

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

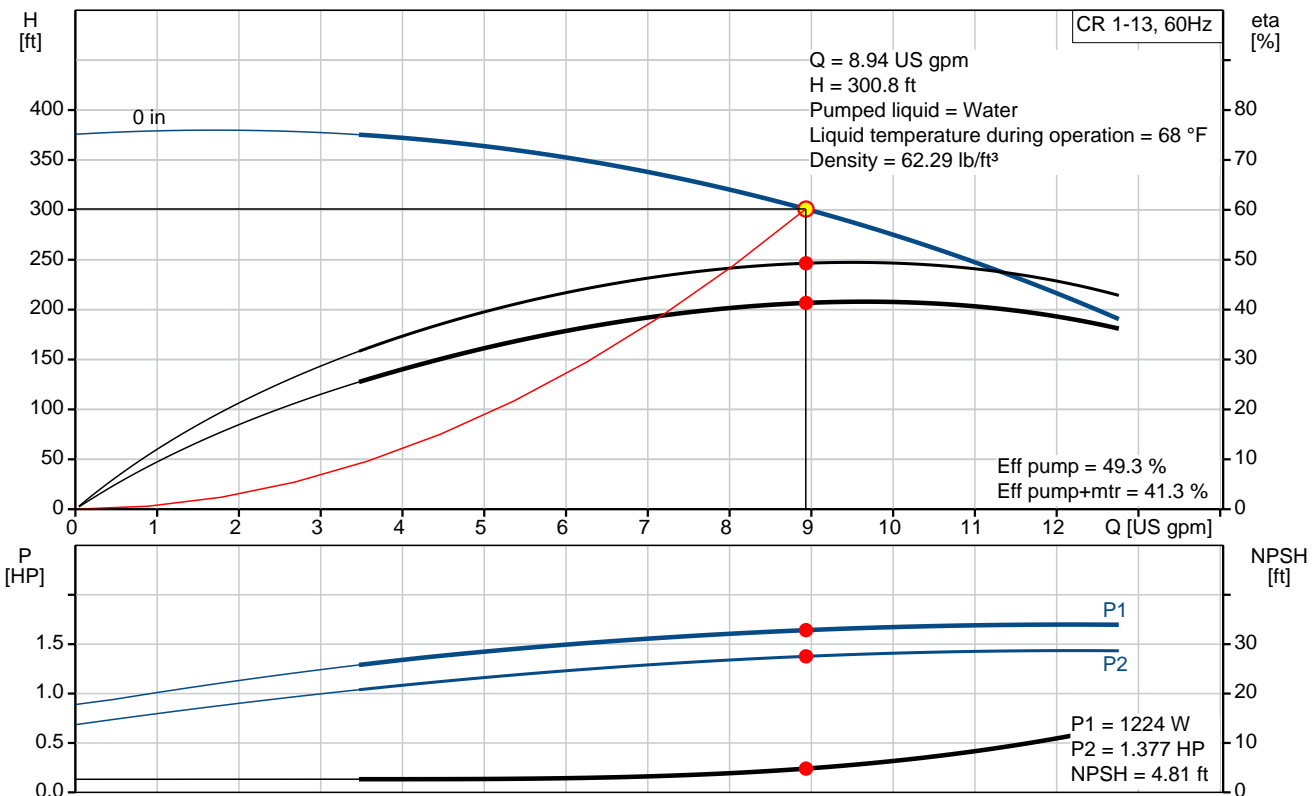
**CR 1-13**

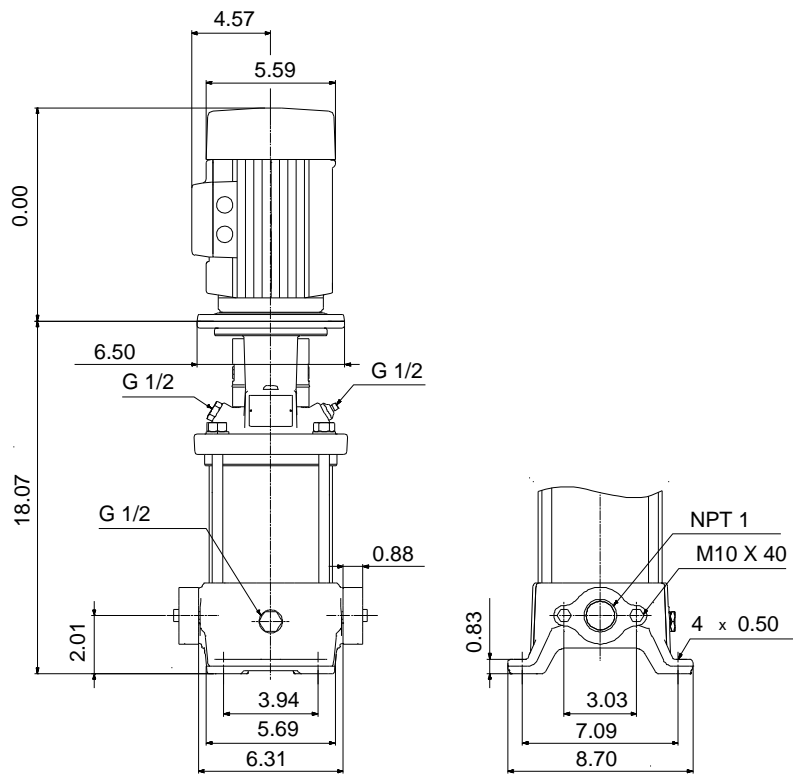
Vertical, multistage centrifugal pump with suction and discharge ports on the same level. The pump head and base are in cast iron. All other wetted parts are in stainless steel (EN 1.4301)(AISI 304)



Product photo could vary from the actual product

Conditions of Service		Pump Data		Motor Data	
Flow:	8.94 US gpm	Max pressure at stated temperature:	232 psi / 250 °F	Rated power - P2:	1.5 HP
Head:	300.8 ft	Maximum ambient temperature:	140 °F	Rated voltage:	208-230YY/460Y V
Efficiency:	41.3 %	Approvals:	CURUS,NSF61	Main frequency:	60 Hz
Liquid:	Water	Shaft seal:	HQQE	Enclosure class:	55 Dust/Jetting
Temperature:	68 °F	Product number:	96081988	Insulation class:	F
NPSH required:	4.81 ft			Motor protection:	NONE
Viscosity:	_____			Motor type:	80CA
Specific Gravity:	1.000			Motor_efficiency:	84.9 %





**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

## Tender Text



Product No.: [96081988](#)

### CR 1-13 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/ft<sup>3</sup>

#### Technical:

Speed for pump data: 3466 rpm

Actual calculated flow: 8.94 US gpm

Resulting head of the pump: 300.8 ft

Pump orientation: Vertical

Shaft seal arrangement: Single

Code for shaft seal: HQQE

Approvals on nameplate: CURUS, NSF61

Curve tolerance: ISO9906:2012 3B

#### Materials:

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

Impeller: Stainless steel  
EN 1.4301

Bearing material: AISI 304  
SIC

#### Installation:

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 inch



Company name:

Created by:

Phone:

Date:

2/20/2018


Size of outlet port: 1 inch  
Pressure rating: PN 16  
Flange size for motor: 56C

**Electrical data:**

Motor standard: NEMA  
Motor type: 80CA  
IE Efficiency class: NEMA Premium / IE3 60Hz  
Rated power - P2: 1.5 HP  
Power (P2) required by pump: 1.5 HP  
Main frequency: 60 Hz  
Rated voltage: 3 x 208-230YY/460Y V  
Service factor: 1,15  
Rated current: 4,45-4,3/2,16 A  
Starting current: 720 %  
Cos phi - power factor: 0,84-0,78  
Rated speed: 3440-3480 rpm  
IE efficiency: IE3 84,1%  
Motor efficiency at full load: 84.9 %  
Motor efficiency at 3/4 load: 81.0 %  
Motor efficiency at 1/2 load: 78.5 %  
Number of poles: 2  
Enclosure class (IEC 34-5): 55 Dust/Jetting  
Insulation class (IEC 85): F

**Others:**

Net weight: 56.4 lb  
Gross weight: 67.4 lb  
Shipping volume: 6.11 ft<sup>3</sup>

Position	Count	Description
	1	<p><b>CR 1-13 A-B-A-E-HQQE</b></p>  <p>Product No.: <a href="#">96081988</a>            Vertical, non-self-priming, multistage, in-line, centrifugal pump for installation in pipe systems and mounting on a foundation.</p> <p>The pump has the following characteristics:</p> <ul style="list-style-type: none"> <li>- Impellers and intermediate chambers are made of</li> <li>- The shaft seal has assembly length according to EN 12756.</li> <li>- Power transmission is via cast iron split coupling.</li> </ul> <p>The motor is a 3-phase AC motor.</p> <p>Controls:            Frequency converter: NONE</p> <p><b>Liquid:</b>            Pumped liquid: Water            Liquid temperature during operation: 68 °F            Density: 62.29 lb/ft<sup>3</sup></p> <p><b>Technical:</b>            Speed for pump data: 3466 rpm            Actual calculated flow: 8.94 US gpm            Resulting head of the pump: 300.8 ft            Pump orientation: Vertical            Shaft seal arrangement: Single            Code for shaft seal: HQQE            Approvals on nameplate: CURUS,NSF61            Curve tolerance: ISO9906:2012 3B</p> <p><b>Materials:</b>            Base: Cast iron                      EN 1561 EN-GJL-200                      ASTM A48-25B            Impeller: Stainless steel                      EN 1.4301                      AISI 304            Bearing material: SIC</p> <p><b>Installation:</b>            Maximum ambient temperature: 140 °F            Max pressure at stated temperature: 232 psi / 250 °F              232 psi / -4 °F</p> <p>Type of connection: Oval / NPT(F)            Size of suction port: 1 inch            Size of outlet port: 1 inch</p>



Company name:

Created by:

Phone:

Date:

2/20/2018

Position	Count	Description
		Pressure rating: PN 16 Flange size for motor: 56C
		<b>Electrical data:</b>
		Motor standard: NEMA
		Motor type: 80CA
		IE Efficiency class: NEMA Premium / IE3 60Hz
		Rated power - P2: 1.5 HP
		Power (P2) required by pump: 1.5 HP
		Main frequency: 60 Hz
		Rated voltage: 3 x 208-230YY/460Y V
		Service factor: 1,15
		Rated current: 4,45-4,3/2,16 A
		Starting current: 720 %
		Cos phi - power factor: 0,84-0,78
		Rated speed: 3440-3480 rpm
		IE efficiency: IE3 84,1%
		Motor efficiency at full load: 84.9 %
		Motor efficiency at 3/4 load: 81.0 %
		Motor efficiency at 1/2 load: 78.5 %
		Number of poles: 2
		Enclosure class (IEC 34-5): 55 Dust/Jetting
		Insulation class (IEC 85): F
		<b>Others:</b>
		Net weight: 56.4 lb
		Gross weight: 67.4 lb
		Shipping volume: 6.11 ft <sup>3</sup>



Company name:

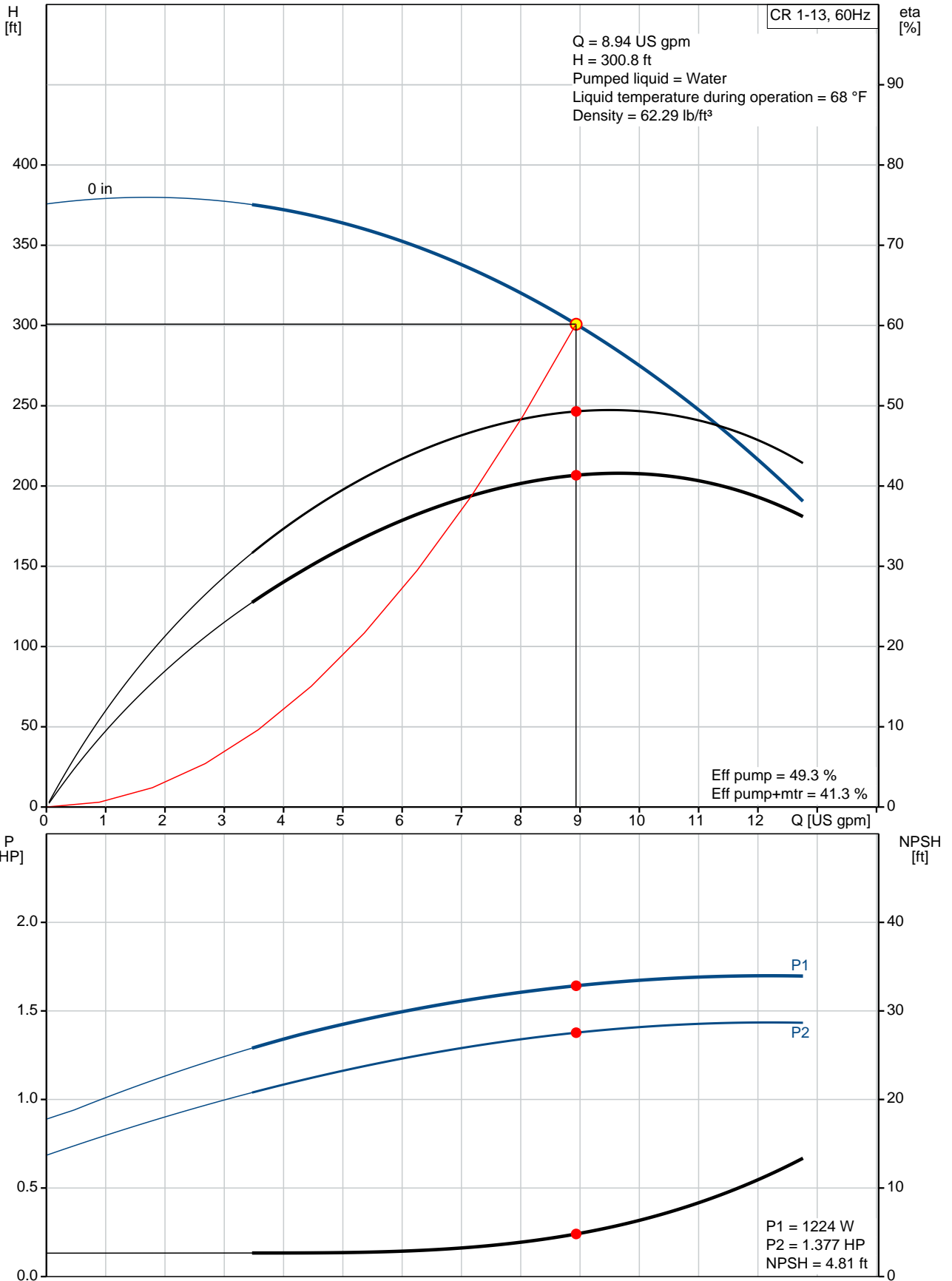
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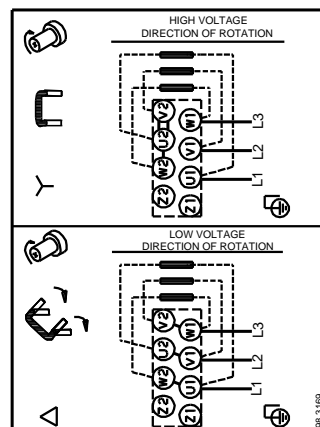
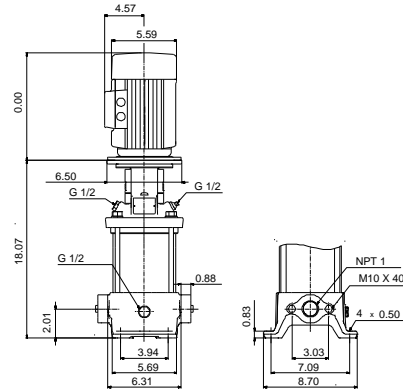
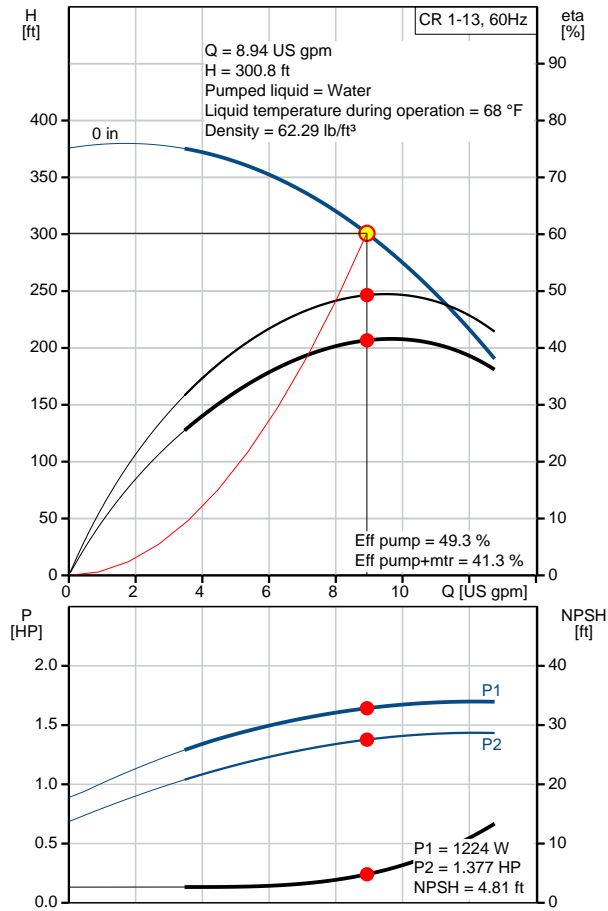
Date:

2/20/2018

# 96081988 CR 1-13 60 Hz



Description	Value
<b>General information:</b>	
Product name:	CR 1-13 A-B-A-E-HQQE
Product No.:	96081988
EAN:	5700395167269
<b>Technical:</b>	
Speed for pump data:	3466 rpm
Actual calculated flow:	8.94 US gpm
Resulting head of the pump:	300.8 ft
Stages:	13
Impellers:	13
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
<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 material:	SIC
<b>Installation:</b>	
Maximum ambient temperature:	140 °F
Max pressure at stated temperature:	232 psi / 250 °F 232 psi / -4 °F
Type of connection:	Oval / NPT(F)
Connect code:	B
Size of suction port:	1 inch
Size of outlet port:	1 inch
Pressure rating:	PN 16
Flange size for motor:	56C
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature during operation:	68 °F
Density:	62.29 lb/ft <sup>3</sup>
<b>Electrical data:</b>	
Motor standard:	NEMA
Motor type:	80CA
IE Efficiency class:	NEMA Premium / IE3 60Hz
Rated power - P2:	1.5 HP
Power (P2) required by pump:	1.5 HP
Main frequency:	60 Hz
Rated voltage:	3 x 208-230YY/460Y V
Service factor:	1,15
Rated current:	4,45-4,3/2,16 A
Starting current:	720 %







Company name:

Created by:

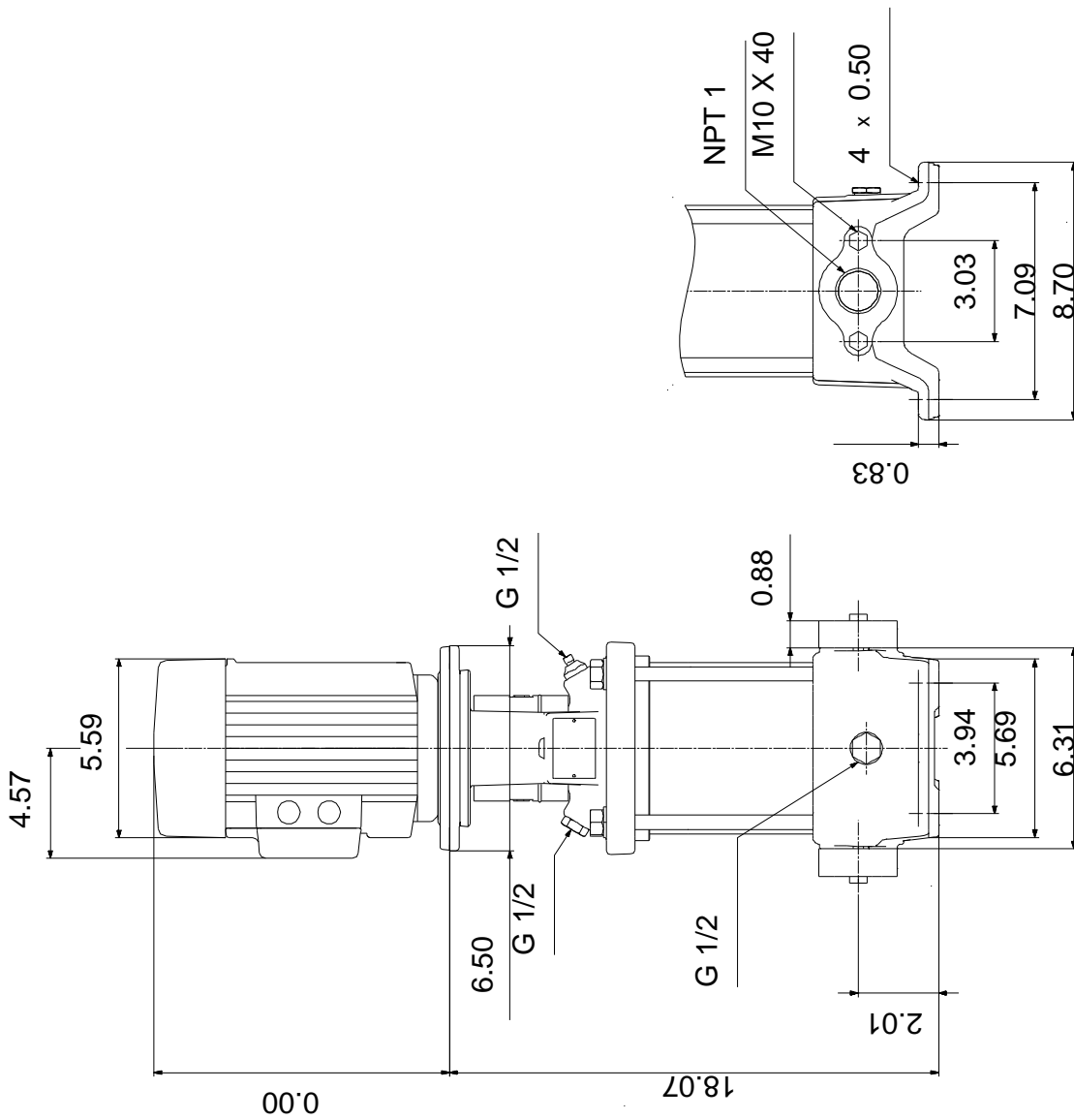
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Date:

2/20/2018

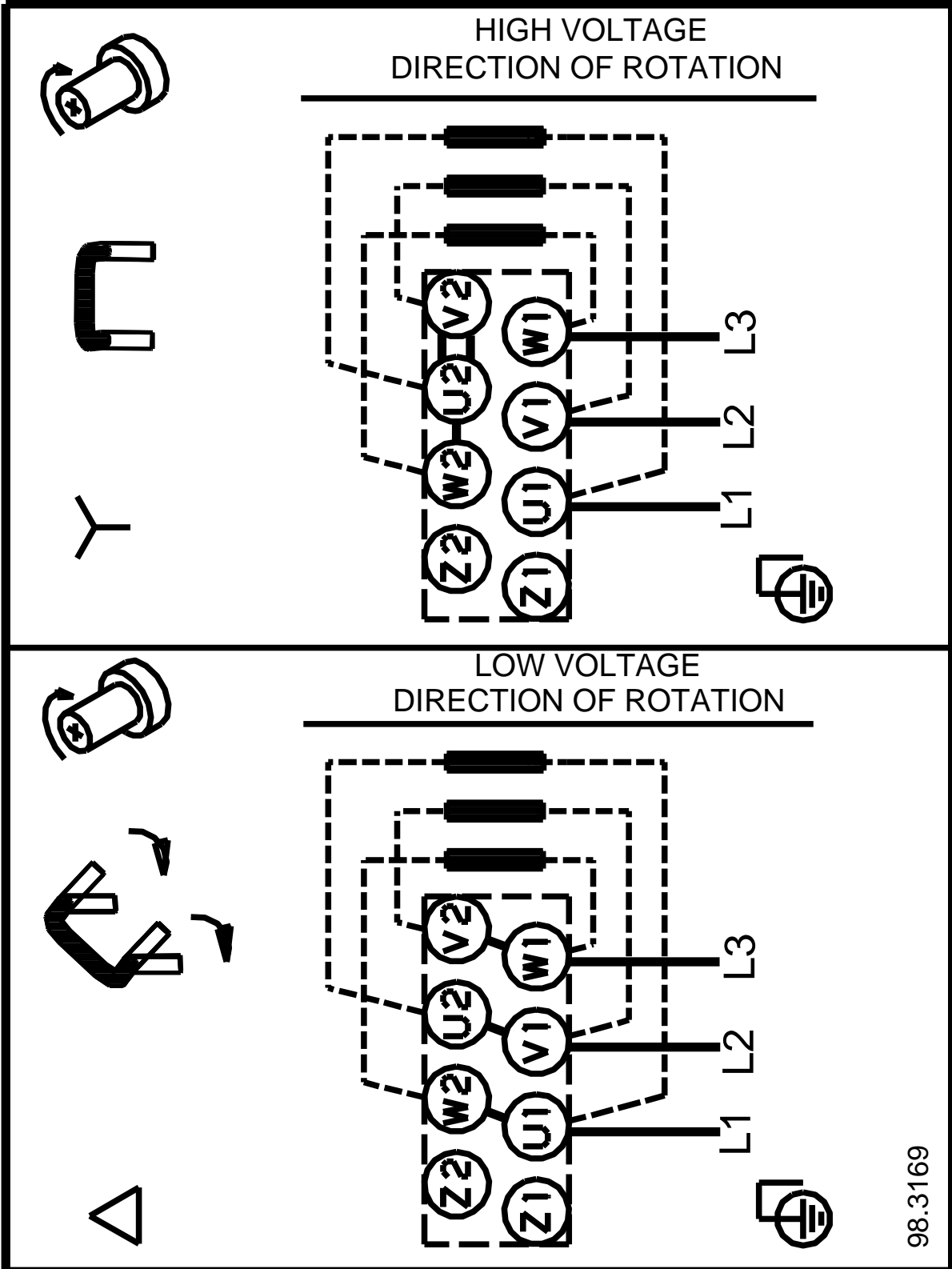
Description	Value
Load current:	5,1-4,95/2,48 A
Cos phi - power factor:	0,84-0,78
Rated speed:	3440-3480 rpm
IE efficiency:	IE3 84,1%
Motor efficiency at full load:	84.9 %
Motor efficiency at 3/4 load:	81.0 %
Motor efficiency at 1/2 load:	78.5 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protection:	NONE
Motor Number:	98976607
<b>Controls:</b>	
Frequency converter:	NONE
<b>Others:</b>	
Net weight:	56.4 lb
Gross weight:	67.4 lb
Shipping volume:	6.11 ft <sup>3</sup>

## 96081988 CR 1-13 60 Hz



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

**96081988 CR 1-13 60 Hz**



98.3169

All units are [mm] unless otherwise presented.



Company name:

Created by:

Phone:

Date: 2/20/2018

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**Order Data:**

Product name: CR 1-13 A-B-A-E-HQQE

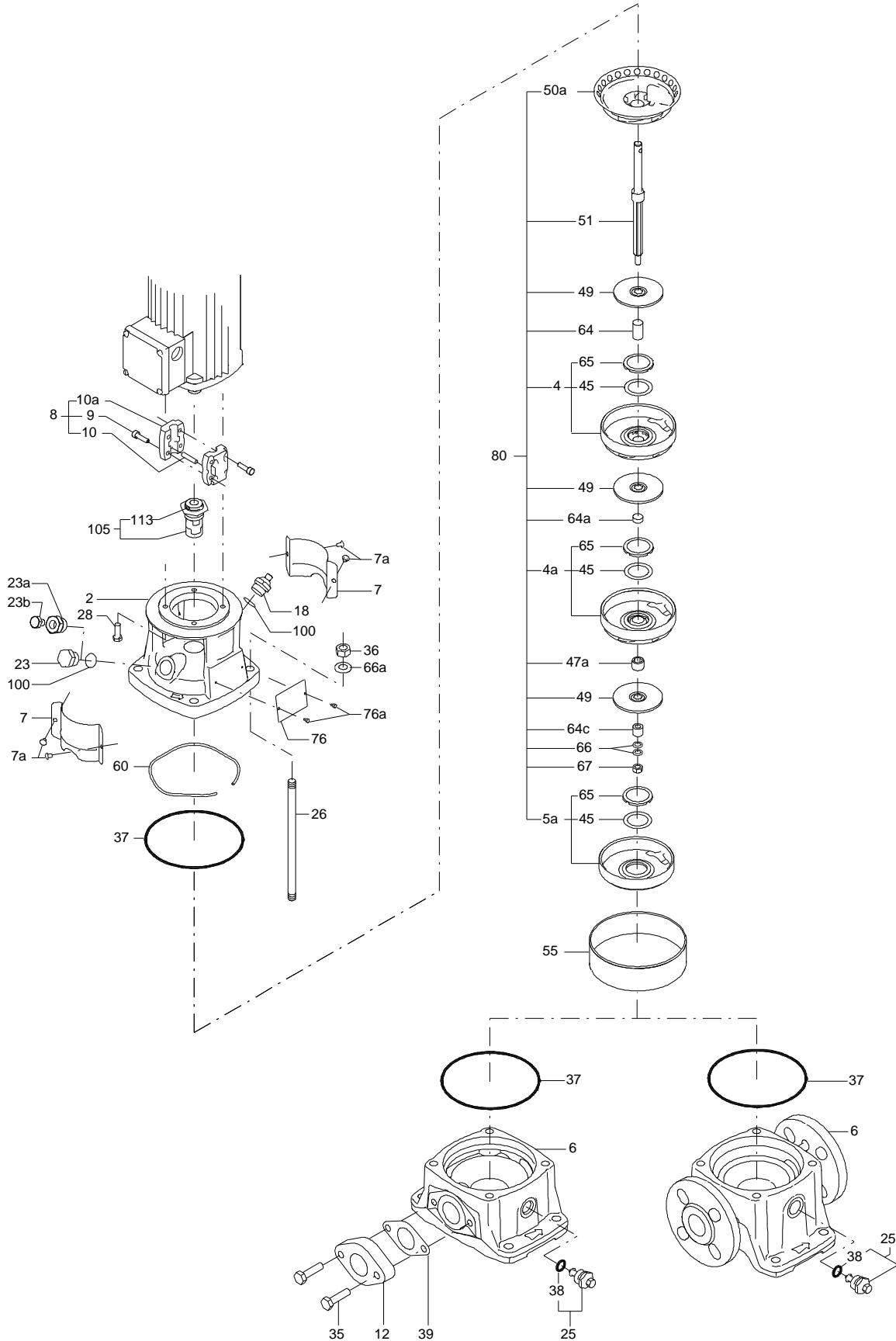
Amount: 1

Product No.: 96081988

Total: Price on request

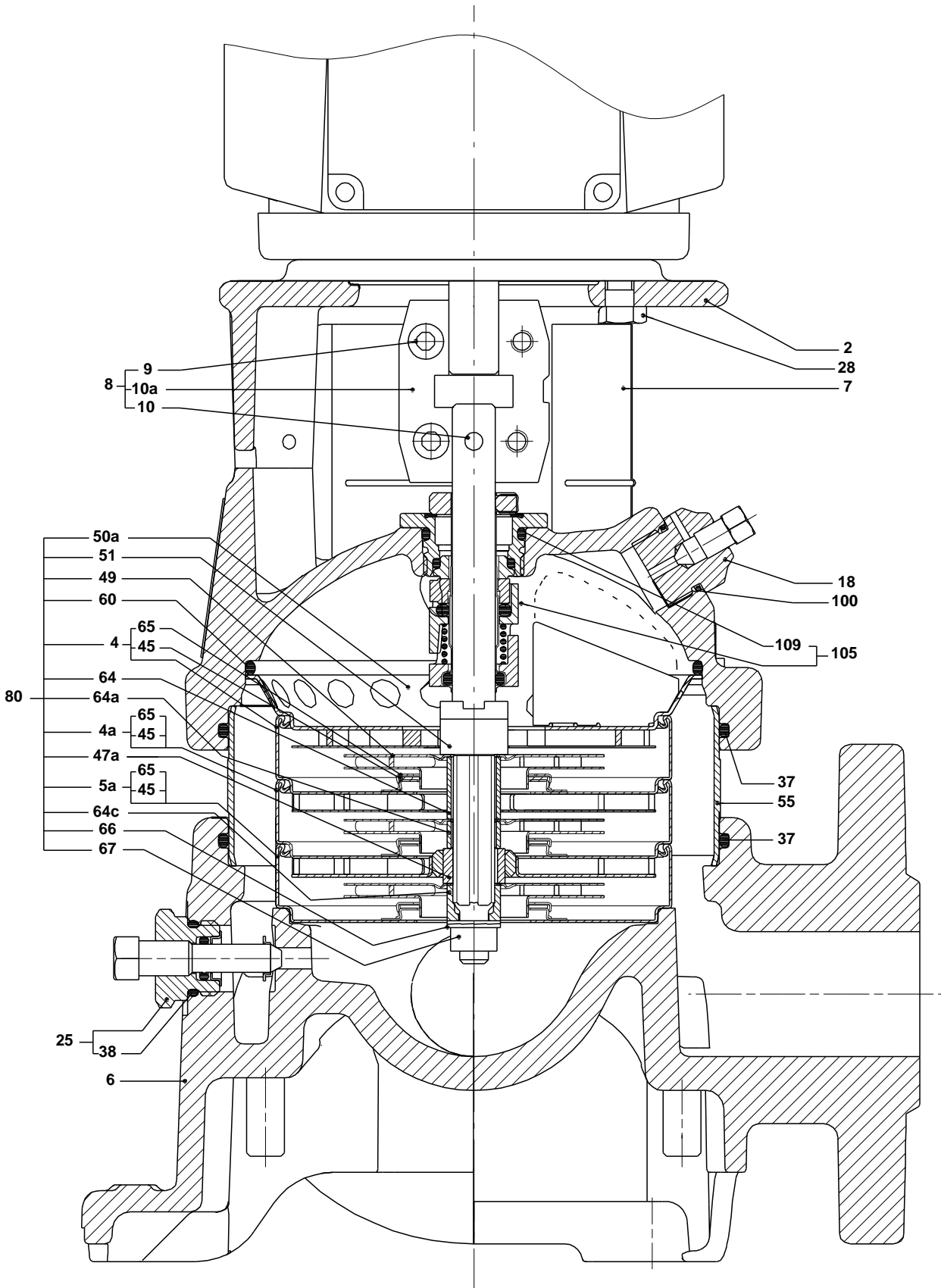
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Exploded view (tm020210 4100)



TM020210

Sectional drawing (tm020211 4100)



**Parts list CR 1-13, Prod number 96081988**

**Valid from 16.9.2016 (1638)**

Position	Description	Annotation	Classification data	Part No.	Count	Unit
	Motor				1	pcs
-	Base cpl.				1	pcs
6	Base				1	
12	Flange				2	
35	Hex head screw		Length: 40 Thread: M10		4	
37	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 Material type: EPDM Thickness: 2,4		2	
- 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 Thread: UNC 3/8"		4	
60	Formed wire spring				1	
- 8	Coupling cpl.				1	pcs
9	Hex socket head cap screw		Designation: DIN 912 Length: 20 Thread: M6		4	
10	Shaft pin		Diameter: 5 Length: 26		1	
10a	Coupling half				2	
26	Staybolt		Length: 259 Thread: M12		4	pcs
36a	Washer		Designation: DIN 125 A Inner diameter: 13 Outer diameter: 24 Thickness: 2,5		4	pcs
55	Outer sleeve				1	pcs
66a	Nut		Thread: M12		4	pcs
- 80	Chamber stack				1	pcs
	Impeller				13	
-	Guide vane cpl.				1	
	Plate					
50a	Guide vane					
50b	Top plate					
- 4	Chamber cpl.				10	
	Guide vane					
	Plate					

Position	Description	Annotation	Classification data	Part No.	Count	Unit
	Retainer					
	Intermediate chamber					
	Vane					
45	Neck ring					
65	Retainer					
- 4a	Chamber w. bearing cpl.				2	
	Guide vane					
	Retainer for bearing					
	Bearing bush					
	Retainer					
	Intermediate chamber					
	Vane					
45	Neck ring					
65	Retainer					
- 5a	Chamber cpl.				1	
	Retainer					
	Intermediate chamber					
	Vane					
45	Neck ring					
65	Retainer					
36	Lock nut		Thread: M8		1	
47a	Bearing ring, rotating				2	
51	Shaft, spline, cpl.				1	
64a	Spacing pipe				10	
64a	Spacing pipe		Inner diameter: 12,85		2	
			Outer diameter: 15,85			
			Length: 4,50			
64c	Clamp, splined		Inner diameter: 8,5		1	
			Outer diameter: 15			
66	Wedge lock washer				1	
- 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	