Looking ahead,
going beyond expectations

Ahead Beyond

EBARA

BSM - Submersible motor

Databook 50/60Hz

General information

EBARA Submersible Motors,
which are winded with PE2+PA
insulated wires.

General features

- High quality PE2+PA winding wires
- CCW direction of rotation
- Our motors can be operated horizontally
- Availability to be operated by Soft-Starter
- Flange with NEMA standards
- Water coolant system
- Stainless steel shaft
- Our rewindable motors provides long service life
- High efficiency provides operation cost savings
- Variable operation revolutions by frequency convertor over 30Hz
- Customized production option
- Optional high corrosion resistive materials (AISI 304/AISI 316/Duplex/Bronze)
- Standard voltage 380/460V - 50/60Hz (Allowable voltage tolerance %10)

Main features

- Corrosion Resistant Construction
- Enhanced Cooling Properties

Type key

BSM **10** / **250**

Motor power (HP)

Motor diameter [inch]

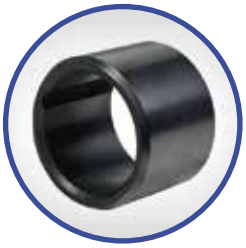
Motor type

Pressure Balancing Checkvalve

Checkvalve controls the pressure changes inside the motor. When the pressure increases, it throws water out of the motor. When the pressure drops, it filtrates the water inside well and gets it inside the motor by the help of this checkvalve to balance the pressure inside. Thus why pressure differences inside motor never causes membrane under motor to blow up.

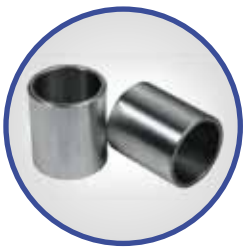
Water Lubricated Radial Carbon Bearings

Radial carbon bearings, which have channels in its structure that makes it possible to get lubricated by water easily, provides precise bearing of rotor shaft at up and down.



Chrome-plated Bearing Collet

Chrome-plated and precisely machined bearing collets which are located in the radial bearings operating area, have great importance for bearing the rotor.



Adjustment Screw

Standard shaft height can be precisely adjusted by the adjustment screw on the thrust bearing base.

Slinger (Sand Guard)

Slinger helps to prevent the sand inside the water of the well entering in mechanical seal and through mechanical seal to inside of the motor.

PT100 Overheating Protection

By connecting the PT100 thermal sensors to the slot that is standardly placed on upper bearing body, motor temperature can be easily measured.

Up-Thrust Ring

Provides safe operation conditions for motor by absorbing Up-Thrust loads with its machined surface and water channels on it.

Membrane

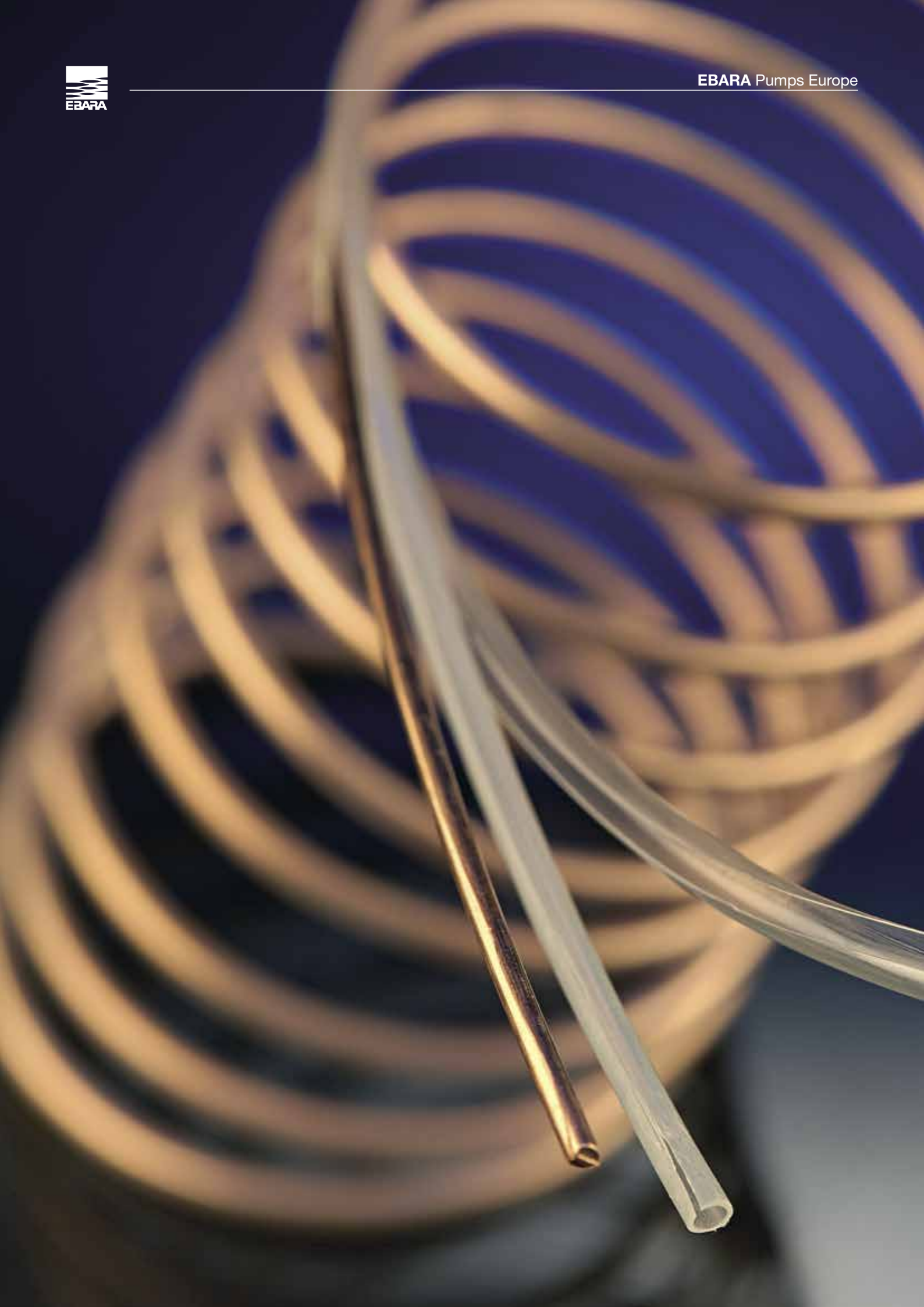
Membrane minimizes the expansion pressure that is caused by heating of cooling water's inside the motor

Cable Connection

Preventing the water inside the motor to run through the cable and reach connection parts of power cables by specially designed cable seals.

Heavy Duty Bearings With High Thrust Capacity

Heavy duty bearings provides the option to revolve both sides, has the capacity to carry high thrust load.



PE2+PA

A standard of BSM Motors

Our submersible motors get their power from the PE2+PA winding wire used as standard. This wire, consisting of a single copper conductor, has a very high insulation resistance. PE2 (Polyethylene) provides electrical isolation, PA (Polyamide) provides mechanical protection. Increased heat resistance is achieved by cross-linking of polyethylene.

At the same time it ensures trouble-free operation and a long service life of the motors for many years.

Longer Life

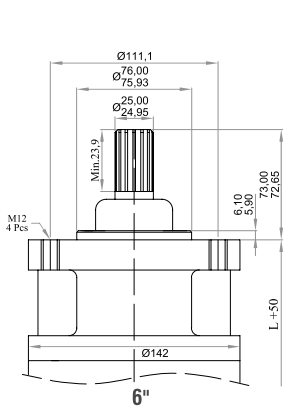
High resistance against voltage fluctuation

Gives more safety factor than standard motors

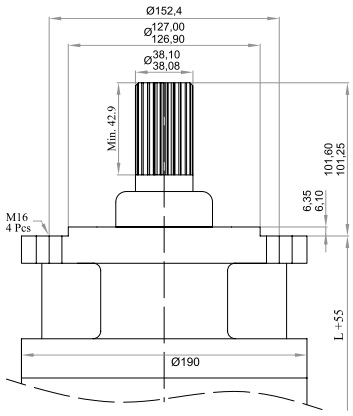
Technical Data

Tensile Strength	Standard: IEC 60811-1-1	23°C (±5)	≥ 10 N/mm²
Elongation	Standard: IEC 60811-1-1	23°C (±5)	≥ %100
Dielectric constant	Standard: DIN 53483	20°C / 800 Hz	2,3
Specific insulation resistance	Standard: IEC 60093	20°C	10 Ω cm
Dielectric breakdown strength	Standard: DIN VDE 0303-21	20°C/50 Hz	70 kV/mm
Tensile strength after aging		80°C / 7x24 hour	≥ 10 N/mm²
Elongation at break after aging		80°C / 7x24 hour	≥ %100

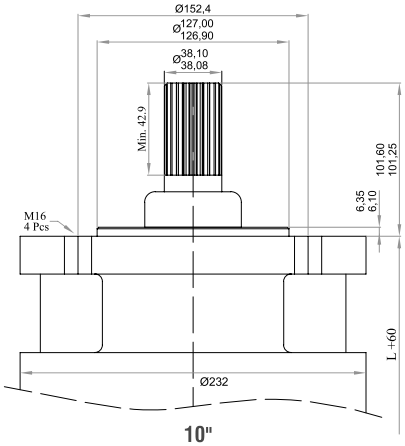
Flange connection standards



6"

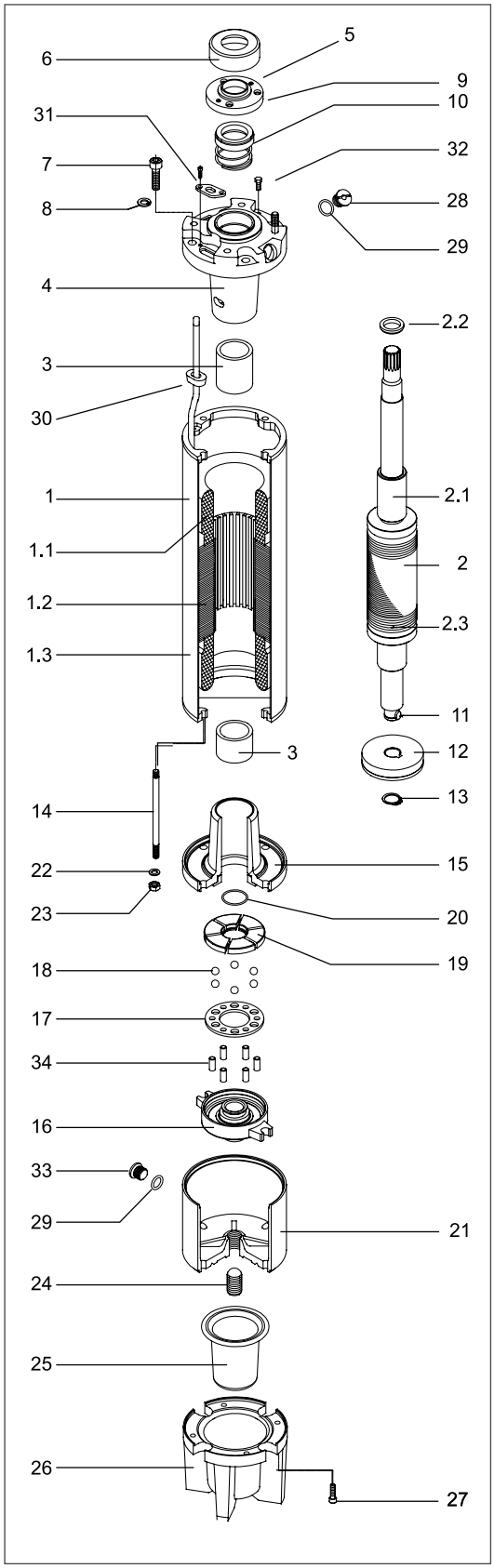


8"



10"

Sectional view



N°	Part name	Material
1	Stator	-
1.1	Winding wire	PE2 / PA
1.2	Stator package	M700-50A/Magnetic Seal
1.3	Stator shell	AISI 304
2	Rotor	-
2.1	Shaft sleeve	St 37 (Coated CrNi)
2.2	Balance ring	St 37
2.3	Copper ring	Cu
3	Radial bearing	Carbon
4	Upper bearing body	GG20-22
5	Bushing	Bronze
6	Slinger (sand guard)	NBR_EPDM
7	Hexagon socket cap screws	Inox
8	Copper ring	Cu
9	Cover seal	AISI 420
10	Mechanical seal	Ceramic Carbon
11	Axial thrust bearing key	AISI 420
12	Axial thrust bearing	Carbon With Antimony
13	Retaining ring	St 37
14	Tie rod	Inox
15	Lower bearing body	GG20-22
16	Thrust bearing support	GG20-22
17	Ball holder	St 37 (Coated Cr+3)
18	Thrust bearing ball	Inox
19	Tilting pads	AISI 420
20	O-ring	NBR 70
21	Thrust bearing body	GG20
22	Copper ring	Cu
23	Nut	Inox
24	Screw (thrust bearing base)	Inox
25	Membrane	NBR-EPDM
26	Membrane body	GG22
27	Hexagon socket cap screws	Inox
28	Check-valve	Bronze
29	O-ring	NBR 70
30	Cable seal	NBR
31	Seal cover	AISI 304
32	Nut	Inox
33	Plush (r 3/8")	Bronze
34	Ball holder pins	Inox

Cable lenght

Direct-On-Line (D.O.L)

HP	Cable size [mm²]											
	3x1,5	3x2,5	3x4	3x6	3x10	3x16	3x25	3x35	3x50	3x70	3x95	3x120
5,5	65	108	172	258	431	689	-	-	-	-	-	-
7,5	48	80	129	193	322	515	-	-	-	-	-	-
10	38	64	102	153	256	409	639	-	-	-	-	-
12,5	-	52	83	125	209	334	522	730	-	-	-	-
15	-	45	72	109	181	289	452	633	-	-	-	-
17,5	-	-	61	92	153	245	383	536	765	-	-	-
20	-	-	52	79	131	210	327	458	655	-	-	-
25	-	-	-	-	106	170	266	372	531	744	-	-
30	-	-	-	-	90	145	226	316	452	633	-	-
35	-	-	-	-	76	122	190	266	380	532	722	-
40	-	-	-	-	67	107	168	235	336	470	638	-
50	-	-	-	-	-	89	139	195	279	390	529	-
60	-	-	-	-	-	-	115	160	229	321	434	548
70	-	-	-	-	-	-	-	139	198	278	377	476
75	-	-	-	-	-	-	-	131	187	262	356	450
80	-	-	-	-	-	-	-	120	172	241	326	411
90	-	-	-	-	-	-	-	-	154	215	292	368
100	-	-	-	-	-	-	-	-	132	192	261	329
110	-	-	-	-	-	-	-	-	127	178	242	305
125	-	-	-	-	-	-	-	-	-	157	213	269
135	-	-	-	-	-	-	-	-	-	145	197	249
150	-	-	-	-	-	-	-	-	-	-	182	230

Star-Delta (S.D.)

HP	Cable size [mm²]											
	3x1,5	3x2,5	3x4	3x6	3x10	3x16	3x25	3x35	3x50	3x70	3x95	3x120
5,5	97	161	258	388	646	-	-	-	-	-	-	-
7,5	72	121	193	290	483	773	-	-	-	-	-	-
10	57	96	153	230	383	613	958	-	-	-	-	-
12,5	47	78	125	188	313	501	783	-	-	-	-	-
15	41	68	109	163	271	434	678	949	-	-	-	-
17,5	34	57	92	138	230	367	574	803	982	-	-	-
20	29	49	79	118	196	314	491	688	797	-	-	-
25	-	40	64	96	159	255	398	558	678	-	-	-
30	-	-	54	81	136	217	339	475	570	949	-	-
35	-	-	46	68	114	182	285	399	503	798	-	-
40	-	-	-	60	101	161	252	352	418	705	-	-
50	-	-	-	-	84	134	209	293	344	585	794	-
60	-	-	-	-	69	110	172	241	297	481	653	-
70	-	-	-	-	59	95	149	208	281	416	565	-
75	-	-	-	-	-	90	141	197	258	394	534	675
80	-	-	-	-	-	82	129	180	231	361	490	619
90	-	-	-	-	-	74	115	162	206	323	439	554
100	-	-	-	-	-	-	103	144	191	289	392	495
110	-	-	-	-	-	-	95	134	168	267	363	458
125	-	-	-	-	-	-	-	118	144	235	319	402
135	-	-	-	-	-	-	-	109	133	218	295	371
150	-	-	-	-	-	-	-	-	123	201	273	344

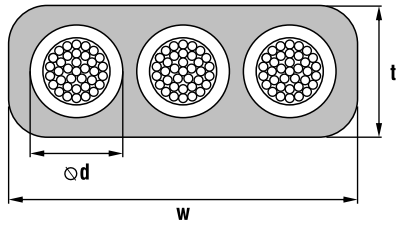
Power cable info

Cable data

Model	Size	Power		D.O.L.	S.D.	Axial Thrust	Start	Length
		kW	HP	[mm²]	[mm²]	[kN]	[start/h]	[m]
BSM 6/5.5	6"	4	5,5	4x2,5	4x2,5+3x2,5	20	20	4
BSM 6/7.5	6"	5,5	7,5	4x2,5	4x2,5+3x2,5	20	20	4
BSM 6/10	6"	7,5	10	4x2,5	4x2,5+3x2,5	20	20	4
BSM 6/12.5	6"	9,3	12,5	4x2,5	4x2,5+3x2,5	20	20	4
BSM 6/15	6"	11	15	4x4	4x2,5+3x2,5	20	20	4
BSM 6/17.5	6"	13	17,5	4x4	4x2,5+3x2,5	20	20	4
BSM 6/20	6"	15	20	4x4	4x2,5+3x2,5	20	20	4
BSM 6/25	6"	18,5	25	4x6	4x4+3x4	20	20	4
BSM 6/30	6"	22	30	4x6	4x4+3x4	20	20	4
BSM 6/35	6"	26,5	35	4x10	4x6+3x6	26,5	15	4
BSM 6/40	6"	30	40	4x10	4x6+3x6	26,5	15	4
BSM 6/50	6"	37	50	3x16+1G16	4x10+3x10	26,5	15	4
BSM 6/60	6"	45	60	3x16+1G16	4x10+3x10	26,5	15	4
BSM 8/40	8"	30	40	4x16	4x10+3x10	45	15	4
BSM 8/50	8"	37	50	4x16	4x10+3x10	45	15	4
BSM 8/60	8"	45	60	4x16	4x10+3x10	45	15	4
BSM 8/70	8"	52	70	4x16	4x10+3x10	45	15	4
BSM 8/75	8"	55	75	4x16	4x10+3x10	45	15	4
BSM 8/80	8"	60	80	4x16	4x10+3x10	45	15	4
BSM 8/90	8"	67	90	4x16	4x10+3x10	45	15	4
BSM 8/100	8"	75	100	3x25+1G25	4x16+3x16	45	15	4
BSM 10/110	10"	81	110	3x25+1G25	4x16+3x16	75	10	4
BSM 10/125	10"	92	125	3x25+1G25	4x16+3x16	75	10	4
BSM 10/150	10"	110	150	3x35+1G35	3x25+3x25	75	10	4

220-230V cable sizes may vary

50/60 Hz - 380/400/415/440/460V



Flat Cable Dimensions

Type mm²	Thickness (t) mm	Width (w) mm	Diameter (d) mm
3x2,5	6,4±0,2	15,0±0,3	3,6
3x4	7,1±0,5	16,5±0,5	4,1
3x6	8,0±0,5	18,3±0,5	4,6
3x10	8,8±0,5	21,8±0,5	6
3x16	10,5±0,5	25,4±0,5	7
3x25	12,0±0,5	33,0±0,5	9
3x35	13,5±1,0	34,5±1,0	10,1

Voltage drop and cable power loss

To determine the cable section it should be considered that the voltage drop must not exceed %3.
The formulas used for voltage drop calculation are given below.

Direct Starter

1 cable

$$U_V = \frac{3{,}1 \times L \times I \times \cos\Phi}{q \times U} \qquad q = \frac{3{,}1 \times L \times I \times \cos\Phi}{U_V\,\% \times U}$$

2 cables in parallel

$$U_V = \frac{1{,}55 \times L \times I \times \cos\Phi}{q \times U} \qquad q = \frac{1{,}55 \times L \times I \times \cos\Phi}{U_V\,\% \times U}$$

Delta Star Starter

$$U_V = \frac{2{,}1 \times L \times I \times \cos\Phi}{q \times U} \qquad q = \frac{2{,}1 \times L \times I \times \cos\Phi}{U_V\,\% \times U}$$

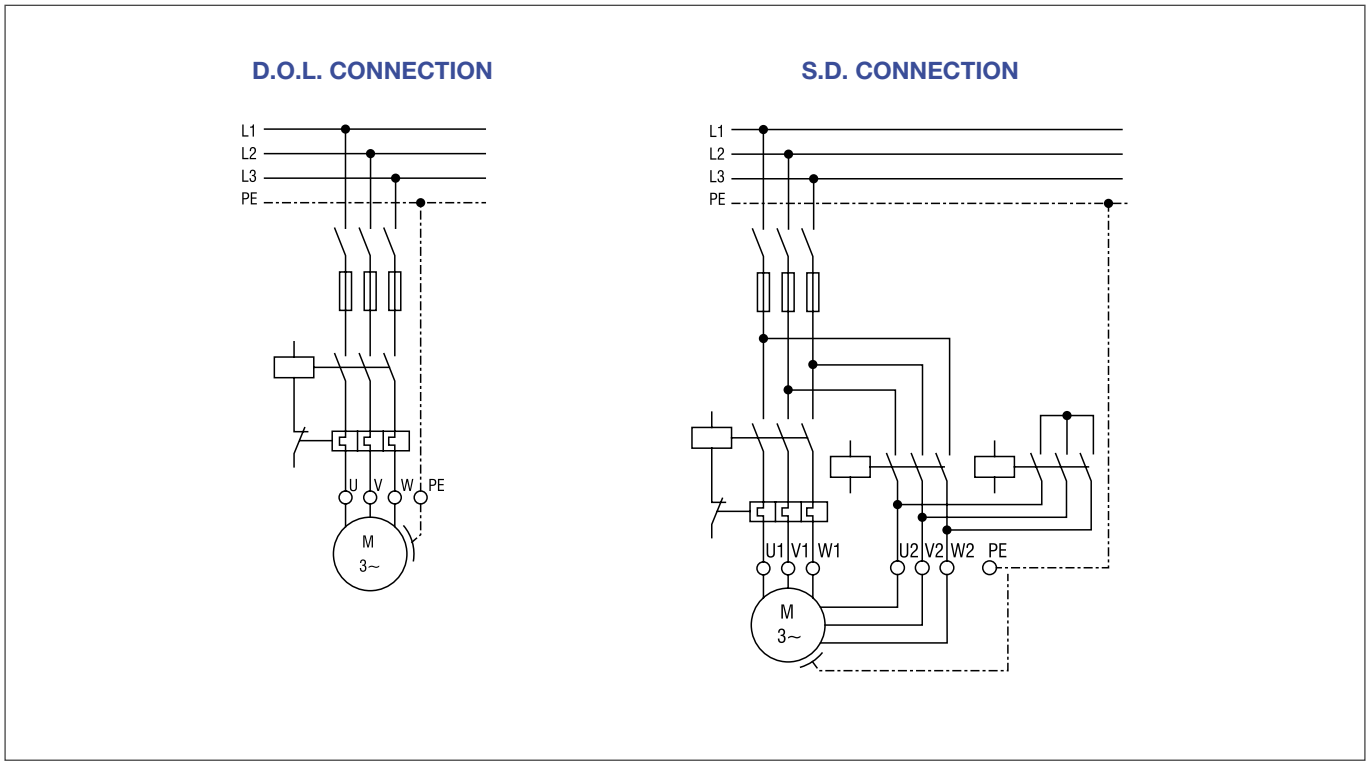
L	: Cable length (m)
I	: Current at nominal vol. (A)
q	: Condutor section (mm²)
cosΦ	: Power factor
P_v	: Power loss (%)
U_v	: Voltage drop (%)
U	: Nominal voltage (V)

The power loss along the feeling cable has to be calculated adjacent to

$$P_V = \frac{U_V}{\cos^2\Phi}$$

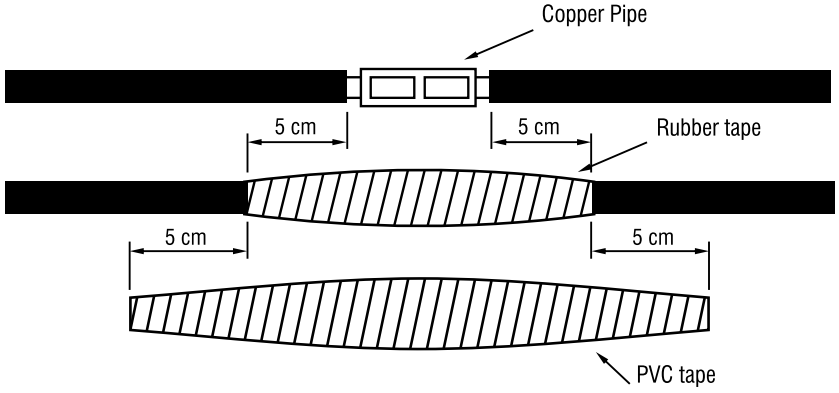
Power cable info

Wiring diagram



Power cable connection

Connection of the power cable that will be used along the well and until the control panel with the power cable on the motor must be done very carefully and by the professionals only. If the insulation after connection is not done properly; short circuit might happen during the connection area is in the water.
Insulation of each cable should be stripped only as far as necessary to provide room for a stake type connector.
Each individual joint should be taped with PVC tape, using two layers by wrapping tightly for eliminating airspaces as much as possible.
Total thickness of tape should be no less than the thickness of the cable insulation in order to prevent the smashing of the cables when the pump is lowered in the well.



Performance table

6” BSM - three phase water filled submersible motors — 50Hz Performance table

Model	P_N		Axial Thrust	Voltage	Rotation	I_N	I_A	Efficiency (% load)			CosΦ (% load)			Length	Weight
	kW	HP	[kN]	[V]	[rpm]	[A]	[A]	50	75	100	50	75	100	[mm]	[Kg]
BSM 6/5.5	4	5,5	20	380	2770	10,2	39,4	67	71	71	63	71	84	649	40
				400	2785	9,8	37,8	68	72	72	59	67	82		
				415	2795	9,5	36,9	68	72	72	58	66	81		
BSM 6/7.5	5,5	7,5	20	380	2780	13,3	52,7	70	73	75	63	71	84	649	40
				400	2795	12,8	50,6	71	74	76	59	67	82		
				415	2805	12,3	48,7	72	75	77	58	66	81		
BSM 6/10	7,5	10	20	380	2790	17,2	66,4	77	79	79	63	71	84	678	43,5
				400	2805	16,5	63,8	79	80	80	59	67	82		
				415	2815	16,1	62,2	79	80	80	58	66	81		
BSM 6/12.5	9,3	12,5	20	380	2850	20,8	80,3	80	81	81	63	71	84	758	50
				400	2855	20,2	78,1	80	81	81	59	67	82		
				415	2865	19,5	75,3	81	82	82	58	66	81		
BSM 6/15	11	15	20	380	2810	23,7	91,6	81	82	82	67	75	86	800	55
				400	2825	22,8	88,0	82	83	83	63	71	84		
				415	2835	22,2	85,9	82	83	83	61	69	83		
BSM 6/17.5	13	17,5	20	380	2820	28,7	110,9	80	81	81	65	73	85	851	60
				400	2835	27,6	106,6	81	82	82	61	69	83		
				415	2845	26,6	102,7	82	83	83	59	67	82		
BSM 6/20	15	20	20	380	2850	33,1	127,9	80	81	81	65	73	85	911	65
				400	2855	32,2	124,5	80	81	81	61	69	83		
				415	2865	31,0	120,0	81	82	82	59	67	82		
BSM 6/25	18,5	25	20	380	2850	41,8	161,6	80	81	81	61	69	83	973	72
				400	2865	40,2	155,4	81	82	82	58	66	81		
				415	2875	38,8	149,8	82	83	83	57	65	80		
BSM 6/30	22	30	20	380	2860	48,5	187,6	81	82	82	63	71	84	1006	76
				400	2875	46,7	180,3	82	83	83	59	67	82		
				415	2885	45,0	173,9	83	84	84	58	66	81		
BSM 6/35	26,5	35	26,5	380	2870	56,4	217,9	83	84	84	65	73	85	1106	87
				400	2885	54,9	212,0	83	84	84	61	69	83		
				415	2895	52,9	204,4	84	85	85	59	67	82		
BSM 6/40	30	40	26,5	380	2880	64,6	249,7	82	83	83	65	73	85	1217	98
				400	2895	62,1	240,0	83	84	84	61	69	83		
				415	2905	59,9	231,4	84	85	85	59	67	82		
BSM 6/50	37	50	26,5	380	2890	79,7	315,6	80	81	83	65	73	85	1247	103
				400	2905	76,7	303,3	81	82	84	61	69	83		
				415	2915	74,7	288,8	83	84	84	59	67	82		
BSM 6/60	45	60	26,5	380	2890	96,9	374,7	82	81	83	65	73	85	1347	110
				400	2905	93,2	360,2	81	82	84	61	69	83		
				415	2915	87,7	339,0	83	84	84	59	67	85		

Performance table

6” BSM - three phase water filled submersible motors — 60Hz Performance table

Model	P_N		Axial Thrust	Voltage	Rotation	I_N	I_A	Efficiency (% load)			CosΦ (% load)			Length	Weight
	kW	HP	[kN]	[V]	[rpm]	[A]	[A]	50	75	100	50	75	100	[mm]	[Kg]
BSM 6/5.5	4	5,5	20	220	3510	19,2	102	69	74	76	51	63	72	649	40
				380	3540	11,4	61	65	71	76	50	62	70		
				460	3530	8,8	47	69	75	77	55	66	74		
BSM 6/7.5	5,5	7,5	20	220	3480	23,8	126	73	77	77	60	72	79	649	40
				380	3490	13,6	72	75	77	77	63	74	80		
				460	3490	11,7	62	73	76	75	64	75	79		
BSM 6/10	7,5	10	20	220	3480	32,8	174	74	78	78	57	70	77	678	43,5
				380	3490	18,3	97	75	78	78	63	74	80		
				460	3480	15,1	80	74	77	77	66	76	81		
BSM 6/12.5	9,3	12,5	20	220	3480	40,7	216	74	78	78	58	70	77	758	50
				380	3480	22,4	119	76	79	79	63	74	80		
				460	3470	18,3	97	77	79	79	66	77	81		
BSM 6/15	11	15	20	220	3480	46,3	245	76	79	80	59	71	78	800	55
				380	3500	26,5	140	76	80	80	61	73	79		
				460	3490	21,3	113	77	80	79	67	76	82		
BSM 6/17.5	13	17,5	20	220	3490	56,9	302	75	79	80	54	67	75	851	60
				380	3510	31,7	168	76	80	81	58	70	77		
				460	3500	25,2	134	77	80	80	64	75	81		
BSM 6/20	15	20	20	220	3490	60,1	318	79	82	82	62	73	80	911	65
				380	3500	34,4	182	80	82	82	65	76	81		
				460	3500	28,4	150	79	81	81	67	77	82		
BSM 6/25	18,5	25	20	220	3480	77,9	413	76	80	81	58	70	77	973	72
				380	3500	46,3	245	75	79	80	57	69	76		
				460	3490	35,9	190	79	81	81	64	75	80		
BSM 6/30	22	30	20	220	3500	91,6	495	81	83	83	64	73	76	1006	76
				380	3520	52,4	283	81	83	83	66	74	77		
				460	3510	41,1	222	82	83	83	71	78	81		
BSM 6/35	26,5	35	26,5	220	3500	110,5	597	82	84	84	62	71	75	1106	87
				380	3510	60,0	324	82	84	84	61	73	80		
				460	3510	48,9	264	82	83	83	63	75	82		
BSM 6/40	30	40	26,5	220	3500	124,8	674	77	81	82	57	70	77	1217	98
				380	3520	68,7	371	78	82	83	61	73	80		
				460	3510	56,1	303	80	83	83	63	74	81		
BSM 6/50	37	50	26,5	220	3500	155,9	842	76	80	81	58	70	77	1247	103
				380	3520	90,2	487	76	80	81	58	70	77		
				460	3510	69,2	374	81	83	84	62	74	80		
BSM 6/60	45	60	26,5	220	3500	189,5	1023	75	79	80	58	71	78	1347	110
				380	3520	109,7	592	75	79	80	58	71	78		
				460	3510	84,1	454	80	82	83	62	75	81		

Performance table

8” BSM - three phase water filled submersible motors — 50Hz Performance table

Model	P_N		Axial Thrust	Voltage	Rotation	I_N	I_A	Efficiency (% load)			CosΦ (% load)			Length	Weight
	kW	HP	[kN]	[V]	[rpm]	[A]	[A]	50	75	100	50	75	100	[mm]	[Kg]
BSM 8/40	30	40	45	380	2880	63,2	239	82	83	83	73	78	87	996	120
				400	2895	60,7	229	83	84	84	67	74	85		
				415	2905	59,2	223	83	84	84	65	73	84		
BSM 8/50	37	50	45	380	2890	76,1	287	84	85	85	73	78	87	1056	129
				400	2905	73,1	276	85	86	86	67	74	85		
				415	2915	72,2	269	85	86	86	65	73	84		
BSM 8/60	45	60	45	380	2890	92,6	349	84	85	85	73	78	87	1116	138
				400	2905	89,0	336	85	86	86	67	74	85		
				415	2915	86,8	327	85	86	86	65	73	84		
BSM 8/70	52	70	45	380	2890	105,7	399	84	85	85	75	81	88	1201	152
				400	2905	101,6	383	85	86	86	70	76	86		
				415	2915	99,1	374	85	86	86	67	74	85		
BSM 8/75	55	75	45	380	2890	113,2	427	83	84	84	75	81	88	1286	170
				400	2905	110,0	415	83	84	84	70	76	86		
				415	2915	106,0	400	84	85	85	67	74	85		
BSM 8/80	60	80	45	380	2890	122,0	460	85	86	86	73	78	87	1286	170
				400	2905	118,6	447	85	86	86	67	74	85		
				415	2915	115,7	436	85	86	86	65	73	84		
BSM 8/90	67	90	45	380	2890	137,8	520	84	85	85	73	78	87	1341	185
				400	2905	132,4	499	85	86	86	67	74	85		
				415	2915	129,2	487	85	86	86	65	73	84		
BSM 8/100	75	100	45	380	2890	154,3	582	83	84	84	75	81	88	1366	186
				400	2905	148,3	559	84	85	85	70	76	86		
				415	2915	144,6	545	84	85	85	67	74	85		

8” BSM - three phase water filled submersible motors — 60Hz Performance table

Model	P_N		Axial Thrust	Voltage	Rotation	I_N	I_A	Efficiency (% load)			CosΦ (% load)			Length	Weight
	kW	HP	[kN]	[V]	[rpm]	[A]	[A]	50	75	100	50	75	100	[mm]	[Kg]
BSM 8/40	30	40	45	220	3480	115,1	612	81	84	84	77	78	82	996	120
				380	3490	66,3	352	82	84	84	77	78	82		
				460	3480	54,1	288	81	83	83	79	81	84		
BSM 8/50	37	50	45	220	3490	139,5	742	82	85	85	77	78	82	1056	129
				380	3500	80,7	430	82	85	85	77	78	82		
				460	3480	65,9	351	83	84	84	79	81	84		
BSM 8/60	45	60	45	220	3480	167,6	892	83	85	85	70	78	83	1116	138
				380	3490	97,0	516	83	85	85	70	78	83		
				460	3490	79,2	421	84	85	85	74	81	84		
BSM 8/70	52	70	45	220	3490	189,1	1000	84	86	86	72	80	84	1201	152
				380	3500	109,5	583	84	86	86	72	80	84		
				460	3495	90,4	481	84	85	85	76	83	85		
BSM 8/75	55	75	45	220	3490	200,0	1064	84	86	86	68	77	84	1286	170
				380	3500	115,8	616	84	86	86	68	77	84		
				460	3500	95,7	509	85	86	86	74	81	84		
BSM 8/80	60	80	45	220	3490	215,7	1148	85	87	87	74	81	84	1286	170
				380	3500	124,9	664	85	87	87	74	81	84		
				460	3500	103,1	549	85	86	86	77	83	85		
BSM 8/90	67	90	45	220	3500	252,7	1344	84	86	86	70	79	81	1341	185
				380	3510	146,3	778	84	86	86	70	79	81		
				460	3500	116,5	620	85	86	86	74	82	84		
BSM 8/100	75	100	45	220	3490	266,5	1418	85	87	87	74	82	85	1366	186
				380	3500	154,3	821	85	87	87	74	82	85		
				460	3500	127,4	678	85	87	87	74	82	85		

Performance table

10” BSM - three phase water filled submersible motors — 50Hz Performance table

Model	P_N		Axial Thrust	Voltage	Rotation	I_N	I_A	Efficiency (% load)			CosΦ (% load)			Length	Weight
	kW	HP	[kN]	[V]	[rpm]	[A]	[A]	50	75	100	50	75	100	[mm]	[Kg]
BSM 10/110	81	110	75	380	2890	164,7	615	84	84	85	76	81	88	1310	228
				400	2905	158,3	590	85	85	86	72	77	86		
				415	2915	152,6	569	86	86	87	69	75	85		
BSM 10/125	92	125	75	380	2900	184,9	690	85	85	86	76	81	88	1370	256
				400	2915	179,8	671	85	85	86	72	77	86		
				415	2925	175,3	654	85	85	86	69	75	85		
BSM 10/150	110	150	75	380	2900	223,6	835	85	85	86	74	80	87	1430	284
				400	2915	217,5	811	85	85	86	69	75	85		
				415	2925	212,1	791	85	85	86	66	73	84		

10” BSM - three phase water filled submersible motors — 60Hz Performance table

Model	P_N		Axial Thrust	Voltage	Rotation	I_N	I_A	Efficiency (% load)			CosΦ (% load)			Length	Weight
	kW	HP	[kN]	[V]	[rpm]	[A]	[A]	50	75	100	50	75	100	[mm]	[Kg]
BSM 10/110	110	81	75	380	3500	170,5	904	85	85	85	80	83	85	1310	228
				460	3510	137,6	729	85	85	85	82	85	87		
BSM 10/125	125	92	75	380	3510	193,7	1.027	85	85	85	80	83	85	1370	256
				460	3520	156,3	829	85	85	85	82	85	87		
BSM 10/150	150	110	75	380	3515	234,3	1242	85	86	85	79	82	84	1430	284
				460	3520	189,1	1002	85	86	85	81	84	86		

Other information

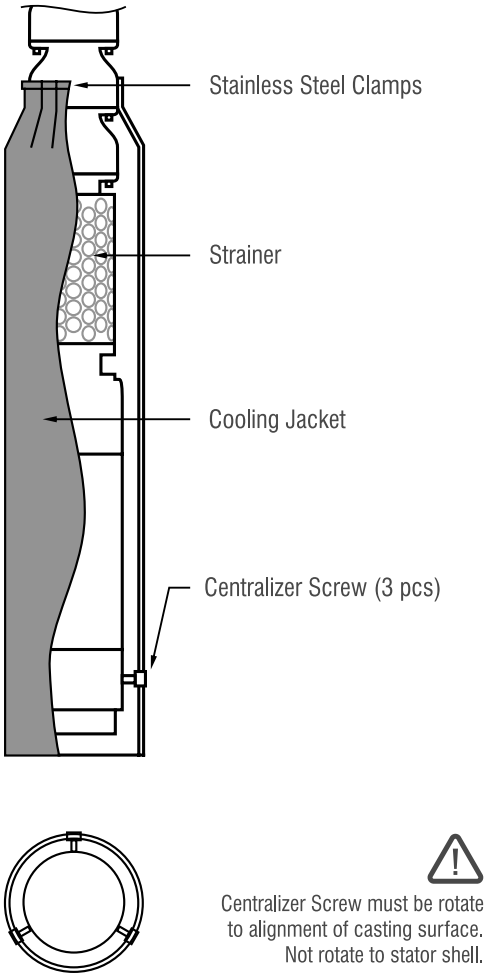
Use cooling jacket

Cooling of submersible motors is provided with the flow of the water around it. That's allows water flow around motors has vital importance during submersible pump installation. This flow rate depends on diameter and power of motor.

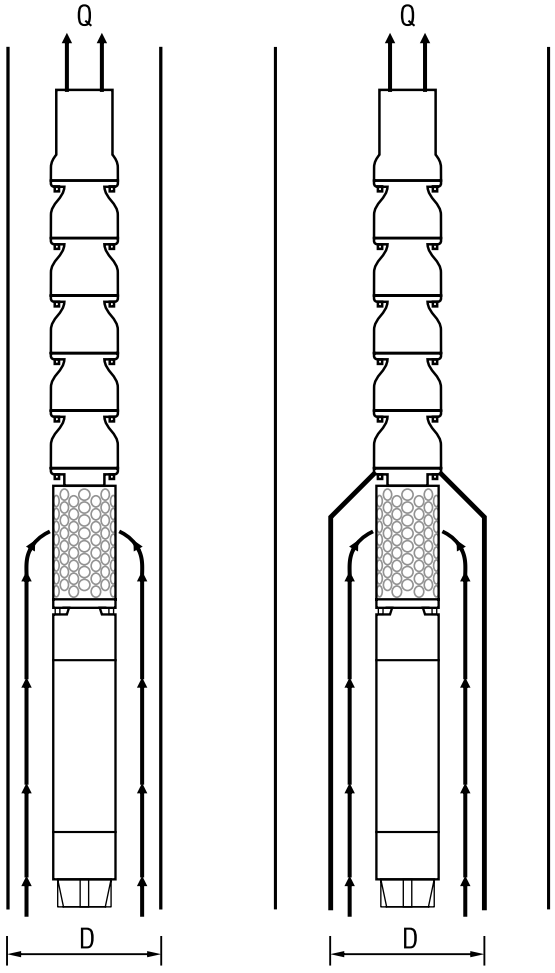
The most important factor of submersible motors' long service life is that the motor has to be cooled well. Required flow velocity around the motor is given in the table below for motors being cooled well enough.

If the motor will be installed in an open body of water (i.e pool) or diameter of the well is much bigger than the diameter of the motor, Flow Inducer Sleeve must be used to provide the flow velocities that are given in the table below, around the motor.

Motor type	Motor rating [mm]	Min. Water Flow [m/s]
6"	5.5 - 18.5 kW	0.2
	22 - 45 kW	0.5
8"	60 - 110 kW	0.5
	81 - 220 kW	0.5
10"	60 - 75 kW	0.5



Centralizer Screw must be rotate to alignment of casting surface. Not rotate to stator shell.



EBARA Pumps Europe S.p.A.
Via Torri di Confine 2/1 int. C
36053 Gambellara (Vicenza), Italia
Tel. +39 0444 706811
Fax +39 0444 405811
ebarapumps.epe@ebara.com
www.ebaraeurope.com

EBARA Corporation
11-1, Haneda Asahi-cho, Ota-ku,
Tokyo 144-8510
Giappone
Tel. +81 3 6275 7598
Fax +81 3 5736 3193
www.ebara.com

S.C. 288 03/22