

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

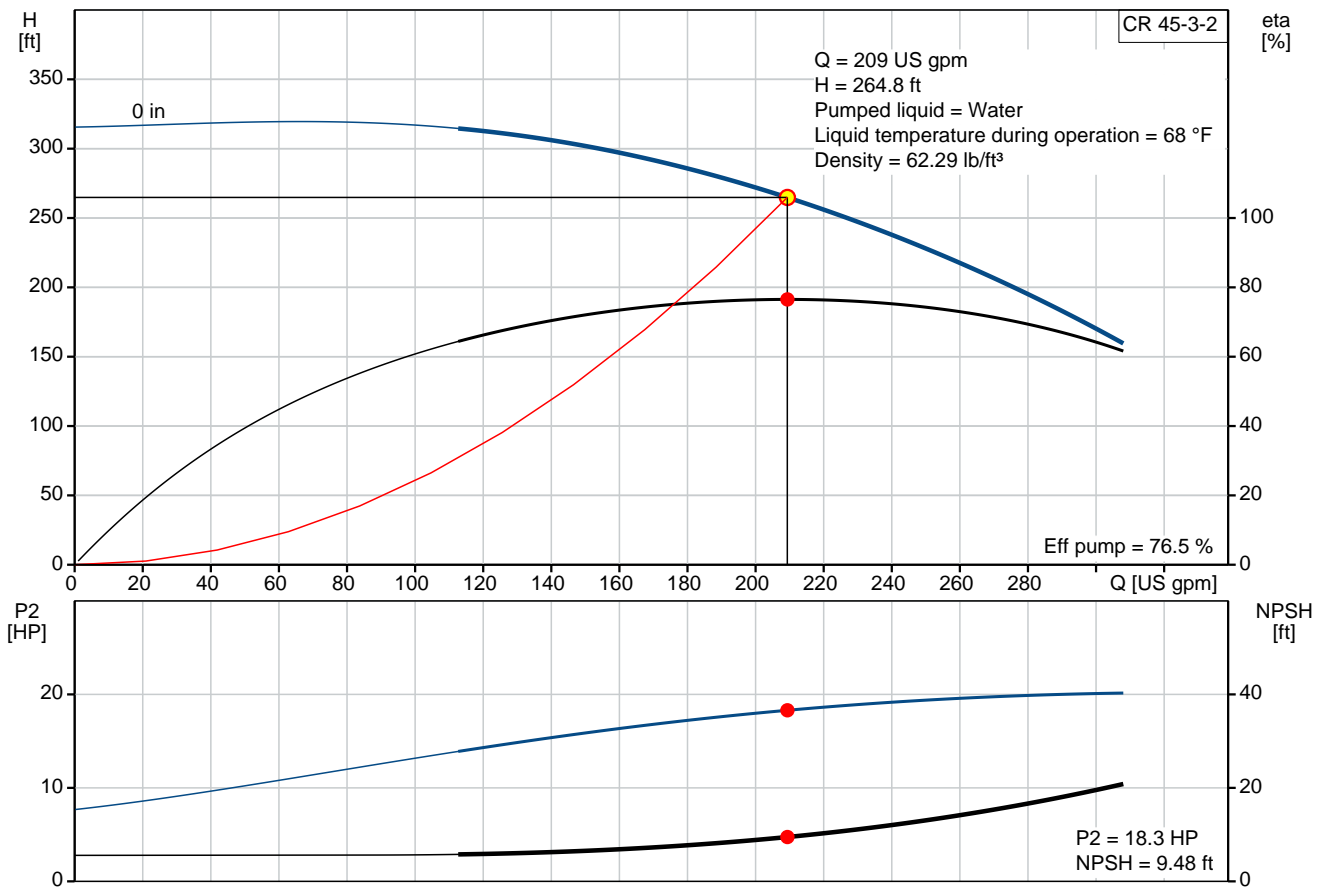


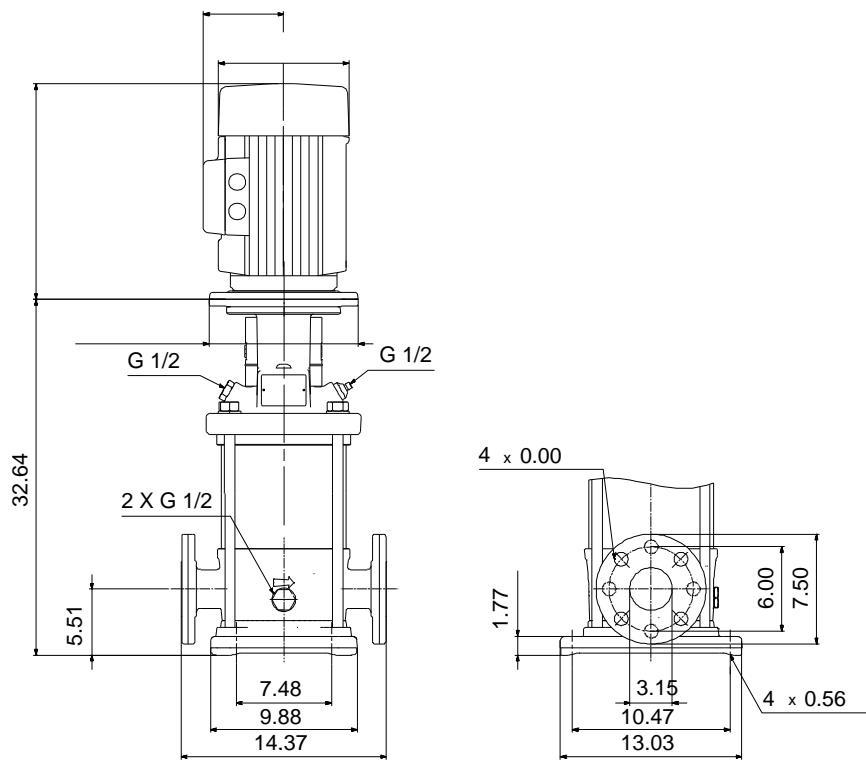
**CR 45-3-2**

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:	209 US gpm	Max pressure at stated temperature:	232 psi / 250 °F	Main frequency: 60 Hz
Head:	264.8 ft	Approvals:	NSF61	
Efficiency:	_____	Shaft seal:	HQQE	
Liquid:	Water	Product number:	96415818	
Temperature:	68 °F			
NPSH required:	9.48 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.: [96415818](#)

### CR 45-3-2 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: 3497 rpm  
Actual calculated flow: 209 US gpm  
Resulting head of the pump: 264.8 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: 3 inch



Company name:

Created by:

Phone:

Date: 2/20/2018


Size of outlet port: 3 inch  
Pressure rating: PN 16  
Flange size for motor: 254TC  
Flange rating inlet: 150 lb

**Electrical data:**

Motor standard: NEMA  
Power (P2) required by pump: 20 HP

**Others:**

Net weight: 162 lb  
Gross weight: 180 lb  
Shipping volume: 10.9 ft<sup>3</sup>

Position	Count	Description
	1	<p data-bbox="347 338 644 365"><b>CR 45-3-2 A-G-A-E-HQQE</b></p>  <p data-bbox="735 680 1190 707">Product photo could vary from the actual product</p> <p data-bbox="347 712 608 739">Product No.: <a href="#">96415818</a></p> <p data-bbox="347 743 863 831">Vertical, non-self-priming, multistage, in-line, centrifugal pump for installation in pipe systems and mounting on a foundation.</p> <p data-bbox="347 864 820 891">The pump has the following characteristics:</p> <ul data-bbox="384 896 967 1010" 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 data-bbox="347 1070 443 1097">Controls:</p> <p data-bbox="347 1102 778 1128">Frequency converter: NONE</p> <p data-bbox="347 1160 427 1187"><b>Liquid:</b></p> <p data-bbox="347 1191 775 1218">Pumped liquid: Water</p> <p data-bbox="347 1223 823 1249">Liquid temperature during operation: 68 °F</p> <p data-bbox="347 1254 823 1281">Density: 62.29 lb/ft<sup>3</sup></p> <p data-bbox="347 1312 469 1339"><b>Technical:</b></p> <p data-bbox="347 1344 810 1370">Speed for pump data: 3497 rpm</p> <p data-bbox="347 1375 842 1402">Actual calculated flow: 209 US gpm</p> <p data-bbox="347 1406 791 1433">Resulting head of the pump: 264.8 ft</p> <p data-bbox="347 1438 791 1464">Pump orientation: Vertical</p> <p data-bbox="347 1469 775 1496">Shaft seal arrangement: Single</p> <p data-bbox="347 1500 775 1527">Code for shaft seal: HQQE</p> <p data-bbox="347 1532 791 1559">Approvals on nameplate: NSF61</p> <p data-bbox="347 1563 903 1590">Curve tolerance: ISO9906:2012 3B</p> <p data-bbox="347 1621 459 1648"><b>Materials:</b></p> <p data-bbox="347 1653 970 1720">Base: Cast iron EN 1563 EN-GJS-500-7 ASTM A536 80-55-06</p> <p data-bbox="347 1724 868 1809">Impeller: Stainless steel EN 1.4301 AISI 304</p> <p data-bbox="347 1814 750 1841">Bearing material: SIC</p> <p data-bbox="347 1845 791 1872">Support bearing: Graflon</p> <p data-bbox="347 1904 485 1930"><b>Installation:</b></p> <p data-bbox="347 1935 944 2002">Max pressure at stated temperature: 232 psi / 250 °F 232 psi / -22 °F</p> <p data-bbox="347 2007 775 2033">Type of connection: ANSI</p> <p data-bbox="347 2038 775 2065">Size of suction port: 3 inch</p> <p data-bbox="347 2069 775 2096">Size of outlet port: 3 inch</p> <p data-bbox="347 2101 775 2128">Pressure rating: PN 16</p>



Company name:

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Phone:

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2/20/2018

Position	Count	Description
		Flange size for motor: 254TC Flange rating inlet: 150 lb
		<b>Electrical data:</b> Motor standard: NEMA Power (P2) required by pump: 20 HP
		<b>Others:</b> Net weight: 162 lb Gross weight: 180 lb Shipping volume: 10.9 ft <sup>3</sup>



Company name:

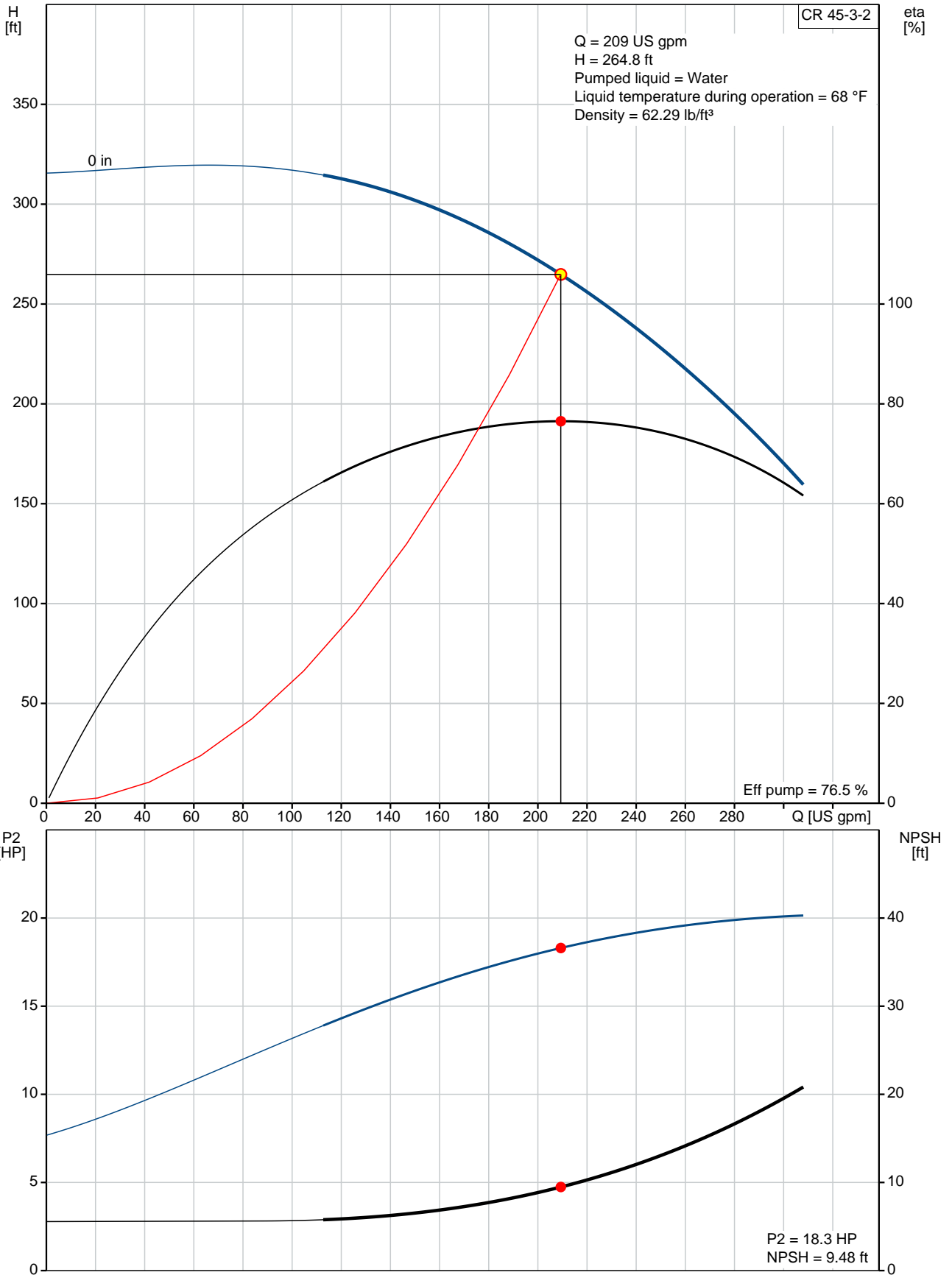
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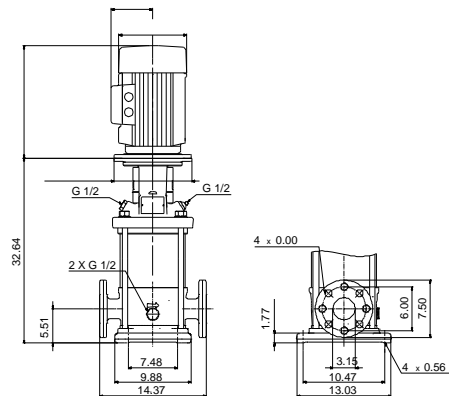
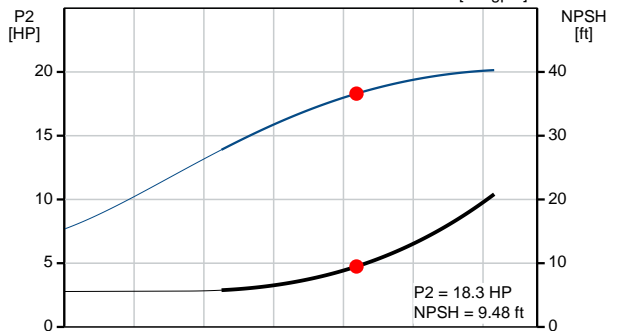
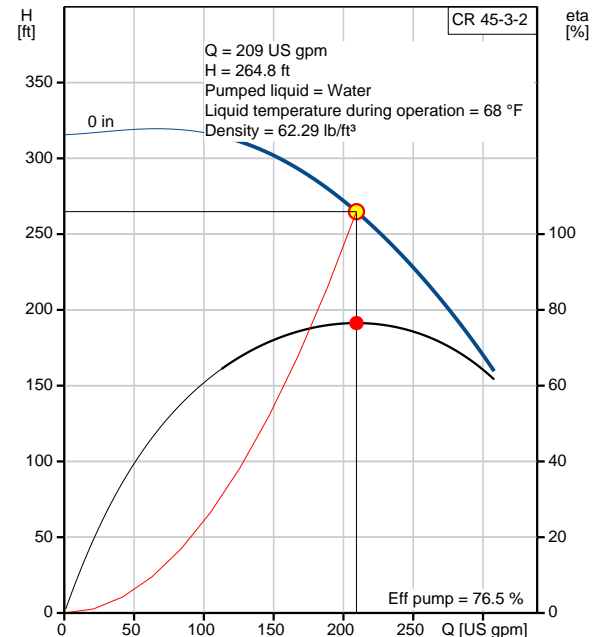
Date:

2/20/2018

### 96415818 CR 45-3-2 60 Hz



Description	Value
<b>General information:</b>	
Product name:	CR 45-3-2 A-G-A-E-HQQE
Product No.:	96415818
EAN:	5700390648879
<b>Technical:</b>	
Speed for pump data:	3497 rpm
Actual calculated flow:	209 US gpm
Resulting head of the pump:	264.8 ft
Stages:	3
Impellers:	3
Number of reduced-diameter impellers:	2
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:	3 inch
Size of outlet port:	3 inch
Pressure rating:	PN 16
Flange size for motor:	254TC
Flange rating inlet:	150 lb
<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
Power (P2) required by pump:	20 HP
<b>Controls:</b>	
Frequency converter:	NONE
<b>Others:</b>	
Net weight:	162 lb







Company name:

Created by:

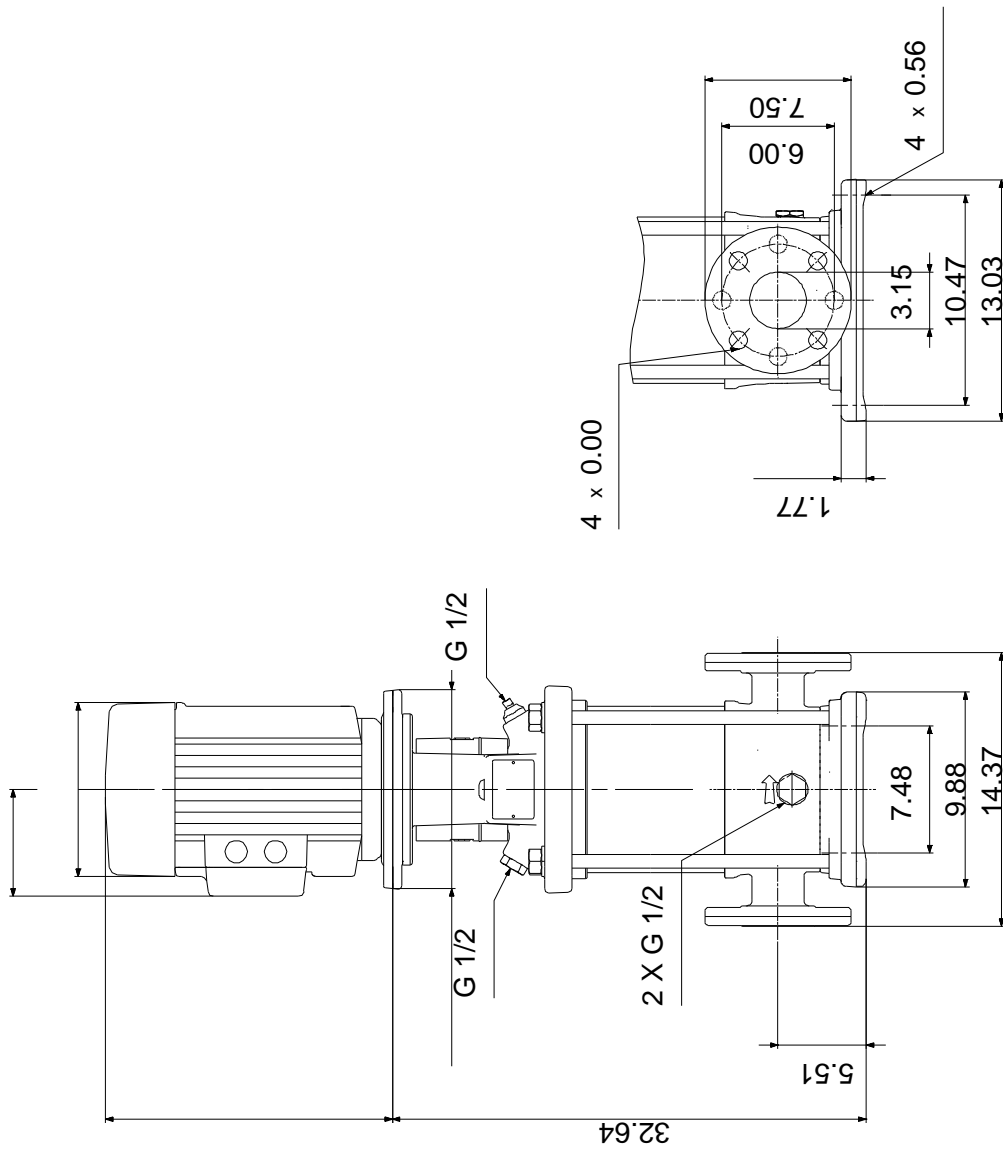
Phone:

Date:

2/20/2018

Description	Value
Gross weight:	180 lb
Shipping volume:	10.9 ft <sup>3</sup>
Sales region:	Namreg

**96415818 CR 45-3-2 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 45-3-2 A-G-A-E-HQQE

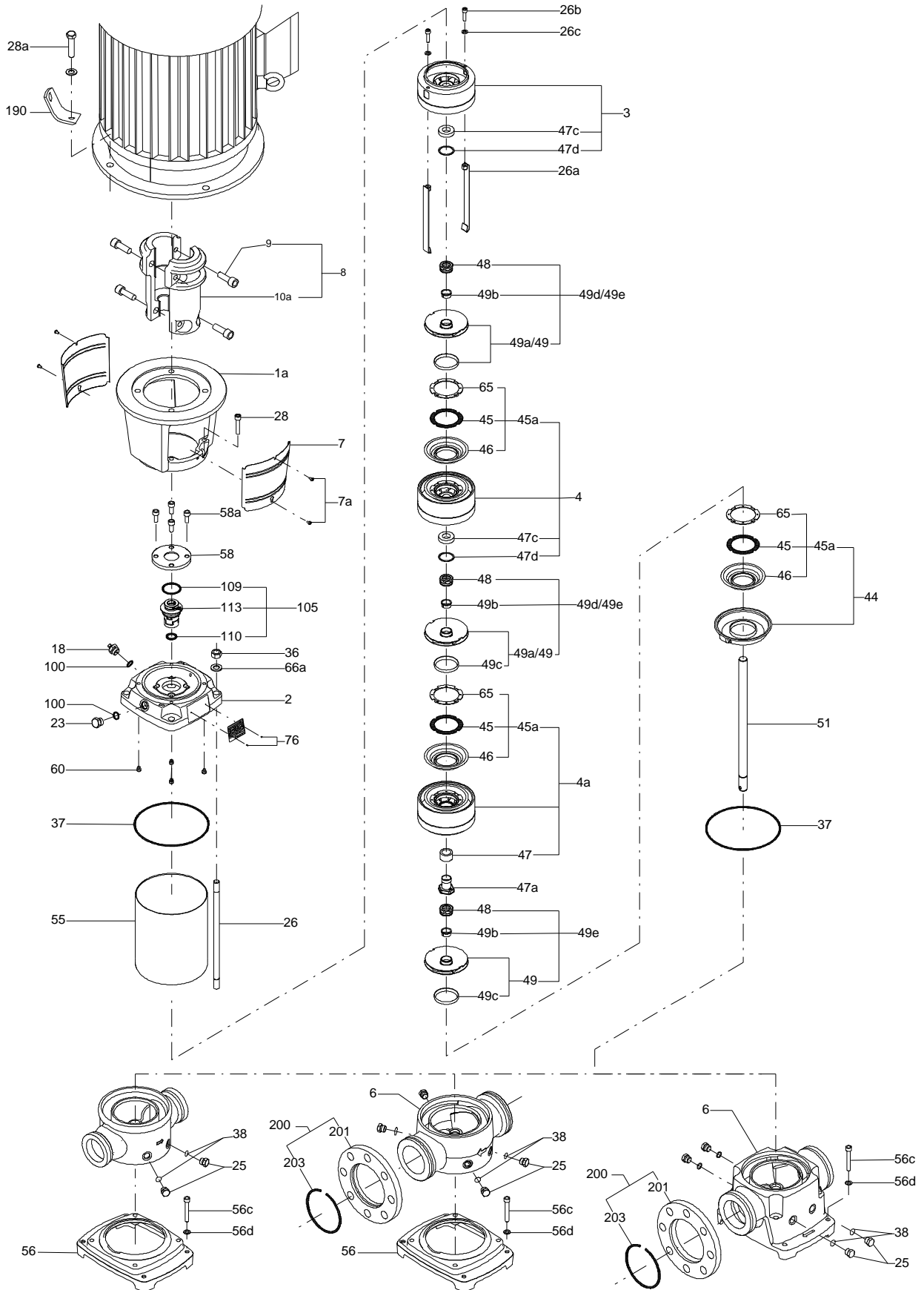
Amount: 1

Product No.: 96415818

Total: Price on request

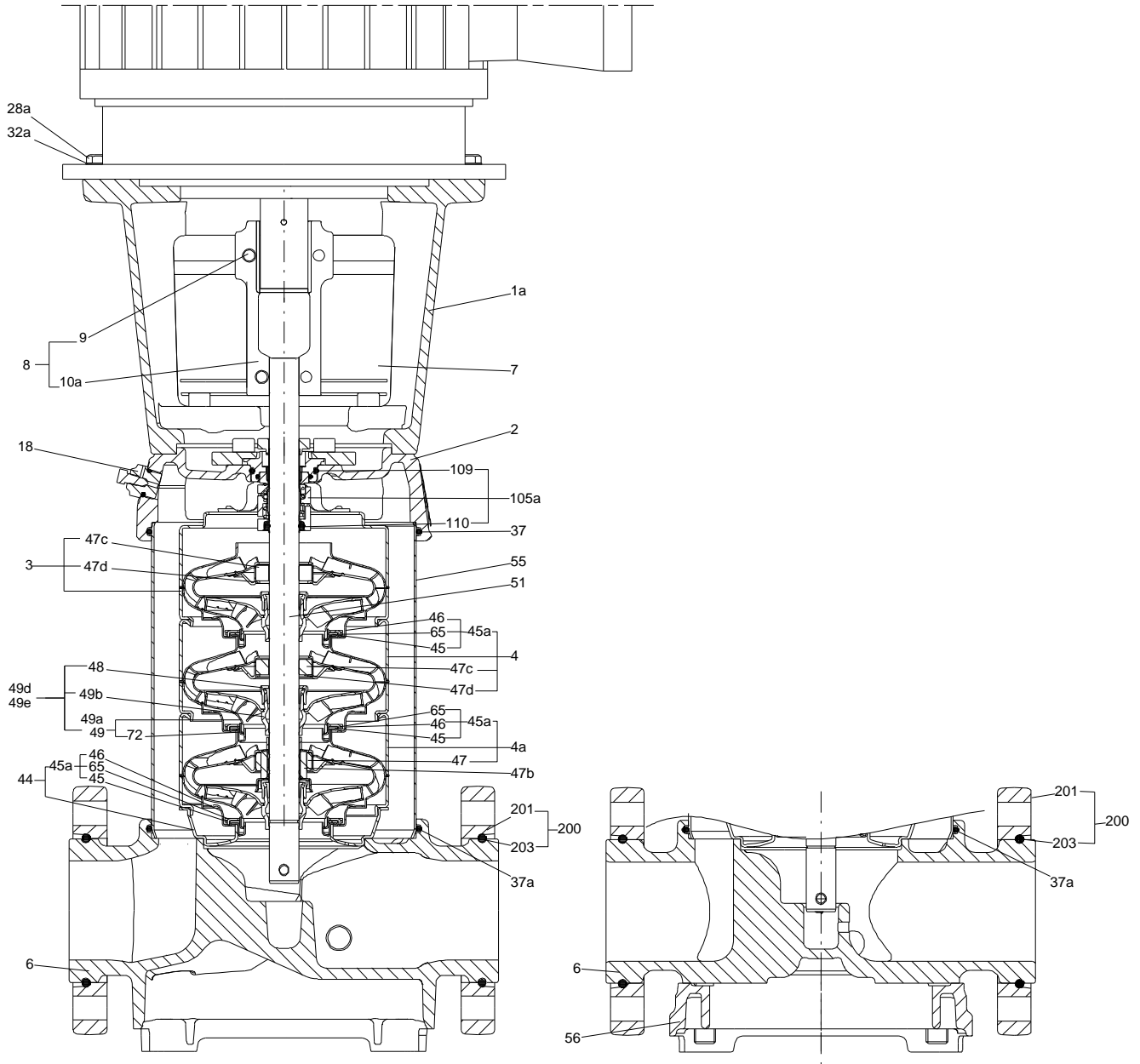
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## Exploded view (TM065558 LACR )



TM065558

Sectional drawing ( TM065571 LACR)



**Parts list CR 45-3-2, Prod number 96415818**

**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				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		4	
			Length: 50			
			Thread: M10			
28a	Hex socket head cap screw		Length: 13		4	
			Thread: 1/2"			
	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	
	O-ring					
2a	Pump head					
9	Hex socket head cap screw		Designation: DIN 912			
			Length: 25			
			Thread: M10			
- 18	Air vent screw					
	Plug					
	Spindle					
23	Plug					
58	Cover					
60	Spring					
100	O-ring		Diameter: 16,3			
			Material type: EPDM			
			Thickness: 2,4			
- 6b	Base cpl.		Rubber type: EPDM		1	
	O-ring					
6	Base					
25	Plug					
32	Washer		Designation: DIN 125A			
			Inner diameter: 6,4			
			Outer diameter: 12,0			
			Thickness: 1,6			
38	O-ring		Diameter: 16,3			
			Material type: EPDM			
			Thickness: 2,4			
26	Staybolt		Length: 407		4	
			Thread: M16			
36	Hex nut		Thread: M16		4	
55	Outer sleeve		Outer diameter: 216,0		1	
			Length: 263,5			
66a	Washer		Designation: DIN 125 A		4	
			Inner diameter: 17			
			Outer diameter: 30			

Position	Description	Annotation	Classification data	Part No.	Count	Unit
			Thickness: 3			
- 80	Chamber stack				1	
- 3	Upper chamber cpl.					
	Chamber					
	Chamber					
	Guide vane					
	Cone					
	Guide cup					
	Guide cup					
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.					
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					
	Neck ring					
	Suction interconnector					
45	Seal ring					
65	Top f/neck ring					
- 47a	Bearing cpl.					
	Disc spring					
	Bearing ring, rotating					
	Holder					
	Driver					
- 49d	Impeller cpl.					
48	Nut					
- 49	Impeller, reduced diameter					
	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					



Company name:

Created by:

Phone:

Date: 2/20/2018

Position	Description	Annotation	Classification data	Part No.	Count	Unit
- 8	Coupling cpl.		Dimension: 22/41,2		1	pcs
9	Hex socket head cap screw		Designation: DIN 912		4	
			Length: 25			
			Thread: M10			
10a	Coupling half				2	
36	Hex nut				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			