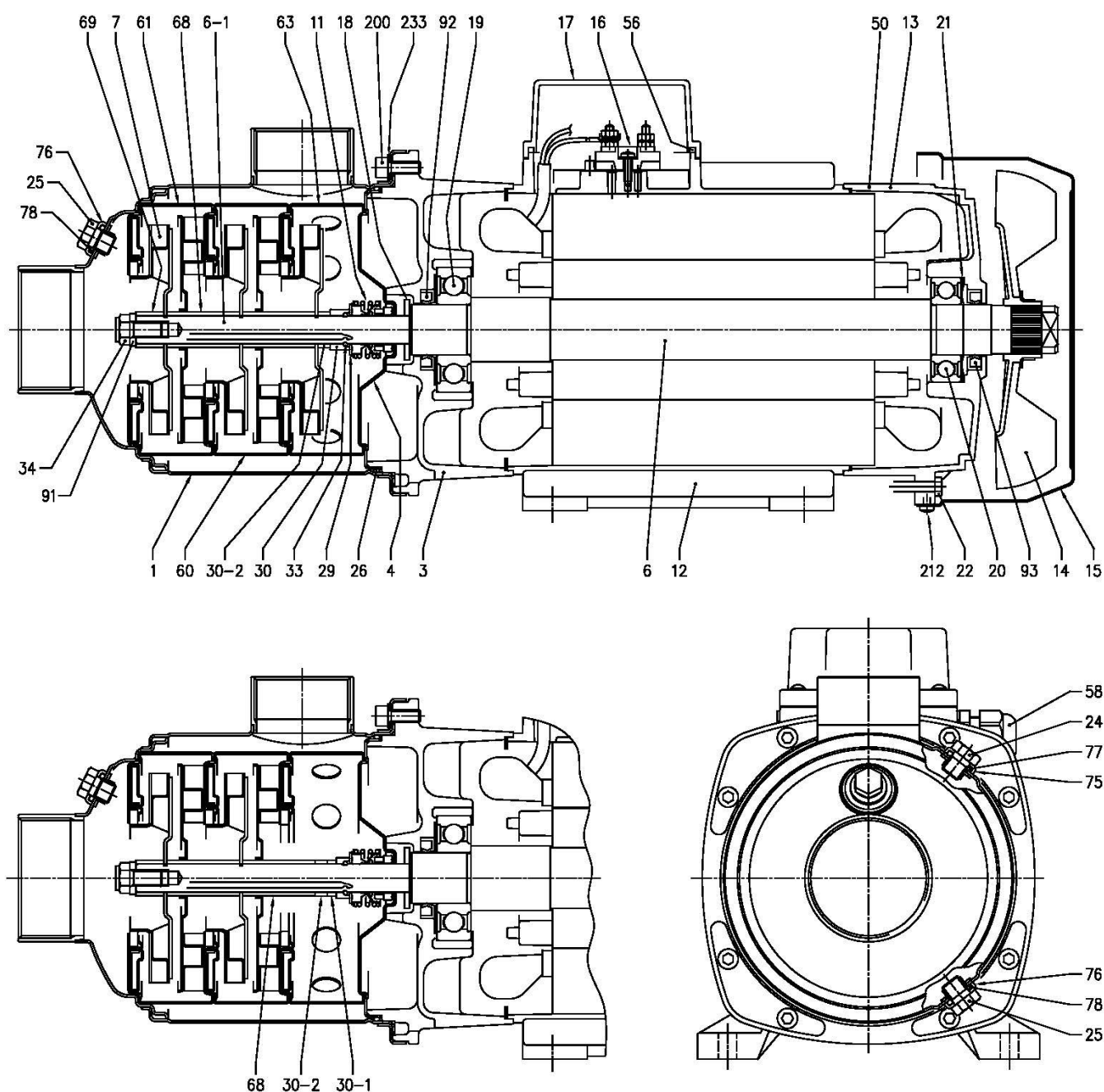


Rotation speed $\approx 3500 \text{ min}^{-1}$
Test standard: ISO 9906:2012 - Grade 3B

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	Ø 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

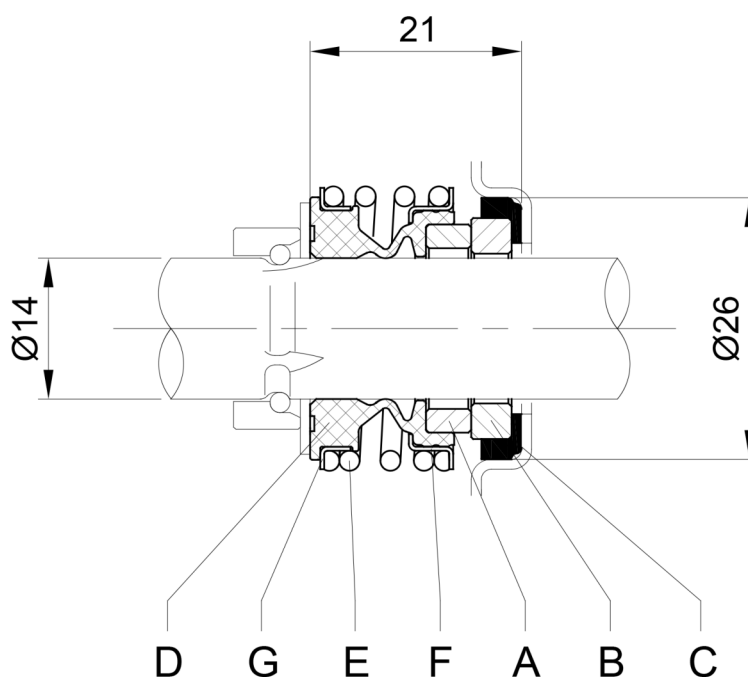
[6] See **MECHANICAL SEAL** pages 304 - 306

[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



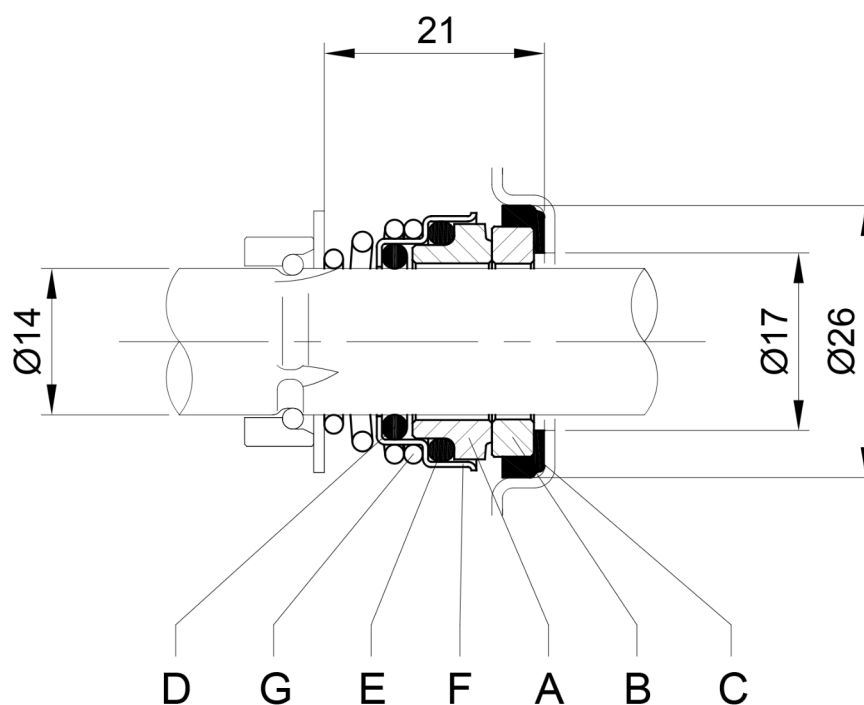
STANDARD *	Material						
	A	B	C	D	E	F	G
	Rotary seal ring	Stationary seal ring	Gasket	Bellows	Spring	Frame	Retainer ring
	Carbon	Ceramic	EPDM	EPDM	EN 1.4402 (AISI 316)	EN 1.4402 (AISI 316)	EN 1.4402 (AISI 316)

OPTIONAL **	Material						
	Version	A	B	C	D	E	G
		Rotary seal ring	Stationary seal ring	Gasket	Bellows	Spring	Retainer ring
	H	Ceramic	Carbon	FPM	FPM	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)

* Approval for drinking water application
WRAS Approval product

** Approval for drinking water application
DM174/2004



MECHANICAL SEAL**OPTIONAL****

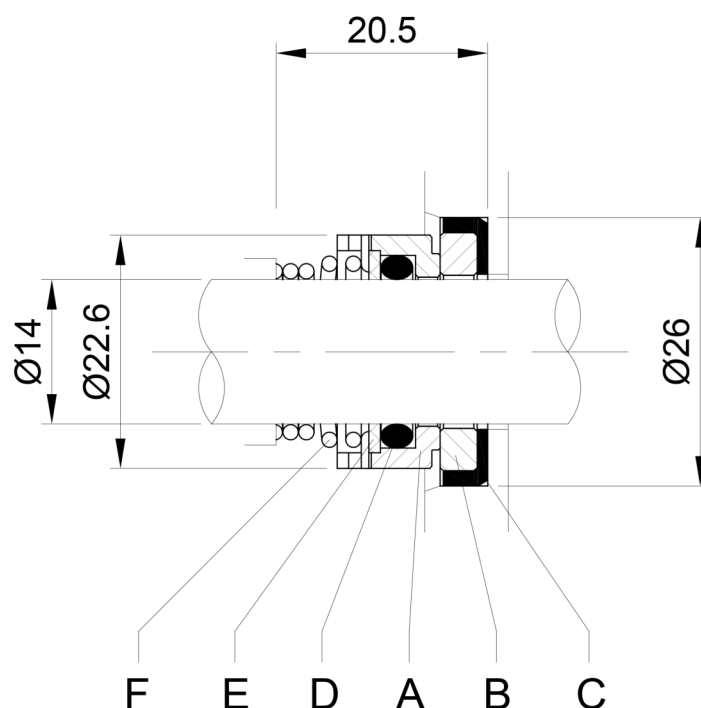
Version	A Rotary seal ring	B Stationary seal ring	C Gasket	Material D O-ring	E O-ring	F Spring	G Retainer ring
-TE	Carbon	Ceramic	EPDM	EPDM	EN 1.4402 (AISI 316)	EN 1.4402 (AISI 316)	EN 1.4402 (AISI 316)

SPECIAL

Version	A Rotary seal ring	B Stationary seal ring	C Gasket	Material D O-ring	E O-ring	F Spring	G Retainer ring
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)

** Approval for drinking water application
DM174/2004

FLUID TEMPERATURE RANGE

The maximum allowable temperature for the pumped fluid is a determining factor for the operational life of the pump. A primary role in this limitation is played by the materials of the mechanical seals (rings and elastomers), whose thermal resistance often defines the upper limit. The general construction materials of the pump (casing, impeller) and the lubricant used also contribute to defining the maximum temperature. Although the fluid properties and operating conditions have an impact, the choice of suitable seal materials for the operating temperature is crucial to prevent leaks and ensure the reliability of the pumping system.

To preserve optimal performance and prevent failures, we recommend to operate within the following limits:

STANDARD mechanical seal	TEMPERATURE	
	MIN	MAX
STANDARD	-15 °C	85 °C

OPTIONAL mechanical seal	TEMPERATURE	
	MIN	MAX
H *	-15 °C	85 °C
HS *	-15 °C	85 °C
-TE	-15 °C	110 °C

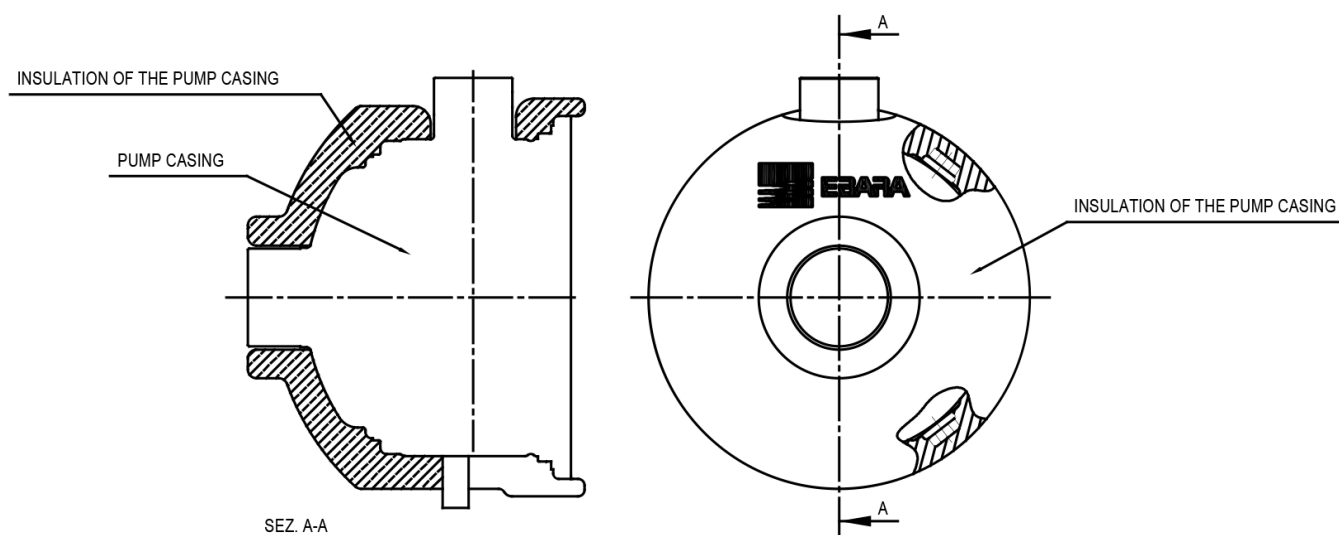
SPECIAL mechanical seal	TEMPERATURE	
	MIN	MAX
Q1AEGG	-15 °C	110 °C
U3Q1EGG	-15 °C	110 °C

* in case the pumped fluid is water in combination to FPM elastomers, a maximum temperature fluid of 75°C is recommended in order to guarantee a longer life of the sealing parts

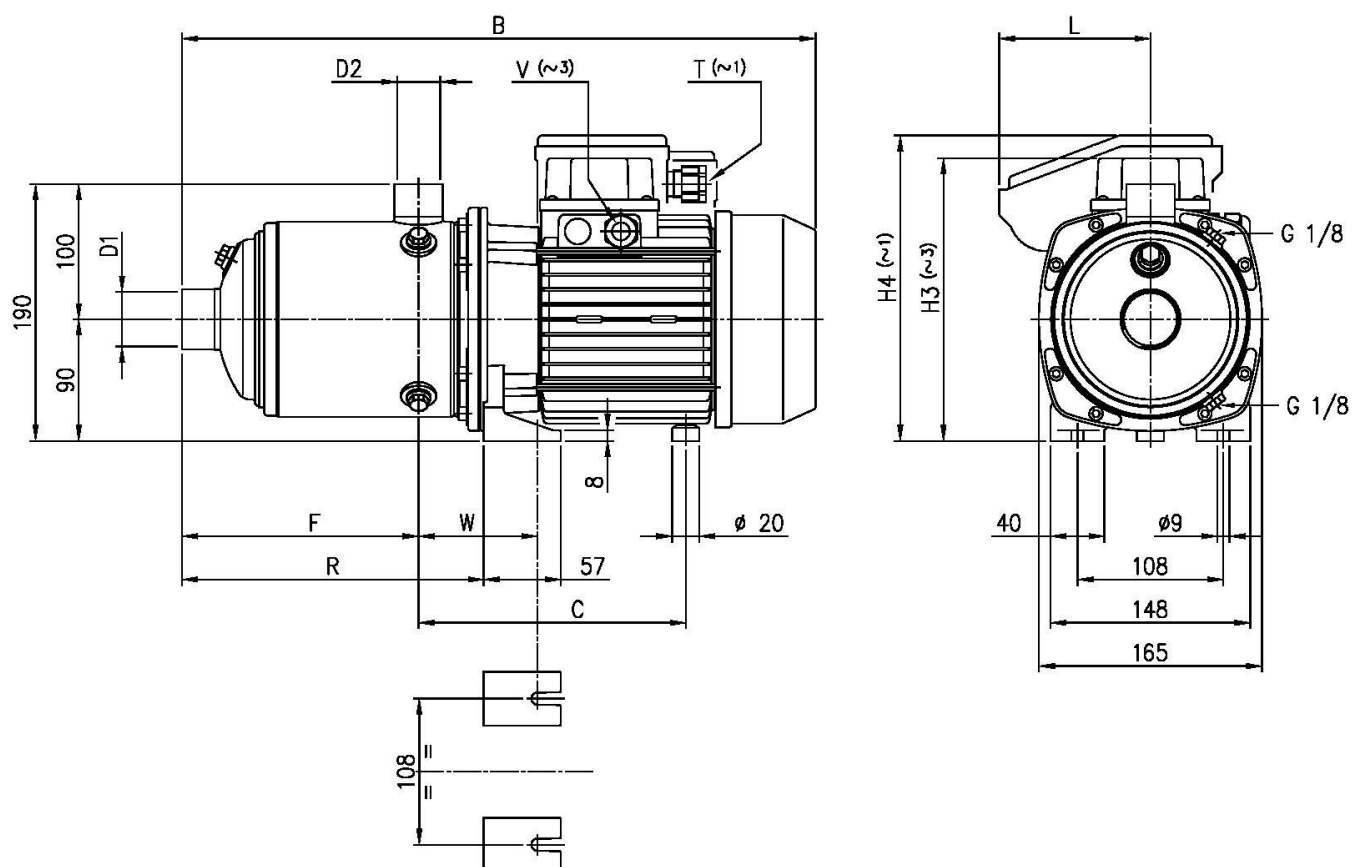
BEARINGS

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	

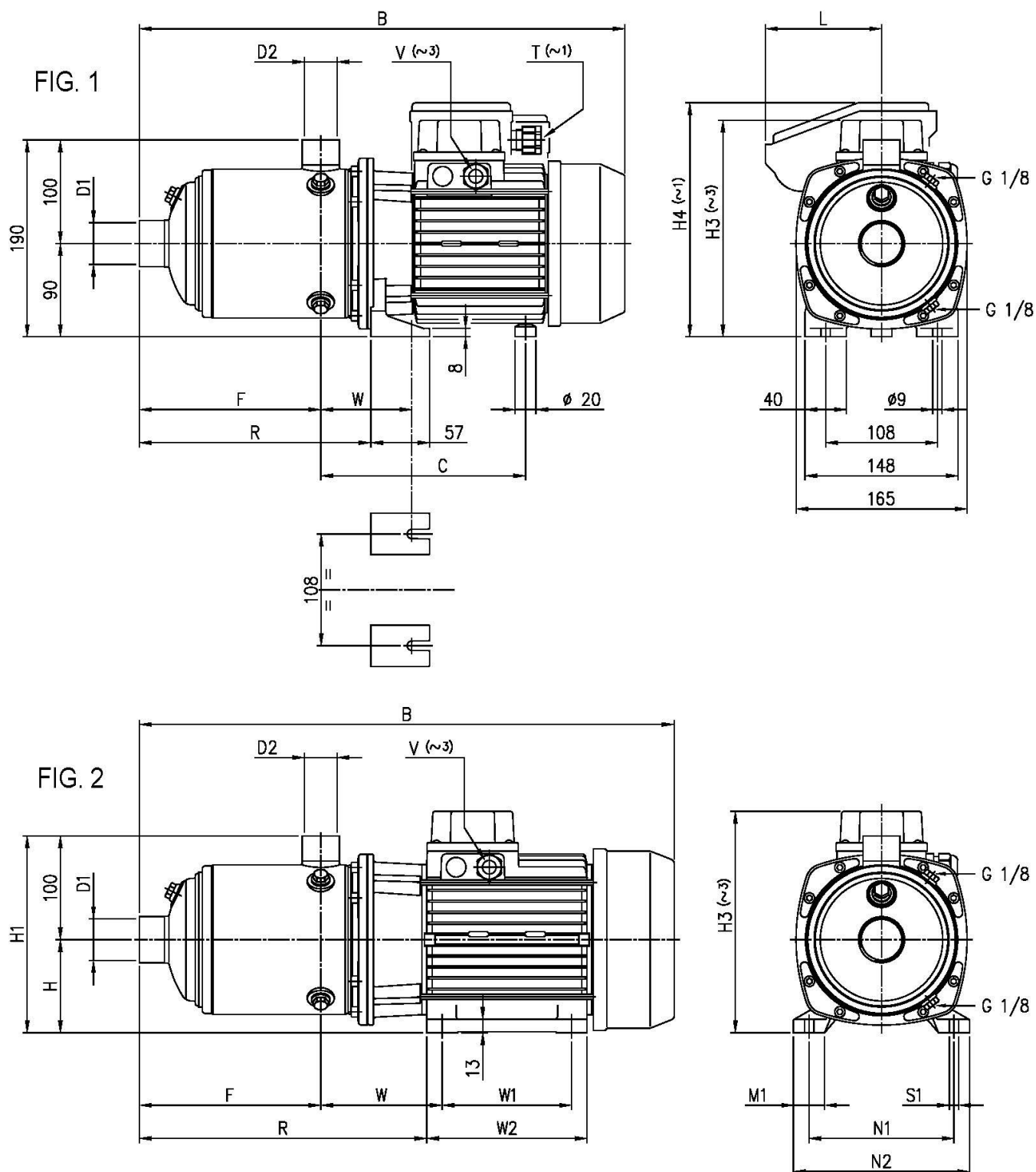
**PUMP DRAWING
MATRIX 3**

**PUMP TABLE
MATRIX 3**

Pump Type	D1	D2	B	C	F	Dimensions [mm]							Weight [kgf]
						H4	H3	L	R	V [1~]	V [3~]	W	
MATRIX 3-2T6/0.65M	1"	1"	360	171	103	198	-	85	151.5	PG11	-	88 ÷ 97	11
MATRIX 3-2T6/0.65			360	171	103	-	192	-	151.5	-	M16x1.5	88 ÷ 97	9.7
MATRIX 3-3T6/0.9M			372	171	103	198	-	85	151.5	M20x1.5	-	88 ÷ 97	12.5
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

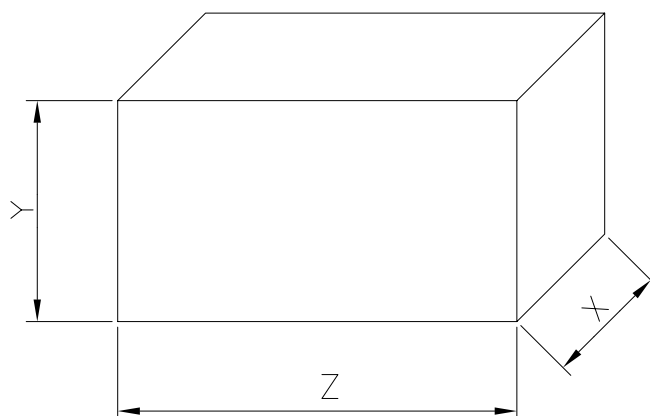
[3~] Three phase

**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	V	W	W1	W2	M1	N1	N2	S1		
				[1~]	[3~]								[1~]	[3~]									
MATRIX 5-2T6/0.9M	1	1" 1/4	1"	-	-	372	171	103	198	-	85	151.5	M20x1.5	-	88÷97	-	-	-	-	-	-	12.5	
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	220	260	560	12
MATRIX 3-2T6/0.65	220	260	560	10.3
MATRIX 3-3T6/0.9M	220	260	560	13.5
MATRIX 3-3T6/0.9	220	260	560	13
MATRIX 3-4T6/1.3M	220	260	580	15.5
MATRIX 3-4T6/1.3	220	260	580	15.8
MATRIX 3-5T6/1.5M	220	260	580	16.8
MATRIX 3-5T6/1.5	220	260	580	19.2
MATRIX 3-6T6/2.2	220	260	670	19.7
MATRIX 5-2T6/0.9M	220	260	560	13.5
MATRIX 5-2T6/0.9	220	260	560	12.9
MATRIX 5-3T6/1.3M	220	260	560	14.8
MATRIX 5-3T6/1.3	220	260	560	15.2
MATRIX 5-4T6/2.2	220	260	580	18.1
MATRIX 5-5T6/2.2	220	260	670	18.3
MATRIX 5-6T6/3	220	260	670	23.2
MATRIX 10-2T6/1.5M	220	260	580	15.6
MATRIX 10-2T6/1.5	220	260	580	18
MATRIX 10-3T6/2.2	220	260	580	17.7
MATRIX 10-4T6/3	220	260	670	23.5
MATRIX 10-5T6/4	220	260	670	33.5
MATRIX 18-2T6/3	220	260	670	22.4
MATRIX 18-3T6/4	220	260	670	32.5

TECHNICAL DATA

60Hz

Rev. N

MOTOR DATA

Pump type	Power		Efficiency	Capacitor		Efficiency (% load) and power factor				Input	Full load current		Locked rotor current	
Single Phase	[kW]	[HP]	[IE]	[μF]	[V]	η %			cos-φ	[kW]	[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	63,0	71,5	75,5	0,86	0,99	10,4	-	66,5	-
				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	Efficiency (% load)			Efficiency (% load)			Input [kW]	Full load current			Locked rotor current				
	Three Phase	[kW]		[HP]	[IE] *	Three phase (380 V)			Three phase (460 V)			[A]			[A]			
						η %	50%	75%	100%		η %	50%	75%	100%	Three Phase	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	84.4	84.5	1.3	4	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	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	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	84.4	84.5	1.3	4	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	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	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	4	IE3	86.8	87.0	87.5	87	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	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	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	4	IE3	86.8	87.0	87.5	87	87.9	88.5	3.42	10.2	5.9	5.6	75.7	43.7	52.8		
MATRIX 10-5T6/4	4	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	4	IE3	86.8	87	87.5	87	87.9	88.5	3.42	10.2	5.9	5.6	75.7	43.7	52.8		
MATRIX 18-3T6/4	4	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		

* From 1.1kW to 3kW at 220/380V efficiency level is IE2; IE3 only at 460V

** Single phase models not available for the European market

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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