

Inventflow: Grundfos A-partner

Grundfos CRN 45-1-1 A-F-A-E-HQQE

Find the pump here:

<https://inventflow.nl/en/pompenfilter/crn/grundfos-crn-45-1-1-a-f-a-e-hqqe>

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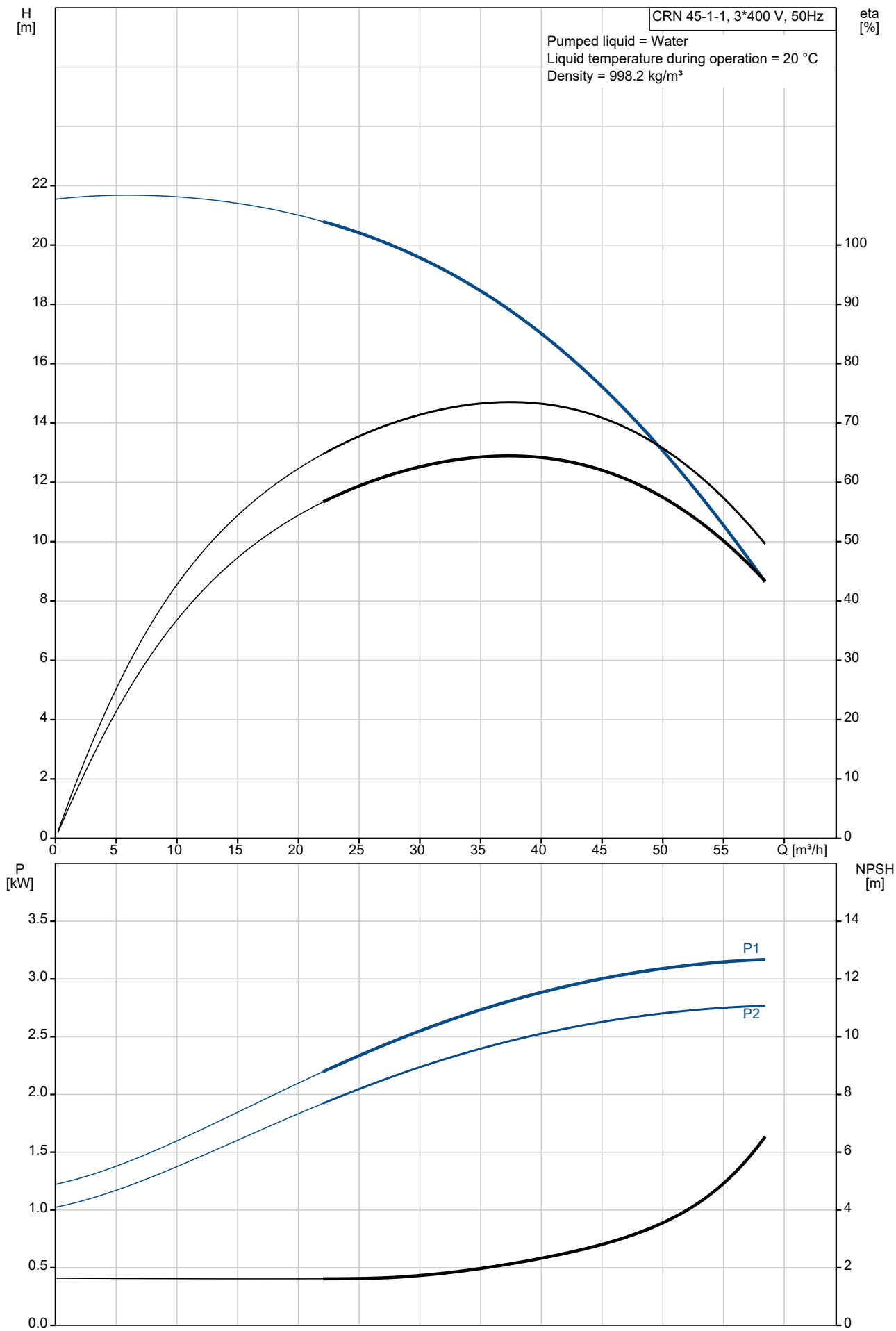
Datasheet



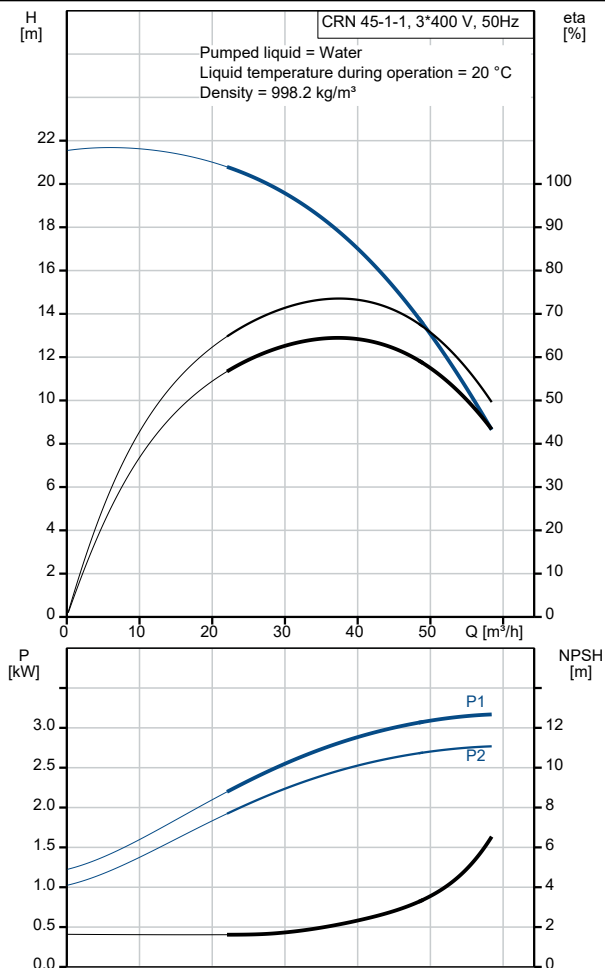
Qty.	Description
1	CRN 45-1-1 A-F-A-E-HQQE  Product No.: 96123116 Vertical, non-self-priming, multistage, in-line, centrifugal pump for installation in pipe systems and mounting on a foundation. The pump has the following characteristics: - Impellers, intermediate chambers and outer sleeve are made of Impeller: Stainless steel, EN 1.4401. - Pump head cover and base are made of Pump housing: Stainless steel, EN 1.4408. - The shaft seal has assembly length according to EN 12756. - Power transmission is via cast iron split coupling. Flange standard: - Pipework connection is via DIN flanges/couplings. Phase: The motor is a 3-phase AC motor. Controls: Frequency converter: NONE Liquid: Pumped liquid: Water Liquid temperature range: -40 .. 120 °C Selected liquid temperature: 20 °C Density: 998.2 kg/m³ Technical: Pump speed on which pump data are based: 2902 rpm Rated flow: 45 m³/h Rated head: 15 m Pump orientation: Vertical Shaft seal arrangement: Single Code for shaft seal: HQQE Approvals on nameplate: CE,EAC,UKCA,WRAS,ACS Curve tolerance: ISO9906:2012 3B Materials: Base: Stainless steel EN 1.4408 AISI 316 Impeller: Stainless steel EN 1.4401 AISI 316 Bearing: SIC Support bearing: Graflon Installation: Maximum ambient temperature: 60 °C Maximum operating pressure: 16 bar Max pressure at stated temp: 16 bar / 120 °C 16 bar / -40 °C

Qty.	Description
	Type of connection: DIN Size of inlet connection: DN 80 Size of outlet connection: DN 80 Pressure rating for connection: PN 40 Flange size for motor: FT130 Electrical data: Motor standard: IEC Motor type: 100LC IE Efficiency class: IE3 Rated power - P2: 3 kW Power (P2) required by pump: 3 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D V Rated current: 6.3 A Starting current: 840-920 % Cos phi - power factor: 0.87-0.82 Rated speed: 2900-2920 rpm Efficiency: IE3 87,1% Motor efficiency at full load: 87.1 % Motor efficiency at 3/4 load: 88.0 % Motor efficiency at 1/2 load: 87.7 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Motor No: 85U15510 Others: Minimum efficiency index, MEI ≥: 0.70 Net weight: 81.8 kg Gross weight: 105 kg Shipping volume: 0.309 m³ Country of origin: DK Custom tariff no.: 84137075

96123116 CRN 45-1-1 A-F-A-E-HQQE 50 Hz

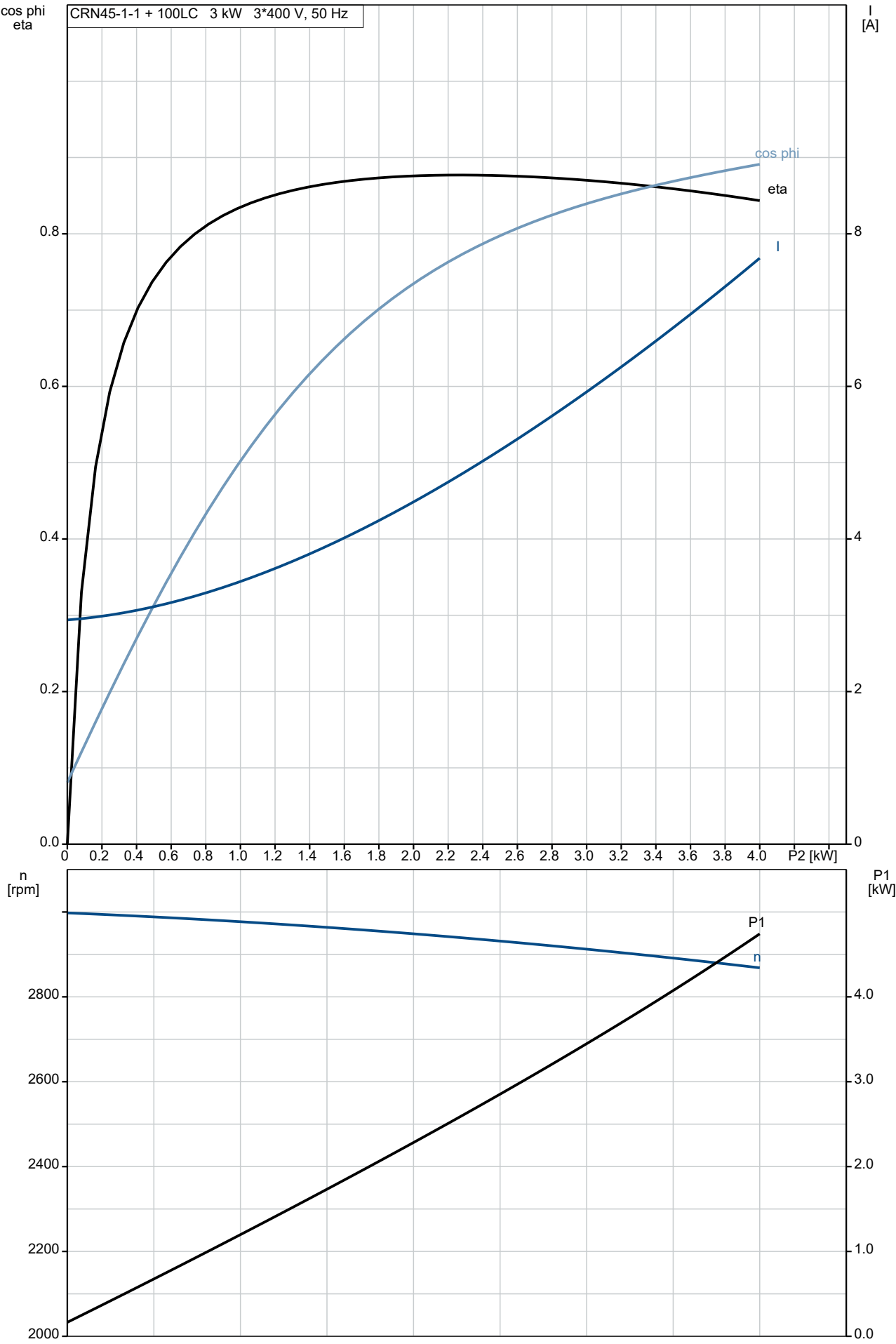


Description	Value
General information:	
Product name:	CRN 45-1-1 A-F-A-E-HQQE
Product No:	96123116
EAN number:	5700396691619
Technical:	
Pump speed on which pump data are based:	2902 rpm
Rated flow:	45 m³/h
Rated head:	15 m
Maximum head:	21.4 m
Stages:	1
Impellers:	1
Number of reduced-diameter impellers:	1
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CE,EAC,UKCA,WRAS,A CS
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	B
Materials:	
Base:	Stainless steel
Base:	EN 1.4408
Base:	AISI 316
Impeller:	Stainless steel
Impeller:	EN 1.4401
Impeller:	AISI 316
Material code:	A
Code for rubber:	E
Bearing:	SIC
Support bearing:	Graflon
Installation:	
Maximum ambient temperature:	60 °C
Maximum operating pressure:	16 bar
Max pressure at stated temp:	16 bar / 120 °C
Max pressure at stated temp:	16 bar / -40 °C
Type of connection:	DIN
Size of inlet connection:	DN 80
Size of outlet connection:	DN 80
Pressure rating for connection:	PN 40
Flange size for motor:	FT130
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-40 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor standard:	IEC
Motor type:	100LC
IE Efficiency class:	IE3
Rated power - P2:	3 kW
Power (P2) required by pump:	3 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-415D V
Rated current:	6.3 A
Starting current:	840-920 %
Cos phi - power factor:	0.87-0.82
Rated speed:	2900-2920 rpm
Efficiency:	IE3 87,1%
Motor efficiency at full load:	87.1 %
Motor efficiency at 3/4 load:	88.0 %

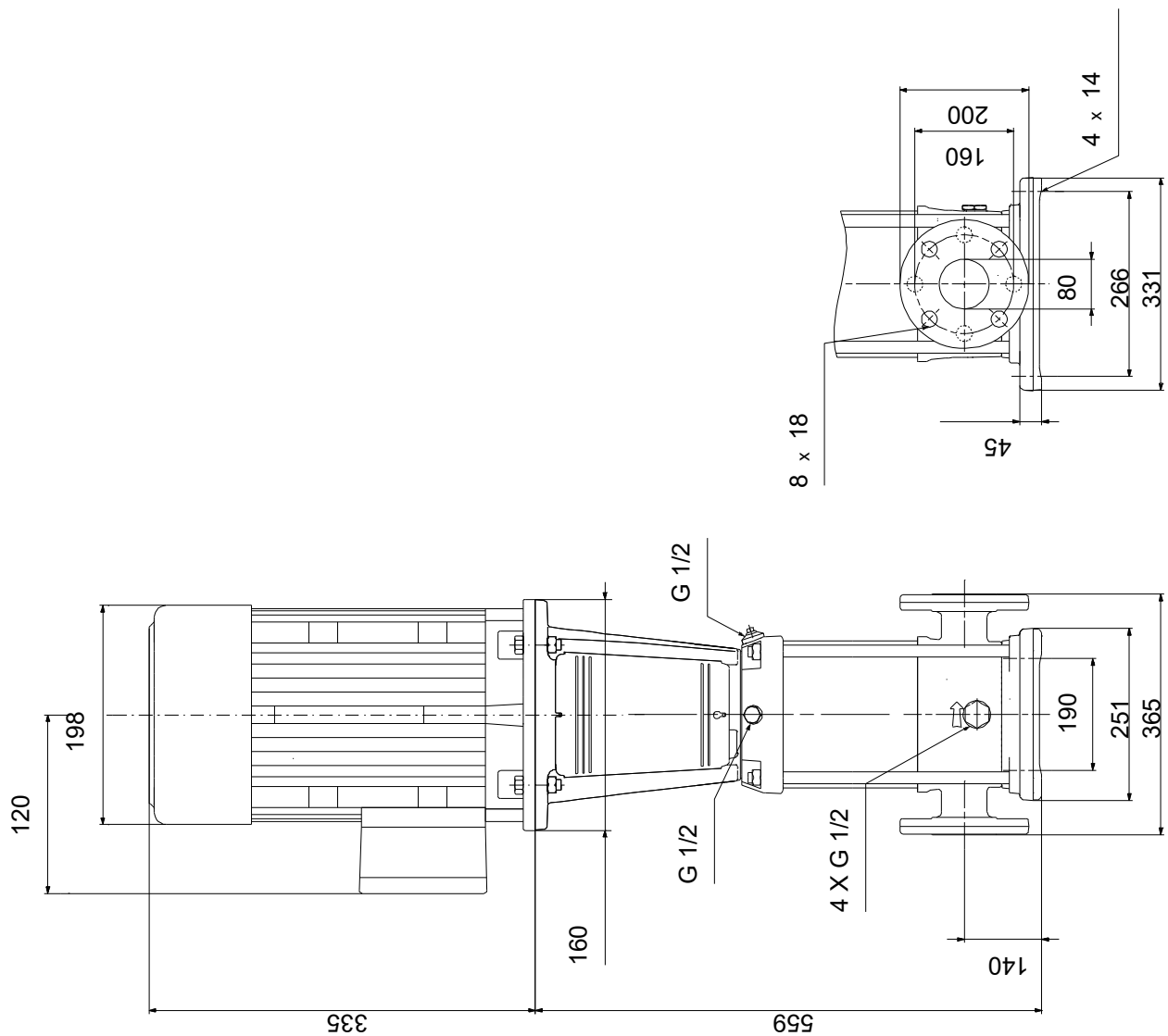


Description	Value
Motor efficiency at 1/2 load:	87.7 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protec:	PTC
Motor No:	85U15510
Controls:	
Frequency converter:	NONE
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	81.8 kg
Gross weight:	105 kg
Shipping volume:	0.309 m³
Country of origin:	DK
Custom tariff no.:	84137075

96123116 CRN 45-1-1 A-F-A-E-HQQE 50 Hz



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Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Spare parts CRN 45-1-1, Product No. 96123116
Produced After 1410 (production year and week number)

Pos	Omschrijving	Opmerking	Classificatie Gegevens	Onderdeelnr	Aanta	Eenhei
	Base			96587695	1	pcs
6	Base				1	
	Kit, chamber stack			96416239	1	pcs
80	Chamber stack				1	
3	Upper chamber cpl.					1
	Cone					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
	Spare, turbulence optimizer KP					
47	Bearing					
26c	Washer		Designation: DIN 125A			2
			Thickness: 1,6			
26b	Hex socket head cap screw					2
26a	Strap cpl.					2
44	Suction interconnector cpl.					1
44a	Suction interconnector					
45	Seal ring					
46	Neck ring					
65	Top f/neck ring					
47a	Bearing cpl.					1
	Driver					
	Holder					
	Disc spring					
	Bearing ring					
47f	Hairpin clip					
49d	Impeller cpl.					1
48	Nut					
49b	Split cone					
49a	Impeller, reduced diameter					
	Impeller hub					
49c	Wear ring					
51	Shaft					1
	Kit, chambers			98633988	1	pcs
3	Upper chamber cpl.				1	
	Cone					1
	Spare, turbulence optimizer KP					1
	Spare, turbulence optimizer KP					1
	Spare, turbulence optimizer KP					1
	Spare, turbulence optimizer KP					1
	Spare, turbulence optimizer KP					10
47	Bearing					1
47a	Bearing cpl.				1	
	Driver					1
	Holder					1
	Disc spring					1
	Bearing ring					1
47f	Hairpin clip					1
	Kit, coupling			96416590	1	pcs
	Adjusting fork					1
9	Hex socket head cap screw		Designation: DIN 912			4
			Length (mm): 25			
			Thread: M10			
10a	Coupling					1
	Kit, coupling guard			96505134	1	pcs
7a	Socket button head screw					4
7	Coupling guard					2
	Kit, cover			98832448	1	pcs

Pos	Omschrijving	Opmerking	Classificatie Gegevens	Onderdeelnr	Aanta	Eenhei
58a	Hex socket head cap screw		Designation: DIN 912		4	
			Length (mm): 25			
			Thread: M10			
58	Cover				1	
	Kit, gaskets			96416599	1	pcs
	Adjusting fork				1	
37	O-ring				2	
38	O-ring				2	
38	O-ring				4	
60	Spring				4	
109	O-ring				1	
110	O-ring		Diameter: 21,2		1	
			Material type: EPDM			
			Thickness: 3,55			
	Kit, Impeller, reduced			98634018	1	pcs
48	Nut				1	
48	Nut				1	
49b	Split cone				1	
49a	Impeller, reduced diameter				1	
	Impeller hub				1	
49c	Wear ring				1	
	Kit, plug			96505136	1	pcs
18	Air vent screw				1	
	Spindle				1	
	Plug				1	
25	Plug				4	
25	Plug				1	
38	O-ring				2	
38	O-ring				4	
38	O-ring		Diameter: 16,3		2	
			Material type: FKM			
			Thickness: 2,4			
38	O-ring		Diameter: 16,3		4	
			Material type: FKM			
			Thickness: 2,4			
38	O-ring		Diameter: 16,3		6	
			Material type: FKM			
			Thickness: 2,4			
	Kit, shaft seal HQQE			96525458	1	pcs
	Grinding device				1	
105	Shaft seal		Material type: HQQE		1	
	Adjusting fork				1	
109	O-ring				1	
110	O-ring		Diameter: 21,5		1	
			Material type: EPDM			
			Thickness: 4,25			
	Kit, wear parts			98497473	1	pcs
45	Seal ring				2	
47d	Lock ring				2	
47c	Bush				1	
49c	Wear ring				2	
65	Top f/neck ring				2	
	Motor			85903731	1	pcs
	Kit, Ball bearing			96279795	1	
99a	Retaining ring				1	
99	Retaining ring				1	
111	Ball bearing				1	
111	Ball bearing				1	
157	O-ring		Diameter: 52		1	
			Material type: NBR			
			Thickness: 3			
158	Waved washer				1	
	Kit, end shield			96279831	1	

Pos	Omschrijving	Opmerking	Classificatie Gegevens	Onderdeelnr	Aanta	Eenhei
156 a	End shield				1	
157	O-ring		Diameter: 52 Material type: NBR Thickness: 3		1	
158	Waved washer				1	
159 a	Seal ring				1	
	Kit, fan			96279757	1	
156	Fan				1	
159 a	Seal ring				1	
	Kit, fan cover			96279826	1	
151 b	Label				1	
151	Fan cover				1	
152	Pan head thread forming screw				4	
	Kit, flange			96279828	1	
156 b	Flange				1	
156. c	Drain plug				3	
159. c	Seal ring				1	
	Kit, retaining ring			96279799	1	
99	Retaining ring				1	
188	Retaining ring				1	
	Kit, shaft seal			96279762	1	
159c	Seal ring				1	
159 a	Seal ring				1	
	Kit, staybolts			96279832	1	
181	Pan head staybolt				4	
	Kit, terminal board			96279769	1	
	Bracket cpl.				1	
163	Hex socket head screw				1	
173 a	Base				1	
173	Pan head thread forming screw		Designation: COMBI TORX T25		1	
176	Slot cheese head screw		Designation: COMBI TORX T25		6	
			Length (mm): 10 Thread: M5			
176	Terminal				1	
176	Connecting piece				3	
176	Wire clamp				3	
176	Terminal board				1	
177	Pan head screw				1	
	Kit, terminal box			96279771	1	
164	Terminal box cover w/gasket				1	
166	Pan head thread forming screw				4	
1a	Motor stool			96587723	1	pcs
2	Pump head			96587726	1	pcs
3	Upper chamber cpl.			99262946	1	pcs
47	Bearing			99964632	1	
47	Bearing			99928986	1	
6	Base			99347238	1	pcs
7a	Socket button head screw			96549696	4	pcs
7	Coupling guard			96603300	2	pcs
9	Hex socket head cap screw		Designation: DIN 912 Length (mm): 25 Thread: M10	99789390	4	pcs
18	Air vent screw			96547461	1	pcs
18	Air vent screw			95061351	1	pcs

Pos	Omschrijving	Opmerking	Classificatie Gegevens	Onderdeelnr	Aanta	Eenhei
25	Plug			96536013	1	pcs
26c	Washer		Designation: DIN 125A	99262704	2	pcs
			Thickness: 1,6			
26c	Washer		Designation: DIN 125A	99886930	2	pcs
			Thickness: 1,6			
26b	Hex socket head cap screw			98931380	2	pcs
26a	Strap cpl.			98983877	2	pcs
26	Staybolt		Length (mm): 310	98976717	4	pcs
			Thread: M16			
28a	Hex head screw		Length (mm): 20	99932722	4	pcs
			Thread: M8			
28	Hex socket head cap screw		Designation: DIN 912	96536147	4	pcs
			Length (mm): 50			
			Thread: M10			
32	Washer		Designation: DIN 125 A2	99944260	4	pcs
			Internal diameter: 17			
			Outer diameter: 30			
			Thickness: 3			
36	Nut		Thread: M16	99944257	4	pcs
37	O-ring			96536142	1	pcs
38	O-ring			99198815	2	pcs
38	O-ring			99412727	2	pcs
44	Suction interconnector cpl.			98634055	1	pcs
45	Seal ring			97911448	1	
45	Seal ring			96535952	1	
65	Top f/neck ring			96547390	1	
47a	Bearing cpl.			99270651	1	pcs
47f	Hairpin clip			99908983	1	
49b	Split cone			96536010	1	pcs
49a	Impeller, reduced diameter			96535957	1	pcs
49c	Wear ring			96535949	1	
49a	Impeller, reduced diameter			98585277	1	pcs
51	Shaft			98506303	1	pcs
55	Outer sleeve		Outer diameter: 216	98820349	1	pcs
			Length (mm): 103,5			
58	Cover			98893158	1	pcs
60	Spring			96536032	4	pcs
105	Shaft seal		Material type: HQQE	96984086	1	pcs
	Adjusting fork			96587896	1	
109	O-ring			99651108	1	
109	O-ring			96547586	1	
105	Shaft seal		Material type: HQQE	96984070	1	pcs
440 b	Lock ring			96535943	1	pcs