

EBARA



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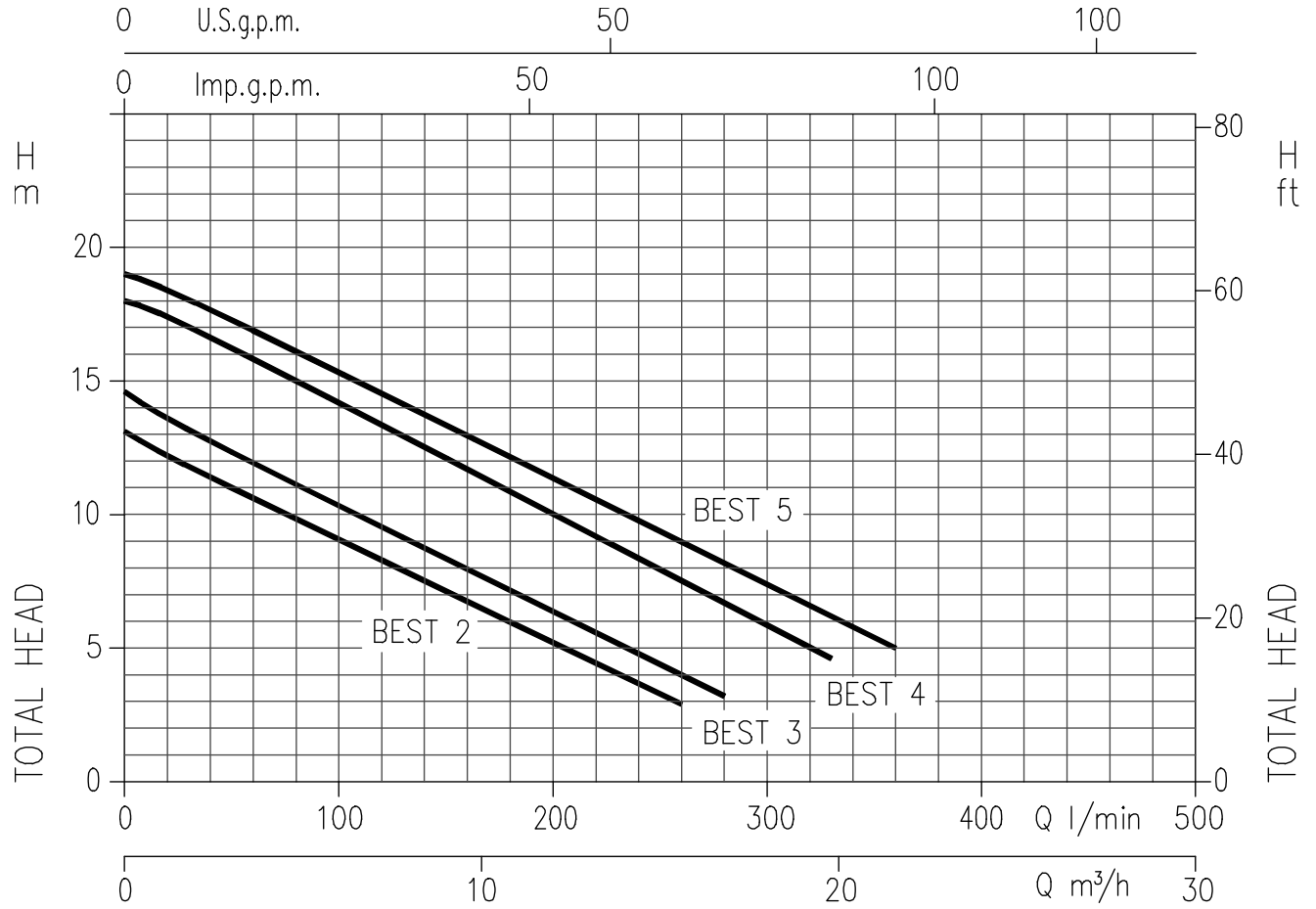
SPECIFICATION

50Hz

Rev. H

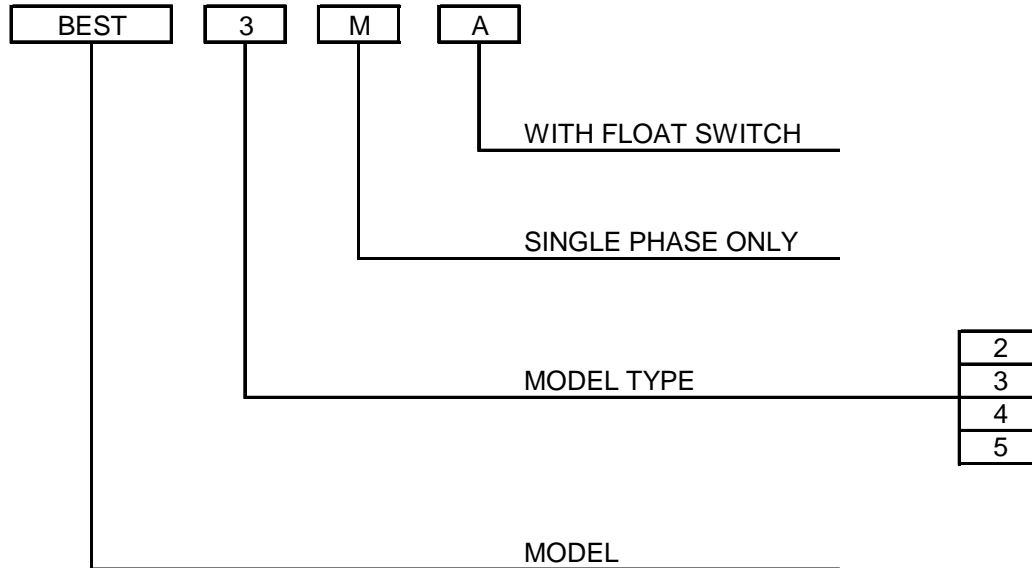
PUMP		
Liquid Handled	Type of liquid	Clean / dirty water
	Max temperature [°C]	35
	Max solids size [mm]	10 (suspended particles)
Maximum immersion	[m]	7
Construction	Impeller	Open centrifugal type
	Shaft seal type	Double mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction-Flange	Strainer
	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 ⁻¹]	≈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 material	H07RN-F	-
Cable 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	



Pump type	Power		Q=Capacity												
	[kW]	[HP]	l/min	20	40	80	120	160	170	200	260	280	300	330	360
			m³/h	1.2	2.4	4.8	7.2	9.6	10.2	12	15.6	16.8	18	19.8	21.6
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	0,75	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:



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 50 Hz

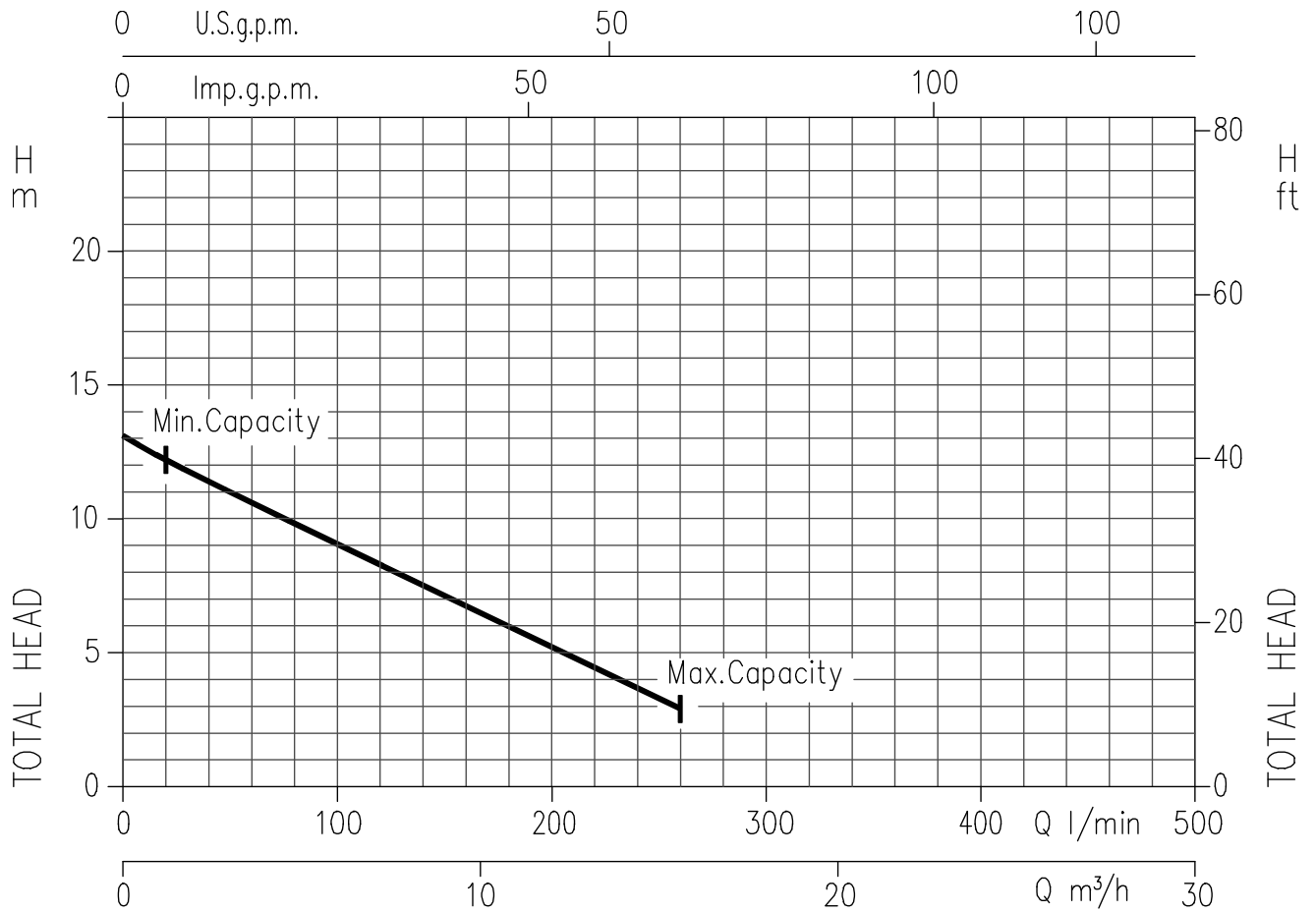
Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt)

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:

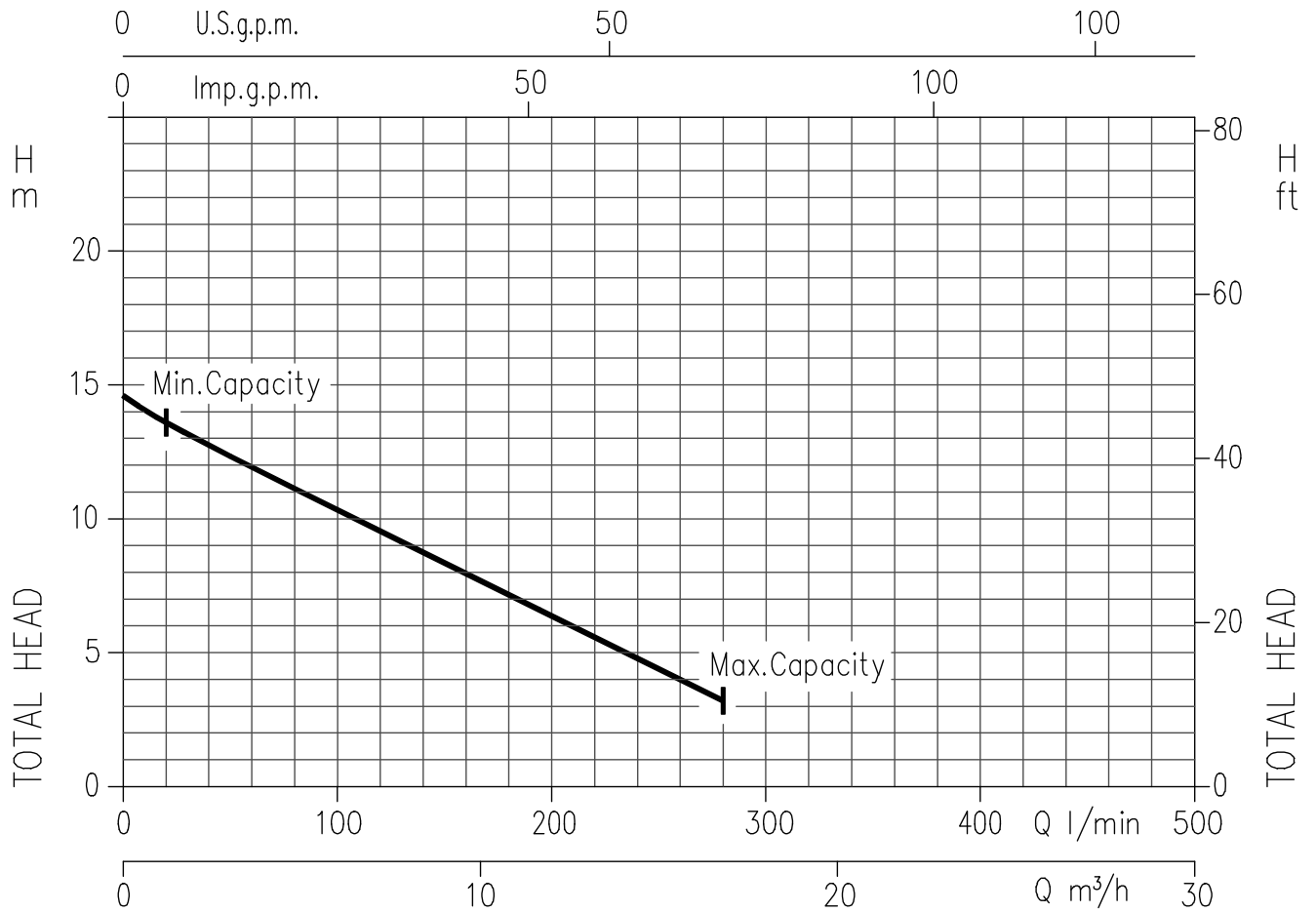
- Q = volume flow rate
- H = total head

BEST 2 (0.55 kW) – impeller diameter = 112 mm



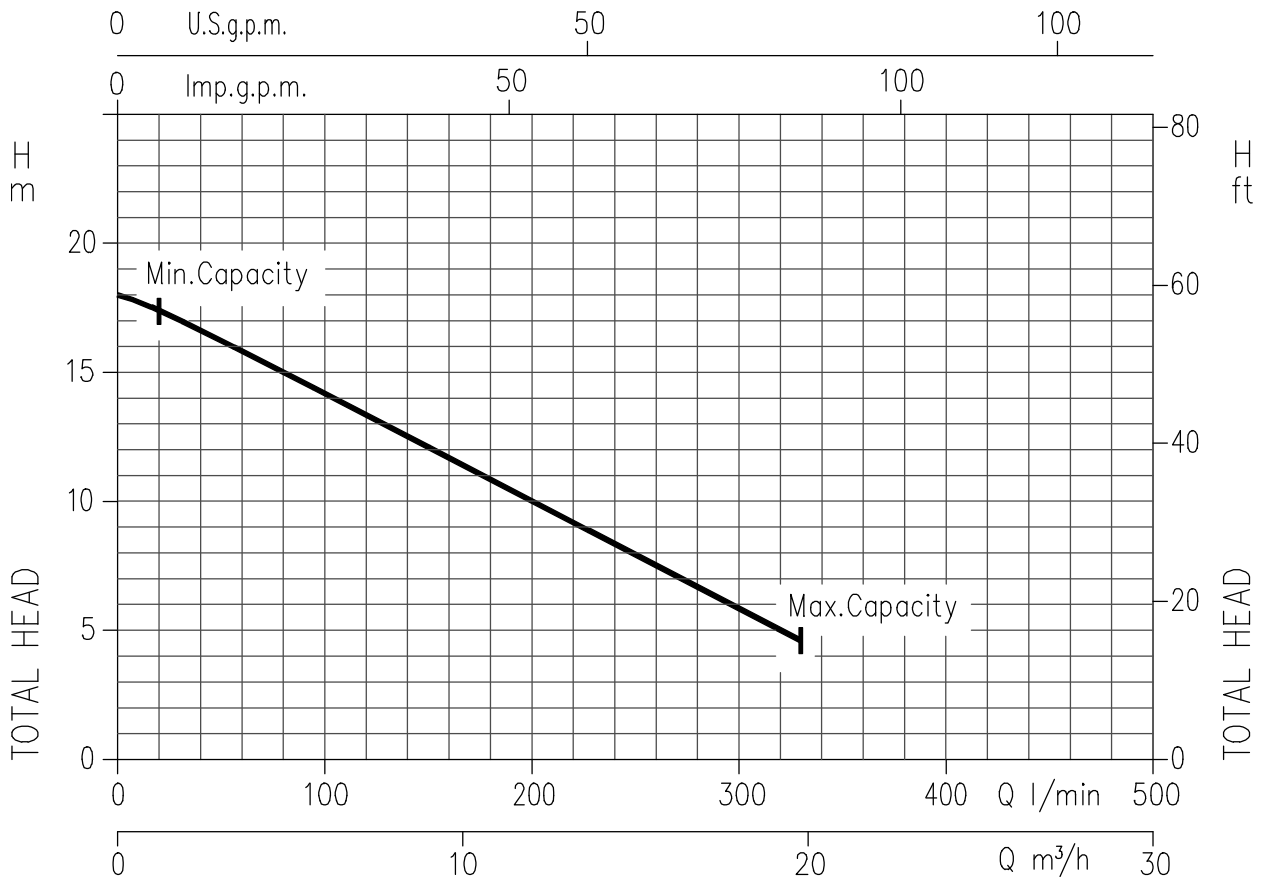
Rotation speed $\approx 2800 \text{ min}^{-1}$
Test standard: ISO 9906 – Annex A

BEST 3 (0.75 kW) – impeller diameter = 120 mm



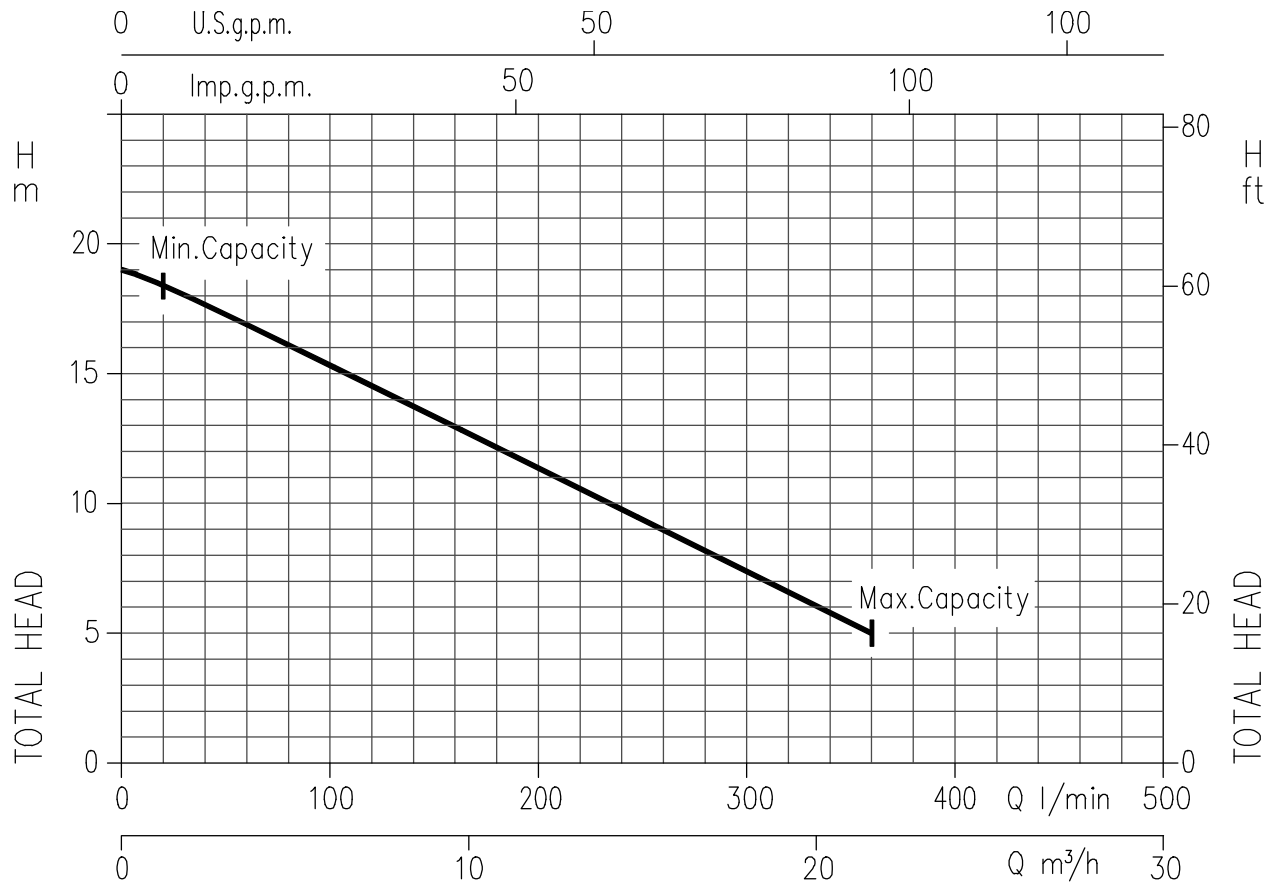
Rotation speed $\approx 2800 \text{ min}^{-1}$
Test standard: ISO 9906 – Annex A

BEST 4 (1.1 kW) – impeller diameter = 125 mm



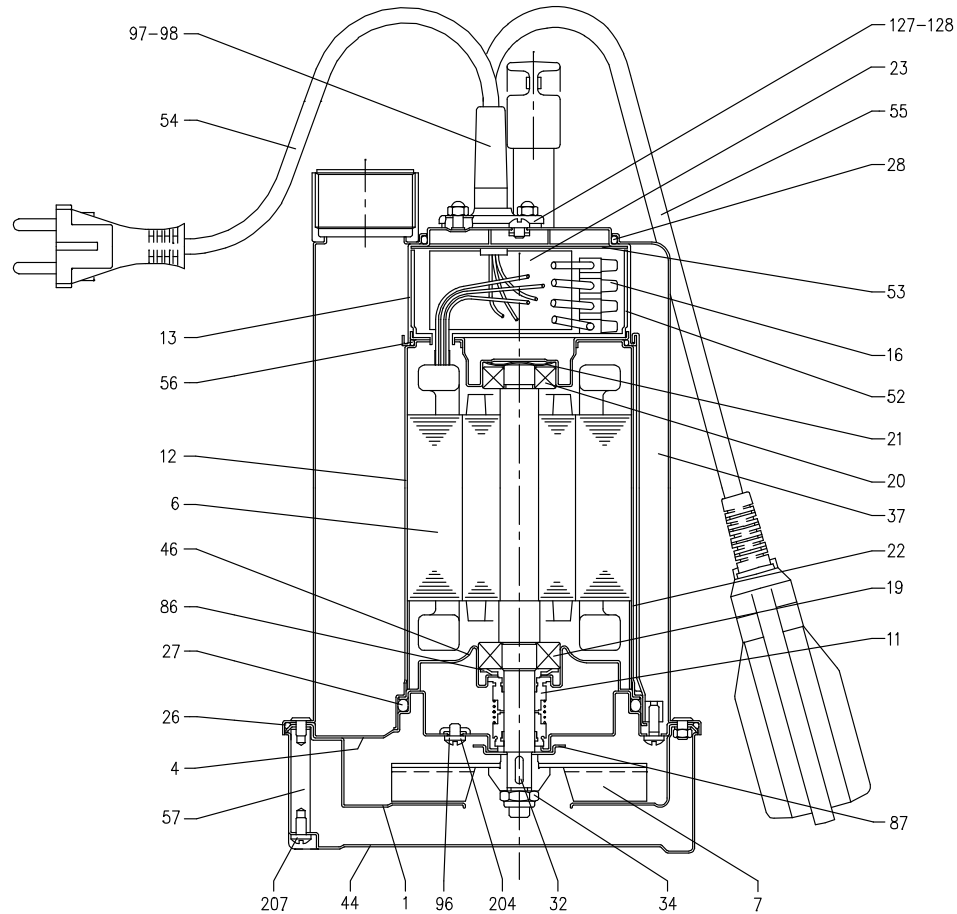
Rotation speed $\approx 2800 \text{ min}^{-1}$
Test standard: ISO 9906 – Annex A

BEST 5 (1.5 kW) – impeller diameter = 125 mm



Rotation speed $\approx 2800 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

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 w ith rotor	AISI 303	1	46	Bearing housing	AISI 304	1
7	Impeller	AISI 304	1	52	Terminal insulating box	PA66 glass fibre reinforced class V-0	1
11	Mechanical seal	NBR	2	53	Terminal insulating cover	PA66 class V-0	1
12	Motor frame w ith stat	-	1	54	Power cable	-	1
13	Motor cover	AISI 304	1	55	Float sw itch [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

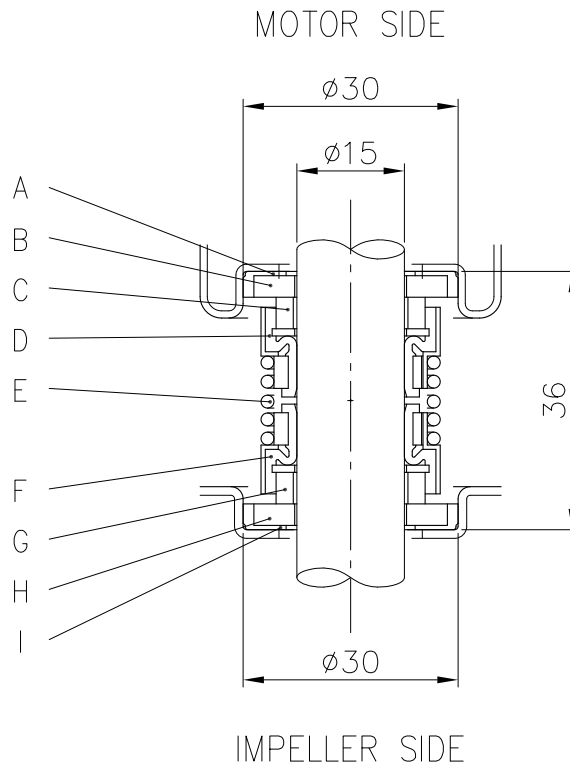
[1] Only for version single phase with float switch

[2] Only for version single phase

BEARINGS

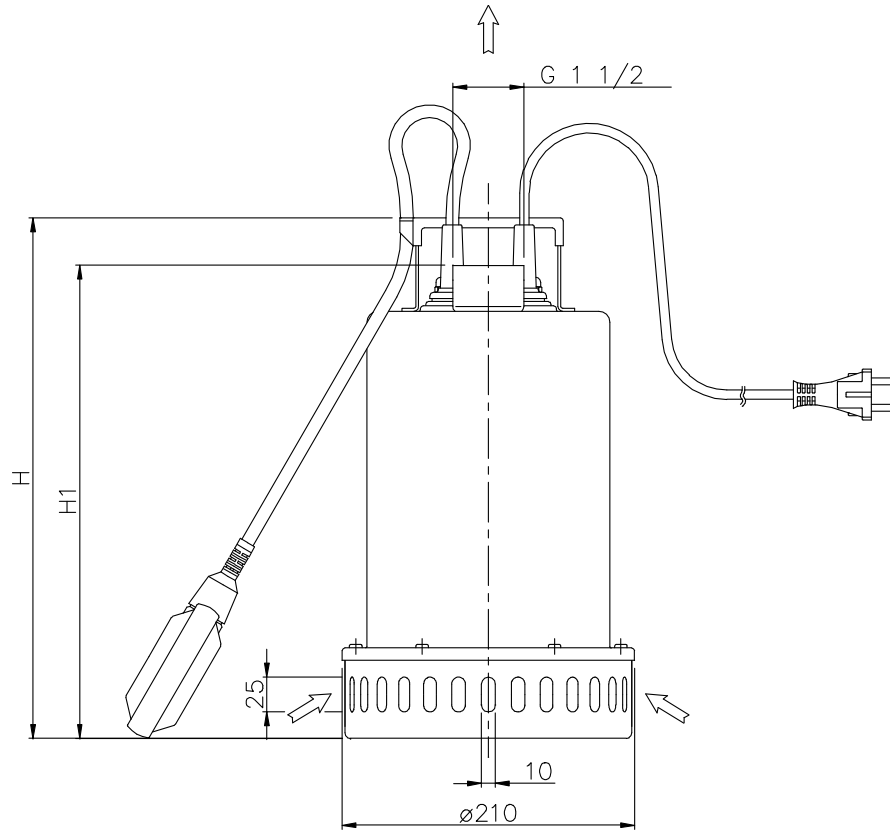
Type pumps		Ball Bearing	
Single Phase	Three Phase	Pump side	Fan side
BEST 2M	BEST 2	6203 ZZ	6202 ZZ
BEST 3M	BEST 3	6203 ZZ	6202 ZZ
BEST 4M	BEST 4	6203 ZZ	6202 ZZ
-	BEST 5	6203 ZZ	6202 ZZ

MECHANICAL SEAL



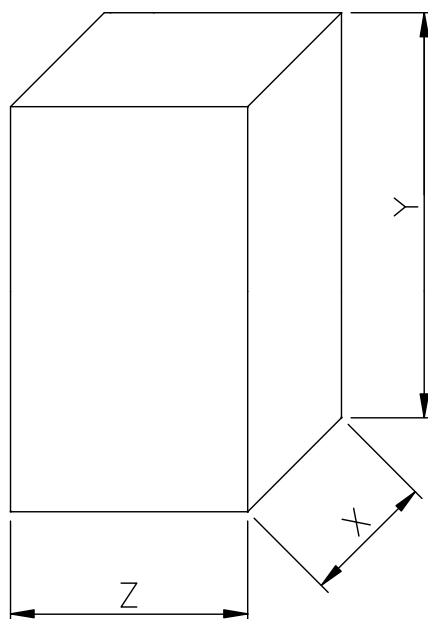
REF	PART NAME	MATERIAL
A	Rubber cup	NBR
B	Seat	Ceramic
C	Seal face	Carbon
D	Bellow	NBR
E	Spring	AISI 304
F	Bellow	NBR
G	Seal face	Silicon carbide
H	Seat	Silicon carbide
I	Rubber cup	NBR

PUMP



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

PACKING



Type pumps		Packing [mm]			Weight pump with paking [kg]	Weight pump with out paking [kg]
Single Phase	Three Phase	X	Y	Z		
BEST 2M	BEST 2	240	375	250	12,5	12
BEST 3M	BEST 3	240	375	250	13,2	12,7
BEST 4M	BEST 4	240	400	250	14,3	13,8
-	BEST 5	240	400	250	14	13,5

MOTOR DATA

Type pumps		Power		Capacitor Single Phase		Input [kW]		Full load current [A]		Locked rotor current [A]	
Single Phase	Three Phase	[kW]	[HP]	(F)	[Vc]	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase
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

INSTALLATION

