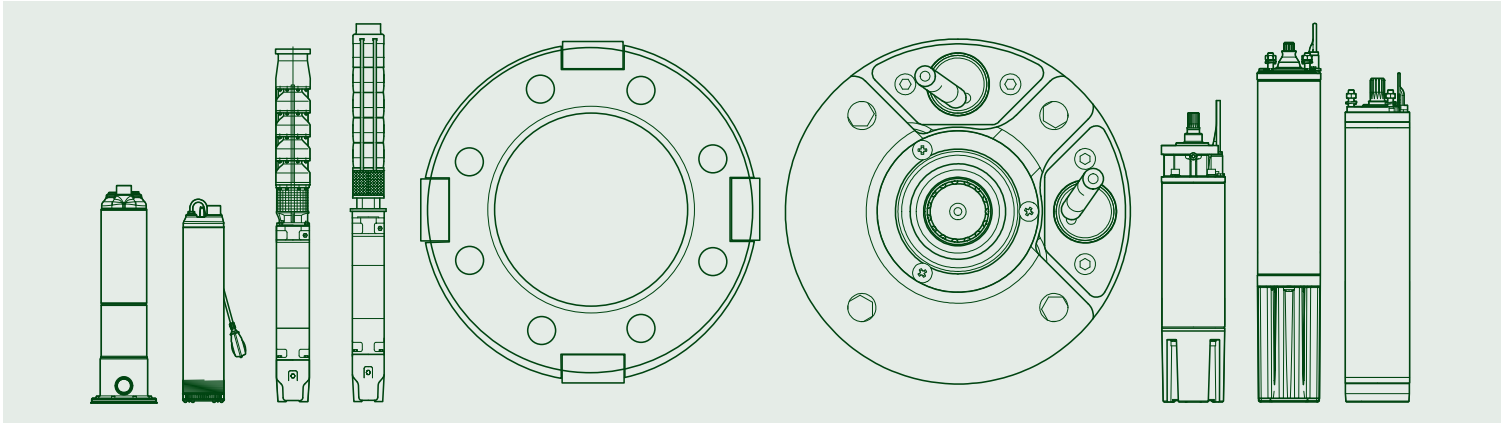


**ErP**  
ready

# SUBMERSIBLE PUMPS AND MOTORS



# TECHNICAL CATALOGUE



THE INTERNATIONAL CERTIFICATION NETWORK

## CERTIFICATE

CISQ/IMQ has issued an IQNet recognized certificate that the organization:

**DWT HOLDING SPA**  
 VIA MARCO POLO 14 - 35035 MESTRINO (PD)  
 BRENDOLA (VI) - CASTELLO DI GODEGO (TV) - BIENTINA (PI) -  
 VAL LIONA (VI) - PRC CHINA - HUNGARY

has implemented and maintains a

Quality Management System

for the following scope:

**Design, production, sale and assistance of components and electronic controls for pumps, electropumps and pump sets for cold and hot water for civil, industrial and agricultural use**

Further clarifications regarding the applicability of ISO 9001:2015 requirements may be obtained by consulting the organization

which fulfills the requirements of the following standard:

**ISO 9001:2015**

Issued on: **2018 - 05 - 21**

Expires on: **2021 - 05 - 27**

This attestation is directly linked to the IQNet Partner's original certificate and shall not be used as a stand-alone document

Registration Number: IT - 824



*Alex Stoichiou*  
 Alex Stoichiou  
 President of IQNET



*Ing. Claudio Provetti*  
 Ing. Claudio Provetti  
 President of CISQ

**IQNet Partners\***

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\* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under [www.iqnet-certification.com](http://www.iqnet-certification.com)

All. 1 di 1  
 Ann. 1 of 1



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CISQ is a member of  
 www.iqnet-certification.com  
 IQNet, the association of the world's first class certification bodies, is the largest provider of management system certifications in the world. IQNet is composed of more than 30 bodies and counts over 120 subsidiaries all over the globe.

ALLEGATO CERTIFICATO n. **9101.COGE**  
 ANNEX CERTIFICATE

(\*) Unità Operative:  
 (\*) Operative Units:

**DAB PUMPS SPA**  
 VIA BONANNO PISANO 1 - 56031 BIENTINA (PI)

**DAB PUMPS SPA**  
 VIA DEL LAVORO 3 - 36040 VAL LIONA (VI)

**DAB PUMPS QINGDAO CO. LTD**  
 40 KAITUO ROAD, QINGDAO DEVELOPMENT ZONE - SHANGDONG PROVINCE, PRC CHINA

**DAB PUMPS HUNGARY KFT**  
 BUDA ERNO H - 8800 NAGYKANISZA HUNGARY

DATE:	PRIMA CERTIFICAZIONE FIRST CERTIFICATION	EMISSIONE CORRENTE CURRENT ISSUE	SCADENZA EXPIRY
	1995-07-17	2018-05-21	2021-05-27

*[Signature]*  
 IMQ S.p.A. - VIA GURITLIANO, 43 - 20138 MILANO ITALY  
 Management Systems Division - Flavio Orsaghi



IAF: 18, 19, 29

SCQ N° 005 A

La validità del certificato è subordinata a un'ispezione annuale e a nuove ispezioni straordinarie. Il Sistema di Gestione con personalità giuridica deve essere sottoposto a una ispezione straordinaria di almeno una volta all'anno. Il presente certificato è valido fino a:

IAF: 18, 19, 29

La validità del certificato è subordinata a un'ispezione annuale e a nuove ispezioni straordinarie. Il Sistema di Gestione con personalità giuridica deve essere sottoposto a una ispezione straordinaria di almeno una volta all'anno. Il presente certificato è valido fino a:



Organismo di Certificazione Federato CISQ



CISQ è la Federazione Italiana di Organismi di Certificazione del sistema di gestione aziendale. CISQ è the Italian Federation of management system Certification Bodies.



CERTIFICATO N. **9101.COGE**  
 CERTIFICATE N. **9101.COGE**

SI CERTIFICA CHE IL SISTEMA QUALITÀ DI  
 WE HEREBY CERTIFY THAT THE QUALITY SYSTEM OPERATED BY

**DWT HOLDING SPA**  
 VIA MARCO POLO 14 - 35035 MESTRINO (PD)

UNITÀ OPERATIVE / OPERATIVE UNITS

**DAB PUMPS SPA**  
 VIA MARCO POLO 14 - 35035 MESTRINO (PD)  
**DAB PUMPS SPA**  
 VIA EINAUDI 2 - 36040 BRENDOLA (VI)  
**DAB PUMPS SPA**  
 VIA E. FERMI 6-B-10 - 31030 CASTELLO DI GODEGO (TV)

Vedere gli Allegati per le altre Unità Operative (n° 1 pagina)  
 View the Annexes for the other Operative Units (n° 1 page)

E' CONFORME ALLA NORMA / IS IN COMPLIANCE WITH THE STANDARD  
**ISO 9001:2015**

PER LE SEGUENTI ATTIVITÀ / FOR THE FOLLOWING ACTIVITIES

Progettazione, produzione, commercializzazioni e assistenza di componenti e controlli elettronici per pompe, elettropompe e gruppi di pompaggio per acqua fredda e calda ad uso civile, industriale ed agricolo  
**Design, production, sale and assistance of components and electronic controls for pumps, electropumps and pump sets for cold and hot water for civil, industrial and agricultural use**

IL PRESENTE CERTIFICATO E' SOGGETTO AL RISPETTO DEL  
 REGOLAMENTO PER LA CERTIFICAZIONE DEI SISTEMI DI GESTIONE  
 THE USE AND THE VALIDITY OF THE CERTIFICATE SHALL SATISFY THE  
 REQUIREMENTS OF THE RULES FOR CERTIFICATION OF MANAGEMENT SYSTEMS

DATE:	PRIMA CERTIFICAZIONE FIRST CERTIFICATION	EMISSIONE CORRENTE CURRENT ISSUE	SCADENZA EXPIRY
	1995-07-17	2018-05-21	2021-05-27

*[Signature]*  
 IMQ S.p.A. - VIA GURITLIANO, 43 - 20138 MILANO ITALY  
 Management Systems Division - Flavio Orsaghi



IAF: 18, 19, 29

SCQ N° 005 A

La validità del certificato è subordinata a un'ispezione annuale e a nuove ispezioni straordinarie. Il Sistema di Gestione con personalità giuridica deve essere sottoposto a una ispezione straordinaria di almeno una volta all'anno. Il presente certificato è valido fino a:























Organismo di Certificazione Federato CISQ












CISQ è la Federazione Italiana di Organismi di Certificazione del sistema di gestione aziendale. CISQ è the Italian Federation of management system Certification Bodies.

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DAB complies with the EcoDesign Directive (ErP - *Energy related Products* - Directive, 2009/125/EC)  
EC 547/2012 Regulation that requires:  
FOR 4" AND 6" SUBMERSIBLE MULTISTAGE PUMPS (MSS)

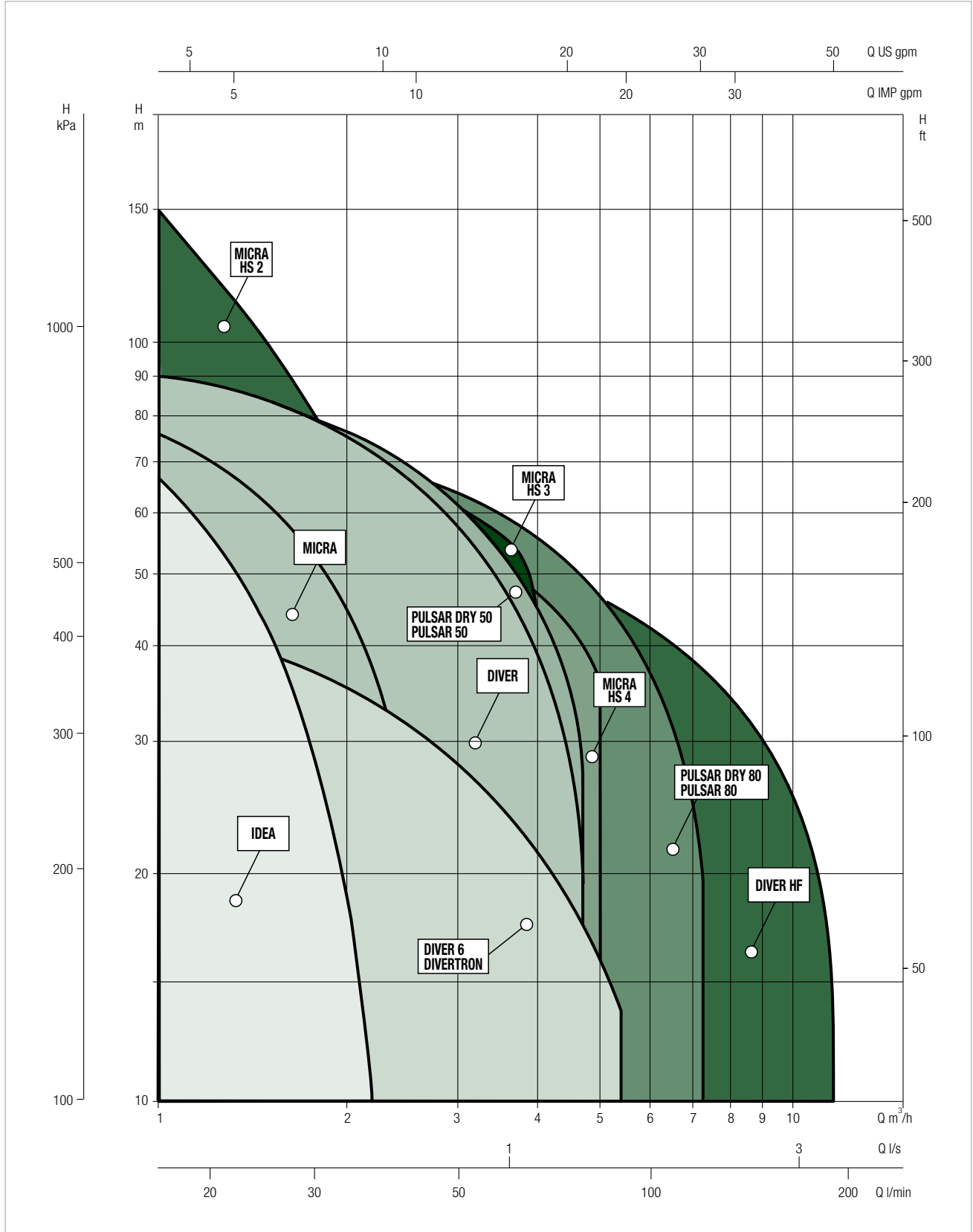
- starting from January 1st 2013 MEI  $\geq$  0,1
- starting from January 1st 2015 MEI  $\geq$  0,4

# RANGE OF SUBMERSIBLE PUMPS

## PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### GRAPHIC SELECTION TABLE





### TECHNICAL DATA

**Operating range:** from 0,4 a 2,4 m<sup>3</sup>/h with head of up to 52 metres  
**Pumped liquid:** clean, free of solids and abrasives, non-viscous, non-crystallised and chemically neutral, with properties similar to water  
**Liquid temperature range:** from 0 °C to +35 °C  
**Max. immersion depth:** 20 m  
**Discharge port diameter:** 1" GAS.  
**Power supply tolerance:** +6 % / -10 %  
**Max. starts:** 20/h  
**Installation:** in 4" wells or larger, tanks and cisterns, vertical position.  
**Special executions on requests:** alternative voltages and frequencies

### APPLICATIONS

Single-impeller (version 75 and 100) or double-impeller (version 150) peripheral submersible pump for 4" wells, capable of providing high heads in limited power conditions. Suitable for water lifting and distribution applications in domestic systems, small agricultural concerns, pressurisation of pressure vessels and DIY uses.

### CONSTRUCTION FEATURES OF THE PUMP

Pump body and motor support in cast iron. Brass impeller. Rotor shaft extension and strainer in stainless steel.

### CONSTRUCTION FEATURES OF THE MOTOR

Submersible asynchronous two-pole motor, made entirely of stainless steel, dry design with external cooling by means of the pumped liquid. Canned-type AISI 304L stator.

Squirrel cage rotor running on ball bearings, oversized to ensure reliability and durability.

Graphite/alumina mechanical seal and lip seal.

In the single-phase version the start capacitor is enclosed in a sturdy, electrically insulated high-density plastic enclosure.

Overload protection to be provided by the user for the three-phase version.

**Protection class:** IP 68

**Insulation class:** F

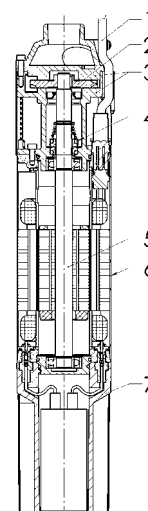
**Standard voltage:** single-phase 230 V / 50 Hz  
 three-phase 400 V / 50 Hz

**Power cable:** Removable H07RN-F power cable, length 15 m.  
 Supplied with 15 m nylon rope

### MATERIALS

N°	PARTS*	MATERIALS
1	CABLE	H07 RNF CEI 20-19
2	IMPELLER	BRASS PCuZn40Pb2 UNI 5705
3	SUPPORT	CAST IRON G20 UNI 5007 (Epoxy electrocoat)
4	MECHANICAL SEAL	GRAPHITE / ALUMINA
5	SHAFT WITH ROTOR	STAINLESS STEEL AISI 431 X17CrNi16 2 UNI 10088-3
6	MOTOR	STAINLESS STEEL AISI 304L X2CrNi19 11 UNI 10088-3
7	CAPACITOR CARTRIDGE	NORYL 20% FIBER GLASS

\* In contact with the liquid.

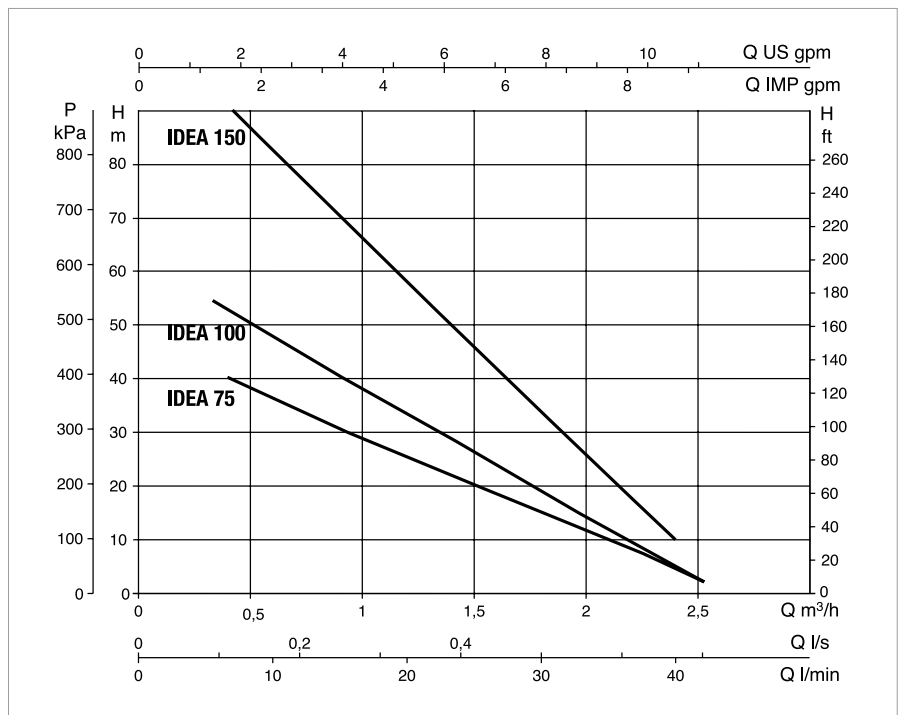
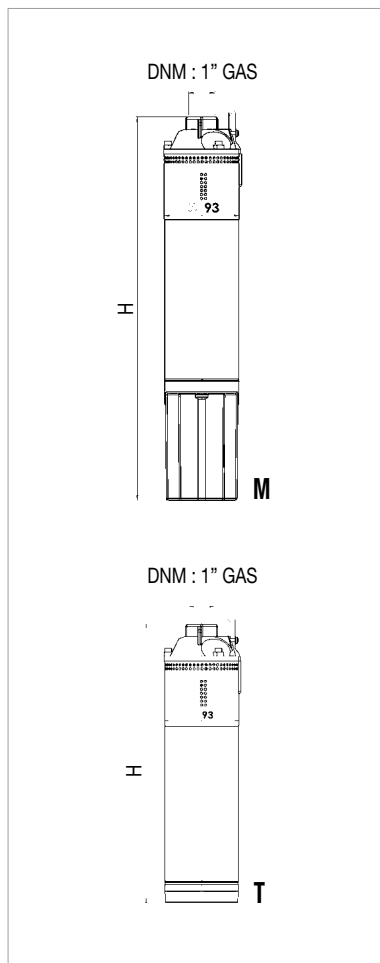


### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA								
	P2 NOMINAL		Q=m <sup>3</sup> /h	0,4	0,6	0,9	1,2	1,5	1,8	2,1	2,4
	kW	HP	Q=l/min	7	10	15	20	25	30	35	40
IDEA 75 M	0,55	0,75	H (m)	39	37	32	27,6	22,5	17,6	12,2	6,8
IDEA 100 M	0,75	1		52	48,3	41,4	34,6	28	21,2	14,4	7,3
IDEA 150 M	1	1,5		90	81	70	60	48	35	22	10
IDEA 75 T	0,55	0,75		39	37	32	27,6	22,5	17,6	12,2	6,8
IDEA 100 T	0,75	1		52	48,3	41,4	34,6	28	21,2	14,4	7,3
IDEA 150 T	1	1,5		90	81	70	60	48	35	22	10

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA								Ø mm	H mm	PACKING DIMENSIONS			WEIGHT Kg
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		I <sub>n</sub> A	CAPACITOR								
			kW	HP		µF	Vc							
IDEA 75 M	1 x 230 V ~	0,8	0,55	0,75	4	16	450	93	482	630	265	125	10,5	
IDEA 100 M	1 x 230 V ~	1,1	0,75	1	4,7	20	450	93	512	630	265	125	12	
IDEA 150 M	1 x 230 V ~	2,2	1	1,5	10,5	35	450	93	602	630	265	125	15	
IDEA 75 T	3 x 400 V ~	0,65	0,55	0,75	1,5	-	-	93	353	420	310	118	10,2	
IDEA 100 T	3 x 400 V ~	1,1	0,75	1	2,3	-	-	93	383	420	310	118	11,7	
IDEA 150 T	3 x 400 V ~	2,5	1	1,5	4,3	-	-	93	475	630	265	125	14,6	



The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equivalent to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

# DIVER - DIVER HF

## SUBMERSIBLE PUMPS



### TECHNICAL DATA

**Operating range:** from 0,6 to 12 m<sup>3</sup>/h with head up to 96 metres  
**Pumped liquid:** clean, free of solids and abrasives, non-aggressive  
**Max percentage of sand in water:** 50 g/m<sup>3</sup>  
**Liquid temperature range:** from 0 °C to +35 °C  
**Max. immersion depth:** 20 m  
**Discharge port diameter:** 1" 1/4 GAS  
**Power supply tolerance:** +6 % / -10 %  
**Max. starts:** 20/h  
**Motor protection class:** IP 68  
**Motor protection rating:** F  
**Installation:** in wells, tanks and cisterns, vertical position  
**Special executions on request:**  
 alternative voltages and/or frequencies  
 Automatic version available with float switch

### APPLICATIONS

DIVER electric pumps are utilised for lifting clear water from boreholes, first water collection tanks or cisterns, wells or water courses, and are capable of distributing pressurised water to domestic installations, small agricultural plants, and sprinkler systems for lawns and vegetable gardens. The pump has a very silent operation, and can be installed inside boreholes and tanks, thus avoiding all the potential problems connected with suction and unpriming.

### CONSTRUCTION FEATURES OF THE PUMP

Multistage monobloc submersible pump with hydraulic section below the motor, which is cooled by the pumped liquid. Impellers and diffusers made of fibreglass reinforced Noryl, with wear-resistant stainless steel thrust ring. Outer liner, stator sleeve, upper head with delivery connection and closing ring in AISI 304 stainless steel. Canned-type stator. Supports in cast iron. Rotor shaft extension in AISI 304 stainless steel. Lip seal on the motor side, and silicon carbide/silicon carbide seal on the pump side.

### CONSTRUCTION FEATURES OF THE MOTOR

Submersible asynchronous two-pole motor, made entirely of stainless steel, dry design with external cooling by means of the pumped liquid. Canned-type AISI 304L stator.

Squirrel cage rotor running on ball bearings, oversized to ensure silent operation, reliability and durability.

The single-phase version can be supplied with CONTROL BOX on request.

Overload protection to be provided by the user for the three-phase version.

Automatic version available with float switch.

Available on request with support base and lateral suction (DRY).

Protection class: IP 68

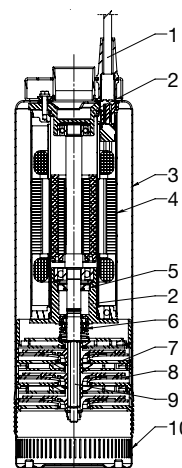
Insulation class: F

Standard voltage: single-phase 230 V / 50 Hz.  
 three-phase 400 V / 50 Hz

Power cable: Removable H07RN-F power cable, length 10 m.

### MATERIALS

N.	PARTS*	MATERIALS
1	CABLE	H07RNF CEI 20-19
2	SUPPORT	BRASS PCuZn40Pb2 UNI 5705
3	OUTER LINER	AISI 304 STAINLESS STEEL X5CrNi1810 UNI 10088-3
4	STATOR	AISI 304 STAINLESS STEEL X5CrNi1810 UNI 10088-3
5	LIP SEAL	NBR 70
6	MECHANICAL SEAL	SiC / SiC
7	DIFFUSER	TECHNOPOLYMER
8	IMPELLER	TECHNOPOLYMER
9	SHAFT WITH ROTOR	AISI 304 STAINLESS STEEL X5CrNi1810 UNI 10088-3
10	STRAINER	AISI 304 STAINLESS STEEL X5CrNi1810 UNI 10088-3



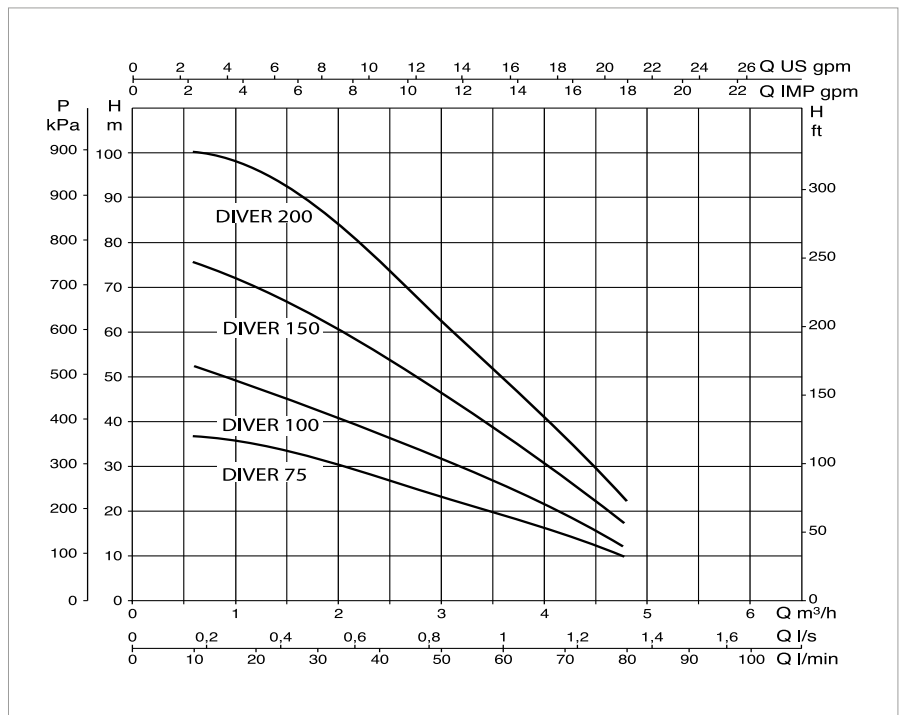
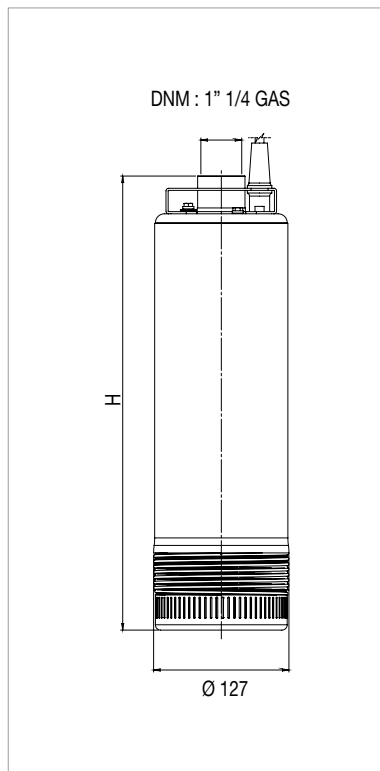


### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA									
	P2 NOMINAL		Q=m³/h	0	0,6	1,2	1,8	2,4	3	3,6	4,2	4,8
	kW	HP	Q=l/min	0	10	20	30	40	50	60	70	80
DIVER 75	0,55	0,75	H (mt)	39	35	33	30	26	22	18	14	9
DIVER 100	0,75	1		55	50	45	41	35	30	25	18	11
DIVER 150	1	1,5		80	72	67	60	52	45	35	26	16
DIVER 200	1,5	2		101	96	90	85	70	60	47	35	21

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA							Ø mm	H mm	PACKING DIMENSIONS			VOLUME PACKING m³	Q.TY X PALLET	WEIGHT Kg
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	CAPACITOR									
			kW	HP		µF	Vc			L/A	L/B	H			
DIVER 75 M	1 x 230 V ~	0,85	0,55	0,75	4,6	16	450	127	427	625	230	170	0,024	25	9
DIVER 75 T-NA	3 x 230 V ~	0,8	0,55	0,75	2,9	-	-	127	427	625	230	170	0,024	25	9
	3 x 400 V ~	0,8	0,55	0,75	1,7	-	-	127	427	625	230	170	0,024	25	9
DIVER 100 M	1 x 230 V ~	1,1	0,75	1	5,9	20	450	127	482	625	230	170	0,024	25	11
DIVER 100 T-NA	3 x 230 V ~	1,2	0,75	1	4,2	-	-	127	482	625	230	170	0,024	25	11
	3 x 400 V ~	1,2	0,75	1	2,4	-	-	127	482	625	230	170	0,024	25	11
DIVER 150 M	1 x 230 V ~	1,6	1	1,5	7,8	30	450	127	550	625	230	170	0,024	25	13
DIVER 150 T-NA	3 x 230 V ~	1,55	1	1,5	5,7	-	-	127	550	625	230	170	0,024	25	13
	3 x 400 V ~	1,55	1	1,5	3,3	-	-	127	550	625	230	170	0,024	25	13
DIVER 200 M	1 x 230 V ~	2,3	1,5	2	10,7	35	450	127	648	648	710	220	0,025	25	16
DIVER 200 T-NA	3 x 230 V ~	2,15	1,5	2	8,5	-	-	127	648	648	710	220	0,025	25	16
	3 x 400 V ~	2,15	1,5	2	4,9	-	-	127	648	648	710	220	0,025	25	16



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

# DIVER HF (HIGH FLOW)

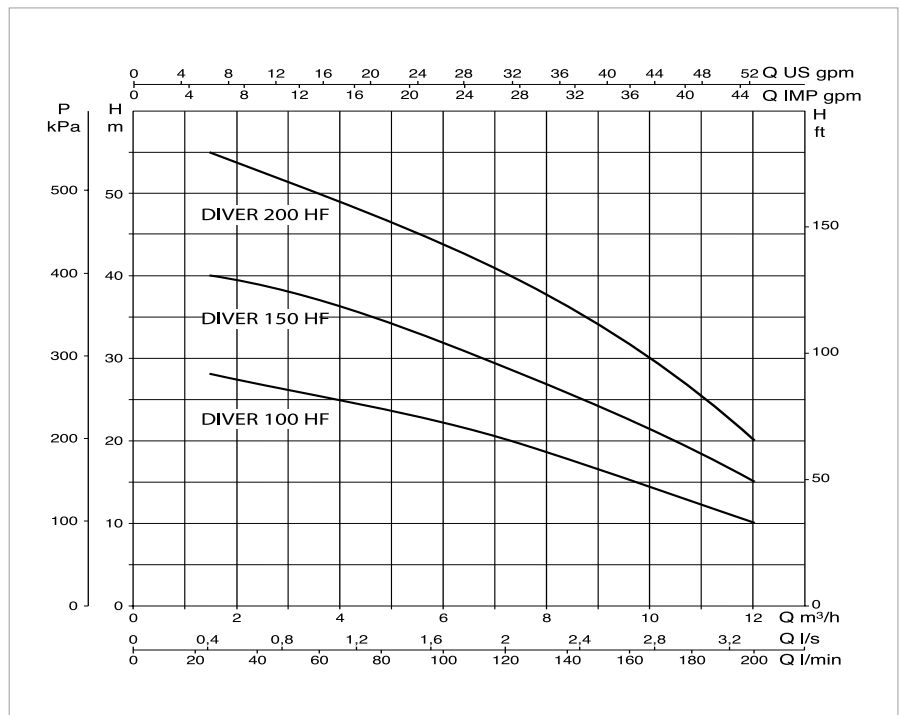
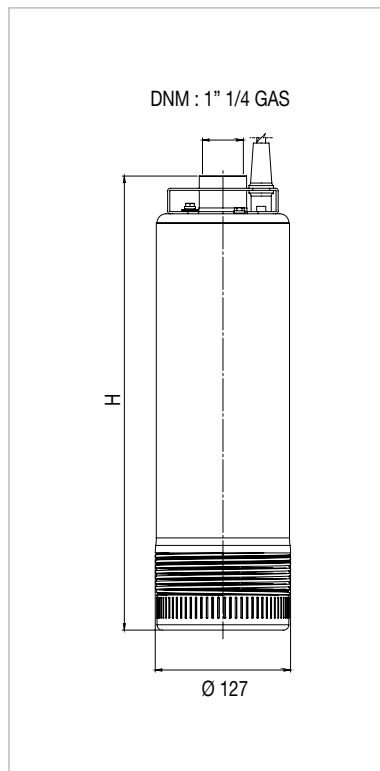
## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA									
	P2 NOMINAL		Q=m³/h	0	1,5	3	4,5	6	7,5	9	10,5	12
	kW	HP	Q=l/min	0	25	50	75	100	125	150	175	200
DIVER 100 HF	0,75	1	H (mt)	30	28	26	24	22	20	16	13	10
DIVER 150 HF	1	1,5		42	40	38	35	32	28	24	20	15
DIVER 200 HF	1,5	2		59	55	51	48	44	39	34	28	20

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA							Ø mm	H mm	PACKING DIMENSIONS			PACKING VOLUME m³	Q.TY X PALLET	WEIGHT Kg
	POWER INPUT 50 Hz	P1 kW	P2 NOMINAL		In A	CAPACITOR									
			kW	HP		µF	Vc			L/A	L/B	H			
DIVER 100 HF M	1 x 230 V ~	1,1	0,75	1	6,2	20	450	127	459	625	230	170	0,024	25	11,5
DIVER 100 HF T-NA	3 x 230 V ~	1,2	0,75	1	4,3	-	-	127	459	625	230	170	0,024	25	11,5
	3 x 400 V ~	1,2	0,75	1	2,5	-	-	127	459	625	230	170	0,024	25	11,5
DIVER 150 HF M	1 x 230 V ~	1,7	1	1,5	8,1	30	450	127	523	625	230	170	0,024	25	13
DIVER 150 HF T-NA	3 x 230 V ~	1,8	1	1,5	6	-	-	127	523	625	230	170	0,024	25	13
	3 x 400 V ~	1,8	1	1,5	3,5	-	-	127	523	625	230	170	0,024	25	13
DIVER 200 HF M	1 x 230 V ~	2,15	1,5	2	10,8	35	450	127	608	710	220	160	0,025	25	15,5
DIVER 200 HF T-NA	3 x 230 V ~	2,1	1,5	2	8,5	-	-	127	608	710	220	160	0,025	25	15,5
	3 x 400 V ~	2,1	1,5	2	4,9	-	-	127	608	710	220	160	0,025	25	15,5



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.



### TECHNICAL DATA

- Operating range:** from 0,9 to 7,2 m<sup>3</sup>/h with head up to 86 metres
- Pumped liquid:** clean, free of solids and abrasives, non-aggressive
- Max percentage of sand in water:** 50 g/m<sup>3</sup>
- Liquid temperature range:** from 0 °C to +40 °C
- Maximum immersion depth:** 20 metres
- Motor protection class:** IP 68
- Motor protection rating:** F
- Installation:** fixed or portable, vertical or horizontal position
- Operation:** manual or automatic (continuous duty with totally submerged pump)
- Discharge port diameter:** 1 1/4 GAS
- Pump maximum diameter:** 138 mm

### APPLICATIONS

PULSAR electric pumps are utilised for lifting clear water from boreholes, first water collection tanks or cisterns, wells or water courses, and are capable of distributing pressurised water to domestic installations, small agricultural plants, and sprinkler systems for lawns and vegetable gardens. The pump has a very silent operation, and can be installed inside boreholes and tanks, thus avoiding all the potential problems connected with suction and unpriming.

### CONSTRUCTION FEATURES OF THE PUMP

Multistage monobloc submersible pump with hydraulic section below the motor, which is cooled by the pumped liquid. Impellers, diffusers, strainer and oil sump in abrasion-proof thermoplastic material. Outer liner, stator sleeve, upper head with delivery connection and closing ring in AISI 304 stainless steel. Upper and lower bearing support in pressed anti-dezincification brass. Rotor shaft extension in AISI 304 stainless steel. Elastomers in NBR. Stainless steel screws. Double mechanical seal with interposed oil chamber, in ceramic/carbon on the motor side, and silicon carbide/silicon carbide on the pump side. The seal system adopted ensures watertight sealing of the motor and good performance of the mechanical seal even in the event of short term dry operation.

### CONSTRUCTION FEATURES OF THE MOTOR

Submersible type continuous duty asynchronous motor. Stator enclosed in airtight casing made of AISI 304 stainless steel and covered by an outer protection that protects the wiring and the capacitor. Rotor running on ball bearings, oversized to ensure low noise and durability. The single-phase version has built-in thermal-amperometric protection and permanently connected capacitor. For the protection of the three-phase motor, we recommend the use of remote overload cut-outs, in compliance with current local regulations. Construction according to CEI 2-3 and CEI 61-69 (EN 60335-2-41).

**Motor protection class:** IP 68

**Insulation class:** F

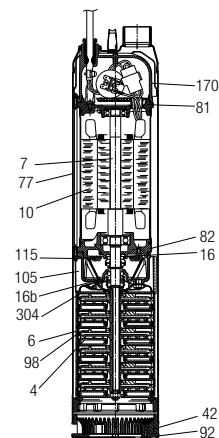
**Standard voltages:** Single-phase 220/240 V - 50 Hz.  
Three-phase 400 V - 50 Hz.

**Standard cables:** 20 m cable type H07 RN-F; single-phase version complete with SCHUKO CEE 7-VII-UNEL 47166-68 plug. The single-phase version can be supplied with or without float switches for automatic operation.

### MATERIALS

N.	PARTS*	MATERIALS
4*	IMPELLER	TECHNOPOLYMER
6*	DIFFUSER	TECHNOPOLYMER
7*	SHAFT WITH ROTOR	AISI 304 (part in contact with the pumped liquid)
10*	MOTOR CASING WITH WOUND STATOR	AISI 304
16*	COMPLETE UPPER MECHANICAL SEAL	NBR/CERAMIC/CARBON
16b	COMPLETE LOWER MECHANICAL SEAL	NBR/SILICON/CARBON
42*	SUCTION STRAINER	TECHNOPOLYMER
77*	OUTER LINER	AISI 304
81*	UPPER BEARING SUPPORT	PRESSED BRASS
82*	LOWER BEARING SUPPORT	PRESSED BRASS
92*	STRAINER COVER	AISI 304
98*	DIFFUSER HOUSING	TECHNOPOLYMER
105*115	SUMP	TECHNOPOLYMER
170*	SEAL LUBRICATION FLUID	ESSO MARCOL 172 OIL
304*	WIRING COMPARTMENT COVER	TECHNOPOLYMER
	REAR DISC	TECHNOPOLYMER

\* In contact with the pumped liquid.



# PULSAR 50

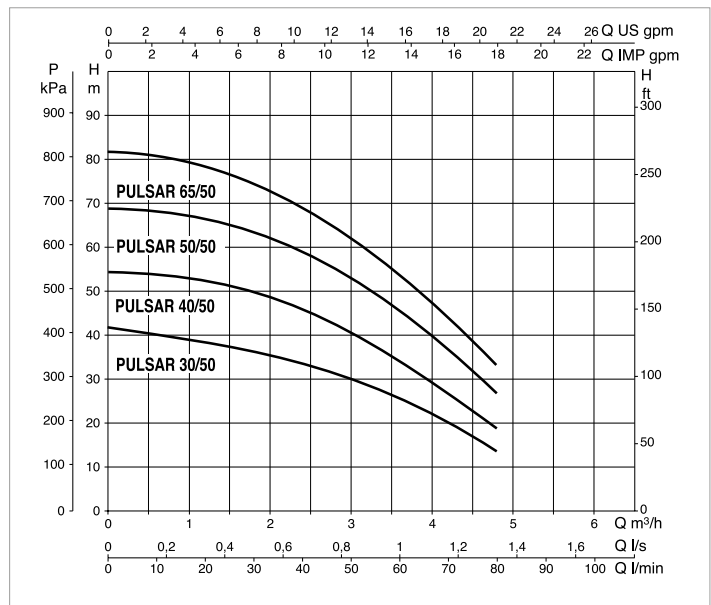
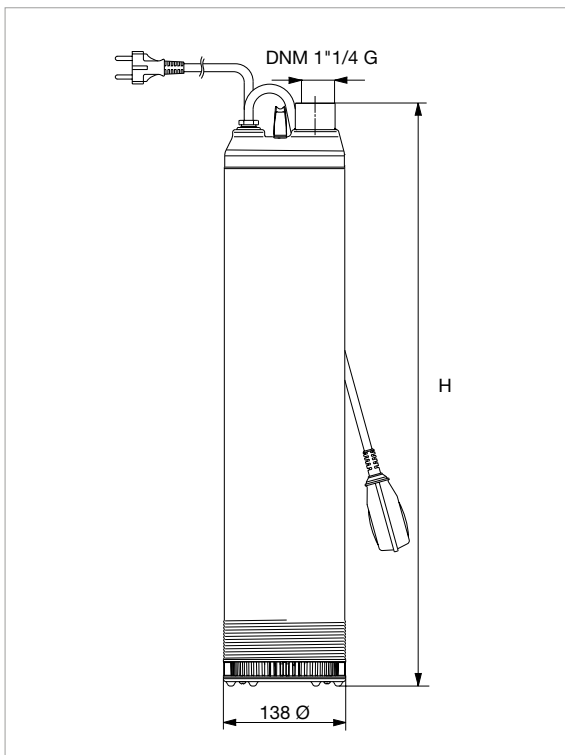
## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA							
	P2 NOMINAL		Q=m³/h	0	1,2	2,4	3,6	4,8	6	7,2
	kW	HP	Q=l/min	0	20	40	60	80	100	120
PULSAR 30/50	0,55	0,75	H (mt)	42	38,2	33,8	24,8	13,5	-	-
PULSAR 40/50	0,75	1		56	51	45	33	18	-	-
PULSAR 50/50	1	1,36		72	65,5	58	43,6	24,5	-	-
PULSAR 65/50	1,2	1,6		86	78,5	70	52,8	29	-	-

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA							H mm	PACKING DIMENSIONS			PACKING VOLUME m³	Q.TY X PALLET	WEIGHT Kg
	POWER INPUT 50 Hz	P1 kW	P2 NOMINAL		In A	CAPACITOR			L/A	L/B	H			
			kW	HP		µF	Vc							
PULSAR 30/50 M-A	1 x 230 V ~	0,94	0,55	0,75	4,5	16	450	562	690	220	165	0,037	20	17,3
PULSAR 30/50 M-NA	1 x 230 V ~	0,94	0,55	0,75	4,5	16	450	562	690	220	165	0,037	20	16,7
PULSAR 30/50 T-NA	3 x 230 V ~	0,87	0,55	0,75	2,85	-	-	562	690	220	165	0,037	20	17,3
	3 x 400 V ~	0,87	0,55	0,75	1,65	-	-	562	690	220	165	0,037	20	17,3
PULSAR 40/50 M-A	1 x 230 V ~	1,12	0,75	1	5,2	16	450	562	690	220	165	0,037	20	17,5
PULSAR 40/50 M-NA	1 x 230 V ~	1,12	0,75	1	5,2	16	450	562	690	220	165	0,037	20	17
PULSAR 40/50 T-NA	3 x 230 V ~	1,03	0,75	1	3,2	-	-	562	690	220	165	0,037	20	17,5
	3 x 400 V ~	1,03	0,75	1	1,85	-	-	562	690	220	165	0,037	20	17,5
PULSAR 50/50 M-A	1 x 230 V ~	1,45	1	1,36	6,5	25	450	630	690	220	165	0,037	20	18,5
PULSAR 50/50 M-NA	1 x 230 V ~	1,45	1	1,36	6,5	25	450	630	690	220	165	0,037	20	18
PULSAR 50/50 T-NA	3 x 230 V ~	1,35	1	1,36	4,15	-	-	630	690	220	165	0,037	20	18,5
	3 x 400 V ~	1,35	1	1,36	2,4	-	-	630	690	220	165	0,037	20	18,5
PULSAR 65/50 M-A	1 x 230 V ~	1,7	1,2	1,6	7,8	30	450	657	690	220	165	0,037	20	19,5
PULSAR 65/50 M-NA	1 x 230 V ~	1,7	1,2	1,6	7,8	30	450	657	690	220	165	0,037	20	19
PULSAR 65/50 T-NA	3 x 230 V ~	1,6	1,2	1,6	5	-	-	657	690	220	165	0,037	20	19,5
	3 x 400 V ~	1,6	1,2	1,6	2,9	-	-	657	690	220	165	0,037	20	19,5



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

# PULSAR 80

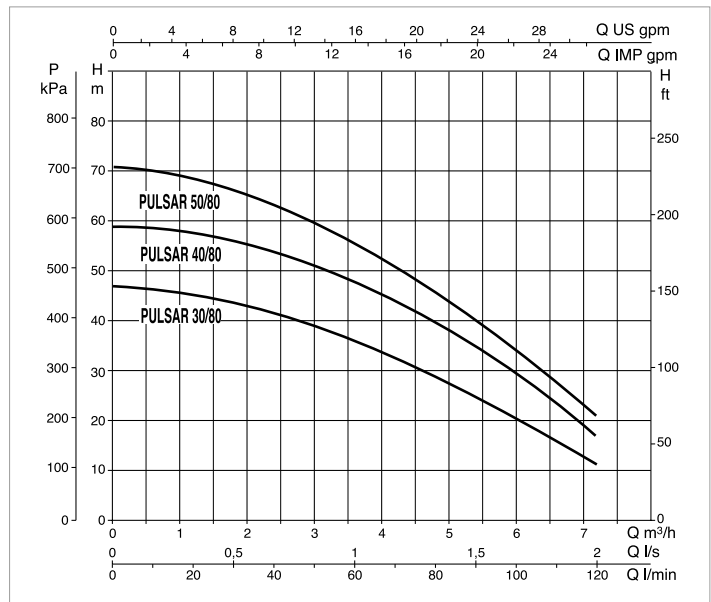
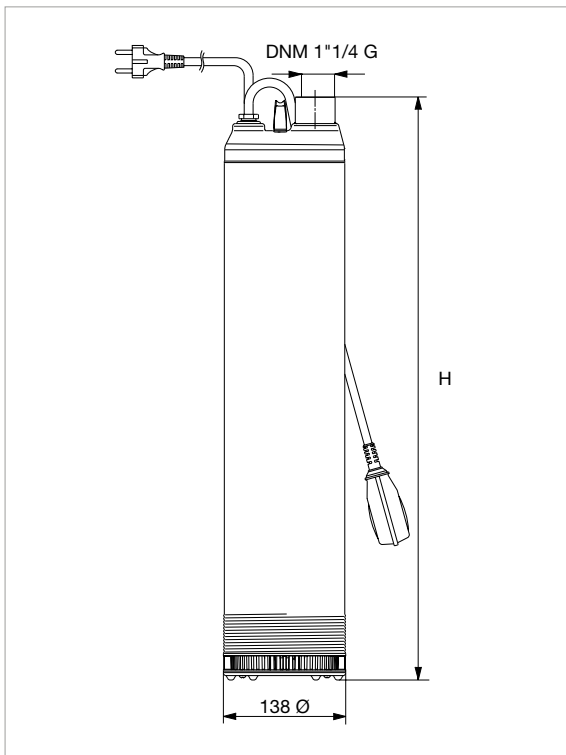
## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA							
	P2 NOMINAL		Q=m³/h	0	1,2	2,4	3,6	4,8	6	7,2
	kW	HP	Q=l/min	0	20	40	60	80	100	120
PULSAR 30/80	0,75	1	H (m)	47	45	42	36	30	21	12
PULSAR 40/80	1	1,36		64	61	56,8	50	41,5	30,5	16,2
PULSAR 50/80	1,2	1,6		77	73,2	68	60	50	37	19,6

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA						H mm	PACKING DIMENSIONS			PACKING VOLUME m3	Q.TY X PALLET	WEIGHT Kg	
	POWER INPUT 50 Hz	P1 kW	P2 NOMINAL		In A	CAPACITOR		L/A	L/B	H				
			kW	HP		µF								Vc
PULSAR 30/80 M-A	1 x 230 V ~	1,12	0,75	1	5,2	16	450	562	690	220	165	0,037	20	17,5
PULSAR 30/80 M-NA	1 x 230 V ~	1,12	0,75	1	5,2	16	450	562	690	220	165	0,037	20	17
PULSAR 30/80 T-NA	3 x 230 V ~	1,03	0,75	1	3,2	-	-	562	690	220	165	0,037	20	17,5
	3 x 400 V ~	1,03	0,75	1	1,85	-	-	562	690	220	165	0,037	20	17,5
PULSAR 40/80 M-A	1 x 230 V ~	1,45	1	1,36	6,5	25	450	630	690	220	165	0,037	20	18,5
PULSAR 40/80 M-NA	1 x 230 V ~	1,45	1	1,36	6,5	25	450	630	690	220	165	0,037	20	18
PULSAR 40/80 T-NA	3 x 230 V ~	1,35	1	1,36	4,15	-	-	630	690	220	165	0,037	20	18,5
	3 x 400 V ~	1,35	1	1,36	2,4	-	-	630	690	220	165	0,037	20	18,5
PULSAR 50/80 M-A	1 x 230 V ~	1,7	1,2	1,6	7,8	30	450	657	690	220	165	0,037	20	19,5
PULSAR 50/80 M-NA	1 x 230 V ~	1,7	1,2	1,6	7,8	30	450	657	690	220	165	0,037	20	19
PULSAR 50/80 T-NA	3 x 230 V ~	1,6	1,2	1,6	5	-	-	657	690	220	165	0,037	20	19,5
	3 x 400 V ~	1,6	1,2	1,6	2,9	-	-	657	690	220	165	0,037	20	19,5



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

# PULSAR DRY

## SUBMERSIBLE PUMPS



### TECHNICAL DATA

**Operating range:** from 0,9 to 7,2 m<sup>3</sup>/h with head of up to 86 metres

**Pumped liquid:** clean, free of solids and abrasives, non-aggressive

**Max percentage of sand in water:** 50 g/m<sup>3</sup>

**Liquid temperature range:** from 0 °C to +40 °C

**Maximum immersion depth:** 20 metres

**Motor protection class:** IP 68

**Motor protection rating:** F

**Maximum working pressure:** 10 bar

**Installation:** fixed or portable, vertical or horizontal position

**Operation:** manual or automatic

(continuous duty with totally submerged pump)

**Discharge and suction port diameters:** 1"1/4 GAS

**Pump maximum diameter:** 138 mm

### APPLICATIONS

PULSAR DRY electric pumps are utilised for lifting and pressurizing clear water from first water collection tanks or cisterns, and are capable of distributing pressurised water to domestic installations, small agricultural plants, and sprinkler systems for lawns and vegetable gardens. Thanks to its particularly silent operation, the pump is suitable for the creation of pressurization assemblies for installation in environments without aeration or prone to flooding.

### CONSTRUCTION FEATURES OF THE PUMP

Multistage monobloc submersible or surface pump with hydraulic section below the motor, which is cooled by the pumped liquid. Impellers, diffusers, strainer and oil sump in abrasion-proof thermoplastic material. Outer liner, pump body, stator sleeve, upper head with delivery connection and closing ring in AISI 304 stainless steel. Upper and lower bearing support in pressed anti-dezincification brass. Rotor shaft extension in AISI 304 stainless steel. Elastomers in NBR. Stainless steel screws. Double mechanical seal with interposed oil chamber, in ceramic/carbon on the motor side, and silicon carbide/silicon carbide on the pump side. The seal system adopted ensures watertight sealing of the motor and good performance of the mechanical seal even in the event of short term dry operation.

### CONSTRUCTION FEATURES OF THE MOTOR

Submersible type continuous duty asynchronous motor. Stator enclosed in airtight casing made of AISI 304 stainless steel and covered by an outer protection that protects the wiring and the capacitor. Rotor running on ball bearings, oversized to ensure low noise and durability. The single-phase version has built-in thermal-amperometric protection and permanently connected capacitor. For the protection of the three-phase motor, we recommend the use of remote overload cut-outs, in compliance with current local regulations. Construction according to CEI 2-3 and CEI 61-69 (EN 60335-2-41).

**Motor protection class:** IP 68

**Insulation class:** F

**Standard voltages:** Single-phase 220/240 V - 50 Hz.

Three-phase 400 V - 50 Hz.

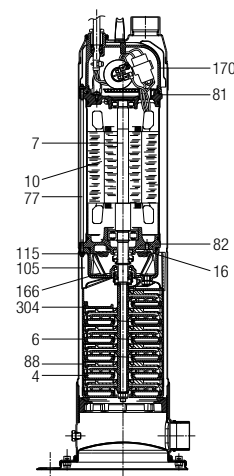
**Standard cables:** 15 m cable type H07 RN-F; single-phase version complete with SCHUKO CEE 7-VII-UNEL 47166-68 plug.

The single-phase version can be supplied with or without float switches for automatic operation.

### MATERIALS

N.	PARTS*	MATERIALS
4*	IMPELLER	TECHNOPOLYMER
6*	DIFFUSER	TECHNOPOLYMER
7*	SHAFT WITH ROTOR	AISI 304 (Part in contact with the pumped liquid)
10*	MOTOR CASING WITH WOUND STATOR	AISI 304
16*	COMPLETE UPPER MECHANICAL SEAL	NBR / CERAMIC / CARBON
16b	COMPLETE LOWER MECHANICAL SEAL	NBR / SILICON / CARBON
77*	OUTER LINER	AISI 304
81*	UPPER BEARING SUPPORT	PRESSED BRASS
82*	LOWER BEARING SUPPORT	PRESSED BRASS
92*	STRAINER COVER	AISI 304
98*	DIFFUSER HOUSING	TECHNOPOLYMER
105*115	SUMP	TECHNOPOLYMER
170*	SEAL LUBRIFICATION FLUID	ESSO MARCOL 172 OIL
304*	WIRING COMPARTMENT COVER	TECHNOPOLYMER
	REAR DISC	TECHNOPOLYMER

\* In contact with the pumped liquid.



# PULSAR DRY

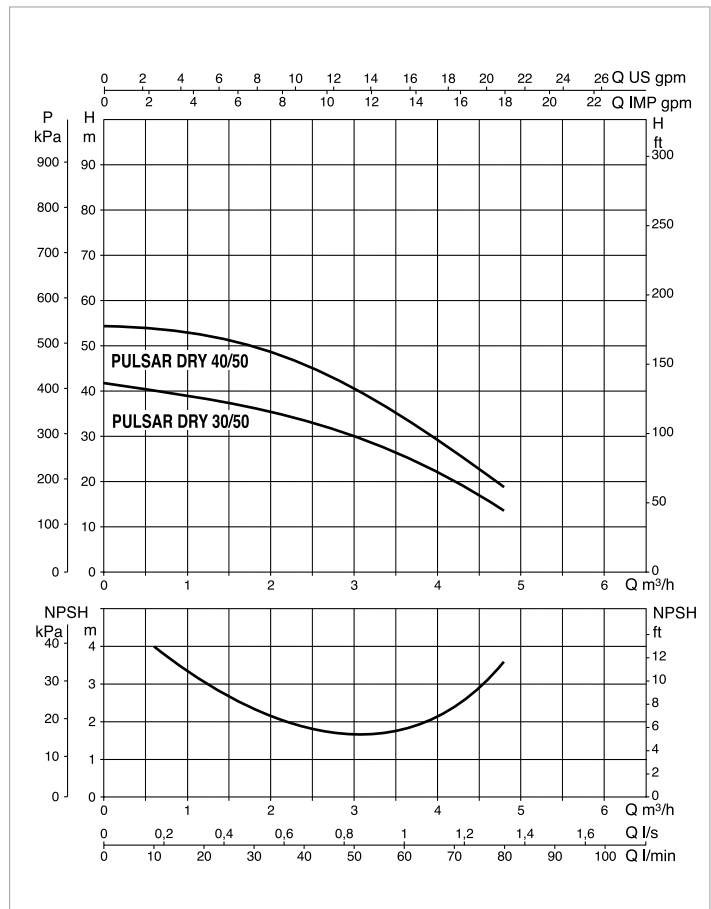
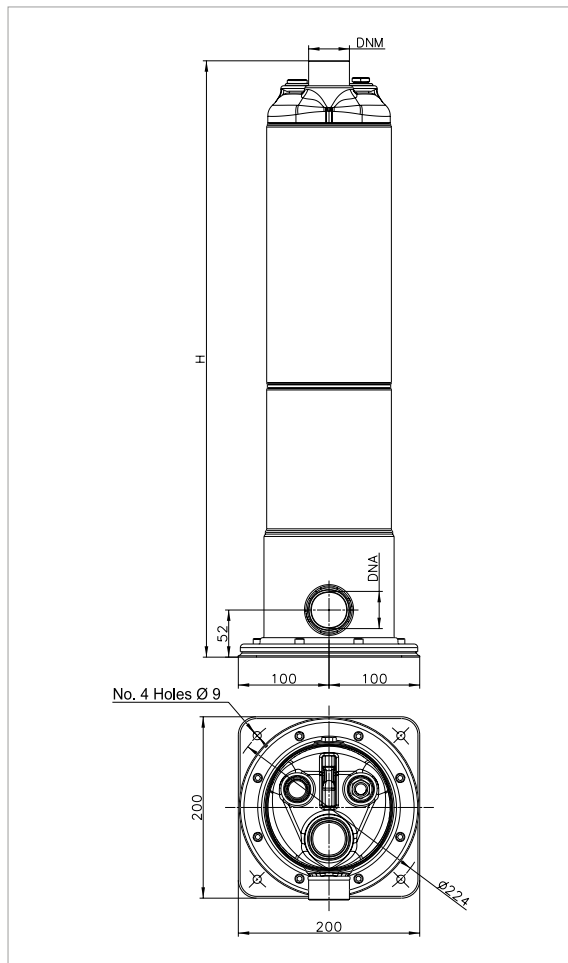
## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA							
	P2 NOMINALE		Q=m³/h	0	1,2	2,4	3,6	4,8	6	7,2
	kW	HP	Q=l/min	0	20	40	60	80	100	120
PULSAR DRY 30/50	0,55	0,75	H (mt)	42	38,2	33,8	24,8	13,5	-	-
PULSAR DRY 40/50	0,75	1		56	51	45	33	18	-	-

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA				In A	H mm	PACKING DIMENSIONS			PACKING VOLUME m³	Q.TY X PALLET	WEIGHT Kg
	POWER INPUT 50 Hz	P1 kW	P2 NOMINAL									
			kW	HP								
PULSAR DRY 30/50 M-NA	1 x 230 V ~	0,94	0,55	0,75	4,4	562	690	220	165	0,037	20	16,7
PULSAR DRY 30/50 T-NA	3 x 230 V ~	0,87	0,55	0,75	2,85	562	690	220	165	0,037	20	17,3
	3 x 400 V ~	0,87	0,55	0,75	1,65	562	690	220	165	0,037	20	17,3
PULSAR DRY 40/50 M-NA	1 x 230 V ~	1,12	0,75	1	5,2	562	690	220	165	0,037	20	17,3
PULSAR DRY 40/50 T-NA	3 x 230 V ~	1,03	0,75	1	3,2	562	690	220	165	0,037	20	17
	3 x 400 V ~	1,03	0,75	1	1,85	562	690	220	165	0,037	20	17



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

# PULSAR DRY

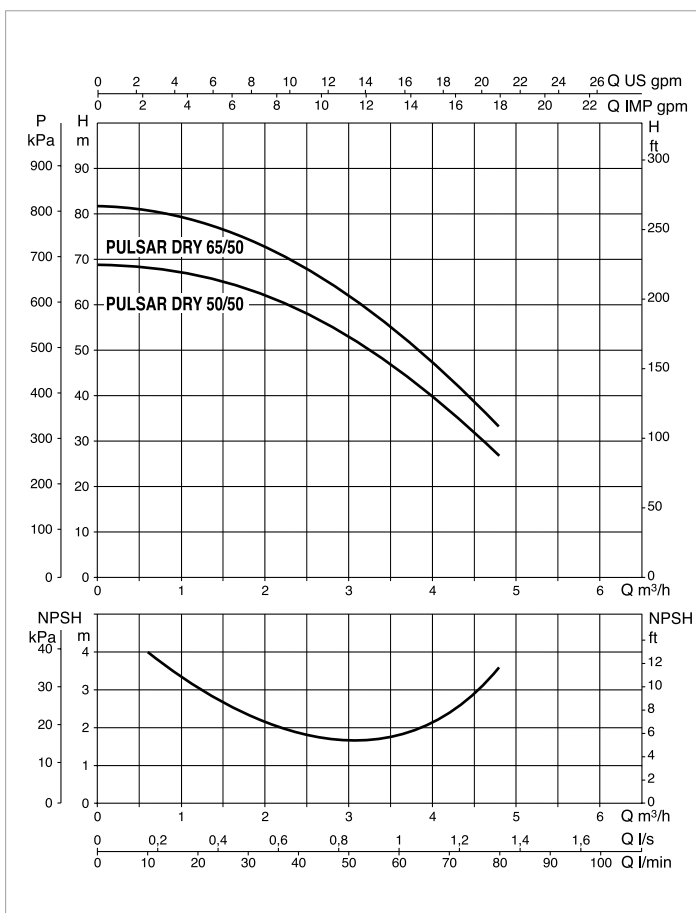
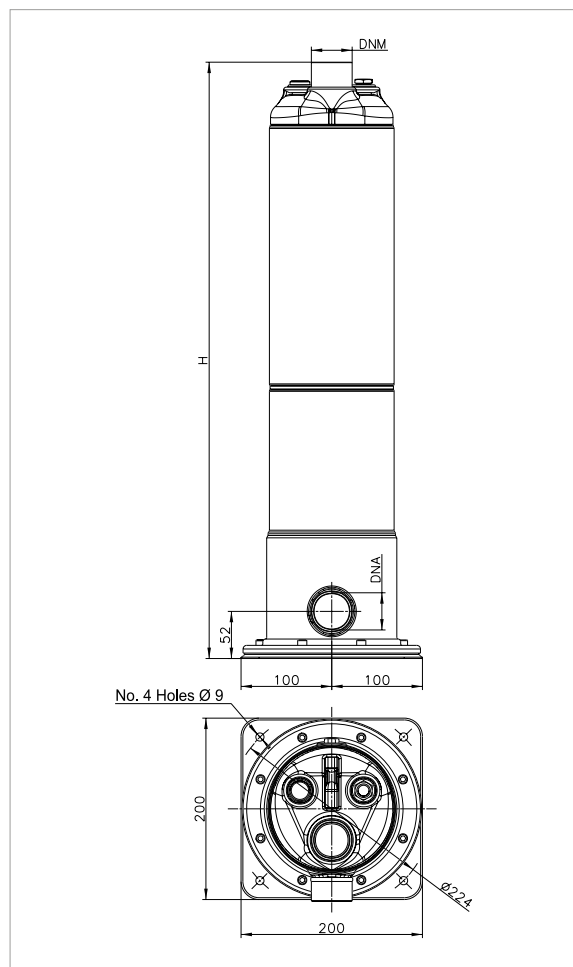
## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA							
	P2 NOMINAL		Q=m <sup>3</sup> /h	0	1,2	2,4	3,6	4,8	6	7,2
	kW	HP	Q=l/min	0	20	40	60	80	100	120
PULSAR DRY 50/50	1	1,36	H (mt)	72	65,5	58	43,6	24,5	-	-
PULSAR DRY 65/50	1,2	1,6		86	78,5	70	52,8	29	-	-

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA				In A	H mm	PACKING DIMENSIONS			PACKING VOLUME m <sup>3</sup>	Q.TY X PALLET	WEIGHT Kg
	POWER INPUT 50 Hz	P1 kW	P2 NOMINAL				L/A	L/B	H			
			kW	HP								
PULSAR DRY 50/50 M-NA	1 x 230 V ~	1,45	1	1,36	6,5	630	690	220	165	0,037	20	18
PULSAR DRY 50/50 T-NA	3 x 230 V ~	1,35	1	1,36	4,15	630	690	220	165	0,037	20	18,5
	3 x 400 V ~	1,35	1	1,36	2,4	630	690	220	165	0,037	20	18,5
PULSAR DRY 65/50 M-NA	1 x 230 V ~	1,7	1,2	1,6	7,8	657	690	220	165	0,037	9	19
PULSAR DRY 65/50 T-NA	3 x 230 V ~	1,6	1,2	1,6	5	657	690	220	165	0,037	9	19,5
	3 x 400 V ~	1,6	1,2	1,6	2,9	657	690	220	165	0,037	9	19,5



The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equivalent to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.



# PULSAR DRY

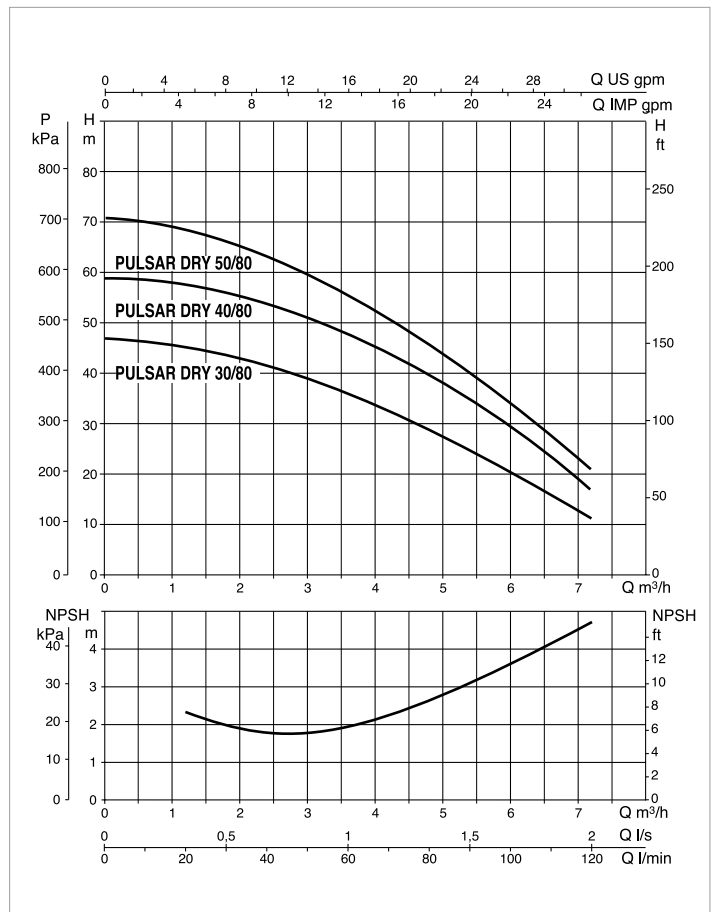
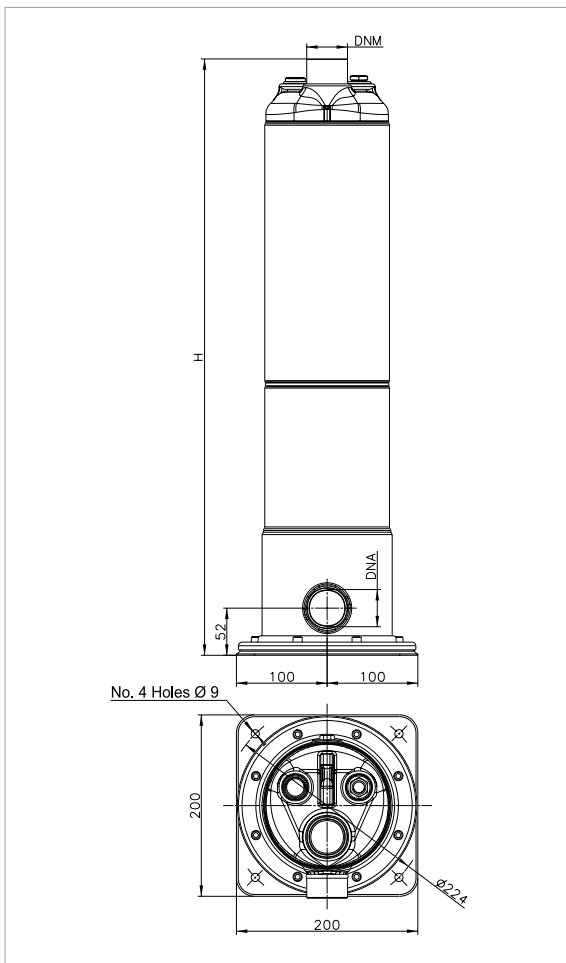
## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA							
	P2 NOMINAL		Q=m³/h	0	1,2	2,4	3,6	4,8	6	7,2
	kW	HP	Q=l/min	0	20	40	60	80	100	120
PULSAR DRY 30/80	0,75	1	H (mt)	47	45	42	36	30	21	12
PULSAR DRY 40/80	1	1,36		64	61	56,8	50	41,5	30,5	16,2
PULSAR DRY 50/80	1,2	1,6		77	73,2	68	60	50	37	19,6

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA					H mm	PACKING DIMENSIONS			PACKING VOLUME m³	Q.TY X PALLET	WEIGHT Kg
	POWER INPUT 50 Hz	P1 kW	P2 NOMINAL		In A		L/A	L/B	H			
			kW	HP								
PULSAR DRY 30/80 M-NA	1 x 230 V ~	1,12	0,75	1	5,2	562	690	220	165	0,037	20	17
PULSAR DRY 30/80 T-NA	3 x 230 V ~	1,03	0,75	1	3,2	562	690	220	165	0,037	20	17,5
	3 x 400 V ~	1,03	0,75	1	1,85	562	690	220	165	0,037	20	17,5
PULSAR DRY 40/80 M-NA	1 x 230 V ~	0,78	1	1,36	6,5	630	690	220	165	0,037	20	18
PULSAR DRY 40/80 T-NA	3 x 230 V ~	0,6	1	1,36	4,15	630	690	220	165	0,037	20	18,5
	3 x 400 V ~	0,6	1	1,36	2,4	630	690	220	165	0,037	20	18,5
PULSAR DRY 50/80 M-NA	1 x 230 V ~	0,94	1,2	1,6	7,8	657	690	220	165	0,037	9	19
PULSAR DRY 50/80 T-NA	3 x 230 V ~	0,87	1,2	1,6	5	657	690	220	165	0,037	9	19,5
	3 x 400 V ~	0,87	1,2	1,6	2,9	657	690	220	165	0,037	9	18,5



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

# DIVER 6

## SUBMERSIBLE PUMPS



### TECHNICAL DATA

**Operating range:** from 1 to 5,4 m<sup>3</sup>/h with head up to 46 metres  
**Pumped liquid:** clean, free of solids and abrasives, non-aggressive  
**Liquid temperature range:** from 0 °C to +35 °C  
**Max. immersion depth:** 12 metres  
**Motor protection class:** IP 68  
**Motor protection rating:** F  
**Installation:** fixed or portable, vertical position  
**Operation:** manual or automatic with float switch (continuous duty with totally submerged pump)  
**Discharge port diameter:** 1"  
**Pump maximum diameter:** 150 mm

### APPLICATIONS

Multi-impeller submersible pumps ideal for use in rain water systems and watering networks, to pump water from cisterns, ponds, and for other applications requiring high pressure. Available with 2, 3, or 4 impellers.

Suitable for pumping clean waters.

Very efficient motor cooling, allowing the pump to also be used only partially submerged. Automatic version with float switch for automatic pump start and stop. Fitted with power supply cable with plug, non return valve and 4-level connector.

### CONSTRUCTION FEATURES OF THE PUMP

Corrosion and oxidation resistant material. Stainless steel debris strainer.

### CONSTRUCTION FEATURES OF THE MOTOR

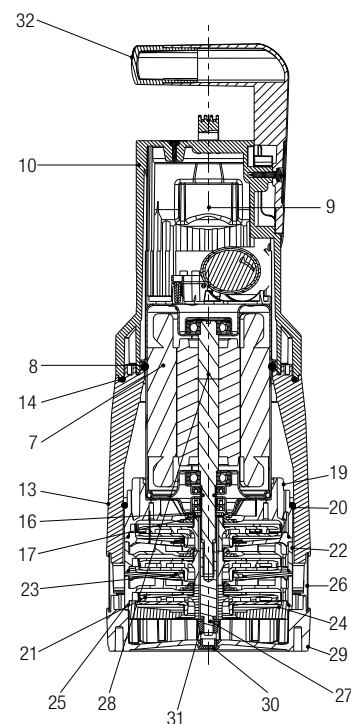
Submersible type continuous duty asynchronous motor.

Thermal overheating protection.

Wear-resistant motor shaft.

### MATERIALS

N°	PARTS		MATERIALS
7	MOTOR	CASE	ALUMINIUM
		ROTOR SHAFT	AISI 416 STAINLESS STEEL
8	OR RING		NBR
9	NON-RETURN VALVE		TECHNOPOLYMER / NBR / AISI 302 STAINLESS STEEL
10	COVER		TECHNOPOLYMER
13	BODY		TECHNOPOLYMER
14	OR RING		NBR
16	WASHER		A2 STAINLESS STEEL
17	WASHER		A2 STAINLESS STEEL
19	DIFFUSER SUPPORT		TECHNOPOLYMER
20	OR RING		NBR
21	IMPELLER		TECHNOPOLYMER / AISI 304 STAINLESS STEEL
22	DIFFUSER		TECHNOPOLYMER
23	THRUST RING		TECHNOPOLYMER
24	FINAL DIFFUSER CAP		TECHNOPOLYMER
25	OR RING		NBR
26	STRAINER RING		AISI 304 STAINLESS STEEL
27	WASHER		A2 STAINLESS STEEL
28	SHAFT		AISI 303 STAINLESS STEEL
29	BASE		TECHNOPOLYMER
30	PLUG		TECHNOPOLYMER
31	NUT		A2 UNI 7474 STAINLESS STEEL
32	HANDLE		TECHNOPOLYMER



# DIVER 6

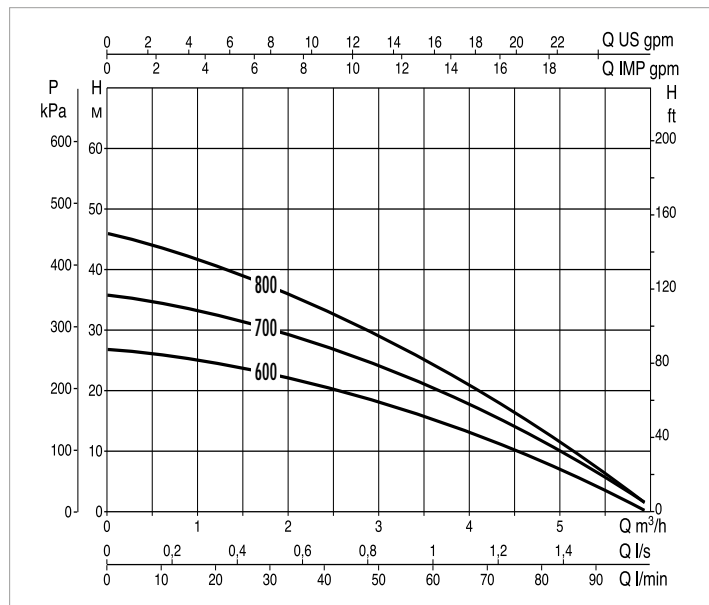
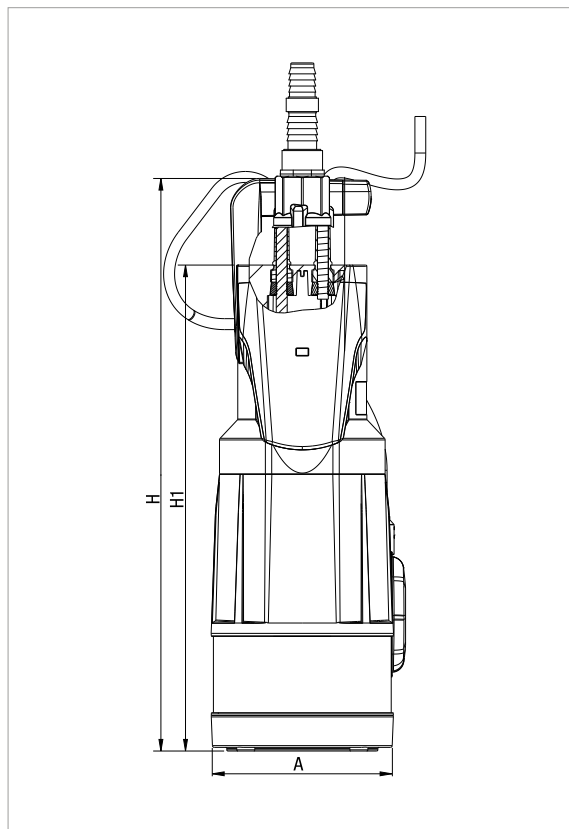
## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA								
	P2 NOMINAL		Q=m³/h	0	0,9	1,8	2,7	3,6	4,5	5,1	5,4
	kW	HP	Q=l/min	0	15	30	45	60	75	85	90
DIVER 6 - 600 M-A	0,35	0,5	H (mt)	24	22	19,5	16,2	12,5	7,5	3,7	1,5
DIVER 6 - 700 M-A	0,65	0,88		36	32,6	28,5	23,6	17	9,5	4,6	1,8
DIVER 6 - 800 M-A	0,75	1		46	41	35,5	29,2	21,8	13,5	7,8	3,5

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA					A	H	H1	Ø	PACKING DIMENSIONS			PACKING VOLUME m³	Q.TY X PALLET	WEIGHT Kg
	POWER INPUT 50 Hz	P1 kW	P2 NOMINAL		In A					L/A	L/B	H			
			kW	HP											
DIVER 6 - 600 M-A	1 x 230 V ~	0,55	0,35	0,5	3	150	423	354	1"	230	190	500	0,02	40	8,05
DIVER 6 - 700 M-A	1 x 230 V ~	0,9	0,65	0,88	3,8	150	470	399	1"	230	190	500	0,02	40	9,3
DIVER 6 - 800 M-A	1 x 230 V ~	1,1	0,75	1	4,8	150	470	399	1"	230	190	500	0,02	40	9,45



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

# DIVERTRON

## SUBMERSIBLE PUMPS



### TECHNICAL DATA

**Operating range:** from 1 to 5,4 m<sup>3</sup>/h with head up to 46 metres

**Pumped liquid:** clean, free of solids and abrasives, non-aggressive

**Liquid temperature range:** from 0 °C to +35 °C

**Max. immersion depth:** 12 metres

**Motor protection class:** IP 68

**Motor protection rating:** F

**Installation:** fixed or portable, vertical position

**Operation:** Manual or automatic with electronic ON/OFF (continuous duty with totally submerged pump)

**Discharge port diameter:** 1"

**Pump maximum diameter:** 150 mm

### APPLICATIONS

Multi-impeller submersible pump with integrated electronics for automatic switching on and off. Ideal for use in rain water systems and watering networks, to pump water from cisterns, ponds, and for other applications requiring high pressure. Available with 3 or 4 impellers. Built-in pressure switch, control circuit board and sensor. Dry run protection. Built-in non-return valve at the delivery. Easy to use and highly reliable.

Suitable for pumping clean waters. Very efficient motor cooling, allowing the pump to also be used only partially submerged. Supplied with stainless steel suction filter or stainless steel connection fitting for use with suction kits, particularly suitable for tanks with debris or dirt lying at the bottom. A version complete with suction kit is also available.

### CONSTRUCTION FEATURES OF THE PUMP

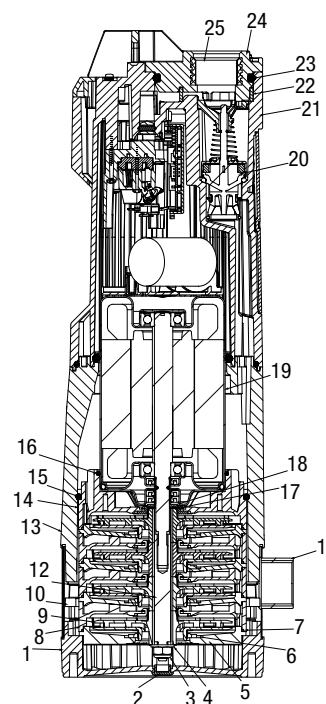
Corrosion and oxidation resistant material. Stainless steel debris strainer.

### CONSTRUCTION FEATURES OF THE MOTOR

Submersible type continuous duty asynchronous motor. Thermal overheating protection. Wear-resistant motor shaft.

### MATERIALS

N.	PARTS	MATERIALS
1	BASE	TECHNOPOLYMER
2	PLUG	TECHNOPOLYMER
3	NUT	A2 UNI 7474 STAINLESS STEEL
4	WASHER	A2 STAINLESS STEEL
5	FINAL DIFFUSER CAP	TECHNOPOLYMER
6	THRUST RING	TECHNOPOLYMER
7	OR RING	NBR
8	DIFFUSER	TECHNOPOLYMER
9	IMPELLER	TECHNOPOLYMER/ AISI 304 STAINLESS STEEL
10	SPACER	TECHNOPOLYMER
11	STRAINER RING	AISI 304 STAINLESS STEEL
12	SHAFT	AISI 303 STAINLESS STEEL
13	BODY	TECHNOPOLYMER
14	DIFFUSER SUPPORT	TECHNOPOLYMER
15	OR RING	NBR
16	OR RING	NBR
17	WASHER	A2 STAINLESS STEEL
18	WASHER	A2 STAINLESS STEEL
19	MOTOR	CASE ALUMINIUM
		ROTOR SHAFT AISI 416 STAINLESS STEEL
20	NON-RETURN VALVE	TECHNOPOLYMER / NBR / SILOPREN FERRIMAX / AISI 302
21	COVER	TECHNOPOLYMER
22	SAND STRAINER	TECHNOPOLYMER
23	OR RING	NBR
24	DELIVERY COVER	TECHNOPOLYMER
25	INSERT	NICKEL PLATED BRASS

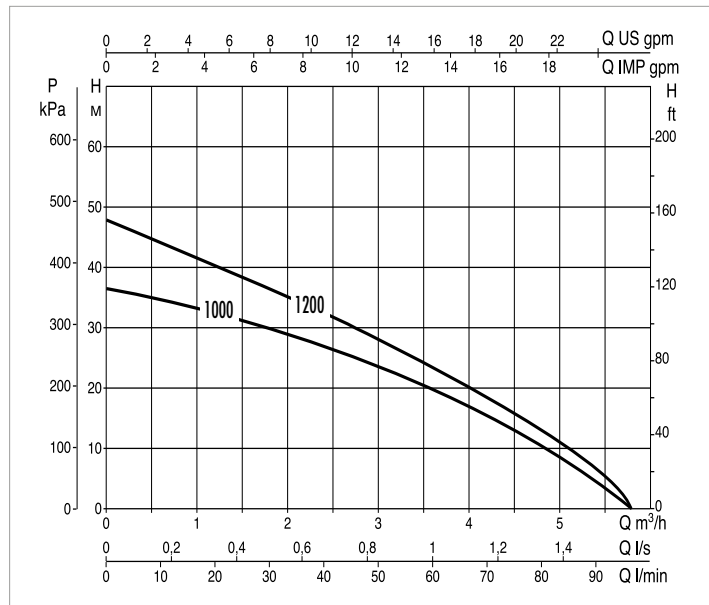
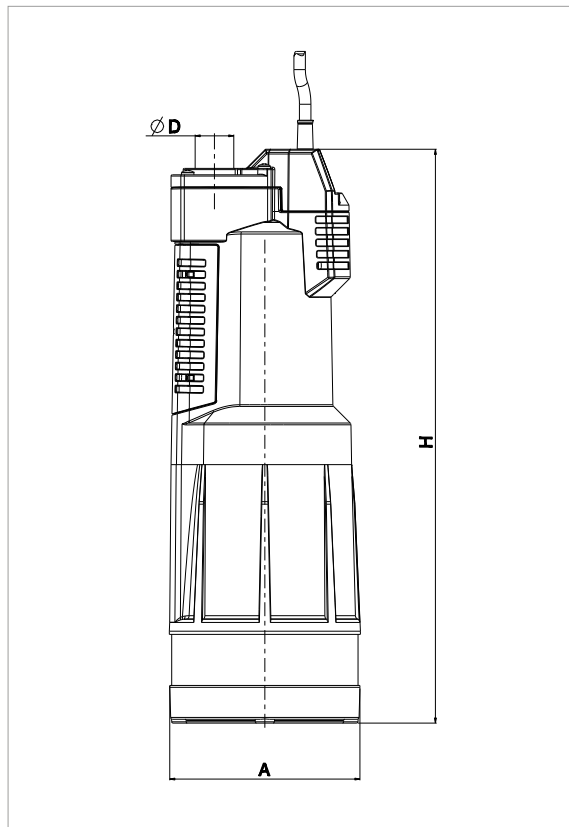


### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA								
	P2 NOMINAL		Q=m³/h	0	0,9	1,8	2,7	3,6	4,5	5,1	5,4
	kW	HP	Q=l/min	0	15	30	45	60	75	85	90
DIVERTRON 1000 M	0,55	0,75	H (mt)	36	32,6	28,5	23,6	17	9,5	4,6	1,8
DIVERTRON X 1000 M	0,55	0,75		36	32,6	28,5	23,6	17	9,5	4,6	1,8
DIVERTRON 1200 M	0,75	1		46	41	35,5	29,2	21,8	13,5	7,8	3,5
DIVERTRON X 1200 M	0,75	1		46	41	35,5	29,2	21,8	13,5	7,8	3,5

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA					A	Ø D	H	DNM	PACKING DIMENSIONS			PACKING VOLUME m³	Q.TY X PALLET	WEIGHT Kg
	POWER INPUT 50 Hz	P1 kW	P2 NOMINAL		In A					L/A	L/B	H			
			kW	HP											
DIVERTRON 1000 M	1 x 230 V ~	0,8	0,55	0,75	3,8	150	30	450	1"	230	190	500	0,02	40	11
DIVERTRON X 1000 M	1 x 230 V ~	0,8	0,55	0,75	3,8	150	30	450	1"	230	190	500	0,02	40	11
DIVERTRON 1200 M	1 x 230 V ~	1	0,75	1	4,8	150	30	480	1"	230	190	500	0,02	40	11
DIVERTRON X 1200 M	1 x 230 V ~	1	0,75	1	4,8	150	30	480	1"	230	190	500	0,02	40	11



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

# MICRA HS

## SUBMERSIBLE PUMPS



**D CONNECT**



ACTIVE DRIVER PLUS included

### TECHNICAL DATA

**Operating range:** from 1 to 5 m<sup>3</sup>/h

**Maximum head:** up to 150 meters

**Pumped liquid:** clean, free of solids and abrasive particles, non-viscous, non-aggressive, chemically neutral, similar to water properties

**Liquid temperature range:** from 0°C to +35°C

**Maximum permitted sand quantity:** 50 g/m<sup>3</sup>

**Discharge port diameter:** 1" GAS

**Power supply voltage to inverter:** 230V +10% / -20% single-phase

**Power supply voltage to pump unit:** 230V three-phase

**Maximum starts per hour:** 20/h

**Rotational speed:** 7.600 giri/min (130Hz)

**Installation:** boreholes  $\geq 3"$  diameter and tanks in vertical position. In case of horizontal installation, ensure a minimum load applied to the thrust bearings

**Power supply cable:** 1,4m removable cable (shielded cable extension up to 30m, 60m, 90m are available as accessories)

### APPLICATIONS

High-speed electric borehole pumps for 3" wells or larger.

These units have a very extensive range of applications for lifting and distribution in domestic and industrial water systems, filling of pressure vessels and tanks, pressure booster and irrigation systems.

### CONSTRUCTION FEATURES OF THE PUMP

Multi-stage centrifugal pump type. Pump and motor connected with rigid coupling. Noryl impellers and self-lubricating polyacetyl diffusers. Pump shell, shaft, coupling, filter and cableguard in stainless steel. Base support and delivery head in brass with incorporated non-return valve.

### CONSTRUCTION FEATURES OF THE MOTOR

Asynchronous submersible two-pole motor, made of stainless steel AISI304 with brass supports. Squirrel cage rotor mounted on Kingsbury thrust bearing. Cooling of the thrust bearing kit and bushings is provided by water, this prevents any risk of contamination. Stainless steel canned stator, filled with thermosetting resin with high insulation property and better thermal dissipation capability.

### CONSTRUCTION FEATURES OF THE INVERTER

Active Driver PLUS is an inverter for electric pumps that keeps the pressure constant even in case of flow variations by adjusting the rotational speed of the pump. The inverter is equipped with an internal pressure switch and a flow sensor which ensure the continuous monitoring of system conditions.

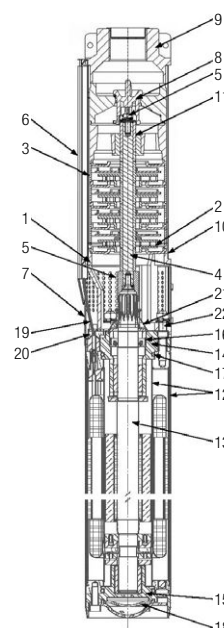
MICRA HS is supplied with ACTIVE DRIVER 2.2, pre-set to drive the pump at the operation frequency of 130 Hz.

### MATERIALS

N°	PARTS*	MATERIALS
<b>PUMP</b>		
1	BASE SUPPORT	BRASS OT58
2	IMPELLER	NORYL GFN2
3	DIFFUSER	POLYACETYL
4	SHAFT	AISI 430F
5	COUPLING	AISI 316L
6	CABLE SHEATH	AISI 430
7	STRAINER	AISI 430
8	VALVE	POLYACETYL
9	DELIVERY BODY	BRASS OT58
10	PUMP LINER	AISI 304
11	BUSHES	PUR

\* In contact with the liquid.

N°	PARTS*	MATERIALS
<b>MOTOR</b>		
12	INTERNAL AND OUTER LINER	AISI 304
13	SHAFT	AISI 431
14	UPPER SUPPORT	BRASS OT58
15	LOWER SUPPORT	BRASS OT58
16	LIP SEAL	NBR
17	GASKETS	NBR
18	BELLOW SEAL	EPDM
19	CABLE	EPDM
20	CONNECTOR PLUG	AISI 304
21	SAND GUARD	NBR
22	SCREWS	AISI 304

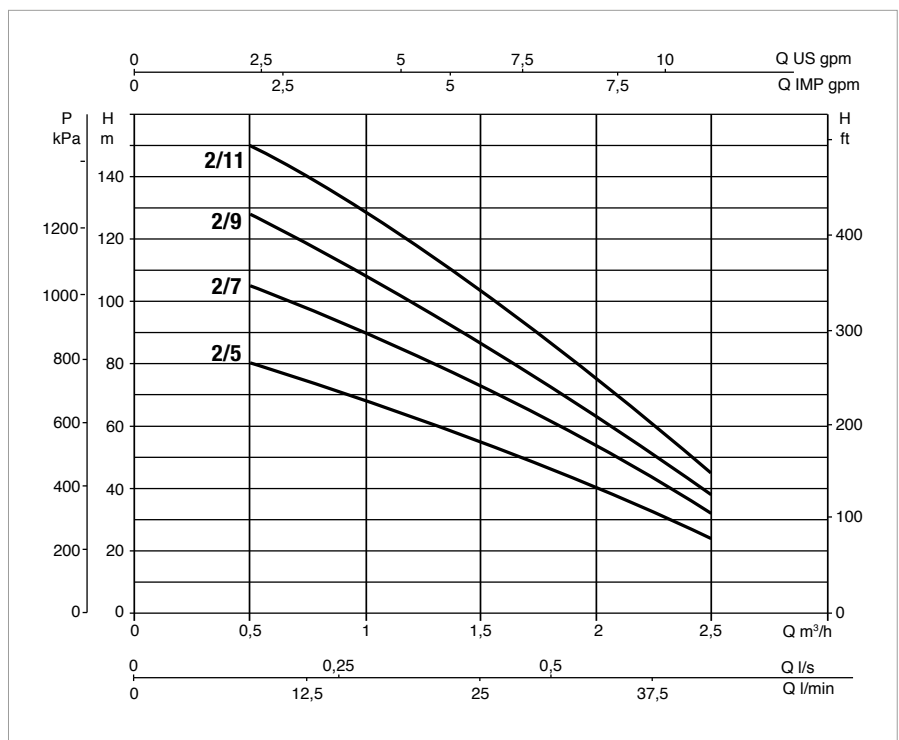
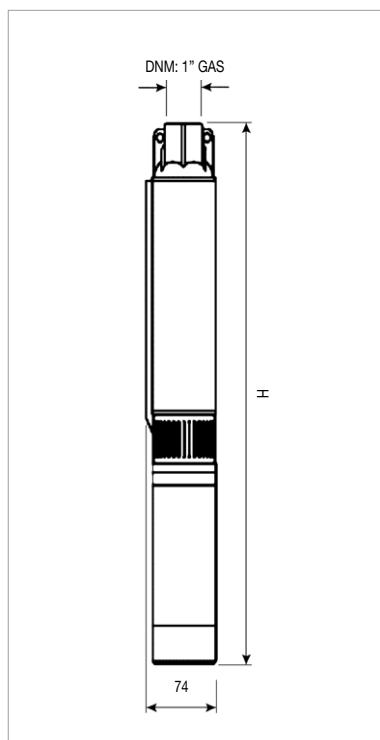


### ELECTRICAL DATA AND PERFORMANCE AT 130 Hz

MODEL	ELECTRICAL DATA				HYDRAULIC DATA					
	INVERTER POWER INPUT	ELECTRIC PUMP POWER INPUT	P1 MAX kW	In MAX A	Q=m³/h	0,5	1	1.5	2	2.5
					Q=l/min	8	17	25	33	42
MICRA HS 2/5	1 x 230 V ~	3 x 230 V ~	1,1	4,7	H (m)	80	68	55	40	24
MICRA HS 2/7	1 x 230 V ~	3 x 230 V ~	1,4	5,5		105	90	73	55	32
MICRA HS 2/9	1 x 230 V ~	3 x 230 V ~	1,7	6,3		128	108	87	62	48
MICRA HS 2/11	1 x 230 V ~	3 x 230 V ~	2	7,1		150	130	102	75	45

### DIMENSIONAL DATA

MODEL	Ø	H	DNM G	PACKING DIMENSIONS (mm)		
				L/A	L/B	H
MICRA HS 2/5	74	640	1"	320	1300	275
MICRA HS 2/7	74	680	1"	320	1300	275
MICRA HS 2/9	74	720	1"	320	1300	275
MICRA HS 2/11	74	760	1"	320	1300	275



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

# MICRA HS

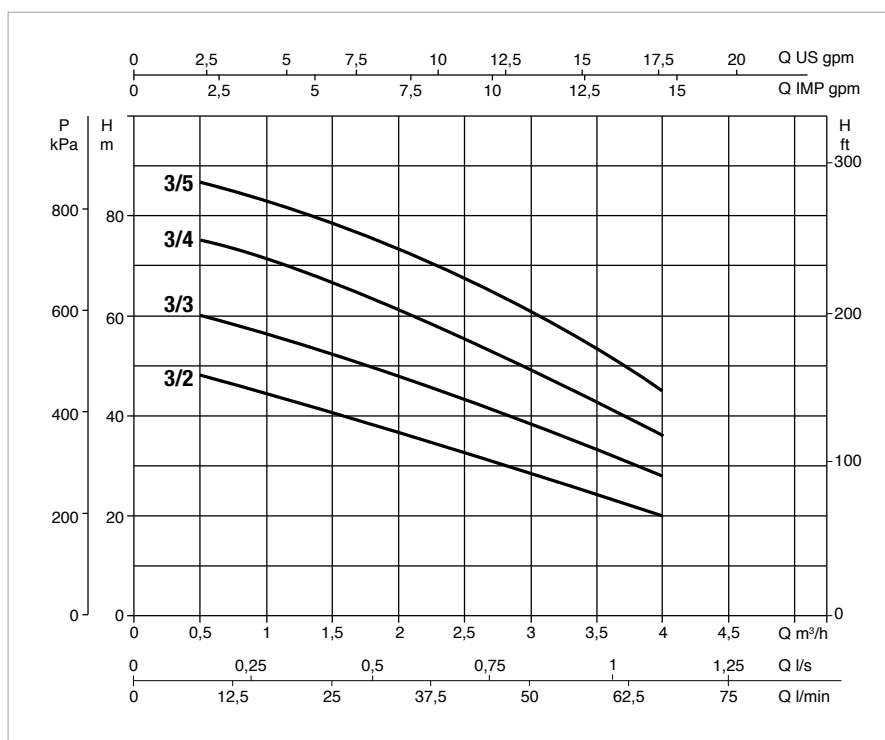
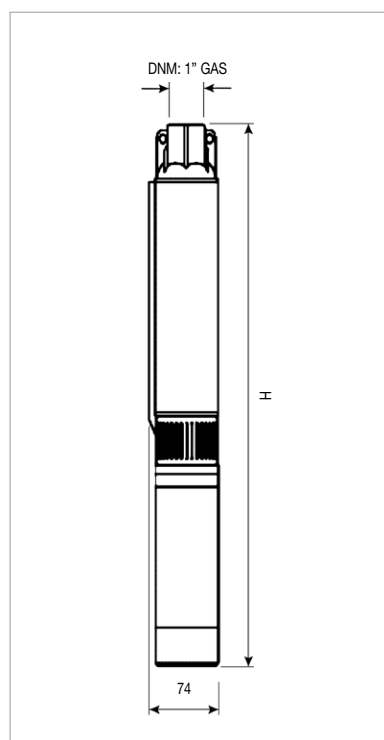
## SUBMERSIBLE PUMPS

### ELECTRICAL DATA AND PERFORMANCE AT 130 Hz

MODEL	ELECTRICAL DATA				HYDRAULIC DATA									
	INVERTER POWER INPUT	ELECTRIC PUMP POWER INPUT	P1 MAX kW	In MAX A	Q=m³/h	0,5	1	1.5	2	2.5	3	3.5	4	
					Q=l/min	8	17	25	33	42	50	58	67	
MICRA HS 3/2	1 x 230 V ~	3 x 230 V ~	1	4,3	H (m)	-	-	40	37	33	29	24	20	
MICRA HS 3/3	1 x 230 V ~	3 x 230 V ~	1,3	5,1		-	-	52	48	43	38	34	28	
MICRA HS 3/4	1 x 230 V ~	3 x 230 V ~	1,6	6		-	-	65	61	56	50	44	36	
MICRA HS 3/5	1 x 230 V ~	3 x 230 V ~	1,9	6,8		-	-	78	74	68	61	54	45	

### DIMENSIONAL DATA

MODEL	Ø	H	DNM G	PACKING DIMENSIONS (mm)		
				L/A	L/B	H
MICRA HS 3/2	74	580	1"	320	1300	275
MICRA HS 3/3	74	600	1"	320	1300	275
MICRA HS 3/4	74	620	1"	320	1300	275
MICRA HS 3/5	74	640	1"	320	1300	275



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

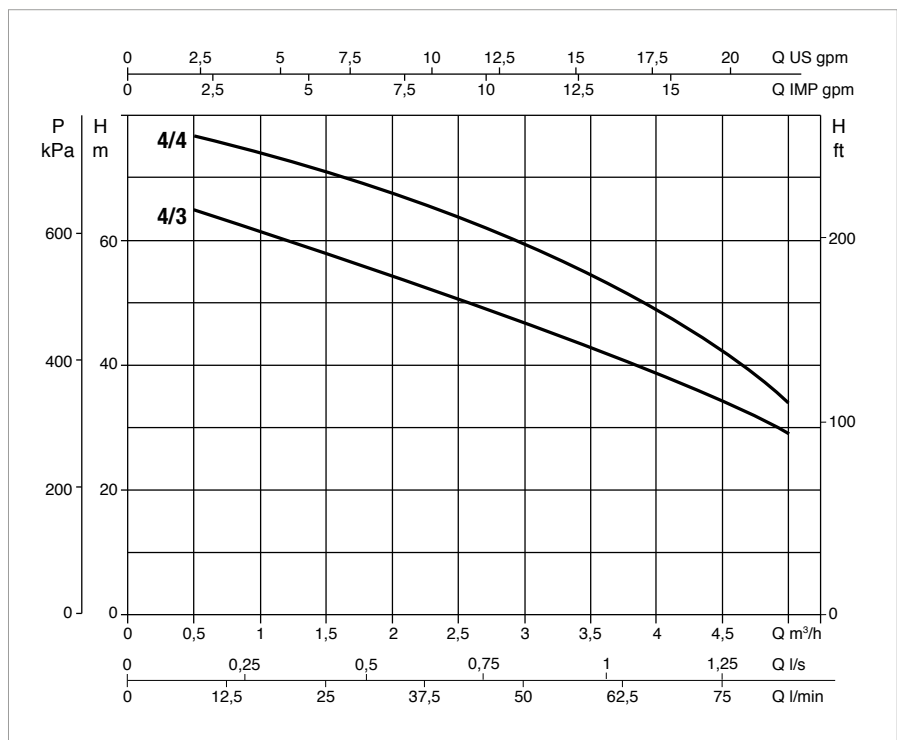
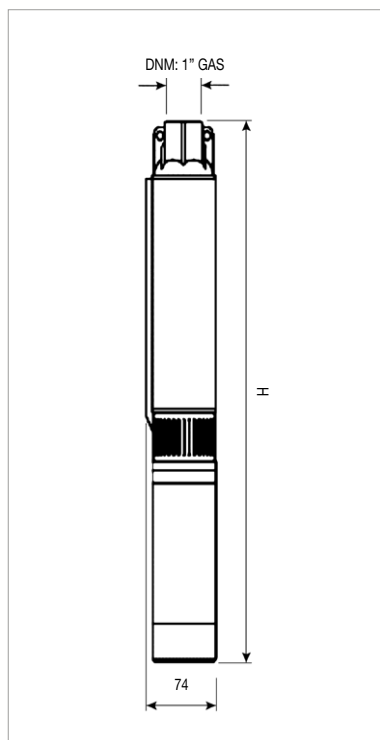


### ELECTRICAL DATA AND PERFORMANCE AT 130 Hz

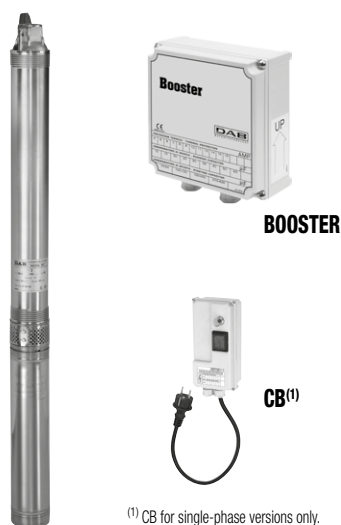
MODEL	ELECTRICAL DATA				HYDRAULIC DATA										
	INVERTER POWER INPUT	ELECTRIC PUMP POWER INPUT	P1 MAX kW	In MAX A	Q=m³/h	0,5	1	1.5	2	2.5	3	3.5	4	4.5	5
					Q=l/min	8	17	25	33	42	50	58	67	75	84
MICRA HS 4/3	1 x 230 V ~	3 x 230 V ~	1,6	5,9	H (mt)	-	-	-	-	50	46	42	39	35	29
MICRA HS 4/4	1 x 230 V ~	3 x 230 V ~	1,9	6,7		-	-	-	-	63	59	55	49	43	34

### DIMENSIONAL DATA

MODEL	Ø	H	DNM G	PACKING DIMENSIONS (mm)		
				L/A	L/B	H
MICRA HS 4/3	74	600	1"	320	1300	275
MICRA HS 4/4	74	620	1"	320	1300	275



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.



<sup>(1)</sup> CB for single-phase versions only.

### TECHNICAL DATA

**Operating range:** from 0,3 to 2,7 m<sup>3</sup>/h

**Maximum head:** up to 90 metres

**Pumped liquid:** clean, free of solids and abrasives, non-viscous, non-aggressive, and chemically neutral, with properties similar to water

**Liquid temperature range:** from 0 °C to +35 °C

**Maximum permitted amount of sand:** 40 g/m<sup>3</sup>

**Discharge port diameter:** 1" GAS

**Power supply tolerance:** +6 % / -10 %

**Max. starts:** 20/h

**Installation:** in 3" wells or larger, tanks and cisterns, vertical position. In case of horizontal installation, ensure a minimum load on the thrust assembly

**Special executions on requests:** alternative voltages and frequencies

**Power cable:** Micra 50 – 1 m

Micra 75 – 1,2m

Micra 100 – 1,4m

The single-phase version can be supplied with CONTROL BOX on request

### APPLICATIONS

Submersible electric pumps for 3" wells or larger.

These units have a very extensive range of applications for lifting and distribution in civil and industrial water systems, filling of pressure vessels and tanks, pressurization and irrigation systems.

### CONSTRUCTION FEATURES OF THE PUMP

Multistage centrifugal type. Pump and motor directly coupled with rigid coupling. Impellers and thrust rings in Noryl and diffusers in self-lubricating polyacetyl. Pump liner, shaft and coupling, strainer and cable sheath in stainless steel.

Base support and head in brass, with check valve incorporated in the head.

### CONSTRUCTION FEATURES OF THE MOTOR

Submersible asynchronous two-pole motor made entirely of AISI 304 stainless steel with brass bearings. Copper squirrel cage rotor mounted on Kingsbury thrust block.

Cooling of the thrust bearing assembly and the bushings is provided by water, thereby eliminating the risk of contamination. Canned-type stator in an airtight casing made of AISI 304L stainless steel. The thermal protector with automatic reset is included with the motor.

Protection class: IP68

Insulation class: F

Supply voltage: single-phase 230 V / 50 Hz.

three-phase 400 V / 50 Hz

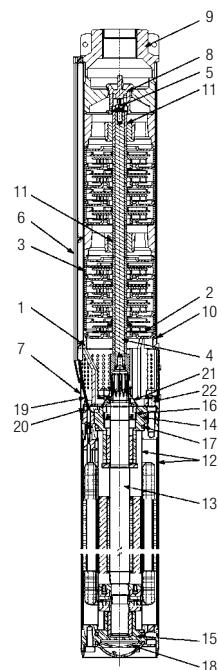
three-phase 230 V / 50 Hz

### MATERIALS

N.	PARTS*	MATERIALS
<b>PUMP</b>		
1	BASE SUPPORT	BRASS OT58
2	IMPELLER	NORYL GFN2
3	DIFFUSER	POLYACETYL
4	SHAFT WITH COUPLING	AISI 430F
5	LOCKING NUT	AISI 304
6	CABLE SHEATH	AISI 430
7	STRAINER	AISI 430
8	VALVE	POLYACETYL
9	DELIVERY BODY	BRASS OT58
10	PUMP LINER	AISI 304
11	BUSHES	AISI 316L

\* In contact with the liquid.

N.	PARTS*	MATERIALS
<b>MOTOR</b>		
12	INTERNAL AND OUTER LINER	AISI 304
13	SHAFT	AISI 431
14	UPPER SUPPORT	BRASS OT58
15	LOWER SUPPORT	BRASS OT58
16	LIP SEAL	NBR
17	GASKETS	NBR
18	BELLOW SEAL	EPDM
19	CABLE	EPDM
20	CONNECTOR PLUG	AISI 304
21	SAND GUARD	NBR
22	SCREWS	AISI 304

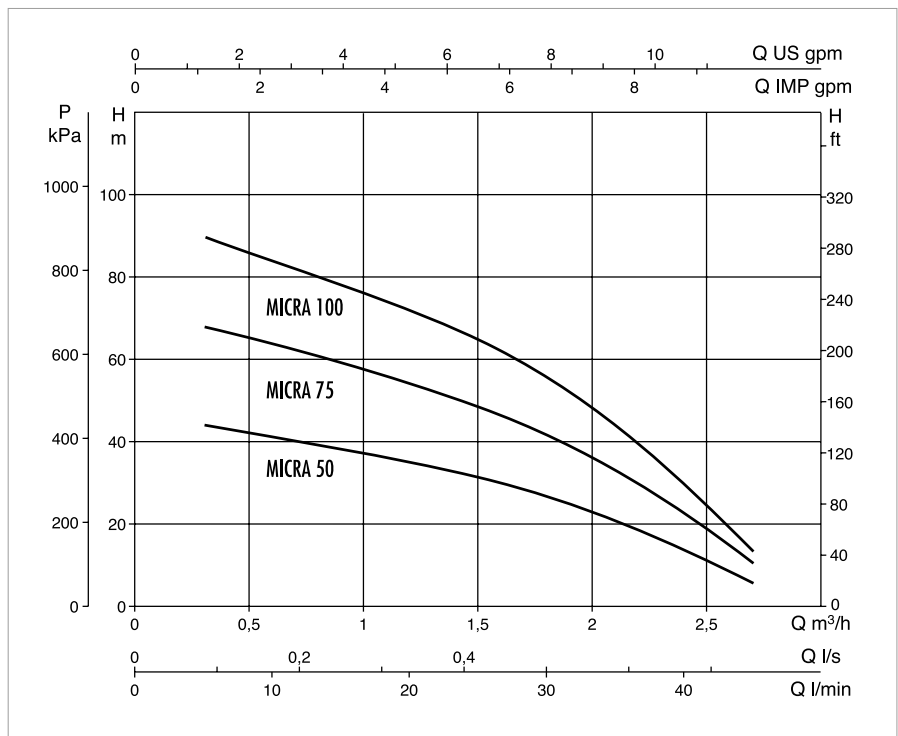
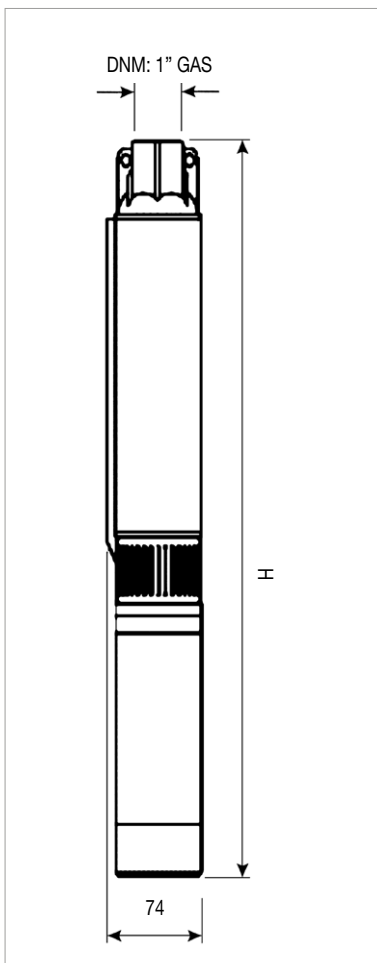


### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA									
	P2 NOMINAL		Q=m³/h	0,3	0,6	0,9	1,2	1,5	1,8	2,1	2,4	2,7
	kW	HP	Q=l/min	5	10	15	20	25	30	35	40	45
MICRA 50 M	0,37	0,5	H (m)	45	41	38	35	31	27	21	14	6
MICRA 75 M	0,55	0,75		68	64	59	54	48	42	33	23	11
MICRA 75 T	0,55	0,75		68	64	59	54	48	42	33	23	11
MICRA 100 M	0,75	1		90	84	78	72	65	56	44	30	14
MICRA 100 T	0,75	1		90	84	78	72	65	56	44	30	14
MICRA 50 M + 15 mt. CABLE + CONTROL BOX (CBS 05) <sup>1</sup>	0,37	0,5		45	41	38	35	31	27	21	14	6
MICRA 75 M + 15 mt. CABLE + CONTROL BOX (CBS 06) <sup>1</sup>	0,55	0,75		68	64	59	54	48	42	33	23	11
MICRA 100 M + 15 mt. CABLE + CONTROL BOX (CBS 07) <sup>1</sup>	0,75	1		90	84	78	72	65	56	44	30	14

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA							Ø mm	H mm	PACKING DIMENSIONS		WEIGHT Kg
	POWER INPUT 50 Hz	P1 kW	P2 NOMINAL		I <sub>n</sub> A	CAPACITOR				Ø	H	
			kW	HP		µF	Vc					
MICRA 50 M	1 x 230 V ~	0,65	0,37	0,5	3,3	12	450	74	930	86	1150	9
MICRA 75 M	1 x 230 V ~	0,95	0,55	0,75	5,1	16	450	74	1145	86	1350	10,2
MICRA 75 T	3 x 400 V ~	0,9	0,55	0,75	1,9	-	-	74	1145	86	1350	10,2
MICRA 100 M	1 x 230 V ~	1,2	0,75	1	6,1	20	450	74	1390	86	1600	13,6
MICRA 100 T	3 x 400 V ~	1,15	0,75	1	2,4	-	-	74	1390	86	1600	13,6
MICRA 50 M + 15 mt. CABLE + CONTROL BOX (CBS 05) <sup>1</sup>	1 x 230 V ~	0,65	0,37	0,5	3,3	12	450	74	930	86	1150	12,7
MICRA 75 M + 15 mt. CABLE + CONTROL BOX (CBS 06) <sup>1</sup>	1 x 230 V ~	0,95	0,55	0,75	5,1	16	450	74	1145	86	1350	14,1
MICRA 100 M + 15 mt. CABLE + CONTROL BOX (CBS 07) <sup>1</sup>	1 x 230 V ~	1,2	0,75	1	6,1	20	450	74	1390	86	1600	16,4



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.



**SAND RESISTANT**



**DM 174**

PUMP BODY AND MOTOR

### TECHNICAL DATA

**Flow rate minimum and maximum:** 21,6 m<sup>3</sup>/h

**Head up to:** 427 m

**Type of pumped liquid:** Clean, free of solids and abrasive substances, non-viscous, non-aggressive, non-crystallized and chemically neutral

**Pump maximum diameter:** 99 mm

**Maximum amount of sand:** 150 g/m<sup>3</sup>

**Diameter of delivery port:** S4-1, S4-2, S4-3, S4-4, S4-6: 1" 1/4  
S4-8, S4-12, S4-16: 2"

**Impeller/s material:** Technopolymer

**Liquid temperature range:** From 0°C to + 40°C

**Maximum immersion depth:** 4GG: 300 m - 40L: 250 m

**Maximum number of starts:** 20/h

**Motor protection class:** IP 68

**Motor insulation class:** F

**Single phase power input:** 230 V 50 Hz

**Three phase power input:** 3x230 V 50 Hz / 3x400 V 50 Hz

**Power cable (m) and plug:**

- Only pump body

- Pump body with oil-filled motor

- Pump body with water-filled motor

- Kit with pump body and motor, power supply cable, cord and control box.

Power cable and cord of 15 meters: S4 1/13, S4 2/7 S4 2/10, S4 3/6, S4

3/9, S4 4/4, S4 4/7, S4 4/9, S4 6/5, S4 6/7, S4 8/5, S4 6/10, S4 8/7, S4

8/9, S4 12/6, S4 12/9, S4 12/13, S4 16/8, S4 16/12

Power cable and cord of 30 meters: S4 1/19, S4 1/26, S4 2/14, S4 3/13, S4

4/14, S4 6/14, S4 6/21, S4 8/15

Power cable and cord of 40 meters: S4 1/37, S4 1/48, S4 2/20, S4 2/28, S4

2/40, S4 3/19, S4 3/25, S4 3/32, S4 3/39, S4 4/19, S4 4/27"

**Possible type of installation:** Fixed in vertical position. Horizontal installation is possible, it is recommended to install a cooling sleeve

**Special versions on request:** Different voltages, different cable lengths, version with 4GX or 4TW motor

**Certification:** ACS certificate. WRAS and DM174 certificate are pending approval

### APPLICATION

S4 are 4" multi-impeller borehole pumps with a water-filled or oil-filled DAB motor capable of providing a wide range of hydraulic performances, designed for water boosting, drawing water from subsoil, gardening and irrigation in civil and commercial applications and for the movement of water in agriculture.

### CONSTRUCTION FEATURES OF THE PUMP

Technopolymer impellers housed in the stage box with stainless steel adjustment rings. Pump liner, shaft, coupling with motor, integrated suction filter and cable guard are in stainless steel. Suction and delivery supports in micro-cast AISI 304 stainless steel. Removable built-in non-return valve in technopolymer or with stainless steel plate (depending on model). Technopolymer impellers designed to ensure high levels of efficiency in accordance with Directive 2009/125/EC (Eco design - ErP) with MEI index  $\geq 0.4$  for the whole range. They have the ACS certificate, WRAS and DM174 certificate are pending approval.

### CONSTRUCTION FEATURES OF THE MOTOR

Pump body can be coupled to 4GG and 40L motors (4TW or 4GX on request).

4GG is a two-pole asynchronous motor with the parts in contact with water made of AISI 304 stainless steel. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. Rotor mounted on a Kingsbury type self-centering thrust block capable of withstanding high axial loads. The stator is immersed in **thermosetting insulating resin with high heat dissipation capacity** and encapsulated in an airtight AISI 304 stainless steel casing.

40L is a two-pole asynchronous motor with the parts in contact with water made of AISI 304L stainless steel. Cooling and lubrication of ball bearings is ensured by a special liquid approved for contact with food. The rewindable stator is housed in an AISI 304L stainless steel casing fixed with steel pins to the upper support of the motor. Equipped with a carbon-ceramic mechanical seal.

For both motors:

Removable cable connector, ACS, WRAS and KTW certified cable, motor suitable for use with variable frequency drive (30 Hz - 50 Hz). In the 50 Hz single-phase version, the capacitor and manually resettable overload protection are in the electrical control panel (to be ordered separately). In the three-phase version, the protection must be guaranteed by the user.

**Available as standard:**

- Only pump body

- Pump body with oil-filled motor

- Pump body with water-filled motor

- Kit with pump body and motor, power supply cable, cord and control box.

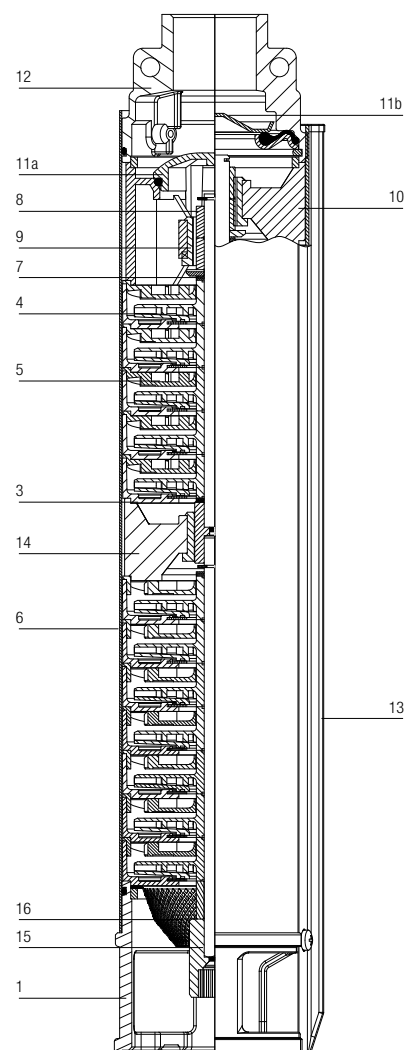
Power cable and cord of 15 meters: S4 1/13, S4 2/7 S4 2/10, S4 3/6, S4 3/9, S4 4/4, S4 4/7, S4 4/9, S4 6/5, S4 6/7, S4 8/5, S4 6/10, S4 8/7, S4 8/9, S4 12/6, S4 12/9, S4 12/13, S4 16/8, S4 16/12

Power cable and cord of 30 meters: S4 1/19, S4 1/26, S4 2/14, S4 3/13, S4 4/14, S4 6/14, S4 6/21, S4 8/15

Power cable and cord of 40 meters: S4 1/37, S4 1/48, S4 2/20, S4 2/28, S4 2/40, S4 3/19, S4 3/25, S4 3/32, S4 3/39, S4 4/19, S4 4/27

### MATERIALS

N°	PARTS*	MATERIALS	
1	LOWER SUPPORT	PRECISION CAST STEEL AISI 304	
2	SCREWS	STAINLESS STEEL AISI 304	
3	STAGE HOUSING	S4 1/13÷37 S4 2÷8/... UP TO 20 STAGES	TECHNOPOLYMER + STAINLESS STEEL WEAR RING
		S4 1/48 S4 2÷8/... ABOVE 20 STAGES S4 12/... S4 16/...	STAINLESS STEEL AISI 304
4	IMPELLER	TECHNOPOLYMER	
5	DIFFUSER	TECHNOPOLYMER	
6	OUTER SLEEVE	STAINLESS STEEL AISI 304	
7	THRUST BEARING	STAINLESS STEEL AISI 304	
8	SHAFT SLEEVE	STAINLESS STEEL AISI 304	
9	BUSH BEARING	RUBBER TPU	
10	UPPER SUPPORT	TECHNOPOLYMER	
11a	NON-RETURN VALVE	S4 1/13÷37 S4 2÷6/... UP TO 20 STAGES S4 8/5÷21 S4 12÷16/... UP TO 13 STAGES	TECHNOPOLYMER
11b		S4 1/48 S4 2÷6/... ABOVE 20 STAGES S4 8/27÷50 S4 12÷16/... ABOVE 13 STAGES	STAINLESS STEEL AISI 304 + RUBBER NBR
12	DELIVERY PORT	PRECISION CAST STEEL AISI 304	
13	CABLE SHEATH	STAINLESS STEEL AISI 304	
14	INTERMEDIATE SHAFT SLEEVE	STAINLESS STEEL AISI 304	
15	SHAFT WITH COUPLING	STAINLESS STEEL AISI 420	
16	FILTER	STAINLESS STEEL AISI 304	



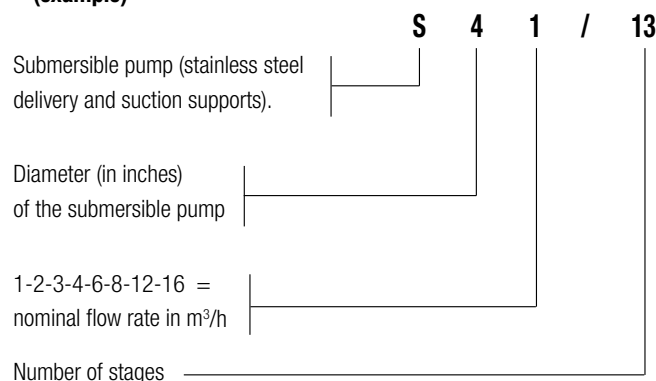
\* In contact with the liquid.

### AVAILABLE AS STANDARD

Only pump body	Pump body with oil-filled motor	Pump body with water-filled motor
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Kit with pump body and motor, power supply cable, cord and control box.		
MODELS SUPPLIED WITH Power cable (and cord) 15 meters length	MODELS SUPPLIED WITH Power cable (and cord) 30 meters length	MODELS SUPPLIED WITH Power cable (and cord) 40 meters length
S4 1/13	S4 1/19	S4 1/37
S4 2/7	S4 1/26	S4 1/48
S4 2/10	S4 2/14	S4 2/20
S4 3/6	S4 3/13	S4 2/28
S4 3/9	S4 4/14	S4 2/40
S4 4/4	S4 6/14	S4 3/19
S4 4/7	S4 6/21	S4 3/25
S4 4/9	S4 8/15	S4 3/32
S4 6/5		S4 3/39
S4 6/7		S4 4/19
S4 8/5		S4 4/27
S4 6/10		
S4 8/7		
S4 8/9		
S4 12/6		
S4 12/9		
S4 12/13		
S4 16/8		
S4 16/12		

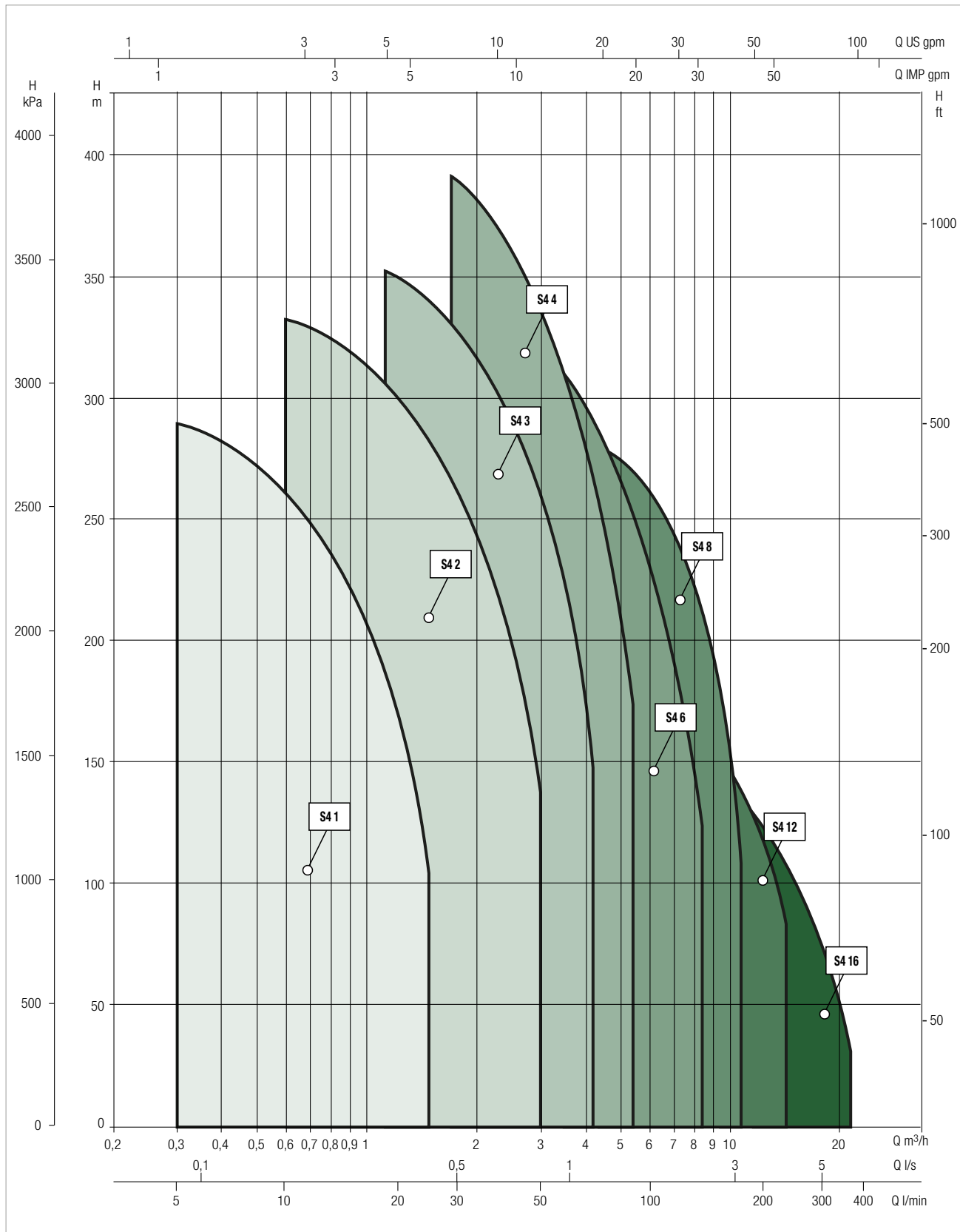
### – Denomination index: (example)



### PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### GRAPHIC SELECTION TABLE



### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA																					
	P2 NOMINAL		Q=m³/h	0	0,3	0,6	0,9	1,2	1,5	1,8	2,4	3,0	4,2	5,4	6,0	7,2	8,4	9,6	10,8	12,0	14,4	16,8	19,2	21,6
	KW	HP	Q=l/min	0	5	10	15	20	25	30	40	50	70	90	100	120	140	160	180	200	240	280	320	360
S4 1/13	0,37	0,5	83	78	69	56	41	22																
S4 1/19	0,55	0,75	121	111	101	82	70	45																
S4 1/26	0,75	1	173	163	148	125	98	65																
S4 1/37	1,1	1,5	236	222	196	175	130	80																
S4 1/48	1,5	2	306	289	255	225	175	100																
S4 2/7	0,37	0,5	47		44	42	40	38	35	28	18													
S4 2/10	0,55	0,75	67		62	60	58	54	50	40	26													
S4 2/14	0,75	1	94		90	86	80	76	70	56	36													
S4 2/20	1,1	1,5	134		128	122	117	108	100	80	52													
S4 2/28	1,5	2	188		180	171	163	151	140	112	73													
S4 2/40	2,2	3	268		255	245	231	216	200	160	104													
S4 2/52	3	4	348		331	319	302	281	260	208	135													
S4 3/6	0,37	0,5	33				32	31	30	26	23	13												
S4 3/9	0,55	0,75	50				47	45	44	40	34	20												
S4 3/13	0,75	1	72				68	66	64	57	50	29												
S4 3/19	1,1	1,5	105				100	98	93	86	72	42												
S4 3/25	1,5	2	138				130	127	122	110	95	55												
S4 3/32	2,2	3	176				168	162	157	141	120	70												
S4 3/39	2,2	3	215				204	198	191	172	147	86												
S4 3/45	3	4	247				233	228	220	198	170	99												
S4 3/51	3	4	280				267	260	250	224	193	112												
S4 3/67	4	5,5	368				350	340	328	294	254	147												
S4 4/4	0,37	0,5	28						25	24	22	17	11											
S4 4/7	0,55	0,75	48						44	41	38	30	19											
S4 4/9	0,75	1	62						56	53	49	39	25											
S4 4/14	1,1	1,5	96						87	82	76	61	39											
S4 4/19	1,5	2	131						118	112	103	82	53											
S4 4/27	2,2	3	186						168	159	147	117	75											
S4 4/35	3	4	241						218	206	191	152	97											
S4 4/48	4	5,5	331						299	283	261	208	133											
S4 4/62	5,5	7,5	427						386	365	338	269	172											
S4 6/5	0,55	0,75	30						28	26	24	21	19	15	10									
S4 6/7	0,75	1	42						38	37	33	29	27	21	14									
S4 6/10	1,1	1,5	60						55	52	47	42	38	30	20									
S4 6/14	1,5	2	84						78	75	66	59	53	42	28									
S4 6/21	2,2	3	126						116	110	99	88	80	63	42									
S4 6/29	3	4	174						160	152	137	122	110	87	58									
S4 6/38	4	5,5	228						209	200	179	160	144	114	76									
S4 6/52	5,5	7,5	312						285	274	244	218	198	156	104									
S4 6/61	7,5	10	366						334	322	287	256	232	183	122									
S4 8/5	0,75	1	30							30	28	27	26	24	21	16	11							
S4 8/7	1,1	1,5	42							41	39	38	37	34	29	23	16							
S4 8/9	1,5	2	54							52	50	49	48	44	37	29	20							
S4 8/15	2,2	3	90							86	83	81	79	73	62	48	33							
S4 8/21	3	4	130							125	120	117	112	103	86	68	47							
S4 8/27	4	5,5	162							155	151	146	144	132	111	87	60							
S4 8/35	5,5	7,5	210							202	195	192	187	171	144	113	78							
S4 8/38	5,5	7,5	228							219	211	207	203	186	156	122	84							
S4 8/47	7,5	10	280							270	261	255	251	230	193	151	104							
S4 8/50	7,5	10	298							288	278	273	267	244	206	161	111							
S4 12/6	1,1	1,5	30											29	28	25	24	23	21	18	11			
S4 12/9	1,5	2	46											42	40	38	36	34	31	28	17			
S4 12/13	2,2	3	66											61	59	55	52	49	44	38	23			
S4 12/18	3	4	91											84	82	76	72	68	60	52	31			
S4 12/24	4	5,5	122											112	110	101	96	91	81	70	46			
S4 12/34	5,5	7,5	172											158	156	144	136	129	115	101	65			
S4 12/44	7,5	10	215											192	188	175	165	156	140	124	81			
S4 16/8	1,5	2	37															31	29	26	22	18	13	7
S4 16/12	2,2	3	55															46	43	39	33	27	19	10
S4 16/16	3	4	73															61	57	52	44	36	25	13
S4 16/21	4	5,5	96															81	75	68	58	47	33	18
S4 16/29	5,5	7,5	133															111	104	94	80	65	46	24
S4 16/38	7,5	10	174															146	136	124	105	86	60	32

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA						
	P2 NOMINAL		Q=m <sup>3</sup> /h	0	0,3	0,6	0,9	1,2	1,5
	kW	HP	Q=l/min	0	5	10	15	20	25
S4 1/13	0,37	0,5	H (m)	83	78	69	56	41	22
S4 1/19	0,55	0,75		121	111	101	82	70	45
S4 1/26	0,75	1		173	163	148	125	98	65
S4 1/37	1,1	1,5		236	222	196	175	130	80
S4 1/48	1,5	2		306	289	255	225	175	100

### ELECTRICAL DATA AND DIMENSIONS

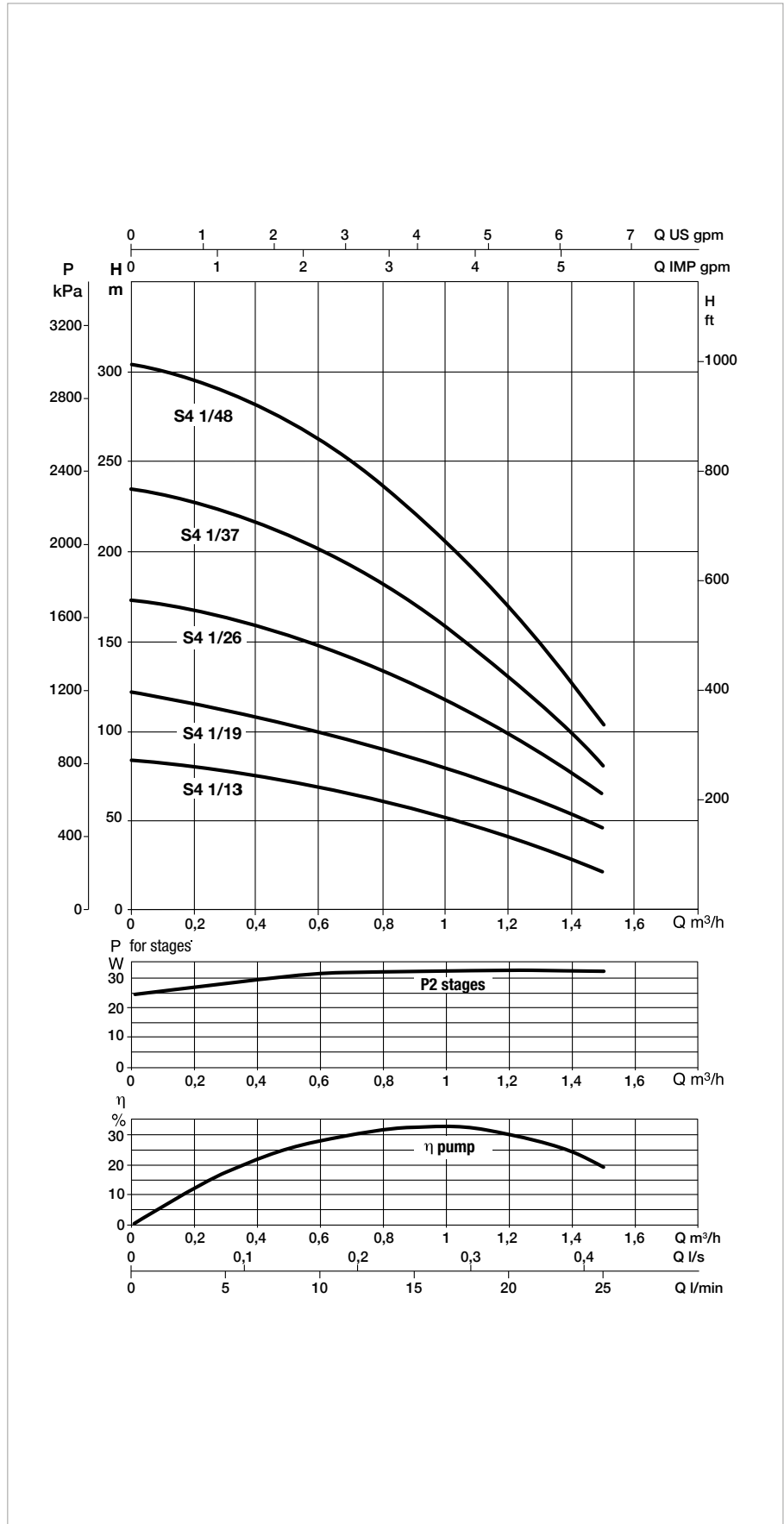
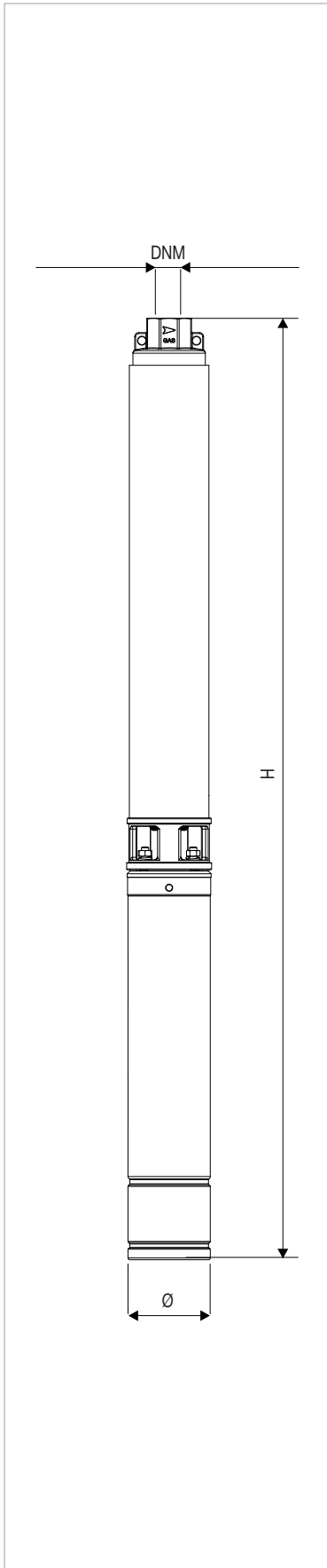
MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m <sup>3</sup>	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		In A				L/A	L/B	H		
			kW	HP									
S4 1/13	40L M	1 x 230 V ~	0,37	0,5	3,5	99	722	1" 1/4	120	120	822	0,012	10,2
	40L T	3 x 230 V ~	0,37	0,5	2,1	99	722	1" 1/4	120	120	822	0,012	10,2
	40L T	3 x 400 V ~	0,37	0,5	1,2	99	722	1" 1/4	120	120	822	0,012	10,2
	4GG M	1 x 230 V ~	0,37	0,5	3,3	99	674	1" 1/4	110	110	720	0,009	10,6
	4GG T	3 x 230 V ~	0,37	0,5	2,7	99	654	1" 1/4	110	110	720	0,009	9,9
	4GG T	3 x 400 V ~	0,37	0,5	1,6	99	654	1" 1/4	110	110	720	0,009	9,9
S4 1/19	40L M	1 x 230 V ~	0,55	0,75	4,5	99	847	1" 1/4	120	120	947	0,014	12,1
	40L T	3 x 230 V ~	0,55	0,75	3,8	99	827	1" 1/4	120	120	927	0,013	11,2
	40L T	3 x 400 V ~	0,55	0,75	2,2	99	827	1" 1/4	120	120	927	0,013	11,2
	4GG M	1 x 230 V ~	0,55	0,75	4,6	99	809	1" 1/4	120	120	909	0,013	13,3
	4GG T	3 x 230 V ~	0,55	0,75	3,3	99	779	1" 1/4	120	120	879	0,013	11,6
	4GG T	3 x 400 V ~	0,55	0,75	1,9	99	779	1" 1/4	120	120	879	0,013	11,6
S4 1/26	40L M	1 x 230 V ~	0,75	1	6,3	99	1001	1" 1/4	120	120	1101	0,016	14,3
	40L T	3 x 230 V ~	0,75	1	4,5	99	971	1" 1/4	120	120	1071	0,015	13
	40L T	3 x 400 V ~	0,75	1	2,6	99	971	1" 1/4	120	120	1071	0,015	13
	4GG M	1 x 230 V ~	0,75	1	6,2	99	953	1" 1/4	120	120	1053	0,015	15,2
	4GG T	3 x 230 V ~	0,75	1	4,1	99	933	1" 1/4	120	120	1033	0,015	14,2
	4GG T	3 x 400 V ~	0,75	1	2,4	99	933	1" 1/4	120	120	1033	0,015	14,2
S4 1/37	40L M	1 x 230 V ~	1,1	1,5	8,5	99	1251	1" 1/4	120	120	1351	0,019	17
	40L T	3 x 230 V ~	1,1	1,5	6,2	99	1231	1" 1/4	120	120	1331	0,019	16
	40L T	3 x 400 V ~	1,1	1,5	3,6	99	1231	1" 1/4	120	120	1331	0,019	16
	4GG M	1 x 230 V ~	1,1	1,5	8,6	99	1228	1" 1/4	120	120	1328	0,019	19,1
	4GG T	3 x 230 V ~	1,1	1,5	5,5	99	1183	1" 1/4	120	120	1283	0,018	16,9
	4GG T	3 x 400 V ~	1,1	1,5	3,2	99	1183	1" 1/4	120	120	1283	0,018	16,9
S4 1/48	40L M	1 x 230 V ~	1,5	2	10,8	99	1492	1" 1/4	120	120	1592	0,023	20,4
	40L T	3 x 230 V ~	1,5	2	7,9	99	1446	1" 1/4	120	120	1546	0,022	18,4
	40L T	3 x 400 V ~	1,5	2	4,6	99	1446	1" 1/4	120	120	1546	0,022	18,4
	4GG M	1 x 230 V ~	1,5	2	11	99	1485	1" 1/4	120	120	1585	0,023	22,7
	4GG T	3 x 230 V ~	1,5	2	7,6	99	1440	1" 1/4	120	120	1540	0,022	20,5
	4GG T	3 x 400 V ~	1,5	2	4,4	99	1440	1" 1/4	120	120	1540	0,022	20,5

4GG: 4" encapsulated motor with stator immersed in thermosetting insulating resin.  
 40L: 4" rewindable oil-filled motor.



# S4 1

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA								
	P2 NOMINAL		Q=m³/h	0	0,6	0,9	1,2	1,5	1,8	2,4	3,0
	kW	HP	Q=l/min	0	10	15	20	25	30	40	50
S4 2/7	0,37	0,5	H (m)	47	44	42	40	38	35	28	18
S4 2/10	0,55	0,75		67	62	60	58	54	50	40	26
S4 2/14	0,75	1		94	90	86	80	76	70	56	36
S4 2/20	1,1	1,5		134	128	122	117	108	100	80	52
S4 2/28	1,5	2		188	180	171	163	151	140	112	73
S4 2/40	2,2	3		268	255	245	231	216	200	160	104
S4 2/52	3	4		348	331	319	302	281	260	208	135

### ELECTRICAL DATA AND DIMENSIONS

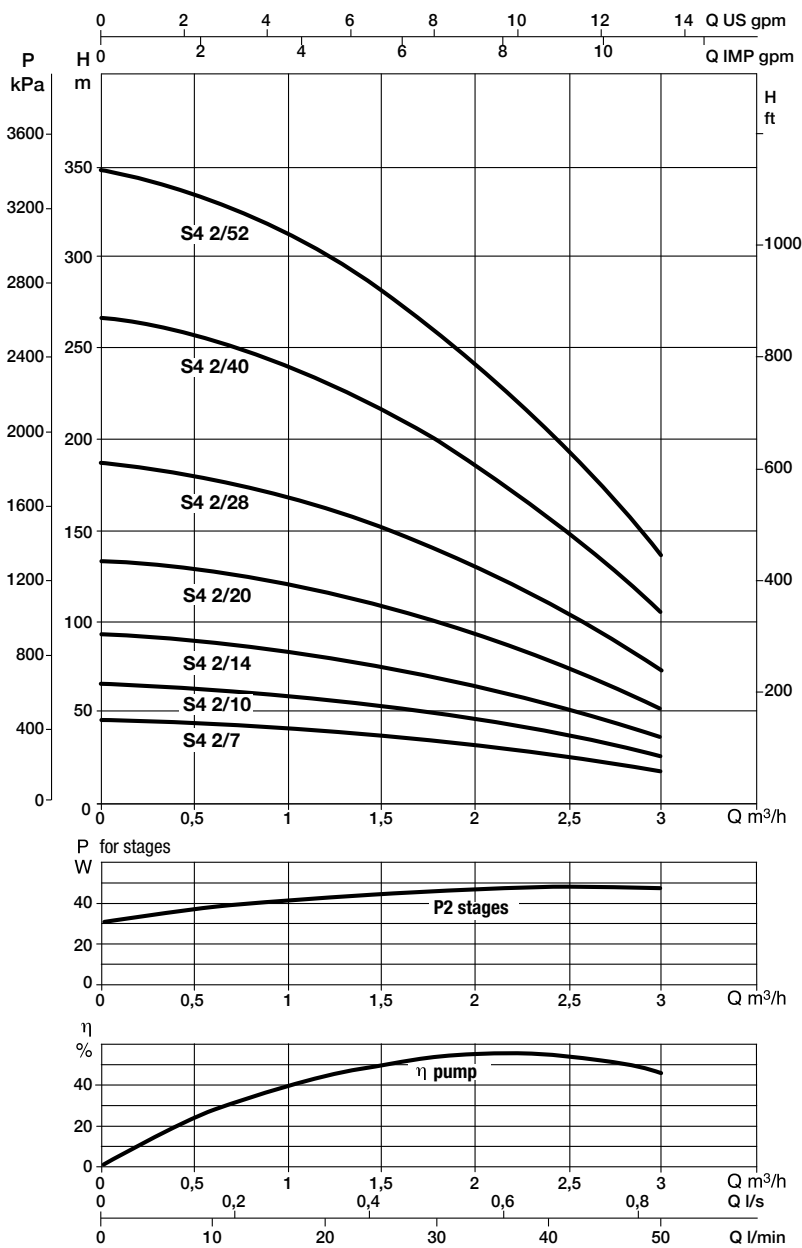
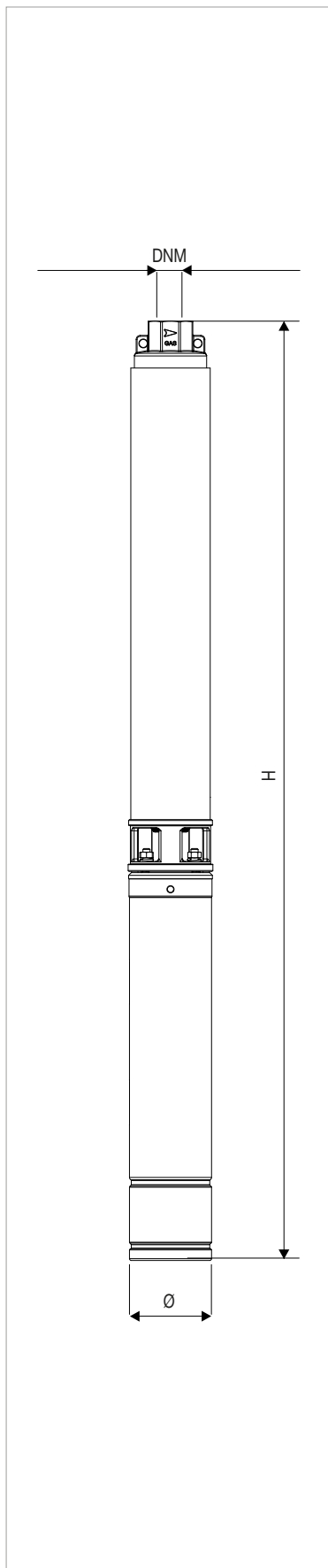
MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m³	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		In A				L/A	L/B	H		
			kW	HP									
S4 2/7	40L M	1 x 230 V ~	0,37	0,5	3,5	99	642	1" 1/4	110	110	650	0,008	9,5
	40L T	3 x 230 V ~	0,37	0,5	2,1	99	642	1" 1/4	110	110	650	0,008	9,5
	40L T	3 x 400 V ~	0,37	0,5	1,2	99	642	1" 1/4	110	110	650	0,008	9,5
	4GG M	1 x 230 V ~	0,37	0,5	3,3	99	594	1" 1/4	110	110	650	0,008	9,9
	4GG T	3 x 230 V ~	0,37	0,5	2,7	99	574	1" 1/4	110	110	650	0,008	9,2
	4GG T	3 x 400 V ~	0,37	0,5	1,6	99	574	1" 1/4	110	110	650	0,008	9,2
S4 2/10	40L M	1 x 230 V ~	0,55	0,75	4,5	99	726	1" 1/4	120	120	826	0,012	10,9
	40L T	3 x 230 V ~	0,55	0,75	3,8	99	706	1" 1/4	110	110	720	0,009	10
	40L T	3 x 400 V ~	0,55	0,75	2,2	99	706	1" 1/4	110	110	720	0,009	10
	4GG M	1 x 230 V ~	0,55	0,75	4,6	99	688	1" 1/4	110	110	720	0,009	12,1
	4GG T	3 x 230 V ~	0,55	0,75	3,3	99	658	1" 1/4	110	110	720	0,009	10,4
	4GG T	3 x 400 V ~	0,55	0,75	1,9	99	658	1" 1/4	110	110	720	0,009	10,4
S4 2/14	40L M	1 x 230 V ~	0,75	1	6,3	99	840	1" 1/4	120	120	940	0,014	12,7
	40L T	3 x 230 V ~	0,75	1	4,5	99	810	1" 1/4	120	120	910	0,013	11,4
	40L T	3 x 400 V ~	0,75	1	2,6	99	810	1" 1/4	120	120	910	0,013	11,4
	4GG M	1 x 230 V ~	0,75	1	6,2	99	792	1" 1/4	120	120	892	0,013	13,6
	4GG T	3 x 230 V ~	0,75	1	4,1	99	772	1" 1/4	120	120	872	0,013	12,6
	4GG T	3 x 400 V ~	0,75	1	2,4	99	772	1" 1/4	120	120	872	0,013	12,6
S4 2/20	40L M	1 x 230 V ~	1,1	1,5	8,5	99	987	1" 1/4	120	120	1087	0,016	14,6
	40L T	3 x 230 V ~	1,1	1,5	6,2	99	967	1" 1/4	120	120	1067	0,015	13,6
	40L T	3 x 400 V ~	1,1	1,5	3,6	99	967	1" 1/4	120	120	1067	0,015	13,6
	4GG M	1 x 230 V ~	1,1	1,5	8,6	99	964	1" 1/4	120	120	1064	0,015	16,7
	4GG T	3 x 230 V ~	1,1	1,5	5,5	99	919	1" 1/4	120	120	1019	0,015	14,5
	4GG T	3 x 400 V ~	1,1	1,5	3,2	99	919	1" 1/4	120	120	1019	0,015	14,5
S4 2/28	40L M	1 x 230 V ~	1,5	2	10,8	99	1089	1" 1/4	120	120	1189	0,017	18,3
	40L T	3 x 230 V ~	1,5	2	7,9	99	1043	1" 1/4	120	120	1143	0,016	16,3
	40L T	3 x 400 V ~	1,5	2	4,6	99	1043	1" 1/4	120	120	1143	0,016	16,3
	4GG M	1 x 230 V ~	1,5	2	11	99	1082	1" 1/4	120	120	1182	0,017	20,6
	4GG T	3 x 230 V ~	1,5	2	7,6	99	1037	1" 1/4	120	120	1137	0,016	18,4
	4GG T	3 x 400 V ~	1,5	2	4,4	99	1037	1" 1/4	120	120	1137	0,016	18,4
S4 2/40	40L M	1 x 230 V ~	2,2	3	15	99	1421	1" 1/4	120	120	1521	0,022	23,8
	40L T	3 x 230 V ~	2,2	3	10,4	99	1401	1" 1/4	120	120	1501	0,022	22,7
	40L T	3 x 400 V ~	2,2	3	6	99	1401	1" 1/4	120	120	1501	0,022	22,7
	4GG M	1 x 230 V ~	2,2	3	15	99	1356	1" 1/4	120	120	1456	0,021	24
	4GG T	3 x 230 V ~	2,2	3	10,2	99	1336	1" 1/4	120	120	1436	0,021	23,3
	4GG T	3 x 400 V ~	2,2	3	5,9	99	1336	1" 1/4	120	120	1436	0,021	23,3
S4 2/52	40L T	3 x 230 V ~	3	4	13	99	1677	1" 1/4	120	120	1777	0,026	27,3
	40L T	3 x 400 V ~	3	4	7,5	99	1677	1" 1/4	120	120	1777	0,026	27,3
	4GG T	3 x 230 V ~	3	4	14,3	99	1703	1" 1/4	120	120	1803	0,026	31,9
	4GG T	3 x 400 V ~	3	4	8,3	99	1703	1" 1/4	120	120	1803	0,026	31,9

4GG: 4" encapsulated motor with stator immersed in thermosetting insulating resin.

40L: 4" rewindable oil-filled motor.

# S4 2

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

## PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA							
	P2 NOMINAL		Q=m³/h	0	1,2	1,5	1,8	2,4	3,0	4,2
	kW	HP	Q=l/min	0	20	25	30	40	50	70
S4 3/6	0,37	0,5	H (m)	33	32	31	30	26	23	13
S4 3/9	0,55	0,75		50	47	45	44	40	34	20
S4 3/13	0,75	1		72	68	66	64	57	50	29
S4 3/19	1,1	1,5		105	100	98	93	86	72	42
S4 3/25	1,5	2		138	130	127	122	110	95	55
S4 3/32	2,2	3		176	168	162	157	141	120	70
S4 3/39	2,2	3		215	204	198	191	172	147	86
S4 3/45	3	4		247	233	228	220	198	170	99
S4 3/51	3	4		280	267	260	250	224	193	112
S4 3/67	4	5,5		368	350	340	328	294	254	147

## ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m³	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		In A				L/A	L/B	H		
			kW	HP									
S4 3/6	40L M	1 x 230 V ~	0,37	0,5	3,5	99	662	1" 1/4	110	110	720	0,009	9,7
	40L T	3 x 230 V ~	0,37	0,5	2,1	99	662	1" 1/4	110	110	720	0,009	9,7
	40L T	3 x 400 V ~	0,37	0,5	1,2	99	662	1" 1/4	110	110	720	0,009	9,7
	4GG M	1 x 230 V ~	0,37	0,5	3,3	99	614	1" 1/4	110	110	650	0,008	10,1
	4GG T	3 x 230 V ~	0,37	0,5	2,7	99	594	1" 1/4	110	110	650	0,008	9,4
	4GG T	3 x 400 V ~	0,37	0,5	1,6	99	594	1" 1/4	110	110	650	0,008	9,4
S4 3/9	40L M	1 x 230 V ~	0,55	0,75	4,5	99	765	1" 1/4	120	120	865	0,012	11,1
	40L T	3 x 230 V ~	0,55	0,75	3,8	99	745	1" 1/4	120	120	845	0,012	10,2
	40L T	3 x 400 V ~	0,55	0,75	2,2	99	745	1" 1/4	120	120	845	0,012	10,2
	4GG M	1 x 230 V ~	0,55	0,75	4,6	99	727	1" 1/4	120	120	827	0,012	12,3
	4GG T	3 x 230 V ~	0,55	0,75	3,3	99	697	1" 1/4	110	110	720	0,009	10,6
	4GG T	3 x 400 V ~	0,55	0,75	1,9	99	697	1" 1/4	110	110	720	0,009	10,6
S4 3/13	40L M	1 x 230 V ~	0,75	1	6,3	99	906	1" 1/4	120	120	1006	0,014	12,9
	40L T	3 x 230 V ~	0,75	1	4,5	99	876	1" 1/4	120	120	976	0,014	11,6
	40L T	3 x 400 V ~	0,75	1	2,6	99	876	1" 1/4	120	120	976	0,014	11,6
	4GG M	1 x 230 V ~	0,75	1	6,2	99	858	1" 1/4	120	120	958	0,014	13,8
	4GG T	3 x 230 V ~	0,75	1	4,1	99	838	1" 1/4	120	120	938	0,014	12,8
	4GG T	3 x 400 V ~	0,75	1	2,4	99	838	1" 1/4	120	120	938	0,014	12,8
S4 3/19	40L M	1 x 230 V ~	1,1	1,5	8,5	99	1093	1" 1/4	120	120	1193	0,017	15,2
	40L T	3 x 230 V ~	1,1	1,5	6,2	99	1073	1" 1/4	120	120	1173	0,017	14,2
	40L T	3 x 400 V ~	1,1	1,5	3,6	99	1073	1" 1/4	120	120	1173	0,017	14,2
	4GG M	1 x 230 V ~	1,1	1,5	8,6	99	1070	1" 1/4	120	120	1170	0,017	17,3
	4GG T	3 x 230 V ~	1,1	1,5	5,5	99	1025	1" 1/4	120	120	1125	0,016	15,1
	4GG T	3 x 400 V ~	1,1	1,5	3,2	99	1025	1" 1/4	120	120	1125	0,016	15,1
S4 3/25	40L M	1 x 230 V ~	1,5	2	10,8	99	1184	1" 1/4	120	120	1284	0,018	17,9
	40L T	3 x 230 V ~	1,5	2	7,9	99	1138	1" 1/4	120	120	1238	0,018	15,9
	40L T	3 x 400 V ~	1,5	2	4,6	99	1138	1" 1/4	120	120	1238	0,018	15,9
	4GG M	1 x 230 V ~	1,5	2	11	99	1177	1" 1/4	120	120	1277	0,018	20,2
	4GG T	3 x 230 V ~	1,5	2	7,6	99	1132	1" 1/4	120	120	1232	0,018	18
	4GG T	3 x 400 V ~	1,5	2	4,4	99	1132	1" 1/4	120	120	1232	0,018	18
S4 3/32	40L M	1 x 230 V ~	2,2	3	15	99	1465	1" 1/4	120	120	1565	0,023	22,2
	40L T	3 x 230 V ~	2,2	3	10,4	99	1445	1" 1/4	120	120	1545	0,022	21,1
	40L T	3 x 400 V ~	2,2	3	6	99	1445	1" 1/4	120	120	1545	0,022	21,1
	4GG M	1 x 230 V ~	2,2	3	15	99	1400	1" 1/4	120	120	1500	0,022	22,4
	4GG T	3 x 230 V ~	2,2	3	10,2	99	1380	1" 1/4	120	120	1480	0,021	19,5
	4GG T	3 x 400 V ~	2,2	3	5,9	99	1380	1" 1/4	120	120	1480	0,021	19,5
S4 3/39	40L M	1 x 230 V ~	2,2	3	15	99	1635	1" 1/4	120	120	1735	0,025	24,3
	40L T	3 x 230 V ~	2,2	3	10,4	99	1615	1" 1/4	120	120	1715	0,025	23,2
	40L T	3 x 400 V ~	2,2	3	6	99	1615	1" 1/4	120	120	1715	0,025	23,2
	4GG M	1 x 230 V ~	2,2	3	15	99	1570	1" 1/4	120	120	1670	0,024	24,5
	4GG T	3 x 230 V ~	2,2	3	10,2	99	1550	1" 1/4	120	120	1650	0,024	23,8
	4GG T	3 x 400 V ~	2,2	3	5,9	99	1550	1" 1/4	120	120	1650	0,024	23,8

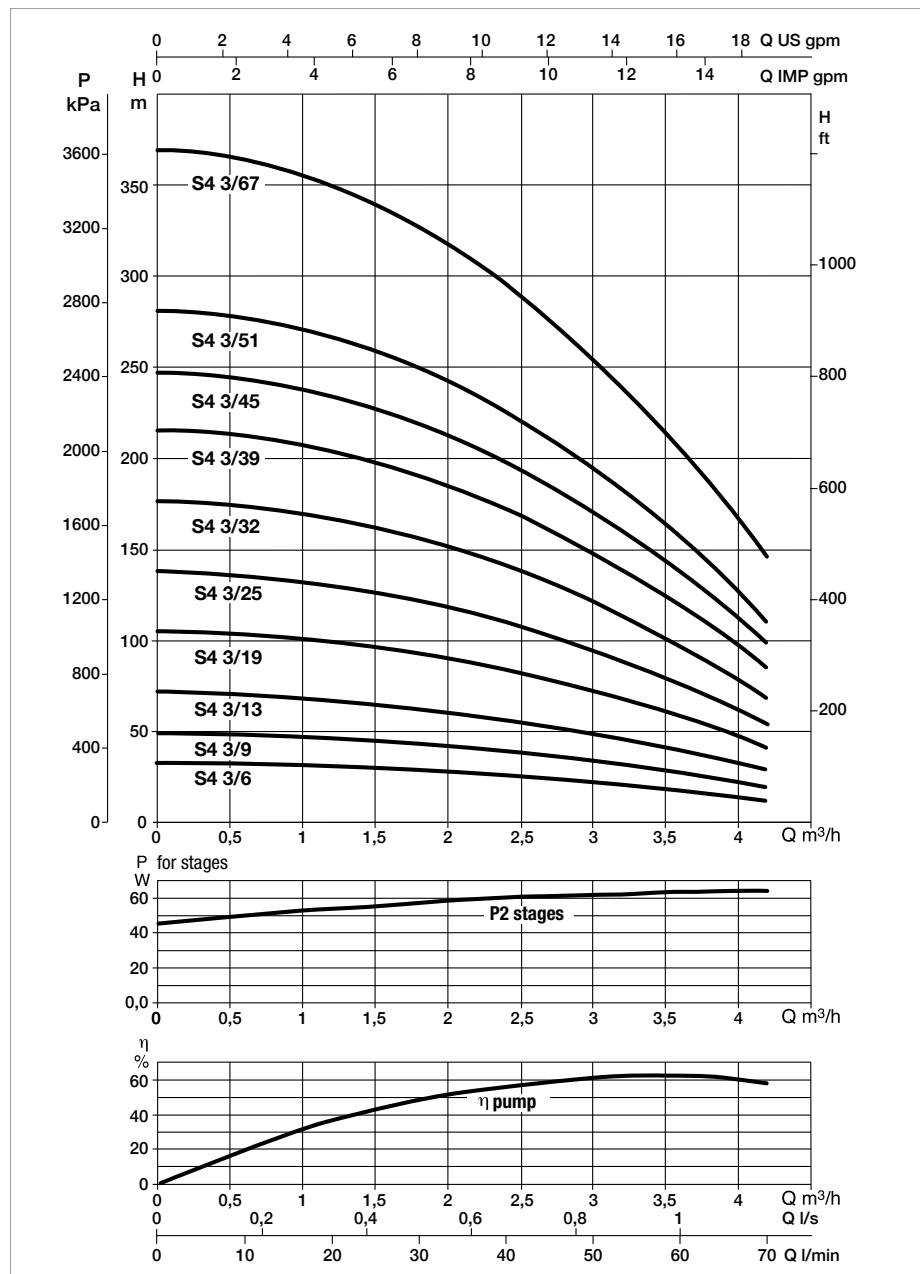
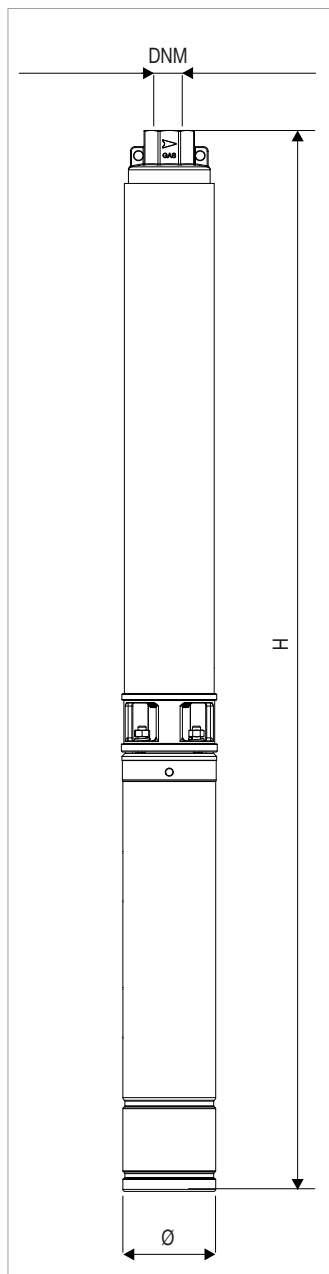
4GG: 4" encapsulated motor with stator immersed in thermosetting insulating resin.

40L: 4" rewindable oil-filled motor.

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m³	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		In A				L/A	L/B	H		
			kW	HP									
S4 3/45	40LT	3 x 230 V ~	3	4	13	99	1819	1" 1/4	120	120	1919	0,028	27
	40LT	3 x 400 V ~	3	4	7,5	99	1819	1" 1/4	120	120	1919	0,028	27
	4GGT	3 x 230 V ~	3	4	14,3	99	1845	1" 1/4	120	120	1945	0,028	31,6
	4GGT	3 x 400 V ~	3	4	8,3	99	1845	1" 1/4	120	120	1945	0,028	31,6
S4 3/51	40LT	3 x 230 V ~	3	4	13	99	1964	1" 1/4	120	120	2064	0,030	28,3
	40LT	3 x 400 V ~	3	4	7,5	99	1964	1" 1/4	120	120	2064	0,030	28,3
	4GGT	3 x 230 V ~	3	4	14,3	99	1990	1" 1/4	120	120	2090	0,030	32,9
	4GGT	3 x 400 V ~	3	4	8,3	99	1990	1" 1/4	120	120	2090	0,030	32,9
S4 3/67	40LT	3 x 230 V ~	4	5,5	16,6	99	2415	1" 1/4	280	230	2820	0,182	56,3
	40LT	3 x 400 V ~	4	5,5	9,6	99	2415	1" 1/4	280	230	2820	0,182	56,3
	4GGT	3 x 230 V ~	4	5,5	17,3	99	2441	1" 1/4	280	230	2820	0,182	63
	4GGT	3 x 400 V ~	4	5,5	10	99	2441	1" 1/4	280	230	2820	0,182	63

4GG: 4" encapsulated motor with stator immersed in thermosetting insulating resin.  
 40L: 4" rewindable oil-filled motor.



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA						
	P2 NOMINAL		Q=m³/h	0	1,8	2,4	3,0	4,2	5,4
	kW	HP	Q=l/min	0	30	40	50	70	90
S4 4/4	0,37	0,5	H (m)	28	25	24	22	17	11
S4 4/7	0,55	0,75		48	44	41	38	30	19
S4 4/9	0,75	1		62	56	53	49	39	25
S4 4/14	1,1	1,5		96	87	82	76	61	39
S4 4/19	1,5	2		131	118	112	103	82	53
S4 4/27	2,2	3		186	168	159	147	117	75
S4 4/35	3	4		241	218	206	191	152	97
S4 4/48	4	5,5		331	299	283	261	208	133
S4 4/62	5,5	7,5		427	386	365	338	269	172

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m³	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		In A				L/A	L/B	H		
			kW	HP									
S4 4/4	40L M	1 x 230 V ~	0,37	0,5	3,5	99	597	1" 1/4	110	110	650	0,008	9,2
	40L T	3 x 230 V ~	0,37	0,5	2,1	99	597	1" 1/4	110	110	650	0,008	9,2
	40L T	3 x 400 V ~	0,37	0,5	1,2	99	597	1" 1/4	110	110	650	0,008	9,2
	4GG M	1 x 230 V ~	0,37	0,5	3,3	99	549	1" 1/4	110	110	650	0,008	9,6
	4GG T	3 x 230 V ~	0,37	0,5	2,7	99	529	1" 1/4	110	110	650	0,008	8,9
	4GG T	3 x 400 V ~	0,37	0,5	1,6	99	529	1" 1/4	110	110	650	0,008	8,9
S4 4/7	40L M	1 x 230 V ~	0,55	0,75	4,5	99	692	1" 1/4	110	110	720	0,009	10,6
	40L T	3 x 230 V ~	0,55	0,75	3,8	99	672	1" 1/4	110	110	720	0,009	9,7
	40L T	3 x 400 V ~	0,55	0,75	2,2	99	672	1" 1/4	110	110	720	0,009	9,7
	4GG M	1 x 230 V ~	0,55	0,75	4,6	99	654	1" 1/4	110	110	720	0,009	11,8
	4GG T	3 x 230 V ~	0,55	0,75	3,3	99	624	1" 1/4	110	110	650	0,008	10,1
	4GG T	3 x 400 V ~	0,55	0,75	1,9	99	624	1" 1/4	110	110	650	0,008	10,1
S4 4/9	40L M	1 x 230 V ~	0,75	1	6,3	99	774	1" 1/4	120	120	874	0,013	12,3
	40L T	3 x 230 V ~	0,75	1	4,5	99	744	1" 1/4	120	120	844	0,012	11
	40L T	3 x 400 V ~	0,75	1	2,6	99	744	1" 1/4	120	120	844	0,012	11
	4GG M	1 x 230 V ~	0,75	1	6,2	99	726	1" 1/4	120	120	826	0,012	13,2
	4GG T	3 x 230 V ~	0,75	1	4,1	99	706	1" 1/4	110	110	720	0,009	12,2
	4GG T	3 x 400 V ~	0,75	1	2,4	99	706	1" 1/4	110	110	720	0,009	12,2
S4 4/14	40L M	1 x 230 V ~	1,1	1,5	8,5	99	921	1" 1/4	120	120	1021	0,015	14,2
	40L T	3 x 230 V ~	1,1	1,5	6,2	99	901	1" 1/4	120	120	1001	0,014	13,2
	40L T	3 x 400 V ~	1,1	1,5	3,6	99	901	1" 1/4	120	120	1001	0,014	13,2
	4GG M	1 x 230 V ~	1,1	1,5	8,6	99	898	1" 1/4	120	120	998	0,014	16,3
	4GG T	3 x 230 V ~	1,1	1,5	5,5	99	853	1" 1/4	120	120	953	0,014	14,1
	4GG T	3 x 400 V ~	1,1	1,5	3,2	99	853	1" 1/4	120	120	953	0,014	14,1
S4 4/19	40L M	1 x 230 V ~	1,5	2	10,8	99	1094	1" 1/4	120	120	1194	0,017	17,5
	40L T	3 x 230 V ~	1,5	2	7,9	99	1048	1" 1/4	120	120	1148	0,017	15,5
	40L T	3 x 400 V ~	1,5	2	4,6	99	1048	1" 1/4	120	120	1148	0,017	15,5
	4GG M	1 x 230 V ~	1,5	2	11	99	1087	1" 1/4	120	120	1187	0,017	19,8
	4GG T	3 x 230 V ~	1,5	2	7,6	99	1042	1" 1/4	120	120	1142	0,016	17,6
	4GG T	3 x 400 V ~	1,5	2	4,4	99	1042	1" 1/4	120	120	1142	0,016	17,6
S4 4/27	40L M	1 x 230 V ~	2,2	3	15	99	1285	1" 1/4	120	120	1385	0,020	22,1
	40L T	3 x 230 V ~	2,2	3	10,4	99	1265	1" 1/4	120	120	1365	0,020	21
	40L T	3 x 400 V ~	2,2	3	6	99	1265	1" 1/4	120	120	1365	0,020	21
	4GG M	1 x 230 V ~	2,2	3	15	99	1220	1" 1/4	120	120	1320	0,019	22,3
	4GG T	3 x 230 V ~	2,2	3	10,2	99	1200	1" 1/4	120	120	1300	0,019	21,6
	4GG T	3 x 400 V ~	2,2	3	5,9	99	1200	1" 1/4	120	120	1300	0,019	21,6
S4 4/35	40L T	3 x 230 V ~	3	4	13	99	1499	1" 1/4	120	120	1599	0,023	25,1
	40L T	3 x 400 V ~	3	4	7,5	99	1499	1" 1/4	120	120	1599	0,023	25,1
	4GG T	3 x 230 V ~	3	4	14,3	99	1525	1" 1/4	120	120	1625	0,023	29,7
	4GG T	3 x 400 V ~	3	4	8,3	99	1525	1" 1/4	120	120	1625	0,023	29,7

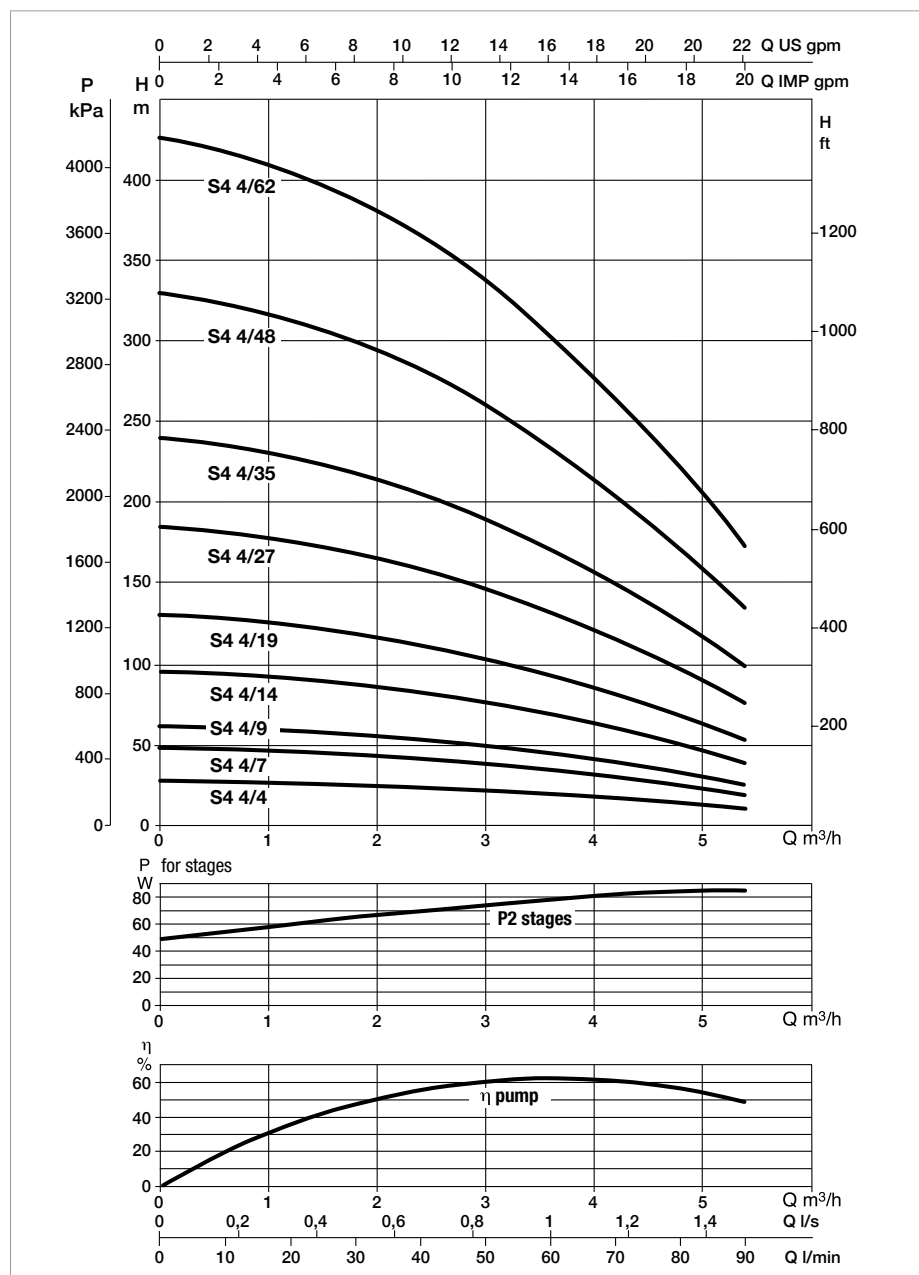
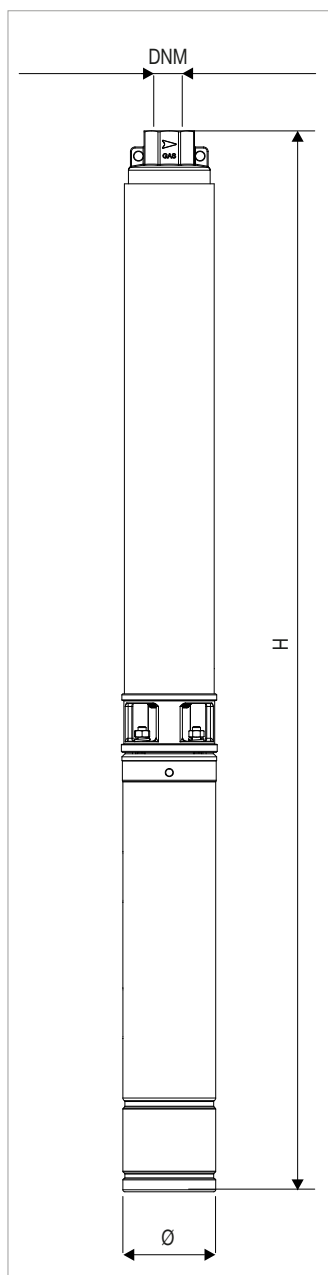
4GG: 4" encapsulated motor with stator immersed in thermosetting insulating resin.  
40L: 4" rewindable oil-filled motor.

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m <sup>3</sup>	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		I <sub>n</sub> A								
			kW	HP									
S4 4/48	40LT	3 x 230 V ~	4	5,5	16,6	99	1851	1" 1/4	120	120	1951	0,028	28,9
	40LT	3 x 400 V ~	4	5,5	9,6	99	1851	1" 1/4	120	120	1951	0,028	28,9
	4GGT	3 x 230 V ~	4	5,5	17,3	99	1877	1" 1/4	120	120	1977	0,028	35,6
	4GGT	3 x 400 V ~	4	5,5	10	99	1877	1" 1/4	120	120	1977	0,028	35,6
S4 4/62	40LT	3 x 230 V ~	5,5	7,5	22,6	99	2225	1" 1/4	120	120	2325	0,033	38,3
	40LT	3 x 400 V ~	5,5	7,5	13,1	99	2225	1" 1/4	120	120	2325	0,033	38,3
	4GGT	3 x 230 V ~	5,5	7,5	24,2	99	2251	1" 1/4	120	120	2351	0,034	41,5
	4GGT	3 x 400 V ~	5,5	7,5	14	99	2251	1" 1/4	120	120	2351	0,034	41,5

4GG: 4" encapsulated motor with stator immersed in thermosetting insulating resin.

40L: 4" rewindable oil-filled motor.



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA								
	P2 NOMINAL		Q=m³/h	0	2,4	3,0	4,2	5,4	6,0	7,2	8,4
	kW	HP	Q=l/min	0	40	50	70	90	100	120	140
S4 6/5	0,55	0,75	H (m)	30	28	26	24	21	19	15	10
S4 6/7	0,75	1		42	38	37	33	29	27	21	14
S4 6/10	1,1	1,5		60	55	52	47	42	38	30	20
S4 6/14	1,5	2		84	78	75	66	59	53	42	28
S4 6/21	2,2	3		126	116	110	99	88	80	63	42
S4 6/29	3	4		174	160	152	137	122	110	87	58
S4 6/38	4	5,5		228	209	200	179	160	144	114	76
S4 6/52	5,5	7,5		312	285	274	244	218	198	156	104
S4 6/61	7,5	10		366	334	322	287	256	232	183	122

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m³	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		In A				L/A	L/B	H		
			kW	HP									
S4 6/5	40L M	1 x 230 V ~	0,55	0,75	4,5	99	678	1" 1/4	110	110	720	0,009	10,6
	40L T	3 x 230 V ~	0,55	0,75	3,8	99	658	1" 1/4	110	110	720	0,009	9,7
	40L T	3 x 400 V ~	0,55	0,75	2,2	99	658	1" 1/4	110	110	720	0,009	9,7
	4GG M	1 x 230 V ~	0,55	0,75	4,6	99	640	1" 1/4	110	110	650	0,008	11,8
	4GG T	3 x 230 V ~	0,55	0,75	3,3	99	610	1" 1/4	110	110	650	0,008	10,1
	4GG T	3 x 400 V ~	0,55	0,75	1,9	99	610	1" 1/4	110	110	650	0,008	10,1
S4 6/7	40L M	1 x 230 V ~	0,75	1	6,3	99	774	1" 1/4	120	120	874	0,013	12,3
	40L T	3 x 230 V ~	0,75	1	4,5	99	744	1" 1/4	120	120	844	0,012	11
	40L T	3 x 400 V ~	0,75	1	2,6	99	744	1" 1/4	120	120	844	0,012	11
	4GG M	1 x 230 V ~	0,75	1	6,2	99	726	1" 1/4	120	120	826	0,012	13,2
	4GG T	3 x 230 V ~	0,75	1	4,1	99	706	1" 1/4	110	110	720	0,009	12,2
	4GG T	3 x 400 V ~	0,75	1	2,4	99	706	1" 1/4	110	110	720	0,009	12,2
S4 6/10	40L M	1 x 230 V ~	1,1	1,5	8,5	99	893	1" 1/4	120	120	993	0,014	14
	40L T	3 x 230 V ~	1,1	1,5	6,2	99	873	1" 1/4	120	120	973	0,014	13
	40L T	3 x 400 V ~	1,1	1,5	3,6	99	873	1" 1/4	120	120	973	0,014	13
	4GG M	1 x 230 V ~	1,1	1,5	8,6	99	870	1" 1/4	120	120	970	0,014	16,1
	4GG T	3 x 230 V ~	1,1	1,5	5,5	99	825	1" 1/4	120	120	925	0,013	13,9
	4GG T	3 x 400 V ~	1,1	1,5	3,2	99	825	1" 1/4	120	120	925	0,013	13,9
S4 6/14	40L M	1 x 230 V ~	1,5	2	10,8	99	1072	1" 1/4	120	120	1172	0,017	16,8
	40L T	3 x 230 V ~	1,5	2	7,9	99	1026	1" 1/4	120	120	1126	0,016	14,8
	40L T	3 x 400 V ~	1,5	2	4,6	99	1026	1" 1/4	120	120	1126	0,016	14,8
	4GG M	1 x 230 V ~	1,5	2	11	99	1065	1" 1/4	120	120	1165	0,017	19,1
	4GG T	3 x 230 V ~	1,5	2	7,6	99	1020	1" 1/4	120	120	1120	0,016	16,9
	4GG T	3 x 400 V ~	1,5	2	4,4	99	1020	1" 1/4	120	120	1120	0,016	16,9
S4 6/21	40L M	1 x 230 V ~	2,2	3	15	99	1350	1" 1/4	120	120	1450	0,021	22,3
	40L T	3 x 230 V ~	2,2	3	10,4	99	1330	1" 1/4	120	120	1430	0,021	21,2
	40L T	3 x 400 V ~	2,2	3	6	99	1330	1" 1/4	120	120	1430	0,021	21,2
	4GG M	1 x 230 V ~	2,2	3	15	99	1285	1" 1/4	120	120	1385	0,020	22,5
	4GG T	3 x 230 V ~	2,2	3	10,2	99	1265	1" 1/4	120	120	1365	0,020	21,8
	4GG T	3 x 400 V ~	2,2	3	5,9	99	1265	1" 1/4	120	120	1365	0,020	21,8
S4 6/29	40L T	3 x 230 V ~	3	4	13	99	1638	1" 1/4	120	120	1738	0,025	25,8
	40L T	3 x 400 V ~	3	4	7,5	99	1638	1" 1/4	120	120	1738	0,025	25,8
	4GG T	3 x 230 V ~	3	4	14,3	99	1664	1" 1/4	120	120	1764	0,025	30,4
	4GG T	3 x 400 V ~	3	4	8,3	99	1664	1" 1/4	120	120	1764	0,025	30,4
S4 6/38	40L T	3 x 230 V ~	4	5,5	16,6	99	1987	1" 1/4	120	120	2087	0,030	29,4
	40L T	3 x 400 V ~	4	5,5	9,6	99	1987	1" 1/4	120	120	2087	0,030	29,4
	4GG T	3 x 230 V ~	4	5,5	17,3	99	2013	1" 1/4	120	120	2113	0,030	36,1
	4GG T	3 x 400 V ~	4	5,5	10	99	2013	1" 1/4	120	120	2113	0,030	36,1

4GG: 4" encapsulated motor with stator immersed in thermosetting insulating resin.

40L: 4" rewindable oil-filled motor.

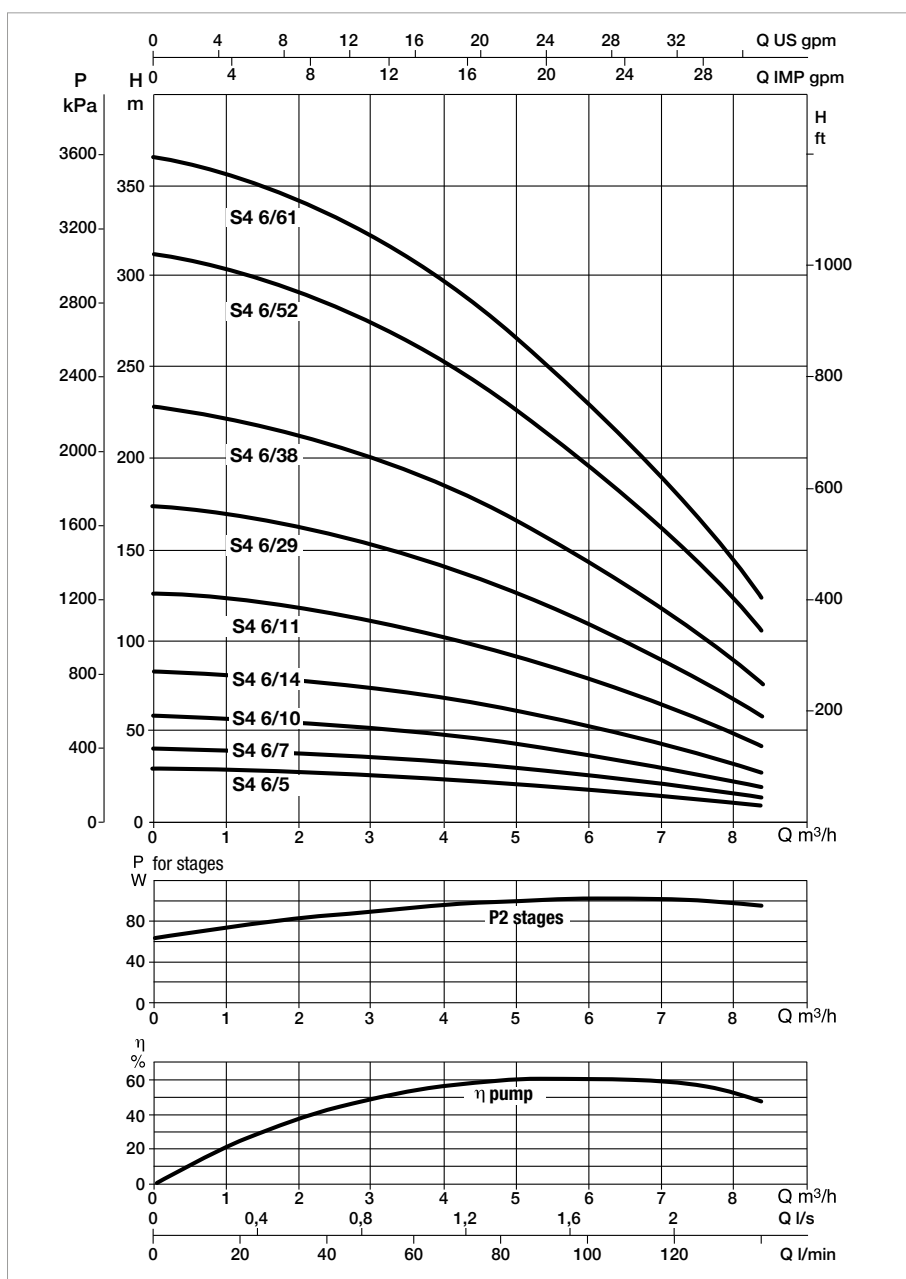
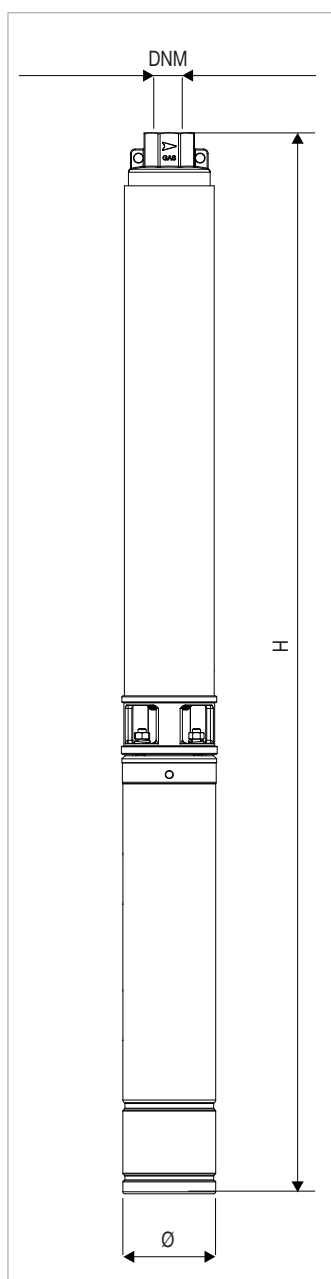


### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m <sup>3</sup>	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		In A								
			kW	HP									
S4 6/52	40LT	3 x 230 V ~	5,5	7,5	22,6	99	2528	1" 1/4	280	230	2820	0,182	63,4
	40LT	3 x 400 V ~	5,5	7,5	13,1	99	2528	1" 1/4	280	230	2820	0,182	63,4
	4GGT	3 x 230 V ~	5,5	7,5	24,2	99	2554	1" 1/4	280	230	2820	0,182	66,6
	4GGT	3 x 400 V ~	5,5	7,5	14	99	2554	1" 1/4	280	230	2820	0,182	66,6
S4 6/61	40LT	3 x 230 V ~	7,5	10	29,2	99	2886	1" 1/4	280	230	3080	0,198	72,1
	40LT	3 x 400 V ~	7,5	10	16,9	99	2886	1" 1/4	280	230	3080	0,198	72,1
	4GGT	3 x 230 V ~	7,5	10	30,1	99	2936	1" 1/4	280	230	3080	0,198	75
	4GGT	3 x 400 V ~	7,5	10	17,4	99	2936	1" 1/4	280	230	3080	0,198	75

**4GG:** 4" encapsulated motor with stator immersed in thermosetting insulating resin.

**40L:** 4" rewindable oil-filled motor.



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

## PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA									
	P2 NOMINAL		Q=m³/h	0	3,0	4,2	5,4	6,0	7,2	8,4	9,6	10,8
	kW	HP	Q=l/min	0	50	70	90	100	120	140	160	180
S4 8/5	0,75	1	H (m)	30	30	28	27	26	24	21	16	11
S4 8/7	1,1	1,5		42	41	39	38	37	34	29	23	16
S4 8/9	1,5	2		54	52	50	49	48	44	37	29	20
S4 8/15	2,2	3		90	86	83	81	79	73	62	48	33
S4 8/21	3	4		130	125	120	117	112	103	86	68	47
S4 8/27	4	5,5		162	155	151	146	144	132	111	87	60
S4 8/35	5,5	7,5		210	202	195	192	187	171	144	113	78
S4 8/38	5,5	7,5		228	219	211	207	203	186	156	122	84
S4 8/47	7,5	10		280	270	261	255	251	230	193	151	104
S4 8/50	7,5	10		298	288	278	273	267	244	206	161	111

## ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m³	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		In A				L/A	L/B	H		
			kW	HP									
S4 8/5	40L M	1 x 230 V ~	0,75	1	6,3	99	784	2"	120	120	884	0,013	12,5
	40L T	3 x 230 V ~	0,75	1	4,5	99	754	2"	120	120	854	0,012	11,2
	40L T	3 x 400 V ~	0,75	1	2,6	99	754	2"	120	120	854	0,012	11,2
	4GG M	1 x 230 V ~	0,75	1	6,2	99	736	2"	120	120	836	0,012	13,4
	4GG T	3 x 230 V ~	0,75	1	4,1	99	716	2"	110	110	720	0,009	12,4
	4GG T	3 x 400 V ~	0,75	1	2,4	99	716	2"	110	110	720	0,009	12,4
S4 8/7	40L M	1 x 230 V ~	1,1	1,5	8,5	99	895	2"	120	120	995	0,014	14,2
	40L T	3 x 230 V ~	1,1	1,5	6,2	99	875	2"	120	120	975	0,014	13,2
	40L T	3 x 400 V ~	1,1	1,5	3,6	99	875	2"	120	120	975	0,014	13,2
	4GG M	1 x 230 V ~	1,1	1,5	8,6	99	872	2"	120	120	972	0,014	16,3
	4GG T	3 x 230 V ~	1,1	1,5	5,5	99	827	2"	120	120	927	0,013	14,1
	4GG T	3 x 400 V ~	1,1	1,5	3,2	99	827	2"	120	120	927	0,013	14,1
S4 8/9	40L M	1 x 230 V ~	1,5	2	10,8	99	1031	2"	120	120	1131	0,016	16,8
	40L T	3 x 230 V ~	1,5	2	7,9	99	985	2"	120	120	1085	0,016	14,8
	40L T	3 x 400 V ~	1,5	2	4,6	99	985	2"	120	120	1085	0,016	14,8
	4GG M	1 x 230 V ~	1,5	2	11	99	1024	2"	120	120	1124	0,016	19,1
	4GG T	3 x 230 V ~	1,5	2	7,6	99	979	2"	120	120	1079	0,016	16,9
	4GG T	3 x 400 V ~	1,5	2	4,4	99	979	2"	120	120	1079	0,016	16,9
S4 8/15	40L M	1 x 230 V ~	2,2	3	15	99	1419	2"	120	120	1519	0,022	21,7
	40L T	3 x 230 V ~	2,2	3	10,4	99	1399	2"	120	120	1499	0,022	20,6
	40L T	3 x 400 V ~	2,2	3	6	99	1399	2"	120	120	1499	0,022	20,6
	4GG M	1 x 230 V ~	2,2	3	15	99	1354	2"	120	120	1454	0,021	21,9
	4GG T	3 x 230 V ~	2,2	3	10,2	99	1334	2"	120	120	1434	0,021	21,2
	4GG T	3 x 400 V ~	2,2	3	5,9	99	1334	2"	120	120	1434	0,021	21,2
S4 8/21	40L T	3 x 230 V ~	3	4	13	99	1732	2"	120	120	1832	0,026	24,9
	40L T	3 x 400 V ~	3	4	7,5	99	1732	2"	120	120	1832	0,026	24,9
	4GG T	3 x 230 V ~	3	4	14,3	99	1758	2"	120	120	1858	0,027	29,5
	4GG T	3 x 400 V ~	3	4	8,3	99	1758	2"	120	120	1858	0,027	29,5
S4 8/27	40L T	3 x 230 V ~	4	5,5	16,6	99	1845	2"	120	120	1945	0,028	29,5
	40L T	3 x 400 V ~	4	5,5	9,6	99	1845	2"	120	120	1945	0,028	29,5
	4GG T	3 x 230 V ~	4	5,5	17,3	99	1871	2"	120	120	1971	0,028	36,2
	4GG T	3 x 400 V ~	4	5,5	10	99	1871	2"	120	120	1971	0,028	36,2
S4 8/35	40L T	3 x 230 V ~	5,5	7,5	22,6	99	2293	2"	120	120	2393	0,034	38,6
	40L T	3 x 400 V ~	5,5	7,5	13,1	99	2293	2"	120	120	2393	0,034	38,6
	4GG T	3 x 230 V ~	5,5	7,5	24,2	99	2319	2"	120	120	2419	0,035	41,8
	4GG T	3 x 400 V ~	5,5	7,5	14	99	2319	2"	120	120	2419	0,035	41,8
S4 8/38	40L T	3 x 230 V ~	5,5	7,5	22,6	99	2555	2"	280	230	2820	0,182	63,4
	40L T	3 x 400 V ~	5,5	7,5	13,1	99	2555	2"	280	230	2820	0,182	63,4
	4GG T	3 x 230 V ~	5,5	7,5	24,2	99	2581	2"	280	230	2820	0,182	66,6
	4GG T	3 x 400 V ~	5,5	7,5	14	99	2581	2"	280	230	2820	0,182	66,6

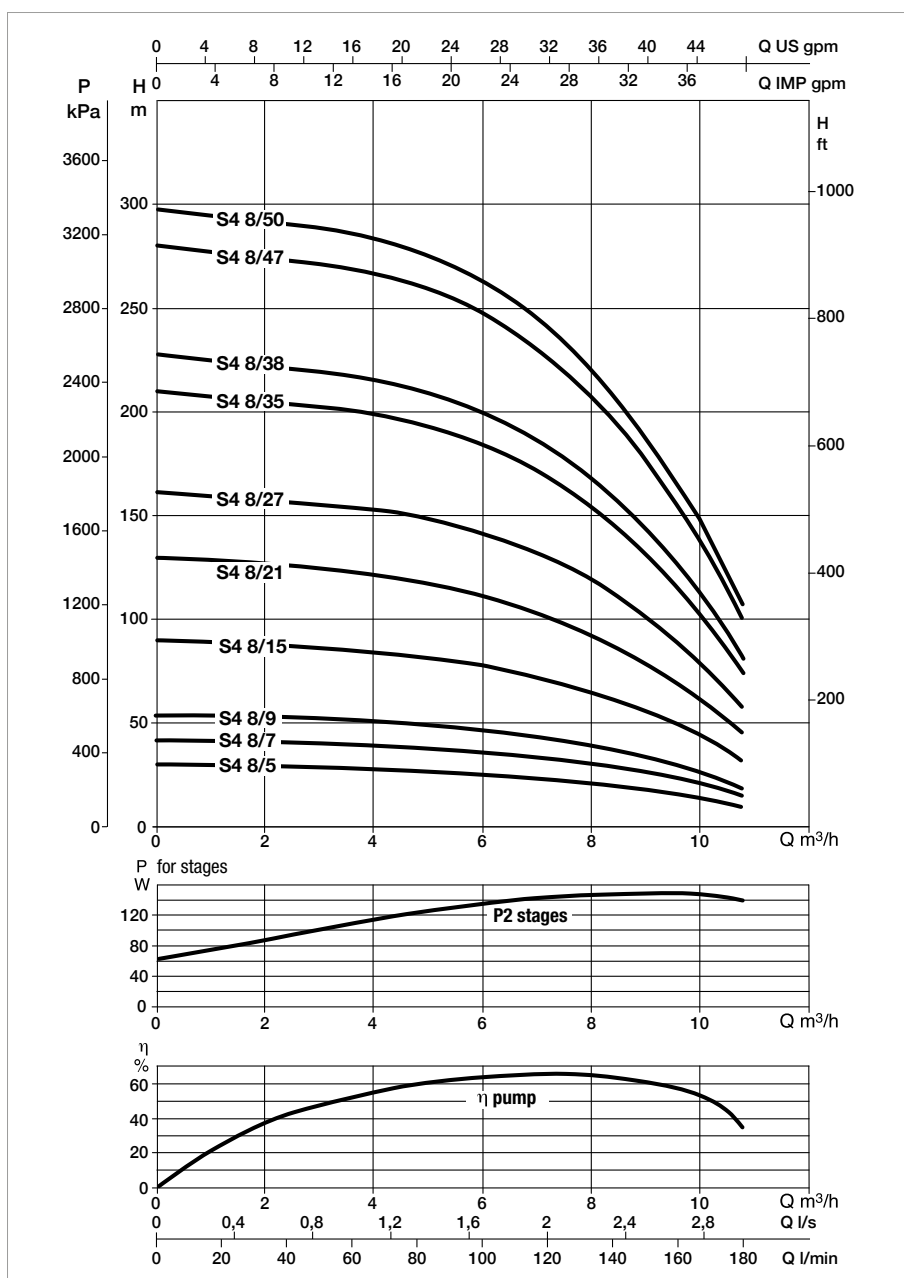
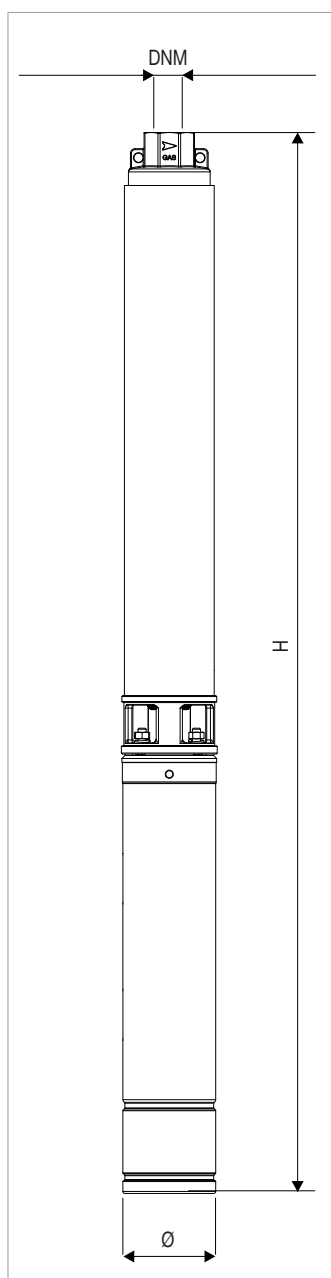
4GG: 4" encapsulated motor with stator immersed in thermosetting insulating resin.

40L: 4" rewindable oil-filled motor.

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m <sup>3</sup>	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		I <sub>n</sub> A								
			kW	HP									
S4 8/47	40LT	3 x 230 V ~	7,5	10	29,2	99	2883	2"	280	230	3080	0,198	71,9
	40LT	3 x 400 V ~	7,5	10	16,9	99	2883	2"	280	230	3080	0,198	71,9
	4GGT	3 x 230 V ~	7,5	10	30,1	99	2909	2"	280	230	3080	0,198	74,8
	4GGT	3 x 400 V ~	7,5	10	17,4	99	2909	2"	280	230	3080	0,198	74,8
S4 8/50	40LT	3 x 230 V ~	7,5	10	29,2	99	3011	2"	280	230	3380	0,218	75,3
	40LT	3 x 400 V ~	7,5	10	16,9	99	3011	2"	280	230	3380	0,218	75,3
	4GGT	3 x 230 V ~	7,5	10	30,1	99	3172	2"	280	230	3380	0,218	78,2
	4GGT	3 x 400 V ~	7,5	10	17,4	99	3172	2"	280	230	3380	0,218	78,2

4GG: 4" encapsulated motor with stator immersed in thermosetting insulating resin.  
 40L: 4" rewindable oil-filled motor.



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA									
	P2 NOMINAL		Q=m³/h	0	5,4	6,0	7,2	8,4	9,6	10,8	12,0	14,4
	kW	HP	Q=l/min	0	90	100	120	140	160	180	200	240
S4 12/6	1,1	1,5	H (m)	30	29	28	25	24	23	21	18	11
S4 12/9	1,5	2		46	42	40	38	36	34	31	28	17
S4 12/13	2,2	3		66	61	59	55	52	49	44	38	23
S4 12/18	3	4		91	84	82	76	72	68	60	52	31
S4 12/24	4	5,5		122	112	110	101	96	91	81	70	46
S4 12/34	5,5	7,5		172	158	156	144	136	129	115	101	65
S4 12/44	7,5	10		215	192	188	175	165	156	140	124	81

### ELECTRICAL DATA AND DIMENSIONS

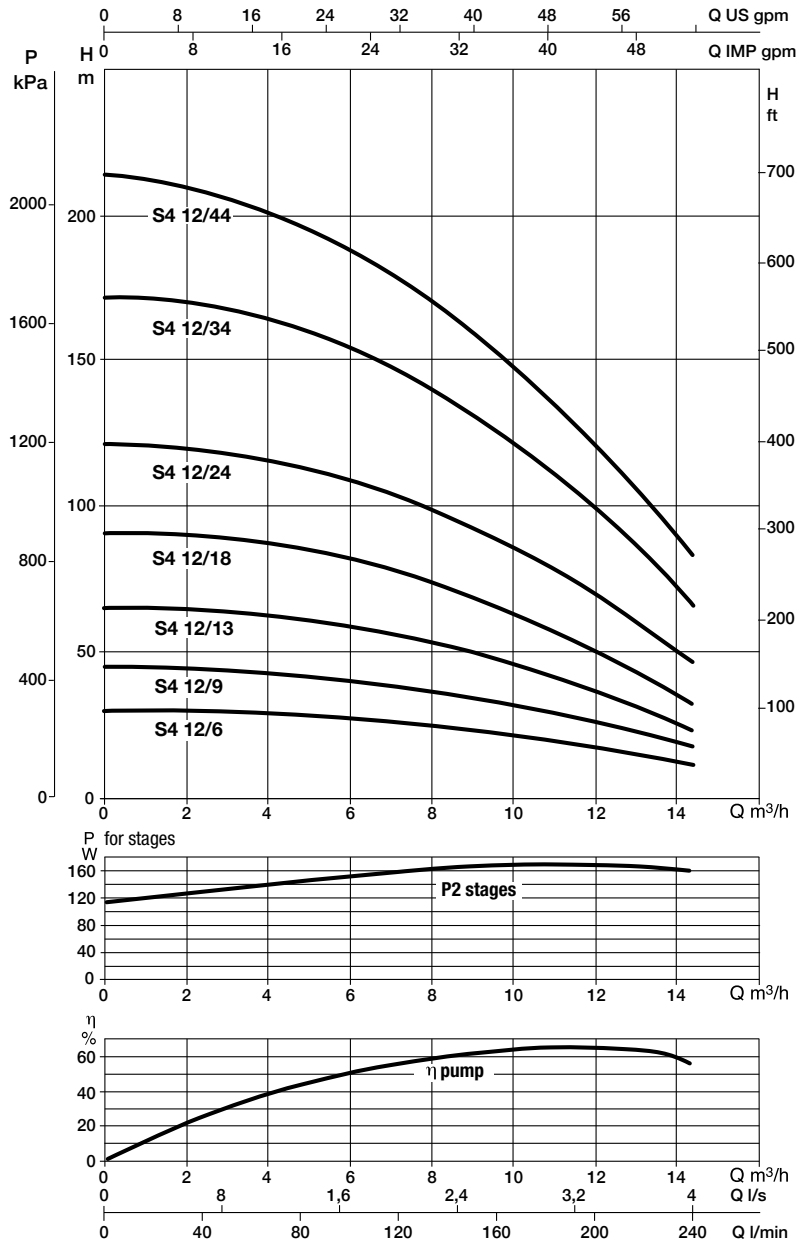
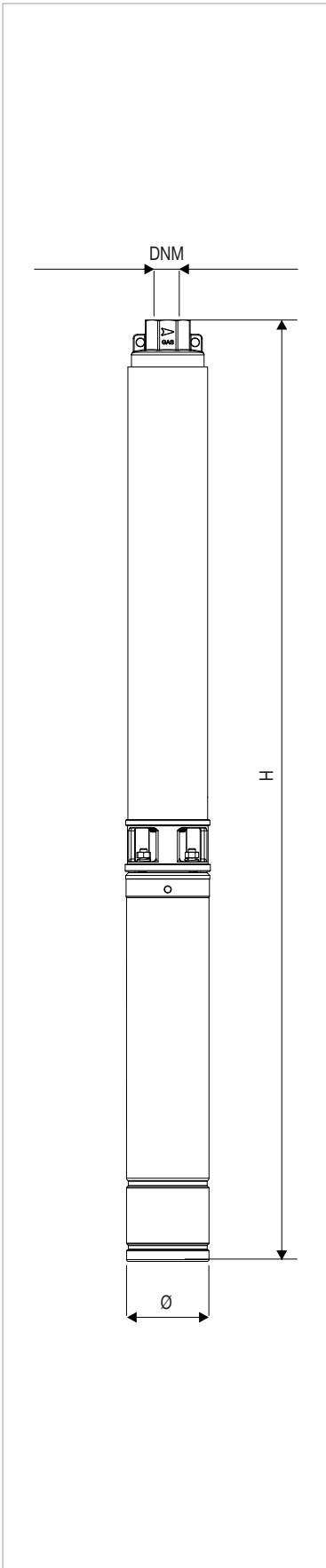
MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m³	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		In A				L/A	L/B	H		
			kW	HP									
S4 12/6	40L M	1 x 230 V ~	1,1	1,5	8,5	99	890	2"	120	120	990	0,014	14,2
	40L T	3 x 230 V ~	1,1	1,5	6,2	99	870	2"	120	120	970	0,014	13,2
	40L T	3 x 400 V ~	1,1	1,5	3,6	99	870	2"	120	120	970	0,014	13,2
	4GG M	1 x 230 V ~	1,1	1,5	8,6	99	867	2"	120	120	967	0,014	16,3
	4GG T	3 x 230 V ~	1,1	1,5	5,5	99	822	2"	120	120	922	0,013	14,1
	4GG T	3 x 400 V ~	1,1	1,5	3,2	99	822	2"	120	120	922	0,013	14,1
S4 12/9	40L M	1 x 230 V ~	1,5	2	10,8	99	1093	2"	120	120	1193	0,017	17,5
	40L T	3 x 230 V ~	1,5	2	7,9	99	1047	2"	120	120	1147	0,017	15,5
	40L T	3 x 400 V ~	1,5	2	4,6	99	1047	2"	120	120	1147	0,017	15,5
	4GG M	1 x 230 V ~	1,5	2	11	99	1086	2"	120	120	1186	0,017	19,8
	4GG T	3 x 230 V ~	1,5	2	7,6	99	1041	2"	120	120	1141	0,016	17,6
	4GG T	3 x 400 V ~	1,5	2	4,4	99	1041	2"	120	120	1141	0,016	17,6
S4 12/13	40L M	1 x 230 V ~	2,2	3	15	99	1378	2"	120	120	1478	0,021	21,5
	40L T	3 x 230 V ~	2,2	3	10,4	99	1358	2"	120	120	1458	0,021	20,4
	40L T	3 x 400 V ~	2,2	3	6	99	1358	2"	120	120	1458	0,021	20,4
	4GG M	1 x 230 V ~	2,2	3	15	99	1313	2"	120	120	1413	0,020	21,7
	4GG T	3 x 230 V ~	2,2	3	10,2	99	1293	2"	120	120	1393	0,020	21
	4GG T	3 x 400 V ~	2,2	3	5,9	99	1293	2"	120	120	1393	0,020	21
S4 12/18	40L T	3 x 230 V ~	3	4	13	99	1685	2"	120	120	1785	0,026	26,4
	40L T	3 x 400 V ~	3	4	7,5	99	1685	2"	120	120	1785	0,026	26,4
	4GG T	3 x 230 V ~	3	4	14,3	99	1711	2"	120	120	1811	0,026	31
	4GG T	3 x 400 V ~	3	4	8,3	99	1711	2"	120	120	1811	0,026	31
S4 12/24	40L T	3 x 230 V ~	4	5,5	16,6	99	2067	2"	120	120	2167	0,031	29,2
	40L T	3 x 400 V ~	4	5,5	9,6	99	2067	2"	120	120	2167	0,031	29,2
	4GG T	3 x 230 V ~	4	5,5	17,3	99	2093	2"	120	120	2193	0,032	35,9
	4GG T	3 x 400 V ~	4	5,5	10	99	2093	2"	120	120	2193	0,032	35,9
S4 12/34	40L T	3 x 230 V ~	5,5	7,5	22,6	99	2693	2"	280	230	2820	0,182	64,7
	40L T	3 x 400 V ~	5,5	7,5	13,1	99	2693	2"	280	230	2820	0,182	64,7
	4GG T	3 x 230 V ~	5,5	7,5	24,2	99	2719	2"	280	230	2820	0,182	67,9
	4GG T	3 x 400 V ~	5,5	7,5	14	99	2719	2"	280	230	2820	0,182	67,9
S4 12/44	40L T	3 x 230 V ~	7,5	10	29,2	99	3290	2"	280	230	3380	0,218	75,9
	40L T	3 x 400 V ~	7,5	10	16,9	99	3290	2"	280	230	3380	0,218	75,9
	4GG T	3 x 230 V ~	7,5	10	30,1	99	3316	2"	280	230	3380	0,218	78,8
	4GG T	3 x 400 V ~	7,5	10	17,4	99	3316	2"	280	230	3380	0,218	78,8

4GG: 4" encapsulated motor with stator immersed in thermosetting insulating resin.

40L: 4" rewindable oil-filled motor.

# S4 12

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA								
	P2 NOMINAL		Q=m³/h	0	9,6	10,8	12,0	14,4	16,8	19,2	21,6
	kW	HP	Q=l/min	0	160	180	200	240	280	320	360
S4 16/8	1,5	2	H (m)	37	31	29	26	22	18	13	7
S4 16/12	2,2	3		55	46	43	39	33	27	19	10
S4 16/16	3	4		73	61	57	52	44	36	25	13
S4 16/21	4	5,5		96	81	75	68	58	47	33	18
S4 16/29	5,5	7,5		133	111	104	94	80	65	46	24
S4 16/38	7,5	10		174	146	136	124	105	86	60	32

### ELECTRICAL DATA AND DIMENSIONS

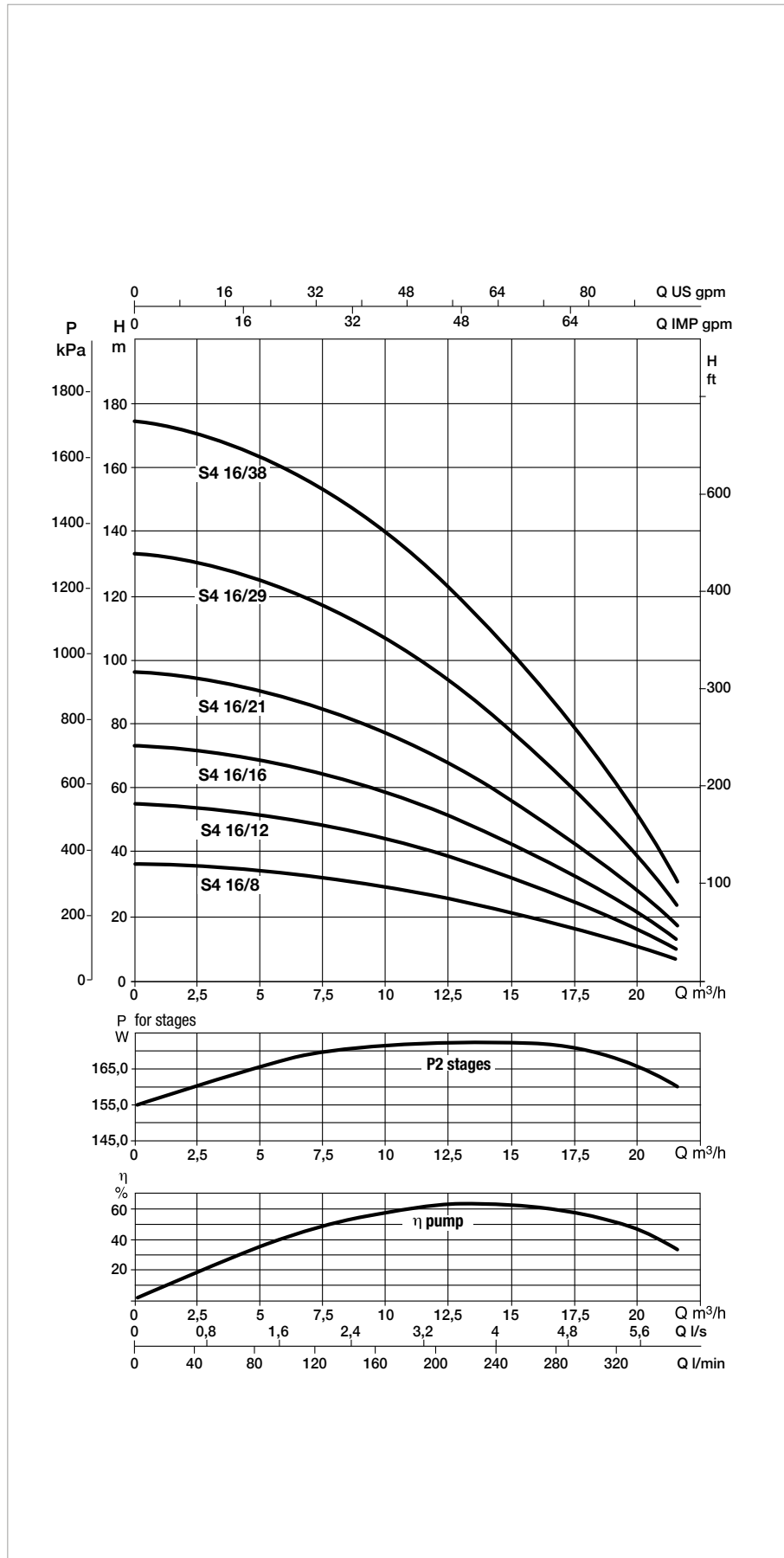
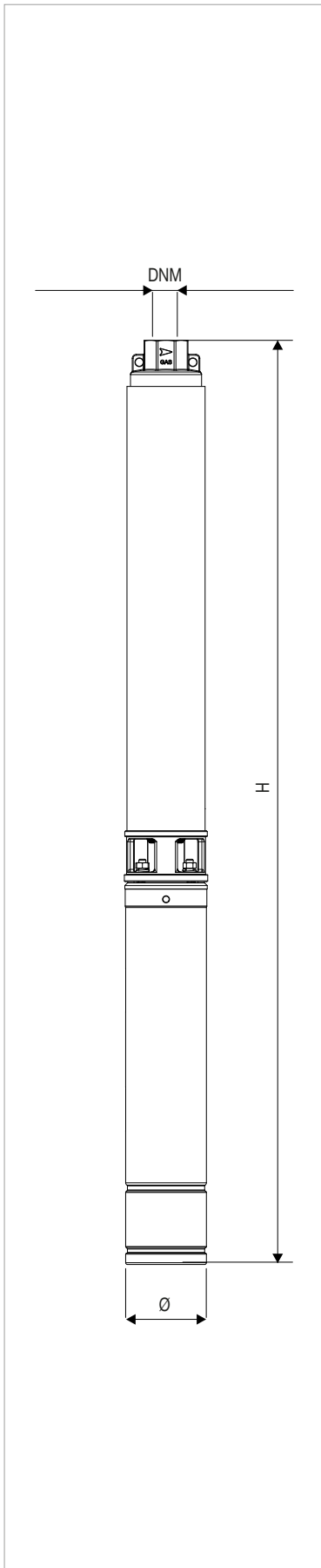
MODEL	ELECTRICAL DATA					Ø mm	H mm	DNM	PACKING DIMENSIONS			VOLUME m³	WEIGHT kg
	MOTOR	POWER INPUT 50 Hz	P2 NOMINAL		In A				L/A	L/B	H		
			kW	HP									
S4 16/8	40L M	1 x 230 V ~	1,5	2	10,8	99	1167	2"	120	120	1267	0,018	17,7
	40L T	3 x 230 V ~	1,5	2	7,9	99	1121	2"	120	120	1221	0,018	15,7
	40L T	3 x 400 V ~	1,5	2	4,6	99	1121	2"	120	120	1221	0,018	15,7
	4GG M	1 x 230 V ~	1,5	2	11	99	1160	2"	120	120	1260	0,018	20
	4GG T	3 x 230 V ~	1,5	2	7,6	99	1115	2"	120	120	1215	0,017	17,8
	4GG T	3 x 400 V ~	1,5	2	4,4	99	1115	2"	120	120	1215	0,017	17,8
S4 16/12	40L M	1 x 230 V ~	2,2	3	15	99	1517	2"	120	120	1617	0,023	23
	40L T	3 x 230 V ~	2,2	3	10,4	99	1497	2"	120	120	1597	0,023	21,9
	40L T	3 x 400 V ~	2,2	3	6	99	1497	2"	120	120	1597	0,023	21,9
	4GG M	1 x 230 V ~	2,2	3	15	99	1452	2"	120	120	1552	0,022	23,2
	4GG T	3 x 230 V ~	2,2	3	10,2	99	1432	2"	120	120	1532	0,022	22,5
	4GG T	3 x 400 V ~	2,2	3	5,9	99	1432	2"	120	120	1532	0,022	22,5
S4 16/16	40L T	3 x 230 V ~	3	4	13	99	1841	2"	120	120	1941	0,028	27,4
	40L T	3 x 400 V ~	3	4	7,5	99	1841	2"	120	120	1941	0,028	27,4
	4GG T	3 x 230 V ~	3	4	14,3	99	1867	2"	120	120	1967	0,028	32
	4GG T	3 x 400 V ~	3	4	8,3	99	1867	2"	120	120	1967	0,028	32
S4 16/21	40L T	3 x 230 V ~	4	5,5	16,6	99	2250	2"	120	120	2350	0,034	31,8
	40L T	3 x 400 V ~	4	5,5	9,6	99	2250	2"	120	120	2350	0,034	31,8
	4GG T	3 x 230 V ~	4	5,5	17,3	99	2276	2"	120	120	2376	0,034	38,5
	4GG T	3 x 400 V ~	4	5,5	10	99	2276	2"	120	120	2376	0,034	38,5
S4 16/29	40L T	3 x 230 V ~	5,5	7,5	22,6	99	2903	2"	280	230	3080	0,198	67,9
	40L T	3 x 400 V ~	5,5	7,5	13,1	99	2903	2"	280	230	3080	0,198	67,9
	4GG T	3 x 230 V ~	5,5	7,5	24,2	99	2929	2"	280	230	3080	0,198	71,1
	4GG T	3 x 400 V ~	5,5	7,5	14	99	2929	2"	280	230	3080	0,198	71,1
S4 16/38	40L T	3 x 230 V ~	7,5	10	29,2	99	3554	2"	280	230	3780	0,243	82,9
	40L T	3 x 400 V ~	7,5	10	16,9	99	3554	2"	280	230	3780	0,243	82,9
	4GG T	3 x 230 V ~	7,5	10	30,1	99	3580	2"	280	230	3780	0,243	85,8
	4GG T	3 x 400 V ~	7,5	10	17,4	99	3580	2"	280	230	3780	0,243	85,8

**4GG:** 4" encapsulated motor with stator immersed in thermosetting insulating resin.

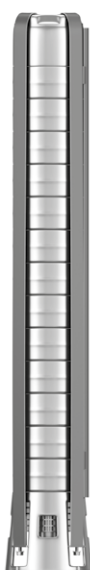
**40L:** 4" rewindable oil-filled motor.

# S4 16

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.



SS6A

## TECHNICAL DATA

**Performance range:** flow up to 75 m<sup>3</sup>/h and max head of 670 m

**Max. quantity of sand/silt:** 50g/m<sup>3</sup>

**Max. ambient temperature:** 30°C (50°C available on request)

**Outlet connection diameter (inside threaded):** SS6 A – SS6 B : 2 ½"

SS6 C : 3"

SS6 D – SS6 E : 4"

**Nr of starts:** refer to the motor specification

**Motor Cooling flow:** refer to the motor specification

**Installation:** horizontal or vertical, refer to the motor specification

## APPLICATIONS

Multistage mixed-flow borehole electric pumps, completely made in stainless steel (AISI 304L or AISI 316 on request), usable for wells from a minimum diameter equal to pump size or greater and capable of developing a wide range of Flows and Heads.

These pumps can be used in a wide range of lifting, distributing, and pressuring application: domestic and general water supply; sprinkler and drip irrigations systems; fire-fighting installations; lowering of groundwater level; industrial supplies as mining, hot springs, autoclaves and tanks.

These pumps are suitable both for standard water and for aggressive water applications by choosing the proper manufacturing material (AISI 304L or AISI 316) both for hydraulic part and motor.

Special version of motors with PE2+PA windings can be used on request for high-temperature water applications up to maximum 50°C.

Pumps can be installed both vertically and horizontally simply by removing the non-return valve and adding a cooling sleeve to the suction case (the only remark is to check the motor applicability to horizontal operations, refer to the motor specifications section).

## CONSTRUCTION FEATURES OF PUMP

Mixed flow pumps with diffusers, impellers, brackets, suction case and discharge case completely made of stainless steel AISI 304 in order to provide maximum strength, durability, wear and tear resistance.

The impellers are balanced and locked to the shaft with a specially shaped collet and nut coupling, in order to guarantee ease-to-assembly feature and avoid vibration sensitive malfunctions and noise increase during rotation.

Rubber bearings that drive the shaft are water lubricated and have sand channels to make enable the sand particles leave the pump with the pumped liquid (maximum permissible sand content 50 gr/m<sup>3</sup>).

Built-in non returned valve provided in order to minimize local friction losses.

Stainless steel strainer provided in order to prevent particles over a certain size from entering the pump.

Coupling with 6", 8" or 10" motor depending on the power requested by hydraulic part:

- 4GG: 4" canned submersible motor
- 4OL: 4" oil filled submersible motor
- 6GF: 6" canned submersible motor
- TR6: 6" rewindable submersible motor
- TR8: 8" rewindable submersible motor
- TR10: 10" rewindable submersible motor

For inverter application refer to the detailed motor specification.

## ON REQUEST:

- Pump body stainless steel AISI 316 for aggressive water application
- Impellers stainless steel AISI 316
- Motors in full stainless steel AISI 316 for aggressive water application
- Star/Delta starting version
- Special version of the motor for high temperature application
- Non-standard power coupling

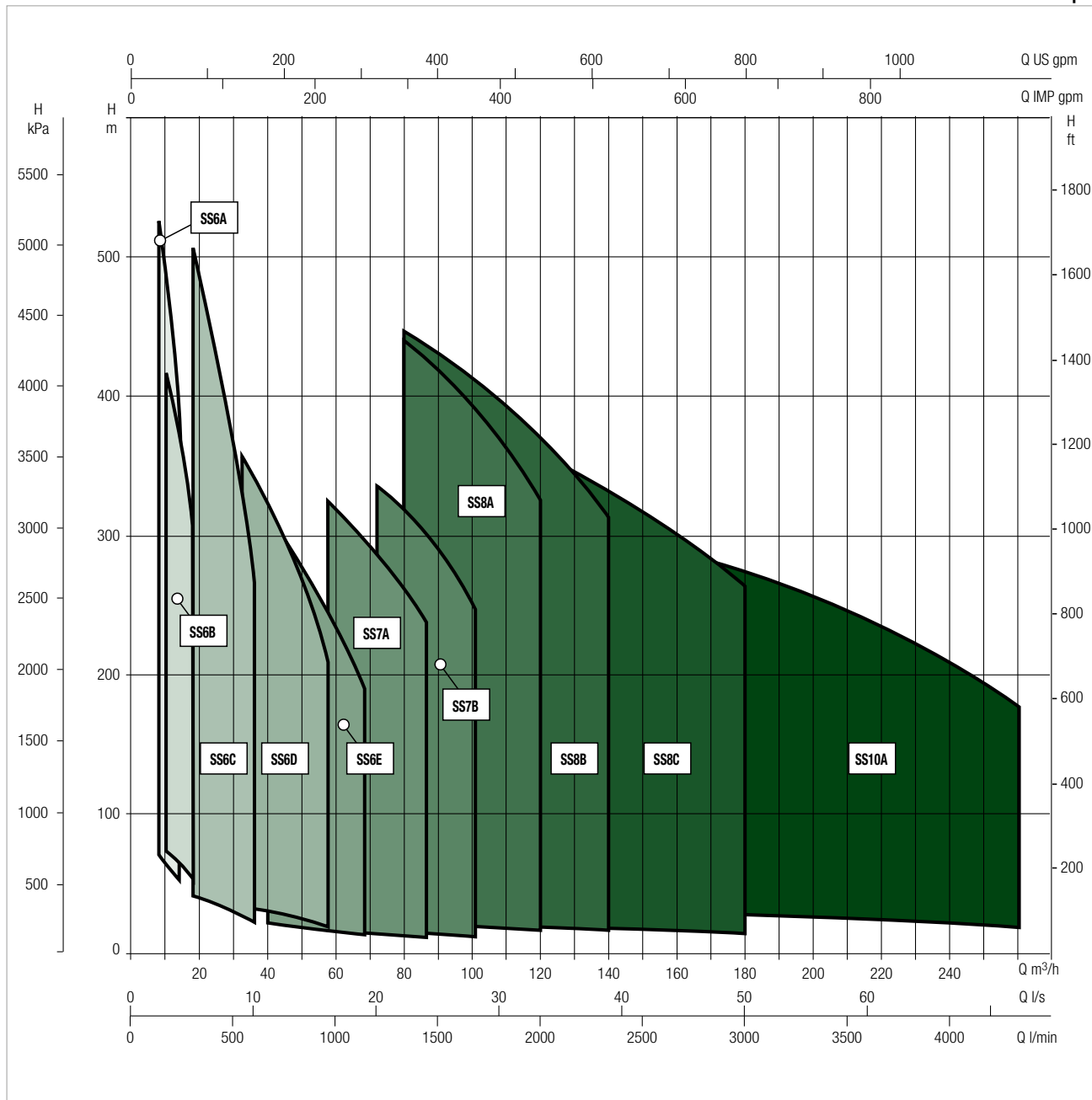


### PERFORMANCE RANGE - 2 POLES

The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

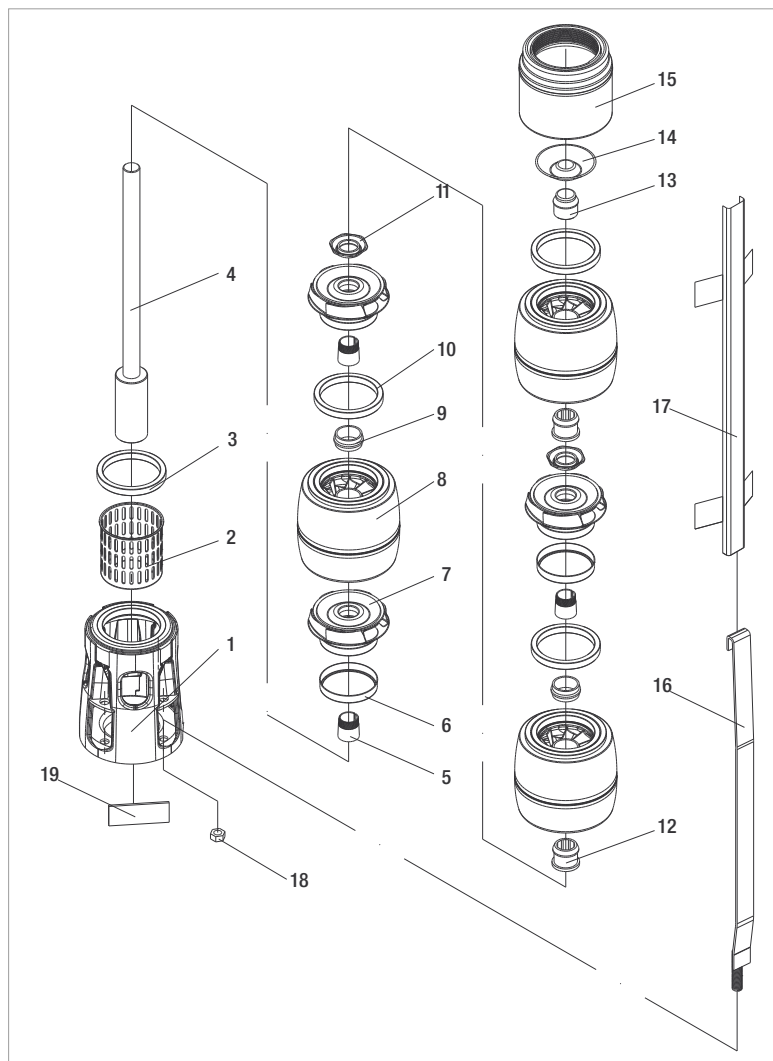
#### GRAPHIC SELECTION TABLE

50 Hz - 2900 r.p.m.

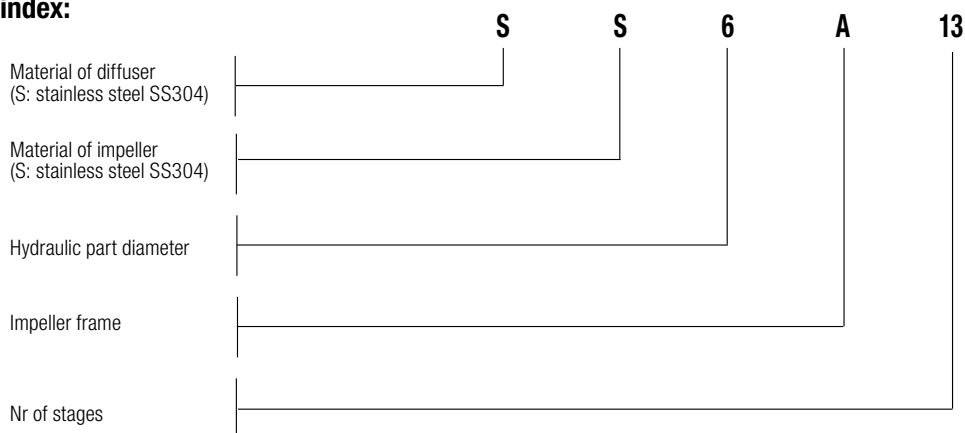


### MATERIALS

N°	PARTS	MATERIALS
1	SUCTION CASE	STAINLESS STEEL (AISI 304L)
2	FILTER	STAINLESS STEEL (AISI 304L)
3	SUCTION CASE WEAR RING	BRONZE (ASTM B145-4A)
4	PUMP SHAFT	STAINLESS STEEL (AISI 420)
5	COLLET	STAINLESS STEEL
6	IMPELLER WEAR RING	STAINLESS STEEL (AISI 304)
7	IMPELLER	STAINLESS STEEL (AISI 304L)
8	DIFFUSER	STAINLESS STEEL (AISI 304L)
9	INTERMEDIATE BEARING	RUBBER
10	DIFFUSER WEAR RING	RUBBER
11	NUT FOR STOP RING	STAINLESS STEEL (AISI 304L)
12	BEARING	RUBBER
13	SHAFT STOPPER	BRONZE (ASTM B145-4A)
14	VALVE	STAINLESS STEEL (AISI 304)
15	DISCHARGE CASE	STAINLESS STEEL (AISI 304)
16	TIE ROD	STAINLESS STEEL (AISI 304L)
17	CABLE GUARD	STAINLESS STEEL (AISI 304)
18	TIE ROD NUT	STAINLESS STEEL (AISI 303)
19	NAME PLATE	STAINLESS STEEL (AISI 304)



**- Denomination index:**  
(example)



### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m <sup>3</sup> h	0	2	4	6	8	10	12	14	16	17	
	kW	HP	Q=l/min	0	33,3	66,6	100	133,3	166,6	200	233,3	266,6	283,3	
SS6A 01	0,55	0,75	H (mt)	9	9	9	9	9	8	7	6	5	4	4"
SS6A 02	1,1	1,5		19	19	19	18	17	16	15	13	10	9	4"
SS6A 03	1,5	2		28	28	28	27	26	24	22	19	15	13	4"
SS6A 04	2,2	3		37	37	37	36	35	32	29	25	20	18	4"
SS6A 05	2,2	3		47	47	46	45	43	41	37	32	26	22	4"
SS6A 06	2,2	3		56	56	56	54	52	49	44	38	31	27	4"
SS6A 07	3	4		65	66	65	64	61	57	51	44	36	31	4"
SS6A 08	4	5,5		75	75	74	73	70	65	59	51	41	36	4" - 6"
SS6A 09	4	5,5		84	84	84	82	78	73	66	57	46	40	4" - 6"
SS6A 10	4	5,5		93	94	93	91	87	81	73	63	51	44	4" - 6"
SS6A 11	4	5,5		103	103	102	100	96	89	81	70	56	49	4" - 6"
SS6A 12	5,5	7,5		112	112	112	109	104	97	88	76	61	53	4" - 6"
SS6A 13	5,5	7,5		121	122	121	118	113	105	95	82	67	58	4" - 6"
SS6A 14	5,5	7,5		131	131	130	127	122	114	103	89	72	62	4" - 6"
SS6A 15	5,5	7,5		140	140	139	136	130	122	110	95	77	67	4" - 6"
SS6A 16	7,5	10		149	150	149	145	139	130	117	101	82	71	4" - 6"
SS6A 17	7,5	10		159	159	158	154	148	138	124	108	87	76	4" - 6"
SS6A 18	7,5	10		168	169	167	163	156	146	132	114	92	80	4" - 6"
SS6A 19	7,5	10		177	178	177	172	165	154	139	120	97	84	4" - 6"
SS6A 20	7,5	10		187	187	186	182	174	162	146	127	102	89	4" - 6"
SS6A 21	7,5	10		196	197	195	191	182	170	154	133	108	93	4" - 6"
SS6A 22	9,3	12,5		205	206	204	200	191	178	161	139	113	98	6"
SS6A 23	9,3	12,5		215	215	214	209	200	186	168	146	118	102	6"
SS6A 24	9,3	12,5		224	225	223	218	209	195	176	152	123	107	6"

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		KW	HP									
SS6A 01	4GG	0,55	0,75	1,9	●	●	566	236	330	93	132	11,9
	40L	0,55	0,75	2,2	●	●	614	284	330	93	132	11,5
SS6A 02	4GG	1,1	1,5	3,2	●	●	676	286	390	93	132	16,6
	40L	1,1	1,5	3,6	●	●	724	334	390	93	132	15,7
SS6A 03	4GG	1,5	2	4,4	●	●	799	348	451	93	132	19,8
	40L	1,5	2	4,6	●	●	805	354	451	93	132	17,7
SS6A 04	4GG	2,2	3	5,9	●	●	904	393	511	93	132	24
	40L	2,2	3	6	●	●	969	458	511	93	132	23,4
SS6A 05	4GG	2,2	3	5,9	●	●	965	393	572	93	132	25
	40L	2,2	3	6	●	●	1030	458	572	93	132	24,4
SS6A 06	4GG	2,2	3	5,9	●	●	1025	393	632	93	132	27
	40L	2,2	3	6	●	●	1090	458	632	93	132	26,4
SS6A 07	4GG	3	4	8,3	●	●	1237	544	693	93	132	34,5
	40L	3	4	7,5	●	●	1211	518	693	93	132	29,9
SS6A 08	4GG	4	5,5	10	●	●	1367	614	753	93	132	38,8
	40L	4	5,5	9,6	●	●	1341	588	753	93	132	32,1
SS6A 08	6GF	4	5,5	10,6	●	●	1354	601	753	141	132	56
	4GG	4	5,5	10	●	●	1428	614	814	93	132	40,8
	40L	4	5,5	9,6	●	●	1402	588	814	93	132	34,1
SS6A 09	6GF	4	5,5	10,6	●	●	1415	601	814	141	132	58
	4GG	4	5,5	10	●	●	1488	614	874	93	132	41,8
	40L	4	5,5	9,6	●	●	1462	588	874	93	132	35,1
SS6A 10	6GF	4	5,5	10,6	●	●	1475	601	874	141	132	59
	4GG	4	5,5	10	●	●	1549	614	935	93	132	43,8
	40L	4	5,5	9,6	●	●	1523	588	935	93	132	37,1
SS6A 11	6GF	4	5,5	10,6	●	●	1536	601	935	141	132	61
	4GG	5,5	7,5	14	●	●	1679	684	995	93	132	48,1
	40L	5,5	7,5	13,1	●	●	1653	658	995	93	132	44,9
SS6A 12	6GF	5,5	7,5	14	●	●	1626	631	995	141	132	65
	TR6	5,5	7,5	13	○	●	1782	787	995	144	132	71
	4GG	5,5	7,5	14	●	●	1740	684	1056	93	132	50,1
SS6A 13	40L	5,5	7,5	13,1	●	●	1714	658	1056	93	132	46,9
	6GF	5,5	7,5	14	●	●	1687	631	1056	141	132	67
	TR6	5,5	7,5	13	○	●	1843	787	1056	144	132	73
SS6A 14	4GG	5,5	7,5	14	●	●	1800	684	1116	93	132	51,1
	40L	5,5	7,5	13,1	●	●	1774	658	1116	93	132	47,9
	6GF	5,5	7,5	14	●	●	1747	631	1116	141	132	68
SS6A 14	TR6	5,5	7,5	13	○	●	1903	787	1116	144	132	74
	4GG	5,5	7,5	14	●	●	1861	684	1177	93	132	53,1
	40L	5,5	7,5	13,1	●	●	1835	658	1177	93	132	49,9
SS6A 15	6GF	5,5	7,5	14	●	●	1808	631	1177	141	132	70
	TR6	5,5	7,5	13	○	●	1964	787	1177	144	132	76
	4GG	7,5	10	17,4	●	●	2001	764	1237	93	132	57,8
SS6A 16	40L	7,5	10	16,9	●	●	1975	738	1237	93	132	54,9
	6GF	7,5	10	18	●	●	1898	661	1237	141	132	74
	TR6	7,5	10	18	○	●	2054	817	1237	144	132	80
SS6A 17	4GG	7,5	10	17,4	●	●	2062	764	1298	93	132	58,8
	40L	7,5	10	16,9	●	●	2036	738	1298	93	132	55,9
	6GF	7,5	10	18	●	●	1959	661	1298	141	132	75
SS6A 17	TR6	7,5	10	18	○	●	2115	817	1298	144	132	81
	4GG	7,5	10	17,4	●	●	2122	764	1358	93	132	60,8
	40L	7,5	10	16,9	●	●	2096	738	1358	93	132	57,9
SS6A 18	6GF	7,5	10	18	●	●	2019	661	1358	141	132	77
	TR6	7,5	10	18	○	●	2175	817	1358	144	132	83
	4GG	7,5	10	17,4	●	●	2183	764	1419	93	132	61,8
SS6A 19	40L	7,5	10	16,9	●	●	2157	738	1419	93	132	58,9
	6GF	7,5	10	18	●	●	2080	661	1419	141	132	78
	TR6	7,5	10	18	○	●	2236	817	1419	144	132	84
SS6A 20	4GG	7,5	10	17,4	●	●	2243	764	1479	93	132	63,8
	40L	7,5	10	16,9	●	●	2217	738	1479	93	132	60,9
	6GF	7,5	10	18	●	●	2140	661	1479	141	132	80
SS6A 20	TR6	7,5	10	18	○	●	2296	817	1479	144	132	86
	4GG	7,5	10	17,4	●	●	2304	764	1540	93	132	64,8
	40L	7,5	10	16,9	●	●	2278	738	1540	93	132	61,9
SS6A 21	6GF	7,5	10	18	●	●	2201	661	1540	141	132	81
	TR6	7,5	10	18	○	●	2357	817	1540	144	132	87
	6GF	9,3	12,5	22	●	●	2286	686	1600	141	132	86
SS6A 22	TR6	9,3	12,5	21	○	●	2447	847	1600	144	132	91
	6GF	9,3	12,5	22	●	●	2347	686	1661	141	132	87
SS6A 23	TR6	9,3	12,5	21	○	●	2508	847	1661	144	132	92
	6GF	9,3	12,5	22	●	●	2407	686	1721	141	132	89
SS6A 24	TR6	9,3	12,5	21	○	●	2568	847	1721	144	132	94

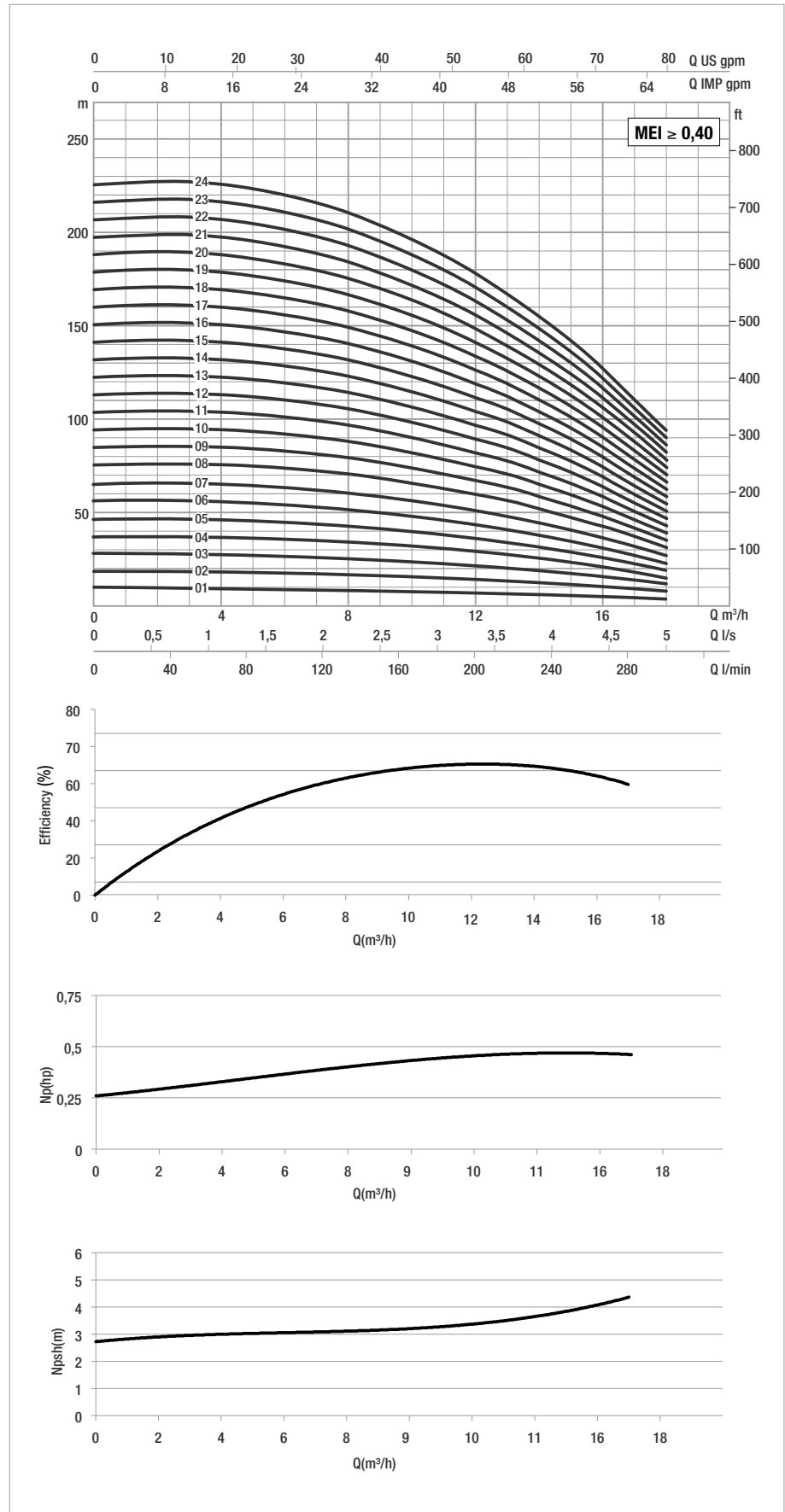
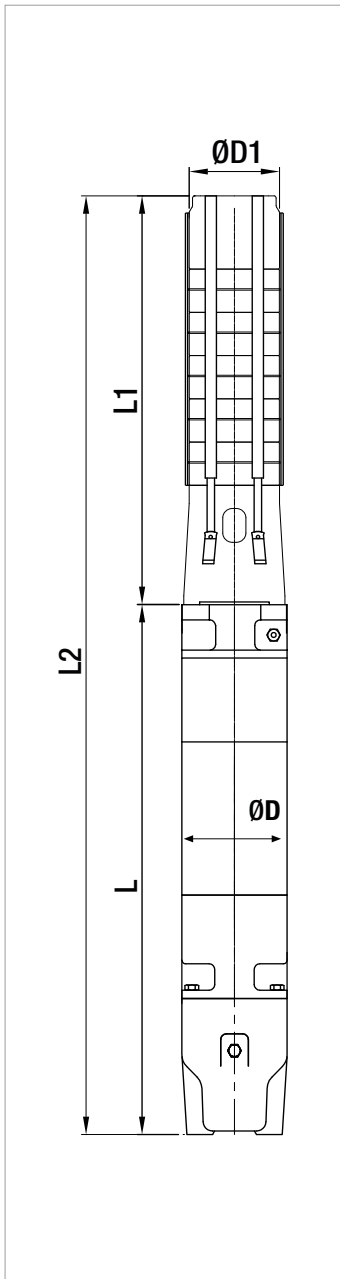
\* **4GG motor:** 4" water-filled motor with stator immersed in thermosetting insulating resin with high heat dissipation capacity  
**40L motor:** 4" oil-filled rewindable motor

**6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR6 motor:** 6" water-filled rewindable motor

● Allowed  
○ Only PE2 + PA version

# SS6A

## SUBMERSIBLE PUMPS



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.  
For hydraulic efficiency see pag. 191

### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m³h	0	2	4	6	8	10	12	14	16	17	
	kW	HP	Q=l/min	0	33,3	66,6	100	133,3	166,6	200	233,3	266,6	283,3	
SS6A 25	9,3	12,5	H (mt)	233	234	232	227	217	203	183	158	128	111	6"
SS6A 26	9,3	12,5		243	244	242	236	226	211	190	165	133	116	6"
SS6A 27	11	15		252	253	251	245	235	219	198	171	138	120	6"
SS6A 28	11	15		261	262	260	254	243	227	205	177	143	124	6"
SS6A 29	11	15		270	272	270	263	252	235	212	184	149	129	6"
SS6A 30	11	15		280	281	279	272	261	243	220	190	154	133	6"
SS6A 31	13	17,5		289	290	288	281	269	251	227	196	159	138	6"
SS6A 32	13	17,5		298	300	297	290	278	259	234	202	164	142	6"
SS6A 33	13	17,5		308	309	307	300	287	268	242	209	169	147	6"
SS6A 34	13	17,5		317	318	316	309	295	276	249	215	174	151	6"
SS6A 35	13	17,5		326	328	325	318	304	284	256	221	179	156	6"
SS6A 36	13	17,5		336	337	335	327	313	292	264	228	184	160	6"
SS6A 37	13	17,5		345	347	344	336	321	300	271	234	190	164	6"
SS6A 38	15	20		354	356	353	345	330	308	278	240	195	169	6"
SS6A 39	15	20		364	365	362	354	339	316	286	247	200	173	6"
SS6A 40	15	20		373	375	372	363	348	324	293	253	205	178	6"
SS6A 41	15	20		382	384	381	372	356	332	300	259	210	182	6"
SS6A 42	18,5	25		392	393	390	381	365	341	308	266	215	187	6"

### ELECTRICAL DATA AND DIMENSIONS

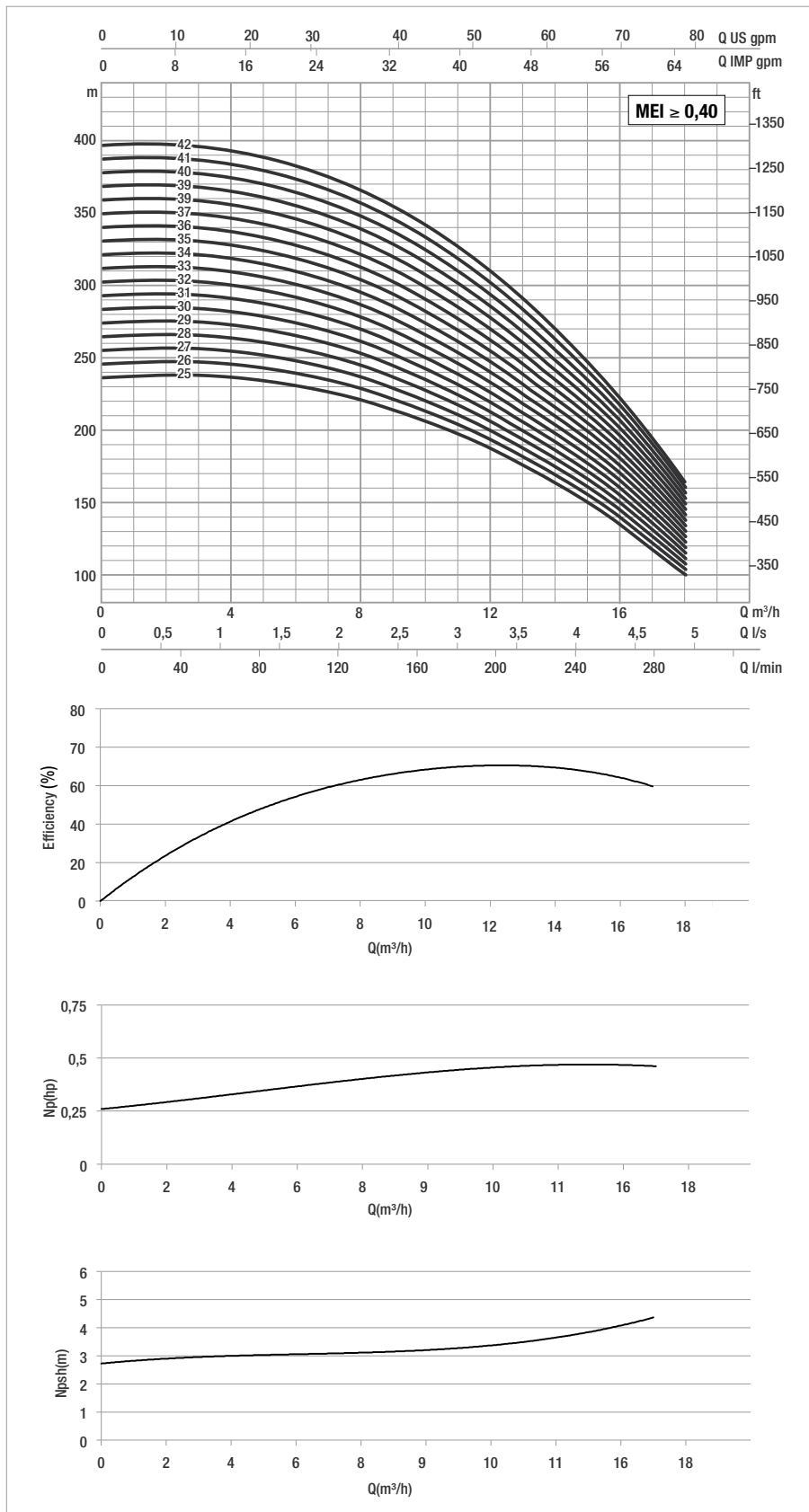
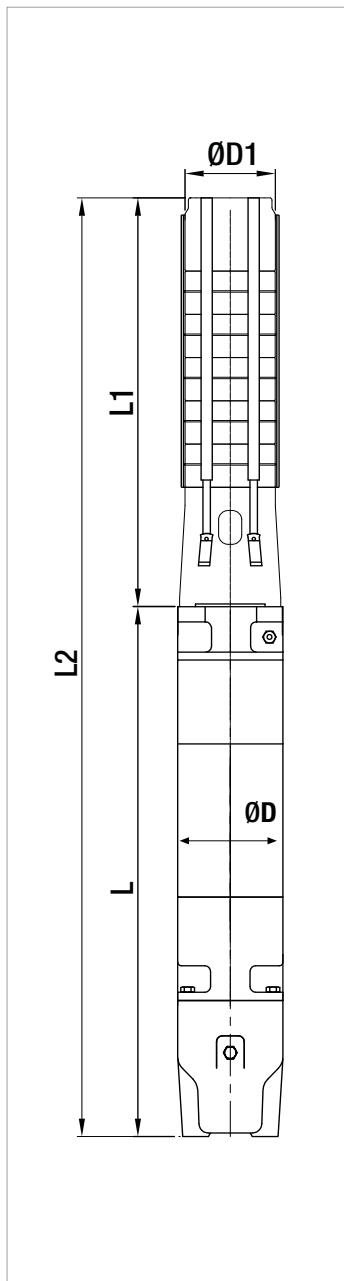
MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS6A 25	6GF	9,3	12,5	22	●	●	2468	686	1782	141	132	90
	TR6	9,3	12,5	21	○	●	2629	847	1782	144	132	95
SS6A 26	6GF	9,3	12,5	22	●	●	2528	686	1842	141	132	91
	TR6	9,3	12,5	21	○	●	2689	847	1842	144	132	96
SS6A 27	6GF	11	15	25,5	●	●	2634	731	1903	141	132	98
	TR6	11	15	25	○	●	2780	877	1903	144	132	103
SS6A 28	6GF	11	15	25,5	●	●	2694	731	1963	141	132	99
	TR6	11	15	25	○	●	2840	877	1963	144	132	104
SS6A 29	6GF	11	15	25,5	●	●	2755	731	2024	141	132	101
	TR6	11	15	25	○	●	2901	877	2024	144	132	106
SS6A 30	6GF	11	15	25,5	●	●	2815	731	2084	141	132	102
	TR6	11	15	25	○	●	2961	877	2084	144	132	107
SS6A 31	6GF	13	17,5	28,7	●	●	2906	761	2145	141	132	107
	TR6	13	17,5	29	○	●	3052	907	2145	144	132	114
SS6A 32	6GF	13	17,5	28,7	●	●	2966	761	2205	141	132	108
	TR6	13	17,5	29	○	●	3112	907	2205	144	132	115
SS6A 33	6GF	13	17,5	28,7	●	●	3027	761	2266	141	132	110
	TR6	13	17,5	29	○	●	3173	907	2266	144	132	117
SS6A 34	6GF	13	17,5	28,7	●	●	3087	761	2326	141	132	111
	TR6	13	17,5	29	○	●	3233	907	2326	144	132	118
SS6A 35	6GF	13	17,5	28,7	●	●	3148	761	2387	141	132	112
	TR6	13	17,5	29	○	●	3294	907	2387	144	132	119
SS6A 36	6GF	13	17,5	28,7	●	●	3208	761	2447	141	132	114
	TR6	13	17,5	29	○	●	3354	907	2447	144	132	121
SS6A 37	6GF	13	17,5	28,7	●	●	3269	761	2508	141	132	115
	TR6	13	17,5	29	○	●	3415	907	2508	144	132	122
SS6A 38	6GF	15	20	33,4	●	●	3354	786	2568	141	132	120
	TR6	15	20	32	○	●	3545	977	2568	144	132	136
SS6A 39	6GF	15	20	33,4	●	●	3665	786	2879	141	167	152
	TR6	15	20	32	○	●	3856	977	2879	144	167	168
SS6A 40	6GF	15	20	33,4	●	●	3725	786	2939	141	167	153
	TR6	15	20	32	○	●	3916	977	2939	144	167	169
SS6A 41	6GF	15	20	33,4	●	●	3786	786	3000	141	167	155
	TR6	15	20	32	○	●	3977	977	3000	144	167	171
SS6A 42	6GF	18,5	25	41	●	●	3921	861	3060	141	167	165
	TR6	18,5	25	39	○	●	4097	1037	3060	144	167	176

\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR6 motor:** 6" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version

# SS6A

## SUBMERSIBLE PUMPS



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906..  
**For hydraulic efficiency see pag. 191**



### PERFORMANCE 50 Hz - 2 POLES

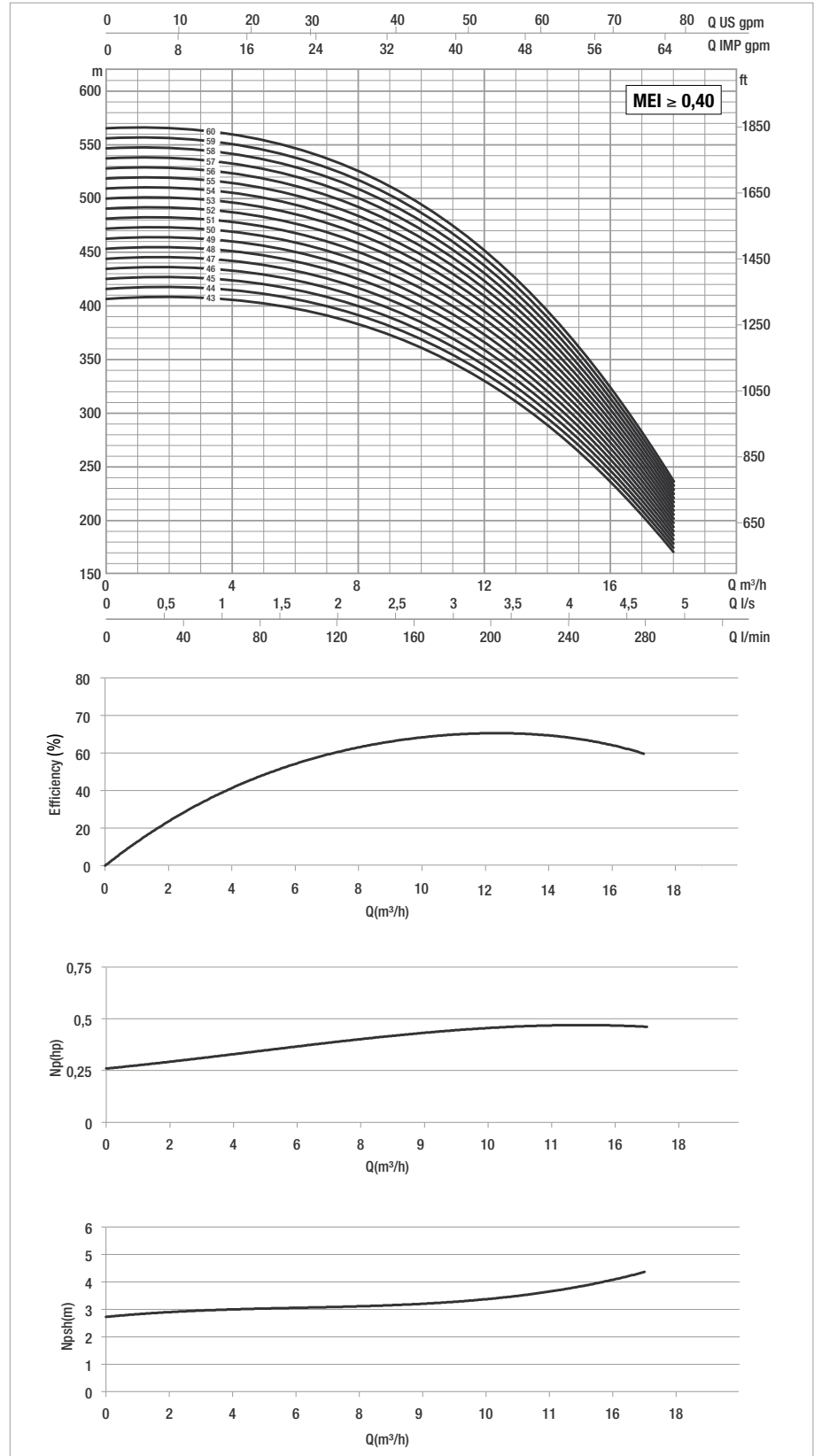
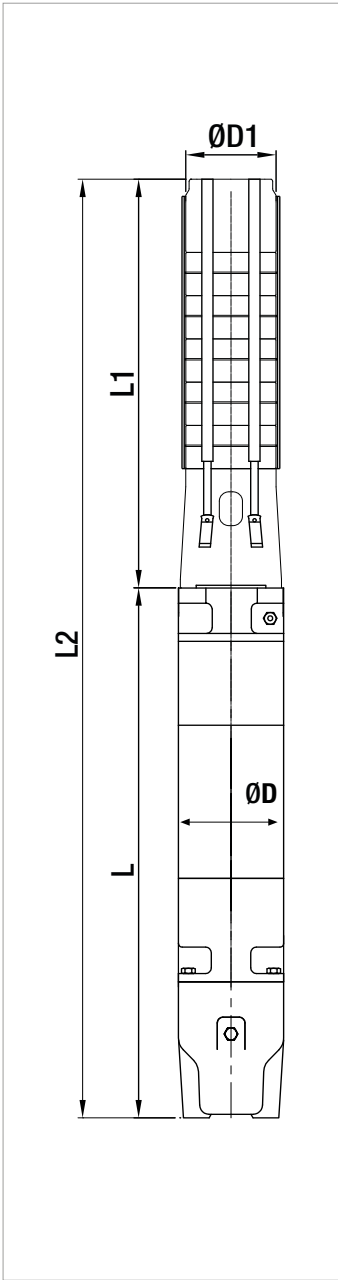
MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m³h	0	2	4	6	8	10	12	14	16	17	
	kW	HP	Q=l/min	0	33,3	66,6	100	133,3	166,6	200	233,3	266,6	283,3	
SS6A 43	18,5	25	H (mt)	401	403	400	390	374	349	315	272	220	191	6"
SS6A 44	18,5	25		410	412	409	399	382	357	322	278	225	196	6"
SS6A 45	18,5	25		420	421	418	408	391	365	330	285	231	200	6"
SS6A 46	18,5	25		429	431	428	418	400	373	337	291	236	204	6"
SS6A 47	18,5	25		438	440	437	427	408	381	344	297	241	209	6"
SS6A 48	18,5	25		448	450	446	436	417	389	352	304	246	213	6"
SS6A 49	18,5	25		457	459	455	445	426	397	359	310	251	218	6"
SS6A 50	22	30		466	468	465	454	434	405	366	316	256	222	6"
SS6A 51	22	30		476	478	474	463	443	414	373	323	261	227	6"
SS6A 52	22	30		485	487	483	472	452	422	381	329	266	231	6"
SS6A 53	22	30		494	496	493	481	460	430	388	335	272	236	6"
SS6A 54	22	30		504	506	502	490	469	438	395	342	277	240	6"
SS6A 55	22	30		513	515	511	499	478	446	403	348	282	244	6"
SS6A 56	22	30		522	524	520	508	487	454	410	354	287	249	6"
SS6A 57	22	30		532	534	530	517	495	462	417	361	292	253	6"
SS6A 58	22	30		541	543	539	526	504	470	425	367	297	258	6"
SS6A 59	22	30		550	553	548	536	513	478	432	373	302	262	6"
SS6A 60	22	30		560	562	558	545	521	486	439	380	307	267	6"

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		KW	HP									
SS6A 43	6GF	18,5	25	41	●	●	3982	861	3121	141	167	167
	TR6	18,5	25	39	○	●	4158	1037	3121	144	167	178
SS6A 44	6GF	18,5	25	41	●	●	4042	861	3181	141	167	169
	TR6	18,5	25	39	○	●	4218	1037	3181	144	167	180
SS6A 45	6GF	18,5	25	41	●	●	4103	861	3242	141	167	170
	TR6	18,5	25	39	○	●	4279	1037	3242	144	167	181
SS6A 46	6GF	18,5	25	41	●	●	4163	861	3302	141	167	172
	TR6	18,5	25	39	○	●	4339	1037	3302	144	167	183
SS6A 47	6GF	18,5	25	41	●	●	4224	861	3363	141	167	174
	TR6	18,5	25	39	○	●	4400	1037	3363	144	167	185
SS6A 48	6GF	18,5	25	41	●	●	4284	861	3423	141	167	176
	TR6	18,5	25	39	○	●	4460	1037	3423	144	167	187
SS6A 49	6GF	18,5	25	41	●	●	4345	861	3484	141	167	177
	TR6	18,5	25	39	○	●	4521	1037	3484	144	167	188
SS6A 50	6GF	22	30	47	●	●	4465	921	3544	141	167	184
	TR6	22	30	49	○	●	4611	1067	3544	144	167	205
SS6A 51	6GF	22	30	47	●	●	4526	921	3605	141	167	186
	TR6	22	30	49	○	●	4672	1067	3605	144	167	207
SS6A 52	6GF	22	30	47	●	●	4586	921	3665	141	167	188
	TR6	22	30	49	○	●	4732	1067	3665	144	167	209
SS6A 53	6GF	22	30	47	●	●	4647	921	3726	141	167	190
	TR6	22	30	49	○	●	4793	1067	3726	144	167	211
SS6A 54	6GF	22	30	47	●	●	4707	921	3786	141	167	191
	TR6	22	30	49	○	●	4853	1067	3786	144	167	212
SS6A 55	6GF	22	30	47	●	●	4768	921	3847	141	167	193
	TR6	22	30	49	○	●	4914	1067	3847	144	167	214
SS6A 56	6GF	22	30	47	●	●	4828	921	3907	141	167	195
	TR6	22	30	49	○	●	4974	1067	3907	144	167	216
SS6A 57	6GF	22	30	47	●	●	4889	921	3968	141	167	197
	TR6	22	30	49	○	●	5035	1067	3968	144	167	218
SS6A 58	6GF	22	30	47	●	●	4949	921	4028	141	167	199
	TR6	22	30	49	○	●	5095	1067	4028	144	167	220
SS6A 59	6GF	22	30	47	●	●	5010	921	4089	141	167	200
	TR6	22	30	49	○	●	5156	1067	4089	144	167	221
SS6A 60	6GF	22	30	47	●	●	5070	921	4149	141	167	202
	TR6	22	30	49	○	●	5216	1067	4149	144	167	223

\* 6GF motor: 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
 TR6 motor: 6" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906. For hydraulic efficiency see pag. 191

### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m³h	0	6	8	10	12	14	15	16	18	20	
	kW	HP	Q=l/min	0	100	133,3	166,6	200	233,3	250	266,6	300	333,3	
SS6B 01	0,75	1	H (m)	11	11	11	10	10	9	9	9	8	6	4"
SS6B 02	1,5	2		23	22	22	21	20	19	18	17	15	13	4"
SS6B 03	2,2	3		34	33	33	31	30	28	27	26	23	19	4"
SS6B 04	3	4		45	44	43	42	40	37	36	34	30	26	4"
SS6B 05	3	4		56	55	54	52	50	47	45	43	38	32	4"
SS6B 06	4	5,5		68	66	65	63	60	56	54	51	45	39	4" - 6"
SS6B 07	4	5,5		79	77	76	73	70	65	63	60	53	45	4" - 6"
SS6B 08	5,5	7,5		90	89	87	84	80	75	71	68	60	52	4" - 6"
SS6B 09	5,5	7,5		102	100	98	94	90	84	80	77	68	58	4" - 6"
SS6B 10	5,5	7,5		113	111	108	105	100	93	89	85	76	65	4" - 6"
SS6B 11	7,5	10		124	122	119	115	110	102	98	94	83	71	4" - 6"
SS6B 12	7,5	10		135	133	130	126	120	112	107	102	91	78	4" - 6"
SS6B 13	7,5	10		147	144	141	136	130	121	116	111	98	84	4" - 6"
SS6B 14	7,5	10		158	155	152	147	140	130	125	119	106	91	4" - 6"
SS6B 15	9,3	12,5		169	166	163	157	150	140	134	128	113	97	6"
SS6B 16	9,3	12,5		181	177	173	168	160	149	143	136	121	103	6"
SS6B 17	9,3	12,5		192	188	184	178	170	158	152	145	128	110	6"
SS6B 18	11	15		203	199	195	189	180	168	161	153	136	116	6"
SS6B 19	11	15		214	210	206	199	190	177	170	162	143	123	6"
SS6B 20	11	15		226	221	217	210	199	186	179	170	151	129	6"
SS6B 21	13	17,5		237	232	228	220	209	196	188	179	159	136	6"
SS6B 22	13	17,5		248	243	238	230	219	205	196	187	166	142	6"
SS6B 23	13	17,5		260	254	249	241	229	214	205	196	174	149	6"
SS6B 24	13	17,5		271	266	260	251	239	224	214	204	181	155	6"
SS6B 25	15	20		282	277	271	262	249	233	223	213	189	162	6"
SS6B 26	15	20		293	288	282	272	259	242	232	221	196	168	6"
SS6B 27	15	20		305	299	293	283	269	252	241	230	204	175	6"

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS6B 01	4GG	0,75	1	2,4	●	596	266	330	93	132	13,6	
	40L	0,75	1	2,6	●	634	304	330	93	132	12,4	
SS6B 02	4GG	1,5	2	4,4	●	738	348	390	93	132	18,3	
	40L	1,5	2	4,6	●	744	354	390	93	132	16,2	
SS6B 03	4GG	2,2	3	5,9	●	844	393	451	93	132	22	
	40L	2,2	3	6	●	909	458	451	93	132	21,4	
SS6B 04	4GG	3	4	8,3	●	1055	544	511	93	132	30	
	40L	3	4	7,5	●	1029	518	511	93	132	25,4	
SS6B 05	4GG	3	4	8,3	●	1116	544	572	93	132	31,5	
	40L	3	4	7,5	●	1090	518	572	93	132	26,9	
SS6B 06	4GG	4	5,5	10	●	1246	614	632	93	132	36,3	
	40L	4	5,5	9,6	●	1220	588	632	93	132	29,6	
SS6B 07	6GF	4	5,5	10,6	●	1233	601	632	141	132	53,5	
	4GG	4	5,5	10	●	1307	614	693	93	132	37,8	
SS6B 08	40L	4	5,5	9,6	●	1281	588	693	93	132	31,1	
	6GF	4	5,5	10,6	●	1294	601	693	141	132	55	
SS6B 09	4GG	5,5	7,5	14	●	1437	684	753	93	132	43,1	
	40L	5,5	7,5	13,1	●	1411	658	753	93	132	39,9	
	6GF	5,5	7,5	14	●	1384	631	753	141	132	60	
	TR6	5,5	7,5	13	○	1540	787	753	144	132	66	
SS6B 10	4GG	5,5	7,5	14	●	1498	684	814	93	132	44,1	
	40L	5,5	7,5	13,1	●	1472	658	814	93	132	40,9	
	6GF	5,5	7,5	14	●	1445	631	814	141	132	61	
	TR6	5,5	7,5	13	○	1601	787	814	144	132	67	
SS6B 11	4GG	5,5	7,5	14	●	1558	684	874	93	132	45,1	
	40L	5,5	7,5	13,1	●	1532	658	874	93	132	41,9	
	6GF	5,5	7,5	14	●	1505	631	874	141	132	62	
	TR6	5,5	7,5	13	○	1661	787	874	144	132	68	
SS6B 12	4GG	7,5	10	17,4	●	1699	764	935	93	132	50,8	
	40L	7,5	10	16,9	●	1673	738	935	93	132	47,9	
	6GF	7,5	10	18	●	1596	661	935	141	132	67	
	TR6	7,5	10	18	○	1752	817	935	144	132	73	
SS6B 13	4GG	7,5	10	17,4	●	1759	764	995	93	132	51,8	
	40L	7,5	10	16,9	●	1733	738	995	93	132	48,9	
	6GF	7,5	10	18	●	1656	661	995	141	132	68	
	TR6	7,5	10	18	○	1812	817	995	144	132	74	
SS6B 14	4GG	7,5	10	17,4	●	1820	764	1056	93	132	53,8	
	40L	7,5	10	16,9	●	1794	738	1056	93	132	50,9	
	6GF	7,5	10	18	●	1717	661	1056	141	132	70	
	TR6	7,5	10	18	○	1873	817	1056	144	132	76	
SS6B 15	4GG	7,5	10	17,4	●	1880	764	1116	93	132	54,8	
	40L	7,5	10	16,9	●	1854	738	1116	93	132	51,9	
	6GF	7,5	10	18	●	1777	661	1116	141	132	71	
	TR6	7,5	10	18	○	1933	817	1116	144	132	77	
SS6B 16	6GF	9,3	12,5	22	●	1863	686	1177	141	132	76	
	TR6	9,3	12,5	21	○	2024	847	1177	144	132	81	
SS6B 17	6GF	9,3	12,5	22	●	1923	686	1237	141	132	77	
	TR6	9,3	12,5	21	○	2084	847	1237	144	132	82	
SS6B 18	6GF	9,3	12,5	22	●	1984	686	1298	141	132	79	
	TR6	9,3	12,5	21	○	2145	847	1298	144	132	84	
SS6B 19	6GF	11	15	25,5	●	2089	731	1358	141	132	85	
	TR6	11	15	25	○	2235	877	1358	144	132	90	
SS6B 20	6GF	11	15	25,5	●	2150	731	1419	141	132	86	
	TR6	11	15	25	○	2296	877	1419	144	132	91	
SS6B 21	6GF	11	15	25,5	●	2210	731	1479	141	132	88	
	TR6	11	15	25	○	2356	877	1479	144	132	93	
SS6B 22	6GF	13	17,5	28,7	●	2301	761	1540	141	132	92	
	TR6	13	17,5	29	○	2447	907	1540	144	132	99	
SS6B 23	6GF	13	17,5	28,7	●	2361	761	1600	141	132	94	
	TR6	13	17,5	29	○	2507	907	1600	144	132	101	
SS6B 24	6GF	13	17,5	28,7	●	2422	761	1661	141	132	95	
	TR6	13	17,5	29	○	2568	907	1661	144	132	102	
SS6B 25	6GF	13	17,5	28,7	●	2482	761	1721	141	132	97	
	TR6	13	17,5	29	○	2628	907	1721	144	132	104	
SS6B 26	6GF	15	20	33,4	●	2568	786	1782	141	132	101	
	TR6	15	20	32	○	2759	977	1782	144	132	117	
SS6B 27	6GF	15	20	33,4	●	2628	786	1842	141	132	103	
	TR6	15	20	32	○	2819	977	1842	144	132	119	
SS6B 28	6GF	15	20	33,4	●	2689	786	1903	141	132	104	
	TR6	15	20	32	○	2880	977	1903	144	132	120	

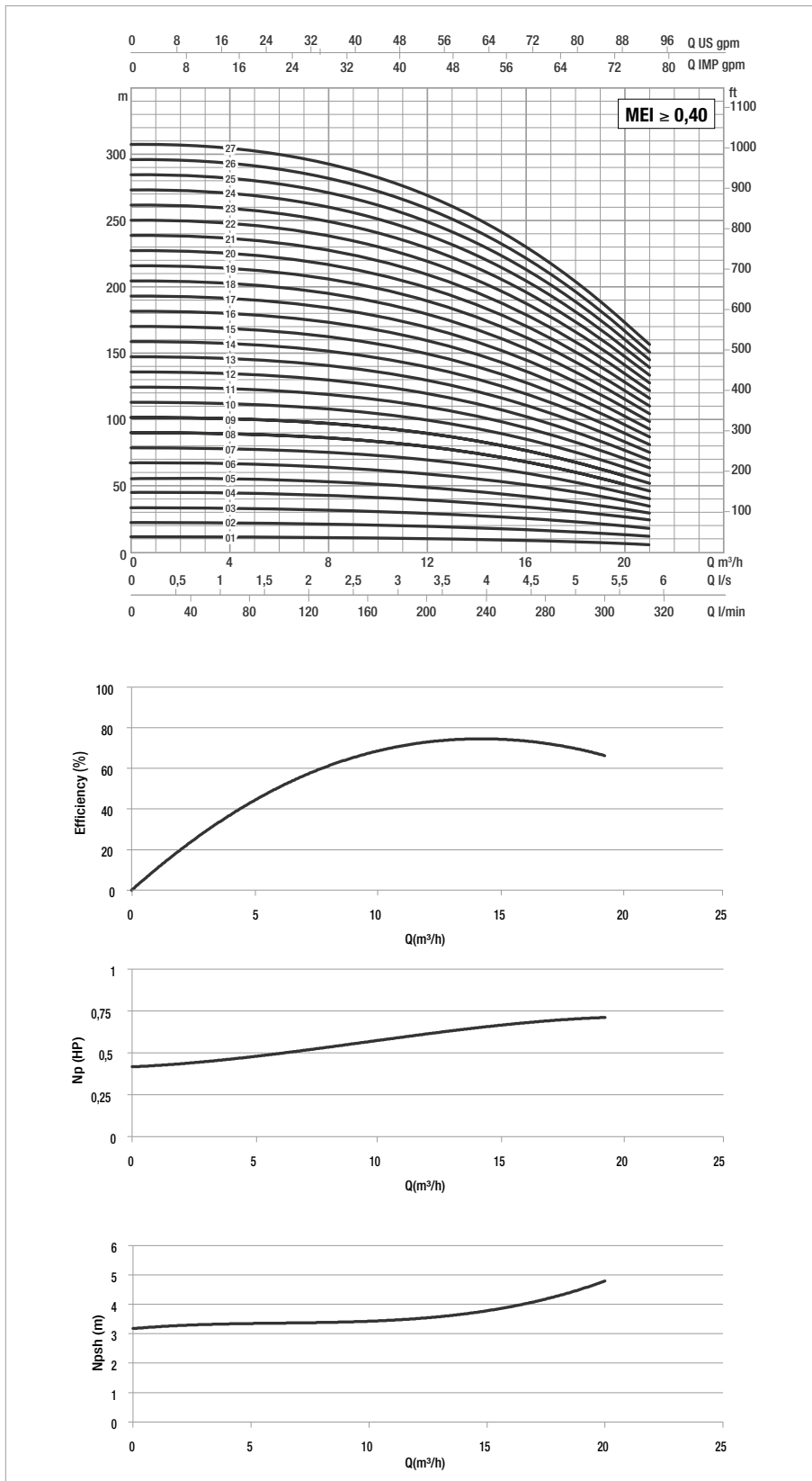
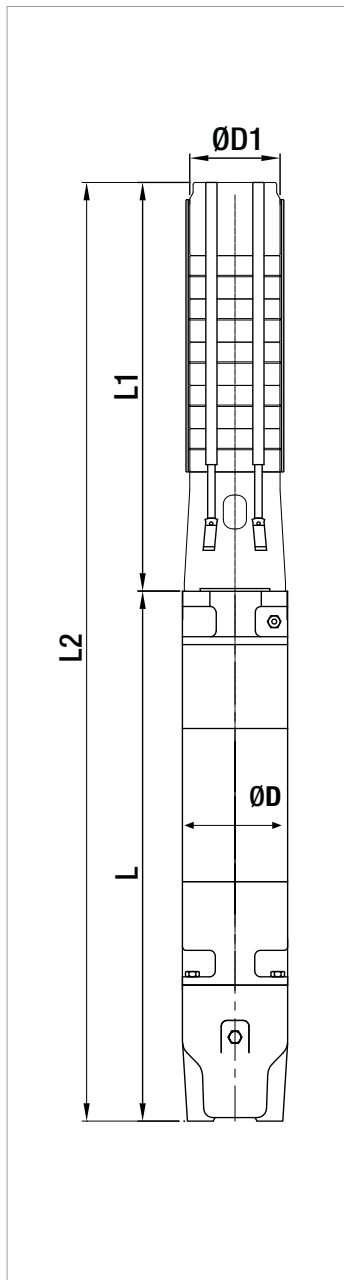
\* 4GG motor: 4" water-filled motor with stator immersed in thermosetting insulating resin with high heat dissipation capacity  
 40L motor: 4" oil-filled rewindable motor

6GF motor: 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
 TR6 motor: 6" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version

# SS6B

## SUBMERSIBLE PUMPS



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.  
**For hydraulic efficiency see pag. 191**

### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m³h	0	6	8	10	12	14	15	16	18	20	
	kW	HP	Q=l/min	0	100	133,3	166,6	200	233,3	250	266,6	300	333,3	
SS6B 28	15	20	H (mt)	316	310	303	293	279	261	250	238	211	181	6"
SS6B 29	18,5	25		327	321	314	304	289	270	259	247	219	188	6"
SS6B 30	18,5	25		339	332	325	314	299	280	268	255	227	194	6"
SS6B 31	18,5	25		350	343	336	325	309	289	277	264	234	200	6"
SS6B 32	18,5	25		361	354	347	335	319	298	286	272	242	207	6"
SS6B 33	18,5	25		372	365	358	346	329	307	295	281	249	213	6"
SS6B 34	18,5	25		384	376	368	356	339	317	304	289	257	220	6"
SS6B 35	22	30		395	387	379	367	349	326	313	298	264	226	6"
SS6B 36	22	30		406	398	390	377	359	335	322	306	272	233	6"
SS6B 37	22	30		418	409	401	388	369	345	330	315	279	239	6"
SS6B 38	22	30		429	420	412	398	379	354	339	323	287	246	6"
SS6B 39	22	30		440	432	423	409	389	363	348	332	294	252	6"
SS6B 40	22	30		451	443	433	419	399	373	357	340	302	259	6"
SS6B 41	22	30		463	454	444	430	409	382	366	349	310	265	6"
SS6B 42	26	35		474	465	455	440	419	391	375	357	317	272	6"
SS6B 43	26	35		485	476	466	450	429	401	384	366	325	278	6"

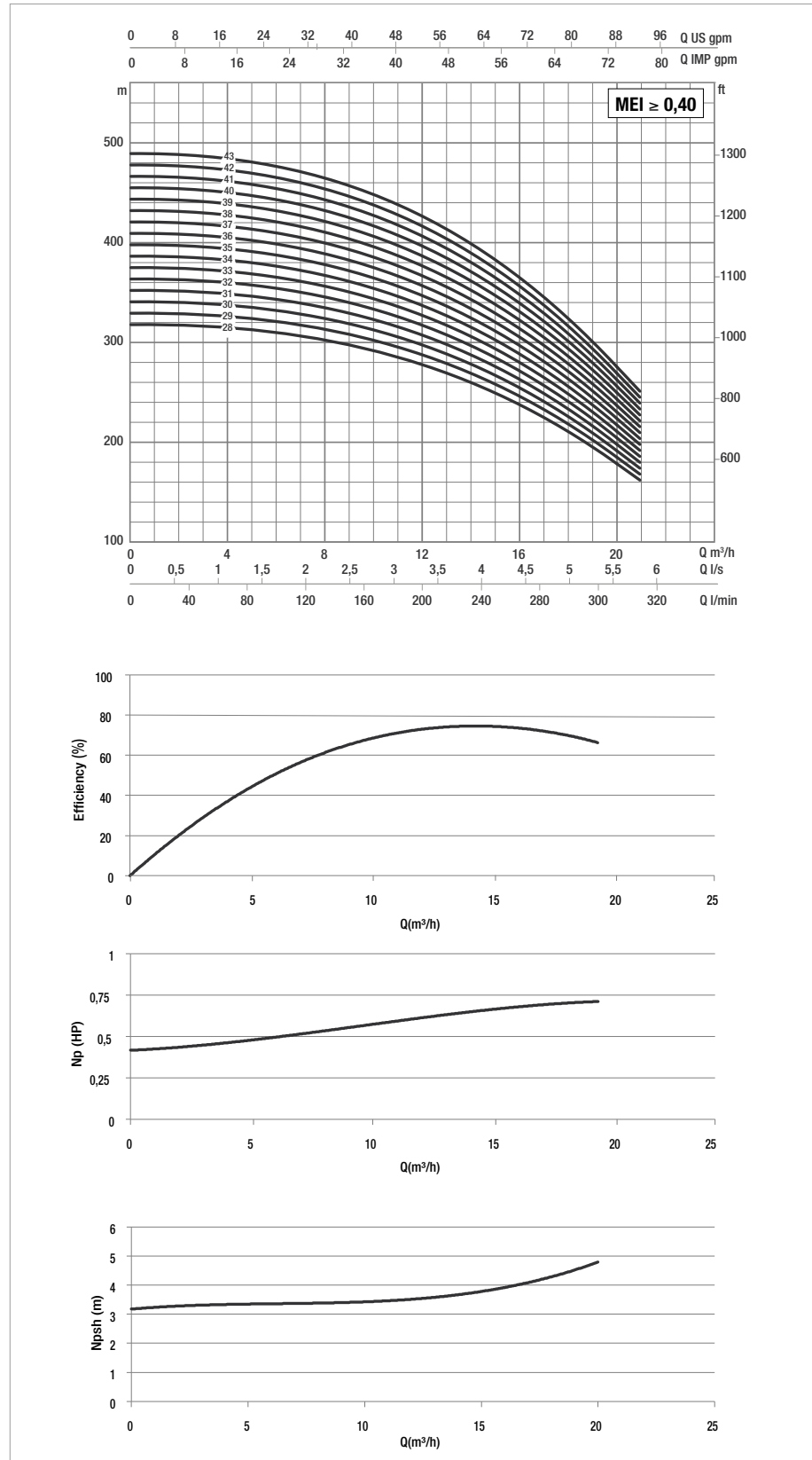
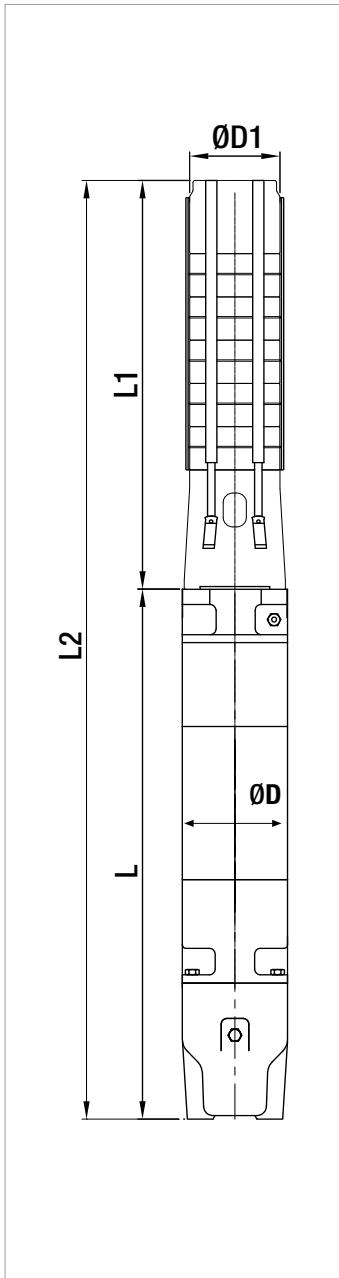
### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS6B 28	6GF	15	20	33,4	●	●	2749	786	1963	141	132	106
	TR6	15	20	32	○	●	2940	977	1963	144	132	122
SS6B 29	6GF	18,5	25	41	●	●	2885	861	2024	141	132	115
	TR6	18,5	25	39	○	●	3061	1037	2024	144	132	126
SS6B 30	6GF	18,5	25	41	●	●	2945	861	2084	141	132	116
	TR6	18,5	25	39	○	●	3121	1037	2084	144	132	127
SS6B 31	6GF	18,5	25	41	●	●	3006	861	2145	141	132	118
	TR6	18,5	25	39	○	●	3182	1037	2145	144	132	129
SS6B 32	6GF	18,5	25	41	●	●	3066	861	2205	141	132	119
	TR6	18,5	25	39	○	●	3242	1037	2205	144	132	130
SS6B 33	6GF	18,5	25	41	●	●	3127	861	2266	141	132	121
	TR6	18,5	25	39	○	●	3303	1037	2266	144	132	132
SS6B 34	6GF	18,5	25	41	●	●	3187	861	2326	141	132	122
	TR6	18,5	25	39	○	●	3363	1037	2326	144	132	133
SS6B 35	6GF	22	30	47	●	●	3308	921	2387	141	132	129
	TR6	22	30	49	○	●	3454	1067	2387	144	132	150
SS6B 36	6GF	22	30	47	●	●	3368	921	2447	141	132	130
	TR6	22	30	49	○	●	3514	1067	2447	144	132	151
SS6B 37	6GF	22	30	47	●	●	3429	921	2508	141	132	132
	TR6	22	30	49	○	●	3575	1067	2508	144	132	153
SS6B 38	6GF	22	30	47	●	●	3489	921	2568	141	132	133
	TR6	22	30	49	○	●	3635	1067	2568	144	132	154
SS6B 39	6GF	22	30	47	●	●	3800	921	2879	141	167	165
	TR6	22	30	49	○	●	3946	1067	2879	144	167	186
SS6B 40	6GF	22	30	47	●	●	3860	921	2939	141	167	167
	TR6	22	30	49	○	●	4006	1067	2939	144	167	188
SS6B 41	6GF	22	30	47	●	●	3921	921	3000	141	167	169
	TR6	22	30	49	○	●	4067	1067	3000	144	167	190
SS6B 42	6GF	26	35	57	●	●	4040	980	3060	141	167	174
	TR6	26	35	58	○	●	4197	1137	3060	144	167	201
SS6B 43	6GF	26	35	57	●	●	4101	980	3121	141	167	176
	TR6	26	35	58	○	●	4258	1137	3121	144	167	203

\* 6GF motor: 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
 TR6 motor: 6" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version





The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.  
**For hydraulic efficiency see pag. 191**

### PERFORMANCE 50 Hz - 2 POLES

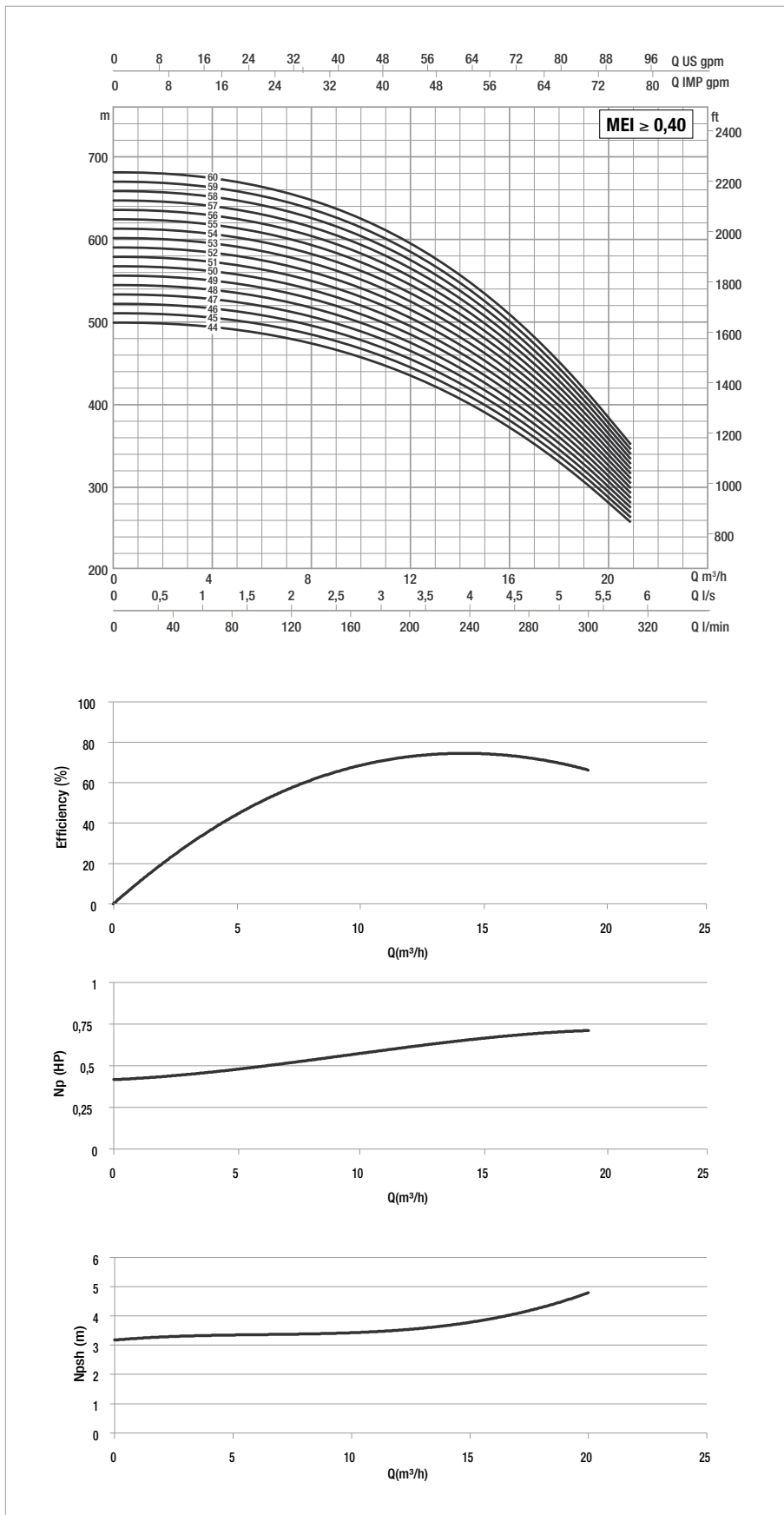
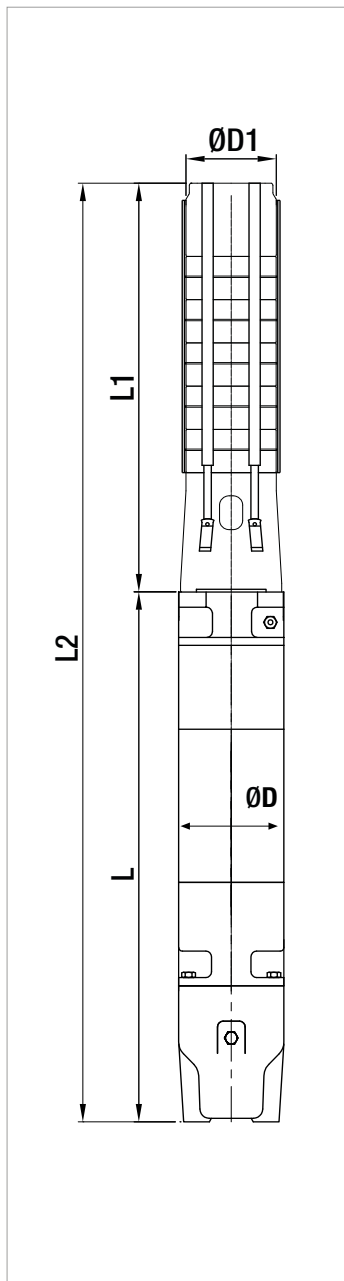
MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m <sup>3</sup> h	0	6	8	10	12	14	15	16	18	20	
	kW	HP	Q=l/min	0	100	133,3	166,6	200	233,3	250	266,6	300	333,3	
SS6B 44	26	35	H (m)	497	487	477	461	439	410	393	374	332	284	6"
SS6B 45	26	35		508	498	488	471	449	419	402	383	340	291	6"
SS6B 46	26	35		519	509	498	482	459	429	411	391	347	297	6"
SS6B 47	26	35		531	520	509	492	469	438	420	400	355	304	6"
SS6B 48	26	35		542	531	520	503	479	447	429	408	362	310	6"
SS6B 49	30	40		553	542	531	513	489	457	438	417	370	317	6"
SS6B 50	30	40		564	553	542	524	499	466	447	425	378	323	6"
SS6B 51	30	40		576	564	553	534	509	475	456	434	385	330	6"
SS6B 52	30	40		587	575	563	545	519	485	464	442	393	336	6"
SS6B 53	30	40		598	586	574	555	529	494	473	451	400	343	6"
SS6B 54	30	40		610	597	585	566	539	503	482	459	408	349	6"
SS6B 55	30	40		621	609	596	576	549	512	491	468	415	356	6"
SS6B 56	30	40		632	620	607	587	559	522	500	476	423	362	6"
SS6B 57	37	50		643	631	618	597	569	531	509	485	430	369	6"
SS6B 58	37	50		655	642	628	608	578	540	518	493	438	375	6"
SS6B 59	37	50		666	653	639	618	588	550	527	502	446	381	6"
SS6B 60	37	50		677	664	650	629	598	559	536	510	453	388	6"

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS6B 44	6GF	26	35	57	●	●	4161	980	3181	141	167	178
	TR6	26	35	58	○	●	4318	1137	3181	144	167	205
SS6B 45	6GF	26	35	57	●	●	4222	980	3242	141	167	180
	TR6	26	35	58	○	●	4379	1137	3242	144	167	207
SS6B 46	6GF	26	35	57	●	●	4282	980	3302	141	167	181
	TR6	26	35	58	○	●	4439	1137	3302	144	167	208
SS6B 47	6GF	26	35	57	●	●	4343	980	3363	141	167	183
	TR6	26	35	58	○	●	4500	1137	3363	144	167	210
SS6B 48	6GF	26	35	57	●	●	4403	980	3423	141	167	185
	TR6	26	35	58	○	●	4560	1137	3423	144	167	212
SS6B 49	6GF	30	40	61,5	●	●	4535	1051	3484	141	167	198
	TR6	30	40	65	○	●	4676	1192	3484	144	167	219
SS6B 50	6GF	30	40	61,5	●	●	4595	1051	3544	141	167	200
	TR6	30	40	65	○	●	4736	1192	3544	144	167	221
SS6B 51	6GF	30	40	61,5	●	●	4656	1051	3605	141	167	201
	TR6	30	40	65	○	●	4797	1192	3605	144	167	222
SS6B 52	6GF	30	40	61,5	●	●	4716	1051	3665	141	167	203
	TR6	30	40	65	○	●	4857	1192	3665	144	167	224
SS6B 53	6GF	30	40	61,5	●	●	4777	1051	3726	141	167	205
	TR6	30	40	65	○	●	4918	1192	3726	144	167	226
SS6B 54	6GF	30	40	61,5	●	●	4837	1051	3786	141	167	207
	TR6	30	40	65	○	●	4978	1192	3786	144	167	228
SS6B 55	6GF	30	40	61,5	●	●	4898	1051	3847	141	167	209
	TR6	30	40	65	○	●	5039	1192	3847	144	167	230
SS6B 56	6GF	30	40	61,5	●	●	4958	1051	3907	141	167	210
	TR6	30	40	65	○	●	5099	1192	3907	144	167	231
SS6B 57	6GF	37	50	79,3	●	●	5149	1181	3968	141	167	225
	TR6	37	50	80	○	●	5260	1292	3968	144	167	236
SS6B 58	6GF	37	50	79,3	●	●	5209	1181	4028	141	167	227
	TR6	37	50	80	○	●	5320	1292	4028	144	167	238
SS6B 59	6GF	37	50	79,3	●	●	5270	1181	4089	141	167	229
	TR6	37	50	80	○	●	5381	1292	4089	144	167	240
SS6B 60	6GF	37	50	79,3	●	●	5330	1181	4149	141	167	231
	TR6	37	50	80	○	●	5441	1292	4149	144	167	242

\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR6 motor:** 6" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906. For hydraulic efficiency see pag. 191

### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m³h	0	6	10	14	18	22	26	30	34	38	
	kW	HP	Q=l/min	0	100	166,6	233,3	300	366,6	433,3	500	566,6	633,3	
SS6C 01	1,1	1,5	H (mt)	12	11	11	11	10	9	8	7	6	5	4"
SS6C 02	2,2	3		12	11	11	11	10	9	8	7	6	5	4"
SS6C 03	3	4		35	34	33	32	30	28	25	22	19	15	4"
SS6C 04	4	5,5		47	46	44	43	40	37	34	30	25	20	4" - 6"
SS6C 05	5,5	7,5		59	57	55	53	50	47	42	37	32	25	4" - 6"
SS6C 06	5,5	7,5		70	69	67	64	60	56	51	45	38	30	4" - 6"
SS6C 07	7,5	10		82	80	78	74	70	65	59	52	44	35	4" - 6"
SS6C 08	7,5	10		94	92	89	85	80	75	68	60	51	40	4" - 6"
SS6C 09	9,3	12,5		105	103	100	96	90	84	76	67	57	45	6"
SS6C 10	9,3	12,5		117	114	111	106	100	93	85	75	63	50	6"
SS6C 11	9,3	12,5		129	126	122	117	110	103	93	82	70	55	6"
SS6C 12	11	15		141	137	133	128	120	112	102	90	76	60	6"
SS6C 13	11	15		152	149	144	138	131	121	110	97	82	65	6"
SS6C 14	13	17,5		164	160	155	149	141	131	119	105	89	70	6"
SS6C 15	13	17,5		176	172	166	159	151	140	127	112	95	75	6"
SS6C 16	15	20		187	183	178	170	161	149	136	120	101	80	6"
SS6C 17	15	20		199	195	189	181	171	159	144	127	108	85	6"
SS6C 18	18,5	25		211	206	200	191	181	168	153	135	114	90	6"
SS6C 19	18,5	25		223	217	211	202	191	177	161	142	121	95	6"
SS6C 20	18,5	25		234	229	222	213	201	186	170	150	127	100	6"

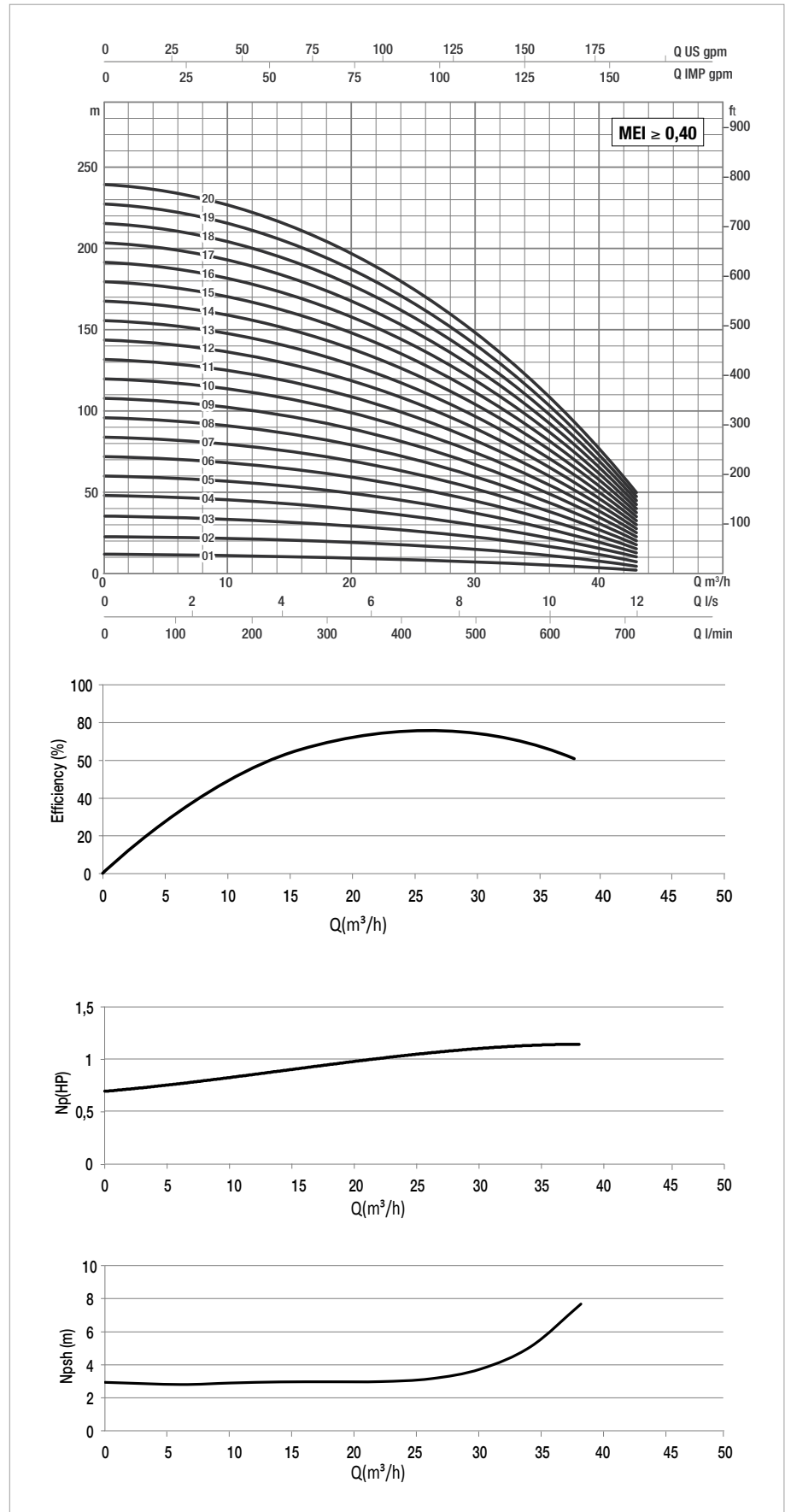
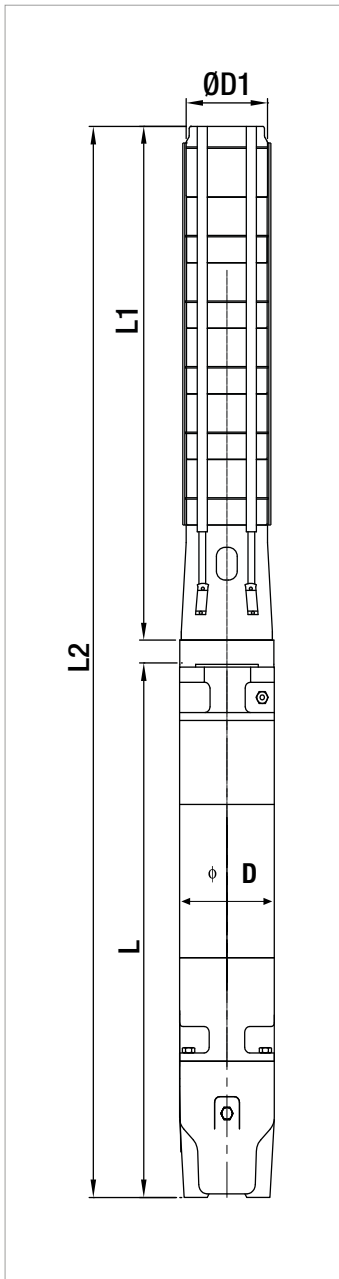
### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS6C 01	4GG	1,1	1,5	3,2	●	●	650	286	364	93	132	15,6
	4OL	1,1	1,5	3,6	●	●	698	334	364	93	132	14,7
SS6C 02	4GG	2,2	3	5,9	●	●	852	393	459	93	132	23
	4OL	2,2	3	6	●	●	917	458	459	93	132	22,4
SS6C 03	4GG	3	4	8,3	●	●	1098	544	554	93	132	31,5
	4OL	3	4	7,5	●	●	1072	518	554	93	132	26,9
SS6C 04	4GG	4	5,5	10	●	●	1263	614	649	93	132	36,8
	4OL	4	5,5	9,6	●	●	1237	588	649	93	132	30,1
	6GF	4	5,5	10,6	●	●	1250	601	649	141	132	54
SS6C 05	4GG	5,5	7,5	14	●	●	1428	684	744	93	132	42,1
	4OL	5,5	7,5	13,1	●	●	1402	658	744	93	132	38,9
	6GF	5,5	7,5	14	●	●	1375	631	744	141	132	59
	TR6	5,5	7,5	13	○	●	1531	787	744	144	132	65
SS6C 06	4GG	5,5	7,5	14	●	●	1523	684	839	93	132	44,1
	4OL	5,5	7,5	13,1	●	●	1497	658	839	93	132	40,9
	6GF	5,5	7,5	14	●	●	1470	631	839	141	132	61
	TR6	5,5	7,5	13	○	●	1626	787	839	144	132	67
SS6C 07	4GG	7,5	10	17,4	●	●	1698	764	934	93	132	49,8
	4OL	7,5	10	16,9	●	●	1672	738	934	93	132	46,9
	6GF	7,5	10	18	●	●	1595	661	934	141	132	66
	TR6	7,5	10	18	○	●	1751	817	934	144	132	72
SS6C 08	4GG	7,5	10	17,4	●	●	1793	764	1029	93	132	51,8
	4OL	7,5	10	16,9	●	●	1767	738	1029	93	132	48,9
	6GF	7,5	10	18	●	●	1690	661	1029	141	132	68
	TR6	7,5	10	18	○	●	1846	817	1029	144	132	74
SS6C 09	6GF	9,3	12,5	22	●	●	1810	686	1124	141	132	73
	TR6	9,3	12,5	21	○	●	1971	847	1124	144	132	78
SS6C 10	6GF	9,3	12,5	22	●	●	1905	686	1219	141	132	75
	TR6	9,3	12,5	21	○	●	2066	847	1219	144	132	80
SS6C 11	6GF	9,3	12,5	22	●	●	2000	686	1314	141	132	77
	TR6	9,3	12,5	21	○	●	2161	847	1314	144	132	82
SS6C 12	6GF	11	15	25,5	●	●	2140	731	1409	141	132	84
	TR6	11	15	25	○	●	2286	877	1409	144	132	89
SS6C 13	6GF	11	15	25,5	●	●	2235	731	1504	141	132	86
	TR6	11	15	25	○	●	2381	877	1504	144	132	91
SS6C 14	6GF	13	17,5	28,7	●	●	2360	761	1599	141	132	91
	TR6	13	17,5	29	○	●	2506	907	1599	144	132	98
SS6C 15	6GF	13	17,5	28,7	●	●	2455	761	1694	141	132	94
	TR6	13	17,5	29	○	●	2601	907	1694	144	132	101
SS6C 16	6GF	15	20	33,4	●	●	2575	786	1789	141	132	99
	TR6	15	20	32	○	●	2766	977	1789	144	132	115
SS6C 17	6GF	15	20	33,4	●	●	2670	786	1884	141	132	101
	TR6	15	20	32	○	●	2861	977	1884	144	132	117
SS6C 18	6GF	18,5	25	41	●	●	2840	861	1979	141	132	111
	TR6	18,5	25	39	○	●	3016	1037	1979	144	132	122
SS6C 19	6GF	18,5	25	41	●	●	2935	861	2074	141	132	113
	TR6	18,5	25	39	○	●	3111	1037	2074	144	132	124
SS6C 20	6GF	18,5	25	41	●	●	3030	861	2169	141	132	115
	TR6	18,5	25	39	○	●	3206	1037	2169	144	132	126

\* **4GG motor:** 4" water-filled motor with stator immersed in thermosetting insulating resin with high heat dissipation capacity  
**4OL motor:** 4" oil-filled rewindable motor

**6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR6 motor:** 6" water-filled rewindable motor

● Allowed  
○ Only PE2 + PA version



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.  
For hydraulic efficiency see pag. 191

### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA										STANDARD MOTOR COUPLING	
	P2 NOMINAL		Q=m³h	0	6	10	14	18	22	26	30	34		38
	kW	HP	Q=l/min	0	100	166,6	233,3	300	366,6	433,3	500	566,6		633,3
SS6C 21	18,5	25	H (m)	246	240	233	223	211	196	178	157	133	105	6"
SS6C 22	22	30		258	252	244	234	221	205	187	165	140	110	6"
SS6C 23	22	30		269	263	255	244	231	214	195	172	146	115	6"
SS6C 24	22	30		281	275	266	255	241	224	203	180	152	120	6"
SS6C 25	22	30		293	286	277	266	251	233	212	187	159	125	6"
SS6C 26	22	30		305	298	289	276	261	242	220	195	165	130	6"
SS6C 27	26	35		316	309	300	287	271	252	229	202	171	136	6"
SS6C 28	26	35		328	320	311	298	281	261	237	210	178	141	6"
SS6C 29	26	35		340	332	322	308	291	270	246	217	184	146	6"
SS6C 30	26	35		351	343	333	319	301	280	254	225	190	151	6"
SS6C 31	30	40		363	355	344	330	311	289	263	232	197	156	6"
SS6C 32	30	40		375	366	355	340	321	298	271	240	203	161	6"
SS6C 33	30	40		387	378	366	351	331	308	280	247	209	166	6"
SS6C 34	30	40		398	389	377	361	341	317	288	255	216	171	6"
SS6C 35	30	40		410	401	388	372	351	326	297	262	222	176	6"
SS6C 36	30	40		422	412	400	383	361	336	305	270	228	181	6"
SS6C 37	37	50		433	423	411	393	371	345	314	277	235	186	6"



### ELECTRICAL DATA AND DIMENSIONS

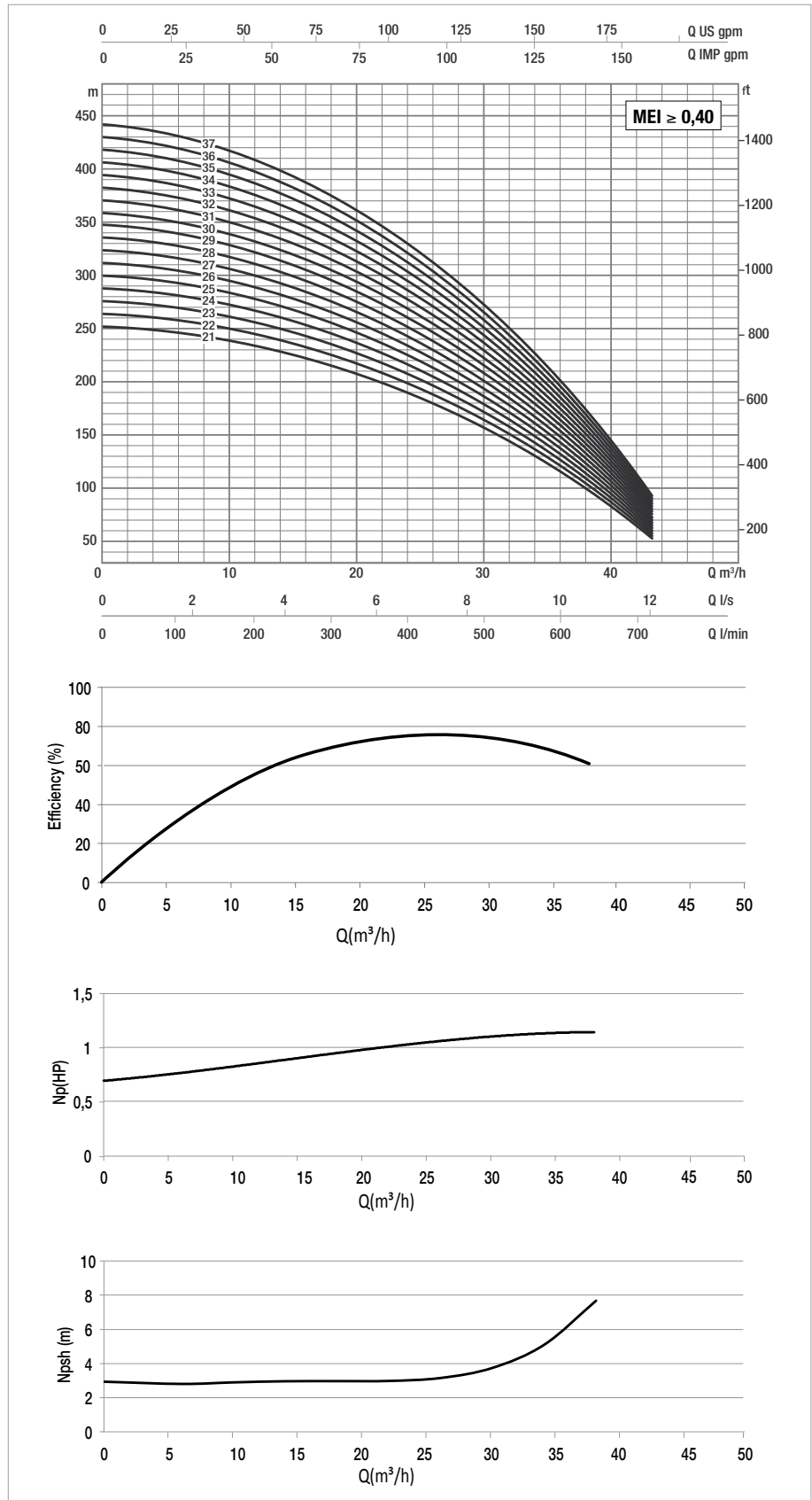
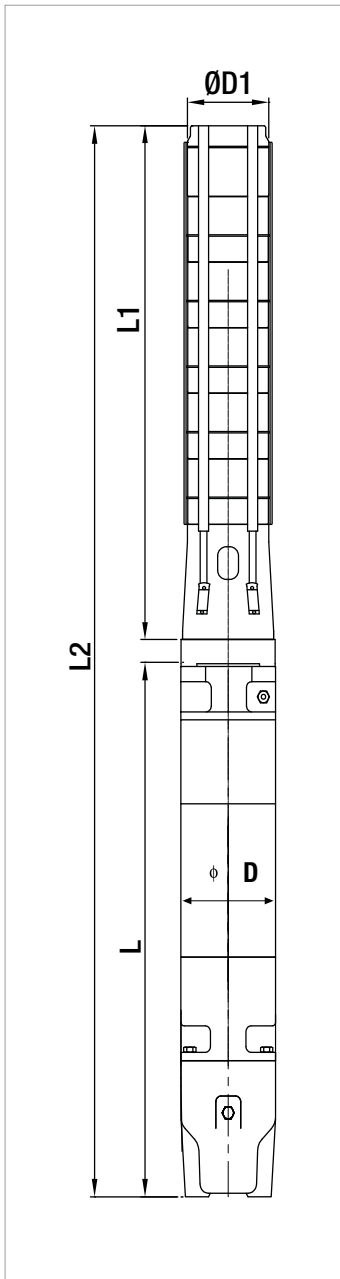
MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS6C 21	6GF	18,5	25	41	●	●	3125	861	2264	141	132	117
	TR6	18,5	25	39	○	●	3301	1037	2264	144	132	128
SS6C 22	6GF	22	30	47	●	●	3280	921	2359	141	132	124
	TR6	22	30	49	○	●	3426	1067	2359	144	132	145
SS6C 23	6GF	22	30	47	●	●	3375	921	2454	141	132	126
	TR6	22	30	49	○	●	3521	1067	2454	144	132	147
SS6C 24	6GF	22	30	47	●	●	3470	921	2549	141	132	128
	TR6	22	30	49	○	●	3616	1067	2549	144	132	149
SS6C 25	6GF	22	30	47	●	●	3565	921	2644	141	132	130
	TR6	22	30	49	○	●	3711	1067	2644	144	132	151
SS6C 26	6GF	22	30	47	●	●	3660	921	2739	141	132	132
	TR6	22	30	49	○	●	3806	1067	2739	144	132	150
SS6C 27	6GF	26	35	57	●	●	3814	980	2834	141	132	138
	TR6	26	35	58	○	●	3971	1137	2834	144	132	165
SS6C 28	6GF	26	35	57	●	●	3909	980	2929	141	132	141
	TR6	26	35	58	○	●	4066	1137	2929	144	132	168
SS6C 29	6GF	26	35	57	●	●	4004	980	3024	141	132	143
	TR6	26	35	58	○	●	4161	1137	3024	144	132	170
SS6C 30	6GF	26	35	57	●	●	4099	980	3119	141	132	145
	TR6	26	35	58	○	●	4256	1137	3119	141	132	172
SS6C 31	6GF	30	40	61,5	●	●	4265	1051	3214	141	132	158
	TR6	30	40	65	○	●	4406	1192	3214	144	132	179
SS6C 32	6GF	30	40	61,5	●	●	4360	1051	3309	141	132	160
	TR6	30	40	65	○	●	4501	1192	3309	144	132	181
SS6C 33	6GF	30	40	61,5	●	●	4455	1051	3404	141	132	162
	TR6	30	40	65	○	●	4596	1192	3404	144	132	183
SS6C 34	6GF	30	40	61,5	●	●	4550	1051	3499	141	132	164
	TR6	30	40	65	○	●	4691	1192	3499	144	132	185
SS6C 35	6GF	30	40	61,5	●	●	4645	1051	3594	141	132	166
	TR6	30	40	65	○	●	4786	1192	3594	144	132	187
SS6C 36	6GF	30	40	61,5	●	●	4740	1051	3689	141	132	168
	TR6	30	40	65	○	●	4881	1192	3689	144	132	189
SS6C 37	6GF	37	50	79,3	●	●	4965	1181	3784	141	132	183
	TR6	37	50	80	○	●	5076	1292	3784	144	132	194

\* 6GF motor: 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
 TR6 motor: 6" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version

# SS6C

## SUBMERSIBLE PUMPS



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.  
**For hydraulic efficiency see pag. 191**

### PERFORMANCE 50 Hz - 2 POLES

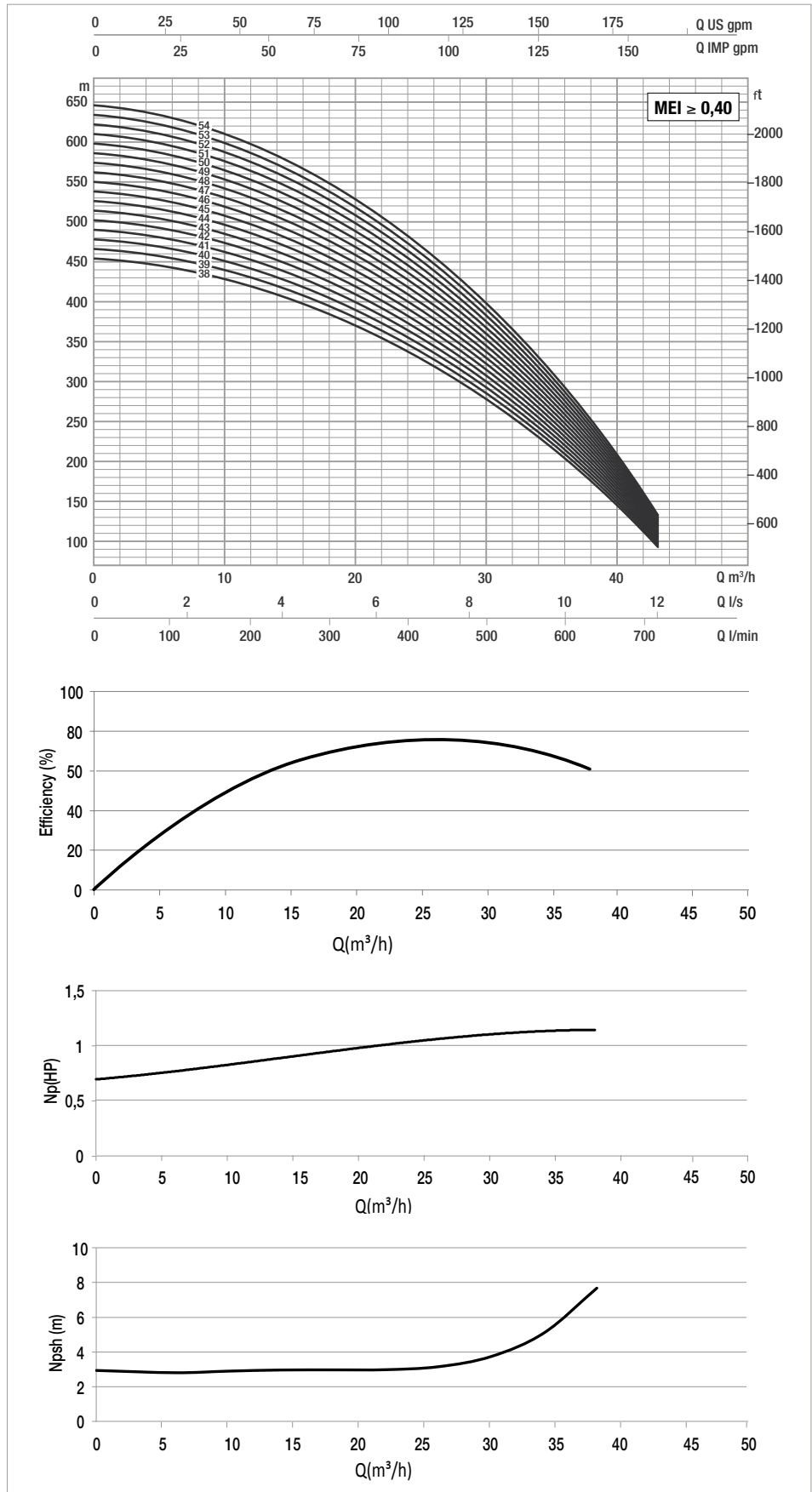
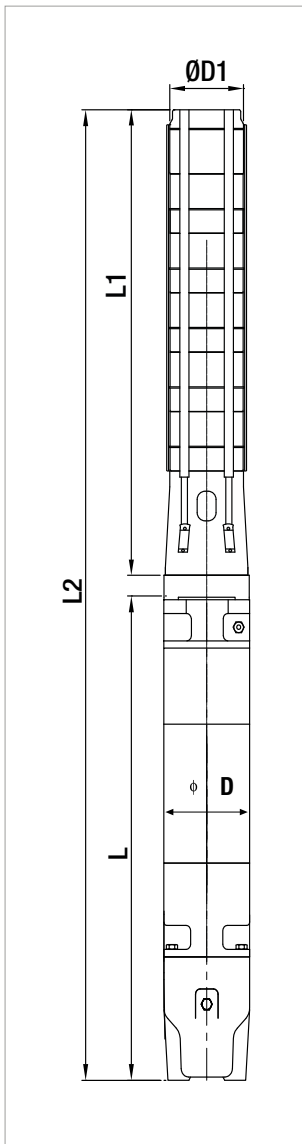
MODEL	ELECTRICAL DATA		HYDRAULIC DATA										STANDARD MOTOR COUPLING	
	P2 NOMINAL		Q=m³h	0	6	10	14	18	22	26	30	34		38
	kW	HP	Q=l/min	0	100	166,6	233,3	300	366,6	433,3	500	566,6		633,3
SS6C 38	37	50	H (m)	445	435	422	404	381	354	322	285	241	191	6"
SS6C 39	37	50		457	446	433	415	392	364	331	292	247	196	6"
SS6C 40	37	50		469	458	444	425	402	373	339	300	254	201	6"
SS6C 41	37	50		480	469	455	436	412	382	348	307	260	206	6"
SS6C 42	37	50		492	481	466	446	422	392	356	315	266	211	6"
SS6C 43	45	60		504	492	477	457	432	401	365	322	273	216	8"
SS6C 44	45	60		515	504	488	468	442	410	373	330	279	221	8"
SS6C 45	45	60		527	515	499	478	452	420	381	337	285	226	8"
SS6C 46	45	60		539	526	511	489	462	429	390	344	292	231	8"
SS6C 47	45	60		551	538	522	500	472	438	398	352	298	236	8"
SS6C 48	45	60		562	549	533	510	482	448	407	359	304	241	8"
SS6C 49	45	60		574	561	544	521	492	457	415	367	311	246	8"
SS6C 50	45	60		586	572	555	532	502	466	424	374	317	251	8"
SS6C 51	45	60		597	584	566	542	512	476	432	382	323	256	8"
SS6C 52	55	75		609	595	577	553	522	485	441	389	330	261	8"
SS6C 53	55	75		621	607	588	563	532	494	449	397	336	266	8"
SS6C 54	55	75	633	618	599	574	542	503	458	404	342	271	8"	

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS6C 38	6GF	37	50	79,3	●	●	5060	1181	3879	141	132	185
	TR6	37	50	80	○	●	5171	1292	3879	144	132	196
SS6C 39	6GF	37	50	79,3	●	●	5405	1181	4224	141	167	226
	TR6	37	50	80	○	●	5516	1292	4224	144	167	237
SS6C 40	6GF	37	50	79,3	●	●	5500	1181	4319	141	167	228
	TR6	37	50	80	○	●	5611	1292	4319	144	167	239
SS6C 41	6GF	37	50	79,3	●	●	5595	1181	4414	141	167	231
	TR6	37	50	80	○	●	5706	1292	4414	144	167	242
SS6C 42	6GF	37	50	79,3	●	●	5690	1181	4509	141	167	234
	TR6	37	50	80	○	●	5801	1292	4509	144	167	245
SS6C 43	TR8	45	60	92	○	●	5874	1270	4604	192	167	311
SS6C 44	TR8	45	60	92	○	●	5969	1270	4699	192	167	314
SS6C 45	TR8	45	60	92	○	●	6064	1270	4794	192	167	316
SS6C 46	TR8	45	60	92	○	●	6159	1270	4889	192	167	319
SS6C 47	TR8	45	60	92	○	●	6254	1270	4984	192	167	322
SS6C 48	TR8	45	60	92	○	●	6349	1270	5079	192	167	324
SS6C 49	TR8	45	60	92	○	●	6444	1270	5174	192	167	327
SS6C 50	TR8	45	60	92	○	●	6539	1270	5269	192	167	329
SS6C 51	TR8	45	60	92	○	●	6634	1270	5364	192	167	332
SS6C 52	TR8	55	75	109	○	●	6809	1350	5459	192	167	350
SS6C 53	TR8	55	75	109	○	●	6904	1350	5554	192	167	352
SS6C 54	TR8	55	75	109	○	●	6999	1350	5649	192	167	355

\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6-8" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.  
For hydraulic efficiency see pag. 191

### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA										STANDARD MOTOR COUPLING	
	P2 NOMINAL		Q=m <sup>3</sup> h	0	20	25	30	35	40	45	50	55		60
	kW	HP	Q=l/min	0	333,3	416,6	500	583,3	666,6	750	833,3	916,6		1000
SS6D 01	2,2	3	H (mt)	14	13	12	11	10	10	9	8	7	5	4"
SS6D 02	4	5,5		28	25	24	22	21	19	18	16	14	10	4" - 6"
SS6D 03	5,5	7,5		42	38	36	33	31	29	26	24	20	16	4" - 6"
SS6D 04	7,5	10		56	50	47	44	41	38	35	32	27	21	4" - 6"
SS6D 05	7,5	10		70	63	59	56	52	48	44	39	34	26	4" - 6"
SS6D 06	9,3	12,5		84	75	71	67	62	57	53	47	41	31	6"
SS6D 07	11	15		98	88	83	78	72	67	61	55	57	36	6"
SS6D 08	13	17,5		112	101	95	89	83	77	70	63	54	42	6"
SS6D 09	15	20		126	113	107	100	93	86	79	71	61	47	6"
SS6D 10	18,5	25		140	126	119	111	103	96	88	79	68	52	6"
SS6D 11	18,5	25		154	138	130	122	114	105	97	87	74	57	6"
SS6D 12	22	30		168	151	142	133	124	115	105	95	81	62	6"
SS6D 13	22	30		182	163	154	144	134	125	114	102	88	68	6"
SS6D 14	22	30		196	176	166	155	145	134	123	110	95	73	6"
SS6D 15	26	35		210	188	178	167	155	144	132	118	101	78	6"
SS6D 16	26	35		224	201	190	178	165	153	141	126	108	83	6"
SS6D 17	30	40		238	214	202	189	176	163	149	134	115	88	6"
SS6D 18	30	40		252	226	213	200	186	172	158	142	122	93	6"
SS6D 19	37	50		266	239	225	211	197	182	167	150	128	99	6"

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS6D 01	4GG	2,2	3	5,9	●	●	775	393	382	93	144	21
	40L	2,2	3	6	●	●	840	458	382	93	144	20,4
SS6D 02	4GG	4	5,5	10	●	●	1108	614	494	93	144	33,8
	40L	4	5,5	9,6	●	●	1082	588	494	93	144	27,1
	6GF	4	5,5	10,6	●	●	1095	601	494	141	144	51
SS6D 03	4GG	5,5	7,5	14	●	●	1290	684	606	93	144	39,1
	40L	5,5	7,5	13,1	●	●	1264	658	606	93	144	35,9
	6GF	5,5	7,5	14	●	●	1237	631	606	141	144	56
	TR6	5,5	7,5	13	○	●	1393	787	606	144	144	62
SS6D 04	4GG	7,5	10	17,4	●	●	1482	764	718	93	144	45,8
	40L	7,5	10	16,9	●	●	1456	738	718	93	144	42,9
	6GF	7,5	10	18	●	●	1379	661	718	141	144	62
	TR6	7,5	10	18	○	●	1535	817	718	144	144	68
SS6D 05	4GG	7,5	10	17,4	●	●	1594	764	830	93	144	48,8
	40L	7,5	10	16,9	●	●	1568	738	830	93	144	45,9
	6GF	7,5	10	18	●	●	1491	661	830	141	144	65
	TR6	7,5	10	18	○	●	1647	817	830	144	144	71
SS6D 06	6GF	9,3	12,5	22	●	●	1628	686	942	141	144	70
	TR6	9,3	12,5	21	○	●	1789	847	942	144	144	75
SS6D 07	6GF	11	15	25,5	●	●	1785	731	1054	141	144	78
	TR6	11	15	25	○	●	1931	877	1054	144	144	83
SS6D 08	6GF	13	17,5	28,7	●	●	1927	761	1166	141	144	84
	TR6	13	17,5	29	○	●	2073	907	1166	144	144	89
SS6D 09	6GF	15	20	33,4	●	●	2064	786	1278	141	144	89
	TR6	15	20	32	○	●	2255	977	1278	144	144	105
SS6D 10	6GF	18,5	25	41	●	●	2251	861	1390	141	144	100
	TR6	18,5	25	39	○	●	2427	1037	1390	144	144	111
SS6D 11	6GF	18,5	25	41	●	●	2363	861	1502	141	144	103
	TR6	18,5	25	39	○	●	2539	1037	1502	144	144	114
SS6D 12	6GF	22	30	47	●	●	2535	921	1614	141	144	110
	TR6	22	30	49	○	●	2681	1067	1614	144	144	131
SS6D 13	6GF	22	30	47	●	●	2647	921	1726	141	144	113
	TR6	22	30	49	○	●	2793	1067	1726	144	144	134
SS6D 14	6GF	22	30	47	●	●	2759	921	1838	141	144	116
	TR6	22	30	49	○	●	2905	1067	1838	144	144	137
SS6D 15	6GF	26	35	57	●	●	2930	980	1950	141	144	122
	TR6	26	35	58	○	●	3087	1137	1950	144	144	147
SS6D 16	6GF	26	35	57	●	●	3042	980	2062	141	144	125
	TR6	26	35	58	○	●	3199	1137	2062	144	144	150
SS6D 17	6GF	30	40	61,5	●	●	3225	1051	2174	141	144	138
	TR6	30	40	65	○	●	3366	1192	2174	144	144	159
SS6D 18	6GF	30	40	61,5	●	●	3337	1051	2286	141	144	141
	TR6	30	40	65	○	●	3478	1192	2286	144	144	162
SS6D 19	6GF	37	50	79,3	●	●	3579	1181	2398	141	144	157
	TR6	37	50	80	○	●	3690	1292	2398	144	144	168

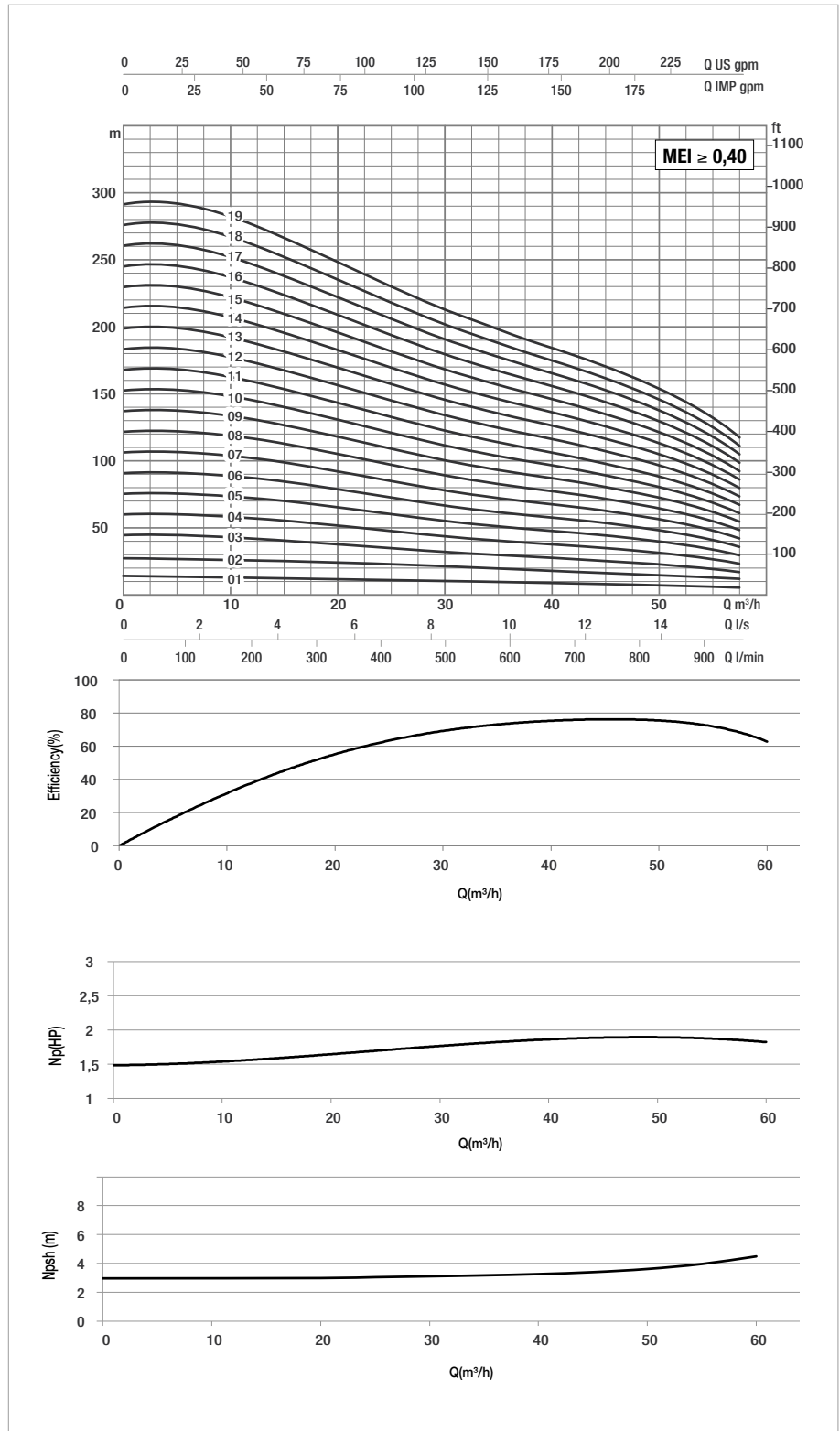
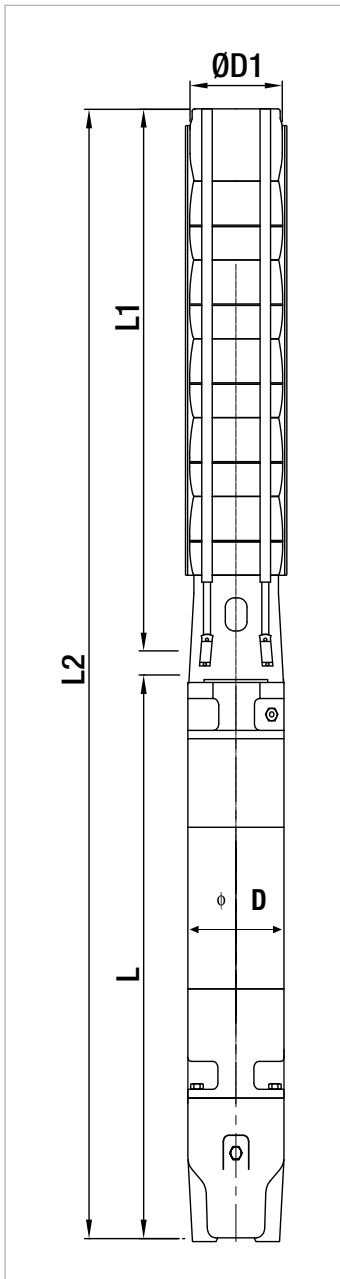
\* **4GG motor:** 4" water-filled motor with stator immersed in thermosetting insulating resin with high heat dissipation capacity  
**40L motor:** 4" oil-filled rewindable motor

**6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR6 motor:** 6" water-filled rewindable motor

● Allowed  
○ Only PE2 + PA version

# SS6D

## SUBMERSIBLE PUMPS



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.  
**For hydraulic efficiency see pag. 191**



### PERFORMANCE 50 Hz - 2 POLES

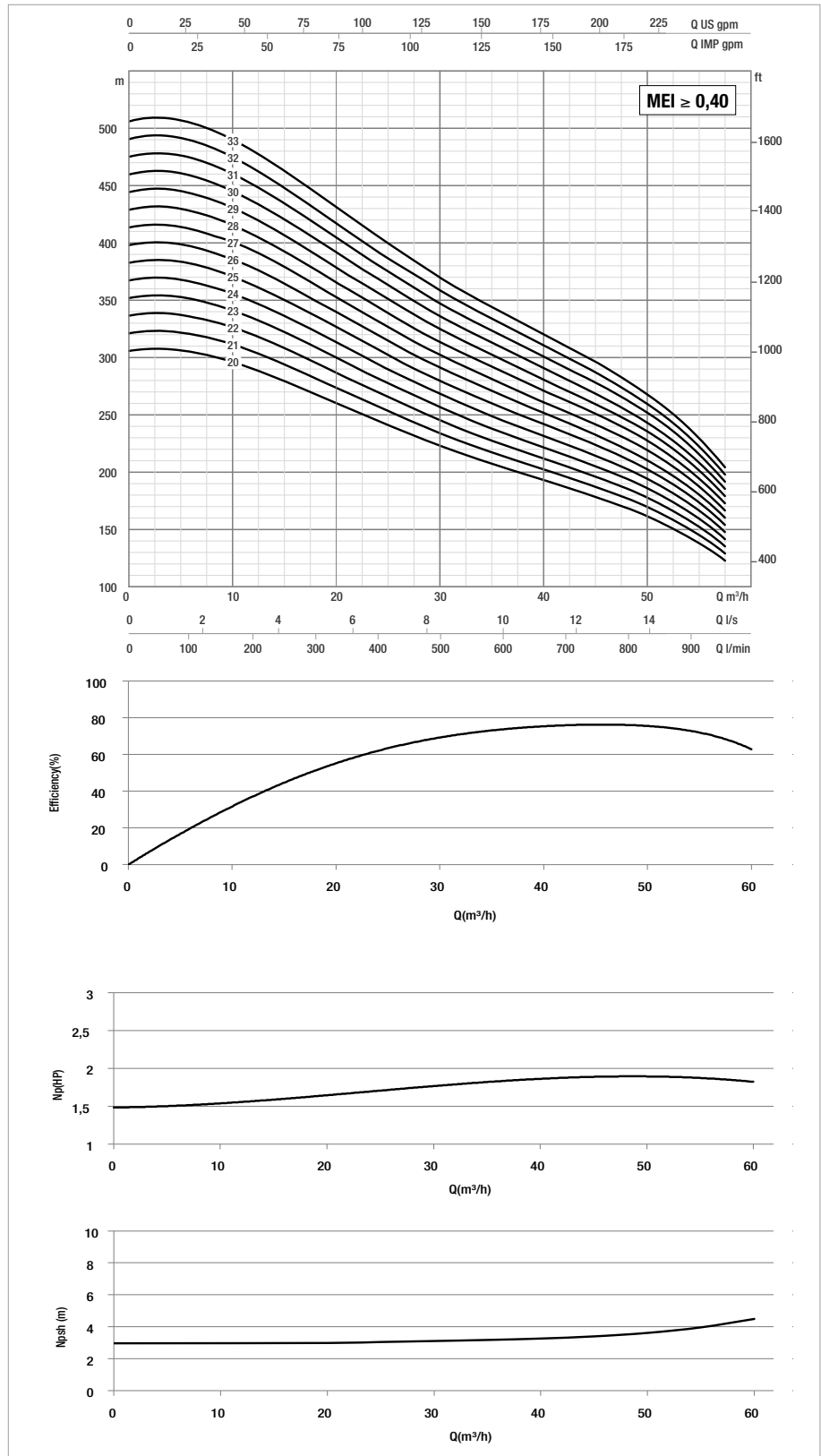
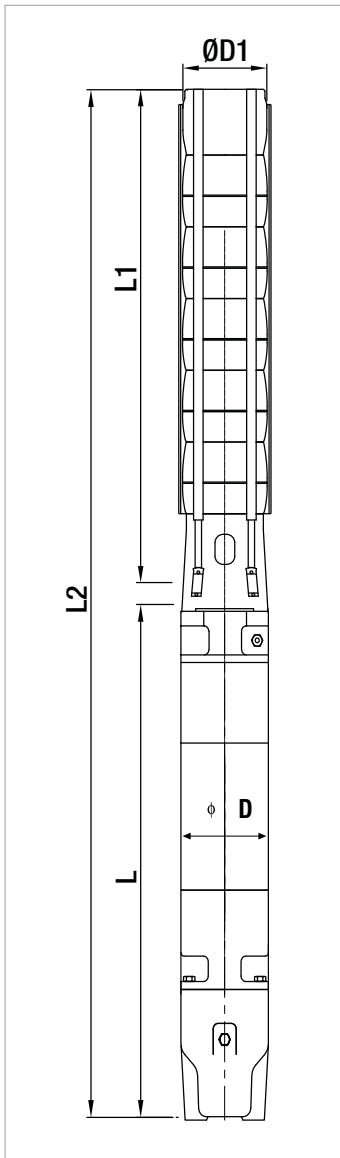
MODEL	ELECTRICAL DATA		HYDRAULIC DATA										STANDARD MOTOR COUPLING	
	P2 NOMINAL		Q=m³h	0	20	25	30	35	40	45	50	55		60
	kW	HP	Q=l/min	0	333,3	416,6	500	583,3	666,6	750	833,3	916,6		1000
SS6D 20	37	50	H (mt)	280	251	237	222	207	192	176	158	135	104	6"
SS6D 21	37	50		294	264	249	233	217	201	184	166	142	109	6"
SS6D 22	37	50		308	276	261	244	228	211	193	173	149	114	6"
SS6D 23	37	50		322	289	273	255	238	220	202	181	155	119	6"
SS6D 24	45	60		336	302	285	267	248	230	211	189	162	125	8"
SS6D 25	45	60		350	314	296	278	259	239	220	197	169	130	8"
SS6D 26	45	60		364	327	308	289	269	249	228	205	176	135	8"
SS6D 27	45	60		378	339	320	300	279	259	237	213	182	140	8"
SS6D 28	45	60		392	352	332	311	290	268	246	221	189	145	8"
SS6D 29	45	60		406	364	344	322	300	278	255	229	196	151	8"
SS6D 30	45	60		420	377	356	333	310	287	264	237	203	156	8"
SS6D 31	55	75		434	390	368	344	321	297	272	244	209	161	8"
SS6D 32	55	75		448	402	379	355	331	307	281	252	216	166	8"
SS6D 33	55	75		462	415	391	366	341	316	290	260	223	171	8"

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS6D 20	6GF	37	50	79,3	●	●	3691	1181	2510	141	144	159
	TR6	37	50	80	○	●	3802	1292	2510	144	144	170
SS6D 21	6GF	37	50	79,3	●	●	3803	1181	2622	141	144	162
	TR6	37	50	80	○	●	3914	1292	2622	144	144	173
SS6D 22	6GF	37	50	79,3	●	●	3915	1181	2734	141	144	165
	TR6	37	50	80	○	●	4026	1292	2734	144	144	176
SS6D 23	6GF	37	50	79,3	●	●	4027	1181	2846	141	144	167
	TR6	37	50	80	○	●	4138	1292	2846	144	144	178
SS6D 24	TR8	45	60	92	○	●	4228	1270	2958	192	144	245
SS6D 25	TR8	45	60	92	○	●	4340	1270	3070	192	144	248
SS6D 26	TR8	45	60	92	○	●	4452	1270	3182	192	144	250
SS6D 27	TR8	45	60	92	○	●	4564	1270	3294	192	144	253
SS6D 28	TR8	45	60	92	○	●	4676	1270	3406	192	144	256
SS6D 29	TR8	45	60	92	○	●	4788	1270	3518	192	144	258
SS6D 30	TR8	45	60	92	○	●	4900	1270	3630	192	144	261
SS6D 31	TR8	55	75	109	○	●	5092	1350	3742	192	144	278
SS6D 32	TR8	55	75	109	○	●	5204	1350	3854	192	144	281
SS6D 33	TR8	55	75	109	○	●	5316	1350	3966	192	144	284

\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6-8" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.  
**For hydraulic efficiency see pag. 191**

### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA										STANDARD MOTOR COUPLING	
	P2 NOMINAL		Q=m³h	0	20	40	45	50	55	60	65	70		75
	kW	HP	Q=l/min	0	333,3	666,6	750	833,3	916,6	1000	1083,3	1166,6		1250
SS6E 01	2,2	3	H (mt)	15	13	10	10	9	9	8	8	7	6	4"
SS6E 02	4	5,5		30	26	21	20	19	18	17	15	14	11	4" - 6"
SS6E 03	5,5	7,5		45	38	31	30	28	27	25	23	20	17	4" - 6"
SS6E 04	7,5	10		60	51	42	40	38	36	33	31	27	23	4" - 6"
SS6E 05	9,3	12,5		75	64	52	50	47	45	42	38	34	28	6"
SS6E 06	11	15		90	77	62	59	57	54	50	46	41	34	6"
SS6E 07	13	17,5		105	90	73	69	66	63	59	54	48	40	6"
SS6E 08	15	20		120	103	83	79	75	71	67	61	54	45	6"
SS6E 09	18,5	25		135	115	94	89	85	80	75	69	61	51	6"
SS6E 10	18,5	25		150	128	104	99	94	89	84	77	68	56	6"
SS6E 11	22	30		165	141	115	109	104	98	92	85	75	62	6"
SS6E 12	22	30		180	154	125	119	113	107	100	92	82	68	6"
SS6E 13	26	35		195	167	135	129	123	116	109	100	88	73	6"
SS6E 14	26	35		210	180	146	139	132	125	117	108	95	79	6"
SS6E 15	30	40		225	192	156	149	141	134	126	115	102	85	6"
SS6E 16	30	40		240	205	167	159	151	143	134	123	109	90	6"
SS6E 17	30	40		255	218	177	169	160	152	142	131	116	96	6"

### ELECTRICAL DATA AND DIMENSIONS

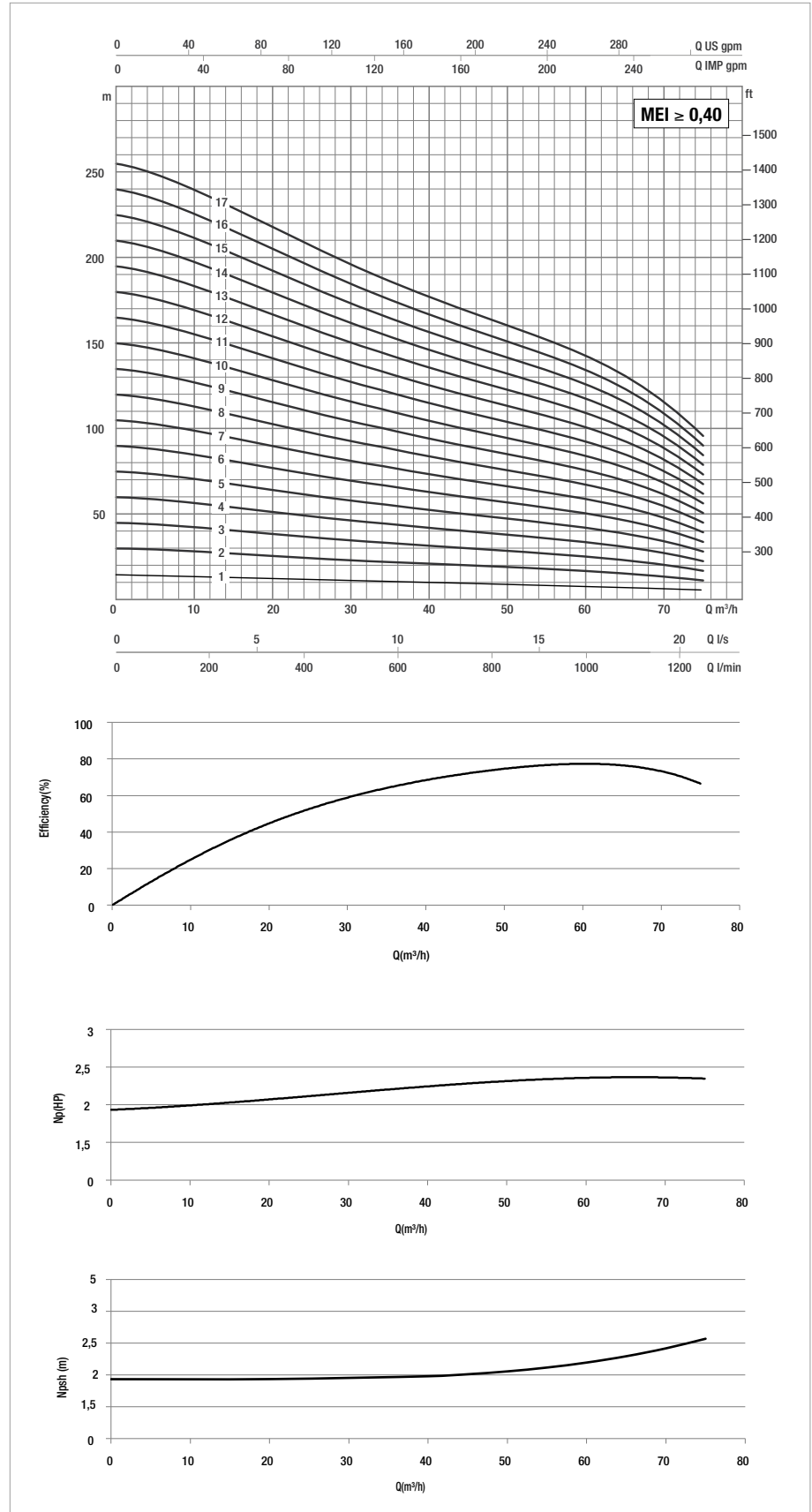
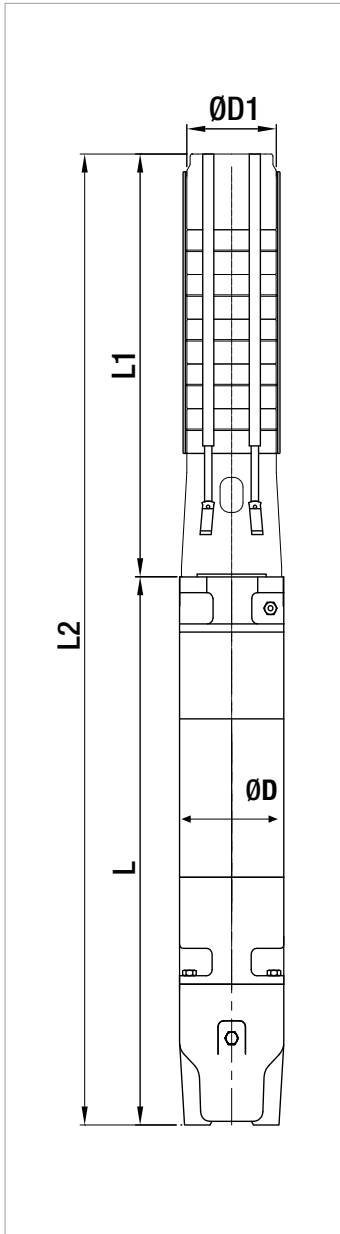
MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS6E 01	4GG	2,2	3	5,9	●	●	775	393	382	93	144	21
	40L	2,2	3	6	●	●	840	458	382	93	144	20,4
SS6E 02	4GG	4	5,5	10	●	●	1108	614	494	93	144	33,8
	40L	4	5,5	9,6	●	●	1082	588	494	93	144	27,1
	6GF	4	5,5	10,6	●	●	1095	601	494	141	144	51
SS6E 03	4GG	5,5	7,5	14	●	●	1290	684	606	93	144	39,1
	40L	5,5	7,5	13,1	●	●	1264	658	606	93	144	35,9
	6GF	5,5	7,5	14	●	●	1237	631	606	141	144	56
	TR6	5,5	7,5	13	○	●	1393	787	606	144	144	62
SS6E 04	4GG	7,5	10	17,4	●	●	1482	764	718	93	144	45,8
	40L	7,5	10	16,9	●	●	1456	738	718	93	144	42,9
	6GF	7,5	10	18	●	●	1379	661	718	141	144	62
	TR6	7,5	10	18	○	●	1535	817	718	144	144	68
SS6E 05	6GF	9,3	12,5	22	○	●	1516	686	830	141	144	68
	TR6	9,3	12,5	21	●	●	1677	847	830	144	144	73
SS6E 06	6GF	11	15	25,5	○	●	1673	731	942	141	144	75
	TR6	11	15	25	●	●	1819	877	942	144	144	80
SS6E 07	6GF	13	17,5	28,7	○	●	1815	761	1054	141	144	81
	TR6	13	17,5	29	●	●	1961	907	1054	144	144	86
SS6E 08	6GF	15	20	33,4	○	●	1952	786	1166	141	144	87
	TR6	15	20	32	●	●	2143	977	1166	144	144	103
SS6E 09	6GF	18,5	25	41	○	●	2139	861	1278	141	144	97
	TR6	18,5	25	39	●	●	2315	1037	1278	144	144	108
SS6E 10	6GF	18,5	25	41	○	●	2251	861	1390	141	144	100
	TR6	18,5	25	39	●	●	2427	1037	1390	144	144	111
SS6E 11	6GF	22	30	47	○	●	2423	921	1502	141	144	108
	TR6	22	30	49	●	●	2569	1067	1502	144	144	129
SS6E 12	6GF	22	30	47	○	●	2535	921	1614	141	144	110
	TR6	22	30	49	●	●	2681	1067	1614	144	144	131
SS6E 13	6GF	26	35	57	○	●	2706	980	1726	141	144	117
	TR6	26	35	58	●	●	2863	1137	1726	144	144	142
SS6E 14	6GF	26	35	57	○	●	2818	980	1838	141	144	120
	TR6	26	35	58	●	●	2975	1137	1838	144	144	145
SS6E 15	6GF	30	40	61,5	○	●	3001	1051	1950	141	144	133
	TR6	30	40	65	●	●	3142	1192	1950	144	144	154
SS6E 16	6GF	30	40	61,5	○	●	3113	1051	2062	141	144	136
	TR6	30	40	65	●	●	3254	1192	2062	144	144	157
SS6E 17	6GF	30	40	61,5	○	●	3225	1051	2174	141	144	139
	TR6	30	40	65	●	●	3366	1192	2174	144	144	160

\* 6GF motor: 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
 TR6 motor: 6" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version

# SS6E

## SUBMERSIBLE PUMPS



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.  
**For hydraulic efficiency see pag. 191**

### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m <sup>3</sup> h	0	20	40	45	50	55	60	65	70	75	
	kW	HP	Q=l/min	0	333,3	666,6	750	833,3	916,6	1000	1083,3	1166,6	1250	
SS6E 18	37	50	H (mt)	270	231	187	178	170	161	151	138	122	102	6"
SS6E 19	37	50		285	244	198	188	179	170	159	146	129	107	6"
SS6E 20	37	50		300	257	208	198	189	179	167	154	136	113	6"
SS6E 21	37	50		315	269	219	208	198	188	176	161	143	119	6"
SS6E 22	45	60		330	282	229	218	207	197	184	169	150	124	8"
SS6E 23	45	60		345	295	239	228	217	205	193	177	157	130	8"
SS6E 24	45	60		360	308	250	238	226	214	201	184	163	135	8"
SS6E 25	55	75		375	321	260	248	236	223	209	192	170	141	8"
SS6E 26	55	75		390	334	271	258	245	232	218	200	177	147	8"
SS6E 27	55	75		405	346	281	268	255	241	226	208	184	152	8"
SS6E 28	55	75		420	359	292	278	264	250	234	215	191	158	8"
SS6E 29	55	75		435	372	302	287	273	259	243	223	197	164	8"
SS6E 30	55	75		450	385	312	297	283	268	251	231	204	169	8"

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS6E 18	6GF	37	50	79,3	○	●	3467	1181	2286	141	144	154
	TR6	37	50	80	●	●	3578	1292	2286	144	144	165
SS6E 19	6GF	37	50	79,3	○	●	3579	1181	2398	141	144	157
	TR6	37	50	80	●	●	3690	1292	2398	144	144	168
SS6E 20	6GF	37	50	79,3	○	●	3691	1181	2510	141	144	160
	TR6	37	50	80	●	●	3802	1292	2510	144	144	171
SS6E 21	6GF	37	50	79,3	○	●	3803	1181	2622	141	144	162
	TR6	37	50	80	●	●	3914	1292	2622	144	144	173
SS6E 22	TR8	45	60	92	○	●	4004	1270	2734	192	144	240
SS6E 23	TR8	45	60	92	○	●	4116	1270	2846	192	144	242
SS6E 24	TR8	45	60	92	○	●	4228	1270	2958	192	144	245
SS6E 25	TR8	55	75	109	○	●	4420	1350	3070	192	144	263
SS6E 26	TR8	55	75	109	○	●	4532	1350	3182	192	144	265
SS6E 27	TR8	55	75	109	○	●	4644	1350	3294	192	144	268
SS6E 28	TR8	55	75	109	○	●	4756	1350	3406	192	144	271
SS6E 29	TR8	55	75	109	○	●	4868	1350	3518	192	144	273
SS6E 30	TR8	55	75	109	○	●	4980	1350	3630	192	144	276

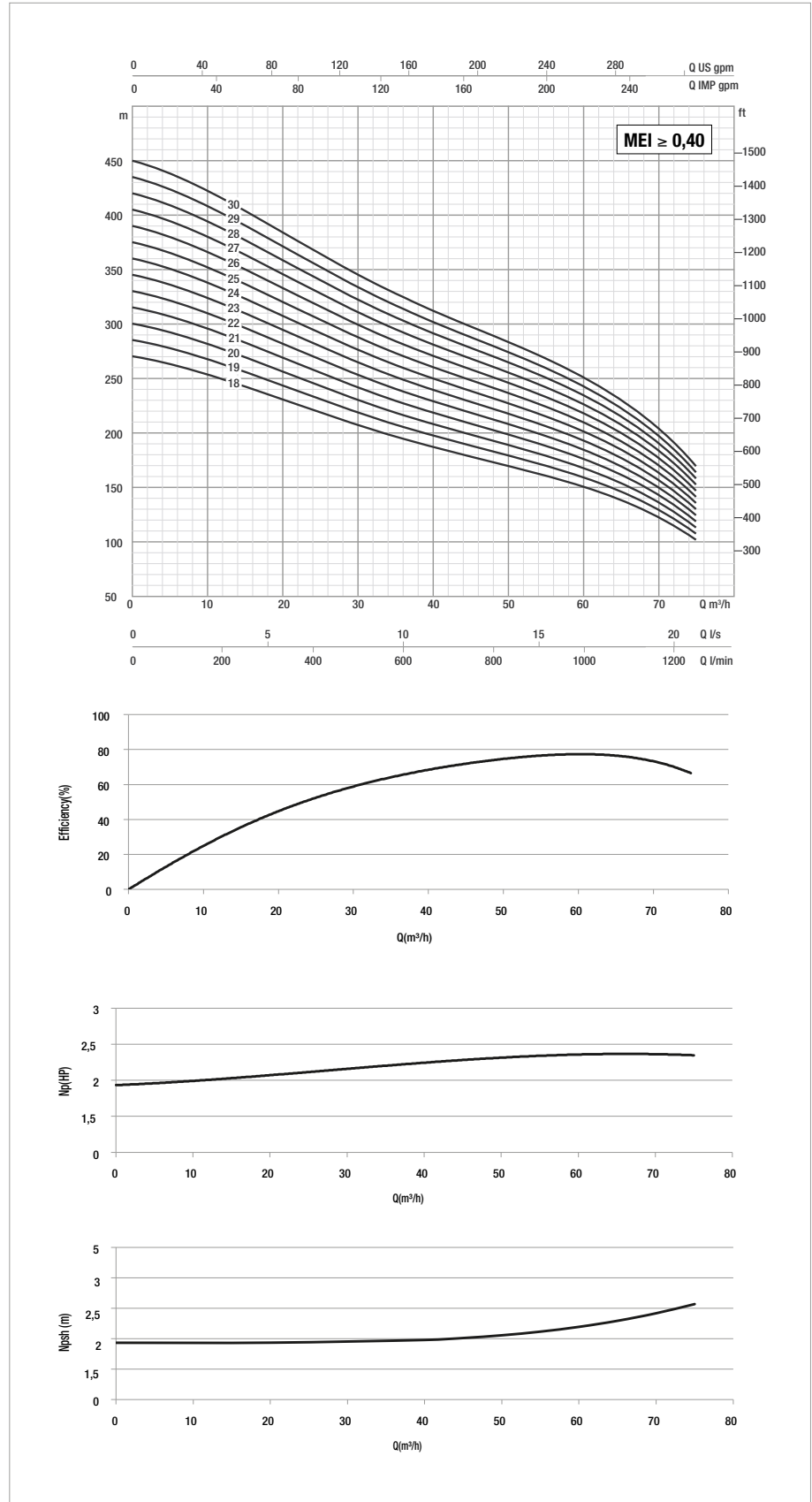
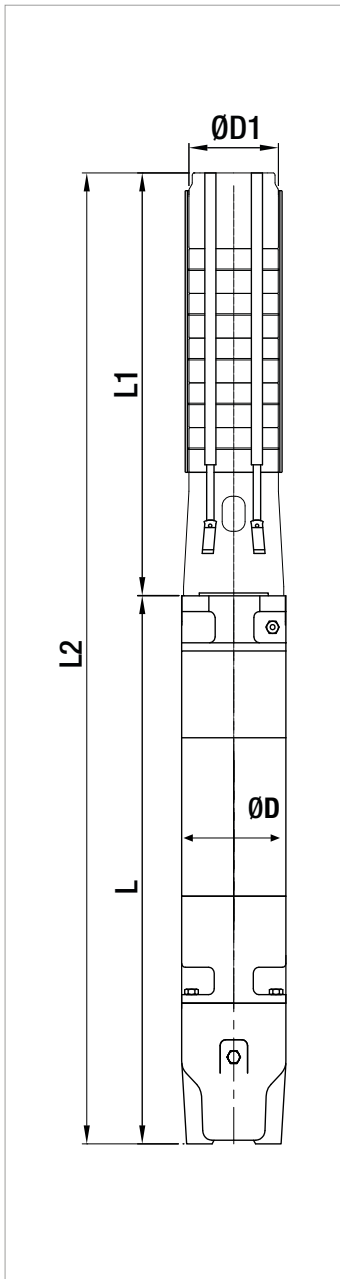
\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6-8" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version



# SS6E

## SUBMERSIBLE PUMPS



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.  
**For hydraulic efficiency see pag. 191**

**TECHNICAL DATA**

**Performance range:** flow up to 110 m<sup>3</sup>/h and max head of 423 m

**Max. quantity of sand/silt:** 50g/m<sup>3</sup>

**Max. ambient temperature:** 30°C (50°C available on request)

**Outlet connection diameter (inside threaded):** 5"

**Nr of starts:** refer to the motor specification

**Motor Cooling flow:** refer to the motor specification

**Installation:** horizontal or vertical, refer to the motor specification

**APPLICATIONS**

Multistage mixed-flow borehole electric pumps, completely made in stainless steel (AISI 304L or AISI 316 on request), usable for wells from a minimum diameter equal to pump size or greater and capable of developing a wide range of Flows and Heads.

These pumps can be used in a wide range of lifting, distributing, and pressuring application: domestic and general water supply; sprinkler and drip irrigations systems; fire-fighting installations; lowering of groundwater level; industrial supplies as mining, hot springs, autoclaves and tanks.

These pumps are suitable both for standard water and for aggressive water applications by choosing the proper manufacturing material (AISI 304L or AISI 316) both for hydraulic part and motor.

Special version of motors with PE2+PA windings can be used on request for high-temperature water applications up to maximum 50°C.

Pumps can be installed both vertically and horizontally simply by removing the non-return valve and adding a cooling sleeve to the suction case (the only remark is to check the motor applicability to horizontal operations, refer to the motor specifications section).

**CONSTRUCTION FEATURES OF PUMP**

Mixed flow pumps with diffusers, impellers, brackets, suction case and discharge case completely made of stainless steel AISI 304 in order to provide maximum strength, durability, wear and tear resistance.

The impellers are balanced and locked to the shaft with a specially shaped collet and nut coupling, in order to guarantee ease-to-assembly feature and avoid vibration sensitive malfunctions and noise increase during rotation.

Rubber bearings that drive the shaft are water lubricated and have sand channels to make enable the sand particles leave the pump with the pumped liquid (maximum permissible sand content 50 gr/m<sup>3</sup>).

Built-in non returned valve provided in order to minimize local friction losses.

Stainless steel strainer provided in order to prevent particles over a certain size from entering the pump.

Coupling with 6", 8" or 10" motor depending on the power requested by hydraulic part:

- 6GF: 6" canned submersible motor
- TR6: 6" rewindable submersible motor
- TR8: 8" rewindable submersible motor
- TR10: 10" rewindable submersible motor

For inverter application refer to the detailed motor specification.

**ON REQUEST:**

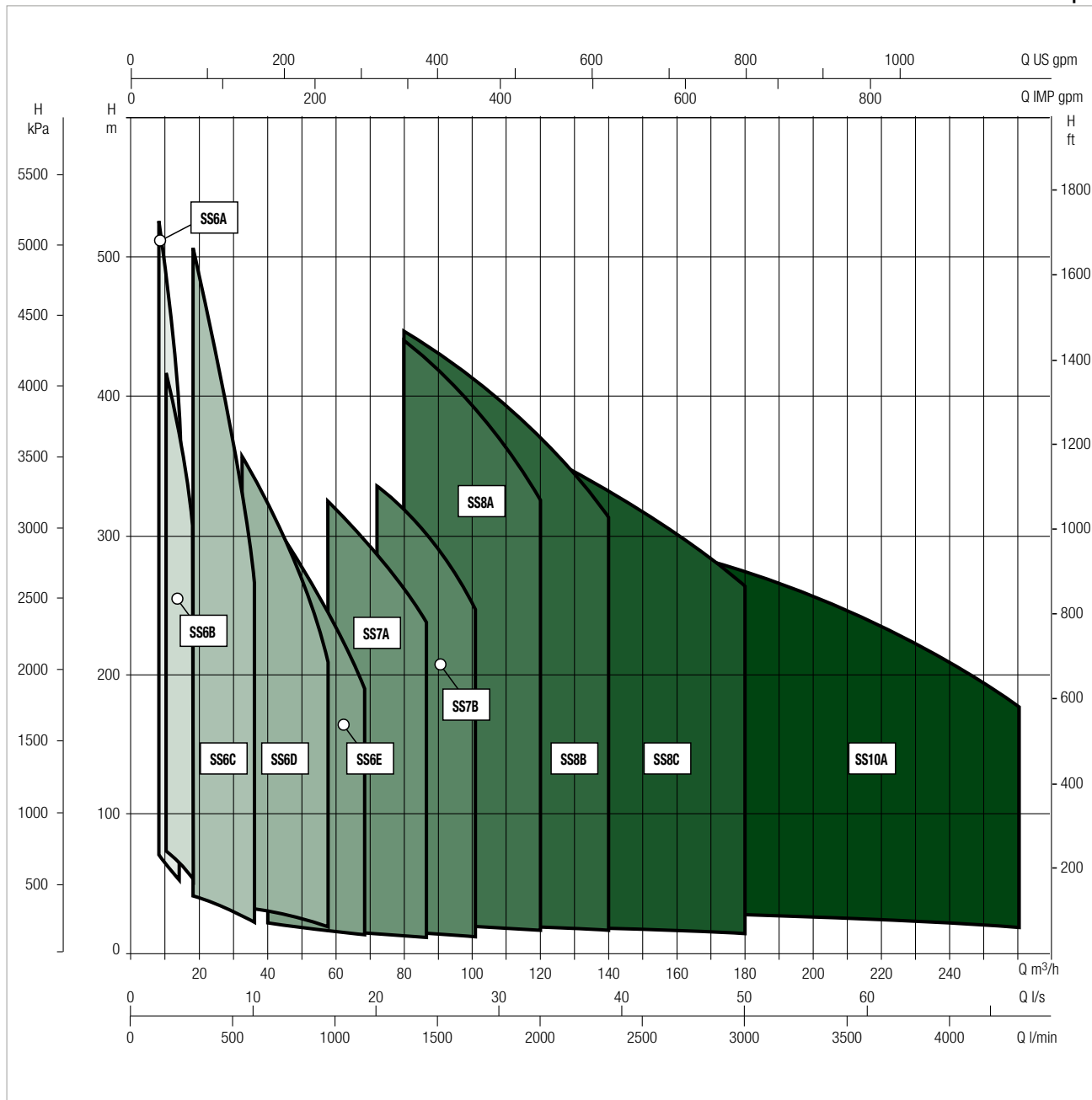
- Pump body stainless steel AISI 316 for aggressive water application
- Impellers stainless steel AISI 316
- Motors in full stainless steel AISI 316 for aggressive water application
- Star/Delta starting version
- Special version of the motor for high temperature application
- Non-standard power coupling

### PERFORMANCE RANGE

The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

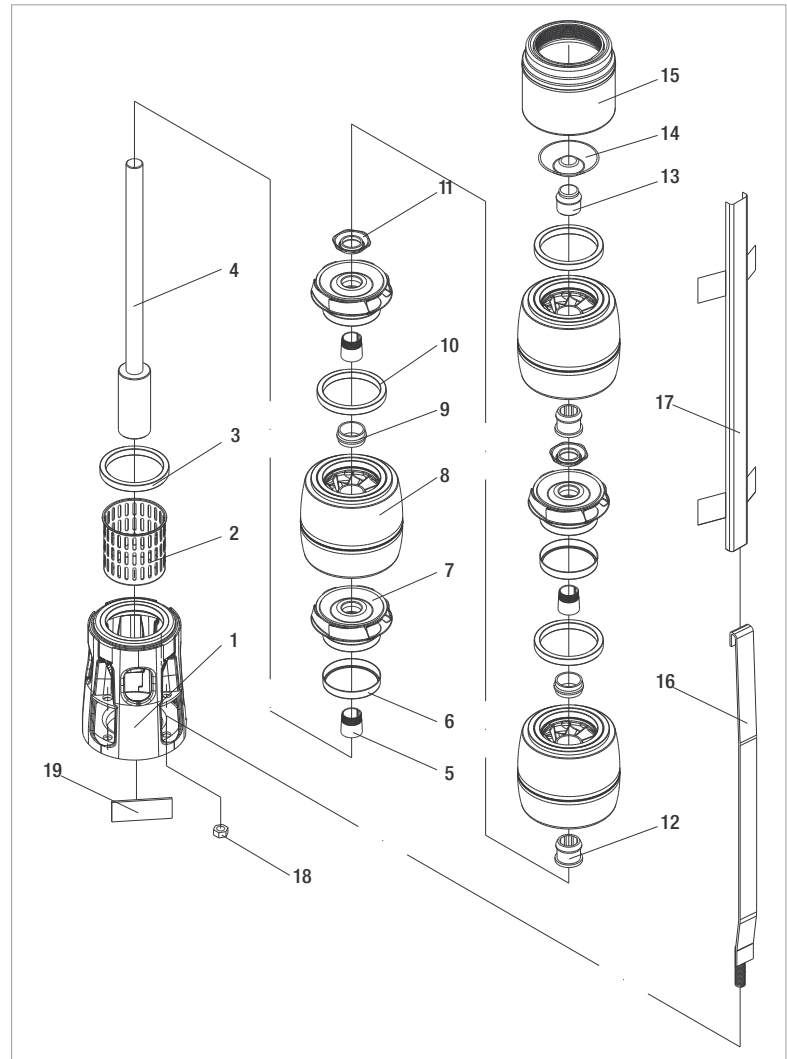
#### GRAPHIC SELECTION TABLE

50 Hz - 2900 r.p.m.

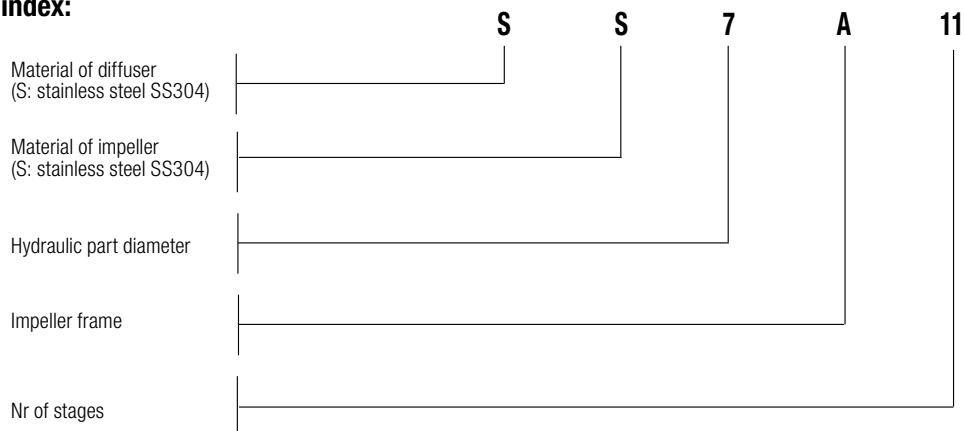


### MATERIALS

N°	PARTS	MATERIALS
1	SUCTION CASE	STAINLESS STEEL (AISI 304L)
2	FILTER	STAINLESS STEEL (AISI 304L)
3	SUCTION CASE WEAR RING	BRONZE (ASTM B145-4A)
4	PUMP SHAFT	STAINLESS STEEL (AISI 420)
5	COLLET	STAINLESS STEEL
6	IMPELLER WEAR RING	STAINLESS STEEL (AISI 304)
7	IMPELLER	STAINLESS STEEL (AISI 304L)
8	DIFFUSER	STAINLESS STEEL (AISI 304L)
9	INTERMEDIATE BEARING	RUBBER
10	DIFFUSER WEAR RING	RUBBER
11	NUT FOR STOP RING	STAINLESS STEEL (AISI 304L)
12	BEARING	RUBBER
13	SHAFT STOPPER	BRONZE (ASTM B145-4A)
14	VALVE	STAINLESS STEEL (AISI 304)
15	DISCHARGE CASE	STAINLESS STEEL (AISI 304)
16	TIE ROD	STAINLESS STEEL (AISI 304L)
17	CABLE GUARD	STAINLESS STEEL (AISI 304)
18	TIE ROD NUT	STAINLESS STEEL (AISI 303)
19	NAME PLATE	STAINLESS STEEL (AISI 304)



**– Denomination index:**  
(example)



### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA												STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m <sup>3</sup> h	0	20	30	40	50	60	70	80	90	100	115	
	kW	HP	Q=l/min	0	333,3	500	666,6	833,3	1000	1166,6	1333,3	1500	1666,6	1916,6	
SS7A 01	4	5,5	H (m)	19	19	18	17	16	15	14	12	11	8	-	6"
SS7A 02	7,5	10		38	37	36	34	32	30	28	25	21	17	-	6"
SS7A 03	11	15		58	56	54	51	49	45	42	37	32	25	-	6"
SS7A 04	15	20		77	74	72	69	65	61	56	50	42	33	-	6"
SS7A 05	18,5	25		96	93	90	86	81	76	69	62	53	41	-	6"
SS7A 06	22	30		115	111	108	103	97	91	83	74	63	50	-	6"
SS7A 07	26	35		135	130	126	120	114	106	97	87	74	58	-	6"
SS7A 08	30	40		154	149	144	137	130	121	111	99	84	66	-	6"
SS7A 09	37	50		173	167	161	154	146	136	125	111	95	75	-	6"
SS7A 10	37	50		192	186	179	172	162	152	139	124	105	83	-	6"
SS7A 11	45	60		211	204	197	189	179	167	153	136	116	91	-	8"
SS7A 12	45	60		231	223	215	206	195	182	167	149	127	99	-	8"
SS7A 13	55	75		250	241	233	223	211	197	181	161	137	108	-	8"
SS7A 14	55	75		269	260	251	240	227	212	195	173	148	116	-	8"
SS7A 15	55	75		288	278	269	257	244	227	208	186	158	124	-	8"
SS7A 16	63	85		307	297	287	275	260	243	222	198	169	133	-	8"
SS7A 17	75	100		327	316	305	292	276	258	236	210	179	141	-	8"
SS7A 18	75	100		346	334	323	309	292	273	250	223	190	149	-	8"
SS7A 19	75	100		365	353	341	326	309	288	264	235	200	158	-	8"
SS7A 20	75	100		384	371	359	343	325	303	278	248	211	166	-	8"
SS7A 21	75	100		404	390	377	360	341	318	292	260	221	174	-	8"
SS7A 22	92	125		423	408	395	378	357	334	306	272	232	182	-	8"

### ELECTRICAL DATA AND DIMENSIONS

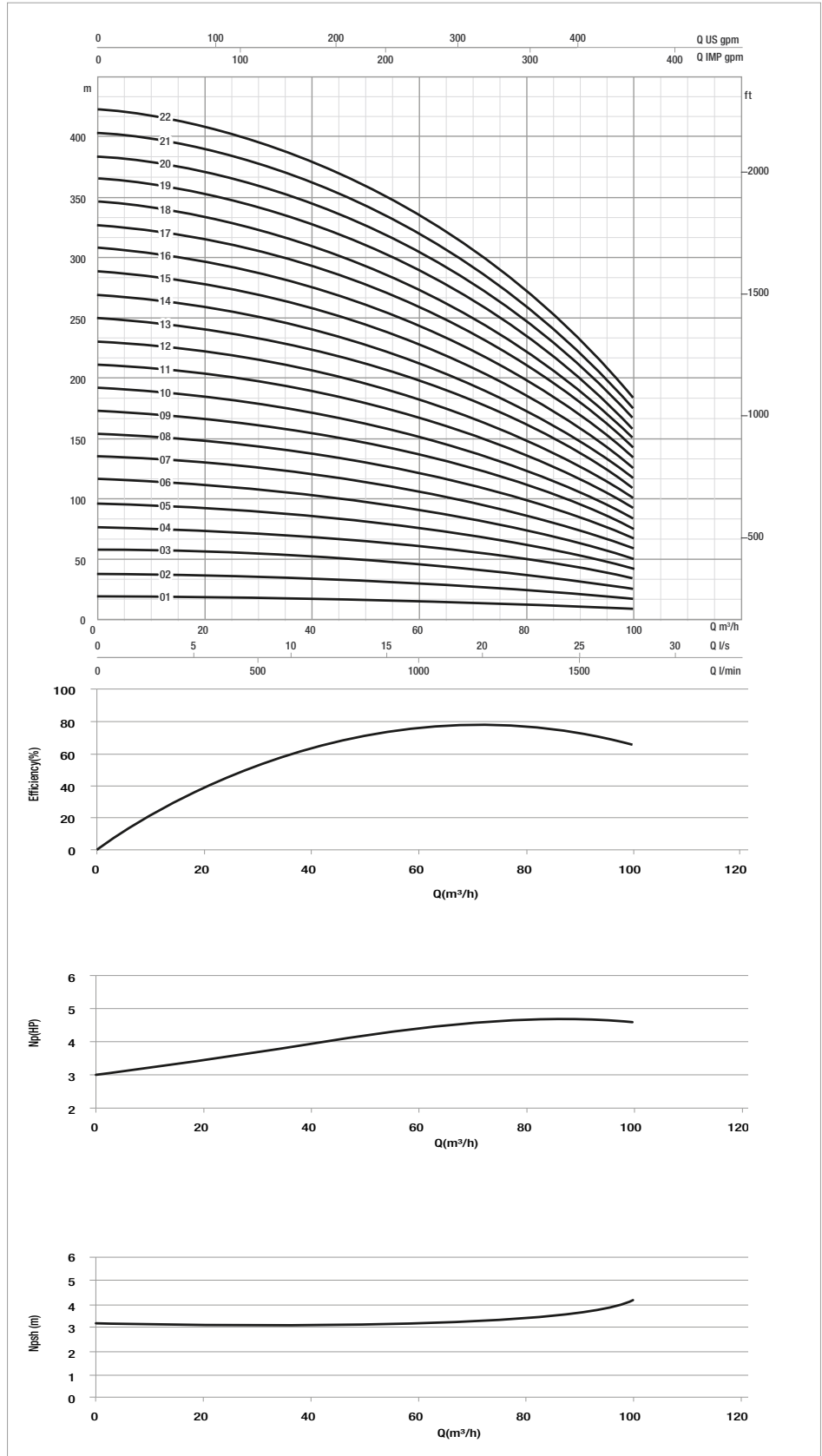
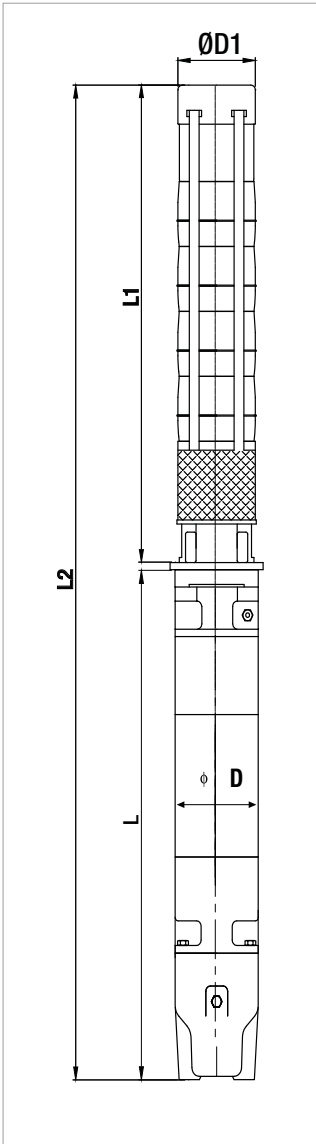
MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS7A 01	6GF	4	5,5	10,6	●	●	1172	601	571	141	172	67
SS7A 02	6GF	7,5	10	18	●	●	1360	661	699	141	172	77
	TR6	7,5	10	18	○	●	1516	817	699	144	172	83
SS7A 03	6GF	11	15	25,5	●	●	1558	731	827	141	172	89
	TR6	11	15	25	○	●	1704	877	827	144	172	94
SS7A 04	6GF	15	20	33,4	●	●	1741	786	955	141	172	99
	TR6	15	20	32	○	●	1932	977	955	144	172	115
SS7A 05	6GF	18,5	25	41	●	●	1944	861	1083	141	172	111
	TR6	18,5	25	39	○	●	2120	1037	1083	144	172	122
SS7A 06	6GF	22	30	47	●	●	2132	921	1211	141	172	120,3
	TR6	22	30	49	○	●	2278	1067	1211	144	172	141
SS7A 07	6GF	26	35	57	●	●	2319	980	1339	141	172	128
	TR6	26	35	58	○	●	2476	1137	1339	144	172	155
SS7A 08	6GF	30	40	61,5	●	●	2518	1051	1467	141	172	143
	TR6	30	40	65	○	●	2659	1192	1467	144	172	164
SS7A 09	6GF	37	50	79,3	●	●	2776	1181	1595	141	172	160
	TR6	37	50	80	○	●	2887	1292	1595	144	172	171
SS7A 10	6GF	37	50	79,3	●	●	2904	1181	1723	141	172	164
	TR6	37	50	80	○	●	3015	1292	1723	144	172	175
SS7A 11	TR8	45	60	92	○	●	3121	1270	1851	192	172	243
SS7A 12	TR8	45	60	92	○	●	3249	1270	1979	192	172	247
SS7A 13	TR8	55	75	109	○	●	3457	1350	2107	192	172	266
SS7A 14	TR8	55	75	109	○	●	3585	1350	2235	192	172	270
SS7A 15	TR8	55	75	109	○	●	3713	1350	2363	192	172	274
SS7A 16	TR8	63	85	126	○	●	3981	1490	2491	192	172	304
SS7A 17	TR8	75	100	145	○	●	4209	1590	2619	192	172	326
SS7A 18	TR8	75	100	145	○	●	4337	1590	2747	192	172	330
SS7A 19	TR8	75	100	145	○	●	4465	1590	2875	192	172	334
SS7A 20	TR8	75	100	145	○	●	4593	1590	3003	192	172	338
SS7A 21	TR8	75	100	145	○	●	4721	1590	3131	192	172	342
SS7A 22	TR8	92	125	177	○	●	5089	1830	3259	192	172	392

\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6-8" water-filled rewindable motor.

● Allowed  
○ Only PE2 + PA version

# SS7A

## SUBMERSIBLE PUMPS



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING	
	P2 NOMINAL		Q=m <sup>3</sup> h	0	20	30	40	50	60	70	80	90	100		115
	kW	HP	Q=l/min	0	333,3	500	666,6	833,3	1000	1166,6	1333,3	1500	1666,6		1916,6
SS7B 01	5,5	7,5	H (m)	21	21	-	20	20	19	18	17	16	14	11	6"
SS7B 02	11	15		43	43	-	41	39	38	36	34	32	28	21	6"
SS7B 03	15	20		64	64	-	61	59	56	54	51	47	43	32	6"
SS7B 04	22	30		85	86	-	81	78	75	72	68	63	57	43	6"
SS7B 05	30	40		106	107	-	101	98	94	90	85	79	71	54	6"
SS7B 06	37	50		128	128	-	122	117	113	108	102	95	85	64	6"
SS7B 07	37	50		149	150	-	142	137	132	126	119	111	100	75	6"
SS7B 08	45	60		170	171	-	162	156	150	144	136	126	114	86	8"
SS7B 09	45	60		192	193	-	183	176	169	162	153	142	128	96	8"
SS7B 10	55	75		213	214	-	203	196	188	180	170	158	142	107	8"
SS7B 11	63	85		234	235	-	223	215	207	197	187	174	157	118	8"
SS7B 12	75	100		256	257	-	243	235	225	215	204	190	171	128	8"
SS7B 13	75	100		277	278	-	264	254	244	233	221	206	185	139	8"
SS7B 14	75	100		298	300	-	284	274	263	251	238	221	199	150	8"
SS7B 15	92	125		319	321	-	304	293	282	269	255	237	214	161	8"
SS7B 16	92	125		341	342	-	325	313	301	287	272	253	228	171	8"
SS7B 17	92	125		362	364	-	345	332	319	305	289	269	242	182	8"
SS7B 18	110	150		383	385	-	365	352	338	323	306	285	256	193	8"
SS7B 19	110	150		405	407	-	385	372	357	341	323	300	271	203	8"
SS7B 20	110	150		426	428	-	406	391	376	359	340	316	285	214	8"



### ELECTRICAL DATA AND DIMENSIONS

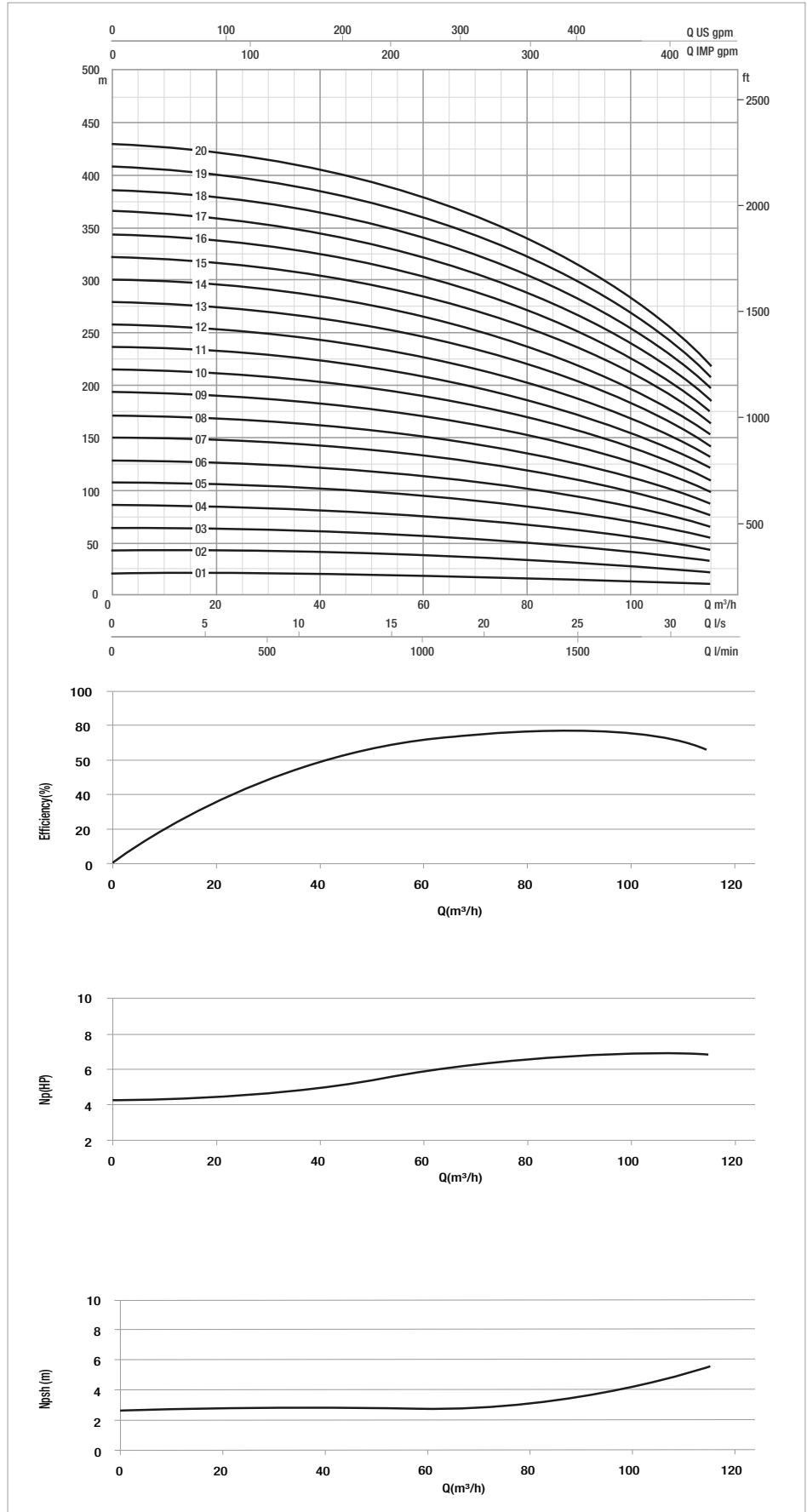
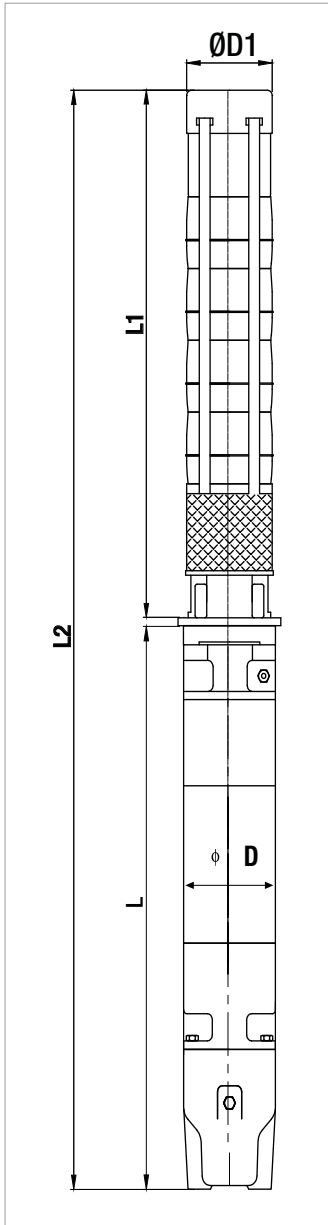
MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS7B 01	6GF	5,5	7,5	14	●	●	1202	631	571	141	172	70
	TR6	5,5	7,5	13	○	●	1358	787	571	144	172	76
SS7B 02	6GF	11	15	25,5	●	●	1430	731	699	141	172	85
	TR6	11	15	25	○	●	1576	877	699	144	172	90
SS7B 03	6GF	15	20	33,4	●	●	1613	786	827	141	172	95
	TR6	15	20	32	○	●	1804	977	827	144	172	111
SS7B 04	6GF	22	30	47	●	●	1876	921	955	141	172	112,3
	TR6	22	30	49	○	●	2022	1067	955	144	172	133
SS7B 05	6GF	30	40	61,5	●	●	2134	1051	1083	141	172	131
	TR6	30	40	65	○	●	2275	1192	1083	144	172	152
SS7B 06	6GF	37	50	79,3	●	●	2392	1181	1211	141	172	148
	TR6	37	50	80	○	●	2503	1292	1211	144	172	159
SS7B 07	6GF	37	50	79,3	●	●	2520	1181	1339	141	172	152
	TR6	37	50	80	○	●	2631	1292	1339	144	172	163
SS7B 08	TR8	45	60	92	○	●	2737	1270	1467	192	172	231
SS7B 09	TR8	45	60	92	○	●	2865	1270	1595	192	172	235
SS7B 10	TR8	55	75	109	○	●	3073	1350	1723	192	172	254
SS7B 11	TR8	63	85	126	○	●	3341	1490	1851	192	172	284
SS7B 12	TR8	75	100	145	○	●	3569	1590	1979	192	172	307
SS7B 13	TR8	75	100	145	○	●	3697	1590	2107	192	172	311
SS7B 14	TR8	75	100	145	○	●	3825	1590	2235	192	172	315
SS7B 15	TR8	92	125	177	○	●	4193	1830	2363	192	172	365
SS7B 16	TR8	92	125	177	○	●	4321	1830	2491	192	172	369
SS7B 17	TR8	92	125	177	○	●	4449	1830	2619	192	172	373
SS7B 18	TR8	110	150	213	○	●	4807	2060	2747	192	172	427
SS7B 19	TR8	110	150	213	○	●	4935	2060	2875	192	172	431
SS7B 20	TR8	110	150	213	○	●	5063	2060	3003	192	172	435

\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6-8" water-filled rewindable motor.

●	Allowed
○	Only PE2 + PA version

# SS7B

## SUBMERSIBLE PUMPS



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.



## TECHNICAL DATA

**Performance range:** flow up to 210 m<sup>3</sup>/h and max head of 555 m

**Max. quantity of sand/silt:** 50g/m<sup>3</sup>

**Max. ambient temperature:** 30°C (50°C available on request)

**Outlet connection diameter (inside threaded):** 6"

**Nr of starts:** refer to the motor specification

**Motor Cooling flow:** refer to the motor specification

**Installation:** horizontal or vertical, refer to the motor specification

## APPLICATIONS

Multistage mixed-flow borehole electric pumps, completely made in stainless steel (AISI 304L or AISI 316 on request), usable for wells from a minimum diameter equal to pump size or greater and capable of developing a wide range of Flows and Heads.

These pumps can be used in a wide range of lifting, distributing, and pressuring application: domestic and general water supply; sprinkler and drip irrigations systems; fire-fighting installations; lowering of groundwater level; industrial supplies as mining, hot springs, autoclaves and tanks.

These pumps are suitable both for standard water and for aggressive water applications by choosing the proper manufacturing material (AISI 304L or AISI 316) both for hydraulic part and motor.

Special version of motors with PE2+PA windings can be used on request for high-temperature water applications up to maximum 50°C.

Pumps can be installed both vertically and horizontally simply by removing the non-return valve and adding a cooling sleeve to the suction case (the only remark is to check the motor applicability to horizontal operations, refer to the motor specifications section).

## CONSTRUCTION FEATURES OF PUMP

Mixed flow pumps with diffusers, impellers, brackets, suction case and discharge case completely made of stainless steel AISI 304 in order to provide maximum strength, durability, wear and tear resistance.

The impellers are balanced and locked to the shaft with a specially shaped collet and nut coupling, in order to guarantee ease-to-assembly feature and avoid vibration sensitive malfunctions and noise increase during rotation.

Rubber bearings that drive the shaft are water lubricated and have sand channels to make enable the sand particles leave the pump with the pumped liquid (maximum permissible sand content 50 gr/m<sup>3</sup>).

Built-in non returned valve provided in order to minimize local friction losses.

Stainless steel strainer provided in order to prevent particles over a certain size from entering the pump.

Coupling with 6", 8" or 10" motor depending on the power requested by hydraulic part:

- 6GF: 6" canned submersible motor
- TR6: 6" rewindable submersible motor
- TR8: 8" rewindable submersible motor
- TR10: 10" rewindable submersible motor

For inverter application refer to the detailed motor specification.

## ON REQUEST:

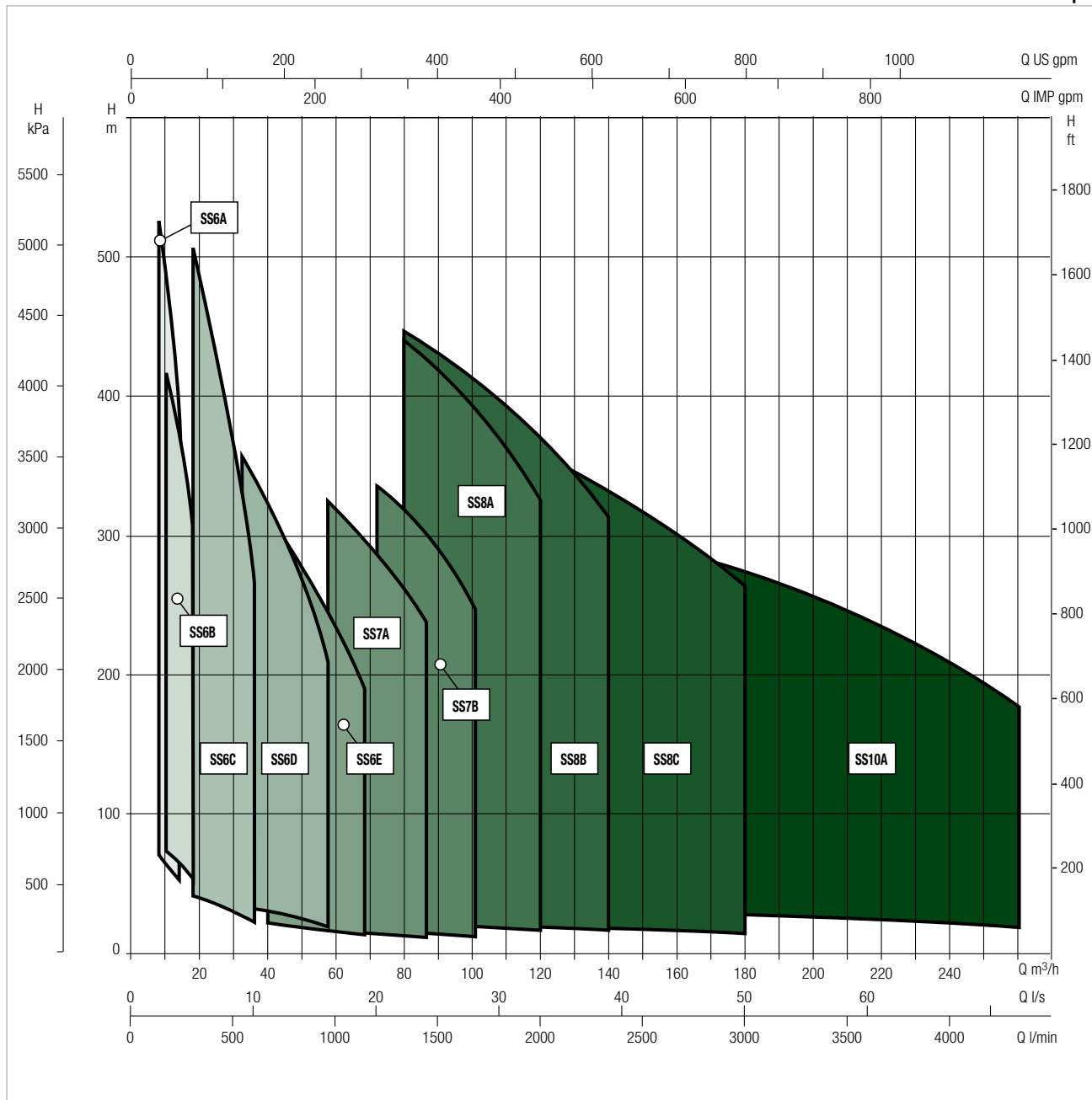
- Pump body stainless steel AISI 316 for aggressive water application
- Impellers stainless steel AISI 316
- Motors in full stainless steel AISI 316 for aggressive water application
- Star/Delta starting version
- Special version of the motor for high temperature application
- Non-standard power coupling

### PERFORMANCE RANGE

The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

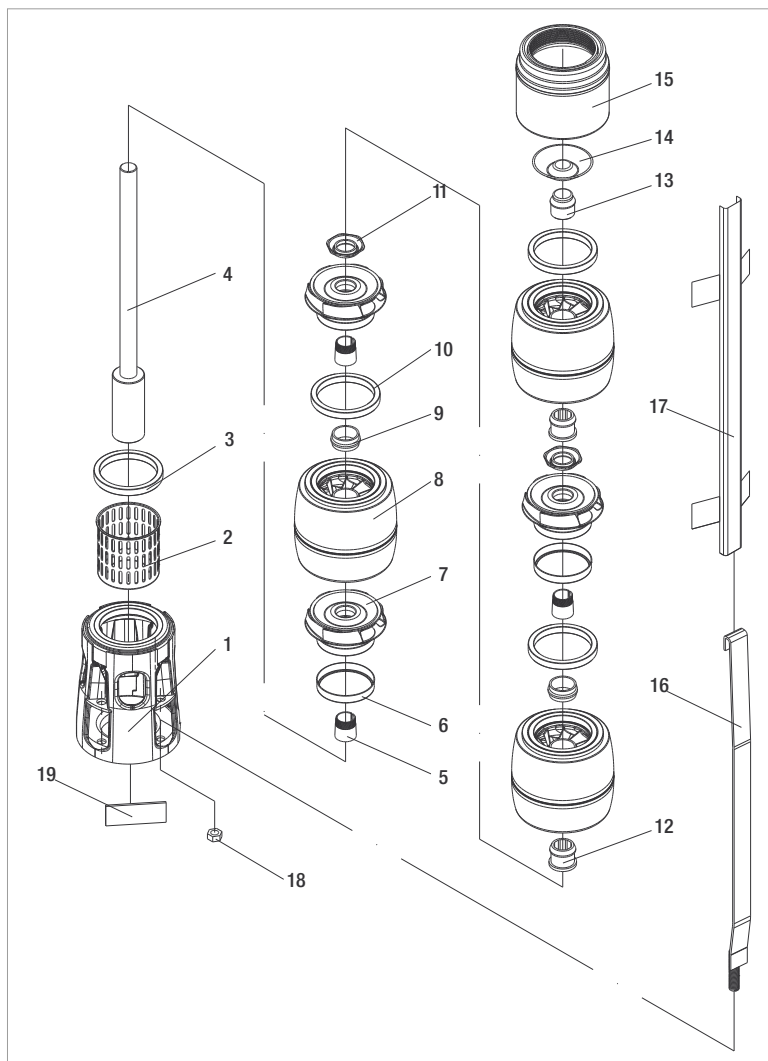
#### GRAPHIC SELECTION TABLE

50 Hz - 2900 r.p.m.

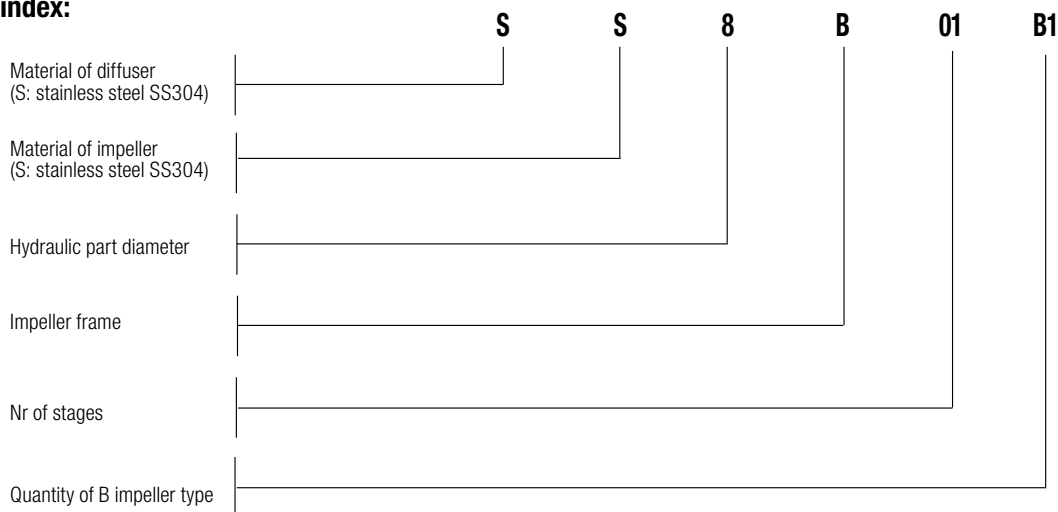


### MATERIALS

N°	PARTS	MATERIALS
1	SUCTION CASE	STAINLESS STEEL (AISI 304L)
2	FILTER	STAINLESS STEEL (AISI 304L)
3	SUCTION CASE WEAR RING	BRONZE (ASTM B145-4A)
4	PUMP SHAFT	STAINLESS STEEL (AISI 420)
5	COLLET	STAINLESS STEEL
6	IMPELLER WEAR RING	STAINLESS STEEL (AISI 304)
7	IMPELLER	STAINLESS STEEL (AISI 304L)
8	DIFFUSER	STAINLESS STEEL (AISI 304L)
9	INTERMEDIATE BEARING	RUBBER
10	DIFFUSER WEAR RING	RUBBER
11	NUT FOR STOP RING	STAINLESS STEEL (AISI 304L)
12	BEARING	RUBBER
13	SHAFT STOPPER	BRONZE (ASTM B145-4A)
14	VALVE	STAINLESS STEEL (AISI 304)
15	DISCHARGE CASE	STAINLESS STEEL (AISI 304)
16	TIE ROD	STAINLESS STEEL (AISI 304L)
17	CABLE GUARD	STAINLESS STEEL (AISI 304)
18	TIE ROD NUT	STAINLESS STEEL (AISI 303)
19	NAME PLATE	STAINLESS STEEL (AISI 304)



**- Denomination index:**  
(example)



### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m³h	0	30	70	80	90	100	110	120	130	140	
	kW	HP	Q=l/min	0	500	1166,6	1333,3	1500	1666,6	1833,3	2000	2166,6	2333,3	
SS8A 01	7,5	10	H (m)	28	26	23	22	21	20	18	16	15	12	6"
SS8A 02	15	20		56	52	46	44	42	39	36	33	29	24	6"
SS8A 03	22	30		83	78	69	66	63	59	54	49	44	37	6"
SS8A 04	30	40		111	104	91	88	83	78	73	66	58	49	6"
SS8A 05	37	50		139	129	114	110	104	98	91	82	73	61	6"
SS8A 06	45	60		167	155	137	131	125	118	109	99	87	73	8"
SS8A 07	55	75		194	181	160	153	146	137	127	115	102	86	8"
SS8A 08	63	85		222	207	183	175	167	157	145	132	116	98	8"
SS8A 09	75	100		250	233	206	197	188	176	163	148	131	110	8"
SS8A 10	75	100		278	259	229	219	208	196	182	165	145	122	8"
SS8A 11	92	125		305	285	252	241	229	216	200	181	160	135	8"
SS8A 12	92	125		333	311	274	263	250	235	218	198	174	147	8"
SS8A 13	92	125		361	337	297	285	271	255	236	214	189	159	8"
SS8A 14	110	150		389	362	320	307	292	274	254	231	203	171	8"
SS8A 15	110	150		416	388	343	329	313	294	272	247	218	184	8"
SS8A 16	132	180		444	414	366	351	333	313	290	264	232	196	10"
SS8A 17	132	180		472	440	389	373	354	333	309	280	247	208	10"
SS8A 18	132	180		500	466	412	394	375	353	327	297	262	220	10"
SS8A 19	147	200		527	492	435	416	396	372	345	313	276	233	10"
SS8A 20	147	200		555	518	457	438	417	392	363	330	291	245	10"

### ELECTRICAL DATA AND DIMENSIONS

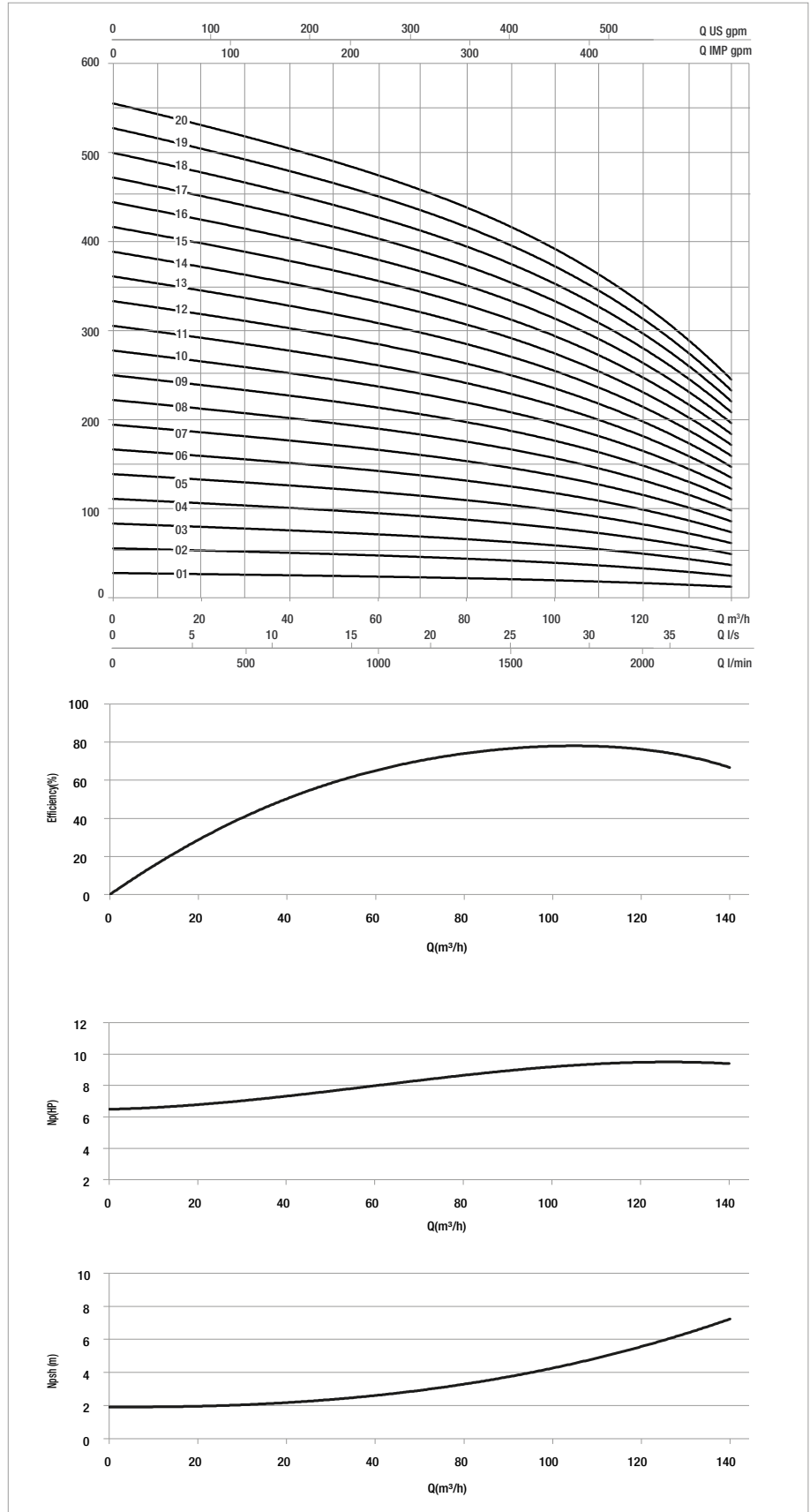
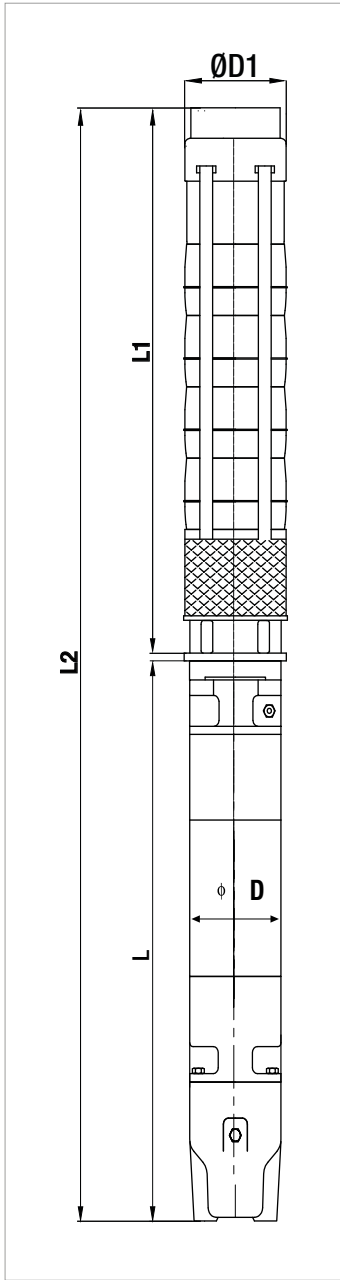
MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS8A 01	6GF	7,5	10	18	●	●	1347	661	686	141	213	79
	TR6	7,5	10	18	○	●	1503	817	686	144	213	82
SS8A 02	6GF	15	20	33,4	●	●	1628	786	842	141	213	99
	TR6	15	20	32	○	●	1819	977	842	144	213	115
SS8A 03	6GF	22	30	47	●	●	1918	921	997	141	213	119,3
	TR6	22	30	49	○	●	2064	1067	997	144	213	140
SS8A 04	6GF	30	40	61,5	●	●	2204	1051	1153	141	213	140
	TR6	30	40	65	○	●	2345	1192	1153	144	213	161
SS8A 05	6GF	37	50	79,3	●	●	2490	1181	1309	141	213	159
	TR6	37	50	80	○	●	2601	1292	1309	144	213	170
SS8A 06	TR8	45	60	92	○	●	2735	1270	1465	192	213	241
SS8A 07	TR8	55	75	109	○	●	2970	1350	1620	192	213	262
SS8A 08	TR8	63	85	126	○	●	3266	1490	1776	192	213	294
SS8A 09	TR8	75	100	145	○	●	3522	1590	1932	192	213	320
SS8A 10	TR8	75	100	145	○	●	3677	1590	2087	192	213	326
SS8A 11	TR8	92	125	177	○	●	4073	1830	2243	192	213	378
SS8A 12	TR8	92	125	177	○	●	4229	1830	2399	192	213	384
SS8A 13	TR8	92	125	177	○	●	4384	1830	2554	192	213	391
SS8A 14	TR8	110	150	213	○	●	4770	2060	2710	192	213	447
SS8A 15	TR8	110	150	213	○	●	4926	2060	2866	192	213	453
SS8A 16	TR10	132	180	257	○	●	4892	1870	3022	237	213	562
SS8A 17	TR10	132	180	257	○	●	5047	1870	3177	237	213	568
SS8A 18	TR10	132	180	257	○	●	5203	1870	3333	237	213	574
SS8A 19	TR10	147	200	300	○	●	5559	2070	3489	237	213	645
SS8A 20	TR10	147	200	300	○	●	5714	2070	3644	237	213	652

\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6-8-10" water-filled rewindable motor.

●	Allowed
○	Only PE2 + PA version

# SS8A

## SUBMERSIBLE PUMPS



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.



### PERFORMANCE 50 Hz - 2 POLES

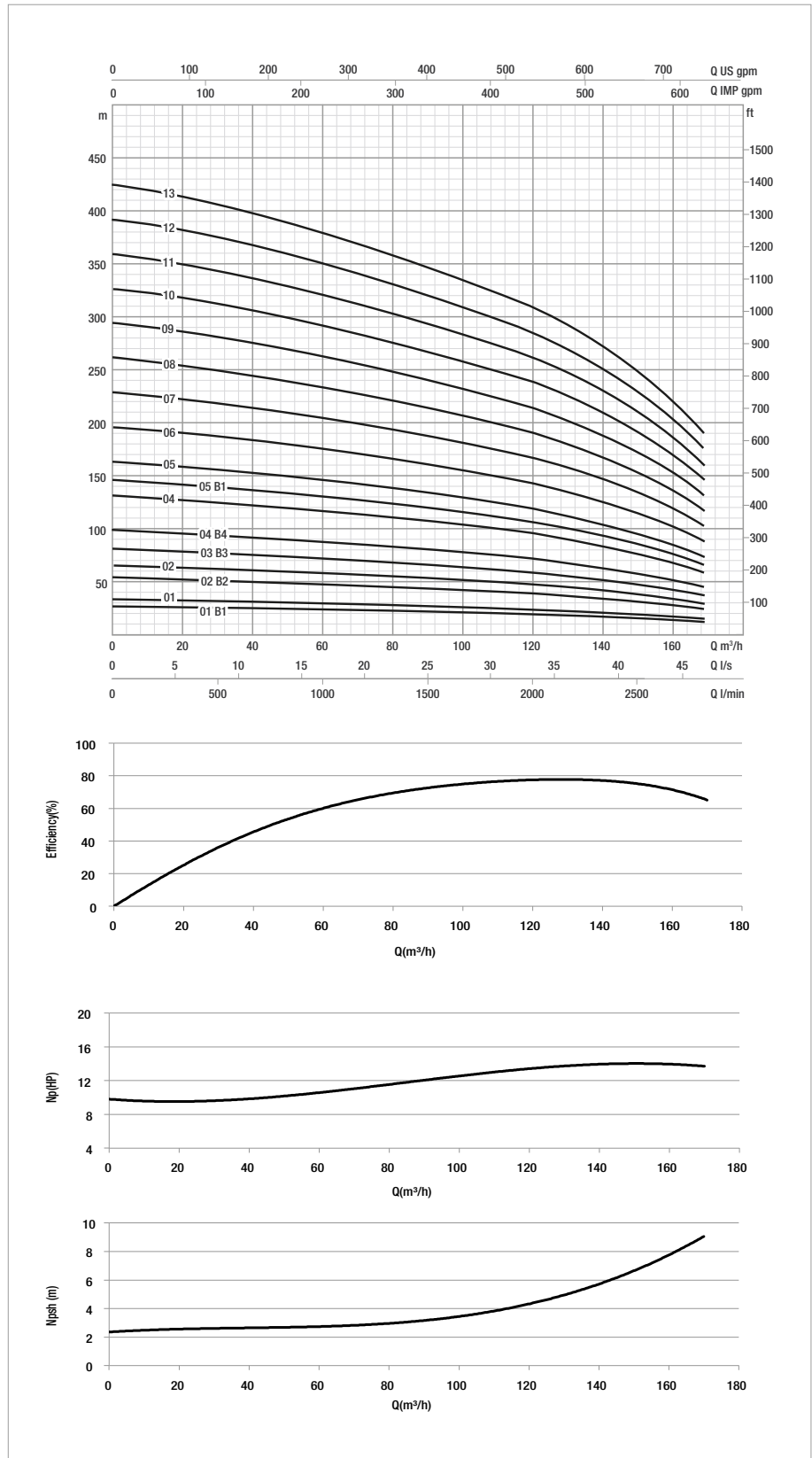
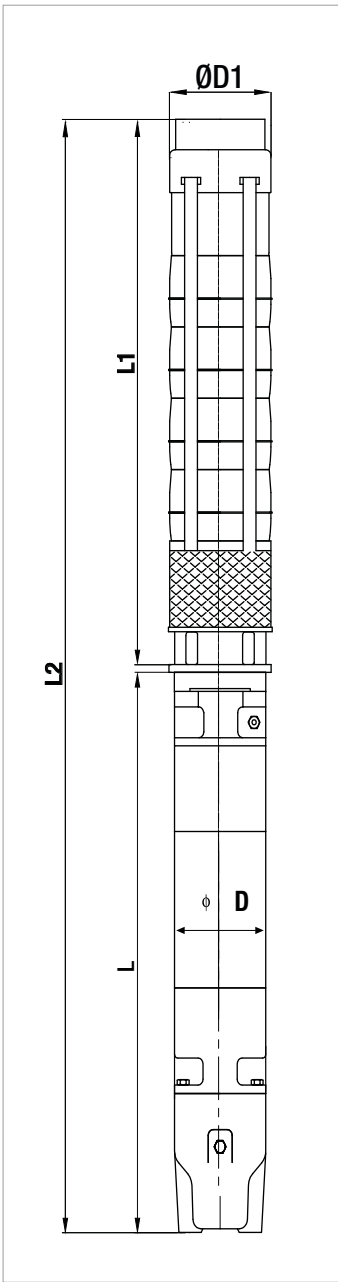
MODEL	ELECTRICAL DATA		HYDRAULIC DATA										STANDARD MOTOR COUPLING	
	P2 NOMINAL		Q=m <sup>3</sup> h	0	40	70	90	120	130	140	150	160		170
	kW	HP	Q=l/min	0	666,6	1166,6	1500	2000	2166,6	2333,3	2500	2666,6		2833,3
SS8B 01.B1	9,3	12,5	H (m)	27	25	23	22	19	18	17	16	14	12	6"
SS8B 01	11	15		33	31	28	27	24	23	21	19	17	14	6"
SS8B 02.B2	18,5	25		54	50	46	44	39	37	34	32	28	24	6"
SS8B 02	22	30		65	61	57	53	48	45	42	38	34	29	6"
SS8B 03.B3	30	40		80	75	70	66	58	55	52	47	42	35	6"
SS8B 03	37	50		98	92	85	80	71	68	63	58	51	43	6"
SS8B 04	45	60		131	122	113	107	95	90	84	77	68	58	8"
SS8B 05.B3	55	75		146	136	126	119	106	100	94	86	76	64	8"
SS8B 05	55	75		163	153	142	134	119	113	105	96	85	72	8"
SS8B 06	75	100		196	183	170	160	143	135	126	115	102	87	8"
SS8B 07	75	100		228	214	198	187	166	158	147	135	119	101	8"
SS8B 08	92	125		261	245	227	214	190	180	168	154	136	115	8"
SS8B 09	110	150		294	275	255	240	214	203	189	173	153	130	8"
SS8B 10	110	150	326	306	283	267	238	225	210	192	171	144	8"	
SS8B 11	132	180	359	336	312	294	261	248	231	211	188	159	10"	
SS8B 12	132	180	392	367	340	320	285	270	252	231	205	173	10"	
SS8B 13	147	200	424	397	368	347	309	293	273	250	222	187	10"	

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS8B 01.B1	6GF	9,3	12,5	22	●	●	1372	686	686	141	213	82
	TR6	9,3	12,5	21	○	●	1533	847	686	144	213	87
SS8B 01	6GF	11	15	25,5	●	●	1417	731	686	141	213	87
	TR6	11	15	25	○	●	1563	877	686	144	213	92
SS8B 02.B2	6GF	18,5	25	41	●	●	1703	861	842	141	213	108
	TR6	18,5	25	39	○	●	1879	1037	842	144	213	119
SS8B 02	6GF	22	30	47	●	●	1763	921	842	141	213	113,3
	TR6	22	30	49	○	●	1909	1067	842	144	213	134
SS8B 03.B3	6GF	30	40	61,5	●	●	2048	1051	997	141	213	134
	TR6	30	40	65	○	●	2189	1192	997	144	213	155
SS8B 03	6GF	37	50	79,3	●	●	2178	1181	997	141	213	147
	TR6	37	50	80	○	●	2289	1292	997	144	213	158
SS8B 04	TR8	45	60	92	○	●	2423	1270	1153	192	213	229
SS8B 05.B3	TR8	55	75	109	○	●	2659	1350	1309	192	213	250
SS8B 05	TR8	55	75	109	○	●	2659	1350	1309	192	213	250
SS8B 06	TR8	75	100	145	○	●	3055	1590	1465	192	213	302
SS8B 07	TR8	75	100	145	○	●	3210	1590	1620	192	213	308
SS8B 08	TR8	92	125	177	○	●	3606	1830	1776	192	213	361
SS8B 09	TR8	110	150	213	○	●	3992	2060	1932	192	213	417
SS8B 10	TR8	110	150	213	○	●	4147	2060	2087	192	213	424
SS8B 11	TR10	132	180	257	○	●	4113	1870	2243	237	213	532
SS8B 12	TR10	132	180	257	○	●	4269	1870	2399	237	213	539
SS8B 13	TR10	147	200	300	○	●	4624	2070	2554	237	213	610

\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6-8-10" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### PERFORMANCE 50 Hz - 2 POLES

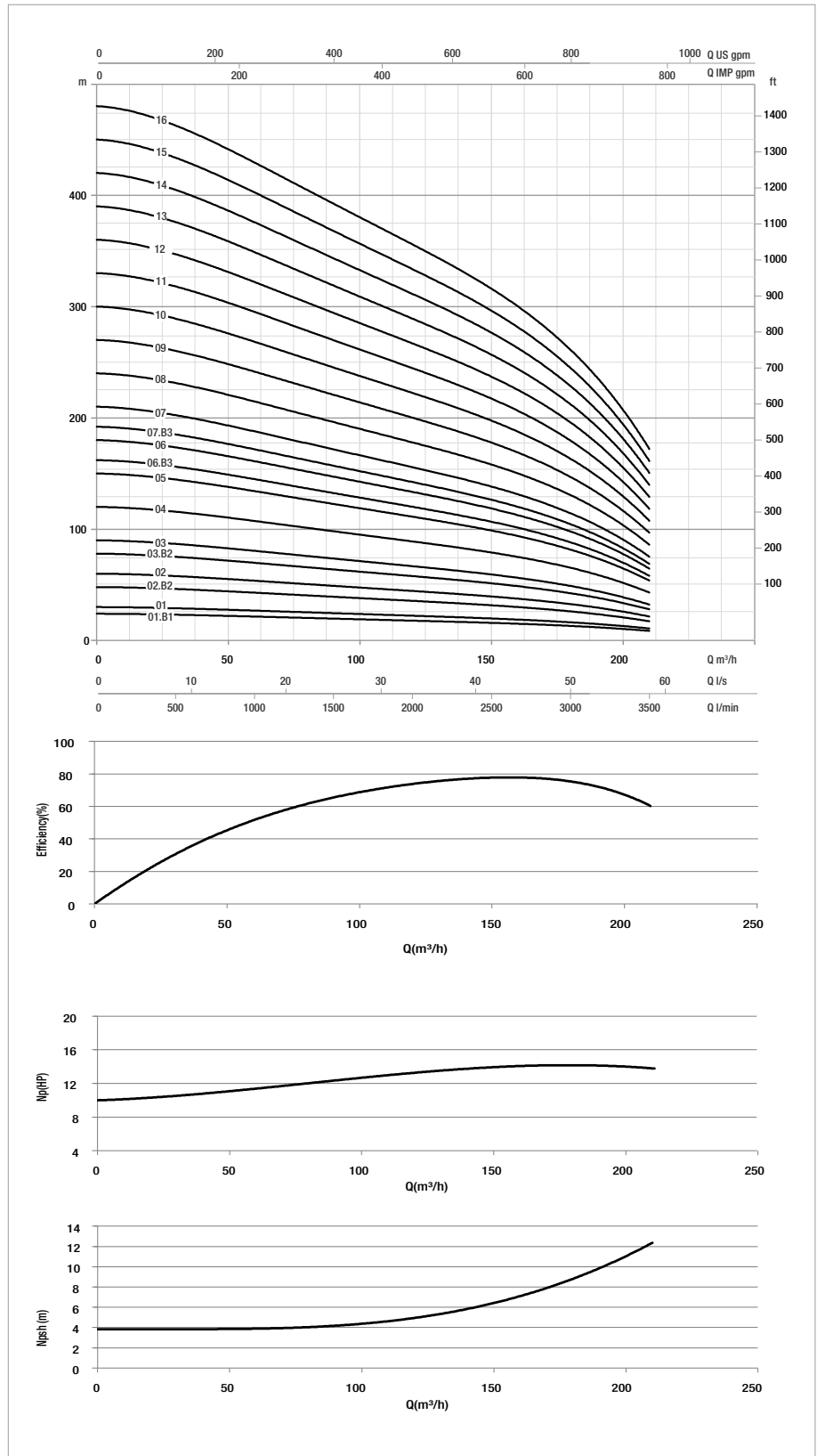
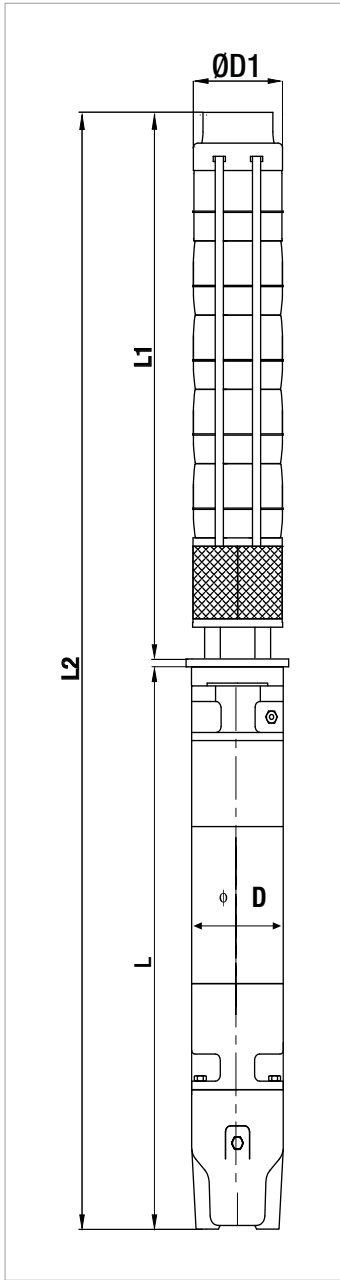
MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m³/h	0	50	70	90	110	130	150	170	190	210	
	kW	HP	Q=l/min	0	833,3	1166,6	1500	1833,3	2166,6	2500	2833,3	3166,6	3500	
SS8C 01.B1	9,3	12,5	H (m)	24	22	21	20	18	17	16	14	12	9	6"
SS8C 01	11	15		30	28	26	24	23	22	20	18	15	11	6"
SS8C 02.B2	18,5	25		48	44	42	39	37	34	32	28	23	17	6"
SS8C 02	22	30		60	55	52	49	26	43	40	35	29	22	6"
SS8C 03.B2	30	40		78	72	68	64	60	56	52	46	38	28	6"
SS8C 03	37	50		90	83	78	73	69	65	60	53	44	32	6"
SS8C 04	45	60		120	111	104	98	92	86	80	71	58	43	8"
SS8C 05	55	75		150	139	130	122	115	108	99	88	73	54	8"
SS8C 06.B3	63	85		162	150	141	132	124	116	107	95	79	58	8"
SS8C 06	75	100		180	166	156	147	138	129	119	106	88	65	8"
SS8C 07.B3	75	100		192	177	167	156	147	138	127	113	94	69	8"
SS8C 07	92	125		210	194	182	171	161	151	139	124	102	76	8"
SS8C 08	92	125		240	222	208	195	184	172	159	141	117	87	8"
SS8C 09	110	150		270	249	234	220	207	194	179	159	132	97	8"
SS8C 10	110	150		300	277	260	244	230	215	199	176	146	108	8"
SS8C 11	132	180		330	305	286	269	253	237	219	194	161	119	10"
SS8C 12	147	200	360	333	312	293	276	259	239	212	175	130	10"	
SS8C 13	147	200	390	360	338	318	299	280	258	229	190	141	10"	
SS8C 14	170	230	420	388	364	342	322	302	278	247	205	152	10"	
SS8C 15	190	260	450	416	390	366	345	323	298	265	219	162	10"	
SS8C 16	190	260	480	443	416	391	368	345	318	282	234	173	10"	

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS8C 01.B1	6GF	9,3	12,5	22	●	●	1372	686	686	141	226	84
	TR6	9,3	12,5	21	○	●	1533	847	686	144	226	89
SS8C 01	6GF	11	15	25,5	●	●	1417	731	686	141	226	89
	TR6	11	15	25	○	●	1563	877	686	144	226	94
SS8C 02.B2	6GF	18,5	25	41	●	●	1703	861	842	141	226	109
	TR6	18,5	25	39	○	●	1879	1037	842	144	226	120
SS8C 02	6GF	22	30	47	●	●	1763	921	842	141	226	114,3
	TR6	22	30	49	○	●	1909	1067	842	144	226	135
SS8C 03.B2	6GF	30	40	61,5	●	●	2048	1051	997	141	226	136
	TR6	30	40	65	○	●	2189	1192	997	144	226	157
SS8C 03	6GF	37	50	79,3	●	●	2178	1181	997	141	226	149
	TR6	37	50	80	○	●	2289	1292	997	144	226	160
SS8C 04	TR8	45	60	92	○	●	2423	1270	1153	192	226	230
SS8C 05	TR8	55	75	109	○	●	2659	1350	1309	192	226	252
SS8C 06.B3	TR8	63	85	126	○	●	2955	1490	1465	192	226	284
SS8C 06	TR8	75	100	145	○	●	3055	1590	1465	192	226	303
SS8C 07.B3	TR8	75	100	145	○	●	3210	1590	1620	192	226	310
SS8C 07	TR8	92	125	177	○	●	3450	1830	1620	192	226	356
SS8C 08	TR8	92	125	177	○	●	3606	1830	1776	192	226	362
SS8C 09	TR8	110	150	213	○	●	3992	2060	1932	192	226	419
SS8C 10	TR8	110	150	213	○	●	4147	2060	2087	192	226	425
SS8C 11	TR10	132	180	257	○	●	4113	1870	2243	237	226	534
SS8C 12	TR10	147	200	300	○	●	4469	2070	2399	237	226	605
SS8C 13	TR10	147	200	300	○	●	4624	2070	2554	237	226	612
SS8C 14	TR10	170	230	348	○	●	4930	2220	2710	237	226	658
SS8C 15	TR10	190	260	405	○	●	5266	2400	2866	237	226	704
SS8C 16	TR10	190	260	405	○	●	5422	2400	3022	237	226	711

\* 6GF motor: 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
 TR motor: 6-8-10" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.



SS10A

### TECHNICAL DATA

**Performance range:** flow up to 290 m<sup>3</sup>/h and max head of 385 m

**Max. quantity of sand/silt:** 50g/m<sup>3</sup>

**Max. ambient temperature:** 30°C (50°C available on request)

**Outlet connection diameter (inside threaded):** 6"

**Nr of starts:** refer to the motor specification

**Motor Cooling flow:** refer to the motor specification

**Installation:** horizontal or vertical, refer to the motor specification

### APPLICATIONS

Multistage mixed-flow borehole electric pumps, completely made in stainless steel (AISI 304L or AISI 316 on request), usable for wells from a minimum diameter equal to pump size or greater and capable of developing a wide range of Flows and Heads.

These pumps can be used in a wide range of lifting, distributing, and pressuring application: domestic and general water supply; sprinkler and drip irrigations systems; fire-fighting installations; lowering of groundwater level; industrial supplies as mining, hot springs, autoclaves and tanks.

These pumps are suitable both for standard water and for aggressive water applications by choosing the proper manufacturing material (AISI 304L or AISI 316) both for hydraulic part and motor.

Special version of motors with PE2+PA windings can be used on request for high-temperature water applications up to maximum 50°C.

Pumps can be installed both vertically and horizontally simply by removing the non-return valve and adding a cooling sleeve to the suction case (the only remark is to check the motor applicability to horizontal operations, refer to the motor specifications section).

### CONSTRUCTION FEATURES OF PUMP

Mixed flow pumps with diffusers, impellers, brackets, suction case and discharge case completely made of stainless steel AISI 304 in order to provide maximum strength, durability, wear and tear resistance.

The impellers are balanced and locked to the shaft with a specially shaped collet and nut coupling, in order to guarantee ease-to-assembly feature and avoid vibration sensitive malfunctions and noise increase during rotation.

Rubber bearings that drive the shaft are water lubricated and have sand channels to make enable the sand particles leave the pump with the pumped liquid (maximum permissible sand content 50 gr/m<sup>3</sup>).

Built-in non returned valve provided in order to minimize local friction losses.

Stainless steel strainer provided in order to prevent particles over a certain size from entering the pump.

Coupling with 6", 8" or 10" motor depending on the power requested by hydraulic part:

- 6GF: 6" canned submersible motor
- TR6: 6" rewindable submersible motor
- TR8: 8" rewindable submersible motor
- TR10: 10" rewindable submersible motor

For inverter application refer to the detailed motor specification.

### ON REQUEST:

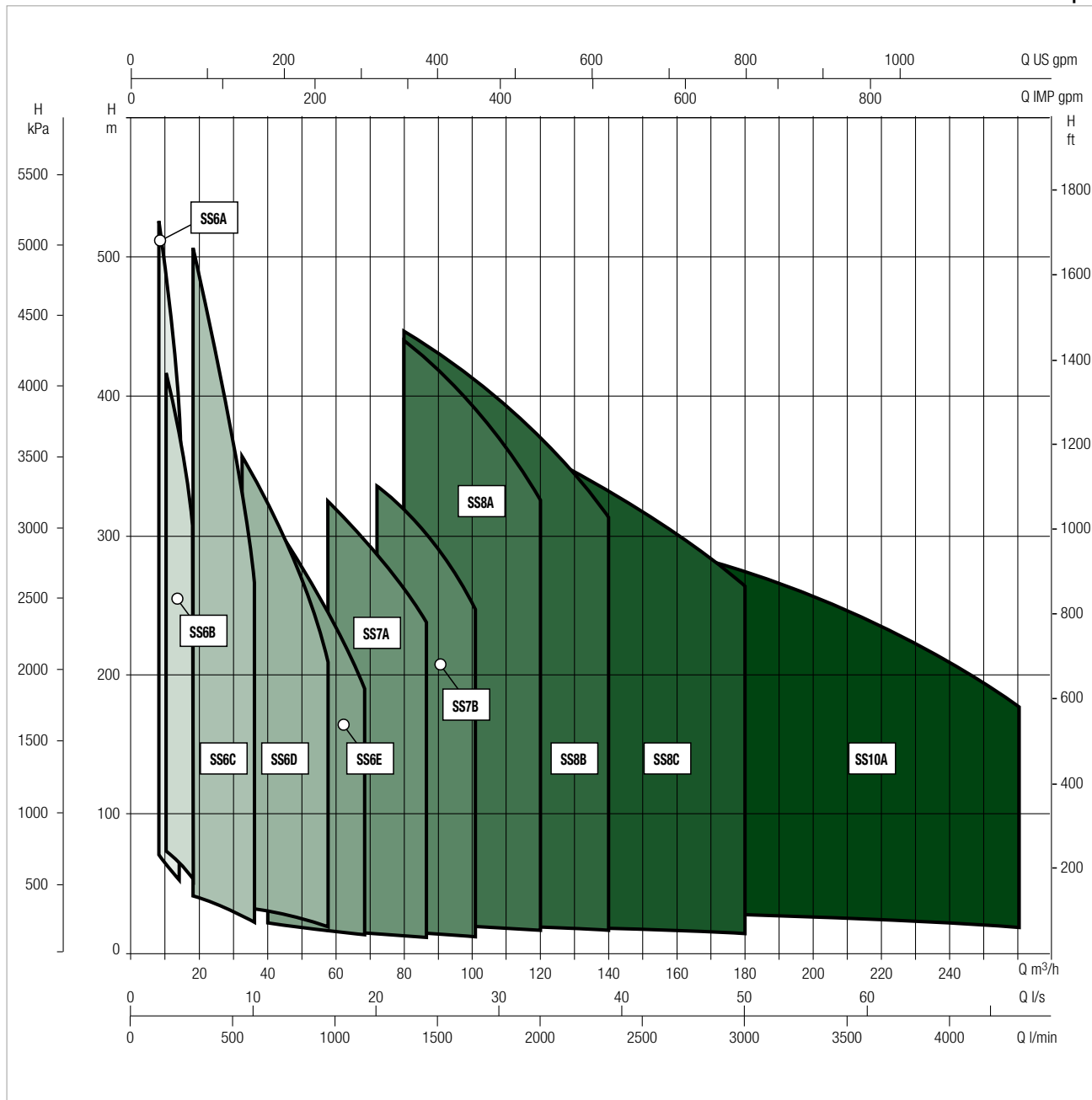
- Pump body stainless steel AISI 316 for aggressive water application
- Impellers stainless steel AISI 316
- Motors in full stainless steel AISI 316 for aggressive water application
- Star/Delta starting version
- Special version of the motor for high temperature application
- Non-standard power coupling

### PERFORMANCE RANGE

The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

#### GRAPHIC SELECTION TABLE

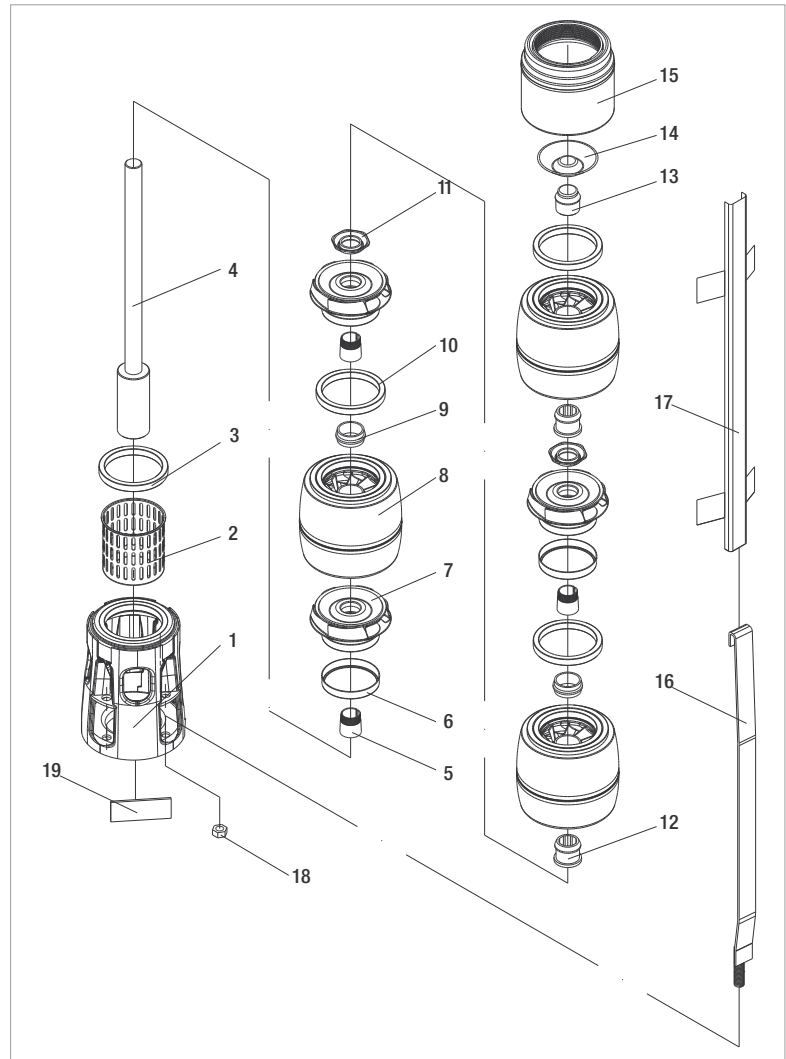
50 Hz - 2900 r.p.m.



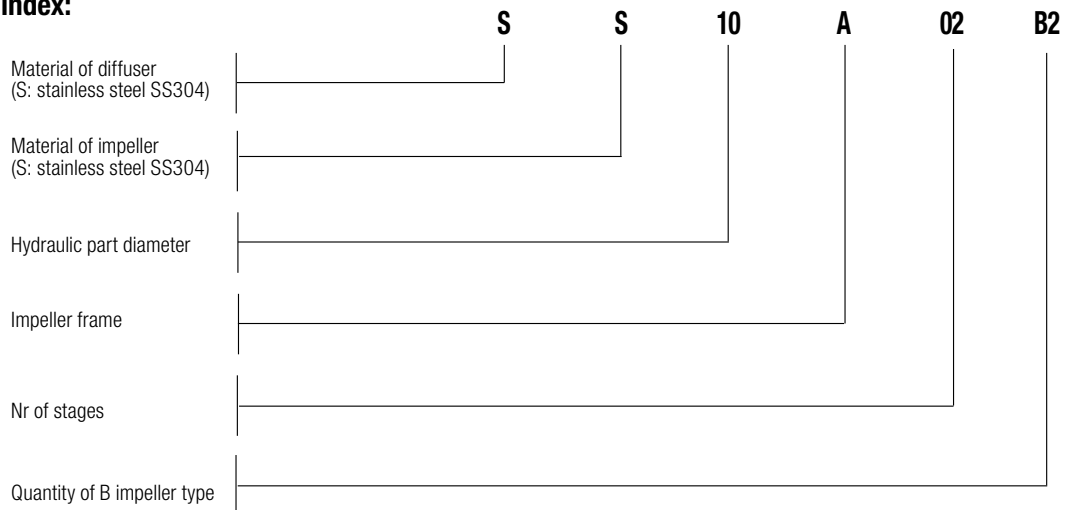


### MATERIALS

N°	PARTS	MATERIALS
1	SUCTION CASE	STAINLESS STEEL (AISI 304L)
2	FILTER	STAINLESS STEEL (AISI 304L)
3	SUCTION CASE WEAR RING	BRONZE (ASTM B145-4A)
4	PUMP SHAFT	STAINLESS STEEL (AISI 420)
5	COLLET	STAINLESS STEEL
6	IMPELLER WEAR RING	STAINLESS STEEL (AISI 304)
7	IMPELLER	STAINLESS STEEL (AISI 304L)
8	DIFFUSER	STAINLESS STEEL (AISI 304L)
9	INTERMEDIATE BEARING	RUBBER
10	DIFFUSER WEAR RING	RUBBER
11	NUT FOR STOP RING	STAINLESS STEEL (AISI 304L)
12	BEARING	RUBBER
13	SHAFT STOPPER	BRONZE (ASTM B145-4A)
14	VALVE	STAINLESS STEEL (AISI 304)
15	DISCHARGE CASE	STAINLESS STEEL (AISI 304)
16	TIE ROD	STAINLESS STEEL (AISI 304L)
17	CABLE GUARD	STAINLESS STEEL (AISI 304)
18	TIE ROD NUT	STAINLESS STEEL (AISI 303)
19	NAME PLATE	STAINLESS STEEL (AISI 304)



**- Denomination index:**  
(example)



### PERFORMANCE 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA											STANDARD MOTOR COUPLING
	P2 NOMINAL		Q=m <sup>3</sup> h	0	50	100	140	180	200	220	240	260	290	
	kW	HP	Q=l/min	0	833,3	1666,6	2333,3	3000	3333,3	3666,6	4000	4333,3	4833,3	
SS10A 01.B1	15	20	H (m)	29	27	25	22	20	19	18	16	15	11	6"
SS10A 01	18,5	25		39	36	33	30	27	25	24	22	19	15	6"
SS10A 02.B2	30	40		58	54	49	44	40	37	35	32	29	22	6"
SS10A 02	37	50		77	72	66	59	53	50	47	44	39	30	6"
SS10A 03.B3	45	60		87	81	74	66	59	56	53	49	44	34	8"
SS10A 03.B1	55	75		106	99	91	81	73	69	65	60	53	41	8"
SS10A 03	63	85		116	108	99	89	80	75	71	65	58	45	8"
SS10A 04.B2	75	100		135	126	115	103	93	88	82	76	68	53	8"
SS10A 04	75	100		155	145	132	119	106	100	94	87	78	60	8"
SS10A 05	92	125		194	181	165	148	133	125	118	109	97	75	8"
SS10A 06	110	150		232	217	198	178	159	151	141	131	117	91	8"
SS10A 07	132	180		271	253	231	207	186	176	165	152	136	106	10"
SS10A 08	147	200		310	289	264	237	212	201	189	174	156	121	10"
SS10A 09	170	230		349	325	298	267	239	226	212	196	175	136	10"
SS10A 10	190	260	387	362	331	296	265	251	236	218	195	151	10"	

### ELECTRICAL DATA AND DIMENSIONS

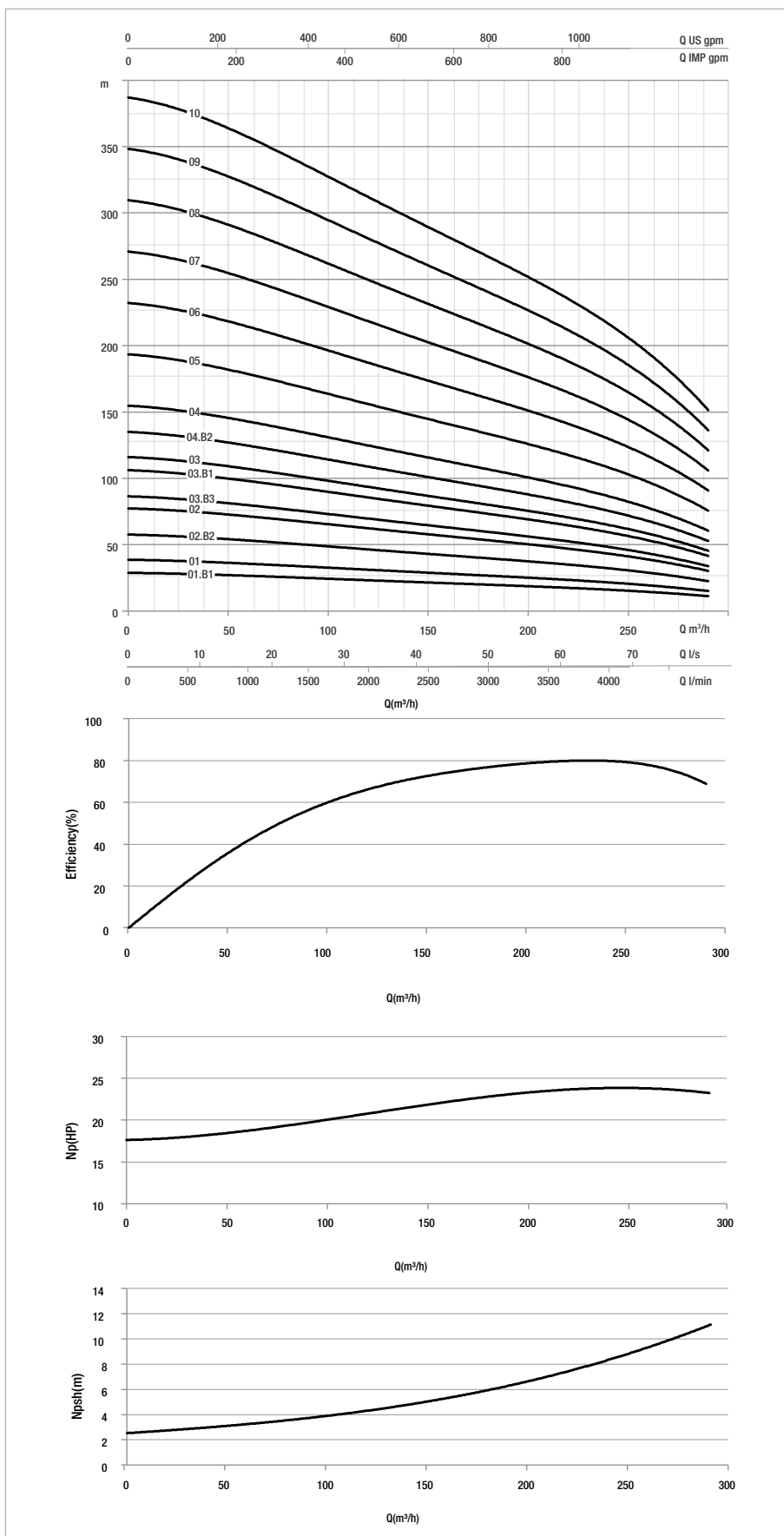
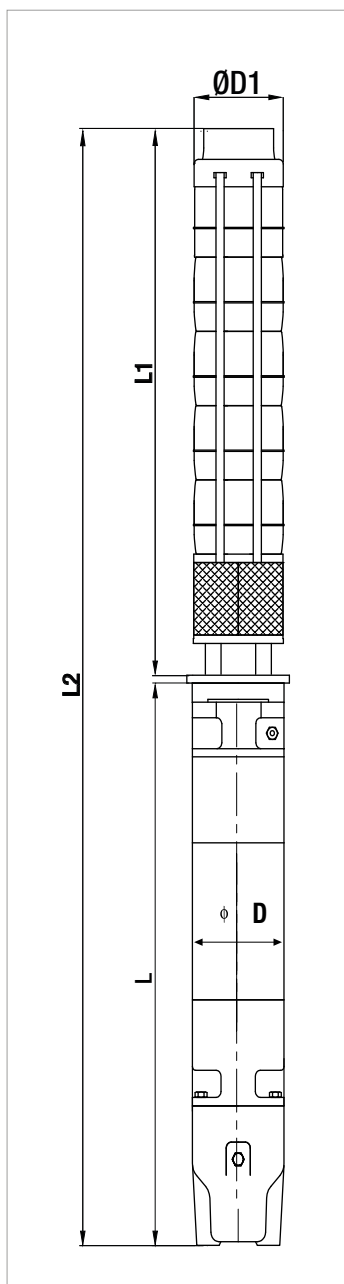
MODEL	MOTOR *	ELECTRICAL DATA				HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	TOTAL WEIGHT Kg
		P2 NOMINAL		In A	OPERATING BY INVERTER							
		kW	HP									
SS10A 01.B1	6GF	15	20	33,4	●	●	1580	786	794	141	247	105
	TR6	15	20	32	○	●	1771	977	794	144	247	121
SS10A 01	6GF	18,5	25	41	●	●	1655	861	794	141	247	113
	TR6	18,5	25	39	○	●	1831	1037	794	144	247	124
SS10A 02.B2	6GF	30	40	61,5	●	●	2021	1051	970	141	247	144
	TR6	30	40	65	○	●	2162	1192	970	144	247	165
SS10A 02	6GF	37	50	79,3	●	●	2151	1181	970	141	247	157
	TR6	37	50	80	○	●	2262	1292	970	144	247	168
SS10A 03.B3	TR8	45	60	92	○	●	2417	1270	1147	192	247	243
SS10A 03.B1	TR8	55	75	109	○	●	2497	1350	1147	192	247	258
SS10A 03	TR8	63	85	126	○	●	2637	1490	1147	192	247	284
SS10A 04.B2	TR8	75	100	145	○	●	2913	1590	1323	192	247	313
SS10A 04	TR8	75	100	145	○	●	2913	1590	1323	192	247	313
SS10A 05	TR8	92	125	177	○	●	3329	1830	1499	192	247	370
SS10A 06	TR8	110	150	213	○	●	3735	2060	1675	192	247	431
SS10A 07	TR10	132	180	257	○	●	3721	1870	1851	237	247	544
SS10A 08	TR10	147	200	300	○	●	4098	2070	2028	237	247	619
SS10A 09	TR10	170	230	348	○	●	4424	2220	2204	237	247	670
SS10A 10	TR10	190	260	405	○	●	4780	2400	2380	237	247	721

\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6-8-10" water-filled rewindable motor

●	Allowed
○	Only PE2 + PA version

# SS10A

## SUBMERSIBLE PUMPS



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 Kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.



SMC6

### TECHNICAL DATA

**Operating range:** up to 84 m<sup>3</sup>/h with head up to 452 m

**Pumped liquid:** clean, free of solids and abrasives, chemically neutral, with properties similar to water

**Starts/hour:** see the coupled motor

**Cooling flow:** see the coupled motor

**Maximum permitted amount of sand:** 40 g/m<sup>3</sup>

**Ambient temperature:** 30 °C

**Minimum recommended level on suction line:** 1 m

**Installation:** horizontal or vertical

**Electric pumps complying with the 2009/125/EC Directive (EcoDesign - ErP)**  
**M.E.I. ≥ 0,40**

### APPLICATIONS

Multistage semiaxial submersible electric pumps for wells measuring 6" or above, able to generate a broad range of flow rates and heads.

They are used extensively for the lifting, distribution and pressurisation of industrial water systems, the supply of pressure vessels and tanks, firefighting systems and irrigation systems.

Application with clean, non-aggressive water free from solids or abrasive substances.

### CONSTRUCTION FEATURES OF THE PUMP

Cast iron pump body treated with cathaphoresis paint coating and dynamically balanced impellers in microcast AISI 304 stainless steel coupled on the shaft with pull tab. Shaft guided with coaxial bush bearings and fully protected with bushes.

Pump with check valve of low pressure loss.

Threaded delivery port.

Coupling with motors of 4", 6" or 8" depending on the required hydraulic power:

4GG: encapsulated 4" submersible motor

4OL: 4" submersible motor in oil bath

6GF: encapsulated 6" submersible motor

TR6: rewindable 6" submersible motor

TR8: rewindable 8" submersible motor

Refer to the technical data sheets of the specific model for the electrical characteristics of the coupled motors and the specifications for operation with inverter.

### ON REQUEST

Motor in AISI 316 stainless steel for use in aggressive water.

Non-standard pump/motor couplings.

Star/Delta starting version.

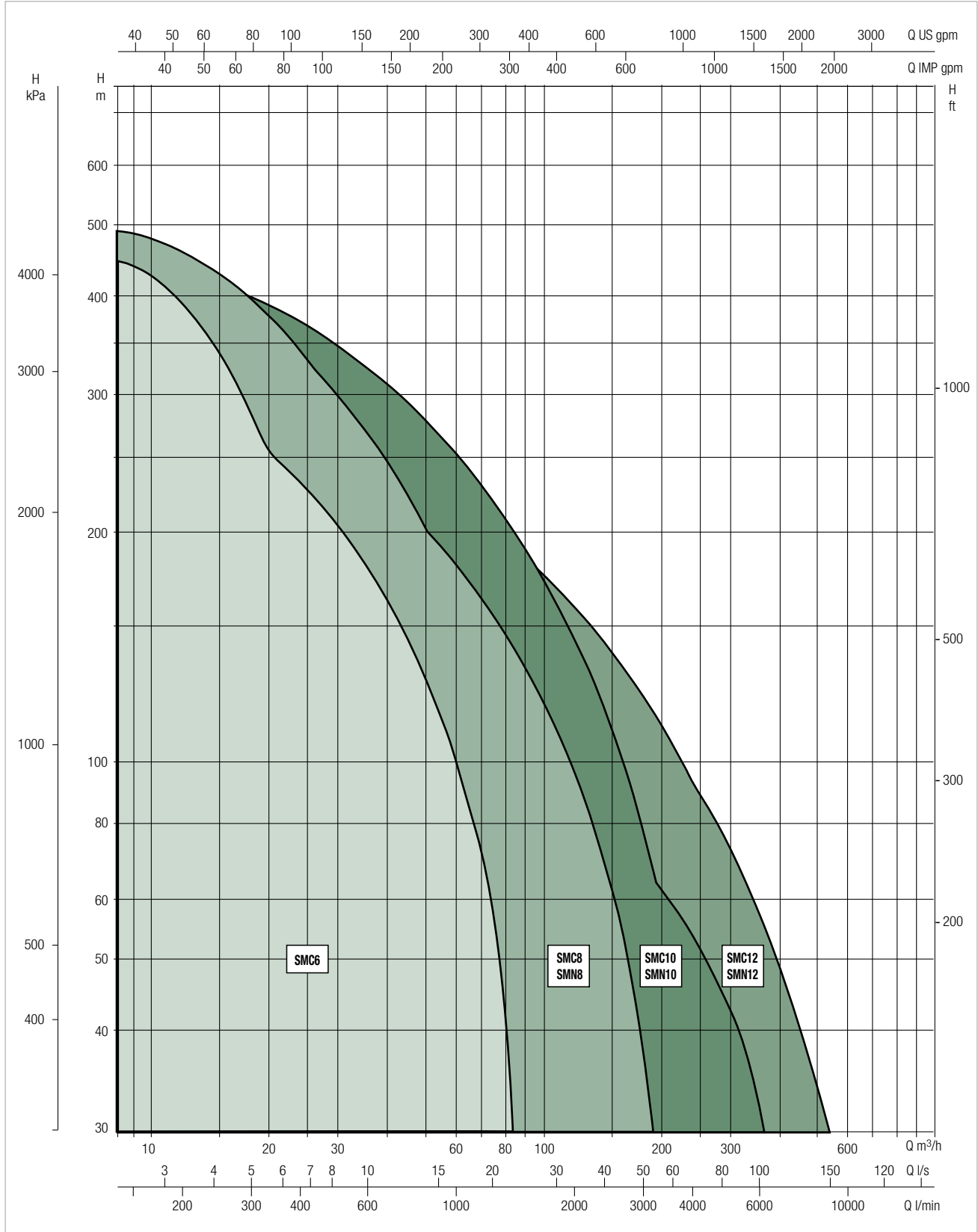
Motor version for high temperature of water.

### PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

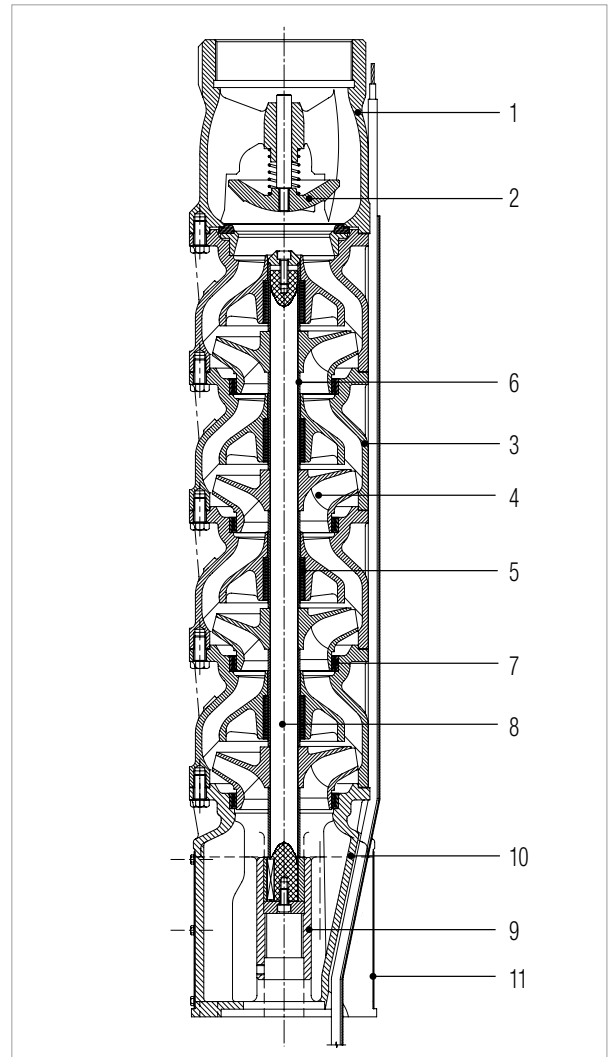
### GRAPHIC SELECTION TABLE

50 Hz - 2900 r.p.m.

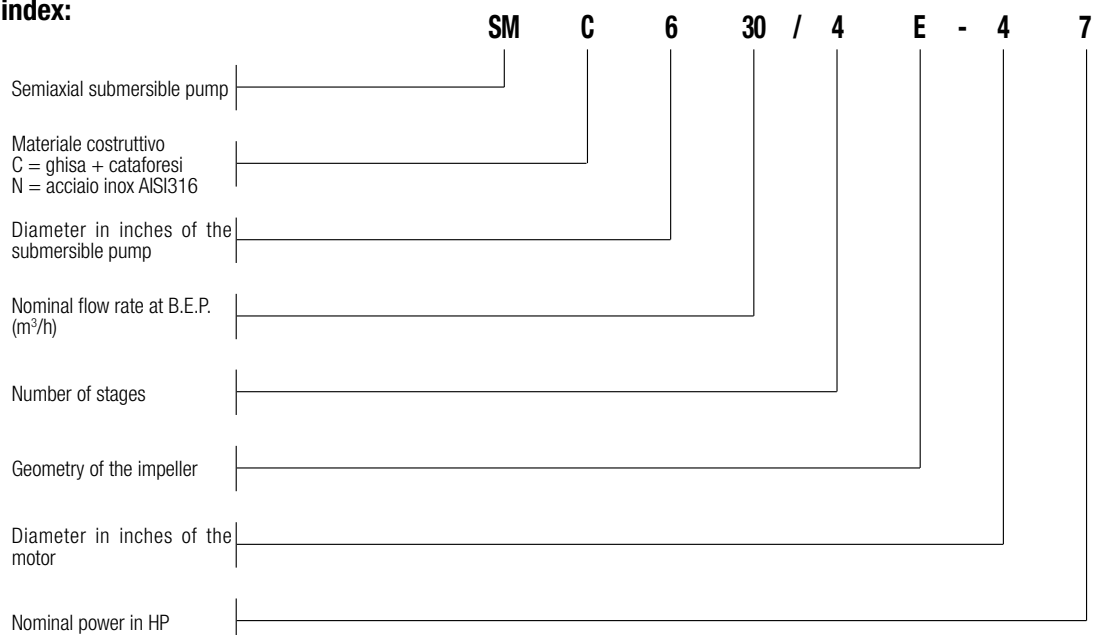


### MATERIALS

N°	PARTS	MATERIALS
1	DELIVERY BODY	CAST IRON + CATAPHORESIS
2	NON-RETURN VALVE	STAINLESS STEEL
3	DIFFUSER	CAST IRON + CATAPHORESIS
4	IMPELLER	AISI 304 STAINLESS STEEL
5	GUIDE BEARING	RUBBER
6	BUSH	CHROME-PLATED BRASS
7	WEAR RING	RUBBER FOR SMC6 30
	WEAR RING	STEEL FOR SMC6 45 AND SMC6 60
8	PUMP SHAFT	STAINLESS STEEL
9	PIPE	STAINLESS STEEL
10	SUCTION BODY	CAST IRON + CATAPHORESIS
11	FILTER GRID	STAINLESS STEEL



### - Denomination index: (example)



### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA													COUPLING STANDARD MOTOR
	P2 NOMINAL		Q=m <sup>3</sup> h	0	9	12	15	18	21	24	27	30	33	36	42	
	kW	HP	Q=l/min	0	150	200	250	300	350	400	450	500	550	600	700	
30/4E	5,5	7,5	H (m)	66,5	63	62	60,5	59	57	54,5	51,5	47,5	42,5	36,5	23	4"
30/5E	7,5	10		83	79	77	75,5	73,5	71	68	64	59	53	45	28,5	6"
30/7G	9,3	12,5		113	107,5	105,5	102,5	99	95,5	90	84	76,5	67,5	56,5	32,5	6"
30/8E	11	15		133	126	123,5	120,5	117,5	113,5	108,5	102	94	84	71,5	45	6"
30/10F	13	17,5		161,5	150,5	148	144,5	140,5	136	129	120	109	96	79,5	49	6"
30/11E	15	20		182,5	171	167,5	164	159,5	154,5	147	137,5	125,5	111	93	58	6"
30/12E	18,5	25		199,5	186,5	183	178,5	174	168,5	160	149,5	136,5	121	101,5	63,5	6"
30/14E	18,5	25		232,5	217,5	213,5	208,5	203	196,5	187	174,5	159,5	141	118	73,5	6"
30/15E	22	30		249	233	228,5	223,5	217,5	210,5	200	187	170,5	151	126,5	79	6"
30/17F	22	30		274,5	256	251,5	245,5	239	230,5	219	204	185	162,5	135	82	6"
30/20F	26	35		322,5	304	297,5	290	282	272,5	259	240,5	217,5	189	155	92,5	6"
30/22E	30	40		361	339	332	325	318	306	291	271,5	246	215	177	106,5	6"
30/25F	37	50		403	380	372	362,5	352,5	340,5	323,5	301	271,5	236	193,5	115,5	6"
30/28F	37	50		451,5	425,5	416,5	405,5	394,5	381,5	362	337	304	264,5	216,5	129	6"



### ELECTRICAL DATA AND DIMENSIONS

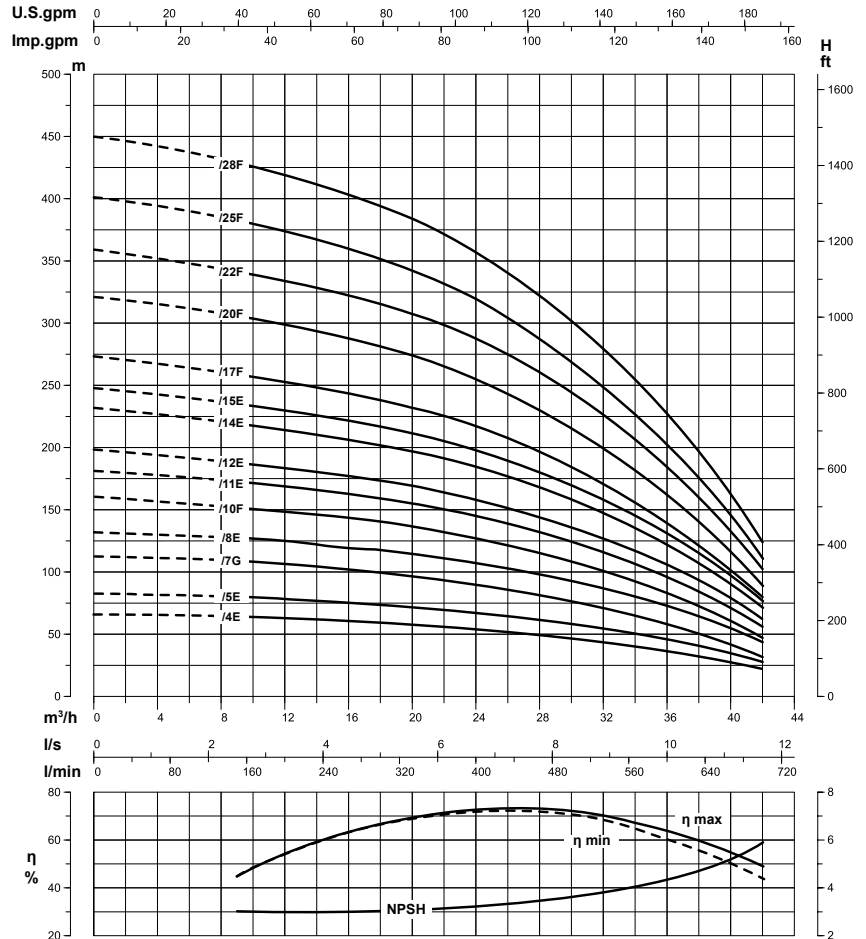
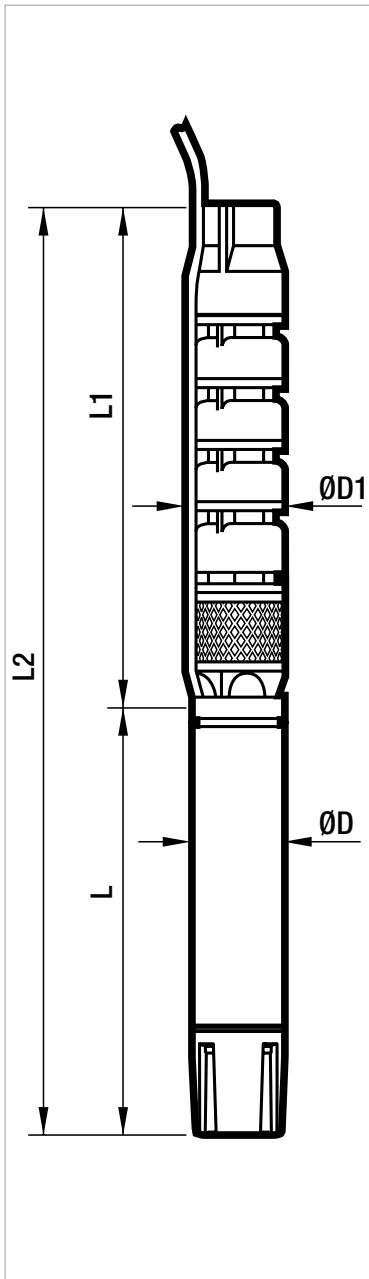
MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN GAS	HYDRAULIC WEIGHT Kg	MOTOR WEIGHT Kg
		P2 NOMINAL		In A										
		kW	HP											
30/4E-47	4GG	5,5	7,5	14	●	●	1318	684	634	93	150	2 ½"	28	27
	40L	5,5	7,5	13,1	●	●	1292	658	634	93	150	2 ½"	28	24
30/5E-610	6GF	7,5	10	18	●	●	1371	661	710	141	150	2 ½"	33	47
	TR6	7,5	10	18	○	●	1527	817	710	144	150	2 ½"	33	53
30/7G-612	6GF	9,3	12,5	22	●	●	1561	686	875	141	150	2 ½"	42	50
	TR6	9,3	12,5	21	○	●	1722	847	875	144	150	2 ½"	42	55
30/8E-615	6GF	11	15	25,5	●	●	1689	731	958	141	150	2 ½"	46	55
	TR6	11	15	25	○	●	1835	877	958	144	150	2 ½"	46	60
30/10F-617	6GF	13	17,5	28,7	●	●	1884	761	1123	141	150	2 ½"	55	58
	TR6	13	17,5	29	○	●	2030	907	1123	144	150	2 ½"	55	63
30/11E-620	6GF	15	20	33,4	●	●	1991	786	1205	141	150	2 ½"	60	61
	TR6	15	20	32	○	●	2182	977	1205	144	150	2 ½"	60	77
30/12E-625	6GF	18,5	25	41	●	●	2149	861	1288	141	150	2 ½"	65	69
	TR6	18,5	25	39	○	●	2325	1037	1288	144	150	2 ½"	65	83
30/14E-625	6GF	18,5	25	41	●	●	2314	861	1453	141	150	2 ½"	74	69
	TR6	18,5	25	39	○	●	2490	1037	1453	144	150	2 ½"	74	83
30/15E-630	6GF	22	30	47	●	●	2456	921	1535	141	150	2 ½"	78	74
	TR6	22	30	49	○	●	2602	1067	1535	144	150	2 ½"	78	95
30/17F-630	6GF	22	30	47	●	●	2621	921	1700	141	150	2 ½"	88	74
	TR6	22	30	49	○	●	2767	1067	1700	144	150	2 ½"	88	95
30/20F-635	6GF	26	35	57	●	●	2928	980	1948	141	153	2 ½"	101	78
	TR6	26	35	58	○	●	3085	1137	1948	144	153	2 ½"	101	103
30/22E-640	6GF	30	40	61,5	●	●	3164	1051	2113	141	153	2 ½"	110	89
	TR6	30	40	65	○	●	3305	1192	2113	144	153	2 ½"	110	110
30/25F-650	6GF	37	50	79,3	●	●	3541	1181	2360	141	153	2 ½"	124	102
	TR6	37	50	80	○	●	3652	1292	2360	144	153	2 ½"	124	113
30/28F-650	6GF	37	50	79,3	●	●	3789	1181	2608	141	153	2 ½"	138	102
	TR6	37	50	80	○	●	3900	1292	2608	144	153	2 ½"	138	113

\* **4GG motor:** 4" water-filled motor with stator immersed in thermosetting insulating resin with high heat dissipation capacity  
**40L motor:** 4" oil-filled rewindable motor  
**6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6" - 12" water-filled rewindable motor

●	Permitted
○	Only version PE2 + PA
△	Contact our sales network

# SMC6 30

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906. **Compliance with MEI**

### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		Q=m3h Q=l/min	HYDRAULIC DATA												COUPLING STANDARD MOTOR
	P2 NOMINAL			0	12	18	24	30	36	42	45	48	54	60	66	
	kW	HP		0	200	300	400	500	600	700	750	800	900	1000	1100	
45/3H	4	5,5	H (m)	39	35,5	33,5	32	30,5	28,5	26	24,5	23	18,5	14	9	4"
45/4H	5,5	7,5		52	47,5	45	43	41	38,5	35	33	30,5	25,5	19	13	4"
45/5G	7,5	10		70	64	61,5	59,5	57	54	49,5	47	44	37,5	29,5	20	6"
45/6F	9,3	12,5		85,5	78,5	75	72,5	69,5	66	60,5	57,5	53,5	45	35	24,5	6"
45/7E	11	15		101	95,5	92	89	85	80	72,5	68,5	64	53,5	41,5	28,5	6"
45/8E	13	17,5		116	110	106,5	103	99	93	85	80,5	75	63	48	31,5	6"
45/10F	15	20		140,5	130	124,5	119,5	114,5	108	99	93,5	87,5	73,5	57	39,5	6"
45/11F	18,5	25		154,5	143	137	131,5	125,5	118,5	108,5	102,5	96	80,5	62,5	43,5	6"
45/12F	18,5	25		168,5	156	149	143,5	137	129,5	118,5	112	104,5	87,5	68	47	6"
45/13F	22	30		182,5	168,5	161,5	155,5	148,5	140	128	121	113	95	73,5	51	6"
45/14E	22	30		201,5	190,5	183,5	177	169	159	144,5	136	126,5	105,5	81,5	57	6"
45/17F	26	35		238,5	220,5	211	203	194	183	167,5	158	147,5	123,5	95,5	66	6"
45/20F	30	40		280,5	259,5	248,5	238,5	228	215	196,5	186	173,5	145,5	112	75	6"
45/22G	37	50		308	284,5	274	263	250	234	212,5	200,5	187	157	121	78,5	6"
45/24F	37	50		336,5	311	298	286	273,5	258	236	222,5	208	174	134,5	93	6"

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN GAS	HYDRAULIC WEIGHT Kg	MOTOR WEIGHT Kg
		P2 NOMINAL		In A										
		kW	HP											
45/3H-45	4GG	4	5,5	10	●	●	1278	614	664	93	149	3"	26	24
	40L	4	5,5	9,6	●	●	1252	588	664	93	149	3"	26	17
45/4H-47	4GG	5,5	7,5	14	●	●	1457	684	773	93	149	3"	31	27
	40L	5,5	7,5	13,1	●	●	1431	658	773	93	149	3"	31	24
45/5G-610	6GF	7,5	10	18	●	●	1549	661	888	141	150	3"	37	47
	TR6	7,5	10	18	○	●	1705	817	888	144	150	3"	37	53
45/6F-612	6GF	9,3	12,5	22	●	●	1689	686	1003	141	150	3"	42	50
	TR6	9,3	12,5	21	○	●	1850	847	1003	144	150	3"	42	55
45/7E-615	6GF	11	15	25,5	●	●	1849	731	1118	141	150	3"	47	55
	TR6	11	15	25	○	●	1995	877	1118	144	150	3"	47	60
45/8E-617	6GF	13	17,5	28,7	●	●	1994	761	1233	141	150	3"	53	58
	TR6	13	17,5	29	○	●	2140	907	1233	144	150	3"	53	63
45/10F-620	6GF	15	20	33,4	●	●	2249	786	1463	141	150	3"	64	61
	TR6	15	20	32	○	●	2440	977	1463	144	150	3"	64	77
45/11F-625	6GF	18,5	25	41	●	●	2439	861	1578	141	150	3"	69	69
	TR6	18,5	25	39	○	●	2615	1037	1578	144	150	3"	69	83
45/12F-625	6GF	18,5	25	41	●	●	2554	861	1693	141	150	3"	74	69
	TR6	18,5	25	39	○	●	2730	1037	1693	144	150	3"	74	83
45/13F-630	6GF	22	30	47	●	●	2729	921	1808	141	153	3"	80	74
	TR6	22	30	49	○	●	2875	1067	1808	144	153	3"	80	95
45/14E-630	6GF	22	30	47	●	●	2844	921	1923	141	153	3"	85	74
	TR6	22	30	49	○	●	2990	1067	1923	144	153	3"	85	95
45/17F-635	6GF	26	35	57	●	●	3248	980	2268	141	153	3"	101	78
	TR6	26	35	58	○	●	3405	1137	2268	144	153	3"	101	103
45/20F-640	6GF	30	40	61,5	●	●	3664	1051	2613	141	153	3"	117	89
	TR6	30	40	65	○	●	3805	1192	2613	144	153	3"	117	110
45/22G-650	6GF	37	50	79,3	●	●	4024	1181	2843	141	153	3"	128	102
	TR6	37	50	80	○	●	4135	1292	2843	144	153	3"	128	113
45/24F-650	6GF	37	50	79,3	●	●	4254	1181	3073	141	153	3"	139	102
	TR6	37	50	80	○	●	4365	1292	3073	144	153	3"	139	113

\* 4GG motor: 4" water-filled motor with stator immersed in thermosetting insulating resin with high heat dissipation capacity

40L motor: 4" oil-filled rewindable motor

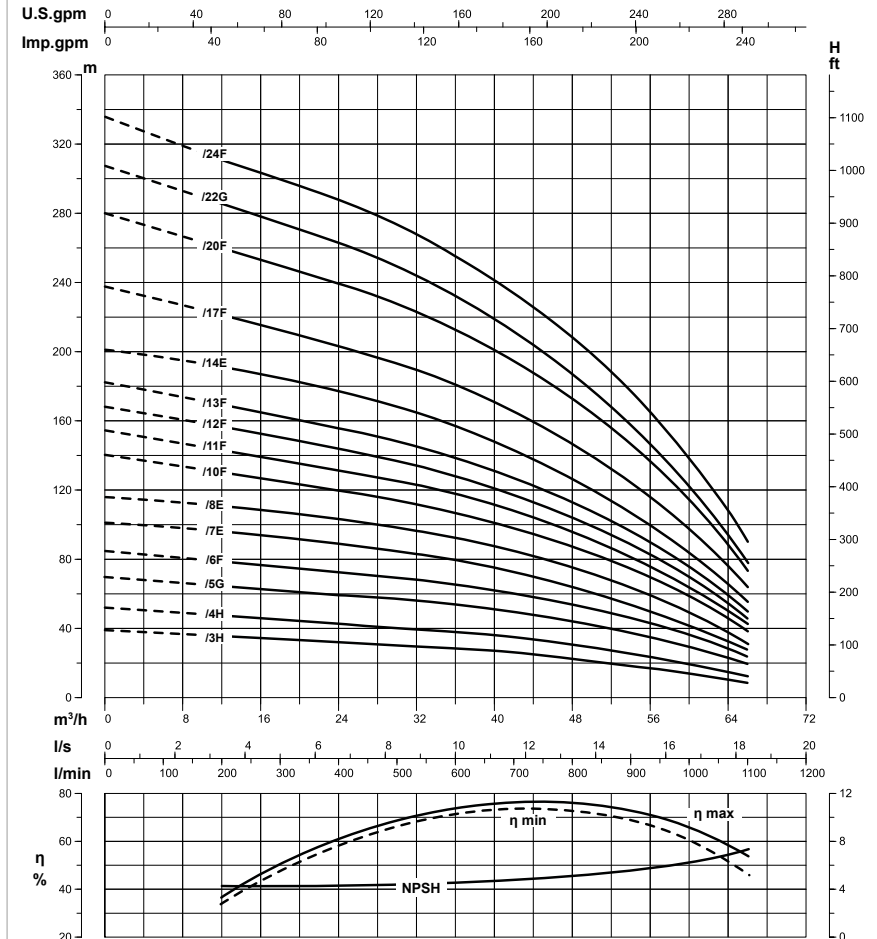
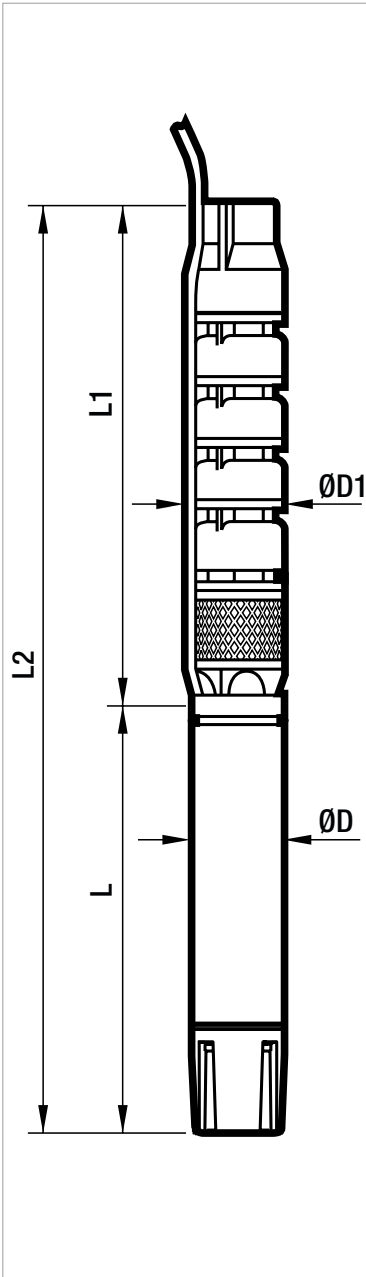
6GF motor: 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin

TR motor: 6" - 12" water-filled rewindable motor

●	Permitted
○	Only version PE2 + PA
△	Contact our sales network

# SMC6 45

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906. **Compliance with MEI**

### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA													COUPLING STANDARD MOTOR
	P2 NOMINAL		Q=m3h	0	18	30	36	42	48	54	60	66	72	78	84	
	kW	HP	Q=l/min	0	300	500	600	700	800	900	1000	1100	1200	1300	1400	
60/2G	4	5,5	H (m)	26,5	24,5	23,5	22,5	21,5	20	18,5	16	14	11	8	5	4"
60/3G	5,5	7,5		39,5	37	35,5	34	32,5	30,5	28	24,5	21	17	13	8	4"
60/4G	7,5	10		52	50,5	48,5	47	45	42	39	34,5	30	25	19,5	13	6"
60/5G	9,3	12,5		65	63	60,5	58,5	56	52,5	48,5	43	37	31	24	16	6"
60/6G	11	15		78	75,5	72,5	70	67,5	63	58	51,5	44,5	36,5	28	18,5	6"
60/7E	13	17,5		94,5	89	83,5	81	77,5	72,5	67	59,5	51	42	32	22,2	6"
60/8E	15	20		108	101,5	95,5	92,5	88,5	83	76,5	68	58,5	47,5	36,5	25,5	6"
60/9E	18,5	25		121,5	114	107,5	104	99,5	93	86	76	65,5	53,5	41	28	6"
60/10E	18,5	25		135	126,5	119,5	115,5	110,5	103,5	95,5	84,5	72,5	59	45	31	6"
60/11E	22	30		148	139,5	131,5	127	121,5	113,5	104,5	93	79,5	65	49,5	34	6"
60/12E	22	30		161,5	152	143	138,5	132,5	124	114	101	87	70,5	54	36,5	6"
60/14E	26	35		188,5	178,5	169,5	163,5	156,5	146	134	119,5	103,5	85,5	66,5	44,5	6"
60/16E	30	40		215,5	204	193,5	187	178,5	166,5	153	136,5	118	97,5	75,5	50,5	6"
60/18F	37	50		238	225	213,5	206	196,5	183	167	148,5	128	105	80	52,5	6"
60/20E	37	50		269,5	255	242	233,5	223	208	191,5	170	147	121,5	94	62,5	6"
60/24E	45	60		323,5	306	290	280	267,5	249,5	229,5	204	176,5	145,5	112	74,5	6"

### ELECTRICAL DATA AND DIMENSIONS

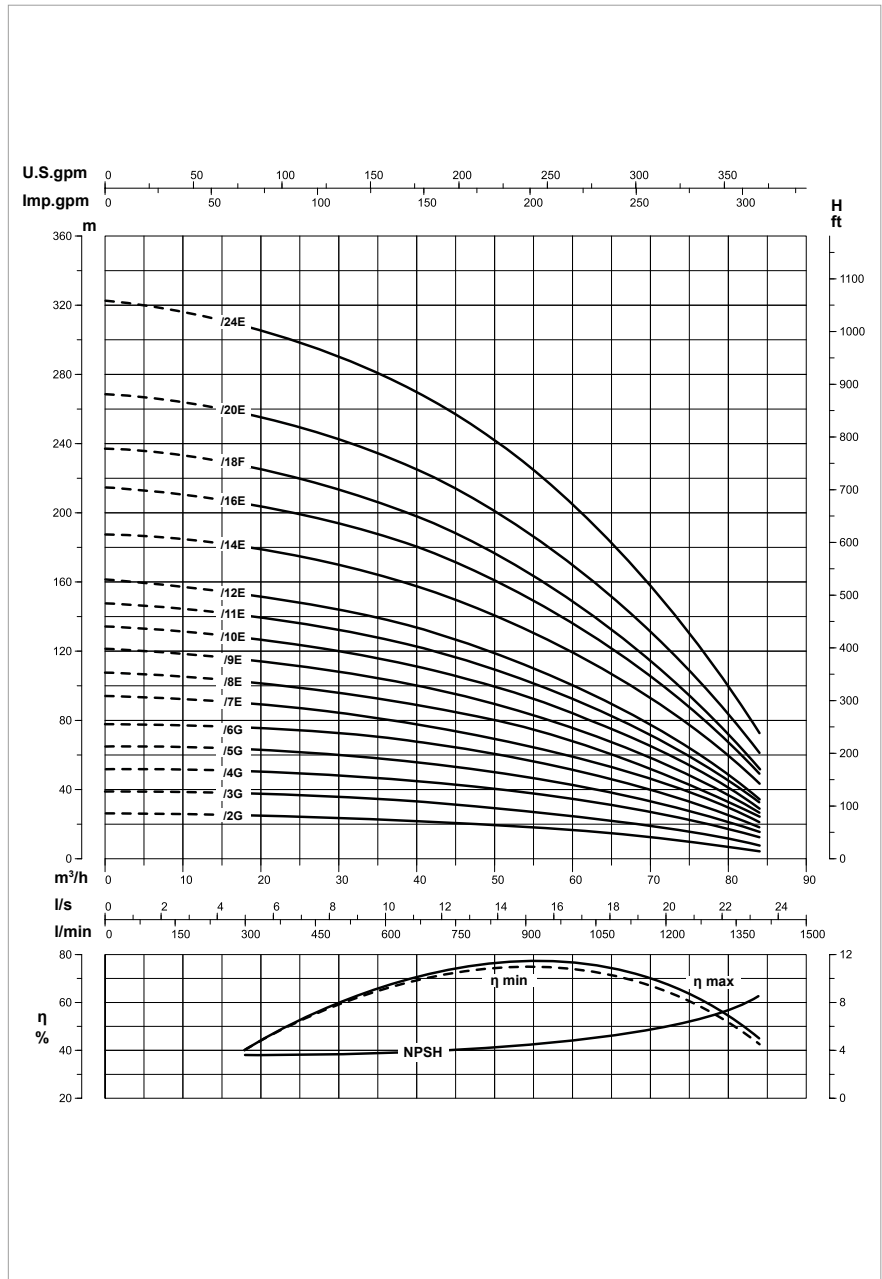
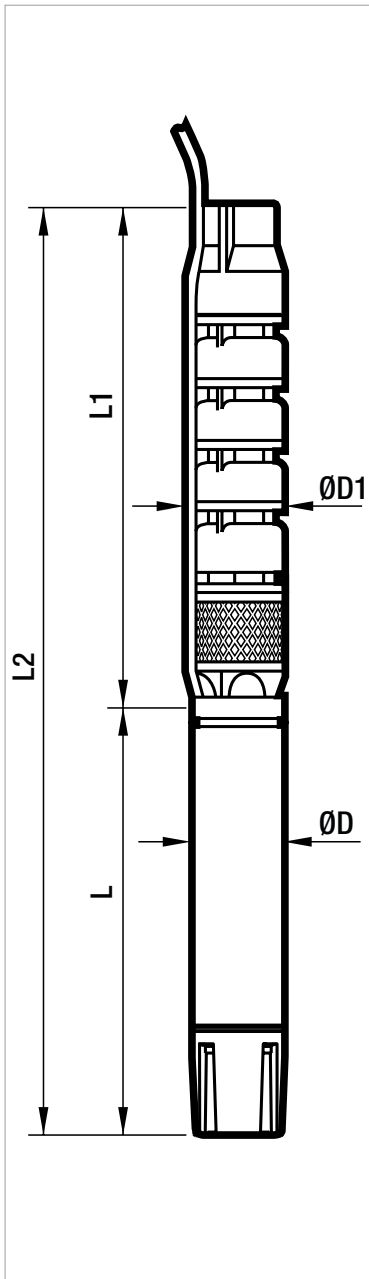
MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN GAS	HYDRAULIC WEIGHT Kg	MOTOR WEIGHT Kg
		P2 NOMINAL		In A										
		kW	HP											
60/2G-45	4GG	4	5,5	10	●	●	1163	614	549	93	149	3"	21	24
	40L	4	5,5	9,6	●	●	1137	588	549	93	149	3"	21	17
60/3G-47	4GG	5,5	7,5	14	●	●	1348	684	664	93	149	3"	26	27
	40L	5,5	7,5	13,1	●	●	1322	658	664	93	149	3"	26	24
60/4G-610	6GF	7,5	10	18	●	●	1434	661	773	141	150	3"	31	47
	TR6	7,5	10	18	○	●	1590	817	773	144	150	3"	31	53
60/5G-612	6GF	9,3	12,5	22	●	●	1574	686	888	141	150	3"	37	50
	TR6	9,3	12,5	21	○	●	1735	847	888	144	150	3"	37	55
60/6G-615	6GF	11	15	25,5	●	●	1734	731	1003	141	150	3"	42	55
	TR6	11	15	25	○	●	1880	877	1003	144	150	3"	42	60
60/7E-617	6GF	13	17,5	28,7	●	●	1879	761	1118	141	150	3"	47	58
	TR6	13	17,5	29	○	●	2025	907	1118	144	150	3"	47	63
60/8E-620	6GF	15	20	33,4	●	●	2019	786	1233	141	150	3"	53	61
	TR6	15	20	32	○	●	2210	977	1233	144	150	3"	53	77
60/9E-625	6GF	18,5	25	41	●	●	2209	861	1348	141	150	3"	58	69
	TR6	18,5	25	39	○	●	2385	1037	1348	144	150	3"	58	83
60/10E-625	6GF	18,5	25	41	●	●	2324	861	1463	141	150	3"	64	69
	TR6	18,5	25	39	○	●	2500	1037	1463	144	150	3"	64	83
60/11E-630	6GF	22	30	47	●	●	2499	921	1578	141	150	3"	69	74
	TR6	22	30	49	○	●	2645	1067	1578	144	150	3"	69	95
60/12E-630	6GF	22	30	47	●	●	2614	921	1693	141	150	3"	74	74
	TR6	22	30	49	○	●	2760	1067	1693	144	150	3"	74	95
60/14E-635	6GF	26	35	57	●	●	2903	980	1923	141	153	3"	85	78
	TR6	26	35	58	○	●	3060	1137	1923	144	153	3"	85	103
60/16E-640	6GF	30	40	61,5	●	●	3204	1051	2153	141	153	3"	96	89
	TR6	30	40	65	○	●	3345	1192	2153	144	153	3"	96	110
60/18F-650	6GF	37	50	79,3	●	●	3564	1181	2383	141	153	3"	106	102
	TR6	37	50	80	○	●	3675	1292	2383	144	153	3"	106	113
60/20E-650	6GF	37	50	79,3	●	●	3794	1181	2613	141	153	3"	117	102
	TR6	37	50	80	○	●	3905	1292	2613	144	153	3"	117	113
60/24E-660	6GF	45	60	95	●	●	4434	1361	3073	141	153	3"	139	118
	TR6	45	60	93,1	○	●	4530	1457	3073	144	153	3"	139	135

\* **4GG motor:** 4" water-filled motor with stator immersed in thermosetting insulating resin with high heat dissipation capacity  
**40L motor:** 4" oil-filled rewindable motor  
**6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6" - 12" water-filled rewindable motor

●	Permitted
○	Only version PE2 + PA
△	Contact our sales network

# SMC6 60

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

**Compliance with MEI**



# SMC8 - SMN8

## SUBMERSIBLE PUMPS



### TECHNICAL DATA

**Operating range:** up to 192 m<sup>3</sup>/h with head up to 488 m  
**Pumped liquid:** clean, free of solids and abrasives, chemically neutral, with properties similar to water  
**Start-ups/hour:** see the coupled motor  
**Cooling flow:** see the coupled motor  
**Maximum permitted amount of sand:** 40 g/m<sup>3</sup>  
**Ambient temperature:** 30 °C  
**Minimum recommended level on suction line:** 1,5 m  
**Installation:** horizontal or vertical

### APPLICATIONS

Multistage semiaxial submersible electric pumps for wells measuring 8" or above, able to generate a broad range of flow rates and heads. They are used extensively for the lifting, distribution and pressurisation of industrial water systems, the supply of pressure vessels and tanks, firefighting systems and irrigation systems.  
Application with clean, non-aggressive water free from solids or abrasive substances.

### CONSTRUCTION FEATURES OF THE PUMP

#### SMC version:

Cast iron pump body treated with cataphoresis paint coating and dynamically balanced impellers in microcast AISI 304 stainless steel coupled on the shaft with pull tab. Shaft guided with coaxial bush bearings and fully protected with bushes.  
Pump with check valve of low pressure loss.  
Threaded delivery port.

#### SMN version:

Pump body and impellers in microcast AISI 316 stainless steel. Dynamically balanced impellers coupled on the shaft with pull tab. Shaft guided with coaxial bush bearings and fully protected with bushes.  
Pump with check valve of low pressure loss.  
Threaded delivery port.

Coupling with motors of 6" or 8" depending on the required hydraulic power and available in a standard version with cast iron supports treated with cataphoresis paint coating, and in a version entirely in AISI 316 stainless steel:

6GF/6GX: encapsulated 6" submersible motor

TR6: rewindable 6" submersible motor

TR8: rewindable 8" submersible motor

Refer to the technical data sheets of the specific model for the electrical characteristics of the submersible motors and the specifications for operation with inverter.

### ON REQUEST

Non-standard pump/motor couplings.

Star/Delta starting version.

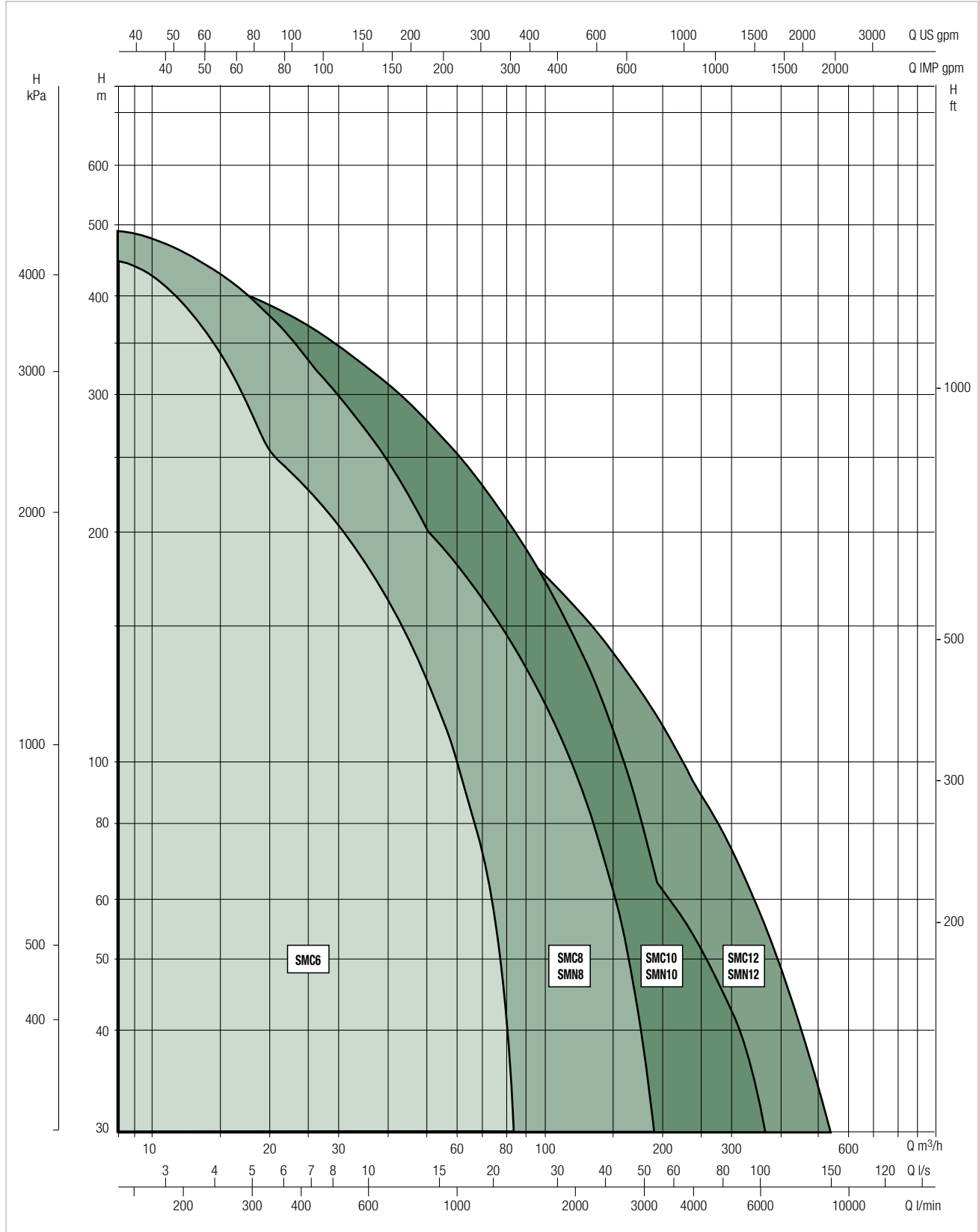
Motor version for high temperature of water.

### PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### GRAPHIC SELECTION TABLE

50 Hz - 2900 r.p.m.

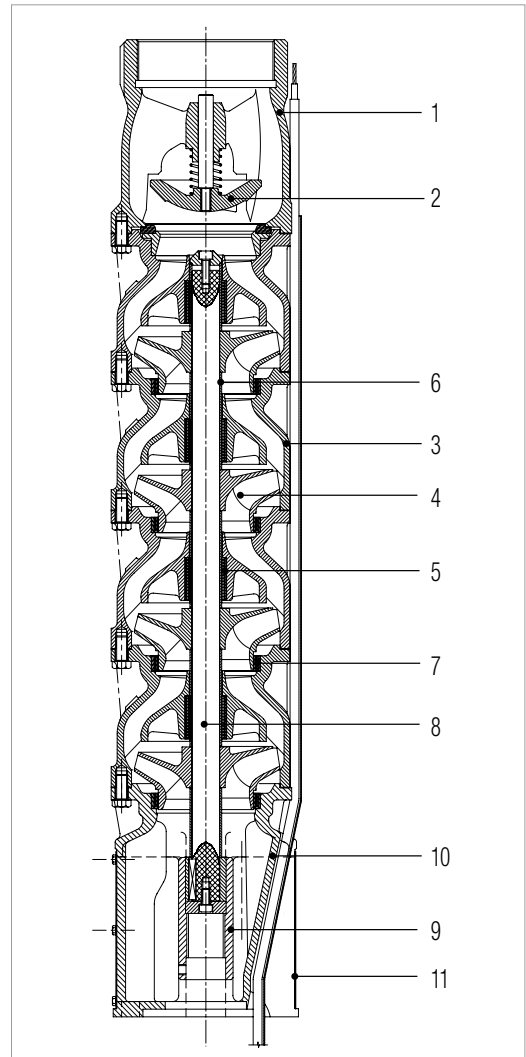


# SMC8 - SMN8

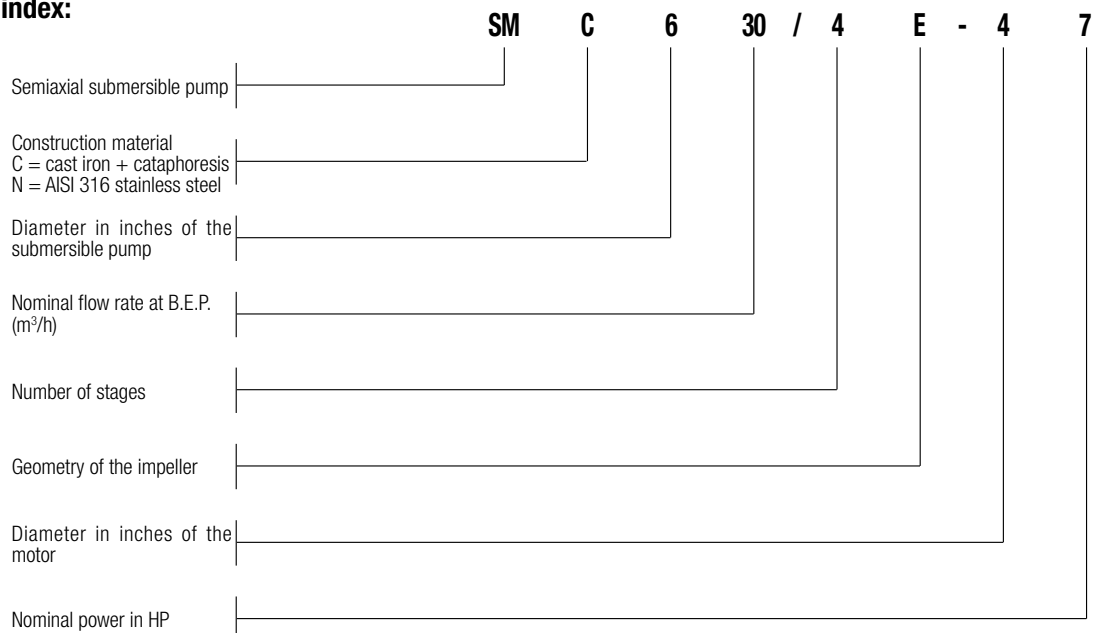
## SUBMERSIBLE PUMPS

### MATERIALS

N°	PARTS	MATERIALS - SMC	MATERIALS - SMN
1	DELIVERY BODY	CAST IRON + CATAPHORESIS	AISI 316 STAINLESS STEEL
2	NON-RETURN VALVE	STAINLESS STEEL	AISI 316 STAINLESS STEEL
3	DIFFUSER	CAST IRON + CATAPHORESIS	AISI 316 STAINLESS STEEL
4	IMPELLER	CAST IRON + CATAPHORESIS PAINT COATING FOR SMC8 60 AND SMC8 85 AISI 304 STAINLESS STEEL FOR SMC8 110 AND SMC8 135	AISI 316 STAINLESS STEEL
5	GUIDE BEARING	RUBBER	VITON
6	BUSH	CHROME-PLATED BRASS	AISI 316 STAINLESS STEEL
7	WEAR RING	RUBBER	POM
8	PUMP SHAFT	STAINLESS STEEL	AISI 329 DUPLEX STAINLESS STEEL
9	PIPE	STAINLESS STEEL	AISI 329 DUPLEX STAINLESS STEEL
10	SUCTION BODY	CAST IRON + CATAPHORESIS	AISI 316 STAINLESS STEEL
11	FILTER GRID	STAINLESS STEEL	AISI 316 STAINLESS STEEL



### - Denomination index: (example)



### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA														COUPLING STANDARD MOTOR
	P2 NOMINAL		Q=m3h	0	24	30	36	42	48	54	60	66	72	78	84	90	
	kW	HP	Q=l/min	0	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	
60/1D	4	5,5	H (m)	23,5	20	19,5	19	18,5	18	17	16,5	15	14	12,5	11	9,5	6"
60/2I	5,5	7,5		38	32,5	31,5	30	28,5	27,5	25,5	23,5	21	17,5	14	10,5	7	6"
60/2F	7,5	10		47	41	39,5	38,5	37	36	34	32	29,5	27	24	21	18,5	6"
60/3G	9,3	12,5		62,5	54,5	53,5	52	50	48	45,5	42,5	38,5	33,5	29	24	19	6"
60/3F	11	15		70	62	60,5	58,5	56	54	51,5	48,5	44,5	40,5	35,5	31,5	26	6"
60/4H	11	15		79,5	69,5	68	65,5	62	58,5	54,5	50,5	45,5	40	35	28	21,5	6"
60/4G	13	17,5		83	73	71	69	66,5	64	60,5	56,5	51	45	38,5	32	25,5	6"
60/4F	15	20		93	82	80	78	75	72	68	64,5	59	53,5	47	41	35	6"
60/5G	18,5	25		104	91	89	86,5	83	80	76	70,5	64	56	48	40	32	6"
60/5F	18,5	25		115	103	100	96,5	93	89	84	79	72,5	65	57	49,5	41,5	6"
60/6G	22	30		125	109	107	104	99,5	95,5	91	84,5	76,5	67,5	57,5	48	38,5	6"
60/6F	22	30		138	123	120	116	112	107	101	95	86,5	78	68,5	59,5	50	6"
60/7G	22	30		146	128	125	121	116	112	106	99	89,5	78,5	67	56	45	6"
60/8G	26	35		167	146	144	138	133	128	122	113	102	89,5	77	64	51	6"
60/8F	30	40		184	164	160	155	149	142	136	127	116	104	91,5	79,5	66,5	6"
60/9E	37	50		207	185	180	174	167	160	152	142	130	117	103	89,5	75	6"
60/10E	37	50		230	205	200	194	186	178	169	158	145	130	114	99	83,5	6"
60/11F	45	60		253	226	220	213	204	196	185	174	159	143	126	109	92	8"
60/11D	45	60		272	241	237	230	221	212	202	189	173	156	136	117	98	8"
60/12D	55	75		295	265	259	251	242	234	222	208	191	173	152	132	110	8"
60/13D	55	75	321	285	280	272	261	251	238	223	204	184	161	139	117	8"	
60/14E	63	85	334	297	290	280	269	259	246	231	212	190	165	141	116	8"	
60/15F	63	85	349	313	308	298	286	275	260	243	222	198	172	147	122	8"	
60/15C	75	100	375	340	334	324	313	300	287	270	247	222	194	164	135	8"	
60/15B	75	100	385	358	350	340	327	315	302	286	265	243	217	188	159	8"	
60/16B	75	100	411	382	374	363	349	333	316	298	278	255	228	200	170	8"	
60/18B	92	125	460	423	412	400	386	369	350	328	304	277	248	218	187	8"	
60/19B	92	125	488	453	444	431	415	396	376	354	330	303	271	238	202	8"	

SUBMERSIBLE PUMPS

### ELECTRICAL DATA AND DIMENSIONS

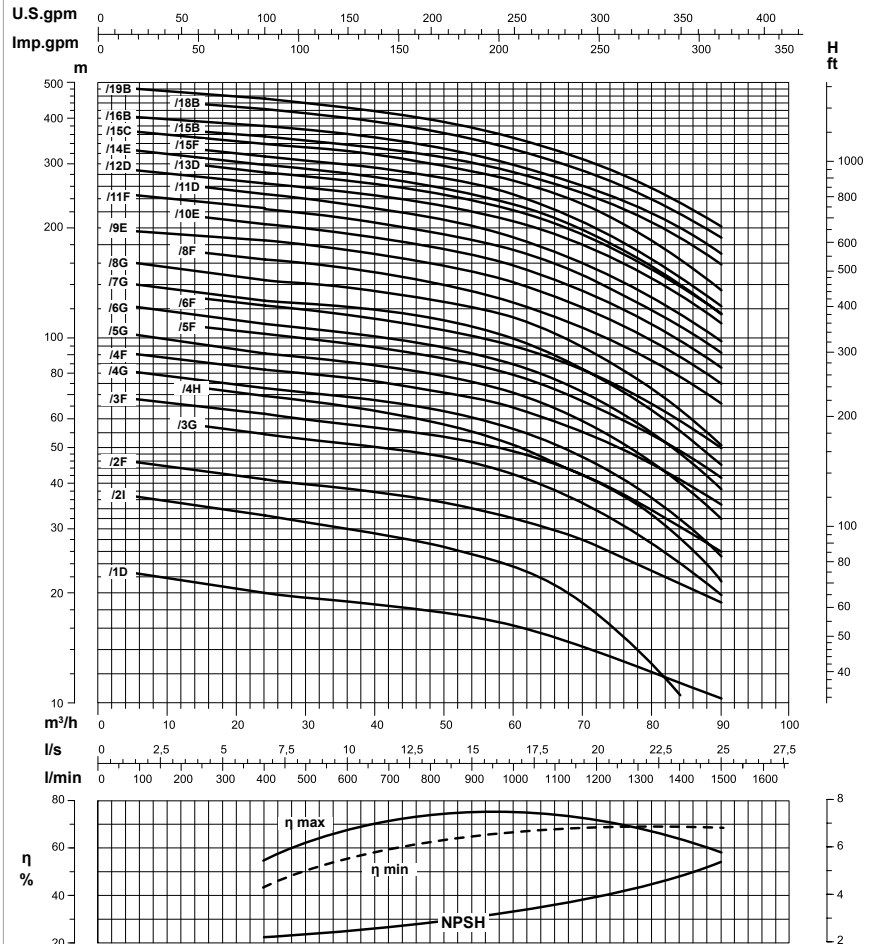
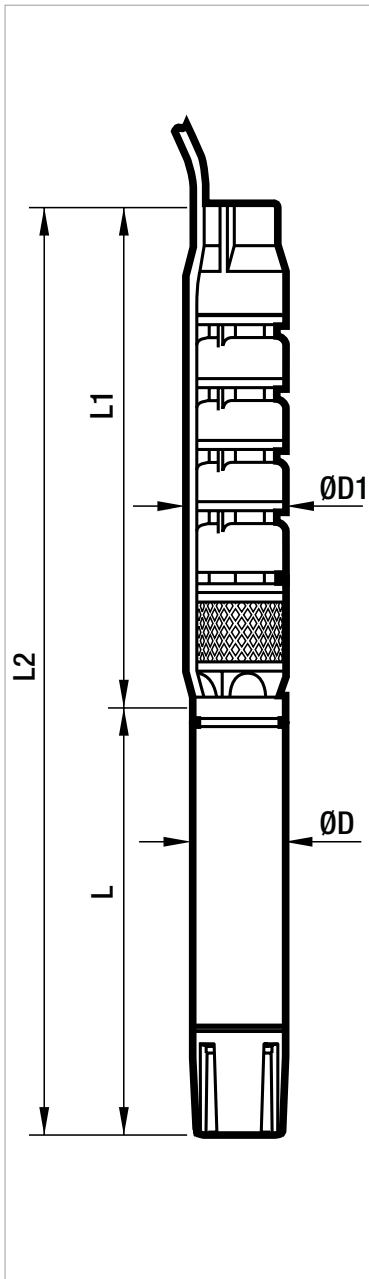
MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN GAS	HYDRAULIC WEIGHT Kg	MOTOR WEIGHT Kg
		P2 NOMINAL		In A										
		kW	HP											
60/1D-65	6GF	4	5,5	10,6	●	●	1152	601	551	141	196	5"	32	41
60/2I-67	6GF	5,5	7,5	14	●	●	1318	631	687	141	196	5"	42	44
	TR6	5,5	7,5	13	○	●	1474	787	687	144	196	5"	42	50
60/2F-610	6GF	7,5	10	18	●	●	1348	661	687	141	196	5"	42	47
	TR6	7,5	10	18	○	●	1504	817	687	144	196	5"	42	53
60/3G-612	6GF	9,3	12,5	22	●	●	1509	686	823	141	196	5"	52	50
	TR6	9,3	12,5	21	○	●	1670	847	823	144	196	5"	52	55
60/3F-615	6GF	11	15	25,5	●	●	1554	731	823	141	196	5"	53	55
	TR6	11	15	25	○	●	1700	877	823	144	196	5"	53	60
60/4H-615	6GF	11	15	25,5	●	●	1690	731	959	141	196	5"	63	55
	TR6	11	15	25	○	●	1836	877	959	144	196	5"	63	60
60/4G-617	6GF	13	17,5	28,7	●	●	1720	761	959	141	196	5"	63	58,4
	TR6	13	17,5	29	○	●	1866	907	959	144	196	5"	63	63
60/4F-620	6GF	15	20	33,4	●	●	1745	786	959	141	196	5"	63	61
	TR6	15	20	32	○	●	1936	977	959	144	196	5"	63	77
60/5G-625	6GF	18,5	25	41	●	●	1956	861	1095	141	196	5"	74	69
	TR6	18,5	25	39	○	●	2132	1037	1095	144	196	5"	74	80
60/5F-625	6GF	18,5	25	41	●	●	1956	861	1095	141	196	5"	74	69
	TR6	18,5	25	39	○	●	2132	1037	1095	144	196	5"	74	80
60/6G-630	6GF	22	30	47	●	●	2152	921	1231	141	196	5"	84	74
	TR6	22	30	49	○	●	2298	1067	1231	144	196	5"	84	95
60/6F-630	6GF	22	30	47	●	●	2152	921	1231	141	196	5"	85	74
	TR6	22	30	49	○	●	2298	1067	1231	144	196	5"	85	95
60/7G-630	6GF	22	30	47	●	●	2288	921	1367	141	196	5"	95	74
	TR6	22	30	49	○	●	2434	1067	1367	144	196	5"	95	95
60/8G-635	6GF	26	35	57	●	●	2483	980	1503	141	196	5"	105	78
	TR6	26	35	58	○	●	2640	1137	1503	144	196	5"	105	103
60/8F-640	6GF	30	40	61,5	●	●	2554	1051	1503	141	196	5"	106	89
	TR6	30	40	65	○	●	2695	1192	1503	144	196	5"	106	110
60/9E-650	6GF	37	50	79,3	●	●	2820	1181	1639	141	198	5"	117	102
	TR6	37	50	80	○	●	2931	1292	1639	144	198	5"	117	113
60/10E-650	6GF	37	50	79,3	●	●	2956	1181	1775	141	198	5"	128	102
	TR6	37	50	80	○	●	3067	1292	1775	144	198	5"	128	113
60/11F-860	TR8	45	60	92	○	●	3181	1270	1911	192	198	5"	140	177
60/11D-860	TR8	45	60	92	○	●	3181	1270	1911	192	198	5"	140	177
60/12D-875	TR8	55	75	109	○	●	3397	1350	2047	192	198	5"	150	192
60/13D-875	TR8	55	75	109	○	●	3533	1350	2183	192	198	5"	161	192
60/14E-885	TR8	63	85	126	○	●	3809	1490	2319	192	200	5"	172	218
60/15F-885	TR8	63	85	126	○	●	3945	1490	2455	192	200	5"	182	218
60/15C-8100	TR8	75	100	145	○	●	4045	1590	2455	192	200	5"	183	237
60/15B-8100	TR8	75	100	145	○	●	4045	1590	2455	192	200	5"	184	237
60/16B-8100	TR8	75	100	145	○	●	4181	1590	2591	192	200	5"	195	237
60/18B-8125	TR8	92	125	177	○	●	4693	1830	2863	192	202	5"	216	283
60/19B-8125	TR8	92	125	177	○	●	4829	1830	2999	192	202	5"	227	283

\* 6GF motor: 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
 TR motor: 6" - 12" water-filled rewindable motor

●	Permitted
○	Only version PE2 + PA
△	Contact our sales network

# SMC8 60

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

# SMN8 60

## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA													COUPLING STANDARD MOTOR
	P2 NOMINAL		Q=m3h	0	24	30	42	48	54	60	66	72	78	84	90	
	kW	HP	Q=l/min	0	400	500	700	800	900	1000	1100	1200	1300	1400	1500	
60/1E	4	5,5	H (m)	25	21	20,5	19	18	17,5	16,5	15,5	14	13	11	9,5	6"
60/2E	7,5	10		49,5	42,5	41	38	36,5	35	33	31	28,5	25,5	22,5	19	6"
60/3E	11	15		75	64	62	57	55	52	49,5	46	42,5	38,5	33,5	28,5	6"
60/4E	15	20		99	85	82	76	73	70	66	62	57	51	45	38	6"
60/5E	18,5	25		124	106	103	95	91	87	82	77	71	64	56	48	6"
60/6E	22	30		149	127	123	114	110	105	99	93	85	77	68	57	6"
60/7E	26	35		174	149	144	133	128	122	115	108	99	90	79	67	6"
60/8E	30	40		199	170	164	152	146	139	132	123	113	102	90	76	6"
60/9E	37	50		221	189	183	170	163	155	147	137	126	113	98	76	6"
60/10E	37	50		246	210	203	188	181	172	163	152	139	125	109	91	6"
60/11L	45	60		267	228	221	205	197	187	177	166	151	135	116	96	8"
60/12L	45	60		292	248	241	224	214	204	193	180	164	147	127	104	8"
60/13E	55	75		328	282	273	255	245	234	221	207	190	171	150	125	8"
60/14E	55	75		354	304	294	274	263	251	238	223	205	184	161	135	8"
60/15E	63	85		379	325	315	294	282	269	255	239	219	197	173	145	8"
60/15B	75	100		410	355	343	318	306	294	278	262	245	225	200	174	8"
60/17B	75	100		465	404	389	362	348	332	315	298	276	254	227	197	8"

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN GAS	HYDRAULIC WEIGHT Kg	MOTOR WEIGHT ** Kg
		P2 NOMINAL		In A										
		kW	HP											
60/1E-65	6GX	4	5,5	10,6	●	●	1152	601	551	141	198	5"	23	39,7
60/2E-610	6GX	7,5	10	18	●	●	1348	661	687	141	198	5"	30	45,5
	TR6N	7,5	10	18	○	●	1504	817	687	144	198	5"	30	51,5
60/3E-615	6GX	11	15	25,5	●	●	1554	731	823	141	198	5"	38	53
	TR6N	11	15	25	○	●	1700	877	823	144	198	5"	38	58,5
60/4E-620	6GX	15	20	33,4	●	●	1745	786	959	141	198	5"	46	59,5
	TR6N	15	20	32	○	●	1936	977	959	144	198	5"	46	75,5
60/5E-625	6GX	18,5	25	41	●	●	1956	861	1095	141	198	5"	53	67
	TR6N	18,5	25	39	○	●	2132	1037	1095	144	198	5"	53	81,5
60/6E-630	6GX	22	30	47	●	●	2152	921	1231	141	198	5"	61	72,8
	TR6N	22	30	49	○	●	2298	1067	1231	144	198	5"	61	93,5
60/7E-635	6GX	26	35	57	●	●	2347	980	1367	141	198	5"	69	77
	TR6N	26	35	58	○	●	2504	1137	1367	144	198	5"	69	104,5
60/8E-640	6GX	30	40	61,5	●	●	2554	1051	1503	141	198	5"	76	87
	TR6N	30	40	65	○	●	2695	1192	1503	144	198	5"	76	108,5
60/9E-650	6GX	37	50	79,3	●	●	2820	1181	1639	141	198	5"	84	100,1
	TR6N	37	50	80	○	●	2931	1292	1639	144	198	5"	84	114,5
60/10E-650	6GX	37	50	79,3	●	●	2956	1181	1775	141	198	5"	92	100,1
	TR6N	37	50	80	○	●	3067	1292	1775	144	198	5"	92	114,5
60/11L-860	TR8N	45	60	92	○	●	3181	1270	1911	192	198	5"	101	179,5
60/12L-860	TR8N	45	60	92	○	●	3317	1270	2047	192	198	5"	109	179,5
60/13E-875	TR8N	55	75	109	○	●	3533	1350	2183	192	198	5"	116	194,5
60/14E-875	TR8N	55	75	109	○	●	3669	1350	2319	192	198	5"	124	194,5
60/15E-885	TR8N	63	85	126	○	●	3945	1490	2455	192	198	5"	132	220,5
60/15B-8100	TR8N	75	100	145	○	●	4045	1590	2455	192	198	5"	132	239,5
60/17B-8100	TR8N	75	100	145	○	●	4317	1590	2727	192	198	5"	147	239,5

\* **6GF/6GX motor:** 6" encapsulated water-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6" - 12" water-filled rewindable motor

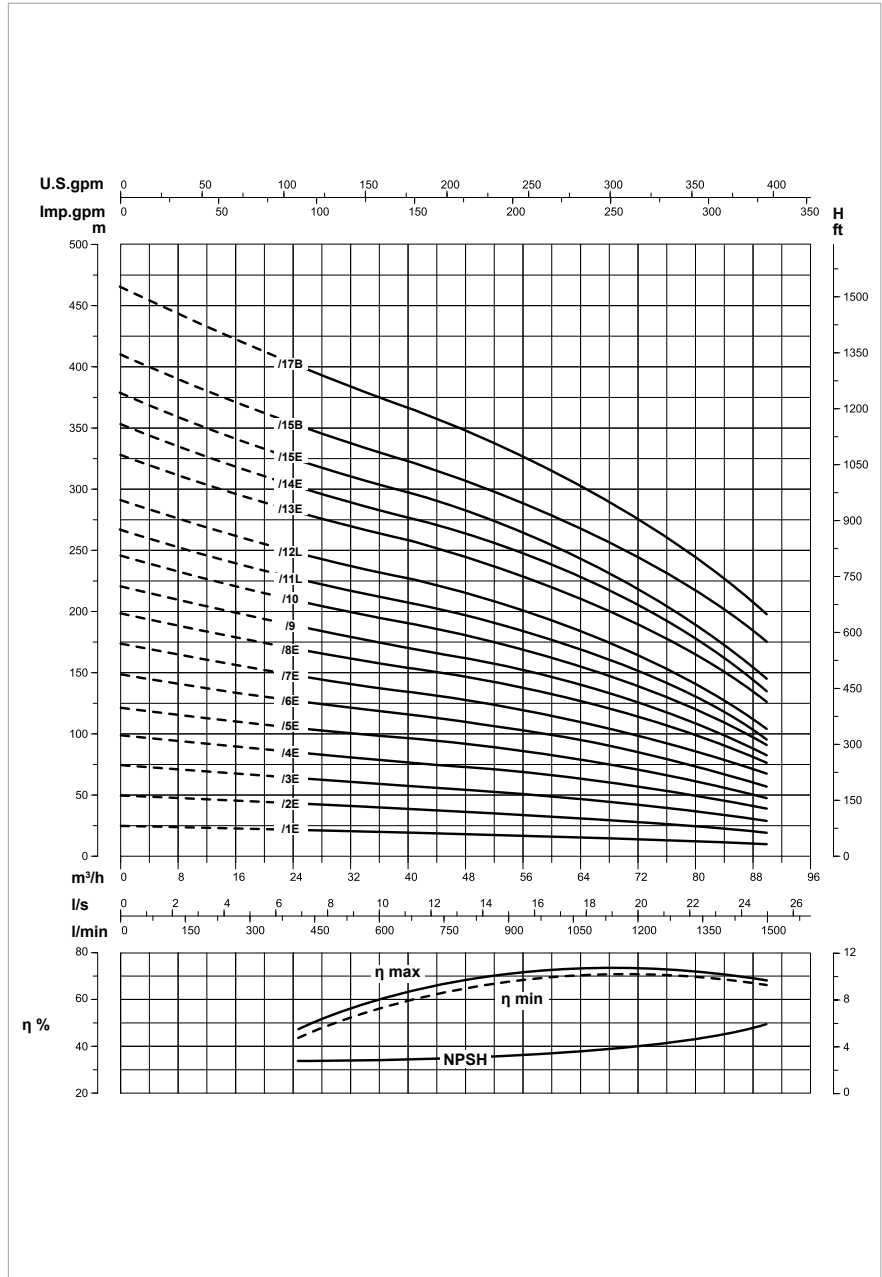
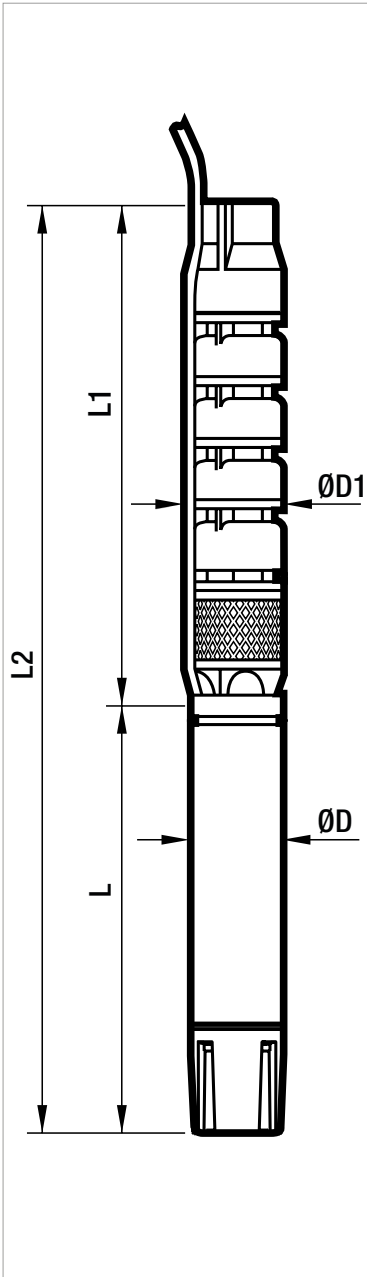
\*\* For the weight of the AISI 316 version, please check the reference motor page or contact our sales network.

●	Permitted
○	Only version PE2 + PA
△	Contact our sales network



# SMN8 60

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA														COUPLING STANDARD MOTOR
	P2 NOMINAL		Q=m3h	0	36	54	60	66	72	78	84	90	96	102	108	114	
	kW	HP	Q=l/min	0	600	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	
85/1A	5,5	7,5	H (m)	27	21,5	20	19,5	18,5	18	17,5	16,5	15,5	14,5	13	12	10,5	6"
85/2F	7,5	10		44	34,5	30,5	29,5	28	27	25	23	21	18,5	16,5	14	12,5	6"
85/2D	9,3	12,5		51	41	36,5	35	33,5	32,5	31,5	29,5	27	24,5	21,5	19	16	6"
85/3F	11	15		66	52	46	44	42	40	37,5	35	31,5	27,5	24,5	21,5	18	6"
85/3E	13	17,5		75	60,5	54,5	52,5	50	48,5	46	43,5	40	35,5	31,5	27,5	23	6"
85/3B	15	20		78,5	63	57	55	53	51	49	46,5	42,5	38,5	34	30	25	6"
85/4E	18,5	25		91	72	65	62,5	60	57	54	50	45,5	41	35,5	30	24,5	6"
85/4D	18,5	25		103	81,5	73	70	67	65	62,5	59	54	49	43,5	38	32,5	6"
85/4B	22	30		105	85,5	77	74	71	68,5	65,5	62,5	57,5	52	46,5	40,5	34,5	6"
85/5E	22	30		124	99	89	85	81,5	78,5	74,5	69,5	63	57	50	43,5	36,5	6"
85/5A	26	35		136	113	102	98	94	91	87,5	83,5	77,5	70,5	63	56	48,5	6"
85/6E	26	35		148	119	107	102	98	94	89,5	83	76	68	60	52	43,5	6"
85/6B	30	40		157	128	116	111	107	103	98,5	93	85	77	68	59,5	50,5	6"
85/7E	30	40		173	139	125	120	116	110	104	97,5	88,5	79,5	70	61	51	6"
85/7D	37	50		178	145	131	126	121	116	111	105	95	85	75	65	54,5	6"
85/8D	37	50		202	161	145	140	134	128	122	116	105	93,5	81,5	70	57	6"
85/8C	45	60		212	173	157	151	146	141	135	128	118	106	94,5	83	70	8"
85/9C	45	60		237	194	175	169	162	157	150	142	131	117	104	91	76,5	8"
85/10C	55	75	267	218	196	189	182	176	170	162	150	137	122	106	90	8"	
85/11C	55	75	291	239	215	207	199	192	184	174	160	146	130	114	97	8"	
85/12D	63	85	304	251	227	218	209	201	193	182	167	150	132	114	95	8"	
85/13E	63	85	329	262	236	227	217	208	198	188	170	152	133	114	93	8"	
85/13C	75	100	336	281	257	247	237	229	219	206	190	172	153	134	114	8"	
85/14C	75	100	359	301	276	265	255	245	234	221	203	183	163	142	120	8"	
85/15C	75	100	385	322	294	284	273	263	251	237	218	196	174	152	129	8"	
85/17C	92	125	436	365	333	322	310	298	285	269	246	222	197	173	146	8"	
85/18C	92	125	462	387	353	340	328	315	301	285	261	235	209	183	154	8"	

### ELECTRICAL DATA AND DIMENSIONS

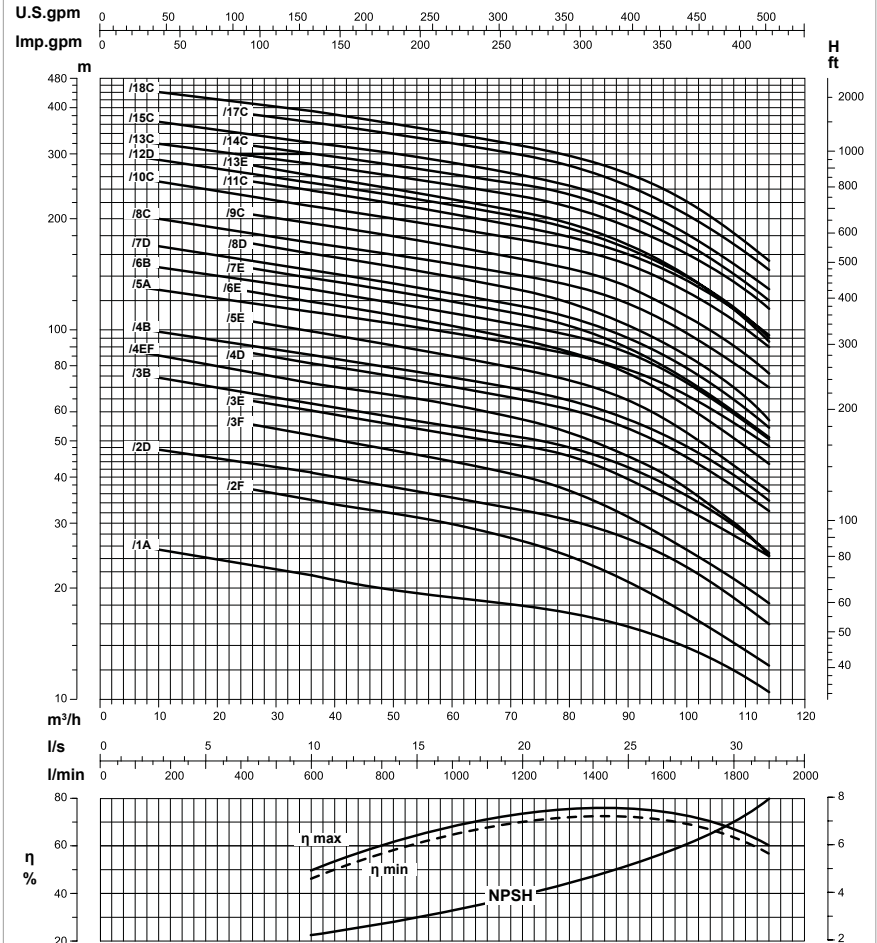
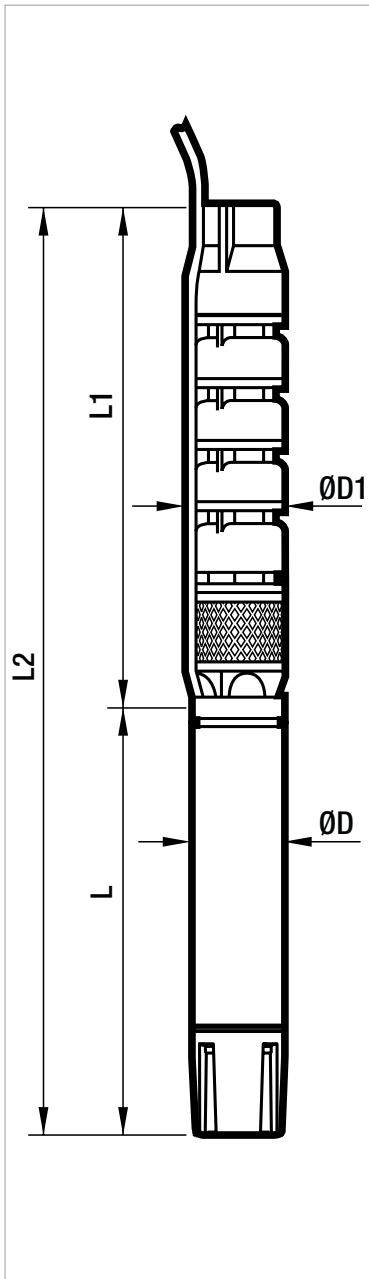
MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN GAS	HYDRAULIC WEIGHT Kg	MOTOR WEIGHT Kg
		P2 NOMINAL		In A										
		kW	HP											
85/1A-67	6GF	5,5	7,5	14	●	●	1182	631	551	141	196	5"	32	44
	TR6	5,5	7,5	13	○	●	1338	787	551	144	196	5"	32	50
85/2F-610	6GF	7,5	10	18	●	●	1348	661	687	141	196	5"	41	47
	TR6	7,5	10	18	○	●	1504	817	687	144	196	5"	41	53
85/2D-612	6GF	9,3	12,5	22	●	●	1373	686	687	141	196	5"	42	50
	TR6	9,3	12,5	21	○	●	1534	847	687	144	196	5"	42	55
85/3F-615	6GF	11	15	25,5	●	●	1554	731	823	141	196	5"	52	55
	TR6	11	15	25	○	●	1700	877	823	144	196	5"	52	60
85/3E-617	6GF	13	17,5	28,7	●	●	1584	761	823	141	196	5"	52	58,4
	TR6	13	17,5	29	○	●	1730	907	823	144	196	5"	52	63
85/3B-620	6GF	15	20	33,4	●	●	1609	786	823	141	196	5"	52	61
	TR6	15	20	32	○	●	1800	977	823	144	196	5"	52	77
85/4E-625	6GF	18,5	25	41	●	●	1820	861	959	141	196	5"	63	69
	TR6	18,5	25	39	○	●	1996	1037	959	144	196	5"	63	80
85/4D-625	6GF	18,5	25	41	●	●	1820	861	959	141	196	5"	63	69
	TR6	18,5	25	39	○	●	1996	1037	959	144	196	5"	63	80
85/4B-630	6GF	22	30	47	●	●	1880	921	959	141	196	5"	63	74
	TR6	22	30	49	○	●	2026	1067	959	144	196	5"	63	95
85/5E-630	6GF	22	30	47	●	●	2016	921	1095	141	196	5"	73	74
	TR6	22	30	49	○	●	2162	1067	1095	144	196	5"	73	95
85/5A-635	6GF	26	35	57	●	●	2075	980	1095	141	196	5"	74	78
	TR6	26	35	58	○	●	2232	1137	1095	144	196	5"	74	103
85/6E-635	6GF	26	35	57	●	●	2211	980	1231	141	196	5"	84	78
	TR6	26	35	58	○	●	2368	1137	1231	144	196	5"	84	103
85/6B-640	6GF	30	40	61,5	●	●	2282	1051	1231	141	196	5"	84	89
	TR6	30	40	65	○	●	2423	1192	1231	144	196	5"	84	110
85/7E-640	6GF	30	40	61,5	●	●	2418	1051	1367	141	196	5"	94	89
	TR6	30	40	65	○	●	2559	1192	1367	144	196	5"	94	110
85/7D-650	6GF	37	50	79,3	●	●	2548	1181	1367	141	198	5"	95	102
	TR6	37	50	80	○	●	2659	1292	1367	144	198	5"	95	113
85/8D-650	6GF	37	50	79,3	●	●	2684	1181	1503	141	198	5"	105	102
	TR6	37	50	80	○	●	2795	1292	1503	144	198	5"	105	113
85/8C-860	TR8	45	60	92	○	●	2773	1270	1503	192	198	5"	107	177
85/9C-860	TR8	45	60	92	○	●	2909	1270	1639	192	198	5"	117	177
85/10C-875	TR8	55	75	109	○	●	3125	1350	1775	192	198	5"	128	192
85/11C-875	TR8	55	75	109	○	●	3261	1350	1911	192	198	5"	138	192
85/12D-885	TR8	63	85	126	○	●	3537	1490	2047	192	200	5"	149	218
85/13E-885	TR8	63	85	126	○	●	3673	1490	2183	192	200	5"	159	218
85/13C-8100	TR8	75	100	145	○	●	3773	1590	2183	192	200	5"	160	237
85/14C-8100	TR8	75	100	145	○	●	3909	1590	2319	192	200	5"	170	237
85/15C-8100	TR8	75	100	145	○	●	4045	1590	2455	192	200	5"	181	237
85/17C-8125	TR8	92	125	177	○	●	4557	1830	2727	192	202	5"	202	283
85/18C-8125	TR8	92	125	177	○	●	4693	1830	2863	192	202	5"	213	283

\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6" - 12" water-filled rewindable motor

●	Permitted
○	Only version PE2 + PA
△	Contact our sales network

# SMC8 85

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values =  $1 \text{ mm}^2/\text{s}$  and density equal to  $1000 \text{ kg}/\text{m}^3$ . Curve tolerance according to ISO 9906.

### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA													COUPLING STANDARD MOTOR
	P2 NOMINAL		Q=m3h	0	36	60	66	72	78	84	90	96	102	108	114	
	kW	HP	Q=l/min	0	600	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	
85/1A	5,5	7,5	H (m)	28,5	20,5	19,5	19	18	17	16	15	14	12,5	11		6"
85/2D	9,3	12,5		54	37,5	36	34,5	33	31,5	29,5	27,5	25	22,5	20	17	6"
85/3A	15	20		85	61	59	57	54	52	49	45	42	37	32,5	27,5	6"
85/4D	18,5	25		108	75	73	70	66	63	59	55	50	45	40	34	6"
85/4A	22	30		114	83	80	77	74	70	66	62	56	51	44	38	6"
85/5D	22	30		134	94	91	87	83	79	74	69	63	57	50	43	6"
85/5A	26	35		142	104	100	96	92	88	83	77	70	63	55	47	6"
85/6A	30	40		170	124	120	116	111	105	99	92	84	76	67	56	6"
85/7C	37	50		191	151	130	125	119	113	107	99	91	82	72	62	6"
85/8G	37	50		217	171	148	142	135	128	121	112	103	93	81	69	6"
85/8D	45	60		234	168	162	156	150	143	135	126	117	106	95	83	8"
85/9E	45	60		256	183	177	170	162	155	146	136	125	113	101	87	8"
85/10D	55	75		292	210	203	195	187	178	169	158	146	133	119	103	8"
85/11D	55	75		321	231	223	215	206	196	186	173	160	146	130	114	8"
85/12D	63	85		350	252	243	234	224	213,5	202	189	175	159	142	124	8"
85/13D	75	100		379	273	264	254	243	232	219	205	189	172	154	134	8"
85/14A	75	100	407	305	295	284	272	259	245	228	210	191	169	146	8"	
85/15A	92	125	436	327	316	304	291	277	262	245	225	204	181	156	8"	
85/16A	92	125	466	349	337	324	311	296	280	261	240	218	193	167	8"	

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN GAS	HYDRAULIC WEIGHT Kg	MOTOR WEIGHT ** Kg
		P2 NOMINAL		In A										
		kW	HP											
85/1A-67	6GX	5,5	7,5	14	●	●	1182	631	551	141	198	5"	23	42,8
	TR6N	5,5	7,5	13	○	●	1338	787	551	144	198	5"	23	48,5
85/2D-612	6GX	9,3	12,5	22	●	●	1373	686	687	141	198	5"	30	48,6
	TR6N	9,3	12,5	21	○	●	1534	847	687	144	198	5"	30	53,5
85/3A-620	6GX	15	20	33,4	●	●	1609	786	823	141	198	5"	38	59,5
	TR6N	15	20	32	○	●	1800	977	823	144	198	5"	38	75,5
85/4D-625	6GX	18,5	25	41	●	●	1820	861	959	141	198	5"	45	67
	TR6N	18,5	25	39	○	●	1996	1037	959	144	198	5"	45	81,5
85/4A-630	6GX	22	30	47	●	●	1880	921	959	141	198	5"	45	72,8
	TR6N	22	30	49	○	●	2026	1067	959	144	198	5"	45	93,5
85/5D-630	6GX	22	30	47	●	●	2016	921	1095	141	198	5"	53	72,8
	TR6N	22	30	49	○	●	2162	1067	1095	144	198	5"	53	93,5
85/5A-635	6GX	26	35	57	●	●	2075	980	1095	141	198	5"	53	77
	TR6N	26	35	58	○	●	2232	1137	1095	144	198	5"	53	104,5
85/6A-640	6GX	30	40	61,5	●	●	2282	1051	1231	141	198	5"	60	87
	TR6N	30	40	65	○	●	2423	1192	1231	144	198	5"	60	108,5
85/7C-650	6GX	37	50	79,3	●	●	2548	1181	1367	141	198	5"	68	100,1
	TR6N	37	50	80	○	●	2659	1292	1367	144	198	5"	68	114,5
85/8G-650	6GX	37	50	79,3	●	●	2684	1181	1503	141	198	5"	77	100,1
	TR6N	37	50	80	○	●	2795	1292	1503	144	198	5"	77	114,5
85/8D-860	TR8N	45	60	92	○	●	2773	1270	1503	192	198	5"	77	179,5
85/9E-860	TR8N	45	60	92	○	●	2909	1270	1639	192	198	5"	85	179,5
85/10D-875	TR8N	55	75	109	○	●	3125	1350	1775	192	198	5"	92	194,5
85/11D-875	TR8N	55	75	109	○	●	3261	1350	1911	192	198	5"	100	194,5
85/12D-885	TR8N	63	85	126	○	●	3537	1490	2047	192	198	5"	107	220,5
85/13D-8100	TR8N	75	100	145	○	●	3773	1590	2183	192	198	5"	115	239,5
85/14A-8100	TR8N	75	100	145	○	●	3909	1590	2319	192	198	5"	123	239,5
85/15A-8125	TR8N	92	125	177	○	●	4285	1830	2455	192	198	5"	131	285,5
85/16A-8125	TR8N	92	125	177	○	●	4421	1830	2591	192	198	5"	139	285,5

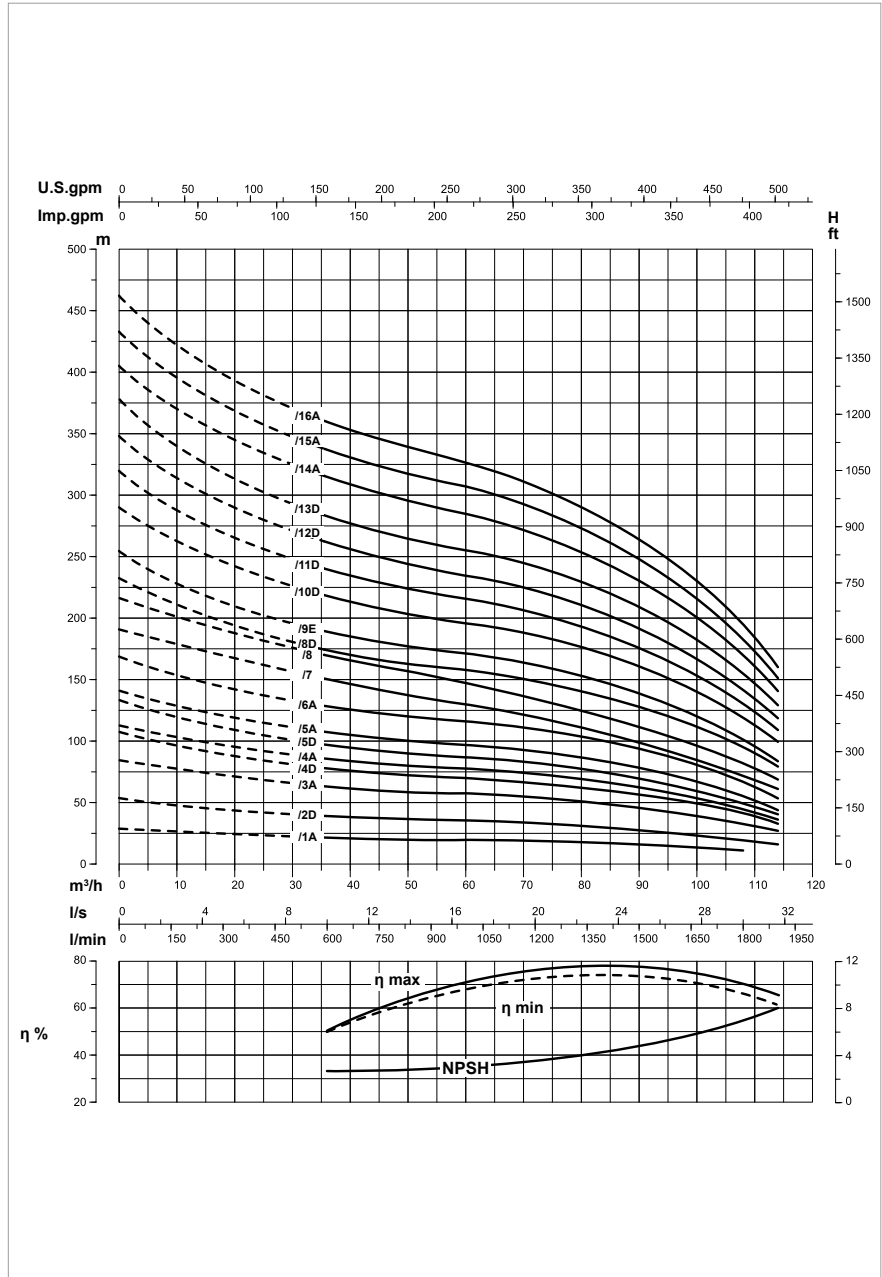
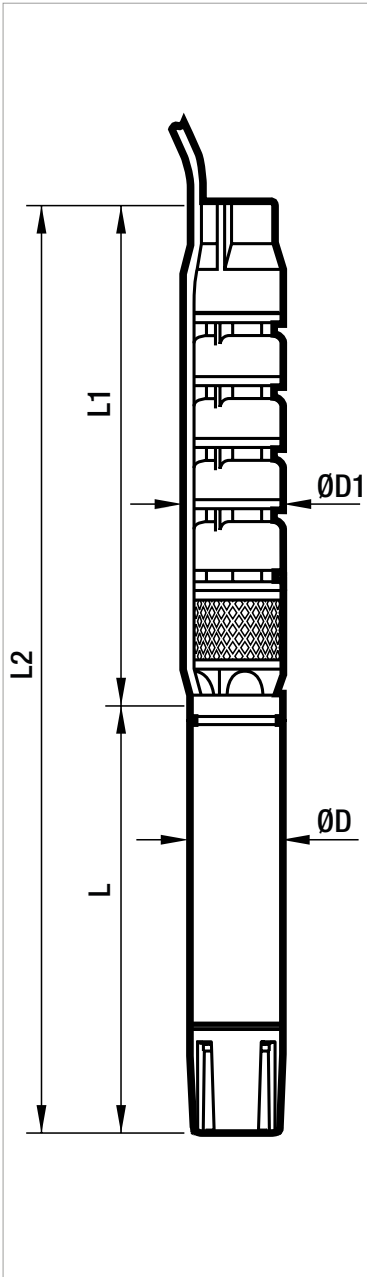
\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6" - 12" water-filled rewindable motor

\*\* For the weight of the AISI 316 version, please check the reference motor page or contact our sales network.

●	Permitted
○	Only version PE2 + PA
△	Contact our sales network

# SMN8 85

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values =  $1 \text{ mm}^2/\text{s}$  and density equal to  $1000 \text{ kg/m}^3$ . Curve tolerance according to ISO 9906.

# SMC8 110 - SMN8 110

## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA													COUPLING STANDARD MOTOR
	P2 NOMINAL		Q=m3h	0	36	66	84	96	102	108	114	120	126	138	156	
	kW	HP	Q=l/min	0	600	1100	1400	1600	1700	1800	1900	2000	2100	2300	2600	
110/2H	13	17,5	H (m)	47,5	42,5	39,5	37	35,5	34,5	33,5	32	30,5	28,5	24,5	17	6"
110/3G	18,5	25		69,5	63	57,5	53	50,5	49	47	45	42	39,5	33	22	6"
110/3B	22	30		76	69	64	60,5	57,5	56	54	51,5	49	46	39	27,5	6"
110/4F	26	35		95	87,5	80,5	75,5	72	69,5	67	63,5	60	56	47,5	32,5	6"
110/5I	30	40		112,5	103,5	95	89	84	81,5	78	74	69,5	64,5	53,5	35,5	6"
110/5F	37	50		118	109,5	101,5	95,5	91	88	85	80,5	76	71	60,5	41,5	6"
110/6H	37	50		137,5	126	117	109,5	103,5	100	96	90,5	85	79	66	45	6"
110/6F	45	60		144,5	134	124,5	117,5	112	109	105,5	100,5	95	89	76	53,5	8"
110/6B	45	60		155,5	144	134,5	127	121	117,5	113,5	108,5	102,5	96,5	83	59,5	8"
110/7C	55	75		178,5	165,5	154	146	139	135	130,5	124,5	117,5	110	92,5	63,5	8"
110/9L	55	75		200,5	186	171,5	161,5	154	149	143	136	127,5	118,5	98,5	66	8"
110/9G	63	85		209	194,5	180	170	162	157	152	146	137,5	128,5	108,5	74,5	8"
110/9B	75	100		225,5	212	196,5	185,5	176,5	171,5	165,5	159	150,5	141	121	88	8"
110/10B	75	100		251	235,5	218	206	196	190,5	184	177	167,5	157	134,5	97,5	8"
110/11B	92	125		276	259	240	226,5	215,5	209,5	202,5	194,5	184	172,5	147,5	107,5	8"
110/13E	92	125		313	294	272	257	244,5	238	230	221	209	196,5	167,5	117,5	8"
110/14C	110	150	351	329,5	305,5	288,5	274,5	266,5	257,5	247,5	234	219,5	188	137	8"	
110/15C	110	150	376	353	327,5	309	294	285,5	276	265,5	251	235,5	201,5	146,5	8"	



# SMC8 110 - SMN8 110

## SUBMERSIBLE PUMPS

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN GAS	WEIGHT SMC Kg	WEIGHT SMN Kg	MOTOR WEIGHT ** Kg
		P2 NOMINAL		In A											
		kW	HP												
110/2H-617	6GF	13	17,5	28,7	●	●	1490	761	729	141	196	5"	43	36	58,4
	TR6	13	17,5	29	○	●	1636	907	729	144	196	5"	43	36	63
110/3G-625	6GF	18,5	25	41	●	●	1747	861	886	141	196	5"	55	46	69
	TR6	18,5	25	39	○	●	1923	1037	886	144	196	5"	55	46	80
110/3B-630	6GF	22	30	47	●	●	1807	921	886	141	196	5"	55	46	74
	TR6	22	30	49	○	●	1953	1067	886	144	196	5"	55	46	95
110/4F-635	6GF	26	35	57	●	●	2023	980	1043	141	196	5"	67	56	78
	TR6	26	35	58	○	●	2180	1137	1043	144	196	5"	67	56	103
110/5I-640	6GF	30	40	61,5	●	●	2251	1051	1200	141	196	5"	79	66	89
	TR6	30	40	65	○	●	2392	1192	1200	144	196	5"	79	66	110
110/5F-650	6GF	37	50	79,3	●	●	2381	1181	1200	141	198	5"	79	66	102
	TR6	37	50	80	○	●	2492	1292	1200	144	198	5"	79	66	113
110/6H-650	6GF	37	50	79,3	●	●	2538	1181	1357	141	198	5"	91	76	102
	TR6	37	50	80	○	●	2649	1292	1357	144	198	5"	91	76	113
110/6F-860	TR8	45	60	92	○	●	2627	1270	1357	192	198	5"	93	76	177
110/6B-860	TR8	45	60	92	○	●	2627	1270	1357	192	198	5"	93	76	177
110/7C-875	TR8	55	75	109	○	●	2864	1350	1514	192	198	5"	105	86	192
110/9L-875	TR8	55	75	109	○	●	3178	1350	1828	192	198	5"	129	106	192
110/9G-885	TR8	63	85	126	○	●	3318	1490	1828	192	198	5"	129	106	218
110/9B-8100	TR8	75	100	145	○	●	3418	1590	1828	192	200	5"	129	106	237
110/10B-8100	TR8	75	100	145	○	●	3575	1590	1985	192	200	5"	142	116	237
110/11B-8125	TR8	92	125	177	○	●	3972	1830	2142	192	202	5"	154	126	283
110/13E-8125	TR8	92	125	177	○	●	4286	1830	2456	192	202	5"	178	146	283
110/14C-8150	TR8	110	150	213	○	●	4673	2060	2613	192	202	5"	190	156	333
110/15C-8150	TR8	110	150	213	○	●	4830	2060	2770	192	202	5"	203	166	333

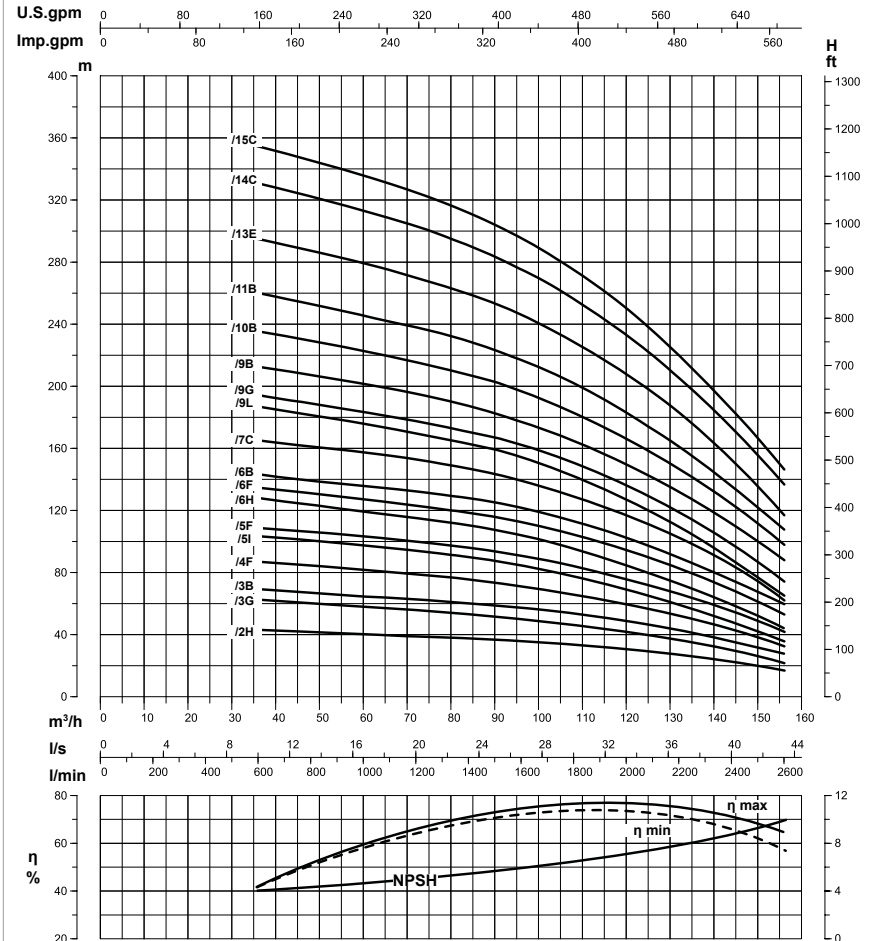
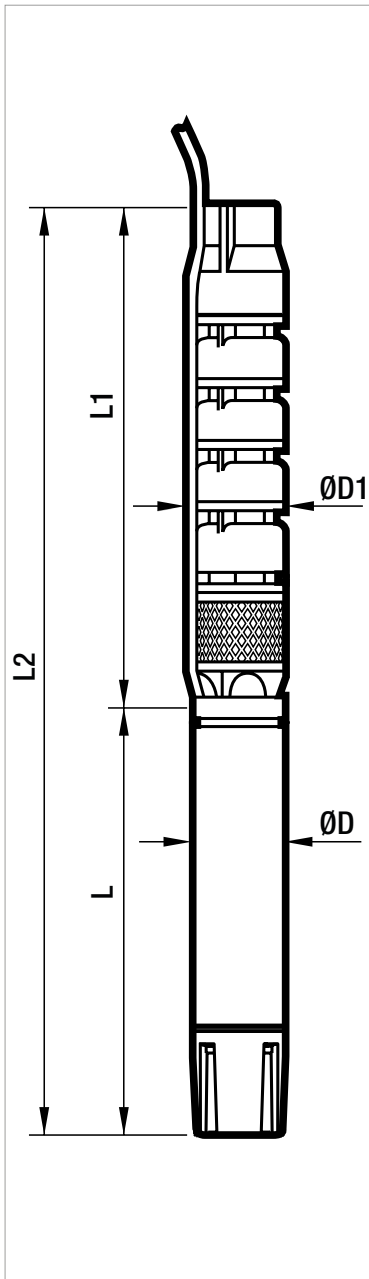
\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6" - 12" water-filled rewindable motor

\*\* For the weight of the AISI 316 version, please check the reference motor page or contact our sales network.

●	Permitted
○	Only version PE2 + PA
▲	Contact our sales network

# SMC8 110 - SMN8 110

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

# SMC8 135 - SMN8 135

## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA													COUPLING STANDARD MOTOR
	P2 NOMINAL		Q=m3h	0	36	72	96	108	120	132	144	156	168	180	192	
	kW	HP	Q=l/min	0	600	1200	1600	1800	2000	2200	2400	2600	2800	3000	3200	
135/2M	13	17,5	H (m)	47,5	42	37,5	34,5	33	30,5	28	24,5	20,5	16	12	8,5	6"
135/2F	15	20		52	46	41	38,5	36,5	34,5	32	29	25	21	16,5	12	6"
135/2C	18,5	25		55	48,5	43,5	41	39	37	34,5	31	27	23	19	15,5	6"
135/3N	18,5	25		63,5	58,5	53,5	49	45,5	42	37	32	26	20	14		6"
135/3L	22	30		70	64	57,5	53	50,5	47	42,5	37,5	31,5	25	19	13,5	6"
135/3B	26	35		82,5	75	68,5	64	61	58	54,5	49,5	43	36	29,5	22	6"
135/4E	30	40		101	90	82	76,5	72,5	68,5	63	56,5	49,5	41,5	33	24	6"
135/4C	37	50		106	95	88	82	78	73,5	68	61,5	54	45,5	36,5	26,5	6"
135/5F	37	50		121,5	111	101,5	94	89	84	77,5	69	60	50	39,5	28	6"
135/5E	45	60		128,5	118	108	100	95,5	90,5	84,5	77	68	58,5	47,5	35,5	8"
135/6F	45	60		151	135,5	125	116	110,5	104	96,5	86,5	76	64	51,5	38	8"
135/7G	55	75		176	159,5	147	137	130,5	123	114	102	89	75	60	44,5	8"
135/7E	55	75		181	164	151,5	141,5	135,5	128	119	107	94	80	65	49,5	8"
135/8G	63	85		201,5	182	168	156,5	149,5	140,5	130	117	102	85,5	68,5	51	8"
135/9G	75	100		220	200,5	185	171,5	163	153,5	141,5	127	110,5	93	74	54	8"
135/9C	75	100		238	219,5	201,5	187	178,5	169	158	143,5	128	110,5	91	69,5	8"
135/11C	92	125	291	268,5	246,5	228,5	218	206,5	193	175,5	156,5	135	111	85	8"	
135/13C	110	150	343,5	317	291	270	258	244	228	207,5	185	159,5	131,5	100,5	8"	

# SMC8 135 - SMN8 135

## SUBMERSIBLE PUMPS

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN GAS	WEIGHT SMC Kg	WEIGHT SMN Kg	MOTOR WEIGHT ** Kg
		P2 NOMINAL		In A											
		kW	HP												
135/2M-617	6GF	13	17,5	28,7	●	●	1490	761	729	141	196	5"	43	36	58,4
	TR6	13	17,5	29	○	●	1636	907	729	144	196	5"	43	36	63
135/2F-620	6GF	15	20	33,4	●	●	1515	786	729	141	196	5"	43	36	61
	TR6	15	20	32	○	●	1706	977	729	144	196	5"	43	36	77
135/2C-625	6GF	18,5	25	41	●	●	1590	861	729	141	196	5"	43	36	69
	TR6	18,5	25	39	○	●	1766	1037	729	144	196	5"	43	36	80
135/3N-625	6GF	18,5	25	41	●	●	1747	861	886	141	196	5"	55	46	69
	TR6	18,5	25	39	○	●	1923	1037	886	144	196	5"	55	46	80
135/3L-630	6GF	22	30	47	●	●	1807	921	886	141	196	5"	55	46	74
	TR6	22	30	49	○	●	1953	1067	886	144	196	5"	55	46	95
135/3B-635	6GF	26	35	57	●	●	1866	980	886	141	196	5"	55	46	78
	TR6	26	35	58	○	●	2023	1137	886	144	196	5"	55	46	103
135/4E-640	6GF	30	40	61,5	●	●	2094	1051	1043	141	196	5"	67	56	89
	TR6	30	40	65	○	●	2235	1192	1043	144	196	5"	67	56	110
135/4C-650	6GF	37	50	79,3	●	●	2224	1181	1043	141	198	5"	67	56	102
	TR6	37	50	80	○	●	2335	1292	1043	144	198	5"	67	56	113
135/5F-650	6GF	37	50	79,3	●	●	2381	1181	1200	141	198	5"	79	66	102
	TR6	37	50	80	○	●	2492	1292	1200	144	198	5"	79	66	113
135/5E-860	TR8	45	60	92	○	●	2470	1270	1200	192	198	5"	81	66	177
135/6F-860	TR8	45	60	92	○	●	2627	1270	1357	192	198	5"	93	76	177
135/7G-875	TR8	55	75	109	○	●	2864	1350	1514	192	198	5"	105	86	192
135/7E-875	TR8	55	75	109	○	●	2864	1350	1514	192	198	5"	105	86	192
135/8G-885	TR8	63	85	126	○	●	3161	1490	1671	192	198	5"	117	96	218
135/9G-8100	TR8	75	100	145	○	●	3418	1590	1828	192	200	5"	129	106	237
135/9C-8100	TR8	75	100	145	○	●	3418	1590	1828	192	200	5"	129	106	237
135/11C-8125	TR8	92	125	177	○	●	3972	1830	2142	192	202	5"	154	126	283
135/13C-8150	TR8	110	150	213	○	●	4516	2060	2456	192	202	5"	178	146	333

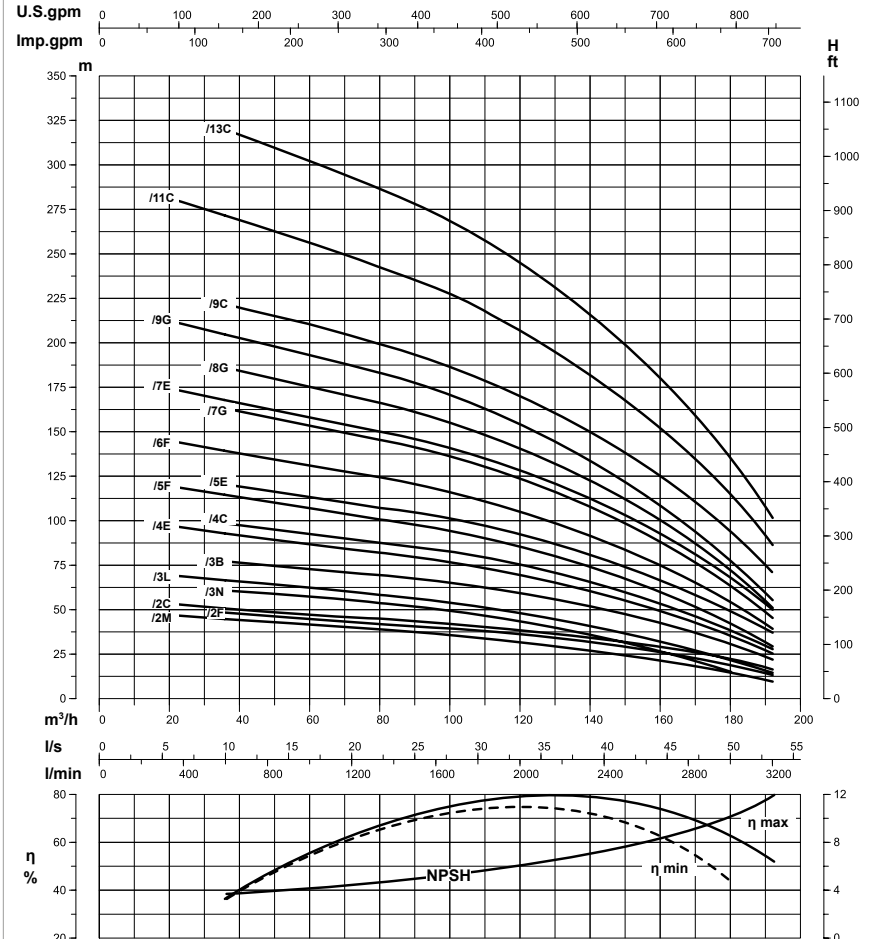
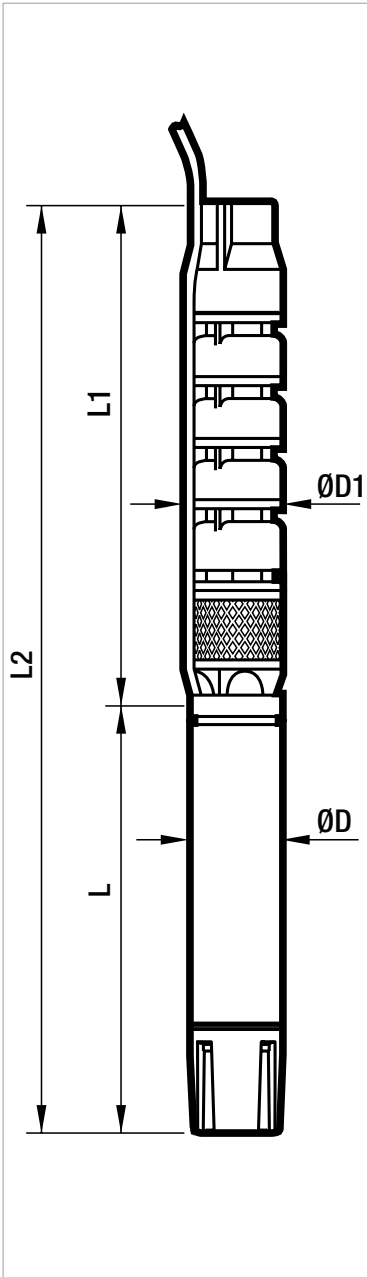
\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6" - 12" water-filled rewindable motor

\*\* For the weight of the AISI 316 version, please check the reference motor page or contact our sales network.

●	Permitted
○	Only version PE2 + PA
△	Contact our sales network

# SMC8 135 - SMN8 135

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

# SMC10 - SMN10

## SUBMERSIBLE PUMPS



### TECHNICAL DATA

**Operating range:** up to 400 m<sup>3</sup>/h with head up to 453 m

**Pumped liquid:** clean, free of solids and abrasives, chemically neutral, with properties similar to water

**Start-ups/hour:** see the coupled motor

**Cooling flow:** see the coupled motor

**Maximum permitted amount of sand:** 40 g/m<sup>3</sup>

**Ambient temperature:** 30 °C

**Minimum recommended level on suction line:** 2 m

**Installation:** horizontal or vertical

### APPLICATIONS

Multistage semiaxial submersible electric pumps for wells measuring 10" or above, able to generate a broad range of flow rates and heads.

They are used extensively for the lifting, distribution and pressurisation of industrial water systems, the supply of pressure vessels and tanks, firefighting systems and irrigation systems.

Application with clean, non-aggressive water free from solids or abrasive substances.

### CONSTRUCTION FEATURES OF THE PUMP

#### SMC version:

Cast iron pump body treated with cataphoresis paint coating and dynamically balanced impellers in microcast AISI 304 stainless steel coupled on the shaft with pull tab. Shaft guided with coaxial bush bearings and fully protected with bushes.

Pump with check valve of low pressure loss.

Flanged delivery port and kit containing counter flange, bolts and gaskets.

#### SMN version:

Pump body and impellers in microcast AISI 316 stainless steel. Dynamically balanced impellers coupled on the shaft with pull tab. Shaft guided with coaxial bush bearings and fully protected with bushes.

Pump with check valve of low pressure loss.

Flanged delivery port and kit containing counter flange, bolts and gaskets.

Coupling with motors of 6" or 8" depending on the required hydraulic power and available in a standard version with cast iron supports treated with cataphoresis paint coating, and in a version entirely in AISI 316 stainless steel:

6GF/6GX: encapsulated 6" submersible motor

TR6: rewindable 6" submersible motor

TR8: rewindable 8" submersible motor

TR10: rewindable 10" submersible motor

Refer to the technical data sheets of the specific model for the electrical characteristics of the submersible motors and the specifications for operation with inverter.

### ON REQUEST

Motor in AISI 316 stainless steel for use in aggressive water.

Non-standard pump/motor couplings.

Star/Delta starting version.

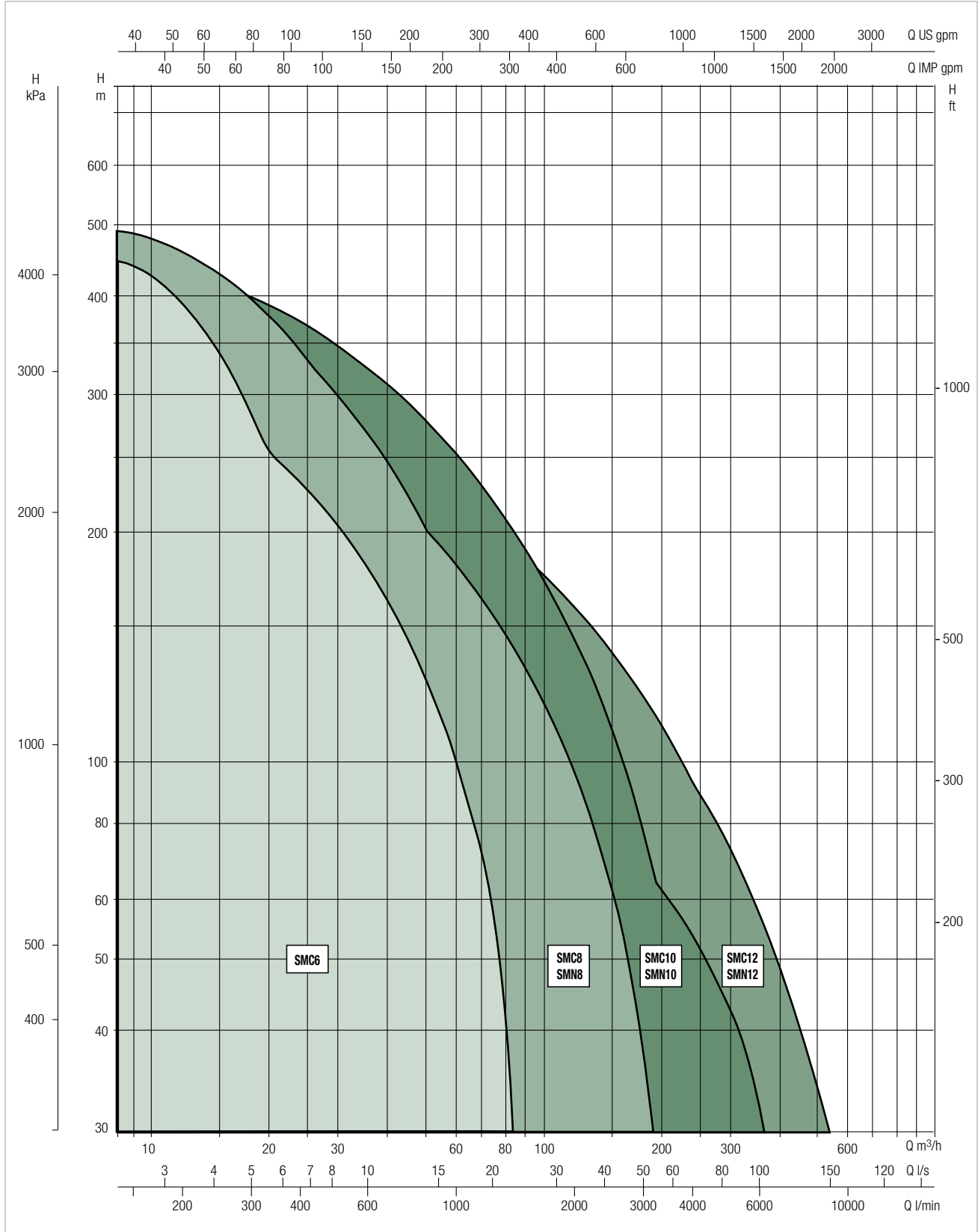
Motor version for high temperature of water.

### PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### GRAPHIC SELECTION TABLE

50 Hz - 2900 r.p.m.

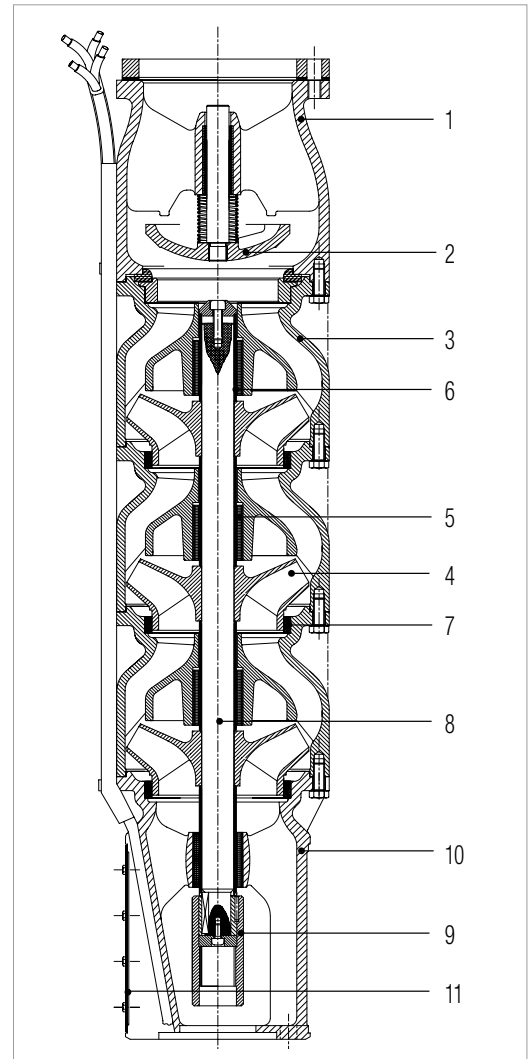


# SMC10 - SMN10

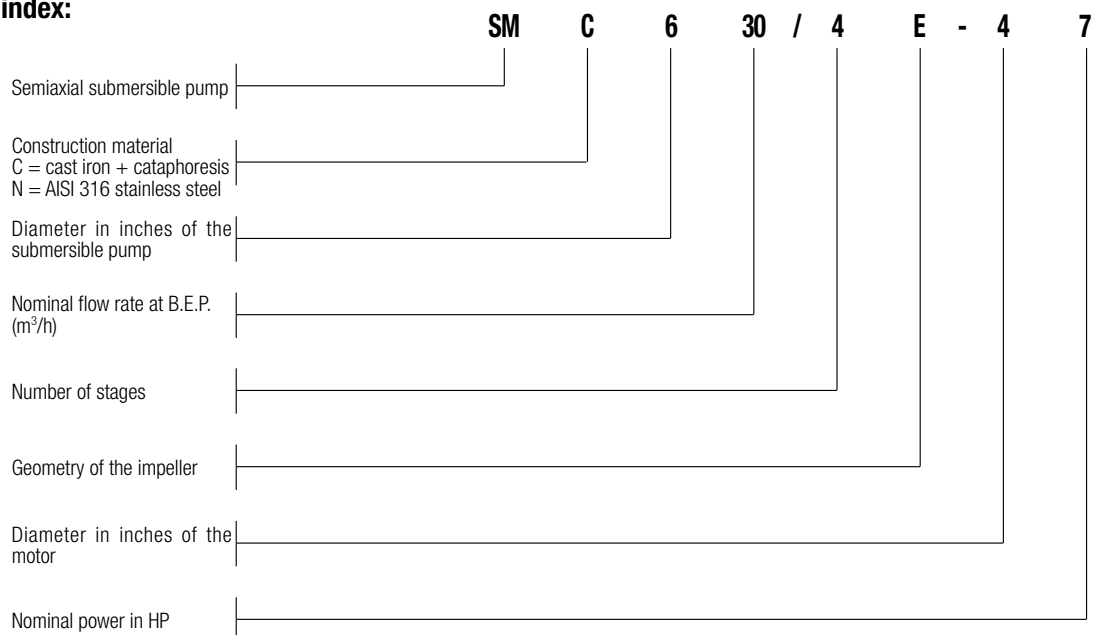
## SUBMERSIBLE PUMPS

### MATERIALS

N°	PARTS	MATERIALS - SMC	MATERIALS - SMN
1	DELIVERY BODY	CAST IRON + CATAPHORESIS	AISI 316 STAINLESS STEEL
2	NON-RETURN VALVE	CAST IRON + CATAPHORESIS	AISI 316 STAINLESS STEEL
3	DIFFUSER	CAST IRON + CATAPHORESIS	AISI 316 STAINLESS STEEL
4	IMPELLER	AISI 304 STAINLESS STEEL	AISI 316 STAINLESS STEEL
5	GUIDE BEARING	RUBBER	VITON
6	BUSH	CHROME-PLATED BRASS	AISI 316 STAINLESS STEEL
7	WEAR RING	RUBBER	POM
8	PUMP SHAFT	STAINLESS STEEL	AISI 329 DUPLEX STAINLESS STEEL
9	PIPE	STAINLESS STEEL	AISI 329 DUPLEX STAINLESS STEEL
10	SUCTION BODY	CAST IRON + CATAPHORESIS	AISI 316 STAINLESS STEEL
11	FILTER GRID	STAINLESS STEEL	AISI 316 STAINLESS STEEL



**- Denomination index:**  
(example)





# SMC10 200 - SMN10 200

## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA													COUPLING STANDARD MOTOR
	P2 NOMINAL		Q=m³h	0	60	84	108	132	150	168	180	192	210	234	258	
	kW	HP	Q=l/min	0	1000	1400	1800	2200	2500	2800	3000	3200	3500	3900	4300	
200/1M	11	15	H (m)	32	25,5	24	22	20,5	19	17,5	16,5	15	12,5	9	-	6"
200/1L	13	17,5		35,5	29	27	25,5	24	22,5	21	19,5	18	15,5	11,5	6,5	6"
200/1H	15	20		40	33	30,5	29	27	25,5	24	23	21,5	19	16	12	6"
200/1G	18,5	25		41	34	32	30	28	26,5	25	24	22,5	20	17	13	6"
200/1C	18,5	25		45	37	34,5	32,5	30,5	29	27,5	26	24,5	22	18,5	14	6"
200/1A	22	30		48	39	36,5	34,5	32,5	31,5	29,5	28,5	27	24	19,5	14	6"
200/2M	22	30		64	51,5	48	44,5	41	38,5	35,5	33	30	25,5	17,5	-	6"
200/2L	26	35		70,5	58,5	55	52	48,5	46	43	40,5	37,5	32,5	24	14,5	6"
200/2H	30	40		79,5	66	62	58,5	55	52	48,5	46	43	38	30	20,5	6"
200/2G	37	50		84	70,5	66,5	62,5	59	56	52,5	50	47	41,5	34	25	6"
200/2E	37	50		90	77	72	68	64	61	58	56	53	48	40,5	31	6"
200/2B	45	60		94,5	80	75,5	71,5	67,5	64,5	61	59	55,5	50,5	43	34,5	8"
200/3H	45	60		117	99	93,5	89	84	80	75,5	72	67,5	59,5	47,5	33	8"
200/3G	55	75		130	110	104	98,5	93	88,5	84	80	75,5	67,5	56	42	8"
200/3E	55	75		137	116,5	110	104,5	99	94,5	90	86,5	81,5	73,5	62,5	48,5	8"
200/3B	63	85		143	122	115,5	109,5	104	99,5	94,5	91,5	86,5	78,5	67,5	54	8"
200/4G	75	100		168,5	142,5	134,5	128	121	115	108,5	104	97,5	86,5	70,5	51	8"
200/4D	75	100		183,5	156	148	141	133,5	128	121,5	117	110,5	100	84	65,5	8"
200/5I	75	100		200	169	159,5	151,5	142,5	135,5	127,5	121,5	113,5	100,5	80	56,5	8"
200/5F	92	125		224	192	180,5	171,5	163	157	150	144,5	137	124	104	80	8"
200/6I	92	125	241	204,5	193,5	184,5	174,5	166,5	156,5	149,5	140	124	99	69	8"	
200/6F	110	150	269	230	216,5	205,5	195,5	188,5	180	173	164	149	124,5	96	8"	
200/7H	110	150	283	241,5	227,5	216,5	205,5	197	186,5	178,5	167	147,5	118	83	8"	
200/7E	132	180	319	271	256,5	244	231,5	222	211	203	192,5	174	148	116,5	10"	
200/8D	147	200	366,5	314	296,5	281	267	256,5	245	236,5	224,5	203,5	172,5	135,5	10"	
200/9D	170	230	412	353,5	332,5	316	300,5	288,5	275,5	266	252,5	229	194	152,5	10"	
200/10E	190	260	453	388	365	347	330	317	302	291,5	276,5	250	211	165	10"	

# SMC10 200 - SMN10 200

## SUBMERSIBLE PUMPS

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN	WEIGHT SMC Kg	WEIGHT SMN Kg	MOTOR WEIGHT** Kg
		P2 NOMINAL		In A											
		kW	HP												
200/1M-615	6GF	11	15	25,5	●	●	1418	731	687	141	247	6"	66	53	54,5
	TR6	11	15	25	○	●	1564	877	687	144	247	6"	66	53	60
200/1L-617	6GF	13	17,5	28,7	●	●	1448	761	687	141	247	6"	66	53	58,4
	TR6	13	17,5	29	○	●	1594	907	687	144	247	6"	66	53	63
200/1H-620	6GF	15	20	33,4	●	●	1473	786	687	141	247	6"	66	53	60,4
	TR6	15	20	32	○	●	1664	977	687	144	247	6"	66	53	77
200/1G-625	6GF	18,5	25	41	●	●	1548	861	687	141	247	6"	66	53	69
	TR6	18,5	25	39	○	●	1724	1037	687	144	247	6"	66	53	80
200/1C-625	6GF	18,5	25	41	●	●	1548	861	687	141	247	6"	66	53	69
	TR6	18,5	25	39	○	●	1724	1037	687	144	247	6"	66	53	80
200/1A-630	6GF	22	30	47	●	●	1608	921	687	141	247	6"	66	53	74
	TR6	22	30	49	○	●	1754	1067	687	144	247	6"	66	53	95
200/2M-630	6GF	22	30	47	●	●	1768	921	847	141	247	6"	92	76	74
	TR6	22	30	49	○	●	1914	1067	847	144	247	6"	92	76	95
200/2L-635	6GF	26	35	57	●	●	1827	980	847	141	247	6"	92	76	78
	TR6	26	35	58	○	●	1984	1137	847	144	247	6"	92	76	103
200/2H-640	6GF	30	40	61,5	●	●	1898	1051	847	141	247	6"	92	76	88,5
	TR6	30	40	65	○	●	2039	1192	847	144	247	6"	92	76	110
200/2G-650	6GF	37	50	79,3	●	●	2048	1181	867	141	249	6"	92	76	102
	TR6	37	50	80	○	●	2159	1292	867	144	249	6"	92	76	113
200/2E-650	6GF	37	50	79,3	●	●	2048	1181	867	141	249	6"	92	76	102
	TR6	37	50	80	○	●	2159	1292	867	144	249	6"	92	76	113
200/2B-860	TR8	45	60	92	○	●	2137	1270	867	192	249	6"	92	76	177
200/3H-860	TR8	45	60	92	○	●	2317	1270	1047	192	249	6"	118	98	177
200/3G-875	TR8	55	75	109	○	●	2397	1350	1047	192	249	6"	118	98	192
200/3E-875	TR8	55	75	109	○	●	2397	1350	1047	192	249	6"	118	98	192
200/3B-885	TR8	63	85	126	○	●	2537	1490	1047	192	249	6"	118	98	218
200/4G-8100	TR8	75	100	145	○	●	2817	1590	1227	192	249	6"	162	121	237
200/4D-8100	TR8	75	100	145	○	●	2817	1590	1227	192	249	6"	162	121	237
200/5I-8100	TR8	75	100	145	○	●	2997	1590	1407	192	249	6"	187	144	237
200/5F-8125	TR8	92	125	177	○	●	3413	1830	1583	192	249	6"	187	144	283
200/6I-8125	TR8	92	125	177	○	●	3585	1830	1755	192	249	6"	213	167	283
200/6F-8150	TR8	110	150	213	○	●	3731	2060	1671	192	249	6"	213	167	333
200/7H-8150	TR8	110	150	213	○	●	3911	2060	1851	192	249	6"	239	190	333
200/7E-10180	TR10	132	180	257	○	●	3721	1870	1851	237	249	6"	239	190	435
200/8D-10200	TR10	147	200	300	○	●	4101	2070	2031	237	249	6"	264	213	500
200/9D-10230	TR10	170	230	348	○	●	4431	2220	2211	237	249	6"	290	235	540
200/10E-10260	TR10	190	260	405	○	●	4791	2400	2391	237	249	6"	316	259	580

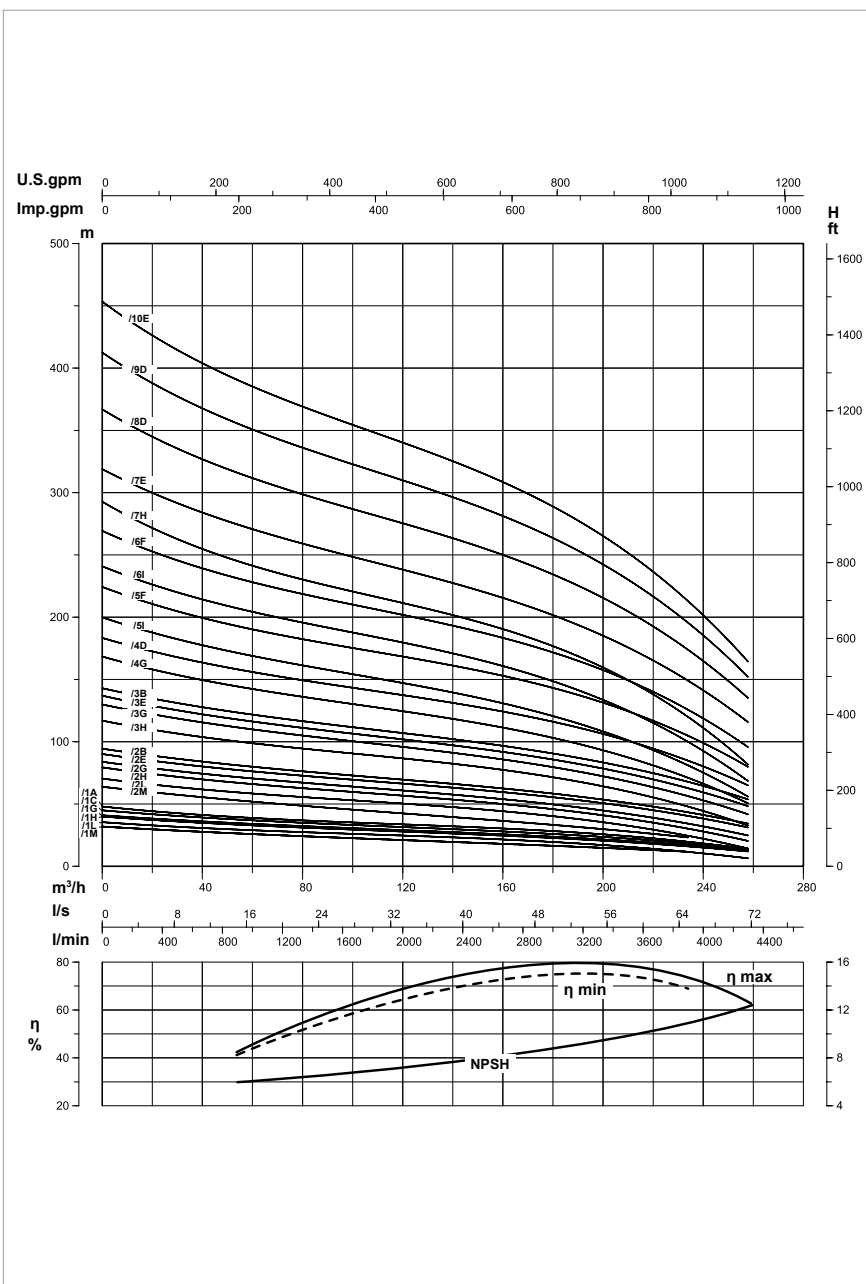
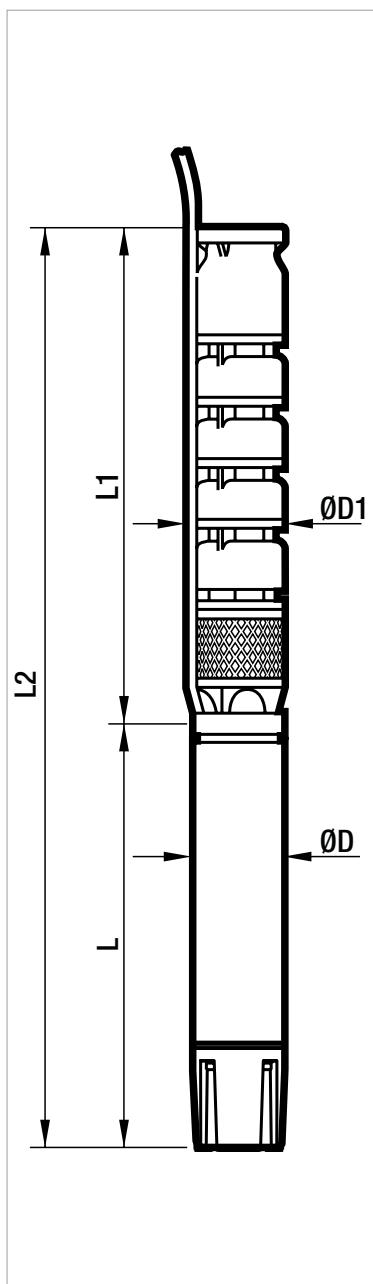
\* 6GF MOTOR: 6" encapsulated in water bath.  
TR MOTOR: 6" - 12" rewindable in water bath.

\*\* For the weight of the version in AISI 316, refer to the page of the motor concerned or contact our sales network.

●	Permitted
○	Only version PE2 + PA
▲	Contact our sales network

# SMC10 200 - SMN10 200

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

# SMC10 320 - SMN10 320

## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		Q=m <sup>3</sup> h Q=l/min	HYDRAULIC DATA												COUPLING STANDARD MOTOR
	P2 NOMINAL			0	120	150	180	210	240	270	300	330	360	390	420	
	kW	HP		0	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	
320/10	22	30	H (m)	34	27,5	26,5	25,5	24,5	23,5	22	20	16,5	12,5	-	-	6"
320/1M	26	35		36	29,5	28,5	27,5	27	26	25	22,5	19,5	16	12,5	-	6"
320/1F	30	40		40	32,5	31	30	29,5	28,5	27,5	26	23	19,5	15,5	10,5	6"
320/1D	37	50		43,5	34,5	33	32	31,5	31	30,5	29	26	22,5	18,5	14	6"
320/1B	37	50		46	37	35	34,5	33,5	33	32,5	31	28,5	25	21	16,5	6"
320/2P	45	60		62	52	50,5	49	47	44	40,5	35,5	29	22	-	-	8"
320/2N	45	60		67,5	57,5	55,5	53,5	51,5	49	45,5	41,5	36	29,5	22,5	14	8"
320/2M	55	75		71	61	59	57,5	55,5	53,5	50,5	46,5	41	34	27	19,5	8"
320/2H	55	75		72	64	61,5	60	58,5	56,5	54	50,5	45,5	38,5	31	21	8"
320/2D	63	85		77	67	65	63,5	62	60,5	58	54,5	49,5	43	35,5	27	8"
320/3I	75	100		106	93,5	90,5	88	85,5	82	77,5	71,5	63	53,5	42,5	31,5	8"
320/3C	92	125		117,5	104,5	102	99	96	94	91	86	79,5	70	57	41	8"
320/4G	110	150		150	134,5	130	126,5	123	119	113,5	106,5	96,5	84,5	71	56	8"
320/4B	132	180		162	147	142,5	138,5	135	130,5	125,5	118,5	108,5	96,5	84,5	69,5	10"
320/5L	132	180		181	162	157	152,5	148	142,5	136	127	114,5	99	81,5	63	10"
320/5E	147	200		196	177,5	172	167	162,5	157	150,5	141,5	129	114,5	98	79,5	10"
320/6G	170	230	225	201,5	195,5	190	184,5	178	170	160	145	127	106	83,5	10"	
320/7L	190	260	253,5	227	219,5	213,5	207	199,5	190	178	160	138,5	114,5	88,5	10"	

# SMC10 320 - SMN10 320

## SUBMERSIBLE PUMPS

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN	WEIGHT SMC Kg	WEIGHT SMN Kg	MOTOR WEIGHT** Kg
		P2 NOMINAL		In A											
		kW	HP												
320/10-630	6GF	22	30	47	●	●	1624	921	703	141	247	6"	64,5	49	74
	TR6	22	30	49	○	●	1770	1067	703	144	247	6"	64,5	49	95
320/1M-635	6GF	26	35	57	●	●	1683	980	703	141	247	6"	64,5	49	78
	TR6	26	35	58	○	●	1840	1137	703	144	247	6"	64,5	49	103
320/1F-640	6GF	30	40	61,5	●	●	1754	1051	703	141	247	6"	64,5	49	89
	TR6	30	40	65	○	●	1895	1192	703	144	247	6"	64,5	49	110
320/1D-650	6GF	37	50	79,3	●	●	1884	1181	703	141	247	6"	64,5	49	102
	TR6	37	50	80	○	●	1995	1292	703	144	247	6"	64,5	49	113
320/1B-650	6GF	37	50	79,3	●	●	1884	1181	703	141	249	6"	65,5	49	102
	TR6	37	50	80	○	●	1995	1292	703	144	249	6"	65,5	49	113
320/2P-860	TR8	45	60	92	○	●	2168	1270	898	192	249	6"	91	68	177
320/2N-860	TR8	45	60	92	○	●	2168	1270	898	192	249	6"	91	68	177
320/2M-875	TR8	55	75	109	○	●	2248	1350	898	192	249	6"	91	68	192
320/2H-875	TR8	55	75	109	○	●	2248	1350	898	192	249	6"	91	68	192
320/2D-885	TR8	63	85	126	○	●	2388	1490	898	192	249	6"	91	68	218
320/3I-8100	TR8	75	100	145	○	●	2767	1590	1177	192	249	6"	116	88	237
320/3C-8125	TR8	92	125	177	○	●	3007	1830	1177	192	249	6"	116	88	283
320/4G-8150	TR8	110	150	213	○	●	3432	2060	1372	192	249	6"	160	117	333
320/4B-10180	TR10	132	180	257	○	●	3242	1870	1372	237	249	6"	160	117	435
320/5L-10180	TR10	132	180	257	○	●	3438	1870	1568	237	249	6"	185,5	137	435
320/5E-10200	TR10	147	200	300	○	●	3638	2070	1568	237	249	6"	185,5	137	500
320/6G-10230	TR10	170	230	348	○	●	3983	2220	1763	237	249	6"	211	157	540
320/7L-10260	TR10	190	260	405	○	●	4359	2400	1959	237	249	6"	236,5	177	580

\* 6GF motor: 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin

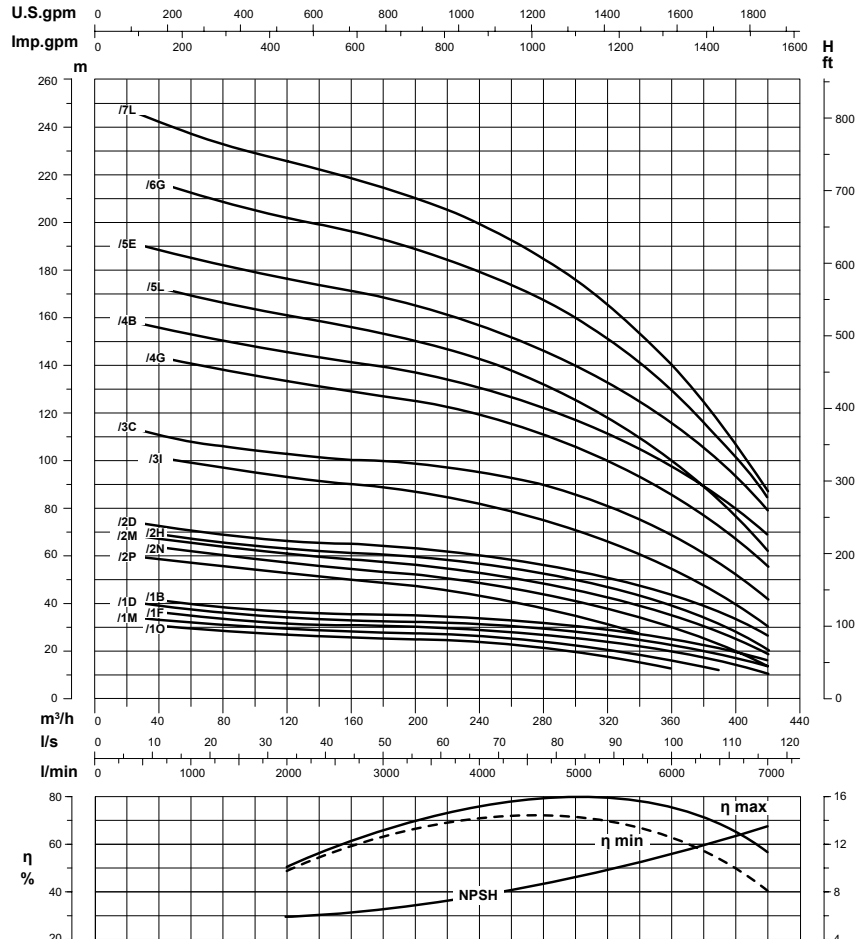
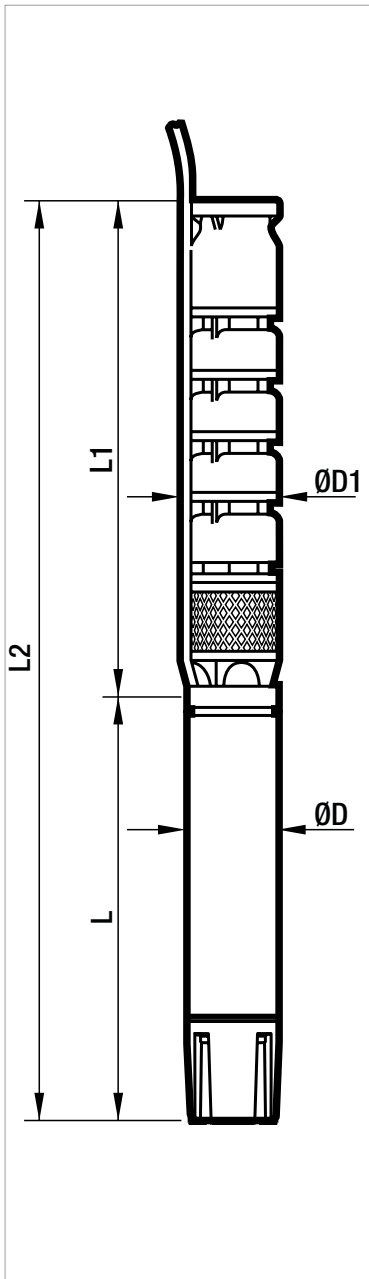
TR motor: 6" - 12" water-filled rewindable motor

\*\* For the weight of the AISI 316 version, please check the reference motor page or contact our sales network.

●	Permitted
○	Only version PE2 + PA
⚠	Contact our sales network

# SMC10 320 - SMN10 320

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

# SMC12 - SMN12

## SUBMERSIBLE PUMPS



### TECHNICAL DATA

**Operating range:** up to 540 m<sup>3</sup>/h with head up to 320 m

**Pumped liquid:** clean, free of solids and abrasives, chemically neutral, with properties similar to water

**Start-ups/hour:** see the coupled motor

**Cooling flow:** see the coupled motor

**Maximum permitted amount of sand:** 40 g/m<sup>3</sup>

**Ambient temperature:** 30 °C

**Minimum recommended level on suction line:** 2.5 m

**Installation:** horizontal or vertical

### APPLICATIONS

Multistage semiaxial submersible electric pumps for wells measuring 12" or above, able to generate a broad range of flow rates and heads.

They are used extensively for the lifting, distribution and pressurisation of industrial water systems, the supply of pressure vessels and tanks, firefighting systems and irrigation systems.

Application with clean, non-aggressive water free from solids or abrasive substances.

### CONSTRUCTION FEATURES OF THE PUMP

#### SMC version:

Cast iron pump body treated with cathaphoresis paint coating and dynamically balanced impellers in microcast AISI 304 stainless steel coupled on the shaft with pull tab. Shaft guided with coaxial bush bearings and fully protected with bushes.

Pump with check valve of low pressure loss.

Flanged delivery port and kit containing counter flange, bolts and gaskets.

#### SMN version:

Pump body and impellers in microcast AISI 316 stainless steel. Dynamically balanced impellers coupled on the shaft with pull tab. Shaft guided with coaxial bush bearings and fully protected with bushes.

Pump with check valve of low pressure loss.

Flanged delivery port and kit containing counter flange, bolts and gaskets.

Coupling with motors of 6" or 8" depending on the required hydraulic power and available in a standard version with cast iron supports treated with cathaphoresis paint coating, and in a version entirely in AISI 316 stainless steel:

6GF/6GX: encapsulated 6" submersible motor

TR6: rewindable 6" submersible motor

TR8: rewindable 8" submersible motor

TR10: rewindable 10" submersible motor

TR12: rewindable 12" submersible motor

Refer to the technical data sheets of the specific model for the electrical characteristics of the submersible motors and the specifications for operation with inverter.

### ON REQUEST

Motor in AISI 316 stainless steel for use in aggressive water.

Non-standard pump/motor couplings.

Star/Delta starting version.

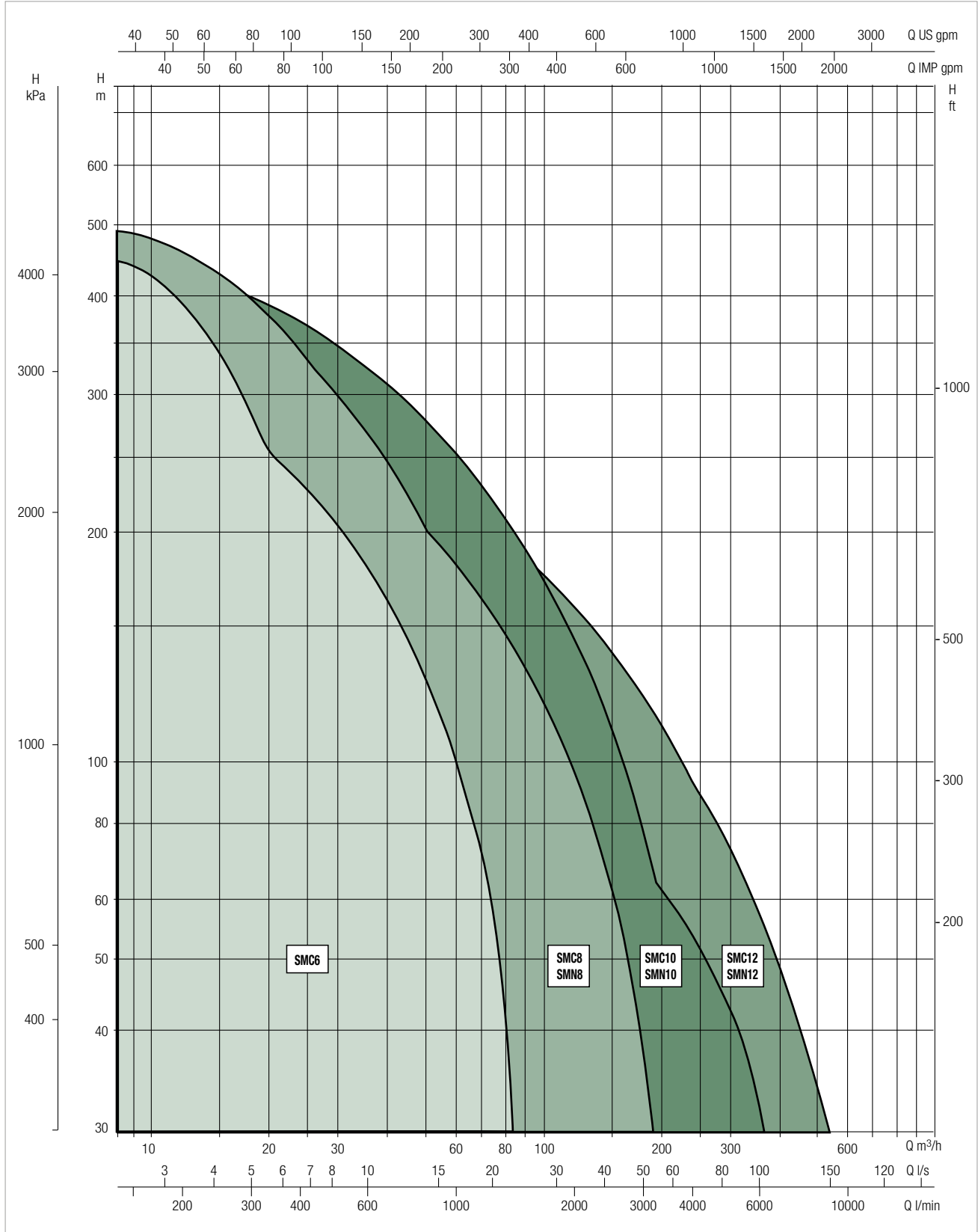
Motor version for high temperature of water.

### PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### GRAPHIC SELECTION TABLE

50 Hz - 2900 r.p.m.



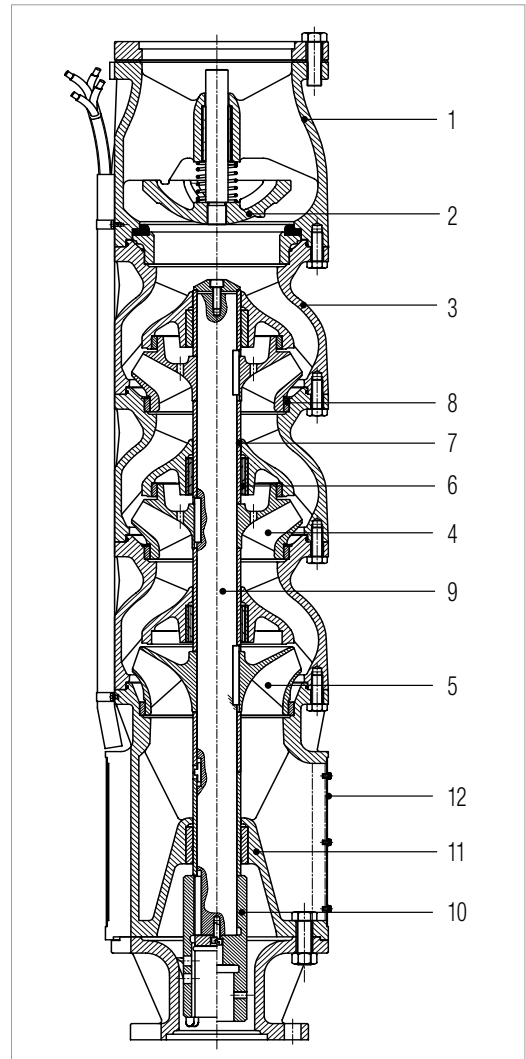


# SMC12 - SMN12

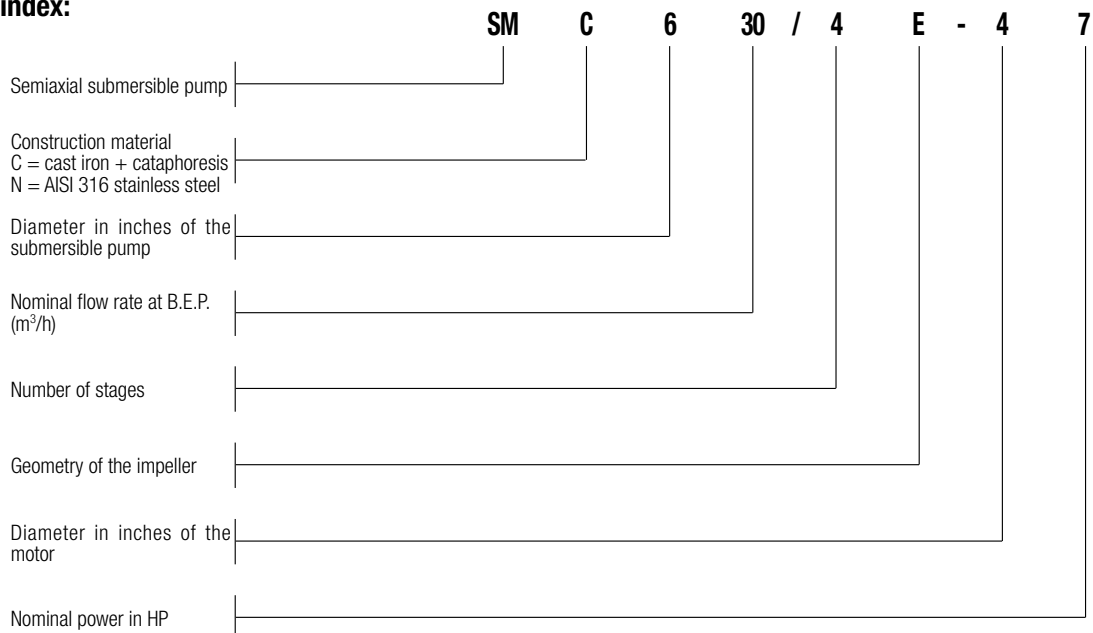
## SUBMERSIBLE PUMPS

### MATERIALS

N°	PARTS	MATERIALS - SMC	MATERIALS - SMN
1	DELIVERY BODY	CAST IRON + CATAPHORESIS	AISI 316 STAINLESS STEEL
2	NON-RETURN VALVE	CAST IRON + CATAPHORESIS	AISI 316 STAINLESS STEEL
3	DIFFUSER	CAST IRON + CATAPHORESIS	AISI 316 STAINLESS STEEL
4	IMPELLER	AISI 316 STAINLESS STEEL	AISI 316 STAINLESS STEEL
5	SUCTION IMPELLER	AISI 316 STAINLESS STEEL	AISI 316 STAINLESS STEEL
6	GUIDE BEARING	RUBBER	VITON
7	BUSH	BRONZE	AISI 316 STAINLESS STEEL
8	WEAR RING	BRONZE	POM
9	PUMP SHAFT	STAINLESS STEEL	AISI 329 DUPLEX STAINLESS STEEL
10	PIPE	STAINLESS STEEL	AISI 329 DUPLEX STAINLESS STEEL
11	SUCTION BODY	CAST IRON + CATAPHORESIS	AISI 316 STAINLESS STEEL
12	FILTER GRID	STAINLESS STEEL	AISI 316 STAINLESS STEEL



### - Denomination index: (example)



# SMC12 360 - SMN12 360

## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		HYDRAULIC DATA													COUPLING STANDARD MOTOR	
	P2 NOMINAL		Q=m³h	0	180	210	240	270	285	300	315	330	360	390	420		450
	kW	HP	Q=l/min	0	3000	3500	4000	4500	4750	5000	5250	5500	6000	6500	7000		7500
360/1A	45	60	H (m)	55,5	46	44,5	43	41,5	40,5	39,5	38	36,5	33,5	29,5	25	20	8"
360/1B	55	75		63	51	49,5	48	46,5	46	45	44	42,5	39	35,5	31	26	8"
360/1C	75	100		65,5	54,5	53,5	52	50,5	49,5	49	48	46,5	44	40,5	37	33	8"
360/2A	75	100		100,5	85	82,5	79	75	72,5	69,5	66,5	62,5	53,5	43,5	33	-	8"
360/2B	92	125		117,5	97,5	95	92	88,5	86,5	84	81	77,5	68,5	58,5	47	-	8"
360/2C	110	150		130,5	107,5	105	102,5	99,5	98	96,5	94,5	91,5	85,5	77,5	68,5	57,5	8"
360/3A	132	180		168,5	139	134	129,5	125	122	119,5	116,5	112	101,5	86,5	65	-	10"
360/3B	147	200		185	153,5	149	144	139,5	137	134	131	127	117,5	104,5	87	61,5	10"
360/4A	190	260		224,5	193	188	182,5	176	171,5	167	162	155,5	140	122,5	102	-	10"
360/5A	220	300		295,5	237,5	230	221,5	213,5	207,5	201,5	193	183,5	163,5	138	105	-	12"
360/5B	250	340	319,5	259	252	244,5	236	231	224,5	217,5	208	187,5	166,5	137,5	100	12"	

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN	WEIGHT SMC Kg	WEIGHT SMN Kg	MOTOR WEIGHT** Kg
		P2 NOMINAL		In A											
		kW	HP												
360/1A-860	TR8	45	60	92	○	●	2169	1270	899	192	298	7"	136	99	177
360/1B-875	TR8	55	75	109	○	●	2249	1350	899	192	298	7"	136	99	192
360/1C-8100	TR8	75	100	145	○	●	2489	1590	899	192	298	7"	136	99	237
360/2A-8100	TR8	75	100	145	○	●	2689	1590	1099	192	298	7"	174	129	237
360/2B-8125	TR8	92	125	177	○	●	2929	1830	1099	192	298	7"	174	129	283
360/2C-8150	TR8	110	150	213	○	●	3184	2060	1124	192	298	7"	178	129	333
360/3A-10180	TR10	132	180	257	○	●	3194	1870	1324	237	298	7"	217	158	435
360/3B-10200	TR10	147	200	300	○	●	3394	2070	1324	237	298	7"	217	158	500
360/4A-10260	TR10	190	260	405	○	●	3924	2400	1524	237	298	7"	255	188	580
360/5A-12300	TR12	220	300	425	○	△	3834	2110	1724	286	298	7"	294	217	700
360/5B-12340	TR12	250	340	481	○	△	4004	2280	1724	286	298	7"	294	217	775

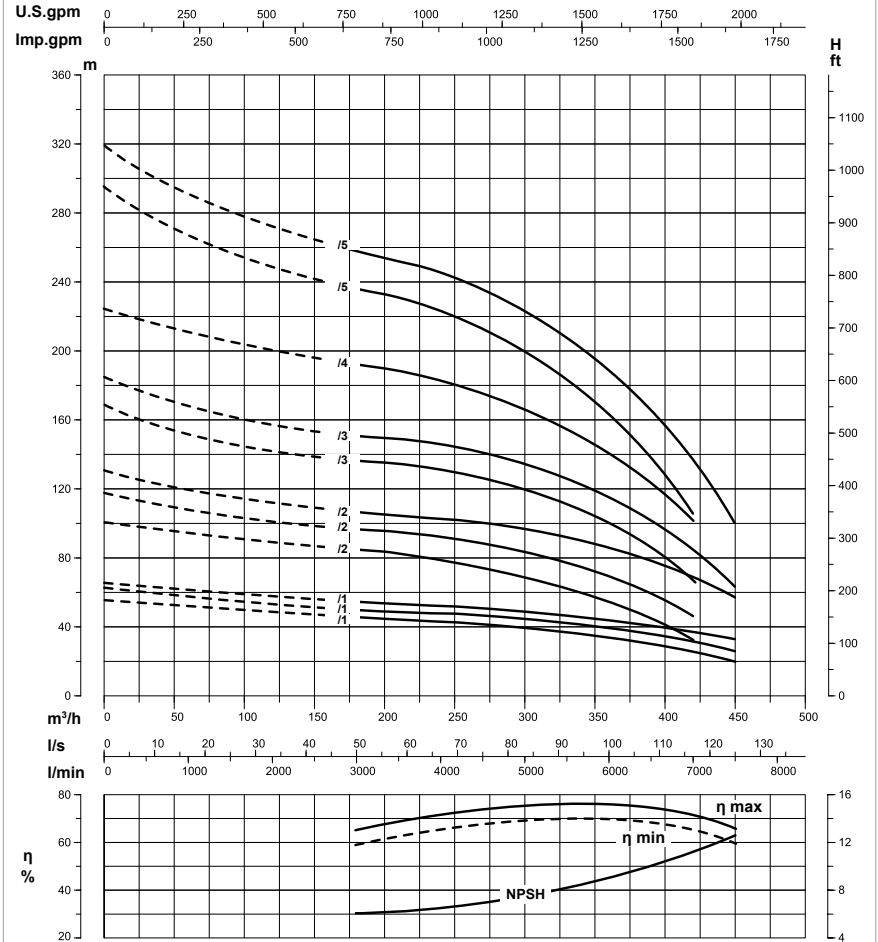
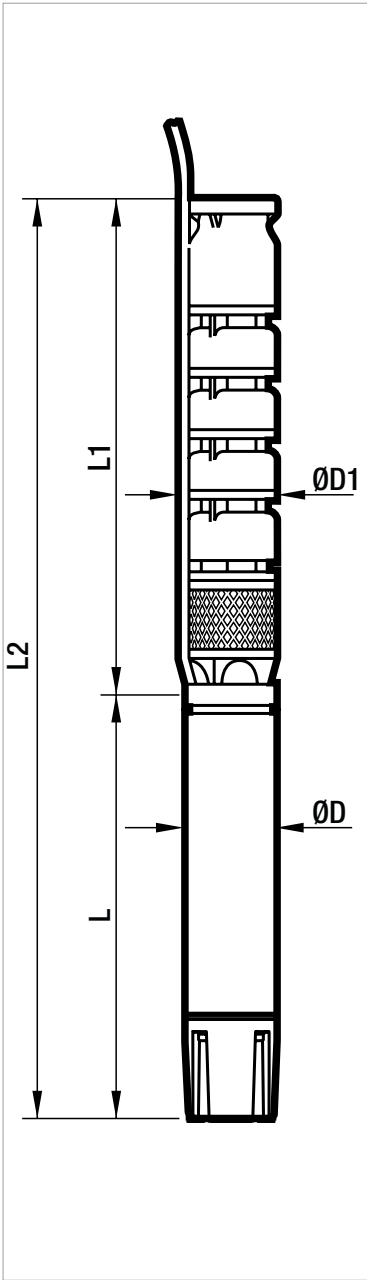
\* 6GF motor: 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
 TR motor: 6" - 12" water-filled rewindable motor

\*\* For the weight of the AISI 316 version, please check the reference motor page or contact our sales network.

●	Permitted
○	Only version PE2 + PA
△	Contact our sales network

# SMC12 360 - SMN12 360

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

# SMC12 420 - SMN12 420

## SUBMERSIBLE PUMPS

### PERFORMANCE AT 50 Hz - 2 POLES

MODEL	ELECTRICAL DATA		Q=m <sup>3</sup> h Q=l/min	HYDRAULIC DATA													COUPLING STANDARD MOTOR
	P2 NOMINAL			0	210	240	270	300	330	360	390	420	450	480	510	540	
	kW	HP		0	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	
420/1A	45	60	H (m)	52	39,5	38	36,5	35	34	32,5	30,5	28,5	26	22,5	19	14	8"
420/1B	55	75		58,5	44,5	43	41,5	40	39	38	36,5	35	32,5	30	26,5	22	8"
420/2A	92	125		101,5	80,5	78	75,5	73	70,5	67,5	64,5	60,5	56	51,5	46	40,5	8"
420/2B	110	150		114,5	90,5	88	85,5	83	80,5	77,5	74,5	71	66	61	54	46	8"
420/3A	132	180		134	111	107,5	104	100,5	96,5	92,5	88	82	75,5	68	59,5	50,5	10"
420/3B	147	200		156,5	124	120,5	117	114	110	106,5	102,5	97	90,5	83,5	75,5	66,5	10"
420/4A	190	260		196	154	149,5	145	140,5	135,5	130	124	116,5	107,5	97	85,5	72	10"
420/4B	220	300		221	173,5	169	165	161	156,5	152	147	139,5	131	121,5	110,5	96	12"
420/5A	250	340		260,5	204	198	192,5	187	182	176,5	170,5	162	152	139	121,5	100	12"

### ELECTRICAL DATA AND DIMENSIONS

MODEL	MOTOR *	ELECTRICAL DATA			OPERATION WITH INVERTER	HORIZONTAL INSTALLATION	L2 mm	L mm	L1 mm	D mm	D1 mm	DN	WEIGHT SMC Kg	WEIGHT SMN Kg	MOTOR WEIGHT** Kg
		P2 NOMINAL		In A											
		kW	HP												
420/1A-860	TR8	45	60	92	○	●	2169	1270	899	192	298	7"	134	96	177
420/1B-875	TR8	55	75	109	○	●	2249	1350	899	192	298	7"	134	96	192
420/2A-8125	TR8	92	125	177	○	●	2929	1830	1099	192	298	7"	170	123	283
420/2B-8150	TR8	110	150	213	○	●	3184	2060	1124	192	298	7"	174	123	333
420/3A-10180	TR10	132	180	257	○	●	3194	1870	1324	237	298	7"	211	149	435
420/3B-10200	TR10	147	200	300	○	●	3394	2070	1324	237	298	7"	211	149	500
420/4A-10260	TR10	190	260	405	○	●	3924	2400	1524	237	298	7"	247	176	580
420/4B-12300	TR12	220	300	425	○	△	3634	2110	1524	286	298	7"	247	176	700
420/5A-12340	TR12	250	340	481	○	△	4004	2280	1724	286	298	7"	284	203	775

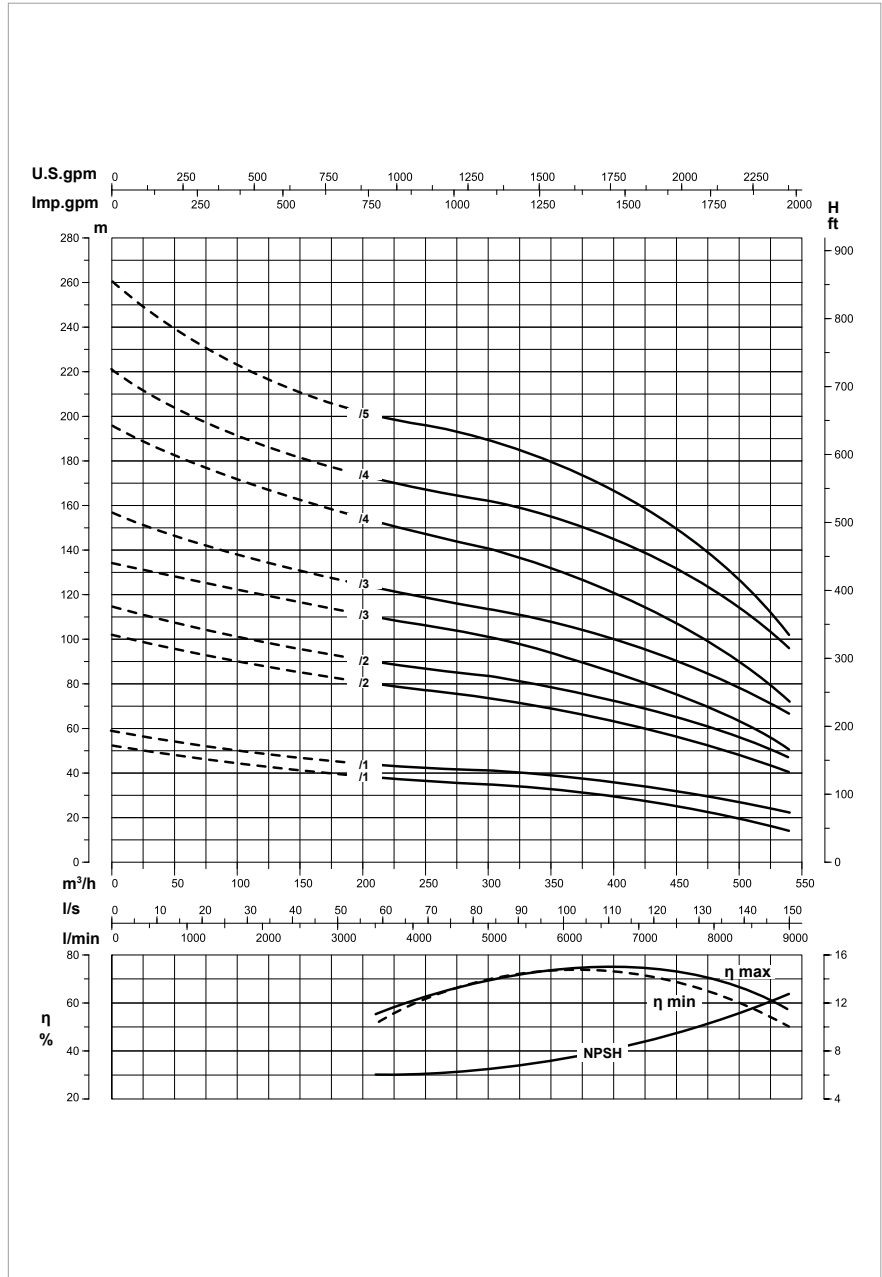
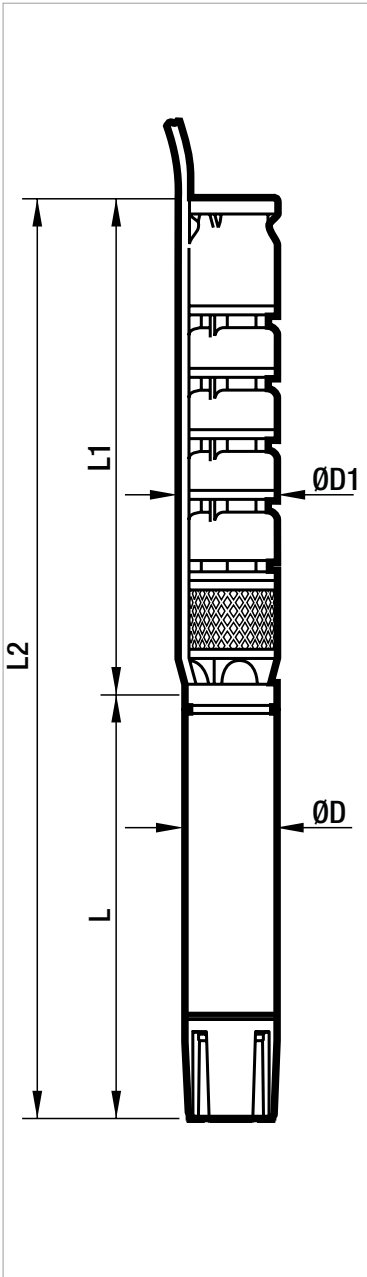
\* **6GF motor:** 6" encapsulated water-glycol-filled motor with stator immersed in thermosetting insulating resin  
**TR motor:** 6" - 12" water-filled rewindable motor

\*\* For the weight of the AISI 316 version, please check the reference motor page or contact our sales network.

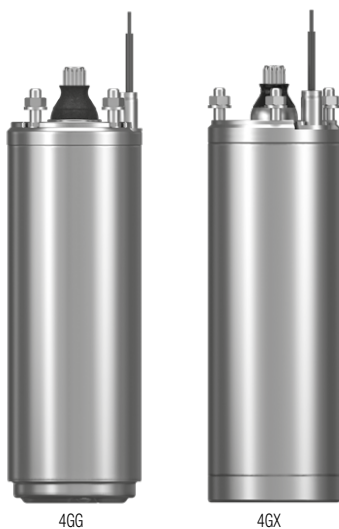
●	Permitted
○	Only version PE2 + PA
△	Contact our sales network

# SMC12 420

## SUBMERSIBLE PUMPS



Performance at 50 Hz 2 poles. The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.



4GG

4GX

### TECHNICAL DATA

**Flanging:** NEMA 4"

**Insulation class:** F

**Protection class:** IP68

**Cooling flow speed:** min. 0,3 m/s 35 °C

**Power supply tolerance:** + 6 % / -10 %

**Max. starts:** 20/h

**Max operating depth:** 300 m

**Horizontal operation:** 0,5 HP - 10 HP

### GENERAL DATA

4" submersible asynchronous two-pole electric motor made entirely of AISI 304 stainless steel for the parts in contact with water. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Kingsbury self-centring thrust block designed to withstand significant axial loads. The stator is submerged in high thermal dissipation insulating thermosetting resin and encapsulated in a sealed stainless steel casing.

The 4GX version completely in AISI 316 stainless steel is available on request.

The cable connector is removable for the purpose of quick and easy maintenance. The cable is ACS, WRAS and KTW certified. The motor is suitable for use with variable frequency drive (30 Hz - 50 Hz). For the 50 Hz single-phase version, the capacitor and manually resettable overload protection are in the electrical control box provided separately. Overload protection to be provided by the user for the three-phase version.

On request: cables of a different length, different voltage supply, thermal protection device (50 Hz - PSC - of 0,5 HP to 1,5 HP).

### CONSTRUCTION FEATURES



Resin submerged stator encapsulated in an AISI 304 casing. The stator has 24 slots to ensure better elasticity and smooth operation; the copper conductors have a double layer of Class H insulating enamel.

Kingsbury thrust block equipped with carbon clearance ring and oscillating pads in high-strength stainless steel machined by Tesla with a spherical lapping process.

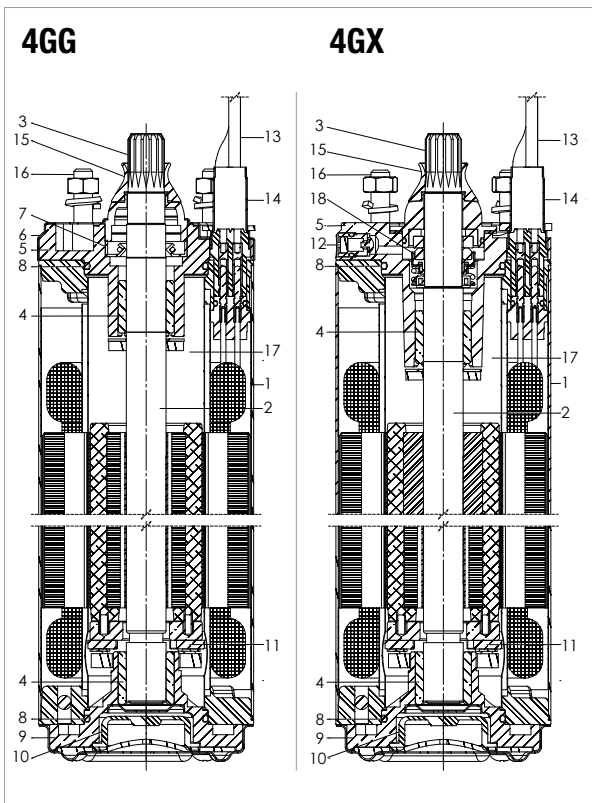
From 0,5 HP to 1,5 HP: 2000 N

From 2 HP to 3 HP: 3000 N

From 4 HP to 10 HP: 6000 N

# 4GG - 4GX

## SUBMERSIBLE MOTORS



### MATERIALS

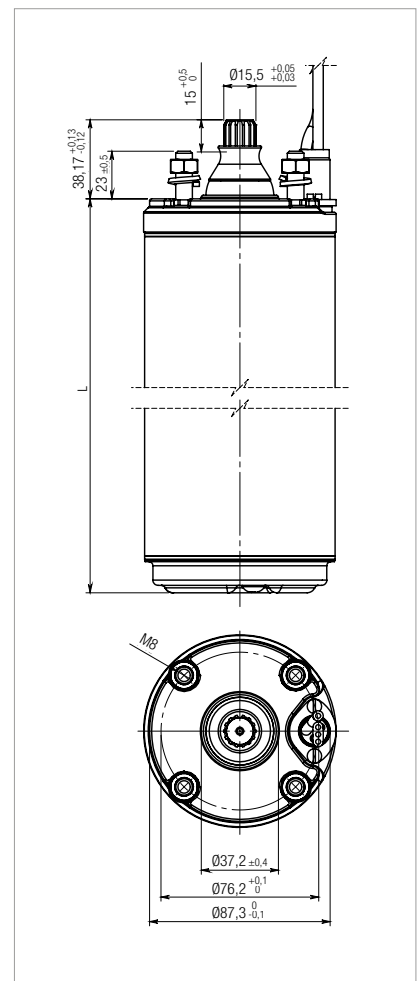
N°	PARTS	4GG	4GX
1	INTERNAL AND EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4301 - AISI 304	STAINLESS STEEL EN 1.4404 - AISI 316L
2	SHAFT	STEEL EN S355JR - ASTM A 105	STAINLESS STEEL EN S355JR - ASTM A 105
3	SHAFT END 2000/3000N	STAINLESS STEEL EN 1.4301 - AISI 304	STAINLESS STEEL EN 1.4462 - AISI 318LN
	SHAFT END 6000N	STAINLESS STEEL EN 1.4057 - AISI 431	STAINLESS STEEL EN 1.4460 - AISI 329
4	BUSHINGS	GRAPHITE	GRAPHITE
5	UPPER BRACKET	CAST IRON EN 0.6020 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4401 - AISI 316
6	UPPER BRACKET COVER	STAINLESS STEEL EN 1.4301 - AISI 304	-
7	LIP SEAL	NBR	-
8	GASKET	NBR	VITON
9	LOWER BRACKET	CAST IRON EN 0.6020 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4401 - AISI 316
10	DIAPHRAGM	EPDM	EPDM
11	THRUST BEARING	STAINLESS STEEL - GRAPHITE	STAINLESS STEEL - GRAPHITE
12	VALVE	STAINLESS STEEL EN 1.4305 - AISI 303	STAINLESS STEEL EN 1.4401 - AISI 316
13	CABLE	FLAT - 07XBH2-F	FLAT - 07XBH2-F
14	CONNECTING PLUG	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4404 - AISI 316L
15	SAND GUARD	NBR	EPDM
16	BOLTS & SCREWS	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316
17	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL
18	MECHANICAL SEAL	-	SIC / SIC

### DIMENSIONS - SINGLE-PHASE MOTORS

TYPE	P2		LENGTH mm	WEIGHT 4GG	WEIGHT 4GX	AXIAL THRUST N
	hp	kW				
50 Hz	0,5	0,37	236	6,9	7,3	2000
	0,75	0,55	266	8,6	9	2000
	1	0,75	286	9,6	9,9	2000
	1,5	1,1	331	11,8	12,2	2000
	2	1,5	393	14	14,4	3000
	3	2,2	413	14,7	15	3000
	4	3	684	27	26,7	6000
	5	3,7	684	27	26,7	6000
	5,5	4	684	27	26,7	6000

### DIMENSIONS - THREE-PHASE MOTORS

TYPE	P2		LENGTH mm	WEIGHT 4GG	WEIGHT 4GX	AXIAL THRUST N
	hp	kW				
50 Hz	0,5	0,37	216	6,2	6,6	2000
	0,75	0,55	236	6,9	7,3	2000
	1	0,75	266	8,6	9	2000
	1,5	1,1	286	9,6	9,9	2000
	2	1,5	348	11,8	12,2	3000
	3	2,2	393	14	14,4	3000
	4	3	544	20,5	20,6	6000
	5,5	4	614	23,8	23,9	6000
	7,5	5,5	684	27,1	27,2	6000
	10	7,5	764	30,8	30,9	6000



SUBMERSIBLE MOTORS

### ELECTRICAL DATA - SINGLE-PHASE MOTORS

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	T <sub>s</sub> /T <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	C μF	CABLE	
	hp	kW										Ø mm <sup>2</sup>	LC m
4GG / 4GX - 0,37 KW - 230 V - M	0,5	0,37	1 x 230 V ~	3,3	2,7	0,69	740	2820	0,97	50	16	4x1,5	1,7
4GG / 4GX - 0,55 KW - 230 V - M	0,75	0,55	1 x 230 V ~	4,6	3,3	0,68	1000	2820	0,94	56	20	4x1,5	1,7
4GG / 4GX - 0,75 KW - 230 V - M	1	0,75	1 x 230 V ~	6,2	3,2	0,66	1310	2820	0,92	58	25	4x1,5	1,7
4GG / 4GX - 1,1 KW - 230 V - M	1,5	1,1	1 x 230 V ~	8,6	3,6	0,68	1780	2830	0,9	62	35	4x1,5	1,7
4GG / 4GX - 1,5 KW - 230 V - M	2	1,5	1 x 230 V ~	11	3,7	0,62	2300	2830	0,91	65	40	4x1,5	1,7
4GG / 4GX - 2,2 KW - 230 V - M	3	2,2	1 x 230 V ~	15	3,1	0,6	3280	2810	0,89	65	60	4x1,5	1,7
4GG / 4GX - 3,0 KW - 230 V - M	4	3	1 x 230 V ~	23,5	3,6	0,51	4870	2830	0,9	62	90	4x2	2,7
4GG / 4GX - 3,7 KW - 230 V - M	5	3,7	1 x 230 V ~	25	3,6	0,51	5600	2850	0,95	65	90	4x2	2,7
4GG / 4GX - 4,0 KW - 230 V - M	5,5	4	1 x 230 V ~	27	3,6	0,51	6000	2840	0,96	67	90	4x2	2,7

### ELECTRICAL DATA - THREE-PHASE MOTORS

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	T <sub>s</sub> /T <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	C μF	CABLE	
	hp	kW										Ø mm <sup>2</sup>	LC m
4GG / 4GX - 0,37 KW - 230 V - T	0,5	0,37	3 x 230 V ~	2,7	3,8	3	670	2820	0,6	55	-	4x1,5	1,7
4GG / 4GX - 0,37 KW - 400 V - T	0,5	0,37	3 x 400 V ~	1,6	3,8	3	670	2820	0,6	55	-	4x1,5	1,7
4GG / 4GX - 0,55 KW - 230 V - T	0,75	0,55	3 x 230 V ~	3,3	4,2	3,1	910	2830	0,69	63	-	4x1,5	1,7
4GG / 4GX - 0,55 KW - 400 V - T	0,75	0,55	3 x 400 V ~	1,9	4,2	3,1	910	2830	0,69	63	-	4x1,5	1,7
4GG / 4GX - 0,75 KW - 230 V - T	1	0,75	3 x 230 V ~	4,1	5	3,2	1190	2830	0,72	63	-	4x1,5	1,7
4GG / 4GX - 0,75 KW - 400 V - T	1	0,75	3 x 400 V ~	2,4	5	3,2	1190	2830	0,72	63	-	4x1,5	1,7
4GG / 4GX - 1,1 KW - 230 V - T	1,5	1,1	3 x 230 V ~	5,5	4,1	3,3	1600	2830	0,72	69	-	4x1,5	1,7
4GG / 4GX - 1,1 KW - 400 V - T	1,5	1,1	3 x 400 V ~	3,2	4,1	3,3	1600	2830	0,72	69	-	4x1,5	1,7
4GG / 4GX - 1,5 KW - 230 V - T	2	1,5	3 x 230 V ~	7,6	4,3	3,4	2200	2830	0,72	68	-	4x1,5	1,7
4GG / 4GX - 1,5 KW - 400 V - T	2	1,5	3 x 400 V ~	4,4	4,3	3,4	2200	2830	0,72	68	-	4x1,5	1,7
4GG / 4GX - 2,2 KW - 230 V - T	3	2,2	3 x 230 V ~	10,2	4,4	3,2	3100	2820	0,74	71	-	4x1,5	1,7
4GG / 4GX - 2,2 KW - 400 V - T	3	2,2	3 x 400 V ~	5,9	4,4	3,2	3100	2820	0,74	71	-	4x1,5	1,7
4GG / 4GX - 3,0 KW - 230 V - T	4	3	3 x 230 V ~	14,3	4,6	3,3	4050	2840	0,71	74	-	4x1,5	2,7
4GG / 4GX - 3,0 KW - 400 V - T	4	3	3 x 400 V ~	8,3	4,6	3,3	4050	2840	0,71	74	-	4x1,5	2,7
4GG / 4GX - 4,0 KW - 230 V - T	5,5	4	3 x 230 V ~	17,3	5,6	3,4	5340	2850	0,79	75	-	4x2	2,7
4GG / 4GX - 4,0 KW - 400 V - T	5,5	4	3 x 400 V ~	10	5,6	3,4	5340	2850	0,79	75	-	4x1,5	2,7
4GG / 4GX - 5,5 KW - 230 V - T	7,5	5,5	3 x 230 V ~	24,2	5,5	3,4	7110	2850	0,74	77	-	4x2	2,7
4GG / 4GX - 5,5 KW - 400 V - T	7,5	5,5	3 x 400 V ~	14	5,5	3,4	7110	2850	0,74	77	-	4x1,5	2,7
4GG / 4GX - 7,5 KW - 400 V - T	10	7,5	3 x 400 V ~	17,4	4,8	2,9	9520	2850	0,8	79	-	4x2	3,5

**P2:** Nominal power  
**V:** Nominal voltage  
**I<sub>n</sub>:** Nominal current  
**I<sub>s</sub>/I<sub>n</sub>:** Starting current/Nominal current  
**C<sub>s</sub>/C<sub>n</sub>:** Starting torque/Nominal torque  
**P1:** Absorbed power  
**N:** Rotations per minute - R.p.m

**Cos φ:** Power factor  
**η:** Yield  
**C:** Capacitor  
**Ø:** Cable cross section  
**LC:** Cable length

Winding resistance: see technical appendix





## TECHNICAL DATA

**Flanging:** NEMA 4"

**Insulation class:** F

**Protection class:** IP68

**Cooling flow speed:** min. 0,3 m/s 35 °C

**Power supply tolerance:** + 6 % / -10 %

**Max. starts:** 20/h

**Max operating depth:** 300 m

**Horizontal operation:** 0,5 HP - 1,5 HP

## GENERAL DATA

4" submersible asynchronous two-pole electric motor made entirely of AISI 304 stainless steel for the parts in contact with water. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Kingsbury self-centring thrust block designed to withstand significant axial loads. The stator is submerged in high thermal dissipation insulating thermosetting resin and encapsulated in a sealed stainless steel casing.

The 4TWX version entirely in AISI 316 stainless steel is available on request.

The cable connector is removable for the purpose of quick and easy maintenance. The cable is ACS, WRAS and KTW certified. The motor is suitable for use with variable frequency drive (30 Hz - 50 Hz). The capacitor is included in the Noryl cartridge under the motor, and the motor does not therefore require the use of a control box. Thermal protection included in the motor of 0,5 HP to 1,5 HP in the 50 Hz version.

On request: cables of different lengths and different voltage supply.

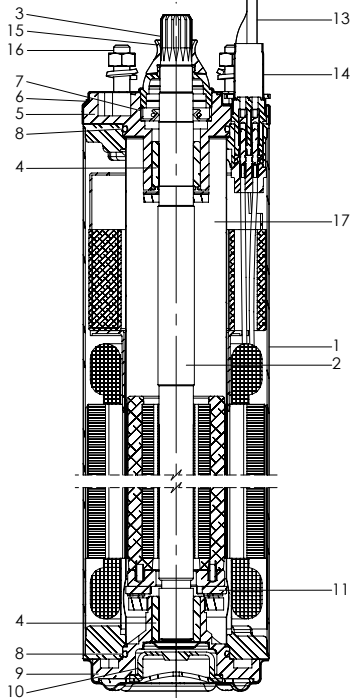
## CONSTRUCTION FEATURES



Resin submerged stator encapsulated in an AISI 304 casing. The stator has 24 slots to ensure better elasticity and smooth operation; the copper conductors have a double layer of Class H insulating enamel. Thermal protection is included in the motor of 0,5 HP to 1,5 HP in the 50 Hz version of 0,5 HP.

Kingsbury thrust block equipped with carbon clearance ring and oscillating pads in high-strength stainless steel machined by Tesla with a spherical lapping process.

From 0,5 HP to 1,5 HP: 2000 N

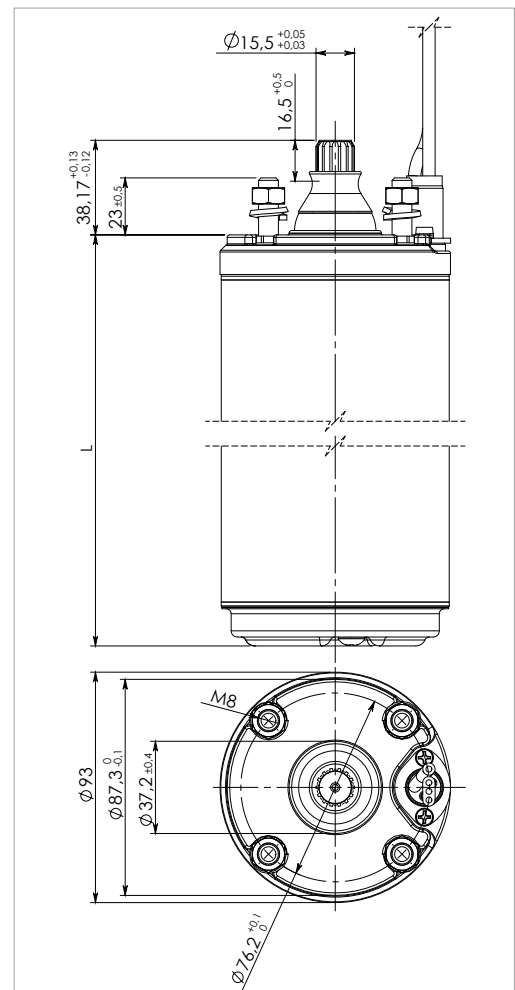


### MATERIALS

N°	PARTS	VERSION 4TW
1	INTERNAL AND EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4301 - AISI 304
2	SHAFT	STAINLESS STEEL EN S355JR - ASTM A 105
3	SHAFT END	STAINLESS STEEL EN 1.4301 - AISI 304
4	BUSHINGS	GRAPHITE
5	UPPER BRACKET	CAST IRON EN 0.6020 + CATAPHORESIS COATING
6	UPPER BRACKET COVER	STAINLESS STEEL EN 1.4301 - AISI 304
7	LIP SEAL	NBR
8	GASKET	NBR
9	LOWER BRACKET	CAST IRON EN 0.6020 + CATAPHORESIS COATING
10	DIAPHRAGM	EPDM
11	THRUST BEARING	STAINLESS STEEL - GRAPHITE
12	VALVE	STAINLESS STEEL EN 1.4305 - AISI 303
13	CABLE	FLAT - 07XBH2-F
14	CONNECTING PLUG	STAINLESS STEEL EN 1.4404 - AISI 316L
15	SAND GUARD	NBR
16	BOLTS & SCREWS	STEEL A2-70 - AISI 304
17	COOLING LIQUID	WATER + GLYCOL

### DIMENSIONS - SINGLE-PHASE MOTORS

TYPE	P2		LENGTH mm	WEIGHT	AXIAL THRUST N
	hp	kW			
50 Hz	0,5	0,37	301	8,5	2000
	0,75	0,55	331	9,5	2000
	1	0,75	351	10,5	2000
	1,5	1,1	426	13,1	3000



### ELECTRICAL DATA - SINGLE-PHASE MOTORS

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	T <sub>s</sub> /T <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	C μF	CABLE	
	hp	kW										Ø mm <sup>2</sup>	LC m
4TW - 0,37 KW - 230 V - M	0,5	0,37	1 x 230 V ~	3,3	2,7	0,69	740	2820	0,97	50	16	3x1,5	1,7
4TW - 0,55 KW - 230 V - M	0,75	0,55	1 x 230 V ~	4,6	3,3	0,68	1000	2820	0,94	56	20	3x1,5	1,7
4TW - 0,75 KW - 230 V - M	1	0,75	1 x 230 V ~	6,2	3,2	0,66	1310	2820	0,92	58	25	3x1,5	1,7
4TW - 1,1 KW - 230 V - M	1,5	1,1	1 x 230 V ~	8,6	3,6	0,68	1780	2830	0,9	62	35	3x1,5	1,7

**P2:** Nominal power  
**V:** Nominal voltage  
**I<sub>n</sub>:** Nominal current  
**I<sub>s</sub>/I<sub>n</sub>:** Starting current/Nominal current  
**C<sub>s</sub>/C<sub>n</sub>:** Starting torque/Nominal torque  
**P1:** Absorbed power  
**N:** Rotations per minute - R.p.m

**Cos φ:** Power factor  
**η:** Yield  
**C:** Capacitor  
**Ø:** Cable cross section  
**LC:** Cable length



## TECHNICAL DATA

**Flanging:** NEMA 4"

**Insulation class:** F

**Protection class:** IP68

**Cooling flow speed:** min. 0,3 m/s 35 °C

**Power supply tolerance:** + 6 % / -10 %

**Max. starts:** 20/h

**Max operating depth:** 250 m

**Horizontal operation:** 0,5 HP - 10 HP

## GENERAL DATA

4" rewindable submersible asynchronous two-pole electric motor made entirely of AISI 304 stainless steel for the parts in contact with water. Cooling and lubrication of ball bearings is assured by a special FDA approved coolant. Stator housed in a AISI 304L stainless steel casing fixed with steel pins to the upper support of the motor. The cable connector is removable for the purpose of quick and easy maintenance. The cable is ACS, WRAS and KTW certified. The motor is suitable for use with variable frequency drive (30 Hz - 50/60 Hz). For the single-phase version, the capacitor and manually resettable overload protection are in the electrical control box provided separately.

Overload protection to be provided by the user for the three-phase version.

On request: cables of a different length, different voltage supply, thermal protection device (up to 1,5 HP, 50 Hz).

## CONSTRUCTION FEATURES



Rewindable stator housed in an outer casing in AISI 304L. The stator has 24 slots to ensure better elasticity and smooth operation; copper conductors with a double layer of Class H insulating enamel.

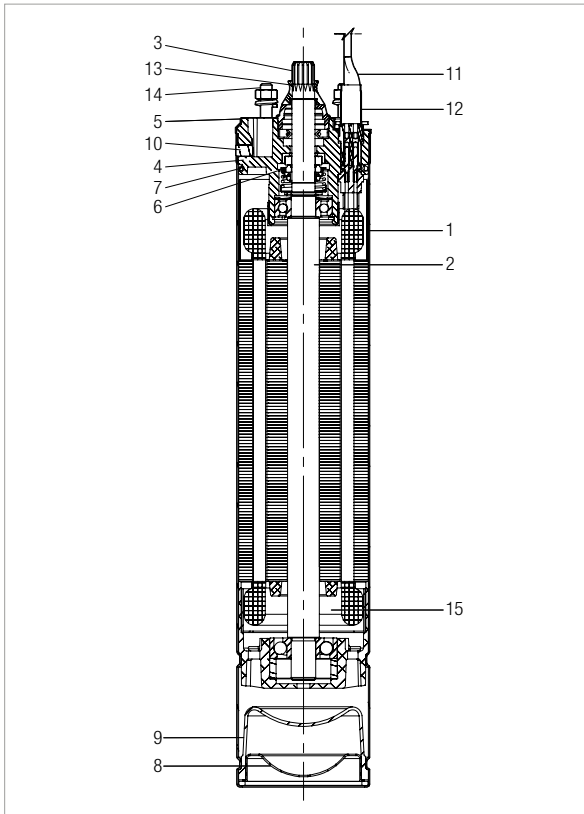
Oversized ball bearings of high axial load.

From 0,5 HP to 2 HP: 2000 N

3 HP: 3000 N

From 4 HP to 5,5 HP: 4000 N

From 7,5 HP to 10 HP: 5000 N



### MATERIALS

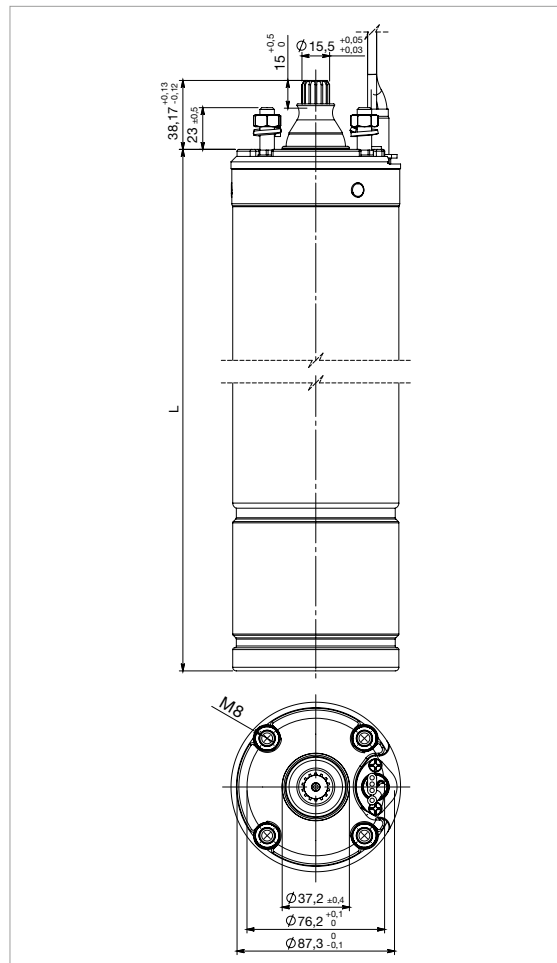
N°	PARTS	MATERIALS
1	INTERNAL AND EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4307 - AISI 304L
2	SHAFT	STEEL ASTM A 105
3	SHAFT END	STAINLESS STEEL EN 1.4301 - AISI 304
4	UPPER BRACKET	CAST IRON EN 0.6020 + CATAPHORESIS COATING
5	UPPER BRACKET COVER	STAINLESS STEEL EN 1.4301 - AISI 304
6	MECHANICAL SEAL	CARBON - CERAMIC
7	GASKET	NBR
8	LOWER COVER	STAINLESS STEEL EN 1.4301 - AISI 304
9	DIAPHRAGM	EPDM
10	PINS	STAINLESS STEEL EN 1.4301 - AISI 304
11	CABLE	FLAT - 07XBH2-F
12	CONNECTING PLUG	STAINLESS STEEL EN 1.4404 - AISI 316L
13	SAND GUARD	NBR
14	BOLTS & SCREWS	STEEL A2-70 - AISI 304
15	COOLING LIQUID	WHITE OIL

### DIMENSIONS - SINGLE-PHASE MOTORS

TYPE	P2		LENGTH (mm)	WEIGHT (Kg)	AXIAL THRUST (N)
	hp	kW			
50 Hz	0,5	0,37	284	6,5	2000
	0,75	0,55	304	7,4	2000
	1	0,75	334	8,7	2000
	1,5	1,1	354	9,7	2000
	2	1,5	400	11,7	2000
	3	2,2	478	14,5	3000/4000
	4	3	658	23,9	5000
	5	3,7	658	23,9	5000
	5,5	4	658	23,9	5000

### DIMENSIONS - THREE-PHASE MOTORS

TYPE	P2		LENGTH (mm)	WEIGHT (Kg)	AXIAL THRUST (N)
	hp	kW			
50 Hz	0,5	0,37	284	6,5	2000
	0,75	0,55	284	6,5	2000
	1	0,75	304	7,4	2000
	1,5	1,1	334	8,7	2000
	2	1,5	354	9,7	2000
	3	2,2	458	13,4	3000/4000
	4	3	518	15,9	4000
	5,5	4	588	17,1	4000
	7,5	5,5	658	23,9	5000
10	7,5	738	27,9	5000	



## ELECTRICAL DATA - SINGLE-PHASE MOTORS

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	T <sub>s</sub> /T <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	C μF	CABLE	
	hp	kW										Ø mm <sup>2</sup>	LC m
40L - 0,37 KW - 230 V - M	0,5	0,37	1 x 230 V ~	3,5	2,6	0,64	725	2800	0,9	51	16	4x1,5	1,7
40L - 0,55 KW - 230 V - M	0,75	0,55	1 x 230 V ~	4,5	2,7	0,6	950	2800	0,92	58	20	4x1,5	1,7
40L - 0,75 KW - 230 V - M	1	0,75	1 x 230 V ~	6,3	3,2	0,64	1275	2820	0,88	59	25	4x1,5	1,7
40L - 1,1 KW - 230 V - M	1,5	1,1	1 x 230 V ~	8,5	2,9	0,54	1780	2800	0,91	62	35	4x1,5	1,7
40L - 1,5 KW - 230 V - M	2	1,5	1 x 230 V ~	10,8	3,2	0,43	2160	2800	0,87	69	40	4x1,5	1,7
40L - 2,2 KW - 230 V - M	3	2,2	1 x 230 V ~	15	3,2	0,57	3060	2800	0,87	78	60	4x1,5	1,7
40L - 3 KW - 230 V - M	4	3	1 x 230 V ~	23,5	3,6	0,51	4900	2830	0,9	62	90	4x2	2,7
40L - 3,7 KW - 230 V - M	5	3,7	1 x 230 V ~	25,4	3,6	0,51	5130	2850	0,95	72	90	4x2	2,7
40L - 4 KW - 230 V - M	5,5	4	1 x 230 V ~	27	3,6	0,51	6000	2840	0,96	67	90	4x2	2,7

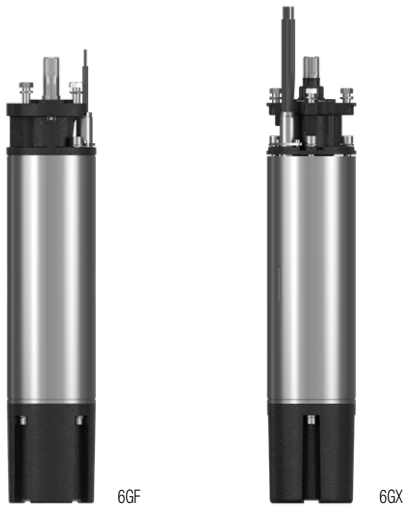
## ELECTRICAL DATA - THREE-PHASE MOTORS

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	T <sub>s</sub> /T <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	C μF	CABLE	
	hp	kW										Ø mm <sup>2</sup>	LC m
40L - 0,37 KW - 230 V - T	0,5	0,37	3 x 230 V ~	2,1	3,3	3,5	650	2820	0,77	57	-	4x1,5	1,7
40L - 0,37 KW - 400 V - T	0,5	0,37	3 x 400 V ~	1,2	3,3	3,5	650	2820	0,77	57	-	4x1,5	1,7
40L - 0,55 KW - 230 V - T	0,75	0,55	3 x 230 V ~	3,8	3,4	3,9	950	2820	0,64	59	-	4x1,5	1,7
40L - 0,55 KW - 400 V - T	0,75	0,55	3 x 400 V ~	2,2	3,4	3,9	950	2820	0,64	59	-	4x1,5	1,7
40L - 0,75 KW - 230 V - T	1	0,75	3 x 230 V ~	4,5	3,8	3,7	1210	2820	0,68	62	-	4x1,5	1,7
40L - 0,75 KW - 400 V - T	1	0,75	3 x 400 V ~	2,6	3,8	3,7	1210	2820	0,68	62	-	4x1,5	1,7
40L - 1,1 KW - 230 V - T	1,5	1,1	3 x 230 V ~	6,2	4,5	4,3	1700	2830	0,68	65	-	4x1,5	1,7
40L - 1,1 KW - 400 V - T	1,5	1,1	3 x 400 V ~	3,6	4,4	4,3	1700	2830	0,68	65	-	4x1,5	1,7
40L - 1,5 KW - 230 V - T	2	1,5	3 x 230 V ~	7,9	4,4	4,4	2160	2810	0,68	69	-	4x1,5	1,7
40L - 1,5 KW - 400 V - T	2	1,5	3 x 400 V ~	4,6	4,3	4,4	2160	2810	0,68	69	-	4x1,5	1,7
40L - 2,2 KW - 230 V - T	3	2,2	3 x 230 V ~	10,4	5,5	3,3	3050	2830	0,71	72	-	4x1,5	1,7
40L - 2,2 KW - 400 V - T	3	2,2	3 x 400 V ~	6	5,5	3,3	3050	2830	0,71	72	-	4x1,5	1,7
40L - 3 KW - 230 V - T	4	3	3 x 230 V ~	13	5,7	3,3	4000	2840	0,77	75	-	4x1,5	2,7
40L - 3 KW - 400 V - T	4	3	3 x 400 V ~	7,5	5,7	3,3	4000	2840	0,77	75	-	4x1,5	2,7
40L - 4 KW - 230 V - T	5,5	4	3 x 230 V ~	16,6	5,4	3,4	5200	2850	0,79	77	-	4x2	2,7
40L - 4 KW - 400 V - T	5,5	4	3 x 400 V ~	9,6	5,4	3,4	5200	2850	0,79	77	-	4x1,5	2,7
40L - 5,5 KW - 230 V - T	7,5	5,5	3 x 230 V ~	22,6	5,4	3,4	7200	2850	0,8	80	-	4x2	2,7
40L - 5,5 KW - 400 V - T	7,5	5,5	3 x 400 V ~	13,1	5,3	3,4	7200	2850	0,8	80	-	4x1,5	2,7
40L - 7,5 KW - 230 V - T	10	7,5	3 x 230 V ~	29,2	5	3	9460	2840	0,81	81	-	4x2	3,5
40L - 7,5 KW - 400 V - T	10	7,5	3 x 400 V ~	16,9	5	3	9460	2840	0,81	81	-	4x2	3,5

**P2:** Nominal power  
**V:** Nominal voltage  
**I<sub>n</sub>:** Nominal current  
**I<sub>s</sub>/I<sub>n</sub>:** Starting current/Nominal current  
**Cs/Cn:** Starting torque/Nominal torque  
**P1:** Absorbed power  
**N:** Rotations per minute - R.p.m

**Cos φ:** Power factor  
**η:** Yield  
**C:** Capacitor  
**Ø:** Cable cross section  
**LC:** Cable length

Winding resistance: see technical appendix



### TECHNICAL DATA

**Flanging:** NEMA 6"  
**Insulation class:** F  
**Protection class:** IP68  
**Cooling flow speed:** min. 0,3 m/s 35 °C  
**Power supply tolerance:** + 6 % / -10 %  
**Max. starts:** 25/h  
**Max operating depth:** 300 m  
**Horizontal operation:** 5,5 HP - 50 HP

### GENERAL DATA

6" submersible asynchronous two-pole electric motor made entirely of AISI 304 stainless steel and cast iron protected with an electrophoresis paint coating for the parts in contact with water. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Kingsbury self-centring thrust block designed to withstand significant axial loads. The stator is submerged in high thermal dissipation insulating thermosetting resin and encapsulated in a sealed stainless steel casing. The cable connector is removable for the purpose of quick and easy maintenance. The cable is ACS, WRAS and KTW certified. The motor is suitable for use with variable frequency drive (30 Hz - 50). Available in a three-phase version with DOL or STAR-DELTA starting and the user must provide the motor protection.

The 6GX version completely in AISI 316 stainless steel with a silicon carbide mechanical seal can be fitted on request. The motor is available in a version equipped with a PT100 or PTC (only DOL version) temperature sensor.

On request: cables of a different length, different voltage supply, single-phase version (up to 15 HP).

### CONSTRUCTION FEATURES



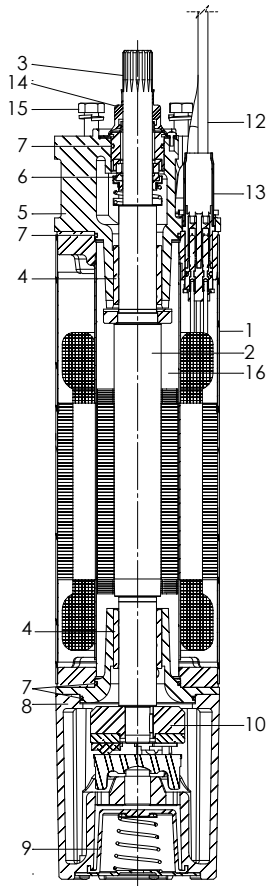
Resin submerged stator encapsulated in an AISI 304 casing and flanges treated with corrosion inhibitor. The stator has 24 slots to ensure better elasticity and smooth operation; the copper conductors have a double layer of Class F insulating enamel.

Kingsbury thrust block equipped with carbon clearance ring and oscillating pads in high-strength stainless steel machined by Tesla with a spherical lapping process.

From 5,5 HP to 30 HP: 16000 N  
 From 40 HP to 50 HP: 27000 N

# 6GF - 6GX

## SUBMERSIBLE MOTORS



### MATERIALS

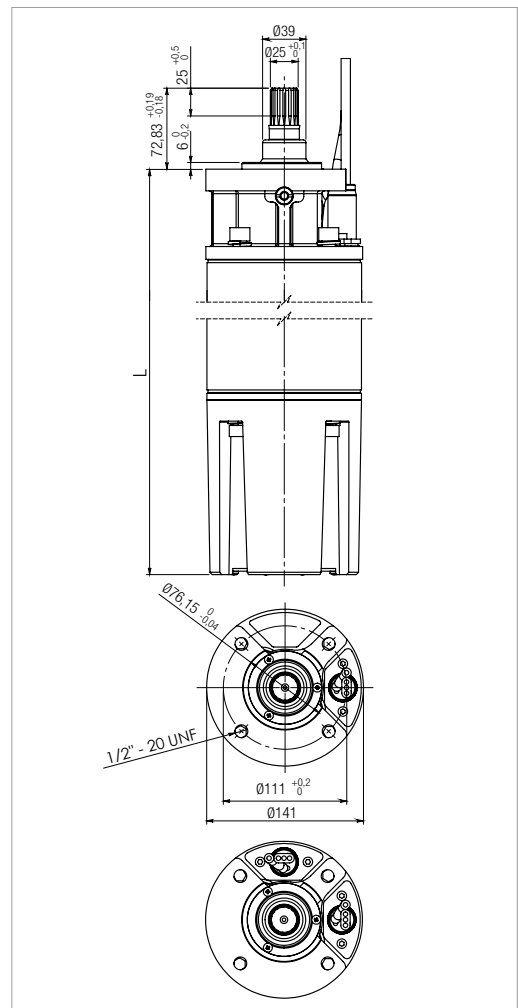
N°	PARTS	VERSION 6GF	VERSION 6GX
1	INTERNAL AND EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4307 - AISI 304L	STAINLESS STEEL EN 1.4571 - AISI 316Ti
2	SHAFT	STEEL ASTM A 105	STAINLESS STEEL EN 1.4401 - AISI 316
3	SHAFT END	STAINLESS STEEL EN 1.4401 - AISI 316	STAINLESS STEEL EN 1.4401 - AISI 316
4	BUSHINGS	GRAPHITE	GRAPHITE
5	UPPER BRACKET	CAST IRON EN 0.6020 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4401 - AISI 316
6	MECHANICAL SEAL	CARBON - CERAMIC	SIC/SIC
7	GASKET	NBR	VITON
8	LOWER BRACKET	CAST IRON EN 0.6020 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4401 - AISI 316
9	DIAPHRAGM	EPDM	EPDM
10	THRUST BEARING	STAINLESS STEEL + GRAPHITE	STAINLESS STEEL + GRAPHITE
11	VALVE	BRASS EN 12165	STAINLESS STEEL EN 1.4401 - AISI 316
12	CABLE	FLAT - 07XBH2-F	FLAT - 07XBH2-F
13	CONNECTING PLUG	STAINLESS STEEL EN 1.4301 - AISI 304	STAINLESS STEEL EN 1.4401 - AISI 316
14	SAND GUARD	NBR	EPDM
15	BOLTS & SCREWS	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316
16	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL

### DIMENSIONS - SINGLE-PHASE MOTORS

TYPE	P2		LENGTH mm	WEIGHT 6GF Kg	WEIGHT 6GX Kg	AXIAL THRUST N
	hp	kW				
50 Hz	5	3,7	661	46,2	45	16000
	7,5	5,5	731	52,8	51	16000
	10	7,5	786	59,2	57,8	16000
	15	11	861	67,2	65,4	16000

### DIMENSIONS - THREE-PHASE MOTORS

TYPE	P2		LENGTH mm	WEIGHT 6GF Kg	WEIGHT 6GX Kg	AXIAL THRUST N
	hp	kW				
50 Hz	5,5	4	601	41,2	39,7	16000
	7,5	5,5	631	44,3	42,8	16000
	10	7,5	661	47	45,5	16000
	12,5	9,3	686	50,1	48,6	16000
	15	11	731	54,5	53	16000
	17,5	13	761	58,4	56,9	16000
	20	15	786	61	59,5	16000
	25	18,5	861	68,5	67	16000
	30	22	921	74,3	72,8	16000
	35	26	980	78	77	16000
	40	30	1051	88,5	87	27000
	50	37	1181	101,6	100,1	27000
	60	45	1361	118,4	116,9	27000





### ELECTRICAL DATA - SINGLE-PHASE MOTORS

MODEL	P2		POWER INPUT 50Hz	In A	Is / In	Ts / Tn	P1 W	N min <sup>-1</sup>	Cos φ	η %	C μF	CABLE	
	hp	kW										Ø mm <sup>2</sup>	LC m
6GF / 6GX - 3,7 KW - 230 V - M	5	3,7	1 x 230 V ~	25	4,4	1,2	5100	2830	0,98	73	90	4X6	4
6GF / 6GX - 5,5 KW - 230 V - M	7,5	5,5	1 x 230 V ~	33,5	4	2	7450	2830	0,98	74	120	4X6	4
6GF / 6GX - 7,5 KW - 230 V - M	10	7,5	1 x 230 V ~	44	3,8	1,6	9900	2820	0,99	76	140	4X8	4
6GF / 6GX - 11 KW - 230 V - M	15	11	1 x 230 V ~	65	3,9	2	14200	2820	0,99	77	180	4X8	4

### ELECTRICAL DATA - THREE-PHASE MOTORS

MODEL	P2		POWER INPUT 50Hz	In A	Is / In	Ts / Tn	P1 W	N min <sup>-1</sup>	Cos φ	η %	C μF	CABLE	
	hp	kW										Ø mm <sup>2</sup>	LC m
6GF / 6GX - 4 KW - 230 V - T	5,5	4	3 x 230 V ~	18,3	4,1	1,6	5290	2845	0,75	76	-	4X4	4
6GF / 6GX - 4 KW - 400 V - T	5,5	4	3 x 400 V ~	10,6	4,1	1,6	5290	2845	0,75	76	-	4X4	4
6GF / 6GX - 4 KW - 415 V - T	5,5	4	3 x 415 V ~	11	4,3	1,66	5500	2860	0,7	73	-	4X4	4
6GF / 6GX - 5,5 KW - 230 V - T	7,5	5,5	3 x 230 V ~	24,3	4,6	1,7	7270	2845	0,75	76	-	4X4	4
6GF / 6GX - 5,5 KW - 400 V - T	7,5	5,5	3 x 400 V ~	14	4,6	1,7	7270	2845	0,75	76	-	4X4	4
6GF / 6GX - 5,5 KW - 415 V - T	7,5	5,5	3 x 415 V ~	14,6	4,8	1,76	7330	2860	0,71	73	-	4X4	4
6GF / 6GX - 7,5 KW - 230 V - T	10	7,5	3 x 230 V ~	31	4,1	1,9	9600	2840	0,78	78	-	4X4	4
6GF / 6GX - 7,5 KW - 400 V - T	10	7,5	3 x 400 V ~	18	4,1	1,9	9600	2840	0,77	78	-	4X4	4
6GF / 6GX - 7,5 KW - 415 V - T	10	7,5	3 x 415 V ~	18,3	4,4	1,97	9700	2850	0,74	77	-	4X4	4
6GF / 6GX - 9,3 KW - 230 V - T	12,5	9,3	3 x 230 V ~	38,1	3,9	2	11800	2840	0,8	80	-	4X4	4
6GF / 6GX - 9,3 KW - 400 V - T	12,5	9,3	3 x 400 V ~	22	3,9	2	11800	2840	0,8	80	-	4X4	4
6GF / 6GX - 9,3 KW - 415 V - T	12,5	9,3	3 x 415 V ~	22,8	4,2	2,08	12000	2850	0,74	79	-	4X4	4
6GF / 6GX - 11 KW - 230 V - T	15	11	3 x 230 V ~	44,2	4,4	2,1	13860	2840	0,82	79	-	4X6	4
6GF / 6GX - 11 KW - 400 V - T	15	11	3 x 400 V ~	25,5	4,4	2,1	13860	2840	0,82	79	-	4X4	4
6GF / 6GX - 11 KW - 415 V - T	15	11	3 x 415 V ~	26	4,8	2,2	14100	2845	0,79	78	-	4X4	4
6GF / 6GX - 13 KW - 230 V - T	17,5	13	3 x 230 V ~	43,1	3,9	1,6	12551	2840	0,77	75	-	4X6	4
6GF / 6GX - 13 KW - 400 V - T	17,5	13	3 x 400 V ~	28,7	3,8	1,7	15479	2850	0,83	79	-	4X4	4
6GF / 6GX - 13 KW - 415 V - T	17,5	13	3 x 415 V ~	29,2	4	1,4	15542	2860	0,78	79	-	4X4	4
6GF / 6GX - 15 KW - 230 V - T	20	15	3 x 230 V ~	57,8	4,8	2,2	18000	2840	0,8	83	-	4X6	4
6GF / 6GX - 15 KW - 400 V - T	20	15	3 x 400 V ~	33,4	4,8	2,2	18000	2840	0,8	83	-	4X4	4
6GF / 6GX - 15 KW - 415 V - T	20	15	3 x 415 V ~	34,2	5	2,3	18200	2850	0,76	82	-	4X4	4
6GF / 6GX - 18,5 KW - 230 V - T	25	18,5	3 x 230 V ~	71	5,2	2,2	22300	2845	0,8	83	-	4X8	4
6GF / 6GX - 18,5 KW - 400 V - T	25	18,5	3 x 400 V ~	41	5,2	2,2	22300	2845	0,8	83	-	4X6	4
6GF / 6GX - 18,5 KW - 415 V - T	25	18,5	3 x 415 V ~	42	5,5	2,3	22450	2855	0,75	82	-	4X6	4
6GF / 6GX - 22 KW - 230 V - T	30	22	3 x 230 V ~	81,4	5,1	2,2	26500	2825	0,84	83	-	4X8	4
6GF / 6GX - 22 KW - 400 V - T	30	22	3 x 400 V ~	47	5,1	2,2	26500	2825	0,84	83	-	4X6	4
6GF / 6GX - 22 KW - 415 V - T	30	22	3 x 415 V ~	47,5	5,4	2,28	26850	2835	0,8	82	-	4X6	4
6GF / 6GX - 26 KW - 230 V - T	35	26	3 x 230 V ~	99,3	4,9	2,2	31100	2825	0,83	84	-	4X8	4
6GF / 6GX - 26 KW - 400 V - T	35	26	3 x 400 V ~	57	4,9	2,2	31100	2830	0,83	84	-	4X8	4
6GF / 6GX - 26 KW - 415 V - T	35	26	3 x 415 V ~	57,1	4,9	2,28	31180	2840	0,84	83	-	4X8	4
6GF / 6GX - 30 KW - 400 V - T	40	30	3 x 400 V ~	61,5	4,6	2,4	35500	2830	0,85	85	-	4X8	4
6GF / 6GX - 30 KW - 415 V - T	40	30	3 x 415 V ~	63,5	4,7	2,5	36000	2840	0,8	83	-	4X8	4
6GF / 6GX - 37 KW - 400 V - T	50	37	3 x 400 V ~	79,3	3,7	1,4	45000	2830	0,84	82	-	4X8	4
6GF / 6GX - 37 KW - 415 V - T	50	37	3 x 415 V ~	80	3,9	1,5	45500	2840	0,8	81	-	4X8	4
6GF / 6GX - 45 KW - 400 V - T	60	45	3 x 400 V ~	95	5,5	1,3	55000	2840	0,83	82	-	4X8	4
6GF / 6GX - 45 KW - 415 V - T	60	45	3 x 415 V ~	95	5,5	1,3	55000	2850	0,8	82	-	4X8	4

P2: Nominal power  
V: Nominal voltage  
In: Nominal current  
Is/In: Starting current/Nominal current  
P1: Absorbed power

N: Rotations per minute - R.p.m  
Cos φ: Power factor  
η: Yield  
Ø: Cable cross section  
LC: Cable length

Winding resistance: see technical appendix



## TECHNICAL DATA

**Flanging:** NEMA 6"  
**Protection class:** IP68  
**Cooling flow speed:** 0,5 m/s  
**Power supply tolerance:** + 6 % / -10 %  
**Max. starts:** 15/h  
**Max operating depth:** 300 m  
**Max operating temperature:** 60 bar  
**Horizontal operation:** 7,5 HP - 50 HP

## GENERAL DATA

Rewindable 6" submersible asynchronous two-pole electric motor available in standard version with casing in AISI 304 stainless steel and supports in cast iron. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Mitchell self-centring thrust block designed to withstand significant axial loads. The motor is also available in a version entirely in AISI 316 stainless steel and a version in AISI 904. There is also a version suitable for use with variable frequency drive (30 Hz - 50/60 Hz). The motor is equipped with a single-core cable of 5 m or 8 m (depending on the power) connected directly to the winding and earth cable, and is available in DOL or STAR-DELTA configuration. ACS, WRAS and KTW certified cable. The electrical protection must be provided by the user.

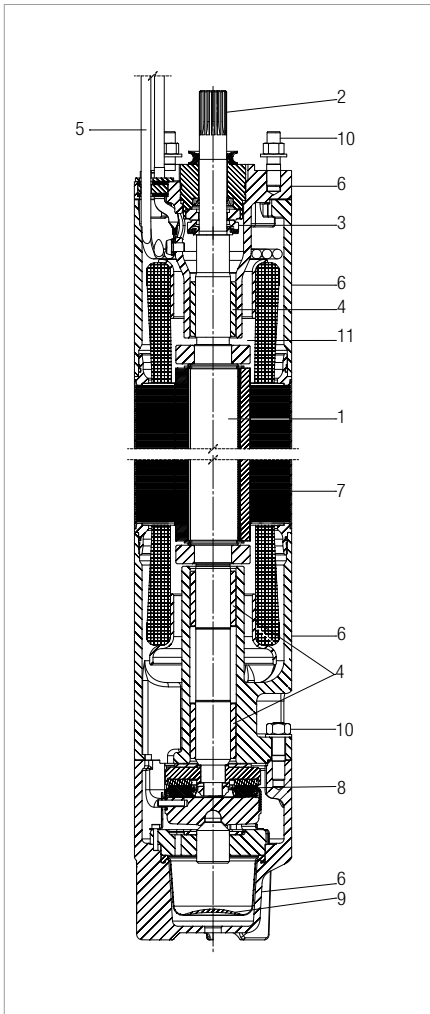
On request: cables of a different length, different voltage supply, PT100 and PTC temperature probes and a special shaft terminal.

## CONSTRUCTION FEATURES



The rewindable stator is protected by an AISI 304 stainless steel jacket (AISI 316 or 904 on request). In the standard version the rotor is wound with PVC coated wire (60 HP in PE2+PA). On request, we can supply a version with a PE2+PA winding that makes the motor compatible with special applications and with the use of a variable frequency drive.

Mitchell type thrust bearings with lapped pads in stainless steel and graphite clearance ring.  
 from 5 HP to 20 HP: 15000 N  
 from 25 HP to 50 HP: 27500 N  
 Counter-thrust load: 6000 N

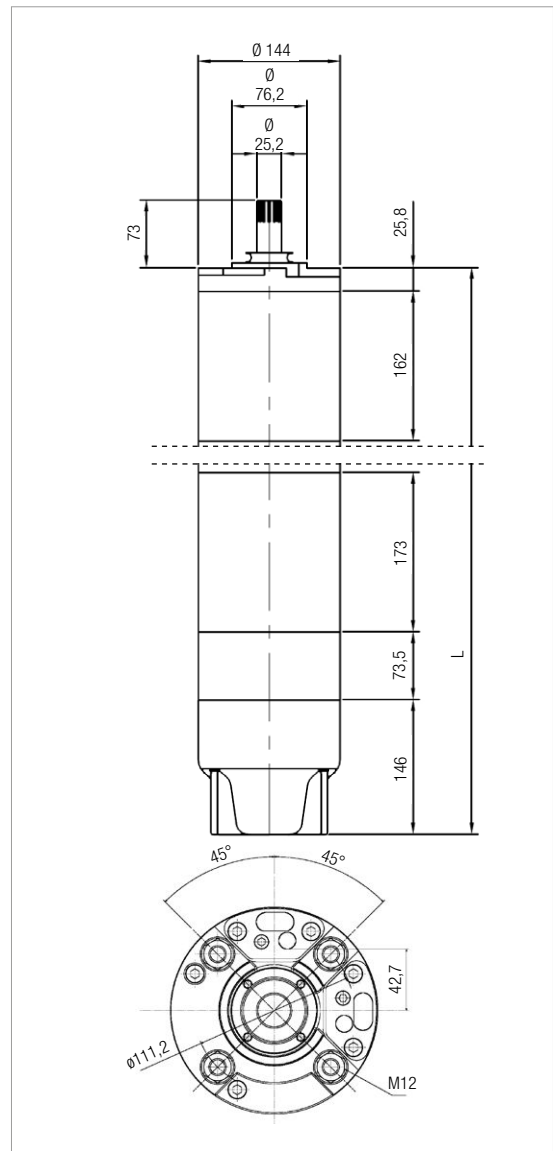


### MATERIALS

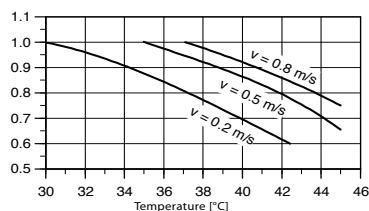
N°	PARTS	STD VERSION	316 SS VERSION	904 SS VERSION
1	SHAFT	STEEL ASTM A 105	STEEL ASTM A 105	STEEL ASTM A 105
2	SHAFT END	STAINLESS STEEL EN 1.4401 - AISI 316	STAINLESS STEEL EN 1.4401 - AISI 316	STAINLESS STEEL EN 1.4462 - AISI 318LN
3	MECHANICAL SEAL	CARBON - CERAMIC	SIC/SIC	SIC/SIC
4	BUSHINGS	GRAPHITE	GRAPHITE	GRAPHITE
5	CABLE	ROUND - 07V2B-F	ROUND - 07V2B-F	ROUND - 07V2B-F
6	STRUCTURAL PARTS	CAST IRON EN 0.6025 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4408 - AISI 316	STAINLESS STEEL EN 1.4517
7	EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4307 - AISI 304L	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4539 - AISI 904L
8	THRUST BEARING	STEEL - GRAPHITE - ALUMINA	STEEL - GRAPHITE - ALUMINA	STEEL - GRAPHITE - ALUMINA
9	DIAPHRAGM	EPDM	EPDM	EPDM
10	BOLTS & SCREW	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316	STAINLESS STEEL EN 1.4539 - AISI 904L
11	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL	WATER + GLYCOL

### DIMENSIONS - THREE-PHASE MOTORS

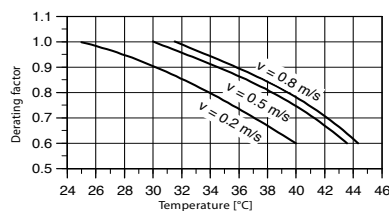
TYPE	P2		LENGTH mm	WEIGHT STD Kg	WEIGHT 316 SS Kg	WEIGHT 904 SS Kg	AXIAL THRUST N
	hp	kW					
50 Hz	7,5	5,5	787	47	48,5	48,5	27500
	10	7,5	817	50	51,5	51,5	27500
	12,5	9,3	847	52	53,5	53,5	27500
	15	11	877	57	58,5	58,5	27500
	17,5	13	907	63	64,5	64,5	27500
	20	15	977	74	75,5	75,5	27500
	25	18,5	1037	80	81,5	81,5	27500
	30	22	1067	92	93,5	93,5	27500
	35	26	1137	103	104,5	104,5	27500
	40	30	1192	107	108,5	108,5	27500
	50	37	1292	113	114,5	114,5	27500
	60	45	1457	135	136,5	136,5	27500



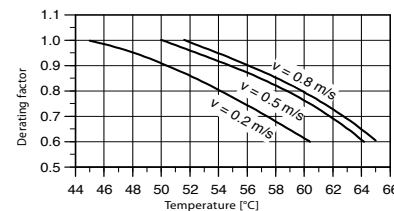
### DOWNGRADING



PVC windings of 5,5 to 30 kW



PVC windings of 37 kW



PE2/PA windings of 5,5 to 37 kW

### ELECTRICAL DATA - THREE-PHASE MOTORS - DOL

MODEL	P2		POWER INPUT 50Hz	In A	Is/In	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR6 - 5,5 KW - 400 V - T	7,5	5,5	3 x 400 V ~	13	3,7	7295	2870	0,81	75	3x6 + 1x6	n.a.	5
TR6 - 7,5 KW - 400 V - T	10	7,5	3 x 400 V ~	18	3,7	9977	2870	0,8	75	3x6 + 1x6	n.a.	5
TR6 - 9,3 KW - 400 V - T	12,5	9,3	3 x 400 V ~	21	3,6	11785	2860	0,81	78	3x6 + 1x6	n.a.	5
TR6 - 11 KW - 400 V - T	15	11	3 x 400 V ~	25	3,7	14203	2860	0,82	77	3x6 + 1x6	6x6 + 2x6	5
TR6 - 13 KW - 400 V - T	17,5	13	3 x 400 V ~	29	3,8	16475	2870	0,82	79	3x6 + 1x6	6x6 + 2x6	5
TR6 - 15 KW - 400 V - T	20	15	3 x 400 V ~	32	4,2	18401	2860	0,83	79	3x6 + 1x6	6x6 + 2x6	5
TR6 - 18,5 KW - 400 V - T	25	18,5	3 x 400 V ~	39	4,5	22427	2890	0,83	82	3x6 + 1x6	6x6 + 2x6	5
TR6 - 22 KW - 400 V - T	30	22	3 x 400 V ~	49	5,5	26819	2880	0,79	82	3x6 + 1x6	6x6 + 2x6	5
TR6 - 26 KW - 400 V - T	35	26	3 x 400 V ~	58	5,7	31745	2880	0,79	82	3x6 + 1x6	6x6 + 2x6	5
TR6 - 30 KW - 400 V - T	40	30	3 x 400 V ~	65	5	36477	2870	0,81	82	3x10 + 1x10	6x6 + 2x6	8
TR6 - 37 KW - 400 V - T	50	37	3 x 400 V ~	80	5,05	44895	2860	0,81	77	3x10 + 1x10	6x6 + 2x6	8
TR6 - 45 KW - 400 V - T	60	45	3 x 400 V ~	93,1	5,5	54826	2825	0,85	82	3x16 + 1x16	6x10 + 2x10	8

**P2:** Nominal power  
**V:** Nominal voltage  
**In:** Nominal current  
**Is/In:** Starting current/Nominal current  
**P1:** Absorbed power

**N:** Rotations per minute - R.p.m  
**Cos φ:** Power factor  
**η:** Yield  
**Ø:** Cable cross section  
**LC:** Cable length



## TECHNICAL DATA

**Flanging:** NEMA 8"  
**Protection class:** IP58 (IP68 on request)  
**Cooling flow speed:** 0,5 m/s  
**Power supply tolerance:** + 6 % / -10 %  
**Max. starts:** 10/h  
**Max operating depth:** 300 m  
**Max operating temperature:** 60 bar  
**Horizontal operation:** 30 HP - 125 HP

## GENERAL DATA

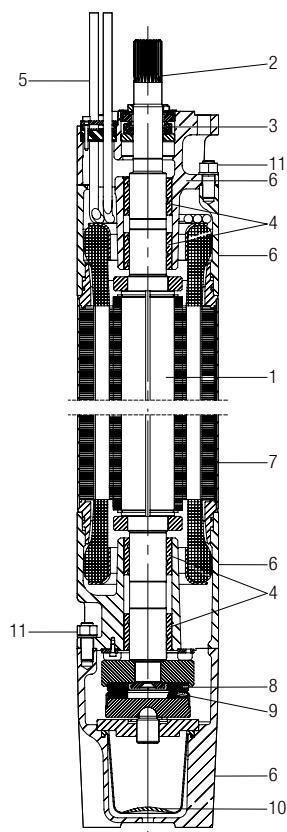
Rewindable 8" submersible asynchronous two or four-pole electric motor available in standard version with casing in AISI 316 stainless steel and supports in cast iron. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Mitchell self-centring thrust block designed to withstand significant axial loads. The motor is also available in a version entirely in AISI 316 stainless steel and a version in AISI 904. There is also a version suitable for use with variable frequency drive (30 Hz - 50/60 Hz). The motor is equipped with a single-core cable of 8 m connected directly to the winding, and is available in DOL or STAR-DELTA configuration. The cable is ACS, WRAS and KTW certified. The electrical protection must be provided by the user.

On request: PT100 and PTC temperature probes, cables of a different length, different voltage supply, special shaft terminals and protection class IP68.

## CONSTRUCTION FEATURES



The rewindable stator is protected by an AISI 316 stainless steel jacket (AISI 904 on request). In the standard version the rotor is wound with PVC coated wire. On request, we can supply a version with a PE2+PA winding that makes the motor compatible with special applications and with the use of a variable frequency drive.



### MATERIALS

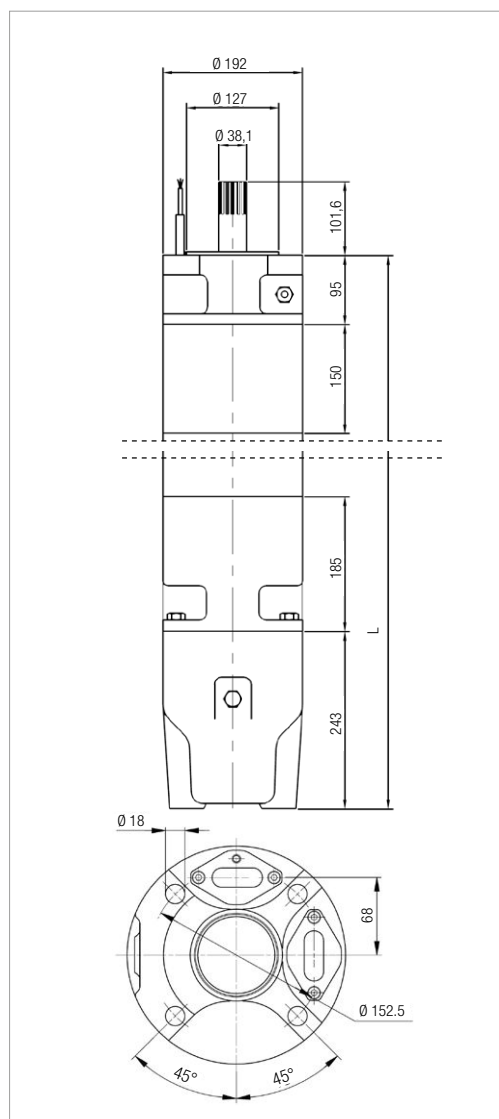
N°	PARTS	STD VERSION	316 SS VERSION	904 SS VERSION
1	SHAFT	STEEL ASTM A 105	STEEL ASTM A 105	STEEL ASTM A 105
2	SHAFT END	STAINLESS STEEL EN 1.4401 - AISI 316	STAINLESS STEEL EN 1.4408 - AISI 316	STAINLESS STEEL EN 1.4462 - AISI 318LN
3	MECHANICAL SEAL	SIC/SIC	SIC/SIC	SIC/SIC
4	BUSHINGS	GRAPHITE	GRAPHITE	GRAPHITE
5	CABLE	ROUND - 07V2B-F	ROUND - 07V2B-F	ROUND - 07V2B-F
6	STRUCTURAL PARTS	CAST IRON EN 0.6025 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4408 - AISI 316	STAINLESS STEEL EN 1.4517
7	EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4539 - AISI 904L
8	THRUST BEARING	CERAMIC - GRAPHITE	CERAMIC - GRAPHITE	CERAMIC - GRAPHITE
9	DIAPHRAGM	EPDM	EPDM	EPDM
10	BOLTS & SCREW	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316	STAINLESS STEEL EN 1.4539 - AISI 904L
11	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL	WATER + GLYCOL

### DIMENSIONS -THREE-PHASE MOTORS - 2 poles

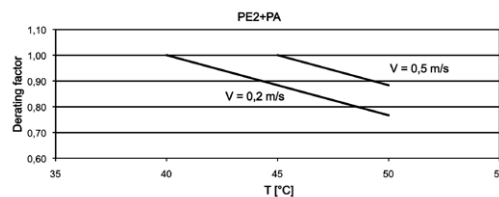
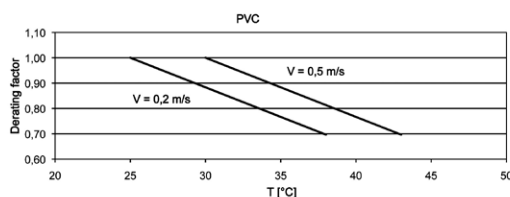
TYPE	P2		LENGTH mm	WEIGHT STD Kg	WEIGHT 316 SS Kg	WEIGHT 904 SS Kg	AXIAL THRUST N
	hp	kW					
50 Hz	30	22	1010	126	128,5	128,5	60000
	35	26	1050	134	136,5	136,5	60000
	40	30	1110	146	148,5	148,5	60000
	50	37	1160	156	158,5	158,5	60000
	60	45	1270	177	179,5	179,5	60000
	75	55	1350	192	194,5	194,5	60000
	85	63	1490	218	220,5	220,5	60000
	100	75	1590	237	239,5	239,5	60000
	125	92	1830	283	285,5	285,5	60000
150	110	2060	333	335,5	335,5	60000	

### DIMENSIONS -THREE-PHASE MOTORS - 4 poles

TYPE	P2		LENGTH mm	WEIGHT STD Kg	WEIGHT 316 SS Kg	WEIGHT 904 SS Kg	AXIAL THRUST N
	hp	kW					
50 Hz	15	11	1110	146	148,5	148,5	60000
	20	15	1160	156	158,5	158,5	60000
	25	18,5	1270	177	179,5	179,5	60000
	30	22	1350	192	194,5	194,5	60000
	35	26	1490	218	220,5	220,5	60000
	40	30	1590	237	239,5	239,5	60000
	50	37	1830	283	285,5	285,5	60000



### DOWNGRADING



For TR8 110 kW the maximum liquid temperature is 5 °C lower than that indicated in the graphs.

### ELECTRICAL DATA - THREE-PHASE MOTORS - 2 POLES - DOL

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								∅ DOL (mm <sup>2</sup> )	∅ Y/D (mm <sup>2</sup> )	LC m
TR8 - 22 KW - 400 V - 2P	30	22	3 x 400 V ~	45	5,3	26604	2890	0,84	83	3x16 + 1x16	6x10 + 2x10	8
TR8 - 26 KW - 400 V - 2P	35	26	3 x 400 V ~	54	5,1	31969	2880	0,85	81	3x16 + 1x16	6x10 + 2x10	8
TR8 - 30 KW - 400 V - 2P	40	30	3 x 400 V ~	61	5,7	35923	2890	0,85	84	3x16 + 1x16	6x10 + 2x10	8
TR8 - 37 KW - 400 V - 2P	50	37	3 x 400 V ~	75	5,7	44167	2890	0,85	84	3x16 + 1x16	6x10 + 2x10	8
TR8 - 45 KW - 400 V - 2P	60	45	3 x 400 V ~	92	6	52266	2910	0,82	86	3x16 + 1x16	6x10 + 2x10	8
TR8 - 55 KW - 400 V - 2P	75	55	3 x 400 V ~	109	5,9	64190	2900	0,85	86	3x16 + 1x16	6x16 + 2x16	8
TR8 - 63 KW - 400 V - 2P	85	63	3 x 400 V ~	126	5,7	72455	2910	0,83	87	3x16 + 1x16	6x16 + 2x16	8
TR8 - 75 KW - 400 V - 2P	100	75	3 x 400 V ~	145	5,8	86395	2910	0,86	87	3x16 + 1x16	6x16 + 2x16	8
TR8 - 92 KW - 400 V - 2P	125	92	3 x 400 V ~	177	5,9	105461	2890	0,86	87	3x25 + 1x25	6x16 + 2x16	8
TR8 - 110 KW - 400 V - 2P	150	110	3 x 400 V ~	213	5,8	128387	2890	0,87	86	3x25 + 1x25	6x16 + 2x16	8

### ELECTRICAL DATA - THREE-PHASE MOTORS - 4 POLES - DOL

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								∅ DOL (mm <sup>2</sup> )	∅ Y/D (mm <sup>2</sup> )	LC m
TR8 - 11 KW - 400 V - 4P	15	11	3 x 400 V ~	25,9	5	13817	1455	0,77	80	3x16 + 1x16	6x10 + 2x10	8
TR8 - 15 KW - 400 V - 4P	20	15	3 x 400 V ~	33,7	4,9	18912	1445	0,81	80	3x16 + 1x16	6x10 + 2x10	8
TR8 - 18,5 KW - 400 V - 4P	25	18,5	3 x 400 V ~	41,4	4,7	23233	1450	0,81	81	3x16 + 1x16	6x10 + 2x10	8
TR8 - 22 KW - 400 V - 4P	30	22	3 x 400 V ~	49,7	4,7	27547	1450	0,8	82	3x16 + 1x16	6x10 + 2x10	8
TR8 - 26 KW - 400 V - 4P	35	26	3 x 400 V ~	58	4,7	32147	1450	0,8	82	3x16 + 1x16	6x10 + 2x10	8
TR8 - 30 KW - 400 V - 4P	40	30	3 x 400 V ~	64,8	4,4	37263	1440	0,83	82	3x16 + 1x16	6x10 + 2x10	8
TR8 - 37 KW - 400 V - 4P	50	37	3 x 400 V ~	81,8	4,5	45338	1455	0,8	83	3x16 + 1x16	6x10 + 2x10	8

P2: Nominal power  
V: Nominal voltage  
I<sub>n</sub>: Nominal current  
I<sub>s</sub>/I<sub>n</sub>: Starting current/Nominal current  
P1: Absorbed power

N: Rotations per minute - R.p.m  
Cos φ: Power factor  
η: Yield  
∅: Cable cross section  
LC: Cable length



### TECHNICAL DATA

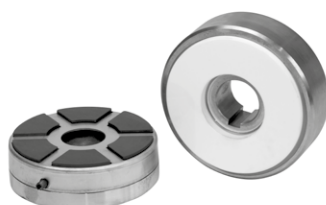
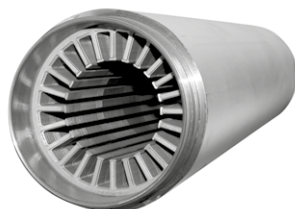
**Flanging:** 10"  
**Protection class:** IP58 (IP68 on request)  
**Cooling flow speed:** 0,5 m/s  
**Power supply tolerance:** + 6 % / -10 %  
**Max. starts:** 8/h  
**Max operating depth:** 300 m  
**Max operating temperature:** 60 bar  
**Horizontal operation:** 100 HP - 230 HP

### GENERAL DATA

Rewindable 10" submersible asynchronous two or four-pole electric motor available in standard version with casing in AISI 316 stainless steel and supports in cast iron. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Mitchell self-centring thrust block designed to withstand significant axial loads. The motor is also available in a version entirely in AISI 316 stainless steel and a version in AISI 904. There is also a version suitable for use with variable frequency drive (30 Hz - 50/60 Hz). The motor is equipped with single-core cables of 8 m connected directly to the winding, and is available in DOL or STAR-DELTA configuration. The cables are ACS, WRAS and KTW certified. The electrical protection must be provided by the user.

On request: PT100 and PTC temperature probes, cables of a different length, different voltage supply, special shaft terminals and protection class IP68.

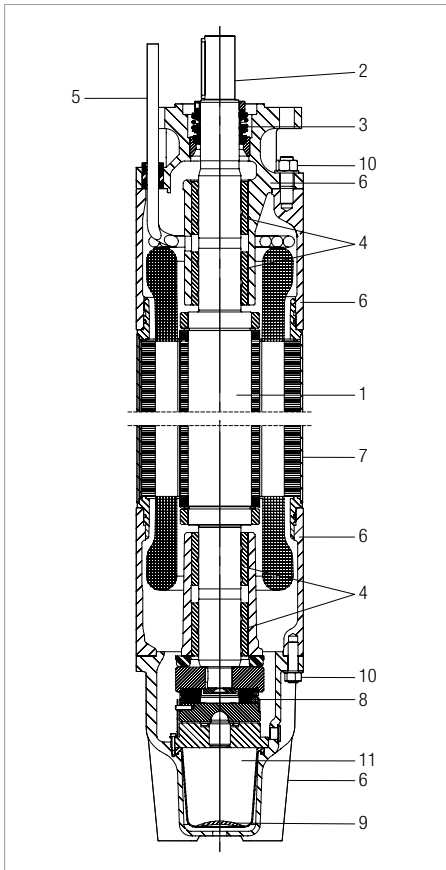
### CONSTRUCTION FEATURES



The rewindable stator is protected by an AISI 316 stainless steel jacket (AISI 904 on request). In the standard version the rotor is wound with PVC coated wire (230 HP and 260 HP in PE2+PA). On request, we can supply a version with a PE2+PA winding that makes the motor compatible with special applications and with the use of a variable frequency drive.

Mitchell type thrust bearings with lapped pads in graphite and ceramic clearance ring.  
 from 100 HP to 260 HP: 60000 N  
 Counter-thrust load: 12500 N





### MATERIALS

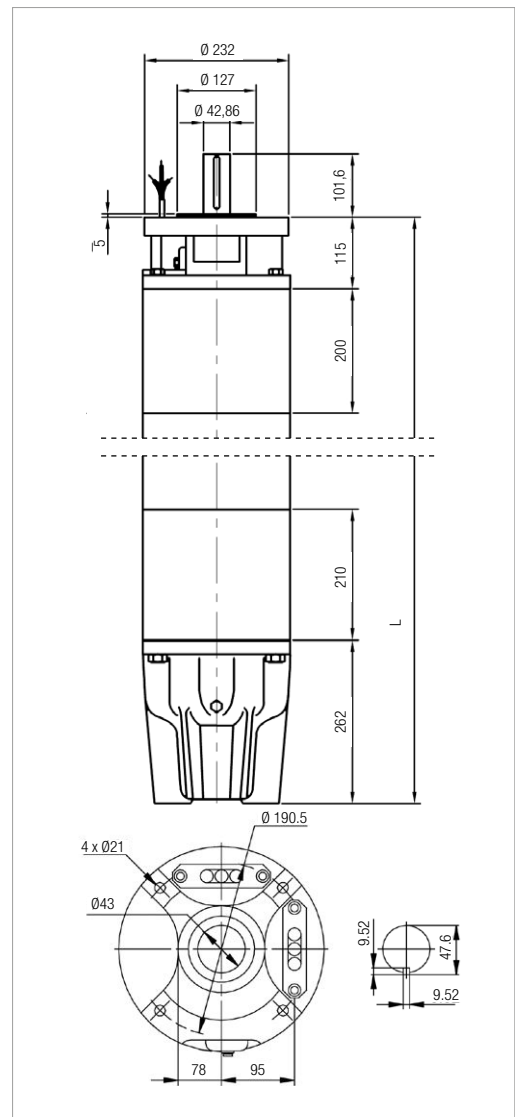
N°	PARTS	STD VERSION	316 SS VERSION	904 SS VERSION
1	SHAFT	STEEL ASTM A 105	STEEL ASTM A 105	STEEL ASTM A 105
2	SHAFT END	STAINLESS STEEL EN 1.4462 - AISI 318LN	STAINLESS STEEL EN 1.4462 - AISI 318LN	STAINLESS STEEL EN 1.4462 - AISI 318LN
3	MECHANICAL SEAL	SIC/SIC	SIC/SIC	SIC/SIC
4	BUSHINGS	GRAPHITE	GRAPHITE	GRAPHITE
5	CABLE	ROUND - 07V2B-F	ROUND - 07V2B-F	ROUND - 07V2B-F
6	STRUCTURAL PARTS	CAST IRON EN 0.6025 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4408 - AISI 316	STAINLESS STEEL EN 1.4517
7	EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4539 - AISI 904L
8	THRUST BEARING	CERAMIC - GRAPHITE	CERAMIC - GRAPHITE	CERAMIC - GRAPHITE
9	DIAPHRAGM	EPDM	EPDM	EPDM
10	BOLTS & SCREW	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316	STAINLESS STEEL EN 1.4539 - AISI 904L
11	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL	WATER + GLYCOL

### DIMENSIONS -THREE-PHASE MOTORS - 2 poles

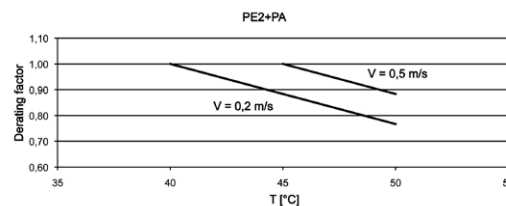
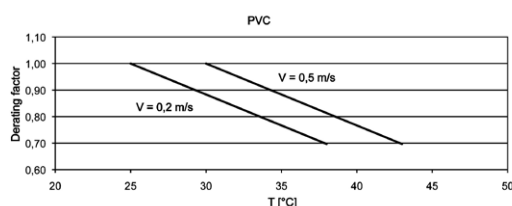
TYPE	P2		LENGTH mm	WEIGHT STD Kg	WEIGHT AISI VERSION 316 Kg	WEIGHT AISI VERSION 904 Kg	AXIAL THRUST N
	hp	kW					
50 Hz	100	75	1400	280	290	290	60000
	125	92	1500	330	340	340	60000
	150	110	1690	385	395	395	60000
	180	132	1870	435	445	445	60000
	200	147	2070	500	510	510	60000
	230	170	2220	540	550	550	60000
	260	190	2400	580	590	590	60000

### DIMENSIONS -THREE-PHASE MOTORS - 4 poles

TYPE	P2		LENGTH mm	WEIGHT STD Kg	WEIGHT AISI VERSION 316 Kg	WEIGHT AISI VERSION 904 Kg	AXIAL THRUST N
	hp	kW					
50 Hz	40	30	1270	250	260	260	60000
	50	37	1400	280	290	290	60000
	60	45	1500	330	340	340	60000
	75	55	1690	385	395	395	60000
	100	75	1870	435	445	445	60000
	125	92	2070	500	510	510	60000
	150	110	2070	521	531	531	60000



### DOWNGRADING



For TR10 170 kW PE2+PA the maximum liquid temperature is 5 °C lower than that indicated in the graphs. For TR10 190 kW PE2+PA it is 10 °C lower.

### ELECTRICAL DATA - THREE-PHASE MOTORS - 2 POLES - DOL

MODEL	P2		POWER INPUT 50Hz	In A	Is/In	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR10 - 75 KW - 400 V - 2P	100	75	3 x 400 V ~	148	5,4	86131	2910	0,84	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 92 KW - 400 V - 2P	125	92	3 x 400 V ~	185	5,6	105101	2910	0,82	88	3x50 + 1x25	6x35 + 2x25	8
TR10 - 110 KW - 400 V - 2P	150	110	3 x 400 V ~	217	5,7	126287	2910	0,84	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 132 KW - 400 V - 2P	180	132	3 x 400 V ~	257	5,7	149566	2910	0,84	88	3x50 + 1x25	6x35 + 2x25	8
TR10 - 147 KW - 400 V - 2P	200	147	3 x 400 V ~	300	6,2	168355	2920	0,81	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 170 KW - 400 V - 2P	230	170	3 x 400 V ~	348	6	195292	2920	0,81	83	3x50 + 1x25	6x35 + 2x25	8
TR10 - 190 KW - 400 V - 2P	260	190	3 x 400 V ~	405	5,9	221668	2930	0,79	86	3x50 + 1x25	6x35 + 2x25	8

### ELECTRICAL DATA - THREE-PHASE MOTORS - 4 POLES - DOL

MODEL	P2		POWER INPUT 50Hz	In A	Is/In	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR10 - 30 KW - 400 V - 4P	40	30	3 x 400 V ~	63	5,3	34918	1455	0,8	85	3x50 + 1x25	6x35 + 2x25	8
TR10 - 37 KW - 400 V - 4P	50	37	3 x 400 V ~	78	5,5	43232	1460	0,8	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 45 KW - 400 V - 4P	60	45	3 x 400 V ~	91	4,6	52329	1450	0,83	85	3x50 + 1x25	6x35 + 2x25	8
TR10 - 55 KW - 400 V - 4P	75	55	3 x 400 V ~	110	5,3	62492	1455	0,82	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 75 KW - 400 V - 4P	100	75	3 x 400 V ~	153	5,4	85861	1455	0,81	88	3x50 + 1x25	6x35 + 2x25	8
TR10 - 92 KW - 400 V - 4P	125	92	3 x 400 V ~	185	5,3	105101	1450	0,82	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 110 KW - 400 V - 4P	150	110	3 x 400 V ~	221	5,8	127084	1450	0,83	87	3x50 + 1x25	6x35 + 2x25	8

**P2:** Nominal power  
**V:** Nominal voltage  
**In:** Nominal current  
**Is/In:** Starting current/Nominal current  
**P1:** Absorbed power

**N:** Rotations per minute - R.p.m  
**Cos φ:** Power factor  
**η:** Yield  
**Ø:** Cable cross section  
**LC:** Cable length



### TECHNICAL DATA

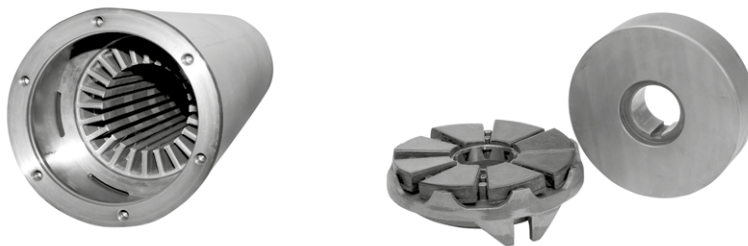
**Flanging:** 12"  
**Protection class:** IP58 (IP68 on request)  
**Cooling flow speed:** 0,5 m/s  
**Power supply tolerance:** + 6 % / -10 %  
**Max. starts:** 5/h  
**Max operating depth:** 300 m  
**Max operating temperature:** 60 bar  
**Horizontal operation:** 180 HP - 260 HP  
**Direction of rotation:** to be specified in the order; the standard version turns anti-clockwise

### GENERAL DATA

Rewindable 12" submersible asynchronous two or four-pole electric motor available in standard version with casing in AISI 316 stainless steel and supports in cast iron. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Mitchell self-centring thrust block designed to withstand significant axial loads. The motor is also available in a version entirely in AISI 316 stainless steel and a version in AISI 904. There is also a version suitable for use with variable frequency drive (30 Hz - 50/60 Hz). The motor is equipped with single-core cables of 8 m connected directly to the winding, and is available in DOL or STAR-DELTA configuration. The cables are ACS, WRAS and KTW certified. The electrical protection must be provided by the user.

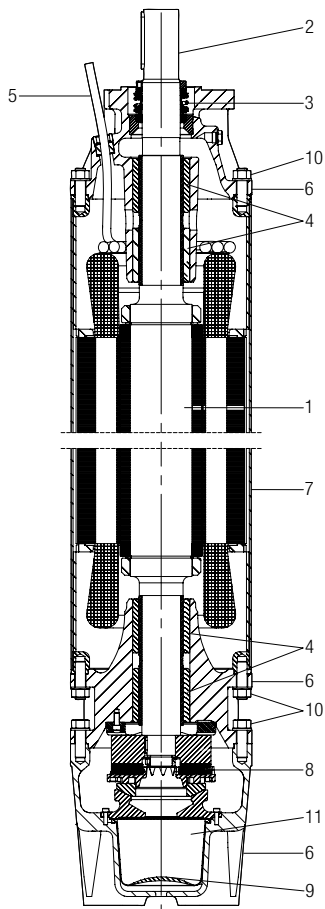
On request: PT100 and PTC temperature probes, cables of a different length, different voltage supply, special shaft terminals.

### CONSTRUCTION FEATURES



The rewindable stator is protected by an AISI 316 stainless steel jacket. In the standard version the rotor is wound with PVC coated wire (PE2+PA for 300 HP and 340 HP). On request, we can supply a version with a PE2+PA winding that makes the motor compatible with special applications and with the use of a variable frequency drive.

Mitchell type thrust bearings with pads in rubber coated steel and steel clearance ring.  
 from 200 HP to 340 HP:  
 70000 N (one-way)  
 35000 N (two-way)  
 Counter-thrust load: 15000 N



### MATERIALS

N°	PARTS	STD VERSION	316 SS VERSION	904 SS VERSION
1	SHAFT	STEEL ASTM A 105	STEEL ASTM A 105	STEEL ASTM A 105
2	SHAFT END	STAINLESS STEEL EN 1.4462 - AISI 318 LN	STAINLESS STEEL EN 1.4462 - AISI 318LN	STAINLESS STEEL EN 1.4462 - AISI 318LN
3	MECHANICAL SEAL	SIC/SIC	SIC/SIC	SIC/SIC
4	BUSHINGS	NBR	NBR	STEEL S275/NBR
5	CABLE	ROUND - 07V2B-F	ROUND - 07V2B-F	ROUND - 07V2B-F
6	STRUCTURAL PARTS	CAST IRON EN 0.6025 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4408 - AISI 316	STAINLESS STEEL EN 1.4517
7	EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4539 - AISI 904L
8	THRUST BEARING	STEEL - RUBBER	STEEL - RUBBER	STEEL - RUBBER
9	DIAPHRAGM	EPDM	EPDM	EPDM
10	BOLTS & SCREW	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316	STAINLESS STEEL EN 1.4539 - AISI 904L
11	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL	WATER + GLYCOL

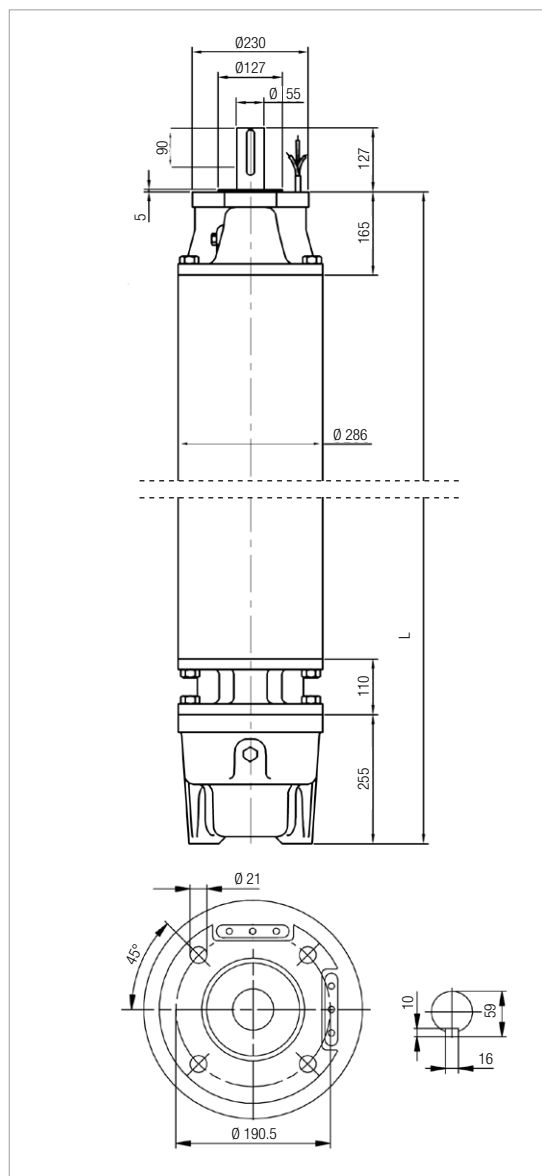
SUBMERSIBLE MOTORS

### DIMENSIONS -THREE-PHASE MOTORS - 2 poles

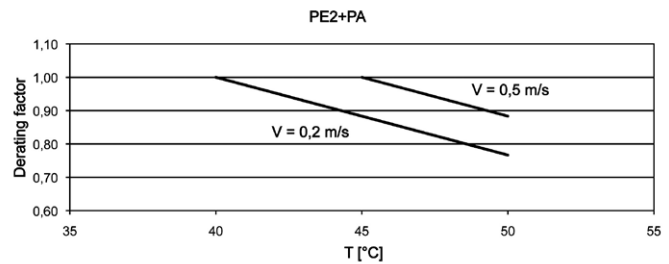
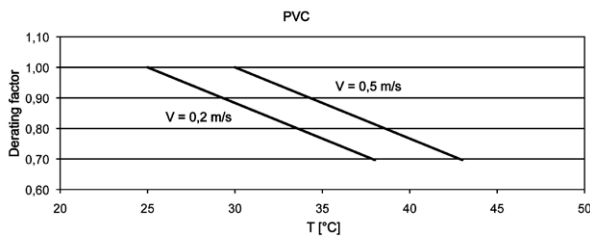
TYPE	P2		LENGTH mm	WEIGHT STD Kg	WEIGHT 316 SS Kg	WEIGHT 904 SS Kg	AXIAL THRUST N
	hp	kW					
50 Hz	180	132	1660	515	527	527	70000
	200	147	1790	565	577	577	70000
	230	170	1880	605	617	617	70000
	260	190	1980	650	662	662	70000
	300	220	2110	700	712	712	70000
	340	250	2280	775	787	787	70000
	400	300	2280	855	867	867	70000

### DIMENSIONS -THREE-PHASE MOTORS - 4 poles

TYPE	P2		LENGTH mm	WEIGHT STD Kg	WEIGHT 316 SS Kg	WEIGHT 904 SS Kg	AXIAL THRUST N
	hp	kW					
50 Hz	100	75	1660	515	527	527	70000
	125	92	1790	565	577	577	70000
	150	110	1880	605	617	617	70000
	180	132	2110	700	712	712	70000
	200	147	2210	750	762	762	70000



### DOWNGRADING



For TR12 220 kW PE2+PA and 250 kW PE2+PA 50 Hz and for all the TR12 60 Hz versions the maximum liquid temperature is 10 °C lower than that indicated in the graph. For TR12 300kW PE2+PA the maximum liquid temperature is 25°C.

### ELECTRICAL DATA - THREE-PHASE MOTORS - 2 POLES - DOL

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR12 - 132 KW - 400 V - 2P	180	132	3 x 400 V ~	267	6,1	151686	2930	0,82	87	3x70 + 1x50	6x50 + 2x25	8
TR12 - 147 KW - 400 V - 2P	200	147	3 x 400 V ~	300	6,2	170434	2935	0,82	87	3x70 + 1x50	6x50 + 2x25	8
TR12 - 170 KW - 400 V - 2P	230	170	3 x 400 V ~	345	6,1	203170	2920	0,85	84	3x70 + 1x50	6x50 + 2x25	8
TR12 - 190 KW - 400 V - 2P	260	190	3 x 400 V ~	372	6,2	216492	2930	0,84	84	3x70 + 1x50	6x50 + 2x25	8
TR12 - 220 KW - 400 V - 2P	300	220	3 x 400 V ~	425	6,1	247337	2920	0,84	84	3x70 + 1x50	6x50 + 2x25	8
TR12 - 250 KW - 400 V - 2P	340	250	3 x 400 V ~	481	5,9	283260	2920	0,85	88	3x70 + 1x50	6x50 + 2x25	8
TR12 - 300 KW - 400 V - 2P	400	300	3 x 400 V ~	575	5,9	346583	2905	0,87	88	3x70 + 1x50	6x50 + 2x25	8

### ELECTRICAL DATA - THREE-PHASE MOTORS - 4 POLES - DOL

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR12 - 75 KW - 400 V - 4P	100	75	3 x 400 V ~	144	6,5	85799	1455	0,86	87	3x70 + 1x50	6x50 + 2x25	8
TR12 - 92 KW - 400 V - 4P	125	92	3 x 400 V ~	185	6,5	103819	1465	0,81	87	3x70 + 1x50	6x50 + 2x25	8
TR12 - 110 KW - 400 V - 4P	150	110	3 x 400 V ~	216	5,8	125705	1465	0,84	87	3x70 + 1x50	6x50 + 2x25	8
TR12 - 132 KW - 400 V - 4P	180	132	3 x 400 V ~	256	5,6	148984	1460	0,84	88	3x70 + 1x50	6x50 + 2x25	8
TR12 - 147 KW - 400 V - 4P	200	147	3 x 400 V ~	278	5,9	167566	1450	0,87	87	3x70 + 1x50	6x50 + 2x25	8

**P2:** Nominal power  
**V:** Nominal voltage  
**I<sub>n</sub>:** Nominal current  
**I<sub>s</sub>/I<sub>n</sub>:** Starting current/Nominal current  
**P1:** Absorbed power

**N:** Rotations per minute - R.p.m  
**Cos φ:** Power factor  
**η:** Yield  
**Ø:** Cable cross section  
**LC:** Cable length



### TECHNICAL DATA

**Flanging:** 14"  
**Protection class:** IP58 (IP68 on request)  
**Cooling flow speed:** 0,5 m/s  
**Power supply tolerance:** + 6 % / -10 %  
**Max. starts:** PVC: 3/h - PE2+PA: 5/H  
**Max operating depth:** 300 m  
**Max operating temperature:** 60 bar  
**Horizontal operation:** 300 HP - 340 HP  
**Direction of rotation:** to specified in the order

### GENERAL DATA

Rewindable 14" submersible asynchronous two or four-pole electric motor available in standard version with casing in AISI 316 stainless steel and supports in cast iron. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Mitchell self-centring thrust block designed to withstand significant axial loads. The motor is also available in a version entirely in AISI 316 stainless steel.

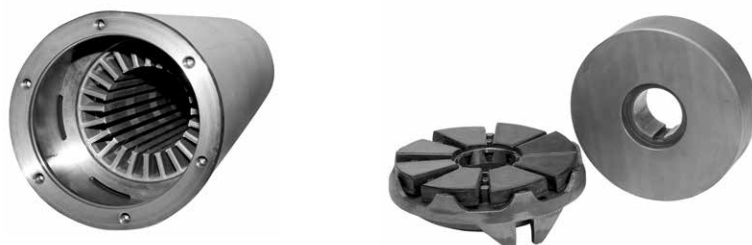
There is also a version suitable for use with variable frequency drive (30 Hz - 50).

The motor is equipped with single-core cables of 8 m connected directly to the winding, and is available in DOL or STAR-DELTA configuration.

The cables are ACS, WRAS and KTW certified. The electrical protection must be provided by the user.

PT100 and PTC temperature probes are available on request.

### CONSTRUCTION FEATURES



The rewindable stator is protected by an AISI 316 stainless steel jacket.

In the standard version the rotor is wound with PVC coated wire. On request, we can supply a version with a PE2+PA winding that makes the motor compatible with special applications and with the use of a variable frequency drive.

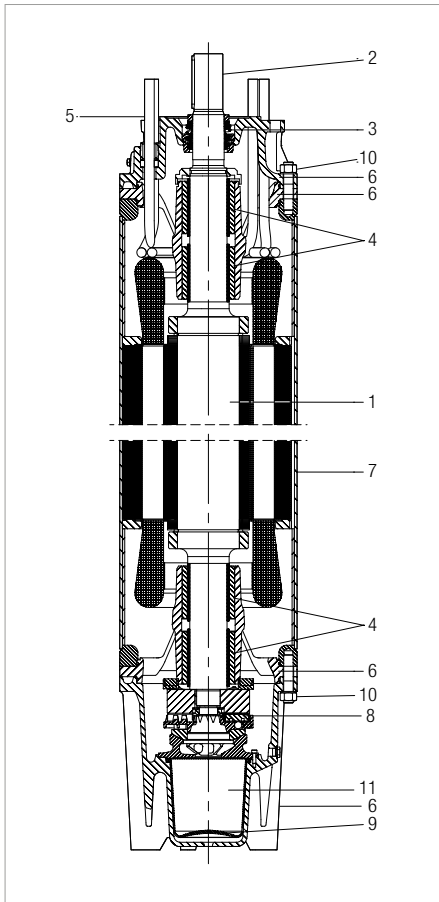
Mitchell type thrust bearings with pads in rubber coated steel and steel clearance ring.

From 300 HP to 550 HP:

70000 N (one-way)

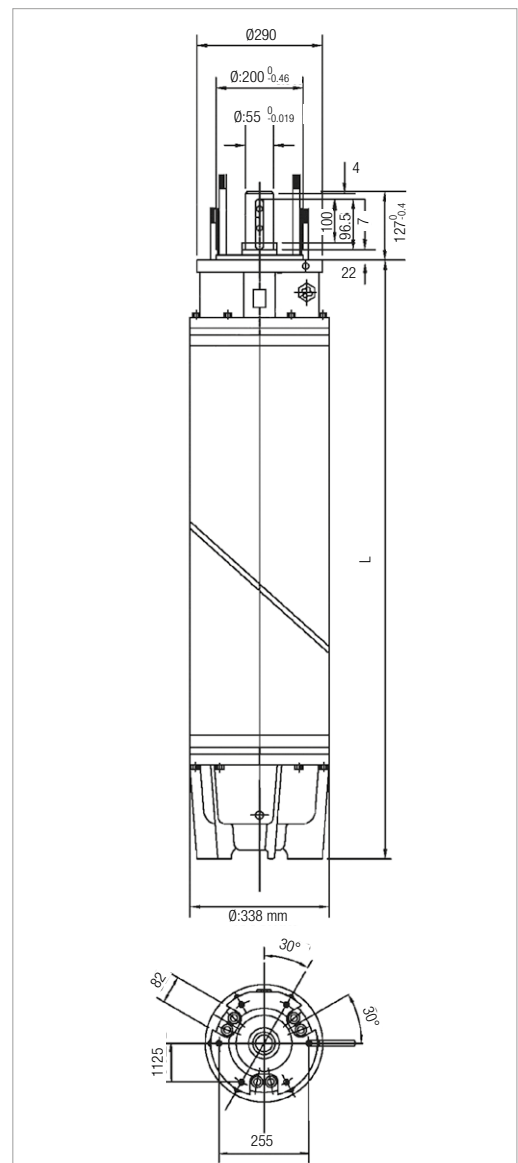
35000 N (two-way)

Counter-thrust load: 15000 N



### MATERIALS

N°	PARTS	STD VERSION	316 SS VERSION
1	SHAFT	STAINLESS STEEL EN 1.4028 - AISI 420B	STAINLESS STEEL EN 1.4462- AISI 318LN
2	SHAFT END	STAINLESS STEEL EN 1.4028 - AISI 420B	STAINLESS STEEL EN 1.4462- AISI 318LN
3	MECHANICAL SEAL	SIC/SIC	SIC/SIC
4	BUSHINGS	NBR	NBR
5	CABLE	ROUND - 07V2B-F	ROUND - 07V2B-F
6	STRUCTURAL PARTS	CAST IRON EN 0.6025 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4401 - AISI 316
7	EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4404 - AISI 316L
8	THRUST BEARING	STEEL - RUBBER	STEEL - RUBBER
9	DIAPHRAGM	EPDM	EPDM
10	BOLTS & SCREW	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316
11	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL



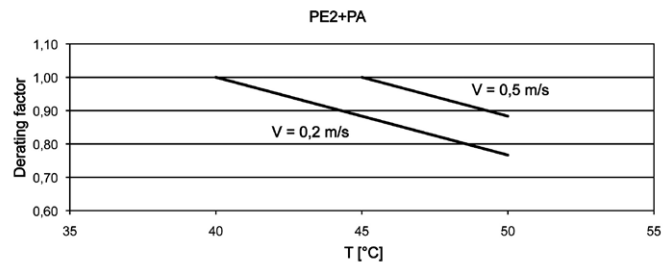
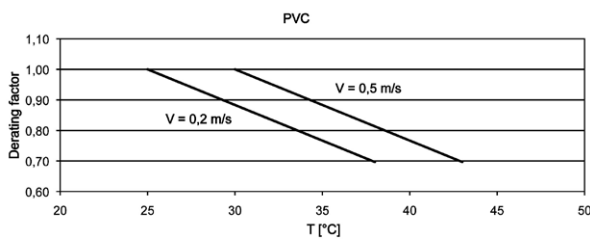
### DIMENSIONS -THREE-PHASE MOTORS - 2 poles

TYPE	P2		LENGTH mm	WEIGHT STD Kg	WEIGHT AISI 316 VERSION Kg	AXIAL THRUST N
	hp	kW				
50 Hz	300	220	1760	663	683	70000
	400	300	2020	845	865	70000
	350	260	1910	784	804	70000
	450	330	2160	906	926	70000
	500	370	2320	1010	1030	70000
	550	400	2460	1105	1125	70000

### DIMENSIONS -THREE-PHASE MOTORS - 4 poles

TYPE	P2		LENGTH mm	WEIGHT STD Kg	WEIGHT AISI 316 VERSION Kg	AXIAL THRUST N
	hp	kW				
50 Hz	230	170	1910	776	796	70000
	260	190	2020	855	875	70000
	300	220	2160	950	970	70000
	400	300	2460	1108	1128	70000
	350	260	2320	1065	1085	70000

### DOWNGRADING



For TR14 220 kW PE2+PA and 250 kW PE2+PA 50 Hz and for all the TR14 60 Hz versions the maximum liquid temperature is 10 °C lower than that indicated in the graph.

### ELECTRICAL DATA - THREE-PHASE MOTORS - 2 POLES

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR14 - 220 KW - 400 V - 2P	300	220	3 x 400 V ~	448	5,5	248307	2935	0,8	89	3x95 + 1x70	6x70 + 2x50	8
TR14 - 260 KW - 400 V - 2P	350	260	3 x 400 V ~	505	6	279899	2945	0,8	88	3x95 + 1x70	6x70 + 2x50	8
TR14 - 300 KW - 400 V - 2P	400	300	3 x 400 V ~	595	5,8	338027	2945	0,82	90	3x95 + 1x70	6x95 + 2x70	8
TR14 - 330 KW - 400 V - 2P	450	330	3 x 400 V ~	651	6	369841	2945	0,82	90	3x95 + 1x70	6x95 + 2x70	8
TR14 - 370 KW - 400 V - 2P	500	370	3 x 400 V ~	745	6,4	412291	2950	0,8	90	3x95 + 1x70	6x95 + 2x70	8
TR14 - 400 KW - 400 V - 2P	550	400	3 x 400 V ~	746	6,8	444486	2940	0,86	90	3x95 + 1x70	6x95 + 2x70	8

### ELECTRICAL DATA - THREE-PHASE MOTORS - 4 POLES

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>s</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR14 - 170 KW - 400 V - 4P	230	170	3 x 400 V ~	350	4	191565	1455	0,79	89	3x70 + 1x50	6x70 + 2x50	8
TR14 - 190 KW - 400 V - 4P	260	190	3 x 400 V ~	387	4,2	214497	1455	0,8	89	3x70 + 1x50	6x70 + 2x50	8
TR14 - 220 KW - 400 V - 4P	300	220	3 x 400 V ~	441	4,1	247482	1455	0,81	89	3x95 + 1x70	6x70 + 2x50	8
TR14 - 260 KW - 400 V - 4P	350	260	3 x 400 V ~	537	4	293357	1450	0,83	89	3x95 + 1x70	6x95 + 2x70	8
TR14 - 300 KW - 400 V - 4P	400	300	3 x 400 V ~	604	3,8	338955	1455	0,81	89	3x95 + 1x70	6x95 + 2x70	8

**P2:** Nominal power  
**V:** Nominal voltage  
**I<sub>n</sub>:** Nominal current  
**I<sub>s</sub>/I<sub>n</sub>:** Starting current/Nominal current  
**P1:** Absorbed power

**N:** Rotations per minute - R.p.m  
**Cos φ:** Power factor  
**η:** Yield  
**Ø:** Cable cross section  
**LC:** Cable length



# HYDRAULIC EFFICIENCY

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### GENERAL INFORMATION

With the aim of defining a comparable performance threshold value among all water pumps present on the market, an index has been created which considers the size of the pump, its specific speed and rotation speed: the MEI (Minimum Efficiency Index). The regulation applies to centrifugal pumps for pumping clean water included in these product categories:

- Pumps with axial intake with support (ESOB - End Suction Own Bearings)
- Pumps with monobloc horizontal axial intake (ESCC - End Suction Close Coupled)
- Pumps with monobloc in-line axial intake (ESCCI End Suction Close Coupled Inline)
- Multistage vertical pumps (MS-V - Vertical multistage)
- Multistage submerged pumps (MSS - Submersible multistage)

MEI represents a dimensionless indicator for hydraulic performance and is a measurement of the sizing of the pump with respect to its performance. The higher the MEI value, the better the sizing of the pump with respect to its performance and the lower the yearly energy consumption due to use of the pump. The upper limit of the MEI values is theoretically open, and depends only on physical and technological limits.

**The minimum efficiency index (MEI) is based on the maximum diameter of the impeller. Multistage submerged water pumps must undergo tests in a version with 9 stages.**

The reference value for the most efficient water pumps is  $MEI \geq 0.70$ .

The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller adapts the pump to a fixed work point, with a consequent lower energy consumption.

The operation of this water pump with variable operating points may be more efficient and economic if controlled, for example, by means of a variable speed motor which adapts pump operation to the system.

You can find information on reference efficiency at the address: [www.dabpumps.com](http://www.dabpumps.com) or contact our sales network.

The efficiency graphs for  $MEI=0.7$  and  $MEI=0.4$  for the different types of pumps are available on the site: [www.europump.org/efficiencycharts](http://www.europump.org/efficiencycharts)

PUMP MODEL	P2 NOMINAL		MEI	$\eta_{PL} \%$	$\eta_{BEP} \%$	$\eta_{OL} \%$
	kW	HP				
S4 1/13	0,37	0,5	$\geq 0,4$	34,2	36,4	36,1
S4 1/19	0,55	0,75		34,1	36,1	35,8
S4 1/26	0,75	1		34,5	36	35,7
S4 1/37	1,1	1,5		34,4	36	35,9
S4 1/48	1,5	2		34,3	35,9	35,5
S4 2/7	0,37	0,5		52,6	55,5	55
S4 2/10	0,55	0,75		52,4	55,5	55,2
S4 2/14	0,75	1		52,4	55,7	55,1
S4 2/20	1,1	1,5		52,1	55,3	55
S4 2/28	1,5	2		52	55,3	55
S4 2/40	2,2	3		52,5	55,3	54,9
S4 2/52	3	4		52,4	55,3	55
S4 3/6	0,37	0,5		55	58,9	58
S4 3/9	0,55	0,75		55	58,7	58
S4 3/13	0,75	1		54,9	58,5	57,8
S4 3/19	1,1	1,5		54,9	58,5	57,8
S4 3/25	1,5	2		54,9	58,3	57,6
S4 3/32	2,2	3		54,4	58,1	57,5
S4 3/39	2,2	3		54,3	58	57,5
S4 3/45	3	4		54,3	58	57,3
S4 3/51	3	4		54,2	57,9	57,1
S4 3/67	4	5,5		54,2	57,8	57

# HYDRAULIC EFFICIENCY

EU REGULATION 547/2012 – MEI

PUMP MODEL	P2 NOMINAL		MEI	$\eta_{PL} \%$	$\eta_{BEP} \%$	$\eta_{OL} \%$
	kW	HP				
S4 4/4	0,37	0,5	≥ 0,4	60,4	64,0	63,2
S4 4/7	0,55	0,75		60,2	64,0	63,1
S4 4/9	0,75	1		60,2	63,7	63,1
S4 4/14	1,1	1,5		60,1	63,5	63,0
S4 4/19	1,5	2		60,0	63,5	63,0
S4 4/27	2,2	3		60,0	63,4	63,0
S4 4/35	3	4		60,0	63,4	62,9
S4 4/48	4	5,5		59,9	63,3	62,9
S4 4/62	5,5	7,5		59,9	63,3	62,8
S4 6/5	0,55	0,75		63,5	66,6	66,0
S4 6/7	0,75	1		63,3	66,5	65,9
S4 6/10	1,1	1,5		63,3	66,4	65,9
S4 6/14	1,5	2		63,3	66,4	65,8
S4 6/21	2,2	3		63,3	66,3	65,8
S4 6/29	3	4		63,2	66,3	65,6
S4 6/38	4	5,5		63,2	66,2	65,6
S4 6/52	5,5	7,5		63,1	66,1	65,5
S4 6/61	7,5	10		63,0	65,9	65,4
S4 8/5	0,75	1		65,6	69,0	68,2
S4 8/7	1,1	1,5		65,4	69,0	68,2
S4 8/9	1,5	2		65,4	68,8	68,2
S4 8/15	2,2	3		65,4	68,8	68,1
S4 8/21	3	4		65,4	68,6	68,0
S4 8/27	4	5,5		65,4	68,5	68,0
S4 8/35	5,5	7,5		65,3	68,4	67,9
S4 8/38	5,5	7,5		65,2	68,4	67,9
S4 8/47	7,5	10		65,2	68,2	67,8
S4 8/50	7,5	10		65,0	68,0	67,7
S4 12/6	1,1	1,5		62,2	66,5	65,4
S4 12/9	1,5	2		62,0	66,3	65,4
S4 12/13	2,2	3		62,0	66,3	65,4
S4 12/18	3	4		62,0	66,1	65,4
S4 12/24	4	5,5		62,0	66,0	65,3
S4 12/34	5,5	7,5		61,9	66,0	65,2
S4 12/44	7,5	10		61,8	65,9	65,2
S4 16/8	1,5	2		62,5	67,5	66,8
S4 16/12	2,2	3		62,5	67,5	66,8
S4 16/16	3	4		62,5	67,3	66,8
S4 16/21	4	5,5		62,3	67,3	66,6
S4 16/29	5,5	7,5		62,3	67,1	66,5
S4 16/38	7,5	10	62,0	66,9	66,3	

# HYDRAULIC EFFICIENCY

EU REGULATION 547/2012 – MEI

PUMP MODEL	N° STAGES	MEI	$\eta_{PL}$	$\eta_{BEP}$	$\eta_{OL}$
SS6A/09	9	$\geq 0,40$	67,01	70,60	69,74
SS6A/08	8		67,01	70,60	69,74
SS6A/10	10		67,01	70,60	69,74
SS6A/11	11		67,01	70,60	69,74
SS6A/12	12		67,01	70,60	69,74
SS6A/13	13		67,01	70,60	69,74
SS6A/14	14		67,01	70,60	69,74
SS6A/15	15		67,01	70,60	69,74
SS6A/16	16		67,01	70,60	69,74
SS6A/17	17		67,01	70,60	69,74
SS6A/18	18		67,01	70,60	69,74
SS6A/19	19		67,01	70,60	69,74
SS6A/20	20		67,01	70,60	69,74
SS6A/21	21		67,01	70,60	69,74
SS6A/22	22		67,01	70,60	69,74
SS6A/23	23		67,01	70,60	69,74
SS6A/24	24		67,01	70,60	69,74
SS6A/25	25		67,01	70,60	69,74
SS6A/26	26		67,01	70,60	69,74
SS6A/27	27		67,01	70,60	69,74
SS6A/28	28		67,01	70,60	69,74
SS6A/29	29		67,01	70,60	69,74
SS6A/30	30		67,01	70,60	69,74
SS6A/31	31		67,01	70,60	69,74
SS6A/32	32		67,01	70,60	69,74
SS6A/33	33		67,01	70,60	69,74
SS6A/34	34		67,01	70,60	69,74
SS6A/35	35		67,01	70,60	69,74
SS6A/36	36		67,01	70,60	69,74
SS6A/37	37		67,01	70,60	69,74
SS6A/38	38		67,01	70,60	69,74
SS6A/39	39		67,01	70,60	69,74
SS6A/40	40		67,01	70,60	69,74
SS6A/41	41		67,01	70,60	69,74
SS6A/42	42		67,01	70,60	69,74
SS6A/43	43		67,01	70,60	69,74
SS6A/44	44		67,01	70,60	69,74
SS6A/45	45		67,01	70,60	69,74
SS6A/46	46		67,01	70,60	69,74
SS6A/47	47		67,01	70,60	69,74
SS6A/48	48		67,01	70,60	69,74
SS6A/49	49		67,01	70,60	69,74
SS6A/50	50		67,01	70,60	69,74
SS6A/51	51		67,01	70,60	69,74
SS6A/52	52		67,01	70,60	69,74
SS6A/53	53		67,01	70,60	69,74
SS6A/54	54		67,01	70,60	69,74
SS6A/55	55		67,01	70,60	69,74
SS6A/56	56		67,01	70,60	69,74
SS6A/57	57		67,01	70,60	69,74
SS6A/58	58		67,01	70,60	69,74
SS6A/59	59		67,01	70,60	69,74
SS6A/60	60		67,01	70,60	69,74

# HYDRAULIC EFFICIENCY

EU REGULATION 547/2012 – MEI

PUMP MODEL	N° STAGES	MEI	$\eta_{PL}$	$\eta_{BEP}$	$\eta_{OL}$
SS6B/09	9	≥ 0,40	70,72	74,52	73,68
SS6B/7	7		70,72	74,52	73,68
SS6B/8	8		70,72	74,52	73,68
SS6B/10	10		70,72	74,52	73,68
SS6B/11	11		70,72	74,52	73,68
SS6B/12	12		70,72	74,52	73,68
SS6B/13	13		70,72	74,52	73,68
SS6B/14	14		70,72	74,52	73,68
SS6B/15	15		70,72	74,52	73,68
SS6B/16	16		70,72	74,52	73,68
SS6B/17	17		70,72	74,52	73,68
SS6B/18	18		70,72	74,52	73,68
SS6B/19	19		70,72	74,52	73,68
SS6B/20	20		70,72	74,52	73,68
SS6B/21	21		70,72	74,52	73,68
SS6B/22	22		70,72	74,52	73,68
SS6B/23	23		70,72	74,52	73,68
SS6B/24	24		70,72	74,52	73,68
SS6B/25	25		70,72	74,52	73,68
SS6B/26	26		70,72	74,52	73,68
SS6B/27	27		70,72	74,52	73,68
SS6B/28	28		70,72	74,52	73,68
SS6B/29	29		70,72	74,52	73,68
SS6B/30	30		70,72	74,52	73,68
SS6B/31	31		70,72	74,52	73,68
SS6B/32	32		70,72	74,52	73,68
SS6B/33	33		70,72	74,52	73,68
SS6B/34	34		70,72	74,52	73,68
SS6B/35	35		70,72	74,52	73,68
SS6B/36	36		70,72	74,52	73,68
SS6B/37	37		70,72	74,52	73,68
SS6B/38	38		70,72	74,52	73,68
SS6B/39	39		70,72	74,52	73,68
SS6B/40	40		70,72	74,52	73,68
SS6B/41	41		70,72	74,52	73,68
SS6B/42	42		70,72	74,52	73,68
SS6B/43	43		70,72	74,52	73,68
SS6B/44	44		70,72	74,52	73,68
SS6B/45	45		70,72	74,52	73,68
SS6B/46	46		70,72	74,52	73,68
SS6B/47	47		70,72	74,52	73,68
SS6B/48	48		70,72	74,52	73,68
SS6B/49	49		70,72	74,52	73,68
SS6B/50	50		70,72	74,52	73,68
SS6B/51	51		70,72	74,52	73,68
SS6B/52	52		70,72	74,52	73,68
SS6B/53	53		70,72	74,52	73,68
SS6B/54	54		70,72	74,52	73,68
SS6B/55	55		70,72	74,52	73,68
SS6B/56	56		70,72	74,52	73,68
SS6B/57	57		70,72	74,52	73,68
SS6B/58	58		70,72	74,52	73,68
SS6B/59	59		70,72	74,52	73,68
SS6B/60	60		70,72	74,52	73,68

# HYDRAULIC EFFICIENCY

EU REGULATION 547/2012 – MEI

PUMP MODEL	N° STAGES	MEI	$\eta_{PL}$	$\eta_{BEP}$	$\eta_{OL}$
SS6C/9	9	$\geq 0,40$	72,03	76,10	75,41
SS6C/4	4		71,03	75,10	74,41
SS6C/5	5		72,03	76,10	75,41
SS6C/6	6		72,03	76,10	75,41
SS6C/7	7		72,03	76,10	75,41
SS6C/8	8		72,03	76,10	75,41
SS6C/10	10		72,03	76,10	75,41
SS6C/11	11		72,03	76,10	75,41
SS6C/12	12		72,03	76,10	75,41
SS6C/13	13		72,03	76,10	75,41
SS6C/14	14		72,03	76,10	75,41
SS6C/15	15		72,03	76,10	75,41
SS6C/16	16		72,03	76,10	75,41
SS6C/17	17		72,03	76,10	75,41
SS6C/18	18		72,03	76,10	75,41
SS6C/19	19		72,03	76,10	75,41
SS6C/20	20		72,03	76,10	75,41
SS6C/21	21		72,03	76,10	75,41
SS6C/22	22		72,03	76,10	75,41
SS6C/23	23		72,03	76,10	75,41
SS6C/24	24		72,03	76,10	75,41
SS6C/25	25		72,03	76,10	75,41
SS6C/26	26		72,03	76,10	75,41
SS6C/27	27		72,03	76,10	75,41
SS6C/28	28		72,03	76,10	75,41
SS6C/29	29		72,03	76,10	75,41
SS6C/30	30		72,03	76,10	75,41
SS6C/31	31		72,03	76,10	75,41
SS6C/32	32		72,03	76,10	75,41
SS6C/33	33		72,03	76,10	75,41
SS6C/34	34		72,03	76,10	75,41
SS6C/35	35		72,03	76,10	75,41
SS6C/36	36		72,03	76,10	75,41
SS6C/37	37		72,03	76,10	75,41
SS6C/38	38		72,03	76,10	75,41
SS6C/39	39		72,03	76,10	75,41
SS6C/40	40		72,03	76,10	75,41
SS6C/41	41		72,03	76,10	75,41
SS6C/42	42		72,03	76,10	75,41
SS6C/43	43		72,03	76,10	75,41
SS6C/44	44		72,03	76,10	75,41
SS6C/45	45		72,03	76,10	75,41
SS6C/46	46		72,03	76,10	75,41
SS6C/47	47		72,03	76,10	75,41
SS6C/48	48		72,03	76,10	75,41
SS6C/49	49		72,03	76,10	75,41
SS6C/50	50	72,03	76,10	75,41	
SS6C/51	51	72,03	76,10	75,41	
SS6C/52	52	72,03	76,10	75,41	
SS6C/53	53	72,03	76,10	75,41	
SS6C/54	54	72,03	76,10	75,41	

# HYDRAULIC EFFICIENCY

EU REGULATION 547/2012 – MEI

PUMP MODEL	N° STAGES	MEI	$\eta_{PL}$	$\eta_{BEP}$	$\eta_{OL}$
SS6D/9	9	$\geq 0,40$	72,67	76,30	75,42
SS6D/3	3		70,67	74,30	73,42
SS6D/4	4		71,67	75,30	74,42
SS6D/5	5		72,67	76,30	75,42
SS6D/6	6		72,67	76,30	75,42
SS6D/7	7		72,67	76,30	75,42
SS6D/8	8		72,67	76,30	75,42
SS6D/10	10		72,67	76,30	75,42
SS6D/11	11		72,67	76,30	75,42
SS6D/12	12		72,67	76,30	75,42
SS6D/13	13		72,67	76,30	75,42
SS6D/14	14		72,67	76,30	75,42
SS6D/15	15		72,67	76,30	75,42
SS6D/16	16		72,67	76,30	75,42
SS6D/17	17		72,67	76,30	75,42
SS6D/18	18		72,67	76,30	75,42
SS6D/19	19		72,67	76,30	75,42
SS6D/20	20		72,67	76,30	75,42
SS6D/21	21		72,67	76,30	75,42
SS6D/22	22		72,67	76,30	75,42
SS6D/23	23		72,67	76,30	75,42
SS6D/24	24		72,67	76,30	75,42
SS6D/25	25		72,67	76,30	75,42
SS6D/26	26		72,67	76,30	75,42
SS6D/27	27		72,67	76,30	75,42
SS6D/28	28		72,67	76,30	75,42
SS6D/29	29		72,67	76,30	75,42
SS6D/30	30		72,67	76,30	75,42
SS6D/31	31		72,67	76,30	75,42
SS6D/32	32		72,67	76,30	75,42
SS6D/33	33		72,67	76,30	75,42

# HYDRAULIC EFFICIENCY

EU REGULATION 547/2012 – MEI

PUMP MODEL	N° STAGES	MEI	$\eta_{PL}$	$\eta_{BEP}$	$\eta_{OL}$
SS6E/9	9	≥ 0,40	72,40	77,30	75,51
SS6E/2	2		69,40	74,30	72,51
SS6E/3	3		70,40	75,30	73,51
SS6E/4	4		71,40	76,30	74,51
SS6E/5	5		72,40	77,30	75,51
SS6E/6	6		72,40	77,30	75,51
SS6E/7	7		72,40	77,30	75,51
SS6E/8	8		72,40	77,30	75,51
SS6E/10	10		72,40	77,30	75,51
SS6E/11	11		72,40	77,30	75,51
SS6E/12	12		72,40	77,30	75,51
SS6E/13	13		72,40	77,30	75,51
SS6E/14	14		72,40	77,30	75,51
SS6E/15	15		72,40	77,30	75,51
SS6E/16	16		72,40	77,30	75,51
SS6E/17	17		72,40	77,30	75,51
SS6E/18	18		72,40	77,30	75,51
SS6E/19	19		72,40	77,30	75,51
SS6E/20	20		72,40	77,30	75,51
SS6E/21	21		72,40	77,30	75,51
SS6E/22	22		72,40	77,30	75,51
SS6E/23	23		72,40	77,30	75,51
SS6E/24	24		72,40	77,30	75,51
SS6E/25	25		72,40	77,30	75,51
SS6E/26	26		72,40	77,30	75,51
SS6E/27	27		72,40	77,30	75,51
SS6E/28	28		72,40	77,30	75,51
SS6E/29	29		72,40	77,30	75,51
SS6E/30	30		72,40	77,30	75,51




# ACCESSORIES


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# ACCESSORIES


## SUBMERSIBLE ELECTRIC PUMPS AND MOTORS

To ensure correct splicing, the cross section of the cable should be equal to or greater than that of the motor cable.  
The cross section of the cable to be spliced must be sized properly in relation to the required length of the cable.

SHIELDED CABLES	DESCRIPTION	MICRA	S4	SS+6GF	SMC+6GF
	4 x 1,5 mm <sup>2</sup> 4-CORE SHIELDED CABLE PER METER	•	•		
	4 x 2,5 mm <sup>2</sup> 4-CORE SHIELDED CABLE PER METER	•	•		
	4 x 4 mm <sup>2</sup> 4-CORE SHIELDED CABLE PER METER	•	•	•	•
Advisable in the case of applications with inverter.					

4-CORE CABLES	DESCRIPTION	MICRA	S4	SS+6GF	SMC+6GF
	4 x 1,5 mm <sup>2</sup> 4-CORE SHIELDED CABLE PER METER	•	•	•	
	4 x 2,5 mm <sup>2</sup> 4-CORE SHIELDED CABLE PER METER	•	•	•	
	4 x 4 mm <sup>2</sup> 4-CORE SHIELDED CABLE PER METER	•	•	•	•
	4 x 6 mm <sup>2</sup> 4-CORE SHIELDED CABLE PER METER	•	•	•	•
	4 x 10 mm <sup>2</sup> 4-CORE SHIELDED CABLE PER METER	•	•	•	•
	4 x 16 mm <sup>2</sup> 4-CORE SHIELDED CABLE PER METER	•	•	•	•
	4 x 25 mm <sup>2</sup> 4-CORE SHIELDED CABLE PER METER	•	•	•	•

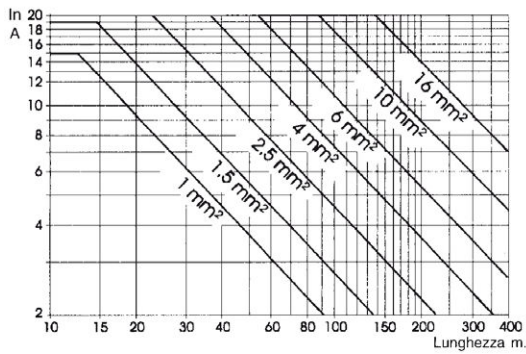
PROBES	DESCRIPTION	MICRA	S4	SS+6GF	SMC+6GF
	<b>ELECTRODE PROBE</b> For use with ES control boxes. Suitable for conductive liquids with temperature up to +40°C. To be connected using 1,5 mm <sup>2</sup> cable with 550 V insulation capacity. Sensitivity: ≤ 53 kohm		•	•	•
	1 x 1,5 mm <sup>2</sup> CABLE FOR ELECTRIC PROBES PER METER		•	•	•
Accessories to be connected only to ES control boxes					

SPLICING	DESCRIPTION	MICRA	S4	SS+6GF	SMC+6GF
	CABLE SPLICING KIT (for 4 x 1 mm <sup>2</sup> cables)	•			
	CABLE SPLICING KIT (for 4 x 1,5/2,5/4/6 mm <sup>2</sup> cables)		•	•	•
	CABLE SPLICING KIT (for 4 x 10/16/25 mm <sup>2</sup> cables)		•	•	•
	SPLICING OF ELECTRIC PUMP CABLE		•	•	•

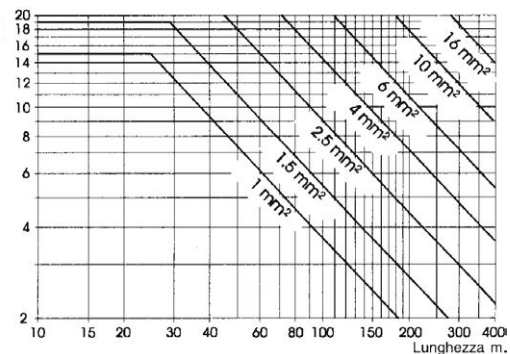
# ACCESSORIES

## SUBMERSIBLE ELECTRIC PUMPS AND MOTORS


### TABLES TO ESTABLISH POWER CABLE CROSS SECTION IN RELATION TO LENGHT




SINGLE-PHASE




THREE-PHASE


KIT EXTENDED LEAD CABLE	DESCRIPTION
	KIT EXTENDED LEAD CABLE 4G1.5 FOR MICRA HS - 30M
	KIT EXTENDED LEAD CABLE 4G1.5 FOR MICRA HS - 60M
	KIT EXTENDED LEAD CABLE 4G1.5 FOR MICRA HS - 90M



KIT CABLE FOR MOTORS	DESCRIPTION	4GG	4TW	4OL	6GF
	KIT CABLE 4GX1,5 MM2 -LENGHT. 20 M. WITH CONNECT. FOR 4GG/4OL	•		•	
	KIT CABLE 4GX1,5 MM2 -LENGHT. 40 M. WITH CONNECT. FOR 4GG/4OL	•		•	
	KIT CABLE 4GX1,5 MM2 -LENGHT. 60 M. WITH CONNECT. FOR 4GG/4OL	•		•	
	KIT CABLE 4GX1,5 MM2 -LENGHT. 80 M. WITH CONNECT. FOR 4GG/4OL	•		•	
	KIT CABLE 4GX1,5 MM2 -LENGHT. 100 M. WITH CONNECT. FOR 4GG/4OL	•		•	
	KIT CABLE 4GX2,5 MM2 -LENGHT. 20 M. WITH CONNECT. FOR 4GG/4OL	•		•	
	KIT CABLE 4GX2,5 MM2 -LENGHT. 40 M. WITH CONNECT. FOR 4GG/4OL	•		•	
	KIT CABLE 4GX2,5 MM2 -LENGHT. 60 M. WITH CONNECT. FOR 4GG/4OL	•		•	
	KIT CABLE 4GX2,5 MM2 -LENGHT. 80 M. WITH CONNECT. FOR 4GG/4OL	•		•	
	KIT CABLE 4GX2,5 MM2 -LENGHT. 100 M. WITH CONNECT. FOR 4GG/4OL	•		•	
	KIT CABLE 3GX1,5 MM2 -LENGHT. 30 M. WITH CONNECT. FOR 4"TW MOTORS		•		
	KIT CABLE 4GX4 MM2 -LENGHT. 20 M. WITH CONNECT. FOR 6GF MOTORS				•
	KIT CABLE 4GX4 MM2 -LENGHT. 40 M. WITH CONNECT. FOR 6GF MOTORS				•
	KIT CABLE 4GX4 MM2 -LENGHT. 60 M. WITH CONNECT. FOR 6GF MOTORS				•
	KIT CABLE 4GX4 MM2 -LENGHT. 80 M. WITH CONNECT. FOR 6GF MOTORS				•
	KIT CABLE 4GX4 MM2 -LENGHT. 100 M. WITH CONNECT. FOR 6GF MOTORS				•
	KIT CABLE 4GX6 MM2 -LENGHT. 20 M. WITH CONNECT. FOR 6GF MOTORS				•
	KIT CABLE 4GX6 MM2 -LENGHT. 40 M. WITH CONNECT. FOR 6GF MOTORS				•
	KIT CABLE 4GX6 MM2 -LENGHT. 60 M. WITH CONNECT. FOR 6GF MOTORS				•
	KIT CABLE 4GX6 MM2 -LENGHT. 80 M. WITH CONNECT. FOR 6GF MOTORS				•
	KIT CABLE 4GX6 MM2 -LENGHT. 100 M. WITH CONNECT. FOR 6GF MOTORS				•
	KIT CABLE 4GX10 MM2 -LENGHT. 20 M. WITH CONNECT. FOR 6GF MOTORS				•
KIT CABLE 4GX10 MM2 -LENGHT. 40 M. WITH CONNECT. FOR 6GF MOTORS				•	
KIT CABLE 4GX10 MM2 -LENGHT. 60 M. WITH CONNECT. FOR 6GF MOTORS				•	
KIT CABLE 4GX10 MM2 -LENGHT. 80 M. WITH CONNECT. FOR 6GF MOTORS				•	
KIT CABLE 4GX10 MM2 -LENGHT. 100 M. WITH CONNECT. FOR 6GF MOTORS				•	

# ACCESSORIES

## SUBMERSIBLE ELECTRIC PUMPS AND MOTORS

CABLE SUBSTITUTION KIT - FE 4" ENCAPSULATED MOTOR	DESCRIPTION
	KIT CABLE SUBSTITUTION TF - 4G1.5 MT1.7 FOR 4"GG

CORROSION PROTECTION KIT FOR 4" MOTORS	DESCRIPTION
	CORROSION PROTECTION KIT - 4"GG 200/300 KG (4" WATER FILLED MOTOR)
	CORROSION PROTECTION KIT - 4"GG 600 KG (4" WATER FILLED MOTOR)
	CORROSION PROTECTION KIT - 4"OL (4" OIL FILLED MOTOR)

DIVERTRON ACCESSORIES	DESCRIPTION
	ASPIRATION KIT FOR DIVERTRON X
	AUXILIARY TANK FOR DIVERTRON

## 4" BOOSTER CONTROL BOX


Control unit to increase starting torque of single-phase electric pumps with power ratings of 0,37 - 3,7 kW containing a manually resettable micro cutout for overload protection, the starting capacitor, a capacitor to boost starting torque, and terminals for electrical connections.

Plug not included.

Protection class: IP 54.


Ambient operating temperature: -10 °C + 40 °C.

Wall-mounting box in self-extinguishing thermoplastic.

	MODEL	POWER INPUT 50 Hz	MAX POWER kW	MAX CURRENT A	STARTING CAPACITOR MF	STARTING TORQUE BOOST CAPACITOR MF	WEIGHT kg
	<b>CBB 05/16 (0,37 Kw)</b>	1 x 230 V	0,37	5	16	53-64	0,85
	<b>CBB 06/20 (0,55Kw)</b>	1 x 230 V	0,55	6	20	53-64	0,85
	<b>CBB 09/25 (0,75 Kw)</b>	1 x 230 V	0,75	9	25	100-130	1,5
	<b>CBB 12/35 (1,1 Kw)</b>	1 x 230 V	1,1	12	35	100-130	1,1
	<b>CBB 15/40 (1,5 Kw)</b>	1 x 230 V	1,5	15	40	189-250	1,1
	<b>CBB 20/60 (2,2 Kw)</b>	1 x 230 V	2,2	20	60	189-250	1,5
	<b>CBB 32/90 (3,7 Kw)</b>	1 x 230 V	3,7	32	90	315-400	1,5

### CB - CONTROL PANEL FOR DIVER SINGLE-PHASE PUMP

- Housing in shockproof thermoplastic with two cable clamps
- Luminous 2-pole main switch (power ON)
- Protection level: IP 43
- Starter capacitor
- Thermal cut-out protection with external manual reset

	MODEL	POWER INPUT 50 Hz	P2 NOMINAL		PROTECTION	MICROC. CAPAC.	DIMENSIONS mm	GROSS WEIGHT Kg	DIVER		MICRA	
			KW	HP								
	<b>CB 16/5</b>	1x230 V ~	0,55	0,75	5 A	16	85 x 170 x 65	0,65	•	DIVER 75 M		
	<b>CB 20/6</b>	1x230 V ~	0,75	1	6 A	20	85 x 170 x 65	0,65	•	DIVER 100 M DIVER 100 HF M		
	<b>CB 30/9</b>	1x230 V ~	1,1	1,5	9 A	30	85 x 170 x 65	0,65	•	DIVER 150 M DIVER 150 HF M		
	<b>CB 35/12</b>	1x230 V ~	1,5	2	12 A	35	85 x 170 x 65	0,65	•	DIVER 200 M DIVER 200 HF M		
	<b>CBS 05/12</b>	1 x 230V~	0,37	0,5	5 A	12	85 x 170 x 65	0,65			•	MICRA 50 M
	<b>CBS 06/16</b>	1 x 230V~	0,55	0,75	6 A	16	85 x 170 x 65	0,65			•	MICRA 75 M
	<b>CBS 07/20</b>	1 x 230V~	0,75	1	7 A	20	85 x 170 x 65	0,65			•	MICRA 100 M

### ESC PLUS

Panel for protection and control of motor/single-phase/three-phase pump with direct start up.

Double set-up mode: automatic/manual

The motor/pump protection against dry running is assured by the major of the motor  $\cos \phi$ , (level probes not required)

Casing made of shock-proof and self-extinguishing thermoplastic material with two antipull plugs.

Main switch.

Power supply: Single-phase 230 V +/- 5%, Three-phase 400 V +/-5%.

Digital display with status indications.

Four models available for powers from 0.5 HP to 15 HP.

Protection degree IP54. Starting

Capacitor for single phase version (to be order separately).

Optoisolated auxiliary contact for control by probes, pressure switch and float switch.

ON-OFF switch.

Functional features:


Overload protection.

Phase failure protection (threephase version).

Overvoltage protection.

Short circuit protection.


Protection against dry running.

	MODEL	POWER INPUT 50-60 Hz	RANGE HP	MAX CURRENT A	BOX DIMENSIONS			WEIGHT Kg.
					A	B	H	
	<b>ESC PLUS 3M 220-240 V</b>	1 x 230 V,	0,5 - 3	< 18	175	175	80	0,9
	<b>ESC PLUS 4T 3X400V</b>	3 x 400 V,	0,5 - 4	< 9	245	195	95	1
	<b>ESC PLUS 10T 3X400V</b>	3 x 400 V,	5,5 - 10	< 20	215	170	75	1,4
	<b>ESC PLUS 15T 3X400V</b>	3 x 400 V,	12,5 - 15	< 30	215	170	75	1,6

### 4" CONTROL BOX

Electrical control box for operation of single-phase submersible electric pumps, containing manually resettable thermal protection, capacitor, and terminals for the connection of a pressure switch/float switch. Complete with 1,5 m cable with


SCHUKO plug CEE 7- VII UNEL 47166-168. Wall-mounting box in self-extinguishing thermoplastic.

	SINGLE-PHASE MODEL	MOTOR POWER KW	OVERLOAD PROTECTION AMP	CAPACITOR $\mu$ F	WEIGHT Kg
	<b>0,5 4" CONTROL BOX</b>	0,37	4	16	1,7
	<b>0,75 4" CONTROL BOX</b>	0,55	5	20	1,7
	<b>1 4" CONTROL BOX</b>	0,75	7	25	1,7
	<b>1,5 4" CONTROL BOX</b>	1,1	10	35	1,7
	<b>2 4" CONTROL BOX</b>	1,5	13	40	1,7
	<b>3 4" CONTROL BOX</b>	2,2	16	60	1,7

### ES 1 M - ES 3 M

Control box for dry run protection of single-phase submersible electric pumps (see table). The control box is protected and it protects the electric pump from overloads and short circuits, with manual reset facility. Facility for operation with 1, 2 or 3 probes depending on use.


Protection class IP 55. Operating ambient temperature limits  $-10\text{ }^{\circ}\text{C} +40\text{ }^{\circ}\text{C}$ . Supplied as standard with an electric probe and wall-mounting brackets. Wall-mounting box in self-extinguishing thermoplastic.

	MODEL	POWER INPUT 50/60 Hz	POWER kW p2 MOT.	NOM. DUTY POWER (MAX) (kW)	MAX CURRENT A	DIMENSIONS			WEIGHT Kg.
						A	B	H	
	<b>ES 1 M</b>	1x220-240 V,	0,37-0,55-0,75	1,85	10	270	300	190	5,6
	<b>ES 3 M</b>	1x220-240 V,	1,1-1,5-2,2	2,2	16	270	300	190	5,6

### ES 0,75 T - 1 T - 1,5 T - 3 T - 4 T - 7,5 T

Control box for dry run protection of three-phase submersible electric pumps (see table). The control box is protected and it protects the electric pump from overloads and short circuits, with manual reset facility. Facility for operation with 1, 2 or 3 probes depending on use.

Protection class IP 55. Operating ambient temperature limits  $-10\text{ }^{\circ}\text{C} +40\text{ }^{\circ}\text{C}$ . Supplied as standard with an electric probe and wall-mounting brackets. Wall-mounting box in self-extinguishing thermoplastic.

	MODEL	POWER INPUT 50 Hz	POWER kW p2 MOT.	NOM. DUTY POWER (MAX) (kW)	MAX CURRENT A	DIMENSIONS			WEIGHT Kg.
						A	B	H	
	<b>ES 0,75 T</b>	3x400V	0,37-0,55	0,88	1,6	270	300	190	5,6
	<b>ES 1 T</b>	3x400V	0,75	1,38	2,5	270	300	190	5,6
	<b>ES 1,5 T</b>	3x400V	1,1	2,2	4	270	300	190	5,6
	<b>ES 3 T</b>	3x400V	1,5 - 2,2	3,5	6,3	270	300	190	5,6
	<b>ES 4 T</b>	3x400V	3	5,5	10	270	300	190	5,6
	<b>ES 7,5 T</b>	3x400V	4-5,5	7,5	14	270	300	190	5,6

### CONTROL SYSTEMS - ES

Control boxes for protection and automatic operation with float switch(es) of three-phase submersible electric pumps in single installations.

Available for direct starting and for star-delta starting.

Wall-mounting box in self-extinguishing thermoplastic.

The control box is self-protected and it protects the electric pump from overloads, short circuits and power loss, with manual reset facility.

Complete with:

Power line disconnect device with padlockable door lock handle;

Self-protected transformer to provide 24 V supply for external controls;

Terminals to connect electric pump and minimum/maximum level float switches;

Probe module for anti dry-run control;

Terminals to connect alarm control for remote installation of a sounder or warning light (voltage free);

Manual – 0 – automatic selector for electric pump on control box front panel;

Protection class: IP55.

Construction of electrical enclosures: to EN 60204-1 and EN 60439-1.

Supplied as standard with an electric probe.



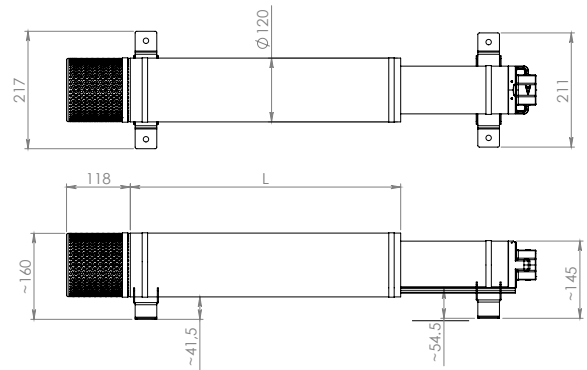
	MODEL	POWER INPUT 50-60 Hz	P2 NOMINAL KW	MAX CURRENT	WEIGHT Kg
	<b>ES 7,5 T</b>	3x 400V	4 - 5,5	14	5,6
	<b>ES 10 T</b>	3x 400V	7,5	18	5,6
	<b>ES 12,5 T</b>	3x 400V	9,2	25	5,9
	<b>ES 15 T</b>	3x 400V	11	25	8
	<b>ES 20 T</b>	3x 400V	15	32	8,1
	<b>ES 25 T</b>	3x 400V	18,5	40	8,3
	<b>ES 30 T</b>	3x 400V	22	63	8,5
	<b>ES 40 T</b>	3x 400V	30	80	8,2
	<b>ES 50 T</b>	3x 400V	37	90	9
	<b>ES 60 T</b>	3x 400V	45	100	9
	<b>ES 75 T</b>	3x 400V	55	109	-
	<b>ES 85 T</b>	3x 400V	63	126	-
	<b>ES 100 T</b>	3x 400V	75	148	-
	<b>ES 125 T</b>	3x 400V	92	185	-
	<b>ES 150 T</b>	3x 400V	110	217	-
	<b>ES 180 T</b>	3x 400V	132	257	-
	<b>ES 200 T</b>	3x 400V	147	300 A	-
	<b>ES 230 T</b>	3x 400V	170	348 A	-
	<b>ES 260 T</b>	3x 400V	190	405 A	-
	<b>ES 300 T</b>	3x 400V	220	424 A	-
	<b>ES 340 T</b>	3x 400V	250	481	-
	<b>ES 10 T S/D</b>	3x 400V	7,5	18	5,6
	<b>ES 12,5 T S/D</b>	3x 400V	9,2	25	5,9
	<b>ES 15 T S/D</b>	3x 400V	11	25	8
	<b>ES 20 T S/D</b>	3x 400V	15	32	8,1
	<b>ES 25 T S/D</b>	3x 400V	18,5	40	8,3
	<b>ES 30 T S/D</b>	3x 400V	22	63	8,5
	<b>ES 40 T S/D</b>	3x 400V	30	80	8,2
	<b>ES 50 T S/D</b>	3x 400V	37	90	9
	<b>ES 60 T S/D</b>	3x 400V	45	100	9
	<b>ES 75 T S/D</b>	3x 400V	55	109	-
	<b>ES 85 T S/D</b>	3x 400V	63	126	-
	<b>ES 100 T S/D</b>	3x 400V	75	148	-
	<b>ES 125 T S/D</b>	3x 400V	92	185	-
	<b>ES 150 T S/D</b>	3x 400V	110	217	-
	<b>ES 180 T S/D</b>	3x 400V	132	257	-
	<b>ES 200 T S/D</b>	3x 400V	147	300 A	-
	<b>ES 230 T S/D</b>	3x 400V	170	348	-
	<b>ES 260 T S/D</b>	3x 400V	190	405	-
	<b>ES 300 T S/D</b>	3x 400V	220	424	-
	<b>ES 340 T S/D</b>	3x 400V	250	481	-

### COOLING SLEEVE FOR 4" MOTOR

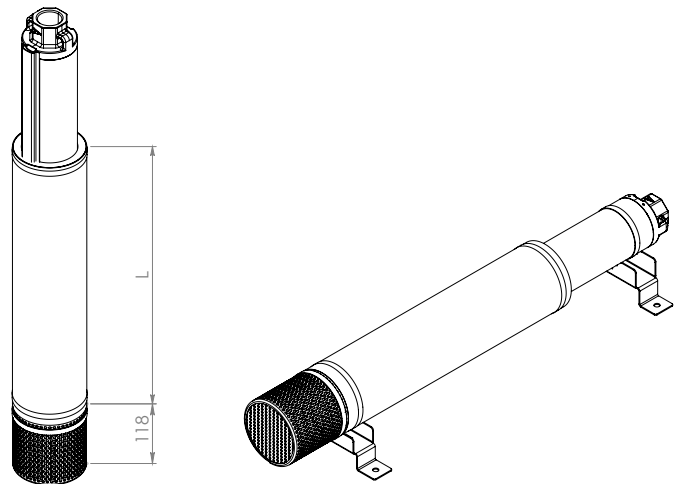
#### SELECTION TABLE

Cooling sleeves kit, different length, to be used to assure a perfect cooling of the 4" motors when installing the pump inside tank or where a minimum cooling flow is not granted. The sleeve choice must be done according to power and type of the motor as stated by the following table.

POWER INPUT 50 Hz	MOTOR POWER		MOTOR TYPE		
	HP	KW	4GG - 4GX	40L	4TW
SINGLE-PHASE	0,5	0,37	COOLING KIT L400 cod 60125178	COOLING KIT L400 cod 60125178	COOLING KIT L525 cod 60125179
	0,75	0,55			
	1	0,75			
	1,5	1,1	COOLING KIT L525 cod 60125179	COOLING KIT L525 cod 60125179	COOLING KIT L885 cod 60125180
	2	1,5			
	3	2,2	COOLING KIT L885 cod 60125180	COOLING KIT L885 cod 60125180	
	5	3,7			



THREE-PHASE	0,5	0,37	COOLING KIT L400 cod 60125178	COOLING KIT L400 cod 60125178
	0,75	0,55		
	1	0,75		
	1,5	1,1		
	2	1,5	COOLING KIT L525 cod 60125179	COOLING KIT L525 cod 60125179
	3	2,2		
	4	3	COOLING KIT L885 cod 60125180	COOLING KIT L885 cod 60125180
	5,5	4		
	7,5	5,5		
	10	7,5		



	DESCRIPTION
	COOLING SLEEVE KIT L400
	COOLING SLEEVE KIT L525
	COOLING SLEEVE KIT L885
	HORIZONTAL POSITIONING KIT (2 PEZZI)
	FILTER KIT

SHOWED IN THE PHOTO: COOLING SLEEVE KIT + HORIZONTAL POSITIONING KIT + FILTER KIT

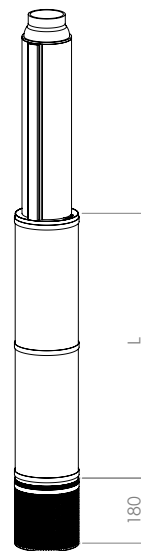
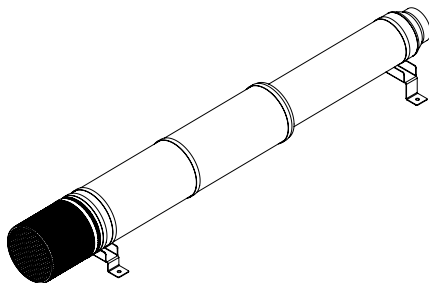
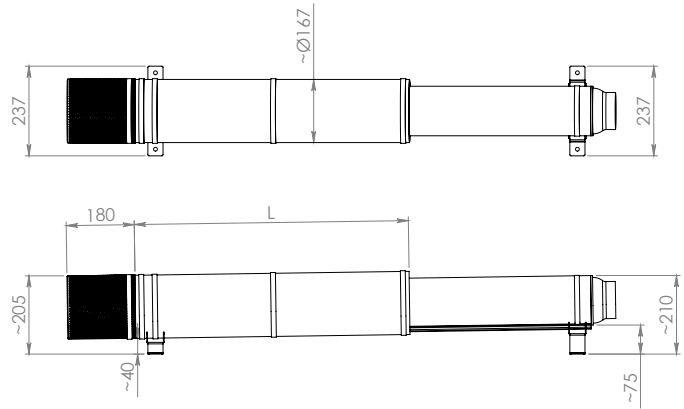


### COOLING SLEEVE FOR 6" MOTOR

#### SELECTION TABLE

Cooling sleeves kit, different length, to be used to assure a perfect cooling of the 6" motors when installing the pump inside tank or where a minimum cooling flow is not granted. The sleeve choice must be done according to power and type of the motor as stated by the following table.

POWER INPUT 50 Hz	MOTOR POWER		MOTOR TYPE	
	HP	kW	6GF-6GX	TR6
THREE-PHASE	5,5	4	COOLING KIT 725 60144213	COOLING KIT 960 60144217
	7,5	5,5		
	10	7,5		
	12,5	9,3		
	15	11	COOLING KIT 960 60144217	COOLING KIT 1220 60144218
	17,5	13		
	20	15		
	25	18,5		
	30	22	COOLING KIT 1220 60144218	COOLING KIT 1490 60146397
	35	26		
	40	30		
	50	37		



	DESCRIPTION
	COOLING SLEEVE KIT L725
	COOLING SLEEVE KIT L960
	COOLING SLEEVE KIT L1220
	COOLING SLEEVE KIT L1490
	HORIZONTAL POSITIONING KIT 6" (2 PIECES)
	FILTER KIT 6"

SHOWED IN THE PHOTO: COOLING SLEEVE KIT + HORIZONTAL POSITIONING KIT + FILTER KIT

### ADAC - INVERTER

**ADAC** is a variable frequency drive electronic panel for the control of pumps used in commercial building service or in agriculture for pressurization, gardening and irrigation. The panel is air-cooled by incorporated fans and is equipped with a display for an easy configuration. The variable frequency drive protects against water hammer and can adapt the pump operation to the requirements of the system. It is also able to drive three-phase pumps up to 15 kW.

Flow and pressure sensor supplied separately. Integrated electric protections. It can create groups up to 8 pumps. The variable frequency drive is designed to be installed on a support.

**Possibility of remote control thanks to the DConnect service (with DConnect Box supplied separately).**



MODEL	MAX MECHANICAL POWER (P2) PUMP KW	MAX NOMINAL CURRENT MOTOR A	MIN NOMINAL CURRENT MOTOR A	POWER INPUT 50 Hz	ELECTRIC PUMP POWER INPUT 50 - 200 Hz
<b>AD M/T 1.0 AC</b>	1,0	6,5	1	1x230	3x230
<b>AD M/T 1.5 AC</b>	1,5	9,0	1	1x230	3x230
<b>AD M/T 2.2 AC</b>	2,2	11,5	1	1x230	3x230
<b>AD T/T 3.0 AC</b>	3,0	9,0	2	3x400	3x400
<b>AD T/T 4.0 AC</b>	4,0	11	2	3x400	3x400
<b>AD T/T 5.5 AC</b>	5,5	15	2	3x400	3x400
<b>AD T/T 7.5 AC</b>	7,5	22	2	3x400	3x400
<b>AD T/T 11.0 AC</b>	11	31	2	3x400	3x400
<b>AD T/T 15.0 AC</b>	15	41	2	3x400	3x400

### ACTIVE DRIVER PLUS - INVERTER

Active Driver Plus are inverters used for the control of hydraulic pumps. Their obvious fields of application are domestic, industrial, and agricultural constant pressure pumping systems.

The OLED display offers an extremely simple and intuitive graphic interface. Displaying or changing any parameters is extremely simple, which in turn also simplifies maintenance.

Installation is also very easy: the installation wizard asks the user for the parameters required for the configuration.

Active Driver Plus inverters provide a reduction of electric consumption, thanks to the inverter technology, whilst at the same time ensuring maximum comfort thanks to the constant pressure.

They are extremely versatile, as they do not require external sensors and non-return valves. There is in-fact a built-in pressure sensor, a flow switch, and a non-return valve.

The advantages of Active Driver Plus are:

- comfort, thanks to the constant pressure,
- energy savings, thanks to the inverter technology.
- less noise,
- compact shape,
- all the built-in protections: dry run, overload, abnormal voltage, overtemperature, freezing.

**Line voltage:** 115V and 230V single-phase.  
400V three-phase

**Electric pump voltage:** 115V and 230V single-phase, 230V and 400V three-phase

**Power supply frequency:** 50 Hz - 60 Hz.

**Installation:** vertical and horizontal (M/M and M/T only)

**Maximum liquid temperature:** 50°C.

**Max operating temperature:** 60°C.

**Max flow rate:** 15m<sup>3</sup>/h.

**Maximum working pressure:** 13 bar.

**Pressure regulation range:** from 1 to 13 bar.

**Suction diameter (DNA):** 1 1/4" male.

**Delivery diameter (DNM):** 1 1/2" female.

**Protection level:** IP55.

**Communication interface for sets:** YES, an Active Driver Plus for each pump

**Non-return valve not required.**

**Possibility of remote control thanks to the DConnect service (with DConnect Box supplied separately).**



MODEL	MAX CURRENT OF MOTOR A	MAX MOTOR POWER kW	VOLTAGE 50 Hz	PUMP SUPPLY VOLTAGE Volt	CONNECTIVITY FOR PARALLEL WORKING	TO BE USED WITH PUMPS TYPE	PRESSURE REGULATION RANGE BAR
ACTIVE DRIVER PLUS M/M 1,1	8,5	1,1	Single-phase 1x230	Single-phase 1x230	YES	Surface pumps, 4" submersible pumps and 5" pumps with single-phase motor and input current of up to 8,5 A	1-6
ACTIVE DRIVER PLUS M/M 1,5/ DUAL VOLTAGE	11	0,55	Single-phase 1x115	Single-phase 1x115	YES	Surface pumps, 4" submersible pumps and 5" pumps with single-phase motor and input current of up to 11 A	1-9
		1,5	Single-phase 1x230	Single-phase 1x230			
ACTIVE DRIVER PLUS M/M 1,8/ DUAL VOLTAGE	14	1,0	Single-phase 1x115	Single-phase 1x115	YES	Surface pumps, 4" submersible pumps and 5" pumps with single-phase motor and input current of up to 14 A	1-9
		1,8	Single-phase 1x230	Single-phase 1x230			
ACTIVE DRIVER PLUS M/T 1	4,7	1,0	Single-phase 1x230	Three-phase 3x230	YES	Surface pumps, 4" submersible pumps and 5" pumps with three-phase 230V motor and input current of up to 4,7 A	1-9
ACTIVE DRIVER PLUS M/T 2,2	10,5	2,2	Single-phase 1x230	Three-phase 3x230	YES	Surface pumps, 4" submersible pumps and 5" pumps with three-phase 230V motor and input current of up to 10,5 A	1-13
ACTIVE DRIVER PLUS T/T 3	7,5	3,0	Three-phase 3x400	Three-phase 3x400	YES	Surface pumps, 4" submersible pumps and 5" pumps with three-phase 400V motor and input current of up to 7,5 A	1-13
ACTIVE DRIVER PLUS T/T 5,5	13,3	5,5	Three-phase 3x400	Three-phase 3x400	YES	Surface pumps, 4" submersible pumps and 5" pumps with three-phase 400V motor and input current of up to 13,3 A	1-13

# D.CONNECT SERVICE

## REMOTE CONTROL FOR ELECTRONIC RESIDENTIAL AND COMMERCIAL SYSTEMS

The D.Connect service offers simple and intuitive remote control of your installation, without the need of a server or specialist personnel.

**With D.Connect, you can remotely manage your installations as if you were right in front of them.**

Thanks to the system operation charts, you will also be able to optimise operation. You will also receive prompt notifications of any system faults.

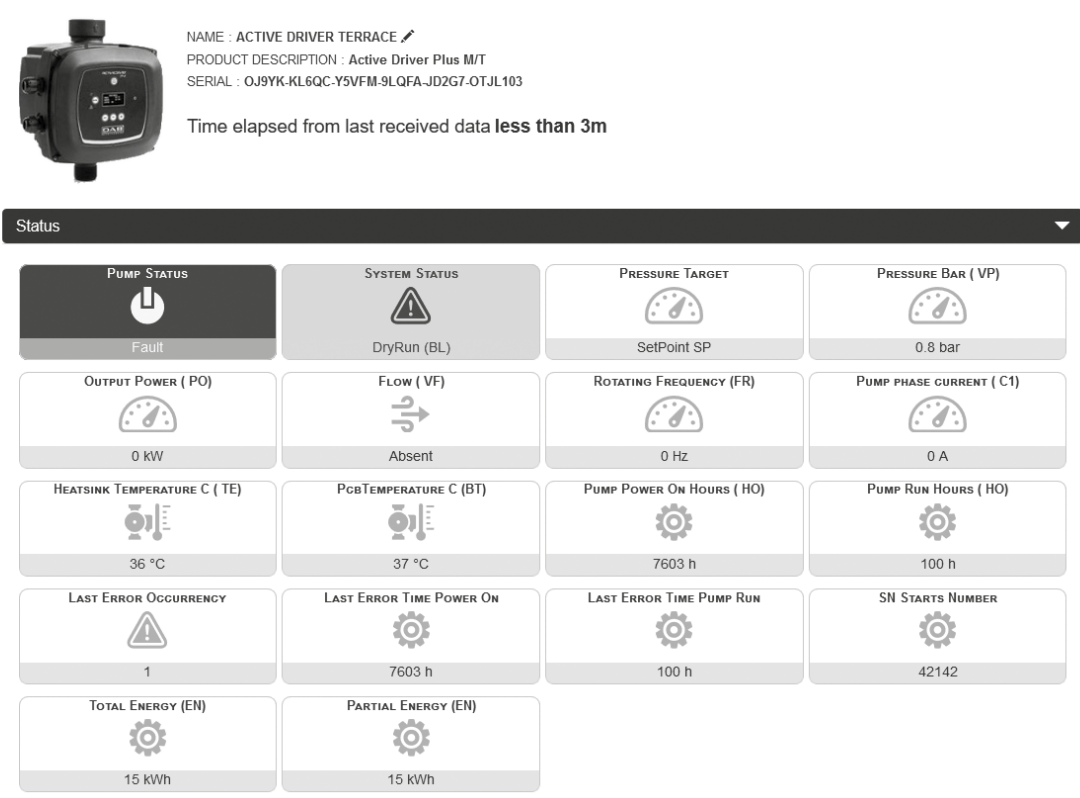
### THE CONNECTIVITY SERVICE ALLOWS YOU TO:

#### EASILY MONITOR YOUR SYSTEMS

The installations with green status are OK, while the orange ones need attention, and the red ones are experiencing problems

#### TAKE ANY NECESSARY ACTIONS AS IF YOU WERE RIGHT IN THE PUMP ROOM

Using the internet site or the APPs, you will be able to easily and quickly control your systems.



NAME : ACTIVE DRIVER TERRACE ✎  
PRODUCT DESCRIPTION : Active Driver Plus M/T  
SERIAL : OJ9YK-KL6QC-Y5VFM-9LQFA-JD2G7-OTJL103

Time elapsed from last received data **less than 3m**

Status

<b>PUMP STATUS</b> Fault	<b>SYSTEM STATUS</b> DryRun (BL)	<b>PRESSURE TARGET</b> SetPoint SP	<b>PRESSURE BAR ( VP)</b> 0.8 bar
<b>OUTPUT POWER ( PO)</b> 0 kW	<b>FLOW ( VF)</b> Absent	<b>ROTATING FREQUENCY (FR)</b> 0 Hz	<b>PUMP PHASE CURRENT ( C1)</b> 0 A
<b>HEATSINK TEMPERATURE C ( TE)</b> 36 °C	<b>PcbTEMPERATURE C (BT)</b> 37 °C	<b>PUMP POWER On Hours ( HO)</b> 7603 h	<b>PUMP RUN Hours ( HO)</b> 100 h
<b>LAST ERROR OCCURRENCY</b> 1	<b>LAST ERROR TIME POWER ON</b> 7603 h	<b>LAST ERROR TIME PUMP RUN</b> 100 h	<b>SN STARTS NUMBER</b> 42142
<b>TOTAL ENERGY (EN)</b> 15 kWh	<b>PARTIAL ENERGY (EN)</b> 15 kWh		

In order to use the D.Connect service, registration and connected products are required.

Connect to the website: <https://dconnect.dabpumps.com>, using Internet Browsers such as Microsoft Edge or Google Chrome.

The Android and iOS D.Connect APPs can be downloaded from the relevant Stores:



### REMOTE ALARMS

In case of alarm, the D.Connect service will promptly send you a notification, so that you can check what is happening and organise a visit to the system before the issue becomes an emergency for your customer.

### WHAT PRODUCTS CAN YOU MANAGE USING THE D.CONNECT SERVICE?

MCE/P, AD AC, Active driver Plus, E.box, Evoplus, E.sybox, E.sybox mini.

### WHAT DO YOU NEED TO USE THE SERVICE?

1. D.Connect Box
2. Cables for the connection of the D.Connect Box to the products to control
3. One or more compatible products
4. An internet connection in the system to control

For more information visit: [internetofpumps.com](http://internetofpumps.com)

# TECHNICAL APPENDIX

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## GENERAL INFORMATION

### FUNDAMENTAL TERMS USED IN PUMPS

The following is a list of fundamental terms used in pumps and an explanation of their meanings. Their knowledge is necessary in order to discuss hydraulic pumps. All measurements are given in Technical units. Reference should be made to the chart for their international and Anglo-Saxon equivalents.

### HEAD

Head means height, difference in level, gradient. For example if a pump has a flow of Q litres per second and a head of 30 metres, it means that it is capable of raising Q litres of liquid by 30 metres every second (therefore achieving a 30 metre gradient). For each given pump, the head is determined by its construction, such as the external diameter of the impeller and the speed of rotation, but it is not affected by the pumped liquid. This means that the pump as such can raise by 30 metres Q litres per second of water, petrol, mercury, etc.; the only difference in the three cases will be the power of the motor required.

### SPECIFIC WEIGHT OF A LIQUID OR FLUID

The specific weight of a liquid or fluid is the weight per unit volume of the liquid/fluid. Specific weight is usually measured in kg/dm<sup>3</sup> or kg/l, remembering that 1 dm<sup>3</sup> equals 1 litre.

### PRESSURE

Pressure means weight per unit of area (e.g. kg/cm<sup>2</sup>), and it should not be confused with head. In the case of liquids, the pressure that the liquid exerts on a surface is given by the product of the head (or height) of the liquid, multiplied by its specific weight. For this reason, the column of several km of air on the earth's surface produces at sea level a pressure of about 1kg/cm<sup>2</sup> (equal to approx. 1 atmosphere). If the same column were of water rather than air, the pressure would be some 700 to 800 times greater, due to the fact that water has a specific weight approximately 700-800 times greater than that of air.

Bearing in mind that a column of water 10 m high is equivalent to approx. 1 kg/cm<sup>2</sup>, if we placed a manometer on the delivery of the pump, the following pressure increases would be measured:

- |  |   |
|--|---|
| a) with petrol (specific weight 0,7 kg/dm <sup>3</sup> )   | = 00,7 x 0,001 x 30 x 100 = 2,1 kg/cm <sup>2</sup>  |
| b) with water (specific weight 1,0 kg/dm <sup>3</sup> )    | = 00,1 x 0,001 x 30 x 100 = 3,0 kg/cm <sup>2</sup>  |
| c) with mercury (specific weight 13,6 kg/dm <sup>3</sup> ) | = 13,6 x 0,001 x 30 x 100 = 40,8 kg/cm <sup>2</sup> |

### FLOW

Flow means the quantity of liquid or fluid that passes through a point, such as the delivery outlet of a pump, or a cross section of a pipe, in the set unit of time.

This can be measured in litres per minute (l/min), litres per second (l/s), cubic metres per hour (m<sup>3</sup>/h) etc.

It should be noted that there is a perfect analogy between the flow of water through a pipe and the flow of electricity through a wire. It is sufficient to remember that hydraulic head is equivalent to electrical potential or voltage, and hydraulic flow is equivalent to electric current or amperes in electrotechnics. Even their behaviour is the same. Just as a thin wire restricts the flow of electricity more than one with a larger section, in the same way, a pipe of a smaller diameter offers a greater resistance to the flow of a liquid than one of a larger one. Just as the passage of electric current through the wire to a cable needs a voltage difference, in the same way, the flow of a liquid or fluid through a pipe needs a certain head.

There will never be a movement of liquid between two points of a perfectly horizontal pipe, and with the liquid at the same head in both points. This is due to the fact that, in the same way as the cable exerts a certain resistance to the passage of the electric current (electric resistance), the pipe also exerts a certain resistance to the passage of the fluid, the extent of which depends on the quality of the pipe (material, shape, presence of scale) and its section, and therefore the speed at which the fluid runs through the pipe. This resistance is called head loss.

### HEAD LOSS

Head loss is that part of the head, possessed by the liquid, which is lost when passing through a pipe, a valve, a filter, etc. This loss cannot be recovered, as it is lost due to friction. Going back to the analogy between electrical and hydraulic phenomena, just as the losses in a cable increase in proportion with the current, so head losses are proportionally greater as the speed of the liquid increases. This means that the more the flow is restricted by scaled pipes, clogged filters, partially closed valves etc. the greater the head loss will be.

### PUMP

A pump is a machine used to give a certain head to a liquid that passes through it. The head can be used to raise the liquid to a higher level, or to make it flow inside a pipe, or even in the open air, so that it covers a certain distance. The characteristics of a pump are:

- Flow** (the quantity of liquid that is moved through the pump in a unit of time).
- Head** (that is the height at which the pump is capable lifting the flow).

Based on the existing relationship between the flow and the head, it is possible to have:

- Pumps with small flow and large head (piston pumps, rotary pumps, small centrifugal pumps).
- Pumps with medium flow and medium head (centrifugal pumps in general).
- Pumps with large flow and small head (helico-centrifugal pumps, propeller pumps).

# TECHNICAL APPENDIX

## SUBMERSIBLE ELECTRIC PUMPS AND MOTORS

Centrifugal pumps, helico-centrifugal pumps and propeller pumps have a rotary motion and their speed is universally measured in revolutions per minute (rpm). With these machines operating at a given speed, for each given value of flow, there is only one value of head. This means that in order to increase or decrease the performance of these types of pumps, the operating speed must be varied accordingly. Basically, the liquid passing through the pump is supplied with energy that is related to the head and the speed of the liquid itself. This energy supplied within the unit of time is known as delivered power.

### DELIVERED POWER

The delivered power is the power delivered by the pump to the liquid. The value of this delivered power depends on three factors: flow, head, and specific weight of the pumped liquid. The higher these three factors, the higher is the power delivered by the pump. For example, a pump delivering petrol does less work than when delivering sulphuric acid, because the specific weights of the two liquids are different.

In order to pump a liquid, a pump must be driven by a motor. In the vast majority of cases, this is either an electric, or an internal combustion motor. Electric motors use electric power, while internal combustion motors (engines) use oil or oil derivative fuels. The power that the pump needs in order to operate is called absorbed power.

### DELIVERED POWER CALCULATION

Delivered power is normally expressed in kW or HP, indicating with:

Q = the flow

H = the head in metres of the column of liquid (m.c.l.)

$\gamma$  = the specific weight of the liquid

The delivered power (P3) is calculated using one of the following equations:

$$P3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (l/s)} \times H \text{ (m.c.l.)}}{75} \text{ in HP}$$

$$P3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (m}^3\text{/h)} \times H \text{ (m.c.l.)}}{270} \text{ in HP}$$

$$P3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (l/s)} \times H \text{ (m.c.l.)}}{102} \text{ in kW}$$

$$P3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (l/min)} \times H \text{ (m.c.l.)}}{4500} \text{ in HP}$$

$$P3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (m}^3\text{/h)} \times H \text{ (m.c.l.)}}{367} \text{ in kW}$$

$$P3 = \frac{\gamma \text{ (kg/dm}^3\text{)} \times Q \text{ (l/min)} \times H \text{ (m.c.l.)}}{6120} \text{ in kW}$$

### ABSORBED POWER

Absorbed power is the power that the pump absorbs from the motor, to give to the liquid the delivered power discussed above.

Not all the absorbed power becomes delivered power, as some power is lost through friction, and even more within the pump itself, due to hydraulic losses. It is therefore clear that the delivered power is always less than the absorbed power, and the relation between the two is a number always lower than 1. This number is known as the efficiency.

### EFFICIENCY

The efficiency is obtained by dividing the delivered power by the absorbed power, and is normally expressed as a percentage. For example, an efficiency of 75 % of a pump indicates that only 75 % of the absorbed power is converted into delivered power, with the remaining 25 % being lost due to friction. Therefore, the higher the efficiency of a pump, the smaller the portion of absorbed power being lost. If one then considers that the cost of energy relates to the absorbed power, it immediately becomes apparent just how important efficiency is. If we compare two pumps with the same 1 HP delivered power, but with an efficiency of 50 % for the first, and 60 % for the second, we can assume that the first one will need 2 HP to supply 1, while the second will only need 1,67 HP to achieve the same result. This means that the efficiency of a pump expresses, better than any other parameter, the quality of the pump and the related savings in terms of operating costs.

### CALCULATION OF POWER OUTPUTS

P1: is the power absorbed by the motor in kW (generally indicated by the wattmeter).

P2: the power delivered by the motor in kW. This is measured at the brake (it basically is the power absorbed by the pump).

P3: the power delivered by the pump in kW.

$$\text{Power output of the motor } \eta = \frac{P_2}{P_1}$$

$$\text{Power output of the motor } \eta = \frac{P_3}{P_2}$$

$$\text{Power output of the motor } \eta = \frac{P_3}{P_1}$$

### THE HEAD OF A PUMP AND ITS MEASUREMENT

The head of a pump is always the differential head, or that given by the pump itself. This is generally expressed in metres. In order to ascertain the head of a surface pump, during its operation it is necessary to measure the value of the head both at the suction and at the delivery of the pump itself, making sure that the readings are taken at the same level, which is called the reference plane. Two cases are possible, depending on installation:

- 1) the value of the head at the suction is negative (i.e. below zero shown on the manometer): in this case, the level of the liquid collected is lower than the level of the suction inlet.
- 2) the value of the head at the suction is positive (i.e. above zero shown on the manometer) in this case, the level of the liquid collected is higher than the level of the suction inlet (flooded suction).

In the first case the head of the pump is given by the sum of the two readings, while in the second it is given by subtracting the value of the head at the suction inlet from the value at the delivery outlet.

Finally, it is necessary to make sure that the readings at the suction and the delivery have been taken from apertures of the same diameter, so that they are not distorted by a difference in the speed of the liquid at the point of measurement. Any correction is made by calculating the dynamic head, or that part of the head linked with the speed of the liquid, which means that part of the head that the liquid possesses at the measuring section, due to the fact that it is moving. The dynamic head  $H_d$ , expressed in metres, is calculated using the following formula:

$$H_d = \frac{v^2}{2g}$$

where:  $v$  = speed of the fluid at the measuring point, given in m/s  
 $g$  = acceleration of gravity (9,81), expressed in m/s<sup>2</sup>  
 $2g = 2 \times 9,81 = 19,62 \text{ m/s}^2$

The correction of the head is given by the difference between the dynamic head at the delivery, and the dynamic head at the suction. It is therefore clear that if the readings upstream and downstream the pump have been taken on pipes of the same diameter, and therefore with the liquid flowing at the same speed, the correction is zero.

For submersible impeller pumps, it is sufficient, during operation, to measure the head at the delivery outlet. In this case, the head of the pump is then given by adding the value read to the dynamic head (at the delivery outlet), and to the difference in level between the free surface of the liquid collected and the manometer.

### VARIATION IN PUMP HEAD IN RELATION TO SPEED VARIATION

The performance of a pump is directly connected to its speed in rpm ( $n$ ). Providing that there is no cavitation, the law of similarity may be used, which is expressed as follows:

$$Q_x = Q \times \frac{n_x}{n}$$

$$H_x = H \times \left(\frac{n_x}{n}\right)^2$$

$$P_{2-x} = P_2 \times \left(\frac{n_x}{n}\right)^3$$

For example, when doubling the number of revolutions ( $n_x$ ) one obtains:

$Q_x$  = the value of the flow doubles

$H_x$  = the value of the head is 4 times higher

$P_{2-x}$  = the value of the absorbed power is 8 times higher

$Q - H - P_2$  are the values at speed  $n$

$Q_x - H_x - P_{2-x}$  are the values at speed  $n_x$ .



### NOTES ON THE MOTORS OF ELECTRIC PUMPS

INDEX OF SYMBOLS USED	
$P_1$	: POWER ABSORBED BY THE MOTOR IN KW.
$P_2$	: POWER DELIVERED BY THE MOTOR IN KW OR HP.
$V \sim$	= AC VOLTAGE AT THE MAINS.
Hz	= FREQUENCY IN CYCLES PER SECOND OF THE SUPPLY VOLTAGE.
$I$	= CURRENT ABSORBED BY THE MOTOR IN AMPERES.
$\cos\phi$	= POWER FACTOR.
$n^{1/min}$	= SPEED OF ROTATION IN RPM.
$\eta$	= OUTPUT POWER (RELATION BETWEEN DEVELOPED POWER AND ABSORBED POWER $P_2/P_1$ ).
$p$	= NUMBER OF POLES OF THE MOTOR.
$C_n$	= NOMINAL TORQUE OF THE MOTOR.

#### NO-LOAD SPEED OF ROTATION

The no-load speed of single-phase and three-phase electric induction motors is given by the formula:

$$n^{1/min} = \frac{120 \times \text{Hz}}{p}$$

No-load speed of rotation  $n^{1/min}$

FREQUENCY HZ	2 POLES	4 POLES
50	3000	1500
60	3600	1800

The full-load speed is 2 to 7 % lower than the no-load speed (2 to 7 % sliding).

#### CURRENT ABSORBED

$$\text{Single-phase: } I = \frac{1000 \times P_2 \text{ (kW)}}{V \times \cos\phi \times \eta} \quad \text{or: } I = \frac{736 \times P_2 \text{ (HP)}}{V \times \cos\phi \times \eta}$$

$$\text{Three-phase: } I = \frac{1000 \times P_2 \text{ (kW)}}{1.73 \times V \times \cos\phi \times \eta} \quad \text{or: } I = \frac{736 \times P_2 \text{ (HP)}}{1.73 \times V \times \cos\phi \times \eta}$$

#### ABSORBED POWER

$$\text{Single-phase: } P_1 \text{ (kW)} = \frac{V \times I \times \cos\phi}{1000}$$

$$\text{Three-phase: } P_1 \text{ (kW)} = \frac{1.73 \times V \times I \times \cos\phi}{1000}$$

#### POWER DELIVERED AT THE MOTOR AXIS

$$\text{Single-phase: } P_2 \text{ (kW)} = \frac{V \times I \times \cos\phi \times \eta}{1000} \quad \text{or: } P_2 \text{ (HP)} = \frac{V \times I \times \cos\phi \times \eta}{736}$$

$$\text{Three-phase: } P_2 \text{ (kW)} = \frac{1.73 \times V \times I \times \cos\phi \times \eta}{1000} \quad \text{or: } P_2 \text{ (HP)} = \frac{1.73 \times V \times I \times \cos\phi \times \eta}{736}$$

#### EFFICIENCY

$$\eta = \frac{P_2 \text{ (kW)}}{P_1 \text{ (kW)}}$$

### POWER FACTOR

$$\text{Single-phase: } \cos\phi = \frac{P_2 (\text{kW}) \times 1000}{V \times I \times \eta} \quad \text{or: } \cos\phi = \frac{P_1 (\text{kW}) \times 1000}{V \times I}$$

$$\text{Three-phase: } \cos\phi = \frac{P_2 (\text{kW}) \times 1000}{1,73 \times V \times I \times \eta} \quad \text{or: } \cos\phi = \frac{P_1 (\text{kW}) \times 1000}{1,73 \times V \times I}$$

### TORQUE FACTOR

$$C_n = \frac{P_2 (\text{kW}) \times 1000}{1.027 \times n^{1/\text{min}}} \text{ in kgm}$$

$$C_n = \frac{P_2 (\text{HP}) \times 736}{1.027 \times n^{1/\text{min}}} \text{ in kgm}$$

$$C_n = \frac{702 \times \text{HP}}{n^{1/\text{min}}} \text{ in decaNewtonmetres}$$

### RELATIONSHIP BETWEEN KW AND HP

$$1 \text{ HP} = 0,736 \text{ kW}$$

$$1 \text{ kW} = 1,36 \text{ HP}$$

$$\frac{\text{HP}}{1.36} = \text{kW}$$

$$\text{kW} \times 1,36 = \text{HP}$$

### STARTING CURRENT (ISP)

The starting current ( at switch on) of a motor is 4 to 8 times greater than the nominal current, depending on the power of the motor.

$$I_{sp} = I_n \times 4 \div 8$$

### DETAILS ON CAPACITORS

The approximate current absorbed by a capacitor is:

$$I = \frac{6,28 \times F \times C \times V}{1.000.000}$$

Where:

I = current in Amps absorbed by the capacitor.

F = frequency in Hz of the applied voltage.

C = capacity of capacitor  $\mu\text{F}$ .

V = applied voltage.

Example:

The current absorbed by a 14  $\mu\text{F}$  capacitor connected to a 220 Volt - 50 Hz power supply is:

$$I = \frac{6,28 \times 50 \times 14 \times 220}{1.000.000} = 0,96 \text{ Amperes}$$

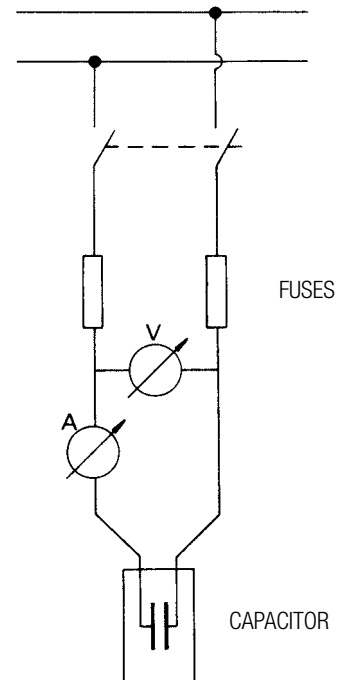
The approximate capacity of a capacitor is determined by:

$$C = \frac{I}{6,28 \times F \times V} \times 1.000,000$$

Example:

The capacity of a capacitor absorbing 1,4 Amps connected to a 220 Volt - 50 Hz power supply is:

$$C = \frac{1,4}{6,28 \times 50 \times 220} \times 1.000,000 = 20,2 \mu\text{F}$$



### STAR-DELTA START-UP

The normally delta  $\Delta$  connected motor is connected to the network using a star type connection. The current and the starting torque are both reduced to 1/3 of the value they would be if delta  $\Delta$  connected.

### PROTECTION

It is recommended that motors are connected to the power supply network using appropriate three-fuse thermal magnetic circuit breakers, or in any case circuit breakers complying with current local regulations.

### LOAD LOSS AND SPEED TABLE

In order to accurately calculate **load losses and speed**, the following table is used:

FLOW			NEW GALVANISED PIPING									
			NOMINAL DIAMETERS: INCHES AND MM									
l/s	l/min	m <sup>3</sup> /h	1/2"	3/4"	1"	1"1/4	1"1/2	2"	2"1/2	3"	3"1/2	4"
			15,75	21,25	27	35,75	41,25	52,5	68	80,25	92,5	105
0,17	10	0,6	0,856	0,47	0,291							
			9,01	20,9	0,65							
0,25	15	0,9	1,284	0,705	0,4387	0,249						
			19,07	4,43	1,38	0,35						
0,33	20	1,2	1,712	0,94	0,582	0,332	0,25					
			32,47	7,55	2,35	0,6	0,3					
0,42	25	1,5	2,14	1,175	0,728	0,415	0,31					
			49,06	11,41	3,55	0,91	0,45					
0,5	30	1,8	2,568	1,411	0,874	0,498	0,37	0,23				
			68,74	15,98	4,98	1,27	0,63	0,2				
0,58	35	2,1	2,996	1,646	1,019	0,581	0,44	0,27				
			91,42	21,26	6,62	1,69	0,84	0,26				
0,67	40	2,4		1,881	1,165	0,664	0,5	0,31				
				27,22	8,48	2,16	1,08	0,33				
0,83	50	3		2,351	1,456	0,831	0,62	0,39	0,23			
				41,13	12,81	3,27	1,63	0,5	0,14			
1	60	3,6		2,821	1,747	0,997	0,75	0,46	0,28			
				57,63	17,95	4,58	2,28	0,7	0,2			
1,17	70	4,2		3,291	2,039	1,163	0,87	0,54	0,32	0,23		
				76,64	23,88	6,08	3,03	0,94	0,27	0,12		
1,33	80	4,8			2,33	1,329	1	0,62	0,37	0,26		
					30,57	7,79	3,88	1,2	34	0,15		
1,5	90	5,4			2,621	1,495	1,12	0,69	0,41	0,3		
					38,01	9,69	4,83	1,49	0,42	0,19		
1,67	100	6			2,912	1,661	1,25	0,77	0,46	0,33	0,25	
					46,19	11,77	5,86	1,81	0,51	0,23	0,11	
2,08	125	7,5			3,641	2,077	1,56	0,96	0,57	0,41	0,31	0,24
					69,79	17,79	8,86	2,74	0,78	0,35	0,17	0,09
2,5	150	9				2,492	1,87	1,16	0,69	0,49	0,37	0,29
						24,92	12,41	3,84	1,09	0,49	0,24	0,13
2,92	175	10,5				2,907	2,18	1,35	0,8	0,58	0,43	0,34
						33,15	16,51	5,1	1,45	0,65	0,32	0,17

White numbers: Load losses in m for every 100 m of pipework

Green numbers: Water speed in m/sec

The table refers to galvanised pipework.

For other materials multiply as follows:

- 0,6 PVC pipes.
- 0,7 aluminium pipes.
- 0,8 laminated steel and stainless steel.

# TECHNICAL APPENDIX

## SUBMERSIBLE ELECTRIC PUMPS AND MOTORS

### LOAD LOSS AND SPEED TABLE

In order to accurately calculate **load losses and speed**, the following table is used:

FLOW			NEW GALVANISED PIPING									
			NOMINAL DIAMETERS: INCHES AND MM									
l/s	l/min	m³/h	1"1/4	1"1/2	2"	2"1/2	3"	3"1/2	4"	5"	6"	8"
			35,75	41,25	52,5	68	80,25	92,5	105	130	155	206
3,33	200	12	3,322	2,5	1,54	0,92	0,66	0,5	0,39	0,25		
			42,43	21,14	6,53	1,85	0,83	0,41	0,22	0,08		
4,17	250	15	4,156	3,12	1,93	1,15	0,82	0,62	0,48	0,31		
			64,12	31,94	9,87	2,8	1,25	1,63	0,34	0,12		
5	300	18		3,74	2,31	1,38	0,99	0,74	0,58	0,38	0,27	
				44,75	13,83	3,92	1,75	0,88	0,47	0,17	0,07	
6,67	400	24		4,99	3,08	1,84	1,32	0,99	0,77	0,5	0,35	
				76,2	23,55	6,68	2,98	1,49	0,8	0,28	0,12	
8,33	500	30			3,85	2,3	1,65	1,24	0,96	0,63	0,44	
					35,58	10,09	4,51	2,26	1,22	0,43	0,18	
10	600	36			4,62	2,75	1,98	1,49	1,16	0,75	0,53	0,3
					49,85	14,14	6,31	3,16	1,7	0,6	0,26	0,06
11,67	700	42				3,21	2,31	1,74	1,35	0,88	0,62	0,35
						18,81	8,4	4,2	2,27	0,8	0,34	0,09
13,33	800	48				3,67	2,64	1,99	1,54	1,01	0,71	0,4
						24,08	10,75	5,38	2,9	1,03	0,44	0,11
15	900	54				4,13	2,97	2,23	1,73	1,13	0,8	0,45
						29,94	13,37	6,69	3,61	1,28	0,54	0,14
16,67	1000	60				4,59	3,3	2,48	1,93	1,26	0,88	0,5
						36,39	16,24	8,13	4,39	1,55	0,66	0,16
20,83	1250	75					4,12	3,1	2,41	1,57	1,1	0,63
							24,54	12,29	6,63	2,34	0,99	0,25
25	1500	90					4,95	3,72	2,89	1,88	1,33	0,75
							34,39	17,22	9,29	3,28	1,39	0,35
29,17	1750	105						4,34	3,37	2,2	1,55	0,88
								22,9	12,35	4,37	1,85	0,46
33,33	2000	120						4,96	3,85	2,5	1,77	1
								29,31	15,81	5,59	2,37	0,59
41,67	2500	150							4,81	3,14	2,21	1,25
									23,89	8,44	3,59	0,9
50	3000	180								3,77	2,65	1,5
											11,83	5,02
66,67	4000	240								5,03	3,53	2
											20,15	8,55
83,33	5000	300									4,42	2,5
												12,93

White numbers: Load losses in m for every 100 m of pipework

Green numbers: Water speed in m/sec

The table refers to galvanised pipework.

For other materials multiply as follows:

- 0,6 PVC pipes.
- 0,7 aluminium pipes.
- 0,8 laminated steel and stainless steel.

### HEAD LOSS

in cm of column of water in bends, gate valves, and foot valves

VELOCITY OF WATER IN m/s	SHARP EDGED BENDS					NORMAL BENDS					GATE VALVE	FOOT VALVE	NON-RETURN VALVE	HEAD LOSS ON EXIT FROM PIPES $V^2 \cdot 2g$
	$\alpha = 30^\circ$	$\alpha = 40^\circ$	$\alpha = 60^\circ$	$\alpha = 80^\circ$	$\alpha = 90^\circ$	$\frac{d}{R} = 0,4$	$\frac{d}{R} = 0,6$	$\frac{d}{R} = 0,8$	$\frac{d}{R} = 1$	$\frac{d}{R} = 1,5$				
0,10	0,03	0,04	0,05	0,07	0,08	0,07	0,08	0,01	0,0155	0,027	0,03	30	30	0,05
0,15	0,06	0,73	0,1	0,14	0,17	0,016	0,019	0,024	0,033	0,06	0,033	31	31	0,12
0,2	0,11	0,13	0,18	0,26	0,31	0,028	0,033	0,04	0,059	0,11	0,058	31	31	0,21
0,25	0,17	0,21	0,28	0,4	0,48	0,044	0,052	0,063	0,091	0,17	0,09	31	31	0,32
0,3	0,25	0,3	0,41	0,6	0,7	0,063	0,074	0,09	0,13	0,25	0,13	31	31	0,46
0,35	0,33	0,4	0,54	0,8	0,93	0,085	0,10	0,12	0,18	0,33	0,18	31	31	0,62
0,4	0,43	0,52	0,71	1,0	1,2	0,11	0,13	0,16	0,23	0,43	0,23	32	31	0,82
0,5	0,67	0,81	1,1	1,6	1,9	0,18	0,21	0,26	0,37	0,67	0,37	33	32	1,27
0,6	0,97	1,2	1,6	2,3	2,8	0,25	0,29	0,36	0,52	0,97	0,52	34	32	1,84
0,7	1,35	1,65	2,2	3,2	3,9	0,34	0,40	0,48	0,70	1,35	0,7	35	32	2,5
0,8	1,7	2,1	2,8	4,0	4,8	0,45	0,53	0,64	0,93	1,7	0,95	36	33	3,3
0,9	2,2	2,7	6	5,2	6,2	0,57	0,67	0,82	1,18	2,2	1,2	37	34	4,2
1,0	2,7	3,3	4,5	6,4	7,6	0,7	0,82	1,0	1,45	2,7	1,45	38	35	5,1
1,5	6,0	7,3	10,0	14,0	17,0	1,6	1,9	2,3	3,3	6,0	3,3	47	40	11,5
2,0	11,0	14,0	18,0	26,0	31,0	2,8	3,3	4,0	5,8	11,0	5,8	61	48	20,4
2,5	17,0	21,0	28,0	40,0	48,0	4,4	5,2	6,3	9,1	17,0	9,1	78	58	32,0
3,0	25,0	30,0	41,0	60,0	70,0	6,3	7,4	9,0	13,0	25,0	13,0	100	71	46,0
3,5	33,0	40,0	55,0	78,0	93,0	8,5	10,0	12,0	18,0	33,0	18,0	123	85	62,0
4,0	43,0	52,0	70,0	100,0	120,0	11,0	13,0	16,0	23,0	42,0	23,0	150	100	82,0
4,5	55,0	67,0	90,0	130,0	160,0	14,0	21,0	26,0	37,0	55,0	37,0	190	120	103,0
5,0	67,0	82,0	110,0	160,0	190,0	18,0	29,0	36,0	52,0	67,0	52,0	220	140	127,0

v = velocity of water in metres per second

d = diameter of pipes in m metres

h = head loss in cm of water column for each metre of pipework, calculated according to the Lang formula:

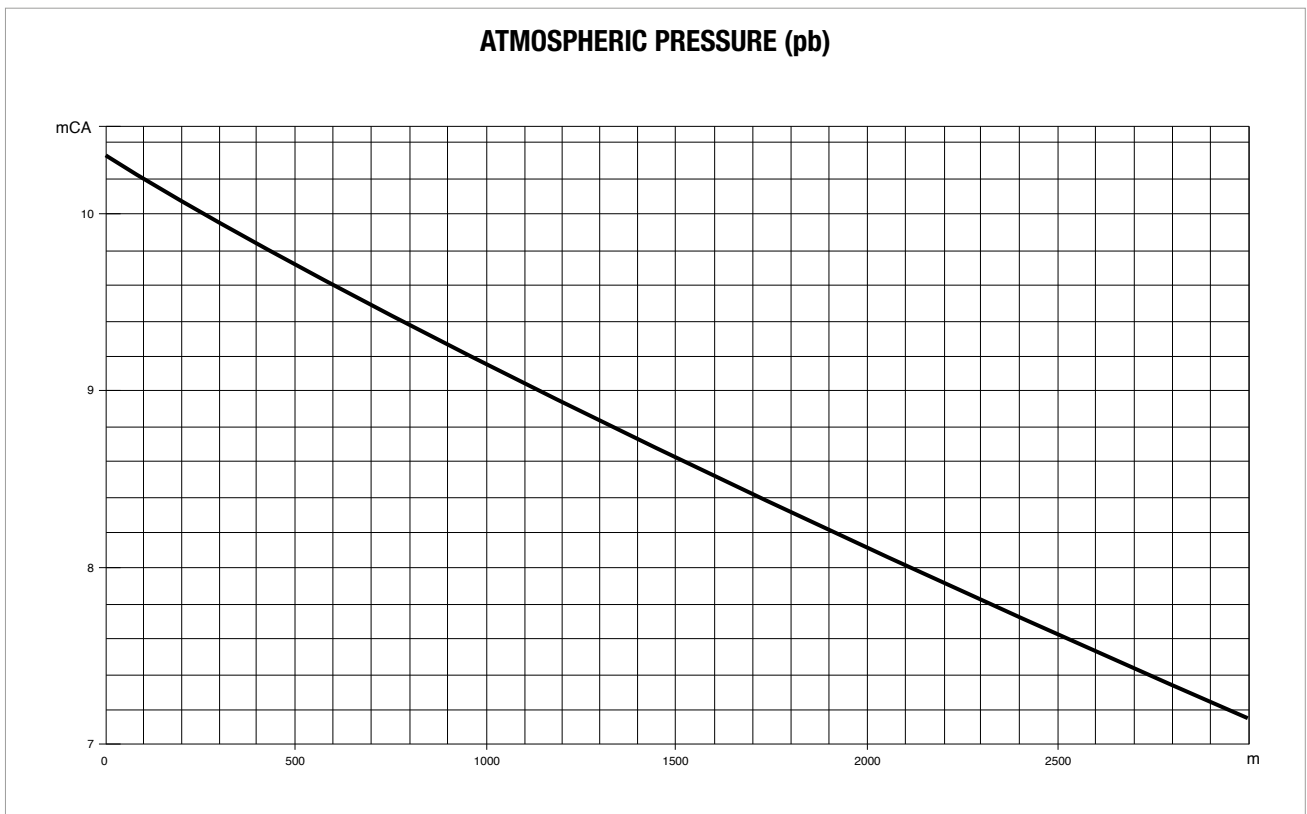
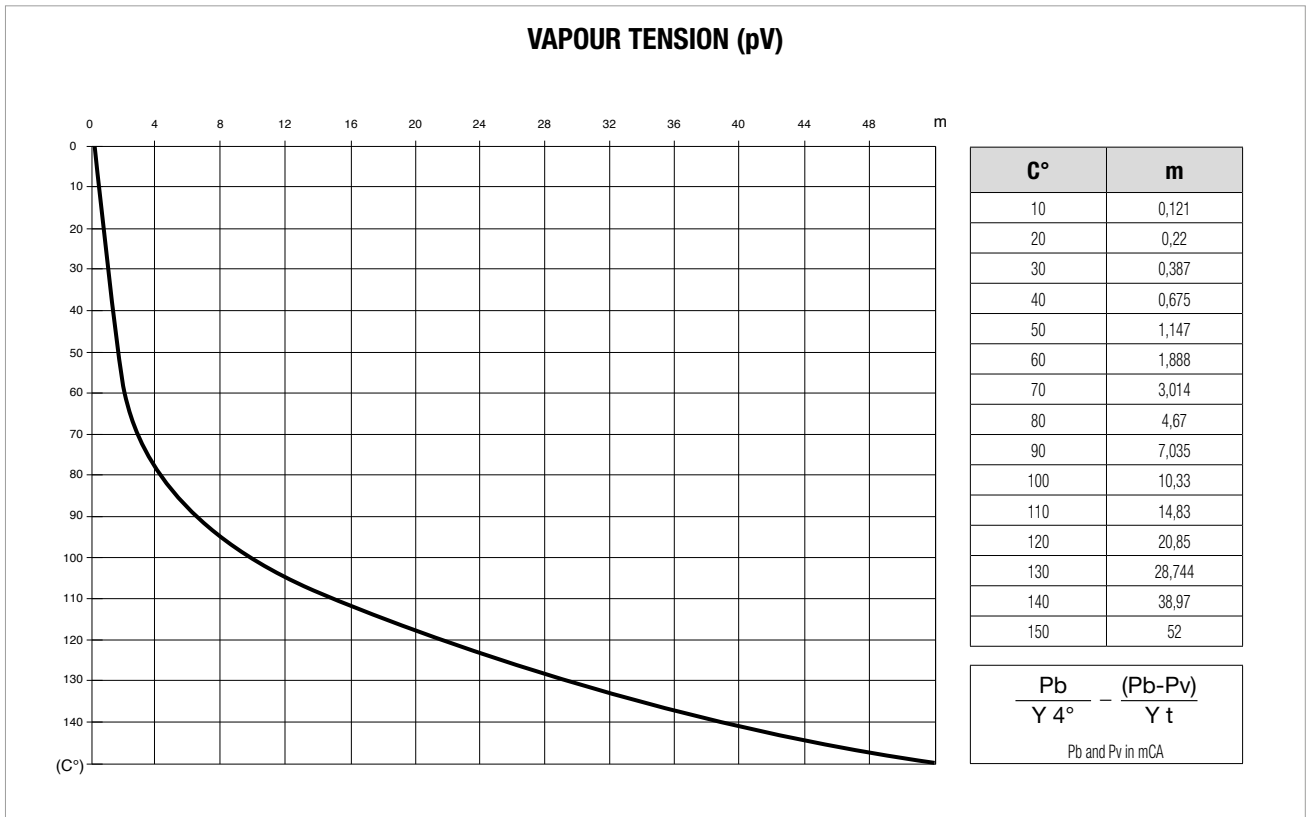
$$h = \lambda \times \frac{100}{d} \times \frac{v^2}{2g} \qquad \lambda = 0,02 + \frac{0,0018}{\sqrt{v \times d}}$$

The only loss in bends is that due to the contraction of the liquid stream when changing direction (the development of the curves must therefore be included in the length of the pipework); the head loss for gate valves has been determined through technical tests.

The head loss for gate valves and normal bends is equal to that of 5 m of straight pipework, while that of non-return valves is equal to 15 m.

The values given are for pipes with a completely smooth internal surface. In case of rough or scaled pipes, allowances must be made accordingly.

### VAPOUR TENSION AND SPECIFIC WEIGHT OF WATER AS A FUNCTION OF TEMPERATURE



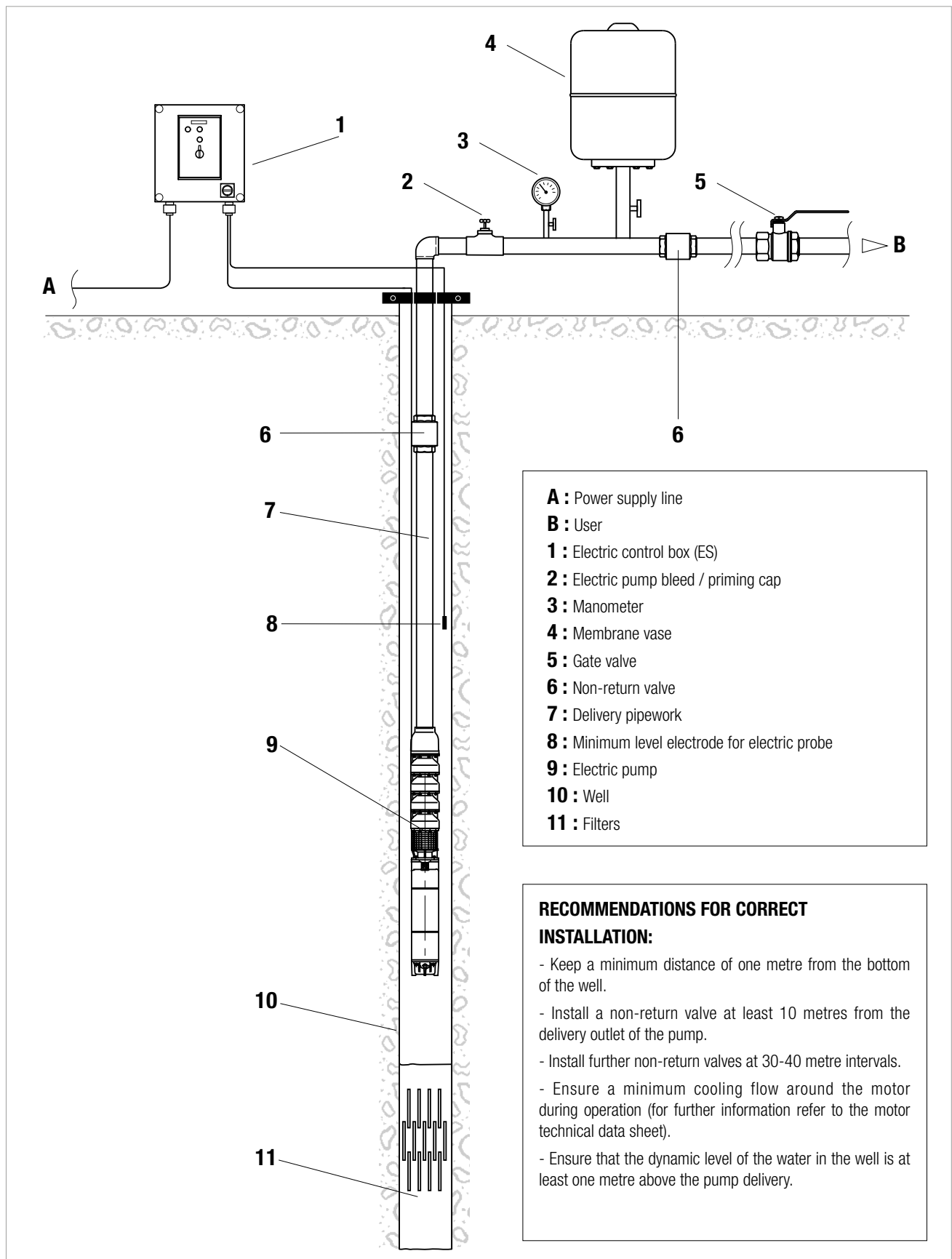
# TECHNICAL APPENDIX

## SUBMERSIBLE ELECTRIC PUMPS AND MOTORS

### CONVERSION TABLE FOR UNITS OF MEASURE

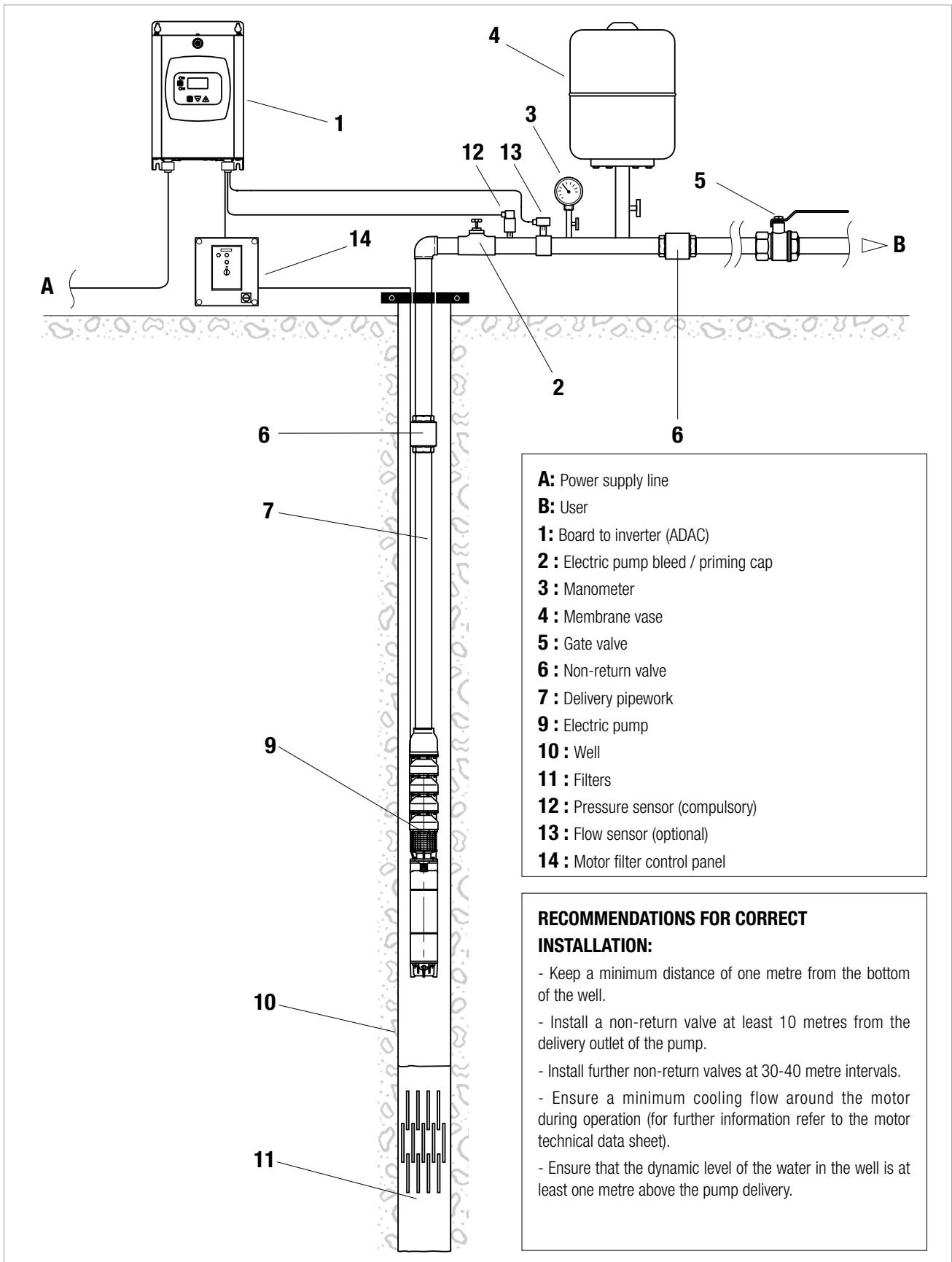
CHARACTERISTIC	SYSTEM UNIT OF MEASURE	UNIT OF MEASURE	SYMBOL	CONVERSIONS		
				SYSTEM	INTERNATIONAL SYSTEM (SI)	IMPERIAL SYSTEM
LENGTH	Technical and International	metre decimetre centimetre millimetre	m dm cm mm	1 dm = 0,1 m 1 cm = 0,01 m 1 mm = 0,001 m		1 m = 3,28 ft 1 dm = 3,937 in 1 cm = 0,3937 in
	Imperial	inch foot yard	1", in 1", ft yd	1" = 25,4 mm 1" ft = 0,3048 m 1 yd = 0,9144 m		1 ft = 12" 1 yd = 3 ft = 26"
AREA	Technical and International	metres squared centimetres squared millimetres squared	m <sup>2</sup> cm <sup>2</sup> mm <sup>2</sup>	1 cm <sup>2</sup> = 0,0001 m <sup>2</sup> 1 mm <sup>2</sup> = 0,01 cm <sup>2</sup>		1 m <sup>2</sup> = 1,196 sq.yd 1 m <sup>2</sup> = 10,764 sq.ft 1 cm <sup>2</sup> = 0,155 sq.in
	Imperial	square inch square foot square yard	sq.in sq.ft sq.yd	1 sq.in = 6,45 cm <sup>2</sup> 1 sq.ft = 0,0929 m <sup>2</sup> 1 sq.yd = 0,836 m <sup>2</sup>		1 sq.ft = 144 sq.in 1 sq.yd = 1,296 sq.in 1 sq.yd = 9 sq.ft
VOLUME	Technical and International	metre cubed decimetre cubed centimetre cubed litre cubed	m <sup>3</sup> cm <sup>3</sup> mm <sup>3</sup> l	1 m <sup>3</sup> = 1.000 dm <sup>3</sup> 1 cm <sup>3</sup> = 0,001 m <sup>3</sup> = 1.000 cm <sup>3</sup> 1 mm <sup>3</sup> = 0,001 dm <sup>3</sup> 1 l = dm <sup>3</sup>		1 dm <sup>3</sup> = 0,22 Imp.gal 1 dm <sup>3</sup> = 0,264 US.gal 1 dm <sup>3</sup> = 61,0 cu.in
	Imperial	cubic inch cubic feet Imperial gallons U.S. gallons	cu.in cu.ft Imp.gal USA.gal	1 cu.in = 16,39 cm <sup>3</sup> 1 cu.ft = 28,34 m <sup>3</sup> 1 Imp.gal = 4,546 m <sup>3</sup> 1 US.gal = 3,785 dm <sup>3</sup>		1 Imp.gal = 1,201 US.gal 1 US.gal = 0,833 Imp.gal
TEMPERATURE	Technical and International	degrees Centigrade degrees Kelvin	°C °K	°C = °K - 273 °K = °C + 273		°C = 5/9 x (°F - 32) °K = 5/9 x (°F - 32) + 273
	Imperial	degrees Fahrenheit	°F	°F = 9/5 x °C + 32		-
		freezing point of water at atmospheric pressure: boiling point of water at atmospheric pressure:		000 °C = 273 °K = 032 °F 100 °C = 373 °K = 212 °F		
WEIGHT and FORCE	Technical	kilogram	kg	-	1 kg = 9,81 N	1 kg = 2,203 lb
	International	Newton	N	1 N = 0,102 kg	-	1 N = 0,22546 lb
	Imperial	pound	lb	1 lb = 0,454 kg	1 lb = 4,452 N	-
SPECIFIC WEIGHT	Technical	kilogram per decimetre cubed	kg/dm <sup>3</sup>	-	1 kg/dm <sup>3</sup> = 9,807 N/dm <sup>3</sup>	1 kg/dm <sup>3</sup> = 62,46 lb/cu.ft
	International	Newton per decimetre cubed	N/dm <sup>3</sup>	1 N/dm <sup>3</sup> = 0,102 kg/dm <sup>3</sup>	-	1 N/dm <sup>3</sup> = 6,36 lb/cu.ft
	Imperial	pound per cubic foot	lb/dm <sup>3</sup>	1 lb/cu.ft = 0,01600 kg/dm <sup>3</sup>	1 lb/cu.ft = 0,160 N/dm <sup>3</sup>	-
PRESSURE	Technical	atmospheres	kg/cm <sup>2</sup>	-	1 kg/cm <sup>2</sup> = 98,067 kPa 1 kg/cm <sup>2</sup> = 0,9807 bar	1 kg/cm <sup>2</sup> = 14,22 psi
	International	Pascal kiloPascal bar	Pa kPa bar	1 kPa = 0,0102 kg/cm <sup>2</sup> 1 bar = 1,02 kg/cm <sup>2</sup>	1 kPa = 1.000 Pa 1 bar = 100.000 Pa	1 kPa = 0,145 psi 1 bar = 14,50 psi
	Imperial	pounds per square inch	psi	1 psi = 0,0703 kg/cm <sup>2</sup>	1 psi = 0,06895 bar 1 psi = 6,894 kPa	-
FLOW	Technical	litres per minute litres per second metres cubed per hour	l/min l/s m <sup>3</sup> /h	1 l/min = 0,0167 l/s 1 l/s = 3,6 m <sup>3</sup> /h 1 m <sup>3</sup> /h = 16,667 l/min	1 l/s = 0,001 m <sup>3</sup> /s	1 l/min = 0,22 imp.g.p.m. 1 l/min = 0,264 US.g.p.m. 1 m <sup>3</sup> /h = 3,666 imp.g.p.m. 1 m <sup>3</sup> /h = 4,403 US.g.p.m.
	International	metres cubed per second	m <sup>3</sup> /s	1 m <sup>3</sup> /s = 1.000 l/s 1 m <sup>3</sup> /s = 3.600 m <sup>3</sup> /h	-	1 m <sup>3</sup> /s = 13,198 imp.g.p.m. 1 m <sup>3</sup> /s = 15,852 US.g.p.m.
	Imperial	imperial gallons per minute U.S. gallons per minute	Imp.g.p.m. US.g.p.m.	1 Imp.g.p.m. = 4,546 l/min 1 Imp.g.p.m. = 0,273 m <sup>3</sup> /h 1 US.g.p.m. = 3,785 l/min 1 US.g.p.m. = 0,227 m <sup>3</sup> /h	-	1 Imp.g.p.m. = 1,201 US.g.p.m. 1 US.g.p.m. = 0,833 Imp.g.p.m.
TORQUE	Technical	kilogram metre	kgm	-	1 kgm = 9,807 Nm	1 kgm = 7,233 ft.lb
	International	Newton metre	Nm	1 Nm = 0,102 kgm	-	1 Nm = 0,7376 ft.lb
	Imperial	foot pound	ft.lb	1 ft.lb = 0,138 kgm	1 ft.lb = 1,358 Nm	-
WORK and ENERGY	Technical	kilogram metre vapour-horsepower hour	kgm CVh		1 kgm = 9,807 J 1 CVh = 0,736 kWh	1 kgm = 7,233 ft.lb 1 Nm = 0,986 HP.hr.
	International	Joule kiloWatt hour	J kWhq	1 J = 0,102 kgm kWh = 1,36 CVh	-	1 Nm = 0,7376 ft.lb 1 Nm = 0,7376 ft.lb
	Imperial	foot pound Horsepower hour	ft.lb HP.hr.	1 ft.lb = 0,138 kgm 1 HP.hr. = 1,014 CVh	1 ft.lb = 0,358 Nm 1 HP.hr. = 0,746 kWh	-
POWER	Technical	Horse power	HP	1 HP = 0,736 kW	1 HP = 736 W	-
	International	Watt kiloWatt	W kW	1 W = 0,00136 Hp 1 kW = 1,36 Hp	1 kW = 1.000 W	-
KINETIC VISCOSITY	Technical	stokes centistokes	1 St 1 cSt	1 St = 1 cm <sup>2</sup> /s 1 cSt = 0,01 St	1 St = 0,0001 m <sup>2</sup> /s	1 St = 0,00107 ft <sup>2</sup> /s
	International	m <sup>2</sup> /s	m <sup>2</sup> /s	1 m <sup>2</sup> /s = 10.000 St	1 m <sup>2</sup> /s = 10.000 cm <sup>2</sup> /s	1 m <sup>2</sup> /s = 10,764 ft <sup>2</sup> /s
	Imperial	square foot per second	ft <sup>2</sup> /s	1 ft <sup>2</sup> /s = 929 St	1 ft <sup>2</sup> /s = 0,0929 m <sup>2</sup> /s	-

### EXAMPLE OF INSTALLATION OF A SUBMERSIBLE ELECTRIC PUMP





### EXAMPLE OF INSTALLATION OF A SUBMERSIBLE ELECTRIC PUMP CONTROLLED BY INVERTER



### DETERMINATION OF THE CROSS SECTION OF THE POWER CABLE

#### SINGLE-PHASE 4" MOTOR (4GG)

CABLE SIZING TAKING INTO ACCOUNT A 3 % VOLTAGE DROP

MOTOR TYPE	NOMINAL POWER		NOMINAL VOLTAGE V	MOTOR NOMINAL CURRENT In (A)	Cos φ	Cable section: 4x ...mm <sup>2</sup>							
						mm <sup>2</sup>	1,5	2,5	4	6	10	16	25
	kW	HP				A max	23	30	41	53	74	99	131
Maximum length in metres (m)													
4"	0,37	0,5	1x230	3,3	3,3	65	108	172	257	428			
4"	0,55	0,75	1x230	4,6	4,6	48	80	127	190	316	502		
4"	0,75	1	1x230	6,2	6,2	36	60	96	144	239	379	585	
4"	1,1	1,5	1x230	8,6	8,6	27	44	71	106	176	279	430	
4"	1,5	2	1x230	11	11	21	34	55	82	136	216	333	
4"	2,2	3	1x230	16	16	15	24	39	58	95	151	233	
4"	3,7	5	1x230	25	25	-	14	23	35	58	91	142	

Free air installation at maximum temperature of 35 °C

#### THREE-PHASE 4" MOTOR (4GG)

CABLE SIZING TAKING INTO ACCOUNT A 3 % VOLTAGE DROP

MOTOR TYPE	NOMINAL POWER		NOMINAL VOLTAGE V	MOTOR NOMINAL CURRENT In (A)	Cos φ	Cable section: 4x ...mm <sup>2</sup>							
						mm <sup>2</sup>	1,5	2,5	4	6	10	16	25
	kW	HP				A max	23	30	41	53	74	99	131
Maximum length in metres (m)													
4"	0,37	0,5	3x230	2,7	0,66	178	296	471					
4"	0,55	0,75	3x230	3,3	0,72	134	222	354	528				
4"	0,75	1	3x230	4,1	0,72	108	179	285	425				
4"	1,1	1,5	3x230	5,7	0,76	73	122	194	290	478			
4"	1,5	2	3x230	7,6	0,72	58	96	154	229	377	593		
4"	2,2	3	3x230	10,2	0,78	40	66	106	158	261	411		
4"	3	4	3x230	14,3	0,71	31	52	83	123	203	319	486	
4"	4	5,5	3x230	17,3	0,79	23	39	62	92	152	240	367	
4"	5,5	7,5	3x230	24,2	0,74	-	29	47	70	116	182	277	
4"	0,37	0,5	3x400	1,4	0,66	597							
4"	0,55	0,75	3x400	1,9	0,72	404							
4"	0,75	1	3x400	2,4	0,72	320	531						
4"	1,1	1,5	3x400	3,4	0,76	214	356	567					
4"	1,5	2	3x400	4,4	0,72	174	290	462					
4"	2,2	3	3x400	5,9	0,78	120	200	318	475				
4"	3	4	3x400	8,3	0,71	94	156	248	370				
4"	4	5,5	3x400	10	0,79	70	116	186	277	457			
4"	5,5	7,5	3x400	14	0,74	53	89	141	211	347	547		
4"	7,5	10	3x400	17,4	0,8	-	66	105	157	260	410		

Free air installation at maximum temperature of 35 °C

# TECHNICAL APPENDIX

## SUBMERSIBLE ELECTRIC PUMPS AND MOTORS

### THREE-PHASE 6" ENCAPSULATED MOTOR (6GF)

CABLE SIZING TAKING INTO ACCOUNT A 3 % VOLTAGE DROP - DIRECT START-UP

MOTOR TYPE	POWER NOMINAL		NOMINAL VOLTAGE V	MOTOR NOMINAL CURRENT In (A)	Cos φ	Cable section: 4x ...mm <sup>2</sup>								
						mm <sup>2</sup>	4	6	10	16	25	35	50	70
	A max	41				53	74	99	131	162	202	250		
						Maximum length in metres (m)								
6"	4	5,5	3x230	18,3	0,75	46	69	113	178	272	371	511		
6"	5,5	7,5	3x230	24,3	0,75	35	52	85	134	205	279	385	514	
6"	7,5	10	3x230	31	0,78	26	39	64	102	155	212	293	393	
6"	9,3	12,5	3x230	37,3	0,8	21	32	52	82	126	173	239	322	
6"	11	15	3x230	44,2	0,82	-	26	43	68	104	143	198	267	
6"	15	20	3x230	56	0,8	-	-	35	55	84	115	159	214	
6"	18,5	25	3x230	71	0,8	-	-	27	43	66	91	126	169	
6"	22	30	3x230	81,4	0,84	-	-	-	36	56	76	106	143	
6"	4	5,5	3x400	10,6	0,75	138	206	340	535					
6"	5,5	7,5	3x400	14	0,75	105	156	257	405					
6"	7,5	10	3x400	18	0,78	78	117	193	304	465				
6"	9,3	12,5	3x400	22	0,8	62	93	154	243	372	510			
6"	11	15	3x400	25,5	0,82	53	79	130	205	315	432	598		
6"	15	20	3x400	33,4	0,8	41	61	101	160	245	336	465		
6"	18,5	25	3x400	41	0,8	34	50	83	130	200	274	379	509	
6"	22	30	3x400	47	0,84	-	42	69	109	167	230	319	431	
6"	30	40	3x400	61,5	0,85	-	-	52	82	127	174	242	327	
6"	37	50	3x400	79,3	0,8	-	-	-	67	103	141	196	263	

Free air installation at maximum temperature of 35 °C

### THREE-PHASE 6" ENCAPSULATED MOTOR (6GF)

CABLE SIZING TAKING INTO ACCOUNT A 3 % VOLTAGE DROP - STAR-DELTA START-UP

MOTOR TYPE	NOMINAL POWER		NOMINAL VOLTAGE V	MOTOR NOMINAL CURRENT In (A)	Cos φ	Cable section: 4x ...mm <sup>2</sup>								
						mm <sup>2</sup>	4	6	10	16	25	35	50	70
	A max	41				53	74	99	131	162	202	250		
						Maximum length in metres (m)								
6"	4	5,5	3x230	18,3	0,75	80	119	196	308	470				
6"	5,5	7,5	3x230	24,3	0,75	60	89	147	232	354	483			
6"	7,5	10	3x230	31	0,78	45	67	111	176	269	367	507		
6"	9,3	12,5	3x230	37,3	0,8	37	55	90	143	218	299	414	556	
6"	11	15	3x230	44,2	0,82	-	45	75	118	181	248	343	463	
6"	15	20	3x230	56	0,8	-	-	60	95	146	199	276	371	
6"	18,5	25	3x230	71	0,8	-	-	47	75	115	157	218	292	
6"	22	30	3x230	81,4	0,84	-	-	-	63	96	132	183	248	
6"	4	5,5	3x400	10,6	0,75	239	356	588						
6"	5,5	7,5	3x400	14	0,75	181	270	445						
6"	7,5	10	3x400	18	0,78	135	202	334	526					
6"	9,3	12,5	3x400	22	0,8	108	161	266	421					
6"	11	15	3x400	25,5	0,82	91	136	225	355	544				
6"	15	20	3x400	33,4	0,8	71	106	176	277	424	581			
6"	18,5	25	3x400	41	0,8	58	87	143	226	346	473			
6"	22	30	3x400	47	0,84	-	72	119	188	289	397	552		
6"	30	40	3x400	61,5	0,85	-	-	90	143	219	301	419	566	
6"	37	50	3x400	79,3	0,8	-	-	-	117	179	245	339	455	

Free air installation at maximum temperature of 35 °C

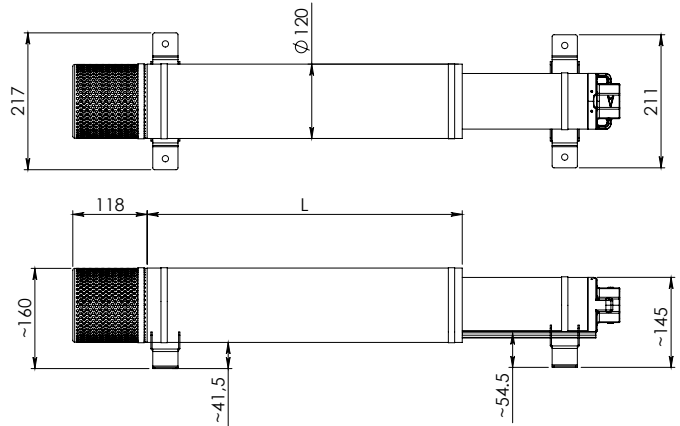




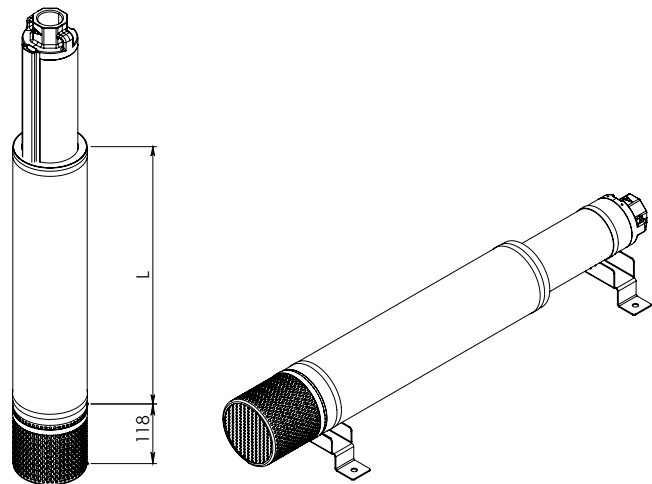
### COOLING LINERS FOR 4" SUBMERSIBLE PUMP

Kit of cooling liners of different lengths, used to ensure perfect cooling of the 4" motor in case of installation inside tanks or containers, or in any location where a minimum cooling flow on the motor cannot be guaranteed.  
The length of the pipe must be selected based on the type of motor and its power, as indicated in the following table.

POWER SUPPLY 50 Hz	MOTOR POWER		MOTOR TYPE		
	HP	kW	4GG - 4GX	40L	4TW
SINGLE-PHASE	0,5	0,37	L400 PIPE KIT	L400 PIPE KIT	L525 PIPE KIT
	0,75	0,55			
	1	0,75			L885 PIPE KIT
	1,5	1,1			
	2	1,5			
	3	2,2			
	5	3,7	L885 PIPE KIT	L885 PIPE KIT	



THREE-PHASE	0,5	0,37	L400 PIPE KIT	L400 PIPE KIT
	0,75	0,55		
	1	0,75		
	1,5	1,1	L525 PIPE KIT	L525 PIPE KIT
	2	1,5		
	3	2,2	L885 PIPE KIT	L885 PIPE KIT
	4	3		
	5,5	4		
	7,5	5,5		
	10	7,5		



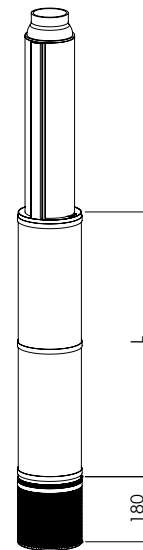
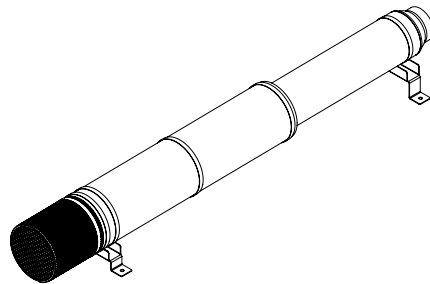
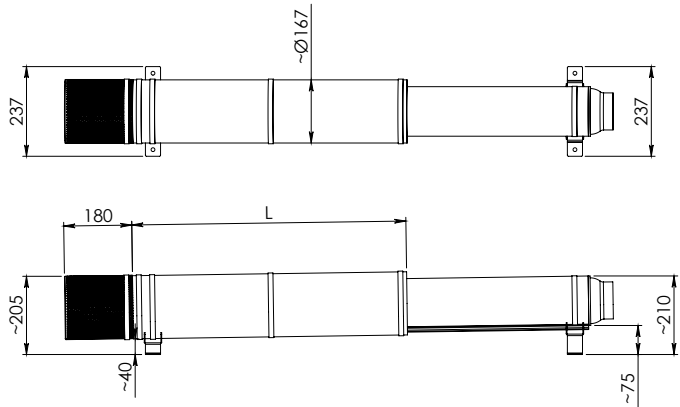
### COOLING LINERS FOR 6" SUBMERSIBLE PUMP

Kit of cooling liners of different lengths, used to ensure perfect cooling of the 6" motor in case of installation inside tanks or containers, or in any location where a minimum cooling flow on the motor cannot be guaranteed.

The length of the pipe must be selected based on the type of motor and its power, as indicated in the following table.

**SUITABLE FOR USE ON S6, SR6 E SM6 ELECTRIC PUMPS COUPLED WITH 6" MOTOR.**

POWER SUPPLY 50 Hz	MOTOR POWER		MOTOR TYPE	
	HP	kW	6GF-6GX	TR6
THREE-PHASE	5,5	4	725 PIPE KIT	960 PIPE KIT
	7,5	5,5		
	10	7,5		
	12,5	9,3		
	15	11	960 PIPE KIT	1220 PIPE KIT
	17,5	13		
	20	15		
	25	18,5		
	30	22	1220 PIPE KIT	1490 PIPE KIT
	35	26		
	40	30		
	50	37		



in order to determine the cooling flow speed  $v$  [m/s] along the motor liner, the following formula can be used:

$$v = \frac{\frac{Q}{2}}{\pi \cdot \left( \frac{D^2}{4} - \frac{d^2}{4} \right)}$$

On the other hand, in order to determine the correct diameter of the cooling liner, to ensure that the minimum required cooling flow condition is met at a certain pump flow level, the following formula can be used:

$$D = \sqrt{4 \cdot \left( \frac{Q}{v \cdot \pi} + \frac{d^2}{4} \right)}$$

$Q$  [m<sup>3</sup>/s] = flow at the point of operation of the electric pump.  
 $D$  [m] = well diameter.  
 $d$  [m] = motor diameter.  
 $v$  [m/s] = cooling flow speed.

# TECHNICAL APPENDIX

## SUBMERSIBLE ELECTRIC PUMPS AND MOTORS

### INDICATIVE CHOICE OF THE ELECTRIC GENERATOR CAPABLE OF POWERING THE SUBMERSIBLE MOTOR

P2 - MOTOR POWER		GENERATOR			
		DOL (DIRECT START-UP)		SD (STAR-DELTA START-UP)	
kW	Hp	kW	kVA	kW	KVA
2,2	3	6	7,5	-	-
4	5,5	10	12,5	8	10
5,5	7,5	12,5	15,6	11	13,8
7,5	10	15	18,8	14	17,5
9,2	12,5	19	24	17	21
11	15	22,5	28	21	26
13	17,5	26,5	33	24	30
15	20	30	38	28	35
18,5	25	37	46	34	42,5
22	30	45	56	41	51
26	35	52	65	45	57
30	40	60	75	52	65
37	50	75	94	64	81
45	60	90	112	78	97
55	75	110	138	95	119
63	85	135	169	114	142
75	100	150	190	128	160
92	125	185	230	158	198
110	150	210	260	190	237
132	180	260	325	225	281
147	200	300	375	260	325
170	230	340	425	295	369
190	260	380	475	329	411
220	300	440	550	381	476
250	340	500	625	433	541

### WINDING RESISTANCE TABLES

In case of single-phase motors, both the running ( $R_m$ ) and the start-up ( $R_a$ ) winding resistance are indicated.

#### SINGLE-PHASE MOTORS

MODEL	P2		V	$R_m$	$R_a$
	HP	kW	V	$\Omega$	$\Omega$
3GF - 3GS	0,5	0,37	230	11,25	31,5
	0,75	0,55	230	9,15	28
	1	0,75	230	6,85	17,35

#### THREE-PHASE MOTORS

MODEL	P2		V	R
	HP	kW	V	$\Omega$
3GF - 3GS	0,5	0,37	400	60,3
	0,75	0,55	400	44,5
	1	0,75	400	32,2

#### SINGLE-PHASE MOTORS

MODEL	P2		V	$R_m$	$R_a$
	HP	kW	V	$\Omega$	$\Omega$
4GG - 4GX	0,5	0,37	230	8,8	18,8
	0,75	0,55	230	5,6	13,5
	1	0,75	230	3,5	6,7
	1,5	1,1	230	2,5	5,4
	2	1,5	230	1,9	5,0
	3	2,2	230	1,6	3,7
	5	3,7	230	0,9	1,7

#### THREE-PHASE MOTORS

MODEL	P2		V	R
	HP	kW	V	$\Omega$
4GG - 4GX	0,5	0,37	230	11,7
	0,5	0,37	400	35,0
	0,75	0,55	230	8,5
	0,75	0,55	400	25,6
	1	0,75	230	5,8
	1	0,75	400	17,3
	1,5	1,1	230	4,3
	1,5	1,1	400	13,0
	2	1,5	230	3,0
	2	1,5	400	8,9
	3	2,2	230	2,0
	3	2,2	400	6,0
	4	3	230	1,4
	4	3	400	4,2
	5,5	4	230	1,1
	5,5	4	400	3,3
	7,5	5,5	230	0,8
	7,5	5,5	400	2,4
	10	7,5	400	2,0



# TECHNICAL APPENDIX

## SUBMERSIBLE ELECTRIC PUMPS AND MOTORS

### SINGLE-PHASE MOTORS

MODEL	P2		V	R <sub>m</sub>	R <sub>a</sub>
	HP	kW	V	Ω	Ω
40L	0,5	0,37	230	9,3	20,3
	0,75	0,55	230	6,5	13,7
	1	0,75	230	4,0	8,6
	1,5	1,1	230	3,0	6,1
	2	1,5	230	2,3	5,0
	3	2,2	230	1,6	3,7

### THREE-PHASE MOTORS

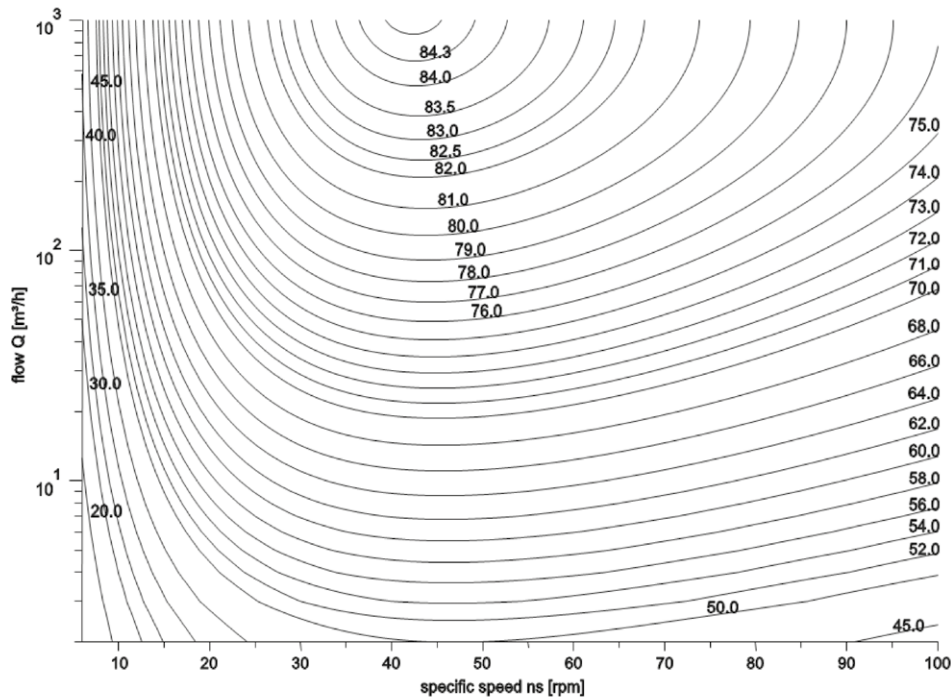
MODEL	P2		V	R
	HP	kW	V	Ω
40L	0,5	0,37	230	14,2
	0,5	0,37	400	42,5
	0,75	0,55	230	8,5
	0,75	0,55	400	25,5
	1	0,75	230	6,3
	1	0,75	400	18,0
	1,5	1,1	230	3,8
	1,5	1,1	400	11,7
	2	1,5	230	2,7
	2	1,5	400	8,3
	3	2,2	230	2
	3	2,2	400	6,2
	4	3	230	1,6
	4	3	400	4,7
	5,5	4	230	1
	5,5	4	400	3
	7,5	5,5	230	0,9
	7,5	5,5	400	2,6
10	7,5	400	1,9	

### THREE-PHASE MOTORS

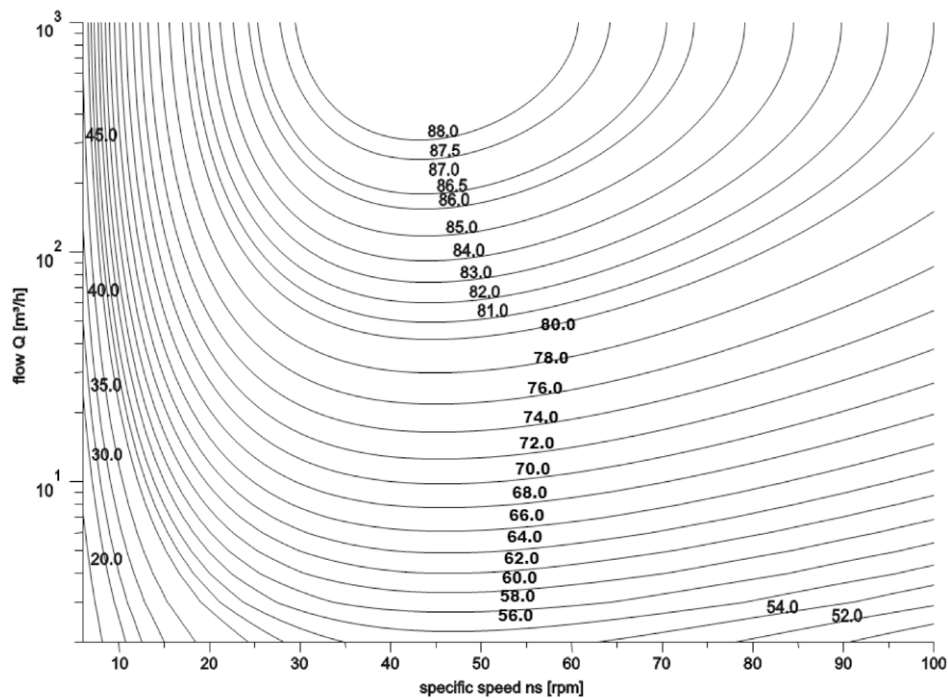
MODEL	P2		V	R
	HP	kW	V	Ω
66F - 66S - 66X	5,5	4	230	0,97
	5,5	4	400	3,00
	5,5	4	400/690	3,00
	7,5	5,5	230	0,64
	7,5	5,5	400	2,00
	7,5	5,5	400/690	2,00
	10	7,5	230	0,51
	10	7,5	400	1,60
	10	7,5	400/690	1,60
	12,5	9,2	230	0,40
	12,5	9,2	400	1,25
	12,5	9,2	400/690	1,25
	15	11	230	0,29
	15	11	400	0,92
	15	11	400/690	0,92
	20	15	230	0,24
	20	15	400	0,65
	20	15	400/690	0,65
	25	18,5	230	0,18
	25	18,5	400	0,55
	25	18,5	400/690	0,55
	30	22	230	0,15
	30	22	400	0,46
	30	22	400/690	0,46
	40	30	400	0,31
	40	30	400/690	0,31
	50	37	400	0,25
	50	37	400/690	0,25

### CHARTS OF REFERENCE - MEI INDEX

MEI = 0.4 for Multistage Submersible 2900rpm



MEI = 0.7 for Multistage Submersible 2900 rpm



DAB complies with the EcoDesign Directive (ErP - Energy related Products - Directive, 2009/125/EC)

EC 547/2012 Regulation that requires:

FOR 4" AND 6" SUBMERSIBLE MULTISTAGE PUMPS (MSS)

- starting from January 1st 2013  $MEI \geq 0,1$
- starting from January 1st 2015  $MEI \geq 0,4$



# DAB

PUMPS SELECTOR

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