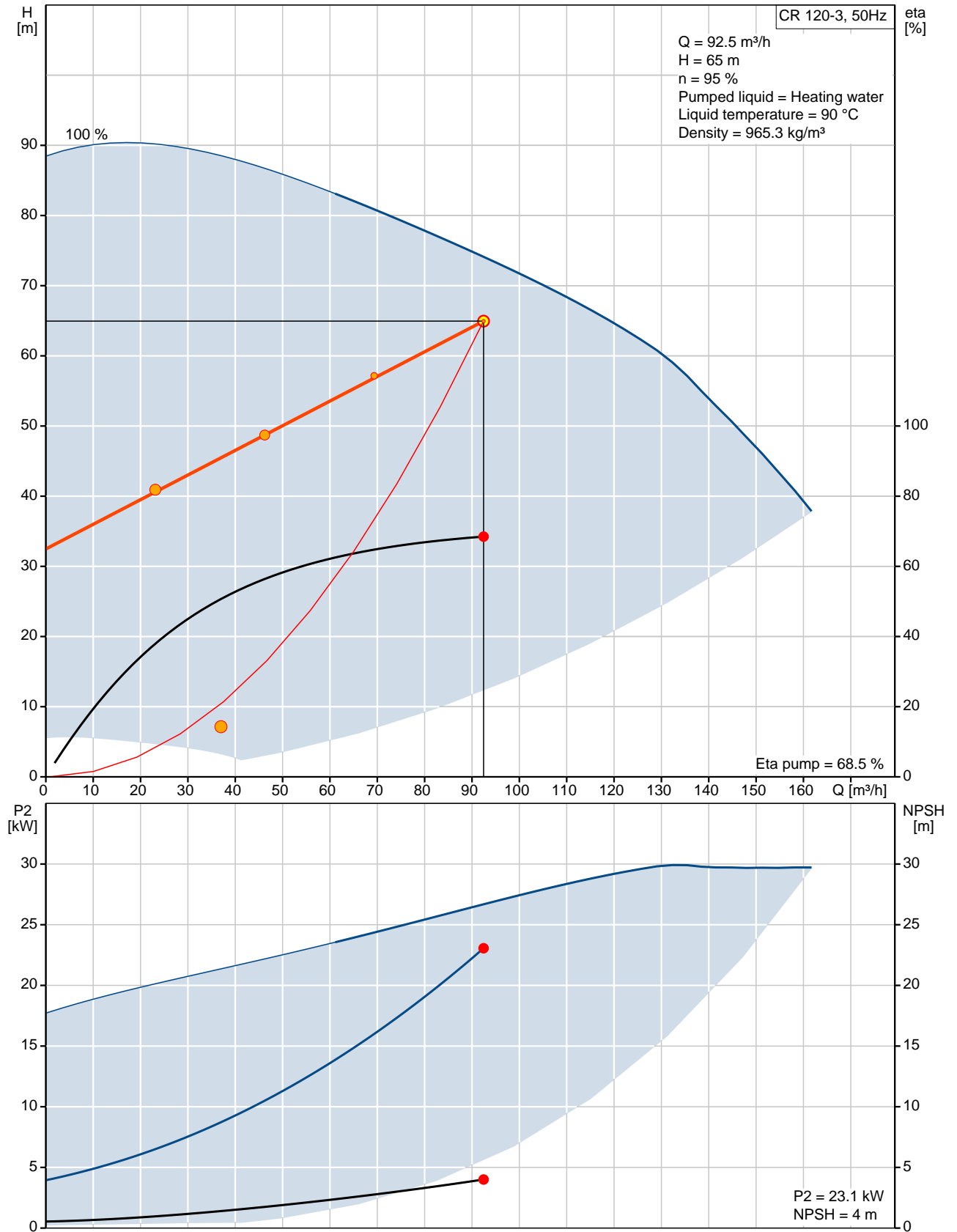
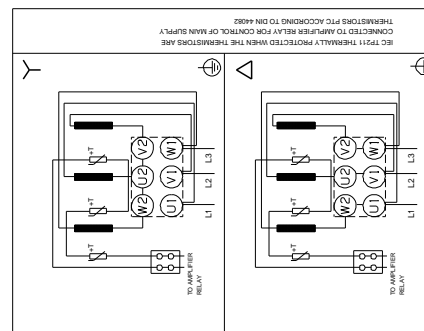
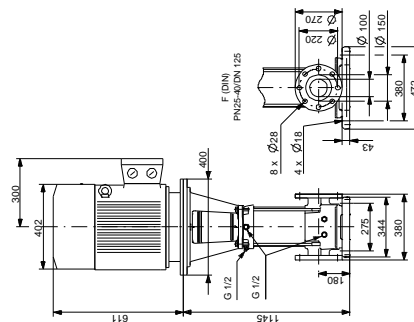
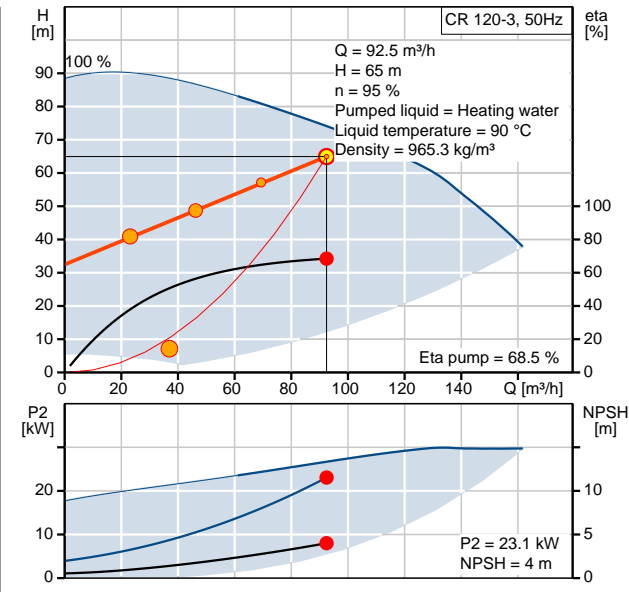




95922153 CR 120-3 50 Hz



Description	Value
Product name:	CR 120-3 A-F-A-E-HQQE
Product No:	95922153
EAN number:	5700838933628
Technical:	
Speed for pump data:	2951 rpm
Actual calculated flow:	92.5 m ³ /h
Resulting head of the pump:	65 m
Head max:	88 m
Impellers:	3
Shaft seal:	HQQE
Approvals on nameplate:	CE,TR
Curve tolerance:	ISO 9906:1999 Annex A
Pump type:	CR 120
Stages:	3
Pump version:	A
Model:	A
Materials:	
Pump housing:	Cast iron EN-JS1050
Impeller:	Stainless steel DIN W.-Nr. 1.4301 AISI 304
Material code:	A
Code for rubber:	E
Installation:	
Maximum ambient temperature:	55 °C
Max pressure at stated temp:	30 bar / 120 °C 30 bar / -30 °C
Flange standard:	DIN
Connect code:	F
Pipe connection:	DN 125
Pressure stage:	PN 25/40
Flange size for motor:	FF350
Liquid:	
Pumped liquid:	Heating water
Liquid temperature range:	-30 .. 120 °C
Liquid temp:	90 °C
Density:	965.3 kg/m ³
Kinematic viscosity:	0 mm ² /s
Electrical data:	
Motor type:	SIEMENS
IE Efficiency class:	IE3
Number of poles:	2
Rated power - P2:	30 kW
Power (P2) required by pump:	30 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-420D/660-725Y V
Rated current:	56,0-51,0/32,0-29,5 A
Starting current:	660-660 %
Cos phi - power factor:	0,9
Rated speed:	2955 rpm
Efficiency:	IE3 93,3%
Motor efficiency at full load:	93,3-93,3 %
Motor efficiency at 3/4 load:	93,6-93,6 %
Motor efficiency at 1/2 load:	93,4-93,4 %
Enclosure class (IEC 34-5):	55 (Protect. water jets/dust)
Insulation class (IEC 85):	F
Motor protec:	PTC
Motor No:	81U15332



Description	Value
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Others:

Net weight:	368 kg
Gross weight:	429 kg

Product name:	CUE 3X380-500V IP20 30KW 61A/5
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Product No:	96754698
EAN number:	5700838635867

Technical:

Approvals on nameplate:	CE, CULUS, C-TICK
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Installation:

Range of ambient temperature:	0 .. 45 °C
Relative humidity:	5-95 %
Mounted on:	Wall

Electrical data:

Maximum current consumption:	61 A
Rated power - P2:	30 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380 - 440 V
Efficiency at full load:	98 %
Enclosure class (IEC 34-5):	IP20
Motor protec:	YES
Thermal protec:	external
Cable length:	150/300 m

Others:

Label:	Grundfos Blueflux
Net weight:	23.5 kg

Product name:	DPI differential pressure sensor kit
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Product No:	96611550
EAN number:	5700834481901

Installation:

Range of ambient temperature:	-10 .. 70 °C
Maximum operating pressure:	16 bar
Type of connection:	7/16 - 20 UNF

Liquid:

Liquid temperature range:	-10 .. 70 °C
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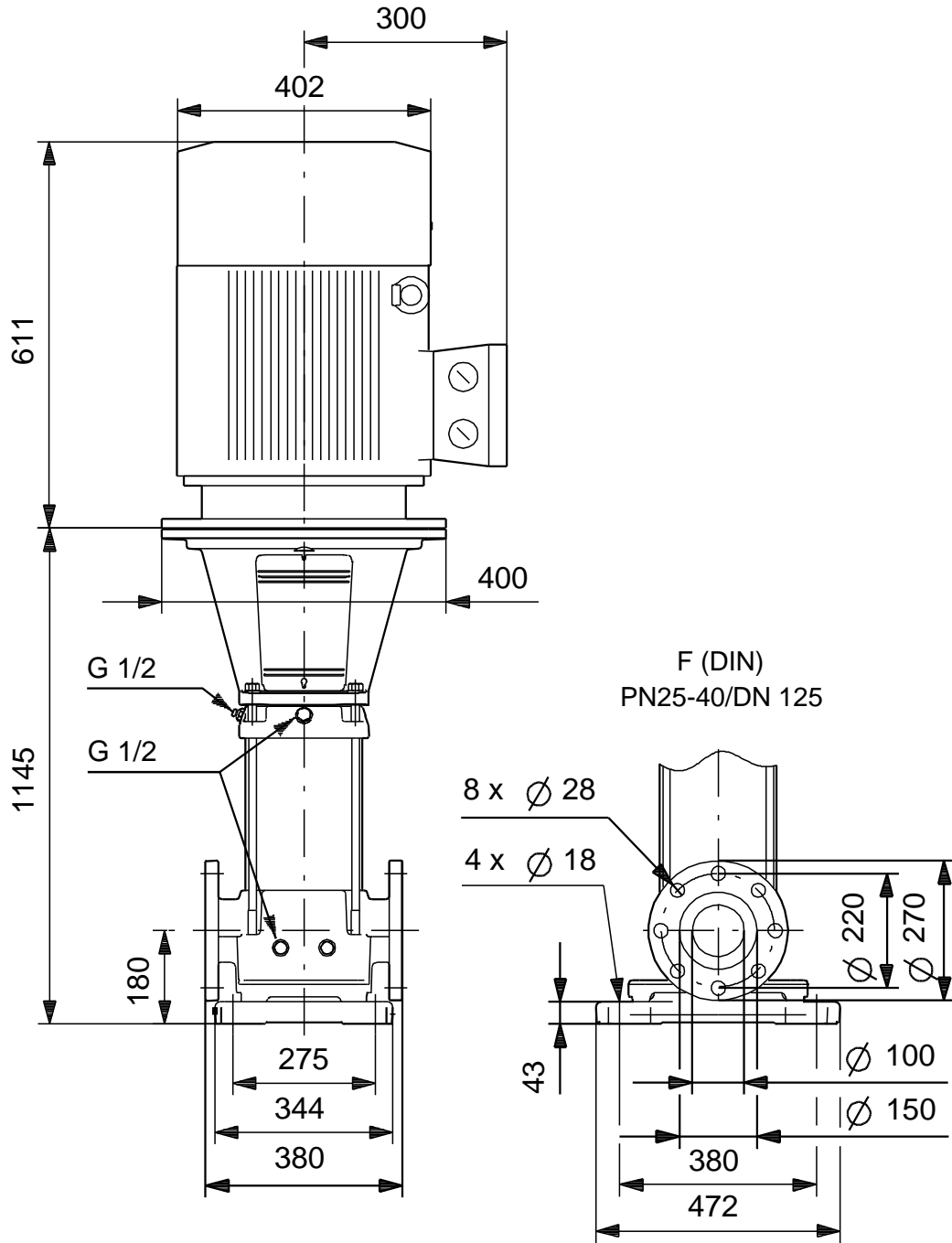
Electrical data:

Enclosure class (IEC 34-5):	IP55
Length of cable:	0.9 m
Cable size:	3-wire, 0,013mm ² , M12 x 1,5
Maximum load:	24V/500 ohm, 16V/200 ohm, 12V/100 ohm
Relay:	24-30 VDC, 28-37 mA
Signal:	4 - 20 mA

Others:

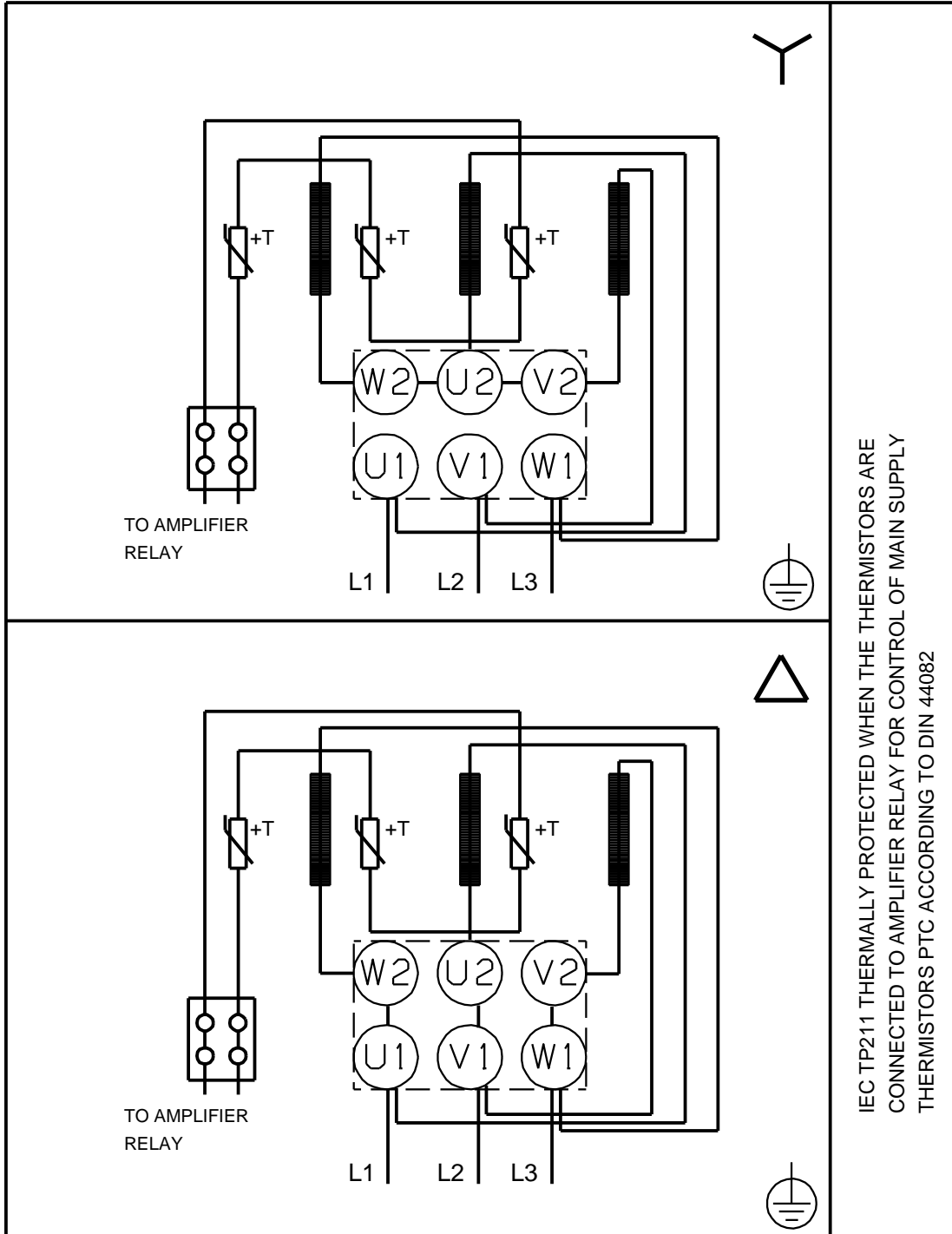
Net weight:	0.55 kg
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95922153 CR 120-3 50 Hz



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

95922153 CR 120-3 50 Hz



IEC TP211 THERMALLY PROTECTED WHEN THE THERMISTORS ARE
 CONNECTED TO AMPLIFIER RELAY FOR CONTROL OF MAIN SUPPLY
 THERMISTORS PTC ACCORDING TO DIN 44082

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

95922153 CR 120-3 50 Hz

Input

Select Application

Overview mode Yes
 Heating Heating

Input overview:

Installation Type Circulation
 Replacement No
 Flow (Q) 92.5 m³/h
 Head (H) 65 m
 More Yes
 Pumped liquid Heating water
 Min. liquid temperature 40 °C
 Liquid temperature during operation 90 °C
 Max. liquid temperature 110 °C
 Ambient temperature 20 °C
 Min. inlet pressure 1.5 bar
 Allowed flow undersize 2 %
 Max. operation pressure 16 bar
 Control mode Prop. pressure
 Decrease at low flow 50 %
 Enclosure Class IP20
 Maximum frequency 105 %
 Select type of hydraulic Single
 Heating season 285 days
 Energy price 0.24 €/kWh
 Increase of energy price 6 %
 Calculation period 15 years
 Evaluation criterion Preference index
 Max. hits per product group 2
 Max. hits total 8
 Frequency 50 Hz
 Phase 1 or 3
 Min. power limit for SD start 5.5 kW
 Voltage 1 x 230 or 3 x 400 V

Pump connection type Flange
 Flange size DN125
 Inline Canned Rotor Yes
 Inline Multistage Yes
 Inline single stage Yes
 End-suction long-coupled Yes
 End-suction close coupled Yes
 End-suction close coupled horizontal multistage Yes
 Horizontal splitcase Yes

Load Profile

	1	2	3	4	
Flow	100	75	50	25	40 %
Head	100	88	75	63	11 %
P1	26	18.1	12.2	8.32	1.68
Eta total	60.7	57.2	48.5	29.7	42.2 %
Time	273	684	1596	2007	
Energy consumption	7113	12394	19473	16686	3824 /Year
Quantity	1	1	1	1	1

Sizing result

Type CR 120-3
 Quantity 1
 Motor 30 kW
 Flow 92.5 m³/h
 Head 65 m
 Min.inlet pressure 0.91 bar (110 °C, against atmosphere)
 Power P1 26 kW
 Power P2 23.1 kW
 Eta pump 68.5 %
 Eta motor 91.0 %
 Eta pump+motor 62.3 % =Eta pump * Eta motor
 Eta total 60.7 % =Eta relative to the duty point
 Energy consumption 59489 kWh/Year
 CO2 emission 33900 kg/Year
 Price On request
 Price + energy costs On request /15Years

