

## Inventflow: Grundfos A-partner

### Grundfos CR 20-6 A-F-A-E-HQQE

View the pump here: <https://inventflow.nl/en/grundfos-cr-20-6-a-f-a-e-hqqe-96500512>

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#### Datasheet



**Qty. Description**1 **CR 20-6 A-F-A-E-HQQE**

**Note! Product picture may differ from actual product**

Product No.: [96500512](#)

Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and base are in cast iron – all other wetted parts are in stainless steel. A cartridge shaft seal ensures high reliability, safe handling, and easy access and service. Power transmission is via a rigid split coupling. Pipe connection is via DIN flanges.

The pump is fitted with a 3-phase, fan-cooled asynchronous motor.

**Liquid:**

Pumped liquid: Water  
Liquid temperature range: -20 .. 120 °C  
Selected liquid temperature: 20 °C  
Density: 998.2 kg/m<sup>3</sup>

**Technical:**

Pump speed on which pump data are based: 2919 rpm  
Rated flow: 21 m<sup>3</sup>/h  
Rated head: 70.4 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: Cast iron  
EN 1561 EN-GJL-200  
ASTM A48-25B  
Impeller: Stainless steel  
EN 1.4301  
AISI 304  
Bearing: SIC  
SIC

**Installation:**

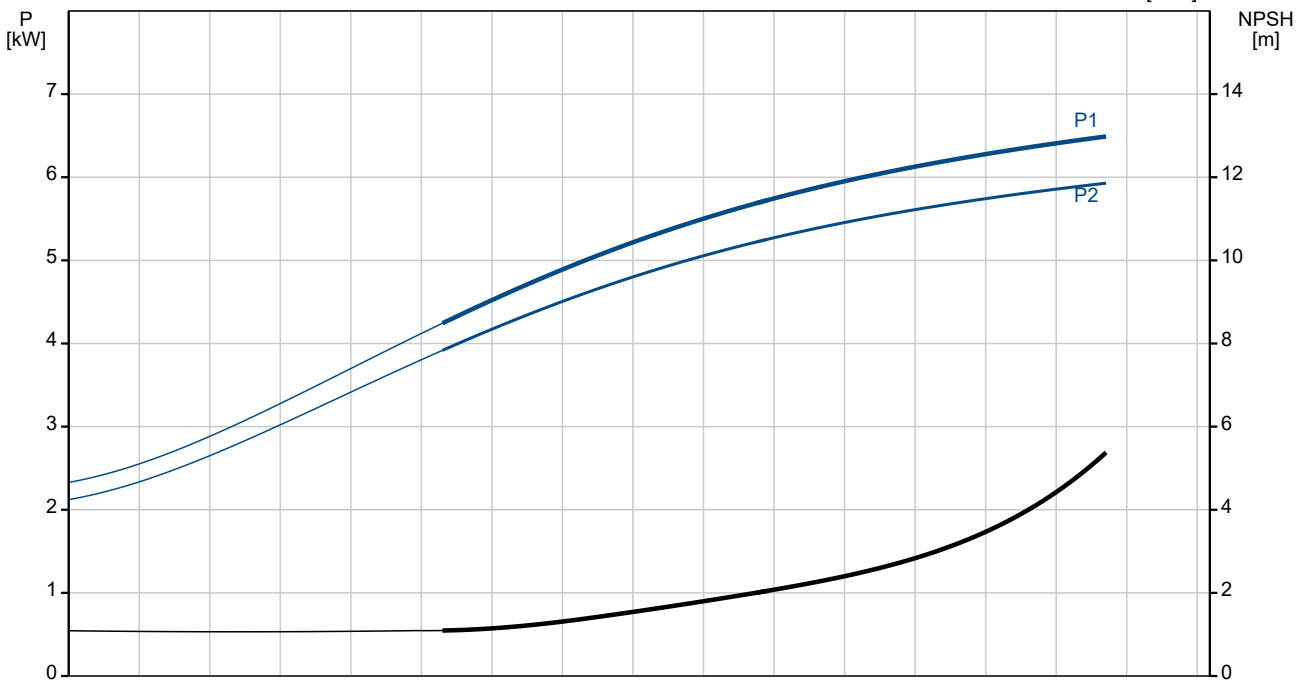
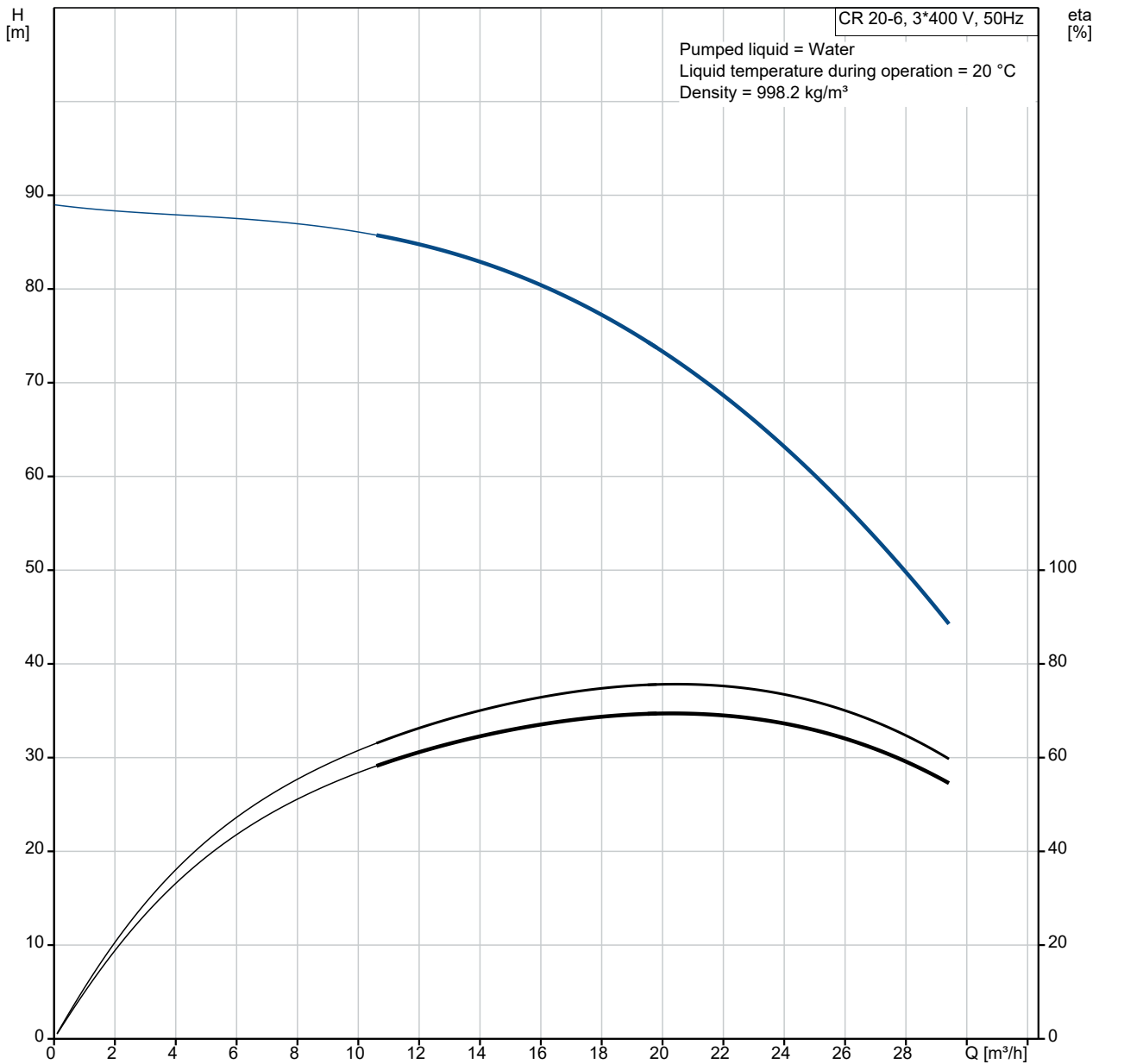
Maximum ambient temperature: 60 °C  
Maximum operating pressure: 16 bar  
Max pressure at stated temp: 16 bar / 120 °C  
16 bar / -20 °C

Type of connection: DIN  
Size of inlet connection: DN 50  
Size of outlet connection: DN 50  
Pressure rating for connection: PN 25  
Flange size for motor: FF265

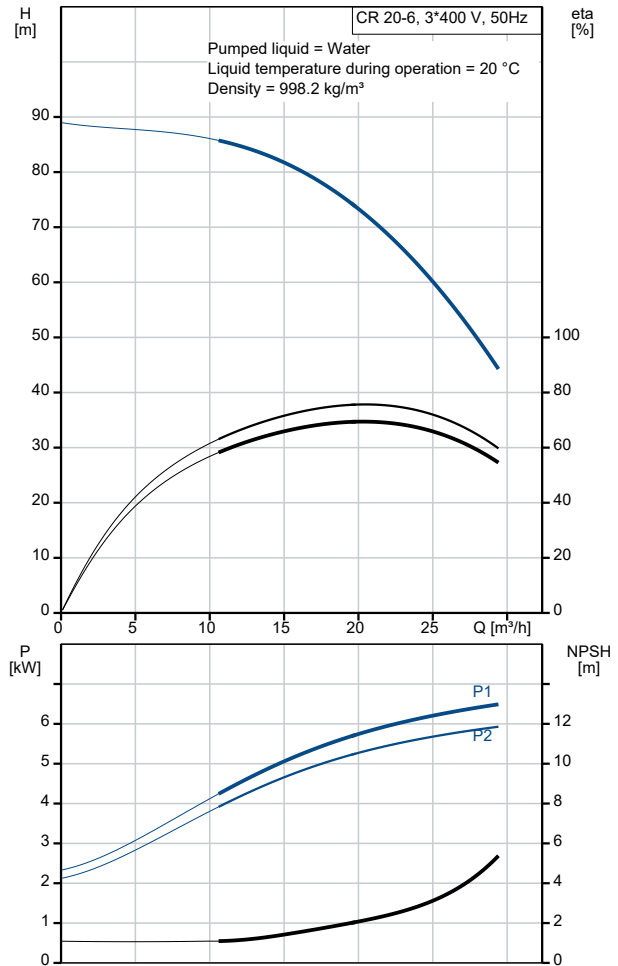
**Electrical data:**

Qty.	Description
	<p>Motor standard: IEC</p> <p>Motor type: 132SB</p> <p>IE Efficiency class: IE3</p> <p>Rated power - P2: 7.5 kW</p> <p>Power (P2) required by pump: 7.5 kW</p> <p>Mains frequency: 50 Hz</p> <p>Rated voltage: 3 x 380-415D/660-690Y V</p> <p>Rated current: 14,4-14,0/8,30-8,10 A</p> <p>Starting current: 780-910 %</p> <p>Cos phi - power factor: 0.88-0.82</p> <p>Rated speed: 2910-2920 rpm</p> <p>Efficiency: IE3 90,1%</p> <p>Motor efficiency at full load: 90.1-90.4 %</p> <p>Motor efficiency at 3/4 load: 90.8 %</p> <p>Motor efficiency at 1/2 load: 90.8 %</p> <p>Number of poles: 2</p> <p>Enclosure class (IEC 34-5): 55 Dust/Jetting</p> <p>Insulation class (IEC 85): F</p> <p>Motor No: 85U17522</p> <p>Controls:</p> <p>Frequency converter: NONE</p> <p>Others:</p> <p>Minimum efficiency index, MEI <math>\geq</math>: 0.70</p> <p>Net weight: 102 kg</p> <p>Gross weight: 124 kg</p> <p>Shipping volume: 0.285 m<sup>3</sup></p> <p>Danish VVS No.: 385905360</p> <p>Swedish RSK No.: 5823490</p> <p>Finnish LVI No.: 4925449</p> <p>Country of origin: HU</p> <p>Custom tariff no.: 84137075</p>

# 96500512 CR 20-6 A-F-A-E-HQQE 50 Hz



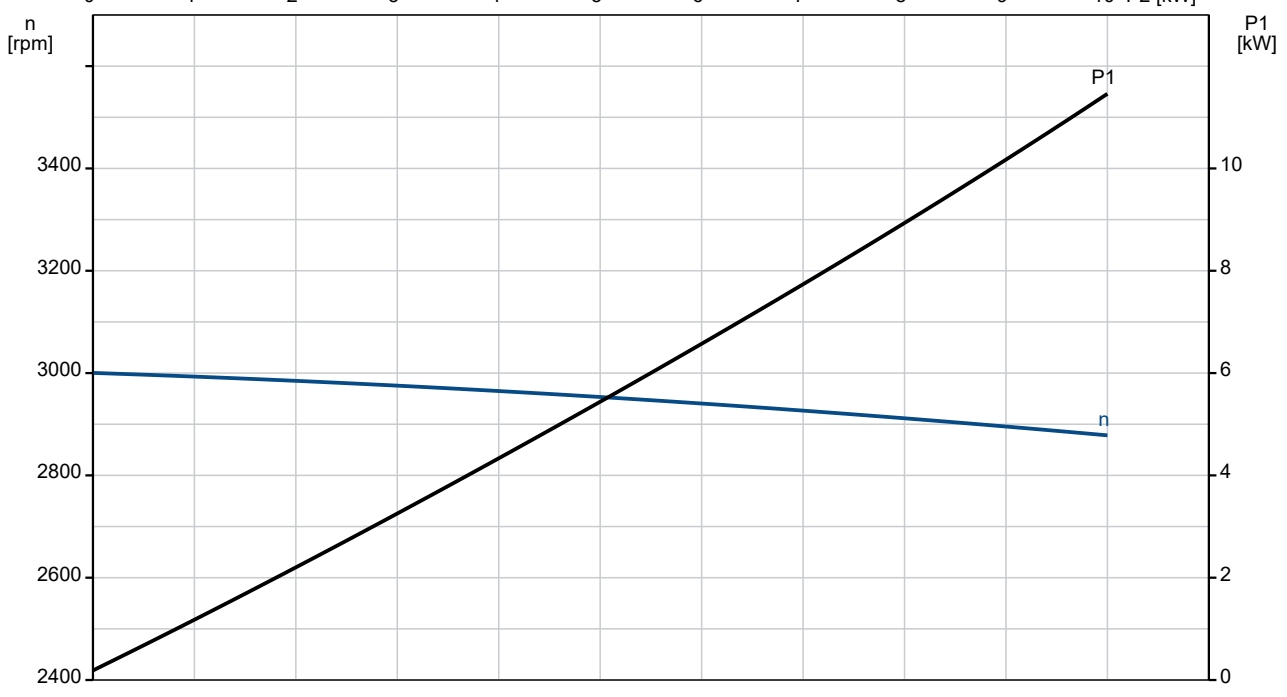
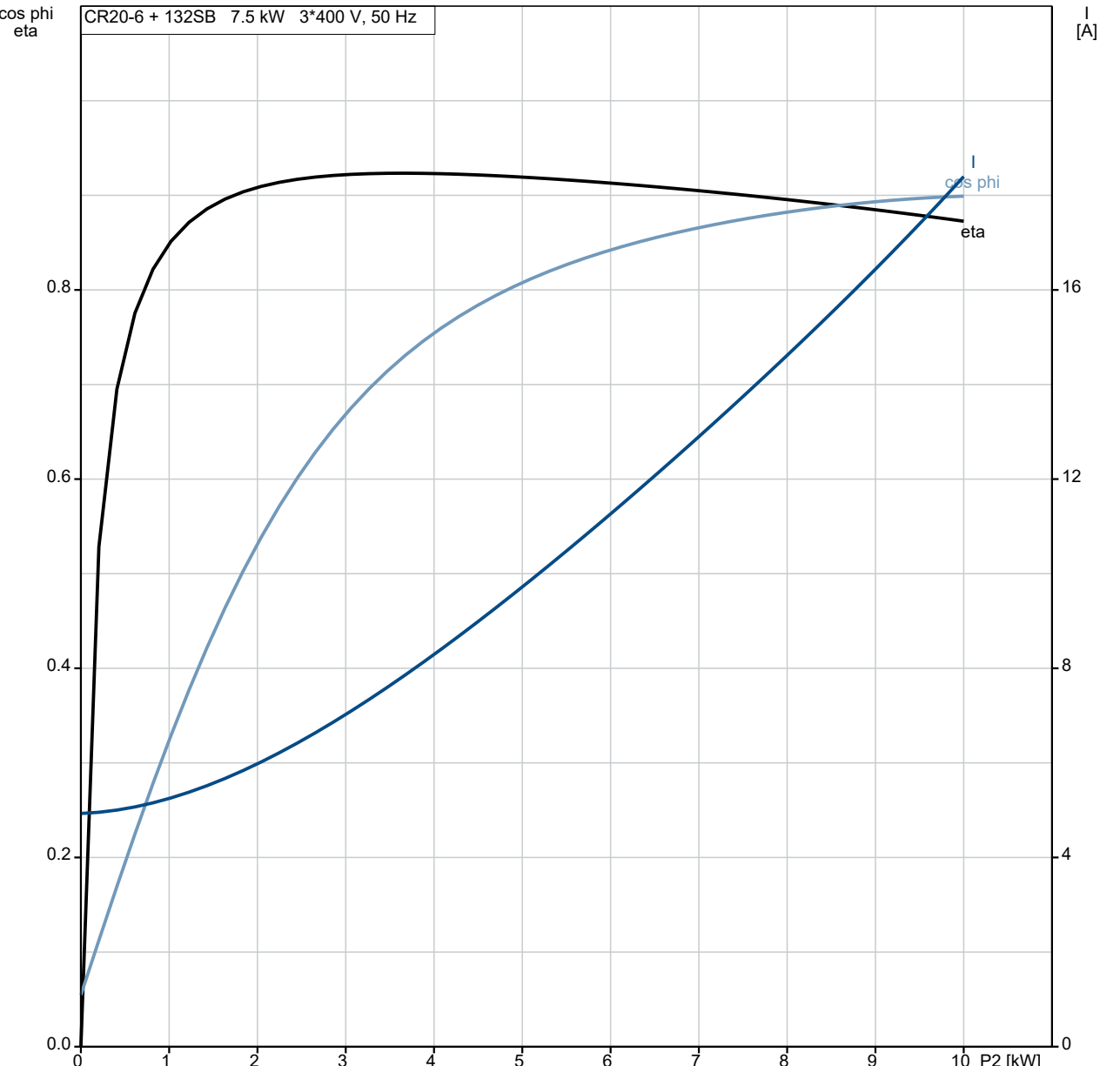
Description	Value
<b>General information:</b>	
Product name:	CR 20-6 A-F-A-E-HQQE
Product No:	96500512
EAN number:	5700396203300
<b>Technical:</b>	
Pump speed on which pump data are based:	2919 rpm
Rated flow:	21 m <sup>3</sup> /h
Rated head:	70.4 m
Maximum head:	88.4 m
Stages:	6
Impellers:	6
Number of reduced-diameter impellers:	0
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:	A
<b>Materials:</b>	
Base:	Cast iron
Base:	EN 1561 EN-GJL-200
Base:	ASTM A48-25B
Impeller:	Stainless steel
Impeller:	EN 1.4301
Impeller:	AISI 304
Material code:	A
Code for rubber:	E
Bearing:	SIC
Bearing:	SIC
<b>Installation:</b>	
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 / -20 °C
Type of connection:	DIN
Size of inlet connection:	DN 50
Size of outlet connection:	DN 50
Pressure rating for connection:	PN 25
Flange size for motor:	FF265
Connect code:	F
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature range:	-20 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m <sup>3</sup>
<b>Electrical data:</b>	
Motor standard:	IEC
Motor type:	132SB
IE Efficiency class:	IE3
Rated power - P2:	7.5 kW
Power (P2) required by pump:	7.5 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-415D/660-690Y V
Rated current:	14,4-14,0/8,30-8,10 A
Starting current:	780-910 %
Cos phi - power factor:	0.88-0.82
Rated speed:	2910-2920 rpm
Efficiency:	IE3 90,1%
Motor efficiency at full load:	90.1-90.4 %



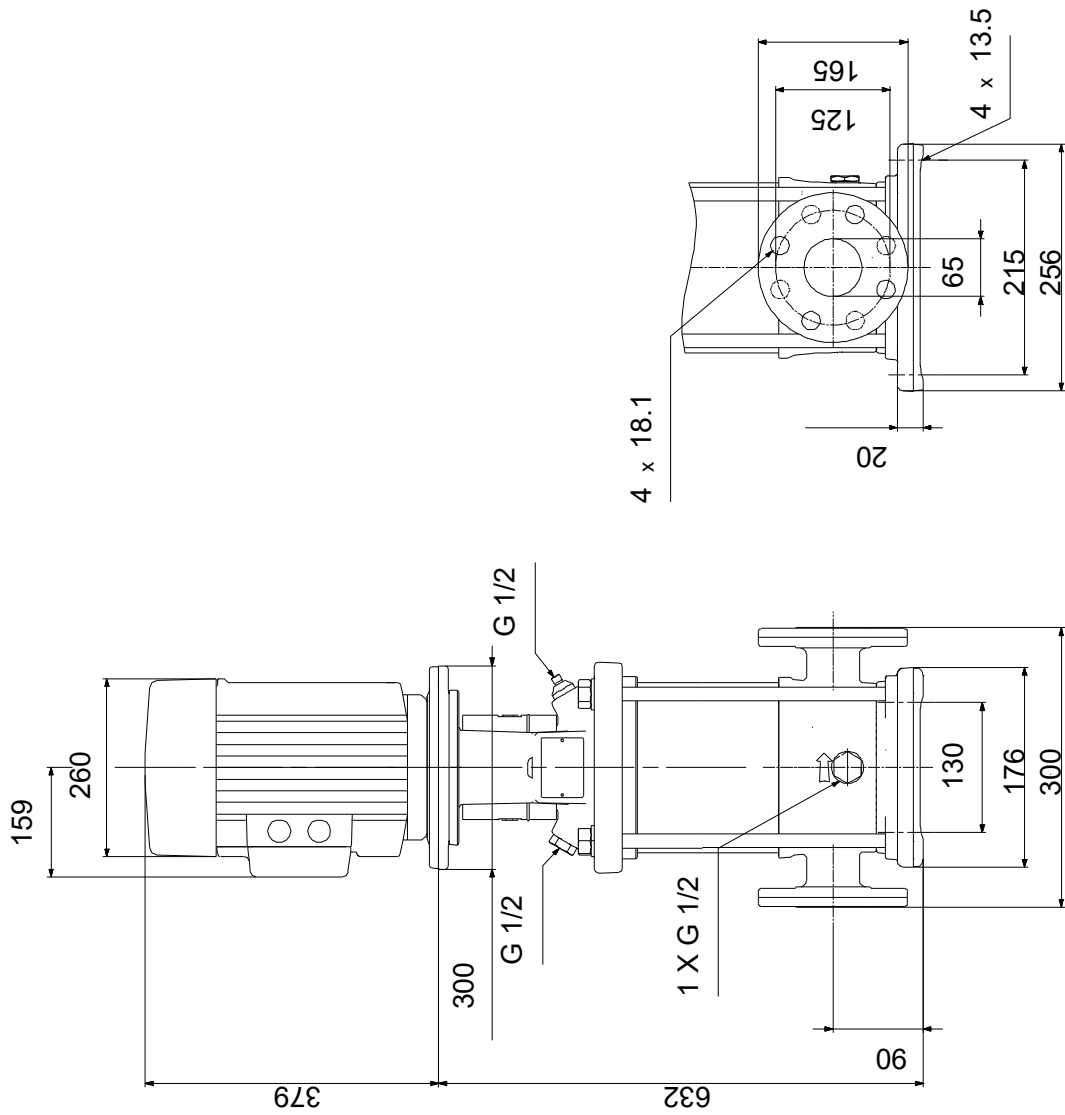
Description	Value
Motor efficiency at 3/4 load:	90.8 %
Motor efficiency at 1/2 load:	90.8 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protec:	PTC
Motor No:	85U17522
<b>Controls:</b>	
Frequency converter:	NONE
<b>Others:</b>	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	102 kg
Gross weight:	124 kg
Shipping volume:	0.285 m <sup>3</sup>
Danish VVS No.:	385905360
Swedish RSK No.:	5823490
Finnish LVI No.:	4925449
Country of origin:	HU
Custom tariff no.:	84137075

# 96500512 CR 20-6 A-F-A-E-HQQE 50 Hz

CR20-6 + 132SB 7.5 kW 3\*400 V, 50 Hz



# 96500512 CR 20-6 A-F-A-E-HQQE 50 Hz



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

**Spare parts CR 20-6, Product No. 96500512**  
**Produced After 1152 (production year and week number)**

Pos	Omschrijving	Opmerking	Classificatie Gegevens	Onderdeelnr	Aanta	Eenhei
	Kit, chamber stack			96508546	1	pcs
80	Chamber stack				1	
3	Top intermediate chamber				1	
	Intermediate chamber					
	Front plate					
	Guide vane					
4a	Intermediate chamber cpl.				1	
	Bearing plate					
3	Intermediate chamber					
45	Neck ring cpl.					
47	Bearing bush					
65	Retainer for upper seal ring					
4	Intermediate chamber cpl.				4	
45	Neck ring cpl.					
65	Retainer for upper seal ring					
26a	Strap cpl.				2	
26.c	Washer		Designation: DIN 125A		2	
			Thickness: 1,6			
26.b	Hex head screw				2	
44b	Inlet part				1	
44a	Inlet part cpl.				1	
	Sand Lifter					
	Guide cup					
	Inlet part					
45	Neck ring cpl.					
65	Retainer for upper seal ring					
47a	Bearing ring				1	
49	Impeller cpl.				6	
	Impeller blade					
	Impeller plate					
	Impeller plate					
49c	Wear ring					
51	Shaft, spline, cpl.				1	
	Bar					
62	Stop ring					
64d	Spacing bush				1	
64c	Spacer				1	
64b	Spacing bush		Length (mm): 5.00		1	
64a	Spacing pipe		Internal diameter: 17,5		1	
			Length (mm): 17			
64	Spacing pipe		Length (mm): 43.6		4	
66	Wedge lock washer				1	
67	Lock nut		Thread: M8		1	
69	Spacing bush				1	
	Kit, coupling			96511351	1	pcs
	Adjusting fork				1	
8	Coupling				1	
9	Hex socket head cap screw		Designation: DIN 912		4	
			Length (mm): 25			
			Thread: M10			
10a	Coupling half				1	
10	Shaft pin		Diameter: 5		1	
			Length (mm): 26			
	Kit, coupling guard			96509613	1	pcs
7.a	Combi Slot Torx screw				4	
7	Coupling guard				2	
	Kit, gaskets			96509609	1	pcs

Pos	Omschrijving	Opmerking	Classificatie Gegevens	Onderdeelnr	Aanta	Eenhei
	Gasket				2	
24	O-ring				2	
37	O-ring				2	
38	O-ring				1	
38	O-ring				1	
38	O-ring				2	
60	Spring				4	
415	Gasket		Internal diameter: 44		2	
			Outer diameter: 60			
			Thickness: 2			
441b	Gasket		Internal diameter: 49		2	
			Outer diameter: 92			
			Thickness: 2			
	Kit, plug			96511311	1	pcs
18	Air vent screw				1	
	Spindle				1	
	Plug				1	
25a	Drain plug				1	
25	Plug				1	
38	O-ring				1	
38	O-ring				1	
38	O-ring				2	
38	O-ring		Diameter: 5,3		1	
			Material type: FKM			
			Thickness: 2,4			
38	O-ring		Diameter: 16,3		1	
			Material type: FKM			
			Thickness: 2,4			
38	O-ring		Diameter: 16,3		2	
			Material type: FKM			
			Thickness: 2,4			
	Kit, shaft seal HQQE			96511844	1	pcs
105	Shaft seal		Material type: HQQE		1	
	Kit, wear parts			96511824	1	pcs
4a	Intermediate chamber cpl.				1	
	Sand Lifter				1	
	Guide cup				1	
	Bearing plate				1	
	Guide vane				10	
3	Intermediate chamber				1	
45	Neck ring cpl.				1	
47	Bearing bush				1	
65	Retainer				1	
26.c	Washer		Designation: DIN 125A		2	
			Thickness: 1,6			
26.b	Hex head screw				2	
45	Neck ring cpl.				5	
47a	Bearing ring				1	
49c	Wear ring				6	
62	Retaining ring				1	
64d	Spacing bush				1	
64c	Spacer				1	
64b	Spacing bush		Length (mm): 5.00		1	
64a	Spacing pipe		Internal diameter: 17,5		1	
			Length (mm): 17			
65	Retainer				5	
66	Wedge lock washer				1	
67	Lock nut		Thread: M8		1	
	Motor			91333038	1	pcs
	Kit, bearing cpl.			96796642	1	
111	Ball bearing		Designation: 6206.2Z.C3.SYN		1	
153	Angular-contact bearing				1	

Pos	Omschrijving	Opmerking	Classificatie Gegevens	Onderdeelnr	Aanta	Eenhei
157	O-ring		Diameter: 62 Material type: NBR Thickness: 3			1
158	Waved washer					2
159. b	V-ring					1
159	V-ring					1
	Kit, eyebolt			96279874	1	
189	Lifting eye					1
	Kit, fan			96796189	1	
156	Fan					1
	Kit, fan cover			96796188	1	
151	Fan cover					1
152	Pan head thread forming screw					4
	Kit, flange			96796224	1	
156. b	Flange					1
159. b	V-ring					1
185c	Nut					4
185	Hex socket head cap screw					4
186	Drain plug					4
	Kit, gaskets			96798510	1	
184	O-ring					2
	Kit, ND-end shield cpl.			96796598	1	
156. a	End shield NDE					1
157	O-ring		Diameter: 62 Material type: NBR Thickness: 3			1
158	Waved washer					1
159	V-ring					1
185. c	Nut					4
185. a	Hex socket head cap screw					4
	Kit, shaft seal			96843458	1	
159. b	V-ring					1
159	V-ring					1
	Kit, terminal board			96030209	1	
	Bracket cpl.					1
163	Hex socket head screw					1
176	Terminal					1
176	Terminal board					1
178	Connecting piece					3
179	Cable shoe					6
180a	Slot cheese head screw		Designation: COMBI TORX T25 Length (mm): 10 Thread: M5			6
180	Wire clamp					6
	Kit, terminal box cover			96796215	1	
164	Terminal box cover w/gasket					1
166	Pan head thread forming screw					4
	Motor				1	pcs
	Kit, bearing cpl.			96796642	1	
111	Ball bearing		Designation: 6206.2Z.C3.SYN			1
153	Angular-contact bearing					1
157	O-ring		Diameter: 62 Material type: NBR Thickness: 3			1
158	Waved washer					2
159. b	V-ring					1

Pos	Omschrijving	Opmerking	Classificatie Gegevens	Onderdeelnr	Aanta	Eenhei
159	V-ring				1	
	Kit, eyebolt			96279874	1	
189	Lifting eye				1	
	Kit, fan			96796189	1	
156	Fan				1	
	Kit, fan cover			96796188	1	
151	Fan cover				1	
152	Pan head thread forming screw				4	
	Kit, flange			96796224	1	
156. b	Flange				1	
159. b	V-ring				1	
185c	Nut				4	
185	Hex socket head cap screw				4	
186	Drain plug				4	
	Kit, gaskets			96798510	1	
184	O-ring				2	
	Kit, ND-end shield cpl.			96796598	1	
156. a	End shield NDE				1	
157	O-ring		Diameter: 62 Material type: NBR Thickness: 3		1	
158	Waved washer				1	
159	V-ring				1	
185. c	Nut				4	
185. a	Hex socket head cap screw				4	
	Kit, shaft seal			96843458	1	
159. b	V-ring				1	
159	V-ring				1	
	Kit, terminal board			96030209	1	
	Bracket cpl.				1	
163	Hex socket head screw				1	
176	Terminal				1	
176	Terminal board				1	
178	Connecting piece				3	
179	Cable shoe				6	
180a	Slot cheese head screw		Designation: COMBI TORX T25		6	
			Length (mm): 10 Thread: M5			
180	Wire clamp				6	
	Kit, terminal box cover			96796215	1	
164	Terminal box cover w/gasket				1	
166	Pan head thread forming screw				4	
1	Flange			99104283	1	pcs
2a	Pump head			98770239	1	pcs
3	Bulk, Top intermediate chamber (3 PC)			96538971	1	pcs
3	Top intermediate chamber			98371105	1	pcs
4a	Bulk, Intermediate chamber cpl. (10 PC)			96538842	1	pcs
3	Bulk, Intermediate chamber (3 PC)			96535086	1	
4a	Intermediate chamber cpl.			98371109	1	pcs
4	Bulk, Intermediate chamber cpl. (10 PC)			96538817	4	pcs
65	Bulk, Retainer for upper seal ring (20 PC)			97699527	1	
65	Retainer for upper seal ring			96587913	1	
4	Intermediate chamber cpl.			98371107	4	pcs
6	Base			98681111	1	pcs
7.a	Bulk, Combi Slot Torx screw (1000 PC)			96886324	4	pcs
10	Bulk, Shaft pin (10 PC)		Diameter: 5 Length (mm): 26	96536473	1	pcs

Pos	Omschrijving	Opmerking	Classificatie Gegevens	Onderdeelnr	Aanta	Eenhei
18	Bulk, Air vent screw (5 PC)			96547461	1	pcs
18	Air vent screw			95061351	1	pcs
25	Bulk, Plug (10 PC)			96536013	1	pcs
25a	Bulk, Drain plug (10 PC)			96535881	1	pcs
26a	Strap cpl.			98852388	2	pcs
26.c	Bulk, Washer (4 PC)		Designation: DIN 125A	99262704	2	pcs
			Thickness: 1,6			
26.c	Bulk, Washer (10 PC)		Designation: DIN 125A	99886930	2	pcs
			Thickness: 1,6			
26	Staybolt			98450265	4	pcs
32	Bulk, Washer (100 PC)		Designation: DIN 125 A	98923051	4	pcs
			Internal diameter: 17			
			Outer diameter: 30			
			Thickness: 3			
36	Bulk, Hex nut (20 PC)		Thread: M16	96620480	4	pcs
37	Bulk, O-ring (20 PC)			96538857	2	pcs
38	Bulk, O-ring (10 PC)			99198791	1	pcs
38	Bulk, O-ring (10 PC)			99198815	2	pcs
38	Bulk, O-ring (50 PC)			99412727	2	pcs
44b	Inlet part			98814595	1	pcs
44a	Inlet part cpl.			98818924	1	pcs
47a	Bulk, Bearing ring (10 PC)			96538795	1	pcs
49	Bulk, Impeller cpl. (10 PC)			96538799	6	pcs
49c	Bulk, Wear ring (10 PC)			96547340	1	
49	Impeller cpl.			98394458	6	pcs
51	Shaft, spline, cpl.			98368613	1	pcs
55	Outer sleeve			98450263	1	pcs
60	Bulk, Spring (20 PC)			96538963	4	pcs
64d	Bulk, Spacing bush (20 PC)			96538947	1	pcs
64c	Bulk, Spacer (5 PC)			97980241	1	pcs
64b	Bulk, Spacing bush (20 PC)		Length (mm): 5.00	96535098	1	pcs
64a	Bulk, Spacing pipe (10 PC)		Internal diameter: 17,5	98417487	1	pcs
			Length (mm): 17			
64	Bulk, Spacing pipe (20 PC)		Length (mm): 43.6	96535107	4	pcs
66	Bulk, Wedge lock washer (10 PC)			96536157	1	pcs
67	Bulk, Lock nut (10 PC)		Thread: M8	98277008	1	pcs
69	Bulk, Spacing bush (20 PC)			96538949	1	pcs
76a	Bulk, Rivet (100 PC)			96620489	1	pcs
105	Bulk, Shaft seal (11 PC)		Material type: HQQE	96538914	1	pcs