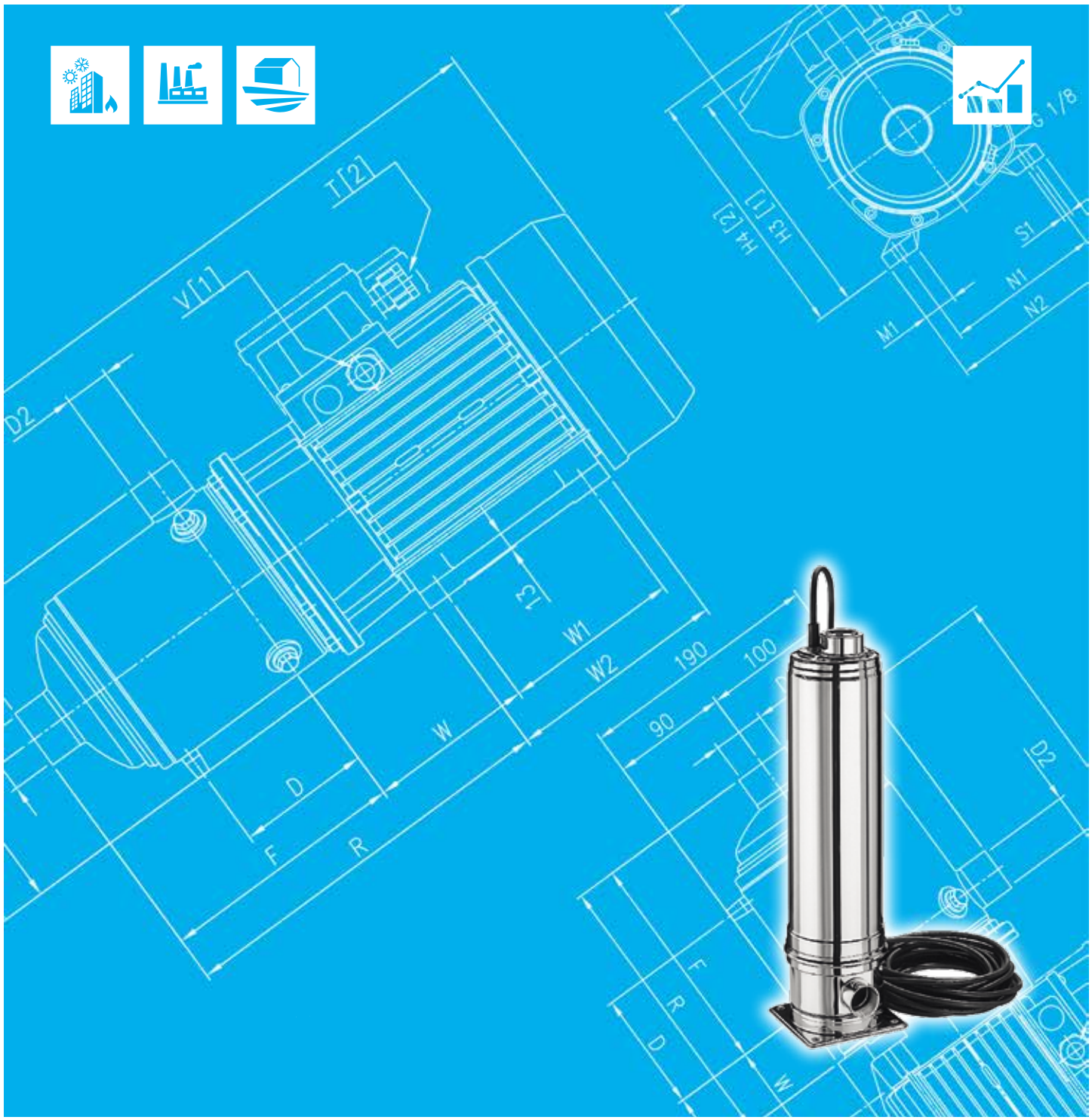




Japanese Technology since 1912

# MULTIGO

Data Book 60Hz



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## SPECIFICATIONS

60Hz

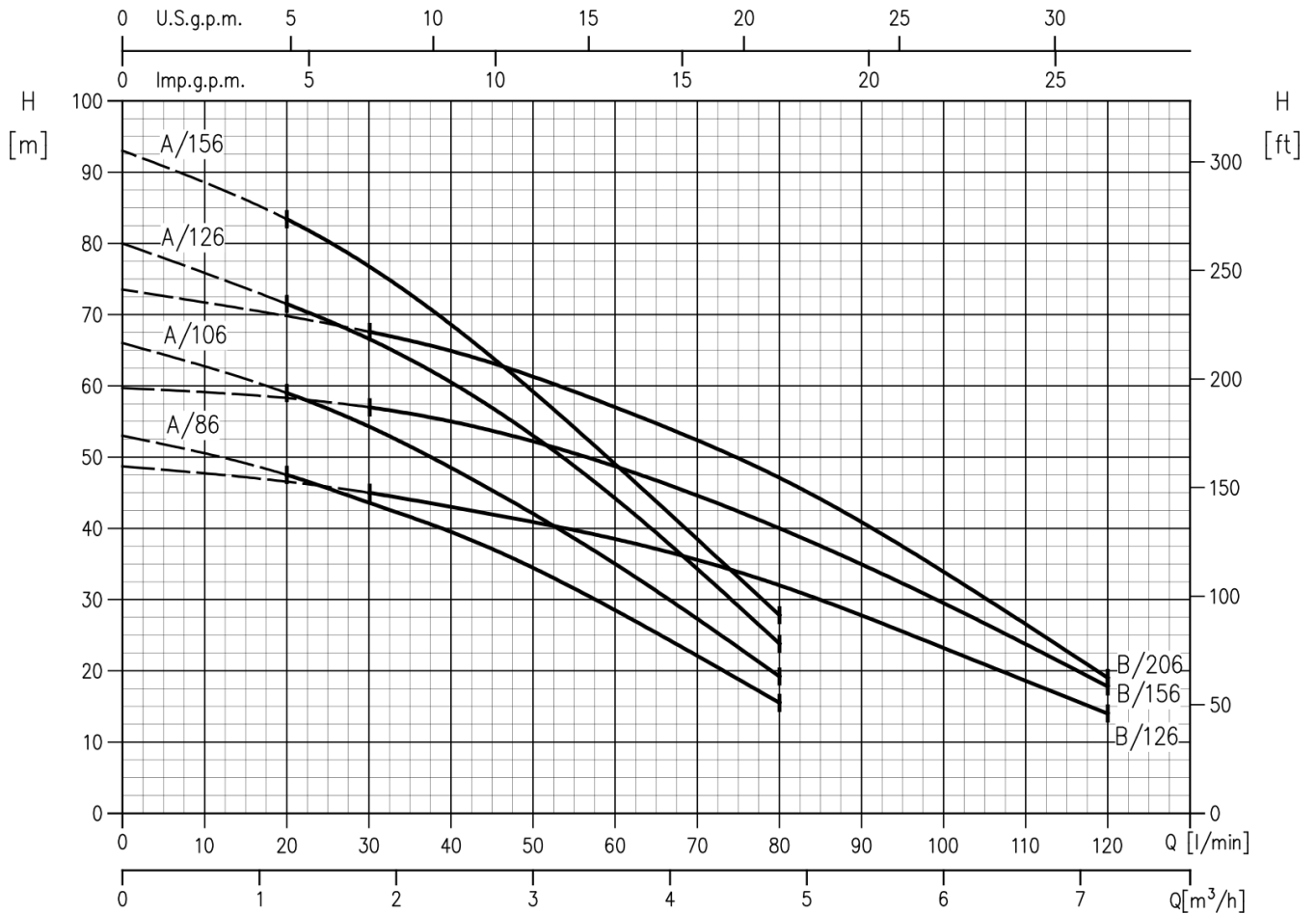
Rev. E

PUMP		
Liquid Handled	Type of liquid	Clean water
	Max temperature [°C]	40
Maximum working pressure	[MPa]	1
Maximum available negative suction head	[m]	-6
Construction	Impeller	Closed centrifugal type (multiple stages)
	Shaft seal type	Double mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction	G 1¼ UNI ISO 228
	Discharge	G 1¼ UNI ISO 228
Material	Casing	AISI 304
	Casing cover	AISI 304
	Impeller	PPE+PS glass fibre reinforced
	Diffuser	PPE+PS glass fibre reinforced
	Shaft	AISI 431
	Shaft seal	Pump side: Carbon/Ceramic/NBR Motor side: Carbon/Ceramic/NBR
	Lubricating oil	White mineral oil: Esso Marcol 152 (90cc)
Applicable standard of test		ISO 9006:2012 - Grade 3B

MOTOR		
Type	Submersible dry type	
	Single Phase	Three Phase
No. of Poles	2	
Rotation speed [min <sup>-1</sup> ]	≈ 3450	
Insulation Class	Class F	
Protection degree	IP X8	
kW/HP Rating	[kW]	0.6 ÷ 1.1
	[HP]	0.8 ÷ 1.5
Frequency [Hz]	60	
Voltage [V]	220-230 ±6%	380 -6%+10%
Capacitor	Built in	-
Over load protection	Built in	Provided by the user
Upper bearing bracket	Aluminium	
Lower bearing bracket	Brass	
Casing material	AISI 304	
material	H07RN-F	
Power cable size	3G1 (40/86, 40/106, 40/126, 40/156)	H07RN-F 4G1
	3G1.5 (80/126, 80/156)	
length [m]	5	
Type of cable entry	Cable Gland	

NOTE:FOR IN-LINE VERSION ONLY SINGLE PHASE MOTORS

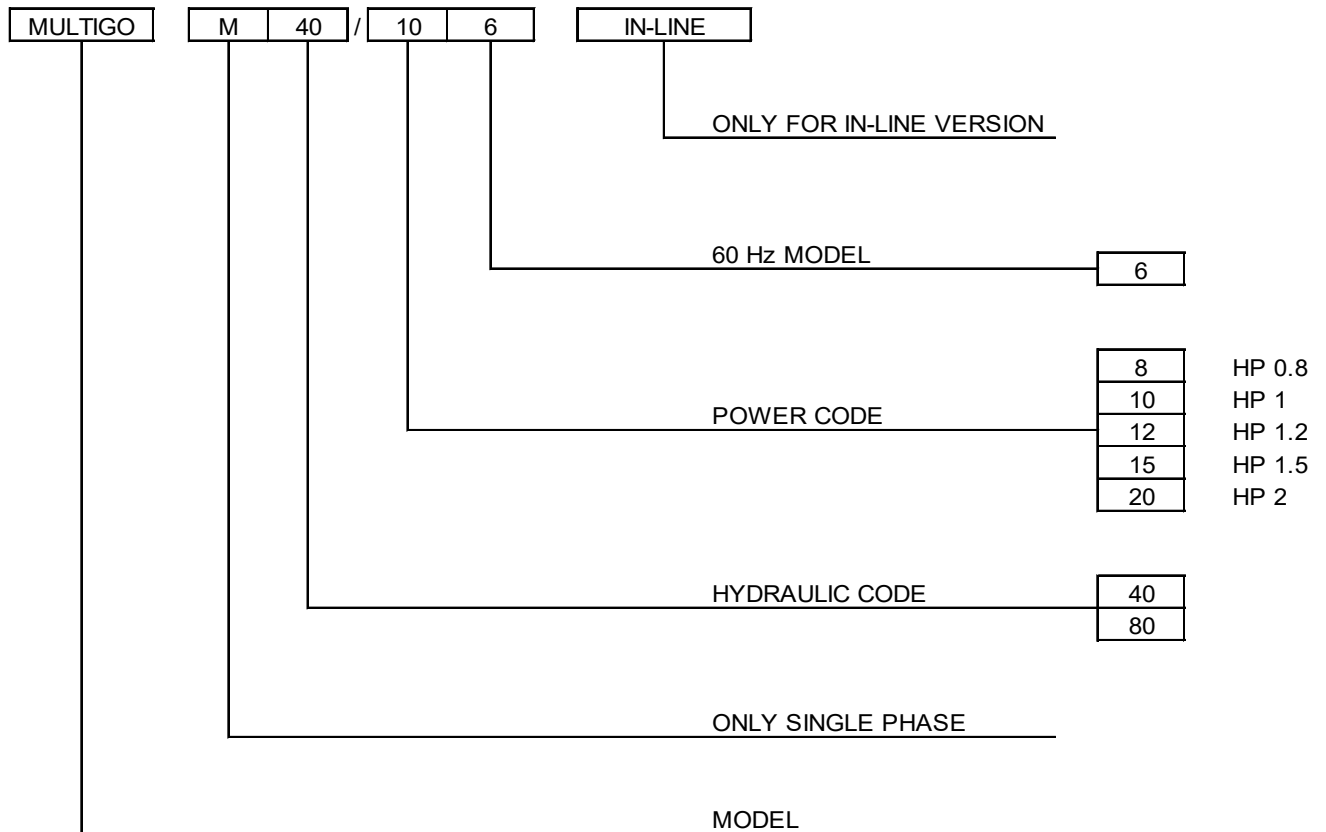
PERFORMANCE RANGE



SELECTION CHART

Pump type		Output		Q=Capacity								
Single-phase	Three-phase	kW	HP	l/min	0	20	30	40	60	80	100	120
				m³/h	0	1,2	1,8	2,4	3,6	4,8	6	7,2
H=Total manometric head in meters												
MULTIGO M40/86	MULTIGO 40/86	0,6	0,8	53	47,5	43,5	39,5	28,5	15,5	-	-	-
MULTIGO M40/106	MULTIGO 40/106	0,75	1	66	59	54,5	48,5	35	19,2	-	-	-
MULTIGO M40/126	MULTIGO 40/126	0,9	1,2	80	71,5	66,5	60,5	44	23,8	-	-	-
MULTIGO M40/156	MULTIGO 40/156	1,1	1,5	93	83,5	76,5	68,5	49	27,8	-	-	-
MULTIGO M80/126	MULTIGO 80/126	0,9	1,2	48,5	-	45	43	38,5	32	23,2	14	-
MULTIGO M80/156	MULTIGO 80/156	1,1	1,5	59,5	-	57	55	48,5	40	29,5	17,8	-
-	MULTIGO 80/206	1,5	2	73,5	-	67,5	65	57	47	33,9	19	-

TYPE KEY



CURVES SPECIFICATIONS

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

Tolerances according to ISO 9006:2012 - Grade 3B

The curves refer to effective speed of asynchronous motors at 60 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)

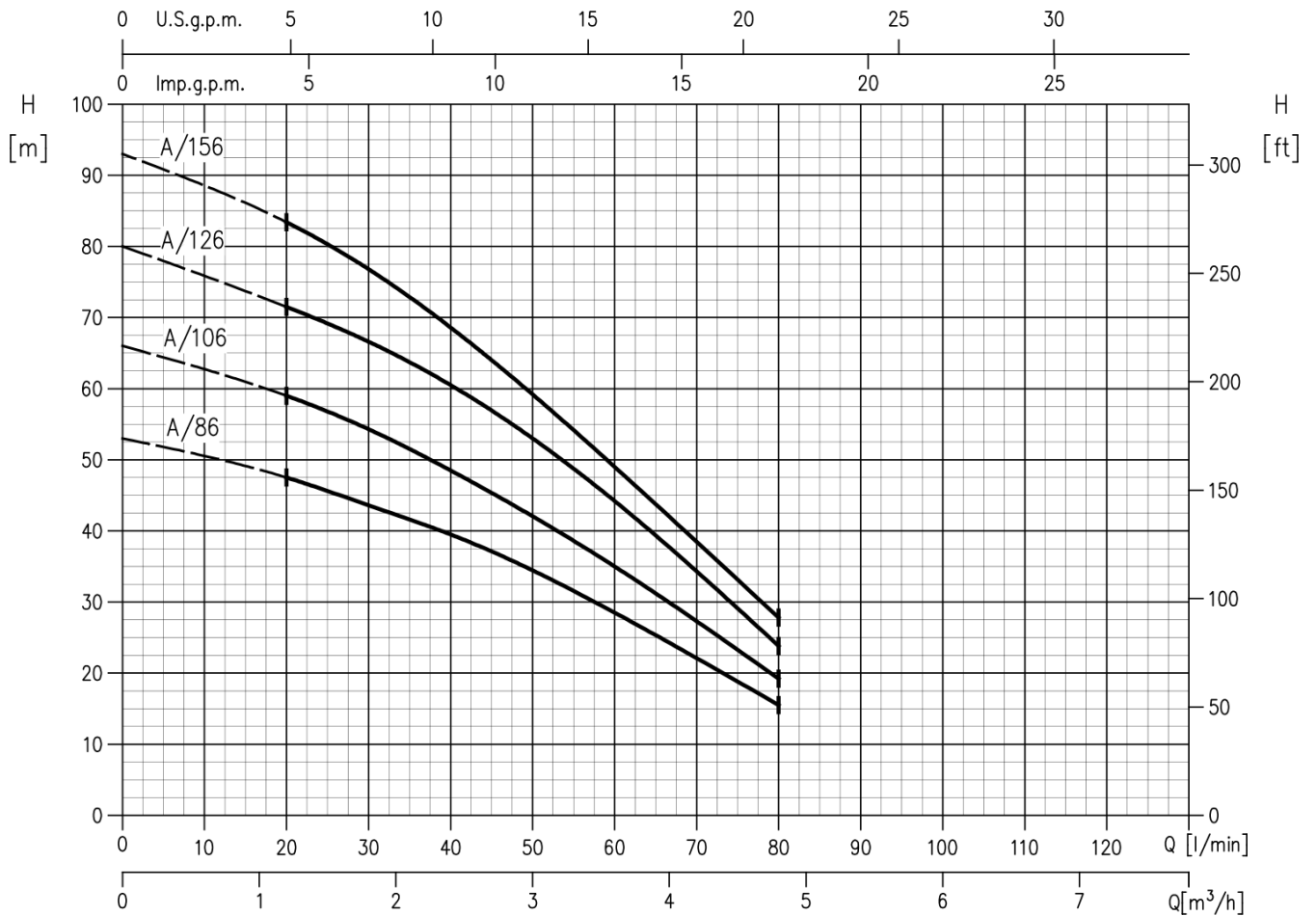
The continuous curves indicate the recommended working range. The dotted curve is only a guide.

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:

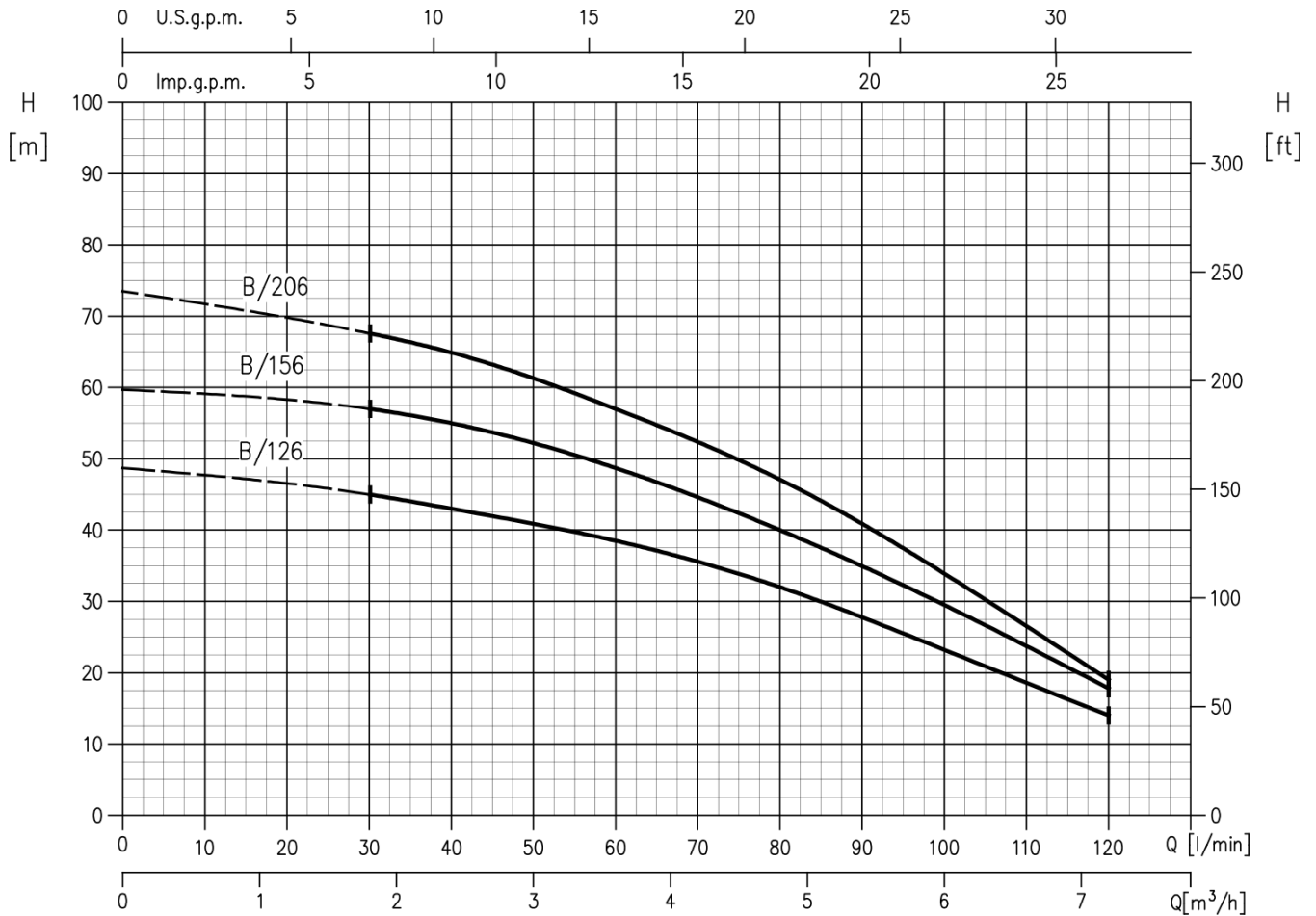
- Q = volume flow rate
- H = total head

MULTIGO 40/86 – Impeller diameter = 90 mm  
 MULTIGO 40/106 – Impeller diameter = 90 mm  
 MULTIGO 40/126 – Impeller diameter = 90 mm  
 MULTIGO 40/156 – Impeller diameter = 90 mm



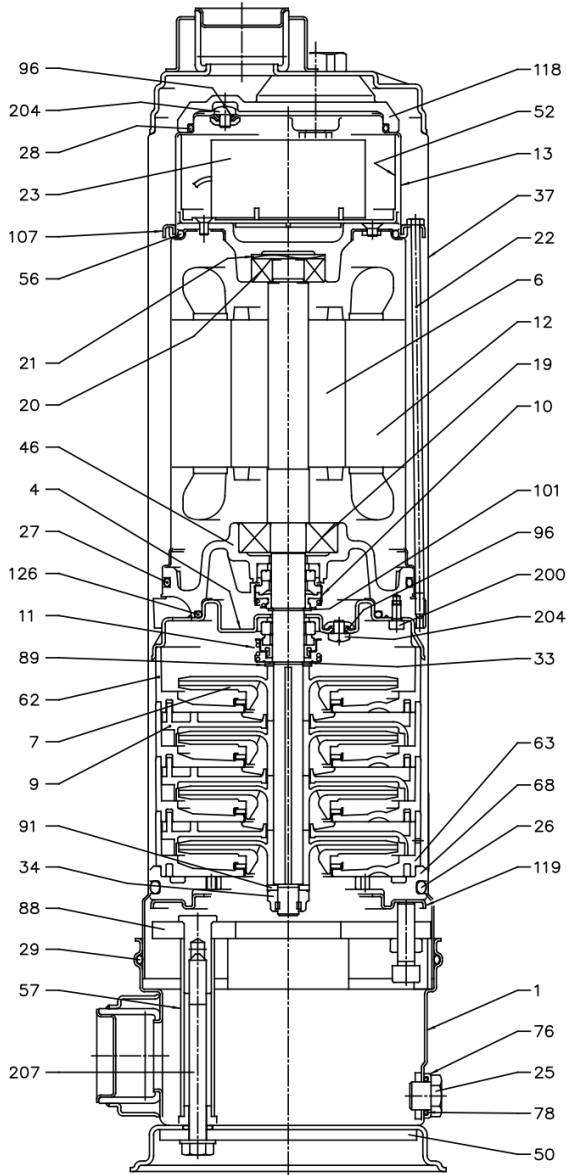
Rotation speed:  $\approx 3450 \text{ min}^{-1}$   
 Test standard: ISO 9006:2012 - Grade 3B

MULTIGO 80/126 – Impeller diameter = 85 mm  
 MULTIGO 80/156 – Impeller diameter = 85 mm  
 MULTIGO 80/206 – Impeller diameter = 85 mm

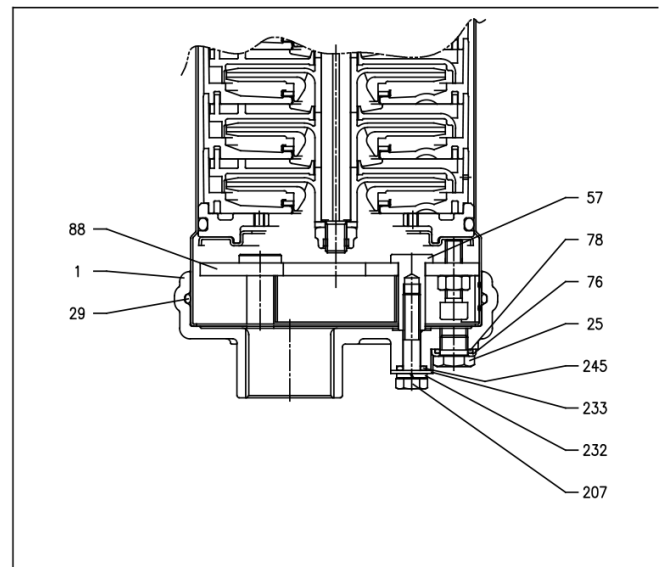
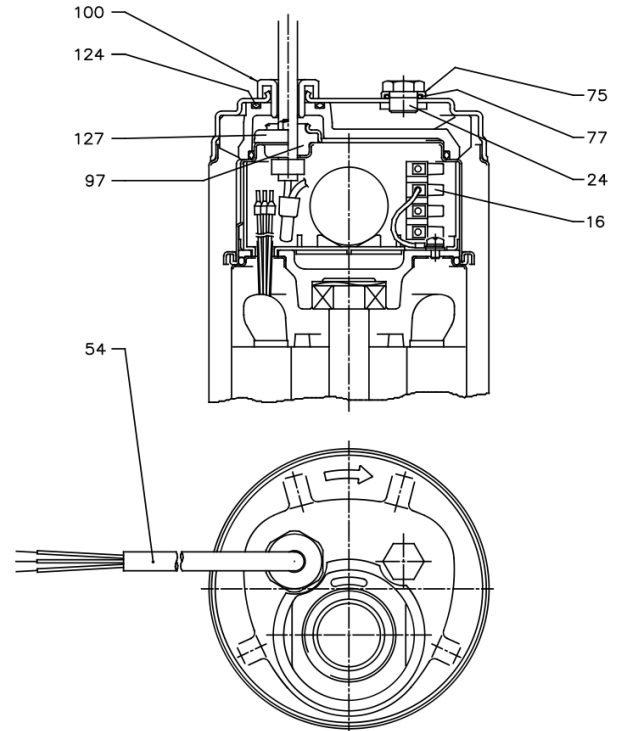


Rotation speed  $\approx 3450 \text{ min}^{-1}$   
 Test standard: ISO 9006:2012 - Grade 3B

SECTIONAL VIEW DRAWING



STANDARD VERSION



IN-LINE VERSION



## SECTIONAL VIEW TABLE

N°	PART NAME	MATERIAL	DIMENSIONS	STANDARD	Q.TY
1	Casing	EN 1.4301 (AISI 304)			1
4	Casing ring	EN 1.4301 (AISI 304)			1
6	Shaft with rotor	EN 1.4057 (AISI 431)			1
7	Impeller	PPE+PS glass fibre reinforced			[3]
9	Diffuser	PPE+PS glass fibre reinforced			[3]
10	Motor side mechanical seal [2]	Carbon/Ceramic/NBR			1
11	Pump side mechanical seal [2]	Carbon/Ceramic/NBR			1
12	Motor frame with stator	-			1
13	Motor cover	EN 1.4301 (AISI 304)			1
16	Terminal	-			1
19	Lower side ball bearing	-	6303 ZZ		1
20	Upper side ball bearing	-	6302 ZZ		1
21	Adjusting ring	Steel C70			1
22	Tie rod	EN 1.4301 (AISI 304)	M4		3
23	Capacitor [1]	-			1
24	Header plug	EN 1.4305 (AISI 303)	G 1/4"		1
25	Drain plug	EN 1.4305 (AISI 303)	G 1/4"		1
26	O ring	NBR	Ø 120.7X5.34	OR 201	1
27	O ring	NBR	Ø 110.7X3.53	OR 4437	1
28	O ring	NBR	Ø 88.5X3.53	OR 4350	1
29	O ring	NBR	Ø 138X3.5		1
33	Seeger ring	EN 1.4301 (AISI 304)	Ø 14	JIS B2804-1978	1
34	Impeller nut	EN 1.4301 (AISI 304)	M10x1.25	U7474	1
37	External pump casing	EN 1.4301 (AISI 304)			1
46	Bearing housing	Brass			1
50	Casing support	EN 1.4301 (AISI 304)			1
52	Terminal insulating box	PA66			1
54	Power cable	-			1
56	O ring	NBR	Ø 98.02x3.53	OR 4387	1
57	Bolt	EN 1.4305 (AISI 303)			2
62	Stage housing	PPE+PS glass fibre reinforced			[3]
63	Stage housing with hall	PPE+PS glass fibre reinforced			1
68	Lower spacer	PPE+PS glass fibre reinforced			1
75	Washer	EN 1.4301 (AISI 304)	G 1/4"		1
76	Washer	EN 1.4301 (AISI 304)	G 1/4"		1
77	O ring	NBR	Ø 13.1x2.62	OR 117	1
78	O ring	NBR	Ø 13.1x2.62	OR 117	1
88	Retainer ring	EN 1.4301 (AISI 304)			1
89	Washer	EN 1.4301 (AISI 304)	Ø 14.1x22x1		1
91	Washer	EN 1.4301 (AISI 304)	Ø 10.2x20x2.5		1
96	O ring	NBR	Ø 4.48x1.78	OR 2018	3
97	Cable entry	NBR	Ø 16.5x20		1
100	Lock screw	EN 1.4305 (AISI 303)			1
101	Seeger ring	EN 1.4021 (AISI 420)	Ø 15	U7435	1
107	Retainer ring	EN 1.4301 (AISI 304)	Ø119X1.2		1
118	Upper spacer	Brass			1
119	Flange	EN 1.4301 (AISI 304)			1
124	O ring	NBR	Ø25.8X3.53	OR 134	1
126	O ring	NBR	Ø82.14X3.53	OR 4325	1
127	Cable connector	EN 1.4301 (AISI 304)			1
200	Screw	Stainless steel A2 UNI 7323	M4x8	UNI 5931	3
204	Screw	Stainless steel A2 UNI 7323	M5x6	UNI 7687	3
207	Screw	Stainless steel A2 UNI 7323	M8X80	UNI 5737	4
232	Washer	Stainless steel A2 UNI 7323			4
233	Washer	Stainless steel A2 UNI 7323	Ø8.5x20x2		4
245	O ring	NBR	Ø8x3		4

[1] Only for Single phase

[2] See **MECHANICAL SEAL** page 303

[3] See **QUANTITY FOR MODEL** page 302

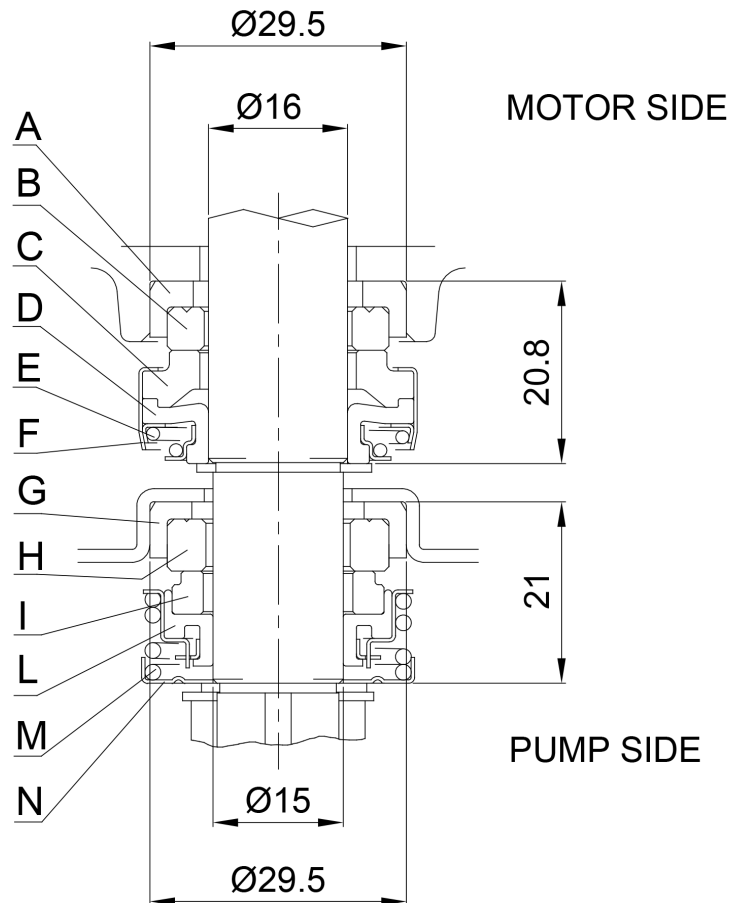
**QUANTITY FOR MODEL**

Pump type	POS. 7 Impeller	POS. 9 Diffuser	POS. 62 Stage housing
MULTIGO 40/86	4	3	4
MULTIGO 40/106	5	4	5
MULTIGO 40/126	6	5	6
MULTIGO 40/156	7	6	7
MULTIGO 80/126	4	3	4
MULTIGO 80/156	5	4	5

**BEARINGS**

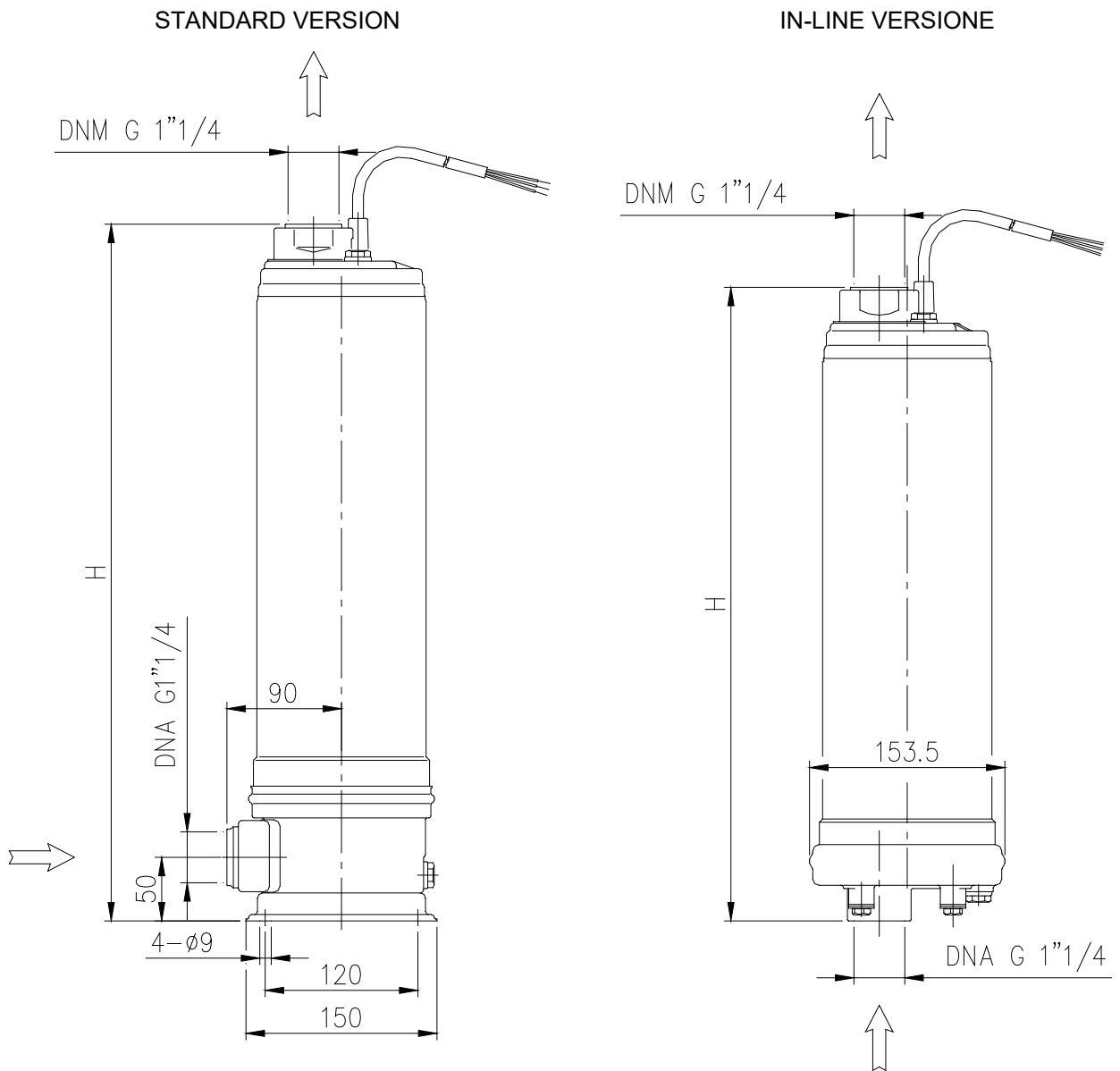
Pump type		Ball Bearings	
Single Phase	Three Phase	Pump side	Fan side
MULTIGO 40/86 M	MULTIGO 40/86	6303 ZZ	6202 ZZ
MULTIGO 40/106 M	MULTIGO 40/106	6303 ZZ	6202 ZZ
MULTIGO 40/126 M	MULTIGO 40/126	6303 ZZ	6202 ZZ
MULTIGO 40/156 M	MULTIGO 40/156	6303 ZZ	6202 ZZ
MULTIGO 80/126 M	MULTIGO 80/126	6303 ZZ	6202 ZZ
MULTIGO 80/156 M	MULTIGO 80/156	6303 ZZ	6202 ZZ
-	MULTIGO 80/206	6303 ZZ	6202 ZZ

MECHANICAL SEAL

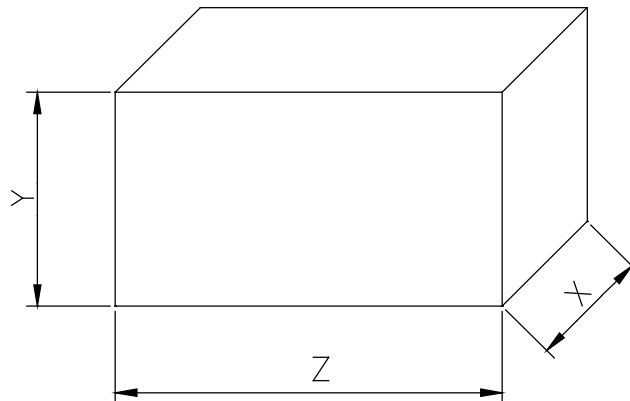


REF	PART NAME	MATERIAL Standard version
A	Rubber seat	NBR
B	Stationary ring	Ceramic
C	Rotary ring	Carbon
D	Rotary seal	NBR
E	Coil spring	AISI 304
F	Seal cover	AISI 304
G	Rubber seat	NBR
H	Stationary ring	Ceramic
I	Rotary ring	Carbon
L	Rotary seal	NBR
M	Coil spring	AISI 304
N	Seal cover	AISI 304

PUMP



Pump Type	H (mm)		Weight [kgf]	
	Standard version	IN-LINE version	[1~]	[3~]
MULTIGO 40/86	547	501	15,7	15,4
MULTIGO 40/106	573	527	16,7	16,5
MULTIGO 40/126	624	578	18,6	18,3
MULTIGO 40/156	650	604	19,7	19,1
MULTIGO 80/126	573	527	17,6	17,3
MULTIGO 80/156	598	552	18,7	18,3
MULTIGO 80/206	624	-	-	19

**PACKING**

Pump type		Packing [mm]			Weight [kgf]	
Single Phase	Three Phase	X	Y	Z	[1~]	[3~]
MULTIGO M 40/86	MULTIGO 40/86	200	200	620	16,5	16,2
MULTIGO M 40/106	MULTIGO 40/106	200	200	620	17,5	17,3
MULTIGO M 40/126	MULTIGO 40/126	200	200	700	19,5	19,1
MULTIGO M 40/156	MULTIGO 40/156	200	200	700	20,5	20
MULTIGO M 80/126	MULTIGO 80/126	200	200	620	18,4	18,1
MULTIGO M 80/156	MULTIGO 80/156	200	200	700	19,5	19,1
-	MULTIGO 80/206	200	200	700	-	20

**MOTOR DATA**

Pump type		Power		Capacitor		Input [kW]		Full load current [A]		Locked rotor current [A]	
Single Phase	Three Phase	kW	HP	Single Phase [μF]	Three Phase [V]	Single Phase	Three Phase	Single Phase 220-230 V	Three Phase 380 V	Single Phase 220-230 V	Three Phase 380 V
MULTIGO 40/86 M	MULTIGO 40/86	0,6	0,8	16	450	1,03	0,93	5,0	1,7	19	10
MULTIGO 40/106 M	MULTIGO 40/106	0,75	1	16	450	1,20	1,09	5,9	2,0	22	11
MULTIGO 40/126 M	MULTIGO 40/126	0,9	1,2	20	450	1,45	1,28	7,1	2,3	29	14
MULTIGO 40/156 M	MULTIGO 40/156	1,1	1,5	25	450	1,68	1,47	8,1	2,7	33	18
MULTIGO 80/126 M	MULTIGO 80/126	0,9	1,2	20	450	1,30	1,10	6,4	2,1	29	14
MULTIGO 80/156 M	MULTIGO 80/156	1,1	1,5	25	450	1,48	1,30	7,2	2,5	33	18
-	MULTIGO 80/206	1,5	2	-	450	-	1,53	-	2,7	-	18

NOTE:FOR IN-LINE VERSION ONLY SINGLE PHASE MOTORS