

**EBARA**

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## SPECIFICATION

50Hz

Rev. E

PUMP			
Liquid Handled	Type of liquid	Water, moderate aggressive solutions, glycol solutions, moderate viscous fluids	
	Temperature [°C]	min.-15 max.+85 (Standard) *WRAS - DM174 max.+110 (High temperature "-TE") *DM174	
Max chlorine content		500 ppm	
Maximum working pressure [MPa]		1	
Construction	Impeller	Closed centrifugal type	
	Motor bearings	Screened ball bearing – greased for life	
	Pump bearings	n° 7-8-9 impellers (Matrix 3-5) n° 6 impellers (Matrix 10) n° 5-6 impellers (Matrix 18)	Type: Sleeve Shaft sleeve: Tungsten Carbide Bearing: Ceramic
Pipe Connection	Suction	G 1 (Matrix 3)	UNI ISO 228
		G 1¼ (Matrix 5)	UNI ISO 228
		G 1½ (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 1¼ (Matrix 10)		UNI ISO 228	
G 1½ (Matrix 18)		UNI ISO 228	
Material	Casing	EN 1.4301 (AISI 304)	
	Impeller	EN 1.4301 (AISI 304)	
	Intermediate casing	EN 1.4301 (AISI 304)	
	O-Rings	EPDM	
	Shaft seal	Ceramic/Carbon/EPDM	
	Liner ring	EN 1.4301 (AISI 304) + PPS	
	Casing cover	EN 1.4301 (AISI 304)	
	Shaft	EN 1.4301 (AISI 304) wet extension	
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

DM174/2004



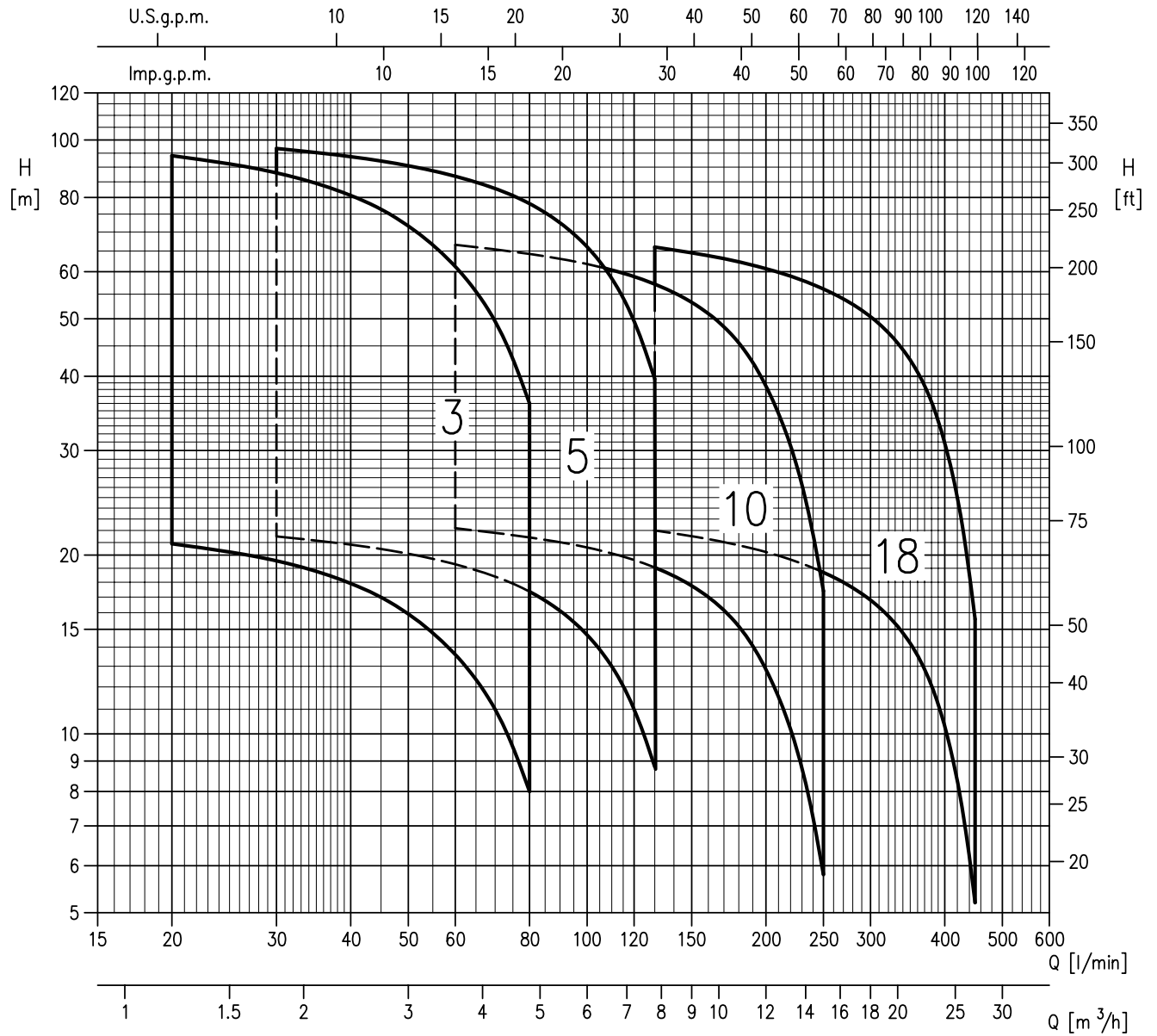
**SPECIFICATION**

50Hz

Rev. E

<b>MOTOR</b>		
Type	Electric - TEFC	
	Single Phase	Three Phase
Efficiency level (Reg. 640/2009)	-	- from 0.45 kW up to 0.65 kW IE2 from 0.75 kW up to 4.0 Kw IE3 from 0.75 kW up to 4.0 kW
No. of Poles	2	
Rotation speed [min <sup>-1</sup> ]	≈ 2850	
Insulation Class	F	
Max temperature environment [°C]	40	
Protection degree (CEI EN 60034-5)	IP 55	
Power rating	[kW]	0.45 ÷ 2.2
	[HP]	0.6 ÷ 3.0
Frequency	[Hz]	50
	[V]	230 ±10%
Voltage		230/400 ±10%
Capacitor	Built in	-
Overload protection	Built in	Provided by the user
Casing material	Aluminium	
Base material / Motor support	Aluminium	
Dimensions of cable entry	PG11 – M20x1.5	PG11 – PG13.5
		M16x1.5 – M20x1.5

PERFORMANCE RANGE



**SELECTION CHART**

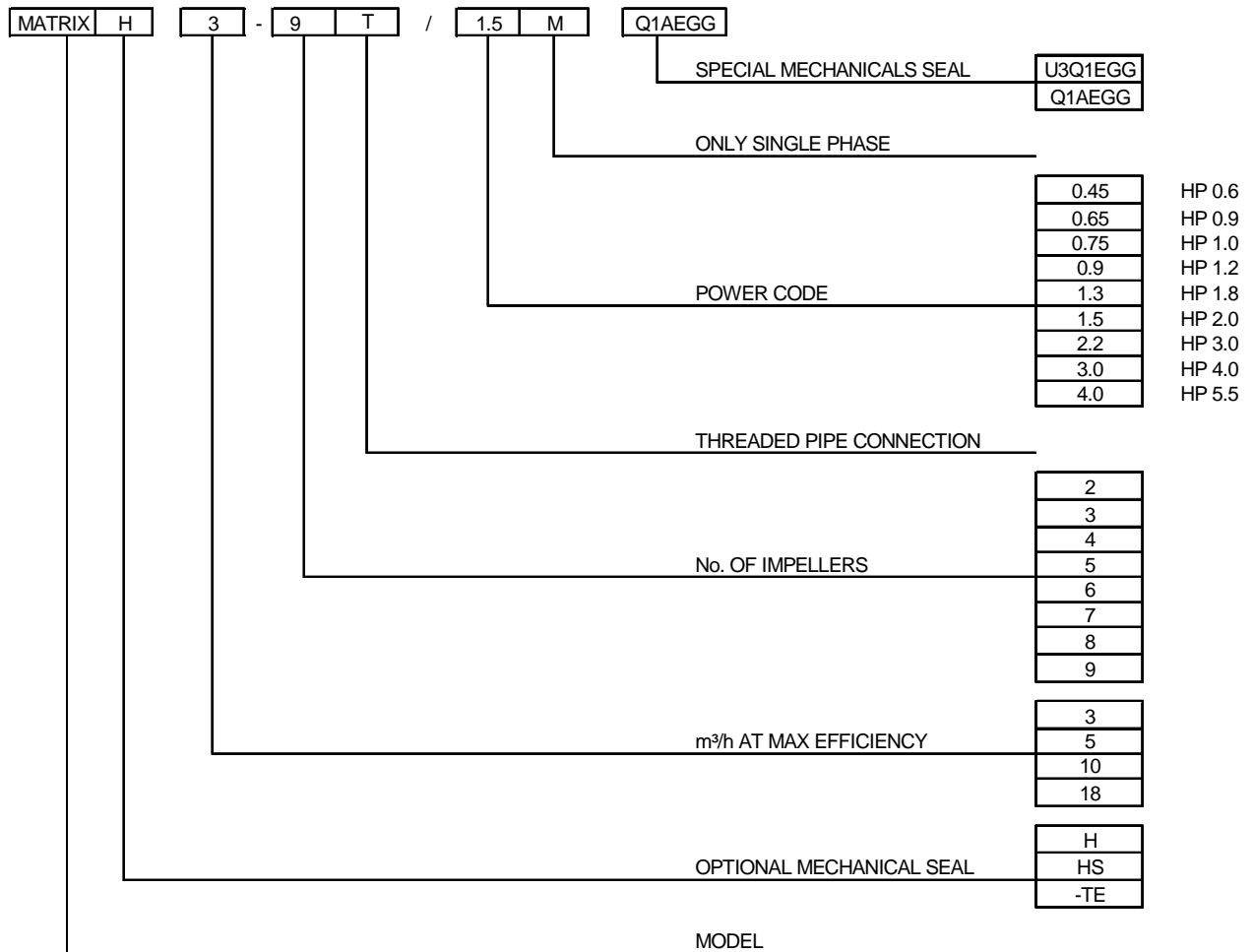
50Hz

Rev. E

**SELECTION CHART**

Pump type		Power		Q=Capacity																
Single phase	Three phase	[kW]	[HP]	l/min	0	20	30	45	60	80	100	130	160	200	250	300	350	400	450	
				m <sup>3</sup> /h	0	1.2	1.8	2.7	3.6	4.8	6	7.8	9.6	12	15	18	21	24	27	
				H=Total manometric head in meters																
3-2(.) / 0.45M	3-2(.) / 0.45	0.45	0.6	22.6	20.9	19.6	17.0	13.6	8.0											
3-3(.) / 0.65M	3-3(.) / 0.65	0.65	0.9	33.9	31.4	29.3	25.5	20.4	12.0											
3-4(.) / 0.65M	3-4(.) / 0.65	0.65	0.9	45.0	42.0	39.1	34.0	27.2	16.0											
3-5(.) / 0.75M	3-5(.) / 0.75	0.75	1.0	56.5	52.5	49.0	42.5	34.0	20.0											
3-6(.) / 0.9M	3-6(.) / 0.9	0.9	1.2	68.0	62.5	58.5	51.0	41.0	24.0											
3-7(.) / 1.3M	3-7(.) / 1.3	1.3	1.8	79.0	73.0	68.5	59.5	47.5	28.0											
3-8(.) / 1.3M	3-8(.) / 1.3	1.3	1.8	90.5	83.5	78.0	68.0	54.5	32.0											
3-9(.) / 1.5M	3-9(.) / 1.5	1.5	2.0	102.0	94.0	88.0	76.5	61.0	36.0											
5-2(.) / 0.45M	5-2(.) / 0.45	0.45	0.6	23.0	-	21.5	20.5	19.3	17.4	14.7	8.8									
5-3(.) / 0.65M	5-3(.) / 0.65	0.65	0.9	34.5	-	32.3	30.7	29.0	26.0	22.0	13.2									
5-4(.) / 0.9M	5-4(.) / 0.9	0.9	1.2	46.0	-	43.0	41.0	38.6	34.7	29.4	17.6									
5-5(.) / 1.3M	5-5(.) / 1.3	1.3	1.8	57.5	-	54.0	51.0	48.5	43.5	36.7	22.0									
5-6(.) / 1.3M	5-6(.) / 1.3	1.3	1.8	69.0	-	64.5	61.5	58.0	52.0	44.0	26.4									
5-7(.) / 1.5M	5-7(.) / 1.5	1.5	2.0	80.5	-	75.5	72.0	67.5	61.0	51.5	30.8									
5-8(.) / 2.2M	5-8(.) / 2.2	2.2	3.0	92.0	-	86.0	82.0	77.0	69.5	58.5	35.2									
5-9(.) / 2.2M	5-9(.) / 2.2	2.2	3.0	104.0	-	97.0	92.0	87.0	78.0	66.0	39.6									
10-2(.) / 0.75M	10-2(.) / 0.75	0.75	1.0	24.0	-	-	-	22.2	21.4	20.6	19.1	17.0	12.8	5.8						
10-3(.) / 1.3M	10-3(.) / 1.3	1.3	1.8	36.0	-	-	-	33.3	32.1	30.9	28.6	25.5	19.3	8.7						
10-4(.) / 1.5M	10-4(.) / 1.5	1.5	2.0	48.0	-	-	-	44.5	43.0	41.0	38.1	34.0	25.7	11.6						
10-5(.) / 2.2M	10-5(.) / 2.2	2.2	3.0	60.0	-	-	-	55.5	53.5	51.5	47.5	42.5	32.1	14.5						
10-6(.) / 2.2M	10-6(.) / 2.2	2.2	3.0	72.0	-	-	-	66.5	64.5	62.0	57.0	51.0	38.5	17.4						
18-2(.) / 1.5M	18-2(.) / 1.5	1.5	2.0	24.2	-	-	-	-	-	-	22.0	21.3	20.2	18.7	16.8	14.2	10.3	5.2		
18-3(.) / 2.2M	18-3(.) / 2.2	2.2	3.0	36.3	-	-	-	-	-	-	33.0	31.9	30.4	28.1	25.2	21.3	15.5	7.8		
-	18-4(.) / 3	3.0	4.0	48.5	-	-	-	-	-	-	44.0	42.5	40.5	37.4	33.6	28.4	20.6	10.4		
-	18-5(.) / 4	4	5.5	60.5	-	-	-	-	-	-	55.0	53.0	50.5	47.0	42.0	35.5	25.8	13.0		
-	18-6(.) / 4	4	5.5	72.5	-	-	-	-	-	-	66.0	64.0	60.5	56.0	50.5	42.5	30.9	15.6		

**TYPE KEY**



**PERFORMANCE CURVE 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 50 Hz, 2 poles.

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)

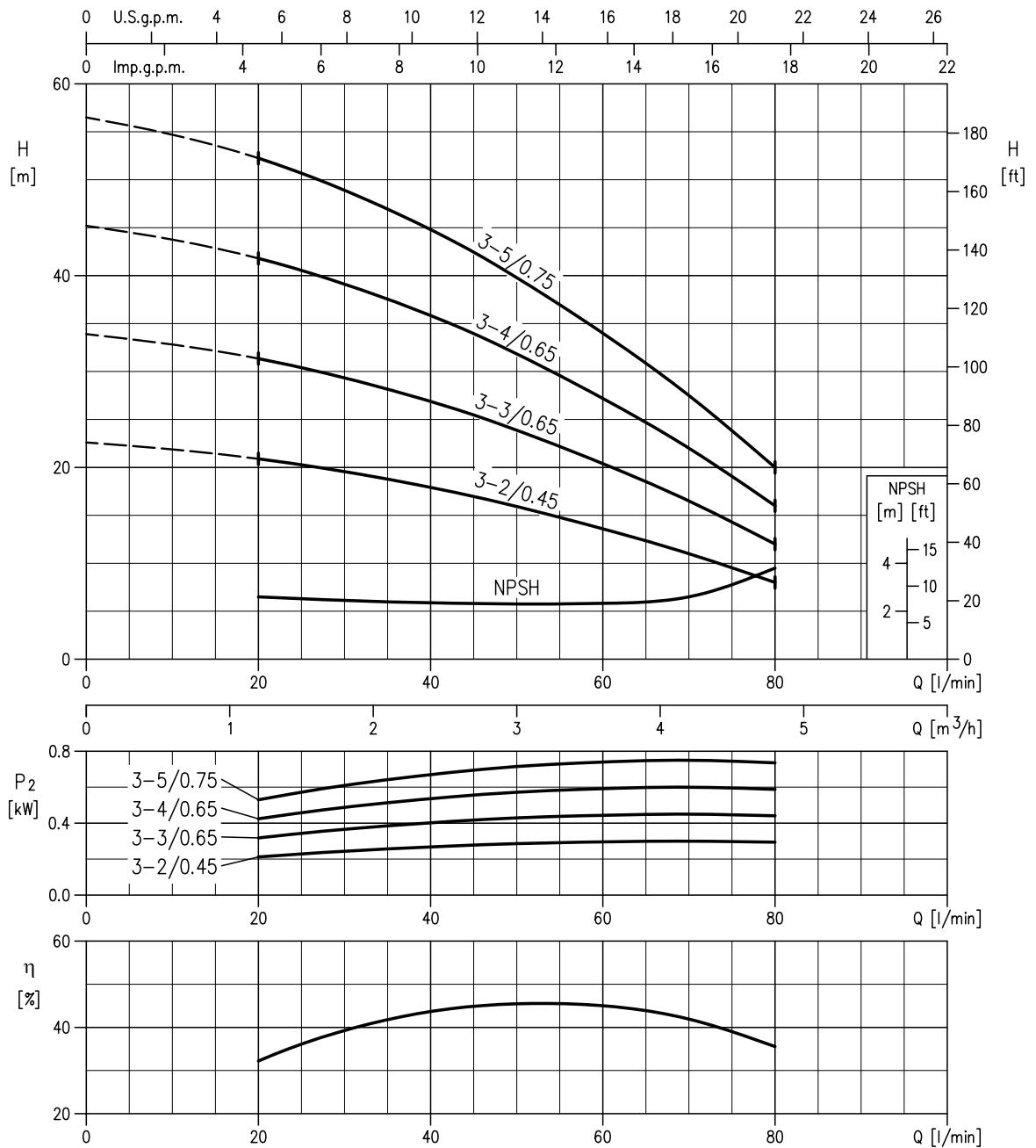
The continuous curves indicate the recommended working range. The dotted curve is only a guide.

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)
- $\eta$  = pump efficiency
- NPSH = net positive suction head required by the pump

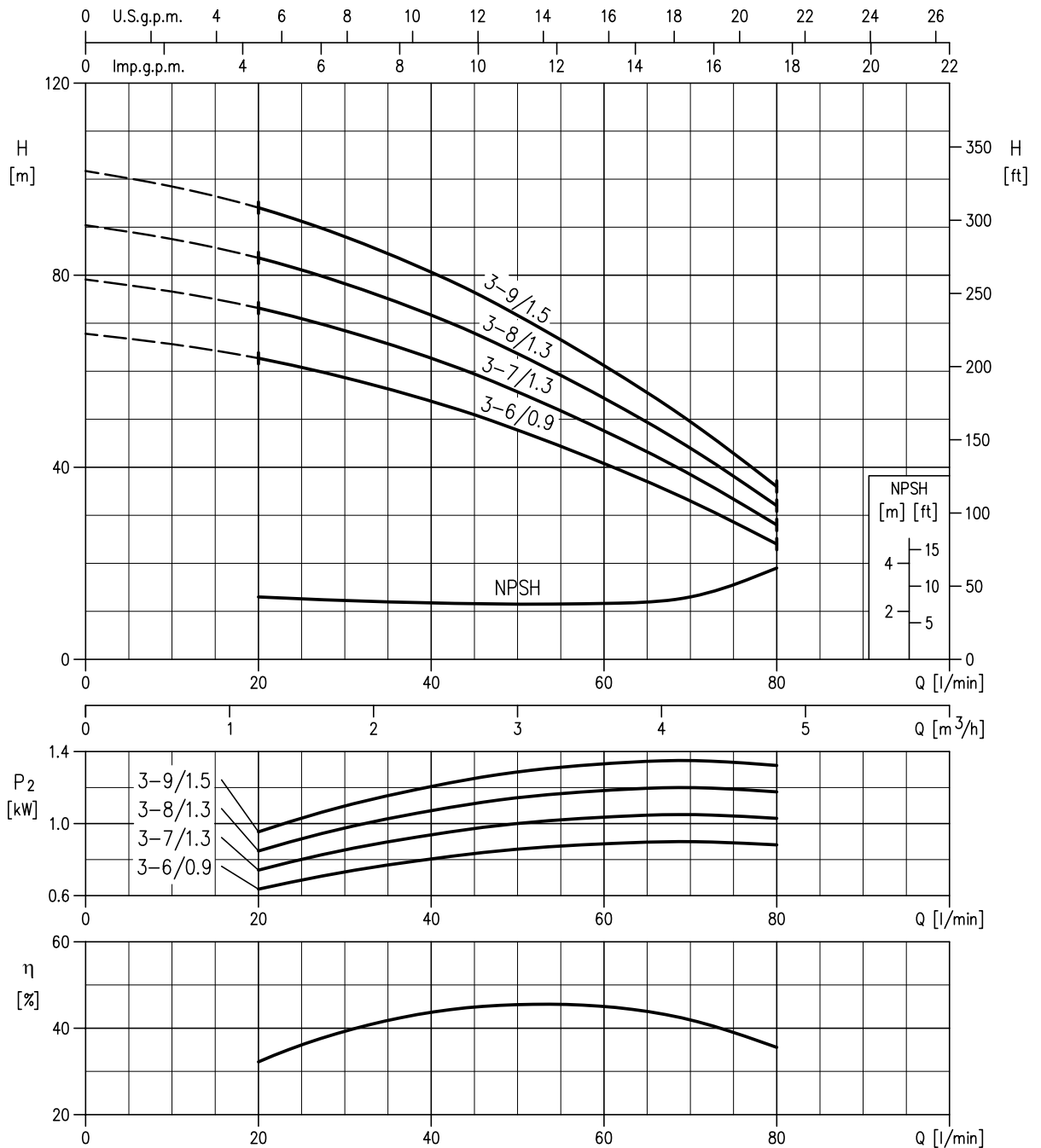
**MATRIX 3-5/0.75 (0.75 kW) - Impeller diameter = 98.5 mm**  
**MATRIX 3-4/0.65 (0.65 kW) - Impeller diameter = 98.5 mm**  
**MATRIX 3-3/0.65 (0.65 kW) - Impeller diameter = 98.5 mm**  
**MATRIX 3-2/0.45 (0.45 kW) - Impeller diameter = 98.5 mm**



Rotation speed ≈ 2850 min<sup>-1</sup>  
 Test standard: ISO 9906:2012 - Grade 3B

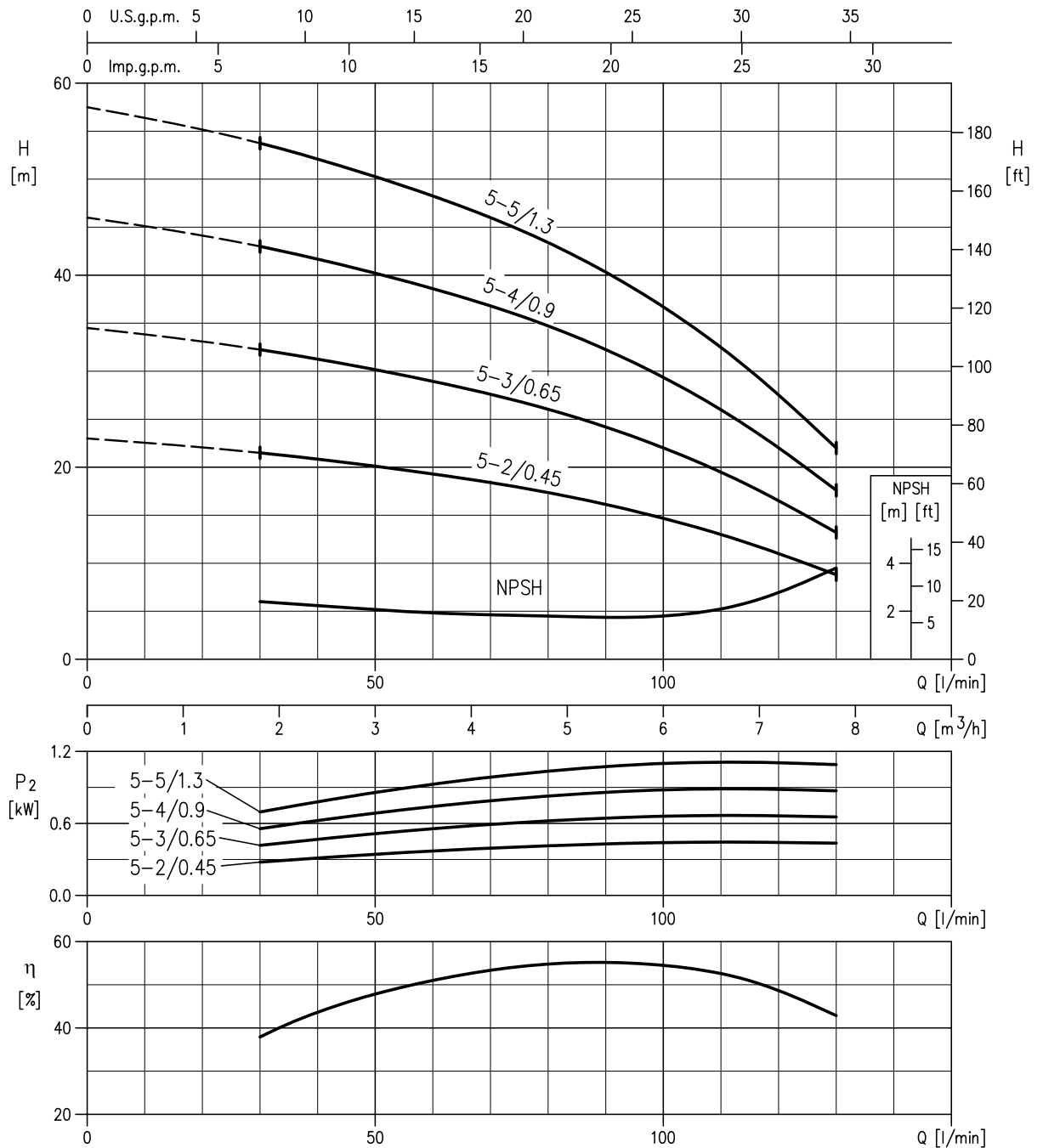


**MATRIX 3-9/1.5 (1.5 kW) - Impeller diameter = 98.5 mm**  
**MATRIX 3-8/1.3 (1.3 kW) - Impeller diameter = 98.5 mm**  
**MATRIX 3-7/1.3 (1.3 kW) - Impeller diameter = 98.5 mm**  
**MATRIX 3-6/0.9 (0.90 kW) - Impeller diameter = 98.5 mm**



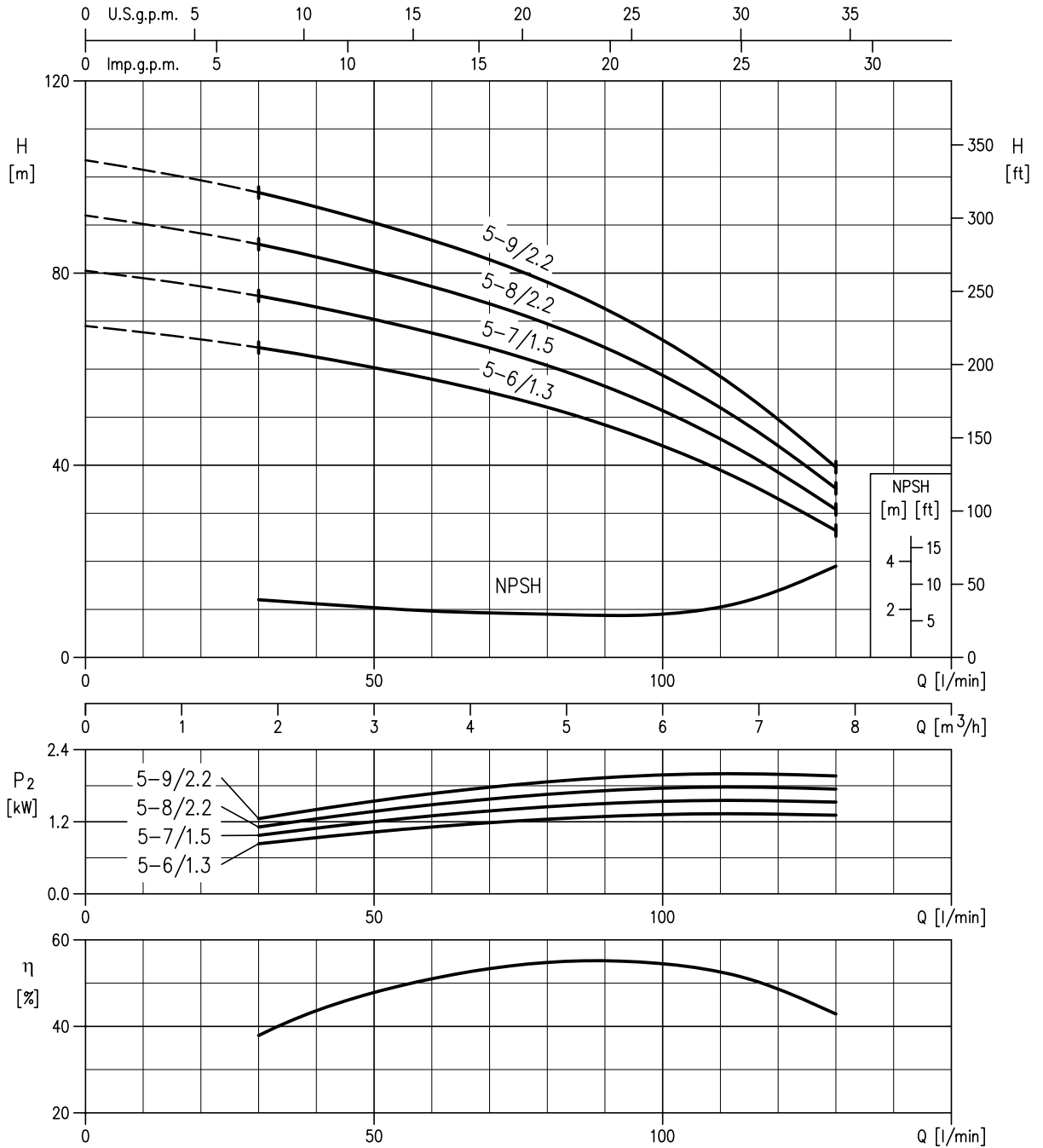
Rotation speed ≈ 2850 min<sup>-1</sup>  
 Test standard: ISO 9906:2012 - Grade 3B

**MATRIX 5-5/1.3 (1.3 kW) - Impeller diameter = 97 mm**  
**MATRIX 5-4/0.9 (0.90 kW) - Impeller diameter = 97 mm**  
**MATRIX 5-3/0.65 (0.65 kW) - Impeller diameter = 97 mm**  
**MATRIX 5-2/0.45 (0.45 kW) - Impeller diameter = 97 mm**



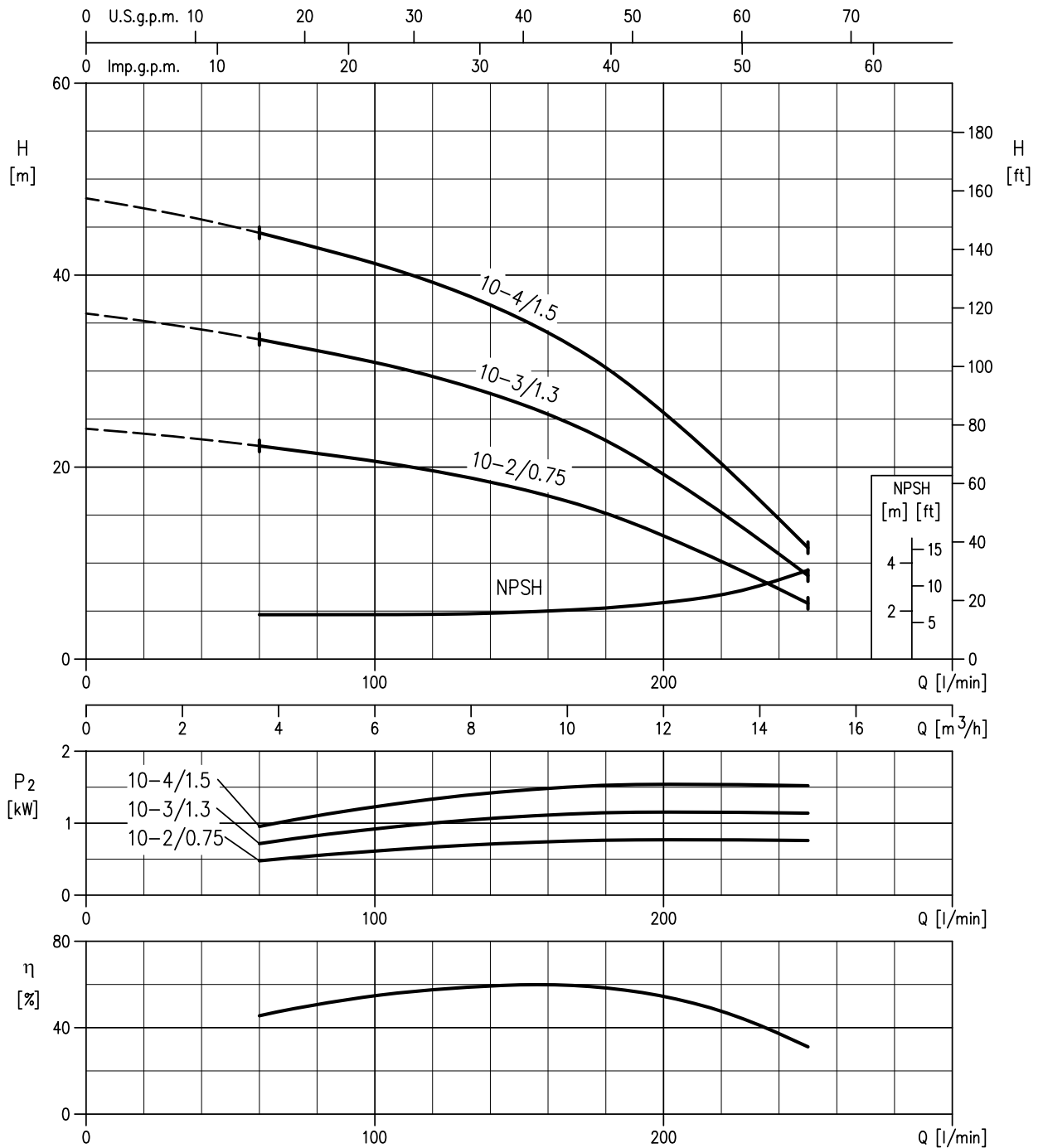
Rotation speed ≈ 2850 min<sup>-1</sup>  
 Test standard: ISO 9906:2012 - Grade 3B

**MATRIX 5-9/2.2 (2.2 kW) - Impeller diameter = 97 mm**  
**MATRIX 5-8/2.2 (2.2 kW) - Impeller diameter = 97 mm**  
**MATRIX 5-7/1.5 (1.5 kW) - Impeller diameter = 97 mm**  
**MATRIX 5-6/1.3 (1.3 kW) - Impeller diameter = 97 mm**



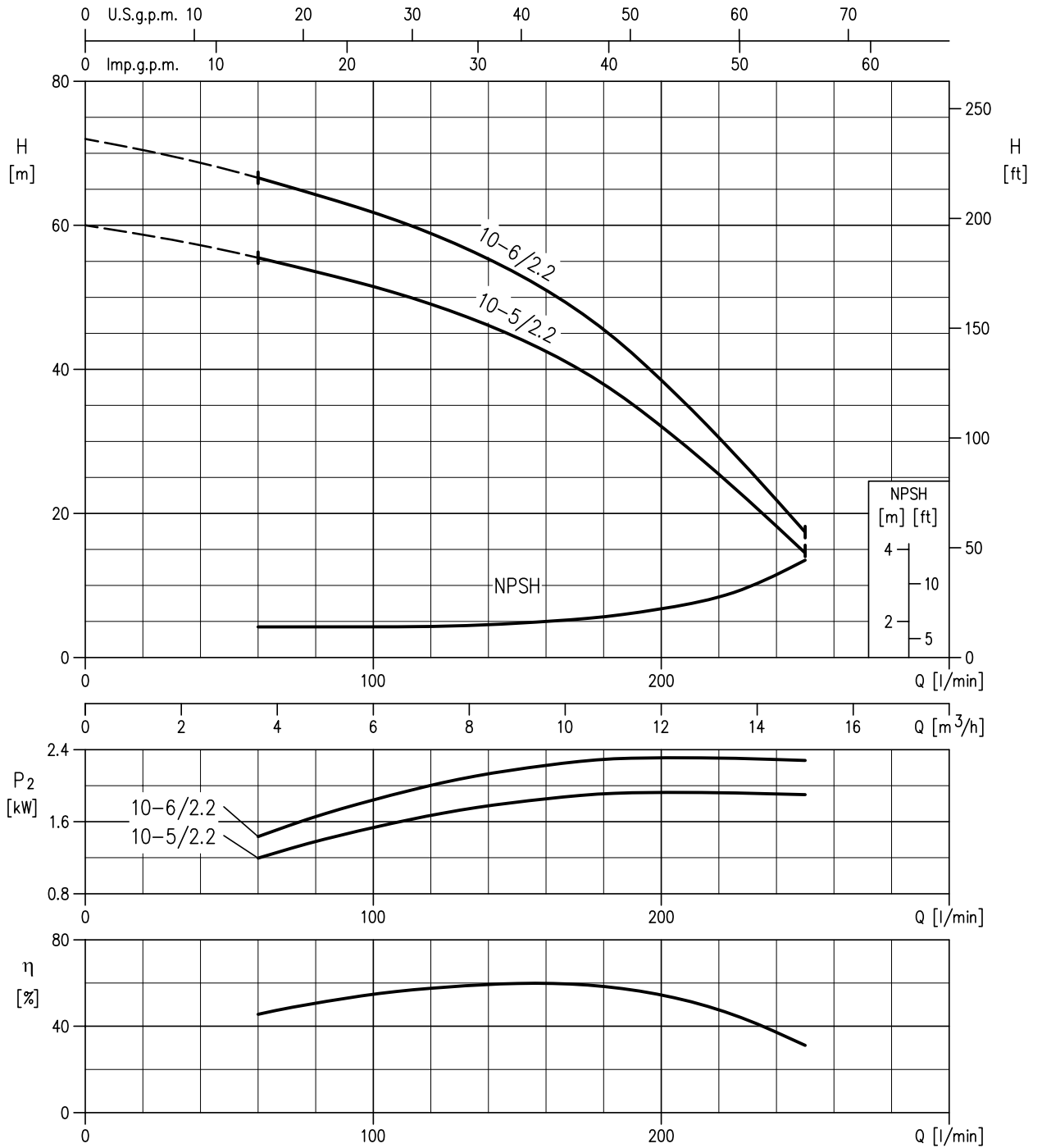
Rotation speed ≈ 2850 min<sup>-1</sup>  
 Test standard: ISO 9906:2012 - Grade 3B

MATRIX 10-4/1.5 (1.5 kW) - Impeller diameter = 100.5 mm  
 MATRIX 10-3/1.3 (1.3 kW) - Impeller diameter = 100.5 mm  
 MATRIX 10-2/0.75 (0.75 kW) - Impeller diameter = 100.5 mm



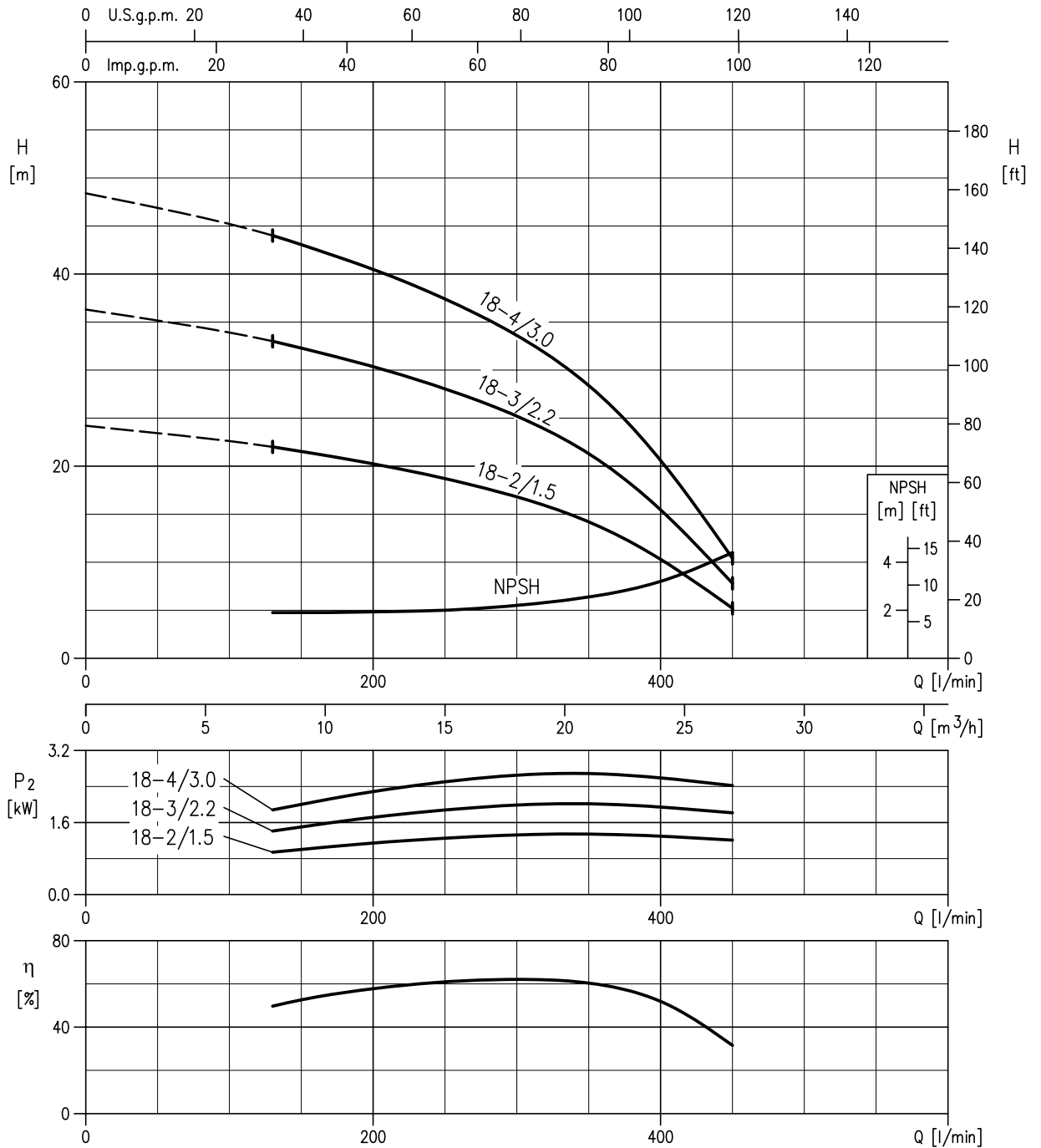
Rotation speed ≈ 2850 min<sup>-1</sup>  
 Test standard: ISO 9906:2012 - Grade 3B

**MATRIX 10-6/2.2 (2.2 kW) - Impeller diameter = 100.5 mm**  
**MATRIX 10-5/2.2 (2.2 kW) - Impeller diameter = 100.5 mm**



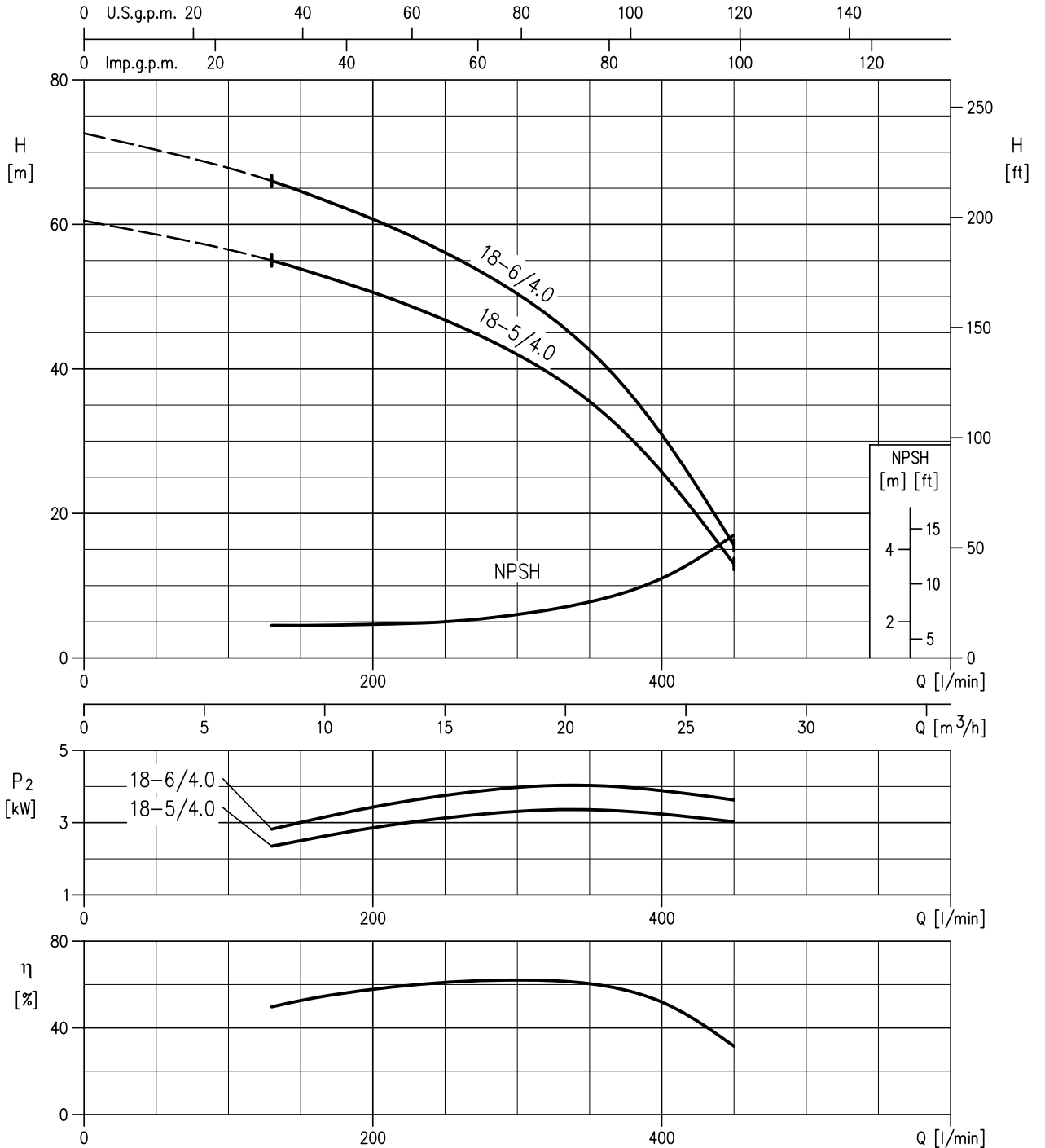
Rotation speed ≈ 2850 min<sup>-1</sup>  
 Test standard: ISO 9906:2012 - Grade 3B

**MATRIX 18-4/3.0 (3.0 kW) - Impeller diameter = 106.7 mm**  
**MATRIX 18-3/2.2 (2.2 kW) - Impeller diameter = 106.7 mm**  
**MATRIX 18-2/1.5 (1.5 kW) - Impeller diameter = 106.7 mm**



Rotation speed ≈ 2875 min<sup>-1</sup>  
 Test standard: ISO 9906:2012 - Grade 3B

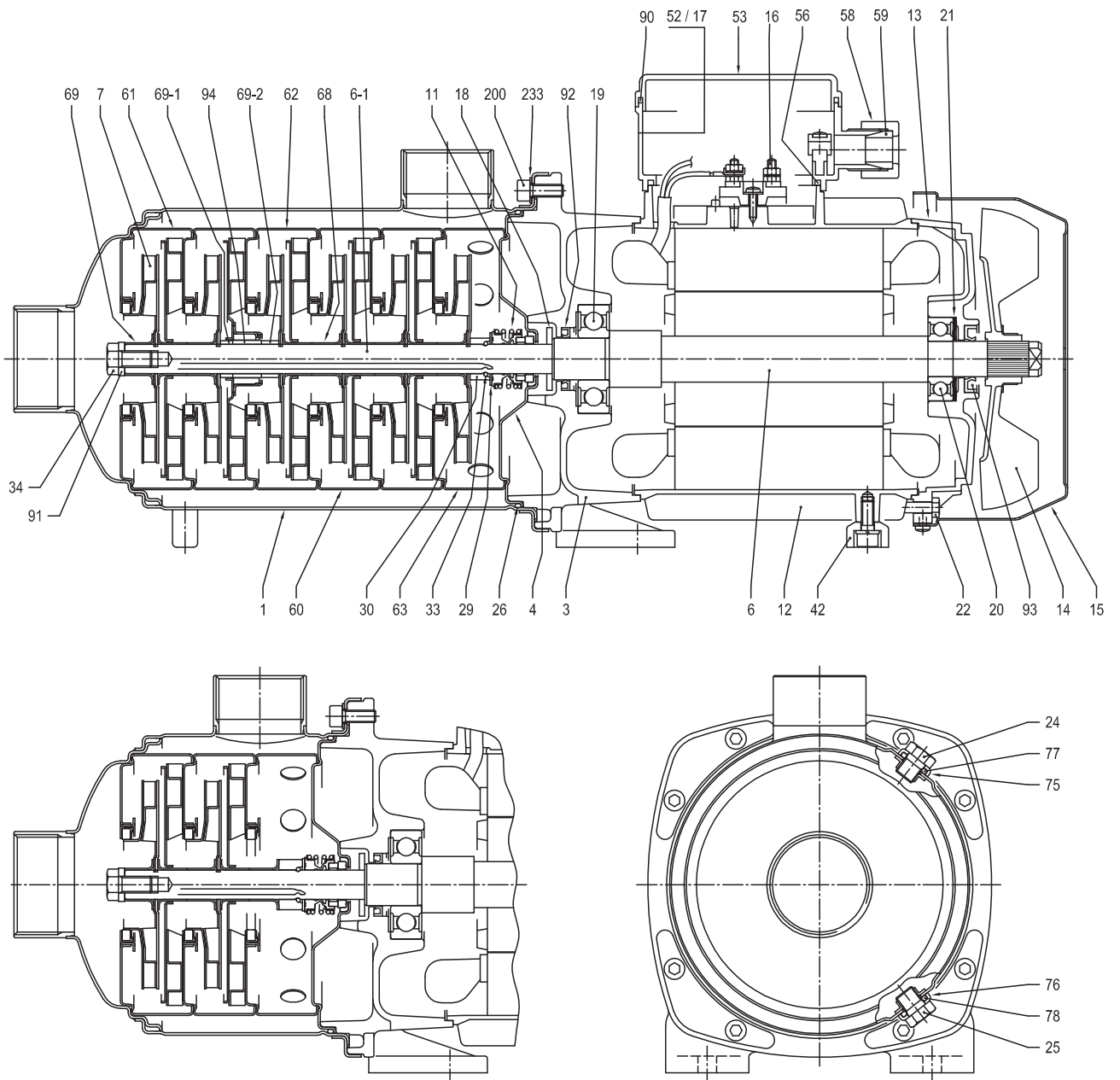
**MATRIX 18-6/4.0 (4.0 kW) - Impeller diameter = 106.7 mm**  
**MATRIX 18-5/4.0 (4.0 kW) - Impeller diameter = 106.7 mm**



Rotation speed ≈ 2850 min<sup>-1</sup>  
 Test standard: ISO 9906:2012 - Grade 3B

SECTIONAL VIEW DRAWING

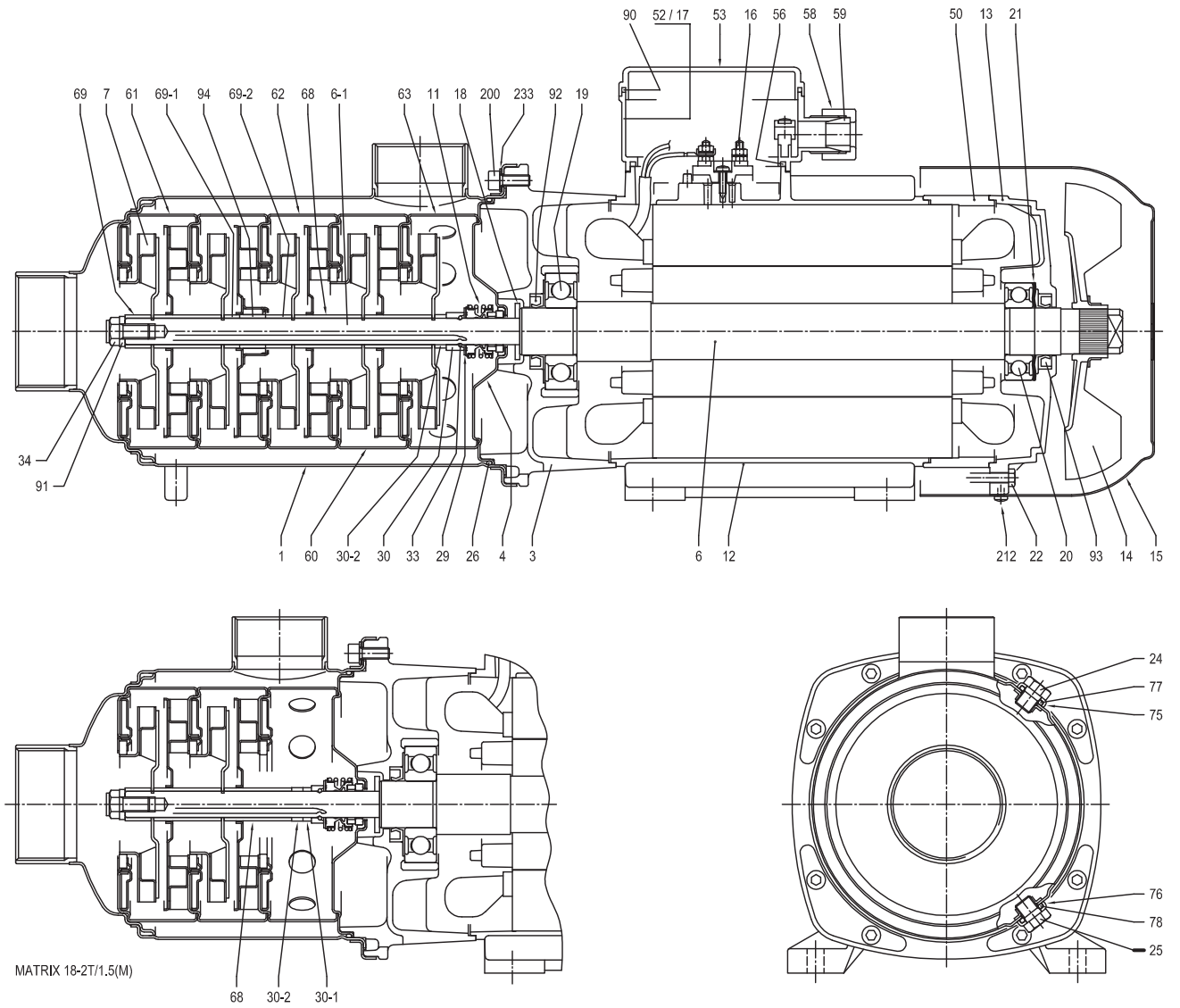
MATRIX 3/5/10



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



MATRIX 18



### SECTIONAL VIEW TABLE

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	Standard mechanical seal [4]	Ceramic/Carbon/EPDM	see page 304-305		1
	High temperature mechanical seal [4]	Ceramic/Carbon/EPDM	see page 304-305		
12	Motor frame with stator	-			1
13	Motor cover	Aluminium			1
14	Fan	PA			1
15	Fan cover	Fe P04 Zincate			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
42	Foot	Aluminium			[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 1.3-1.5-2.2 kW 2.2M-3-4 kW	17x32x6 20x30x4 25x40x7	1 1 1
93	Lip seal	-	0.45-0.65-0.75-0.9 kW 1.3-1.5-2.2 kW 2.2M-3-4 kW	15x30x5 17x32x7 25x40x7	1 1 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 table page 303

[2] Only for single phase

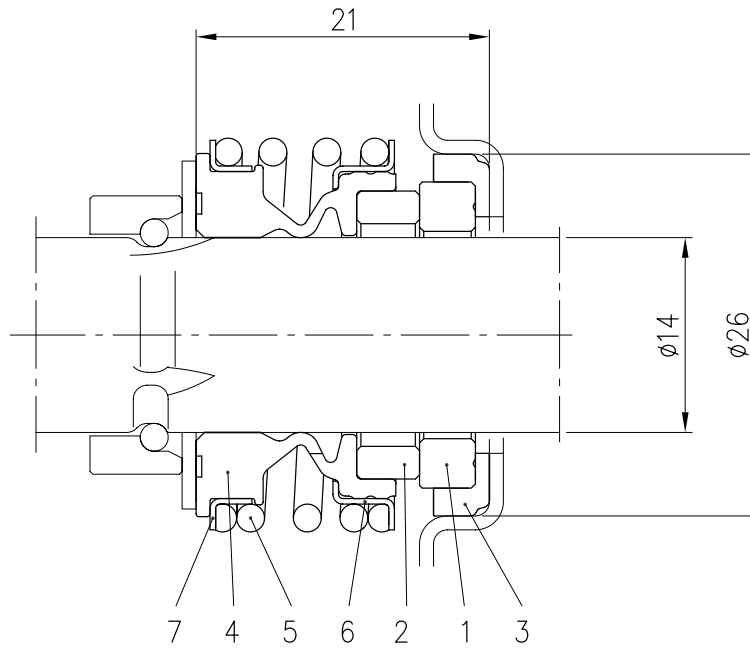
[3] Only for 18-5T/4 and 18-6T/4

[4] See Mechanical Seals materials at page 304-305

**QUANTITY FOR MODEL**

Pump type	7	17	30-1	30-2	42	58	59	60	62	68	69-1	69-2	90	94
MATRIX 3-2T/0,45M	2	-	-	-	1	1	1	1	-	4	-	-	1	-
MATRIX 3-2T/0,45		1	-	-	1	-	-	1	-	4	-	-	-	-
MATRIX 3-3T/0,65M	3	-	-	-	1	1	1	1	-	4	-	-	1	-
MATRIX 3-3T/0,65		1	-	-	1	-	-	1	-	4	-	-	-	-
MATRIX 3-4T/0,65M	4	-	-	-	1	1	1	2	-	6	-	-	1	-
MATRIX 3-4T/0,65		1	-	-	1	-	-	2	-	6	-	-	-	-
MATRIX 3-5T/0,75M	5	-	-	-	1	1	1	3	-	8	-	-	1	-
MATRIX 3-5T/0,75		1	-	-	1	-	-	3	-	8	-	-	-	-
MATRIX 3-6T/0,9M	6	-	-	-	1	1	1	4	-	10	-	-	1	-
MATRIX 3-6T/0,9		1	-	-	1	-	-	4	-	10	-	-	-	-
MATRIX 3-7T/1,3M	7	-	-	-	1	1	1	4	1	10	1	1	1	1
MATRIX 3-7T/1,3		1	-	-	1	-	-	4	1	10	1	1	-	1
MATRIX 3-8T/1,3M	8	-	-	-	1	1	1	5	1	12	1	1	1	1
MATRIX 3-8T/1,3		1	-	-	1	-	-	5	1	12	1	1	-	1
MATRIX 3-9T/1,5M	9	-	-	-	1	1	1	6	1	14	1	1	1	1
MATRIX 3-9T/1,5		1	-	-	1	-	-	6	1	14	1	1	-	1
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
MATRIX 10-2T/0,75M	2	-	-	-	1	1	1	1	-	4	-	-	1	-
MATRIX 10-2T/0,75		1	-	-	1	-	-	1	-	4	-	-	-	-
MATRIX 10-3T/1,3M	3	-	-	-	1	1	1	1	-	4	-	-	1	-
MATRIX 10-3T/1,3		1	-	-	1	-	-	1	-	4	-	-	-	-
MATRIX 10-4T/1,5M	4	-	-	-	1	1	1	2	-	6	-	-	1	-
MATRIX 10-4T/1,5		1	-	-	1	-	-	2	-	6	-	-	-	-
MATRIX 10-5T/2,2M	5	-	-	-	-	1	1	3	-	8	-	-	1	-
MATRIX 10-5T/2,2		1	-	-	1	-	-	3	-	8	-	-	-	-
MATRIX 10-6T/2,2M	6	-	-	-	-	1	1	3	1	8	1	1	1	1
MATRIX 10-6T/2,2		1	-	-	1	-	-	3	1	8	1	1	-	1
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	-	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

**MECHANICAL SEAL**



Version	Material						
	1 Stationary seal ring	2 Rotary seal ring	3 Gasket	4 Bellows	5 Spring	6 Frame	7 Retainer ring
Standard	Ceramic	Carbon	EPDM	EPDM	EN 1.4402 (AISI 316)	EN 1.4402 (AISI 316)	EN 1.4402 (AISI 316)
H	Carbon	Ceramic	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)
U3Q1EGG	Silicon Carbide	Tungsten Carbide	EPDM	EPDM	EN 1.4402 (AISI 316 Ti)	EN 1.4402 (AISI 316)	EN 1.4402 (AISI 316)
Q1AEGG	Silicon Carbide	Metallised Carbon	EPDM	EPDM	EN 1.4402 (AISI 316)	EN 1.4402 (AISI 316)	EN 1.4402 (AISI 316)

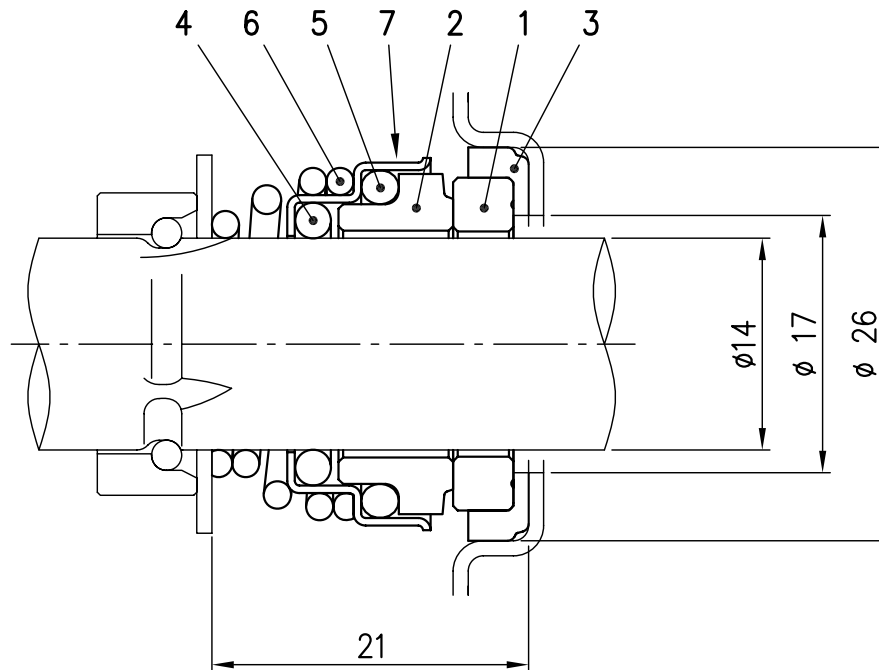
\*Approval for drinking water application  
WRAS Approval product

DM174/2004



prodotto conforme  
D.M.174/2004

HIGH TEMPERATURE (-TE)



Version	Material						
	1 Stationary seal ring	2 Rotary seal ring	3 Gasket	4 O-Ring	5 O-Ring	6 Spring	7 Retainer ring
High temperature (-TE)	Ceramic	Carbon	EPDM	EPDM	EPDM	EN 1.4402 (AISI 316)	EN 1.4301 (AISI 304)

\*Approval for drinking water application  
**DM174/2004**

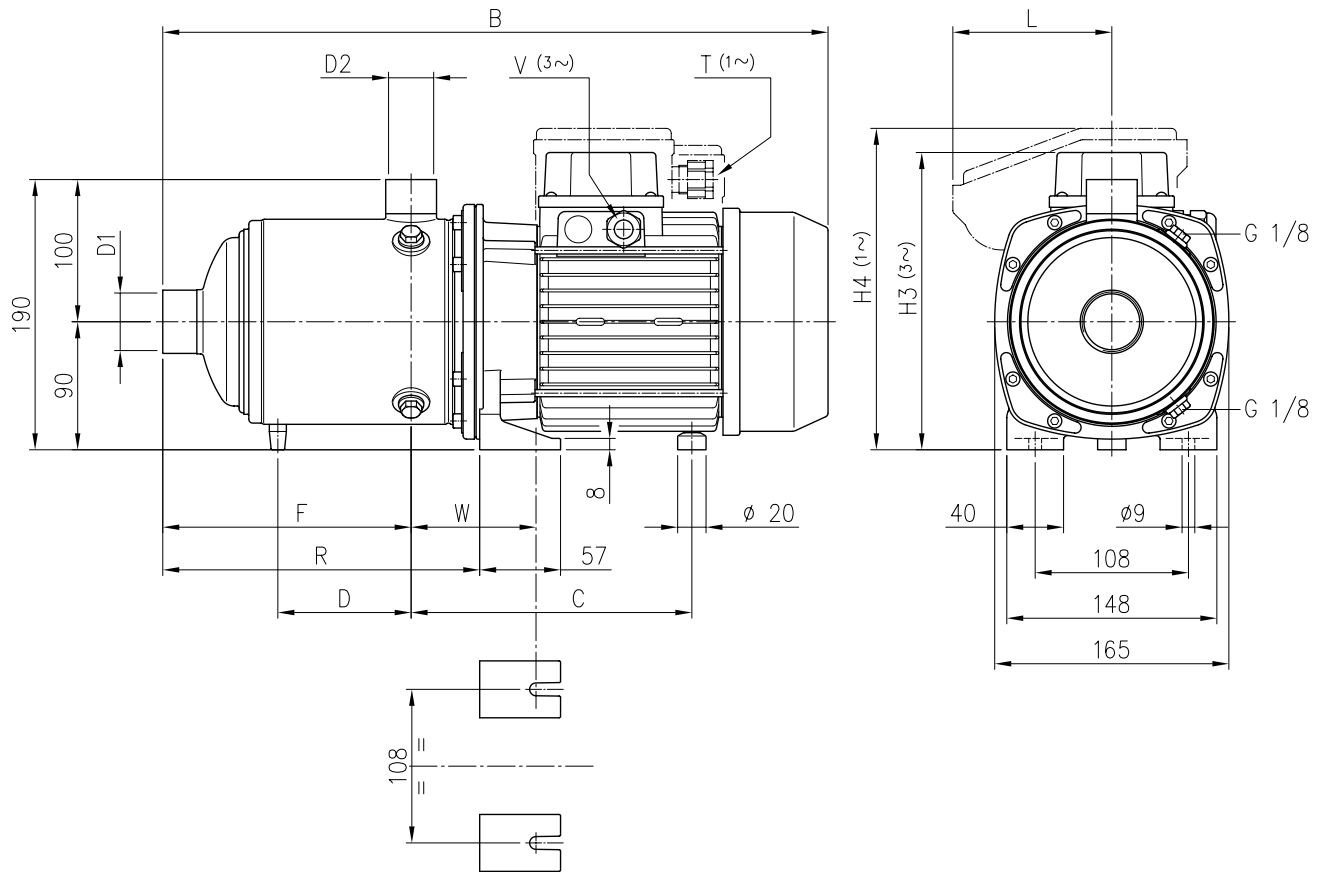


**BEARINGS**

Pump Type	Pump side	Bearings		
		(*) Pump side	Fan side	(*) Fan side
MATRIX 3-2T/0.45M	6203-2RSH	-	6202-2RSH	-
MATRIX 3-2T/0.45				
MATRIX 3-3T/0.65M				
MATRIX 3-3T/0.65				
MATRIX 3-4T/0.65M				
MATRIX 3-4T/0.65				
MATRIX 3-5T/0.75M				
MATRIX 3-5T/0.75				
MATRIX 3-6T/0.9M				
MATRIX 3-6T/0.9	6203-ZZ C3		6202-ZZ C3	
MATRIX 3-7T/1.3M	6304-2RSH	-	6203-2RSH	-
MATRIX 3-7T/1.3		6304-ZZ C3		6203-ZZ C3
MATRIX 3-8T/1.3M		-		-
MATRIX 3-8T/1.3		6304-ZZ C3		6203-ZZ C3
MATRIX 3-9T/1.5M		-		-
MATRIX 3-9T/1.5		6304-ZZ C3		6203-ZZ C3
MATRIX 5-2T/0.45M	6203-2RSH	-	6202-2RSH	-
MATRIX 5-2T/0.45				
MATRIX 5-3T/0.65M				
MATRIX 5-3T/0.65				
MATRIX 5-4T/0.9M				
MATRIX 5-4T/0.9	6203-ZZ C3		6202-ZZ C3	
MATRIX 5-5T/1.3M	6304-2RSH	-	6203-2RSH	-
MATRIX 5-5T/1.3		6304-ZZ C3		6203-ZZ C3
MATRIX 5-6T/1.3M		-		-
MATRIX 5-6T/1.3		6304-ZZ C3		6203-ZZ C3
MATRIX 5-7T/1.5M		-		-
MATRIX 5-7T/1.5		6304-ZZ C3		6203-ZZ C3
MATRIX 5-8T/2.2M	6305-2RSH1	6305-ZZ C3	6205-2RSH	6205-ZZ C3
MATRIX 5-8T/2.2	6304-2RSH	6304-ZZ C3	6203-2RSH	6203-ZZ C3
MATRIX 5-9T/2.2M	6305-2RSH1	6305-ZZ C3	6205-2RSH	6205-ZZ C3
MATRIX 5-9T/2.2	6304-2RSH	6304-ZZ C3	6203-2RSH	6203-ZZ C3
MATRIX 10-2T/0.75M	6203-2RSH	-	6202-2RSH	-
MATRIX 10-2T/0.75		6203-ZZ C3		6202-ZZ C3
MATRIX 10-3T/1.3M	6304-2RSH	-	6203-2RSH	-
MATRIX 10-3T/1.3		6304-ZZ C3		6203-ZZ C3
MATRIX 10-4T/1.5M		-		-
MATRIX 10-4T/1.5		6304-ZZ C3		6203-ZZ C3
MATRIX 10-5T/2.2M		6305-2RSH1		6305-ZZ C3
MATRIX 10-5T/2.2	6304-2RSH	6304-ZZ C3	6203-2RSH	6203-ZZ C3
MATRIX 10-6T/2.2M	6305-2RSH1	6305-ZZ C3	6205-2RSH	6205-ZZ C3
MATRIX 10-6T/2.2	6304-2RSH	6304-ZZ C3	6203-2RSH	6203-ZZ C3
MATRIX 18-2T/1.5M	6304-2RSH	-	6203-2RSH	-
MATRIX 18-2T/1.5		6304-ZZ C3		6203-ZZ C3
MATRIX 18-3T/2.2M	6305-2RSH1	6305-ZZ C3	6205-2RSH	6205-ZZ C3
MATRIX 18-3T/2.2	6304-2RSH	6304-ZZ C3	6203-2RSH	6203-ZZ C3
MATRIX 18-4T/3	6305-2RSH1	6305-ZZ C3	6205-2RSH	6205-ZZ C3
MATRIX 18-5T/4				
MATRIX 18-6T/4				

(\*) Only for IE3 Motors

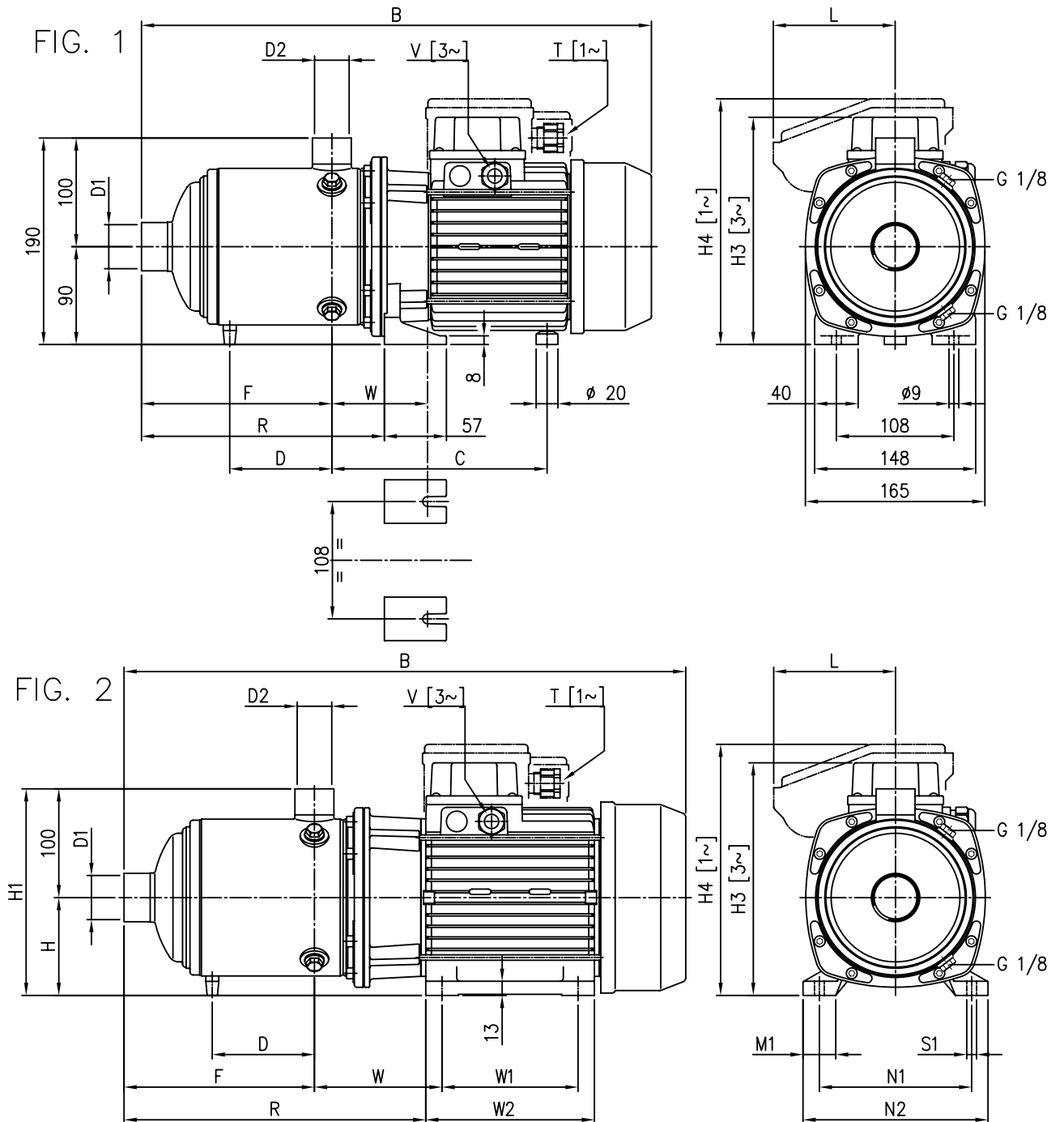
### PUMP MATRIX 3



Pump Type	Dimensions [mm]															Weight [kgf]		
	D1	D2	B	(*)	C	D	F	H3 (3~)	H4 (1~)	L	R	T (1~)	V (3~)	(*) (3~)	W		(*)	
MATRIX 3-2T/0.45M	1"	1"	360	-	171	-	103	-	-	86.5	151.5	Pg11	-	-	88 ÷ 97	8.5	-	
MATRIX 3-2T/0.45			360	-	171	-	103	192	-	-	151.5	-	-	Pg11	-	88 ÷ 97	8.4	-
MATRIX 3-3T/0.65M			360	-	171	-	103	-	200	86.5	151.5	Pg11	-	-	88 ÷ 97	9.9	-	
MATRIX 3-3T/0.65			360	-	171	-	103	192	-	-	151.5	-	Pg11	-	88 ÷ 97	9.8	-	
MATRIX 3-4T/0.65M			384	-	171	-	127	-	200	86.5	175.5	Pg11	-	-	88 ÷ 97	10.6	-	
MATRIX 3-4T/0.65			384	-	171	-	127	192	-	-	175.5	-	Pg11	-	88 ÷ 97	10.4	-	
MATRIX 3-5T/0.75M			408	-	171	-	151	-	200	86.5	199.5	Pg11	-	-	88 ÷ 97	12.5	-	
MATRIX 3-5T/0.75			408	408	171	-	151	192	-	-	199.5	-	Pg11	M16x1.5	88 ÷ 97	12.4	12.4	
MATRIX 3-6T/0.9M			432	-	171	-	175	-	219	106	223.5	M20x1.5	-	-	88 ÷ 97	13.7	-	
MATRIX 3-6T/0.9			444	444	171	-	175	192	-	-	223.5	-	Pg11	M16x1.5	88 ÷ 97	13.6	13.6	
MATRIX 3-7T/1.3M			493	-	198	110.5	199	-	226	112	247.5	M20x1.5	-	-	88 ÷ 97	16.3	-	
MATRIX 3-7T/1.3			493	518	198	110.5	199	209	-	-	247.5	-	Pg11	M20x1.5	88 ÷ 97	17	17.9	
MATRIX 3-8T/1.3M			517	-	198	134.5	223	-	226	112	271.5	M20x1.5	-	-	88 ÷ 97	16.3	-	
MATRIX 3-8T/1.3			517	542	198	134.5	223	209	-	-	271.5	-	Pg11	M20x1.5	88 ÷ 97	17.8	18.7	
MATRIX 3-9T/1.5M			541	-	198	158.5	247	-	226	112	295.5	M20x1.5	-	-	88 ÷ 97	18.3	-	
MATRIX 3-9T/1.5			554	567	198	158.5	247	209	-	-	295.5	-	Pg11	M20x1.5	88 ÷ 97	20	20.9	

(\*) Only for IE3 Motors

PUMP DRAWING MATRIX 5/10/18



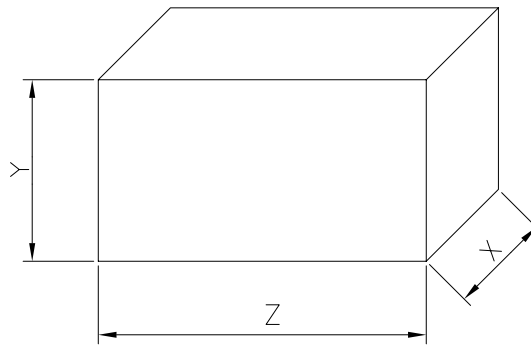


DIMENSION TABLE MATRIX 5/10/18

Pump Type	Fig.	D1	D2	Dimensions [mm]																	Weight [kgf]										
				H	H1	B		C	D	F	H3 (3-)	H4 (1-)	L	R	T (1-)	V		W	W1	W2	M1	N1	N2	S1	(*)						
MATRIX 5-2T/0.45 M	1	1 1/4"	1"	-	-	360	-	171	-	103	-	200	86,5	151,5	Pg11	-	-	88-97	-	-	-	-	-	-	8.5	-					
MATRIX 5-2T/0.45				-	-	360	-	171	-	103	192	-	-	151,5	-	Pg11	-	-	88-97	-	-	-	-	-	-	8.4	-				
MATRIX 5-3T/0.65 M				-	-	360	-	171	-	103	-	200	86,5	151,5	-	Pg11	-	-	88-97	-	-	-	-	-	-	9.9	-				
MATRIX 5-3T/0.65				-	-	360	-	171	-	103	192	-	-	151,5	-	Pg11	-	-	88-97	-	-	-	-	-	-	9.8	-				
MATRIX 5-4T/0.9 M				-	-	384	-	171	-	127	-	219	106	175,5	M20x1.5	-	-	-	88-97	-	-	-	-	-	-	12.2	-				
MATRIX 5-4T/0.9				-	-	396	396	171	-	127	192	-	-	175,5	-	Pg11	M16x1.5	-	-	88-97	-	-	-	-	-	12.4	12.4				
MATRIX 5-5T/1.3 M				-	-	445	-	198	-	151	-	226	112	199,5	M20x1.5	-	-	-	88-97	-	-	-	-	-	-	15.8	-				
MATRIX 5-5T/1.3				-	-	445	470	198	-	151	209	-	-	199,5	-	Pg11	M20x1.5	-	-	88-97	-	-	-	-	-	15.8	16.7				
MATRIX 5-6T/1.3 M				-	-	469	-	198	-	175	-	226	112	223,5	M20x1.5	-	-	-	88-97	-	-	-	-	-	-	15.2	-				
MATRIX 5-6T/1.3				-	-	469	494	198	-	175	209	-	-	223,5	-	Pg11	M20x1.5	-	-	88-97	-	-	-	-	-	16.2	17.1				
MATRIX 5-7T/1.5 M				-	-	493	-	198	110,5	199	-	226	112	247,5	M20x1.5	-	-	-	88-97	-	-	-	-	-	-	18.3	-				
MATRIX 5-7T/1.5				-	-	506	518,5	198	110,5	199	209	-	-	247,5	-	Pg11	M20x1.5	-	-	88-97	-	-	-	-	-	18.7	19.6				
MATRIX 5-8T/2.2 M				2		90	190	565	-	-	134,5	223	-	231	112	325,5	M20x1.5	-	-	117,5	125	155	30	140	170	9	22.3	-			
MATRIX 5-8T/2.2				1		-	-	530	542,5	198	134,5	223	209	-	-	271,5	-	Pg11	M20x1.5	-	-	-	-	-	-	-	18.7	19.6			
MATRIX 5-9T/2.2 M	2		90	190	589	-	-	158,5	247	-	231	112	349,5	M20x1.5	-	-	117,5	125	155	30	140	170	9	23.3	-						
MATRIX 5-9T/2.2	1		-	-	554	566,5	198	158,5	247	209	-	-	295,5	-	Pg11	M20x1.5	-	-	-	-	-	-	-	18.8	19.7						
MATRIX 10-2T/0.75 M	1	1 1/2"	1 1/4"	-	-	379	-	175	-	118	-	200	86,5	170,5	Pg11	-	-	92-101	-	-	-	-	-	11.3	-						
MATRIX 10-2T/0.75				-	-	379	379	175	-	118	192	-	-	170,5	-	Pg11	M16x1.5	-	-	92-101	-	-	-	-	-	11.2	11.2				
MATRIX 10-3T/1.3 M				-	-	416	-	202	-	118	-	226	112	170,5	M20x1.5	-	-	-	92-101	-	-	-	-	-	-	14.3	-				
MATRIX 10-3T/1.3				-	-	416	441	202	-	118	209	-	-	170,5	-	Pg11	M20x1.5	-	-	92-101	-	-	-	-	-	13.6	14.5				
MATRIX 10-4T/1.5 M				-	-	446	-	202	-	148	-	226	112	200,5	M20x1.5	-	-	-	92-101	-	-	-	-	-	-	15.6	-				
MATRIX 10-4T/1.5				-	-	459	471,5	202	-	148	209	-	-	200,5	-	Pg11	M20x1.5	-	-	92-101	-	-	-	-	-	17.3	18.2				
MATRIX 10-5T/2.2 M				2		90	190	524	-	-	178	-	231	112	284,5	M20x1.5	-	-	-	121,5	125	155	30	140	170	9	21.8	-			
MATRIX 10-5T/2.2				1		-	-	489	501,5	202	-	178	209	-	-	230,5	-	Pg11	M20x1.5	-	-	-	-	-	-	-	17.9	18.8			
MATRIX 10-6T/2.2 M				2		90	190	554	-	-	118,5	208	-	231	112	314,5	M20x1.5	-	-	-	121,5	125	155	30	140	170	9	22.1	-		
MATRIX 10-6T/2.2				1		-	-	519	531,5	202	118,5	208	209	-	-	260,5	-	Pg11	M20x1.5	-	-	-	-	-	-	-	18.3	19.2			
MATRIX 18-2T/1.5M				1	2"	1 1/2"	-	-	442	-	205	-	141	-	226	112	196,5	M20x1.5	-	-	95 - 104	-	-	-	-	-	14.5	-			
MATRIX 18-2T/1.5							-	-	455	467,5	205	-	141	209	-	-	196,5	-	Pg11	M20x1.5	-	-	95 - 104	-	-	-	-	-	16.2	17.1	
MATRIX 18-3T/2.2M							2		90	190	490	-	-	141	-	231	112	250,5	M20x1.5	-	-	-	124,5	125	155	30	140	170	9	20.7	-
MATRIX 18-3T/2.2							1		-	-	455	467,5	205	-	141	209	-	-	196,5	-	Pg11	M20x1.5	-	-	95 - 104	-	-	-	-	17.2	18.1
MATRIX 18-4T/3	2		90				190	565	565	-	-	178,5	214	-	-	288	-	Pg13,5	M20x1.5	124,5	125	155	30	140	170	9	23.8	23.8			
MATRIX 18-5T/4		100	200				615	615	-	-	123	216	241	-	-	315	-	Pg16	M20x1.5	114	140	170	35	160	192	11	33.2	33.2			
MATRIX 18-6T/4	100	200	652	652	-	-	160,5	253,5	241	-	-	352,5	-	Pg16	M20x1.5	114	140	170	35	160	192	11	34.2	34.2							

(\*) Only for IE3 Motors

**PACKING**



Pump Type	Packing [mm]						Weight [kgf]	
	X	Y (*)		Z (*)			(*)	
MATRIX 3-2T/0.45M	180	220	-	465	-	9,1	-	
MATRIX 3-2T/0.45	180	220	-	465	-	9	-	
MATRIX 3-3T/0.65M	180	220	-	465	-	10,5	-	
MATRIX 3-3T/0.65	180	220	-	465	-	10,4	-	
MATRIX 3-4T/0.65M	180	220	-	465	-	11,2	-	
MATRIX 3-4T/0.65	180	220	-	465	-	11	-	
MATRIX 3-5T/0.75M	210	240	-	550	-	13,1	-	
MATRIX 3-5T/0.75	210	240	240	550	550	13	13	
MATRIX 3-6T/0.9M	210	240	-	570	-	14,5	-	
MATRIX 3-6T/0.9	210	240	240	570	570	14,6	14,6	
MATRIX 3-7T/1.3M	210	240	-	570	-	17,1	-	
MATRIX 3-7T/1.3	210	240	240	570	660	18	18	
MATRIX 3-8T/1.3M	210	240	-	660	-	17,1	-	
MATRIX 3-8T/1.3	210	240	240	660	660	18,8	18,8	
MATRIX 3-9T/1.5M	210	240	-	660	-	19,1	-	
MATRIX 3-9T/1.5	210	240	240	660	660	21	21	
MATRIX 5-2T/0.45M	180	220	-	465	-	9,1	-	
MATRIX 5-2T/0.45	180	220	-	465	-	9	9	
MATRIX 5-3T/0.65M	180	220	-	465	-	10,5	-	
MATRIX 5-3T/0.65	180	220	-	465	-	10,4	10,4	
MATRIX 5-4T/0.9M	180	220	-	465	-	13	-	
MATRIX 5-4T/0.9	210	240	240	550	550	13,2	13,2	
MATRIX 5-5T/1.3M	210	240	-	570	-	16,8	-	
MATRIX 5-5T/1.3	210	240	240	570	570	16,8	17,7	
MATRIX 5-6T/1.3M	210	240	-	570	-	16	-	
MATRIX 5-6T/1.3	210	240	240	570	570	17,2	18,1	
MATRIX 5-7T/1.5M	210	240	-	570	-	19,3	-	
MATRIX 5-7T/1.5	210	240	240	660	660	19,6	20,5	
MATRIX 5-8T/2.2M	210	240	-	660	-	23,3	-	
MATRIX 5-8T/2.2	210	240	240	660	660	19,5	20,4	
MATRIX 5-9T/2.2M	210	240	-	660	-	24,4	-	
MATRIX 5-9T/2.2	210	240	240	660	660	19,8	20,7	
MATRIX 10-2T/0.75M	180	220	-	465	-	11,9	-	
MATRIX 10-2T/0.75	180	220	220	465	465	11,8	11,8	
MATRIX 10-3T/1.3M	210	240	-	570	-	15,3	-	
MATRIX 10-3T/1.3	210	240	240	550	550	14,2	15,1	
MATRIX 10-4T/1.5M	210	240	-	570	-	16,4	-	
MATRIX 10-4T/1.5	210	240	240	570	570	18,2	19,1	
MATRIX 10-5T/2.2M	210	240	-	660	-	22,3	-	
MATRIX 10-5T/2.2	210	240	240	570	570	18,7	19,6	
MATRIX 10-6T/2.2M	210	240	-	660	-	23,1	-	
MATRIX 10-6T/2.2	210	240	240	660	660	19,1	20	
MATRIX 18-2T/1.5M	210	240	-	570	-	15,3	-	
MATRIX 18-2T/1.5	210	240	240	570	570	17	17,9	
MATRIX 18-3T/2.2M	210	240	-	570	-	21,6	-	
MATRIX 18-3T/2.2	210	240	240	570	570	18,2	19,1	
MATRIX 18-4T/3	210	240	240	660	660	24,8	24,8	
MATRIX 18-5T/4	210	280	280	750	750	34,4	34,4	
MATRIX 18-6T/4	210	280	280	750	750	35,2	35,2	

(\*) Only for IE3 Motors

### MOTOR DATA

Pump type		Power		Efficiency		Capacitor		Efficiency (% load)			Input		Full load current			Locked rotor current		
Single Phase	Three Phase	[kW]	[HP]	Single Phase	Three Phase	Single Phase		Three phase			[kW]		[A]			[A]		
						[μF]	[V]	50%	75%	100%	Single Phase	Three Phase	Single Phase	Three Phase	400 V	Single Phase	Three Phase	400 V
MATRIX 3-2T/0.45M	MATRIX 3-2T/0.45	0.45	0.6	-	-	12.5	450	-	-	-	0.73	0.72	3.2	2.3	1.3	8.0	11.0	6.5
MATRIX 3-3T/0.65M	MATRIX 3-3T/0.65	0.65	0.9	-	-	16	450	-	-	-	0.97	0.85	4.5	2.8	1.6	16.2	16.0	9.1
MATRIX 3-4T/0.65M	MATRIX 3-4T/0.65	0.65	0.9	-	-	16	450	-	-	-	0.97	0.85	4.5	2.8	1.6	16.2	16.0	9.1
MATRIX 3-5T/0.75M	MATRIX 3-5T/0.75	0.75	1.0	-	IE2	25	450	77.2	80.9	81.3	1.14	0.92	5.4	3.0	1.7	26.5	22.0	12.9
-	MATRIX 3-5T/0.75	0.75	1.0	-	IE3	-	-	80.9	82.3	82.1	-	0.91	-	3.0	1.7	-	19.7	11.4
MATRIX 3-6T/0.9M	MATRIX 3-6T/0.9	0.9	1.2	-	IE2	31.5	450	79.0	81.7	81.6	1.28	1.35	5.7	4.3	2.5	21.7	31.0	17.8
-	MATRIX 3-6T/0.9	0.9	1.2	-	IE3	-	-	81.7	83.1	82.4	-	1.34	-	4.3	2.5	-	28.8	16.6
MATRIX 3-7T/1.3M	MATRIX 3-7T/1.3	1.3	1.8	-	IE2	35	450	79.7	82.5	83.0	1.75	1.80	7.8	5.6	3.2	41.0	45.0	25.7
-	MATRIX 3-7T/1.3	1.3	1.8	-	IE3	-	-	83.5	84.3	84.6	-	1.77	-	5.8	3.3	-	47.4	27.4
MATRIX 3-8T/1.3M	MATRIX 3-8T/1.3	1.3	1.8	-	IE2	35	450	79.7	82.5	83.0	1.75	1.80	7.8	5.6	3.2	41.0	45.0	25.7
-	MATRIX 3-8T/1.3	1.3	1.8	-	IE3	-	-	83.5	84.3	84.6	-	1.77	-	5.8	3.3	-	47.4	27.4
MATRIX 3-9T/1.5M	MATRIX 3-9T/1.5	1.5	2.0	-	IE2	40	450	78.6	83.0	84.2	1.95	1.78	8.7	6.3	3.7	43.0	34.3	20.0
-	MATRIX 3-9T/1.5	1.5	2.0	-	IE3	-	-	82.7	86.1	87.0	-	1.72	-	6.6	3.8	-	66.6	38.4
MATRIX 5-2T/0.45M	MATRIX 5-2T/0.45	0.45	0.6	-	-	12.5	450	-	-	-	0.73	0.72	3.2	2.3	1.3	8.0	11.0	6.5
MATRIX 5-3T/0.65M	MATRIX 5-3T/0.65	0.65	0.9	-	-	16	450	-	-	-	0.97	0.85	4.5	2.8	1.6	16.2	16.0	9.1
MATRIX 5-4T/0.9M	MATRIX 5-4T/0.9	0.9	1.2	-	IE2	31.5	450	79.0	81.7	81.6	1.28	1.35	5.7	4.3	2.5	21.7	31.0	17.8
-	MATRIX 5-4T/0.9	0.9	1.2	-	IE3	-	-	81.7	83.1	82.4	-	1.34	-	4.3	2.5	-	28.8	16.6
MATRIX 5-6T/1.3M	MATRIX 5-6T/1.3	1.3	1.8	-	IE2	35	450	79.7	82.5	83.0	1.75	1.80	7.8	5.6	3.2	41.0	45.0	25.7
-	MATRIX 5-6T/1.3	1.3	1.8	-	IE3	-	-	83.5	84.3	84.6	-	1.77	-	5.8	3.3	-	47.4	27.4
MATRIX 5-8T/1.3M	MATRIX 5-8T/1.3	1.3	1.8	-	IE2	35	450	79.7	82.5	83.0	1.75	1.80	7.8	5.6	3.2	41.0	45.0	25.7
-	MATRIX 5-8T/1.3	1.3	1.8	-	IE3	-	-	83.5	84.3	84.6	-	1.77	-	5.8	3.3	-	47.4	27.4
MATRIX 5-7T/1.5M	MATRIX 5-7T/1.5	1.5	2.0	-	IE2	40	450	78.6	83.0	84.2	1.95	1.78	8.7	6.3	3.7	43.0	34.3	20.0
-	MATRIX 5-7T/1.5	1.5	2.0	-	IE3	-	-	82.7	86.1	87.0	-	1.72	-	6.6	3.8	-	66.6	38.4
MATRIX 5-8T/2.2M	MATRIX 5-8T/2.2	2.2	3.0	-	IE2	50	450	83.0	84.4	83.8	2.92	2.63	13.0	8.2	4.7	62.4	59.0	34.3
-	MATRIX 5-8T/2.2	2.2	3.0	-	IE3	-	-	86.2	87.0	86.0	-	2.55	-	8.2	4.7	-	66.6	38.4
MATRIX 5-9T/2.2M	MATRIX 5-9T/2.2	2.2	3.0	-	IE2	50	450	83.0	84.4	83.8	2.92	2.63	13.0	8.2	4.7	62.4	59.0	34.3
-	MATRIX 5-9T/2.2	2.2	3.0	-	IE3	-	-	86.2	87.0	86.0	-	2.55	-	8.2	4.7	-	66.6	38.4
MATRIX 10-2T/0.75M	MATRIX 10-2T/0.75	0.75	1.0	-	IE2	25	450	77.2	80.9	81.3	1.14	0.92	5.4	3.0	1.7	26.5	22.0	12.9
-	MATRIX 10-2T/0.75	0.75	1.0	-	IE3	-	-	80.9	82.3	82.1	-	0.91	-	3.0	1.7	-	19.7	11.4
MATRIX 10-3T/1.3M	MATRIX 10-3T/1.3	1.3	1.8	-	IE2	35	450	79.7	82.5	83.0	1.75	1.80	7.8	5.6	3.2	41.0	45.0	25.7
-	MATRIX 10-3T/1.3	1.3	1.8	-	IE3	-	-	83.5	84.3	84.6	-	1.77	-	5.8	3.3	-	47.4	27.4
MATRIX 10-4T/1.5M	MATRIX 10-4T/1.5	1.5	2.0	-	IE2	40	450	78.6	83.0	84.2	1.95	1.78	8.7	6.3	3.7	43.0	34.3	20.0
-	MATRIX 10-4T/1.5	1.5	2.0	-	IE3	-	-	82.7	86.1	87.0	-	1.72	-	6.6	3.8	-	66.6	38.4
MATRIX 10-5T/2.2M	MATRIX 10-5T/2.2	2.2	3.0	-	IE2	50	450	83.0	84.4	83.8	2.92	2.63	13.0	8.2	4.7	62.4	59.0	34.3
-	MATRIX 10-5T/2.2	2.2	3.0	-	IE3	-	-	86.2	87.0	86.0	-	2.55	-	8.2	4.7	-	66.6	38.4
MATRIX 10-6T/2.2M	MATRIX 10-6T/2.2	2.2	3.0	-	IE2	50	450	83.0	84.4	83.8	2.92	2.63	13.0	8.2	4.7	62.4	59.0	34.3
-	MATRIX 10-6T/2.2	2.2	3.0	-	IE3	-	-	86.2	87.0	86.0	-	2.55	-	8.2	4.7	-	66.6	38.4
MATRIX 18-2T/1.5M	MATRIX 18-2T/1.5	1.5	2.0	-	IE2	40	450	78.6	83.0	84.2	1.95	1.78	8.7	6.3	3.7	43.0	34.3	20.0
-	MATRIX 18-2T/1.5	1.5	2.0	-	IE3	-	-	82.7	86.1	87.0	-	1.72	-	6.6	3.8	-	66.6	38.4
MATRIX 18-3T/2.2M	MATRIX 18-3T/2.2	2.2	3.0	-	IE2	50	450	83.0	84.4	83.8	2.92	2.63	13.0	8.2	4.7	62.4	59.0	34.3
-	MATRIX 18-3T/2.2	2.2	3.0	-	IE3	-	-	86.2	87.0	86.0	-	2.55	-	8.2	4.7	-	66.6	38.4
-	MATRIX 18-4T/3	3	4.0	-	IE2	-	-	85.0	86.7	86.3	-	3.48	-	10.6	6.1	-	100.0	57.7
-	MATRIX 18-4T/3	3	4.0	-	IE3	-	-	85.9	87.5	87.1	-	3.44	-	11.1	6.4	-	90.0	52.0
-	MATRIX 18-5T/4	4	5.5	-	IE2	-	-	84.3	87.2	87.8	-	4.56	-	15.1	8.7	-	151.0	87.0
-	MATRIX 18-5T/4	4	5.5	-	IE3	-	-	85.8	88.3	88.4	-	4.52	-	15.1	8.7	-	131.8	76.1
-	MATRIX 18-6T/4	4	5.5	-	IE2	-	-	84.3	87.2	87.8	-	4.56	-	15.1	8.7	-	151.0	87.0
-	MATRIX 18-6T/4	4	5.5	-	IE3	-	-	85.8	88.3	88.4	-	4.52	-	15.1	8.7	-	131.8	76.1

### NOISE DATA

Pump Type		Power		LpA-dB(A)*
Single phase	Three phase	[kW]	[HP]	
MATRIX 3-2T/0.45M	MATRIX 3-2T/0.45	0.45	0.6	61
MATRIX 5-2T/0.45M	MATRIX 5-2T/0.45			
MATRIX 3-3T/0.65M	MATRIX 3-3T/0.65	0.65	0.9	62
MATRIX 3-4T/0.65M	MATRIX 3-4T/0.65			
MATRIX 5-3T/0.65M	MATRIX 5-3T/0.65			
MATRIX 3-5T/0.75M	MATRIX 3-5T/0.75	0.75	1.0	62
MATRIX 10-2T/0.75M	MATRIX 10-2T/0.75			
MATRIX 3-6T/0.9M	MATRIX 3-6T/0.9	0.9	1.2	62
MATRIX 5-4T/0.9M	MATRIX 5-4T/0.9			
MATRIX 3-7T/1.3M	MATRIX 3-7T/1.3			
MATRIX 3-8T/1.3M	MATRIX 3-8T/1.3	1.3	1.8	64
MATRIX 5-5T/1.3M	MATRIX 5-5T/1.3			
MATRIX 5-6T/1.3M	MATRIX 5-6T/1.3			
MATRIX 10-3T/1.3M	MATRIX 10-3T/1.3			
MATRIX 3-9T/1.5M	MATRIX 3-9T/1.5	1.5	2.0	64
MATRIX 5-7T/1.5M	MATRIX 5-7T/1.5			
MATRIX 10-4T/1.5M	MATRIX 10-4T/1.5			
MATRIX 18-2T/1.5M	MATRIX 18-2T/1.5			
-	MATRIX 5-8T/2.2	2.2	3.0	65
-	MATRIX 5-9T/2.2			
-	MATRIX 10-5T/2.2			
-	MATRIX 10-6T/2.2			
-	MATRIX 18-3T/2.2			
MATRIX 5-8T/2.2M	-			
MATRIX 5-9T/2.2M	-			
MATRIX 10-5T/2.2M	-			
MATRIX 10-6T/2.2M	-			
MATRIX 18-3T/2.2M	-			
-	MATRIX 18-4T/3	3.0	4.0	68
-	MATRIX 18-5T/4	4.0	5.5	69
-	MATRIX 18-6T/4			

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