

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

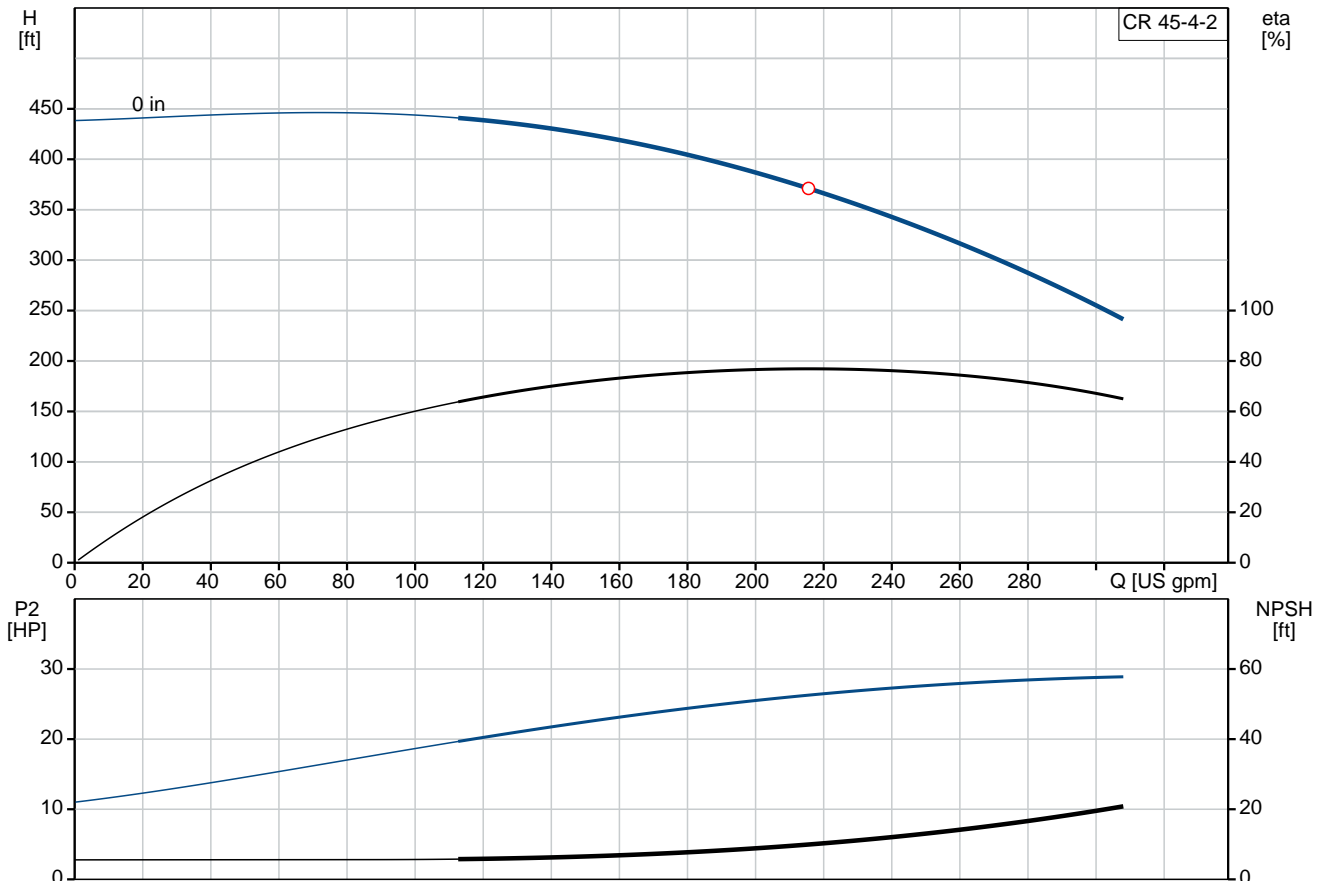


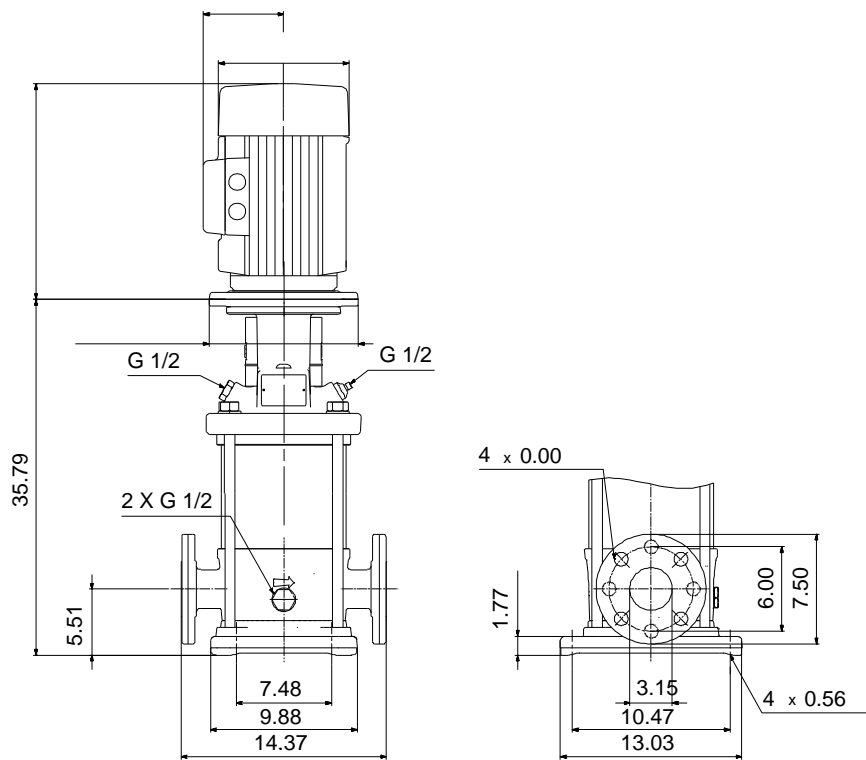
### CR 45-4-2

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: _____	Max pressure at stated temperature: 232 psi / 194 °F	Main frequency: 60 Hz
Head: _____	Shaft seal: HQQV	
Efficiency: _____	Product number: 96415835	
Liquid: Water		
Temperature: 68 °F		
NPSH required: 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:	V

## Tender Text



Product photo could vary from the actual product

Product No.: [96415835](#)

### CR 45-4-2 A-G-A-V-HQQV

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: 3541 rpm  
Pump orientation: Vertical  
Shaft seal arrangement: Single  
Code for shaft seal: HQQV  
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 / 194 °F  
232 psi / -4 °F  
Type of connection: ANSI  
Size of suction port: 3 inch  
Size of outlet port: 3 inch  
Pressure rating: PN 16  
Flange size for motor: 284TC



Company name:

Created by:

Phone:

Date: 2/20/2018

Flange rating inlet: 150 lb

**Electrical data:**

Motor standard: NEMA


Power (P2) required by pump: 30 HP

**Others:**

Net weight: 168 lb

Gross weight: 186 lb

Shipping volume: 10.9 ft<sup>3</sup>

Position	Count	Description
	1	<p data-bbox="336 338 646 369"><b>CR 45-4-2 A-G-A-V-HQQV</b></p>  <p data-bbox="730 680 1192 705" style="text-align: right;">Product photo could vary from the actual product</p> <p data-bbox="336 712 614 743">Product No.: <a href="#">96415835</a></p> <p data-bbox="336 745 866 831">Vertical, non-self-priming, multistage, in-line, centrifugal pump for installation in pipe systems and mounting on a foundation.</p> <p data-bbox="336 864 820 891">The pump has the following characteristics:</p> <ul data-bbox="379 893 970 1005" 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="336 1070 780 1128">Controls: Frequency converter: NONE</p> <p data-bbox="336 1160 432 1187"><b>Liquid:</b></p> <p data-bbox="336 1189 826 1279">Pumped liquid: Water Liquid temperature during operation: 68 °F Density: 62.29 lb/ft<sup>3</sup></p> <p data-bbox="336 1310 467 1337"><b>Technical:</b></p> <p data-bbox="336 1339 906 1485">Speed for pump data: 3541 rpm Pump orientation: Vertical Shaft seal arrangement: Single Code for shaft seal: HQQV Curve tolerance: ISO9906:2012 3B</p> <p data-bbox="336 1516 461 1543"><b>Materials:</b></p> <p data-bbox="336 1545 975 1630">Base: Cast iron EN 1563 EN-GJS-500-7 ASTM A536 80-55-06</p> <p data-bbox="336 1637 868 1722">Impeller: Stainless steel EN 1.4301 AISI 304</p> <p data-bbox="336 1729 791 1787">Bearing material: SIC Support bearing: Graflon</p> <p data-bbox="336 1818 485 1845"><b>Installation:</b></p> <p data-bbox="336 1848 948 1906">Max pressure at stated temperature: 232 psi / 194 °F 232 psi / -4 °F</p> <p data-bbox="336 1912 783 2085">Type of connection: ANSI Size of suction port: 3 inch Size of outlet port: 3 inch Pressure rating: PN 16 Flange size for motor: 284TC Flange rating inlet: 150 lb</p>



Company name:

Created by:

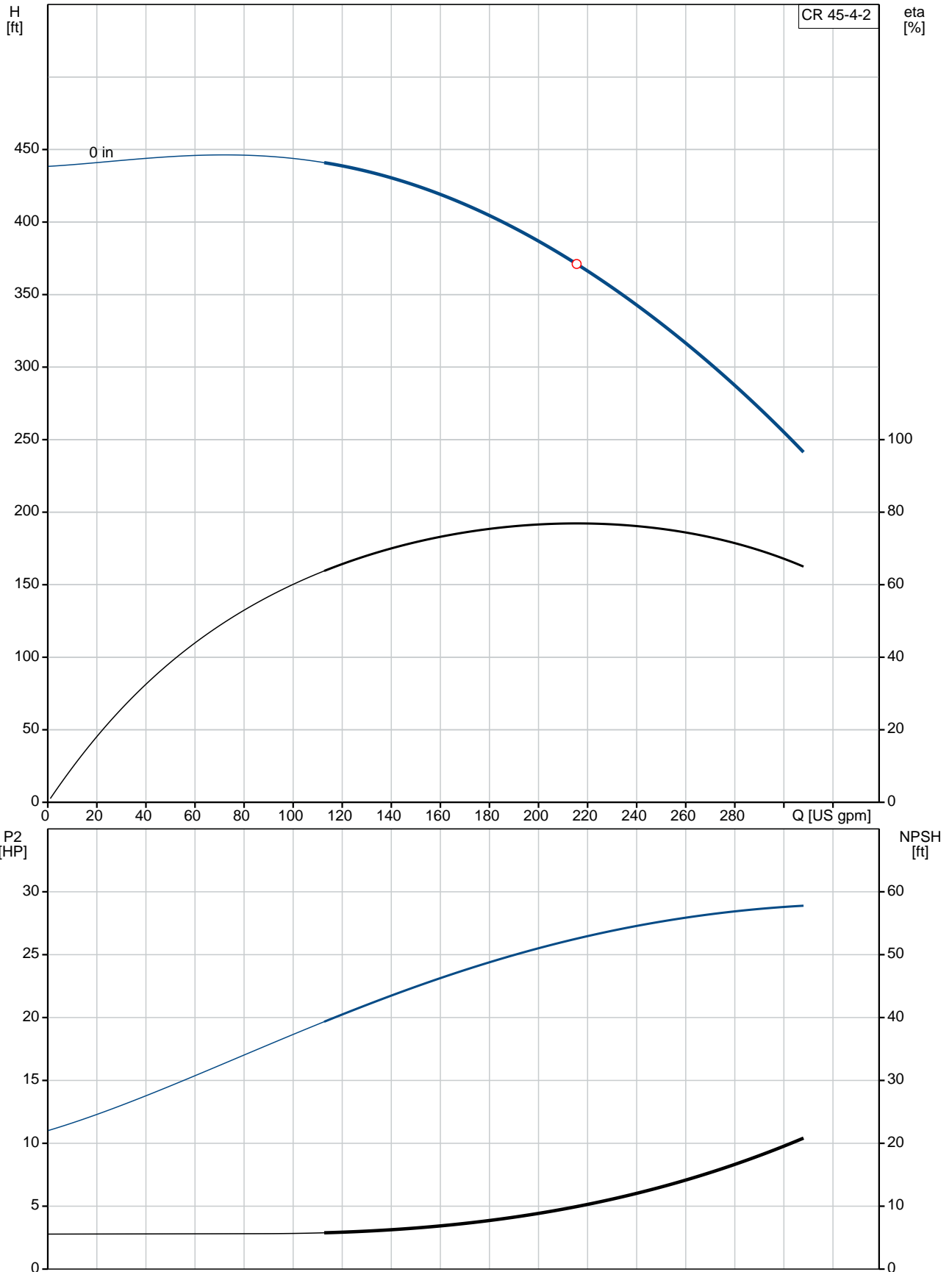
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Date:

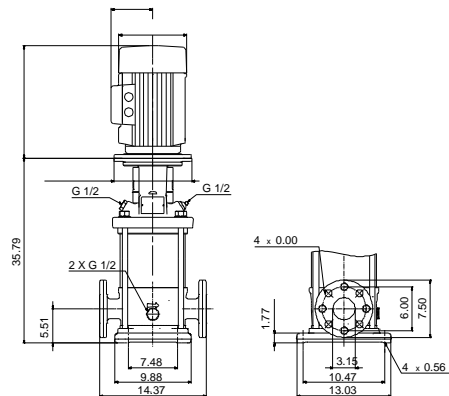
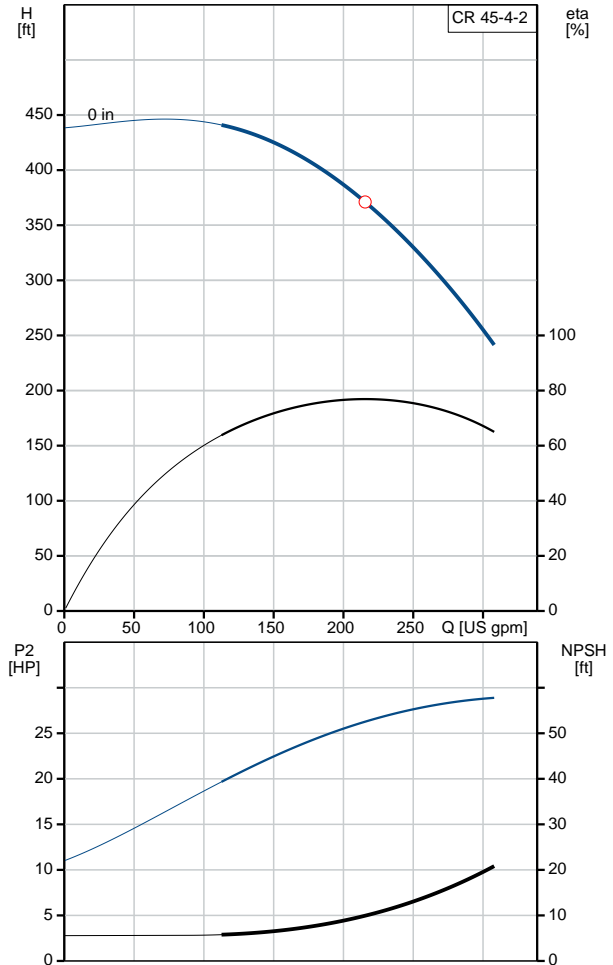
2/20/2018

Position	Count	Description
		<p><b>Electrical data:</b></p> <p>Motor standard: NEMA Power (P2) required by pump: 30 HP</p> <p><b>Others:</b></p> <p>Net weight: 168 lb Gross weight: 186 lb Shipping volume: 10.9 ft<sup>3</sup></p>

## 96415835 CR 45-4-2 60 Hz

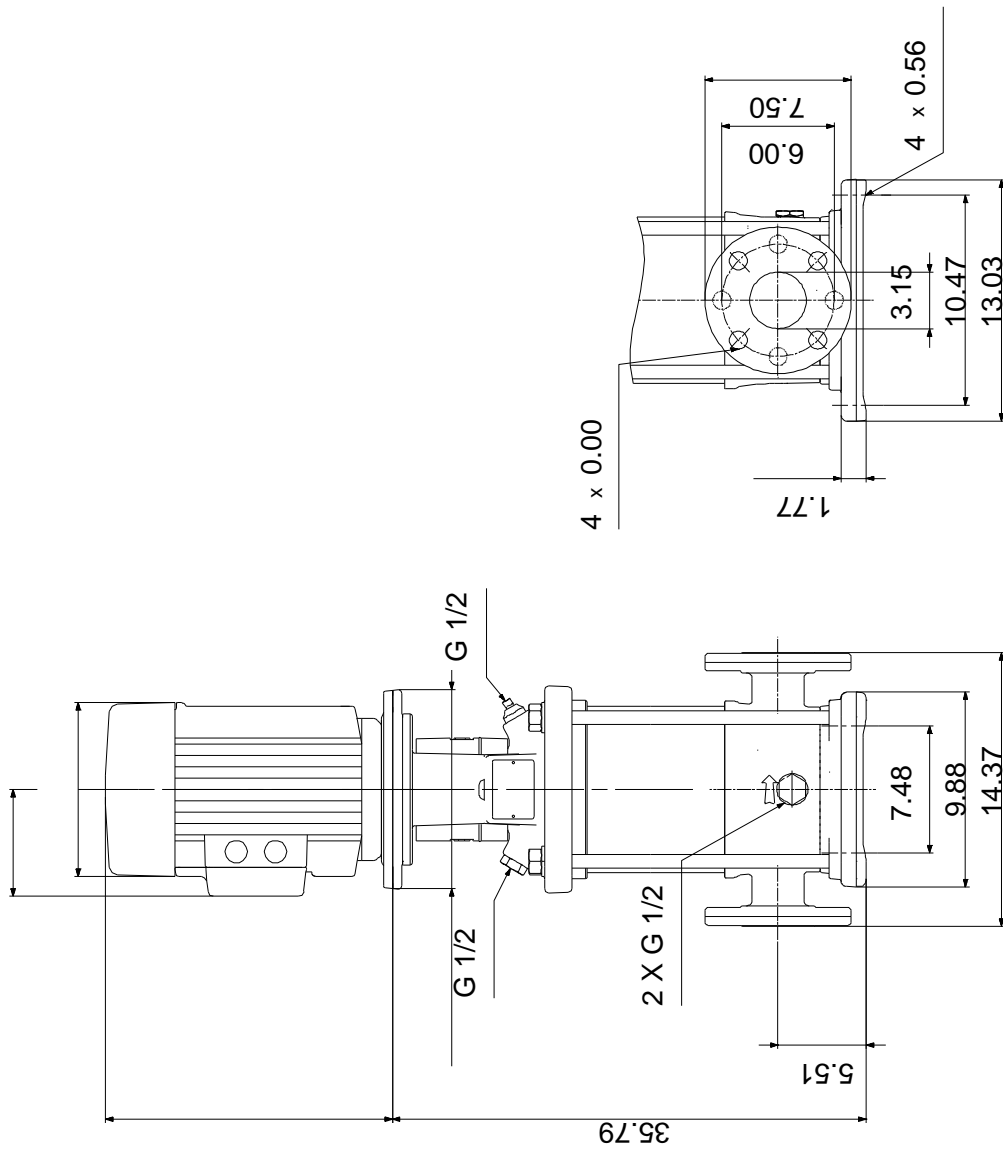


Description	Value
<b>General information:</b>	
Product name:	CR 45-4-2 A-G-A-V-HQQV
Product No.:	96415835
EAN:	5700390649494
<b>Technical:</b>	
Speed for pump data:	3541 rpm
Stages:	4
Impellers:	4
Number of reduced-diameter impellers:	2
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQV
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:	V
Bearing material:	SIC
Support bearing:	Graflon
<b>Installation:</b>	
Max pressure at stated temperature:	232 psi / 194 °F 232 psi / -4 °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:	284TC
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:	30 HP
<b>Controls:</b>	
Frequency converter:	NONE
<b>Others:</b>	
Net weight:	168 lb
Gross weight:	186 lb
Shipping volume:	10.9 ft <sup>3</sup>
Sales region:	Namreg





**96415835 CR 45-4-2 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 45-4-2 A-G-A-V-HQQV

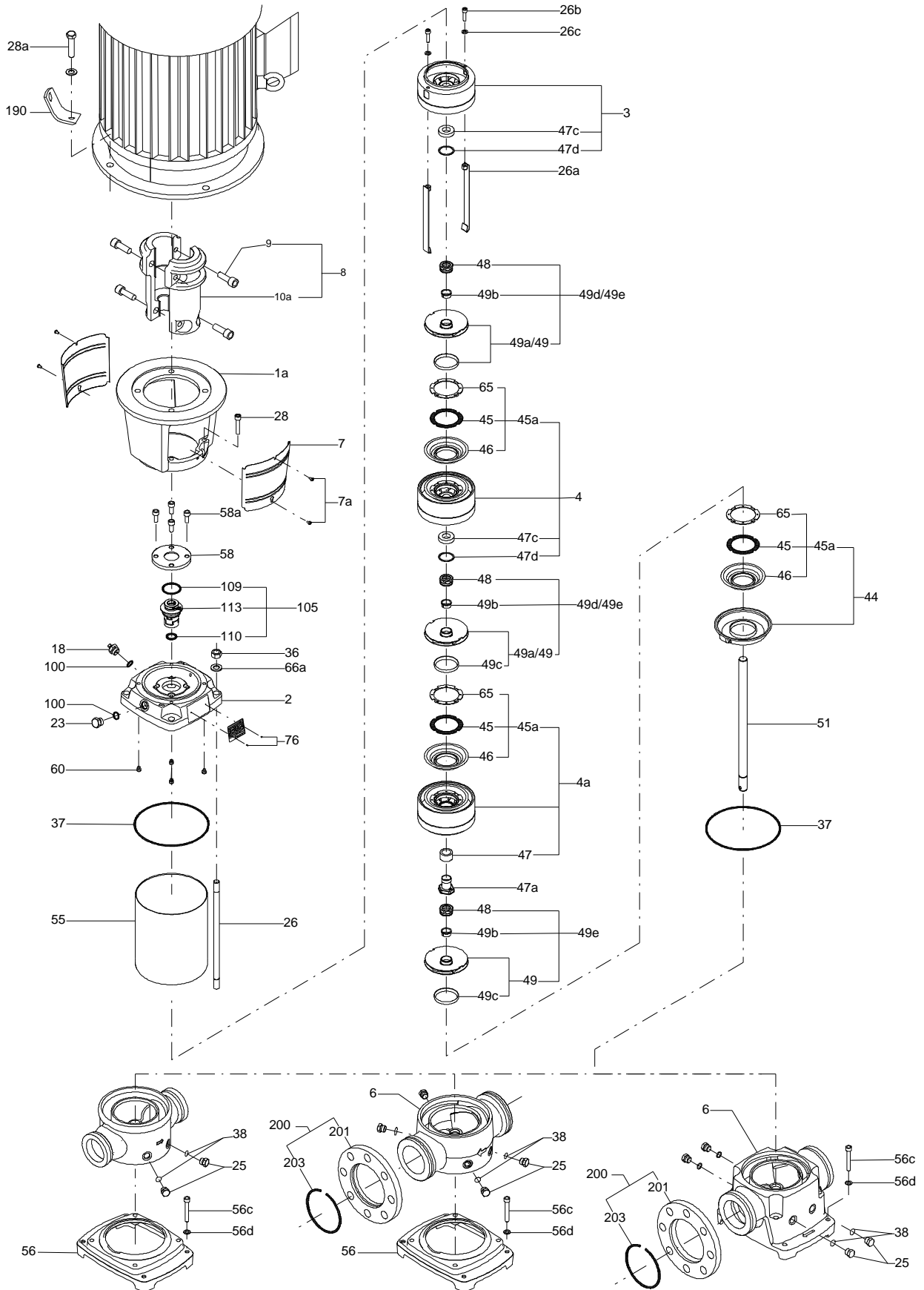
Amount: 1

Product No.: 96415835

Total: Price on request

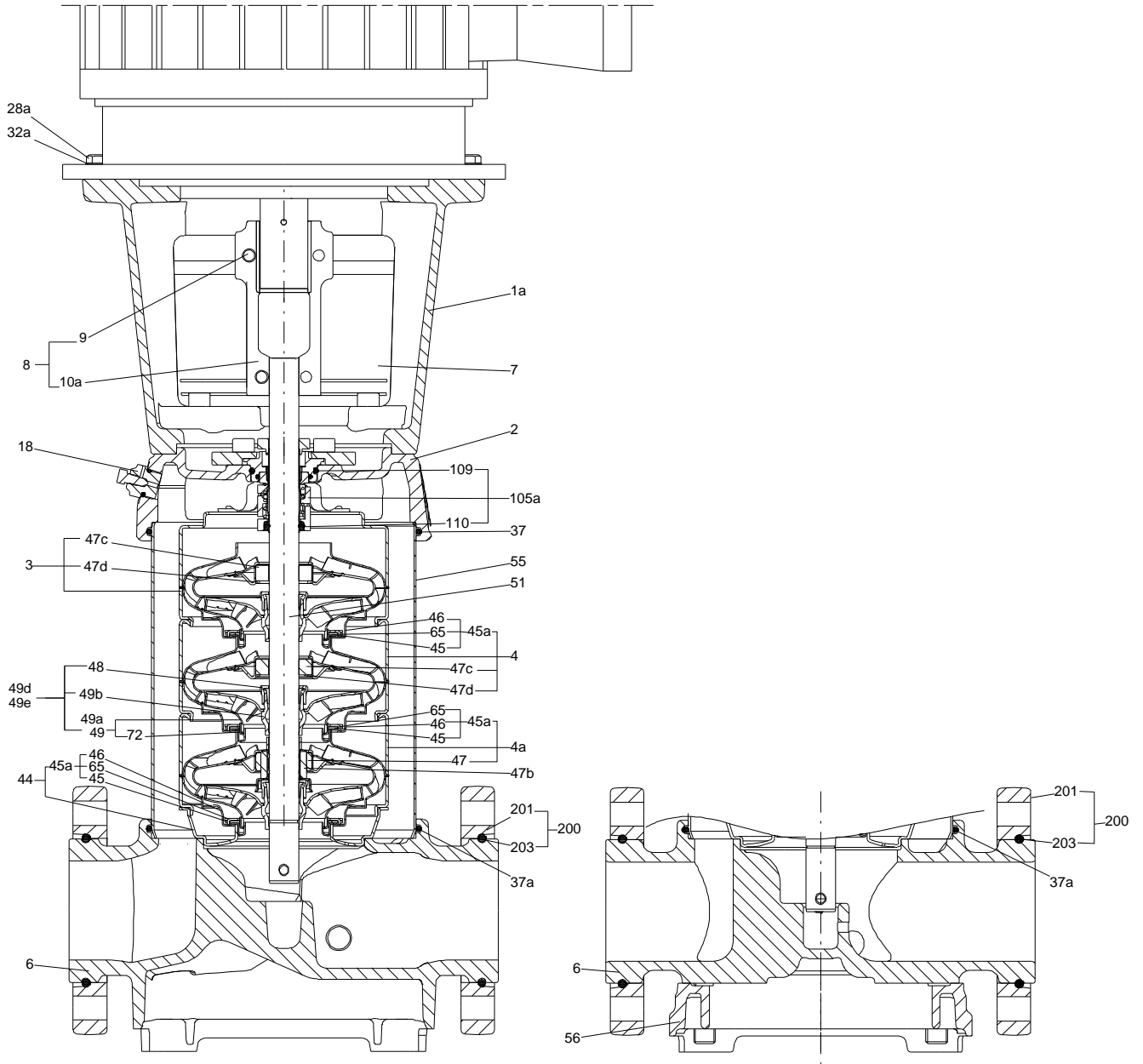
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## Exploded view (TM065558 LACR )



TM065558

Sectional drawing ( TM065571 LACR)



**Parts list CR 45-4-2, Prod number 96415835**

**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	
	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	
2a	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		Diameter: 216			
			Material type: FKM			
			Thickness: 4			
58	Cover					
60	Spring					
100	O-ring		Diameter: 16,3			
			Material type: FKM			
			Thickness: 2,4			
- 6b	Base cpl.		Rubber type: FKM		1	
6	Base					
25	Plug					
32	Washer		Designation: DIN 125A			
			Inner diameter: 6,4			
			Outer diameter: 12,0			
			Thickness: 1,6			
37	O-ring		Diameter: 216			
			Material type: FKM			
			Thickness: 4			
38	O-ring		Diameter: 16,3			
			Material type: FKM			
			Thickness: 2,4			
26	Staybolt		Length: 487		4	
			Thread: M16			
36	Hex nut		Thread: M16		4	
55	Outer sleeve		Outer diameter: 216,0		1	
			Length: 343,5			
66a	Washer		Designation: DIN 125 A		4	
			Inner diameter: 17			
			Outer diameter: 30			
			Thickness: 3			
- 80	Chamber stack				1	
- 3	Upper chamber cpl.					
	Chamber					
	Chamber					

Position	Description	Annotation	Classification data	Part No.	Count	Unit
	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.		Length: 329 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					
	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					
- 1a	Motor stool cpl.				1	pcs
1a	Motor stool				1	
7	Coupling guard				2	
7a	Socket button head screw				4	

Position	Description	Annotation	Classification data	Part No.	Count	Unit
28	Hex socket head cap screw		Designation: DIN 912 Length: 50 Thread: M10		4	
28a	Hex socket head cap screw		Length: 13 Thread: 1/2"		4	
- 8	Coupling cpl.		Dimension: 22/41,2		1	pcs
9	Hex socket head cap screw		Designation: DIN 912 Length: 25 Thread: M10		4	
10a	Coupling half				2	
36	Hex nut				2	pcs
- 105	Shaft seal		Material type: HQQV		1	pcs
	Adjusting fork				1	
109	O-ring		Diameter: 44,45 Material type: FKM Thickness: 3,53		1	
110	O-ring		Diameter: 21,5 Thickness: 4,25		1	