

Submersible Borehole Pump

UPA

Size: UPA C 100

Nominal Pump Diameter: 4 Inches

50 Hz

Type Series Booklet



Legal information/Copyright

Type Series Booklet UPA

All rights reserved. The contents provided herein must neither be distributed, copied, reproduced, edited or processed for any other purpose, nor otherwise transmitted, published or made available to a third party without the manufacturer's express written consent.

Subject to technical modification without prior notice.

© KSB SE & Co. KGaA, Frankenthal 2023-03-14

Contents

Water Supply	4
Submersible Borehole Pumps.....	4
UPA C 100.....	4
Main applications.....	4
Fluids handled.....	4
Operating data.....	4
Design details.....	4
Designation.....	5
Materials.....	6
Product benefits.....	6
Product information as per Regulation No. 547/2012 (for 4" and 6" water pumps) implementing "Ecodesign" Directive 2009/125/EC.....	6
Certifications.....	6
Technical data, 50 Hz.....	7
General overview, 50 Hz.....	7
UPA C 100-1 EE - 50 Hz.....	8
UPA C 100-2 EE - 50 Hz.....	10
UPA C 100-3 EE - 50 Hz.....	12
UPA C 100-5 EE - 50 Hz.....	14
UPA C 100-9 EE - 50 Hz.....	16
UPA C 100-12 EE - 50 Hz.....	20
Permissible cable lengths.....	22
Scope of supply.....	22
Accessories.....	23
Pump accessories.....	23
Cooling shroud made of stainless steel 1.4301.....	24
Automatic control units.....	24

Water Supply

Submersible Borehole Pumps

UPA C 100



Main applications

- Drinking water supply
- Spray irrigation systems
- General irrigation systems
- Industry
- Pressure boosting
- Lowering groundwater levels
- Domestic water supply
- Water supply systems

Fluids handled

- Clean water not containing aggressive, abrasive or solid substances
- Max. permissible sand content of the fluid 50 g/m³

Operating data

Table 1: Operating properties

Characteristic	Value	
Flow rate	Q [m ³ /h]	≤ 18
	Q [l/min]	≤ 300
Head	H [m]	≤ 600
Fluid temperature	T [°C]	≤ +30 for continuous duty
Speed	n [rpm]	≤ 2900
Power	P _N [kW]	≤ 7,5 ¹⁾
Well diameter	D [mm]	≤ 100 ¹⁾
	D ["]	≤ 4 ¹⁾

Design details

Design

- Centrifugal pump
- Multistage
- Single-suction
- Ring-section design
- Rigid connection between pump and motor

Connections

- Pump end with Rp 1 1/4 to Rp 2 thread
- Optional: adapter for pump ends DN 40, DN 50, G 1 1/2
- With lift check valve

Impeller type

- Radial or mixed flow versions

Type of installation

- Vertical installation
- Horizontal installation
- Angled installation

Drive

- Asynchronous motor
- Interior (buried) permanent magnet synchronous motor (IPMSM)
- With squirrel cage motor for submerged use
- Standard connection to NEMA
- Frequency 50 Hz
- IP68 enclosure
- Thermal class B
- DOL starting
- Frequency of starts ≤ 20 starts per hour

Single-phase AC motor:

- Rated power P_N ≤ 2.2 kW
- Rated voltage V_N 220 - 230 V

Three-phase motor:

- Rated power P_N ≤ 7.5 kW
- Designs with additional stages and 6-inch motors of up to 18.5 kW are available for high heads.
- Rated voltage V_N 380 - 400 V

Electrical connection

- With 1 flat motor lead 4 x 1.5 mm² (including earth conductor and internal earthing) as standard ex works
 - Cable length of 1.5 m for motors up to 1.5 kW
 - Cable length of 2.5 m for motors from 2.2 kW

¹ Designs with additional stages and 6-inch motors of up to 18.5 kW are available for high heads.

Bearings

- Radial plain bearings
- Pump bearings lubricated by fluid handled; motor bearings lubricated by water fill
- Axial thrust is balanced by a tilting-pad thrust bearing in the motor (lower end)
- Intermediate bearing in every stage

Designation
Table 2: Designation example

Designation of submersible borehole pump																	Position		Designation of submersible motor													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	+	19	20	21	22	23	24	25	26	27	28	29	30	31	32
U	P	A	-	C	-	1	0	0	-	-	5	/	1	7	E	E	+	D	N	-	1	0	0	-	2	,	2	0	-	1	E	
See name plate and data sheet																																

Table 3: Designation key

Position	Code	Description
1-6	Pump type	
	UPA C	Pump designation
7-9	Nominal pump diameter [mm]	
	100	4 " (approx. 100 mm)
11-12	Flow rate at best efficiency point [m ³ /h]	
	1	1 m ³ /h
	2	2 m ³ /h
	3	3 m ³ /h
	5	5 m ³ /h
	9	9 m ³ /h
14-15	Number of stages	
	01	1 stage
	02	2 stages
	03	3 stages

	91	91 stages
	A0	100 stages (A=100+0)
B0	110 stages (B=110+0)	
16	Pump material	
	C	Stainless steel AISI 316
	D	Duplex
	E	Stainless steel AISI 304
	Z	Order-specific
17	Impeller material	
	C	Stainless steel AISI 316
	D	Duplex
	E	Stainless steel AISI 304
	N	Noryl
	Z	Order-specific
18	Supply	
	+	Pump set (pump and motor)
	-	Pump without motor
19-20	Motor	
	DN	Submersible motor by Franklin, asynchronous motor
22-24	Minimum motor diameter [mm]	
	100	4 " (approx. 100 mm)
26-29	Motor rating [kW]	
	- - - -	Fig. 0 (bare shaft)
	0, 3 7	0,37 kW
	0, 5 5	0,55 kW
	0, 7 5	0,75 kW
	1, 1 0	1,1 kW
1, 5 0	1,5 kW	

Position	Code	Description
26-29	2, 2 0	2,2 kW
	3, 0 0	3 kW
	3, 7 0	3,7 kW
	4, 0 0	4 kW
	5, 5 0	5,5 kW
	7, 5 0	7,5 kW
31	Phase type	
	1	1~
	3	3~
32	Motor material	
	C	Stainless steel AISI 316
	E	Stainless steel AISI 304

Materials

Table 4: Overview of available materials

Part No.	Description	Material		
		EE	EN ²⁾	CC ²⁾
10-6	Pump shroud	AISI 304	AISI 304	AISI 316
106	Suction casing	AISI 304	AISI 304	AISI 316
107	Valve body	AISI 304	AISI 304	AISI 316
211	Shaft	AISI 431	AISI 431	AISI 431
230	Impeller	AISI 304	Noryl	AISI 316
171	Diffuser	AISI 304	Noryl	AISI 316

Product benefits

- High operating reliability as all components are made of high-quality stainless steel.
- High efficiencies through optimised hydraulic design
- High flexibility by vertical, horizontal and angular installation options
- Reliable operation by anti-jam lift check valve
- Highly flexible operating range through adjustment of motor dimensions
- Service-friendly with bearings and casing wear rings that are easy to replace

- Pump performance curves, including efficiency characteristic characteristics: see documented characteristic curve
- The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. Trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.
- Operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.
- Information on benchmark efficiency or benchmark efficiency graph for MEI = 0.70 (0.40) for the pump based on the model shown in the Figure are available at: <http://www.europump.org/efficiencycharts>

Product information as per Regulation No. 547/2012 (for 4" and 6" water pumps) implementing "Ecodesign" Directive 2009/125/EC

- Minimum efficiency index: see data sheet
- The benchmark for the most efficient water pumps is MEI ≥ 0.70 .
- Year of construction: see data sheet
- Manufacturer's name or trade mark, commercial registration number and place of manufacture: see data sheet or order documentation
- Product's type and size identifier: see data sheet

Certifications

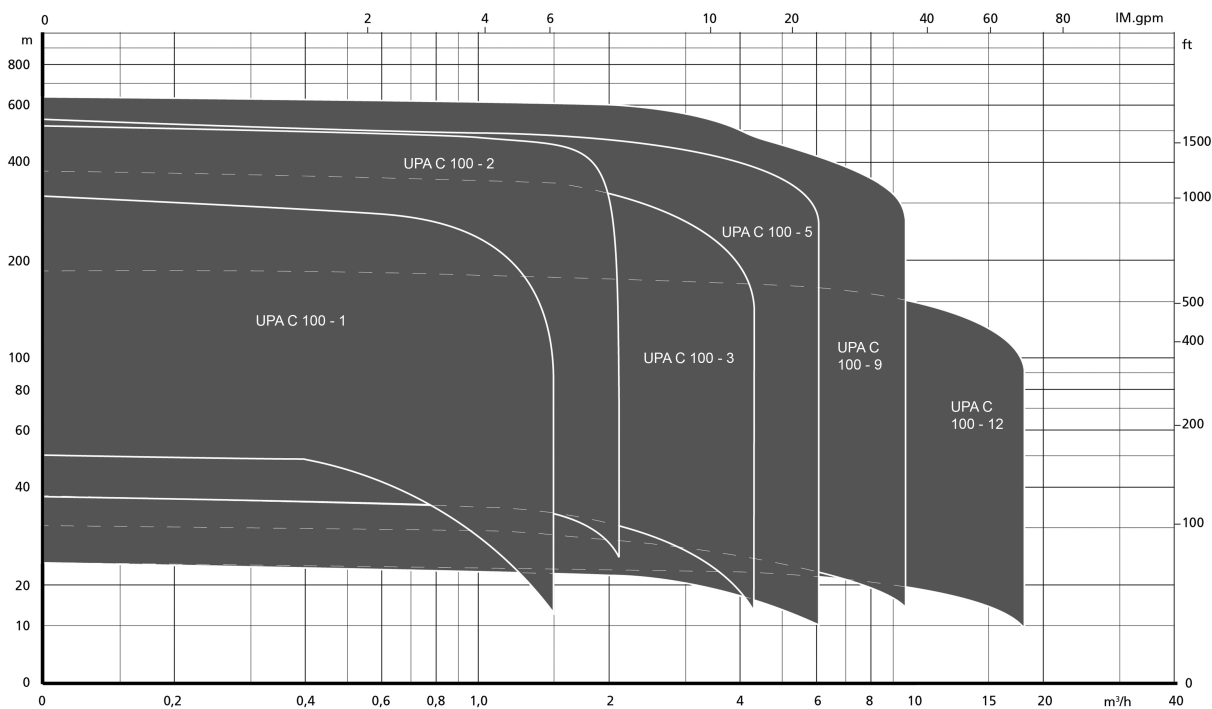
Table 5: Overview

Label	Effective in:	Comment
	All countries	Certified quality management to ISO 9001
	France	Approved in accordance with the French drinking water regulation

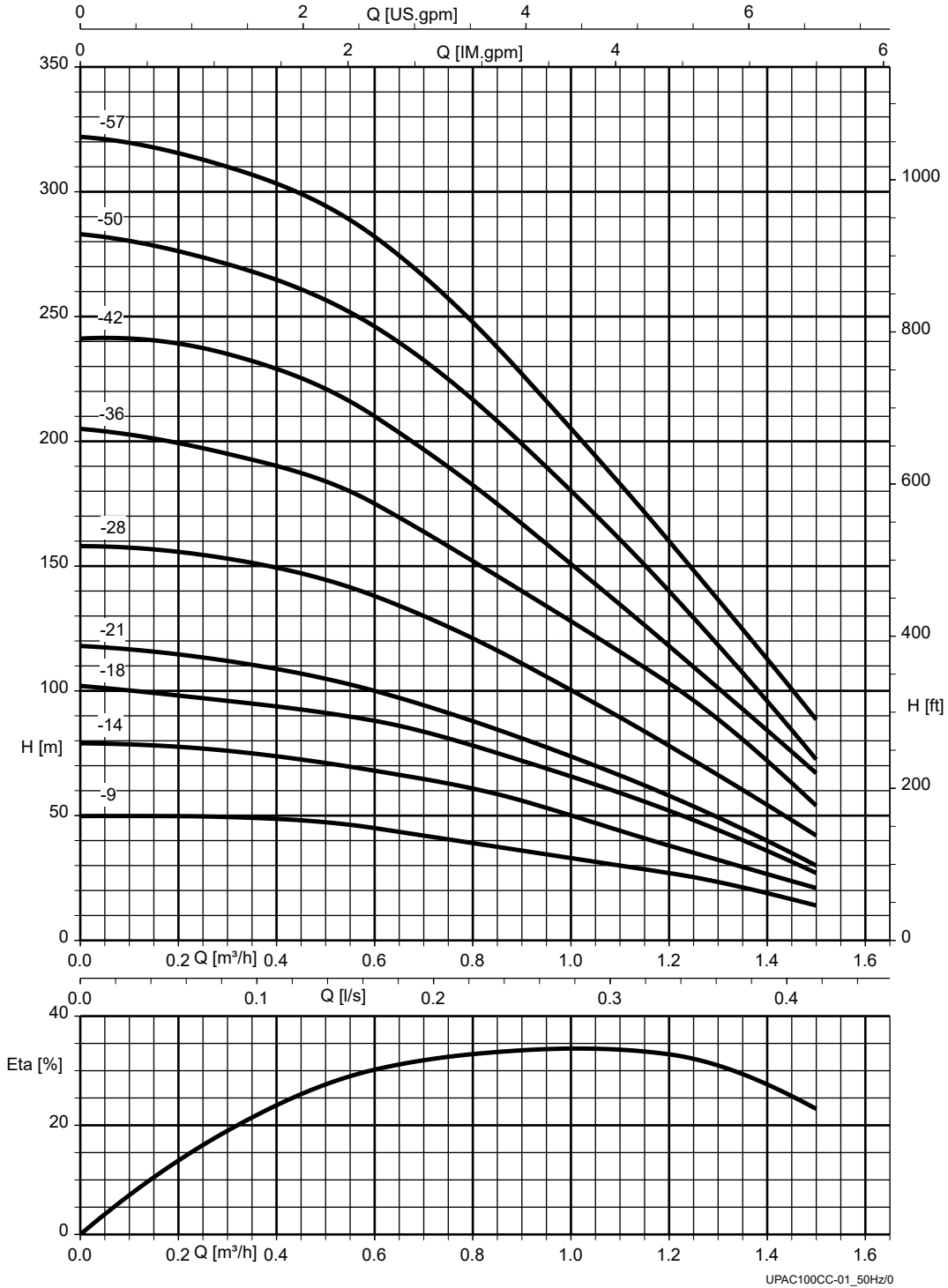
²⁾ On request

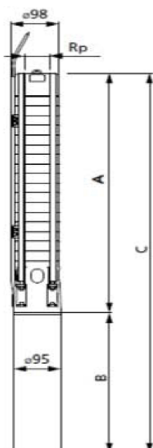
Technical data, 50 Hz

General overview, 50 Hz



UPA C 100-1 EE - 50 Hz



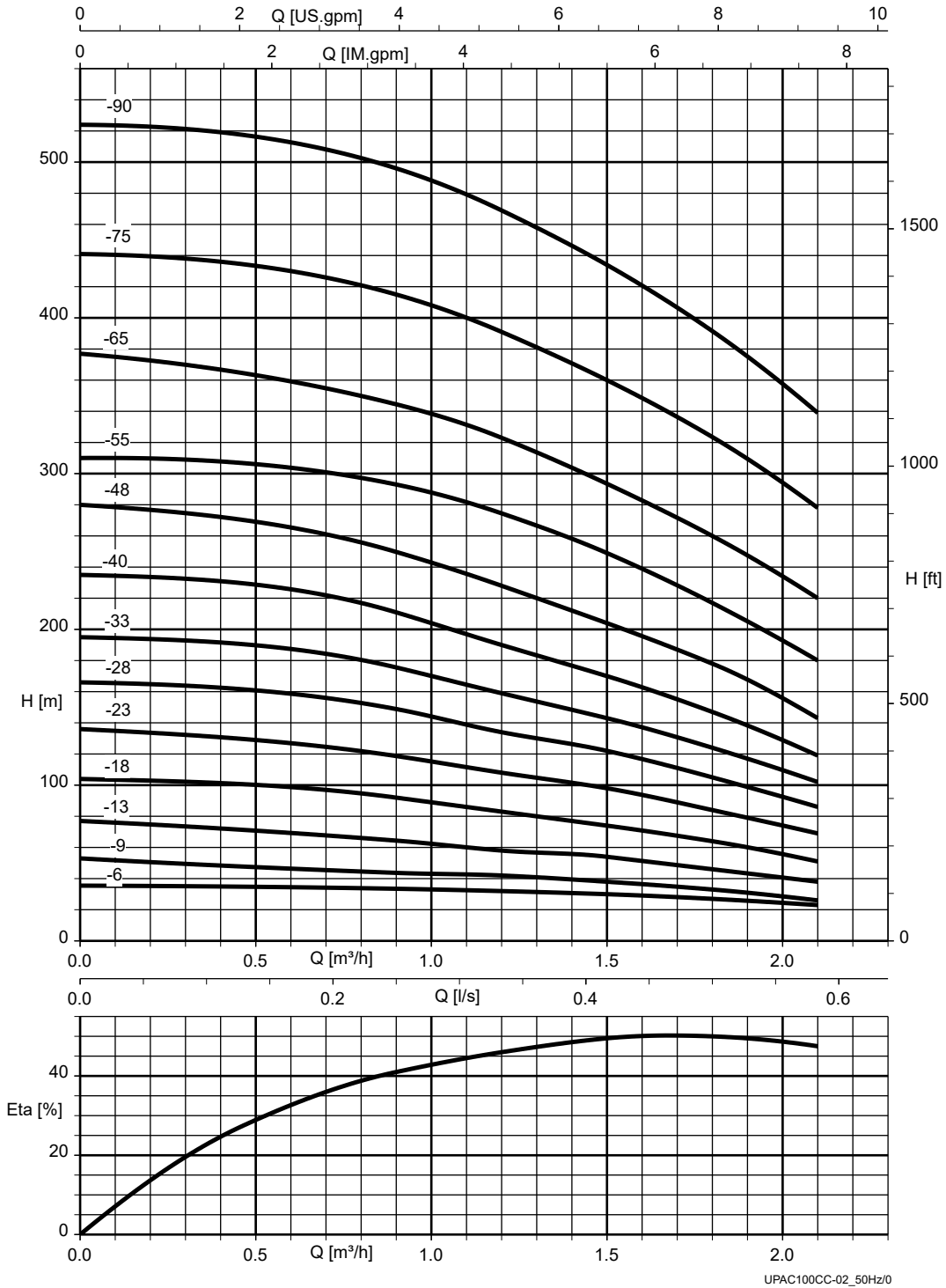
Dimensions

Table 6: Dimensions [mm], weights [kg]

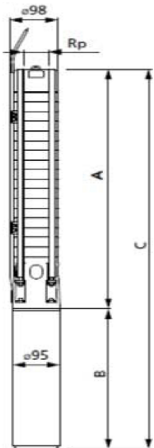
Size	Motor diam. ["]	Rp	1~230 V					3~400 V				
			A	B	C	Mat. No.	[kg]	A	B	C	Mat. No.	[kg]
			[mm]	[mm]	[mm]			[mm]	[mm]	[mm]		
UPA C 100-1/9 EE	4	1 1/4	356	251	607	48257382	10,1	356	237	593	48257443	8,48
UPA C 100-1/14 EE	4	1 1/4	461	251	712	48257383	10,9	461	237	698	48257444	9,28
UPA C 100-1/18 EE	4	1 1/4	545	276	821	48257384	12,8	545	251	796	48257445	10,8
UPA C 100-1/21 EE	4	1 1/4	608	276	884	48257385	13,4	608	251	859	48257446	11,4
UPA C 100-1/28 EE	4	1 1/4	755	297	1052	48257386	15,5	755	271	1026	48257447	13,45
UPA C 100-1/36 EE	4	1 1/4	946	321	1267	48257387	20,4	946	297	1243	48257448	18,45
UPA C 100-1/42 EE	4	1 1/4	1072	321	1393	48257388	21,75	1072	297	1369	48257449	19,85
UPA C 100-1/50 EE	4	1 1/4	1240	353	1593	48257389	25,1	1240	321	1561	48257450	22,75
UPA C 100-1/57 EE	4	1 1/4	1387	451	1838	48257390	31,45	1387	353	1740	48257451	25,85

Table 7: Nominal power [kW] / [hp], nominal current [A]

Size	Motor rating		Nominal current	
	[kW]	[hp]	1~230 V	3~400 V
			[A]	[A]
UPA C 100-1/9 EE	0,37	0,50	3,3	1,1
UPA C 100-1/14 EE	0,37	0,50	3,3	1,1
UPA C 100-1/18 EE	0,55	0,75	4,3	1,6
UPA C 100-1/21 EE	0,55	0,75	4,3	1,6
UPA C 100-1/28 EE	0,75	1,00	5,7	2,0
UPA C 100-1/36 EE	1,10	1,50	8,4	2,8
UPA C 100-1/42 EE	1,50	2,00	10,7	3,9
UPA C 100-1/50 EE	1,50	2,00	10,7	3,9
UPA C 100-1/57 EE	2,20	3,00	14,7	5,5

UPA C 100-2 EE - 50 Hz



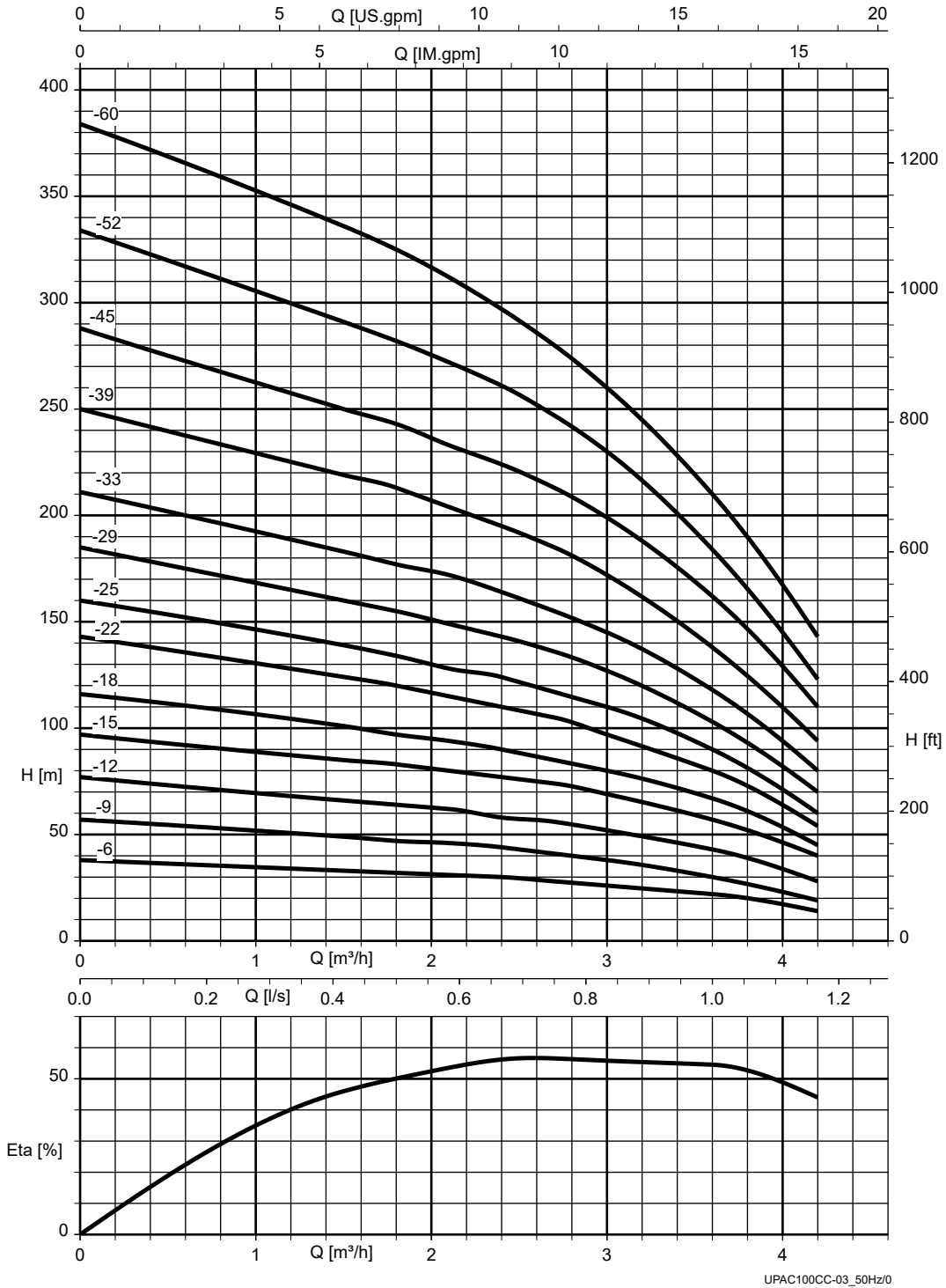
Dimensions

Table 8: Dimensions [mm], weights [kg]

Size	Motor diam. ["]	Rp	1~230 V					3~400 V				
			A	B	C	Mat. No.	[kg]	A	B	C	Mat. No.	[kg]
			[mm]	[mm]	[mm]			[mm]	[mm]	[mm]		
UPA C 100-2/6 EE	4	1 1/4	293	251	544	48257391	9,5	293	237	530	48257452	7,88
UPA C 100-2/9 EE	4	1 1/4	356	251	607	48257392	10,2	356	237	593	48257453	8,58
UPA C 100-2/13 EE	4	1 1/4	440	276	716	48257393	12,2	440	251	691	48257454	10,2
UPA C 100-2/18 EE	4	1 1/4	545	297	842	48257394	14	545	271	816	48257455	11,95
UPA C 100-2/23 EE	4	1 1/4	650	321	971	48257395	16,2	650	297	947	48257456	14,25
UPA C 100-2/28 EE	4	1 1/4	755	353	1108	48257396	18,5	755	321	1076	48257457	16,15
UPA C 100-2/33 EE	4	1 1/4	883	353	1236	48257397	21,6	883	321	1204	48257458	19,25
UPA C 100-2/40 EE	4	1 1/4	1030	451	1481	48257398	28,2	1030	353	1383	48257459	22,55
UPA C 100-2/48 EE	4	1 1/4	1198	451	1649	48257399	30,2	1198	353	1551	48257460	24,55
UPA C 100-2/55 EE	4	1 1/4	-	-	-	-	-	1345	408	1753	48257461	28,85
UPA C 100-2/65 EE	4	1 1/4	-	-	-	-	-	1555	408	1963	48257462	31,35
UPA C 100-2/75 EE	4	1 1/4	-	-	-	-	-	2123	543	2666	48257463	60,1
UPA C 100-2/90 EE	4	1 1/4	-	-	-	-	-	2438	543	2981	48257464	65,6

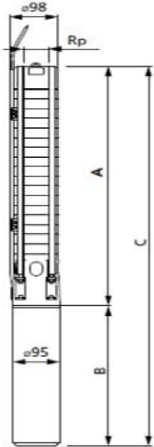
Table 9: Nominal power [kW] / [hp], nominal current [A]

Size	Motor rating		Nominal current	
	[kW]	[hp]	1~230 V	3~400 V
			[A]	[A]
UPA C 100-2/6 EE	0,37	0,50	3,3	1,1
UPA C 100-2/9 EE	0,37	0,50	3,3	1,1
UPA C 100-2/13 EE	0,55	0,75	4,3	1,6
UPA C 100-2/18 EE	0,75	1,00	5,7	2,0
UPA C 100-2/23 EE	1,10	1,50	8,4	2,8
UPA C 100-2/28 EE	1,50	2,00	10,7	3,9
UPA C 100-2/33 EE	1,50	2,00	10,7	3,9
UPA C 100-2/40 EE	2,20	3,00	14,7	5,5
UPA C 100-2/48 EE	2,20	3,00	14,7	5,5
UPA C 100-2/55 EE	3,00	4,00	-	7,5
UPA C 100-2/65 EE	3,00	4,00	-	7,5
UPA C 100-2/75 EE	4,00	5,50	-	9,9
UPA C 100-2/90 EE	4,00	5,50	-	9,9

UPA C 100-3 EE - 50 Hz



3412.51/03-EN

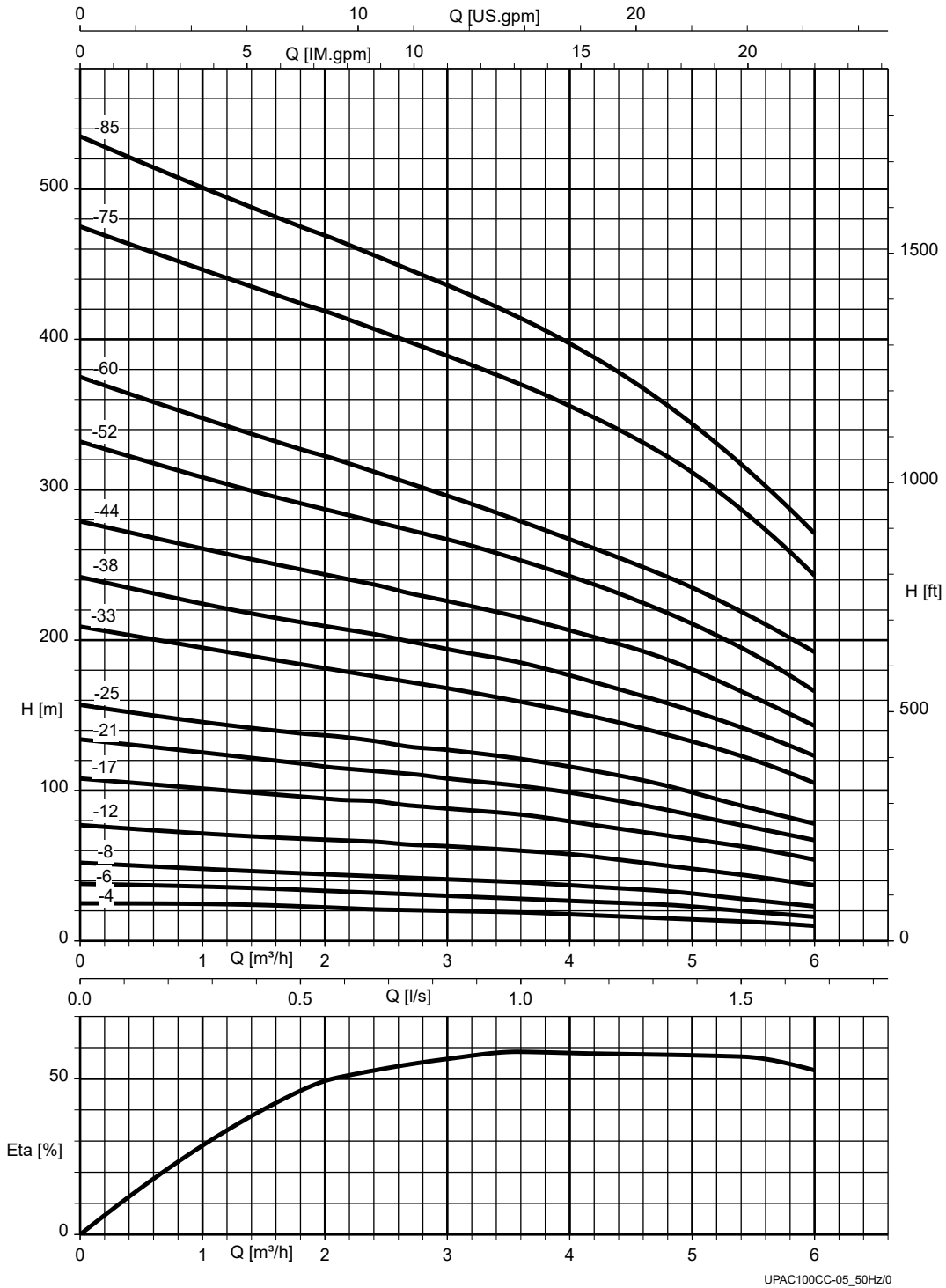
Dimensions

Table 10: Dimensions [mm], weights [kg]

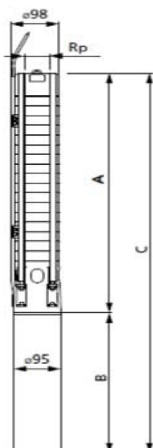
Size	Motor diam. ["]	Rp	1~230 V					3~400 V				
			A	B	C	Mat. No.	[kg]	A	B	C	Mat. No.	[kg]
			[mm]	[mm]	[mm]			[mm]	[mm]	[mm]		
UPA C 100-3/6 EE	4	1 1/4	293	276	569	48257404	10,8	293	251	544	48257465	8,8
UPA C 100-3/9 EE	4	1 1/4	356	276	632	48257405	11,4	356	251	607	48257466	9,4
UPA C 100-3/12 EE	4	1 1/4	419	321	740	48257406	14,05	419	297	716	48257467	12,15
UPA C 100-3/15 EE	4	1 1/4	482	321	803	48257407	14,7	482	297	779	48257468	12,75
UPA C 100-3/18 EE	4	1 1/4	545	353	898	48257408	16,6	545	297	950	48257469	14,3
UPA C 100-3/22 EE	4	1 1/4	629	353	982	48257409	17,4	629	321	950	48257470	15,05
UPA C 100-3/25 EE	4	1 1/4	692	451	1143	48257410	22,8	692	353	1045	48257471	17,2
UPA C 100-3/29 EE	4	1 1/4	776	451	1227	48257411	23,5	776	353	1129	48257472	17,85
UPA C 100-3/33 EE	4	1 1/4	883	451	1334	48257412	26,4	883	353	1236	48257473	20,75
UPA C 100-3/39 EE	4	1 1/4	-	-	-	-	-	1009	408	1417	48257474	24,75
UPA C 100-3/45 EE	4	1 1/4	-	-	-	-	-	1135	408	1543	48257475	26,25
UPA C 100-3/52 EE	4	1 1/4	-	-	-	-	-	1282	543	1825	48257477	36,6
UPA C 100-3/60 EE	4	1 1/4	-	-	-	-	-	1450	543	1993	48257478	37,7

Table 11: Nominal power [kW] / [hp], nominal current [A]

Size	Motor rating		Nominal current	
	[kW]	[hp]	1~230 V	3~400 V
			[A]	[A]
UPA C 100-3/6 EE	0,55	0,75	4,3	1,6
UPA C 100-3/9 EE	0,55	0,75	4,3	1,6
UPA C 100-3/12 EE	1,10	1,50	8,4	2,8
UPA C 100-3/15 EE	1,10	1,50	8,4	2,8
UPA C 100-3/18 EE	1,50	2,00	10,7	3,9
UPA C 100-3/22 EE	1,50	2,00	10,7	3,9
UPA C 100-3/25 EE	2,20	3,00	14,7	5,5
UPA C 100-3/29 EE	2,20	3,00	14,7	5,5
UPA C 100-3/33 EE	2,20	3,00	14,7	5,5
UPA C 100-3/39 EE	3,00	4,00	-	7,5
UPA C 100-3/45 EE	3,00	4,00	-	7,5
UPA C 100-3/52 EE	4,00	5,50	-	9,9
UPA C 100-3/60 EE	4,00	5,50	-	9,9

UPA C 100-5 EE - 50 Hz



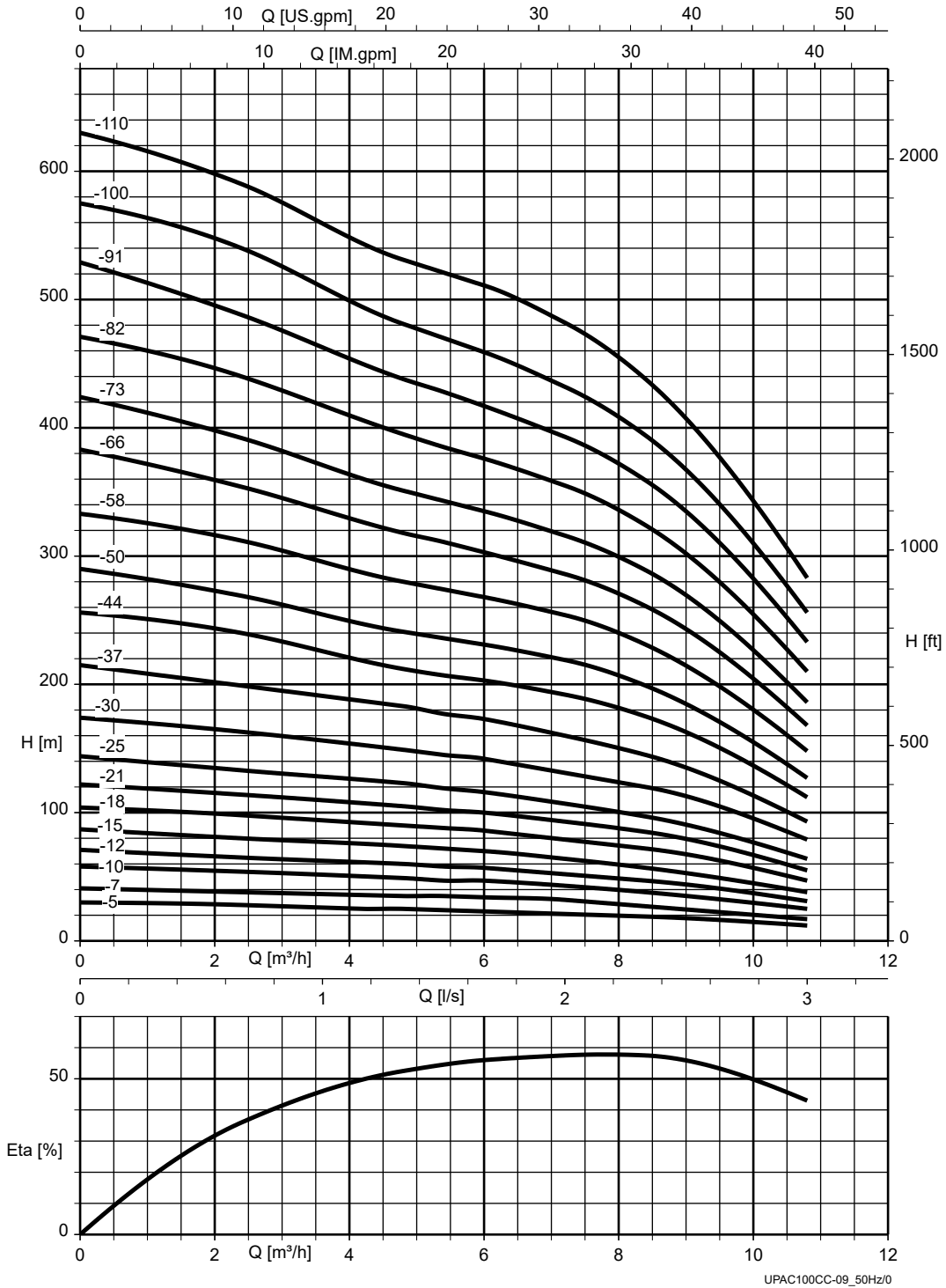
Dimensions

Table 12: Dimensions [mm], weights [kg]

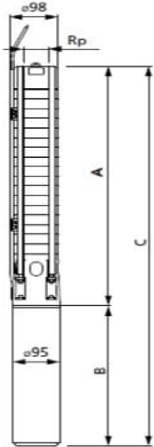
Size	Motor diam. ["]	Rp	1~230 V					3~400 V				
			A	B	C	Mat. No.	[kg]	A	B	C	Mat. No.	[kg]
			[mm]	[mm]	[mm]			[mm]	[mm]	[mm]		
UPA C 100-5/4 EE	4	1 1/2	251	251	502	48257417	9,2	251	237	488	48257479	7,58
UPA C 100-5/6 EE	4	1 1/2	293	276	569	48257418	10,8	293	251	544	48257480	8,8
UPA C 100-5/8 EE	4	1 1/2	335	321	656	48257419	13,3	335	297	632	48257481	11,4
UPA C 100-5/12 EE	4	1 1/2	419	353	772	48257420	16,4	419	321	740	48257482	13,15
UPA C 100-5/17 EE	4	1 1/2	524	451	975	48257421	21,95	524	353	877	48257483	15,55
UPA C 100-5/21 EE	4	1 1/2	608	451	1059	48257422	22,65	608	353	961	48257484	16,35
UPA C 100-5/25 EE	4	1 1/2	-	-	-	-	-	692	408	1100	48257485	19,55
UPA C 100-5/33 EE	4	1 1/2	-	-	-	-	-	868	543	1411	48257486	29,6
UPA C 100-5/38 EE	4	1 1/2	-	-	-	-	-	973	653	1626	48257488	37,5
UPA C 100-5/44 EE	4	1 1/2	-	-	-	-	-	1099	653	1752	48257490	39
UPA C 100-5/52 EE	4	1 1/2	-	-	-	-	-	1267	653	1920	48257491	41
UPA C 100-5/60 EE	4	1 1/2	-	-	-	-	-	1435	731	2166	48257492	47
UPA C 100-5/75 EE	6	1 1/2	-	-	-	-	-	2171	699	2870	48257874	89,5
UPA C 100-5/85 EE	6	1 1/2	-	-	-	-	-	2335	809	3144	48257875	93,5

Table 13: Nominal power [kW] / [hp], nominal current [A]

Size	Motor rating		Nominal current	
	[kW]	[hp]	1~230 V	3~400 V
			[A]	[A]
UPA C 100-5/4 EE	0,37	0,50	3,3	1,1
UPA C 100-5/6 EE	0,55	0,75	4,3	1,6
UPA C 100-5/8 EE	1,10	1,50	8,4	2,8
UPA C 100-5/12 EE	1,50	2,00	10,7	3,9
UPA C 100-5/17 EE	2,20	3,00	14,7	5,5
UPA C 100-5/21 EE	2,20	3,00	14,7	5,5
UPA C 100-5/25 EE	3,00	4,00	-	7,5
UPA C 100-5/33 EE	4,00	5,50	-	9,9
UPA C 100-5/38 EE	5,50	7,50	-	12,6
UPA C 100-5/44 EE	5,50	7,50	-	12,6
UPA C 100-5/52 EE	5,50	7,50	-	12,6
UPA C 100-5/60 EE	7,50	10,00	-	17,1
UPA C 100-5/75 EE	9,00	10,00	-	21,7
UPA C 100-5/85 EE	9,00	15,00	-	21,7

UPA C 100-9 EE - 50 Hz



Dimensions

Table 14: Dimensions [mm], weights [kg]

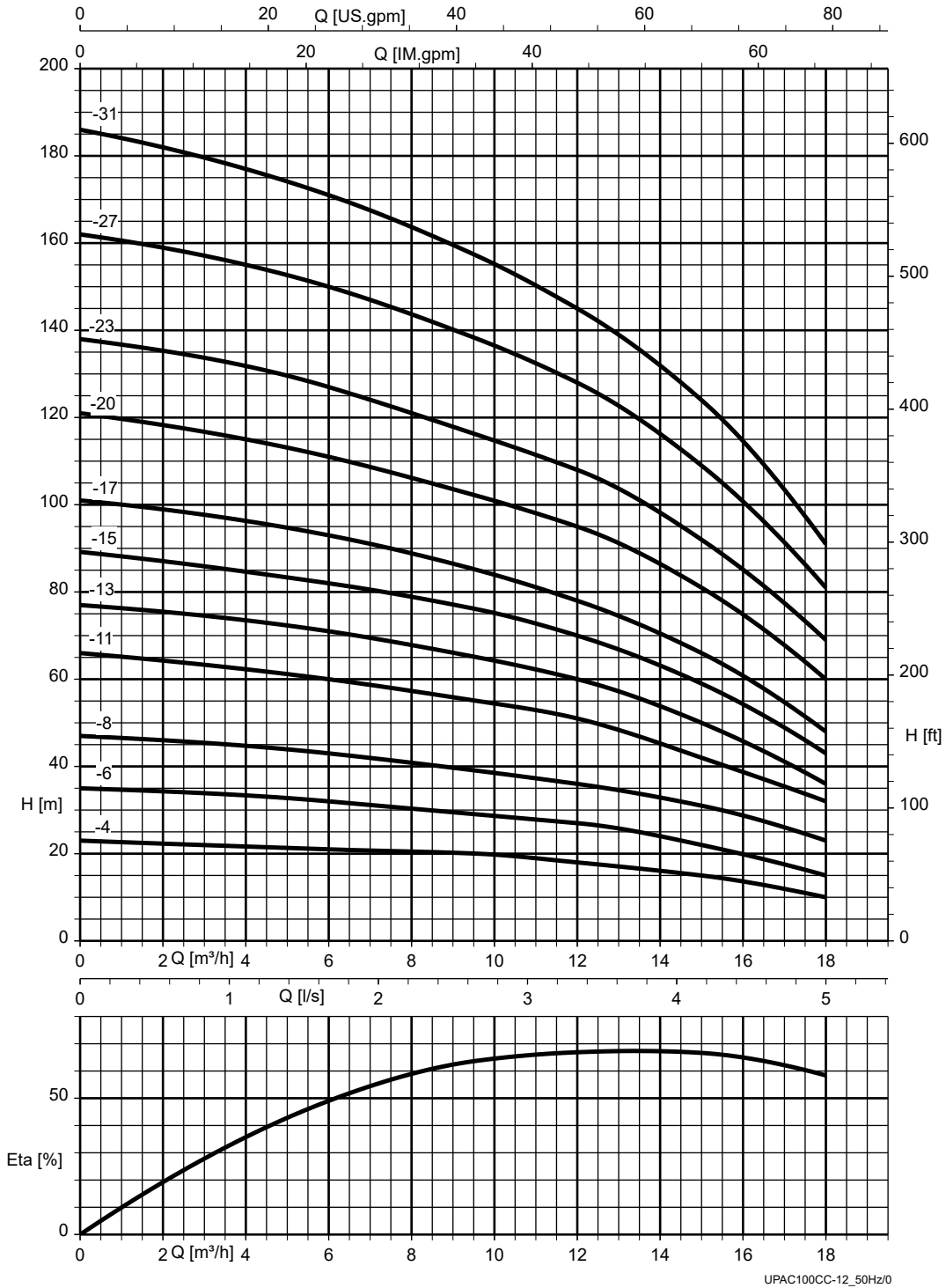
Size	Motor diam. ["]	Rp	1~230 V					3~400 V				
			A	B	C	Mat. No.	[kg]	A	B	C	Mat. No.	[kg]
			[mm]	[mm]	[mm]			[mm]	[mm]	[mm]		
UPA C 100-9/5 EE	4	2	412	297	709	48257427	13,6	412	271	683	48257493	11,55
UPA C 100-9/7 EE	4	2	496	353	849	48257428	17,2	496	321	817	48257494	14,85
UPA C 100-9/10 EE	4	2	622	451	1073	48257429	23,5	622	353	975	48257495	17,85
UPA C 100-9/12 EE	4	2	706	451	1157	48257430	24,5	706	353	1059	48257496	18,85
UPA C 100-9/15 EE	4	2	-	-	-	-	-	832	408	1240	48257497	22,85
UPA C 100-9/18 EE	4	2	-	-	-	-	-	958	408	1366	48257498	24,35
UPA C 100-9/21 EE	4	2	-	-	-	-	-	1084	543	1627	48257500	32,3
UPA C 100-9/25 EE	4	2	-	-	-	-	-	1252	653	1904	48257502	40,9
UPA C 100-9/30 EE	4	2	-	-	-	-	-	1462	653	2114	48257503	43,4
UPA C 100-9/37 EE	4	2	-	-	-	-	-	1753	731	2484	48257504	50,9
UPA C 100-9/44 EE	4	2	-	-	-	-	-	2047	731	2778	48257505	53,9
UPA C 100-9/50 EE	4	2	-	-	-	-	-	2299	809	3108	48257506	74,4
UPA C 100-9/58 EE	6	2	-	-	-	-	-	3005	809	3814	48257876	114,2
UPA C 100-9/66 EE	6	2	-	-	-	-	-	3341	809	4150	48257877	120,6
UPA C 100-9/73 EE	6	2	-	-	-	-	-	3635	854	4489	48257878	126,4
UPA C 100-9/82 EE	6	2	-	-	-	-	-	4013	854	4867	48257879	138,7
UPA C 100-9/91 EE	6	2	-	-	-	-	-	4391	854	5245	48257880	146,1
UPA C 100-9/100 EE	6	2	-	-	-	-	-	4769	899	5668	48257881	157,4
UPA C 100-9/110 EE	6	2	-	-	-	-	-	5189	899	6088	48257882	165,6

Table 15: Nominal power [kW] / [hp], nominal current [A]

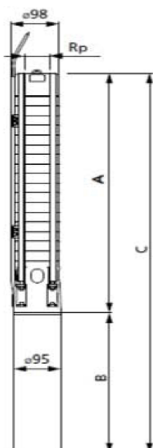
Size	Motor rating		Nominal current	
	[kW]	[hp]	1~230 V [A]	3~400 V [A]
	UPA C 100-9/5 EE	0,75	1,00	5,7
UPA C 100-9/7 EE	1,50	2,00	10,7	3,9
UPA C 100-9/10 EE	2,20	3,00	14,7	5,5
UPA C 100-9/12 EE	2,20	3,00	14,7	5,5
UPA C 100-9/15 EE	3,00	4,00	-	7,5
UPA C 100-9/18 EE	3,00	4,00	-	7,5
UPA C 100-9/21 EE	4,00	5,50	-	9,9
UPA C 100-9/25 EE	5,50	7,50	-	12,6
UPA C 100-9/30 EE	5,50	7,50	-	12,6
UPA C 100-9/37 EE	7,50	10,00	-	17,1
UPA C 100-9/44 EE	7,50	10,00	-	17,1
UPA C 100-9/50 EE	9,00	15,00	-	21,7
UPA C 100-9/58 EE	13,00	17,40	-	30,1
UPA C 100-9/66 EE	13,00	17,40	-	30,1
UPA C 100-9/73 EE	13,00	17,40	-	30,1

Size	Motor rating		Nominal current	
			1~230 V	3~400 V
	[kW]	[hp]	[A]	[A]
UPA C 100-9/82 EE	15,00	20,00	-	33,1
UPA C 100-9/91 EE	15,00	20,00	-	33,1
UPA C 100-9/100 EE	18,50	25,00	-	42,1
UPA C 100-9/110 EE	18,50	25,00	-	42,1

UPA C 100-12 EE - 50 Hz



3412.51/03-EN

Dimensions

Table 16: Dimensions [mm], weights [kg]

Size	Motor diam. ["]	Rp	1~230 V					3~400 V				
			A	B	C	Mat. No.	[kg]	A	B	C	Mat. No.	[kg]
			[mm]	[mm]	[mm]			[mm]	[mm]	[mm]		
UPA C 100-12/4 EE	4	2	485	321	806	48257224	15,5	485	297	782	48257437	15,2
UPA C 100-12/6 EE	4	2	635	353	988	48257225	18,4	635	321	956	48257438	17,7
UPA C 100-12/8 EE	4	2	785	451	1236	48257226	24,7	785	353	1138	48257439	20,6
UPA C 100-12/11 EE	4	2	-	-	-	-	-	1010	408	1418	48257440	27,3
UPA C 100-12/13 EE	4	2	-	-	-	-	-	1160	408	1568	48257441	28,8
UPA C 100-12/15 EE	4	2	-	-	-	-	-	1310	543	1853	48257442	33,3
UPA C 100-12/17 EE	4	2	-	-	-	-	-	1460	543	2003	48257507	34,8
UPA C 100-12/20 EE	4	2	-	-	-	-	-	1685	653	2338	48257508	43,7
UPA C 100-12/23 EE	4	2	-	-	-	-	-	1910	731	2641	48257509	50
UPA C 100-12/27 EE	4	2	-	-	-	-	-	2210	731	2941	48257510	53
UPA C 100-12/31 EE	4	2	-	-	-	-	-	2510	731	3241	48257511	56

Table 17: Nominal power [kW] / [hp], nominal current [A]

Size	Motor rating		Nominal current	
	[kW]	[hp]	1~230 V	3~400 V
			[A]	[A]
UPA C 100-12/4 EE	1,10	1,50	8,4	2,8
UPA C 100-12/6 EE	1,50	2,00	10,7	3,9
UPA C 100-12/8 EE	2,20	3,00	14,7	5,5
UPA C 100-12/11 EE	3,00	4,00	-	7,5
UPA C 100-12/13 EE	3,00	4,00	-	7,5
UPA C 100-12/15 EE	4,00	5,50	-	9,9
UPA C 100-12/17 EE	4,00	5,50	-	9,9
UPA C 100-12/20 EE	5,50	7,50	-	12,6
UPA C 100-12/23 EE	5,50	7,50	-	12,6
UPA C 100-12/27 EE	7,50	10,00	-	17,1
UPA C 100-12/31 EE	7,50	10,00	-	17,1

Permissible cable lengths

Table 18: ΔV up to 3 %, DOL starting and t up to +30 °C

Type of current/ voltage	Motor rating [kW]	Cable lengths [m] for a cable cross-section of ³⁾			
		1.5 mm ²	2.5 mm ²	4.0 mm ²	6.0 mm ²
1~230 V (PSC)	0,37	95	159	255	382
1~230 V (PSC)	0,55	71	118	189	284
1~230 V (PSC)	0,75	52	87	140	210
1~230 V (PSC)	1,10	37	62	99	148
1~230 V (PSC)	1,50	28	47	75	113
1~ 230 V (PSC)	2,20	20	33	53	80
3~400 V	0,37	713	-	-	-
3~400 V	0,55	490	-	-	-
3~400 V	0,75	377	628	-	-
3~400 V	1,10	265	443	708	-
3~400 V	1,50	190	318	509	-
3~400 V	2,20	137	228	365	548
3~400 V	3,00	100	167	268	402
3~400 V	4,00	82	137	220	330
3~400 V	5,50	56	94	151	227
3~400 V	7,50	41	68	107	160

Scope of supply

Depending on the model, the following items are included in the scope of supply:

- Pump set with motor lead
- Back-up name plate

Optional:

- Extension cable optional: connected or supplied but not fitted
- Cable connector
- Cable clips
- Pedestals
- Cooling shroud, suction shroud or pressure shroud
- Supporting clamps and mounting clamps
- Electrical protection equipment
- Automatic control units

³⁾ The permissible motor cable length differs as a function of cable cross-section.

Accessories
Pump accessories
Table 19: Selection of pump accessories

Description			Mat. No.	[kg]
Adapter	Rp 1 1/4 → G 1 1/2	Per piece	90052823	0,5
	Rp 1 1/2 → DN 40 / PN 40	Per piece	01845929	2,5
	Rp 2 → DN 50 / PN 40	Per piece	01848450	2,5
Supporting and installation clamps	R 1 1/4 / DN 32	Per pair	95000290	2,4
	R 2" / DN 50	Per pair	95000294	3,4
Cable clip		Per piece	40980709	0,1
Power cable, round, drinking water	4 x 1,5 mm ²	Per metre	90068174	0,18
Power cable, round, drinking water	4 x 2,5 mm ²	Per metre	90068175	0,259
Power cable, round, drinking water	4 x 4 mm ²	Per metre	90068176	0,356
Standard cable connector with shrink tube, for non-separable cable connections	4 x 1,5 mm ² and 4 x 2,5 mm ²		40980058	0,1
	Sealed and connected with power cable at the factory		40980708	0,1
	4 x 4 mm ²		39020537	0,1
	Sealed and connected with power cable at the factory		39020536	0,5
Cable kit for 3~ motors DN 100, 4-core, flat, 4 x 1.5 mm ² ⁴⁾	L = 5 m	Per set	01431841	0,7
	L = 10 m	Per set	01435407	1,3
	L = 15 m	Per set	01435408	2,07
	L = 20 m	Per set	01435409	2,74
	L = 25 m	Per set	01435410	3,3
	L = 30 m	Per set	01435411	4,1
	L = 35 m	Per set	01435412	4,77
	L = 40 m	Per set	01435413	5,54
Dry running protection device Fully automatic operation		Per set	90009554	2
Dry running protection device Semi-automatic operation		Per set	90009553	2
Plus 1 control current cable per electrode, ACS, 1 x 1.5 mm ²		Per metre	01046306	0,01
Control cabinet UPA Control For DOL starting, temperature-compensated, insulating enclosure With 4 PG cable glands for round cables 3 immersion electrodes and integrated selector switch for "Dry running protection" or "Water level control" operation, as well as with thermal overcurrent relay with phase failure protection, for motor sizes:	1~ 230 V	3~ 400 V		
	-	0,37 kW	40980887	3,5
	-	0,55 + 0,75 kW	40980889	3,5
	0,37 kW	1,10 + 1,50 kW	40980891	3,5
	0,55 kW	-	40980893	3,5
	0,75 kW	2,20 kW	40980895	3,5
	1,10 kW	3,00 + 3,70 kW	40980897	3,5
	1,50 kW	-	40980899	3,5
	2,20 kW	5,50 kW	40984811	3,5
	-	7,50 kW	90052649	3,5
Pressure controller 0 - 8 bar		Per piece	01151586	1
Set of electrodes: 3 electrodes made of stainless steel			40980055	0,3
Set of electrodes: 1 electrode made of stainless steel			40980056	0,1
Stainless steel wire rope, 15 m, with fastening elements			42200727	1
Stainless steel wire rope, 30 m			42204021	2

⁴ Specify the material number of the pump when ordering.

Cooling shroud made of stainless steel 1.4301

Using a cooling shroud can help reduce the temperature of the submersible motor. We recommend using a cooling shroud under the following operating conditions:

- When the submersible motor is subject to thermal stress, caused by:
 - Overload
 - High temperature of the surrounding fluid
 - Insufficient flow of the cooling fluid at the motor
 - Insufficient motor cooling due to impurities or deposits accumulating on the motor
- Using an additional suction strainer if the fluid contains coarse particles
 - For protection against drawn in leaves or other coarse particles contained in the water
 - For inhibiting the formation of vortices.



Since the cooling shroud is not tightly mounted to the pump (not pressure-proof) it cannot be used as suction shroud. The submersible borehole pump with cooling shroud must be permanently submerged in the water.

Table 20: Accessories cooling shroud

Size	Cooling shroud					Suction strainer		
	Ø × length	Vertical installation		Horizontal installation (including pedestals)		Ø × length	Mat. No.	[kg]
	[mm]	Mat. No.	[kg]	Mat. No.	[kg]			
UPA C 100-1/9 ... 1/21 EE	Ø 115 (130) × 400	90066478	1,5	01138203	1,5	Ø 115 × 117	90065494	0,3
UPA C 100-1/28 ... 1/50 EE	Ø 115 (130) × 500	90066479	1,8	01138204	1,8	Ø 115 × 117	90065494	0,3
UPA C 100-1/50 EE	Ø 115 (130) × 620	90066480	2	01138205	2	Ø 115 × 117	90065494	0,3
UPA C 100-2/6 ... 2/13 EE	Ø 115 (130) × 400	90066478	1,5	01138203	1,5	Ø 115 × 117	90065494	0,3
UPA C 100-2/18 ... 2/33 EE	Ø 115 (130) × 500	90066479	1,8	01138204	1,8	Ø 115 × 117	90065494	0,3
UPA C 100-2/40 ... 2/65 EE	Ø 115 (130) × 620	90066480	2	01138205	2	Ø 115 × 117	90065494	0,3
UPA C 100-2/75 ... 2/90 EE	Ø 115 (130) × 800	90066481	2,5	01138206	2,5	Ø 115 × 117	90065494	0,3
UPA C 100-3/6 ... 3/9 EE	Ø 115 (130) × 400	90066478	1,5	01138203	1,5	Ø 115 × 117	90065494	0,3
UPA C 100-3/12 ... 3/25 EE	Ø 115 (130) × 500	90066479	1,8	01138204	1,8	Ø 115 × 117	90065494	0,3
UPA C 100-3/29 ... 3/45 EE	Ø 115 (130) × 620	90066480	2	01138205	2	Ø 115 × 117	90065494	0,3
UPA C 100-3/52 ... 3/60 EE	Ø 115 (130) × 800	90066481	2,5	01138206	2,5	Ø 115 × 117	90065494	0,3
UPA C 100-5/4 ... 5/6 EE	Ø 115 (130) × 400	90066478	1,5	01138203	1,5	Ø 115 × 117	90065494	0,3
UPA C 100-5/8 ... 5/17 EE	Ø 115 (130) × 500	90066479	1,8	01138204	1,8	Ø 115 × 117	90065494	0,3
UPA C 100-5/21 ... 5/33 EE	Ø 115 (130) × 620	90066480	2	01138205	2	Ø 115 × 117	90065494	0,3
UPA C 100-5/38 ... 5/44 EE	Ø 115 (130) × 800	90066481	2,5	01138206	2,5	Ø 115 × 117	90065494	0,3
UPA C 100-5/52 ... 2/60 EE	Ø 115 (130) × 1000	90066482	3	01138257	3	Ø 115 × 117	90065494	0,3
UPA C 100-5/75 ... 5/85 EE	Ø 180 (195) × 1000	05190236	6	05190240	8,5	Ø 180 × 192	01138984	0,6
UPA C 100-9/5 ... 9/10 EE	Ø 115 (130) × 500	90066479	1,8	01138204	1,8	Ø 115 × 117	90065494	0,3
UPA C 100-9/12 ... 9/18 EE	Ø 115 (130) × 620	90066480	2	01138205	2	Ø 115 × 117	90065494	0,3
UPA C 100-9/21 ... 9/25 EE	Ø 115 (130) × 800	90066481	2,5	01138206	2,5	Ø 115 × 117	90065494	0,3
UPA C 100-9/30 ... 9/50 EE	Ø 115 (130) × 1000	90066482	3	01138257	3	Ø 115 × 117	90065494	0,3
UPA C 100-9/58 ... 9/110 EE	Ø 180 (200) × 1250	05190237	7,2	05190241	9,8	Ø 180 × 192	01138984	0,6
UPA C 100-12/4 ... 12/6 EE	Ø 115 (130) × 500	90066479	1,8	01138204	1,8	Ø 115 × 117	90065494	0,3
UPA C 100-12/8 ... 12/13 EE	Ø 115 (130) × 620	90066480	2	01138205	2	Ø 115 × 117	90065494	0,3
UPA C 100-12/15 ... 12/17 EE	Ø 115 (130) × 800	90066481	2,5	01138206	2,5	Ø 115 × 117	90065494	0,3
UPA C 100-12/20 ... 12/31 EE	Ø 115 (130) × 1000	90066482	3	01138257	3	Ø 115 × 117	90065494	0,3





Automatic control units

Table 21: Overview of automatic control units

	Description	Mat. No.	[kg]
	Cervomatic EDP.2 automatic control unit	01185581	2,5
	Controlmatic E automatic control unit	90053395	1,3

Accessories for automatic control units

Table 22: Accessories for automatic control units

Item	Description	Mat. No.	[kg]
	Pump pipe unions Rp1" → G1 1/4" (2 pcs.)	00136434	0,3
	Pipe adapter set for installing the unit in horizontal pipes	01198308	2,2
	Check valve Rp1" → G1"	00410207	0,6
	Accumulator (membrane-type accumulator), 8 l	01079764	2,35



KSB SE & Co. KGaA
Johann-Klein-Straße 9 • 67227 Frankenthal (Germany)
Tel. +49 6233 86-0
www.ksb.com