




**EBARA**

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**SPECIFICATIONS**

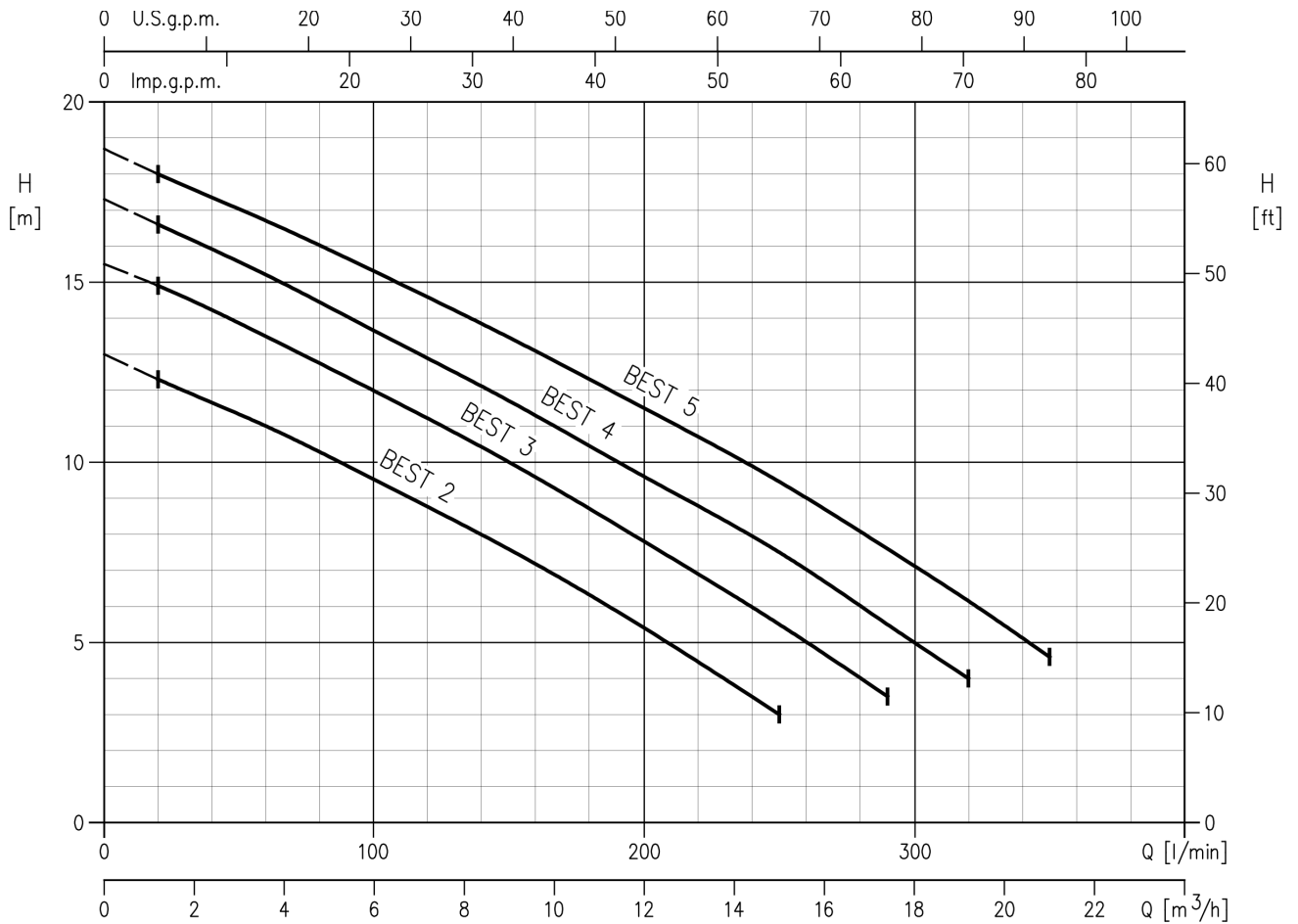
60Hz

Rev. B

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 152 (180 cc)
Applicable standard of test	ISO 9006:2012 - Grade 3B	

MOTOR		
Type	Submersible dry type	
	Single Phase	Three Phase
No. of Poles	2	
Rotation speed [min <sup>-1</sup> ]	≈ 3400	
Insulation Class	F	
Protection degree	IP X8	
Power rating	[kW]	0.55 ÷ 1.1
	[HP]	0.75 ÷ 1.5
Frequency [Hz]	60	
Voltage [V]	110-115 ±6% 220-230 ±6%	220/380 -6% +10%
Capacitor	Built in	-
Over load protection	Built in	-
Float Switch	Optional	-
Float Switch	material	H07RN-F
Cable	size	3G1
Casing material	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	

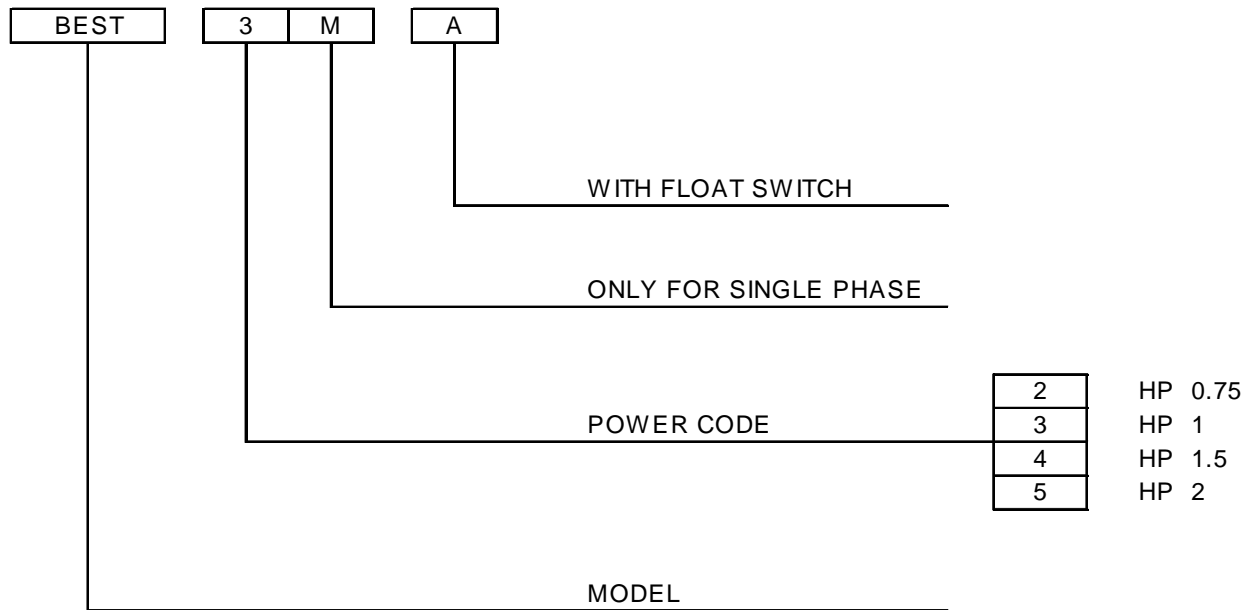
**PERFORMANCE RANGE**



**SELECTION CHART**

Pump type		Power		Q = Capacity											
				l/min	0	20	50	100	150	200	250	290	320	350	
Single phase	Three phase	[kW]	[HP]	m³/h	0	1,2	3	6	9	12	15	17,4	19,2	21	
H=Total manometric head in meters															
BEST 2M	BEST 2	0.55	0.75	13	12,3	11,4	9,5	7,6	5,4	3	-	-	-	-	-
BEST 3M	BEST 3	0.75	1	15,5	14,9	13,8	12,0	10	7,8	5,5	3,5	-	-	-	-
BEST 4M	BEST 4	1.1	1.5	17,3	16,6	15,5	13,7	11,7	9,6	7,5	5,5	4	-	-	-
-	BEST 5	1.5	2	18,7	18	17	15,3	13,5	11,5	9,5	7,6	6,2	4,6	-	-

**TYPE KEY**



**CURVES SPECIFICATIONS**

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

Tolerances according to ISO 9006:2012 - Grade 3B

The curves refer to effective speed of asynchronous motors at 60 Hz, 2 poles.

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)

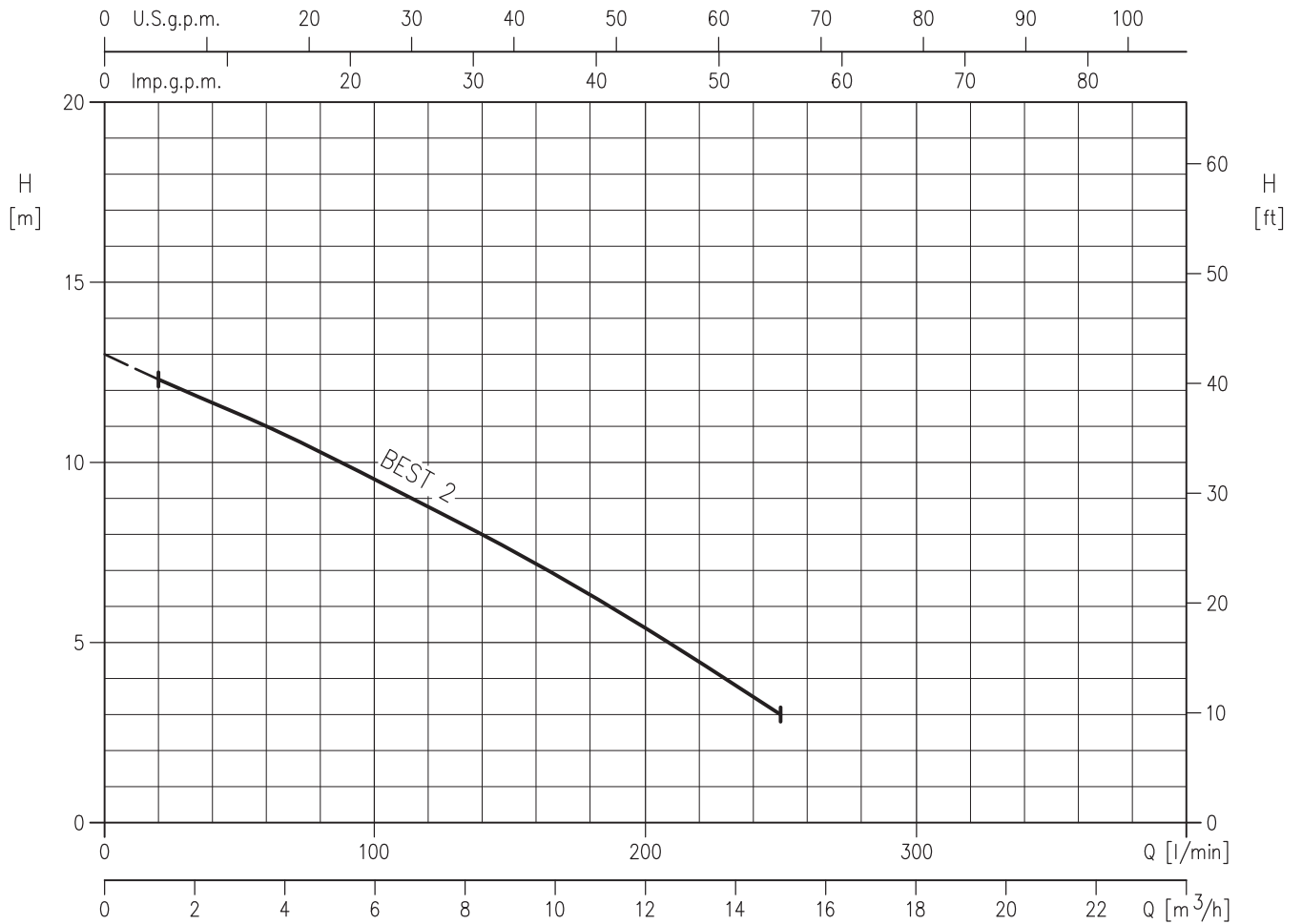
The continuous curves indicate the recommended working range. The dotted curve is only a guide.

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:

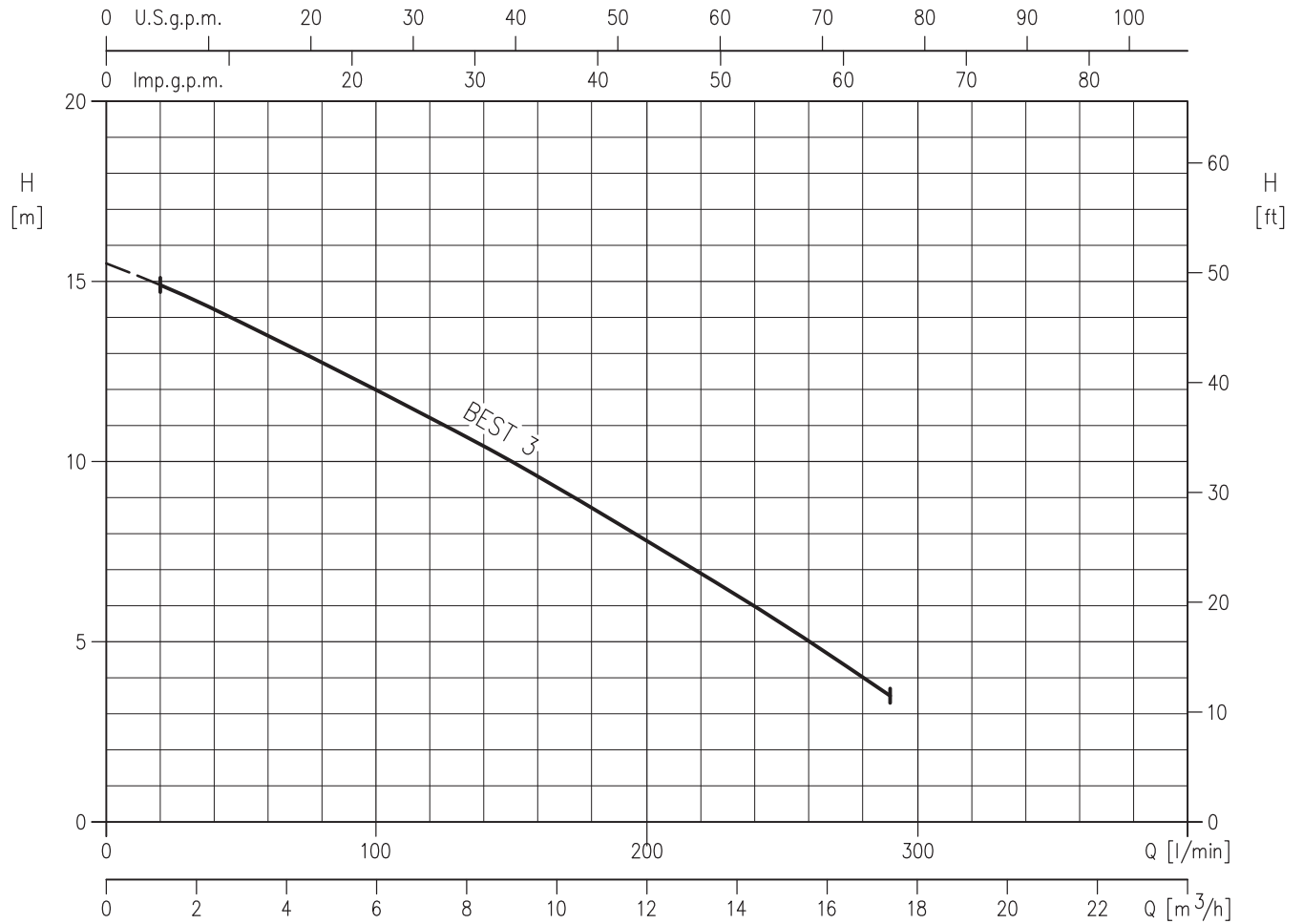
- Q = volume flow rate
- H = total head

**BEST 2 (0.55 kW) – impeller diameter = 97 mm**



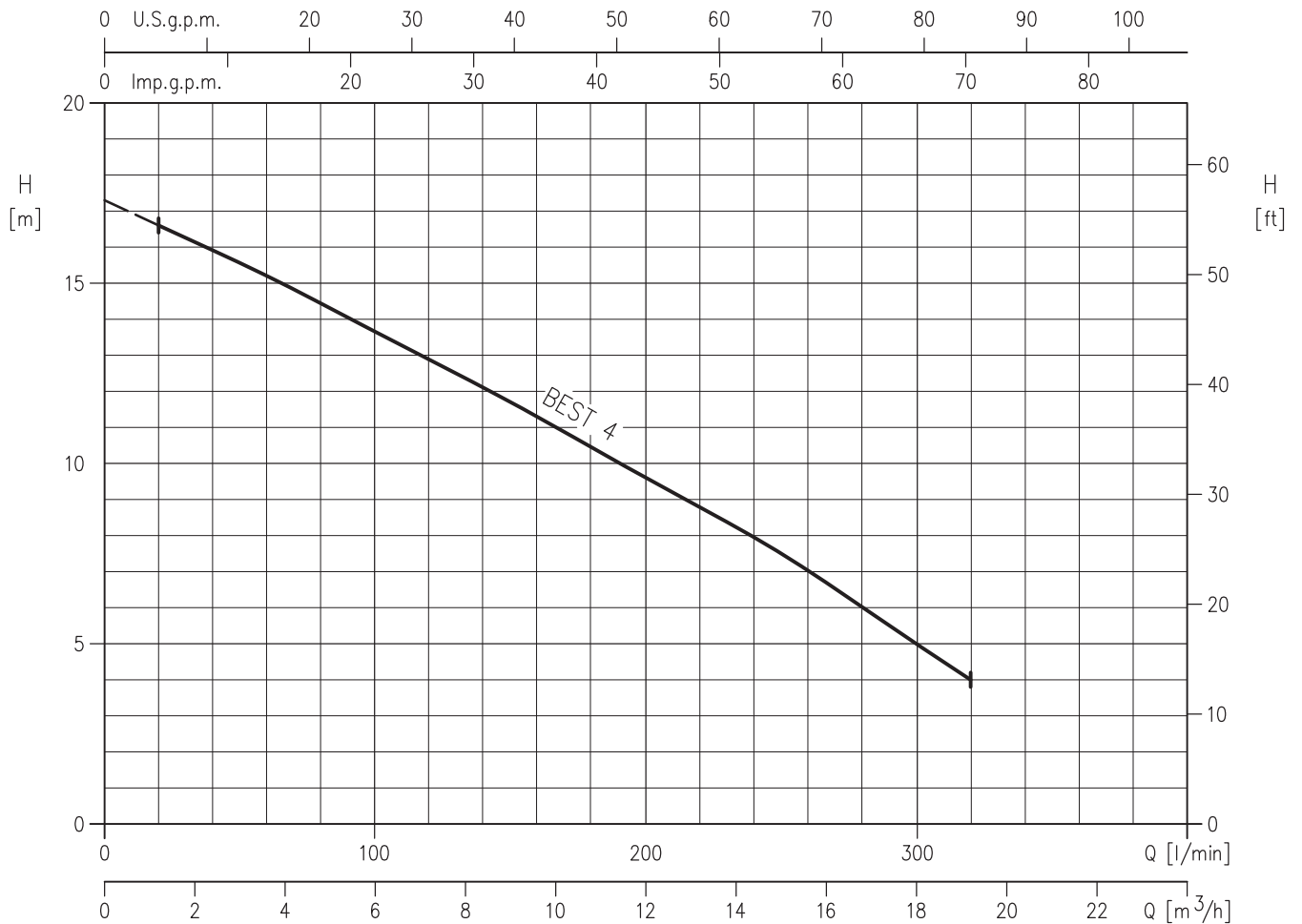
Rotation speed:  $\approx 3400\text{min}^{-1}$   
Test standard: ISO 9006:2012 - Grade 3B

**BEST 3 (0.75 kW) – impeller diameter = 108 mm**



Rotation speed:  $\approx 3400\text{min}^{-1}$   
Test standard: ISO 9006:2012 - Grade 3B

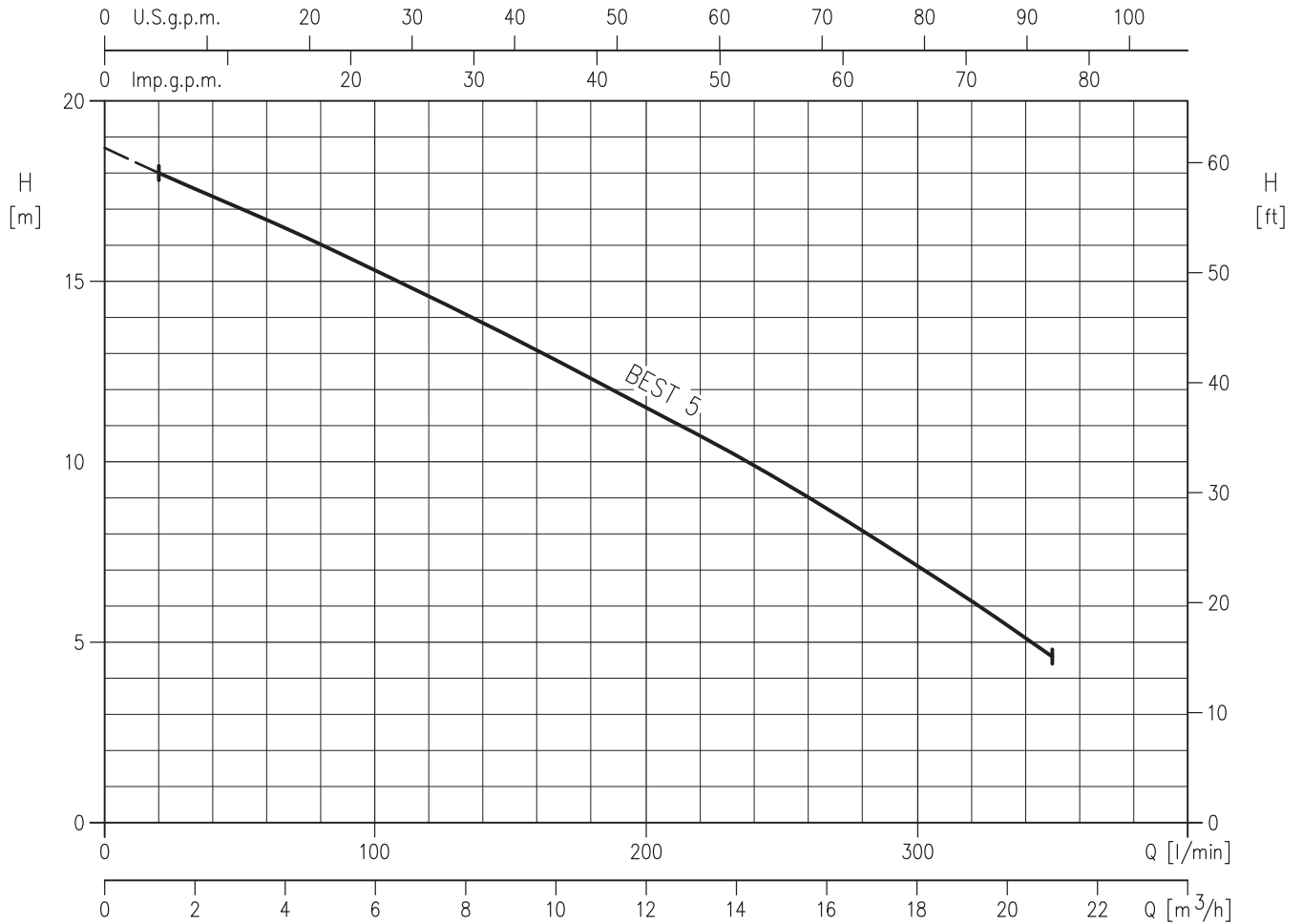
**BEST 4 (1.1 kW) – impeller diameter = 108 mm**



Rotation speed:  $\approx 3400 \text{ min}^{-1}$   
Test standard: ISO 9006:2012 - Grade 3B

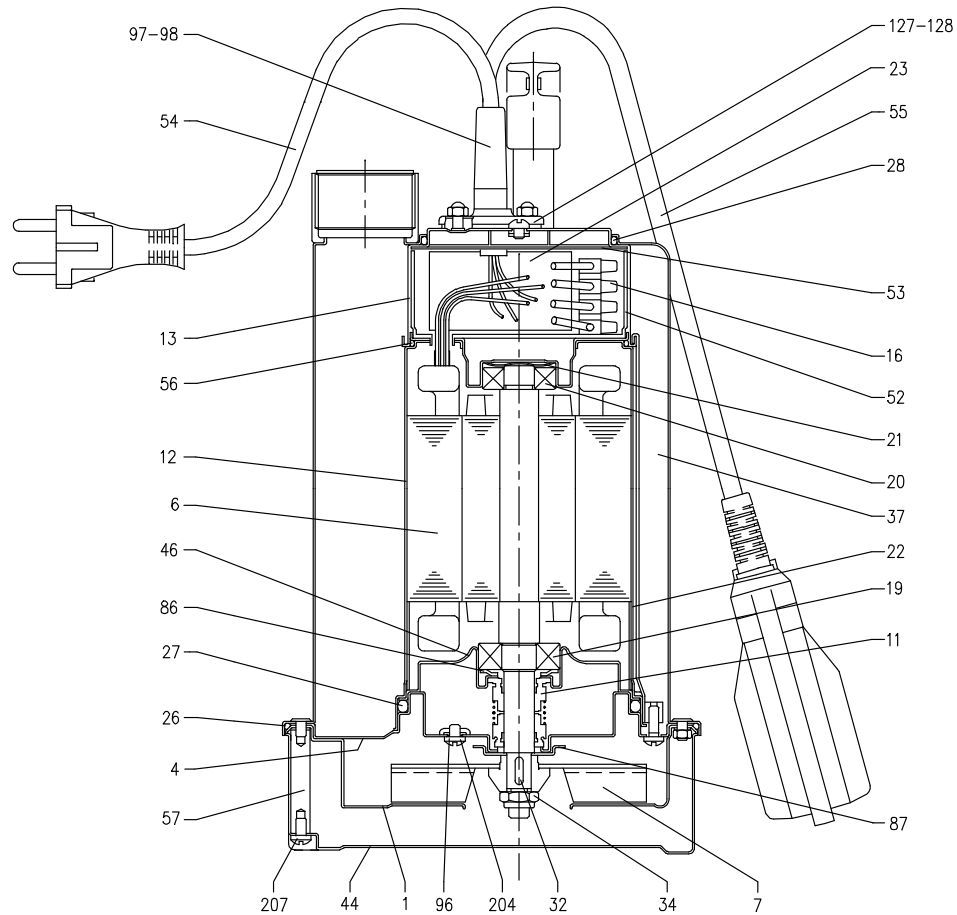


**BEST 5 (1.5 kW) – impeller diameter = 108 mm**



Rotation speed:  $\approx 3400 \text{ min}^{-1}$   
Test standard: ISO 9006:2012 - Grade 3B

**SECTIONAL VIEW**



N°	PART NAME	MATERIAL	Q.TY
1	Volute	AISI 304	1
4	Motor bracket	AISI 304	1
6	Shaft with rotor	AISI 303	1
7	Impeller	AISI 304	1
11	Mechanical seal	NBR	2
12	Motor frame with stator	-	1
13	Motor cover	AISI 304	1
16	Terminal	-	1
19	Pump side ball bearing	-	1
20	Fan side ball bearing	-	1
21	Adjusting ring	Steel C70	1
22	Tie rod	AISI 304	3
23	Capacitor [2]	-	1
26	"O" Ring	NBR	1
27	"O" Ring	NBR	1
28	"O" Ring	NBR	1
32	Key	AISI 304	1
34	Impeller nut	AISI 304	1

N°	PART NAME	MATERIAL	Q.TY
37	Pump casing	AISI 304	1
44	Strainer	AISI 304	1
46	Bearing housing	AISI 304	1
52	Terminal insulating box	PA66 glass fibre reinforced class V-0	1
53	Terminal insulating cover	PA66 class V-0	1
54	Power cable	-	1
55	Float switch [1]	-	1
56	"O" Ring	NBR	1
57	Bolt	AISI 303	3
86	Washer	AISI 304	1
87	Impeller ring	AISI 304	1
96	"O" Ring	NBR	3
97	Cable connector [1]	NBR	1
98	Cable connector	NBR	1
127	Cable connector [1]	AISI 304	1
128	Cable connector	AISI 304	1
204	Screw	Stainless steel A2 UNI 7323	3
207	Screw	Stainless steel A2 UNI 7323	3

[1] Only for version Single phase with float switch

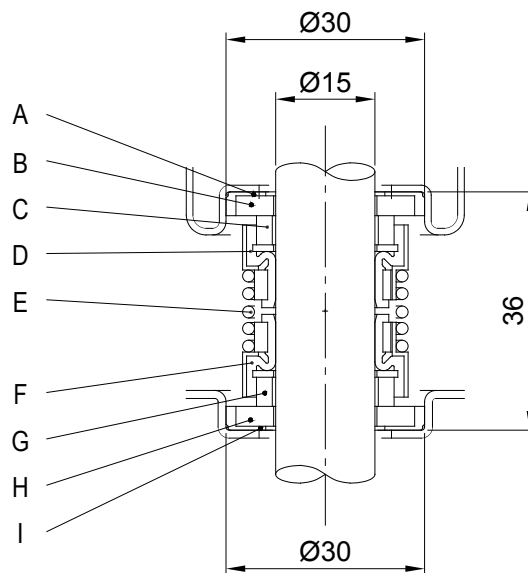
[2] Only for Single phase

**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

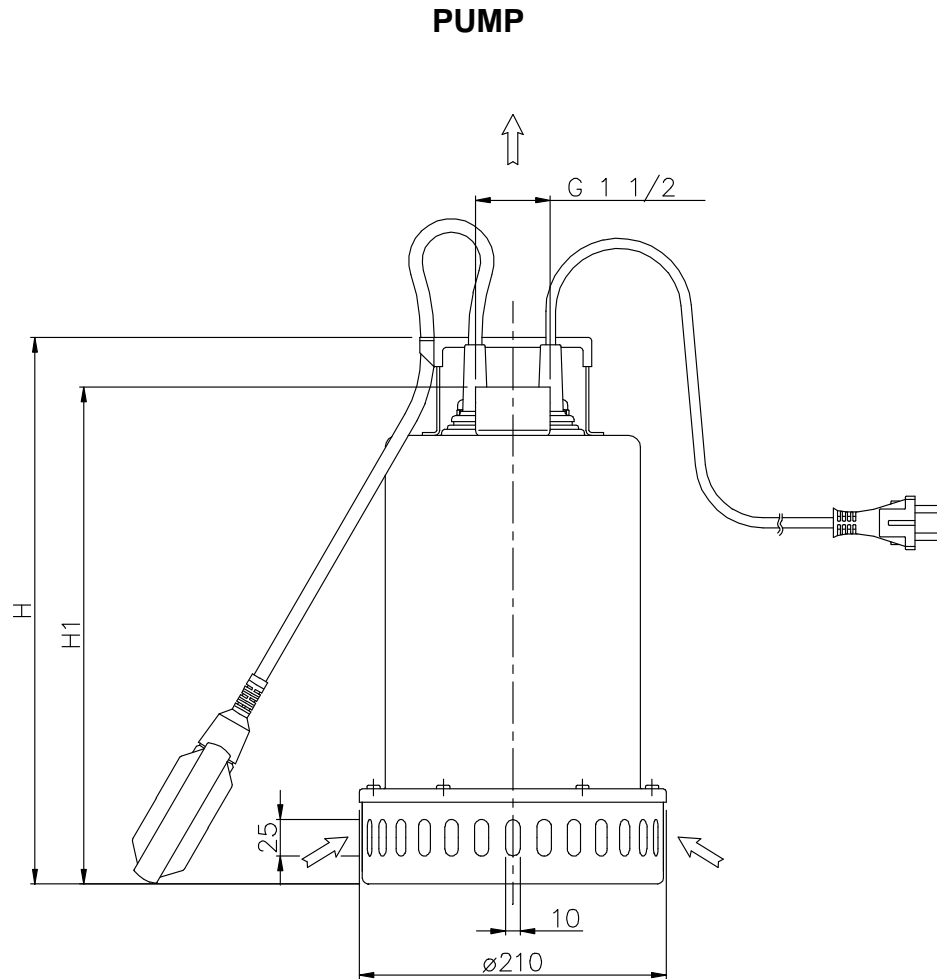
**MECHANICAL SEAL**

MOTOR SIDE



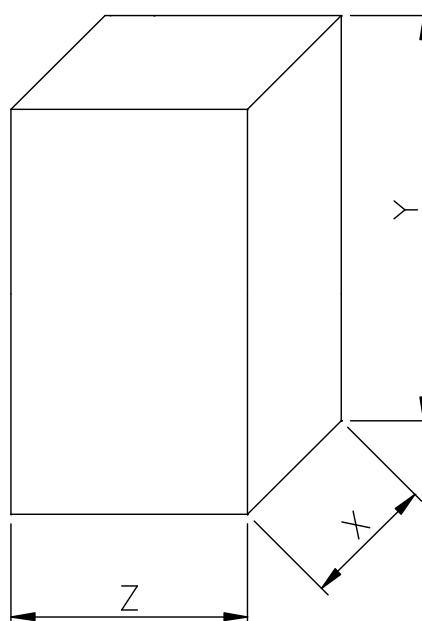
IMPELLER SIDE

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 type	Dimensions [mm]		Weight [kgf]		
	H	H1	[1-] Automatic (With float switch)	Manual	[3-]
BEST 2	352	315	12	11,5	11,5
BEST 3	352	315	12,7	12,2	12,2
BEST 4	377	340	13,8	13,3	13,3
BEST 5	377	340	-	-	13,3

**PACKING**



Pump type	Packing [mm]			Weight [kgf]		
	X	Y	Z	[1~] Automatic (With float switch)	Manual	[3~]
BEST 2	227	397	250	12,9	12,4	12,4
BEST 3	227	397	250	13,6	13,1	13,1
BEST 4	227	397	250	14,7	14,2	14,2
BEST 5	227	397	250	-	-	14,2

### MOTOR DATA

Pump type		Power		Capacitor				Input [kW]		Full load current [A]				Locked rotor current [A]			
Single Phase	Three Phase	[kW]	[HP]	110-115 V		220-230 V		Single Phase	Three Phase	Single Phase		Three Phase		Single Phase		Three Phase	
				[μF]	[V]	[μF]	[V]	Phase	Phase	110-115 V	220-230 V	220 V	380 V	110-115 V	220-230 V	220 V	380 V
BEST 2M	BEST 2	0,55	0,75	56,5	250	16	450	0,99	0,83	10	4,8	3	1,7	-	-	54,7	31,6
BEST 3M	BEST 3	0,75	1,0	31,5	250	16	450	1,3	1,2	12,1	6	3,8	2,2	48	24	61,5	35,5
BEST 4M	BEST 4	1,1	1,5	-	-	25	450	1,48	1,4	-	7,2	4,8	2,8	-	33,7	30,5	17,6
-	BEST 5	1,5	2,0	-	-	-	-	-	1,68	-	-	-	3,2	-	-	30,5	17,6

INSTALLATION

