

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

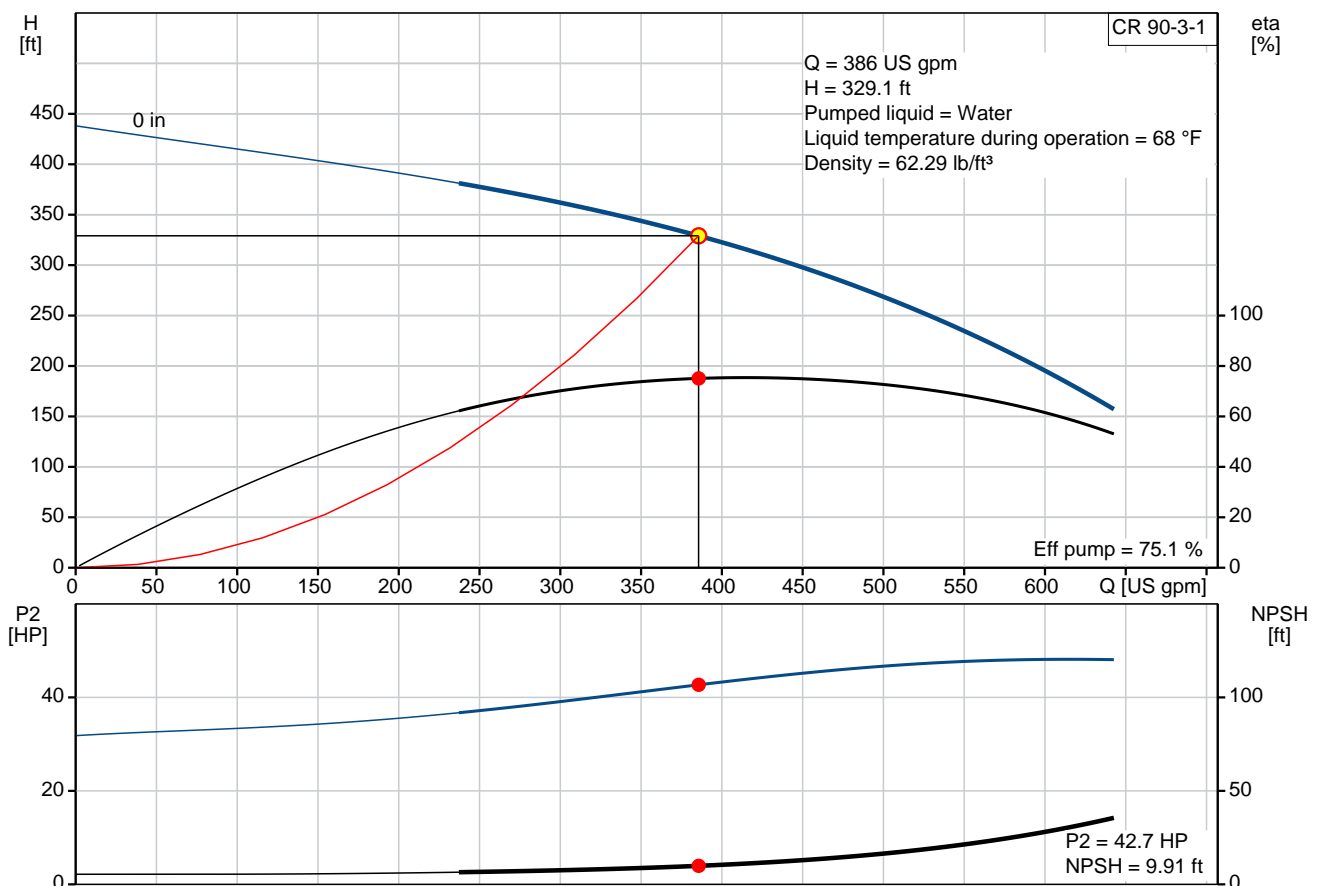


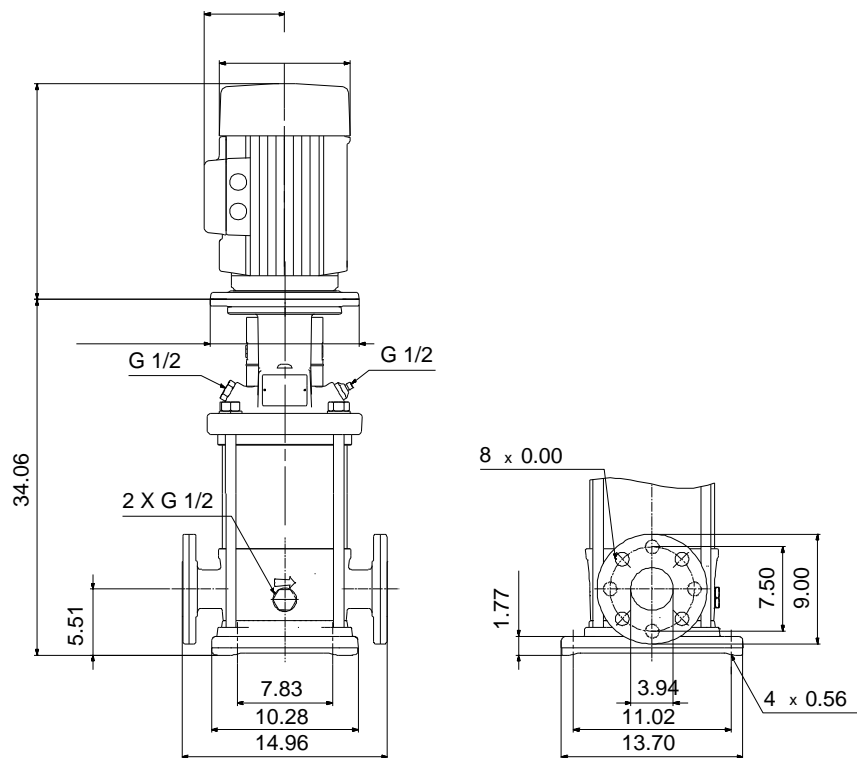
### CR 90-3-1

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: 386 US gpm	Max pressure at stated temperature: 232 psi / 250 °F	Main frequency: 60 Hz
Head: 329.1 ft	Approvals: NSF61	
Efficiency: _____	Shaft seal: HQQE	
Liquid: Water	Product number: 96416177	
Temperature: 68 °F		
NPSH required: 9.91 ft		
Viscosity: _____		
Specific Gravity: 1.000		





**Materials:**

Base:	Cast iron EN 1563 EN-GJS-500-7 ASTM A536 80-55-06
Impeller:	Stainless steel AISI 304 EN 1.4301
Material code:	A
Code for rubber:	E

## Tender Text



Product photo could vary from the actual product

Product No.: [96416177](#)

### CR 90-3-1 A-G-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 DIN 24960.
- Power transmission is via cast iron split coupling.

#### 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: 3550 rpm

Actual calculated flow: 386 US gpm

Resulting head of the pump: 329.1 ft

Pump orientation: Vertical

Shaft seal arrangement: Single

Code for shaft seal: HQQE

Approvals on nameplate: NSF61

Curve tolerance: ISO9906:2012 3B

#### Materials:

Base: Cast iron  
EN 1563 EN-GJS-500-7  
ASTM A536 80-55-06

Impeller: Stainless steel  
EN 1.4301  
AISI 304

Bearing material: SIC

Support bearing: Graflon

#### Installation:

Max pressure at stated temperature: 232 psi / 250 °F  
232 psi / -22 °F

Type of connection: ANSI

Size of suction port: 4 inch



Company name:

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Phone:

Date:

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Size of outlet port: 4 inch  
Pressure rating: PN 16  
Flange size for motor: 324TC  
Flange rating inlet: 150 lb

**Electrical data:**

Motor standard: NEMA  
Power (P2) required by pump: 50 HP

**Others:**

Net weight: 199 lb  
Gross weight: 217 lb  
Shipping volume: 10.9 ft<sup>3</sup>

Position	Count	Description
	1	<p><b>CR 90-3-1 A-G-A-E-HQQE</b></p>  <p>Product photo could vary from the actual product</p> <p>Product No.: <a href="#">96416177</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 DIN 24960.</li> <li>- Power transmission is via cast iron split coupling.</li> </ul> <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: 3550 rpm            Actual calculated flow: 386 US gpm            Resulting head of the pump: 329.1 ft            Pump orientation: Vertical            Shaft seal arrangement: Single            Code for shaft seal: HQQE            Approvals on nameplate: NSF61            Curve tolerance: ISO9906:2012 3B</p> <p><b>Materials:</b>            Base: Cast iron                      EN 1563 EN-GJS-500-7                      ASTM A536 80-55-06            Impeller: Stainless steel                      EN 1.4301                      AISI 304            Bearing material: SIC            Support bearing: Graflon</p> <p><b>Installation:</b>            Max pressure at stated temperature: 232 psi / 250 °F              232 psi / -22 °F            Type of connection: ANSI            Size of suction port: 4 inch            Size of outlet port: 4 inch            Pressure rating: PN 16</p>



Company name:

Created by:

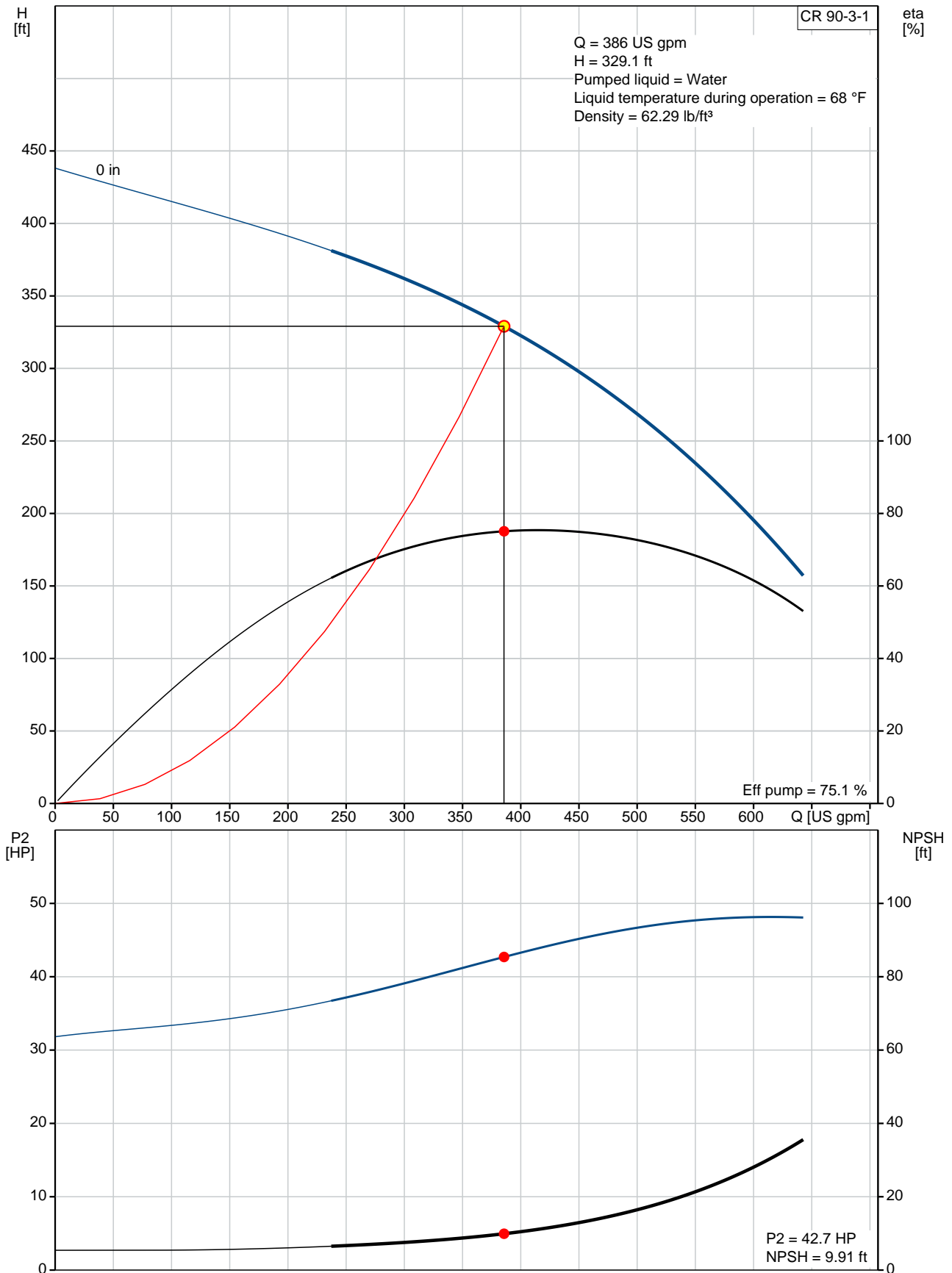
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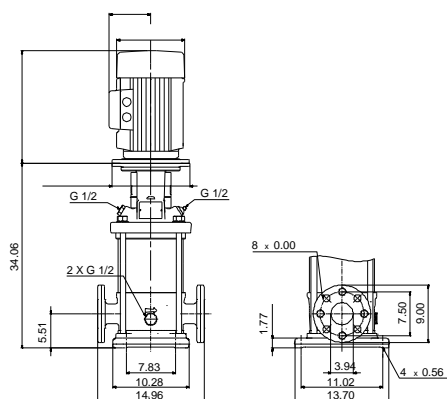
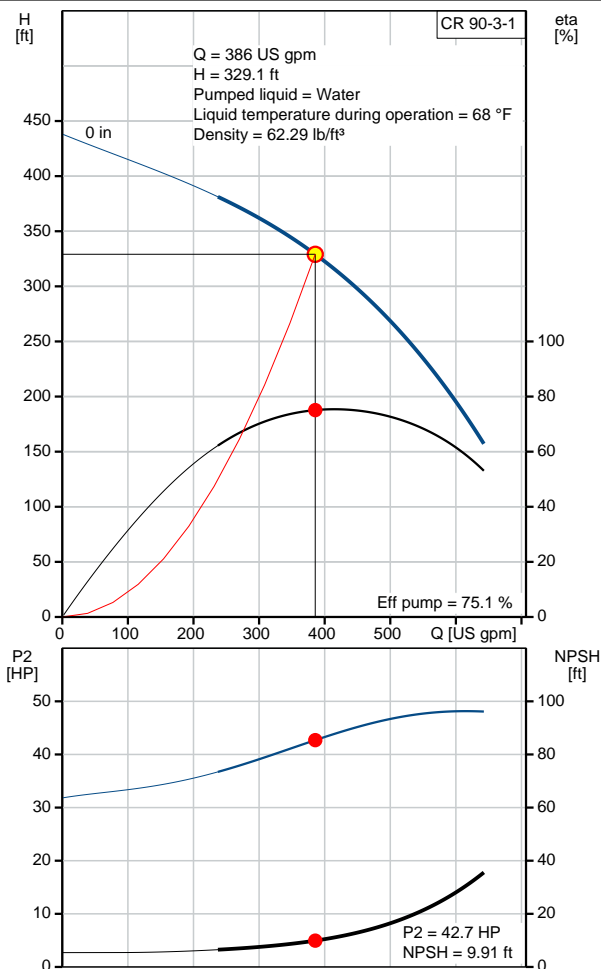
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Position	Count	Description
		Flange size for motor: 324TC Flange rating inlet: 150 lb  <b>Electrical data:</b> Motor standard: NEMA Power (P2) required by pump: 50 HP  <b>Others:</b> Net weight: 199 lb Gross weight: 217 lb Shipping volume: 10.9 ft <sup>3</sup>

## 96416177 CR 90-3-1 60 Hz



Description	Value
<b>General information:</b>	
Product name:	CR 90-3-1 A-G-A-E-HQQE
Product No.:	96416177
EAN:	5700390661953
<b>Technical:</b>	
Speed for pump data:	3550 rpm
Actual calculated flow:	386 US gpm
Resulting head of the pump:	329.1 ft
Stages:	3
Impellers:	3
Number of reduced-diameter impellers:	1
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	NSF61
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	B
<b>Materials:</b>	
Base:	Cast iron EN 1563 EN-GJS-500-7 ASTM A536 80-55-06
Impeller:	Stainless steel EN 1.4301 AISI 304
Material code:	A
Code for rubber:	E
Bearing material:	SIC
Support bearing:	Graflon
<b>Installation:</b>	
Max pressure at stated temperature:	232 psi / 250 °F 232 psi / -22 °F
Type of connection:	ANSI
Connect code:	G
Size of suction port:	4 inch
Size of outlet port:	4 inch
Pressure rating:	PN 16
Flange size for motor:	324TC
Flange rating inlet:	150 lb
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature during operation:	68 °F
Density:	62.29 lb/ft³
<b>Electrical data:</b>	
Motor standard:	NEMA
Power (P2) required by pump:	50 HP
<b>Controls:</b>	
Frequency converter:	NONE
<b>Others:</b>	
Net weight:	199 lb







Company name:

Created by:

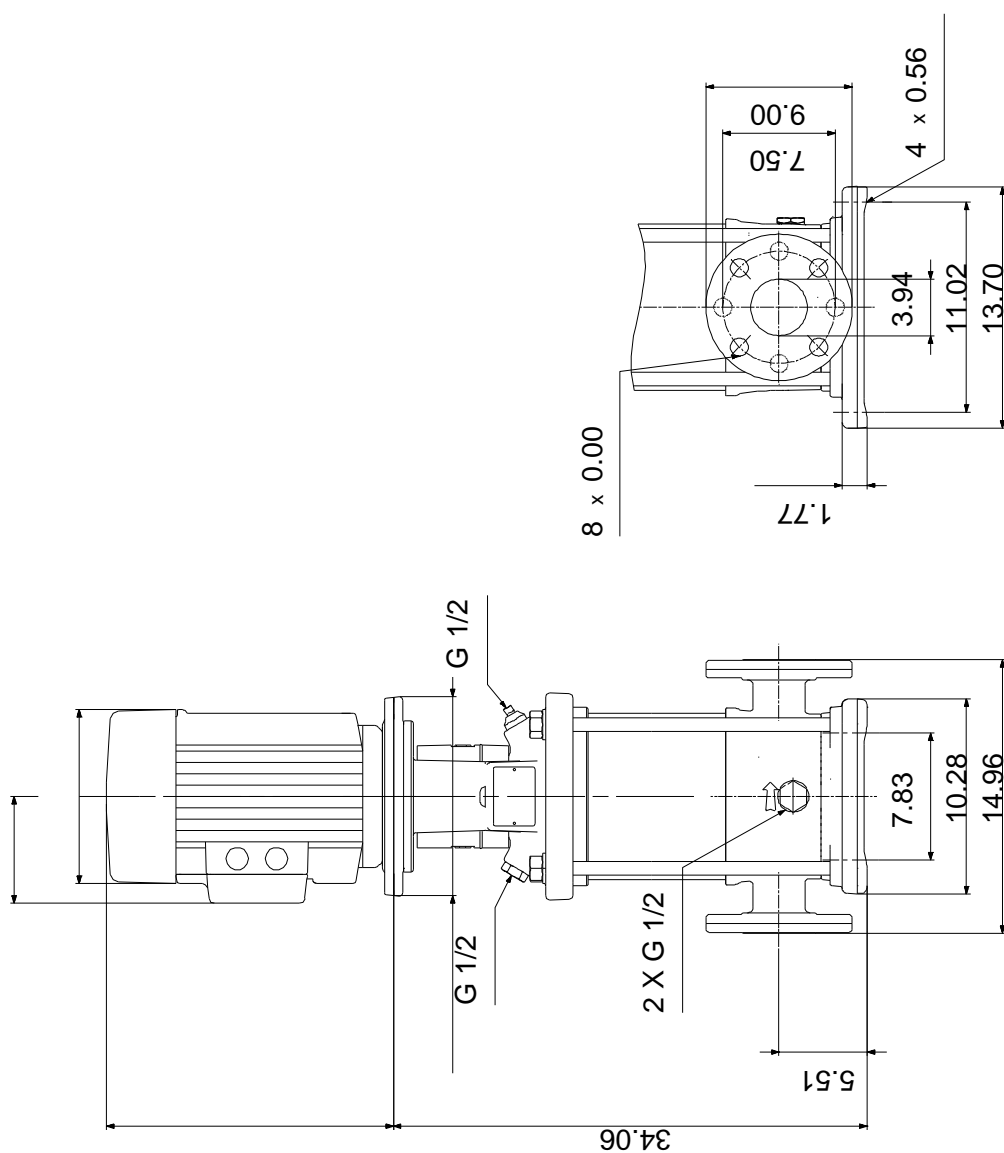
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Date:

2/20/2018

Description	Value
Gross weight:	217 lb
Shipping volume:	10.9 ft³
Sales region:	Namreg

## 96416177 CR 90-3-1 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:

2/20/2018

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**Order Data:**

Product name: CR 90-3-1 A-G-A-E-HQQE

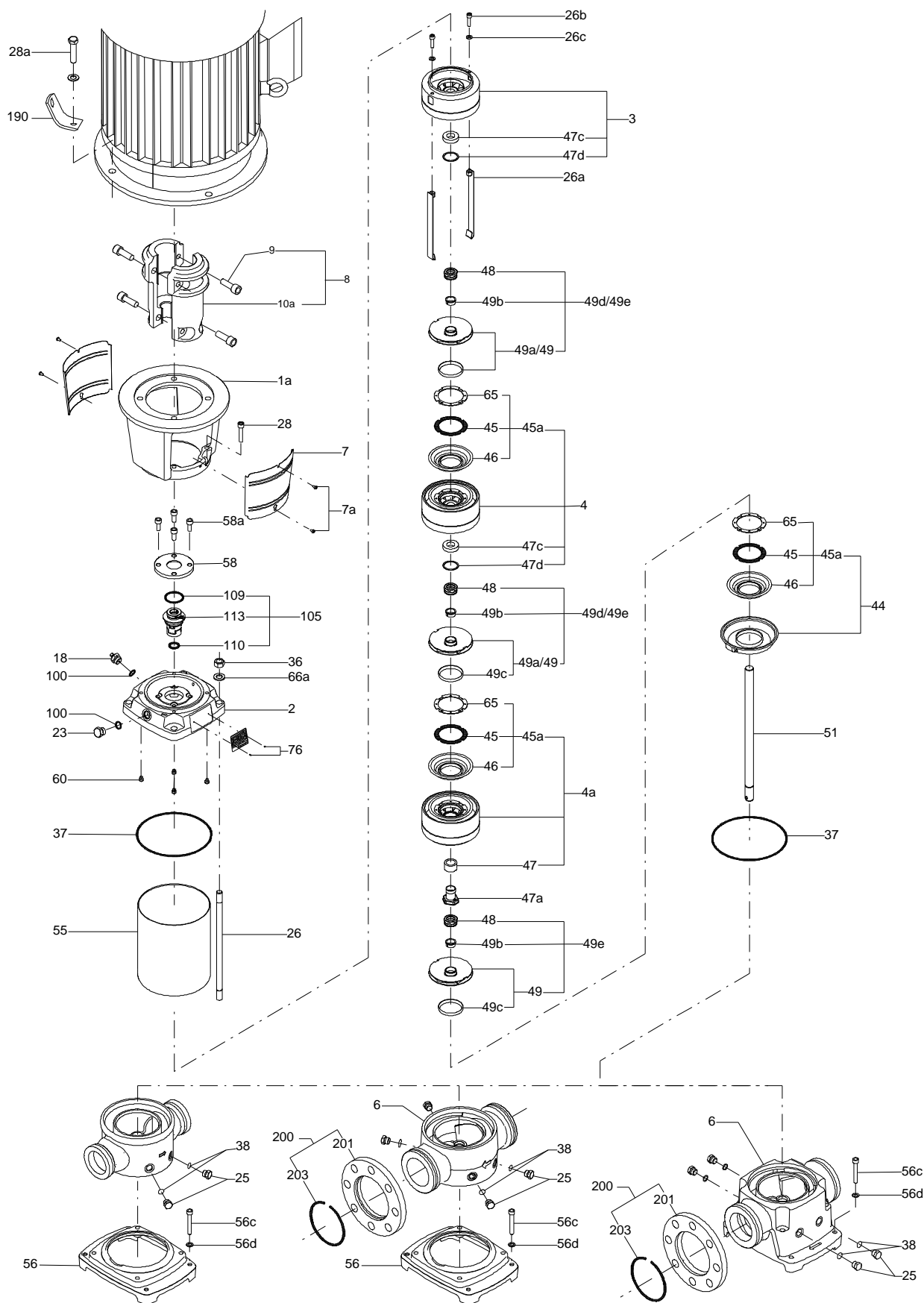
Amount: 1

Product No.: 96416177

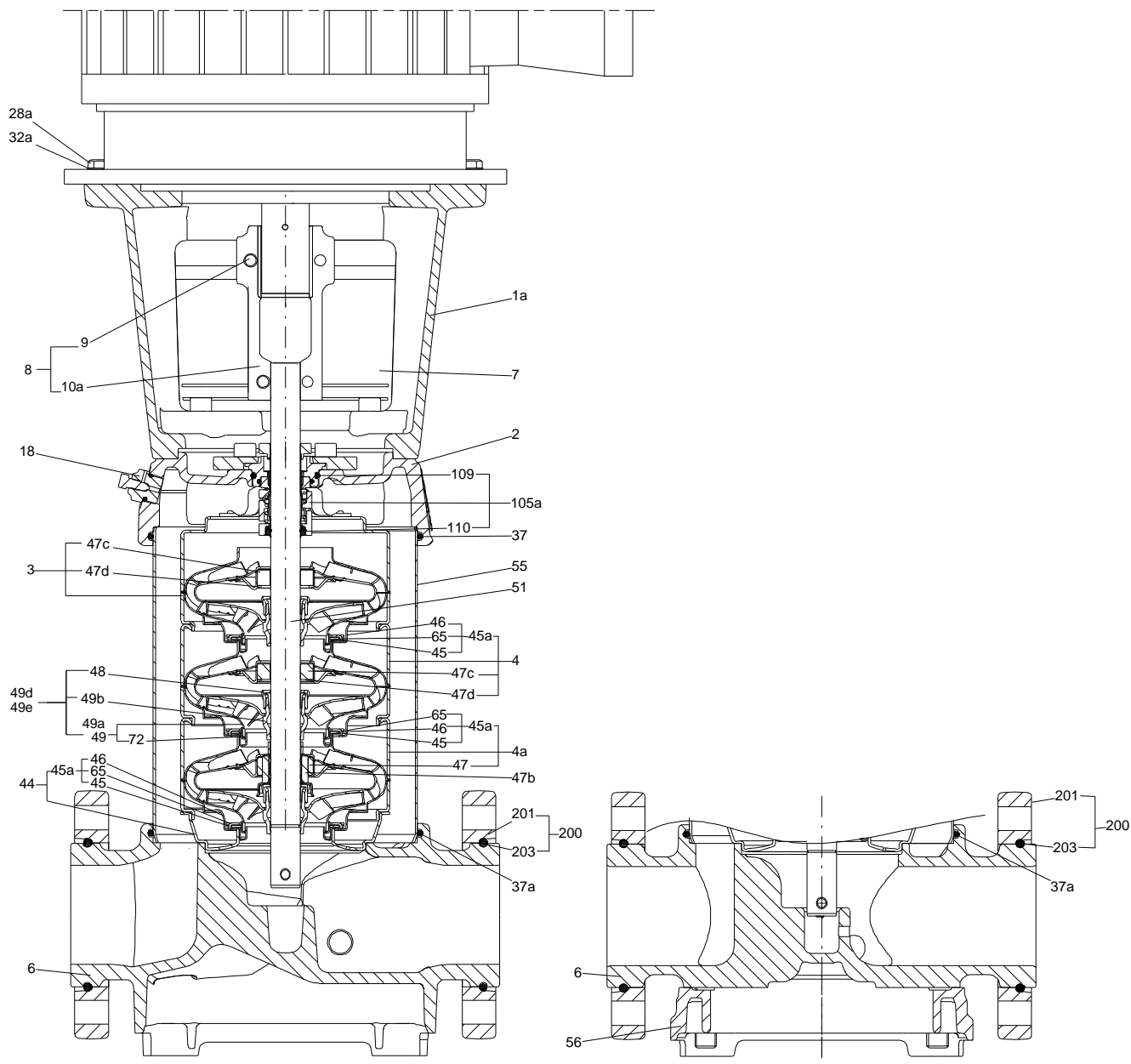
Total: Price on request

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## Exploded view (TM065558 LACR )



## Sectional drawing ( TM065571 LACR)



**Parts list CR 90-3-1, Prod number 96416177**

**Valid from 3.3.2014 (1410)**

Position	Description	Annotation	Classification data	Part No.	Count	Unit
	Hex head screw				1	pcs
	Washer				1	pcs
-	Flange cpl.				2	pcs
201	Flange		Pressure (bar): 150-4 Dimension: 229X25		1	
203	Lock ring				1	
-	Motor stool cpl.				1	pcs
1a	Motor stool				1	
7	Coupling guard				2	
7a	Socket button head screw				4	
28	Hex socket head cap screw		Designation: DIN 912 Length: 50 Thread: M10		4	
28.a	Hex socket head screw				4	
	Quick guide				1	pcs
	Shaft end				1	pcs
	Bar				1	pcs
	Spring lock washer				1	pcs
- 1	Basic unit				1	pcs
- 2a	Pump head cpl.				1	
2	Pump head					
9	Hex socket head cap screw		Designation: DIN 912 Length: 25 Thread: M10			
- 18	Air vent screw					
	Plug					
	Spindle					
23	Plug					
37	O-ring					
58	Cover					
60	Spring					
100	O-ring		Diameter: 16,3 Material type: EPDM Thickness: 2,4			
- 6b	Base cpl.		Rubber type: EPDM		1	
6	Base					
25	Plug					
32	Washer		Designation: DIN 125A Inner diameter: 6,4 Outer diameter: 12,0 Thickness: 1,6			
37	O-ring					
38	O-ring		Diameter: 16,3 Material type: EPDM Thickness: 2,4			
26	Staybolt		Length: 444 Thread: M16		4	
36	Hex nut		Thread: M16		4	
55	Outer sleeve		Outer diameter: 225,0 Length: 299,5		1	
66a	Washer		Designation: DIN 125 A Inner diameter: 17 Outer diameter: 30		4	

Position	Description	Annotation	Classification data	Part No.	Count	Unit
Thickness: 3						
- 80	Chamber stack				1	
- 3	Upper chamber cpl.					
	Chamber					
	Guide vane					
	Cone					
	Guide cup					
	Guide cup					
3	Chamber					
47c	Bush					
47d	Lock ring					
- 4	Intermediate chamber cpl.					
	Chamber					
	Chamber					
	Neck ring cpl.					
	Guide vane					
	Cone					
	Guide cup					
	Guide cup					
47c	Bush					
47d	Lock ring					
- 4a	Intermediate chamber cpl.					
	Chamber					
	Chamber					
	Neck ring cpl.					
	Guide vane					
	Cone					
	Guide cup					
	Guide cup					
47	Bearing					
26a	Strap cpl.		Length: 285			
			Thread: M8			
26b	Hex socket head cap screw					
26c	Washer		Designation: DIN 125A			
			Inner diameter: 8,4			
			Outer diameter: 16			
			Thickness: 1,6			
- 44	Suction interconnector coupling					
44	Suction interconnector					
46	Neck ring cpl.					
47a	Bearing					
- 49	Impeller cpl.					
48	Nut					
49	Impeller					
49b	Split cone					
- 49a	Impeller cpl. reduced diameter					
48	Nut					
- 49a	Impeller					
	Impeller hub					
49c	Wear ring					
49b	Split cone					
- 49e	Impeller cpl.					
48	Nut					
- 49	Impeller					
	Impeller hub					
49c	Wear ring					
49b	Split cone					
51	Shaft					
- 8	Coupling cpl.		Dimension: 22/47,6		1	pcs



Company name:

Created by:

Phone:

Date: 2/20/2018

Position	Description	Annotation	Classification data	Part No.	Count	Unit
9	Hex socket head cap screw		Designation: DIN 912		4	
			Length: 25			
			Thread: M10			
10a	Coupling half				2	
28a	Hex head screw		Length: 45		2	pcs
			Thread: M16			
36	Hex nut		Thread: M16		2	pcs
- 105	Shaft seal		Material type: HQQE		1	pcs
	Adjusting fork				1	
109	O-ring				1	
110	O-ring		Diameter: 21,5		1	
			Material type: EPDM			
			Thickness: 4,25			