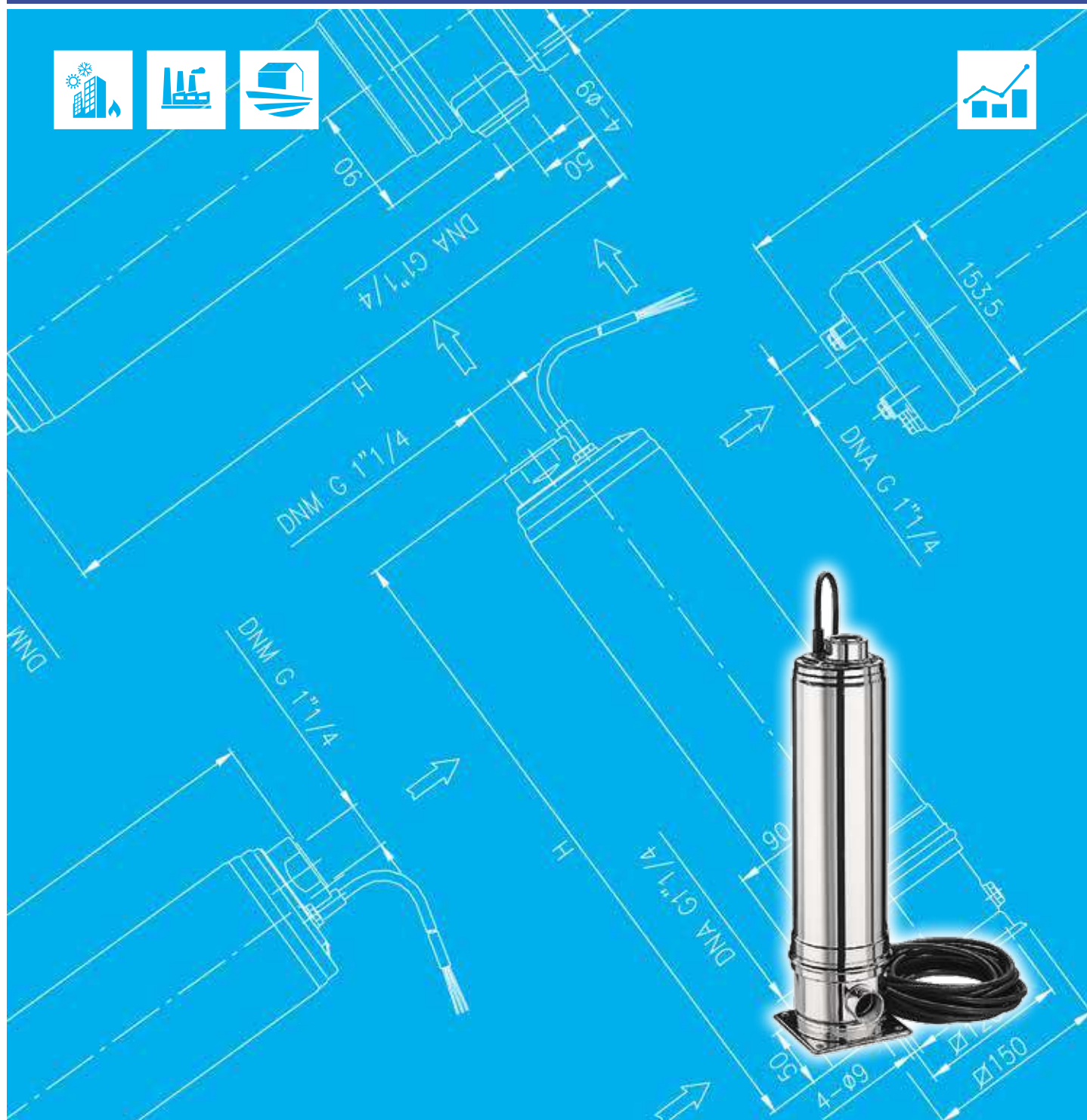




Japanese Technology since 1912

MULTIGO

Data Book 50Hz



SPECIFICATION

50Hz

Rev. I

PUMP		
Liquid Handled	Type of liquid	Clean water
	Temperature [°C]	max. +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	EN 1.4301 (AISI 304)
	Casing cover	EN 1.4301 (AISI 304)
	Impeller	PPE+PS Glass fibre reinforced
	Diffuser	PPE+PS Glass fibre reinforced
	Shaft	EN 1.4057 (AISI 431)
	Shaft seal	Pump side: Carbon/Ceramic/NBR Motor side: Carbon/Ceramic/NBR
	Lubricating oil	White mineral oil: Esso Marcol 172 (90cc)
Applicable standard of test		ISO 9906 – Annex A

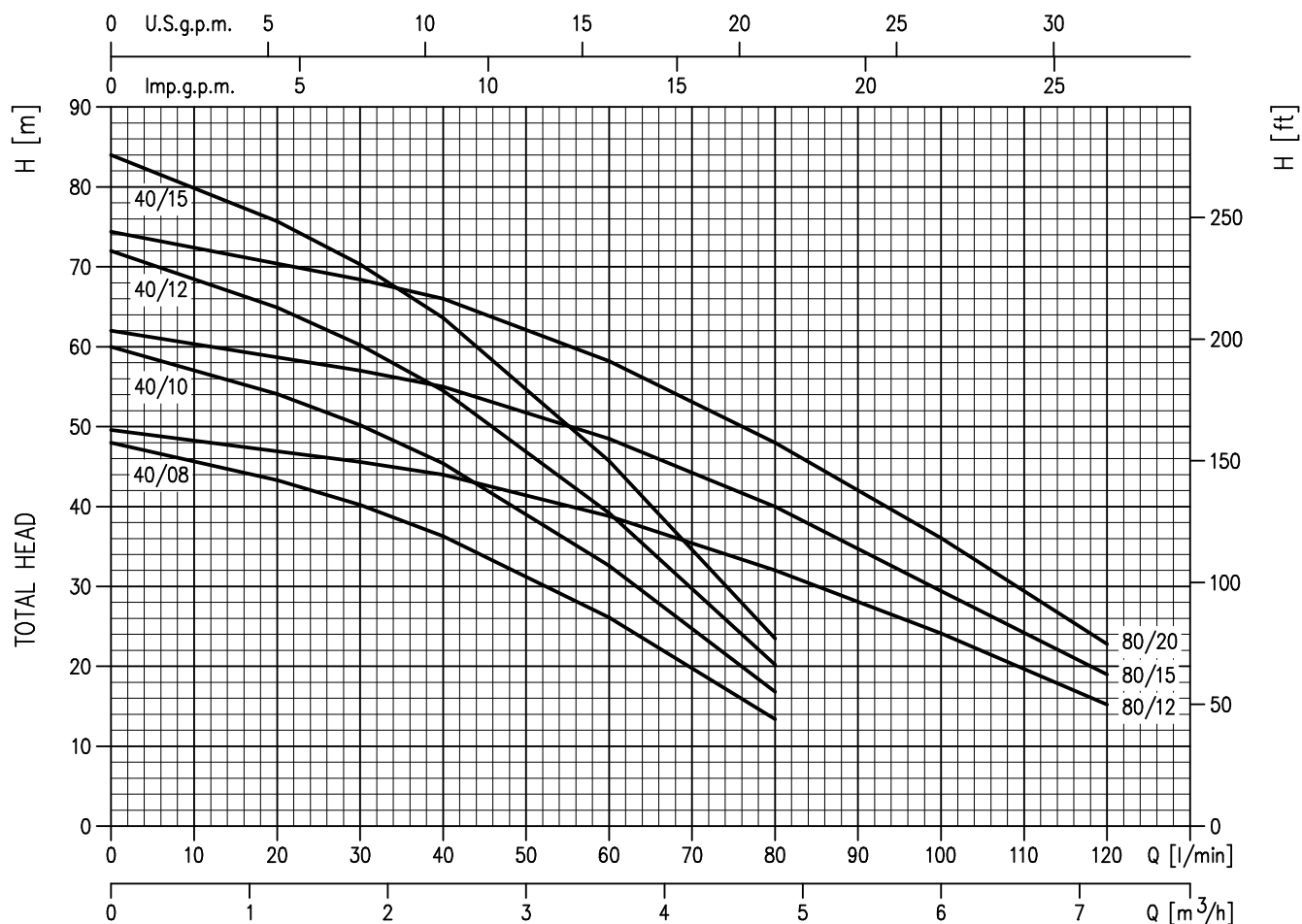
MOTOR		
Type	Submersible dry type	
	Single Phase	Three Phase
No. of Poles	2	
Rotation speed [min ⁻¹]	2800	
Insulation Class	Class F	
Protection degree (CEI EN 60034-5)	IP 68	
Power rating	[kW]	0.6 ÷ 1.1
	[HP]	0.8 ÷ 1.5
Frequency	[Hz]	50
	[V]	230 ±10%
Voltage		230/400 ±10%
Capacitor	Built in	-
Over load protection	Built in	Provided by the user
Upper bearing bracket	Aluminium	
Lower bearing bracket	Brass	
Motor frame	AISI 304	
material	H07RN-F	
Power cable	size	3G1 (40/08, 40/10, 40/12, 40/15) 3G1.5 (80/12, 80/15)
	length [m]	4G1
Type of cable entry	5 Cable Gland	

* ON REQUEST IN-LINE VERSION ONLY SINGLE PHASE MODELS

SELECTION CHART

50Hz

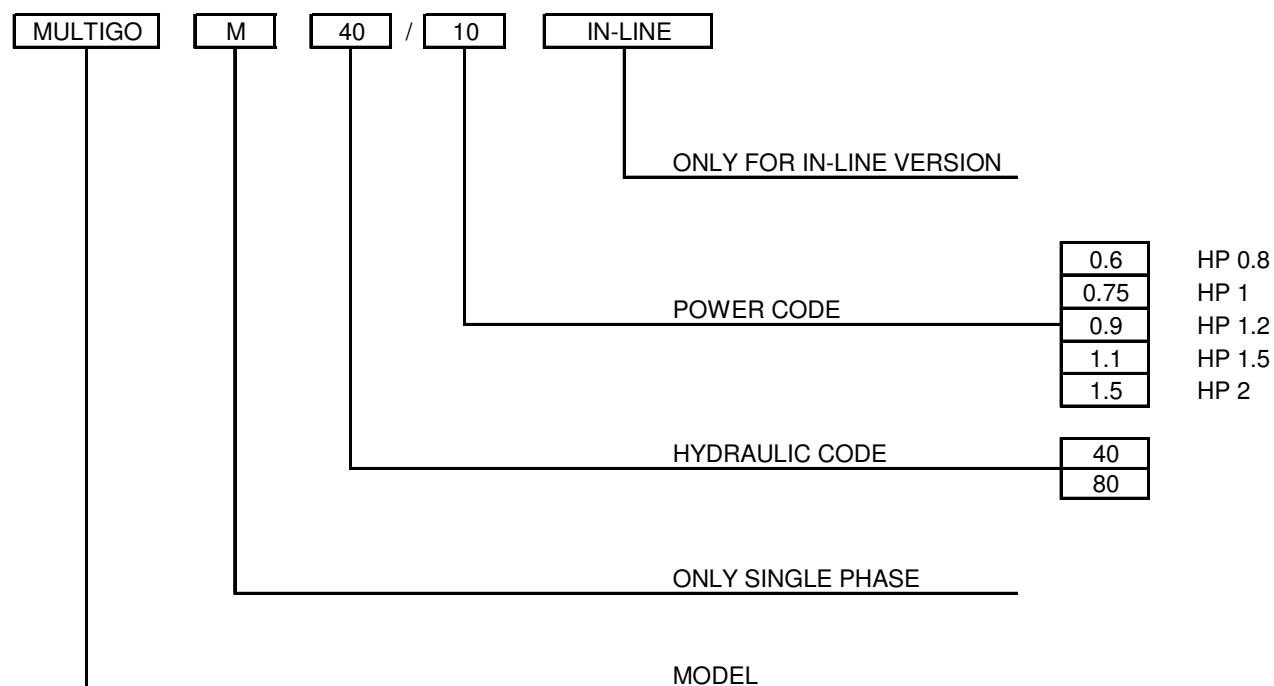
Rev. I



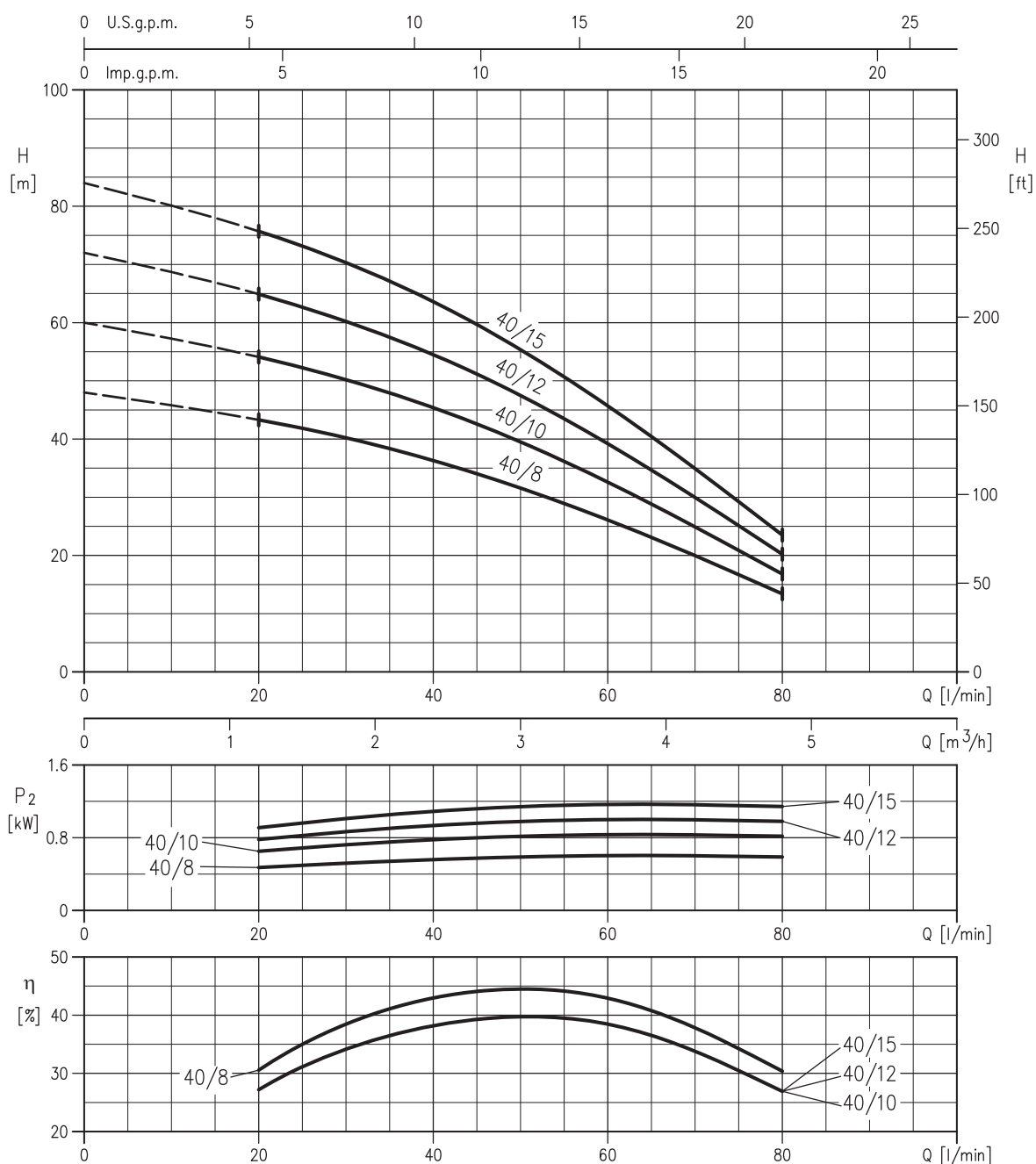
Pump type		Power		Q=Capacity								
				l/min	0	20	30	40	60	80	100	120
Single Phase	Three Phase	[kW]	[HP]	m³/h	0	1.2	1.8	2.4	3.6	4.8	6	7.2
				H=Total manometric head in meters								
MULTIGO M40/08	MULTIGO 40/08	0.6	0.8	48	43.3	40.2	36.3	26.1	13.4	-	-	-
MULTIGO M40/10	MULTIGO 40/10	0.75	1	60	54.1	50.2	45.4	32.6	16.8	-	-	-
MULTIGO M40/12	MULTIGO 40/12	0.9	1.2	72	64.9	60.2	54.5	39.2	20.2	-	-	-
MULTIGO M40/15	MULTIGO 40/15	1.1	1.5	84	75.7	70.3	63.6	45.7	23.5	-	-	-
MULTIGO M80/12	MULTIGO 80/12	0.9	1.2	49.6	-	45.6	44	38.8	32	23.2	15.2	-
MULTIGO M80/15	MULTIGO 80/15	1.1	1.5	62	-	57	55	48.5	40	28	19	-
-	MULTIGO 80/20	1.5	2	74.4	-	68.4	66	58.2	48	34.8	22.8	-

* ON REQUEST IN-LINE VERSION ONLY SINGLE PHASE MODELS

TYPE KEY



MULTIGO 40/08 (0.60 kW) MEI > 0.40 - Impeller diameter = 104
MULTIGO 40/10 (0.75 kW) MEI > 0.40 - Impeller diameter = 104
MULTIGO 40/12 (0.90 kW) MEI > 0.40 - Impeller diameter = 104
MULTIGO 40/15 (1.10 kW) MEI > 0.40 - Impeller diameter = 104

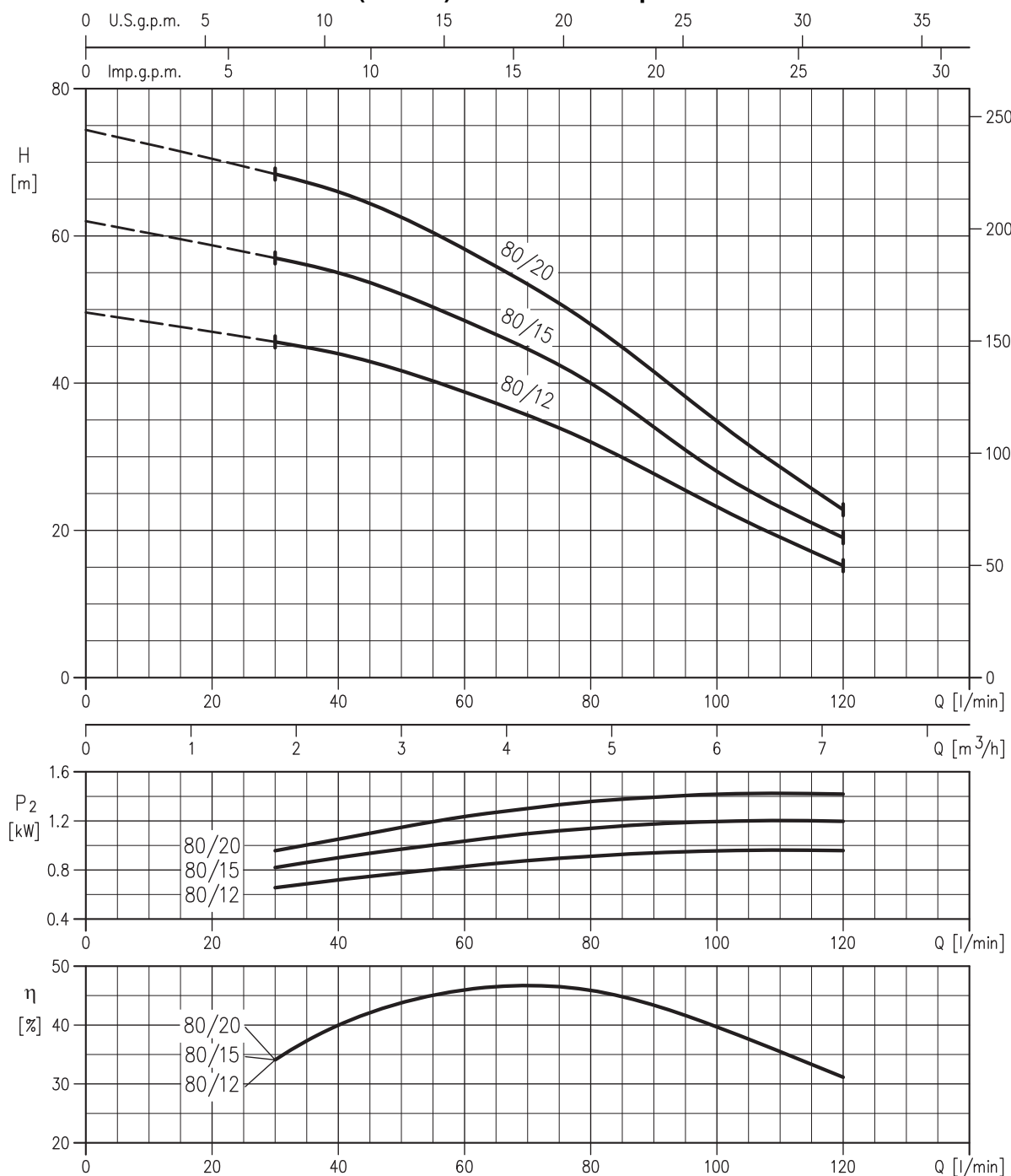


Rotation speed $\approx 2800 \text{ min}^{-1}$
 Test fluid: clean water at 20°C
 Test standard: ISO 9906 – Annex A

MULTIGO 80/12 (0.9 kW) MEI > 0.70 - Impeller diameter = 102

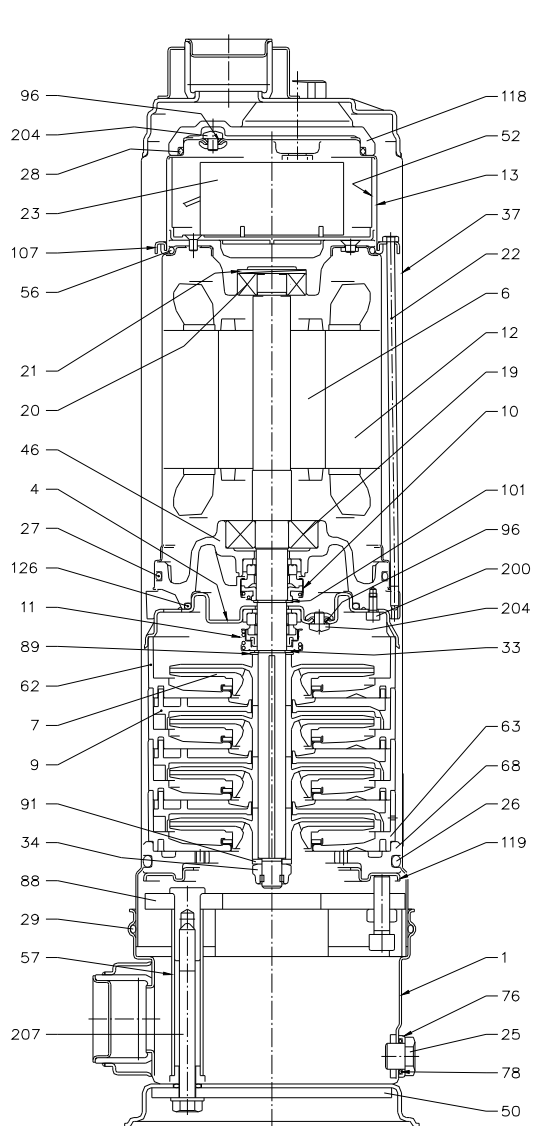
MULTIGO 80/15 (1.1 kW) MEI > 0.70 - Impeller diameter = 102

MULTIGO 80/20 (1.5 kW) MEI > 0.70 - Impeller diameter = 102

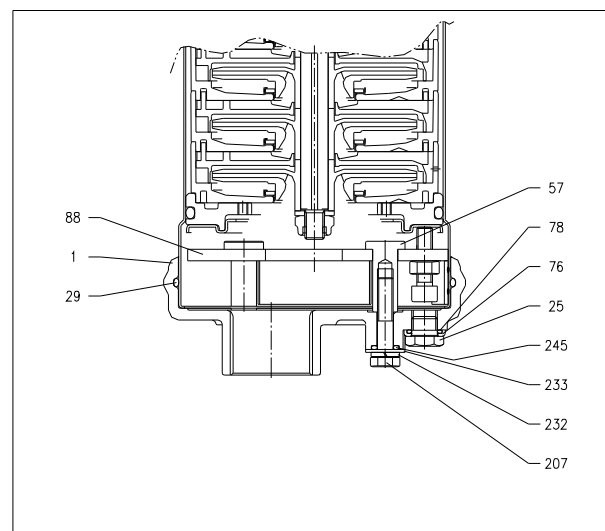
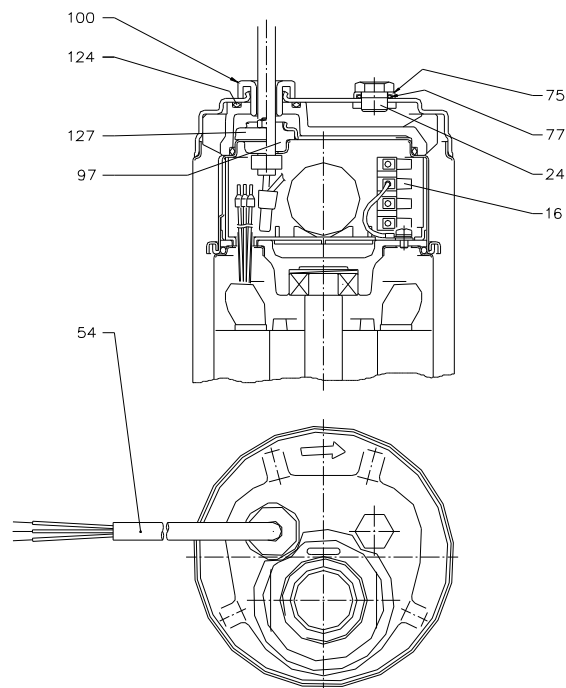


Rotation speed $\approx 2800 \text{ min}^{-1}$
 Test fluid: clean water at 20°C
 Test standard: ISO 9906 – Annex A

SECTIONAL VIEW



STANDARD VERSION



IN-LINE VERSION

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	See table p.302		1
11	Pump side mechanical seal [2]	Carbon/Ceramic/NBR	See table p.302		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 glass fibre reinforced			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

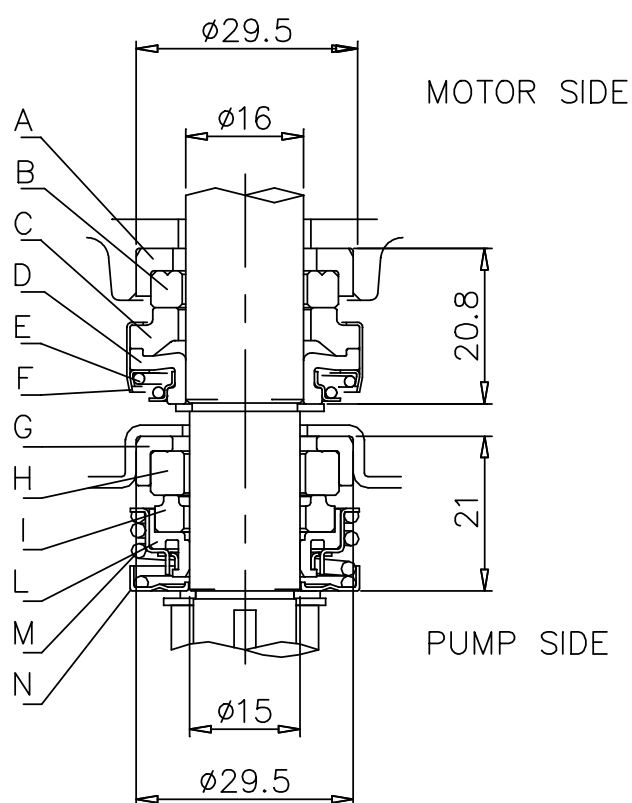
[2] See constructions mechanical seal page 303

[3] See table page 302

QUANTITY FOR MODEL

Pump type		N°7 Impeller	N°9 Diffuser	N°62 Stage housing
Single Phase	Three Phase			
MULTIGO M40/08	MULTIGO 40/08	4	3	4
MULTIGO M40/10	MULTIGO 40/10	5	4	5
MULTIGO M40/12	MULTIGO 40/12	6	5	6
MULTIGO M40/15	MULTIGO 40/15	7	6	7
MULTIGO M80/12	MULTIGO 80/12	4	3	4
MULTIGO M80/15	MULTIGO 80/15	5	4	5
-	MULTIGO 80/20	6	5	6

MECHANICAL SEAL

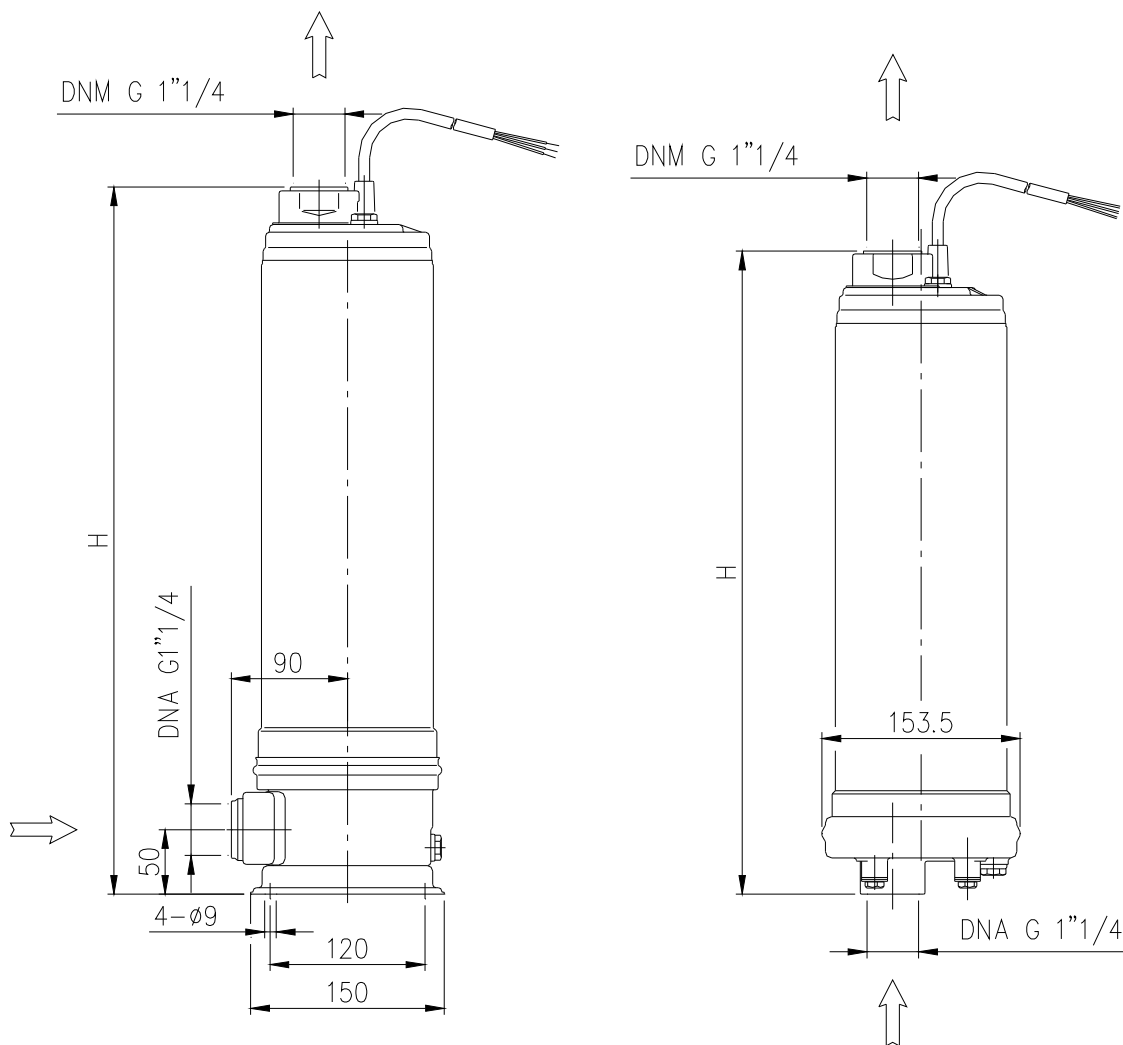


REF	PART NAME	MATERIAL Standard version (MULTIGO)
A	Rubber seat	NBR
B	Stationary ring	Cearmic
C	Rotary ring	Carbon
D	Rotary seal	NBR
E	Coil spring	AISI 304
F	Seal cover	AISI 304
G	Rubber seat	NBR
H	Stationary ring	Ceramic
I	Rotary ring	Carbon
L	Rotary seal	NBR
M	Coil spring	AISI 304
N	Seal cover	AISI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

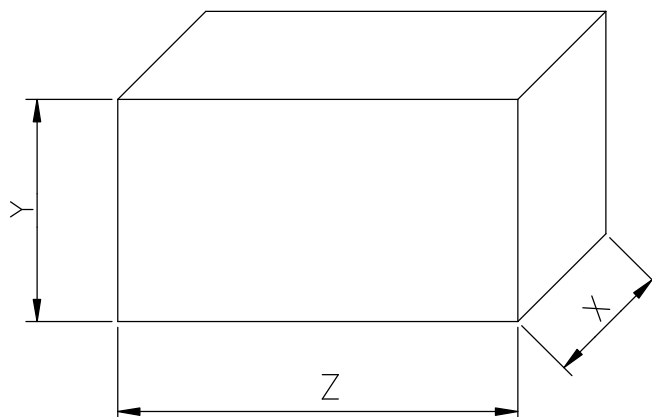
BEARINGS

Type pumps		Ball Bearing	
Single Phase	Three Phase	Pump side	Fan side
MULTIGO M40/08	MULTIGO 40/08	6303 ZZ	6202 ZZ
MULTIGO M40/10	MULTIGO 40/10	6303 ZZ	6202 ZZ
MULTIGO M40/12	MULTIGO 40/12	6303 ZZ	6202 ZZ
MULTIGO M40/15	MULTIGO 40/15	6303 ZZ	6202 ZZ
MULTIGO M80/12	MULTIGO 80/12	6303 ZZ	6202 ZZ
MULTIGO M80/15	MULTIGO 80/15	6303 ZZ	6202 ZZ
-	MULTIGO 80/20	6303 ZZ	6202 ZZ

PUMP



Pump type		H [mm]	H [mm]
Single Phase	Three Phase	STANDARD VERSION	IN-LINE VERSION
MULTIGO M40/08	MULTIGO 40/08	547	501
MULTIGO M40/10	MULTIGO 40/10	573	527
MULTIGO M40/12	MULTIGO 40/12	624	578
MULTIGO M40/15	MULTIGO 40/15	650	604
MULTIGO M80/12	MULTIGO 80/12	573	527
MULTIGO M80/15	MULTIGO 80/15	598	552
-	MULTIGO 80/20	624	-

PACKING

Pump type		Packing [mm]			Weight [kgf]	
Single Phase	Three Phase	X	Y	Z	[1~]	[3~]
MULTIGO M40/08	MULTIGO 40/08	200	200	320	15.3	16
MULTIGO M40/10	MULTIGO 40/10	200	200	320	16.5	17
MULTIGO M40/12	MULTIGO 40/12	200	200	700	17.7	18
MULTIGO M40/15	MULTIGO 40/15	200	200	700	18.8	18.7
MULTIGO M80/12	MULTIGO 80/12	200	200	320	17	17.4
MULTIGO M80/15	MULTIGO 80/15	200	200	700	18.2	18.2
-	MULTIGO 80/20	200	200	700	-	19.2

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]	Single Phase [V]	Single Phase	Three Phase	Single Phase 230 V	Three Phase 230 V	Three Phase 400 V	Single Phase 230 V	Three Phase 230 V	Three Phase 400 V
MULTIGO M40/08	MULTIGO 40/08	0.6	0.8	16	450	1	0.95	4.3	3.3	1.9	16	17.3	10
MULTIGO M40/10	MULTIGO 40/10	0.75	1	20	450	1.25	1.18	5.7	3.8	2.2	20	20.8	12
MULTIGO M40/12	MULTIGO 40/12	0.9	1.2	20	450	1.42	1.33	6.8	4.2	2.4	23	24.2	14
MULTIGO M40/15	MULTIGO 40/15	1.1	1.5	31.5	450	1.6	1.55	7.3	-	3.0	25	-	16.5
MULTIGO M80/12	MULTIGO 80/12	0.9	1.2	20	450	1.33	1.22	6.4	4.0	2.3	23	24.2	14
MULTIGO M80/15	MULTIGO 80/15	1.1	1.5	31.5	450	1.62	1.52	7.5	5.4	3.1	25	28.6	16.5
-	MULTIGO 80/20	1.5	2	-	-	-	1.9	-	6.1	3.5	-	28.6	16.5

NOISE DATA

Pump type		Power		L _{pA} - dB(A) *
Single Phase	Three Phase	[kW]	[HP]	
MULTIGO M40/08	MULTIGO 40/08	0.6	0.8	58
MULTIGO M40/10	MULTIGO 40/10	0.75	1	
MULTIGO M40/12	MULTIGO 40/12	0.9	1.2	
MULTIGO M40/15	MULTIGO 40/15	1.1	1.5	
MULTIGO M80/12	MULTIGO 80/12	0.9	1.2	59
MULTIGO M80/15	MULTIGO 80/15	1.1	1.5	
-	MULTIGO 80/20	1.5	2	

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