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Inventflow: Grundfos A-partner

Grundfos CR 20-10 A-F-A-E-HQQE

Find the pump here:

<https://inventflow.nl/en/pompenfilter/cr/grundfos-cr-20-10-a-f-a-e-hqqe>

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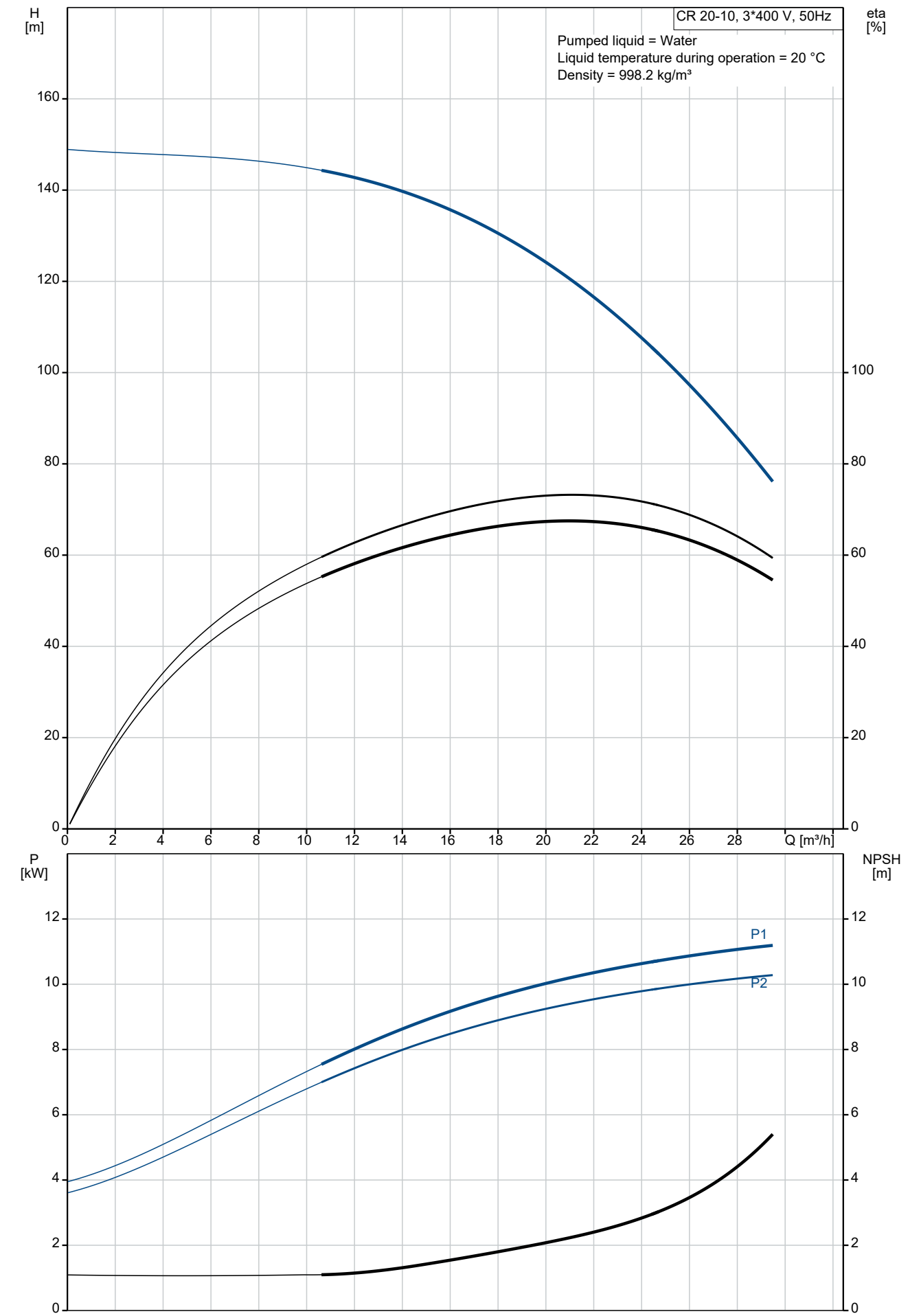
Datasheet



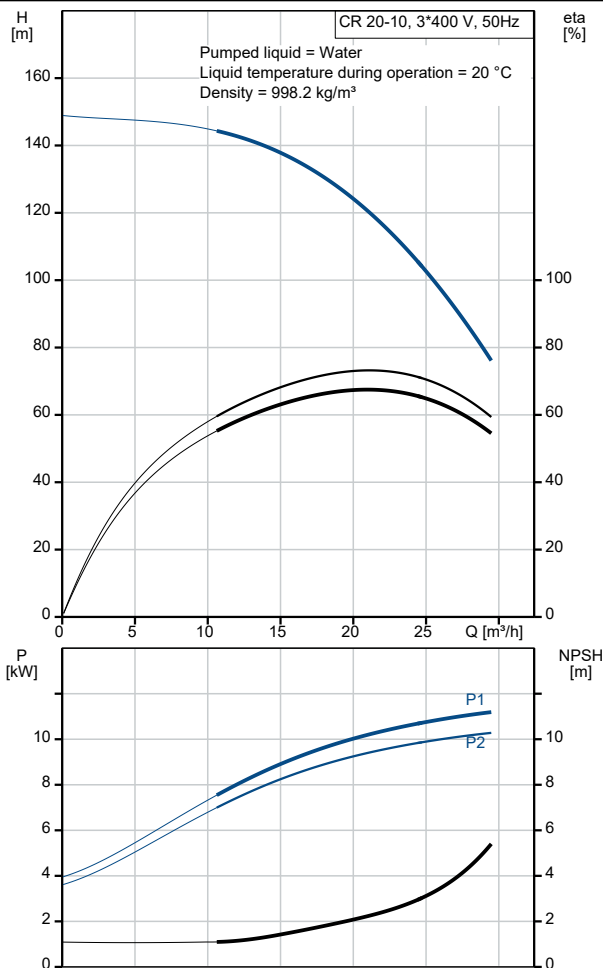
Qty.	Description
1	CR 20-10 A-F-A-E-HQQE  Note! Product picture may differ from actual product Product No.: 96500515 Vertical, non-self-priming, multistage, in-line, centrifugal pump for installation in pipe systems and mounting on a foundation. The pump has the following characteristics: - Impellers and intermediate chambers are made of Stainless steel, EN 1.4301. Impeller: Stainless steel, EN 1.4301. Pump housing: - Pump head and base are made of Cast iron. - 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. Phase: The motor is a 3-phase AC motor. Controls: Frequency converter: NONE Liquid: Pumped liquid: Water Liquid temperature range: -20 .. 120 °C Selected liquid temperature: 20 °C Density: 998.2 kg/m³ Technical: Pump speed on which pump data are based: 2924 rpm Rated flow: 21 m³/h Rated head: 118 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 Installation:

Qty.	Description
	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: FF300 Electrical data: Motor standard: IEC Motor type: 160MB IE Efficiency class: IE3 Rated power - P2: 11 kW Power (P2) required by pump: 11 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 20,8-19,8/12,0-11,8 A Starting current: 660-780 % Cos phi - power factor: 0.88-0.84 Rated speed: 2940-2950 rpm Efficiency: IE3 91,2% Motor efficiency at full load: 91.2-91.2 % Motor efficiency at 3/4 load: 91.8 % Motor efficiency at 1/2 load: 91.3 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Motor No: 85U17524 Others: Minimum efficiency index, MEI ≥: 0.70 Net weight: 149 kg Gross weight: 177 kg Shipping volume: 0.488 m³ Danish VVS No.: 385905100 Swedish RSK No.: 5823493 Finnish LVI No.: 4925452 Country of origin: HU Custom tariff no.: 84137075

96500515 CR 20-10 A-F-A-E-HQQE 50 Hz

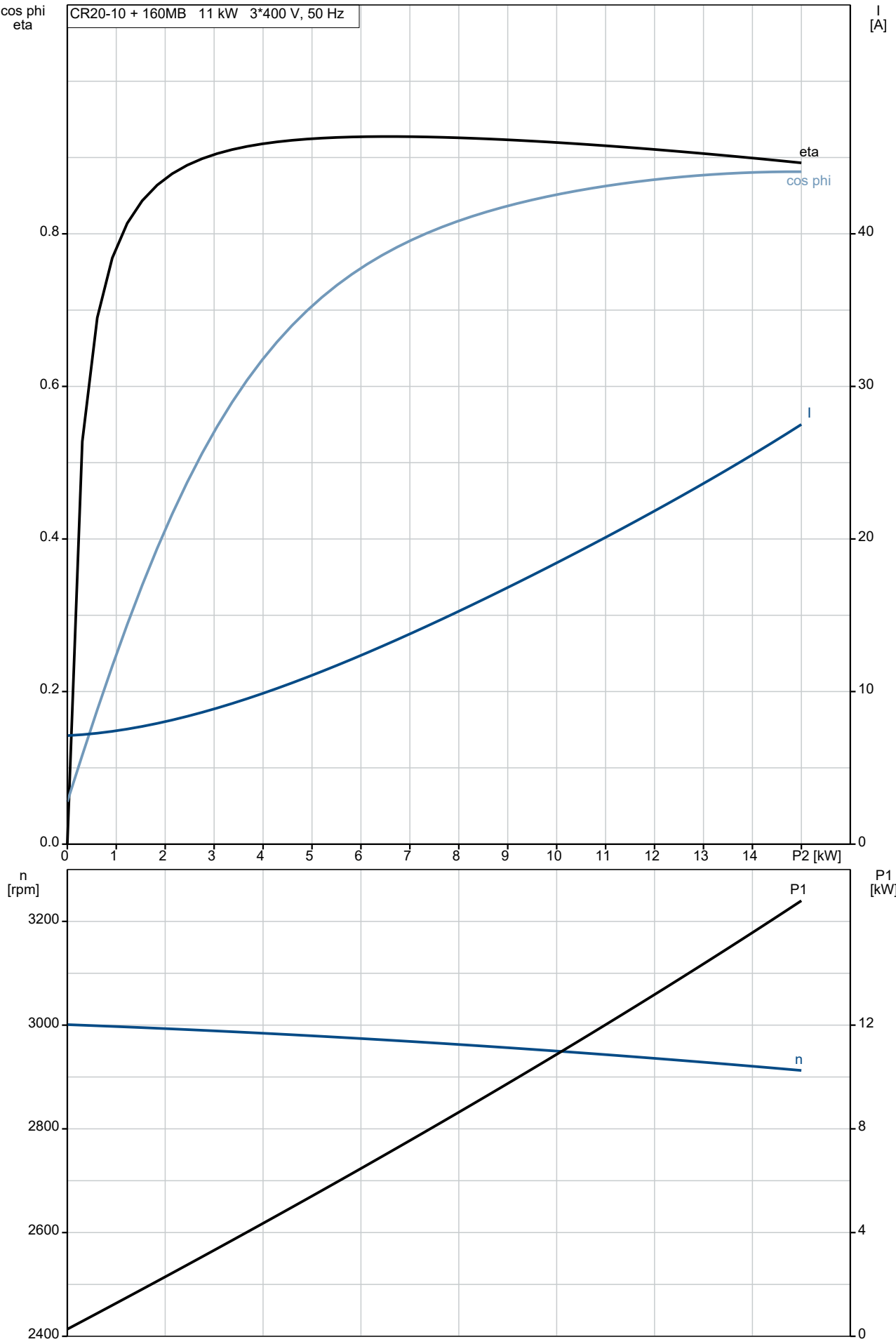


Description	Value		
General information:			
Product name:	CR 20-10 A-F-A-E-HQQE		
Product No:	96500515		
EAN number:	5700396203362		
Technical:			
Pump speed on which pump data are based:	2924 rpm		
Rated flow:	21 m³/h		
Rated head:	118 m		
Maximum head:	148 m		
Stages:	10		
Impellers:	10		
Number of 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		
Materials:			
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		
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 / -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:	FF300		
Connect code:	F		
Liquid:			
Pumped liquid:	Water		
Liquid temperature range:	-20 .. 120 °C		
Selected liquid temperature:	20 °C		
Density:	998.2 kg/m³		
Electrical data:			
Motor standard:	IEC		
Motor type:	160MB		
IE Efficiency class:	IE3		
Rated power - P2:	11 kW		
Power (P2) required by pump:	11 kW		
Mains frequency:	50 Hz		
Rated voltage:	3 x 380-415D/660-690Y V		
Rated current:	20,8-19,8/12,0-11,8 A		
Starting current:	660-780 %		
Cos phi - power factor:	0.88-0.84		
Rated speed:	2940-2950 rpm		
Efficiency:	IE3 91,2%		
Motor efficiency at full load:	91.2-91.2 %		
Motor efficiency at 3/4 load:	91.8 %		

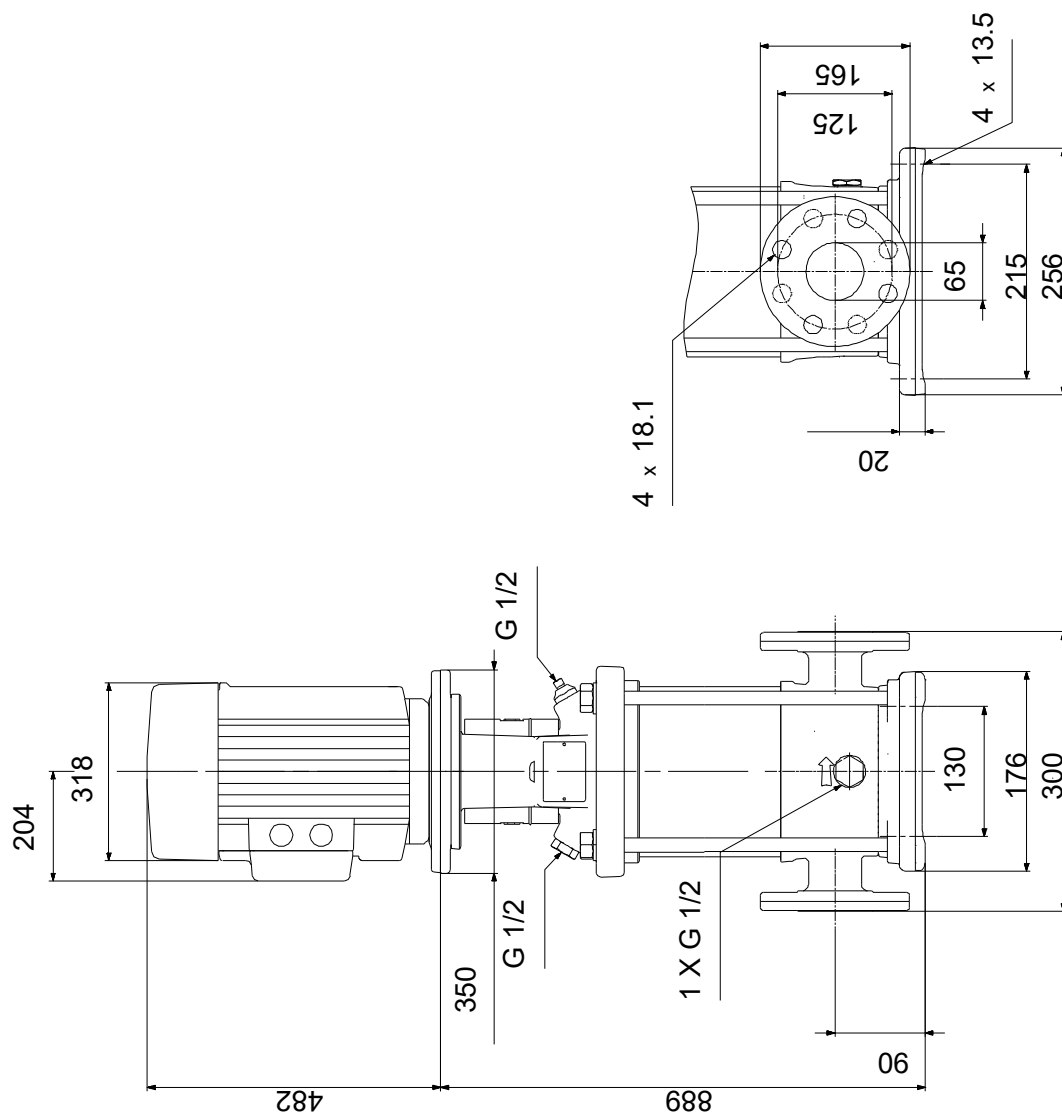


Description	Value
Motor efficiency at 1/2 load:	91.3 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protec:	PTC
Motor No:	85U17524
Controls:	
Frequency converter:	NONE
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	149 kg
Gross weight:	177 kg
Shipping volume:	0.488 m³
Danish VVS No.:	385905100
Swedish RSK No.:	5823493
Finnish LVI No.:	4925452
Country of origin:	HU
Custom tariff no.:	84137075

96500515 CR 20-10 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 CR 20-10, Product No. 96500515
Produced After 1101 (production year and week number)

Pos	Omschrijving	Opmerking tekst	Classificatie Gegevens	Onderdeelnr.	Aantal	Eenheid
-	Kit, chamber stack			96508550	1	pcs
- 80	Chamber stack				1	
- 3	Top intermediate chamber				1	
	Intermediate chamber					
	Front plate					
	Guide vane					
- 4a	Intermediate chamber cpl.				3	
	Bearing plate					
3	Intermediate chamber					
45	Neck ring cpl.					
47	Bearing bush					
65	Retainer for upper seal ring					
- 4	Intermediate chamber cpl.				8	
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	
- 44a	Inlet part cpl.				1	
	Sand Lifter					
	Guide cup					
	Inlet part					
45	Neck ring cpl.					
65	Retainer for upper seal ring					
47a	Bearing ring				3	
- 49	Impeller cpl.				12	
	Impeller blade					
	Impeller plate					
	Impeller plate					
49c	Wear ring					
- 51	Shaft, spline, cpl.				1	
	Bar					
62	Stop ring					
64d	Spacing bush				3	
64c	Spacer				1	
64b	Spacing bush		Length (mm): 5.00		1	
64a	Spacing pipe		Internal diameter: 17,5		3	
			Length (mm): 17			
64	Spacing pipe		Length (mm): 43.6		8	
66	Wedge lock washer				1	
67	Lock nut		Thread: M8		1	
69	Spacing bush				1	
-	Kit, coupling			96511352	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				2	
10	Shaft pin		Diameter: 5		1	
			Length (mm): 26			
-	Kit, coupling guard			96509614	1	pcs
7.a	Combi Slot Torx screw				4	
7	Coupling guard				2	
-	Kit, gaskets			96509609	1	pcs
	Gasket				2	
24	O-ring				2	
37	O-ring				2	

Pos	Omschrijving	Opmerking tekst	Classificatie Gegevens	Onderdeelnr.	Aantal	Eenheid
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			96511827	1	pcs
- 4a	Intermediate chamber cpl.				2	
	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.				8	
47a	Bearing ring				2	
49c	Wear ring				10	
62	Retaining ring				1	
64d	Spacing bush				2	
64c	Spacer				1	
64b	Spacing bush	Length (mm): 5.00			1	
64a	Spacing pipe	Internal diameter: 17,5			2	
		Length (mm): 17				
65	Retainer				8	
66	Wedge lock washer				1	
67	Lock nut	Thread: M8			1	
-	Motor				1	pcs
+	Kit, bearing cpl.			96796676	1	
-	Kit, bearing plate			96796664	1	
155.a	Bearing cover				1	
208a	Gasket				3	
208	Hex socket head cap screw	Designation: DIN912			3	
		Length (mm): 40				
		Thread: M5				
-	Kit, eyebolt			96796712	1	

Pos	Omschrijving	Opmerking tekst	Classificatie Gegevens	Onderdeelnr.	Aantal	Eenheid
189	Eyebolt				2	
-	Kit, fan			96796654	1	
156.c	Retaining ring				1	
156	Fan				1	
-	Kit, fan cover			96796647	1	
151	Fan cover				1	
152.a	Rubber bush				4	
152	Hex head cap screw				4	
196	Diaphragm				1	
-	Kit, flange			96796662	1	
156.b	Flange				1	
159.b	Seal ring				1	
185.b	Nut				4	
185	Hex socket head cap screw				4	
186	Drain plug				4	
195.a	Grease nipple				1	
-	Kit, gaskets			96798508	1	
184	O-ring	Diameter: 235			2	
-	Kit, lubrication nipple			96796671	1	
195.b	Grease nipple				2	
195.a	Grease nipple				1	
-	Kit, ND-end shield cpl.			96796669	1	
32b	Waved washer				1	
156.a	End shield NDE				1	
157	O-ring				1	
159	V-ring				1	
185.c	Nut				4	
185.a	Hex socket head cap screw				4	
195.b	Grease nipple				1	
-	Kit, shaft seal			96843459	1	
159.b	V-ring				1	
159	V-ring				1	
-	Kit, terminal board			96796657	1	
	Terminal connection				3	
	Washer				12	
36	Hex nut				12	
173	Torx Screw				1	
176.d	Terminal board				1	
176	Terminal board				1	
177	Torx Screw				1	
-	Kit, terminal box cover			96796659	1	
164	Terminal box cover				1	
273a	Pan head thread forming screw				4	
-	Motor				1	pcs
+	Kit, bearing cpl.			96796676	1	
-	Kit, bearing plate			96796664	1	
155.a	Bearing cover				1	
208a	Gasket				3	
208	Hex socket head cap screw	Designation: DIN912			3	
		Length (mm): 40				
		Thread: M5				
-	Kit, eyebolt			96796712	1	
189	Eyebolt				2	
-	Kit, fan			96796654	1	
156.c	Retaining ring				1	
156	Fan				1	
-	Kit, fan cover			96796647	1	
151	Fan cover				1	
152.a	Rubber bush				4	
152	Hex head cap screw				4	
196	Diaphragm				1	
-	Kit, flange			96796662	1	
156.b	Flange				1	
159.b	Seal ring				1	

Pos	Omschrijving	Opmerking tekst	Classificatie Gegevens	Onderdeelnr.	Aantal	Eenheid
185.b	Nut				4	
185	Hex socket head cap screw				4	
186	Drain plug				4	
195.a	Grease nipple				1	
-	Kit, gaskets			96798508	1	
184	O-ring	Diameter: 235			2	
-	Kit, lubrication nipple			96796671	1	
195.b	Grease nipple				2	
195.a	Grease nipple				1	
-	Kit, ND-end shield cpl.			96796669	1	
32b	Waved washer				1	
156.a	End shield NDE				1	
157	O-ring				1	
159	V-ring				1	
185.c	Nut				4	
185.a	Hex socket head cap screw				4	
195.b	Grease nipple				1	
-	Kit, shaft seal			96843459	1	
159.b	V-ring				1	
159	V-ring				1	
-	Kit, terminal board			96796657	1	
	Terminal connection				3	
	Washer				12	
36	Hex nut				12	
173	Torx Screw				1	
176.d	Terminal board				1	
176	Terminal board				1	
177	Torx Screw				1	
-	Kit, terminal box cover			96796659	1	
164	Terminal box cover				1	
273a	Pan head thread forming screw				4	
1	Flange			98913788	1	pcs
2a	Pump head			98824714	1	pcs
+ 3	Top intermediate chamber			96538971	1	pcs
+ 3	Top intermediate chamber			98371105	1	pcs
- 4a	Intermediate chamber cpl.			96538842	2	pcs
3	Intermediate chamber			96535086	1	
+ 4a	Intermediate chamber cpl.			98371109	2	pcs
- 4	Intermediate chamber cpl.			96538817	7	pcs
65	Retainer for upper seal ring			97699527	1	
65	Retainer for upper seal ring			96587913	1	
+ 4	Intermediate chamber cpl.			98371107	7	pcs
6	Base			98681111	1	pcs
7a	Combi Slot Torx screw			96886324	4	pcs
10	Shaft pin	Diameter: 5		96536473	1	pcs
		Length (mm): 26				
10	Shaft pin	Diameter: 5		96587588	1	pcs
		Length (mm): 26				
+ 18	Air vent screw			96547461	1	pcs
+ 18	Air vent screw			95061351	1	pcs
25	Plug			96536013	1	pcs
25a	Drain plug			96535881	1	pcs
26a	Strap cpl.	Length (mm): 449MM		98984432	2	pcs
26.c	Washer	Designation: DIN 125A		99262704	2	pcs
		Thickness: 1,6				
26.c	Washer	Designation: DIN 125A		99886930	2	pcs
		Thickness: 1,6				
26	Staybolt			98982848	4	pcs
28	Hex head screw	Length (mm): 25		99522923	4	pcs
		Thread: M12				
32	Washer	Designation: DIN 125 A		98923051	4	pcs
		Internal diameter: 17				
		Outer diameter: 30				
		Thickness: 3				

Pos	Omschrijving	Opmerking tekst	Classificatie Gegevens	Onderdeelnr.	Aantal	Eenheid
36	Hex nut		Thread: M16	96620480	4	pcs
37	O-ring			96538857	2	pcs
38	O-ring			99198791	1	pcs
38	O-ring			99198815	2	pcs
38	O-ring			99412727	2	pcs
44b	Inlet part			98814595	1	pcs
+ 44a	Inlet part cpl.			98818924	1	pcs
47a	Bearing ring			96538795	2	pcs
- 49	Impeller cpl.			96538799	10	pcs
49c	Wear ring			96547340	1	
+ 49	Impeller cpl.			98394458	10	pcs
+ 51	Shaft, spline, cpl.			98368618	1	pcs
55	Outer sleeve			98812630	1	pcs
60	Spring			96538963	4	pcs
64d	Spacing bush			96538947	2	pcs
64c	Spacer			97980241	1	pcs
64a	Spacing pipe		Internal diameter: 17,5	98417487	2	pcs
			Length (mm): 17			
64	Spacing pipe		Length (mm): 43.6	96535107	7	pcs
66	Wedge lock washer			96536157	1	pcs
66	Wedge lock washer			92575609	1	pcs
67	Lock nut		Thread: M8	98277008	1	pcs
69	Spacing bush			96538949	1	pcs
76a	Rivet			96620489	1	pcs
105	Shaft seal		Material type: HQQE	96538914	1	pcs