



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.

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

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

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

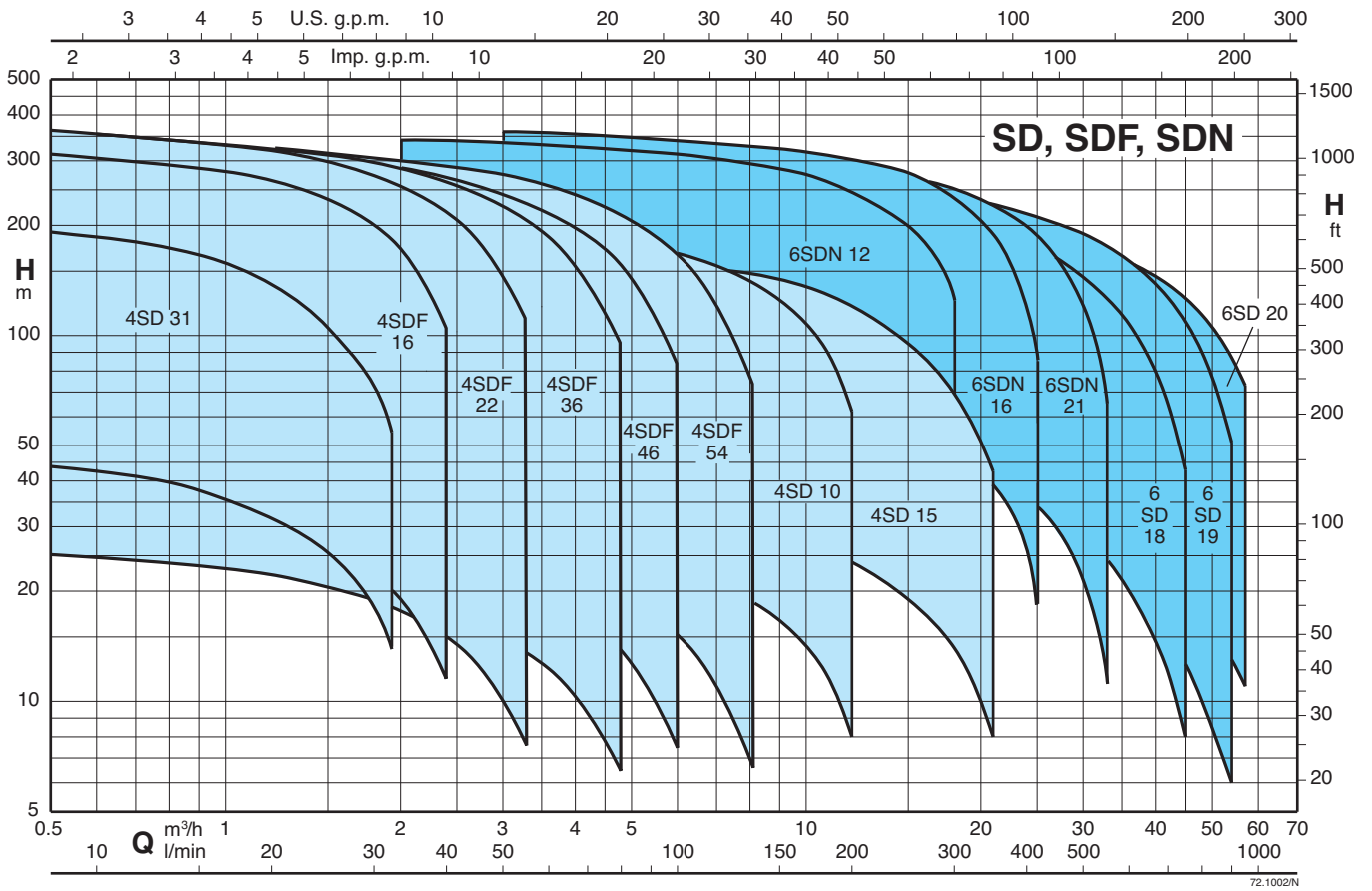
Materials

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®)
Diffuser	26.00		
Impeller	28.00	GFN2V* (NORYL®)* for 4SDF	
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

Coverage chart $n \approx 2900$ rpm

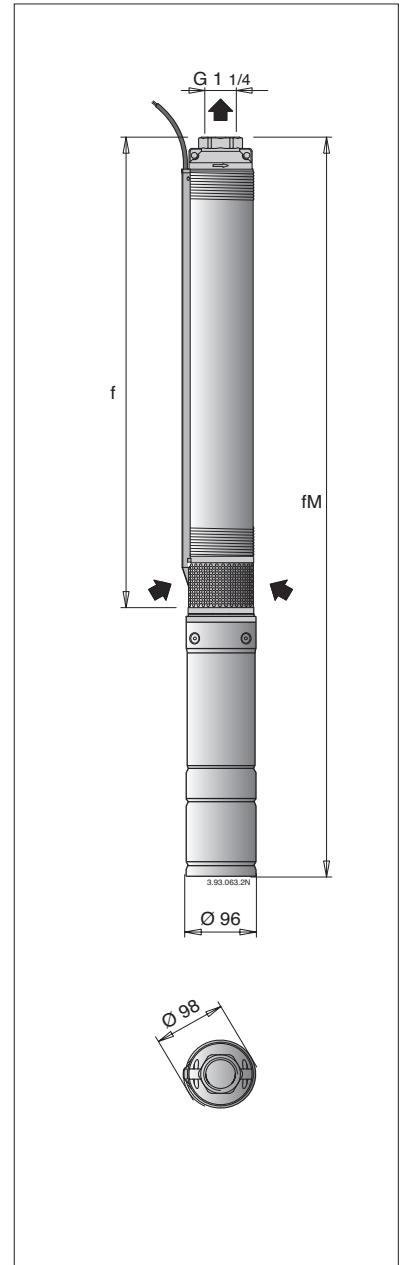
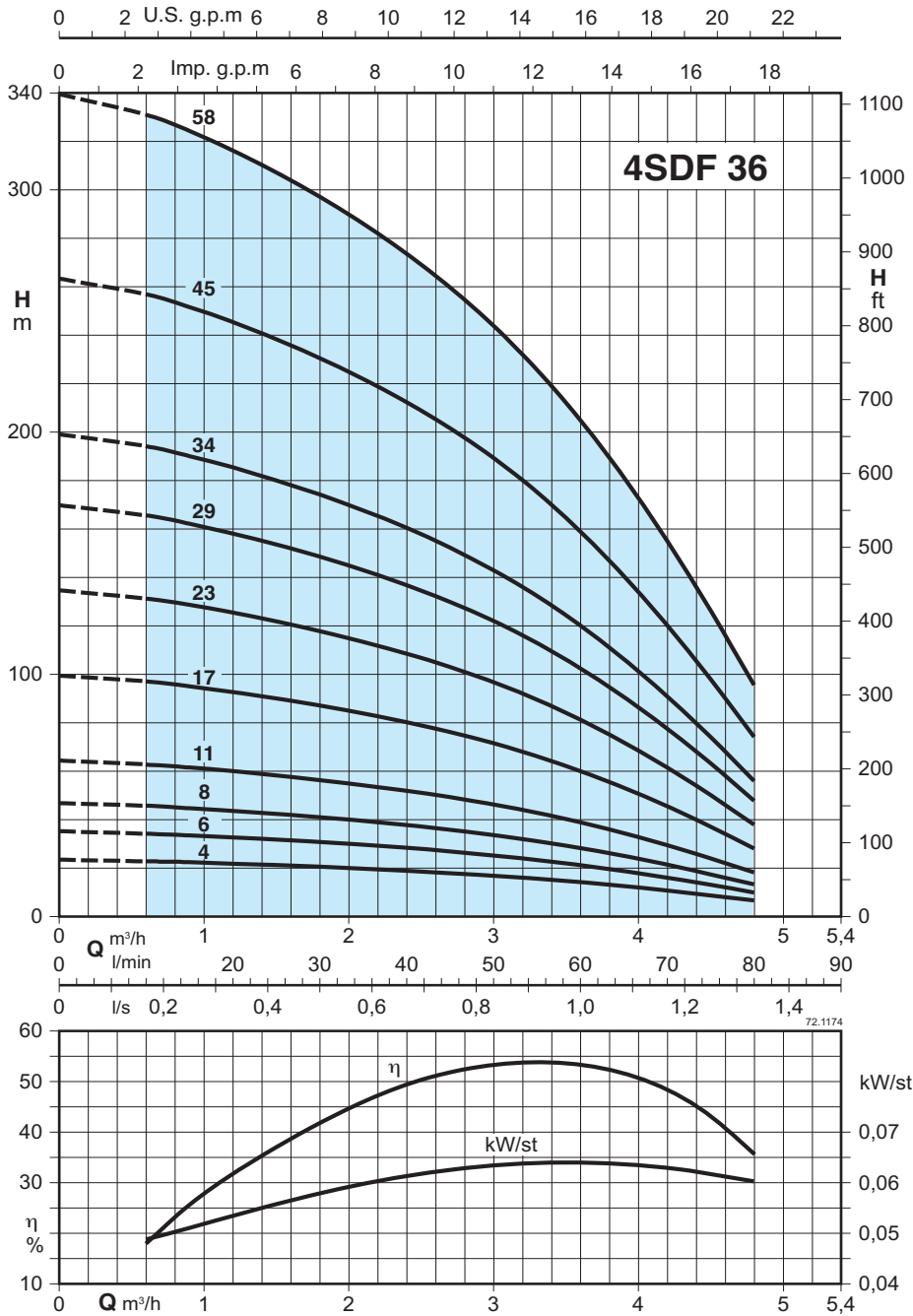


4SDF 36

Submersible borehole pumps for 4" wells



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



3~	400 V (380-415) 50 Hz	1~	230V Capacitor		P1	P2	Q	n ≈ 2900 rpm											
			A	µF				kW	HP	H m									
										0	0,6	1,2	1,8	2,4	3	3,6	4,2	4,8	
4SDF 36/4EC	1,2	4SDFM 36/4EC	3,2	16	0,62	0,37	0,5	23,4	22,8	21,8	20,5	18,8	16,8	14,1	10,7	6,6			
4SDF 36/6EC	1,2	4SDFM 36/6EC	3,2	16	0,7	0,37	0,5	35,1	34,2	32,7	30,7	28,3	25,2	21,2	16	9,9			
4SDF 36/8EC	1,5	4SDFM 36/8EC	4	25	0,89	0,55	0,75	46,8	45,6	43,6	40,9	37,7	33,6	28,2	21,3	13,2			
4SDF 36/11EC	2	4SDFM 36/11EC	5,6	35	1,22	0,75	1	64,3	62,7	59,9	56,3	51,8	46,2	38,8	29,4	18,1			
4SDF 36/17EC	2,9	4SDFM 36/17EC	8,4	40	1,82	1,1	1,5	99,4	96,9	92,6	87	80,1	71,4	60	45,4	28			
4SDF 36/23EC	4,2	4SDFM 36/23EC	11,2	60	2,33	1,5	2	134	131	125	118	108	96,6	81,2	61,4	37,8			
4SDF 36/29EC	5,5	4SDFM 36/29EC	14,7	70	3,27	2,2	3	170	165	158	148	137	122	102	77,4	47,7			
4SDF 36/34EC	5,5	4SDFM 36/34EC	14,7	70	3,27	2,2	3	199	194	185	174	160	143	120	90,7	55,9			
4SDF 36/45EC	7,4					3	4	263	256	245	230	212	189	159	120	74			
4SDF 36/58EC	9,4					4	5,5	339	331	316	297	273	244	205	155	95,4			

f	4SDF		4SDFM	
	fM	kg	fM	kg
306	633	10,7	633	10,6
366	693	11,1	693	11
426	773	10,6	788	13,3
517	879	12,2	919	15,4
699	1101	14,7	1146	18,5
880	1327	17,5	1347	21
1063	1465	27,3	1580	24,7
1213	1694	28,7	1730	26,1
1590	2136	28,4		
1981	2627	34,3		

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