

# IDROGO

## 5" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS in AISI 304



AISI 304 5" borehole multistage centrifugal electric pumps.

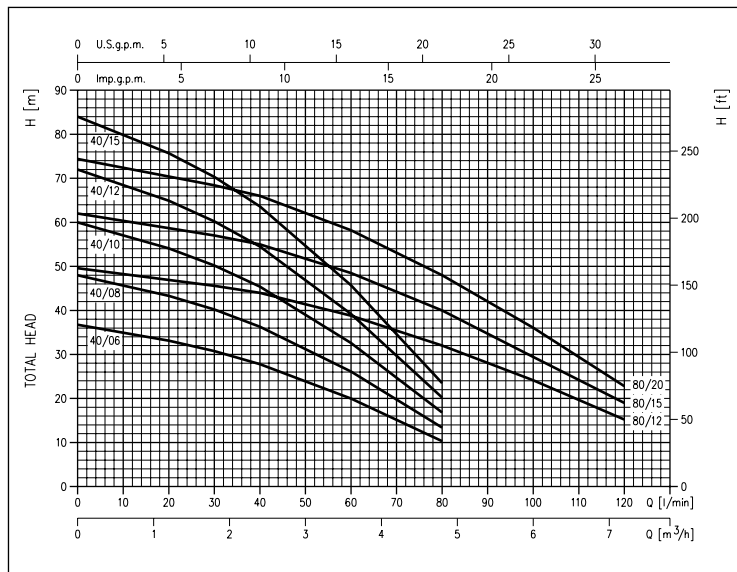
### APPLICATIONS

- Moving clear water from wells, cisterns and primary collection reservoirs
- Pressure boosting domestic plants
- Small-sale irrigation
- Washing vehicles
- General pressure increases

### TECHNICAL DETAILS

- Equipped with twin mechanical seal with interposed oil chamber
- Supplied with 20 m of H07RN-F power supply cable (5m for IDROGO 40/06 M model)
- Single phase version with float on request (version "A")
- Available in the 230V  $\pm$ 10% 50Hz three phase version
- Installation: in horizontal and vertical position

### PERFORMANCE CURVES (according to ISO 9906 Attachment A)



### PUMP TECHNICAL DATA

- Maximum working pressure: 10 bar
- Maximum temperature of the liquid: 40°C
- Maximum immersion: 17 m
- Maximum solid size passage: 2,5 mm
- G1¼ discharge connection

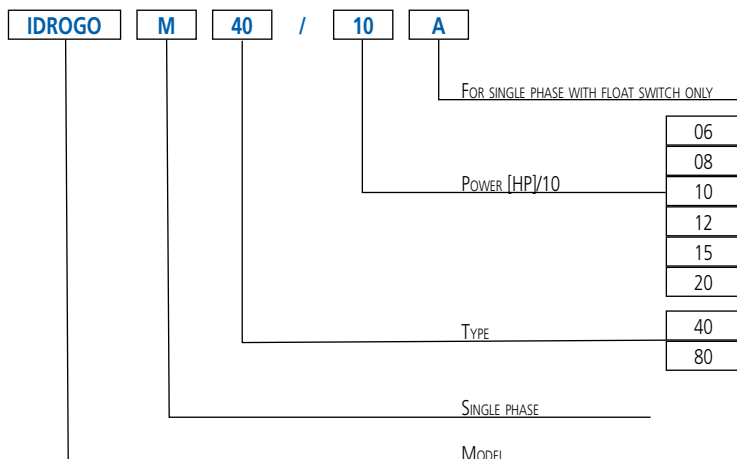
### MOTOR TECHNICAL DATA

- 2 poles self-ventilated asynchronous motor cooled via the moving liquid
- Class of insulation F
- IP68 Protection degree
- 230V  $\pm$ 10%, 50Hz single-phase voltage
- 400  $\pm$ 10%, 50Hz three-phase voltage
- Permanent capacitor inserted and thermo-amperometric protection with automatic reset incorporated for the single phase motor
- Protection under user's responsibility for the three phase version

### MATERIALS

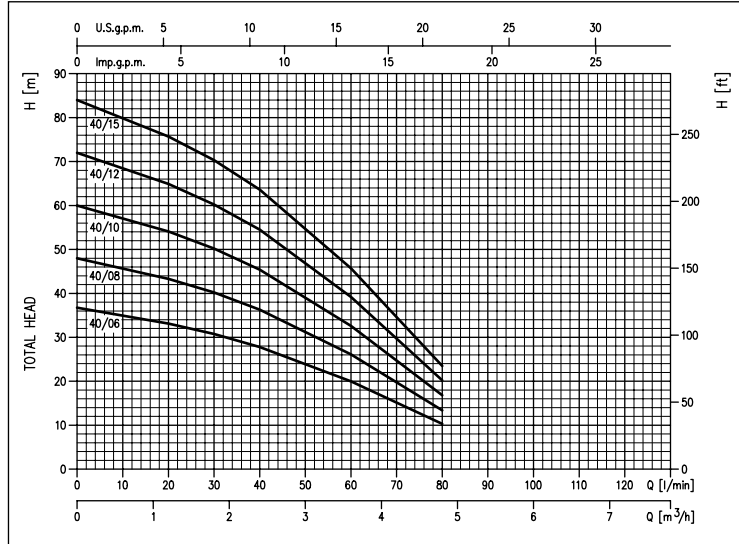
- External casing, motor cover, seal housing disc, filter and closing ring in AISI 304
- Impeller, diffuser and spacer in PPE+PS reinforced with fibreglass
- Shaft in AISI 431
- Upper mechanical seal (motor side) in Carbon/Ceramic/NBR and lower (pump side) in SiC/Carbon/NBR

### IDENTIFICATION CODE

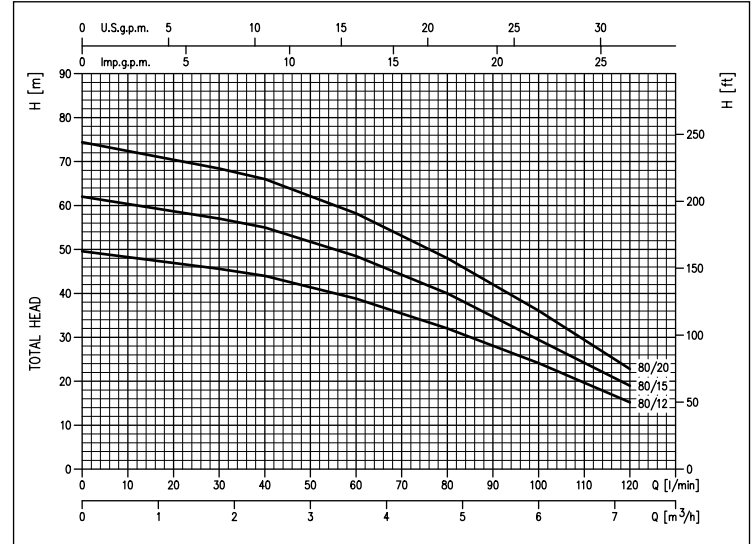


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### PERFORMANCE CURVES IDROGO 40 series (according to ISO 9906 Attachment A) - impeller diameter: 104 mm



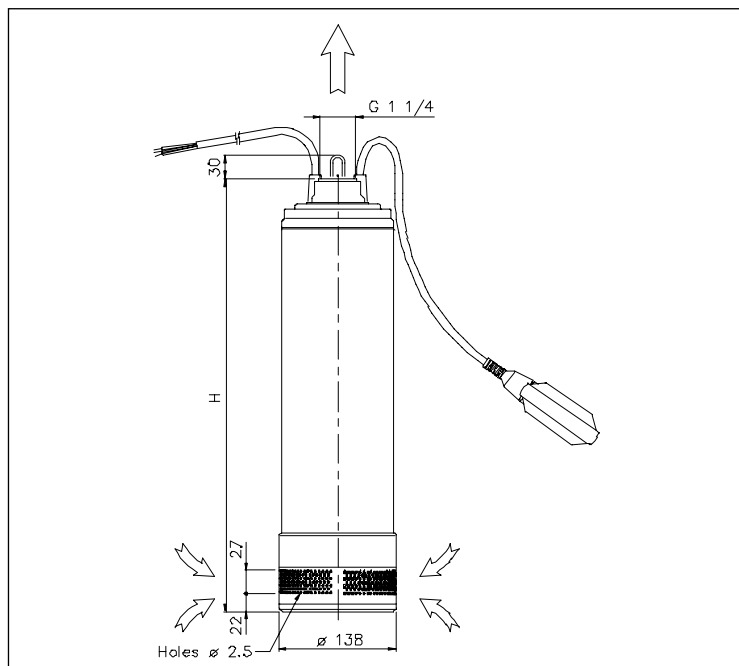
### PERFORMANCE CURVES IDROGO 80 series (according to ISO 9906 Attachment A) - impeller diameter: 102 mm



### PERFORMANCE TABLE

Single phase 230V	Model	Three phase 230V - 400V	P <sub>2</sub>		Q=Flow rate									
			[HP]	[kW]	l/min m <sup>3</sup> /h	20 1,2	30 1,8	40 2,4	H=Head [m]		60 3,6	80 4,8	100 6	120 7,2
			0,6	0,44	33,1	30,8	27,8	20,0	10,3	-	-	-	-	-
		IDROGO 40/08	0,8	0,6	43,3	40,2	36,3	26,1	13,4	-	-	-	-	-
		IDROGO 40/10	1	0,75	54,1	50,2	45,4	32,6	16,8	-	-	-	-	-
		IDROGO 40/12	1,2	0,9	64,9	60,2	54,5	39,2	20,2	-	-	-	-	-
		IDROGO 40/15	1,5	1,1	75,7	70,3	63,6	45,7	23,5	-	-	-	-	-
		IDROGO 80/12	1,2	0,9	-	45,6	44,0	38,8	32,0	23,2	15,2	-	-	-
		IDROGO 80/15	1,5	1,1	-	57,0	55,0	48,5	40,0	28,0	19,0	-	-	-
		IDROGO 80/20	2	1,5	-	68,4	66,0	58,2	48,0	34,8	22,8	-	-	-

### DIMENSIONS

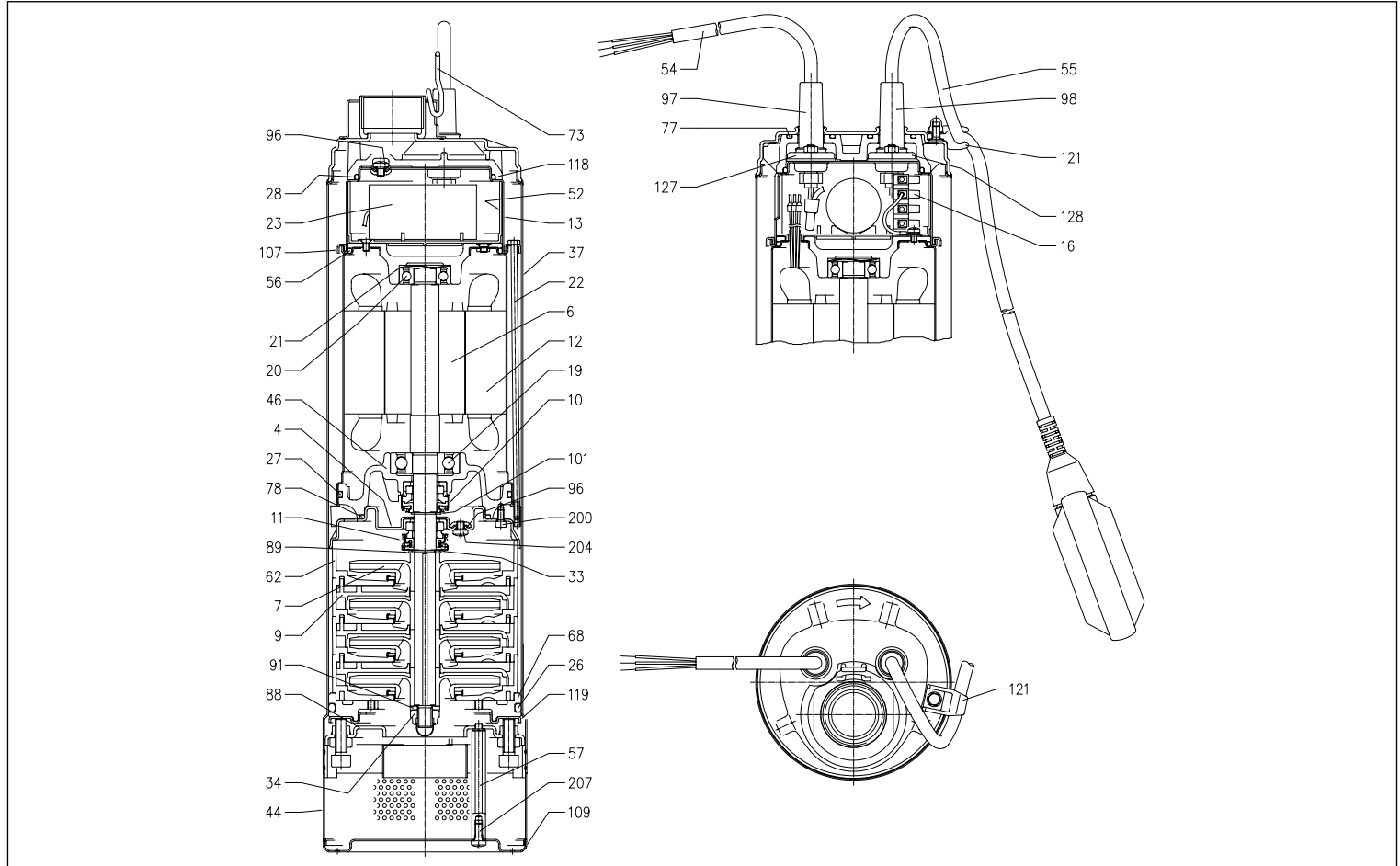


### DIMENSIONAL TABLE

Model	H [mm]	Weight [kg]	
		Single phase	Three phase
IDROGO 40/06	513	13,0	-
IDROGO 40/08	513	14,6	14,8
IDROGO 40/10	539	16,0	16,1
IDROGO 40/12	590	17,2	17,4
IDROGO 40/15	616	18,3	18,3
IDROGO 80/12	540	16,5	16,4
IDROGO 80/15	564	17,7	17,4
IDROGO 80/20	590	-	18,0

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### SECTIONAL VIEW



### MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
4	Casing cover	EN 1.4301 (AISI 304)	55	Float switch [2]	-
6	Shaft	EN 1.4057 (AISI 431)	56	O-Ring	NBR
7	Impeller	PPE+PS reinforced with fibreglass	57	Filter spacer	EN 1.4305 (AISI 303)
9	Diffusor	PPE+PS reinforced with fibreglass	62	Stage box	PPE+PS reinforced with fibreglass
10	Motor side mechanical seal	Carbon/Ceramic/NBR	68	Lower spacer	PPE+PS reinforced with fibreglass
11	Pump side mechanical seal	SiC/Carbon/NBR	73	Borehole hook	EN 1.4301 (AISI 304)
12	Motor case	-	77	O-Ring	NBR
13	Motor cover	EN 1.4301 (AISI 304)	78	O-Ring	NBR
16	Terminal box	-	88	Fixing flange	EN 1.4301 (AISI 304)
19	Bearing (pump side)	-	89	Washer	EN 1.4301 (AISI 304)
20	Bearing (motor side)	-	91	Washer	EN 1.4301 (AISI 304)
21	Adjusting ring	Steel C70	96	O-Ring	NBR
22	Tie-rod	EN 1.4305 (AISI 303)	97	Cable gland (power supply)	NBR
23	Capacitor [1]	-	98	Cable gland (float switch) [2]	NBR
26	O-Ring	NBR	101	Seeger ring	EN 1.4021 (AISI 420)
27	O-Ring	NBR	107	Lock ring	EN 1.4301 (AISI 304)
28	O-Ring	NBR	109	Filter base	EN 1.4301 (AISI 304)
33	Seeger ring	EN 1.4301 (AISI 304)	118	Upper spacer	PPE+PS reinforced with fibreglass
34	Impeller nut	EN 1.4301 (AISI 304)	119	Flange for lower spacer	EN 1.4301 (AISI 304)
37	Casing	EN 1.4301 (AISI 304)	121	Support for float switch [2]	PPE+PS reinforced with fibreglass
44	Filter	EN 1.4301 (AISI 304)	127	Cable gland connector (power supply)	EN 1.4301 (AISI 304)
46	Bearing holder support	Brass	128	Cable gland connector (float)	EN 1.4301 (AISI 304)
52	Capacitor-holder box	PA66 reinforced with fibreglass	200	Screw	Stainless steel A2 UNI 7323
54	Power supply cable	-	204-207	Screw	Stainless steel A2 UNI 7323

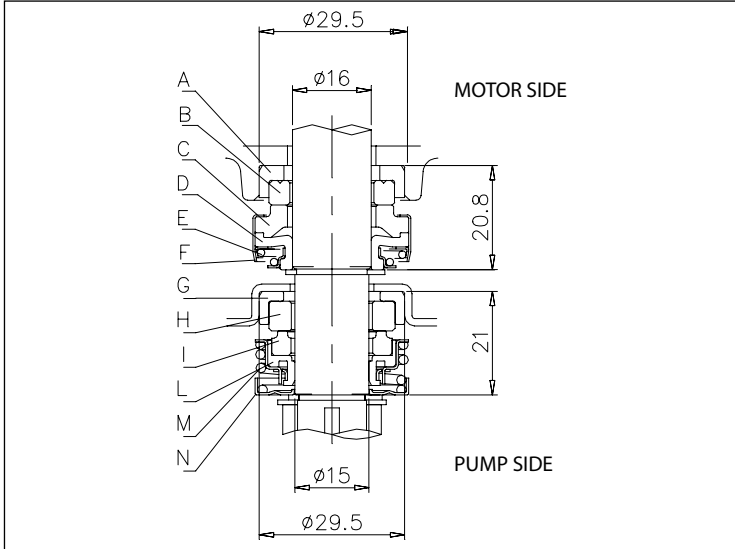
[1]= Single phase only  
[2]= Single phase with float switch only

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in AISI 304

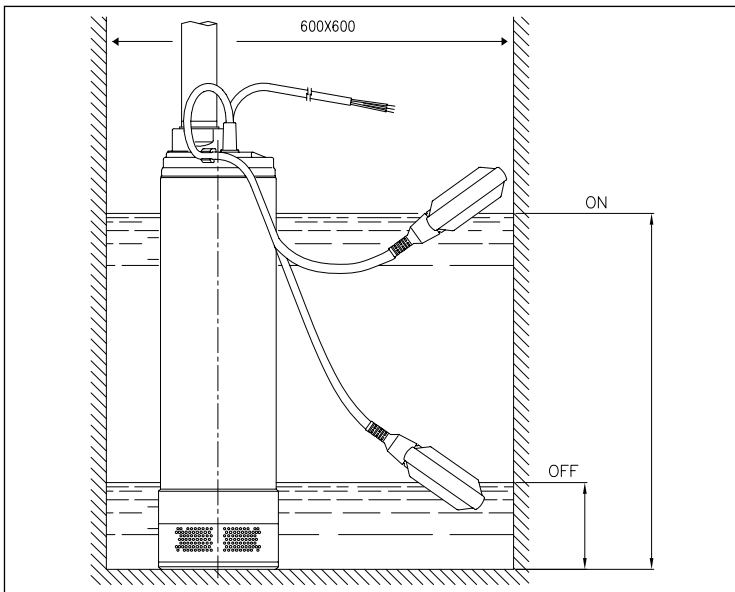
### MECHANICAL SEAL



### MATERIALS TABLE

Ref.	Name	Material
A	Fixed gasket	NBR
B	Fixed sealing ring	Ceramic
C	Rotating sealing ring	Carbon
D	Rotating gasket	NBR
E	Spring	AISI 304
F	Structure/frame	AISI 304
G	Fixed gasket	NBR
H	Fixed sealing ring	SiC
I	Rotating sealing ring	Carbon
L	Rotating gasket	NBR
M	Spring	AISI 304
N	Structure/frame	AISI 304

### INSTALLATION



### INSTALLATION TABLE

Model	Dimensions [mm]	
	ON	OFF
IDROGO 40/06	560	180
IDROGO 40/08	560	180
IDROGO 40/10	590	190
IDROGO 40/12	660	220
IDROGO 40/15	730	240
IDROGO 80/12	590	190
IDROGO 80/15	640	210

### ELECTRIC DATA TABLE

Model	P <sub>2</sub>	Capacitor		P <sub>1</sub>		Absorbed Current [A]				
		Single phase	Three phase	Single phase	Three phase	Single phase	Three phase	Three phase		
Single phase 230V	Three phase 230V - 400V	[HP]	[kW]	µF	V <sub>c</sub>	Single phase [kW]	Three phase [kW]	Single phase 230V	Three phase 230V	Three phase 400V
IDROGO M 40/06	-	0,6	0,44	16	450	0,82	-	3,8	-	-
IDROGO M 40/08	IDROGO 40/08	0,8	0,6	16	450	1	0,95	4,3	3,3	1,9
IDROGO M 40/10	IDROGO 40/10	1	0,75	20	450	1,25	1,18	5,7	3,8	2,2
IDROGO M 40/12	IDROGO 40/12	1,2	0,9	20	450	1,42	1,33	6,8	4,2	2,4
IDROGO M 40/15	IDROGO 40/15	1,5	1,1	31,5	450	1,6	1,55	7,3	5,2	3,0
IDROGO M 80/12	IDROGO 80/12	1,2	0,9	20	450	1,33	1,22	6,4	4,0	2,3
IDROGO M 80/15	IDROGO 80/15	1,5	1,1	31,5	450	1,62	1,52	7,5	5,4	3,1
-	IDROGO 80/20	2	1,5	-	-	-	1,9	-	6,1	3,5

