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**SPECIFICATION**
**60Hz**

Rev. E

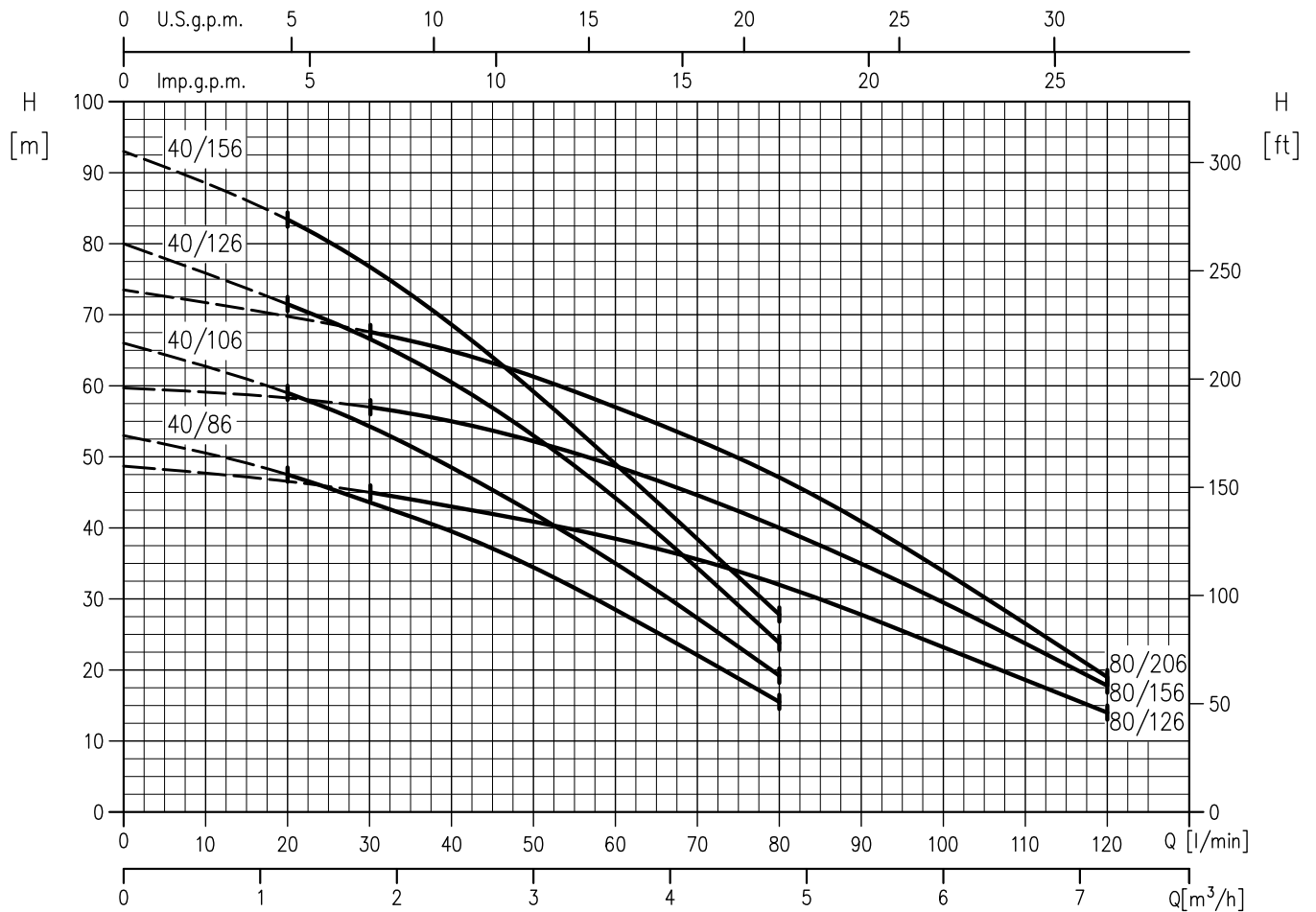
PUMP		
Liquid Handled	Type of liquid	Clean water
	Max temperature [°C]	40
	Max solids size [mm]	2,5
Maximum immersion	[m]	10 (with power cable length 20 m for version with float switch) 17 (with power cable length 20 m)
Construction	Impeller	Closed centrifugal type (multiple stages)
	Shaft Seal Type	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 2548 Class C

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	0.6 ÷ 1.5	
	[HP]	0.8 ÷ 1.5	0.8 ÷ 2
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		
Power cable	material	H05VV-F	
	size	3 G 1.5	4 G 1
	length [m]	20	
Type of cable entry	Cable Gland		

SELECTION CHART

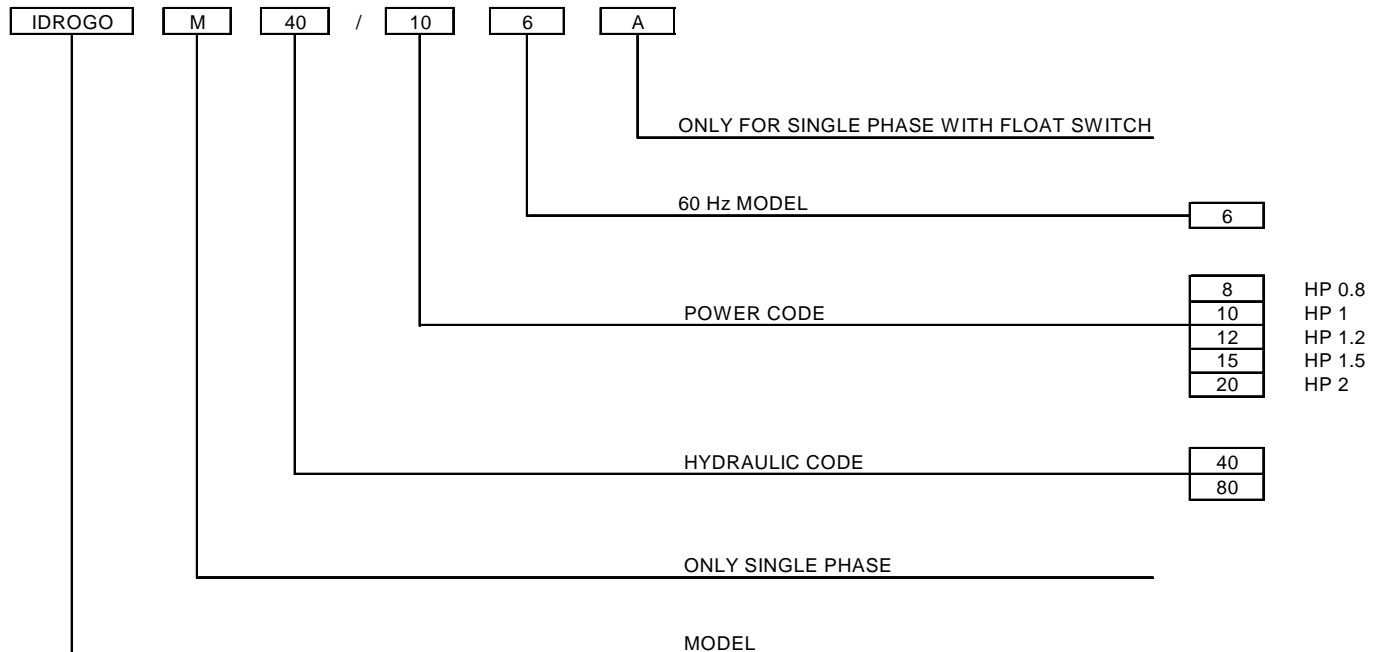
60Hz

Rev. E



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**



**PERFORMANCE CURVE SPECIFICATIONS**

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

Tolerances according to ISO 9906 Annex A

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

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)

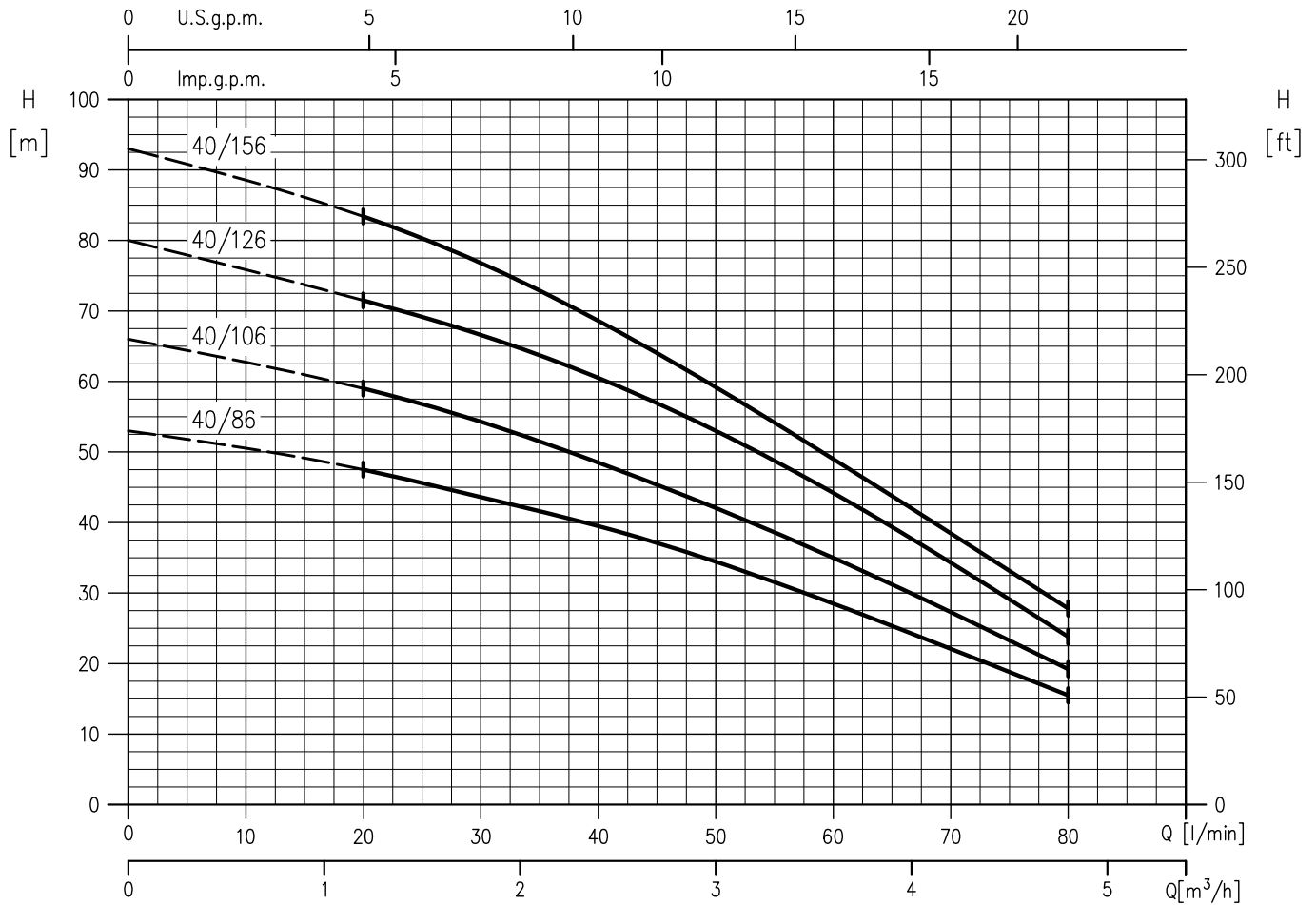
The continuous curves indicate the recommended working range. The dotted curve is only a guide.

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:

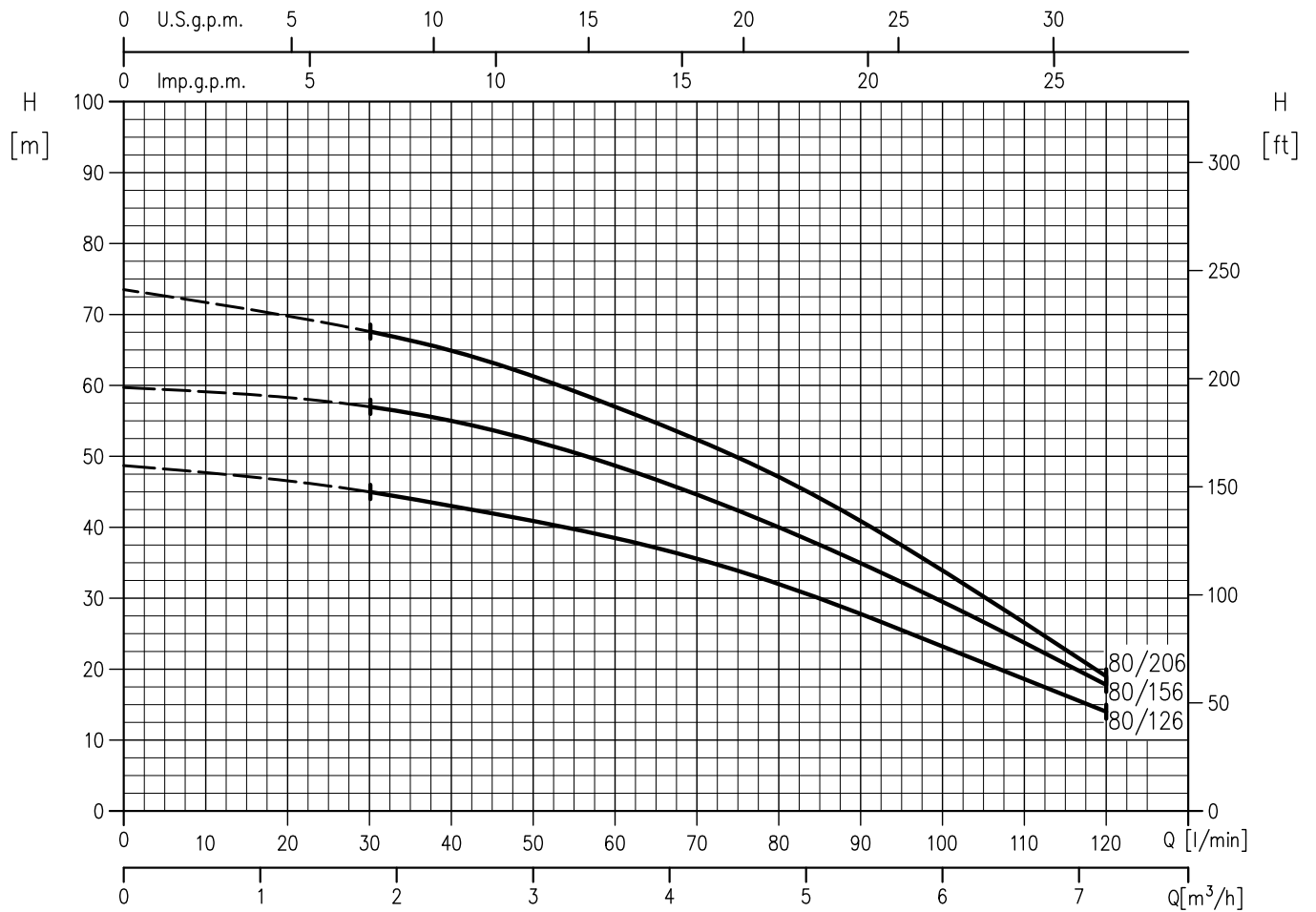
- Q = volume flow rate
- H = total head

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



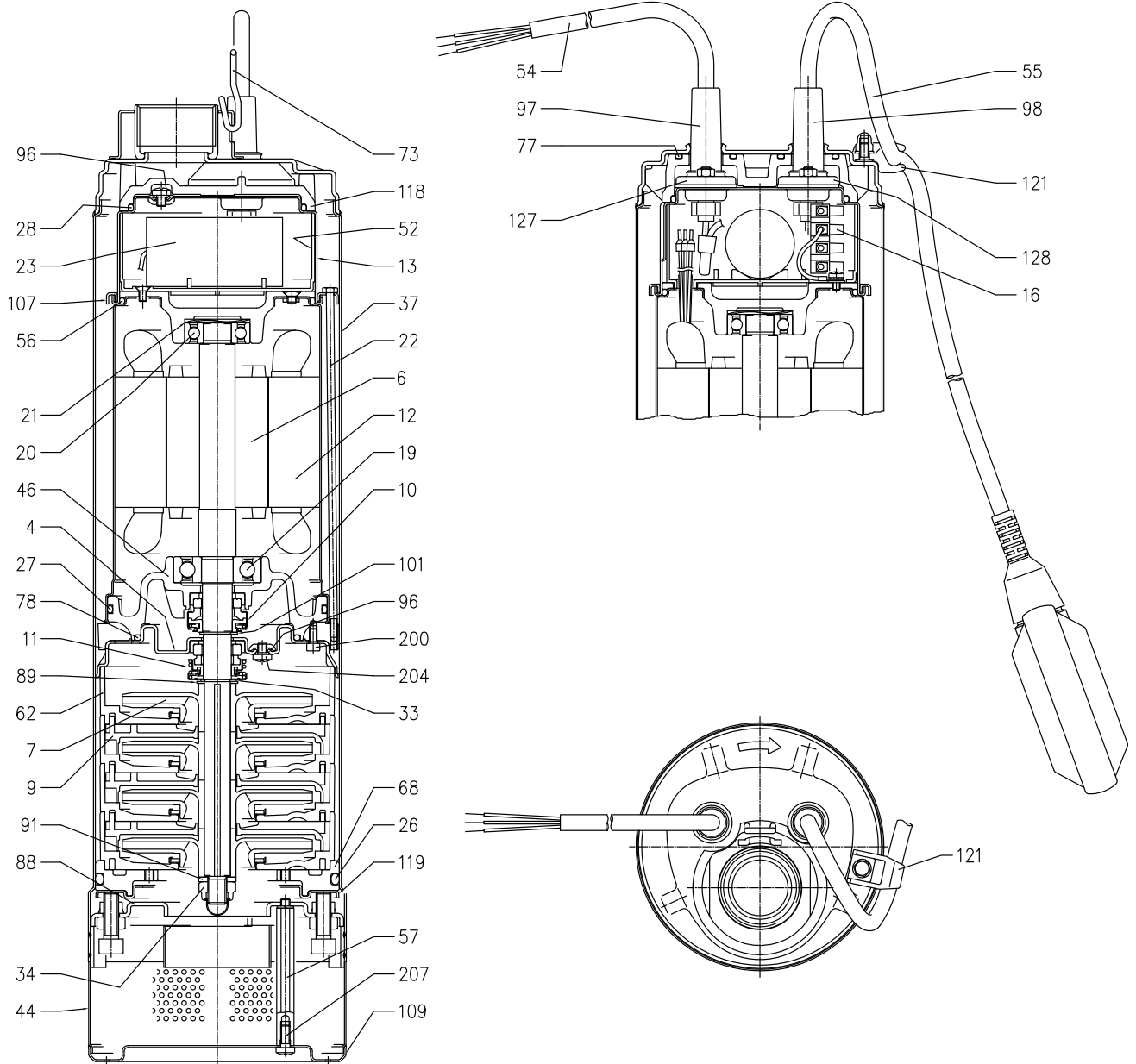
Rotation speed:  $\approx 3450 \text{ min}^{-1}$   
 Test standard: ISO 9906 – Annex A

**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 – Annex A

SECTIONAL VIEW DRAWING



- [1] Only for single phase
- [2] Only for three phase
- [3] Only for IP55



### SECTIONAL VIEW TABLE

N°	PART NAME	MATERIAL	Q.TY	N°	PART NAME	MATERIAL	Q.TY
4	Casing cover	AISI 304	1	56	"O" ring	NBR	1
6	Shaft with rotor	AISI 431	1	57	Bolt	AISI 303	2
7	Impeller	PPE+PS glass fibre reinforced	[4]	62	Stage housing	PPE+PS glass fibre reinforced	[4]
9	Diffuser	PPE+PS glass fibre reinforced	[4]	68	Lower spacer	PPE+PS glass fibre reinforced	1
10	Motor side mechanical seal [3]	Carbon/Ceramic/NBR	1	73	Lifting holder	AISI 304	1
11	Pump side mechanical seal [3]	SiC/Carbon/NBR	1	77	O ring	NBR	2
12	Motor frame with stator	-	1	78	O ring	NBR	2
13	Motor cover	AISI 304	1	89	Washer	AISI 304	1
16	Terminal	-	1	91	Washer	AISI 304	1
19	Lower side ball bearing	-	1	96	O ring	NBR	3
20	Upper side ball bearing	-	1	97	Cable entry	NBR	1
21	Adjusting ring	Steel C70	1	98	Cable entry [2]	NBR	1
22	Tie rod	AISI 303	3	101	Seeger ring	AISI 420	1
23	Capacitor [1]	-	1	107	Retainer ring	AISI 304	1
26	O ring	NBR	1	109	Strainer cover	AISI 304	1
27	O ring	NBR	1	118	Upper spacer	PPE+PS glass fibre reinforced	1
28	O ring	NBR	1	119	Flange	AISI 304	1
33	Seeger ring	AISI 304	1	120	Retainer ring	AISI 304	1
34	Impeller nut	AISI 304	1	121	Support for float switch [2]	PPE+PS glass fibre reinforced	1
37	External pump casing	AISI 304	1	127	Cable connector	AISI 304	1
44	Strainer	AISI 304	1	128	Cable connector	AISI 304	1
46	Bearing housing	Brass	1	200	Screw	Stainless steel A2 UNI 7323	3
52	Terminal insulating box	PA66 class V-0	1	204	Screw	Stainless steel A2 UNI 7323	3
54	Power cable	-	1	207	Screw	Stainless steel A2 UNI 7323	2
55	Float switch [2]	-	1	-	-	-	-

[1] Only for single phase

[2] Only for single phase with float switch

[3] See constructions mechanical seal page 303

[4] See table page 302

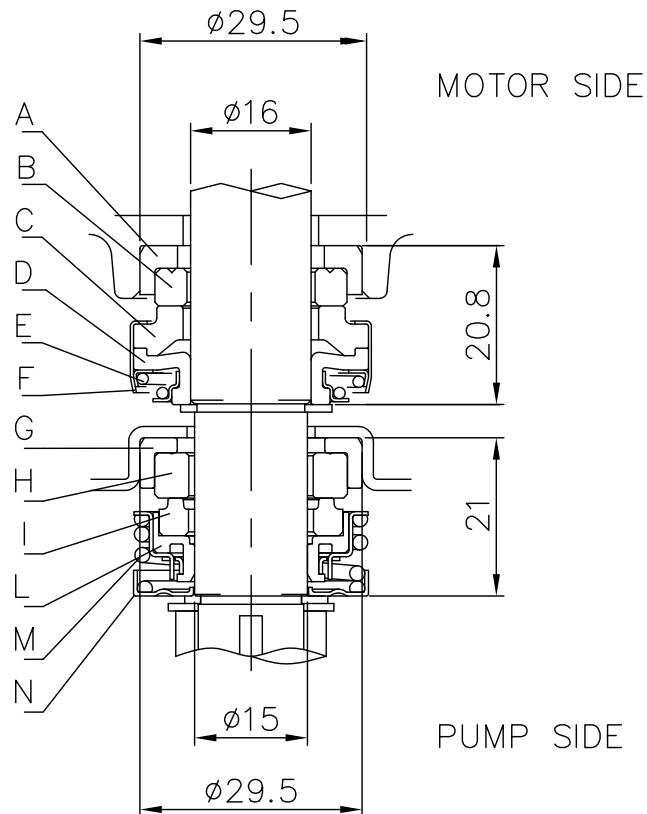
**QUANTITY FOR MODEL**

Pump type	N°7 Impeller	N°9 Diffuser	N°62 Stage housing
IDROGO 40/08	4	3	4
IDROGO 40/10	5	4	5
IDROGO 40/12	6	5	6
IDROGO 40/15	7	6	7
IDROGO 80/12	4	3	4
IDROGO 80/15	5	4	5
IDROGO 80/20	6	5	6

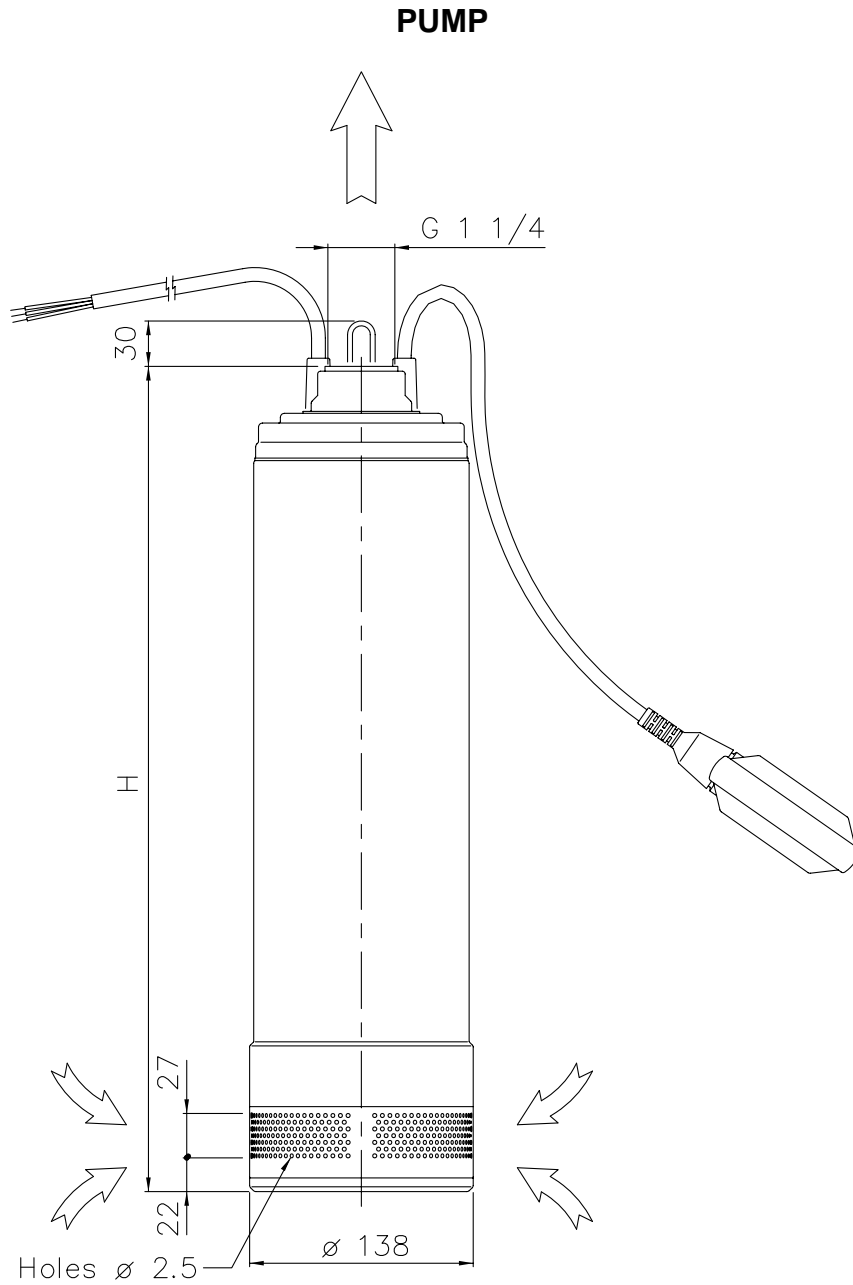
**BEARINGS**

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

**MECHANICAL SEAL**

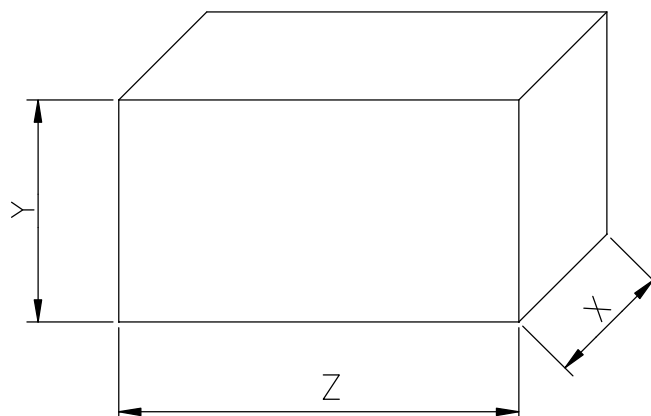


REF	PART NAME	MATERIAL product standard IDROGO
A	Rubber seat	NBR
B	Stationary ring	Ceramic
C	Rotary ring	Carbon
D	Rotary seal	NBR
E	Coil spring	AISI 304
F	Seal cover	AISI 304
G	Rubber seat	NBR
H	Stationary ring	Silicon carbide
I	Rotary ring	Carbon
L	Rotary seal	NBR
M	Coil spring	AISI 304
N	Seal cover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



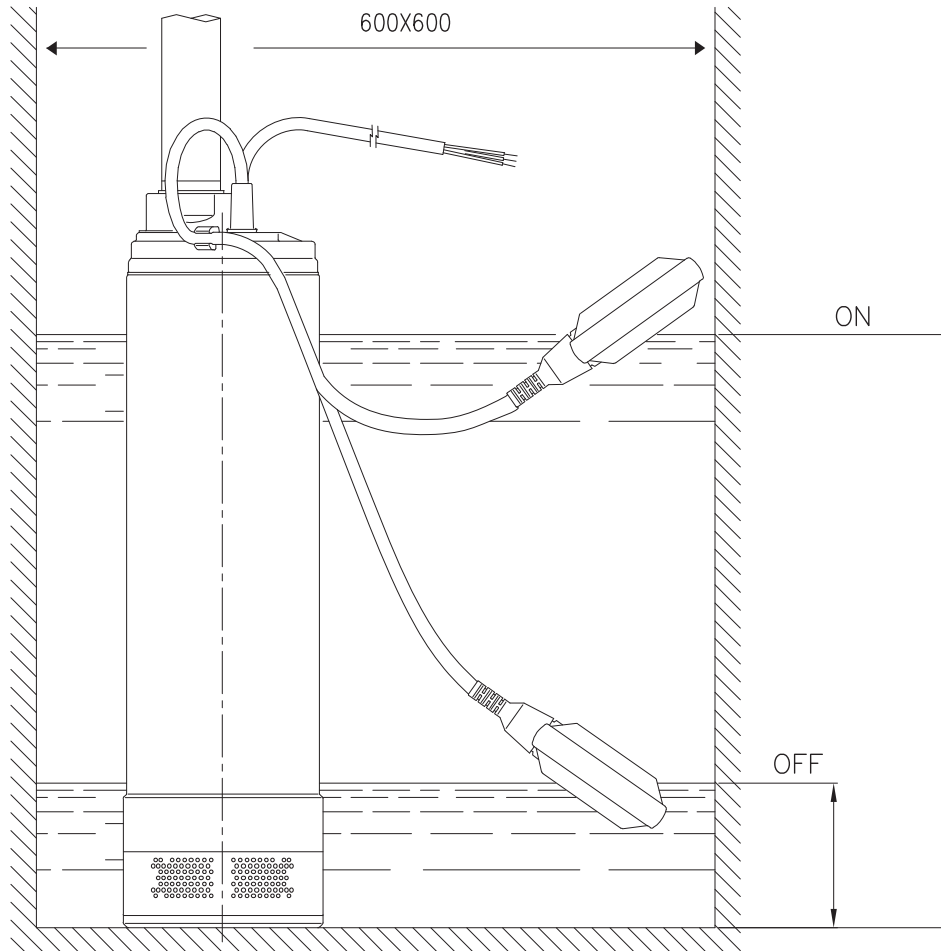
Pump type	Dimensions		Weight [kgf]	
	H [mm]	H1 [mm]	1~	3~
IDROGO 40/86	513	250	14.5	14
IDROGO 40/106	539	275	15.5	15
IDROGO 40/126	590	300	17	16.5
IDROGO 40/156	616	325	18	17.2
IDROGO 80/126	540	250	15.8	15.2
IDROGO 80/156	564	275	17	16.5
IDROGO 80/206	590	300	-	17.5

**PACKING**



Pump type		Packing [mm]			Weight [kgf]	
Single Phase	Three Phase	Z	X	Y	1~	3~
IDROGO M40/86	IDROGO 40/86	620	200	200	15.3	14.8
IDROGO M40/106	IDROGO 40/106	620	200	200	16.3	15.8
IDROGO M40/126	IDROGO 40/126	700	200	200	18	17.4
IDROGO M40/156	IDROGO 40/156	700	200	200	19	18
IDROGO M80/126	IDROGO 80/126	620	200	200	16.6	16
IDROGO M80/156	IDROGO 80/156	700	200	200	18	17.4
-	IDROGO 80/206	700	200	200	-	18.4

Pump type		Power		Locked rotor current [A]		Capacitor		Input [kW]		Full load current [A]	
Single Phase	Three Phase	kW	HP	Single Phase 220-230 V	Three Phase 380 V	Single Phase [μF]	Three Phase [V]	Single Phase	Three Phase	Single Phase 220-230 V	Three Phase 380 V
IDROGO M40/86	IDROGO 40/86	0.6	0.8	19.3	9.9	16	450	1.03	0.93	5.0	1.7
IDROGO M40/106	IDROGO 40/106	0.75	1.0	22.3	11.2	16	450	1.2	1.09	5.9	2
IDROGO M40/126	IDROGO 40/126	0.9	1.2	28.7	13.5	20	450	1.45	1.28	7.1	2.3
IDROGO M40/156	IDROGO 40/156	1.1	1.5	33.7	17.6	25	450	1.68	1.47	8.1	2.7
IDROGO M80/126	IDROGO 80/126	0.9	1.2	28.7	13.5	20	450	1.3	1.1	6.4	2.1
IDROGO M80/156	IDROGO 80/156	1.1	1.5	33.7	17.6	25	450	1.48	1.3	7.2	2.5
-	IDROGO 80/206	1.5	2.0	33.7	17.6	-	-	-	1.53	-	2.7



Pump type	ON	OFF [mm]
40/06	560	180
40/08		
40/10	590	190
40/12	660	220
40/15	730	240
80/12	590	190
80/15	640	210
80/20	660	220