

# Submittal Data

PROJECT:	UNIT TAG:	QUANTITY:
REPRESENTATIVE:	TYPE OF SERVICE:	DATE:
ENGINEER:	SUBMITTED BY:	DATE:
CONTRACTOR:	APPROVED BY:	DATE:
	ORDER NO.:	DATE:

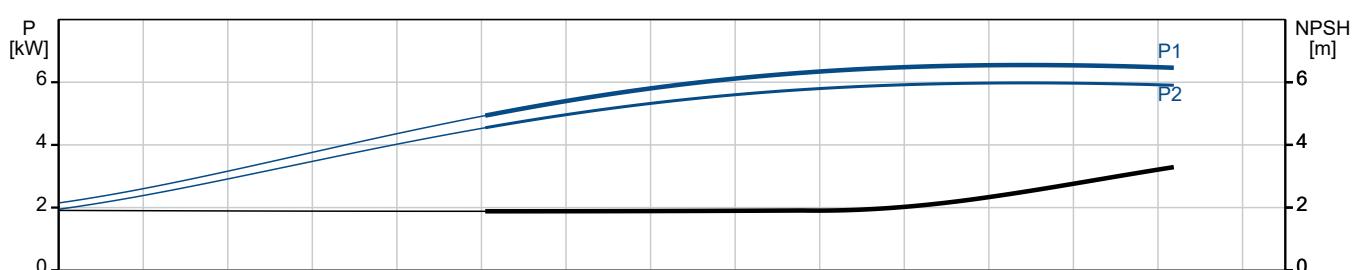
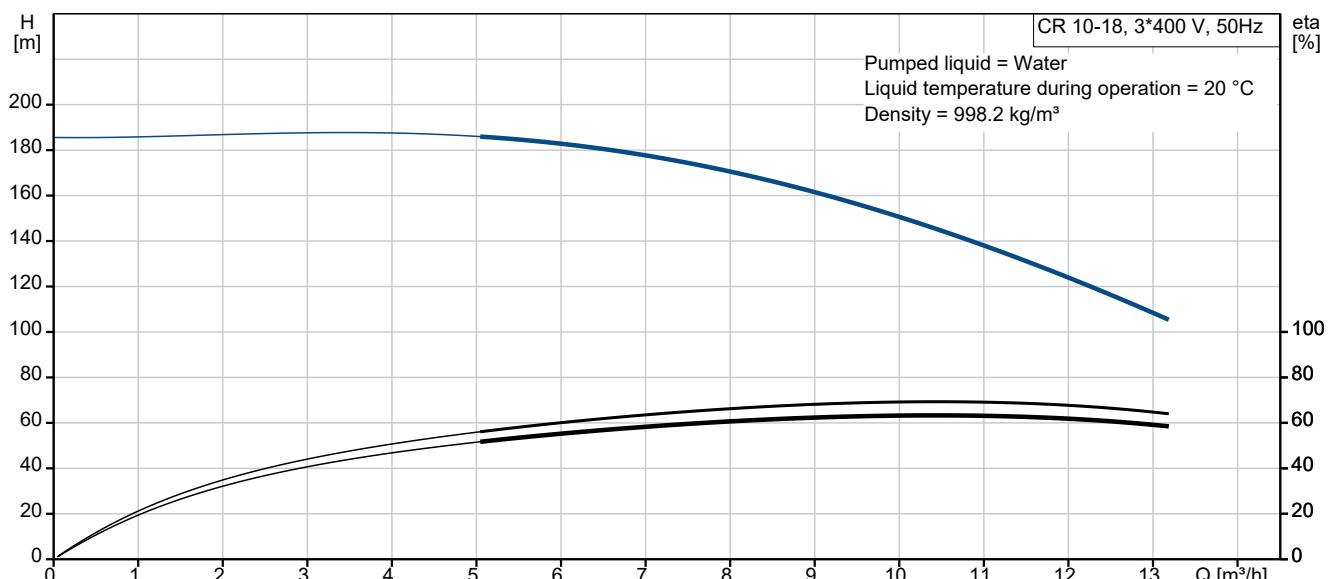


## CR 10-18 A-FJ-A-E-HQQE

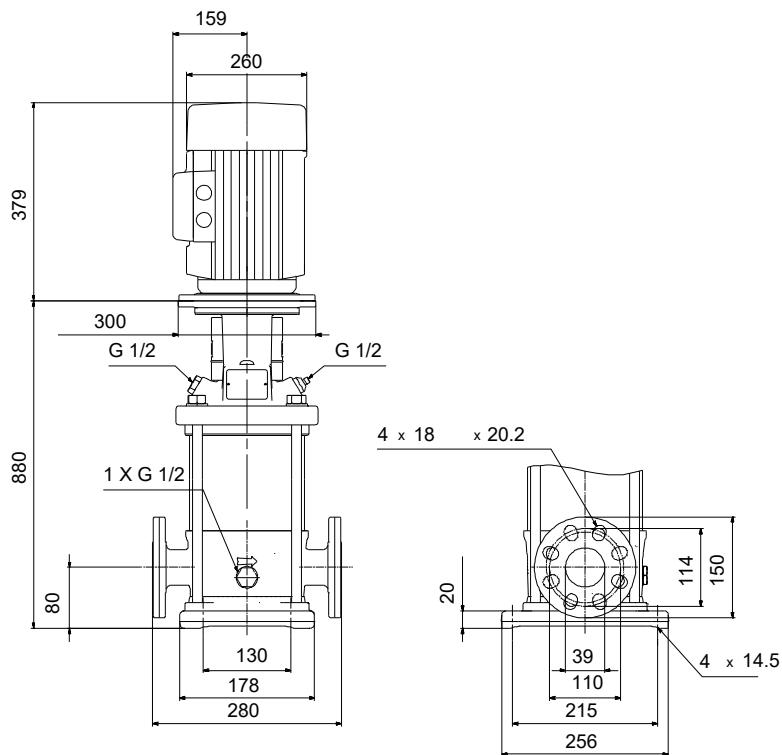
Vertical, multistage centrifugal pump with suction and discharge ports on the same level. The pump head and base are in cast iron - all other wetted parts are in stainless steel (EN 1.4301)

Note! Product picture may differ from actual product

Conditions of Service		Pump Data		Motor Data	
Liquid:	Water	Max pressure at stated temp:	25 bar / 120 °C	Rated power - P2:	7.5 kW
Temperature:	20 °C	Liquid temperature range:	-20 .. 120 °C	Rated voltage:	380-415D/660-690Y V
Specific Gravity:	1.000	Maximum ambient temperature:	60 °C	Mains frequency:	50 Hz
		Shaft seal:	HQQE	Enclosure class:	55 Dust/Jetting
		Product number:	On request	Insulation class:	F
				Motor protection:	PTC
				Motor type:	132SB
				Eta 1/1:	90.1-90.4 %



# Submittal Data



## Materials:

Base:

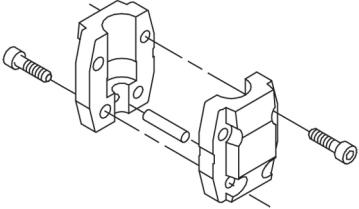
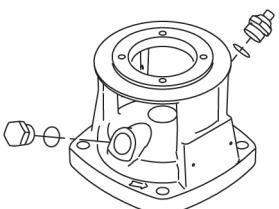
Cast iron  
EN 1561 EN-GJL-200  
ASTM A48-25B

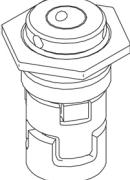
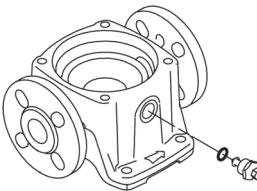
Impeller:

Stainless steel  
AISI 304  
EN 1.4301

Material code: A

Code for rubber: E

Qty.	Description
1	<p><b>CR 10-18 A-FJ-A-E-HQQE</b></p>  <p><b>Note! Product picture may differ from actual product</b></p> <p>Product No.: On request</p> <p>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 combined DIN-JIS flanges.</p> <p>The pump is fitted with a 3-phase, fan-cooled asynchronous motor.</p> <p><b>Further product details</b></p> <p>Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process.</p> <p>CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface.</p> <p>An integral part of the process is a pretreatment.</p> <p>The entire process consists of these elements:</p> <ol style="list-style-type: none"> <li>1) Alkaline-based cleaning.</li> <li>2) Zinc phosphating.</li> <li>3) Cathodic electro-deposition.</li> <li>4) Curing to a dry film thickness 18-22 µm.</li> </ol> <p>The colour code for the finished product is NCS 9000/RAL 9005.</p> <p><b>Pump</b></p> <p>A standard split coupling connects the pump and motor shaft. It is enclosed in the pump head/motor stool by means of two coupling guards.</p>  <p>The pump head, pump head cover and flange for motor mounting is made in one piece. The pump head has a combined 1/2" priming plug and vent screw.</p>  <p>The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system. This seal type is assembled in a cartridge unit which makes replacement safe and easy. Due to the balancing, this seal type is suitable for high-pressure applications.</p>

Qty.	Description																				
1	<p>The cartridge construction also protects the pump shaft from possible wear from a dynamic O-ring between pump shaft and shaft seal.</p> <p>Seal faces:</p> <ul style="list-style-type: none"> <li>• Rotating seal ring material: silicon carbide (SiC)</li> <li>• Stationary seat material: silicon carbide (SiC)</li> </ul> <p>This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.</p> <p>Secondary seal material: EPDM (ethylene-propylene rubber)</p> <p>EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.</p>  <p>The shaft seal is screwed into the pump head.</p> <p>The chambers and impellers are made of stainless-steel sheet. The chambers are provided with a PTFE neck ring offering improved sealing and high efficiency. The impellers have smooth surfaces, and the shape of the blades ensure a high efficiency.</p> <p>The base is made of cast iron. The flanges and base are cast in one piece. The outlet side of the base has a drain plug. The pump is secured to the foundation by four bolts through the base plate.</p>  <h3>Motor</h3> <p>The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with free-hole flange (FF).</p> <p>Motor-mounting designation in accordance with IEC 60034-7: IM B 5 (Code I) / IM 3001 (Code II).</p> <p>Electrical tolerances comply with IEC 60034.</p> <p>The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.</p> <p>The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.</p> <p>Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations.</p> <p>The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center.</p> <h3>Technical data</h3> <p>Liquid:</p> <table> <tbody> <tr> <td>Pumped liquid:</td> <td>Water</td> </tr> <tr> <td>Liquid temperature range:</td> <td>-20 .. 120 °C</td> </tr> <tr> <td>Selected liquid temperature:</td> <td>20 °C</td> </tr> <tr> <td>Density:</td> <td>998.2 kg/m<sup>3</sup></td> </tr> </tbody> </table> <p>Technical:</p> <table> <tbody> <tr> <td>Pump speed on which pump data are based:</td> <td>2919 rpm</td> </tr> <tr> <td>Rated flow:</td> <td>10 m<sup>3</sup>/h</td> </tr> <tr> <td>Rated head:</td> <td>149.4 m</td> </tr> <tr> <td>Pump orientation:</td> <td>Vertical</td> </tr> <tr> <td>Shaft seal arrangement:</td> <td>Single</td> </tr> <tr> <td>Primary shaft seal:</td> <td>HQQE</td> </tr> </tbody> </table>	Pumped liquid:	Water	Liquid temperature range:	-20 .. 120 °C	Selected liquid temperature:	20 °C	Density:	998.2 kg/m <sup>3</sup>	Pump speed on which pump data are based:	2919 rpm	Rated flow:	10 m <sup>3</sup> /h	Rated head:	149.4 m	Pump orientation:	Vertical	Shaft seal arrangement:	Single	Primary shaft seal:	HQQE
Pumped liquid:	Water																				
Liquid temperature range:	-20 .. 120 °C																				
Selected liquid temperature:	20 °C																				
Density:	998.2 kg/m <sup>3</sup>																				
Pump speed on which pump data are based:	2919 rpm																				
Rated flow:	10 m <sup>3</sup> /h																				
Rated head:	149.4 m																				
Pump orientation:	Vertical																				
Shaft seal arrangement:	Single																				
Primary shaft seal:	HQQE																				



Company name: ALMAWARED ENGINEERING AND TRADING S.A.E  
Created by: adham Sabry  
Phone: 01223033998  
Email: adhasm.sabry@met-eg.com  
Date:

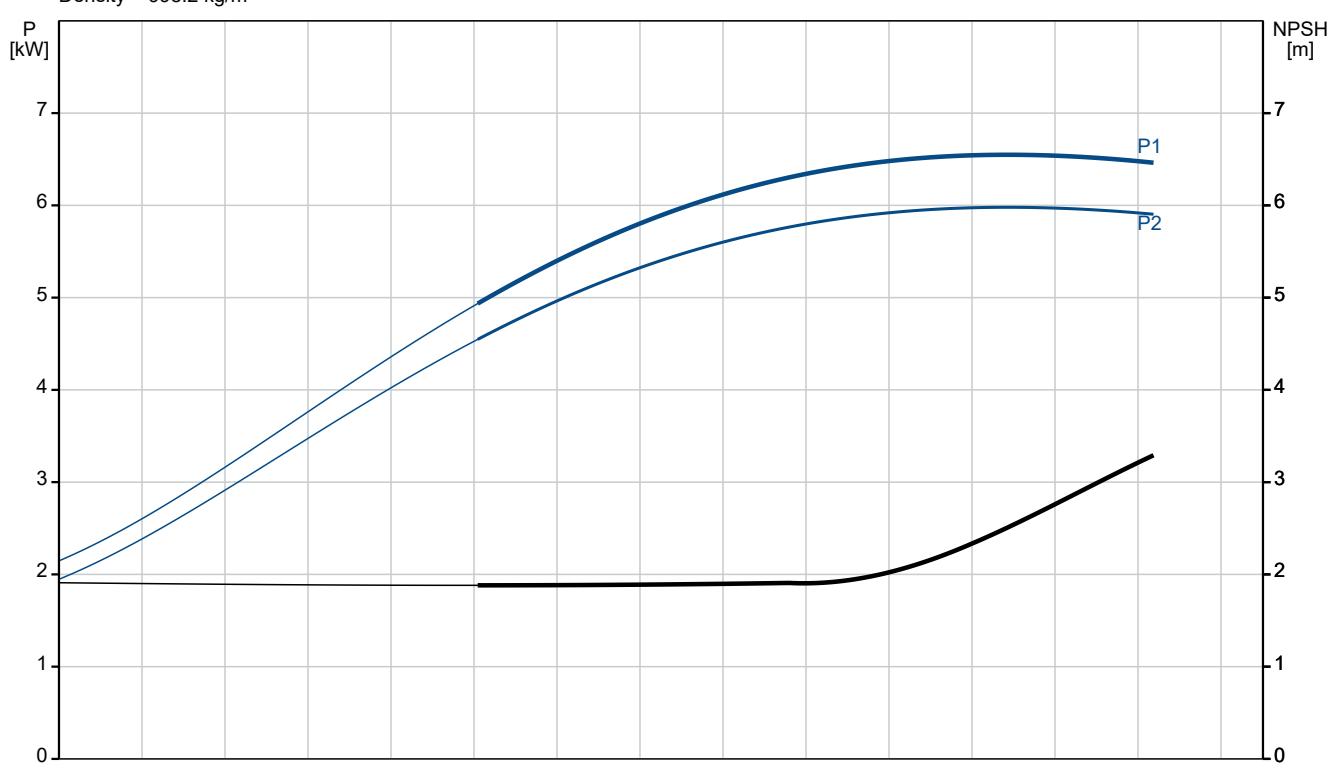
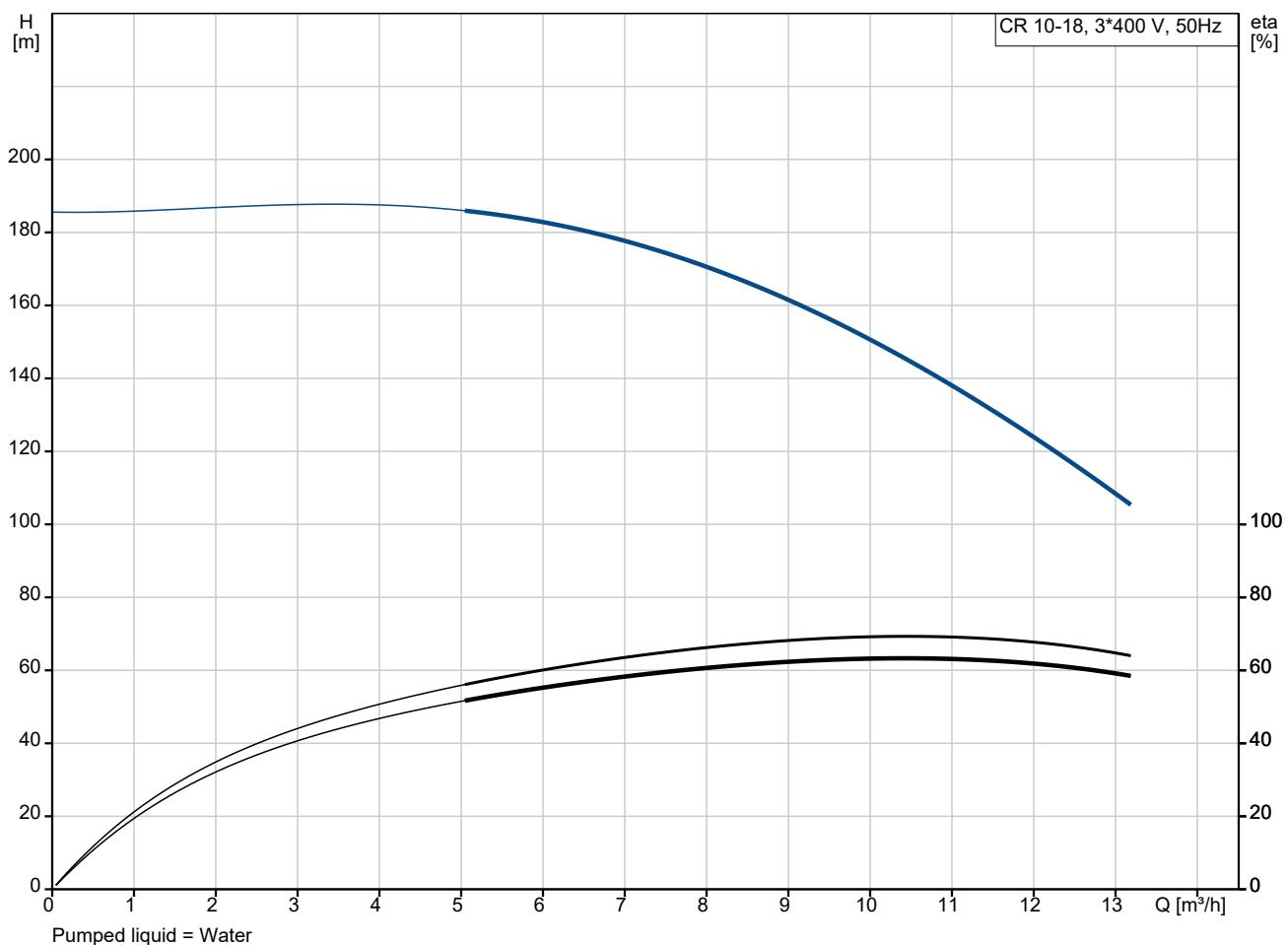
Qty.	Description
1	<p>Code for shaft seal: HQQE Approvals: CE,EAC,UKCA,SEPRO Approvals for drinking water: WRAS,ACS Curve tolerance: ISO9906:2012 3B</p> <p>Materials: Base: Cast iron EN 1561 EN-GJL-200 ASTM A48-25B</p> <p>Impeller: Stainless steel EN 1.4301 AISI 304</p> <p>Bearing: SIC</p> <p>Installation: Maximum ambient temperature: 60 °C Maximum operating pressure: 25 bar Max pressure at stated temp: 25 bar / 120 °C 25 bar / -20 °C</p> <p>Type of connection: DIN / JIS Size of inlet connection: DN 40 1 1/2 inch</p> <p>Size of outlet connection: DN 40 Pressure rating for connection: PN 25 Flange rating inlet: 300 lb Flange size for motor: FF265</p> <p>Electrical data: Motor standard: IEC Motor type: 132SB 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 IE Efficiency class: IE3 Motor efficiency at full load: 90.1-90.4 % Motor efficiency at 3/4 load: 90.8-90.9 % Motor efficiency at 1/2 load: 90.8-90.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Motor No: 85U17522</p> <p>Controls: Frequency converter: None</p> <p>Others: Terminal box position: 6 Minimum efficiency index, MEI <math>\geq</math>: 0.70 Net weight: 109 kg Gross weight: 131 kg Shipping volume: 0.321 m<sup>3</sup> Danish VVS No.: 385903180 Swedish RSK No.: 5823469 Finnish LVI No.: 4925428</p>



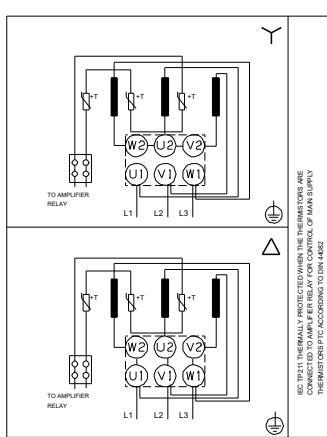
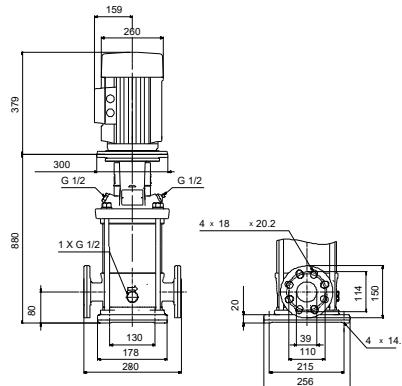
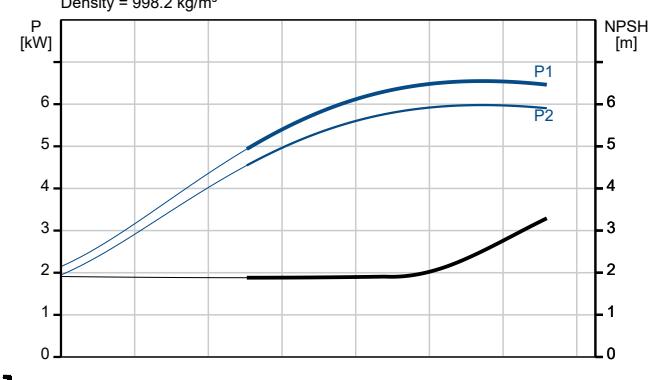
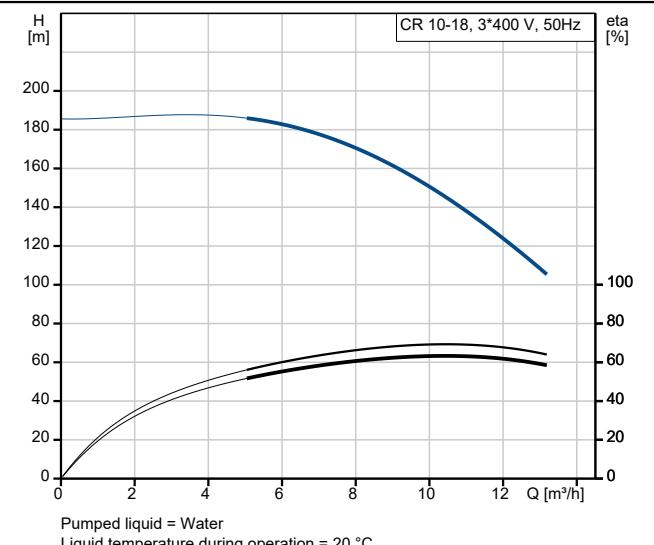
**Company name:** ALMAWARED ENGINEERING AND TRADING S.A.E  
**Created by:** adham Sabry  
**Phone:** 01223033998  
**Email:** adhasm.sabry@met-eg.com  
**Date:**

Qty.	Description
1	Country of origin: DK Custom tariff no.: 84137075

## On request CR 10-18 A-FJ-A-E-HQQE 50 Hz



Description	Value
<b>General information:</b>	
Product name:	CR 10-18 A-FJ-A-E-HQQE
Product No:	On request
EAN number:	On request
<b>Technical:</b>	
Pump speed on which pump data are based:	2919 rpm
Rated flow:	10 m <sup>3</sup> /h
Rated head:	149.4 m
Maximum head:	185 m
Stages:	18
Impellers:	18
Number of reduced-diameter impellers:	0
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Primary shaft seal:	HQQE
Code for shaft seal:	HQQE
Approvals:	CE,EAC,UKCA,SEPRO
Approvals for drinking water:	WRAS,ACS
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
<b>Materials:</b>	
Base:	Cast iron EN 1561 EN-GJL-200 ASTM A48-25B
Impeller:	Stainless steel EN 1.4301 AISI 304
Material code:	A
Code for rubber:	E
Bearing:	SIC
<b>Installation:</b>	
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:	DIN / JIS
Size of inlet connection:	DN 40 1 1/2 inch
Size of outlet connection:	DN 40
Pressure rating for connection:	PN 25
Flange rating inlet:	300 lb
Flange size for motor:	FF265
Connect code:	FJ
<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
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

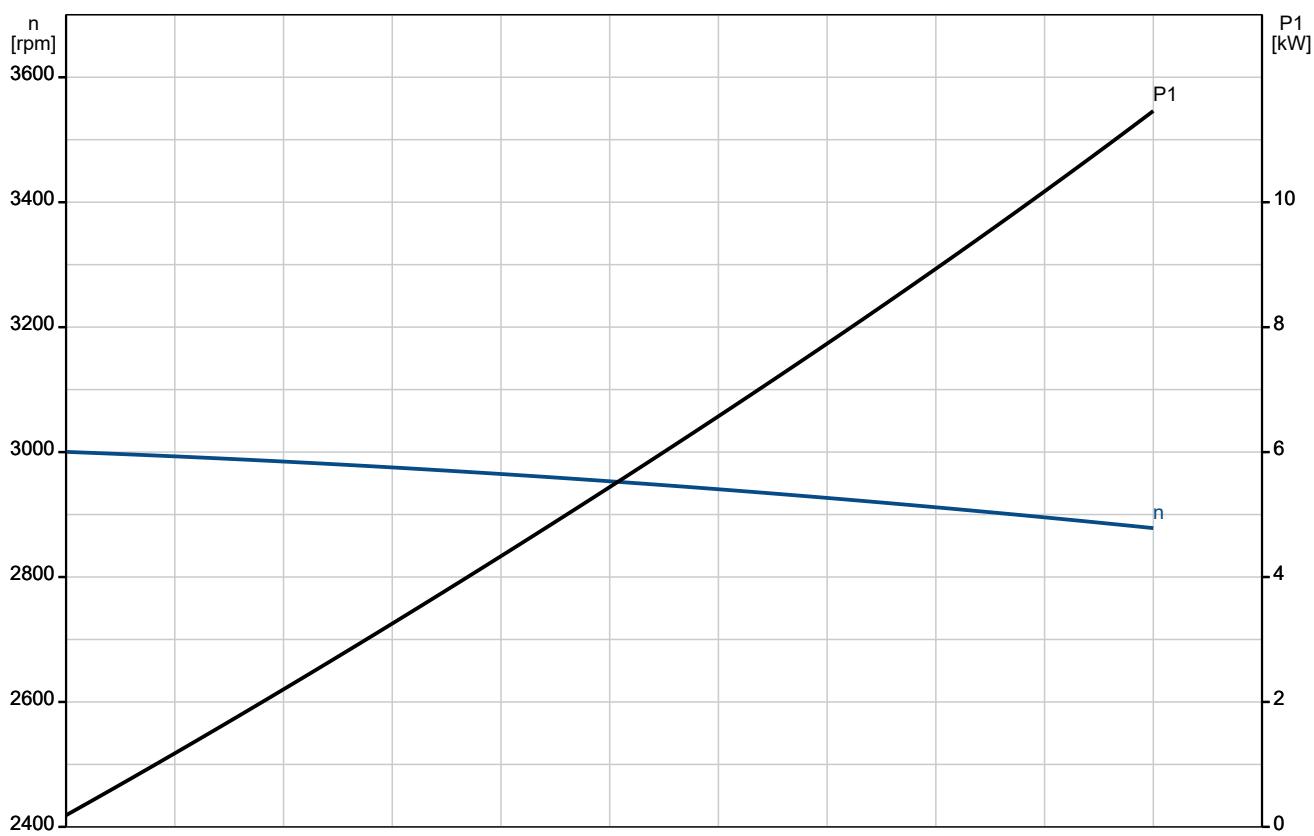
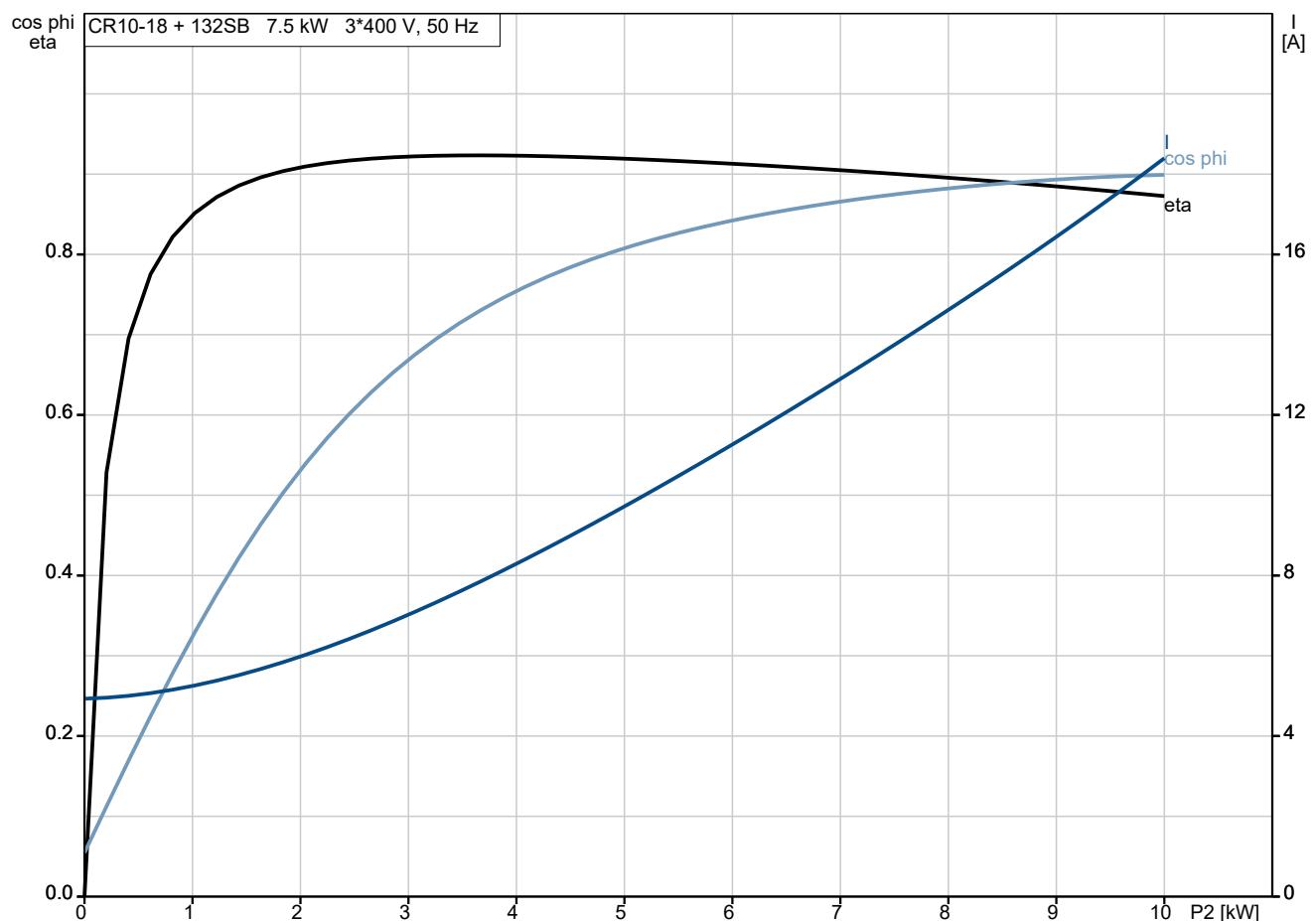


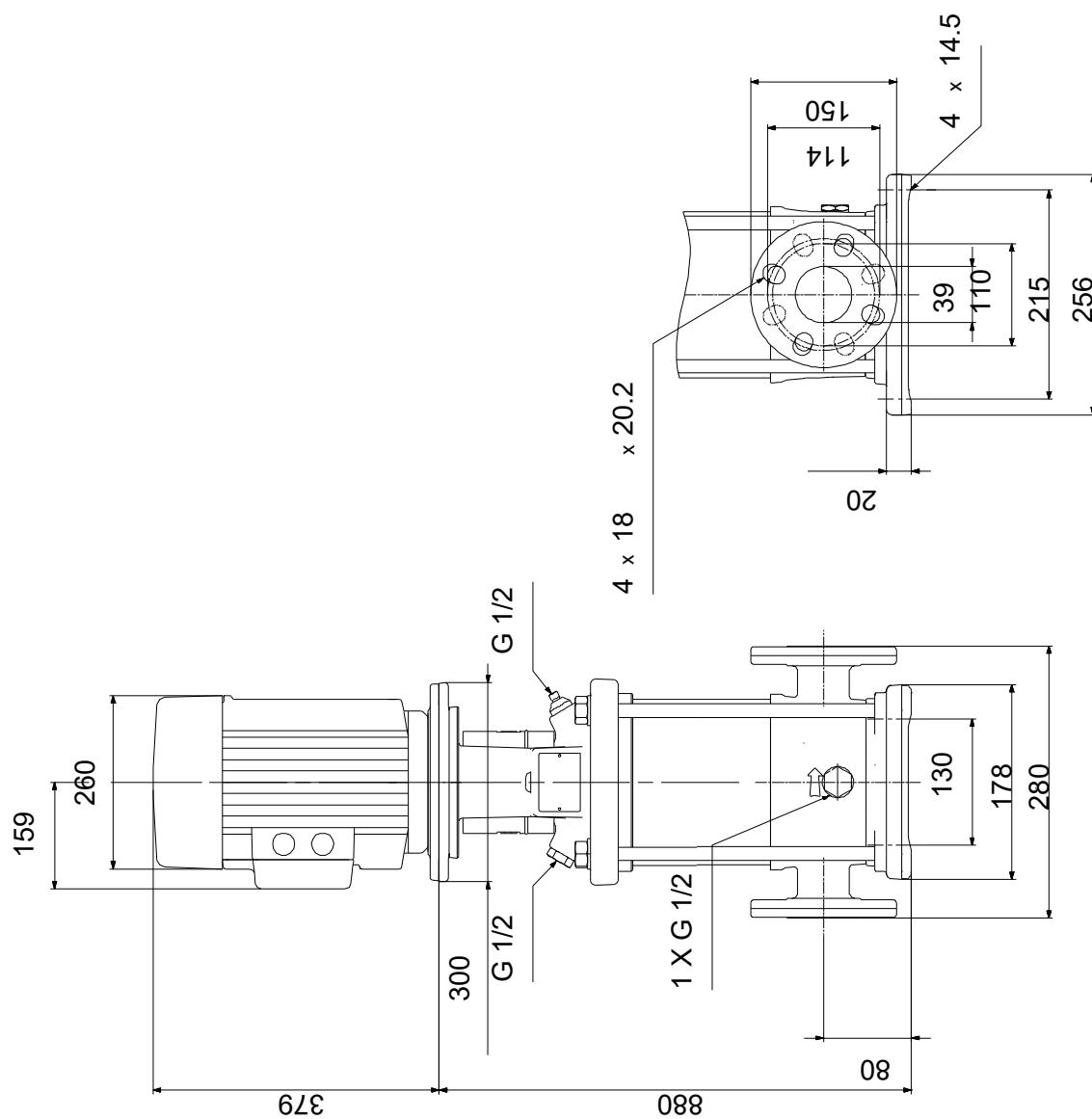


Company name: ALMAWARED ENGINEERING AND TRADING S.A.E  
Created by: adham Sabry  
Phone: 01223033998  
Email: adhasm.sabry@met-eg.com  
Date:

Description	Value
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
IE Efficiency class:	IE3
Motor efficiency at full load:	90.1-90.4 %
Motor efficiency at 3/4 load:	90.8-90.9 %
Motor efficiency at 1/2 load:	90.8-90.4 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No.:	<a href="#">85U17522</a>
<b>Controls:</b>	
Frequency converter:	None
<b>Others:</b>	
Terminal box position:	6
Minimum efficiency index, MEI ≥:	0.70
Net weight:	109 kg
Gross weight:	131 kg
Shipping volume:	0.321 m <sup>3</sup>
Danish VVS No.:	385903180
Swedish RSK No.:	5823469
Finnish LVI No.:	4925428
Country of origin:	DK
Custom tariff no.:	84137075

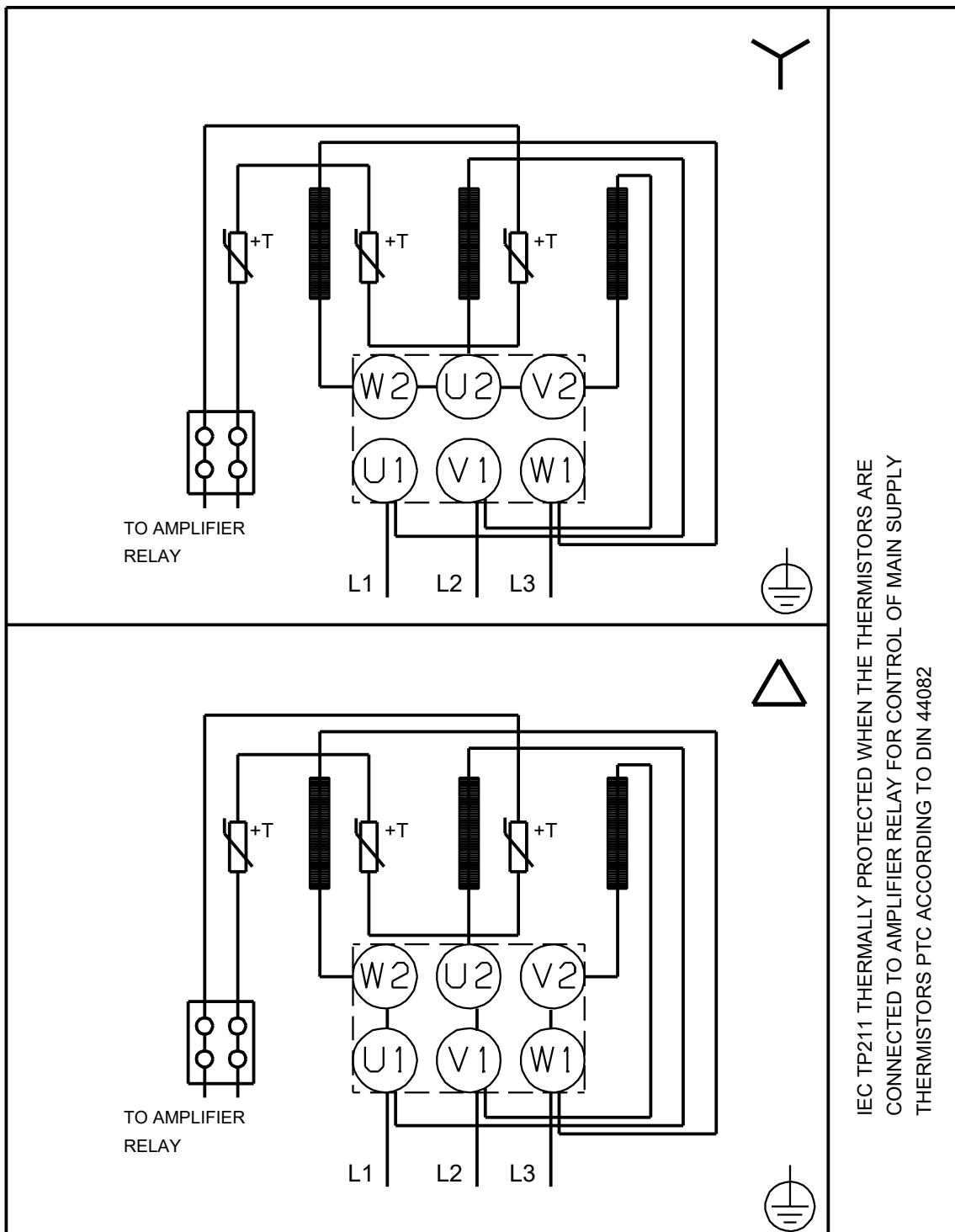
## On request CR 10-18 A-FJ-A-E-HQQE 50 Hz



**On request CR 10-18 A-FJ-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.

**On request CR 10-18 A-FJ-A-E-HQQE 50 Hz**



Note! All units are in [mm] unless others are stated.



Company name: ALMAWARED ENGINEERING AND TRADING S.A.E  
Created by: adham Sabry  
Phone: 01223033998  
Email: adhasm.sabry@met-eg.com  
Date:

**Order Data:**

Position	Your pos.	Product name	Amount	Product No	Total
		CR 10-18 A-FJ-A-E-HQQE	1	On request	