GRUNDFOS

Submittal Data

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



Product photo could vary from the actual product

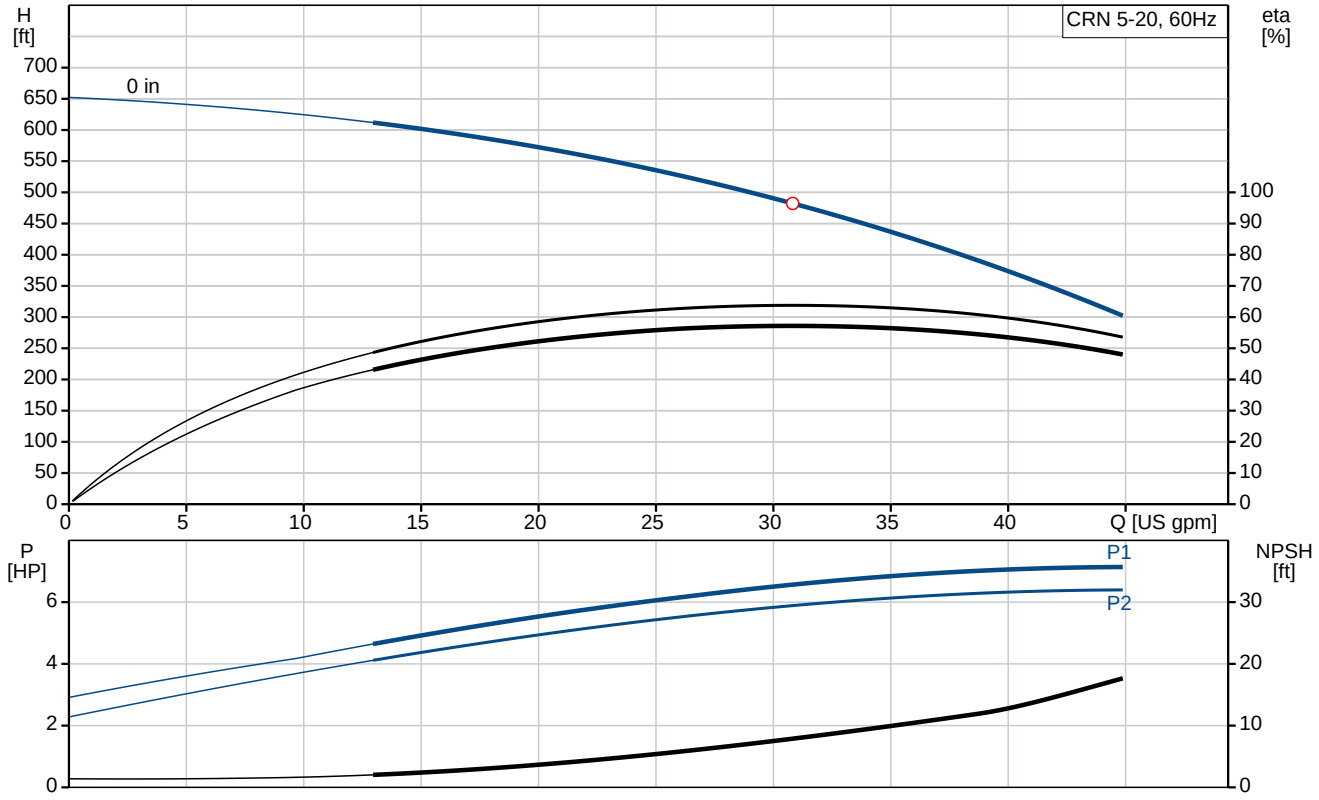
CRN 5-20

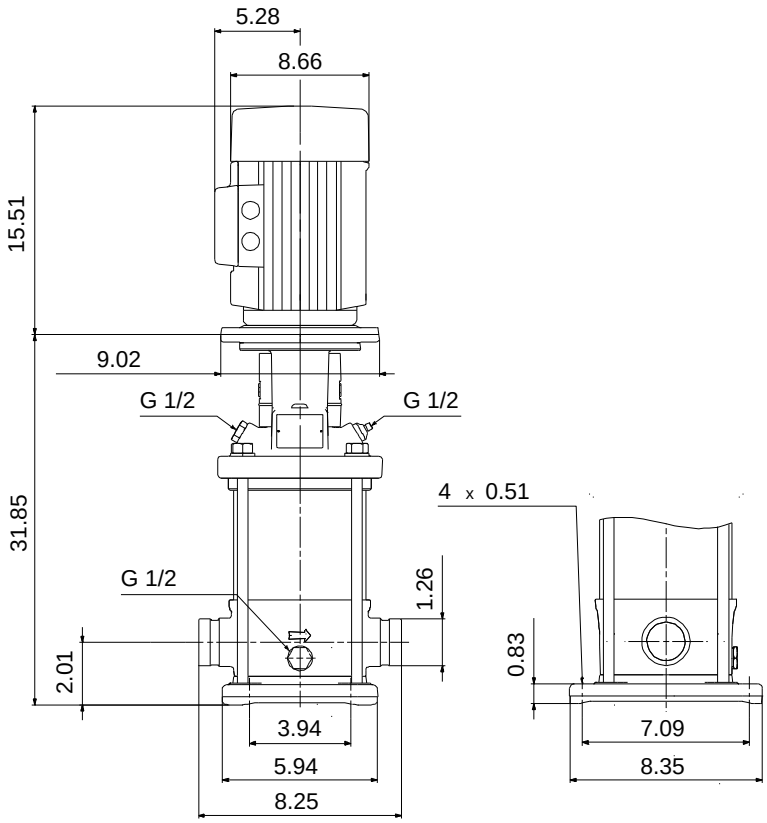
Vertical, multistage centrifugal pump with suction and discharge ports on same the level. Pump materials in contact with the liquid are in high-grade stainless steel (EN 1.4401) (AISI 316)

Conditions of Service	
Flow:	
Head:	
Efficiency:	
Liquid:	Water
Temperature:	68 °F
NPSH required:	ft
Viscosity:	
Specific Gravity:	1.000

Pump Data	
Max pressure at stated temperature:	363 psi / 250 °F
Maximum ambient temperature:	140 °F
Approvals:	CURUS,NSF61
Shaft seal:	HQQE
Product number:	96084853

Motor Data	
Rated power - P2:	7.5 HP
Rated voltage:	208-230YY/460Y V
Main frequency:	60 Hz
Enclosure class:	55 Dust/Jetting
Insulation class:	F
Motor protection:	PTC
Motor type:	132DA
Motor_efficiency:	89.5 %





Materials:

Base:	Stainless steel EN 1.4408 AISI 316
Impeller:	Stainless steel AISI 316 EN 1.4401
Material code:	G
Code for rubber:	E

Company name:
Created by:
Phone:

Date: 2/21/2018

Tender Text



Product No.: 96084853
CRN 5-20 A-P-G-E-HQQE
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
- Pump head cover and base are made of
- The shaft seal has assembly length according to EN 12756.
- Power transmission is via cast iron split coupling.

flanges/couplings.

The motor is a 3-phase AC motor.

Controls:

Frequency converter:	NONE

Liquid:

Pumped liquid:	Water
Liquid temperature during operation:	68 °F
Density:	62.29 lb/ft³

Technical:

Speed for pump data:	3467 rpm
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CURUS,NSF61
Curve tolerance:	ISO9906:2012 3B

Materials:

Base:	Stainless steel EN 1.4408 AISI 316
Impeller:	Stainless steel EN 1.4401 AISI 316
Bearing material:	SIC

Installation:

Maximum ambient temperature:	140 °F
Max pressure at stated temperature:	363 psi / 250 °F 363 psi / -4 °F
Type of connection:	PJE

Size of inlet connection:	DN 32
Size of suction port:	1 1/4 inch
Size of outlet connection:	DN 32
Size of outlet port:	1 1/4 inch
Pressure rating:	PN 50
Flange size for motor:	213TC

Electrical data:

Motor standard:	NEMA
Motor type:	132DA
IE Efficiency class:	NEMA Premium / IE3 60Hz
Rated power - P2:	7.5 HP
Power (P2) required by pump:	7.5 HP
Main frequency:	60 Hz
Rated voltage:	3 x 208-230YY/460Y V
Service factor:	1,15
Rated current:	19,5-18,1/9,09 A
Starting current:	1020-1480 %
Cos phi - power factor:	0,89-0,86
Rated speed:	3490-3515 rpm
IE efficiency:	IE3 89,5%
Motor efficiency at full load:	89.5 %
Motor efficiency at 3/4 load:	89.7 %
Motor efficiency at 1/2 load:	88.3 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F

Others:

Net weight:	152 lb
Gross weight:	170 lb
Shipping volume:	11.3 ft^3

GRUNDFOS

Company name:
Created by:
Phone:

Date: 2/21/2018

Position	Count	Description
	1	**CRN 5-20 A-P-G-E-HQQE**



Product No.: 96084853
Vertical, non-self-priming, multistage, in-line, centrifugal pump for installation in pipe systems and mounting on a foundation.

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- The shaft seal has assembly length according to EN 12756.
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The motor is a 3-phase AC motor.

Controls:

Frequency converter:	NONE

Liquid:

Pumped liquid:	Water
Liquid temperature during operation:	68 °F
Density:	62.29 lb/ft³

Technical:

Speed for pump data:	3467 rpm
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CURUS,NSF61
Curve tolerance:	ISO9906:2012 3B

Materials:

Base:	Stainless steel EN 1.4408 AISI 316
Impeller:	Stainless steel EN 1.4401 AISI 316
Bearing material:	SIC

Installation:

Maximum ambient temperature:	140 °F
Max pressure at stated temperature:	363 psi / 250 °F 363 psi / -4 °F
Type of connection:	PJE
Size of inlet connection:	DN 32

GRUNDFOS

Company name:
Created by:
Phone:

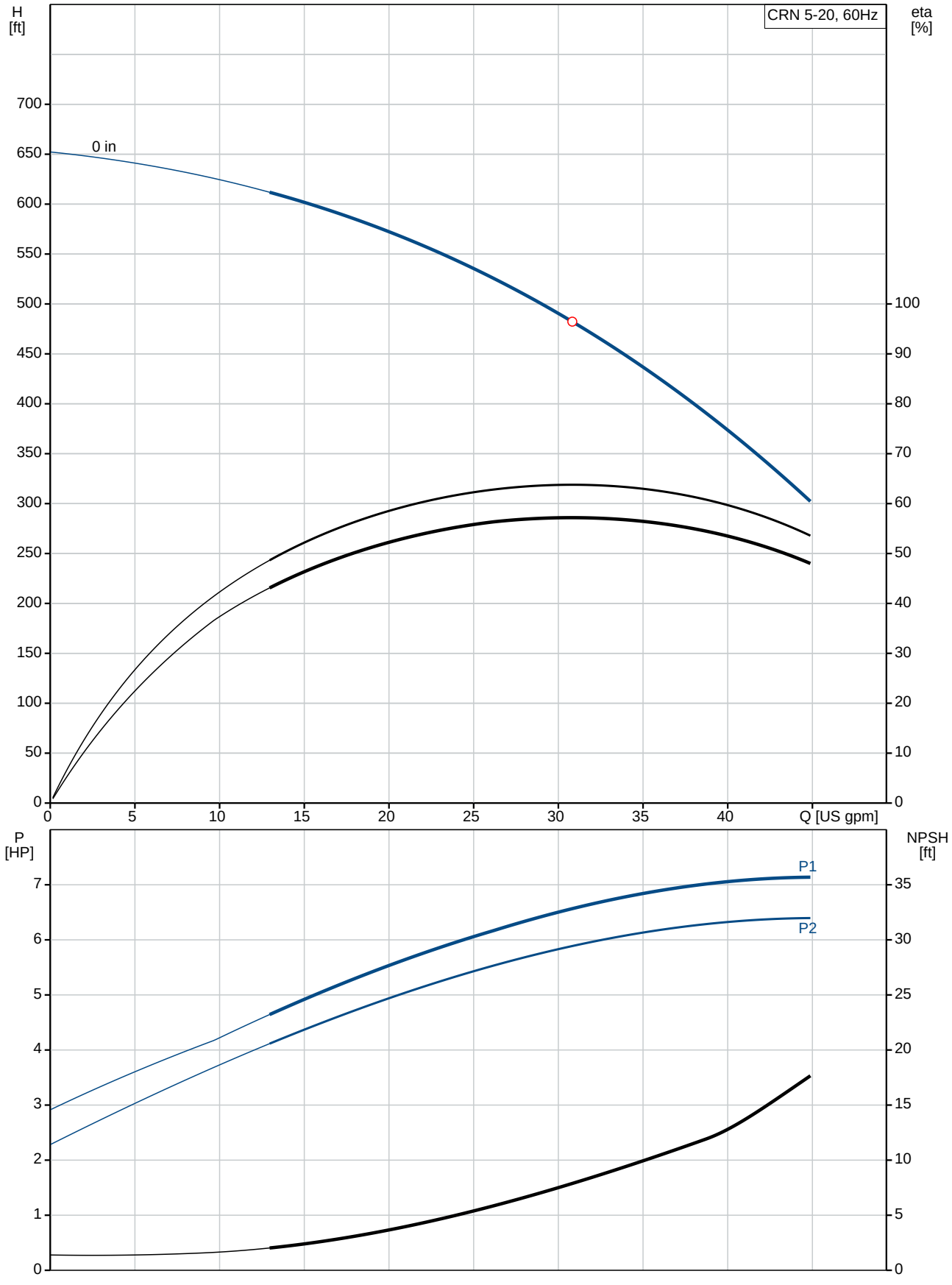
Date: 2/21/2018

Position	Count	Description	
		Size of suction port:	1 1/4 inch
		Size of outlet connection:	DN 32
		Size of outlet port:	1 1/4 inch
		Pressure rating:	PN 50
		Flange size for motor:	213TC
		Electrical data:	
		Motor standard:	NEMA
		Motor type:	132DA
		IE Efficiency class:	NEMA Premium / IE3 60Hz
		Rated power - P2:	7.5 HP
		Power (P2) required by pump:	7.5 HP
		Main frequency:	60 Hz
		Rated voltage:	3 x 208-230YY/460Y V
		Service factor:	1,15
		Rated current:	19,5-18,1/9,09 A
		Starting current:	1020-1480 %
		Cos phi - power factor:	0,89-0,86
		Rated speed:	3490-3515 rpm
		IE efficiency:	IE3 89,5%
		Motor efficiency at full load:	89.5 %
		Motor efficiency at 3/4 load:	89.7 %
		Motor efficiency at 1/2 load:	88.3 %
		Number of poles:	2
		Enclosure class (IEC 34-5):	55 Dust/Jetting
		Insulation class (IEC 85):	F
		Others:	
		Net weight:	152 lb
		Gross weight:	170 lb
		Shipping volume:	11.3 ft^3

Company name:
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Phone:

Date: 2/21/2018

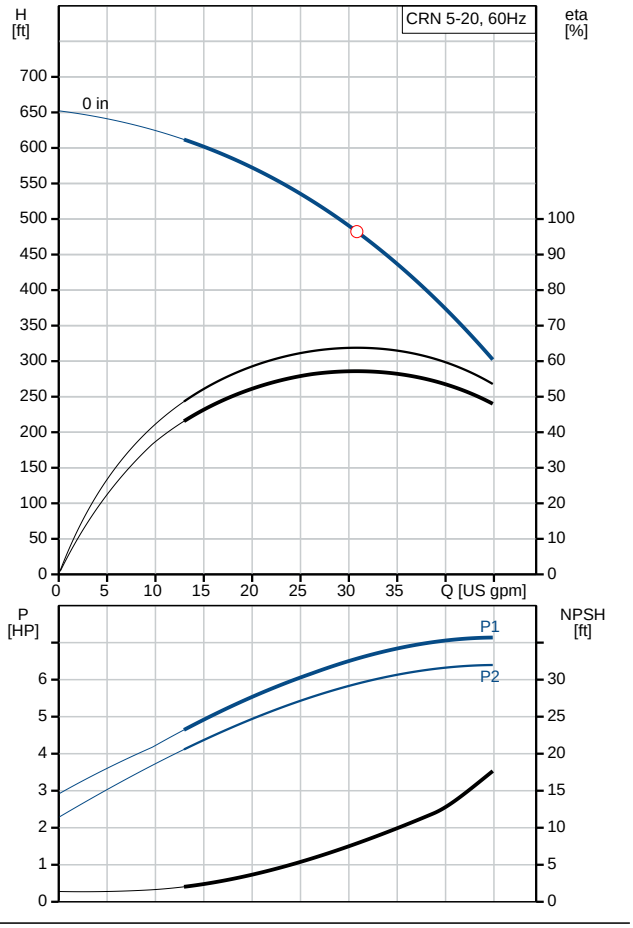
96084853 CRN 5-20 60 Hz

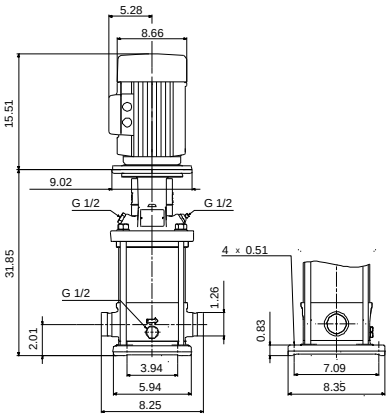


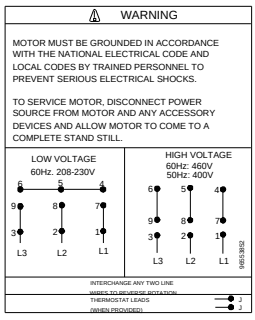
Company name:
Created by:
Phone:

Date: 2/21/2018

Description	Value
General information:	
Product name:	CRN 5-20 A-P-G-E-HQQE
Product No.:	96084853
EAN:	5700395196917
Technical:	
Speed for pump data:	3467 rpm
Stages:	20
Impellers:	20
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CURUS,NSF61
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Cooling:	TEFC
Materials:	
Base:	Stainless steel
	EN 1.4408
	AISI 316
Impeller:	Stainless steel
	EN 1.4401
	AISI 316
Material code:	G
Code for rubber:	E
Bearing material:	SIC
Installation:	
Maximum ambient temperature:	140 °F
Max pressure at stated temperature:	363 psi / 250 °F
	363 psi / -4 °F
Type of connection:	PJE
Connect code:	P
Size of inlet connection:	DN 32
Size of suction port:	1 1/4 inch
Size of outlet connection:	DN 32
Size of outlet port:	1 1/4 inch
Pressure rating:	PN 50
Flange size for motor:	213TC
Liquid:	
Pumped liquid:	Water
Liquid temperature during operation:	68 °F
Density:	62.29 lb/ft³
Electrical data:	
Motor standard:	NEMA
Motor type:	132DA
IE Efficiency class:	NEMA Premium / IE3 60Hz
Rated power - P2:	7.5 HP
Power (P2) required by pump:	7.5 HP
Main frequency:	60 Hz
Rated voltage:	3 x 208-230YY/460Y V
Service factor:	1,15
Rated current:	19,5-18,1/9,09 A
Starting current:	1020-1480 %







GRUNDFOS

Company name:
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Phone:

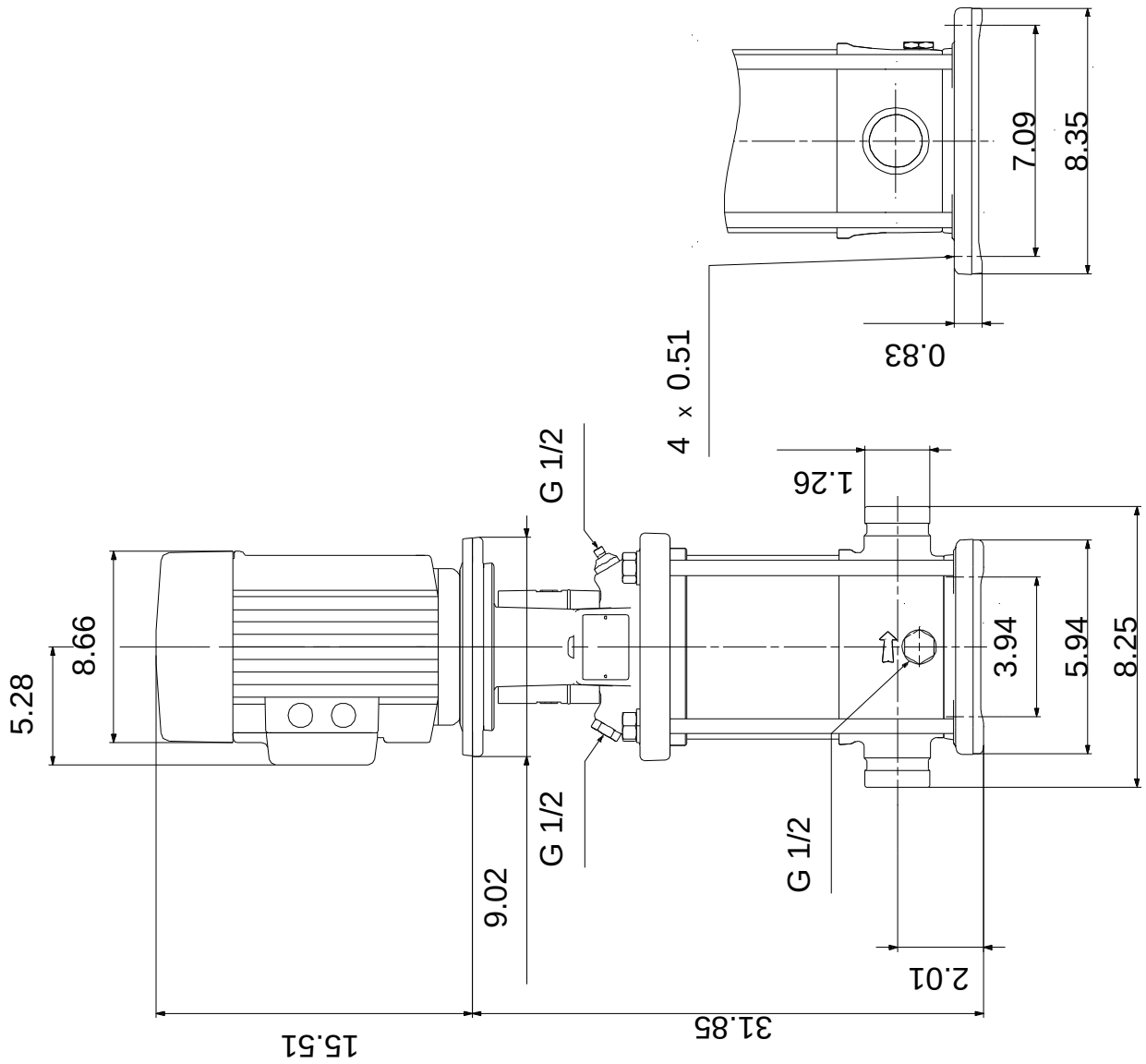
Date: 2/21/2018

Description	Value
Load current:	22,4-20,8/10,4 A
Cos phi - power factor:	0,89-0,86
Rated speed:	3490-3515 rpm
IE efficiency:	IE3 89,5%
Motor efficiency at full load:	89.5 %
Motor efficiency at 3/4 load:	89.7 %
Motor efficiency at 1/2 load:	88.3 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protection:	PTC
Motor Number:	85904392
Controls:	
Frequency converter:	NONE
Others:	
Net weight:	152 lb
Gross weight:	170 lb
Shipping volume:	11.3 ft^3

Company name:
Created by:
Phone:

Date: 2/21/2018

96084853 CRN 5-20 60 Hz



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

Company name:
Created by:
Phone:

Date: 2/21/2018

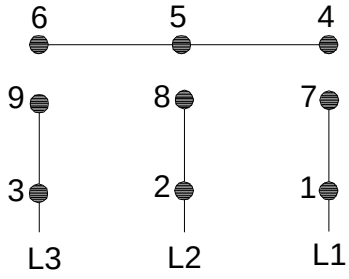
96084853 CRN 5-20 60 Hz

WARNING

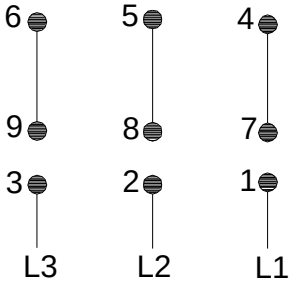
MOTOR MUST BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES BY TRAINED PERSONNEL TO PREVENT SERIOUS ELECTRICAL SHOCKS.

TO SERVICE MOTOR, DISCONNECT POWER SOURCE FROM MOTOR AND ANY ACCESSORY DEVICES AND ALLOW MOTOR TO COME TO A COMPLETE STAND STILL.

LOW VOLTAGE
60Hz. 208-230V



HIGH VOLTAGE
60Hz: 460V
50Hz: 400V



96553852

INTERCHANGE ANY TWO LINE
WIRES TO REVERSE ROTATION

THERMOSTAT LEADS (WHEN PROVIDED) — J — J

All units are [mm] unless otherwise presented.

Company name:
Created by:
Phone:

Date: 2/21/2018

Order Data:

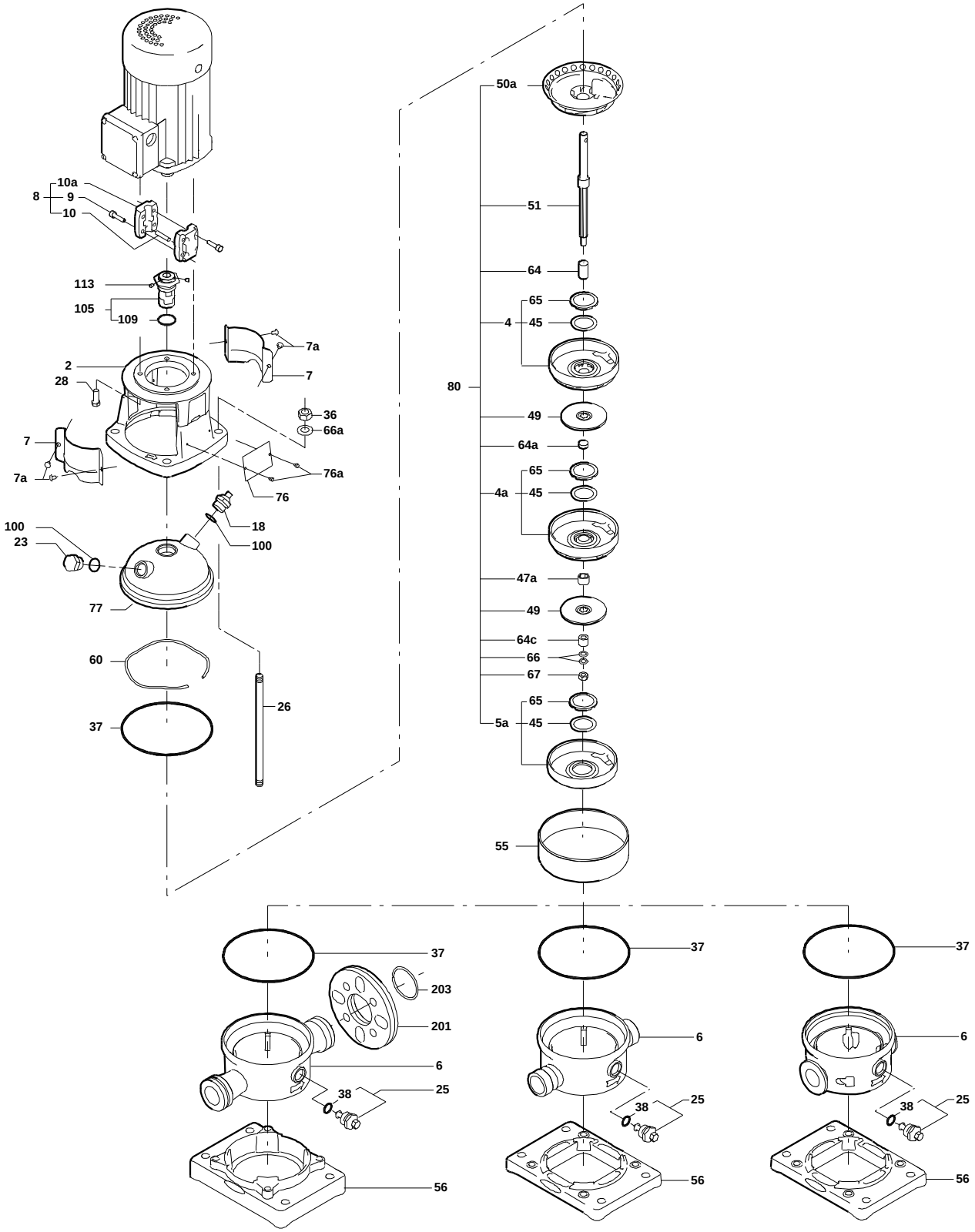
Product name: CRN 5-20 A-P-G-E-HQQE
Amount: 1
Product No.: 96084853

Total: Price on request

Company name:
Created by:
Phone:

Date: 2/21/2018

Exploded view (TM02 0212 4100)



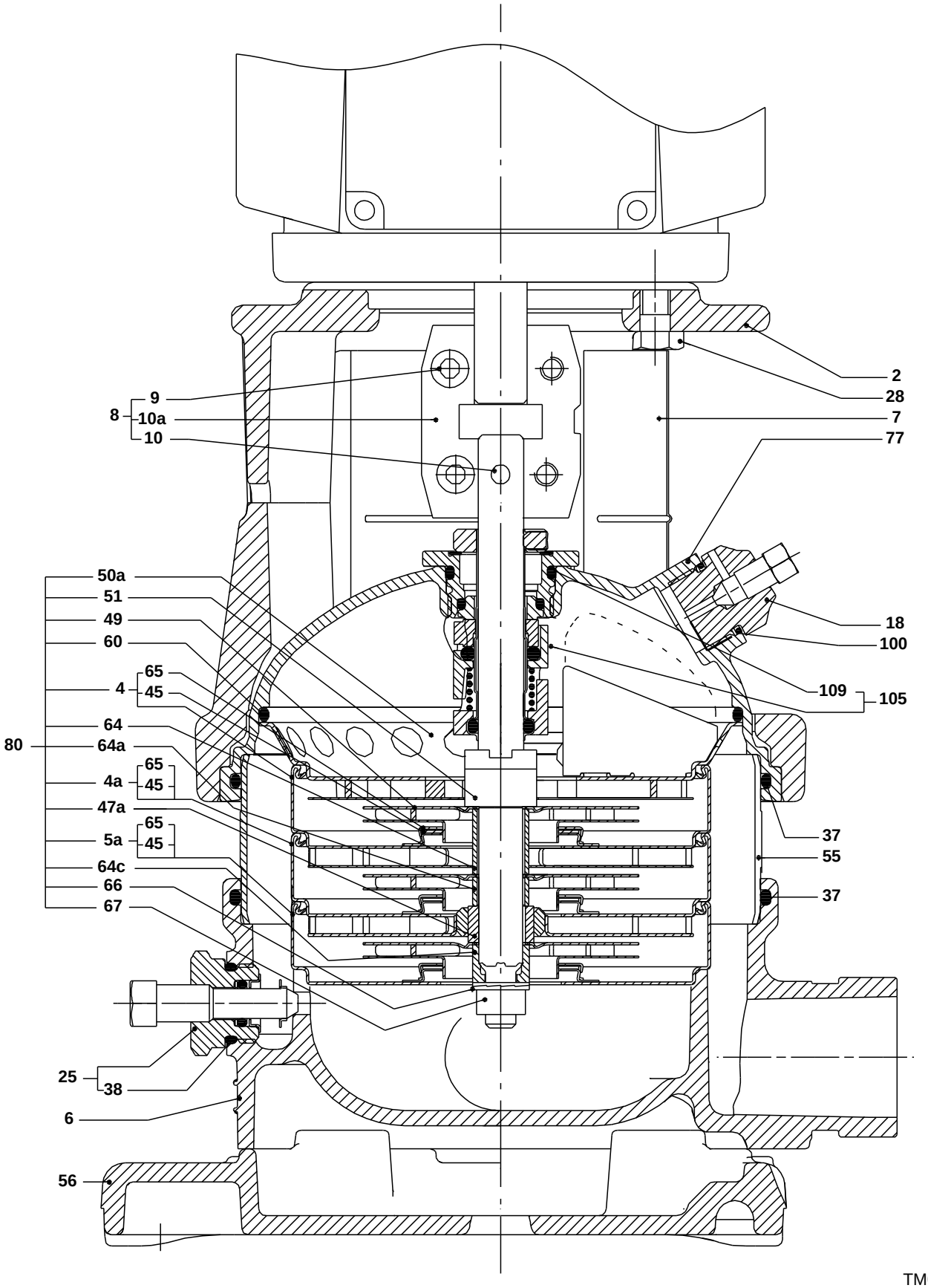
TM02

GRUNDFOS

Company name:
Created by:
Phone:

Date: 2/21/2018

Sectional drawing (TM02 0215 4100)

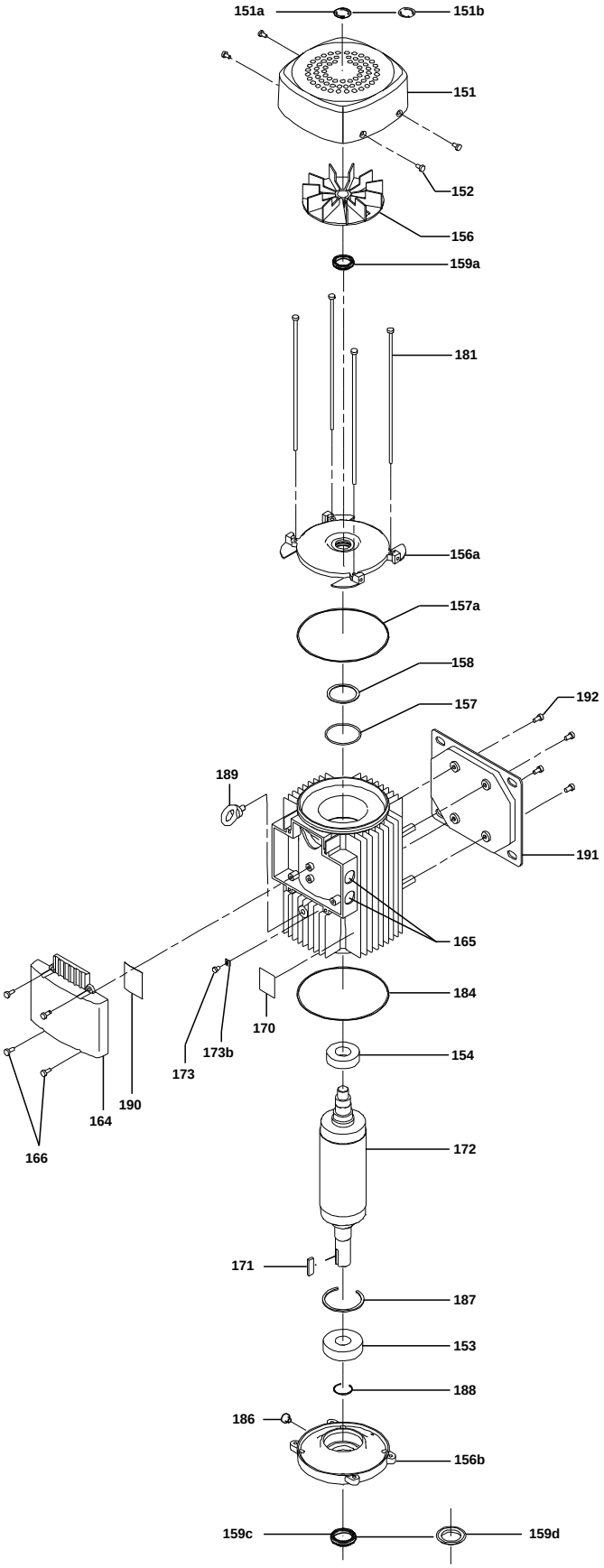


GRUNDFOS

Company name:
Created by:
Phone:

Date: 2/21/2018

Exploded view (tm030553)

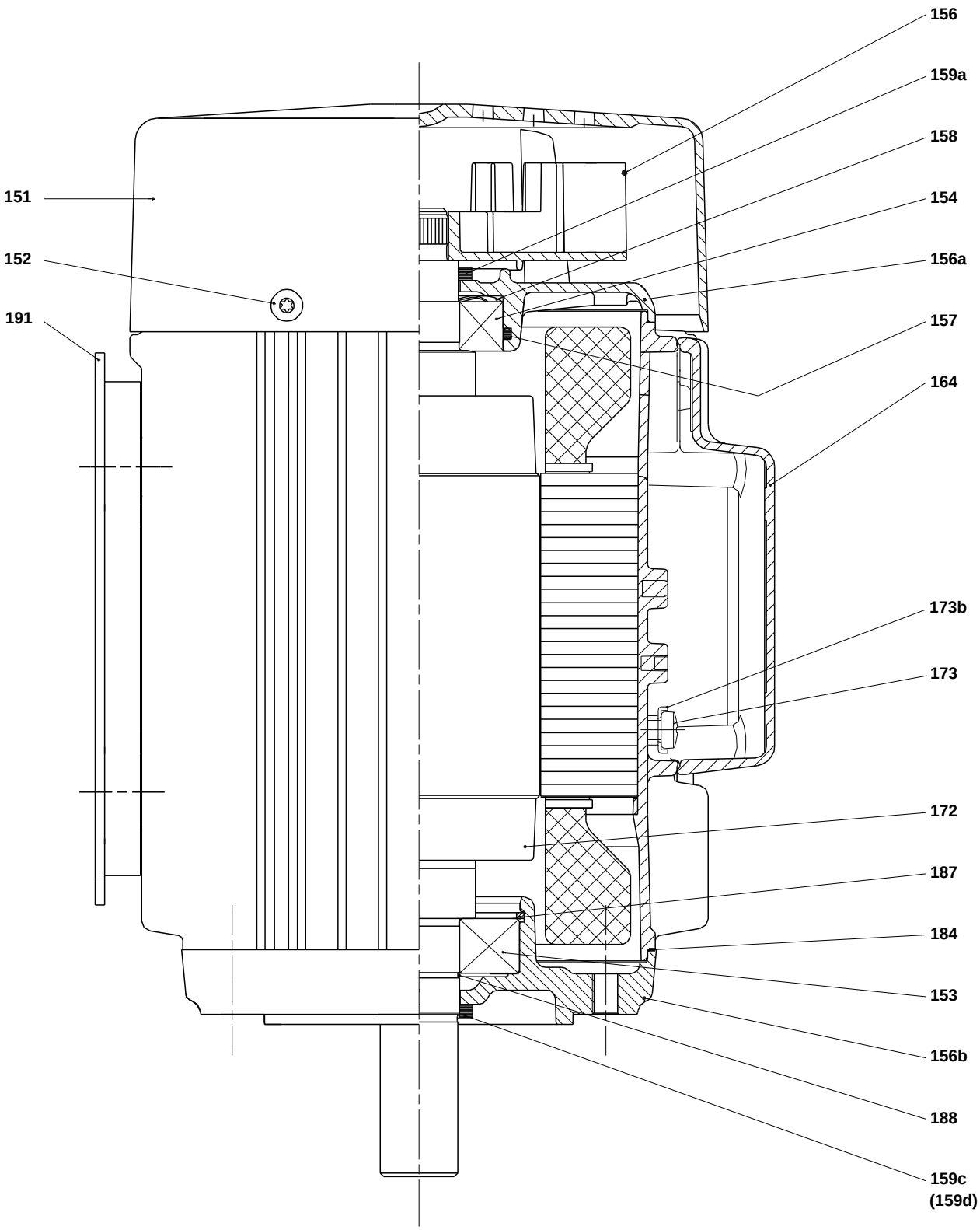


TM030553)

Company name:
Created by:
Phone:

Date: 2/21/2018

Sectional drawing (TM031465)



TM031465)

GRUNDFOS

Company name:
Created by:
Phone:

Date: 2/21/2018

Parts list CRN 5-20, Prod number 96084853
Valid from 1.7.2011 (1127)

	Position	Description	Annotation	Classification data	Part No.	Count	Unit
+		Motor				1	pcs
		Motor				1	pcs
-		Base cpl.				1	pcs
	6	Base				1	
	25	Plug				2	
	56	Base plate				1	
-		Sealing parts				1	pcs
-	25	Drain plug w/bypass valve				1	
	38	O-ring		Diameter: 16,3			
				Material type: EPDM			
				Thickness: 2,4			
	37	O-ring				2	
	100	O-ring		Diameter: 16,3		2	
				Material type: EPDM			
				Thickness: 2,4			
-	2	Pump head cpl.				1	pcs
	1	Adapter flange				1	
	2	Motor stool				1	
	7	Coupling guard				2	
	7a	Thread cutting screw				4	
-	18	Air vent screw				1	
		Plug					
		Spindle					
-	25	Drain plug				1	
	23	Pipe plug					
	25	Drain plug					
	28	Hex head bolt				4	
	60	Formed wire spring				1	
	77	Pump cover				1	
-	8	Coupling				1	pcs
	9	Hex socket head cap screw		Designation: DIN 912		4	
				Length: 25			
				Thread: M10			
	10	Shaft pin		Diameter: 5		1	
				Length: 26			
	10a	Coupling				1	
	26	Staybolt		Length: 637		4	pcs
				Thread: M12			
	36	Nut		Thread: M12		4	pcs
	55	Outer sleeve				1	pcs
	66a	Washer		Designation: DIN 125 A2		4	pcs
				Inner diameter: 13			
				Outer diameter: 24			
				Thickness: 2,5			
-	80	Chamber stack				1	pcs
		Spacing pipe		Length: 2.00		1	
-		Chamber w. bearing cpl.				4	
		Chamber					
	45	Neck ring					
	65	Neck ring retainer					
-	4	Chamber cpl.				15	
		Chamber					
	45	Neck ring					

GRUNDFOS

Company name:
Created by:
Phone:

Date: 2/21/2018

	Position	Description	Annotation	Classification data	Part No.	Count	Unit
	65	Neck ring retainer					
-	5a	Chamber cpl.				1	
		Chamber					
	45	Neck ring					
	65	Neck ring retainer					
	36	Lock nut		Thread: M8		1	
	47a	Bearing ring, rotating				4	
+	49	Impeller cpl.				20	
-	50a	Guide vane				1	
		Guide vane					
		Plate					
	50b	Top plate					
	51	Shaft, spline, cpl.				1	
	64a	Spacing pipe		Inner diameter: 12,85		1	
				Outer diameter: 15,85			
				Length: 4,50			
	64a	Spacing pipe		Length: 13.00		4	
	64c	Clamp, splined		Inner diameter: 8,5		1	
				Outer diameter: 15			
	66	Wedge lock washer				1	
	69	Spacing pipe		Length: 26.0		15	
-	105	Shaft seal		Material type: HQQE	1		pcs
		O-ring				1	
		O-ring				1	
		Seal driver, upper				1	
		Seal driver, lower				1	
		Spacer ring				1	
		Pipe				1	
		Plug				1	
		Plug				1	
		Compression spring				1	
		Socket set screw				1	
	102	O-ring		Diameter: 22,00		1	
				Material type: EPDM			
				Thickness: 2,75			
	103	Seal ring, stationary				1	
	105	Seal ring, rotating				1	
	107	O-ring				1	
	113	Driver				1	