



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.

Operating conditions motor

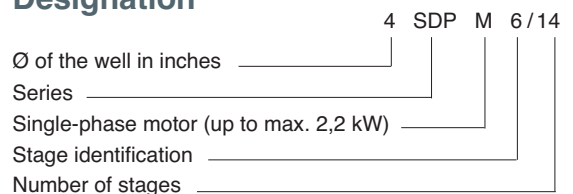
Motor	Max. Liquid temperature	Cooling: minimum flow velocity	Max. starts per hour	Motor P2
4CS-R	35 °C	0,08 m/s	20	all types
6CS-R	30 °C	0,1 m/s	15	4÷11 kW
		0,2 m/s	15	13÷15 kW
	25 °C	0,2 m/s	15	18,5 kW
		0,2 m/s	13	22÷30 kW

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



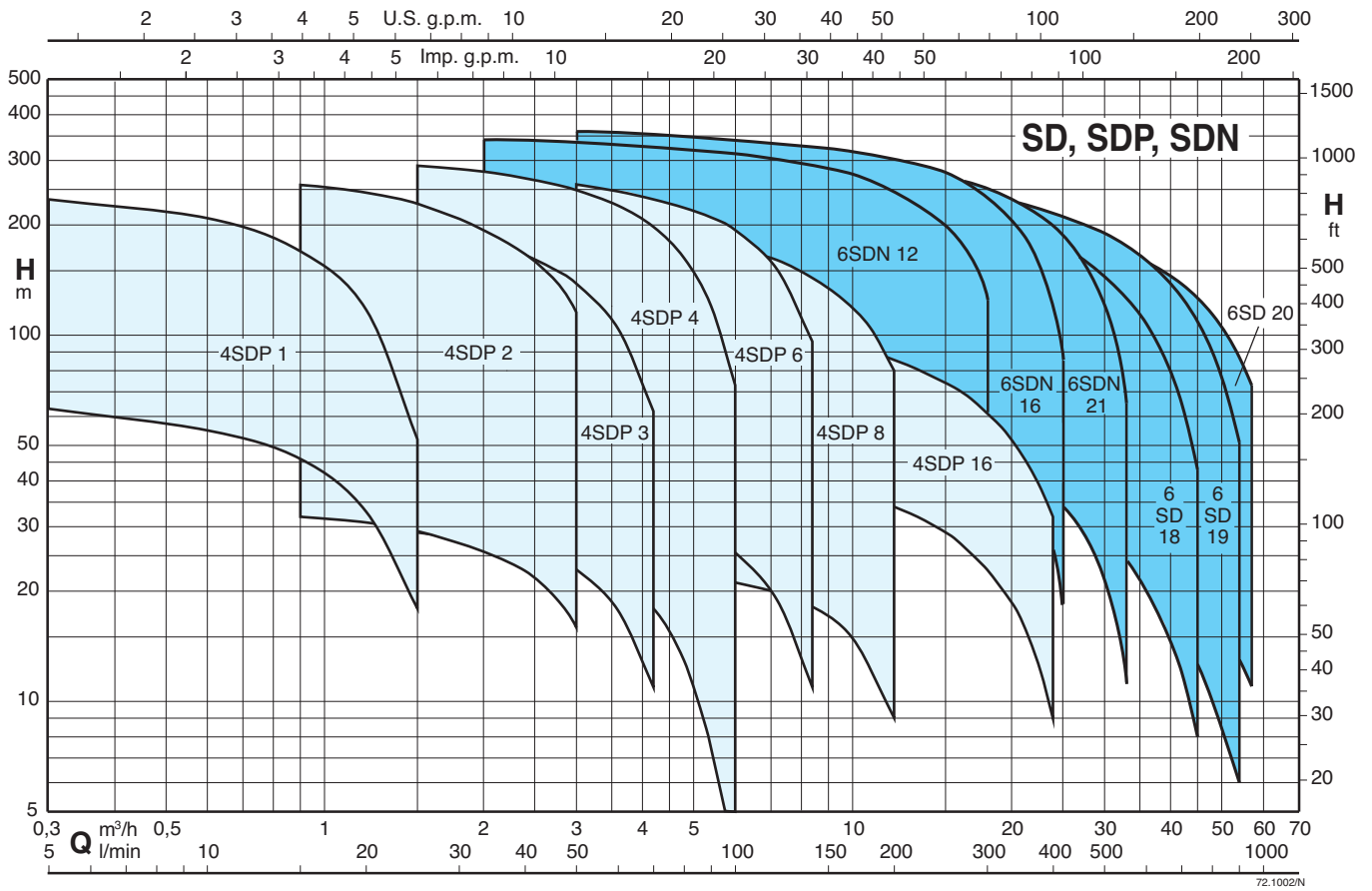
Materials

Pump Components	4SDP	6SD, 6SDN
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

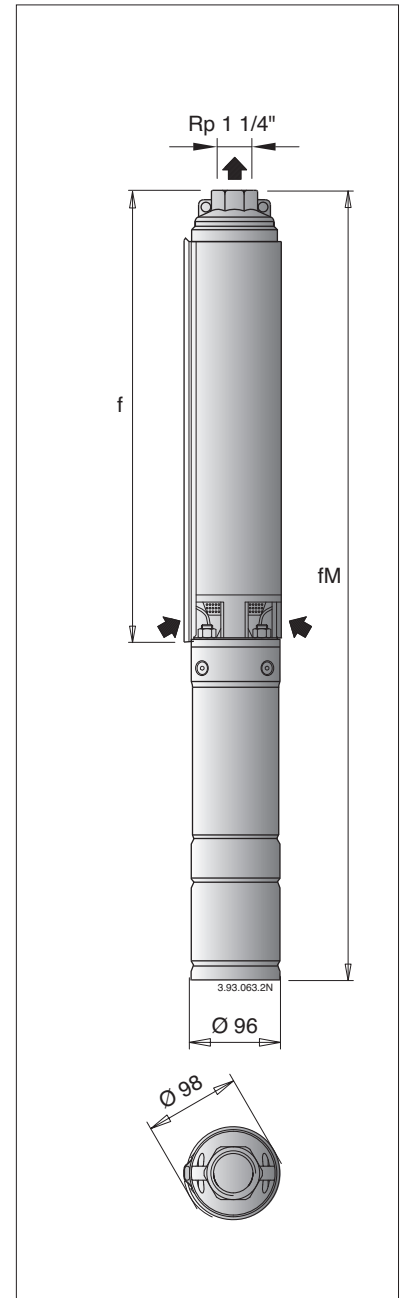
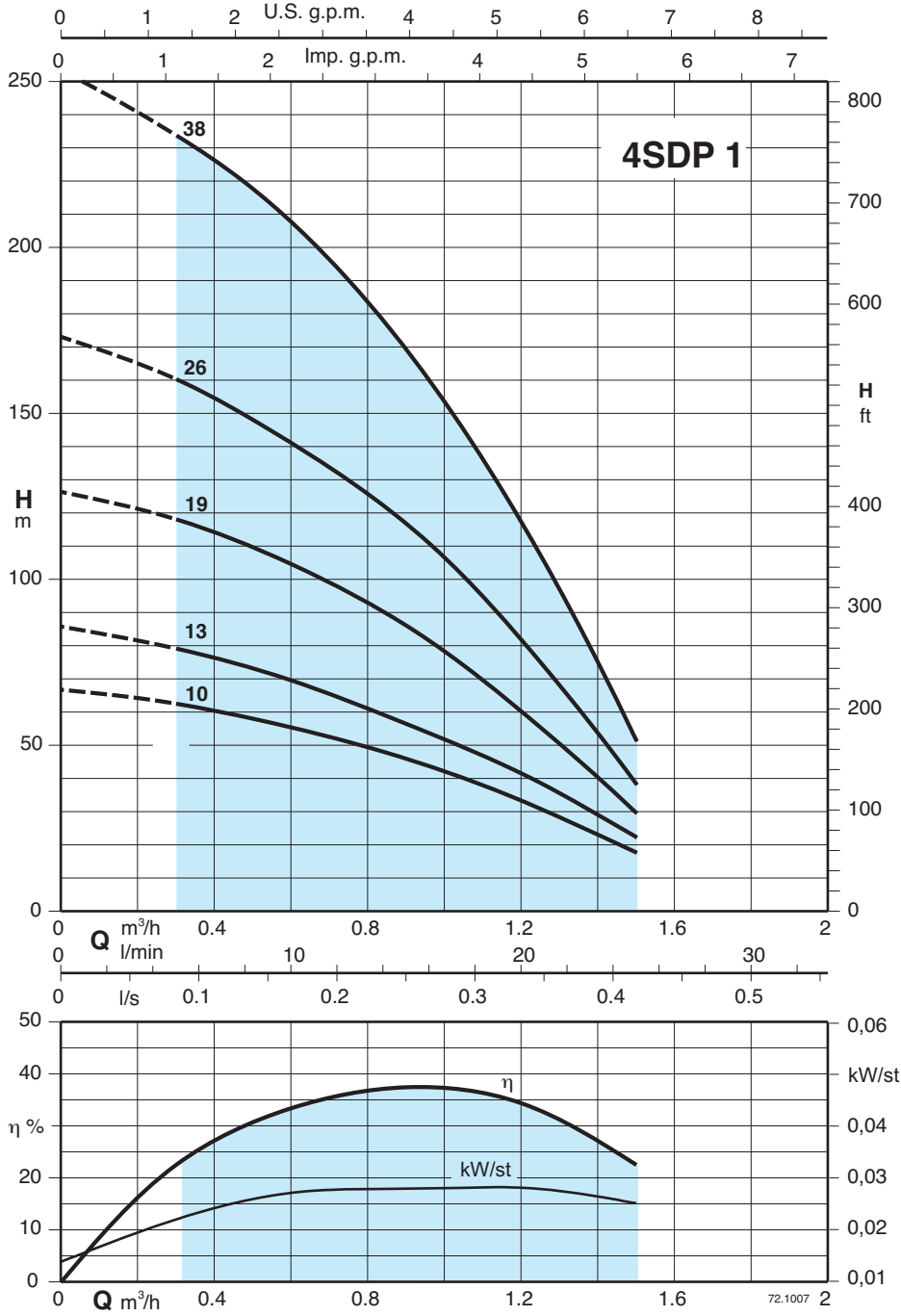
* Trademark of General Electric

Motor Components	4CS-R	6CS-R
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

Coverage chart $n \approx 2900$ rpm



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



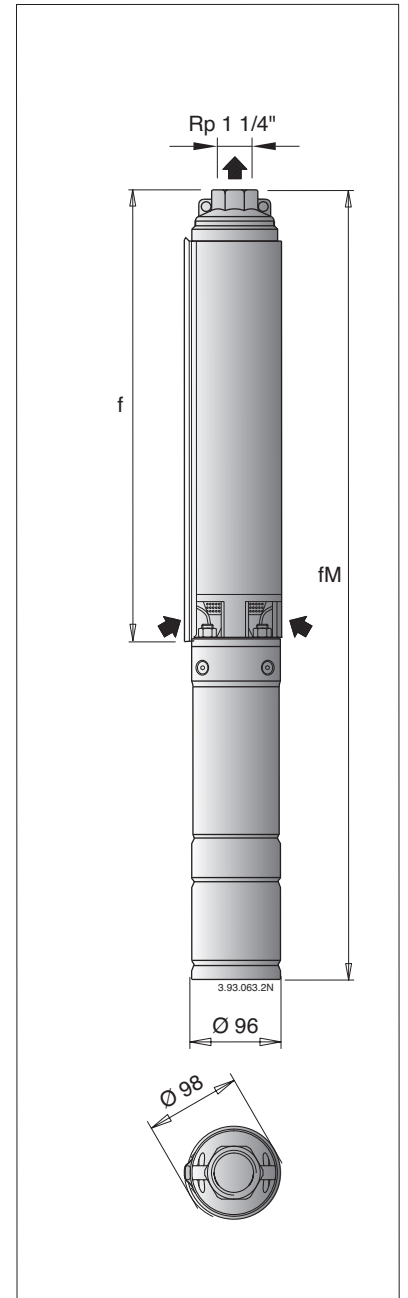
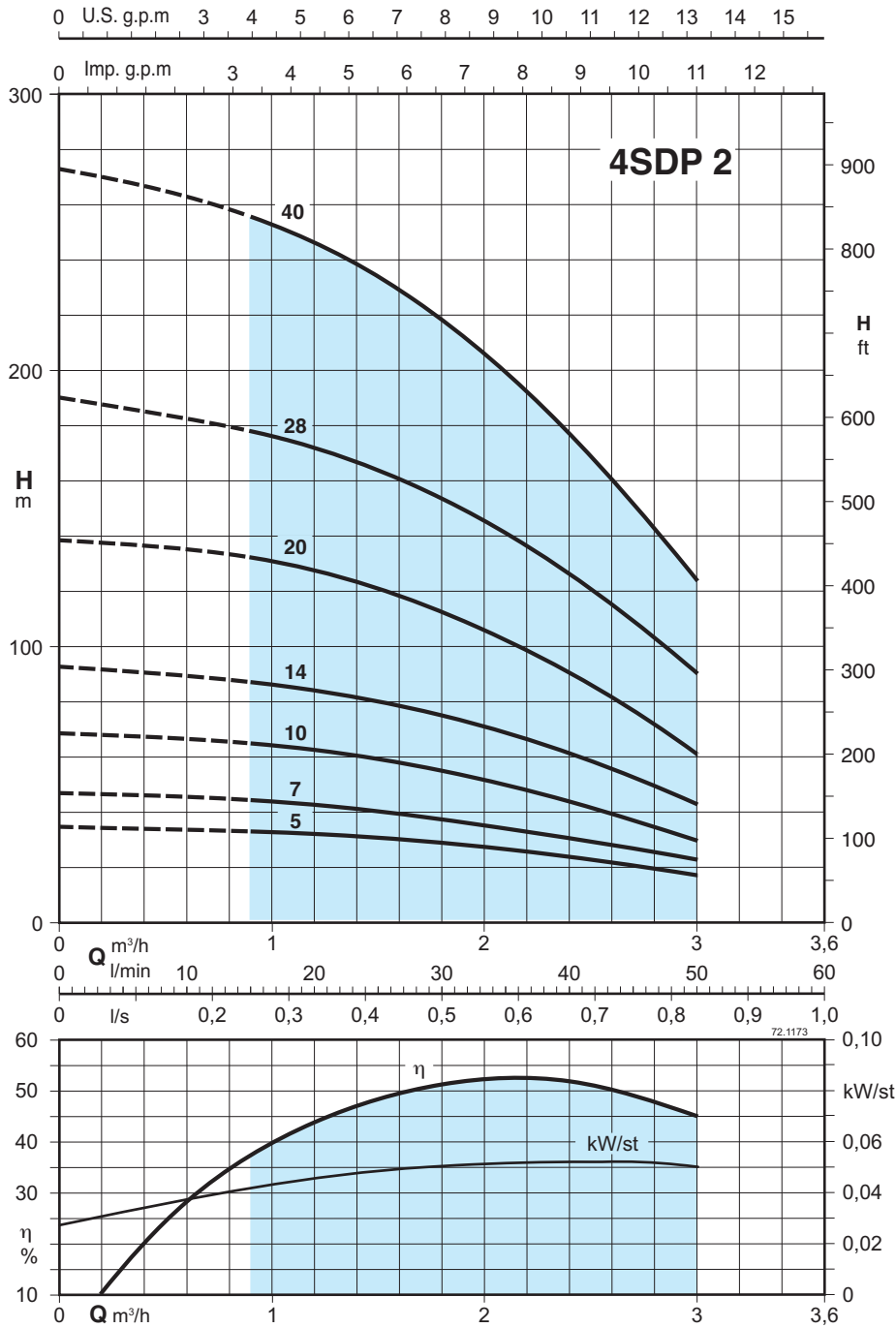
	3~ 400 V (380-415) 50 Hz		1~ 230V Cap* P ₁ P ₂				Q		n ≈ 2900 rpm									
	A		A	μF	kW	kW	HP	m³/h										
								l/min	0	0,3	0,6	0,9	1,2	1,5				
4SDP 1/10C	1,2	4SDPM 1/10C	3,2	16	0,71	0,37	0,5	H m	67	63	55	46	33	18				
4SDP 1/13C	1,2	4SDPM 1/13C	3,2	16	0,71	0,37	0,5		86	78	70	56	42	23				
4SDP 1/19C	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	1~	230V Capacitor P1			P2			Q	n \approx 2900 rpm											
			A	μ F	kW	kW	HP	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		190	178	172	163	153	141	126	108	89				
4SDP 2/40C	5,5	4SDPM 2/40C	14,7	70	3,25	2,2	3		273	256	246	234	218	199	177	151	123				

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

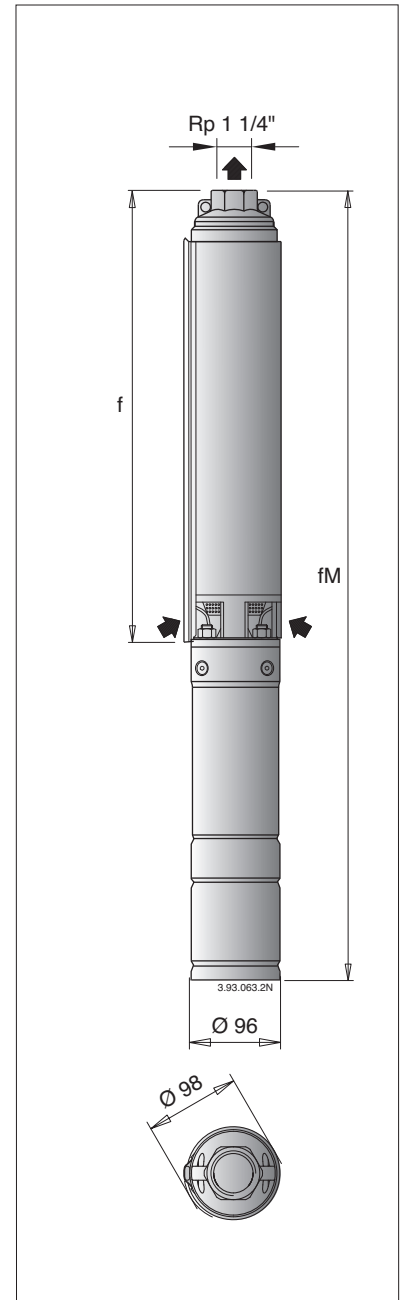
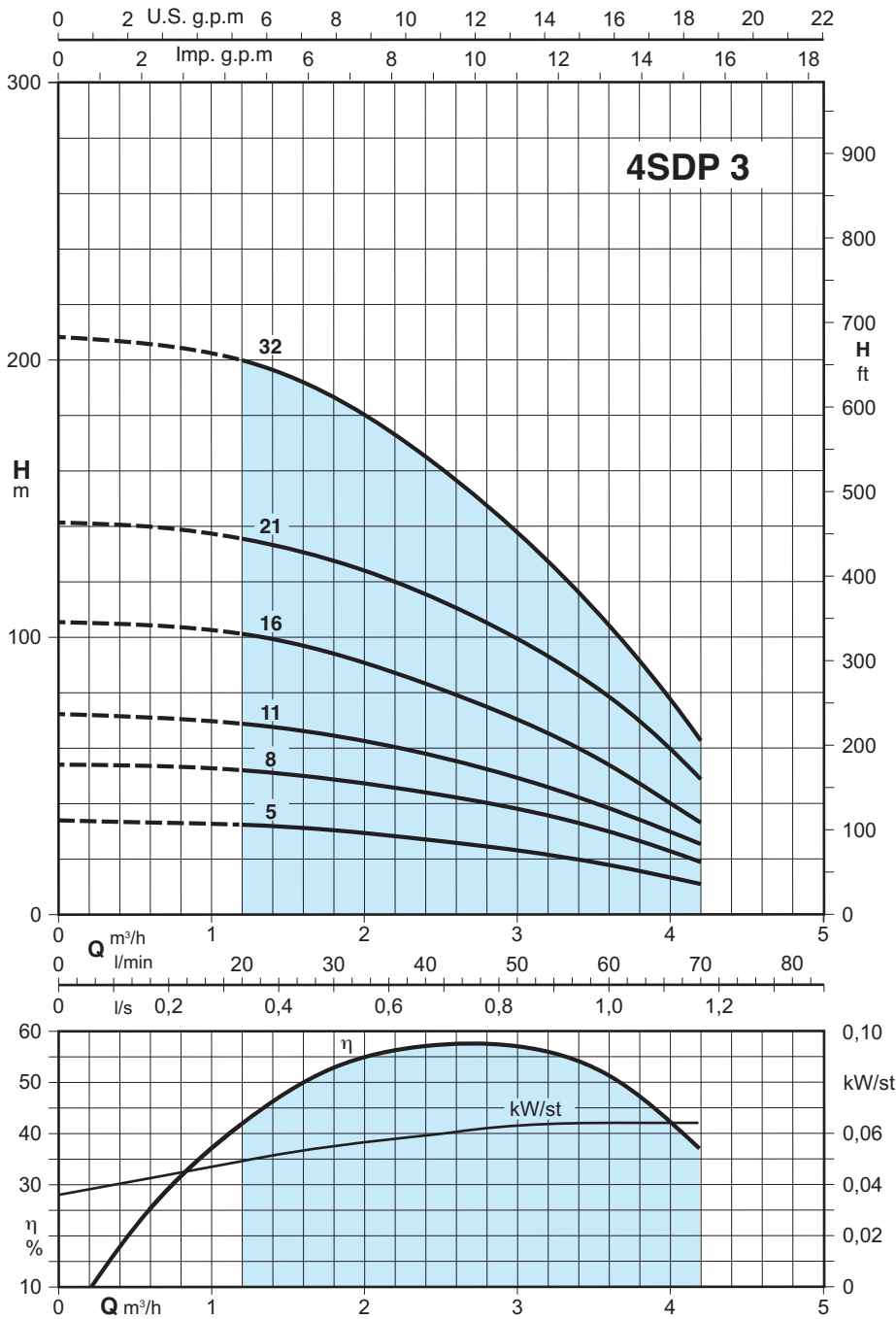
P1 Max. power input

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

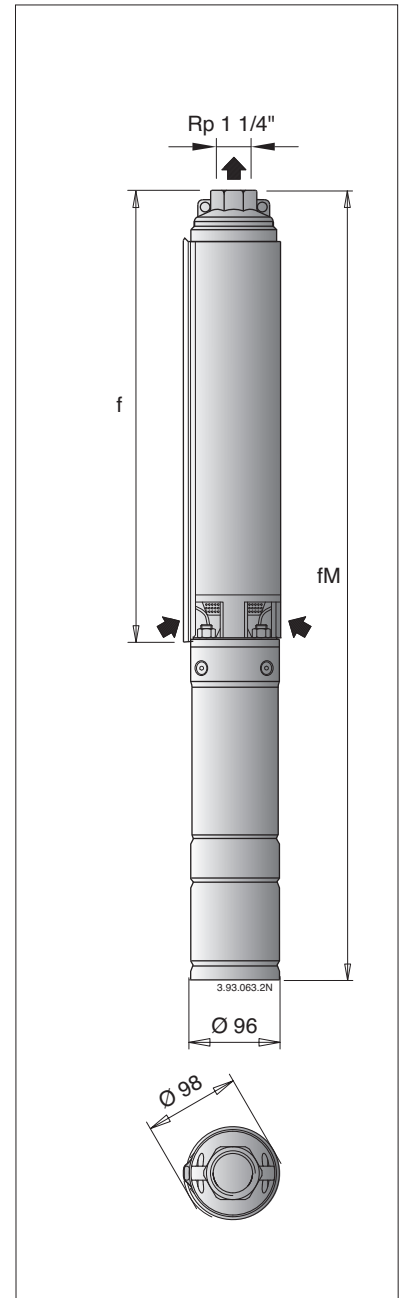
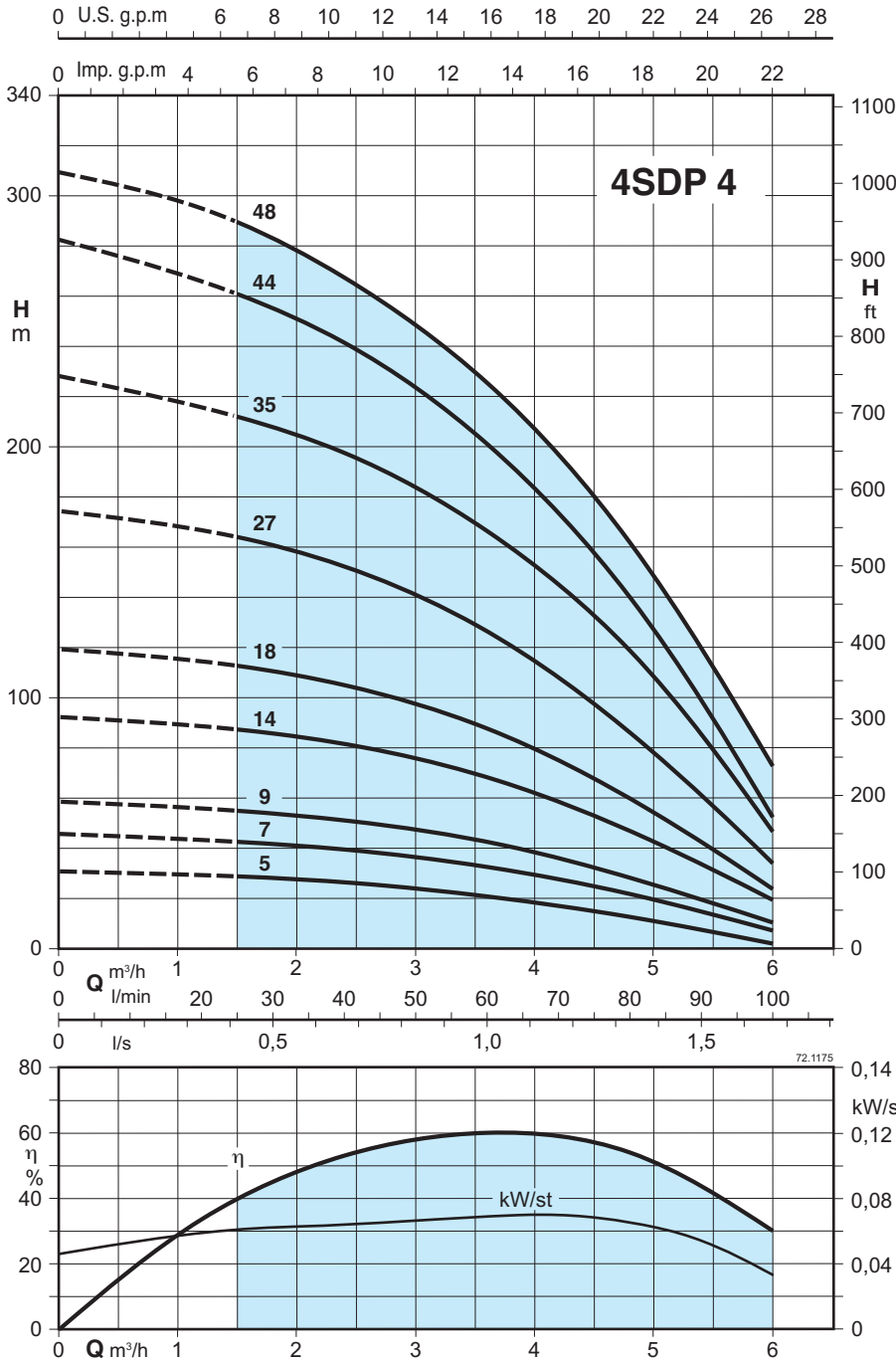


	400 V (380-415) 50 Hz		230V * Capacitor P1 450 Vc				P2		Q m³/h l/min	n ≈ 2900 rpm										
	3~ A	1~ A	A	μF	kW	kW	HP	H m												
								0		1,2	1,5	1,8	2,1	2,4	2,7	3	3,6	4,2		
4SDP 3/5C	1,2	4SDPM 3/5C	3,2	16	0,71	0,37	0,5	34	32	31	30	29	27	25	23	18	11			
4SDP 3/8C	1,5	4SDPM 3/8C	4	25	0,91	0,55	0,75	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 mm	4SDP		4SDPM	
	fM mm	kg	fM mm	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	n ≈ 2900 rpm										
			A	μF	kW	kW	HP	m³/h		n ≈ 2900 rpm										
										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	H m	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)

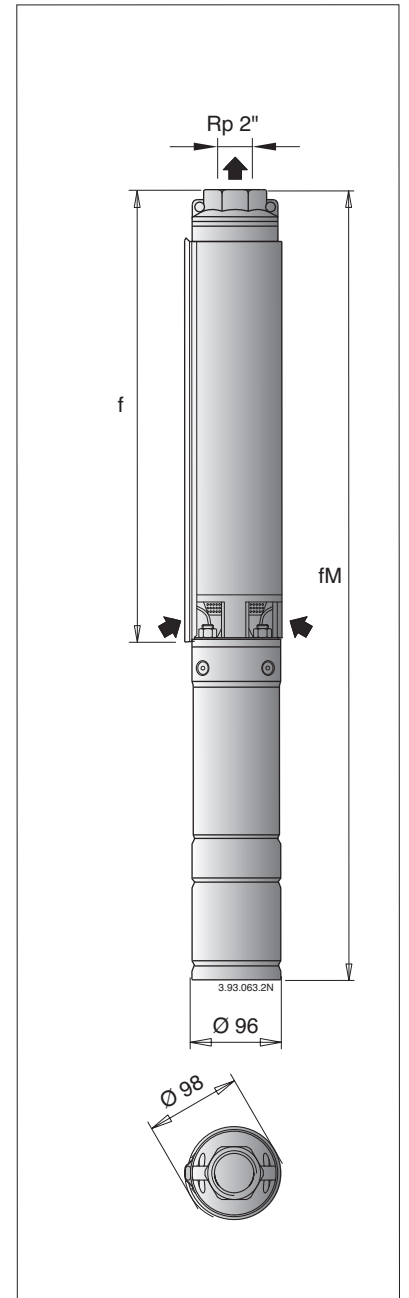
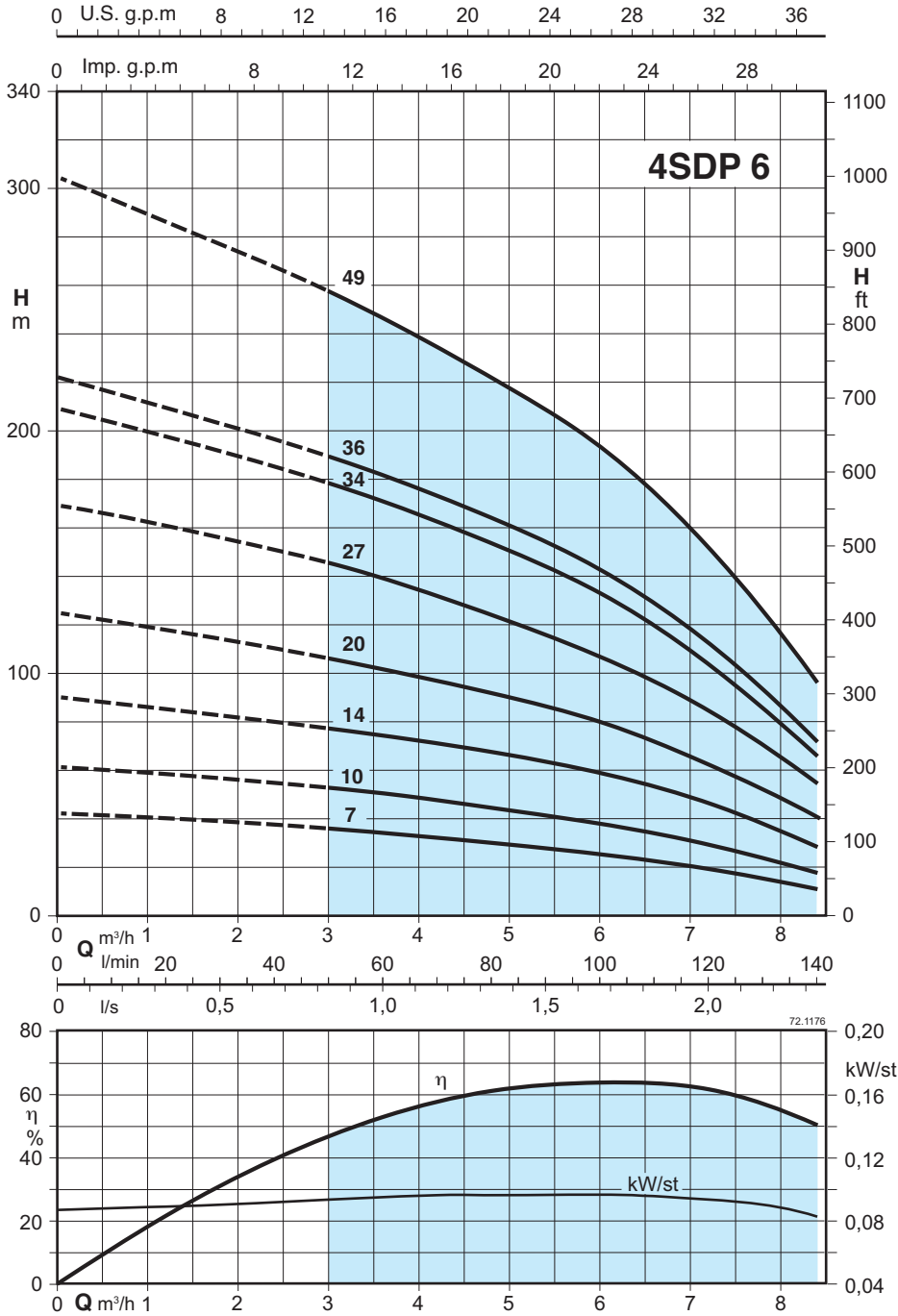
Tolerances according to UNI EN ISO 9906:2012

4SDP 6

Submersible borehole pumps for 4" wells



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



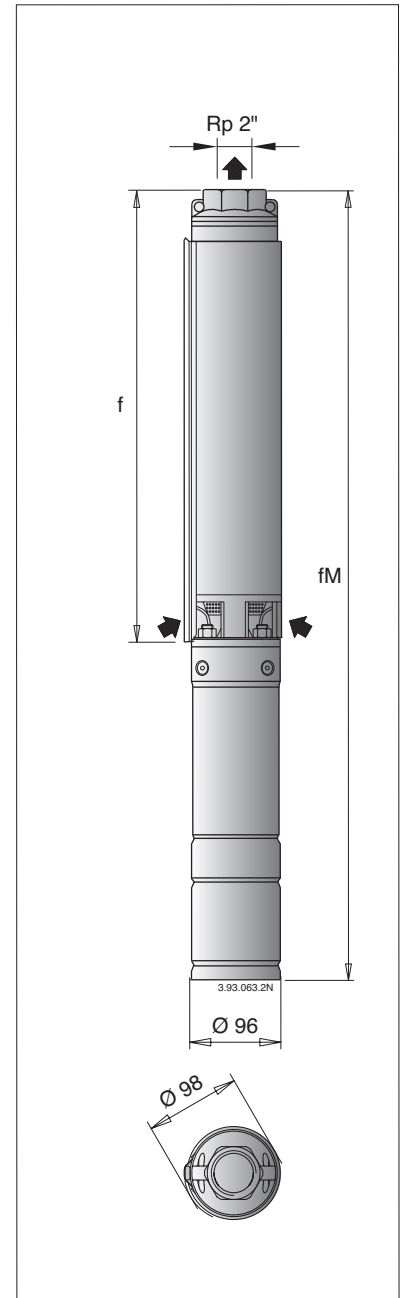
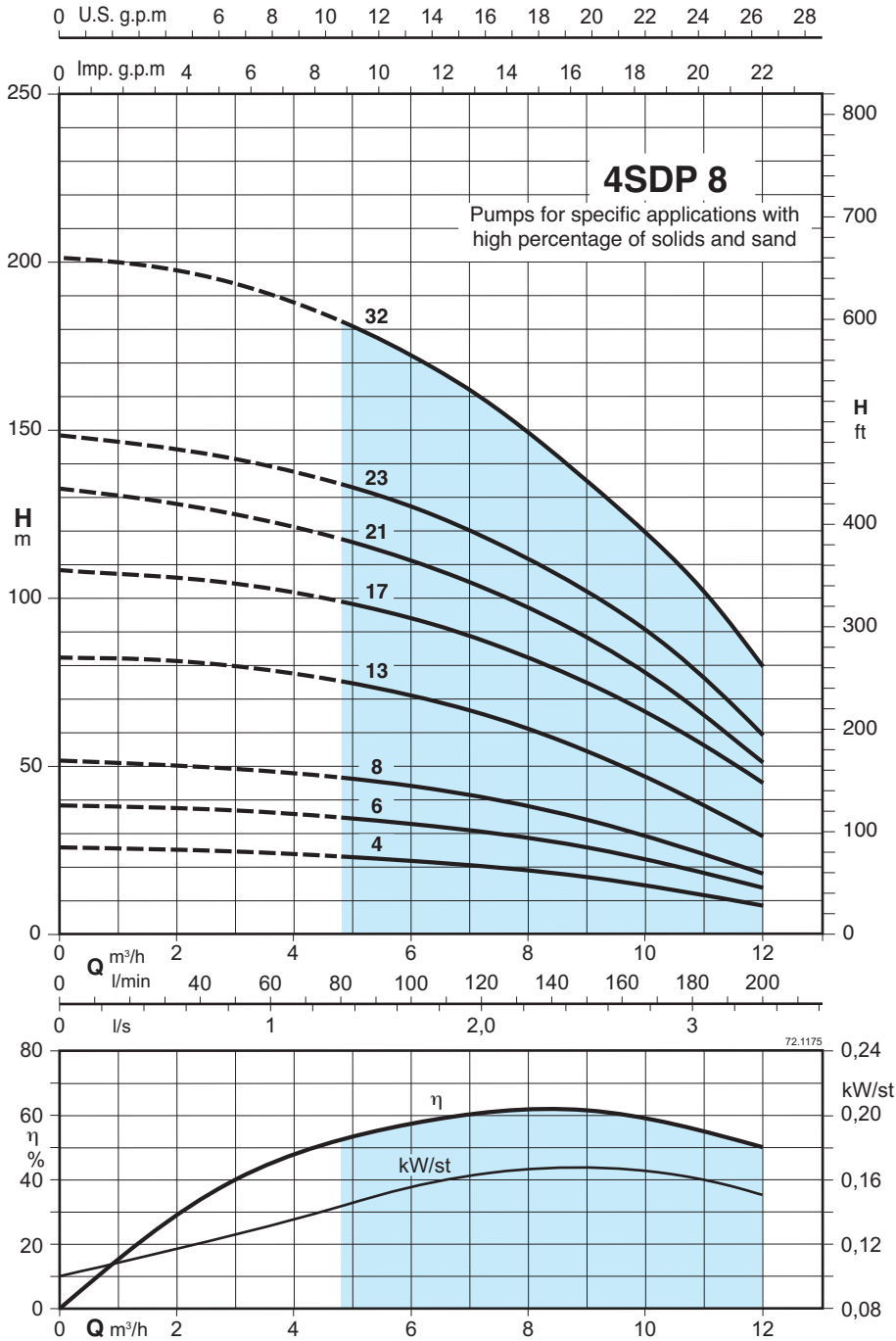
	3~ 400 V (380-415) 50 Hz		1~ 230V Capacitor P ₁		P ₂		Q m ³ /h l/min	n ≈ 2900 rpm										
	A		450 Vc		kW	HP		H m										
	A	μF	μF	kW				0	3	3,6	4,2	4,8	5,4	6	7,2	8,4		
4SDP 6/7C	2,2	4SDPM 6/7C	5,6	30	1,24	0,75	1	42	36	34	32	30	28	25	19	11		
4SDP 6/10C	2,8	4SDPM 6/10C	8	40	1,71	1,1	1,5	62	53	51	48	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

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	n ≈ 2900 rpm											
			A	μF	kW	kW	HP	m³/h		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	
	mm	kg	mm	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		

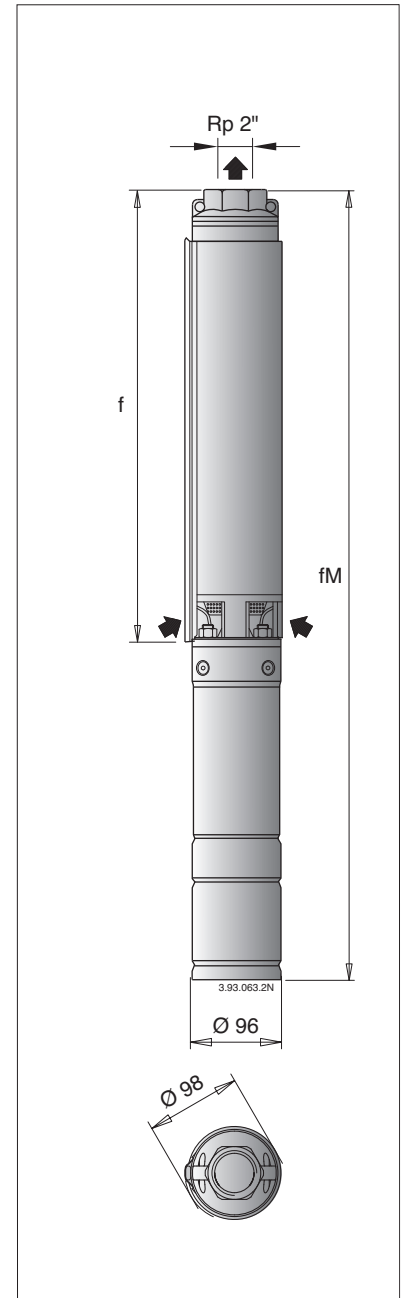
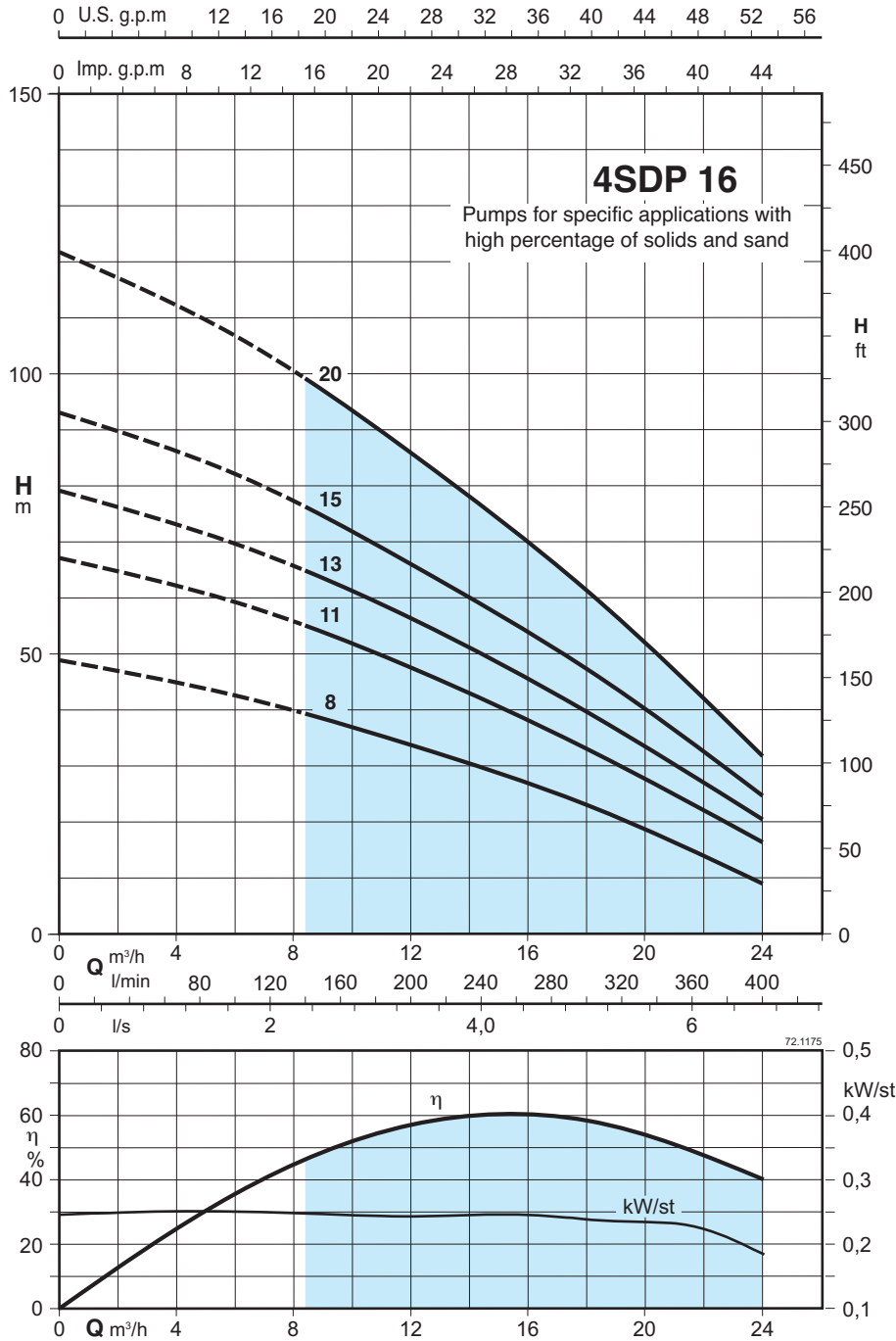
P₁ Max. power input P₂ Rated motor power output * Only for single-phase motor 230 V - 50 Hz (on request)

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)

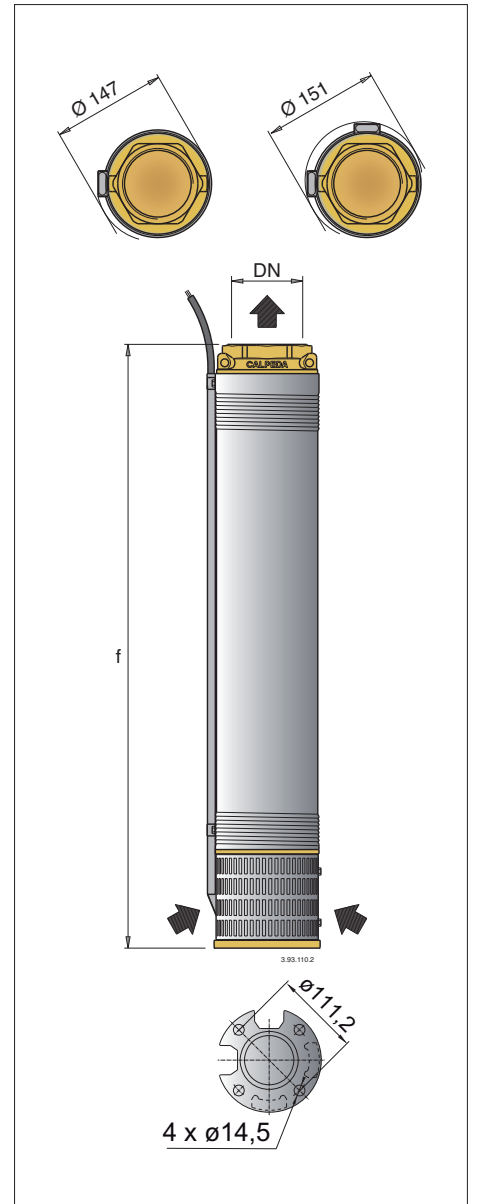
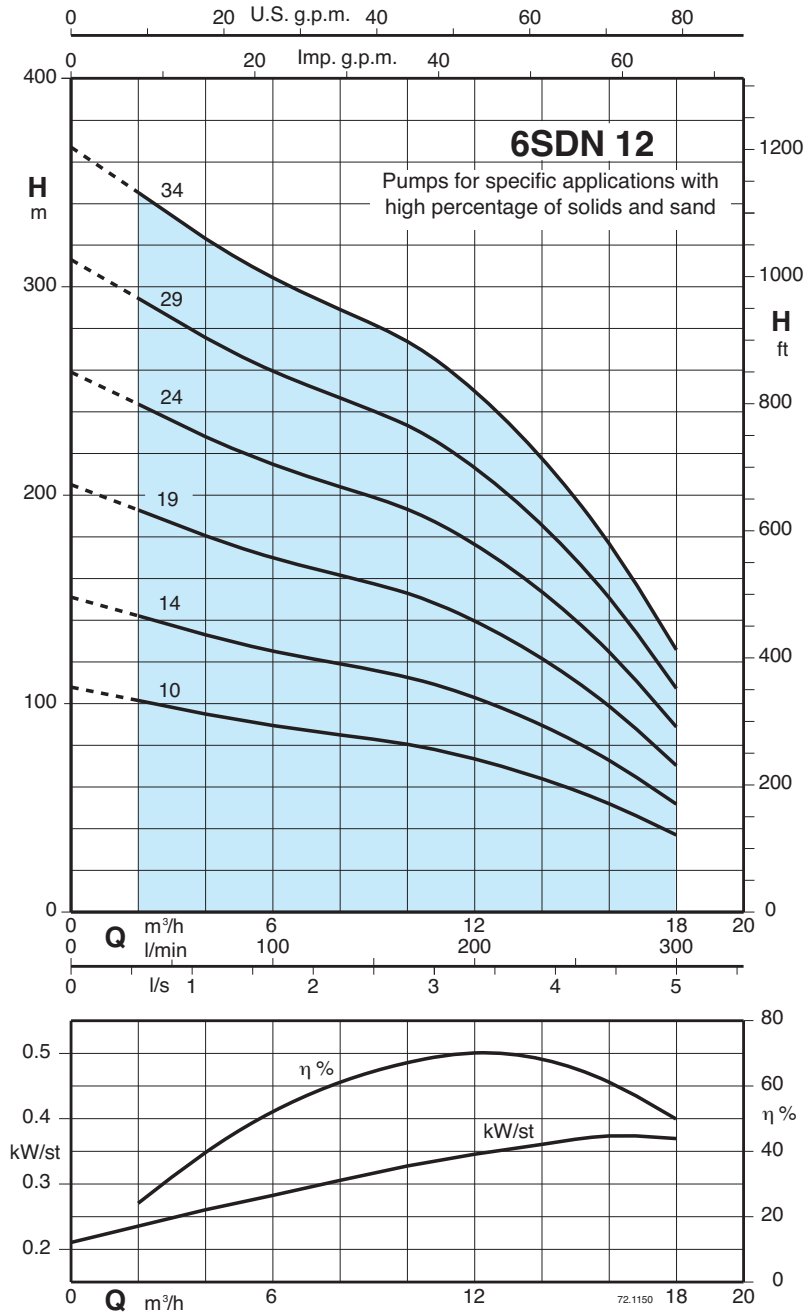
Tolerances according to UNI EN ISO 9906:2012

6SDN 12

Submersible borehole pumps for 6" wells



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



3~	P ₂		Q	n ≈ 2900 rpm												
	kW	HP		m³/h	2	4	6	8	10	12	14	16	18			
				l/min	33,3	66,6	100	133,3	166,6	200	233	266	300			
6SDN 12/10	4	5,5	H m	102	95	89,5	85	80,5	73,5	64	52	37				
6SDN 12/14	5,5	7,5		142	133	125	119	113	103	89,5	73	52				
6SDN 12/19	7,5	10		193	181	170	162	153	140	122	99	70,5				
6SDN 12/24	9,2	12,5		244	231	215	204	193	176	154	125	89				
6SDN 12/29	11	15		294	276	260	247	233	213	186	151	107				
6SDN 12/34	13 (15)	17,5 (20)		345	323	304	289	274	250	218	177	126				

DN	f	
	mm	kg
G 3 ISO 228	715	15,5
	870	17,5
	1060	20
	1320	23
	1510	25,7
	1705	28,5

P₂ Rated motor power output

(...) FK motor rated power output

H Total head in m

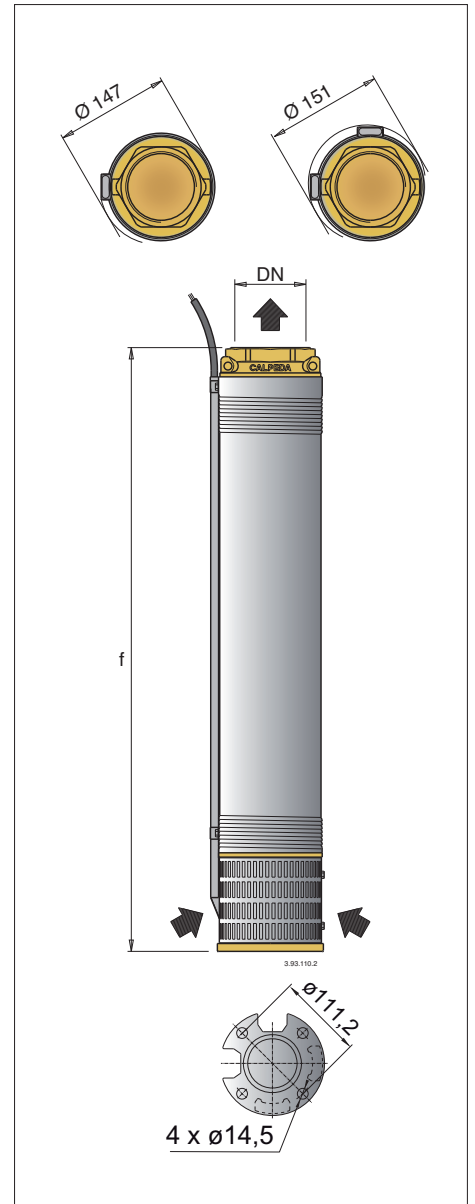
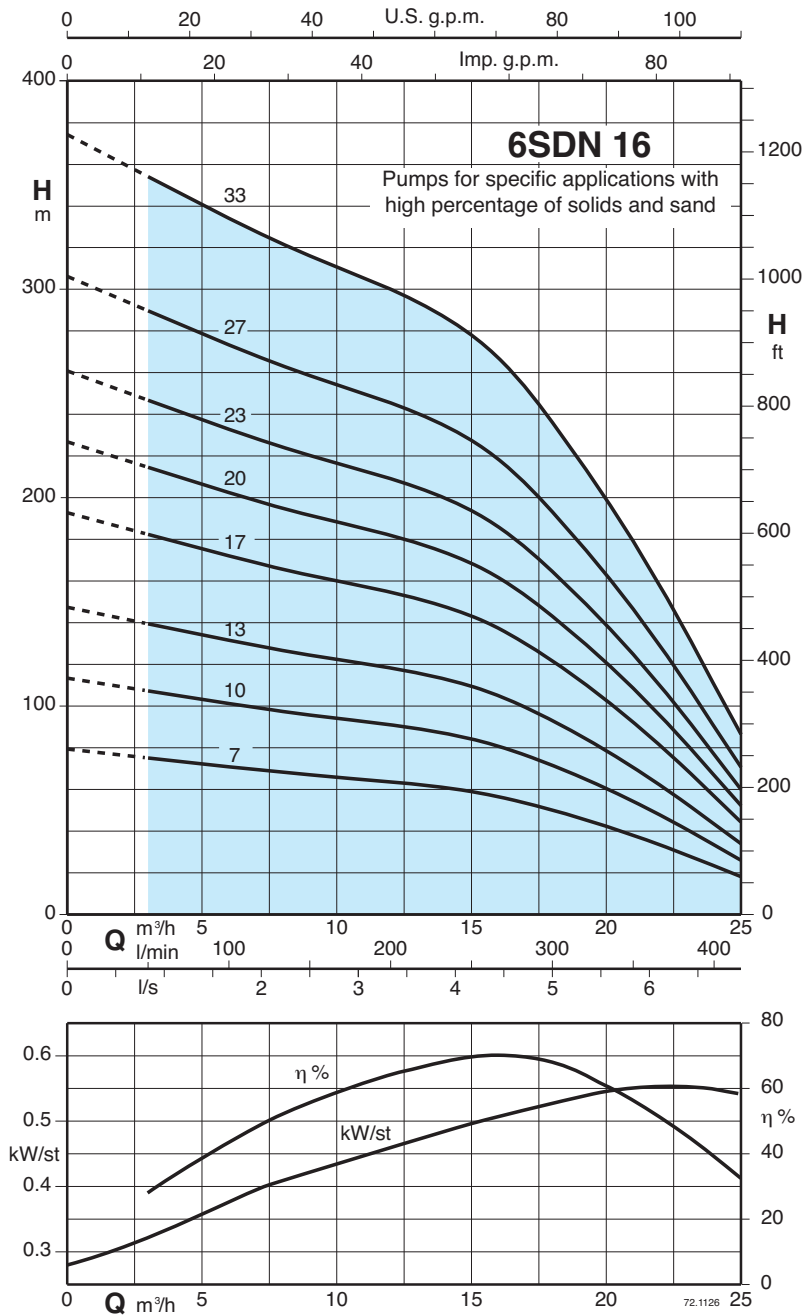
Tolerances according to UNI EN ISO 9906:2012

6SDN 16

Submersible borehole pumps for 6" wells



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



3~	P ₂		Q	n ≈ 2900 rpm												
				m³/h												
	kW	HP		3	6	9	12	15	18	21	25					
6SDN 16/7	4	5,5	75	71	67	63,5	59	50	38	18,5						
6SDN 16/10	5,5	7,5	107	101	96	91	84	71,5	54,5	26						
6SDN 16/13	7,5	10	139	132	124	118	110	93	70,5	34						
6SDN 16/17	9,2	12,5	182	172	163	155	143	122	92,5	44,5						
6SDN 16/20	11	15	215	202	192	182	168	143	109	52,5						
6SDN 16/23	13 (15)	17,5 (20)	247	233	220	209	194	165	125	60						
6SDN 16/27	15	20	290	273	259	245	227	193	147	71						
6SDN 16/33	18,5	25	354	334	316	300	278	236	179	86,5						

DN	f	kg
	mm	
G 3 ISO 228	600	14
	715	15,5
	830	17
	985	19
	1100	20,5
	1285	22,5
	1435	24,6
	1665	28

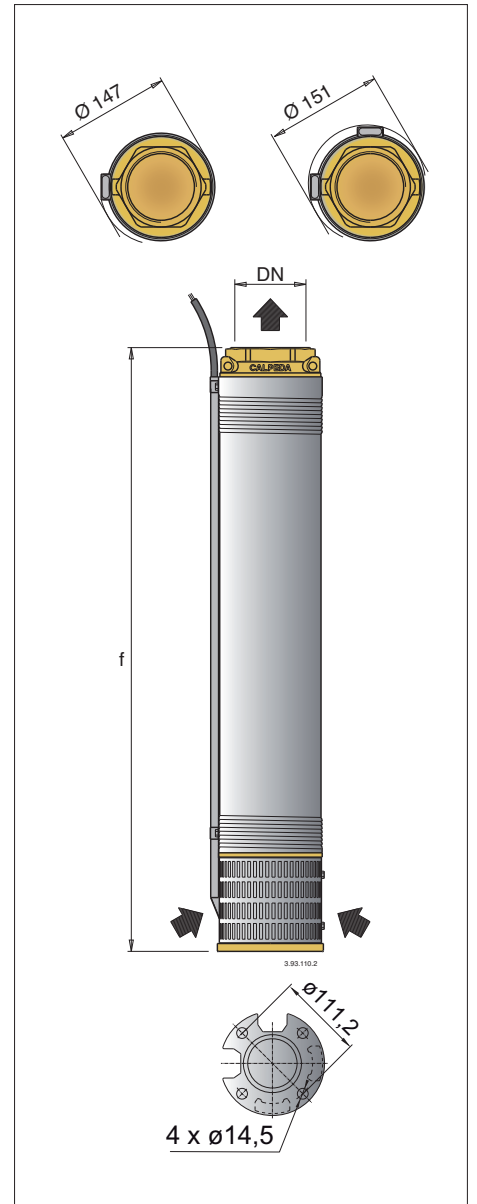
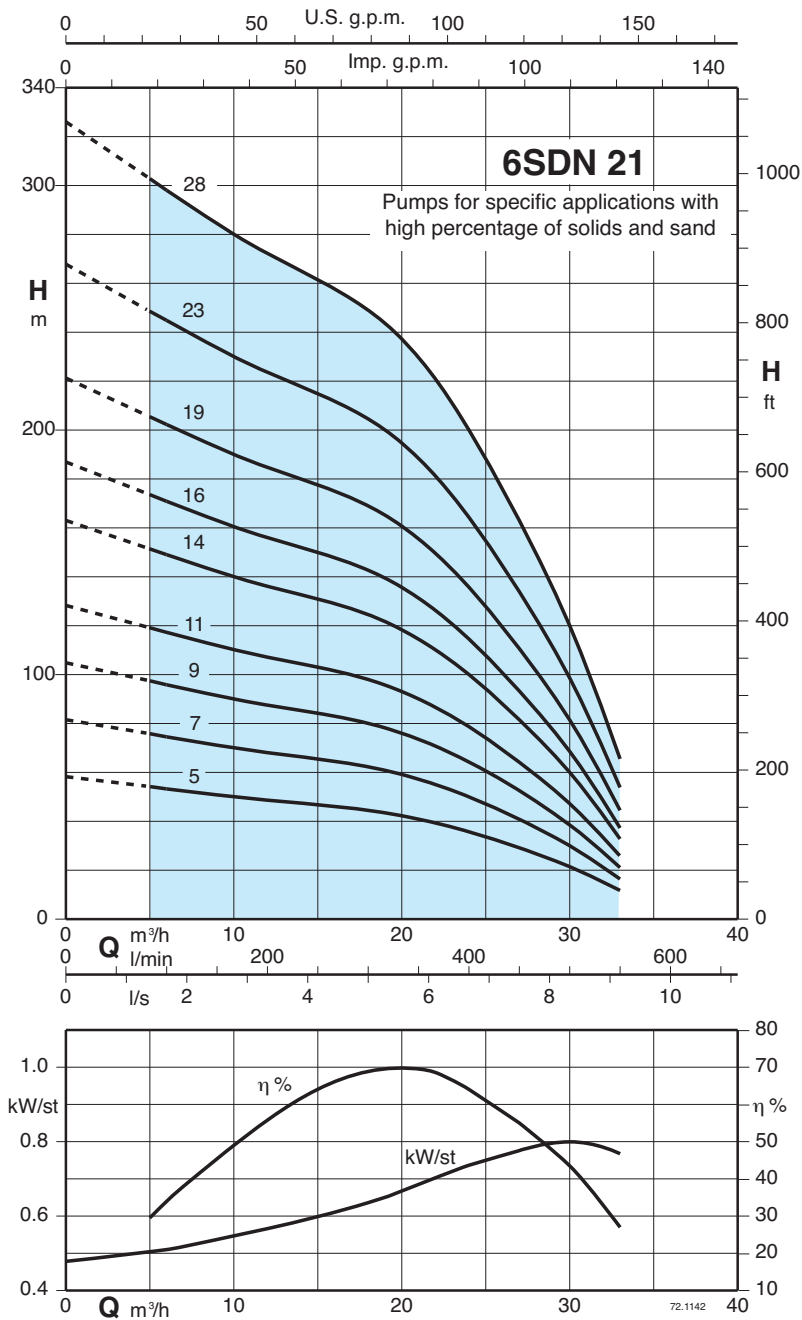
P₂ Rated motor power output

(...) FK motor rated power output

H Total head in m

Tolerances according to UNI EN ISO 9906:2012

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



3~	P ₂		Q	n ≈ 2900 rpm											
	kW	HP		H											
				m³/h	5	9	12	15	18	21	24	27	30	33	
6SDN 21/5	4	5,5	83,3	54	51	48,5	46,5	45	41,5	36	29	21,5	11,5		
6SDN 21/7	5,5	7,5	150	75,5	71,5	68	65	62,5	58	50	41	30	16		
6SDN 21/9	7,5	10	200	97	92	87,5	83,5	80,5	74,5	64,5	53	38,5	21		
6SDN 21/11	9,2	12,5	250	119	112	107	102	99	91	79	64	47	25,5		
6SDN 21/14	11	15	300	151	143	136	130	125	116	100	81,5	60	32,5		
6SDN 21/16	13 (15)	17,5 (20)	350	173	163	155	149	143	132	114	93	69	37		
6SDN 21/19	15	20	400	205	194	185	176	170	157	136	111	81,5	44		
6SDN 21/23	18,5	25	450	249	235	224	213	206	190	164	134	99	53		
6SDN 21/28	22	30	500	303	286	272	260	251	231	200	163	120	64,5		

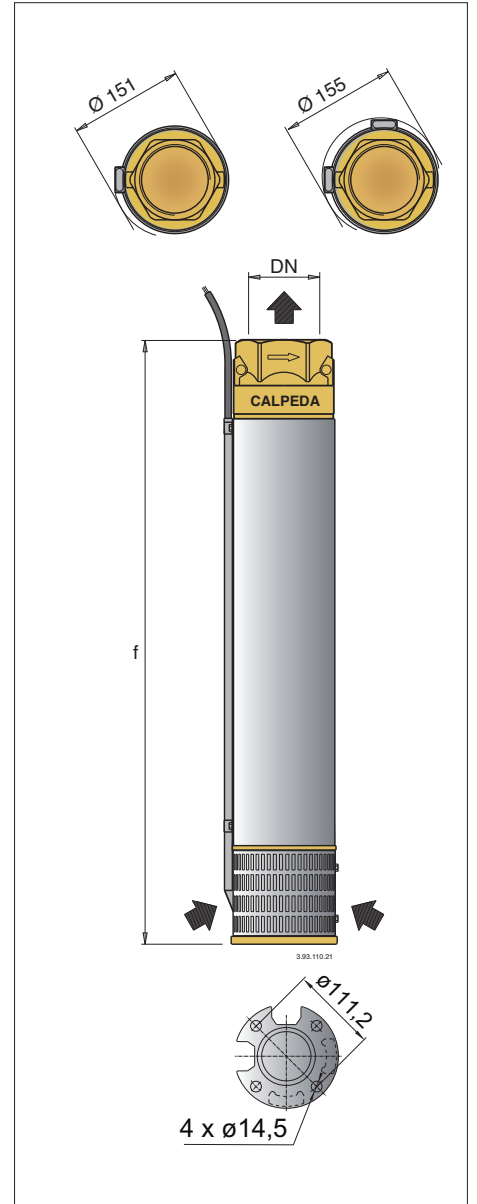
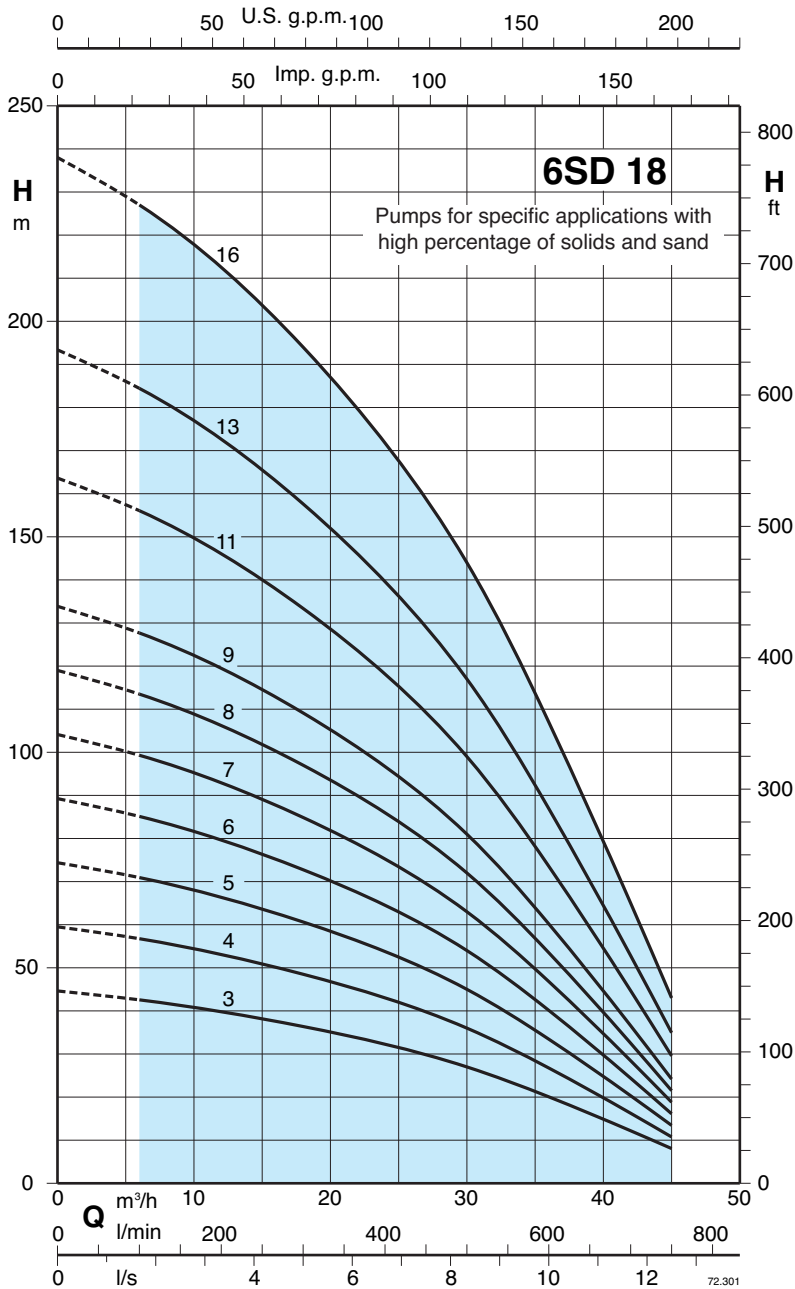
DN	f	kg
G 3 ISO 228	565	13,3
	660	14,5
	755	15,7
	850	16,9
	990	18,7
	1085	19,9
	1225	21,7
1480	24,5	
1710	27,5	

6SD 18

Submersible borehole pumps for 6" wells



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



3~	P ₂		Q	n ≈ 2900 rpm												
	kW	HP		H												
			m³/h	l/min	6	12	18	24	30	36	42	45				
6SD 18/3	4	5,5	42	39	36	32	27	20	12	8						
6SD 18/4	5,5	7,5	56	53	48	43	36	27	16	11						
6SD 18/5	7,5	10	70	66	60	53	45	34	21	13						
6SD 18/6	9,2	12,5	85	79	72	64	54	40	25	16						
6SD 18/7	9,2	12,5	100	93	84	75	63	46	28	19						
6SD 18/8	11	15	113	105	96	86	72	54	32	21						
6SD 18/9	13 (15)	17,5 (20)	127	119	108	96	81	60	37	24						
6SD 18/11	15	20	156	145	132	118	99	74	45	30						
6SD 18/13	18,5	25	184	172	157	139	117	87	52	35						
6SD 18/16	22	30	227	213	194	172	144	107	65	43						

DN	f	
	mm	kg
G 3 ISO 228	647	20,5
	756	23
	865	25
	974	27
	1083	29,5
	1192	32
	1301	34,5
	1519	39,5
	1737	43
	2064	50,2

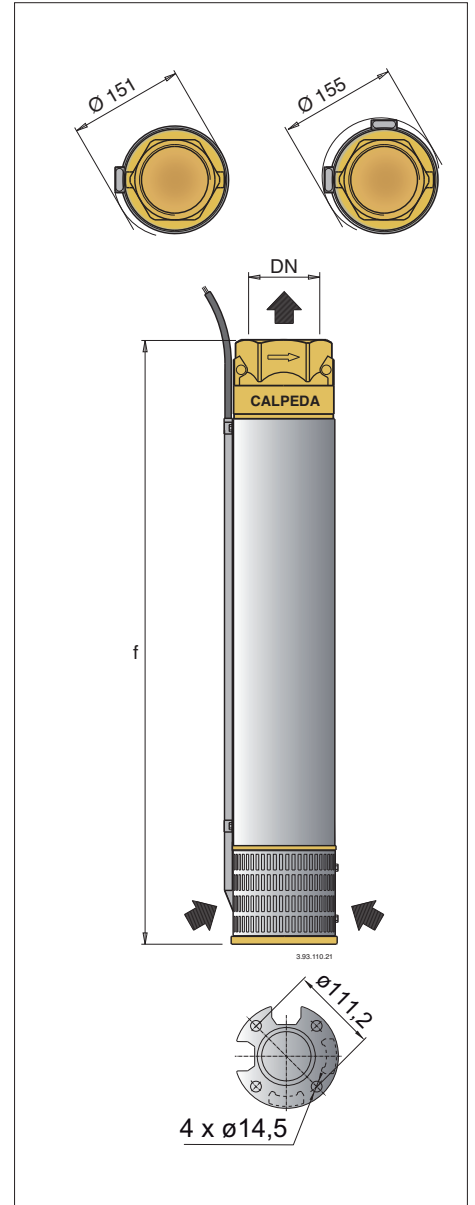
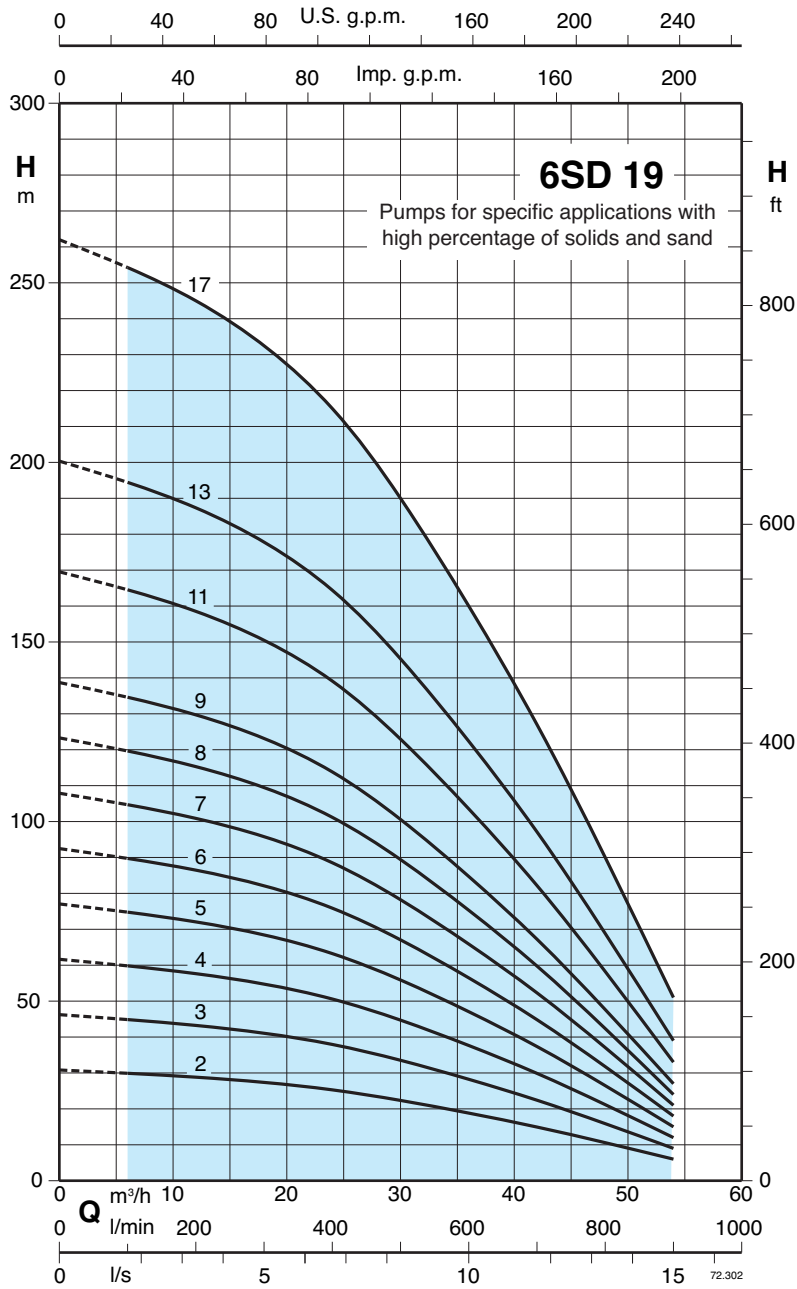
P₂ Rated motor power output

(...) FK motor rated power output

H Total head in m

Tolerances according to UNI EN ISO 9906:2012

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



3~	P ₂		Q	n ≈ 2900 rpm												
				H												
	kW	HP	m³/h	6	12	18	24	30	36	42	48	54				
6SD 19/2	4	5,5	30	29	27	25	22	19	15	10	6					
6SD 19/3	5,5	7,5	45	43	41	38	33	29	23	15	9					
6SD 19/4	7,5	10	60	57	55	50	45	38	30	21	12					
6SD 19/5	9,2	12,5	75	72	69	63	56	47	38	26	15					
6SD 19/6	11	15	90	86	82	75	67	56	45	31	18					
6SD 19/7	13 (15)	17,5 (20)	105	100	96	88	79	66	53	37	21					
6SD 19/8	15	20	120	115	110	101	89	75	60	42	24					
6SD 19/9	15	20	135	130	123	114	100	85	68	47	27					
6SD 19/11	18,5	25	165	158	151	139	123	104	83	58	33					
6SD 19/13	22	30	195	188	179	164	145	122	98	69	39					
6SD 19/17	30	40	255	245	234	215	190	160	127	90	51					

DN	f	kg
G 3 ISO 228	538	18
	647	20,5
	756	23
	865	25
	974	27
	1083	29,5
	1192	32
	1301	34,5
	1519	39,5
	1737	43
2173	53	

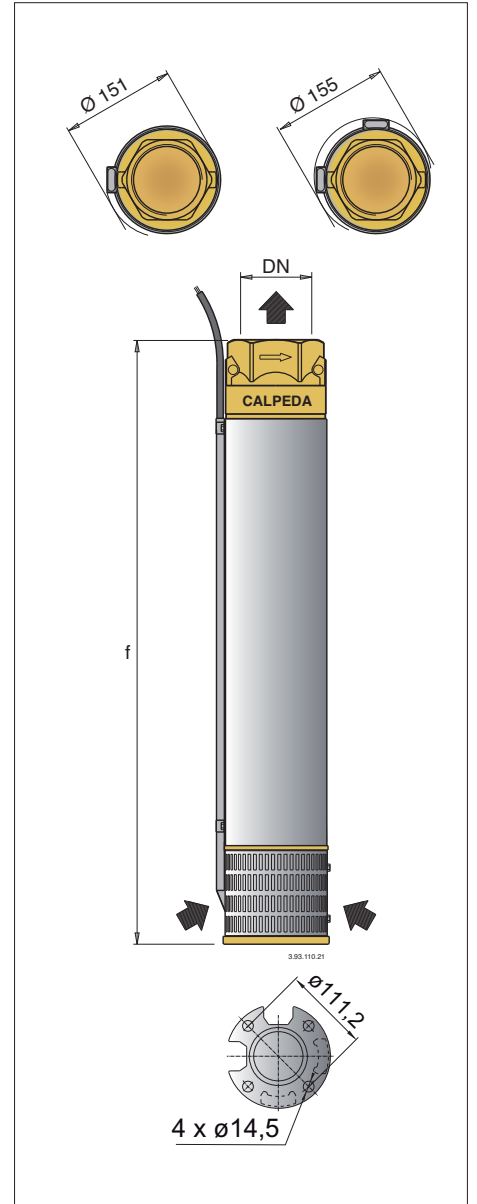
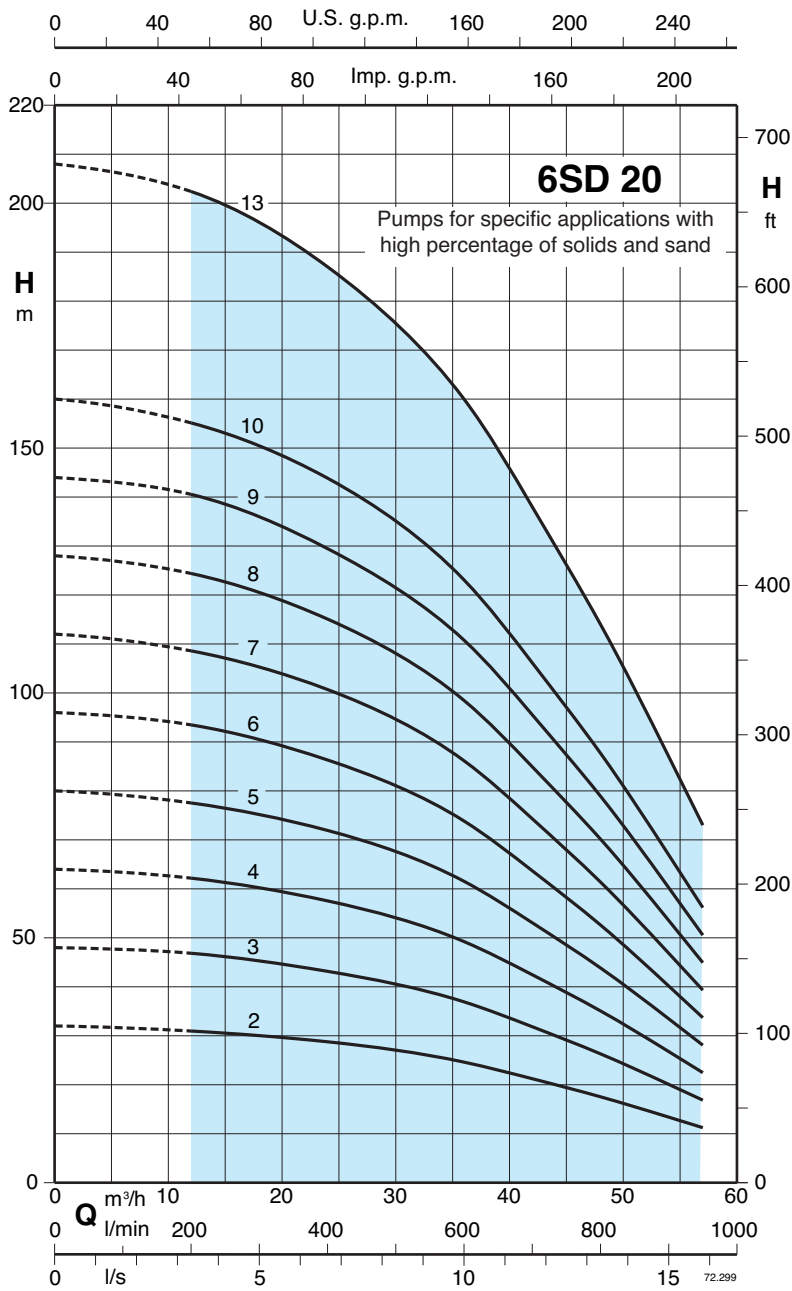
P₂ Rated motor power output

(...) FK motor rated power output

H Total head in m

Tolerances according to UNI EN ISO 9906:2012

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



3~	P ₂		Q	n ≈ 2900 rpm												
				H												
	kW	HP		m³/h	12	18	24	30	36	42	48	54	57			
6SD 20/2	5,5	7,5	31	30	29	28	24	21	17	13	11					
6SD 20/3	7,5	10	46	45	44	42	37	32	26	20	17					
6SD 20/4	9,2	12,5	62	60	58	55	49	42	35	26	22					
6SD 20/5	11	15	77	76	73	68	61	53	44	33	28					
6SD 20/6	13 (15)	17,5 (20)	93	91	87	83	73	63	53	40	34					
6SD 20/7	15	20	108	106	102	96	86	74	61	47	39					
6SD 20/8	18,5	25	124	120	115	110	99	85	70	53	45					
6SD 20/9	18,5	25	140	136	130	124	111	96	79	60	51					
6SD 20/10	22	30	155	151	144	138	123	106	88	67	56					
6SD 20/13	30	40	202	196	188	179	160	138	114	87	73					

DN	f	
	mm	kg
G 3 ISO 228	538	18
	647	20,5
	756	23
	865	25
	974	27
	1083	29,5
	1192	32
	1301	34,5
	1410	36,2
	1737	44,4

P₂ Rated motor power output

(...) FK motor rated power output

H Total head in m

Tolerances according to UNI EN ISO 9906:2012

