

## 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

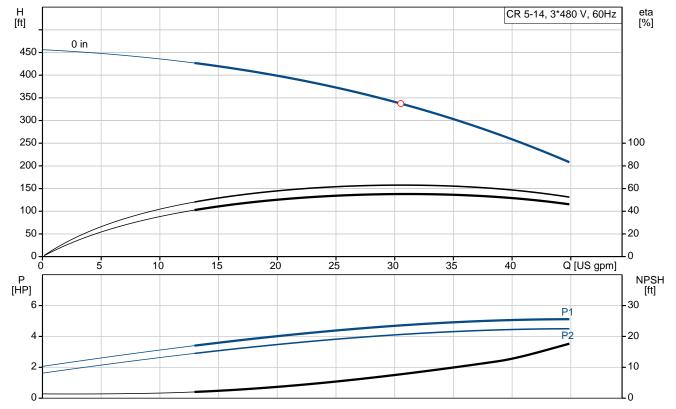
#### CR 5-14

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)(AISI 304)

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

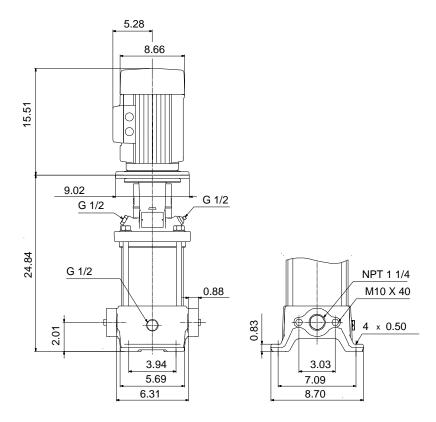
Pump Data	
Max pressure at stated temperature:	232 psi / 250 °F
Maximum ambient temperature:	140 °F
Approvals:	CURUS,NSF61
Shaft seal:	HQQE
Product number:	96084121

]	Motor Data				
	Rated power - P2:	5.5 HP			
	Rated voltage:	208-230YY/460Y V			
	Main frequency:	60 Hz			
	Enclosure class:	55 Dust/Jetting			
	Insulation class:	F			
	Motor protection:	PTC			
	Motor type:	112CA			
	Motor_efficiency:	88.5 %			





## **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



**Date:** 2/20/2018

### **Tender Text**



Product No.: 96084121 CR 5-14 A-B-A-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 and intermediate chambers are made of
- The shaft seal has assembly length

according to EN 12756.

- Power transmission is via cast iron split coupling.

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: 3461 rpm
Pump orientation: Vertical
Shaft seal arrangement: Single
Code for shaft seal: HQQE

Approvals on nameplate: CURUS,NSF61 Curve tolerance: ISO9906:2012 3B

Materials:

Impeller:

Base: Cast iron

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

Stainless steel

EN 1.4301 AISI 304

Bearing material: SIC

Installation:

Maximum ambient temperature: 140 °F

Max pressure at stated temperature: 232 psi / 250  $^{\circ}\text{F}$ 

232 psi / -4 °F

Type of connection: Oval / NPT(F)
Size of suction port: 1 1/4 inch
Size of outlet port: 1 1/4 inch
Pressure rating: PN 16



**Date:** 2/20/2018

Flange size for motor: 182TC

**Electrical data:** 

Motor standard: NEMA Motor type: 112CA

IE Efficiency class: NEMA Premium / IE3 60Hz

Rated power - P2: 5.5 HP Power (P2) required by pump: 5.5 HP Main frequency: 60 Hz

Rated voltage: 3 x 208-230YY/460Y V

Service factor: 1,15

Rated current: 14,1-13,1/7,29 A Starting current: 1000-1470 % Cos phi - power factor: 0,89-0,86 Rated speed: 3525-3540 rpm IE efficiency: IE3 88,5% Motor efficiency at full load: 88.5 % Motor efficiency at 3/4 load: 88.6 % Motor efficiency at 1/2 load: 85.2 % Number of poles: 2

Enclosure class (IEC 34-5): 55 Dust/Jetting

Insulation class (IEC 85): F

Others:

Net weight: 139 lb Gross weight: 157 lb Shipping volume: 10.1 ft³



**Date:** 2/20/2018

Position | Count | Description

1 CR 5-14 A-B-A-E-HQQE



Product No.: 96084121

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
- The shaft seal has assembly length
- according to EN 12756.
- Power transmission is via cast iron split coupling.

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: 3461 rpm
Pump orientation: Vertical
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Materials:

Impeller:

Base: Cast iron

EN 1561 EN-GJL-200

ASTM A48-25B Stainless steel

EN 1.4301 AISI 304

SIC

Installation:

Bearing material:

Maximum ambient temperature: 140 °F

Max pressure at stated temperature: 232 psi / 250 °F

232 psi / -4 °F

Type of connection: Oval / NPT(F)
Size of suction port: 1 1/4 inch
Size of outlet port: 1 1/4 inch
Pressure rating: PN 16
Flange size for motor: 182TC



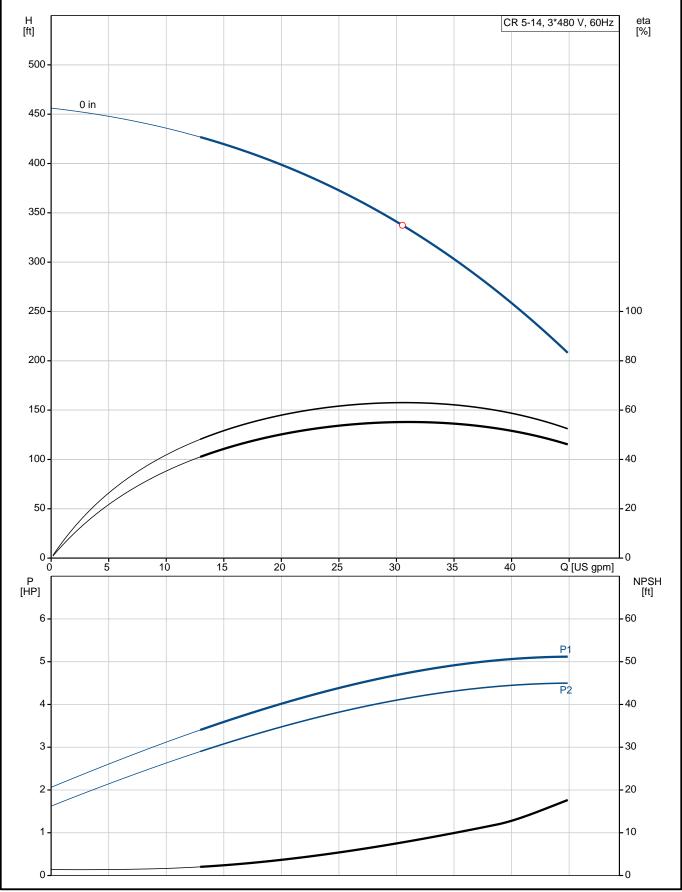
**Date:** 2/20/2018

			Date:	2/20/2018
Position	ount Description	Position   Count		
Position	Electrical data: Motor standard: Motor type: IE Efficiency class: Rated power - P2: Power (P2) required by pump: Main frequency: Rated voltage: Service factor: Rated current: Starting current: Cos phi - power factor: Rated speed: IE efficiency: Motor efficiency at full load: Motor efficiency at 1/2 load: Number of poles: Enclosure class (IEC 34-5): Insulation class (IEC 85):  Others: Net weight: Gross weight: Shipping volume:	Position Count	NEMA 112CA NEMA Premium / IE3 60Hz 5.5 HP 5.5 HP 60 Hz 3 x 208-230YY/460Y V 1,15 14,1-13,1/7,29 A 1000-1470 % 0,89-0,86 3525-3540 rpm IE3 88,5% 88.6 % 85.2 % 2 55 Dust/Jetting F  139 lb 157 lb 10.1 ft³	



**Date:** 2/20/2018

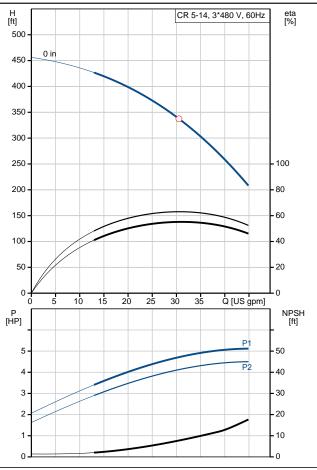
# 96084121 CR 5-14 60 Hz

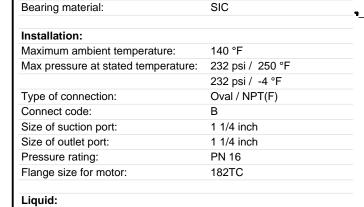


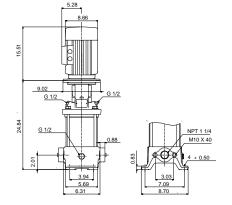


**Date:** 2/20/2018

General information:           Product name:         CR 5-14 A-B-A-E-HQQE           Product No.:         96084121           EAN:         5700395189599           Technical:           Speed for pump data:         3461 rpm           Stages:         14           Impellers:         14           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:         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	Description	Value
Product No.:         96084121           EAN:         5700395189599           Technical:           Speed for pump data:         3461 rpm           Stages:         14           Impellers:         14           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:         Cast iron           EN 1561 EN-GJL-200         ASTM A48-25B           Impeller:         Stainless steel           EN 1.4301         AISI 304           Material code:         A	General information:	
EAN:         5700395189599           Technical:           Speed for pump data:         3461 rpm           Stages:         14           Impellers:         14           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:         Cast iron           EN 1561 EN-GJL-200         ASTM A48-25B           Impeller:         Stainless steel           EN 1.4301         AISI 304           Material code:         A	Product name:	CR 5-14 A-B-A-E-HQQE
Technical:  Speed for pump data:  Speed for pump data:  Stages:  Impellers:  Low NPSH:  Pump orientation:  Shaft seal arrangement:  Code for shaft seal:  Approvals on nameplate:  Curve tolerance:  ISO9906:2012 3B  Pump version:  A  Model:  A  Cooling:  TEFC  Materials:  Base:  Cast iron  EN 1561 EN-GJL-200  ASTM A48-25B  Impeller:  Stainless steel  EN 1.4301  AISI 304  Material code:  A  Material code:  A  A  A  A  A  Material code:  A  Material code:  A  A  A  A  A  A  A  A  A  A  A  A  A	Product No.:	96084121
Speed for pump data:         3461 rpm           Stages:         14           Impellers:         14           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:         Cast iron           EN 1561 EN-GJL-200         ASTM A48-25B           Impeller:         Stainless steel           EN 1.4301         AISI 304           Material code:         A	EAN:	5700395189599
Stages:         14           Impellers:         14           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:         Cast iron           EN 1561 EN-GJL-200         ASTM A48-25B           Impeller:         Stainless steel           EN 1.4301         AISI 304           Material code:         A	Technical:	
Impellers:	Speed for pump data:	3461 rpm
Low NPSH: Pump orientation: Vertical Shaft seal arrangement: Single Code for shaft seal: Approvals on nameplate: Curve tolerance: ISO9906:2012 3B Pump version: A Model: A Cooling: TEFC  Materials: Base: Cast iron EN 1561 EN-GJL-200 ASTM A48-25B Impeller: Stainless steel EN 1.4301 AISI 304 Material code: A	Stages:	14
Pump orientation:  Shaft seal arrangement:  Code for shaft seal:  Approvals on nameplate:  Curve tolerance:  ISO9906:2012 3B  Pump version:  A  Model:  Cooling:  TEFC  Materials:  Base:  Cast iron  EN 1561 EN-GJL-200  ASTM A48-25B  Impeller:  Stainless steel  EN 1.4301  AISI 304  Material code:  A Vertical  Vertical  Single  CURUS,NSF61  LSO9906:2012 3B  A  CORUMN AA  CORUMN AA  A AA  A AA  A AA  AA  A AA	Impellers:	14
Shaft seal arrangement:  Code for shaft seal:  Approvals on nameplate:  Curve tolerance:  Pump version:  Model:  Cooling:  Materials:  Base:  Cast iron  EN 1561 EN-GJL-200  ASTM A48-25B  Impeller:  Stainless steel  EN 1.4301  AISI 304  Material code:  A  Single  CURUS,NSF61  CURUS,NSF61  CURUS,NSF61  CURUS,NSF61  CURUS,NSF61  COURUS,NSF61  COURUS,NSF61  CURUS,NSF61  CURUS,NSF61  COURUS,NSF61  CURUS,NSF61  COURUS,NSF61  A  Material code:	Low NPSH:	N
Code for shaft seal: HQQE Approvals on nameplate: CURUS,NSF61 Curve tolerance: ISO9906:2012 3B Pump version: A Model: A Cooling: TEFC  Materials: Base: Cast iron EN 1561 EN-GJL-200 ASTM A48-25B Impeller: Stainless steel EN 1.4301 AISI 304 Material code: A	Pump orientation:	Vertical
Approvals on nameplate:         CURUS,NSF61           Curve tolerance:         ISO9906:2012 3B           Pump version:         A           Model:         A           Cooling:         TEFC           Materials:           Base:         Cast iron           EN 1561 EN-GJL-200         ASTM A48-25B           Impeller:         Stainless steel           EN 1.4301         AISI 304           Material code:         A	Shaft seal arrangement:	Single
Curve tolerance:         ISO9906:2012 3B           Pump version:         A           Model:         A           Cooling:         TEFC           Materials:           Base:         Cast iron           EN 1561 EN-GJL-200           ASTM A48-25B           Impeller:         Stainless steel           EN 1.4301         AISI 304           Material code:         A	Code for shaft seal:	HQQE
Pump version:         A           Model:         A           Cooling:         TEFC           Materials:           Base:         Cast iron           EN 1561 EN-GJL-200           ASTM A48-25B           Impeller:         Stainless steel           EN 1.4301           AISI 304           Material code:         A	Approvals on nameplate:	CURUS,NSF61
Model:         A           Cooling:         TEFC           Materials:           Base:         Cast iron           EN 1561 EN-GJL-200           ASTM A48-25B           Impeller:         Stainless steel           EN 1.4301         AISI 304           Material code:         A	Curve tolerance:	ISO9906:2012 3B
Materials:         Cast iron           Base:         Cast iron           EN 1561 EN-GJL-200           ASTM A48-25B           Impeller:         Stainless steel           EN 1.4301           AISI 304           Material code:         A	Pump version:	Α
Materials:           Base:         Cast iron           EN 1561 EN-GJL-200           ASTM A48-25B           Impeller:         Stainless steel           EN 1.4301           AISI 304           Material code:         A	Model:	Α
Base: Cast iron	Cooling:	TEFC
EN 1561 EN-GJL-200	Materials:	
ASTM A48-25B  Impeller: Stainless steel	Base:	Cast iron
Impeller: Stainless steel EN 1.4301 AISI 304 Material code: A		EN 1561 EN-GJL-200
EN 1.4301 AISI 304 Material code: A		ASTM A48-25B
AISI 304 Material code: A	Impeller:	Stainless steel
Material code: A		EN 1.4301
		AISI 304
Code for rubber:	Material code:	Α
	Code for rubber:	E

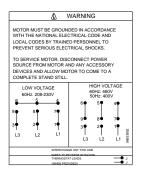






Pumped liquid:	Water
Liquid temperature during operation:	68 °F
Density:	62.29 lb/ft <sup>3</sup>

Electrical data:	
Motor standard:	NEMA
Motor type:	112CA
IE Efficiency class:	NEMA Premium / IE3 60Hz
Rated power - P2:	5.5 HP
Power (P2) required by pump:	5.5 HP
Main frequency:	60 Hz
Rated voltage:	3 x 208-230YY/460Y V
Service factor:	1,15
Rated current:	14,1-13,1/7,29 A
Starting current:	1000-1470 %
Load current:	16,2-15,0/8,40 A
Cos phi - power factor:	0,89-0,86





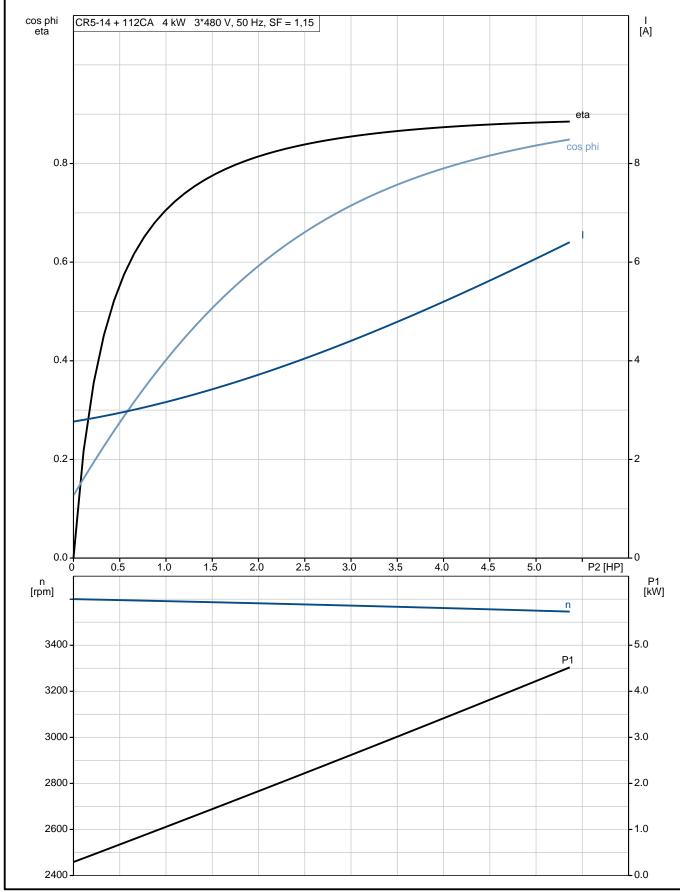
**Date:** 2/20/2018

Description	Value
Rated speed:	3525-3540 rpm
IE efficiency:	IE3 88,5%
Motor efficiency at full load:	88.5 %
Motor efficiency at 3/4 load:	88.6 %
Motor efficiency at 1/2 load:	85.2 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protection:	PTC
Motor Number:	85904389
Controls:	
Frequency converter:	NONE
Others:	
Net weight:	139 lb
Gross weight:	157 lb
Shipping volume:	10.1 ft <sup>3</sup>



**Date:** 2/20/2018

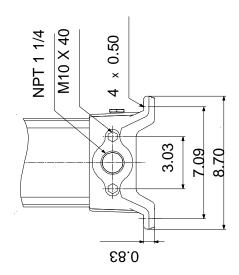
# 96084121 CR 5-14 60 Hz

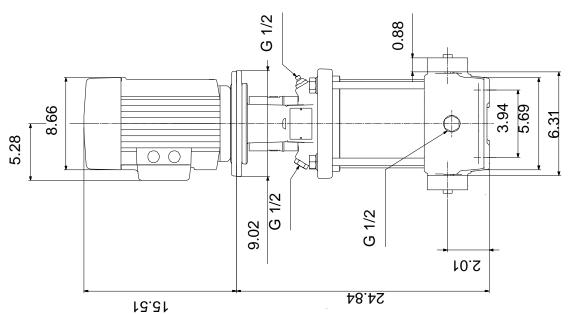




Date: 2/20/2018

# 96084121 CR 5-14 60 Hz





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



**Date:** 2/20/2018

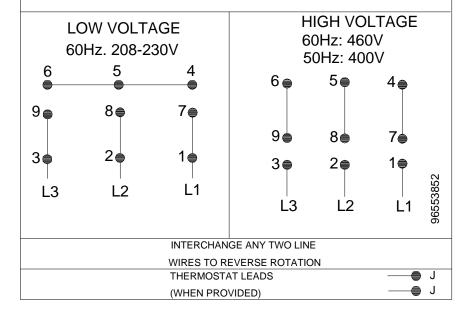
96084121 CR 5-14 60 Hz

#### $\bigvee_{i=1}^{n}$

#### 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.



All units are [mm] unless otherwise presented.



**Date:** 2/20/2018

**Order Data:** 

Product name: CR 5-14 A-B-A-E-HQQE

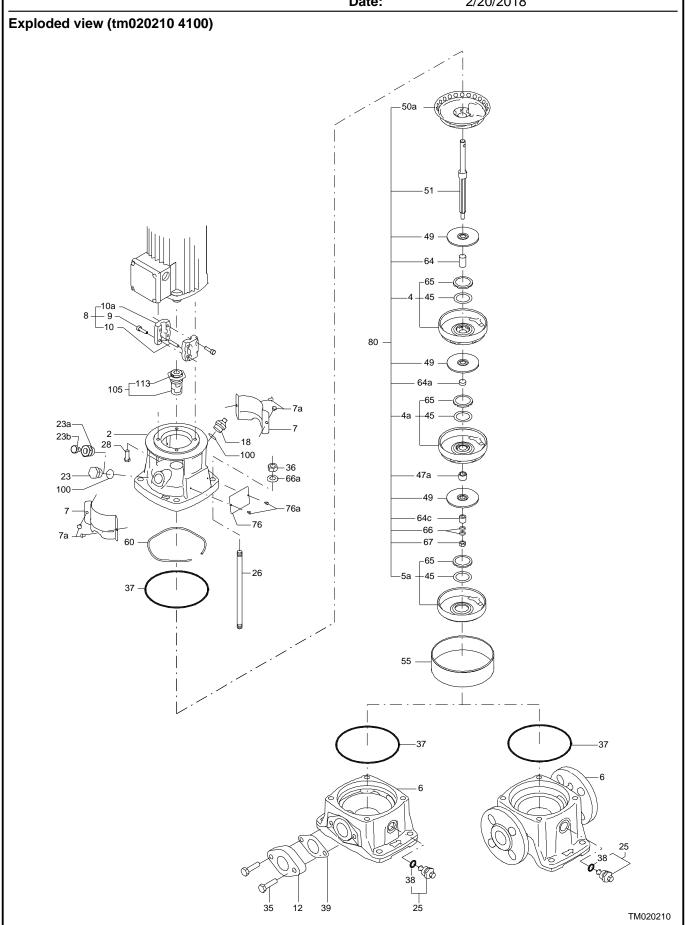
Amount: 1

Product No.: 96084121

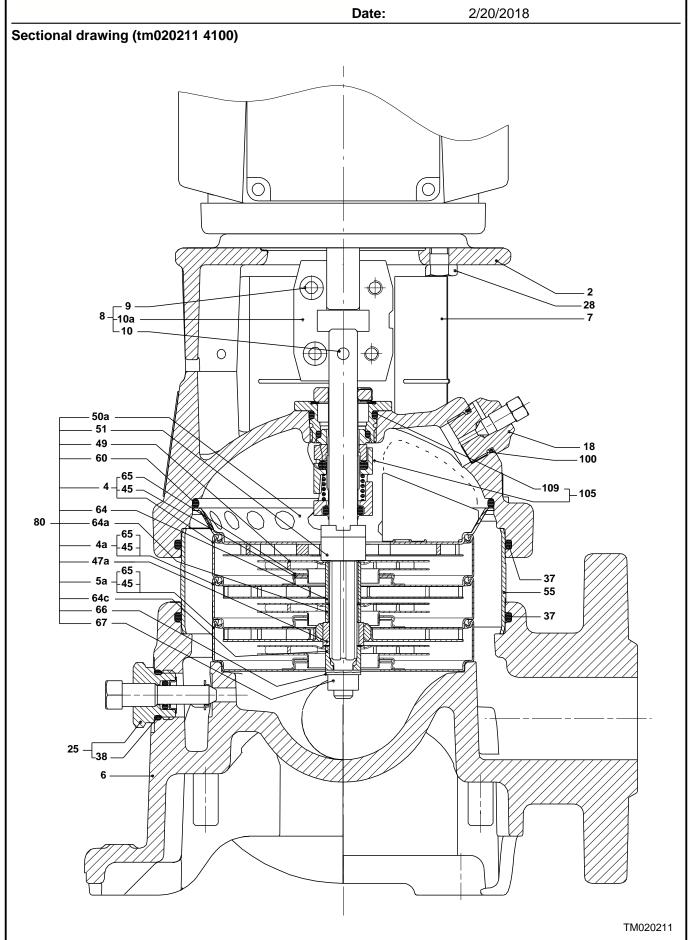
Total: Price on request



Date: 2/20/2018



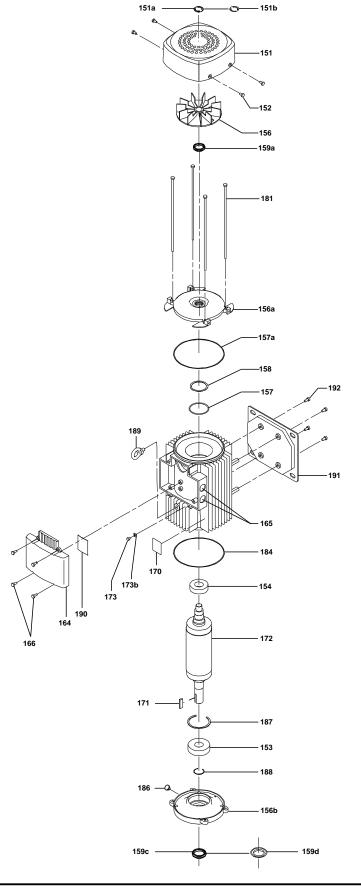






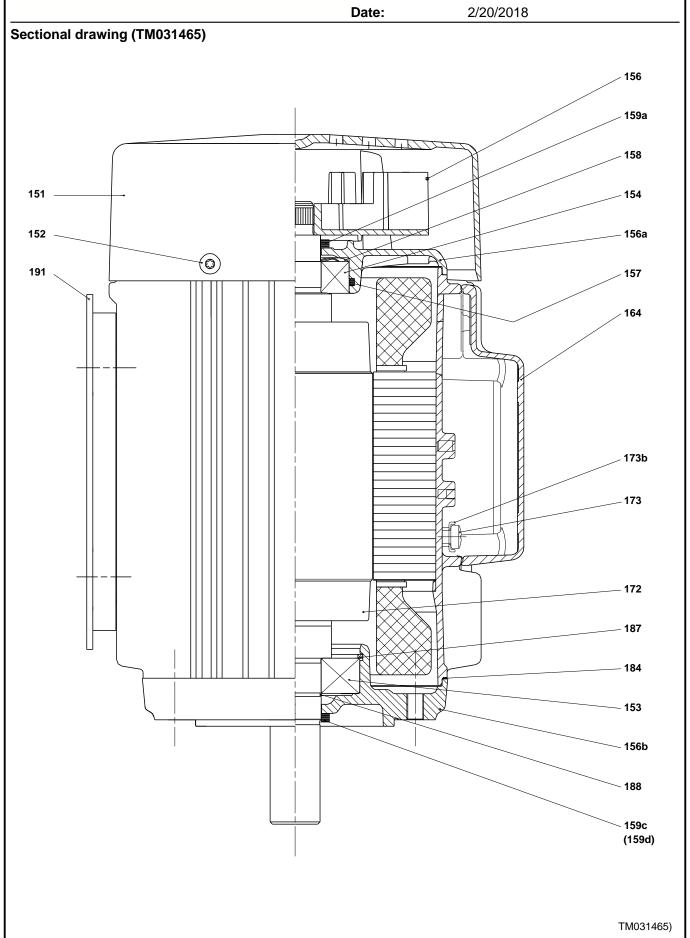
**Date:** 2/20/2018

Exploded view (tm030553)



TM030553)

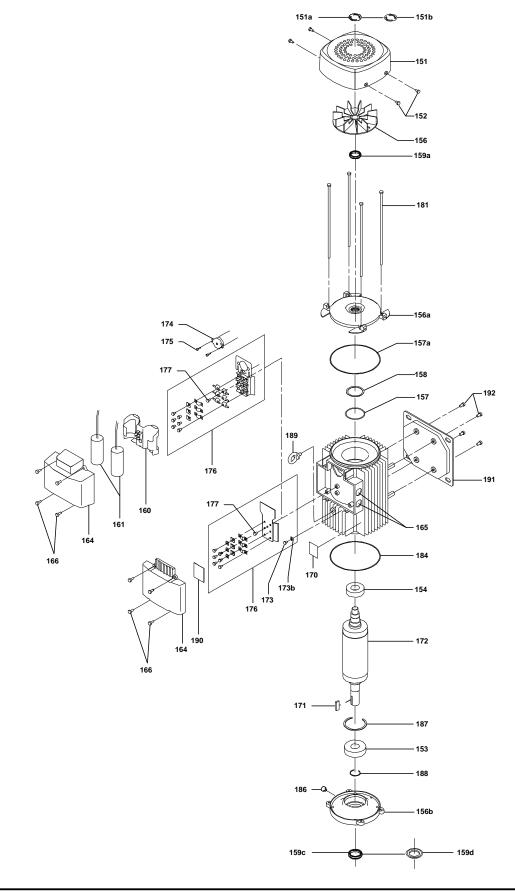






**Date:** 2/20/2018

**Exploded view (tm029184 0505)** 



TM029184



Date: 2/20/2018 Sectional drawing (tm029178 2004) 156 159a 151 -152 156a  $( \bigcirc )$ 191 - 172 187 184 - 153 - 156b **- 188** - 159c (159d) TM029178



**Date:** 2/20/2018

# Parts list CR 5-14, Prod number 96084121 Valid from 1.7.2011 (1127)

	Position	•	Annotation	Classification data	Part No.		unt	
+		Motor				1		pcs
+		Motor				1		pcs
-		Base cpl.				1		pcs
	6	Base					1	
	12	Flange					2	
	35	Hex head screw		Length: 40			4	
				Thread: M10				
	39	Gasket					2	
-		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
	2	Pump head					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 cap screw		Length: 25			4	
		Hox Hoad cap colon		Thread: UNC 1/2"			•	
	60	Formed wire spring		11110000. 0110 1/2			1	
_	8	Coupling cpl.				1	•	pcs
	9	Hex socket head cap screw		Designation: DIN 912	1	-	4	Poo
	•	Tiex societ fledd dap solew		Length: 25	•		_	
				Thread: M8				
	10	Shaft pin		Diameter: 5			1	
	10	Grian pin		Length: 26				
	10a	Coupling half		Lerigui. 20			2	
	26	Staybolt		Length: 400		4	_	pcs
	20	Clayboil		Thread: M12		-		pus
	36a	Washer		Designation: DIN 125 A		4		ncc
	30a	wasner		Inner diameter: 13		4		pcs
				Outer diameter: 24				
	EE	Outer alegae		Thickness: 2,5		1		
	55	Outer sleeve		Thread, MAC		1		pcs
	66a	Nut		Thread: M12		4		pcs
-	80	Chamber stack		Lawath, 0.00		1	,	pcs
		Spacing pipe		Length: 2.00			1	
-		Guide vane cpl.					1	
		Guide vane						
		Plate						
	50b	Top plate						
-	4	Chamber cpl.					10	
		Chamber						



**Date:** 2/20/2018

Position	Description	Annotation	Classification data	Part No.	Count	Unit
	Retainer for seal ring					
	Guide vane					
	Plate					
	Vane					
45	Neck ring					
65	Retainer					
4a	Chamber w. bearing cpl.				3	
	Chamber					
	Retainer for seal ring					
	Guide vane					
	Retainer for bearing					
	Bearing bush					
	Vane					
45	Neck ring					
65	Retainer					
5a	Chamber cpl.				1	
	Chamber					
45	Neck ring					
65	Retainer					
36	Lock nut		Thread: M8		1	
47a	Bearing ring, rotating				3	
49	Impeller cpl.				14	
51	Shaft, spline, cpl.				1	
64a	Spacing pipe		Inner diameter: 12,85	5	1	
			Outer diameter: 15,85			
			Length: 4,50			
64a	Spacing pipe		Length: 13.00		3	
64c	Clamp, splined		Inner diameter: 8,5		1	
			Outer diameter: 15			
66	Wedge lock washer				1	
69	Spacing pipe		Length: 26.0		10	
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	
400	Socket set screw		B:		1	
102	O-ring		Diameter: 22,00		1	
			Material type: EPDM			
400	On all winners of the		Thickness: 2,75			
103	Seal ring, stationary				1	
105	Seal ring, rotating				1	
107	O-ring				1	
113	Driver				1	