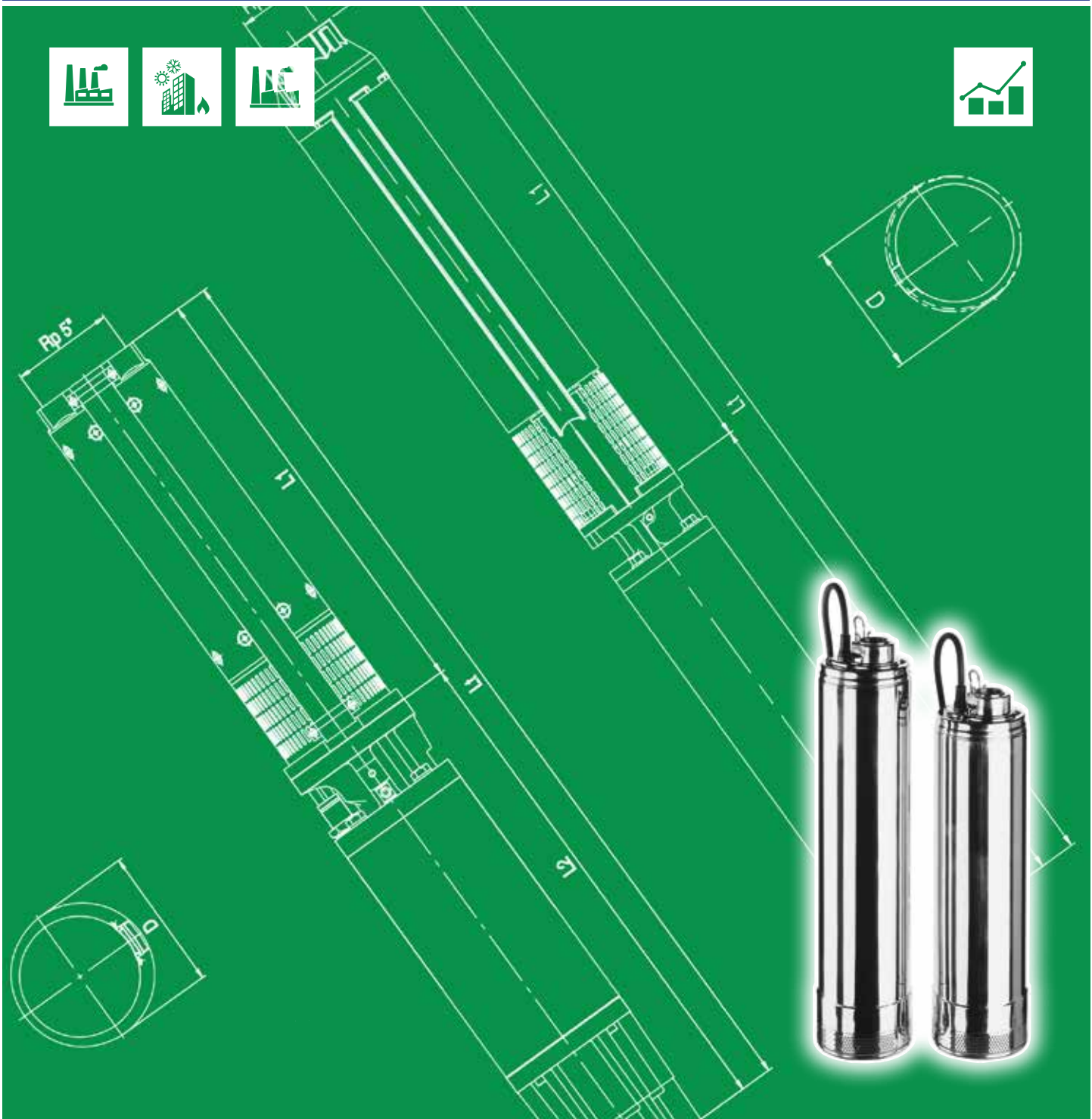




Japanese Technology since 1912


# IDROGO

Data Book 60Hz



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**SPECIFICATIONS**

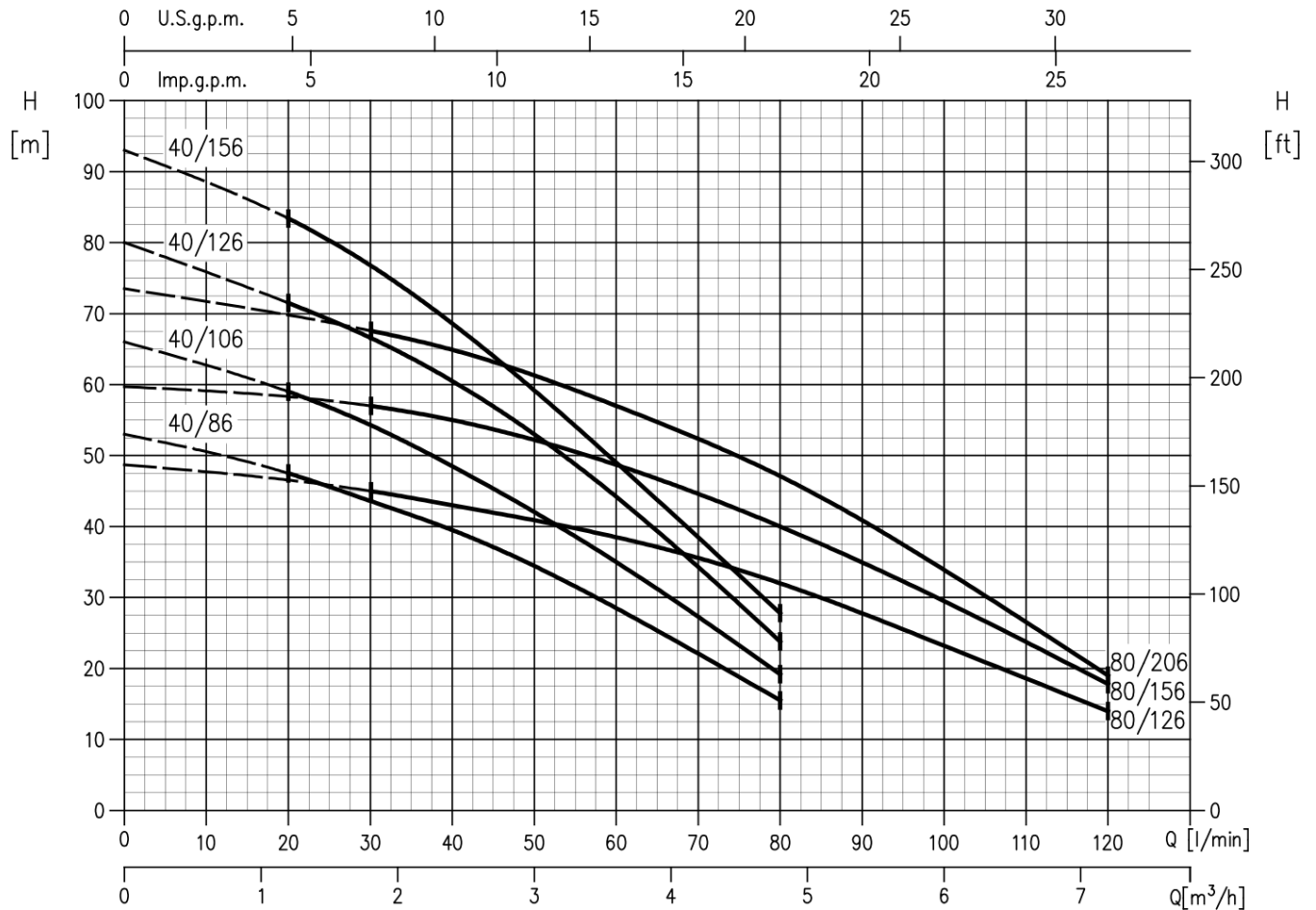
60Hz

Rev. H

PUMP		
Liquid Handled	Type of liquid	Clean water
	Max temperature [°C]	40
	Max solids size [mm]	2,5
Maximum immersion	[m]	10 (with power cable length 20 m for version with float switch) 17 (with power cable length 20 m)
Construction	Impeller	Closed centrifugal type (multiple stages)
	Shaft Seal Type	Double mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction-Flange	Strainer
	Discharge-Flange	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: Sic/Carbon/NBR Motor side: Carbon/Ceramic/NBR
	Lubricating liquid	White mineral oil: Esso Marcol 152 (90 cc)
Applicable standard of test		ISO 9906:2012 - 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	
Power 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
Float Switch	Optional	-
Float Switch material	H07RN-F	-
Cable size	3 G 1	-
Upper bearing bracket	Aluminium	
Lower bearing bracket	Brass	
Casing material	AISI 304	
	H07RN-F	
Power cable	material	H07RN-F
	size	3 G 1.5
	length [m]	20
Type of cable entry	Cable Gland	

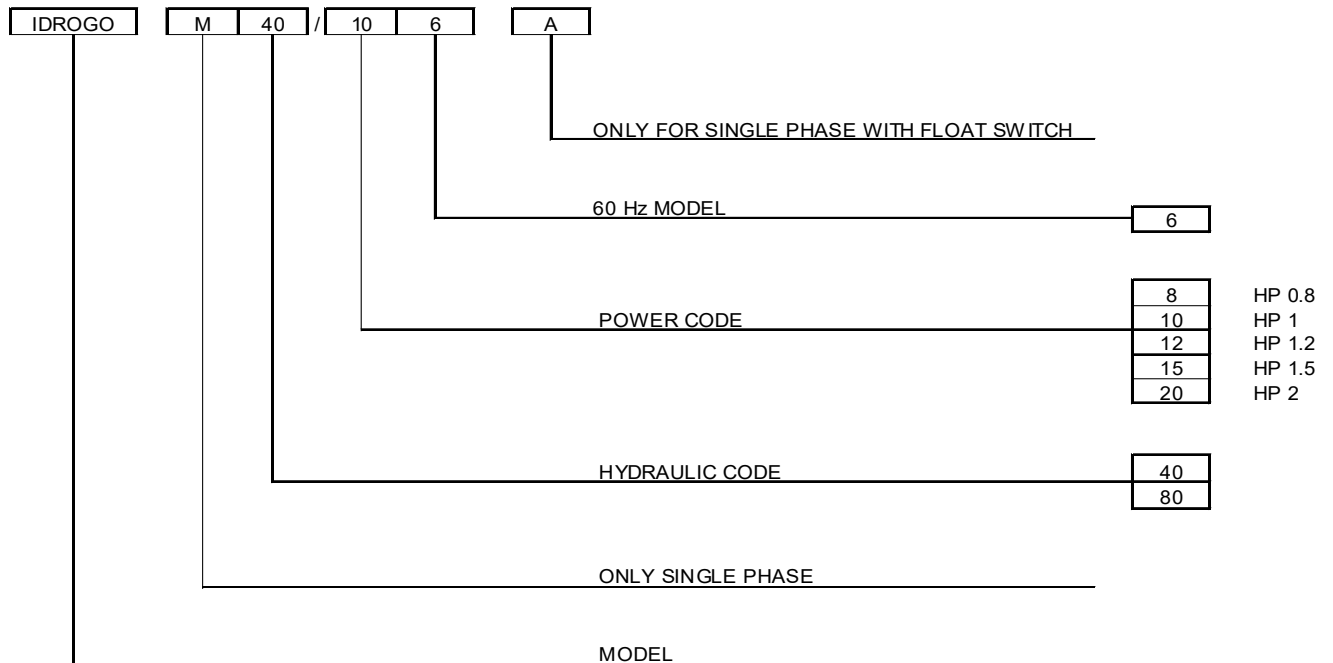
**PERFORMANCE RANGE**



**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	6,0	7,2
H=Total manometric head in meters												
IDROGO M40/86	IDROGO 40/86	0,6	0,8	53	47,5	43,5	39,5	28,5	15,5	-	-	-
IDROGO M40/106	IDROGO 40/106	0,75	1	66	59	54,5	48,5	35	19,2	-	-	-
IDROGO M40/126	IDROGO 40/126	0,9	1,2	80	71,5	66,5	60,5	44	23,8	-	-	-
IDROGO M40/156	IDROGO 40/156	1,1	1,5	93	83,5	76,5	68,5	49	27,8	-	-	-
IDROGO M80/126	IDROGO 80/126	0,9	1,2	48,5	-	45	43	38,5	32	23,2	14	-
IDROGO M80/156	IDROGO 80/156	1,1	1,5	59,5	-	57	55	48,5	40	29,5	17,8	-
-	IDROGO 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 9906:2012 - 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)

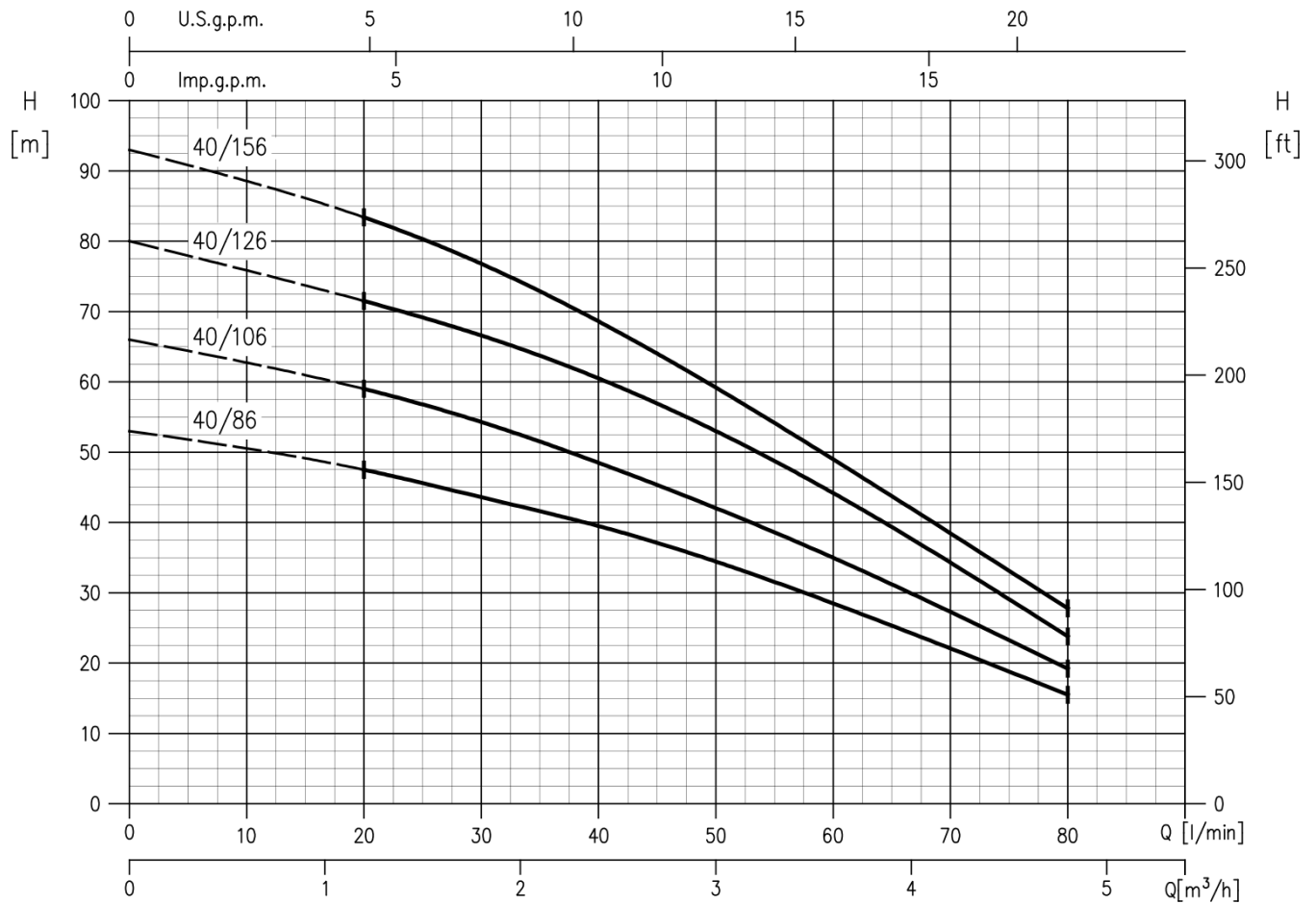
The continuous curves indicate the recommended working range. The dotted curve is only a guide.

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:

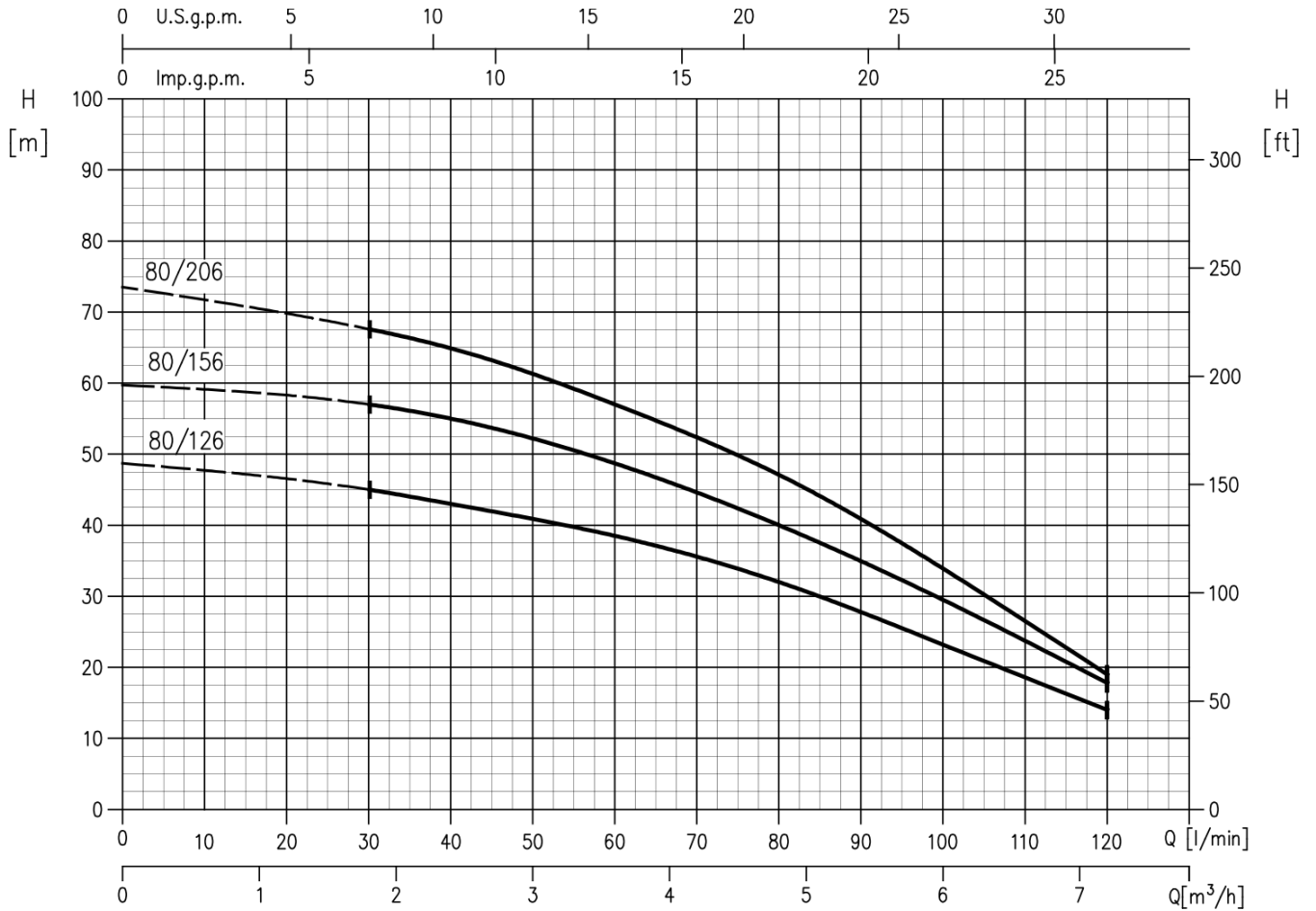
- Q = volume flow rate
- H = total head

**IDROGO 40/86 - Impeller diameter = 90 mm**  
**IDROGO 40/106 - Impeller diameter = 90 mm**  
**IDROGO 40/126 - Impeller diameter = 90 mm**  
**IDROGO 40/156 - Impeller diameter = 90 mm**



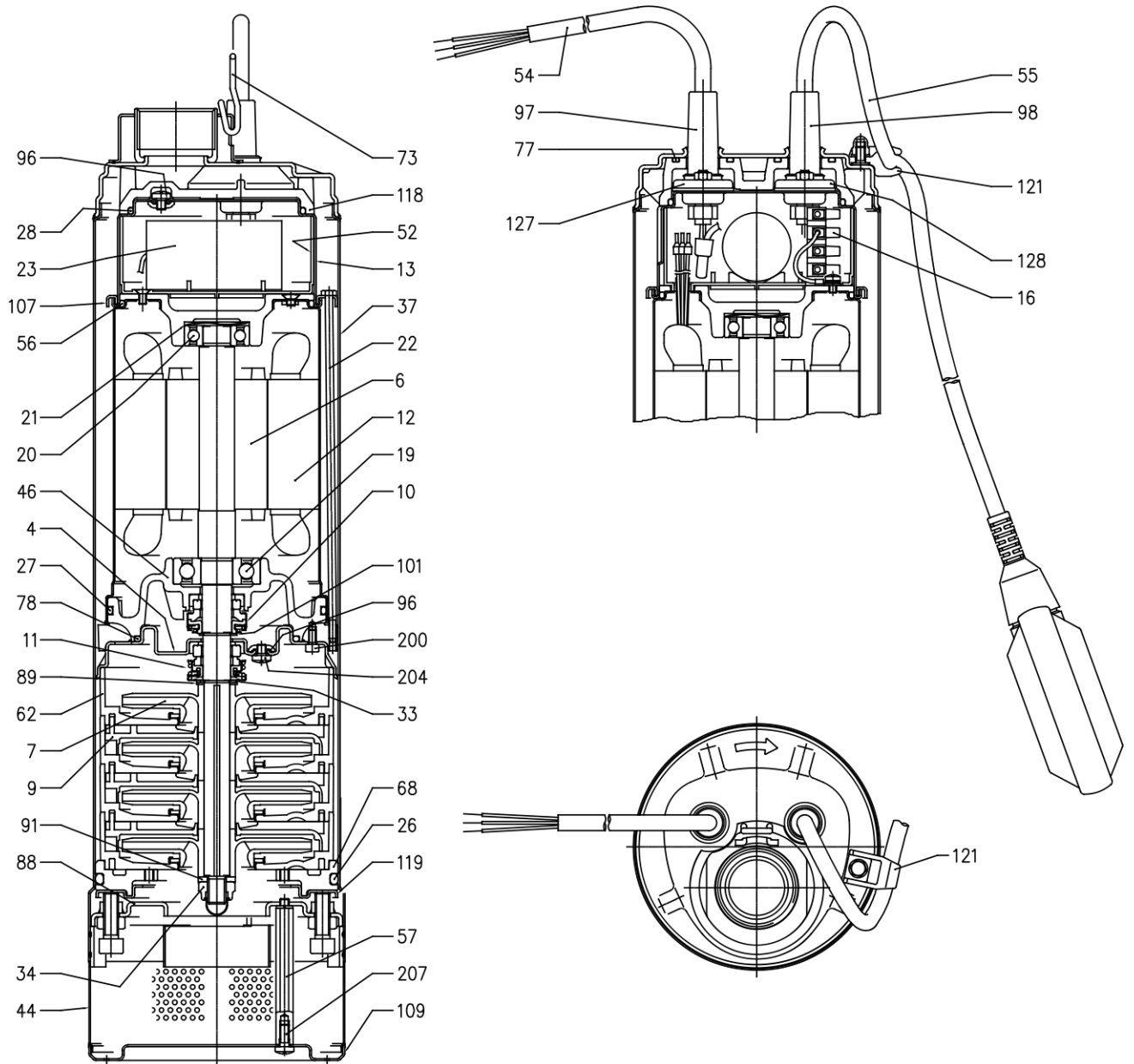
Rotation speed:  $\approx 3450 \text{ min}^{-1}$   
 Test standard: ISO 9906:2012 - Grade 3B

**IDROGO 80/126 - Impeller diameter = 85 mm**  
**IDROGO 80/156 - Impeller diameter = 85 mm**  
**IDROGO 80/206 - Impeller diameter = 85 mm**



Rotation speed:  $\approx 3450 \text{ min}^{-1}$   
 Test standard: ISO 9906:2012 - Grade 3B

SECTIONAL VIEW DRAWING





### SECTIONAL VIEW TABLE

N°	PART NAME	MATERIAL	Q.TY
4	Casing cover	AISI 304	1
6	Shaft with rotor	AISI 431	1
7	Impeller	PPE+PS glass fibre reinforced	[4]
9	Diffuser	PPE+PS glass fibre reinforced	[4]
10	Motor side mechanical seal	Carbon/Ceramic/NBR	1
11	Pump side mechanical seal	SiC/Carbon/NBR	1
12	Motor frame with stator	-	1
13	Motor cover	AISI 304	1
16	Terminal	-	1
19	Lower side ball bearing	-	1
20	Upper side ball bearing	-	1
21	Adjusting ring	Steel C70	1
22	Tie rod	AISI 304	3
23	Capacitor	-	1
26	O ring	NBR	1
27	O ring	NBR	1
28	O ring	NBR	1
33	Seeger ring	AISI 304	1
34	Impeller nut	AISI 304	1
37	External pump casing	AISI 304	1
44	Strainer	AISI 304	1
46	Bearing housing	Brass	1
52	Terminal insulating box	PA66 class V-0	1
54	Power cable	-	1
55	Float switch	-	1

N°	PART NAME	MATERIAL	Q.TY
56	"O" ring	NBR	1
57	Bolt	AISI 303	2
62	Stage housing	PPE+PS glass fibre reinforced	[4]
68	Lower spacer	PPE+PS glass fibre reinforced	1
73	Lifting holder	AISI 304	1
77	O ring	NBR	2
78	O ring	NBR	2
88	Fixing Flange	AISI 304	1
89	Washer	AISI 304	1
91	Washer	AISI 304	1
96	O ring	NBR	3
97	Cable entry	NBR	1
98	Cablre entry	NBR	1
101	Seeger ring	AISI 420	1
107	Retainer ring	AISI 304	1
109	Strainer cover	AISI 304	1
118	Upper spacer	PPE+PS glass fibre reinforced	1
119	Flange	AISI 304	1
121	Support for float switch	PPE+PS glass fibre reinforced	1
127	Cable connector	AISI 304	1
128	Cable connector	AISI 304	1
200	Screw	Stainless steel A2 UNI 7323	3
204	Screw	Stainless steel A2 UNI 7323	3
207	Screw	Stainless steel A2 UNI 7323	2

- [1] Only for Single phase
- [2] Only for Single phase with float switch
- [3] See **MECHANICAL SEAL** page 303
- [4] See **QUANTITY FOR MODEL** page 302

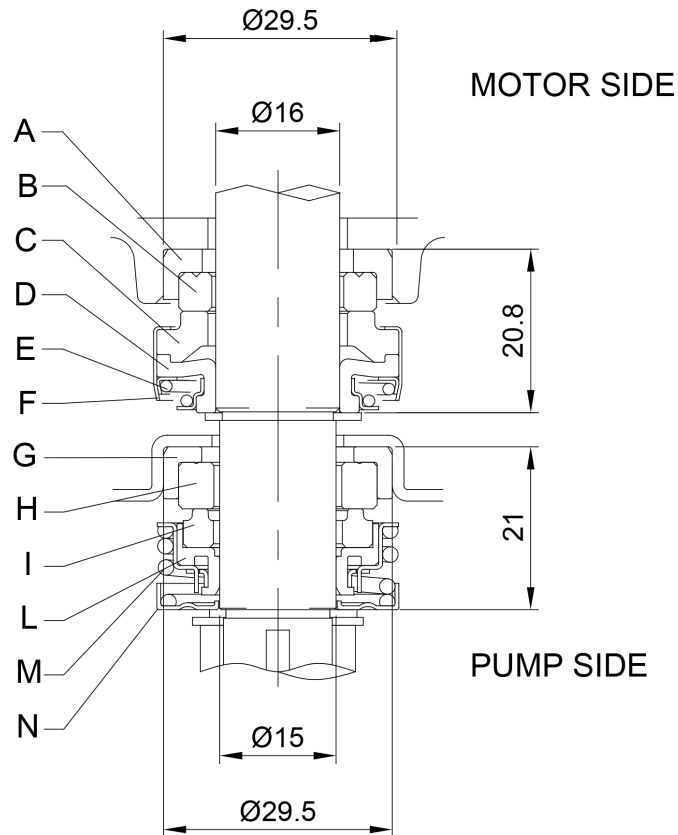
## QUANTITY FOR MODEL

Pump type	POS. 7 Impeller	POS. 9 Diffuser	POS. 62 Stage housing
IDROGO 40/86	4	3	4
IDROGO 40/106	5	4	5
IDROGO 40/126	6	5	6
IDROGO 40/156	7	6	7
IDROGO 80/126	4	3	4
IDROGO 80/156	5	4	5
IDROGO 80/206	6	5	6

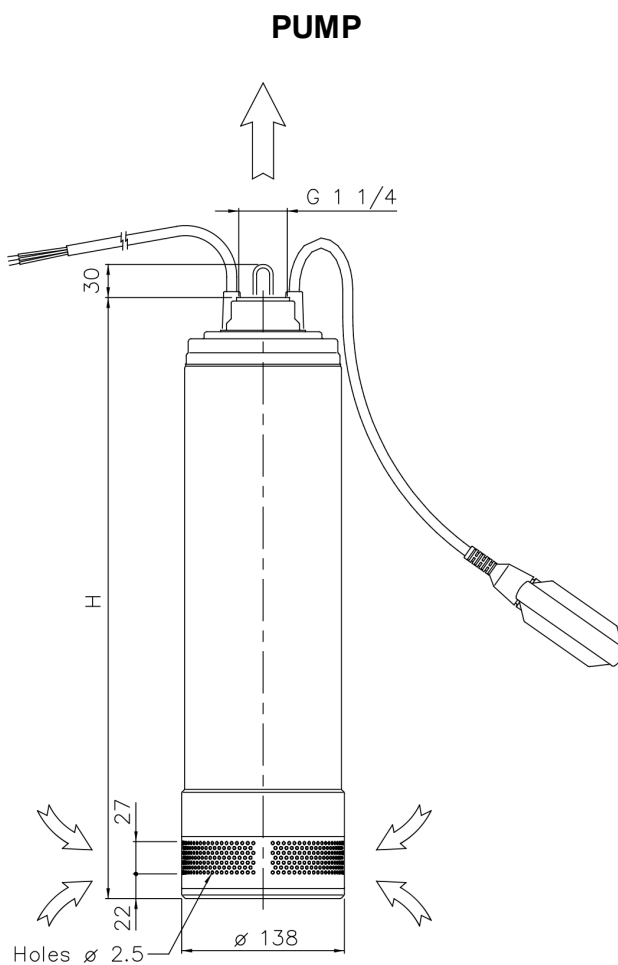
## BEARINGS

Pump type		Ball Bearing	
Single Phase	Three Phase	Pump side	Fan side
IDROGO M40/86	IDROGO 40/86	6303 ZZ	6202 ZZ
IDROGO M40/106	IDROGO 40/106	6303 ZZ	6202 ZZ
IDROGO M40/126	IDROGO 40/126	6303 ZZ	6202 ZZ
IDROGO M40/156	IDROGO 40/156	6303 ZZ	6202 ZZ
IDROGO M80/126	IDROGO 80/126	6303 ZZ	6202 ZZ
IDROGO M80/156	IDROGO 80/156	6303 ZZ	6202 ZZ
-	IDROGO 80/206	6303 ZZ	6202 ZZ

**MECHANICAL SEAL**

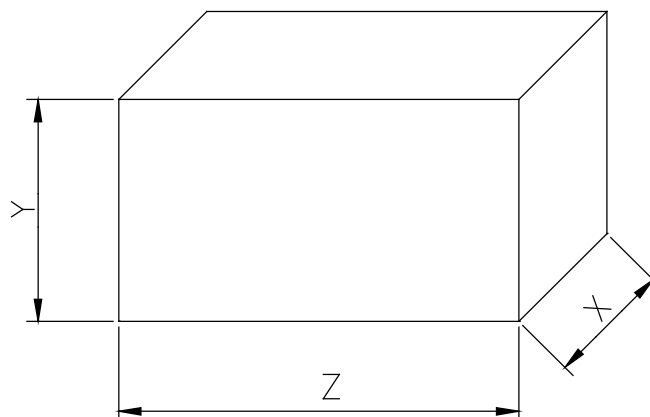


REF	PART NAME	MATERIAL
		Standard version
A	Rubber seat	NBR
B	Stationary ring	Ceramic
C	Rotary ring	Carbon
D	Rotary seal	NBR
E	Coil spring	AISI 304
F	Seal cover	AISI 304
G	Rubber seat	NBR
H	Stationary ring	Silicon carbide
I	Rotary ring	Carbon
L	Rotary seal	NBR
M	Coil spring	AISI 304
N	Seal cover	AISI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



Pump type	Dimensions H [mm]	Weight [kgf]	
		[1~]	[3~]
IDROGO 40/86	513	14,5	14
IDROGO 40/106	539	15,5	15
IDROGO 40/126	590	17	16,5
IDROGO 40/156	616	18	17,2
IDROGO 80/126	540	15,8	15,2
IDROGO 80/156	564	17	16,5
IDROGO 80/206	590	-	17,5

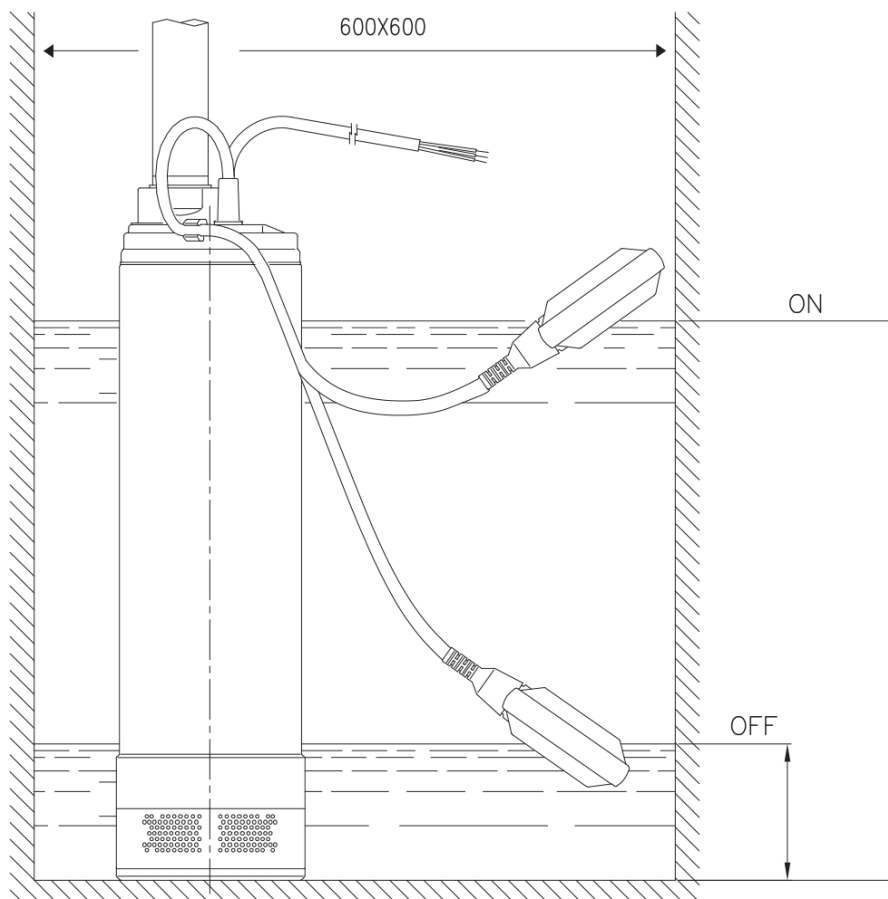
**PACKING**



Pump type		Packing [mm]			Weight [kgf]	
Single Phase	Three Phase	X	Y	Z	[1~]	[3~]
IDROGO M40/86	IDROGO 40/86	200	200	620	15,3	14,8
IDROGO M40/106	IDROGO 40/106	200	200	620	16,3	15,8
IDROGO M40/126	IDROGO 40/126	200	200	700	18	17,4
IDROGO M40/156	IDROGO 40/156	200	200	700	19	18
IDROGO M80/126	IDROGO 80/126	200	200	620	16,6	16
IDROGO M80/156	IDROGO 80/156	200	200	700	18	17,4
-	IDROGO 80/206	200	200	700	-	18,4

### 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 220-230 V	Three Phase 380 V	Single Phase 220-230 V	Three Phase 380 V
IDROGO M40/86	IDROGO 40/86	0,6	0,8	16	450	1,03	0,93	5,0	1,7	19,3	9,9
IDROGO M40/106	IDROGO 40/106	0,75	1,0	16	450	1,2	1,09	5,9	2	22,3	11,2
IDROGO M40/126	IDROGO 40/126	0,9	1,2	20	450	1,45	1,28	7,1	2,3	28,7	13,5
IDROGO M40/156	IDROGO 40/156	1,1	1,5	25	450	1,68	1,47	8,1	2,7	33,7	17,6
IDROGO M80/126	IDROGO 80/126	0,9	1,2	20	450	1,3	1,1	6,4	2,1	28,7	13,5
IDROGO M80/156	IDROGO 80/156	1,1	1,5	25	450	1,48	1,3	7,2	2,5	33,7	17,6
-	IDROGO 80/206	1,5	2,0	-	-	-	1,53	-	2,7	-	17,6



Pump type	ON [mm]	OFF [mm]
40/86	560	180
40/106	590	190
40/126	660	220
40/156	730	240
80/126	590	190
80/156	640	210
80/206	660	220