



Construction

Submersible borehole pumps for 4" wells (DN 100 mm), and 6" (DN 150 mm), with external jacket in stainless steel AISI 304 and stages in polycarbonate for 4SD pumps and in noryl for 4SDF, 6SD, 6SDN pumps.

Impellers

radial floating impellers	4SDF 16, 22, 36, 46, 54
radial impellers	4SD 31, - 6SDN 12, 16, 21
mixed flow impellers	4SD 10, 15 - 6SD 18, 19, 20

Connection: screwed connection ISO 228.
Delivery casing with built-in non-return valve.

Applications

For water supply.
For civil and industrial applications.
For fire fighting applications.
For irrigation.

Operating conditions

Liquid temperature: - up to a 35 °C for 4" motors
- up to a 25 °C for 6-8-10" motors.
Max. sand quantity into the water: 150 g/m³ (300 g/m³ high percentage of solids and sand).
Continuous duty.

Rewindable motor CS series

2-pole induction motor. 50 Hz (n ≈ 2900 rpm).
Sized for connection to the pumps according to NEMA Standards.
Standard voltages:
- single-phase 230 V up to 2,2 kW for 4" motors.
- three-phase 230 V; 400 V, for 4" motors.
- three-phase 400 V; 400/690 V, for 6" motors.
Voltage tolerance : +6% / -10%.

In order to limit both current and torque at each starting, for rated motor powers equal to or higher than 7.5 kW, one of the following types of starting is necessary: star/delta, soft starter, stator impedance or autotransformer.

The electropumps 4SD31, 4SDF series comply with the European Regulation no. 547/2012.

Materials

Components	Part Nr.	4SD, 4SDF	6SD, 6SDN
External jacket	14.02	Cr-Ni steel	AISI 304
Stage casing (4SDF)	25.02	Cr-Ni steel	AISI 304
Stage casing (4,6SD)	25.02	Polycarbonate (Lexan 141 R)	GFN2V* (NORYL®) for 4SDF
Diffuser	26.00		GFN2V* (NORYL®)
Impeller	28.00		
Wear ring		Cr-Ni steel	AISI 304
Shaft	64.00	Cr steel	AISI 430 F
Delivery casing	12.01	Cr-Ni steel	Bronze
Suction lantern	32.02	AISI 304	G-Cu Sn 10 EN 1982
Bearing bush	12.03-12.30	Thermoplastic	Rubber
Strainer	15.50	Cr-Ni steel	AISI 430
Screws		Cr-Ni steel	AISI 304

* Trademark of General Electric

Components	4CS	6CS-R
External frame	Cr-Ni steel	AISI 304
Shaft	Cr-Ni-Mo steel AISI 316 (shaft end)	Cr steel AISI 431
Thrust bearing	Oil wetted ball type	Oscillation pads
Bearing bush	Oil wetted ball type	Graphite

Operating conditions motor

Motor	Max. Liquid temperature	Cooling: minimum flow velocity	Max. starts per hour	Motor P2
4CS	35 °C	0,08 m/s	20	all types
6CS-R	30 °C	0,1 m/s	15	4÷11 kW
		0,2 m/s	15	13÷15 kW
	25 °C	0,2 m/s	15	18,5 kW
		0,2 m/s	13	22÷30 kW

Insulation class F for 4" motors, class E for 6" motors.
Motor suitable operation with frequency converter .
Protection IP 68.

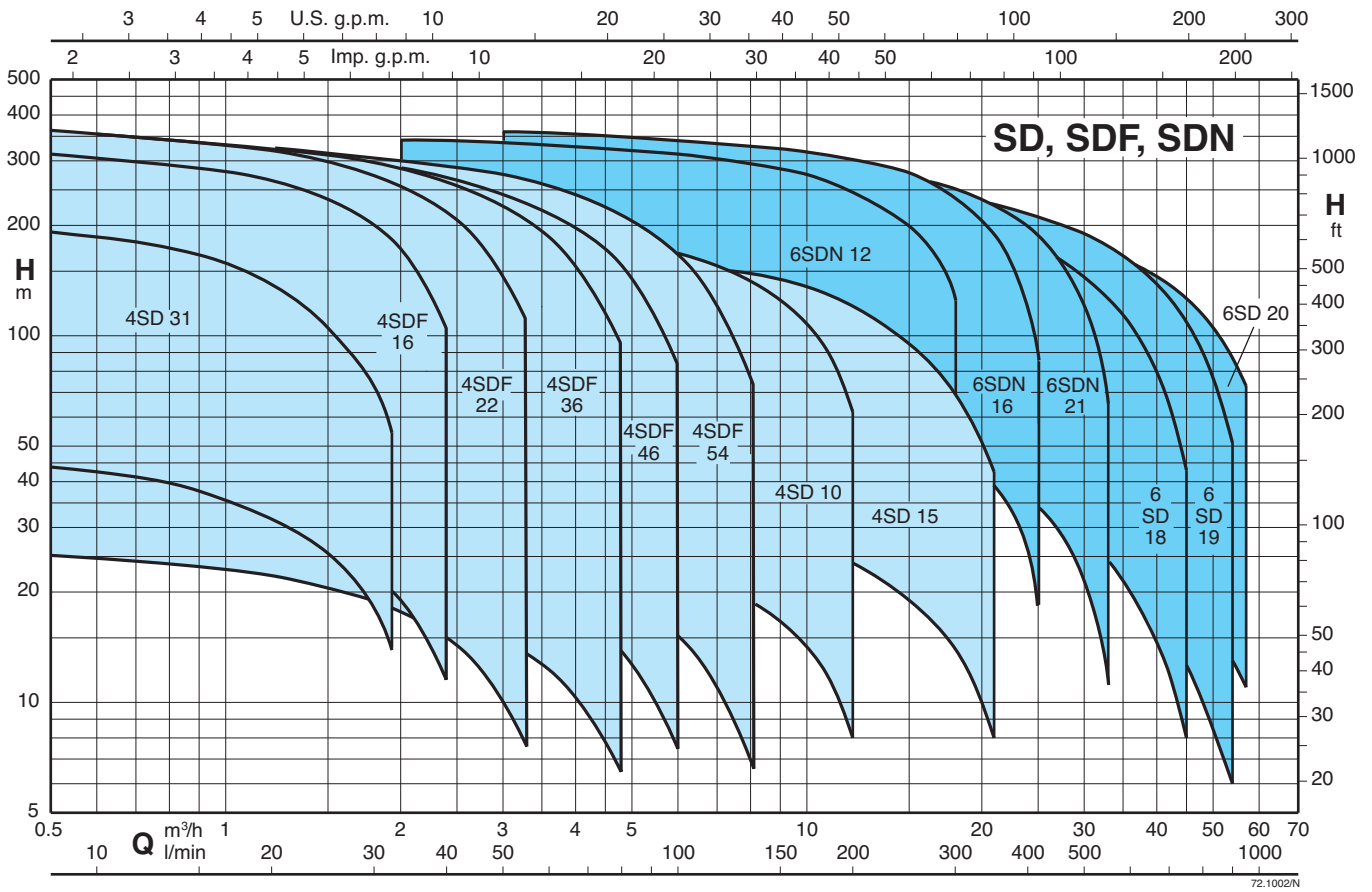
Special features on request

- Other voltages.
- 60 Hz frequency.
- Other temperatures.
- Encapsulated motor **FK series**.

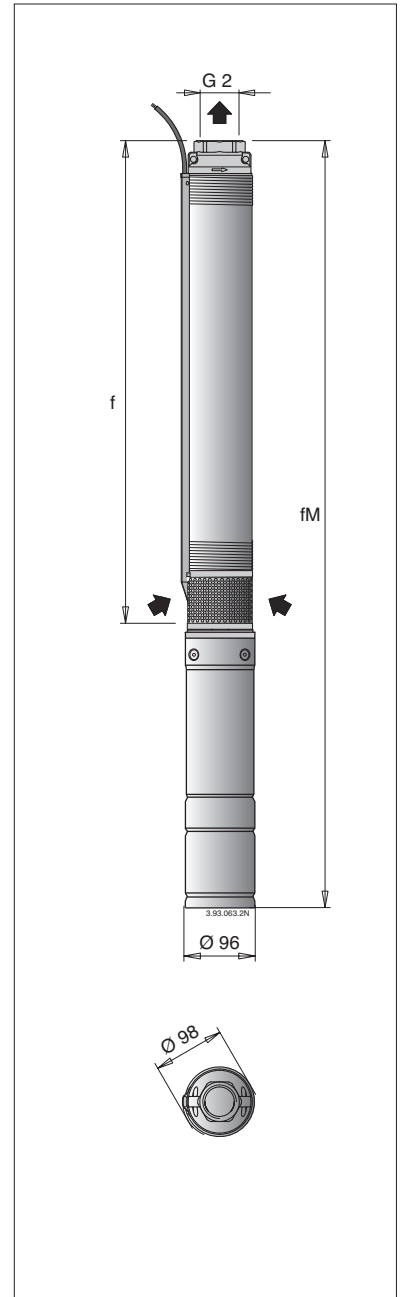
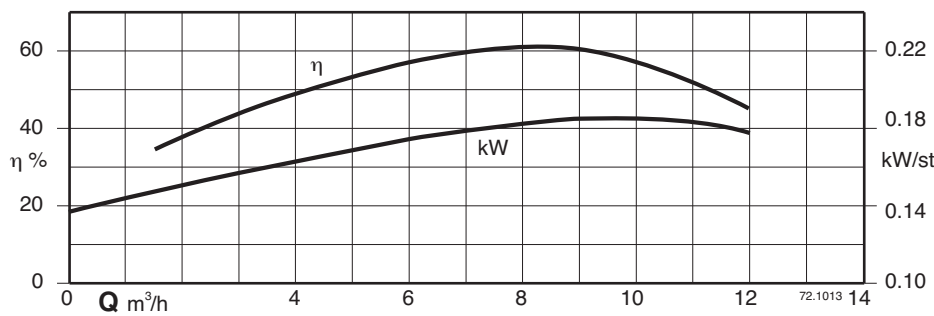
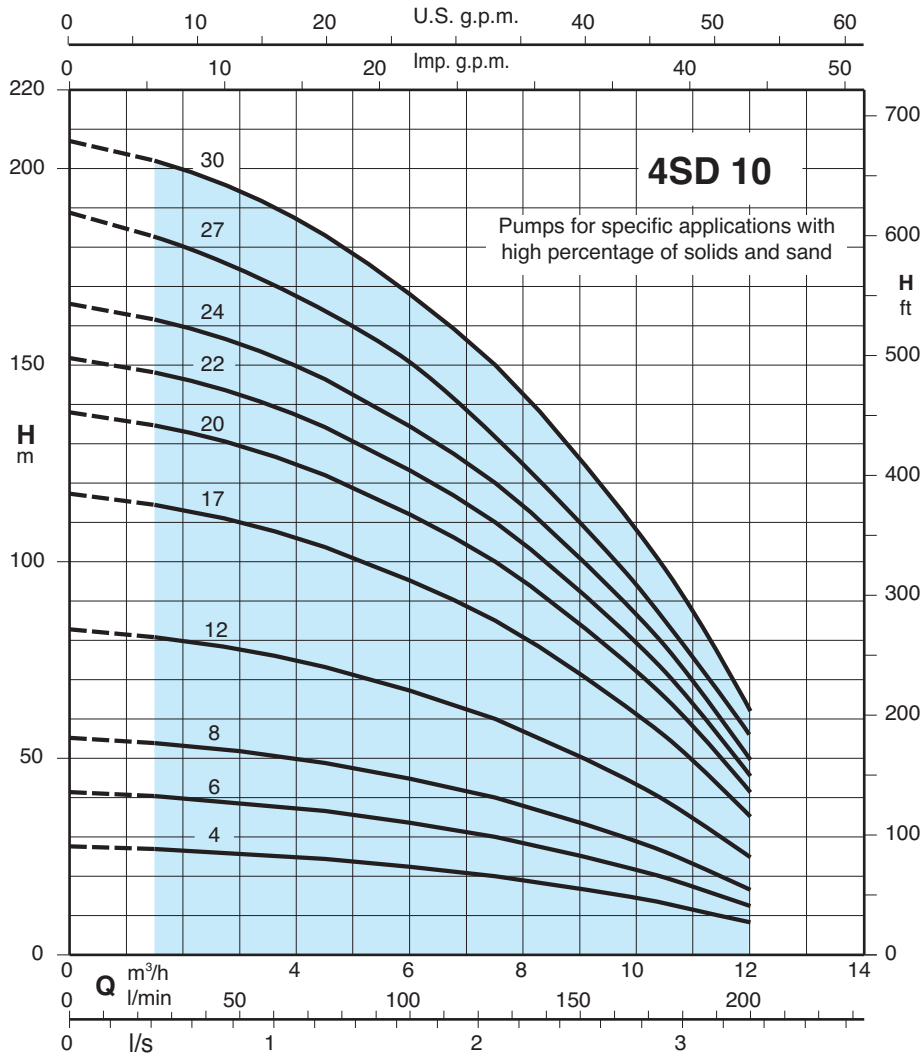
Designation

Ø of the well in inches 4 SD M 31 / 26
Series _____
Single-phase motor (up to max. 2,2 kW) _____
Stage identification _____
Number of stages _____

Coverage chart $n \approx 2900$ rpm



Characteristic curves, performance $n \approx 2900$ rpm, dimensions and weights



3~ 400 V (380-415) 50 Hz A	1~ 230V Capacitor P1 450 Vc A μF kW	P2 kW HP	Q m³/h l/min	n ≈ 2900 rpm												
				H m												
				1,5	2,4	3	3,6	4,8	6	7,2	8,4	9,6	10,8	12		
4SD 10/4EC	2	4SDM 10/4EC	5,6 35 1,22	0,75	1	27	26	26	25	24	23	20	18	15	12	8
4SD 10/6EC	2,9	4SDM 10/6EC	8,4 40 1,82	1,1	1,5	40	39	39	38	36	34	31	27	23	18	12
4SD 10/8EC	4,2	4SDM 10/8EC	11,2 60 2,33	1,5	2	54	53	52	51	48	45	41	36	30	25	16
4SD 10/12EC	5,5	4SDM 10/12EC	14,7 70 3,27	2,2	3	81	79	78	76	72	67	61	54	46	37	25
4SD 10/17EC	7,4			3	4	114	112	111	108	102	95	87	76	65	52	35
4SD 10/20EC	9,4			4	5,5	134	132	130	127	120	112	102	90	76	61	41
4SD 10/22EC	9,4			4	5,5	148	145	143	139	132	123	112	99	84	67	45
4SD 10/24EC	9,4			4	5,5	162	158	156	152	144	134	122	108	91	74	50
4SD 10/27EC	13			5,5	7,5	182	178	176	171	162	151	138	122	103	83	56
4SD 10/30EC	13			5,5	7,5	202	198	195	190	180	168	153	135	114	92	62

f mm	4SD		4SDM	
	fM mm	kg	fM mm	kg
409	771	11,6	811	14,1
515	917	13,4	962	16,7
621	1068	15,7	1088	18,6
833	1235	25,9	1350	22,7
1098	1579	28		
1312	1858	36		
1418	1964	36,8		
1524	2070	37,6		
1683	2329	41,1		
1842	2488	42,1		

P1 Max. power input

P2 Rated motor power output

* Only for single-phase motor 230 V - 50 Hz (on request)

Tolerances according to UNI EN ISO 9906:2012