HYDROLYS.FR

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50Hz

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SPECIFICATION

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PUMP			
Liquid Handled	Type of liquid		Clear water (Clean water for MS version)
	Max temperature	[℃]	50
	Max solids size	[mm]	10 20 (for Vortex version)
Maximum immersion		[m]	2 (with power cable length 5 m) 5 (with power cable length 10 m)
Construction	Impeller		Semi-open centrifugal type (BEST ONE) Vortex type (BEST ONE VOX)
	Shaft seal type		Oil lubricated mechanical seal (pump side) + lip seal (motor side)
	Bearing		Sealed ball bearing
Pipe Connection	Suction		Strainer
	Discharge nozzle	[inch]	G1¼": UNI ISO 228
Material	Pump casing		AISI 304
	Impeller		AISI 304
	Shaft seal		Mechanical seal: Ceramic/Carbon/NBR Lip seal: NBR
	Casing cover		AISI 304
	Shaft		AISI 303 + AISI 303 ceramic coated shaft sleeve
	Lubricating liquid		White mineral oil: Esso Marcol 152
Applicable standard of test			ISO 9906:2012 – Grade 3B

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]	0.25	
		[HP]	0.33	
Frequency		[Hz]	50	
Voltage		[V]	230 ±10%	400 ±10%
Capacitor			Built in	-
Over load protection			Built in	-
Casing material			AISI 304	
Switch	float		MA version (no maintenance required)	-
	magnetic		MS version (maintenance required)	-
Float/magnetic switch cable	material		H07RN-F	-
	size		3G1	-
Power cable	length	[m]	5 (only for internal usage); 10	
	material		H05RN-F	H07RN-F
	size		3G0.75	4G1
Cable entry			Cable Gland	

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BEST ONE

SELECTION CHART

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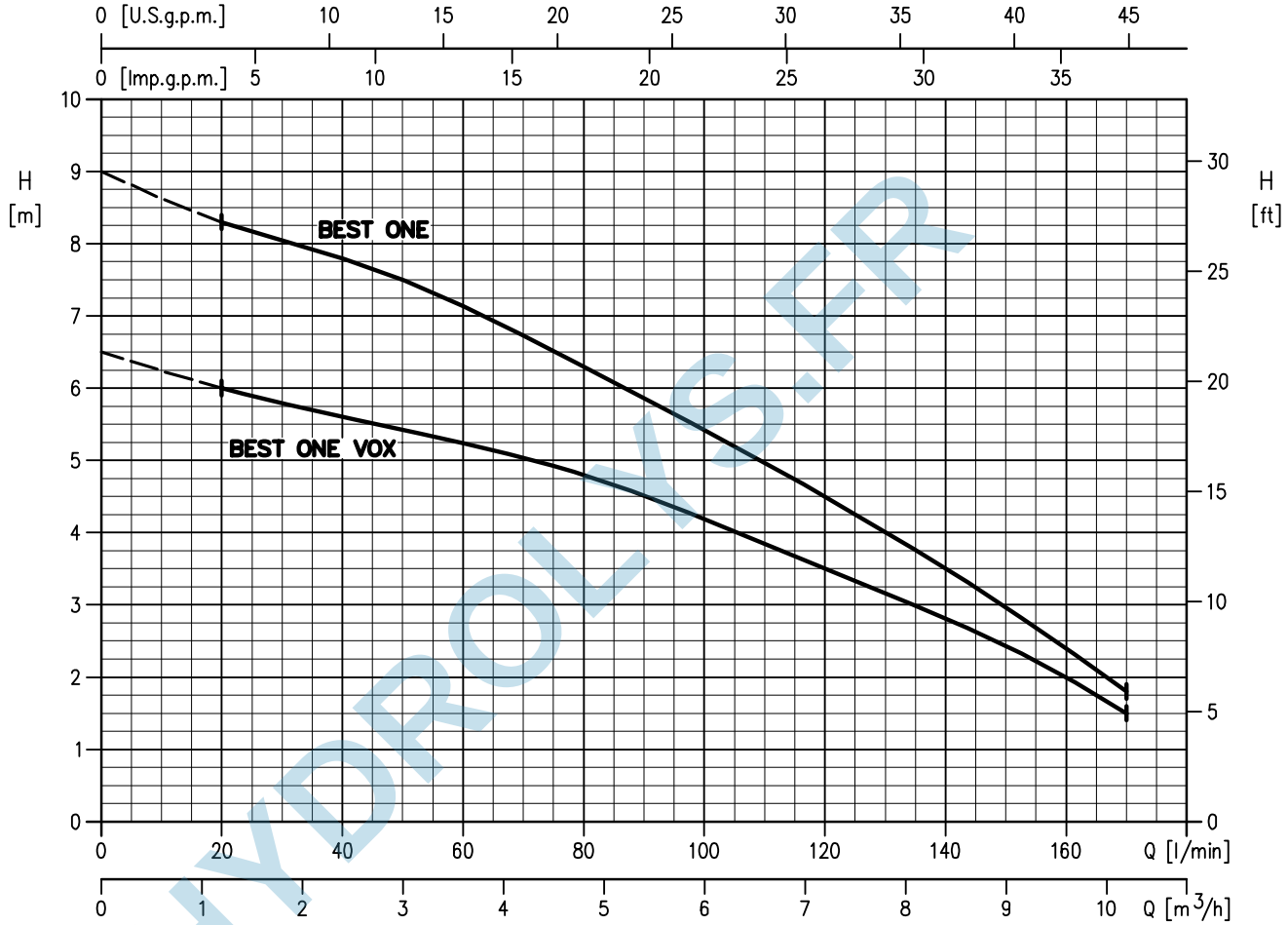
PERFORMANCE CURVE



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SELECTION CHART

Pump Type		Power		Q=Capacity						
				l/min 0	20	40	80	120	160	170
Single Phase	Three Phase	[kW]	[HP]	m³/h 0	1,2	2,4	4,8	7,2	9,6	10,2
				H=Total manometric head in meters						
BEST ONE M	BEST ONE	0,25	0,33	9,0	8,3	7,8	6,3	4,5	2,4	1,8
BEST ONE VOX M	BEST ONE VOX	0,25	0,33	6,5	6,0	5,6	4,8	3,5	2,0	1,5

PERFORMANCE CURVE 50Hz

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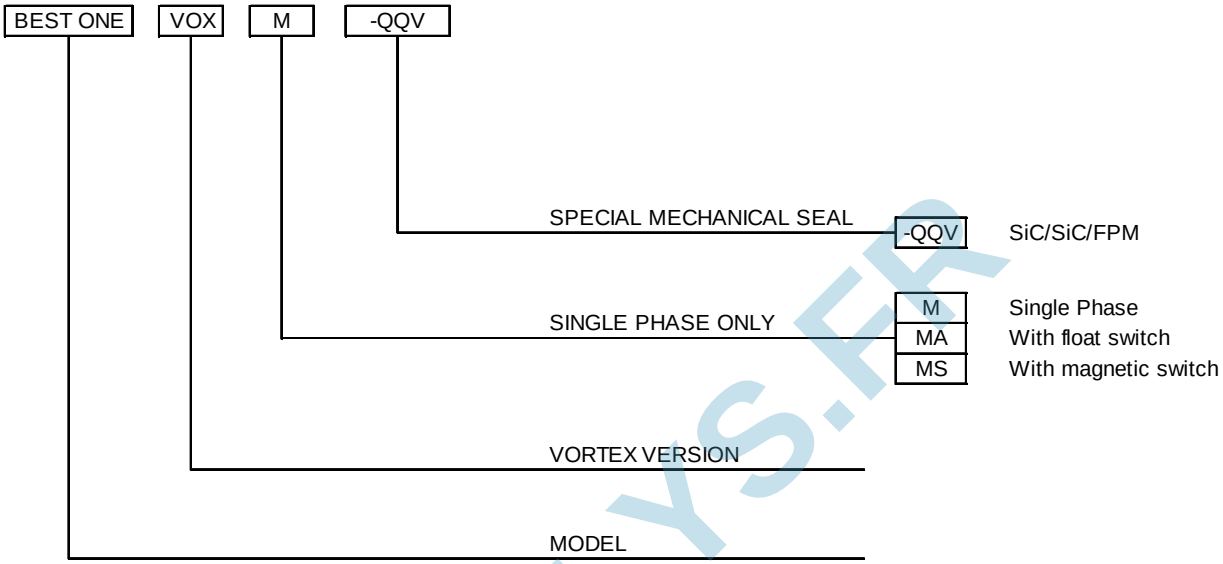
TYPE KEY



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PERFORMANCE CURVE SPECIFICATIONS

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

Tolerances according to ISO 9906:2012 – Grade 3B
The curves refer to effective speed of asynchronous motors at 50 Hz, 2 poles.
Measurements were carried out with clean water at 20℃ of temperature and with a kinematic viscosity of $\nu = 1\ mm^2/s$ (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

PERFORMANCE CURVE

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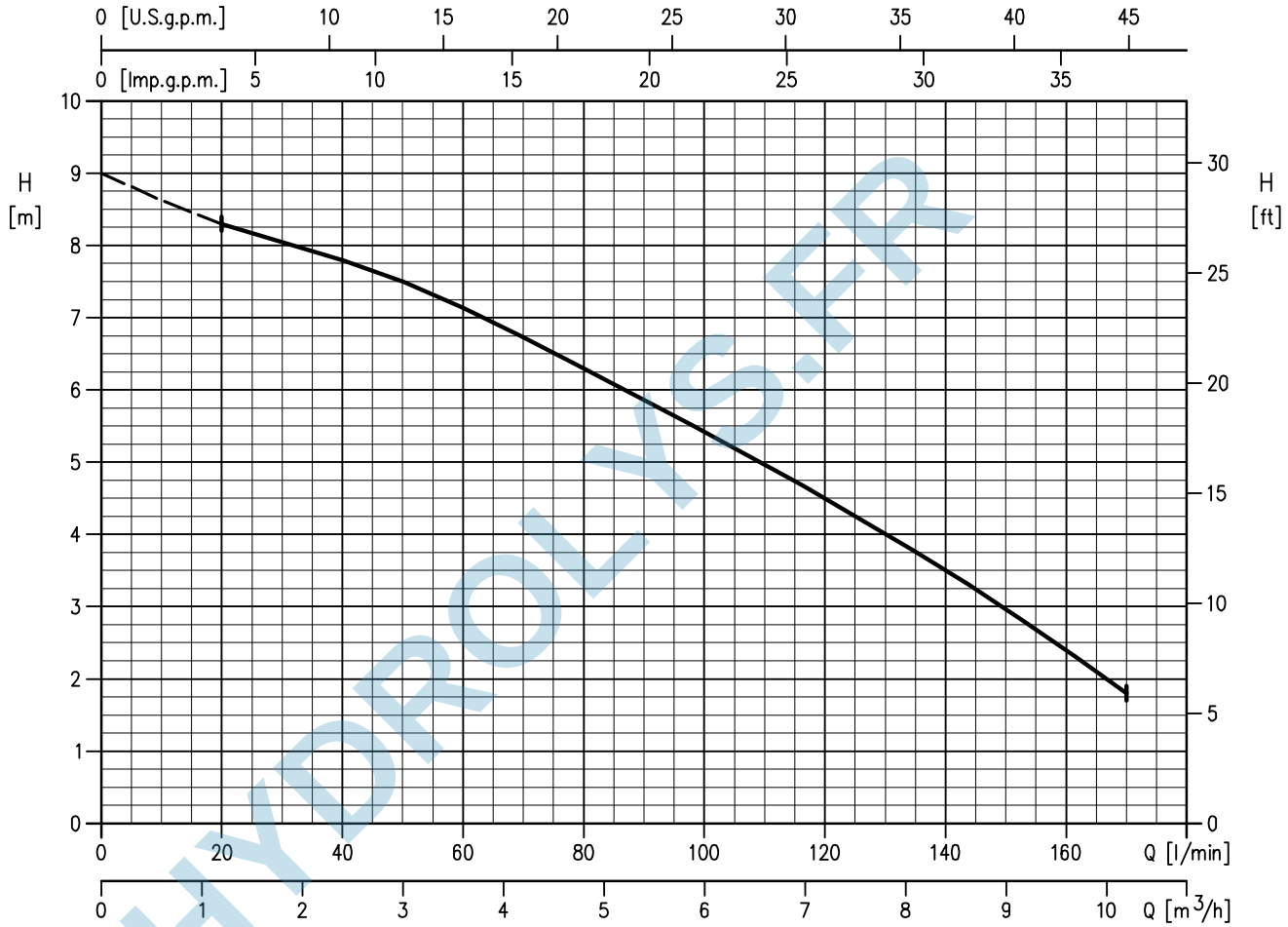
BEST ONE (0.25 kW) – impeller diameter = 85 mm



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Rotation speed ≈ 2800 min^{-1}
Test standard: ISO 9906:2012 – Grade 3B

PERFORMANCE CURVE

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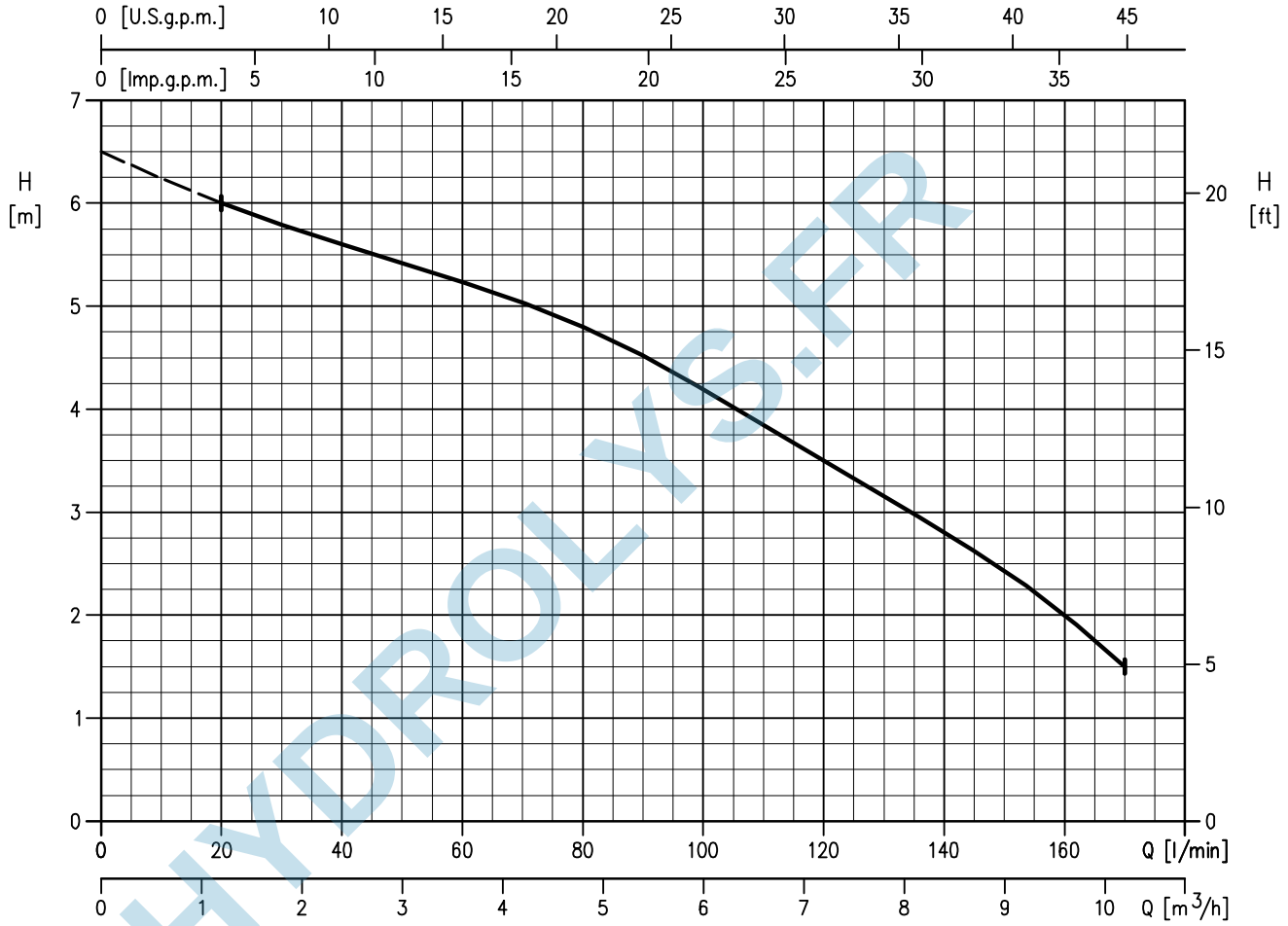
BEST ONE VOX (0.25 kW) – impeller diameter = 85 mm



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Rotation speed ≈ 2800 min^{-1}
Test standard: ISO 9906:2012 – Grade 3B

CONSTRUCTION

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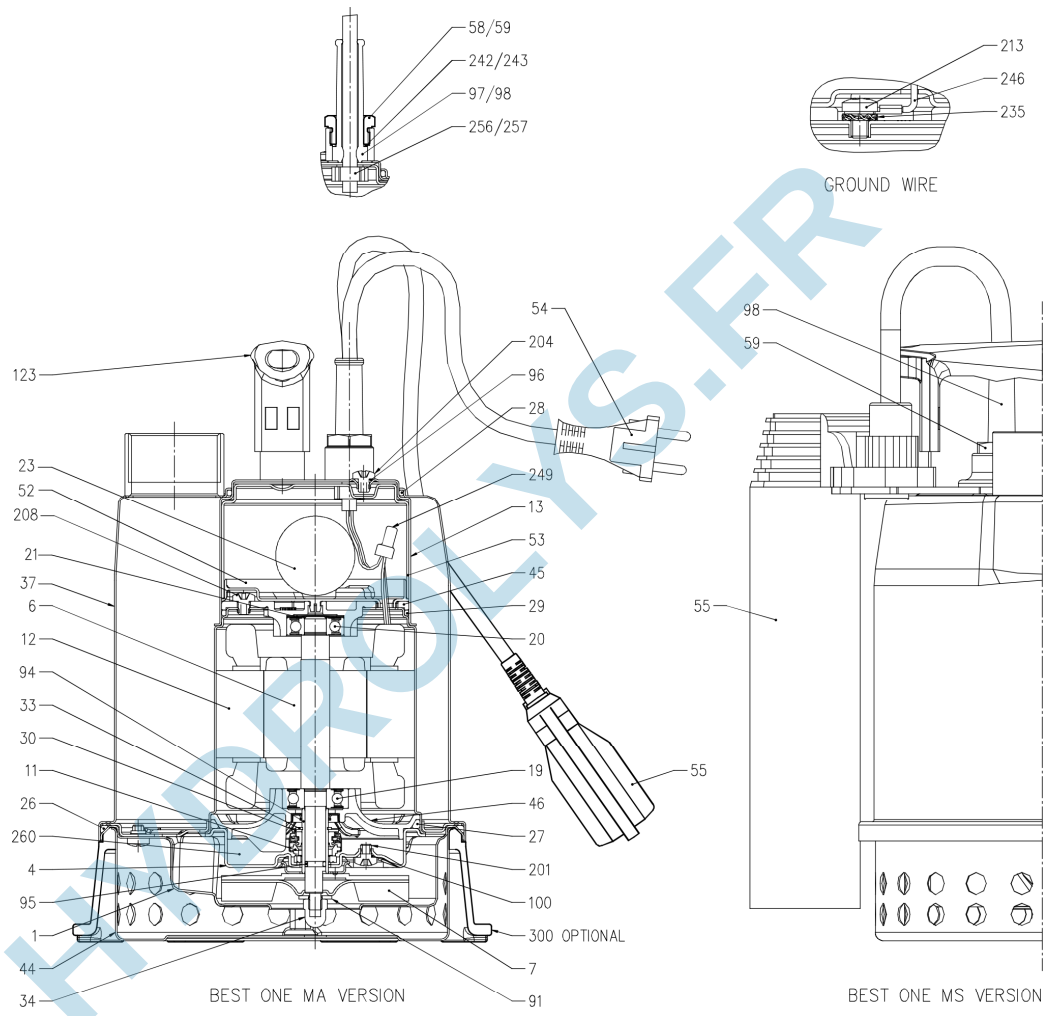
SECTIONAL VIEW DRAWING



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CONSTRUCTION

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SECTIONAL VIEW TABLE

N°	PART NAME	MATERIAL	DIMENSIONS	STANDARD	Q.TY
1	Suction cover	EN 14301(AISI 304)	-	-	1
4	Casing cover	EN 14301(AISI 304)	-	-	1
6	Shaft with rotor	EN 14305 (AISI 303)	-	-	1
7	Impeller	EN 14301(AISI 304)	-	-	1
11	Mechanical seal [1]	[1]	[1]	-	1
12	Motor frame with stator	EN 14301(AISI 304)	-	-	1
13	Motor cover	EN 14301(AISI 304)	-	-	1
19	Lower ball bearing	-	-	-	1
20	Upper ball bearing	-	-	-	1
21	Adjusting ring	-	-	-	1
23	Capacitor [2]	-	-	-	1
26	O-ring	NBR	159,5x3	-	1
27	O-ring	NBR	88,5x3,53	-	1
28	O-ring	NBR	75,87x2,62	-	1
29	O-ring	NBR	75,87x2,62	-	1
30	Washer	EN 14301(AISI 304)	12x21x1	-	1
33	Seeger ring	Carbon steel TC80	12	UNI 7435	1
34	Impeller nut	A2 - 70 UNI 7323	M 6	UNI 5721	1
37	Pump casing	EN 14301(AISI 304)	-	-	1
44	Strainer	EN 14301(AISI 304)	-	-	1
45	Upper bearing housing	EN 1706 AC-46000 D	-	-	1
46	Lower bearing housing	EN 1706 AC-46000 D	-	-	1
52	Terminal insulating base	PA 6 class V-0	-	-	1
53	Terminal insulating box	PA 6 class V-0	-	-	1
54	Power cable	-	-	-	1
55	Switch [3] [4]	-	-	-	1
57	Spacer	EN 14301(AISI 304)	-	-	2
58	Power cable connector	OT 58 UNI 5705-65 Nickel-plated Brass	-	-	1
59	Switch cable connector [3]	OT 58 UNI 5705-65 Nickel-plated Brass		-	1
91	Washer	EN 14301(AISI 304)	-	-	1
92	Lip seal	NBR	22x12x4	-	1
94	Shaft sleeve	EN 14305 (AISI 303) ceramic coated	-	-	1
95	O-ring	NBR	6,07x1,78	-	1
96	O-ring	NBR	4,48x1,78	-	1
97	Power cable connector	NBR	-	-	1
98	Switch cable connector [3]	NBR	-	-	1
100	O-ring	NBR	4,48x1,78	-	1
123	Handle	PP	-	-	1
200	Screw	A2 - 70 UNI 7323	M 5x6	UNI 7687	4
201	Screw	A2 - 70 UNI 7323	M 5x6	UNI 7687	1
204	Screw	A2 - 70 UNI 7323	M 5x6	UNI 7687	1
206	Screw	A2 - 70 UNI 7323	M 5x6	UNI 7687	3
207	Screw	A2 - 70 UNI 7323	M 5x6	UNI 7687	2
208	Screw	A2 - 70 UNI 7323	M 5x6	UNI 7687	3
213	Screw	A2 - 70 UNI 7323	M 4x6	UNI 7687	1
232	Washer	PA6	5,5x10x1	-	1
235	Washer	Zinked Steel	4	UNI 8842	1
242	Washer	EN 14301(AISI 304)	13,4x15,9x1	-	1
243	Washer [3]	EN 14301(AISI 304)	13,4x15,9x1	-	1
246	Ground wire	-	-	-	1
256	Strain relief	-	-	-	1
257	Strain relief [3]	-	-	-	1
260	Oil	Esso Marcol 152	-	-	40 cc
300	Minimum suction system [5]	Thermoplastic elastomer vulcanizate	-	-	-

[1] See Mechanical Seal table at page.302

[2] Only for single phase

[3] Only for switch version

[4] It could be float or magnetic type

[5] See pag.700 (OPTIONAL)

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CONSTRUCTION

50Hz

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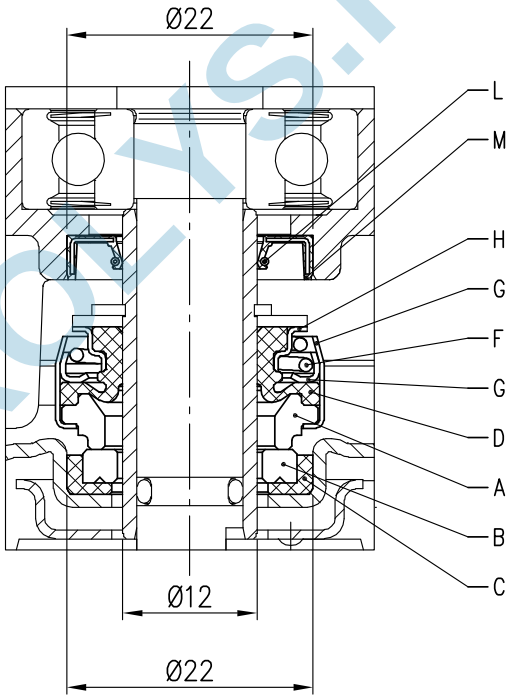
BEARINGS

Type pumps		Ball Bearing	
Single Phase	Three Phase	Lower side	Upper side
BEST ONE M	BEST ONE	6200 ZZ C3	6000 ZZ C3

MECHANICAL SEAL



REF	PART NAME	MATERIAL standard	MATERIAL QQV
A	Rotary seal ring	Carbon graphite	SiC
B	Stationary seal ring	Ceramic	SiC - Q6 (*)
C	Gasket	NBR	FPM
D	Bellows	NBR	FPM
F	Self driving spring	EN 1.4301 (AISI 304)	
G	Frame	EN 1.4301 (AISI 304)	
H	Retainer ring	EN 1.4301 (AISI 304)	
L	Spring	EN 1.4318 (AISI 302)	
M	Lip	NBR	

(*) Special grade of SiC with microporosities filled with graphite
(**) Only for model BEST ONE VOX MA

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DIMENSIONS AND WEIGHT

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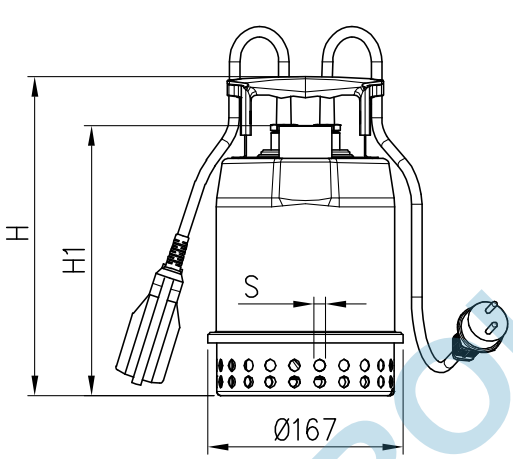
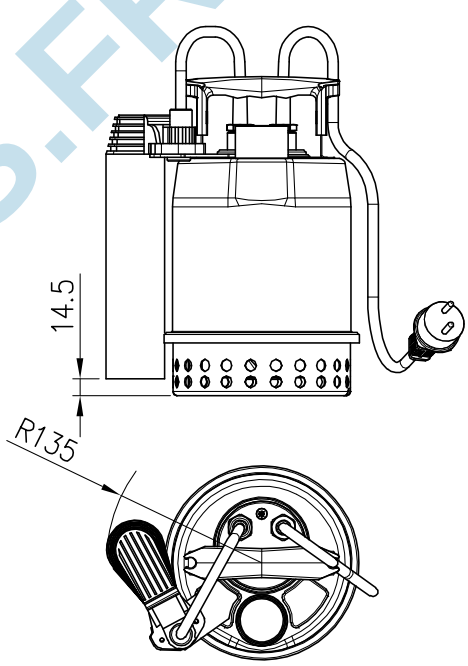
PUMP

BEST ONE MA
BEST ONE VOX MA



BEST ONE MS



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Pump Type	Dimensions [mm] H	H1	S	Weight [kgf]
BEST ONE	273	231	10	4.3
BEST ONE M				4.4
BEST ONE MA				4.6
BEST ONE MS				4.8
BEST ONE VOX	304	262	20	4.4
BEST ONE VOX M				4.5
BEST ONE VOX MA				4.7

DIMENSIONS AND WEIGHT

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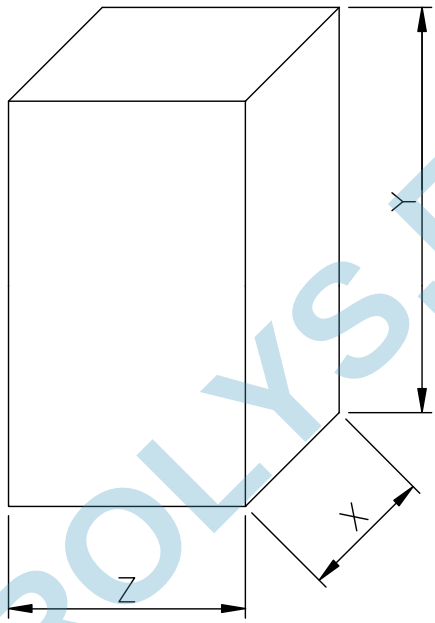
PACKING



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Pump Type	Dimensions [mm]			Weight
	X	Y	Z	[kgf]
BEST ONE	180	330	220	4.8
BEST ONE M				4.9
BEST ONE MA				5.1
BEST ONE MS				5.3
BEST ONE VOX				4.9
BEST ONE VOX M				5.0
BEST ONE VOX MA				5.2

TECHNICAL DATA 50Hz

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MOTOR DATA

Pump Type		Power		Capacitor Single Phase		Input [kW]		Full load current [A]		Locked rotor current [A]	
Single Phase	Three Phase	[kW]	[HP]	[µF]	[Vc]	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase
BEST ONE M	BEST ONE	0.25	0.33	8	450	0.51	0.47	2.3	0.8	5.8	2.7
BEST ONE VOX M	BEST ONE VOX	0.25	0.33	8	450	0.50	0.44	2.2	0.8	5.6	2.7

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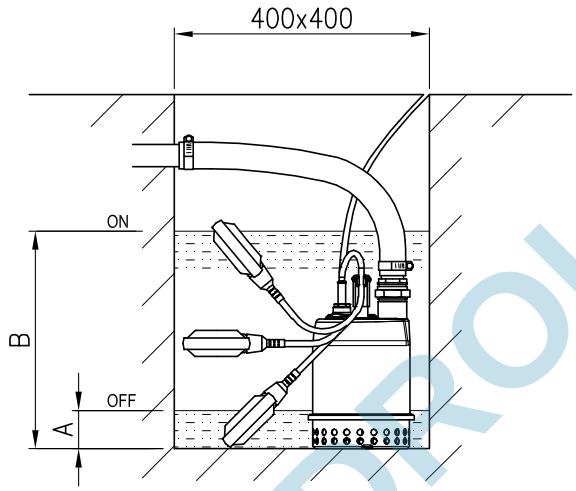
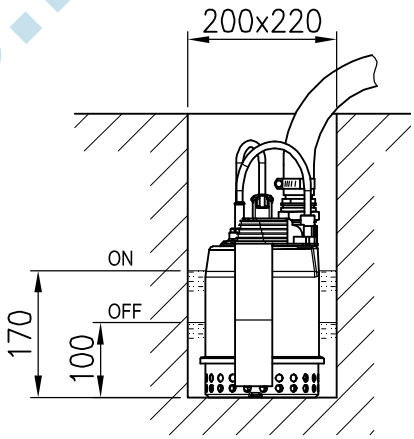
INSTALLATION

BEST ONE MA
BEST ONE VOX MA
(With float switch)



Pump Type	A	B
BEST ONE MA	110	305
BEST ONE VOX MA		330

BEST ONE MS
(With magnetic switch)



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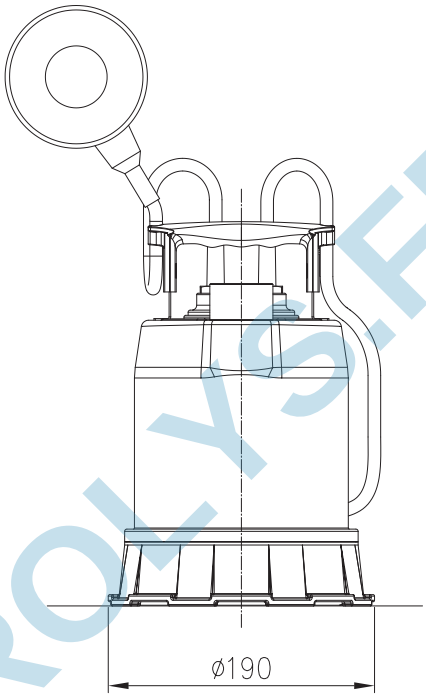
MINIMUM SUCTION SYSTEM



LEVEL	
Minimum starting suction level	10 mm
Minimum suction level capability	3 mm

COMPATIBILITY				
Type pumps	Version			
	1~			3~
	M	MA	MS	
BEST ONE	✓	✓	×	✓
BEST ONE VOX	×	×	*	×

* This model don't exist

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