

Technical Data

Pump Name

MATRIX 5-2T/0.45

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 20
3	Flow m³/h		Kin. viscosity	mm²/s 1.005
4	Head m		Vapour pressure	bar 0.0234
5	Geodetic head m		PH value	
6	Inlet pressure (pin) bar	0	Density	kg/m³ 998.3
7	Available system NPSH		Solids	Weight % 0
8	Ambient temperature °C	20		

Pump

9	Pump Name	MATRIX 5-2T/0.45	Frequency	Hz 50
10	Design	HORIZONTAL MULTISTAGE PUMPS	Installation type	STANDARD
11	Manufacturer	EBARA	Impeller Diameter	Max. mm 97
12	Speed rpm	2850		Designed mm 97
13	No. of Stage	2		Min. mm 97
14	Connection Suction side	UNI ISO 228	Flow	Operating m³/h
15	Connection Discharge side	UNI ISO 228		Max- m³/h 7.8
16	Max Working Pressure bar	10		Min- m³/h 1.8
17	Shut-off head bar	2.25	Head	Operating m
18	Total weight kg	See the table of "Dimensions".		- (Qmax.) m 8.8
19	Shaft power kW			- (Qmin.) m 21.5
20			Max. Shaft Power at max. impeller	kW 0.43
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 5-2T/0.45M_230_Single Phase	Phases	1~
30	Specific design	IE2 / 50 Hz / Pole pairs 1	Frame size	
31	Rated power kW	0.45	Weight	kg
32	Number of poles	2	Electric voltage	V 230
33	Speed rpm	2850	Electric current	A 3
34	Degree of protection	IP 55		
35				

Remarks

Performance Curve

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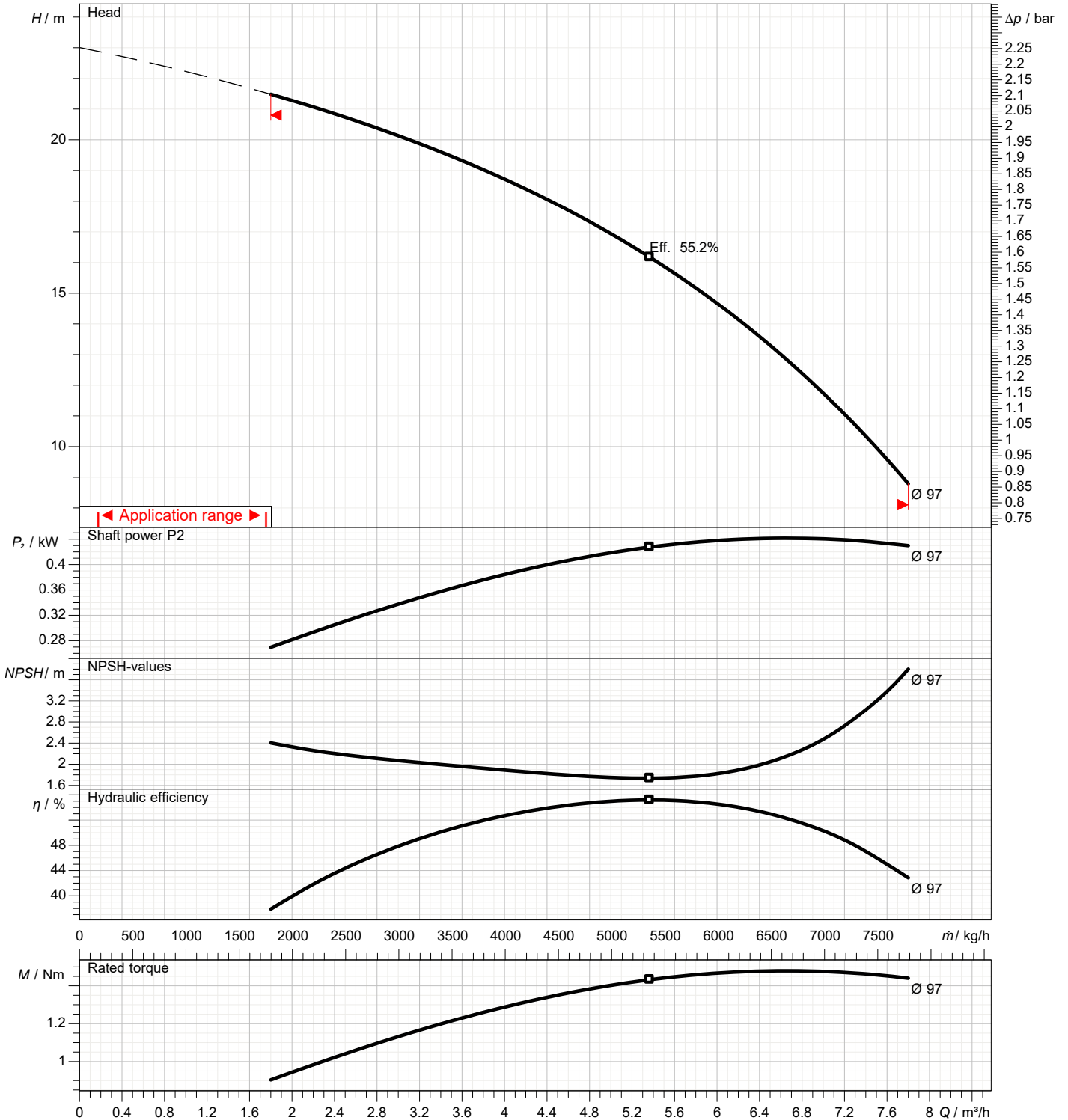
1	Flow	m³/h	
2	Head	m	
3	Geodetic head	m	

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

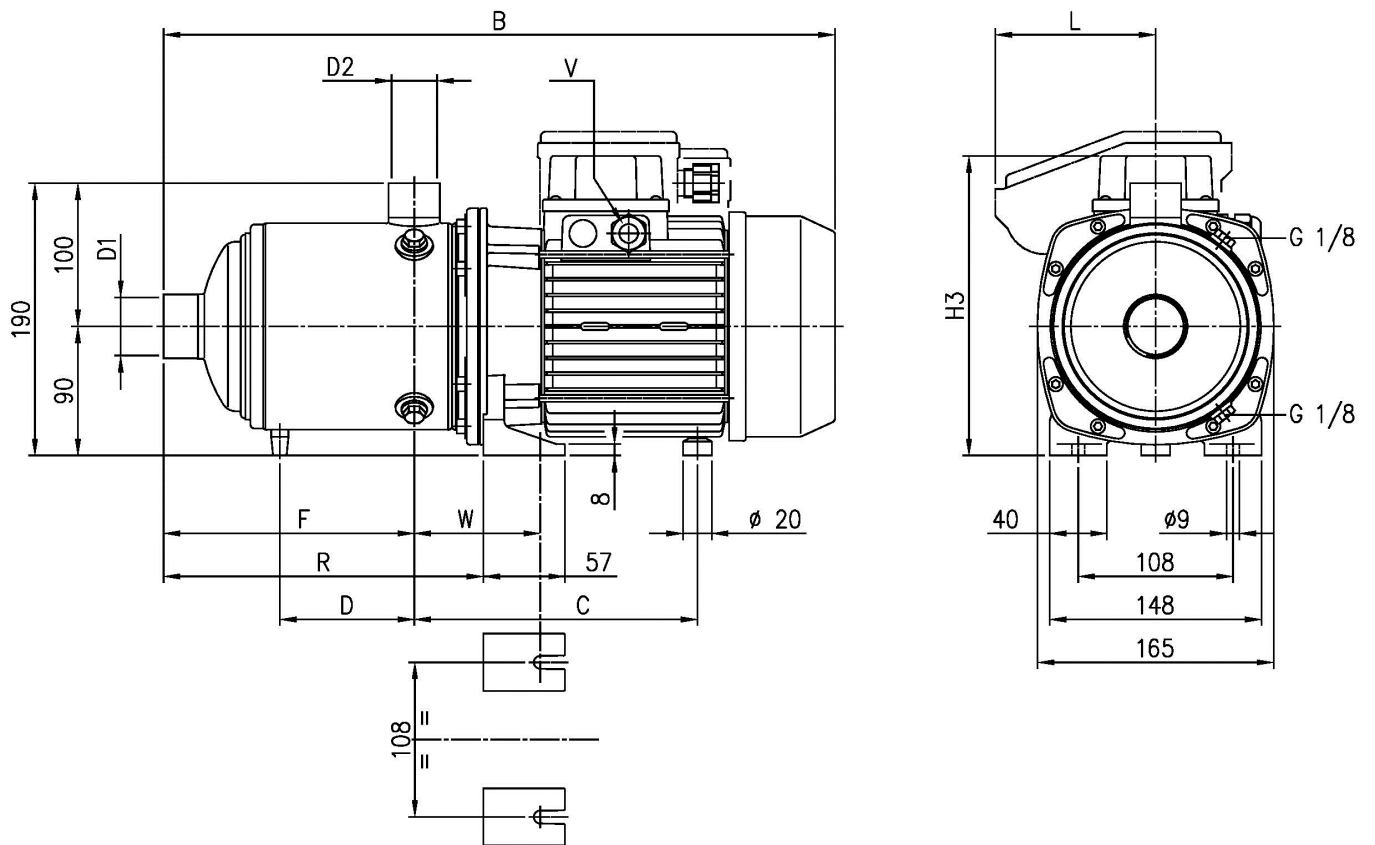
Water; 20°C; 998.3kg/m³; 1mm²/s



Dimensions

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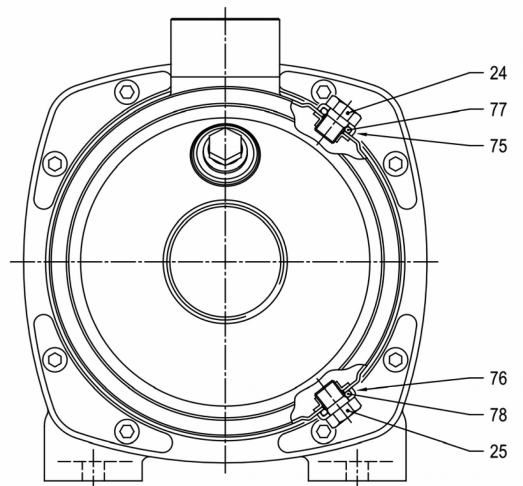
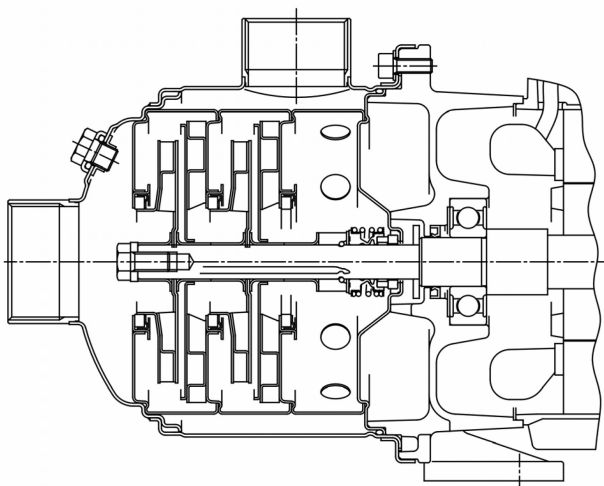
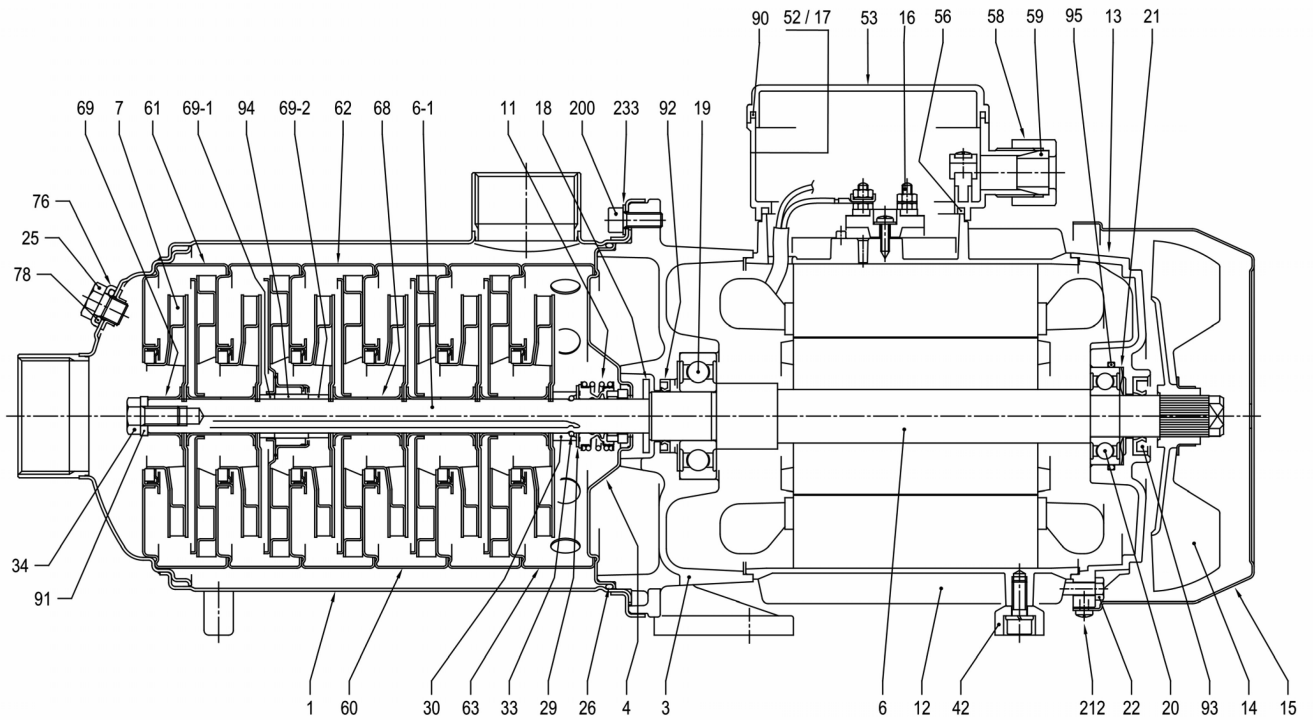
Dimensions in		mm						
1	B	360						
2	C	171						
3	Dia D1	1" 1/4						
4	Dia D2	1"						
5	F	103						
6	H3	192						
7	R	151.5						
8	V	M16X1.5						
9	W	0						
10	Weight P&M	9,2kg						
11								
12								
13								
14								
15								

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Construction

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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 5-2T/0.45**

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N°	PART NAME	MATERIAL	DIMENSION	STANDARD	Q.TY
1	Casing	EN 1.4301 (AISI 304)			1
3	Bracket	EN AB-AISI11Cu2(Fe)			1
4	Casing cover	EN 1.4301 (AISI 304)			1
6	Shaft with rotor	-			1
6-1	Pump Shaft	EN 1.4301 (AISI 304)			1
7	Impeller	EN 1.4301 (AISI 304)			[1]
11	Mechanical seal [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**

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Construction

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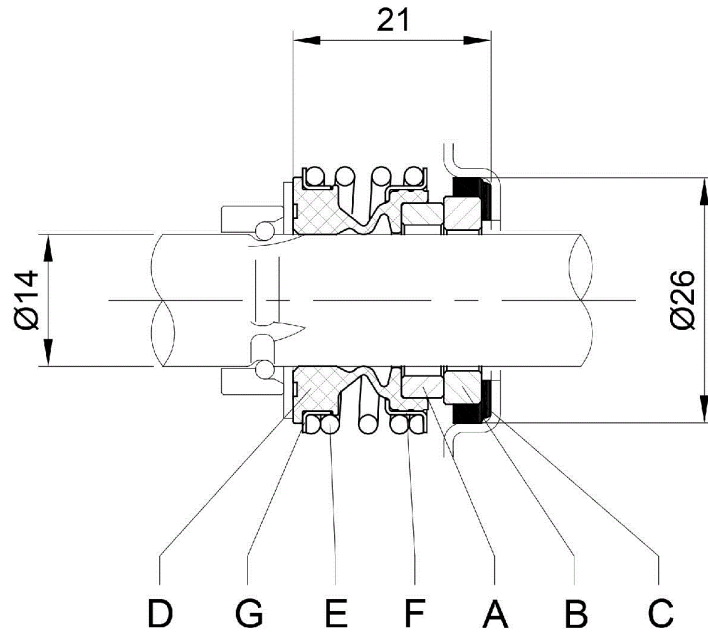
Pump type	N° 7 Impeller	N° 17 Terminal box cover	N° 30-1 Shaft sleeve (adjustment)	N° 30-2 Shaft sleeve (adjustment)	N° 42 Foot	N° 58 Ring nut	N° 59 Conic gasket	N° 60 Intermediate casing	N° 62 Intermediate casing (bearing)	N° 68 Shaft sleeve (intermediate)	N° 69-1 Shaft sleeve (adjustment)	N° 69-2 Shaft sleeve (adjustment)	N° 90 Terminal box cover gasket	N° 94 Shaft sleeve (adjustment)
MATRIX 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	-
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	-
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	-

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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)