



Construction

Submersible borehole pumps for 4" wells (DN 100 mm), and 6" (DN 150 mm), with external jacket in stainless steel AISI 304 and impellers in Noryl.

Impellers

radial floating impellers	4SDP
radial impellers	6SDN 12, 16, 21
mixed flow impellers	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" motors.

Max. sand quantity into the water: 150 g/m³ (300 g/m³ high percentage of solids and sand).

Continuous duty.

Rewindable motor CS-R 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 4SDP 1,2,3,6 series comply with the European Regulation no. 547/2012.

Materials

Pump	4SDP	6SD, 6SDN
Components		
External jacket	Cr-Ni steel AISI 304	Cr-Ni steel AISI 304
Stage casing	Cr-Ni steel AISI 304	Cr-Ni steel AISI 304
Diffuser	Polycarbonate	GFN2V* (NORYL®)*
Impeller	GFN2V* (NORYL®)*	GFN2V* (NORYL®)*
Wear ring	-	Cr-Ni steel AISI 304
Shaft	Cr-Ni steel AISI 304	Cr steel AISI 430 F
Delivery casing	Cr-Ni steel	Bronze
Suction lantern	AISI 304	G-Cu Sn 10 EN 1982
Bearing bush	POM - POLYACETAL	Rubber
Strainer	Cr-Ni steel AISI 304	Cr-Ni steel AISI 430
Screws	Cr-Ni steel AISI 304	Cr-Ni steel AISI 304

* Trademark of General Electric

Motor

Motor	4CS-R	6CS-R
Components		
External frame	Cr-Ni steel AISI 304	Cr-Ni steel AISI 304
Motor flange	Cast iron GJL 200 EN 1561 nickel-plated	Cast iron GJL 200 EN 1561
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-R	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 SDP M 6 / 14

Ø of the well in inches _____

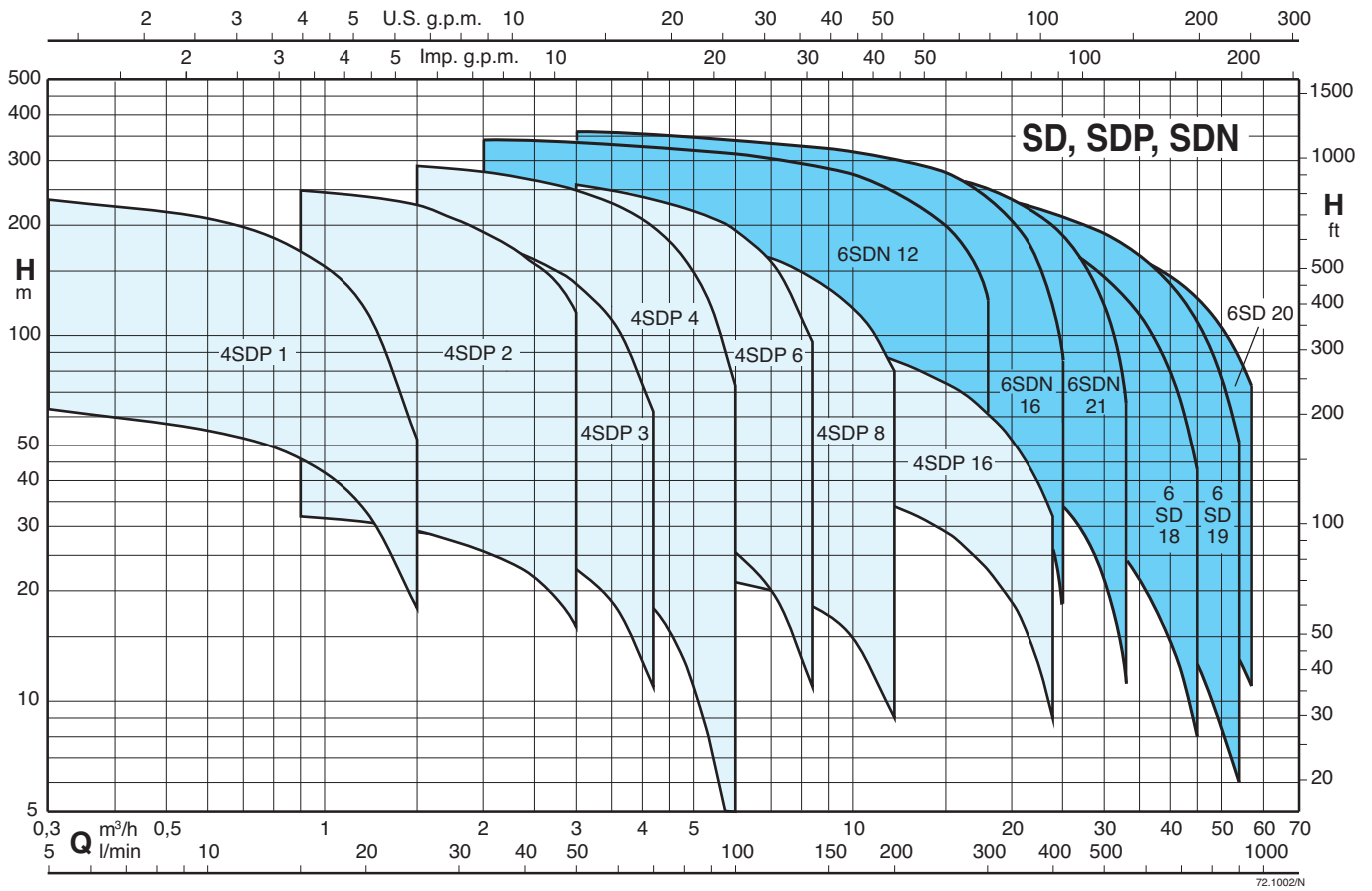
Series _____

Single-phase motor (up to max. 2,2 kW) _____

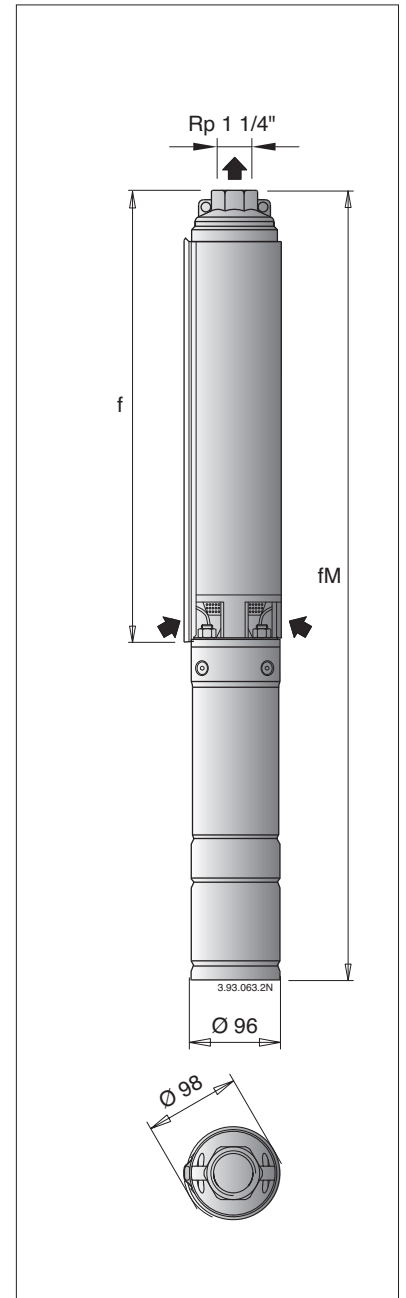
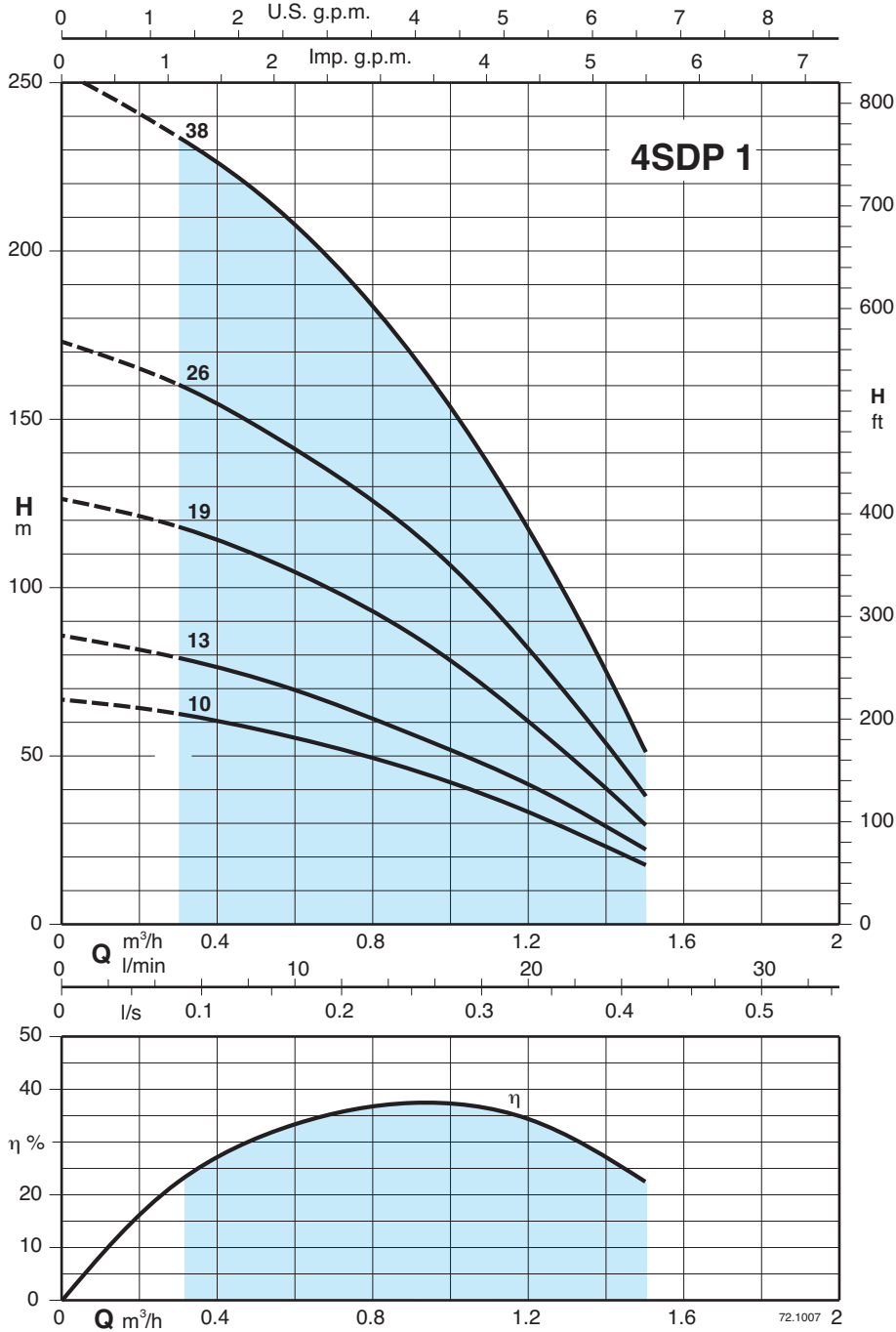
Stage identification _____

Number of stages _____

Coverage chart $n \approx 2900$ rpm



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



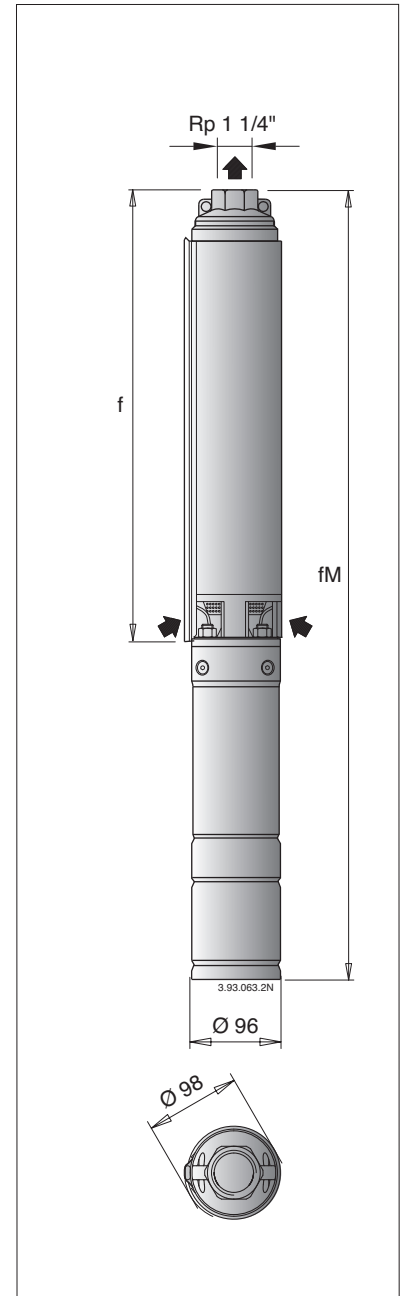
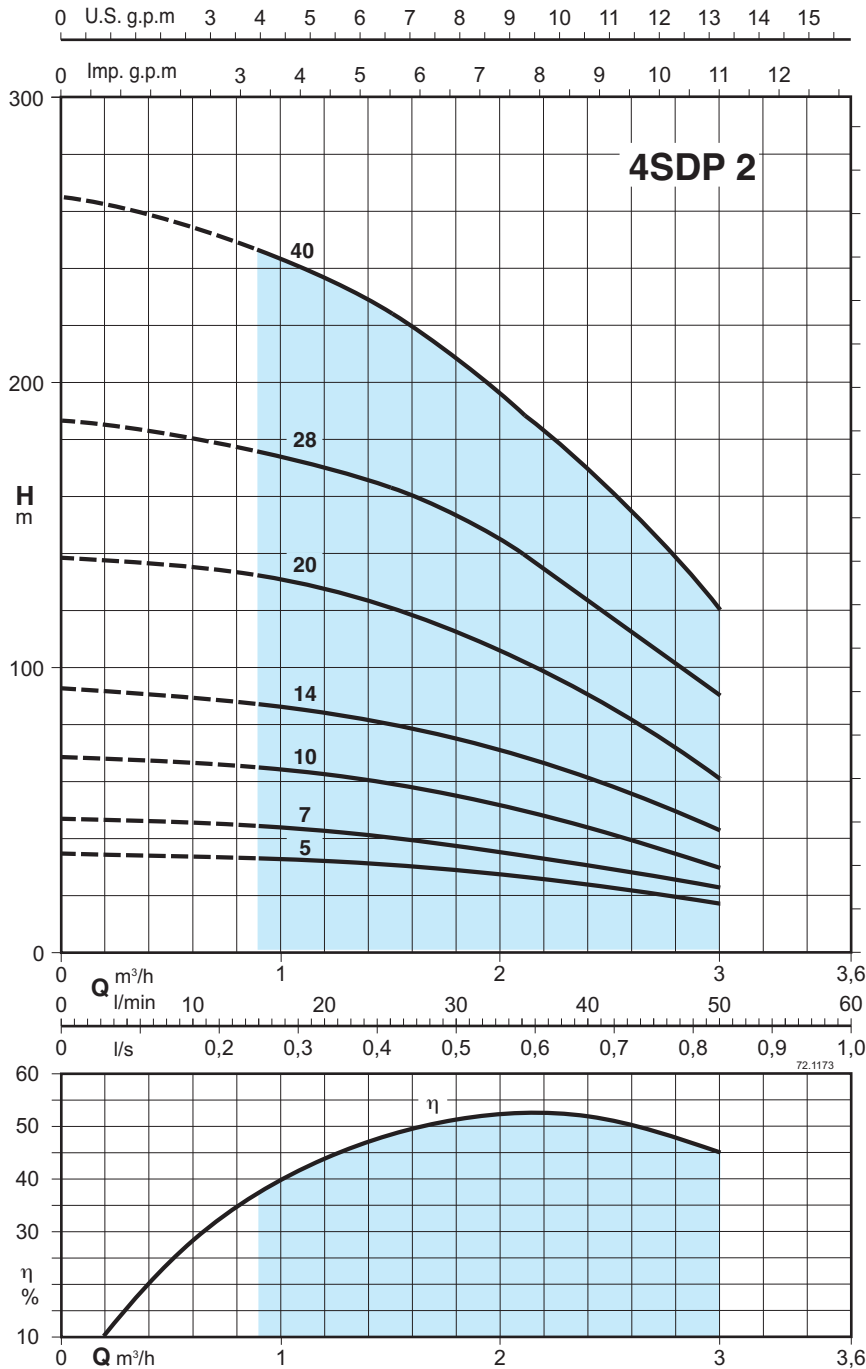
	3~ 400 V (380-415) 50 Hz		1~ 230V		Capacitor P ₁			P ₂			Q	n \approx 2900 rpm						
	A		A	μ F	kW	kW	HP	m³/h										
	l/min	0	0,3	0,6	0,9	1,2	1,5	0	5	10		15	20	25				
4SDP 1/10C	1,2	4SDPM 1/10C	3,2	16	0,71	0,37	0,5	H m	67	63	55	46	33	18				
4SDP 1/13C	1,2	4SDPM 1/13C	3,2	16	0,71	0,37	0,5		86	78	70	56	42	23				
4SDP 1/19C	1,5	4SDPM 1/19C	4	25	0,91	0,55	0,75		126	118	105	86	60	30				
4SDP 1/26C	2,2	4SDPM 1/26C	5,6	30	1,24	0,75	1		173	160	141	117	81	39				
4SDP 1/38C	2,8	4SDPM 1/38C	8	40	1,71	1,1	1,5		253	234	208	169	117	52				

f	4SDP		4SDPM	
	fM	kg	fM	kg
324	651	11	651	10,9
377	704	11,4	704	11,3
481	808	12,4	843	14,1
642	989	14,5	1004	15,2
864	1226	18,7	1266	19,9

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

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



3~	400 V (380-415) 50 Hz A	1~	230V [*] Capacitor P ₁ 450 Vc			P ₂		Q	n \approx 2900 rpm													
			A	μ F	kW	kW	HP		m ³ /h	0	0,9	1,2	1,5	1,8	2,1	2,4	2,7	3				
4SDP 2/5C	1,2	4SDPM 2/5C	3,2	16	0,71	0,37	0,5	H m	34	32	31	29	27	25	23	19	16					
4SDP 2/7C	1,2	4SDPM 2/7C	3,2	16	0,71	0,37	0,5		46	43	42	39	36	33	29	26	22					
4SDP 2/10C	1,5	4SDPM 2/10C	4	25	0,91	0,55	0,75		67	64	61	58	54	49	43	36	28					
4SDP 2/14C	2,2	4SDPM 2/14C	5,6	30	1,24	0,75	1		92	86	83	79	74	67	60	52	42					
4SDP 2/20C	2,8	4SDPM 2/20C	8	40	1,71	1,1	1,5		139	131	127	120	111	101	90	75	60					
4SDP 2/28C	3,5	4SDPM 2/28C	10,8	60	2,33	1,5	2		189	178	172	164	153	140	126	108	90					
4SDP 2/40C	5,5	4SDPM 2/40C	14,7	70	3,25	2,2	3		265	247	237	224	208	189	170	147	120					

f	4SDP			4SDPM	
	fM	kg	fM	kg	
236	563	10,2	563	10,1	
271	598	10,5	598	10,4	
324	651	11	686	12,7	
394	741	12,6	756	13,3	
499	861	14,4	901	15,6	
680	1082	17,7	1127	19,3	
885	1287	21	1402	25	

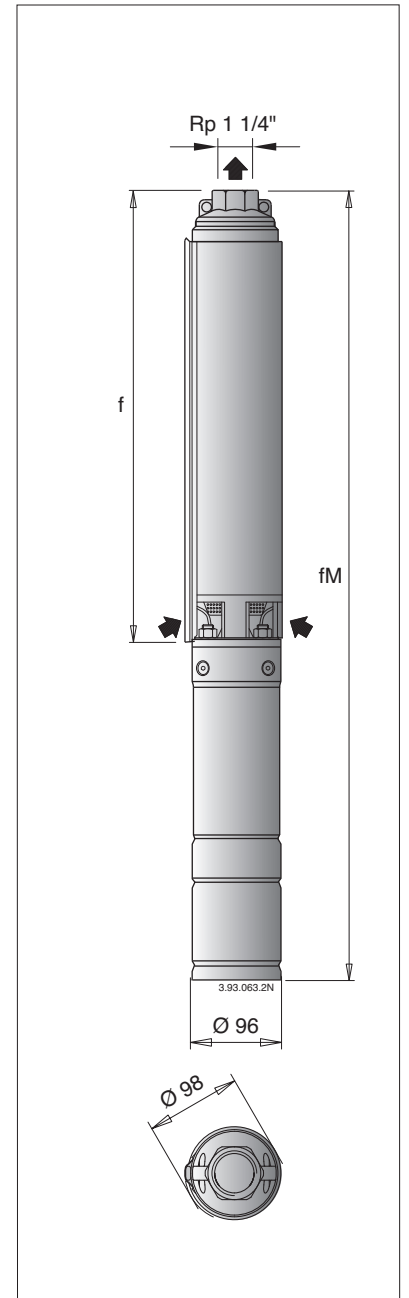
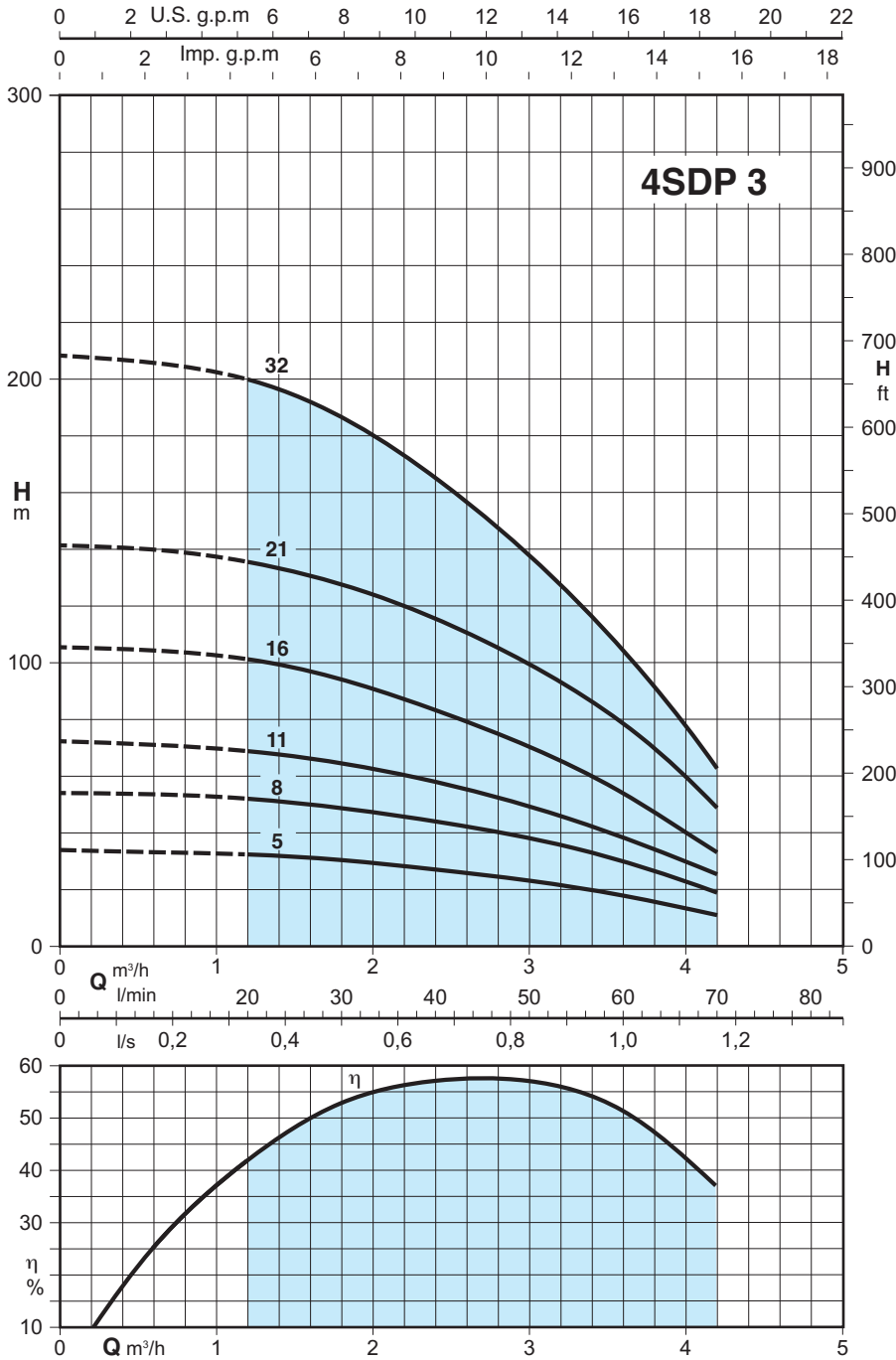
P₁ Max. power input

P₂ Rated motor power output

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

Tolerances according to UNI EN ISO 9906:2012

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



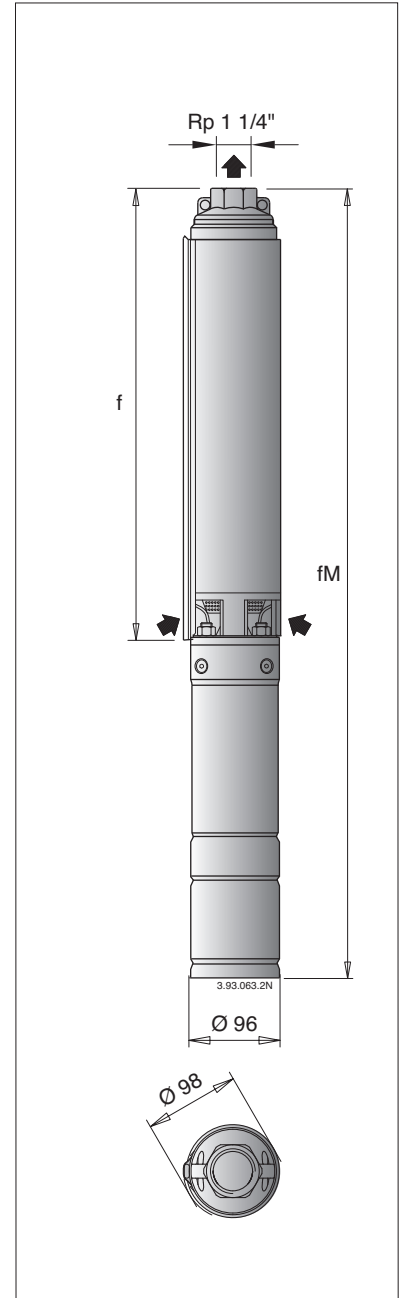
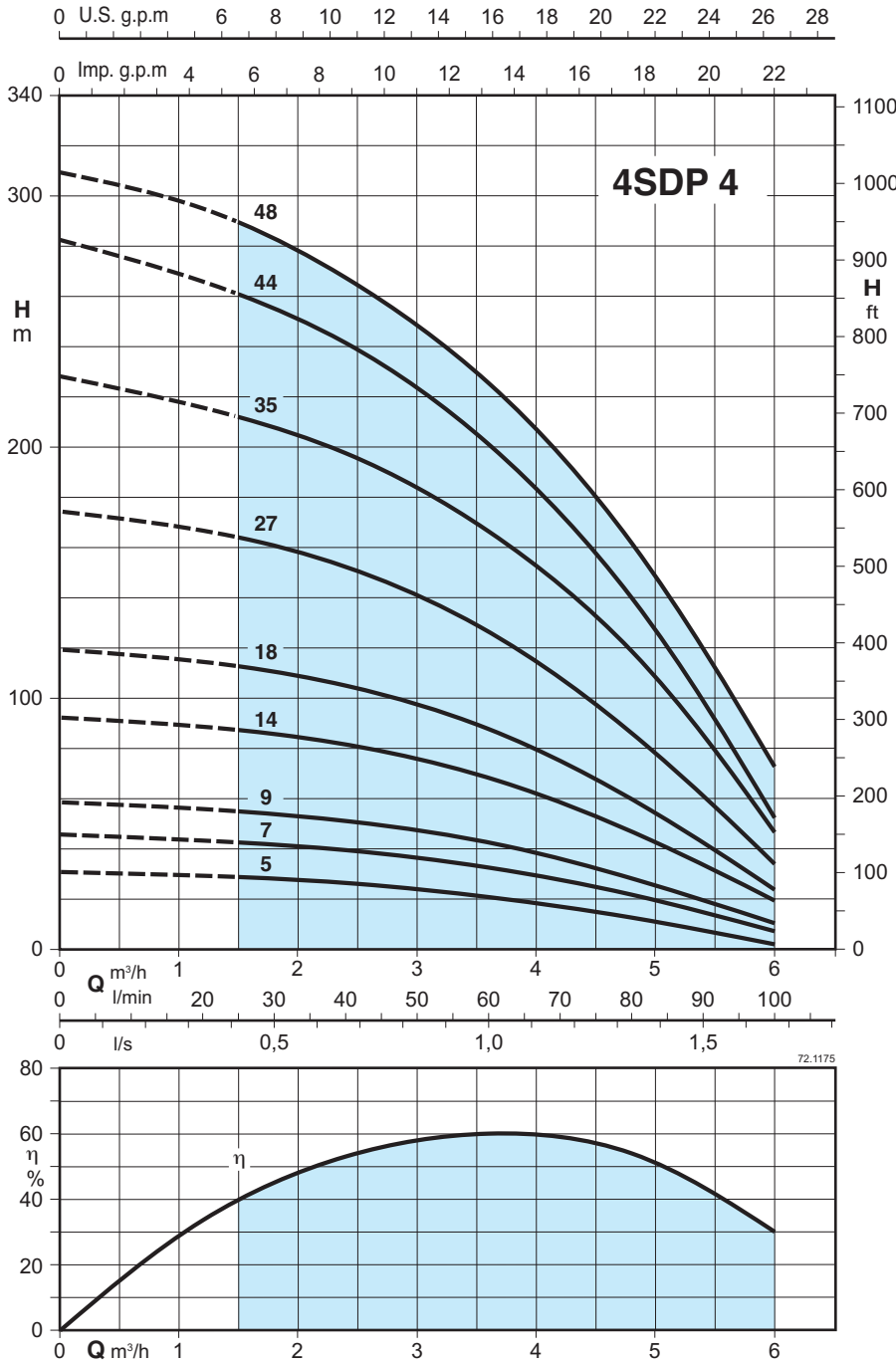
	400 V (380-415) 50 Hz		230V * Capacitor P1				P2		Q m³/h l/min	n ≈ 2900 rpm										
	3~		1~		450 Vc		kW HP			H m										
	A		A	μF	kW	kW	HP	0		1,2	1,5	1,8	2,1	2,4	2,7	3	3,6	4,2		
4SDP 3/5C	1,2	4SDPM 3/5C	3,2	16	0,71	0,37	0,5	34	32	31	30	29	27	25	23	18	11			
4SDP 3/8C	1,5	4SDPM 3/8C	4	25	0,91	0,55	0,75	54	51	50	49	46	43	41	38	30	19			
4SDP 3/11C	2,2	4SDPM 3/11C	5,6	30	1,24	0,75	1	72	68	66	64	61	58	54	49	38	26			
4SDP 3/16C	2,8	4SDPM 3/16C	8	40	1,71	1,1	1,5	106	101	98	95	89	83	77	70	54	33			
4SDP 3/21C	3,7	4SDPM 3/21C	10,8	60	2,33	1,5	2	142	135	132	127	122	115	108	100	79	49			
4SDP 3/32C	5,5	4SDPM 3/32C	14,7	70	3,25	2,2	3	208	200	194	187	177	165	152	138	104	62			

f	4SDP		4SDPM	
	fM	kg	fM	kg
236	563	10,2	563	10,1
289	616	10,6	651	12,3
342	689	12,1	704	12,8
430	792	13,7	832	14,9
519	921	15,8	966	17,4
787	1189	19,8	1304	23,8

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

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



3~	400 V (380-415) 50 Hz A	1~	230V Capacitor P1				P2		Q m³/h l/min	n ≈ 2900 rpm										
			450 Vc				kW	HP		H m										
			A	μF	kW	HP				0	1,5	1,8	2,1	2,4	3	3,6	4,2	4,8	6	
4SDP 4/5C	1,2	4SDPM 4/5C	3,2	16	0,71	0,37	0,5	33	29	28	27	26	24	21	18	13	3			
4SDP 4/7C	1,5	4SDPM 4/7C	4	25	0,91	0,55	0,75	46	43	42	41	39	36	33	28	22	7			
4SDP 4/9C	2,2	4SDPM 4/9C	5,6	30	1,24	0,75	1	59	55	54	52	51	47	43	37	28	10			
4SDP 4/14C	2,8	4SDPM 4/14C	8	40	1,71	1,1	1,5	93	87	86	83	81	76	68	58	47	20			
4SDP 4/18C	3,7	4SDPM 4/18C	10,8	60	2,33	1,5	2	120	113	111	108	105	98	88	75	60	25			
4SDP 4/27C	5,5	4SDPM 4/27C	14,7	70	3,25	2,2	3	175	164	161	157	152	141	127	109	87	35			
4SDP 4/35C	7,4					3	4	228	212	208	203	197	184	166	145	119	46			
4SDP 4/44C	9,4					4	5,5	282	261	255	249	241	223	201	173	140	52			
4SDP 4/48C	9,4					4	5,5	309	289	283	276	267	248	225	197	162	73			

f	4SDP		4SDPM	
	fM	kg	fM	kg
257	584	10,4	584	10,3
301	628	10,7	663	12,4
344	691	12	706	12,7
452	814	13,6	854	14,8
538	940	15,5	985	17,1
805	1207	18,9	1322	22,9
972	1453	23,8		
1166	1712	28,5		
1291	1837	29,1		

P1 Max. power input P2 Rated motor power output * Only for single-phase motor 230 V - 50 Hz (on request)

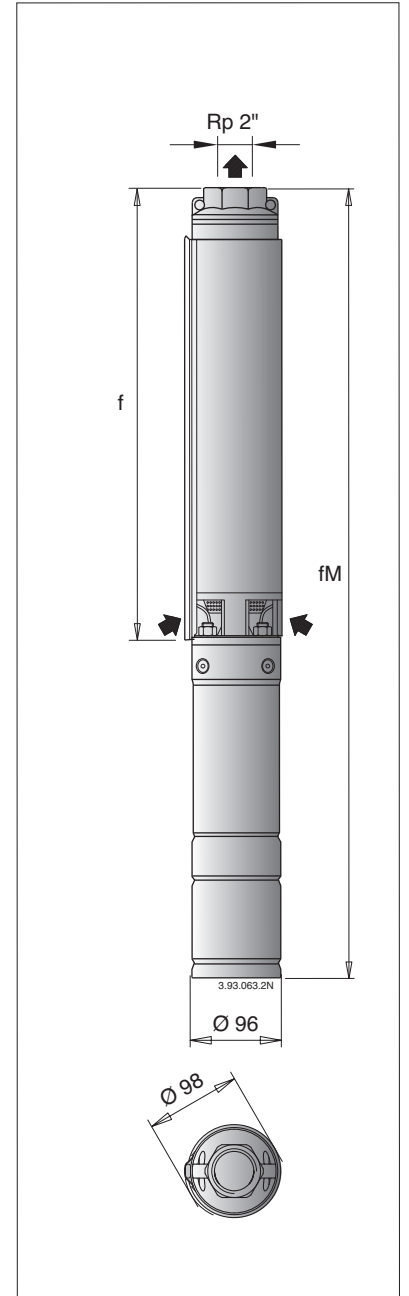
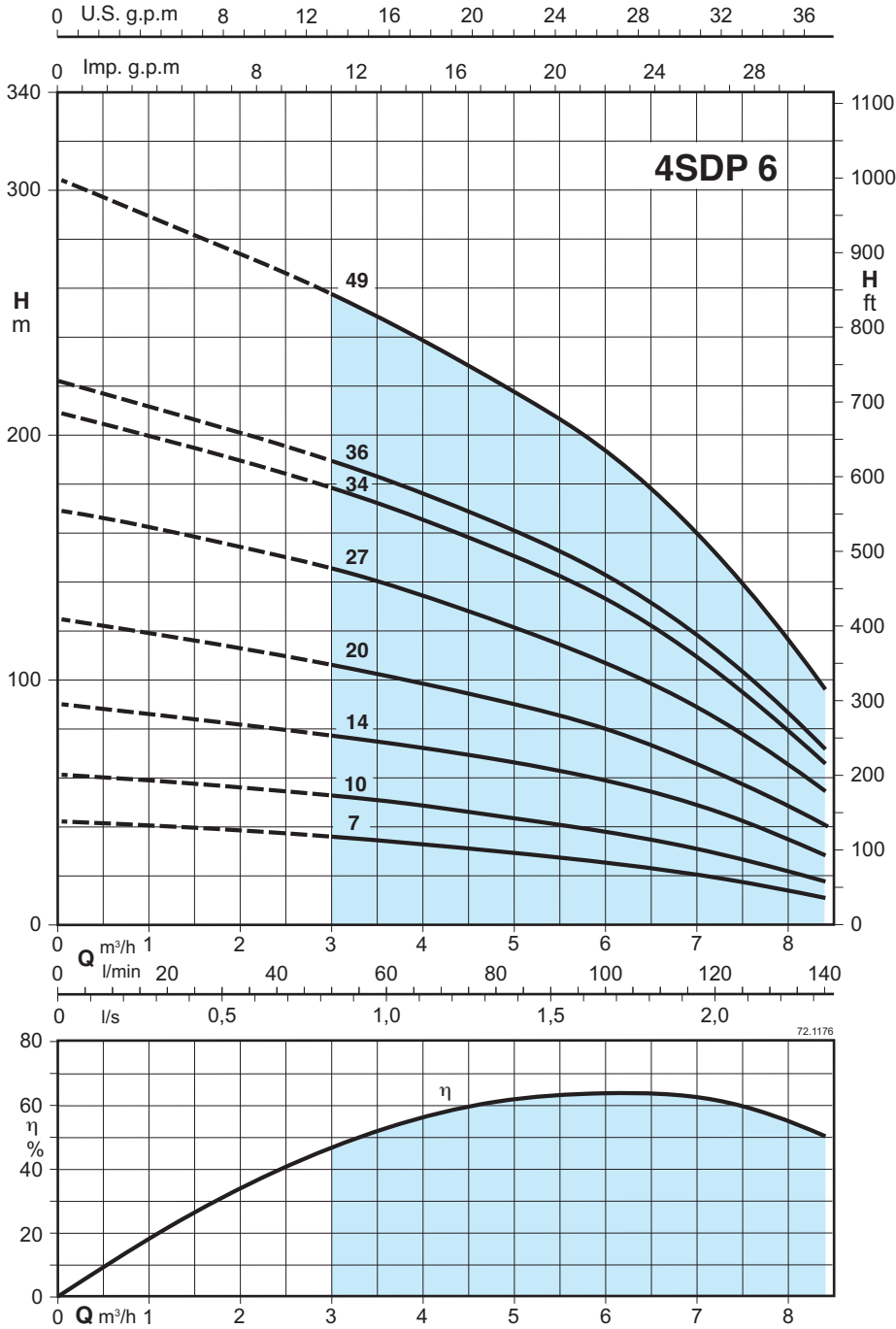
Tolerances according to UNI EN ISO 9906:2012

4SDP 6

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 P ₁		P ₂		Q	n \approx 2900 rpm											
	A		450 Vc		kW	HP		m³/h		l/min									
	A		A	μ F				kW	HP	0	3	3,6	4,2	4,8	5,4	6	7,2	8,4	
4SDP 6/7C	2,2	4SDPM 6/7C	5,6	30	1,24	0,75	1	42	36	34	32	30	28	25	19	11			
4SDP 6/10C	2,8	4SDPM 6/10C	8	40	1,71	1,1	1,5	62	53	51	48	45	41	38	29	18			
4SDP 6/14C	3,7	4SDPM 6/14C	10,8	60	2,33	1,5	2	90	77	74	71	68	63	59	46	28			
4SDP 6/20C	5,5	4SDPM 6/20C	14,7	70	3,25	2,2	3	125	107	102	97	92	86	80	62	40			
4SDP 6/27C	7,4					3	4	169	145	139	131	123	115	107	84	55			
4SDP 6/34C	9,4					4	5,5	208	178	170	162	153	143	132	103	66			
4SDP 6/36C	9,4					4	5,5	221	190	181	173	164	154	143	112	72			
4SDP 6/49C	13					5,5	7,5	302	257	246	234	222	209	193	151	96			

f	4SDP			4SDPM	
	fM	kg	fM	kg	
390	737	12,4	752	13,1	
483	845	14,1	885	15,3	
607	1009	16,5	1054	18,1	
831	1233	19,2	1348	23,2	
1086	1567	25,5			
1295	1841	30,8			
1356	1902	31,4			
1840	2486	39,9			

P₁ Max. power input P₂ Rated motor power output * Only for single-phase motor 230 V - 50 Hz (on request)

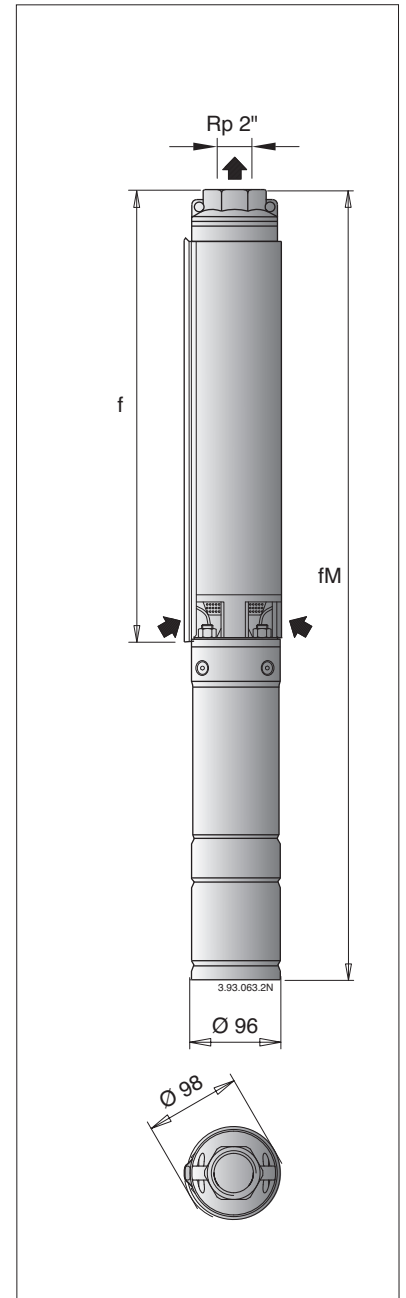
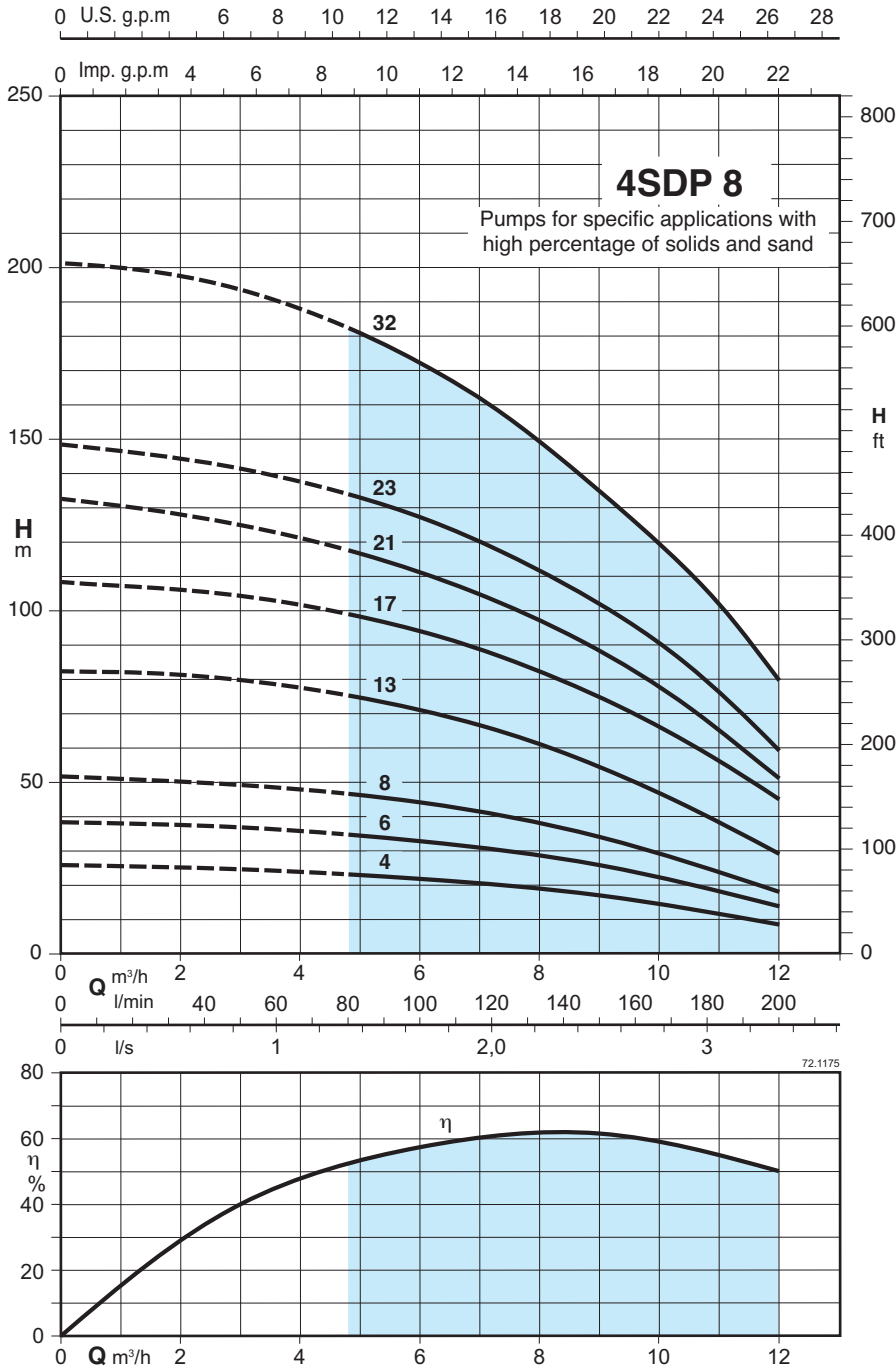
Tolerances according to UNI EN ISO 9906:2012

4SDP 8

Submersible borehole pumps for 4" wells



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



3~	400 V (380-415) 50 Hz A	1~	230V Capacitor P ₁			P ₂			Q m ³ /h l/min	n ≈ 2900 rpm											
			A	μF	kW	kW	HP	0		4,8	5,4	6	7,2	8,4	9,6	10,8	12				
4SDP 8/4C	2,2	4SDPM 8/4C	5,6	30	1,24	0,75	1	H m	26	23	22	21	20	18	16	12	9				
4SDP 8/6C	2,8	4SDPM 8/6C	8	40	1,71	1,1	1,5		38	35	34	33	31	28	24	19	14				
4SDP 8/8C	3,7	4SDPM 8/8C	10,8	60	2,33	1,5	2		52	47	45	44	41	37	31	25	18				
4SDP 8/13C	5,5	4SDPM 8/13C	14,7	70	3,25	2,2	3		82	75	73	71	66	59	50	40	30				
4SDP 8/17C	7,4					3	4		108	98	96	94	87	79	70	58	46				
4SDP 8/21C	9,4					4	5,5		132	117	114	111	103	93	82	68	52				
4SDP 8/23C	9,4					4	5,5		148	134	131	127	118	108	95	79	60				
4SDP 8/32C	13					5,5	7,5		202	182	178	172	160	143	125	105	80				

f	4SDP		4SDPM	
	fM	kg	fM	kg
294	641	11,5	656	12,2
356	718	12,9	758	14,1
418	820	14,8	865	16,4
573	975	17,2	1090	21,2
697	1178	21,5		
859	1405	26		
959	1505	27,6		
1276	1922	35		

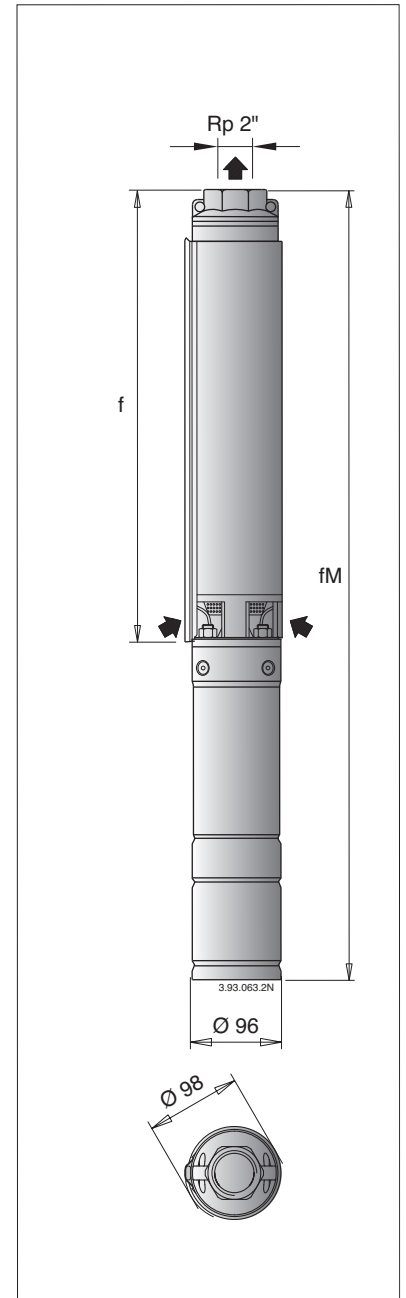
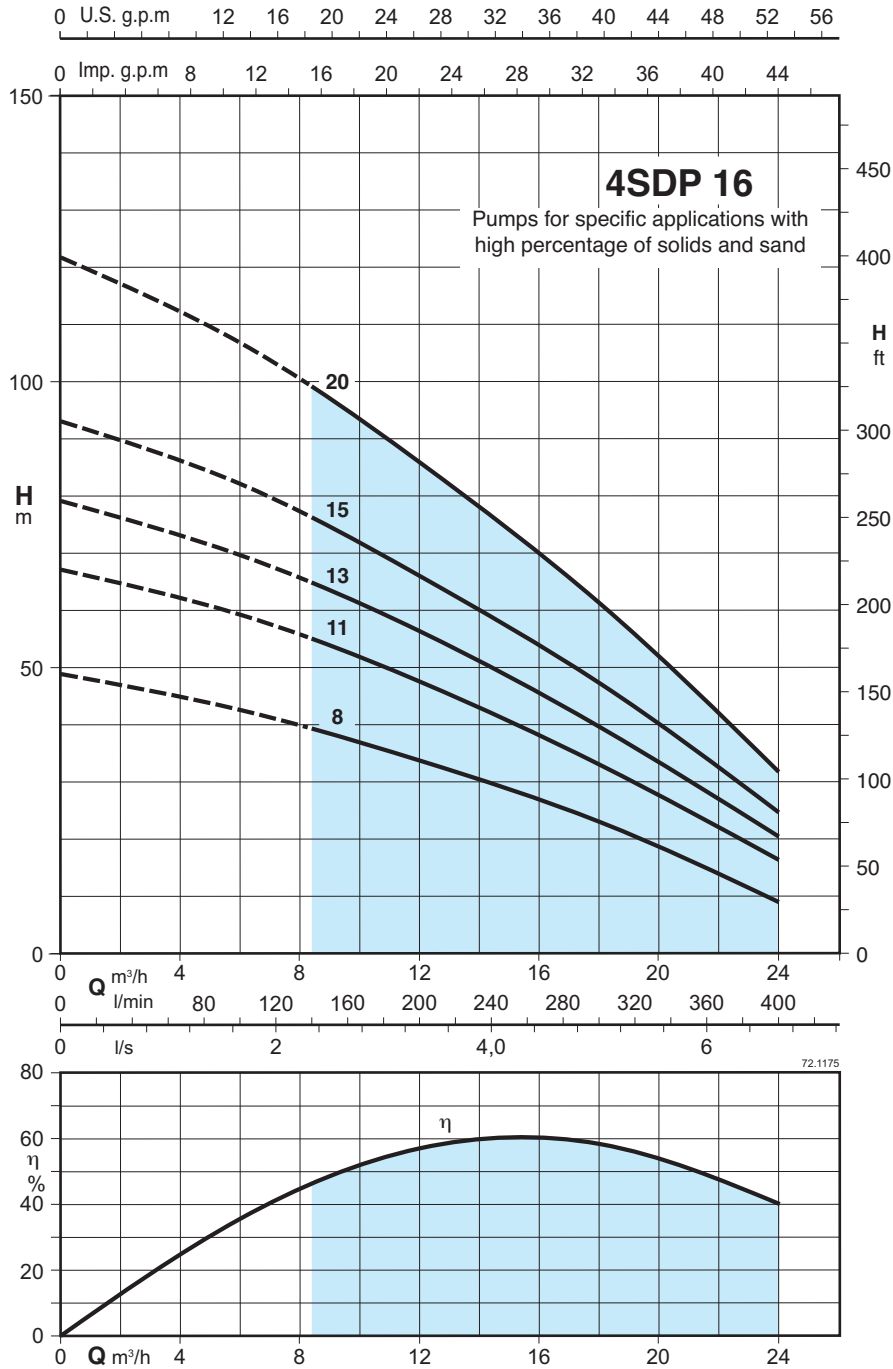
P₁ Max. power input P₂ Rated motor power output * Only for single-phase motor 230 V - 50 Hz (on request)

Tolerances according to UNI EN ISO 9906:2012

4SDP 16 Submersible borehole pumps for 4" wells



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	P1 kW	P2		Q m³/h l/min	n ≈ 2900 rpm															
					kW	HP		0	8,4	9,6	10,8	12	13,2	15,6	18	21,6	24						
4SDP 16/8C	5,5	4SDPM 16/8C	14,7	70	3,25	2,2	3	H m	49	39	38	36	34	32	28	23	15	9					
4SDP 16/11C	7,4					3	4		67	55	53	50	48	45	39	33	23	16					
4SDP 16/13C	9,4					4	5,5		79	65	62	59	56	53	47	40	28	20					
4SDP 16/15C	9,4					4	5,5		93	76	73	70	66	62	55	47	34	25					
4SDP 16/20C	13					5,5	7,5		122	99	95	90	86	81	72	61	44	32					

f	4SDP		4SDPM	
	fM	kg	fM	kg
676	1078	18	1193	22
880	1361	23		
1013	1559	27,5		
1149	1695	28,7		
1489	2135	36,5		

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