



**EBARA**

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**SUBMERSIBLE SUMP PUMPS**

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**BEST 2-5**

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50Hz

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# SUBMERSIBLE SUMP PUMPS

# BEST 2-5

## SPECIFICATIONS

50 Hz

PUMP		
Liquid Handled	Type of liquid	Clean / dirty water
	Max temperature [°C]	35
	Max solids size [mm]	10 (suspended particles)
Maximum immersion	[m]	10
Construction	Impeller	Open centrifugal type
	Shaft seal type	Double mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction-Flange	Strainer
	Discharge-Flange [inch]	G 1½ UNI ISO 228
Material	Casing	AISI 304
	Impeller	AISI 304
	Casing cover	AISI 304
	Shaft seal	Pump side : Sic/Sic/NBR
		Motor side : Carbon/Ceramic/NBR
	Seal cover	AISI 304
	Shaft	AISI 303 (wet extension)
Lubricating liquid	White mineral oil ESSO MARCOL 172 (180 cc)	
Applicable standard of test	ISO 9906 - Annex A	

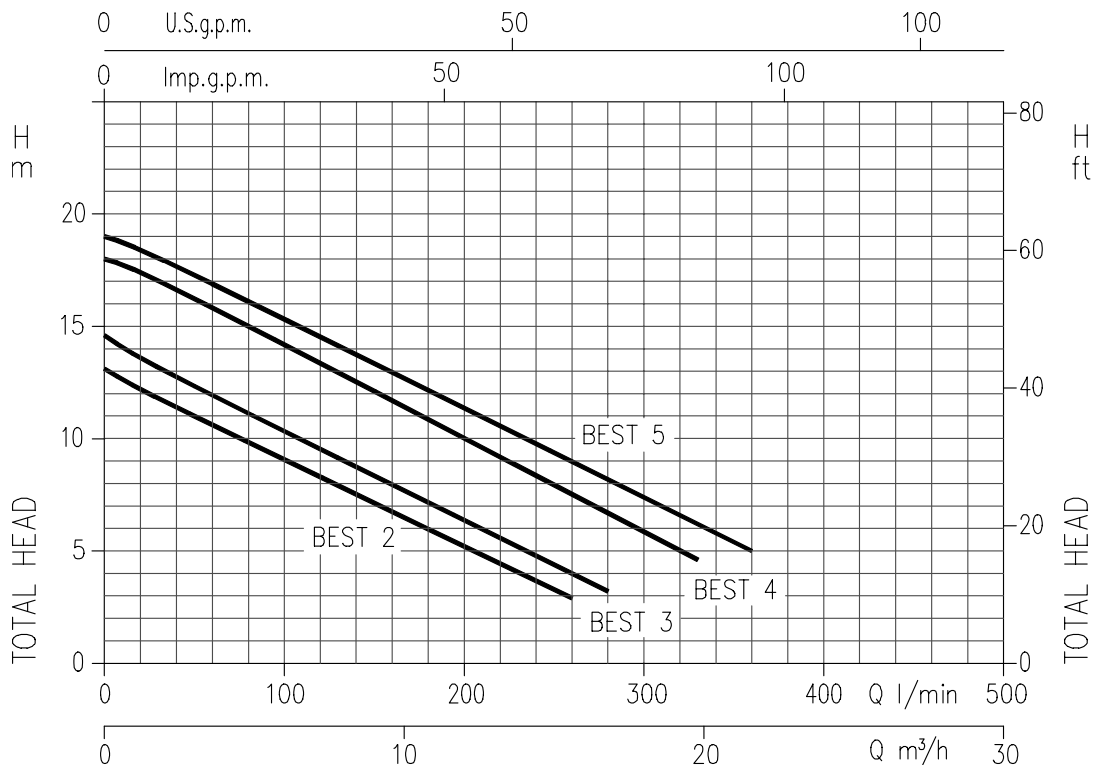
MOTOR		
Type	Submersible dry type	
	Single Phase	Three Phase
No. of Poles	2	
Rotation speed [min <sup>-1</sup> ]	≈2800	
Insulation Class	F	
Protection degree	IP 68	
Power rating	[kW]	0.55 ÷ 1.1
	[HP]	0.75 ÷ 1.5
Frequency [Hz]	50	
Voltage [V]	230 ±10%	400 ±10%
Capacitor	Built in	-
Over load protection	Built in	-
Float Switch	Optional	-
Float Switch Cable	material	H07RN-F
	size	3G1
Casing material	AISI 304	
Base material/motor support	AISI 304	
Power cable	length [m]	10
	material	H07RN-F
	size	3G1 (Best 2) 3G1.5 (Best 3, 4)
Dimensions of cable entry	Cable Gland	

# SUBMERSIBLE SUMP PUMPS

# BEST 2-5

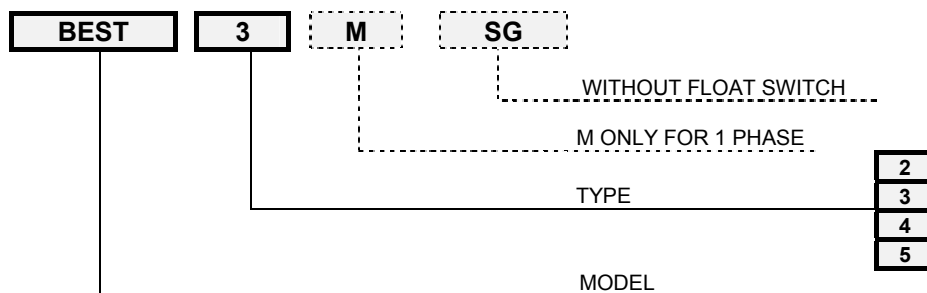
## SELECTION CHART

50Hz



Pump type	kW	HP	Q=Capacity												
			l/min 20	40	80	120	160	170	200	260	280	300	330	360	
			H=Total manometric head in meters												
BEST 2	0.55	0.75	12.2	11.4	9.8	8.3	6.7	6.3	5	2.9	-	-	-	-	
BEST 3	0.74	1	13.6	12.7	11.1	9.5	7.9	7.6	6.4	4	3.2	-	-	-	
BEST 4	1.1	1.5	17.4	16.6	15	13.4	11.7	11.3	10	7.5	6.7	5.9	4.6	-	
BEST 5	1.5	2	18.4	17.7	16.1	14.5	12.8	12.5	11.4	9	8	7.4	6	5	

**TYPE KEY:**



**SUBMERSIBLE SUMP PUMPS**

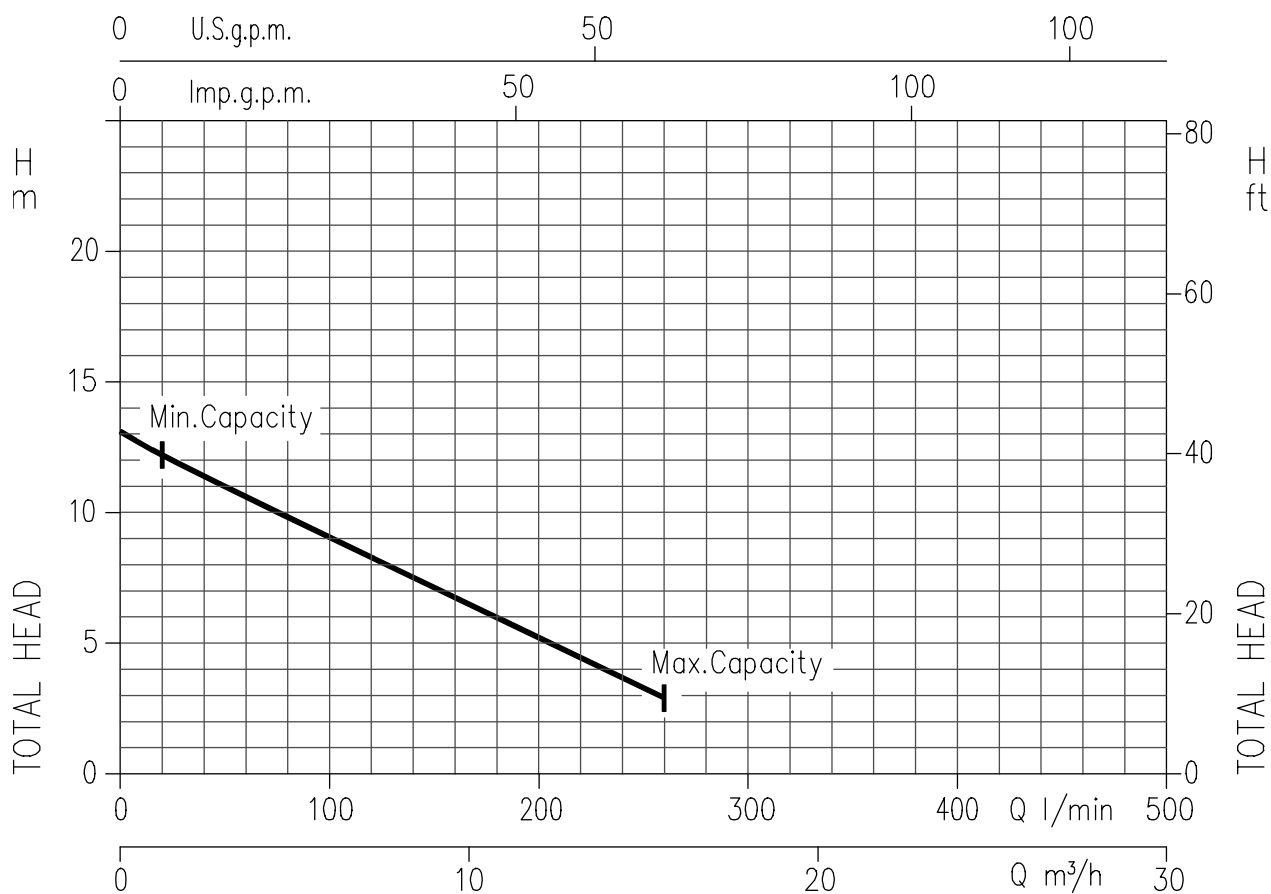
**BEST 2-5**

**PERFORMANCE CURVE**

50Hz

**PUMP CHARACTERISTIC PERFORMANCE**

**BEST 2 (0.55 kW) SYNCHRONOUS SPEED : 3000 min<sup>-1</sup>**



Temperature of water: 20°C  
 Impeller diameter = 112 mm  
 Applicable standard of test: ISO 9906 – Annex A

**SUBMERSIBLE SUMP PUMPS**

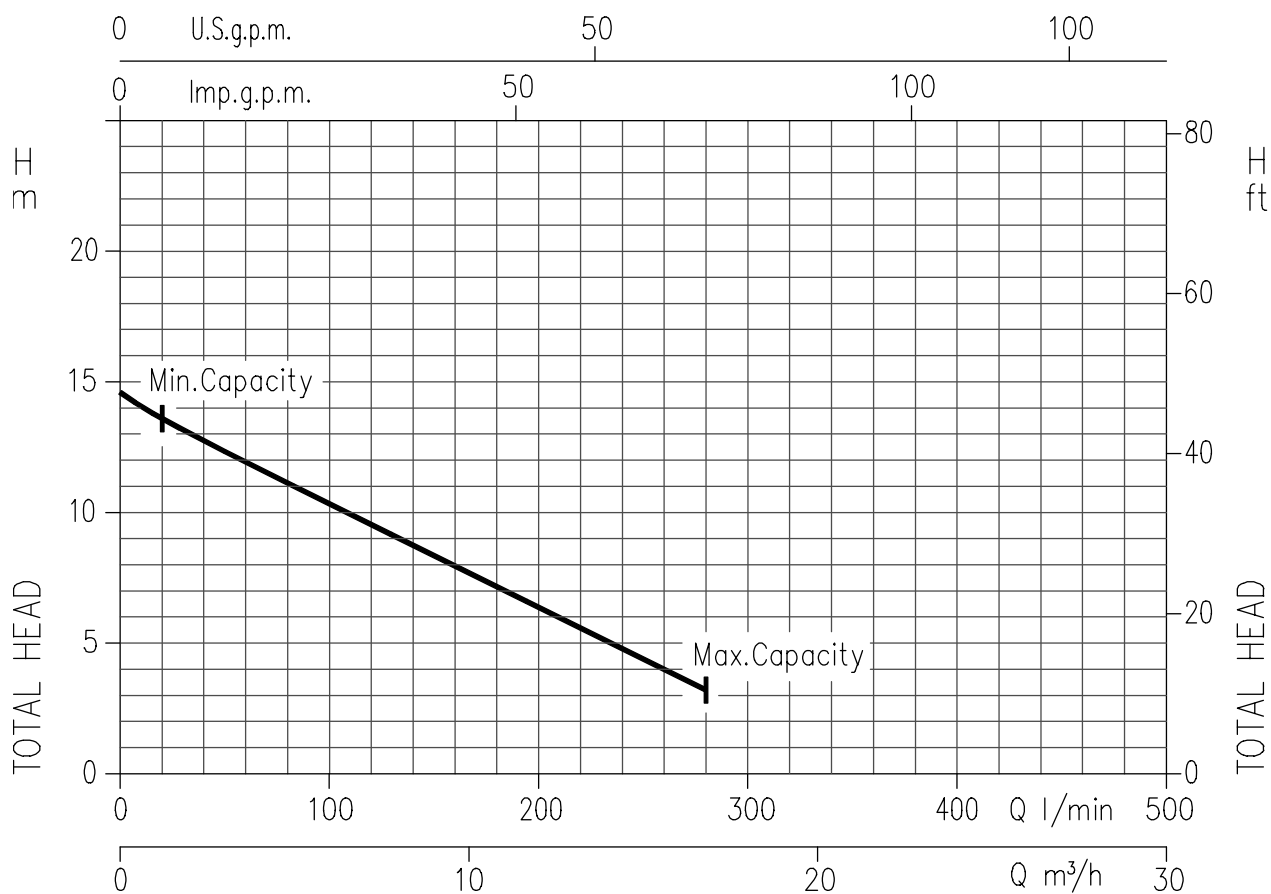
**BEST 2-5**

**PERFORMANCE CURVE**

50Hz

**PUMP CHARACTERISTIC PERFORMANCE**

**BEST 3 (0.75 kW) SYNCHRONOUS SPEED : 3000 min<sup>-1</sup>**



Temperature of water: 20°C  
 Impeller diameter = 120 mm  
 Applicable standard of test: ISO 9906 – Annex A

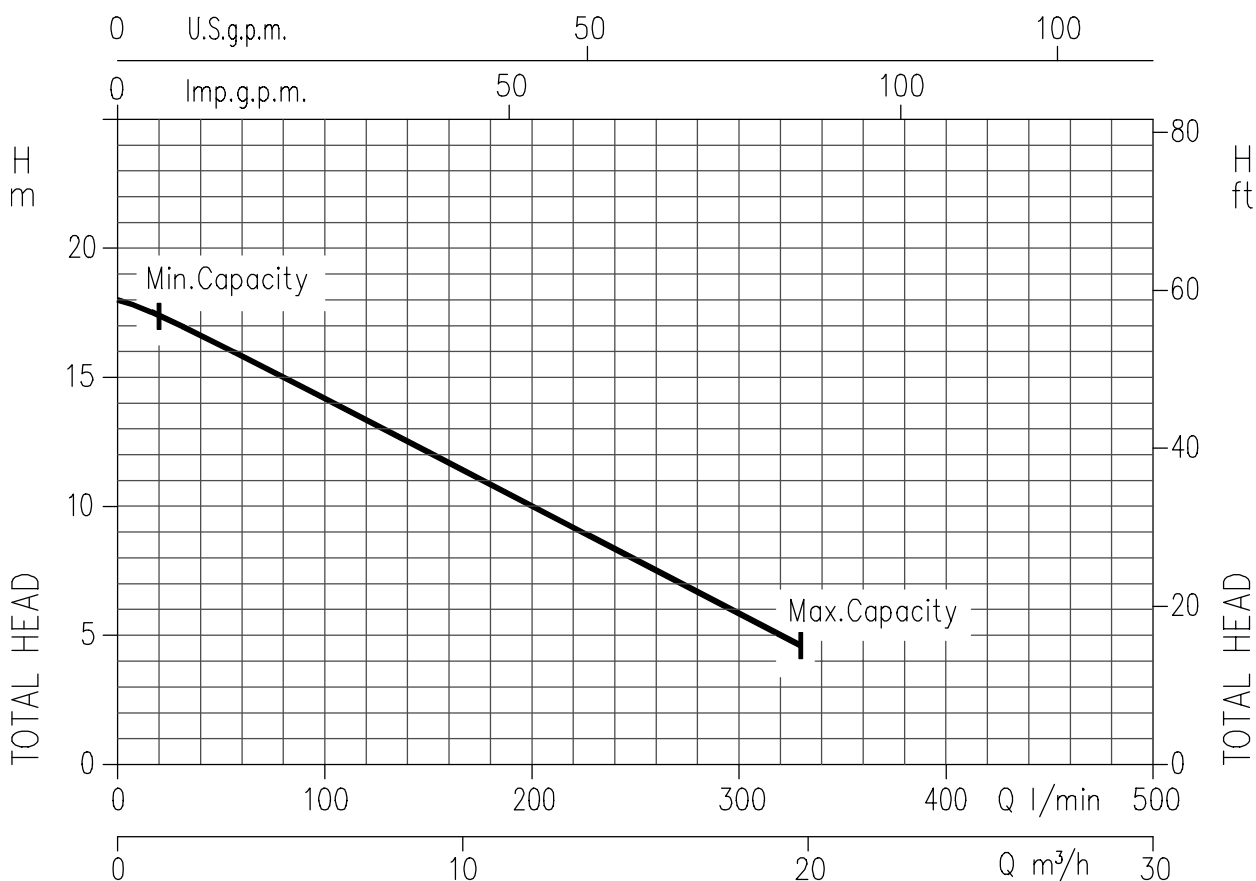
**SUBMERSIBLE SUMP PUMPS**

**BEST 2-5**

**PERFORMANCE CURVE**

50Hz

**PUMP CHARACTERISTIC PERFORMANCE**  
**BEST 4 (1.1 kW) SYNCHRONOUS SPEED : 3000 min<sup>-1</sup>**



Temperature of water: 20°C  
 Impeller diameter = 125 mm  
 Applicable standard of test: ISO 9906 – Annex A

**SUBMERSIBLE SUMP PUMPS**

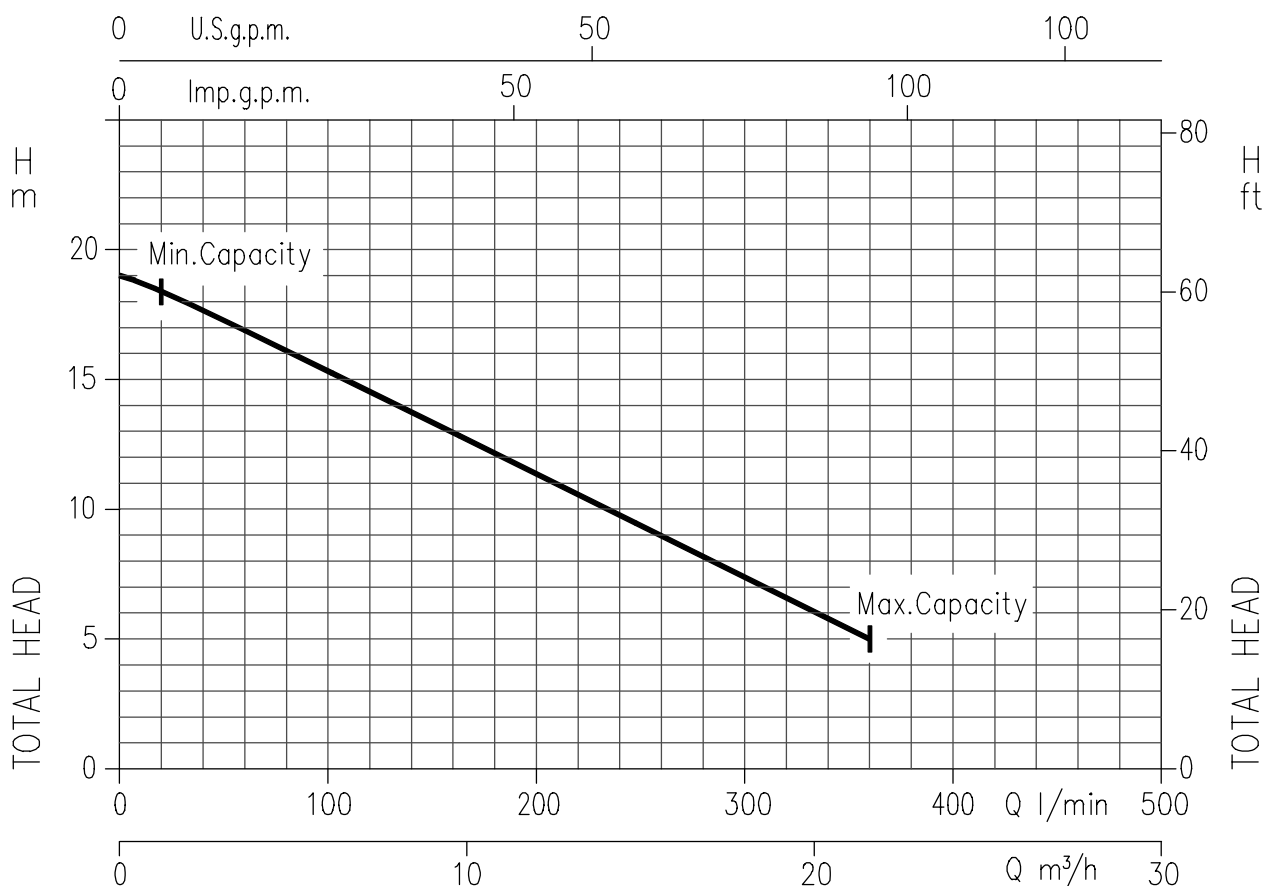
**BEST 2-5**

**PERFORMANCE CURVE**

50Hz

**PUMP CHARACTERISTIC PERFORMANCE**

**BEST 5 (1.5 kW) SYNCHRONOUS SPEED : 3000 min<sup>-1</sup>**



Temperature of water: 20°C  
 Impeller diameter = 125 mm  
 Applicable standard of test: ISO 9906 – Annex A



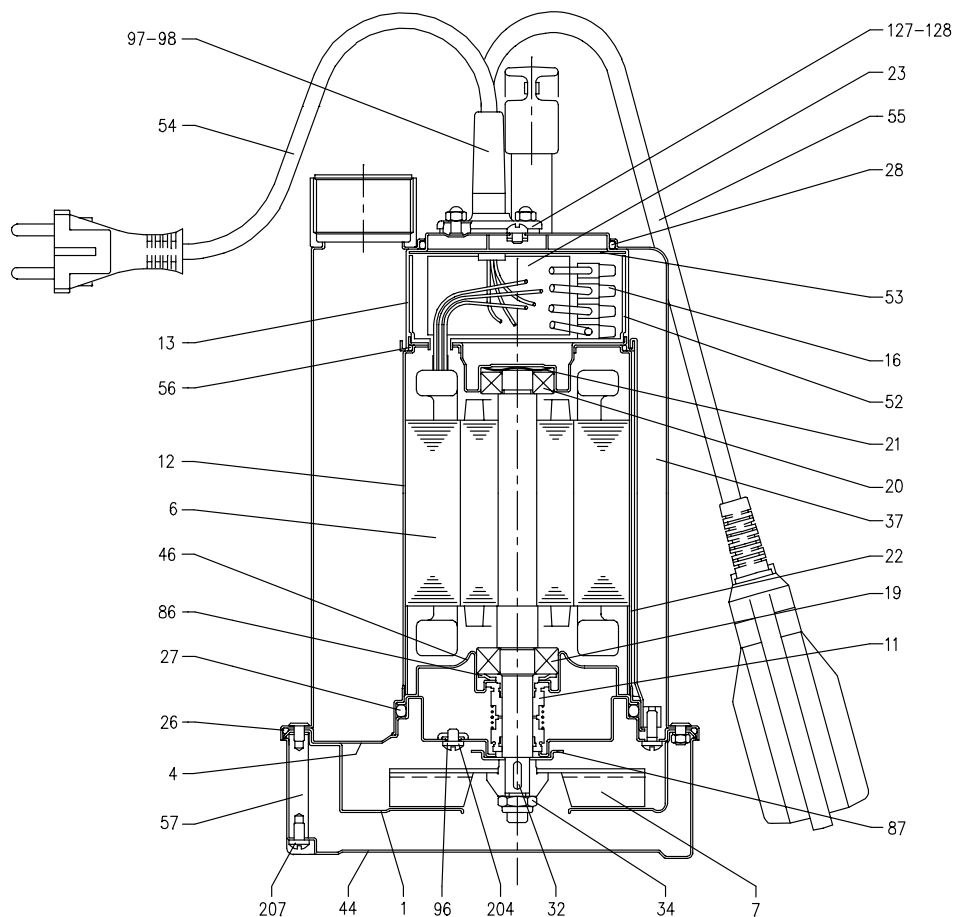
# SUBMERSIBLE SUMP PUMPS

# BEST 2-5

## CONSTRUCTIONS

50Hz

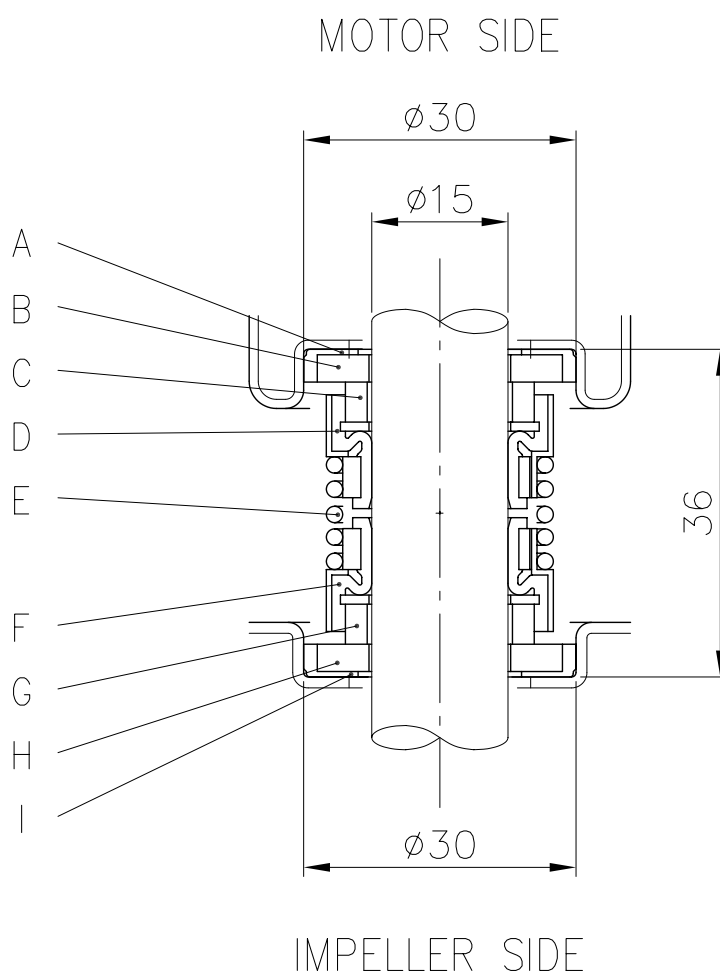
### SECTIONAL VIEW



N°	PART NAME	MATERIAL	Q:TY	N°	PART NAME	MATERIAL	Q.TY
1	Volute	AISI 304	1	37	Pump casing	AISI 304	1
4	Motor bracket	AISI 304	1	44	Strainer	AISI 304	1
6	Shaft with rotor	AISI 303	1	46	Bearing housing	AISI 304	1
7	Impeller	AISI 304	1	52	Terminal insulating box	PA66 glass fibre reinforced	1
11	Mechanical seal	NBR	2	53	Terminal insulating cov	PA66	1
12	Motor frame with stator	-	1	54	Power cable	-	1
13	Motor cover	AISI 304	1	55	Float switch [1]	-	1
16	Terminal	-	1	56	"O" Ring	NBR	1
19	Pump side ball bearing	-	1	57	Bolt	AISI 303	3
20	Fan side ball bearing	-	1	86	Washer	AISI 304	1
21	Adjusting ring	Steel C70	1	87	Impeller ring	AISI 304	1
22	Tie rod	AISI 304	3	96	"O" Ring	NBR	3
23	Capacitor [2]	-	1	97	Cable connector [1]	NBR	1
26	"O" Ring	NBR	1	98	Cable connector	NBR	1
27	"O" Ring	NBR	1	127	Cable connector [1]	AISI 304	1
28	"O" Ring	NBR	1	128	Cable connector	AISI 304	1
32	Key	AISI 304	1	204	Screw	Stainless steel A2 UNI 7323	3
34	Impeller nut	AISI 304	1	207	Screw	Stainless steel A2 UNI 7323	3

[1] Only for version single phase with float switch

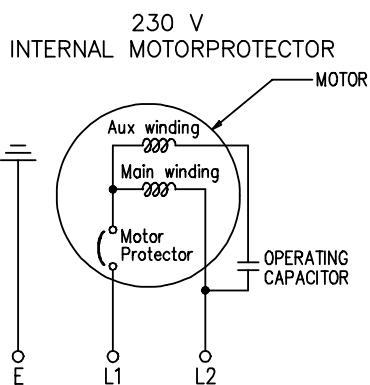
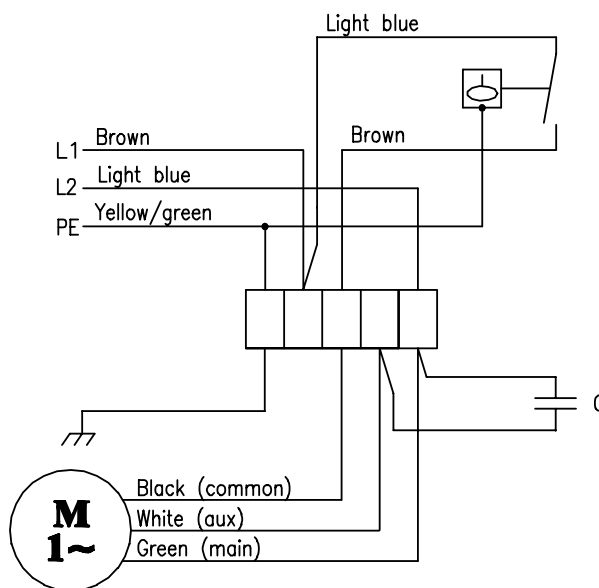
[2] Only for version single phase

**MECHANICAL SEAL**

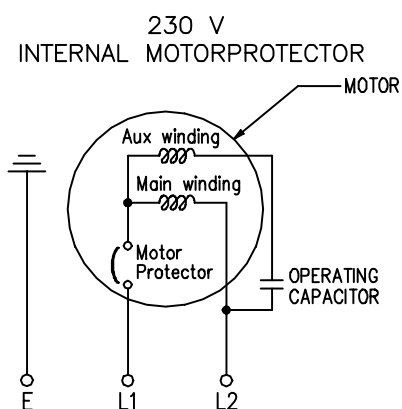
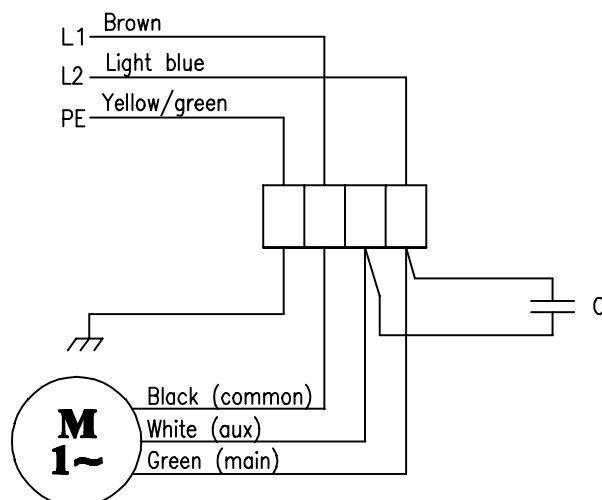
REF	PART NAME	MATERIAL
A	Rubber cup	NBR
B	Seat	Ceramic
C	Seal face	Carbon
D	Bellow	NBR
E	Spring	AISI 304
F	Bellow	NBR
G	Seal face	Silicon carbide
H	Seat	Silicon carbide
I	Rubber cup	NBR

DIAGRAM AND ELECTRIC CONNECTIONS

SINGLE PHASE MOTOR WITH FLOAT SWITCH

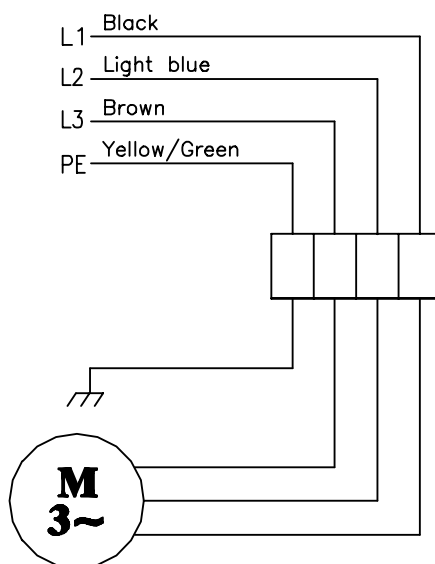


## DIAGRAM AND ELECTRIC CONNECTIONS

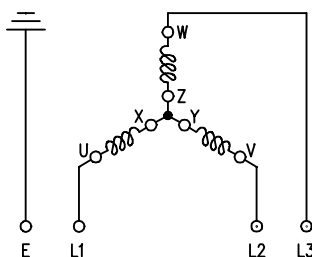
SINGLE PHASE MOTOR  
WITHOUT FLOAT SWITCH

## DIAGRAM AND ELECTRIC CONNECTIONS

## THREE PHASE MOTOR



400 V  
STAR CONNECTION

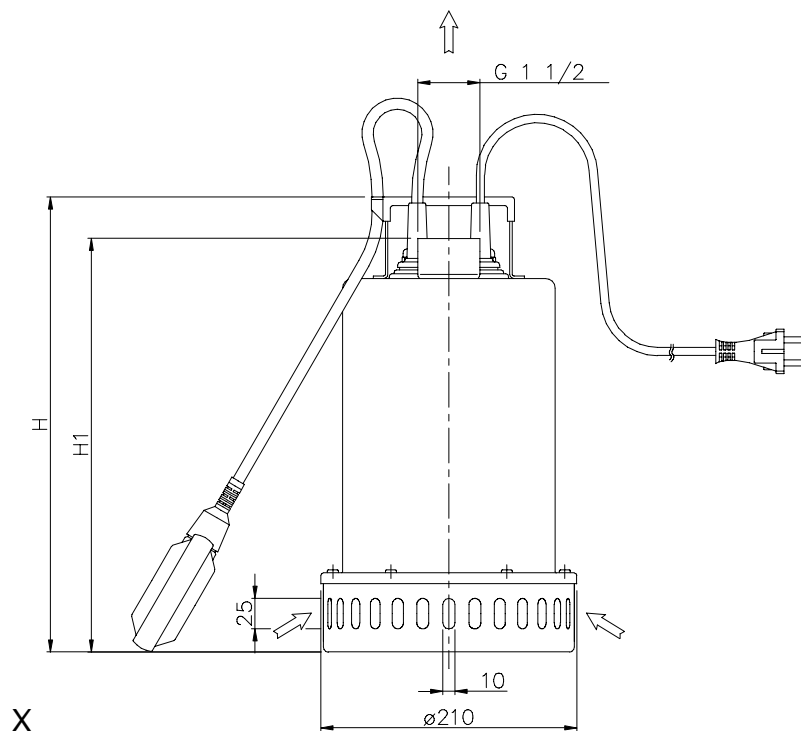


**SUBMERSIBLE SUMP PUMPS**

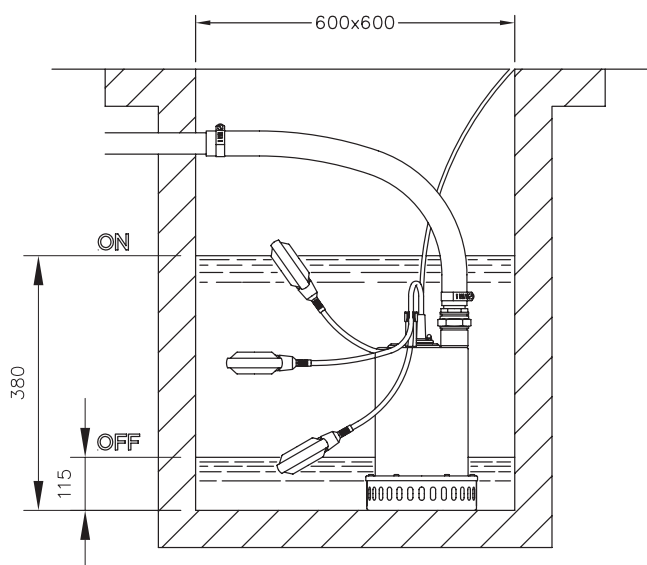
**BEST 2-5**

**DIMENSIONS**

50Hz



Pump type	Dimensions mm	
	H	H1
BEST 2	352	315
BEST 3	352	315
BEST 4	377	340
BEST 5	377	340

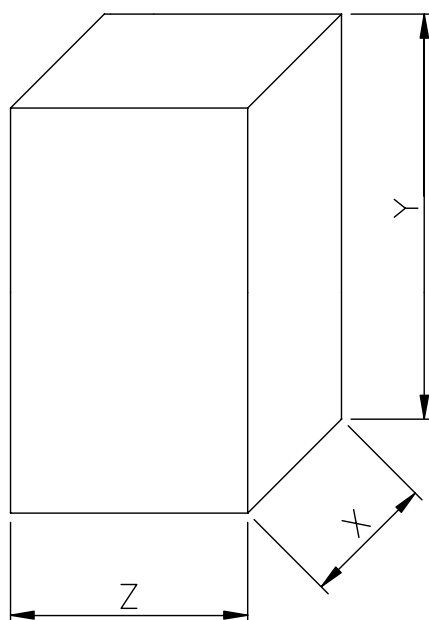


## SUBMERSIBLE SUMP PUMPS

**BEST 2-5**

## PACKING AND WEIGHT

50Hz



Type pumps		Packing [mm]			Weight [kg]
Single Phase	Three Phase	X	Y	Z	
BEST 2M	BEST 2	240	375	250	12
BEST 3M	BEST 3	240	375	250	12.7
BEST 4M	BEST 4	240	400	250	13.8
-	BEST 5	240	400	250	13.5

## SUBMERSIBLE SUMP PUMPS

**BEST 2-5**

## TECHNICAL DATA

50 Hz

Type pumps		kW	HP	Capacitor		Input [kW]		Full load current [A]		Locked rotor current	
Single Phase 230 V 50 Hz	Three Phase 400 V 50 Hz			Single Phase $\mu$ F	VI	Single Phase	Three Phase	Single Phase 230 V	Three Phase 400 V	Single Phase 230 V 50 Hz	Three Phase 400 V 50 Hz
BEST 2M	BEST 2	0,55	0,75	16	450	0,9	1,0	4,4	2,0	16	10
BEST 3M	BEST 3	0,75	1	20	450	1,3	1,2	5,6	2,4	20	12,5
BEST 4M	BEST 4	1,1	1,5	30	450	1,7	1,6	7,3	3,0	25	16,5
-	BEST 5	1,5	2	-	-	-	1,7	-	3,3	-	16,5

Type pumps		Ball Bearing	
Single Phase 230 V 50 Hz	Three Phase 400 V 50 Hz	Pump side	Fan side
BEST 2M	BEST 2	6203 ZZ	6202 ZZ
BEST 3M	BEST 3	6203 ZZ	6202 ZZ
BEST 4M	BEST 4	6203 ZZ	6202 ZZ
-	BEST 5	6203 ZZ	6202 ZZ