

Inventflow: Grundfos A-partner

Grundfos CRN 3-21 A-P-A-E-HQQE

Find the pump here:

<https://inventflow.nl/en/pompenfilter/crn/grundfos-crn-3-21-a-p-a-e-hqqe>

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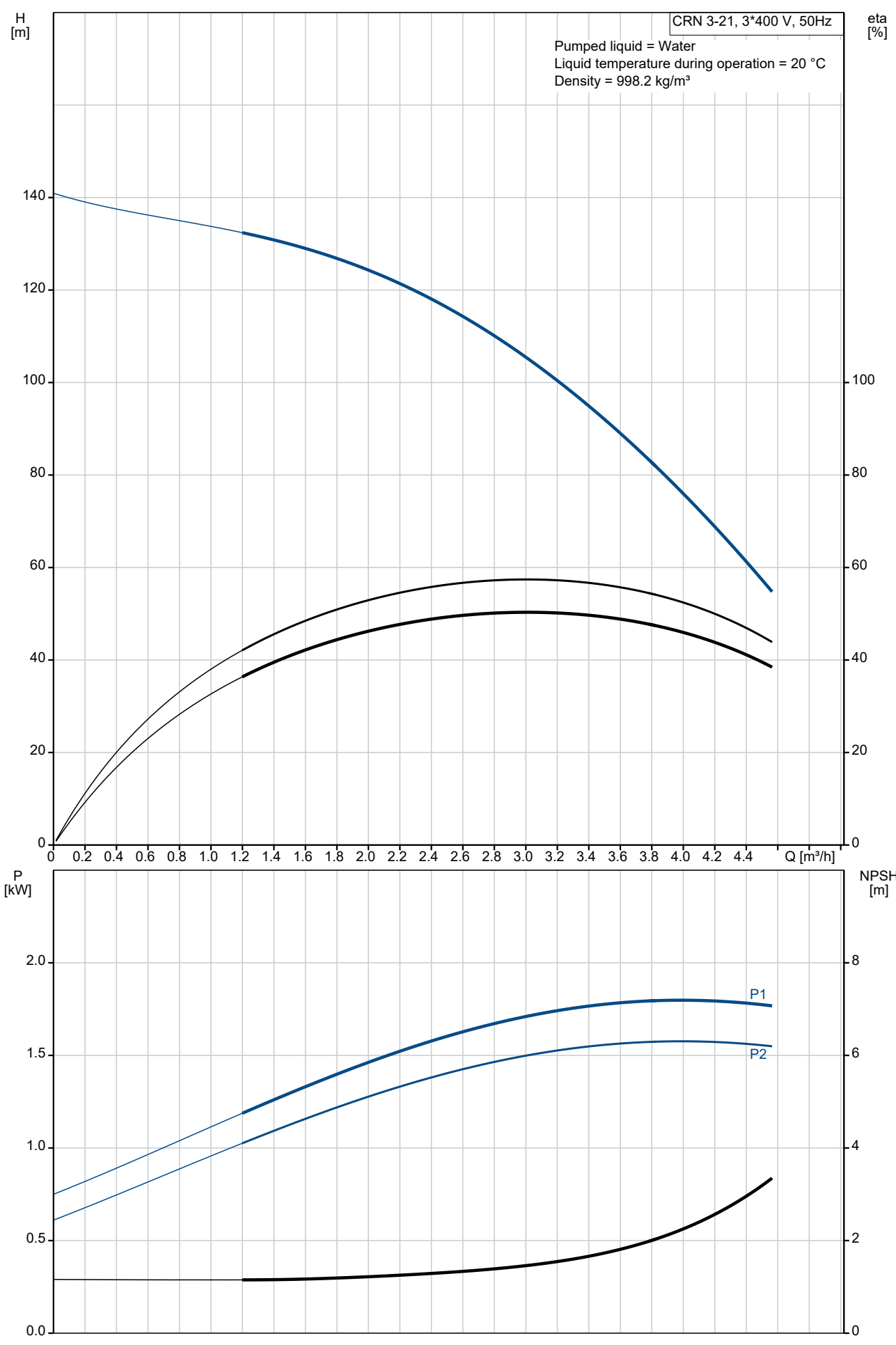
Datasheet



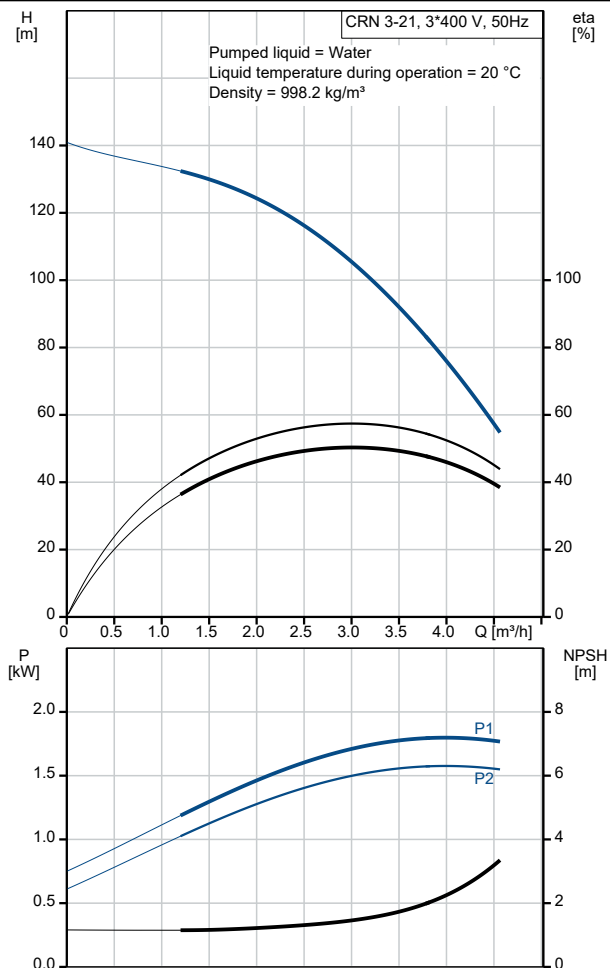
Qty.	Description
1	CRN 3-21 A-P-A-E-HQQE  Product No.: 96513456 Vertical, non-self-priming, multistage, in-line, centrifugal pump for installation in pipe systems and mounting on a foundation. The pump has the following characteristics: - Impellers, intermediate chambers and outer sleeve are made of 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 PJE flanges/couplings. 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: 2899 rpm Rated flow: 3 m³/h Rated head: 103.6 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 Installation: Maximum ambient temperature: 60 °C Maximum operating pressure: 25 bar Max pressure at stated temp: 25 bar / 120 °C 25 bar / -20 °C Type of connection: PJE

Qty.	Description
	Size of inlet connection: DN 32 Size of outlet connection: DN 32 Pressure rating for connection: PN 50 Flange size for motor: FT115 Electrical data: Motor standard: IEC Motor type: 90LE IE Efficiency class: IE3 Rated power - P2: 2.2 kW Power (P2) required by pump: 2.2 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-415D V Rated current: 4.65 A Starting current: 840-920 % Cos phi - power factor: 0.86-0.80 Rated speed: 2890-2910 rpm Efficiency: IE3 85,9% Motor efficiency at full load: 85.9-85.9 % Motor efficiency at 3/4 load: 88.2 % Motor efficiency at 1/2 load: 88.0 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Motor No: 85U11908 Others: Minimum efficiency index, MEI ≥: 0.70 Net weight: 38.6 kg Gross weight: 41.5 kg Shipping volume: 0.13 m ³ Country of origin: HU Custom tariff no.: 84137075

96513456 CRN 3-21 A-P-A-E-HQQE 50 Hz

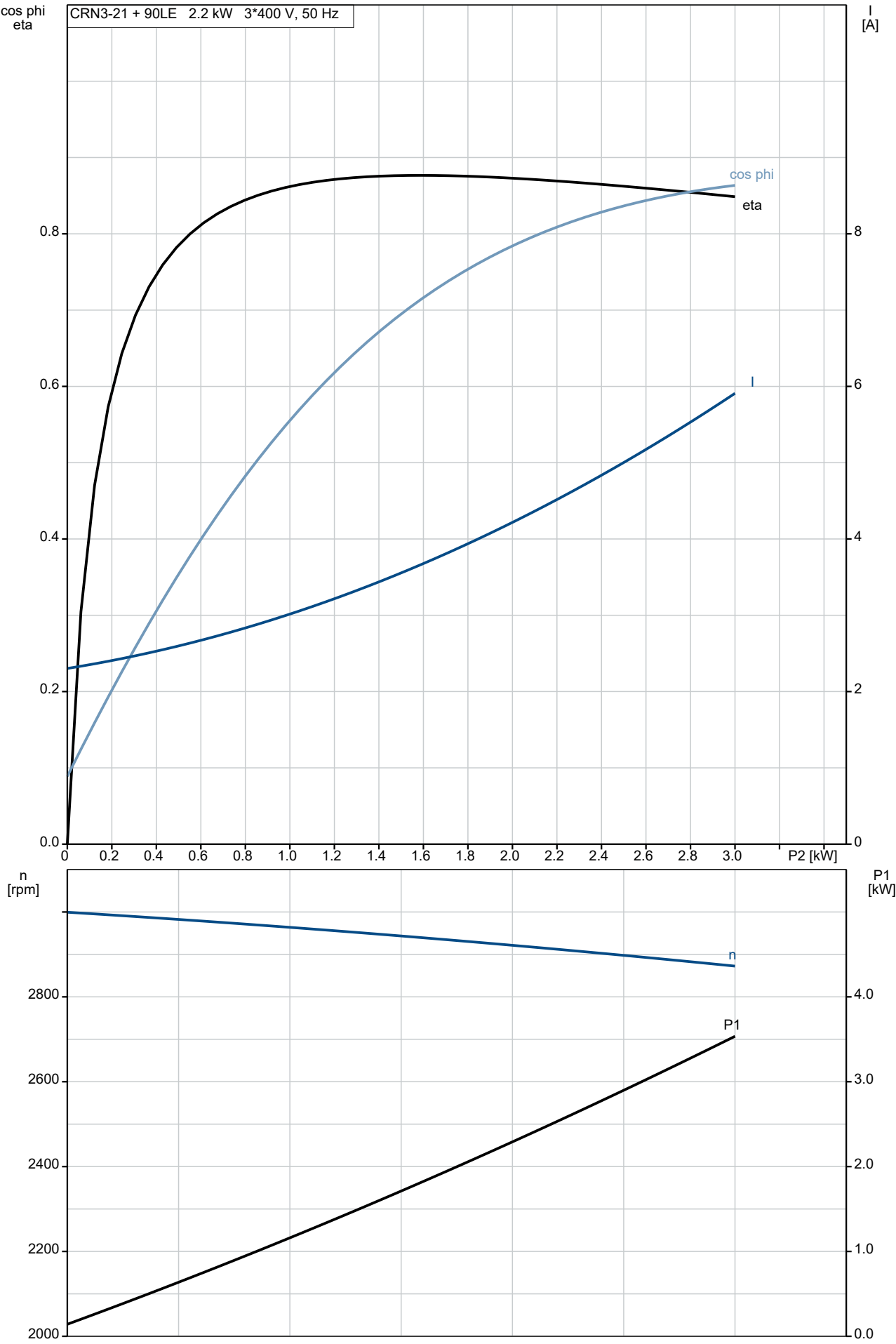


Description	Value
General information:	
Product name:	CRN 3-21 A-P-A-E-HQQE
Product No:	96513456
EAN number:	5700396642901
Technical:	
Pump speed on which pump data are based:	2899 rpm
Rated flow:	3 m³/h
Rated head:	103.6 m
Maximum head:	139.9 m
Stages:	21
Impellers:	21
Number of reduced-diameter impellers:	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:	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
Installation:	
Maximum ambient temperature:	60 °C
Maximum operating pressure:	25 bar
Max pressure at stated temp:	25 bar / 120 °C
Max pressure at stated temp:	25 bar / -20 °C
Type of connection:	PJE
Size of inlet connection:	DN 32
Size of outlet connection:	DN 32
Pressure rating for connection:	PN 50
Flange size for motor:	FT115
Connect code:	P
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:	90LE
IE Efficiency class:	IE3
Rated power - P2:	2.2 kW
Power (P2) required by pump:	2.2 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-415D V
Rated current:	4.65 A
Starting current:	840-920 %
Cos phi - power factor:	0.86-0.80
Rated speed:	2890-2910 rpm
Efficiency:	IE3 85,9%
Motor efficiency at full load:	85.9-85.9 %
Motor efficiency at 3/4 load:	88.2 %
Motor efficiency at 1/2 load:	88.0 %

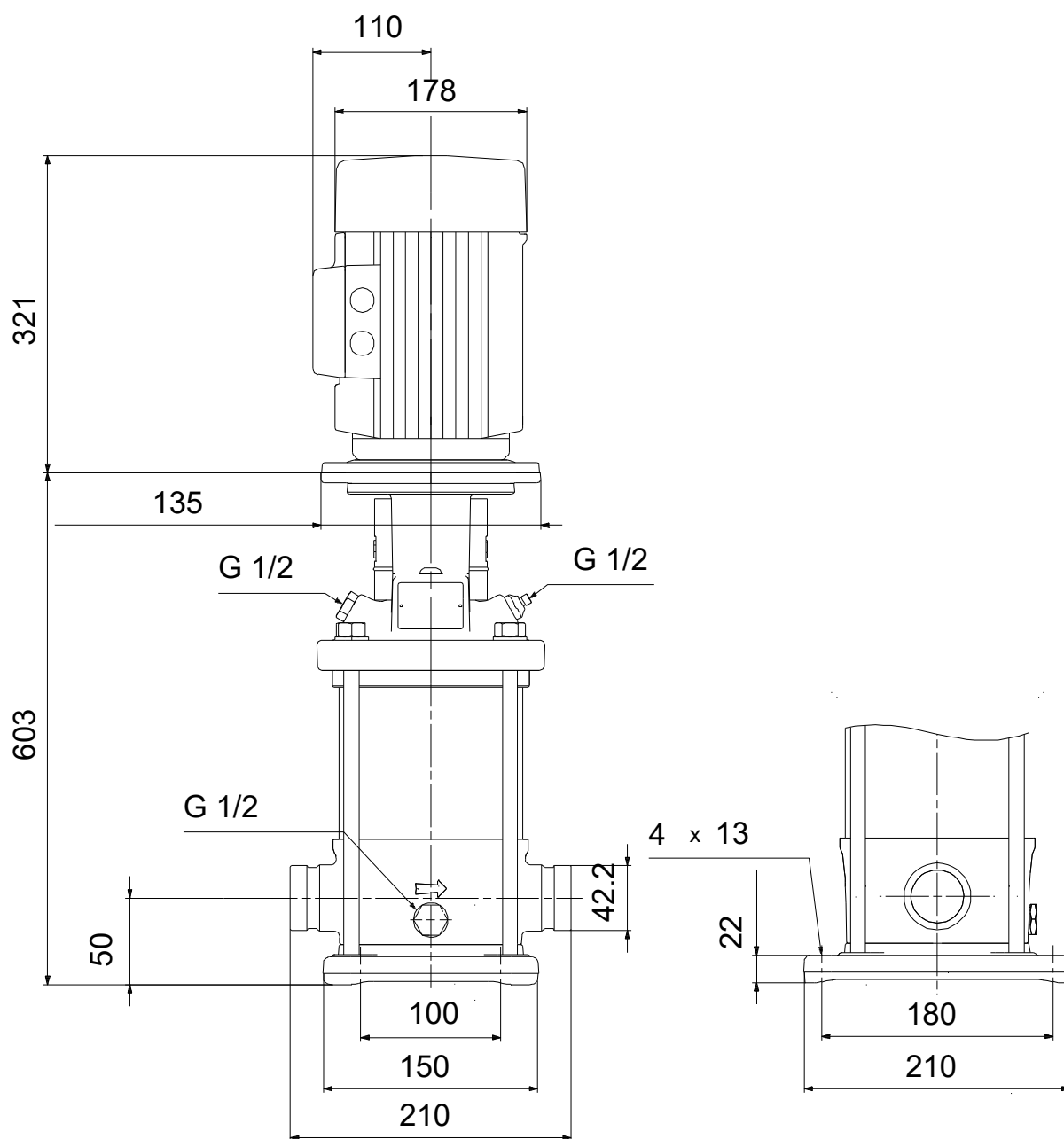


Description	Value
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protec:	NONE
Motor No:	85U11908
Controls:	
Frequency converter:	NONE
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	38.6 kg
Gross weight:	41.5 kg
Shipping volume:	0.13 m³
Country of origin:	HU
Custom tariff no.:	84137075

96513456 CRN 3-21 A-P-A-E-HQQE 50 Hz



96513456 CRN 3-21 A-P-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 CRN 3-21, Product No. 96513456
Produced After 1944 (production year and week number)

Pos	Omschrijving	Opmerking tekst	Classificatie Gegevens	Onderdeelnr.	Aanta	Eenhei
- 80	Kit, chamber stack			96453567	1	pcs
- 4a	Chamber w. bearing cpl.				3	
	Vane				1	
	Retainer				1	
	Guide vane				6	
4a	Intermediate chamber				1	
45	Neck ring				1	
47	Bearing bush				1	
65	Retainer for seal ring				1	
65	Neck ring retainer				1	
- 4	Chamber cpl.				17	
4a	Intermediate chamber				1	
45	Neck ring				1	
65	Neck ring retainer				1	
- 5a	Chamber cpl.				1	
	Vane				1	
4a	Intermediate chamber				1	
45	Neck ring				1	
65	Retainer for seal ring				1	
65	Neck ring retainer				1	
- 44a	Guide vane cpl.				1	
	Plate				1	
	Guide vane				6	
50	Top plate				1	
47a	Bearing ring				3	
49	Impeller cpl.				21	
51	Shaft, spline, cpl.				1	
64d	Spacing pipe		Internal diameter: 12,85		3	
			Outer diameter: 15,85			
			Length (mm): 4,50			
64c	Clamp, splined		Internal diameter: 8,5		1	
			Outer diameter: 15			
64a	Spacing pipe				17	
66	Wedge lock washer				1	
67	Lock nut		Thread: M8		1	
-	Kit, coupling			00415062	1	pcs
9	Hex socket head cap screw		Designation: DIN 912		4	
			Length (mm): 25			
			Thread: M8			
10a	Coupling half				2	
10	Shaft pin		Diameter: 5		1	
			Length (mm): 26			
-	Kit, coupling guard			96505131	1	pcs
7a	Combi Slot Torx screw				4	
7	Coupling guard				2	
-	Kit, gaskets			96455090	1	pcs
37	O-ring				2	
38	O-ring				1	
38	O-ring				2	
109	O-ring		Diameter: 22,00		1	
			Material type: EPDM			
			Thickness: 2,75			
-	Kit, plug			96505133	1	pcs
- 18	Air vent screw				1	
	Spindle				1	
	Plug				1	
23b	Spindle				1	
25	Plug				1	
25	Plug				1	

Pos	Omschrijving	Opmerking tekst	Classificatie	Gegevens	Onderdeelnr.	Aanta	Eenhei
38	O-ring					1	
38	O-ring					2	
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				96455086	1	pcs
105	Shaft seal			Material type: HQQE		1	
-	Kit, wear parts			Material type: SILICON CARBIDE	96455093	1	pcs
-	4a Chamber w. bearing cpl.					3	
	Vane					1	
	Retainer					1	
	Guide vane					6	
4a	Intermediate chamber					1	
45	Neck ring					1	
47	Bearing bush					1	
65	Retainer for seal ring					1	
65	Neck ring retainer					1	
45	Neck ring					24	
47a	Bearing ring					3	
64d	Spacing pipe			Internal diameter: 12,85		3	
				Outer diameter: 15,85			
				Length (mm): 4,50			
64c	Clamp, splined			Internal diameter: 8,5		1	
				Outer diameter: 15			
65	Neck ring retainer					24	
66	Wedge lock washer					1	
67	Lock nut			Thread: M8		1	
441b	Gasket					2	
1a	Pump head				98906053	1	pcs
2	Pump cover				96588244	1	pcs
-	4a Chamber w. bearing cpl.				97690603	3	pcs
65	Retainer for seal ring				99812852	1	
4a	Chamber w. bearing cpl.				98371226	3	pcs
-	4 Chamber cpl.				97690021	17	pcs
45	Neck ring				96536194	1	
65	Neck ring retainer				99490745	1	
65	Neck ring retainer				99490747	1	
4	Chamber cpl.				96547663	17	pcs
4	Chamber cpl.				98371223	17	pcs
5a	Chamber cpl.				98371222	1	pcs
5a	Chamber cpl.				97564654	1	pcs
6	Base				96588139	1	pcs
7.a	Combi Slot Torx screw				96886324	4	pcs
7	Coupling guard				96603690	2	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
-	25a Drain plug w/bypass valve				96588243	1	pcs
38	O-ring				99198815	1	
38	O-ring				99412727	1	
25	Plug				96536013	1	pcs
26	Staybolt			Length (mm): 475	98985610	4	pcs
				Thread: M12			
28	Hex head screw			Length (mm): 20	99932722	4	pcs
				Thread: M8			
32	Washer			Designation: DIN 125 A2	99944263	4	pcs

Pos	Omschrijving	Opmerking tekst	Classificatie Gegevens	Onderdeelnr.	Aanta	Eenhei
			Internal diameter: 13			
			Outer diameter: 24			
			Thickness: 2,5			
37	O-ring			96547656	2	pcs
38	O-ring			99198815	2	pcs
38	O-ring			99412727	2	pcs
44a	Guide vane cpl.			98928568	1	pcs
47a	Bearing ring			97905743	3	pcs
47a	Bearing ring			96547649	3	pcs
49	Impeller cpl.			98271529	21	pcs
49	Impeller cpl.			96547601	21	pcs
49	Impeller cpl.			98394417	21	pcs
51	Shaft, spline, cpl.			96588236	1	pcs
55	Outer sleeve			98811274	1	pcs
56	Base plate			96588142	1	pcs
60	Formed wire spring			99935918	1	pcs
64c	Clamp, splined		Internal diameter: 8,5	98496968	1	pcs
			Outer diameter: 15			
64a	Spacing pipe			96536198	17	pcs
66	Wedge lock washer			96536157	1	pcs
66	Wedge lock washer			92575609	1	pcs
67	Lock nut		Thread: M8	98277008	1	pcs
105	Shaft seal		Material type: HQQE	96983415	1	pcs
- 2099	Motor			99606494	1	pcs
-	Kit, bearing cpl.			96279794	1	
111	Ball bearing					1
154	Ball bearing					1
157	O-ring		Diameter: 52			1
			Material type: NBR			
			Thickness: 3			
158	Waved washer					1
187	Retaining ring					1
188	Retaining ring					1
-	Kit, end shield			96279789	1	
156a	End shield					1
157a	Gasket		Internal diameter: 141,2			1
			Outer diameter: 145,5			
			Thickness: 0,2			
157	O-ring		Diameter: 52			1
			Material type: NBR			
			Thickness: 3			
158	Waved washer					1
159a	Seal ring					1
-	Kit, fan			96279757	1	
156	Fan					1
159a	Seal ring					1
-	Kit, fan cover			96279755	1	
151	Fan cover					1
152	Pan head thread forming screw					4
-	Kit, flange			96279777	1	
156b	Flange					1
159.	Seal ring					1
c						
184	Gasket		Internal diameter: 141,2			1
			Outer diameter: 145,5			
			Thickness: 0,2			
186	Drain plug					3
-	Kit, retaining ring			96279798	1	
187	Retaining ring					1

Pos	Omschrijving	Opmerking tekst	Classificatie Gegevens	Onderdeelnr.	Aanta	Eenhei
188	Retaining ring					1
-	Kit, shaft seal			96279761	1	
159c	Seal ring					1
159a	Seal ring					1
-	Kit, staybolts			96279792	1	
181	Pan head staybolt					4
-	Kit, terminal board			96279769	1	
	Bracket cpl.					1
163	Hex socket head screw					1
173a	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