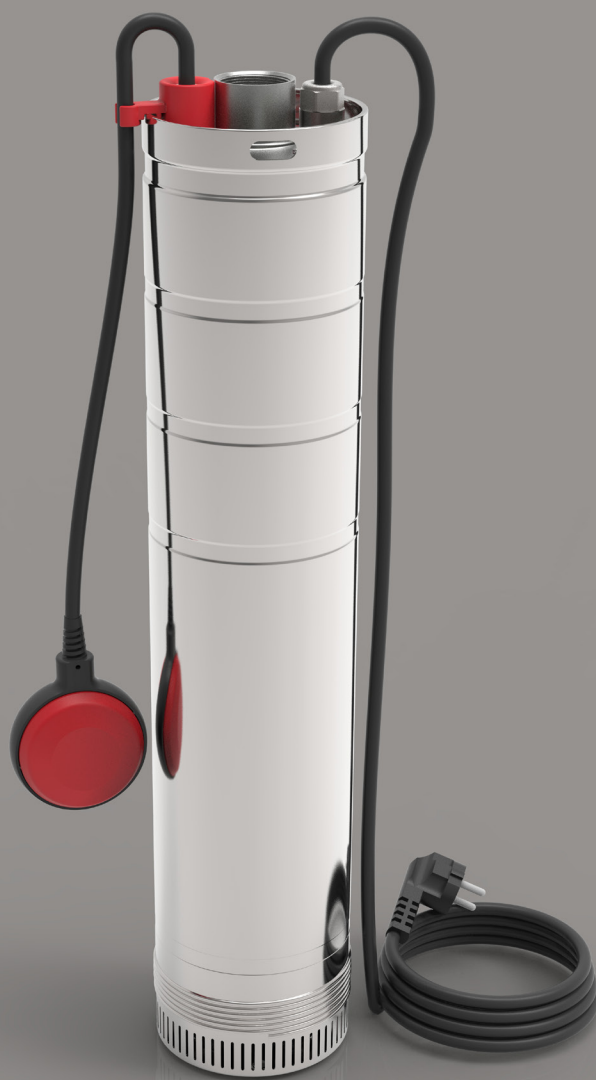


FROG

50 Hz - 60 Hz



**5" SUBMERSIBLE MONOBLOCK
ELECTROPUMPS**



Made in Italy

TECHNICAL SPECIFICATIONS

POWERS

3 m³/h: from 0,6 Hp to 2 Hp single-phase / three-phase 50 Hz
 from 0,8 Hp to 2 Hp single-phase / three-phase 60 Hz
 5 m³/h: from 0,8 Hp to 2 Hp single-phase / three-phase 50 Hz
 from 1,2 Hp to 2 Hp single-phase / three-phase 60 Hz

VOLTAGE

Single-phase: 230 V / 50 Hz - 220 V / 60 Hz
 Three-phase: 230;400 V / 50 Hz - 220;380 V / 60 Hz

CONSTRUCTION FEATURES

CONNECTION SYSTEM by means of connector.

PUMP OUTLET made in AISI 304 stainless steel.

ASYNCHRONOUS MOTOR COOLED BY PUMPED LIQUID

SLEEVE made in 304L stainless steel (Low carbon) to avoid possible corrosions of the welding.

DOUBLE MECHANICAL SEAL with interposed oil chamber.

B-CLASS CONDENSER, meeting long-lasting features (three times a standard condenser).

IMPELLERS AND DIFFUSERS made in techno-polymer:

- higher performance;
- higher resistance to sand.

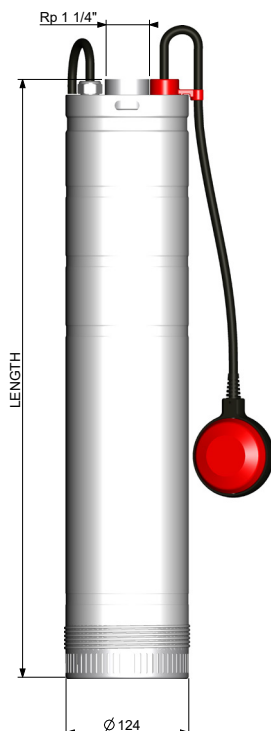
INTAKE FILTER made in 304 stainless steel.

REMOVABLE CABLE CONNECTOR H07RN-F type.

AUTOMATIC VERSIONS WITH REMOVABLE FLOAT SWITCH for applications at great depths (40 m).

100% TESTED, all the electropumps are electrically and hydraulically tested at the end of the line.

DIMENSIONS



OPERATING LIMITS

PROTECTION

IP 68

INSULATION CLASS

F

VOLTAGE TOLERANCE

-10% / +10%

PUMPED LIQUID TEMPERATURE

0°C – 35°C

MAX. STARTS / HOUR

40

MAX. AMOUNT OF SAND TOLERATED IN WATER

50 g/m³

MAX. IMMERSION DEPTH

40m

SINGLE-PHASE VERSION

Featuring a condenser with overload protection and automatic resetting system.

3-20S, 5-20S, 3-20S6, 5-20S6 AND THREE-PHASE SERIES

Not feature overload protection.

VERSIONS UPON REQUEST

Different thrust load
 Different voltage
 Version with KTW, WRAS, ACS type-approved cable
 Versions with or without float switch
 External capacitor (*minimum quantity required*)

ACCESSORIES

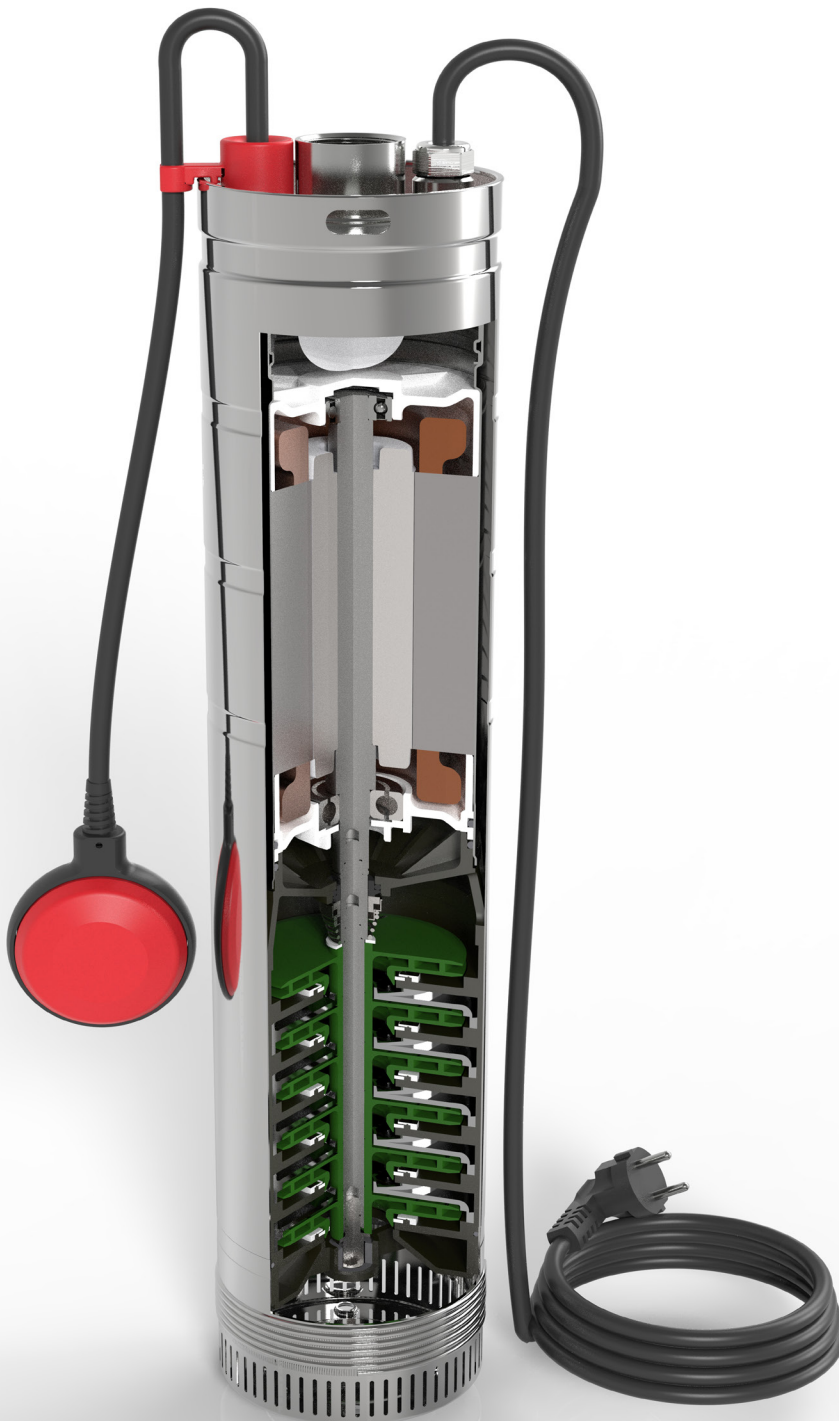
Cable lengths: 10 m or 20 m
 Sacrificial anode
 Float switch with removable connector
 FROG disassembly kit
 Electrical plug of different standards

MODELS

50Hz Model		60Hz Model		Dimension		Cable Length [m]
Single-phase 230 V	Three-phase 230/400 V	Single-phase 220 V	Three-phase 220/380 V	Length [mm]	Weight [kg]	
FROG 3 - 06S	FROG 3 - 06T	-	-	439	14	10
FROG 3 - 08S	FROG 3 - 08T	FROG 3 - 08S6	FROG 3 - 08T6	495	15,5	
FROG 3 - 10S	FROG 3 - 10T	FROG 3 - 10S6	FROG 3 - 10T6	521	16,5	
FROG 3 - 12S	FROG 3 - 12T	FROG 3 - 12S6	FROG 3 - 12T6	590	19	
FROG 3 - 15S	FROG 3 - 15T	FROG 3 - 15S6	FROG 3 - 15T6	616	20	
FROG 3 - 20S	FROG 3 - 20T	FROG 3 - 20S6	FROG 3 - 20T6	698	23,5	
FROG 5 - 08S	FROG 5 - 08T	-	-	469	16	
FROG 5 - 12S	FROG 5 - 12T	FROG 5 - 12S6	FROG 5 - 12T6	515	17,5	
FROG 5 - 15S	FROG 5 - 15T	FROG 5 - 15S6	FROG 5 - 15T6	541	18,5	
FROG 5 - 20S	FROG 5 - 20T	FROG 5 - 20S6	FROG 5 - 20T6	620	20,5	

FLOAT SWITCH WITH “PLUG IN & PLUG OUT” SYSTEM

- Guarantees a perfect sealing
- Gives the option of using/selling the electropump with or without float switch just connecting or disconnecting it
- Reduces stock because electropump can be bought with or without float switch
- Allows a fast and safe maintenance cause superior pump side can be completely removed

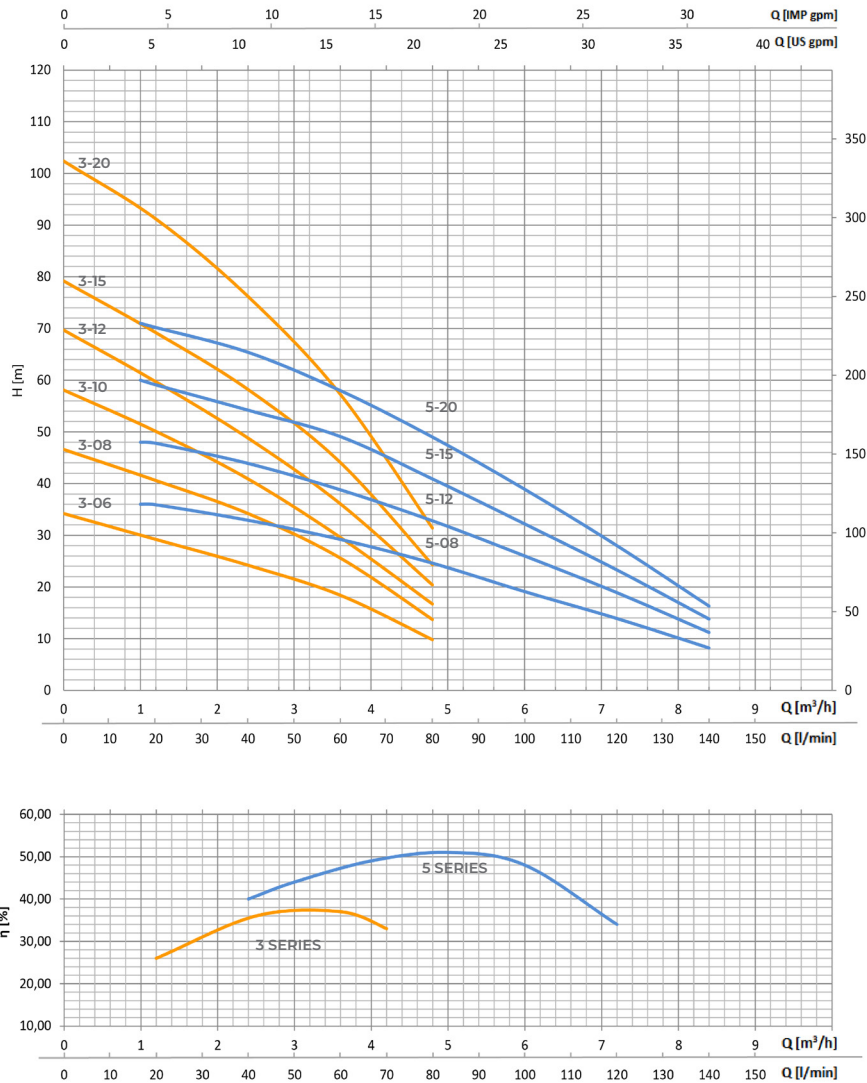


SCAN TO
see how to install the
float switch correctly.



FROG - 50Hz

OPERATING CURVES FROG - 50Hz



HYDRAULIC PERFORMANCE TABLE FROG - 50Hz

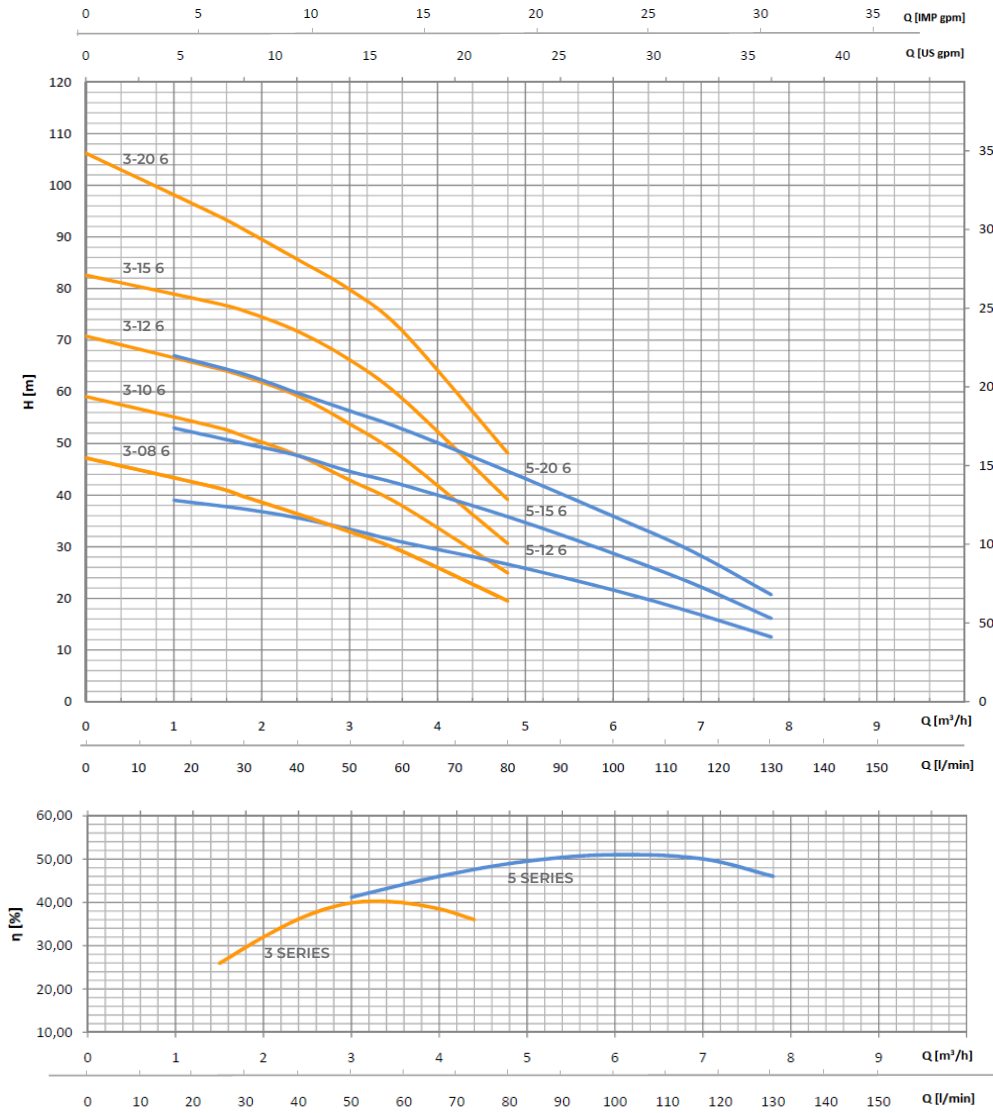
Type		P ₂		N. of Stage	Q (Flow Rate)								
Single-phase 230 V	Three-phase 230/400 V	[Hp]	[kW]		[l/min]	0	20	40	60	80	100	120	140
					[m³/h]	0	1,2	2,4	3,6	4,8	6	7,2	8,4
H (Total Head) [m]													
FROG 3 - 06S	FROG 3 - 06T	0,6	0,45	3	34,2	29,2	24,2	18,4	9,8	-	-	-	
FROG 3 - 08S	FROG 3 - 08T	0,8	0,6	4	46,6	40,6	34,2	25,6	13,7	-	-	-	
FROG 3 - 10S	FROG 3 - 10T	1	0,75	5	58,1	50,1	40,9	29,6	16,7	-	-	-	
FROG 3 - 12S	FROG 3 - 12T	1,2	0,9	6	69,7	59,7	48,8	36,1	20,4	-	-	-	
FROG 3 - 15S	FROG 3 - 15T	1,5	1,1	7	79,2	69,2	58,2	44,1	24,3	-	-	-	
FROG 3 - 20S	FROG 3 - 20T	2	1,5	9	102,4	91,2	76,2	57,3	31,4	-	-	-	
FROG 5 - 08S	FROG 5 - 08T	0,8	0,6	3	37,2	35,9	32,9	29,2	24,6	19,1	13,9	8,2	
FROG 5 - 12S	FROG 5 - 12T	1,2	0,9	4	49,6	47,8	43,9	38,8	32,8	26	18,9	11,2	
FROG 5 - 15S	FROG 5 - 15T	1,5	1,1	5	61,5	59,1	54,2	49,1	40,9	32,2	23,3	13,8	
FROG 5 - 20S	FROG 5 - 20T	2	1,5	6	74,4	70,2	65,4	58	49	38,9	28	16,3	

ELECTRICAL DATA FROG - 50Hz

Type	P ₁ [kW] (Max Absorbed Power)	I [A] (Max Absorbed Current)	Capacitor 450 V [μF]	Type	P ₁ [kW] (Max Absorbed Power)	I [A] (Max Absorbed Current)	
						230 V	400 V
Single-phase 230 V				Three-phase 230/400 V			
FROG 3 - 06S	0,81	3,7	20	FROG 3 - 06T	0,82	2,4	1,4
FROG 3 - 08S	1	5,1	25	FROG 3 - 08T	1,04	2,9	1,9
FROG 3 - 10S	1,22	5,7	25	FROG 3 - 10T	1,3	3,8	2,2
FROG 3 - 12S	1,4	6,5	35	FROG 3 - 12T	1,32	4,5	2,6
FROG 3 - 15S	1,65	7,6	35	FROG 3 - 15T	1,51	4,8	2,9
FROG 3 - 20S	2,15	9,8	40	FROG 3 - 20T	2,05	5,7	3,5
FROG 5 - 08S	1,1	5,2	25	FROG 5 - 08T	1,12	4	2,1
FROG 5 - 12S	1,32	6,4	35	FROG 5 - 12T	1,29	4,4	2,5
FROG 5 - 15S	1,7	8	35	FROG 5 - 15T	1,64	4,9	3
FROG 5 - 20S	1,95	9,4	40	FROG 5 - 20T	1,92	5,7	3,7

FROG - 60Hz

OPERATING CURVES FROG - 60Hz



HYDRAULIC PERFORMANCE TABLE FROG - 60Hz

Type		P ₂		N. of Stage	Q (Flow Rate)										
Single-phase 220 V	Three-phase 220/380 V	[Hp]	[kW]		[l/min]	0	25	30	40	50	60	80	100	115	130
					[m³/h]	0	1,5	1,8	2,4	3	3,6	4,8	6	6,9	7,8
				H (Total Head) [m]											
FROG 3-08S6	FROG 3-08T6	0,8	0,6	4	47,2	41,4	39,7	36,4	32,9	29,1	19,5	-	-	-	-
FROG 3-10S6	FROG 3-10T6	1	0,75	5	59,1	53,1	51,4	47,8	42,9	37,9	24,9	-	-	-	-
FROG 3-12S6	FROG 3-12T6	1,2	0,9	6	70,8	64,5	63	59,3	53,8	47,3	30,6	-	-	-	-
FROG 3-15S6	FROG 3-15T6	1,5	1,1	7	82,6	77,1	75,1	71,8	66,2	58,7	39,1	-	-	-	-
FROG 3-20S6	FROG 3-20T6	2	1,5	9	106,2	94,1	91,4	85,7	79,8	71,8	48,1	-	-	-	-
FROG 5-12S6	FROG 5-12T6	1,2	0,9	4	45,4	42,6	37,3	35,6	33,4	30,9	26,6	21,6	17,3	12,5	-
FROG 5-15S6	FROG 5-15T6	1,5	1,1	5	56,7	53,8	50	47,7	44,6	42	35,8	28,7	22,9	16,1	-
FROG 5-20S6	FROG 5-20T6	2	1,5	6	68	66,2	63,4	59,8	56,3	52,8	44,6	35,9	29,1	20,7	-

ELECTRICAL DATA FROG - 60Hz

Type	P ₁ [kW] (Max Absorbed Power)	I [A] (Max Absorbed Current)	Capacitor 450 V [μF]	Type	P ₁ [kW] (Max Absorbed Power)	I [A] (Max Absorbed Current)	
						220 V	380 V
Single-phase 220 V				Three-phase 220/380 V			
FROG 3-08S6	1,05	4,8	25	FROG 3-08T6	1,06	2,9	1,7
FROG 3-10S6	1,24	5,9	25	FROG 3-10T6	1,31	3,6	2,1
FROG 3-12S6	1,42	7,1	35	FROG 3-12T6	1,37	3,9	2,3
FROG 3-15S6	1,67	8	35	FROG 3-15T6	1,56	4,4	2,6
FROG 3-20S6	2,16	10,1	40	FROG 3-20T6	2,08	5,4	3,2
FROG 5-12S6	1,34	6,3	35	FROG 5-12T6	1,31	3,6	2,1
FROG 5-15S6	1,72	7,3	35	FROG 5-15T6	1,67	4,4	2,6
FROG 5-20S6	1,91	9,7	40	FROG 5-20T6	1,89	4,9	2,9

