## Submittal Data

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

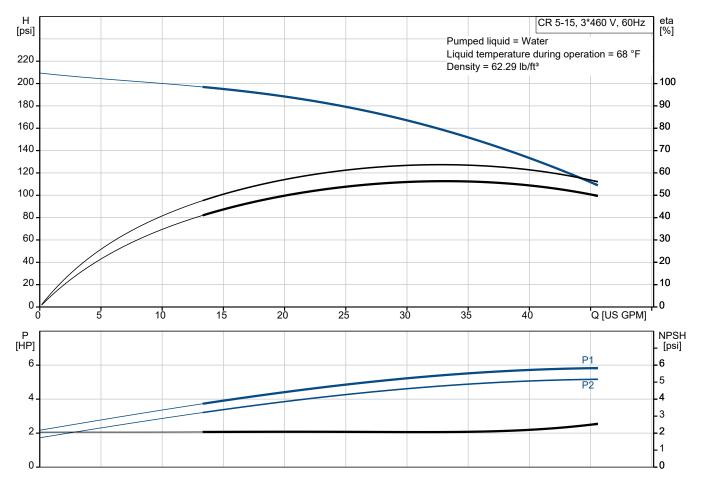


### CR 5-15 K-FGJ-A-E-HQQE

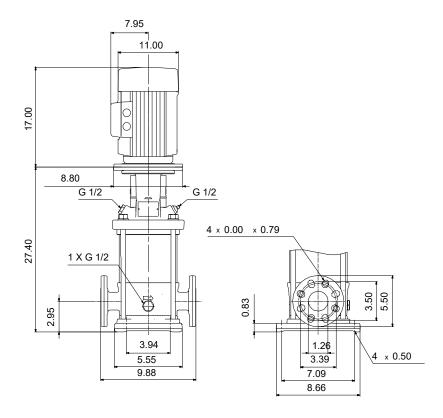
Vertical, multistage centrifugal pump with suction and discharge ports on the same level. The pump head and base are in cast iron - all other wetted parts are in stainless steel (EN 1.4301)

Note! Product picture may differ from actual product

Conditions of Service		Pump Data		Motor Data	
Liquid: Temperature: Specific Gravity:	Water 68 °F 1.000	Max pressure at stated temp: Liquid temperature range: Maximum ambient temperature: Shaft seal: Product number:	363 psi / 250 °F -4 248 °F 104 °F HQQE 99968283	Rated power - P2: Rated voltage: Mains frequency: Enclosure class: Insulation class: Motor protection: Motor type: Eta 1/1:	7.5 HP 230/460 V 60 Hz IP55 F NONE WEG 89.5 %



# Submittal Data



#### Materials:

- Base:CBase:EBase:AImpeller:SImpeller:AImpeller:EMaterial code:ACode for rubber:E
- Cast iron EN 1561 EN-GJL-200 ASTM A48-25B Stainless steel AISI 304 EN 1.4301 A



25/04/2024



Product No.: 99968283

Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and base are in cast iron – all other wetted parts are in stainless steel. A special "Low NPSH" first-stage design reduces the pump's NPSHr value.

A cartridge shaft seal ensures high reliability, safe handling, and easy access and service. Power transmission is via a rigid split coupling. Pipe connection is via combined DIN-ANSI-JIS flanges.

The pump is fitted with a 3-phase, fan-cooled asynchronous motor.

#### Further product details

Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process.

CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface.

An integral part of the process is a pretreatment.

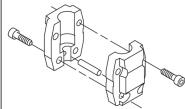
The entire process consists of these elements:

- 1) Alkaline-based cleaning.
- 2) Zinc phosphating.
- 3) Cathodic electro-deposition.
- 4) Curing to a dry film thickness 18-22 my m.

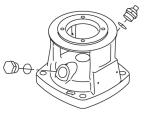
The colour code for the finished product is NCS 9000/RAL 9005.

#### Pump

A standard split coupling connects the pump and motor shaft. It is enclosed in the pump head/motor stool by means of two coupling guards.



The pump head, pump head cover and flange for motor mounting is made in one piece. The pump head has a combined 1/2" priming plug and vent screw.



The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system. This seal type is assembled in a cartridge unit which makes replacement safe and easy. Due to the balancing, this seal type is suitable for high-pressure applications.



25/04/2024

Qty. | Description

1

The cartridge construction also protects the pump shaft from possible wear from a dynamic O-ring between pump shaft and shaft seal.

- Seal faces:
  - Rotating seal ring material: silicon carbide (SiC)
  - Stationary seat material: silicon carbide (SiC)

This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: EPDM (ethylene-propylene rubber)

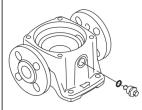
EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.



The shaft seal is screwed into the pump head.

The chambers and impellers are made of stainless-steel sheet. The chambers are provided with a PTFE neck ring offering improved sealing and high efficiency. The impellers have smooth surfaces, and the shape of the blades ensure a high efficiency.

The base is made of cast iron. The flanges and base are cast in one piece. The outlet side of the base has a combined drain plug and bypass valve. The pump is secured to the foundation by four bolts through the base plate.



#### Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with free-hole flange (FF).

Motor-mounting designation in accordance with IEC 60034-7: IM B 5 (Code I) / IM 3001 (Code II).

Electrical tolerances comply with IEC 60034.

The motor efficiency is classified as premium efficiency in accordance with EISA2007.

The motor does not incorporate motor protection and must be connected to a motor-protective circuit breaker which can be manually reset. The motor-protective circuit breaker must be set according to the rated current of the motor (I1/1).

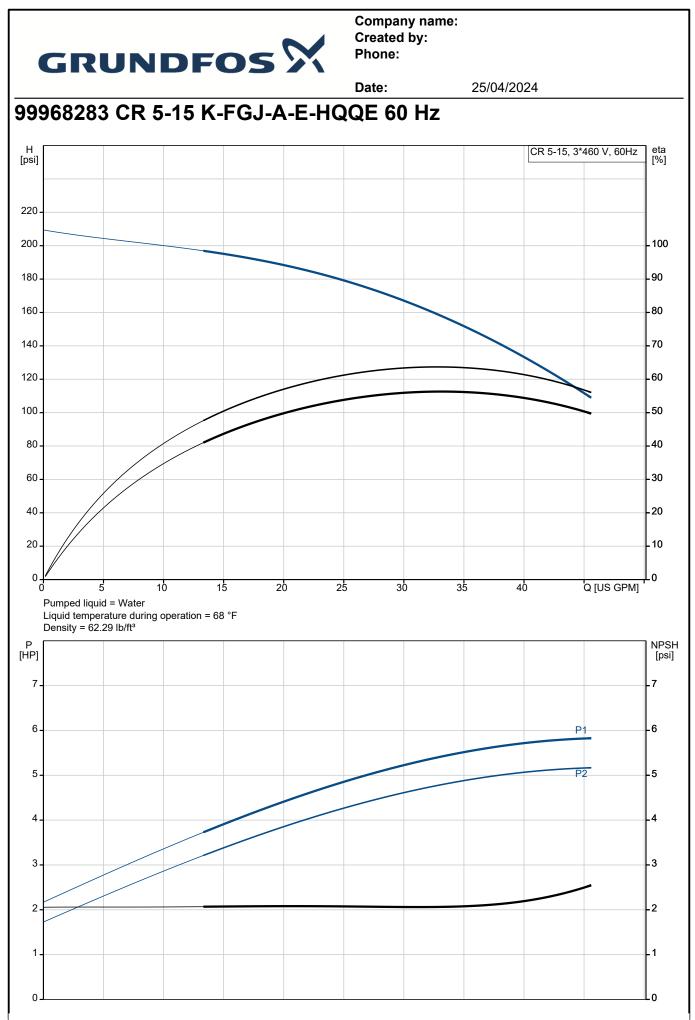
The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center.

#### **Technical data**

Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density:	Water -4 248 °F 68 °F 62.29 lb/ft³
Technical:	
Pump speed on which pump data	are based: 3461 rpm
Rated flow:	30.4 US GPM
Rated head:	159.6 psi
Actual impeller diameter:	2.88 in
Pump orientation:	Vertical

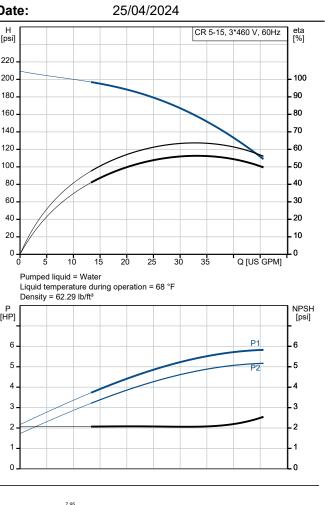


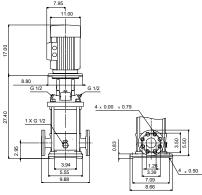
			Date:	25/04/2024	
y.	Description				
	Shaft seal arrangement:	Single			
	Code for shaft seal:	HQQE			
	Approvals:	CURUS			
	Curve tolerance:	ISO9906:2012 3B			
	Materials:				
	Base:	Cast iron			
		EN 1561 EN-GJL-200	)		
		ASTM A48-25B			
	Impeller:	Stainless steel			
		EN 1.4301			
		AISI 304			
	Bearing:	SIC			
	bearing.	510			
	Installation:				
	Maximum ambient temperature:	104 °F			
	Maximum operating pressure:	362.59 psi			
	Max pressure at stated temp:	363 psi / 250 °F			
	<b>- - - -</b>	363 psi / -4 °F			
	Type of connection:	DIN / ANSI / JIS			
	Size of inlet connection:	DN 25/32			
	Size of outlet connection:	DN 25/32			
	Pressure rating for connection:	PN 25			
	Flange rating inlet:	250 lb			
	Flange size for motor:	213TC			
	Electrical data:				
	Motor standard:	NEMA			
	Motor type:	WEG			
	Rated power - P2:	7.5 HP			
	Power (P2) required by pump:	7.5 HP			
	Mains frequency:	60 Hz			
	Rated voltage:	3 x 230/460 V			
	Service factor:	1.15			
	Rated current:	17.3/8.67 A			
	Starting current:	760 %			
	Cos phi - power factor:	0.89			
	Rated speed:	3530 rpm			
	IE efficiency:	IE3 89,5%			
	IE Efficiency class:	IE3 / NEMA Premium			
	Motor efficiency at full load:	89.5 %			
	Motor efficiency at 3/4 load:	88.5 %			
	Motor efficiency at 1/2 load:	87.5 %			
	Number of poles:	2			
	Enclosure class (IEC 34-5):	IP55			
	Insulation class (IEC 85):	F			
	Motor No:	99882381			
		00002001			
	Controls:				
	Frequency converter:	None			
	Othere				
	Others:	0.04			
	DOE Pump Energy Index CL:	0.94			
	Net weight:	210 lb			
	Gross weight:	227 lb			
	Shipping volume:	13.1 ft <sup>3</sup>			
	Country of origin:	US			
	Custom tariff no.:	8413.70.2040			

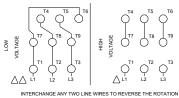




Description	Value	H
Description General information:	Value	[psi]
Product name:	CR 5-15	220 -
rioduct name.	K-FGJ-A-E-HQQE	200 -
Product No:	99968283	180 -
EAN number:	5715114888806	160
Technical:		140 -
Pump speed on which pump data are based:	3461 rpm	120 -
Rated flow:	30.4 US GPM	100 -
Rated head:	159.6 psi	80 -
Maximum head:	209.7 psi	60 -
Actual impeller diameter:	2.88 in	40 -
Stages:	15	20 - //
Impellers:	15	
Number of reduced-diameter impellers:	0	0
Low NPSH:	Y	Pu
Pump orientation:	Vertical	Liq
Shaft seal arrangement:	Single	P
Code for shaft seal:	HQQE	[HP]
Approvals:	CURUS	-
Curve tolerance:	ISO9906:2012 3B	6-
Pump version:	К	5 -
Model:	Α	4 -
Cooling:	IC 411	
Materials:		3-
Base:	Cast iron	2
Base:	EN 1561 EN-GJL-200	1
Base:	ASTM A48-25B	
Impeller:	Stainless steel	0
Impeller:	EN 1.4301	
Impeller:	AISI 304	
Material code:	Α	
Code for rubber:	E	
Bearing:	SIC	17.00
Installation:		1
Maximum ambient temperature:	104 °F	
Maximum operating pressure:	362.59 psi	
Max pressure at stated temp:	363 psi / 250 °F	_
Max pressure at stated temp:	363 psi / -4 °F	27.40
Type of connection:	, DIN / ANSI / JIS	_
Size of inlet connection:	DN 25/32	2.95
Size of outlet connection:	DN 25/32	
Pressure rating for connection:	PN 25	
Flange rating inlet:	250 lb	
Flange size for motor:	213TC	
Connect code:	FGJ	
Liquid:		
Pumped liquid:	Water	
Liquid temperature range:	-4 248 °F	
Selected liquid temperature:	68 °F	
Density:	62.29 lb/ft <sup>3</sup>	
Electrical data:	02.29 ID/IL	
Motor standard:	NEMA	
Motor type:	WEG	
Rated power - P2:	7.5 HP	
Power (P2) required by pump:	7.5 HP	
Mains frequency:	60 Hz	
Rated voltage:	3 x 230/460 V	







 T1-BLU
 T2-WHT

 T3-ORG
 T4-YEL

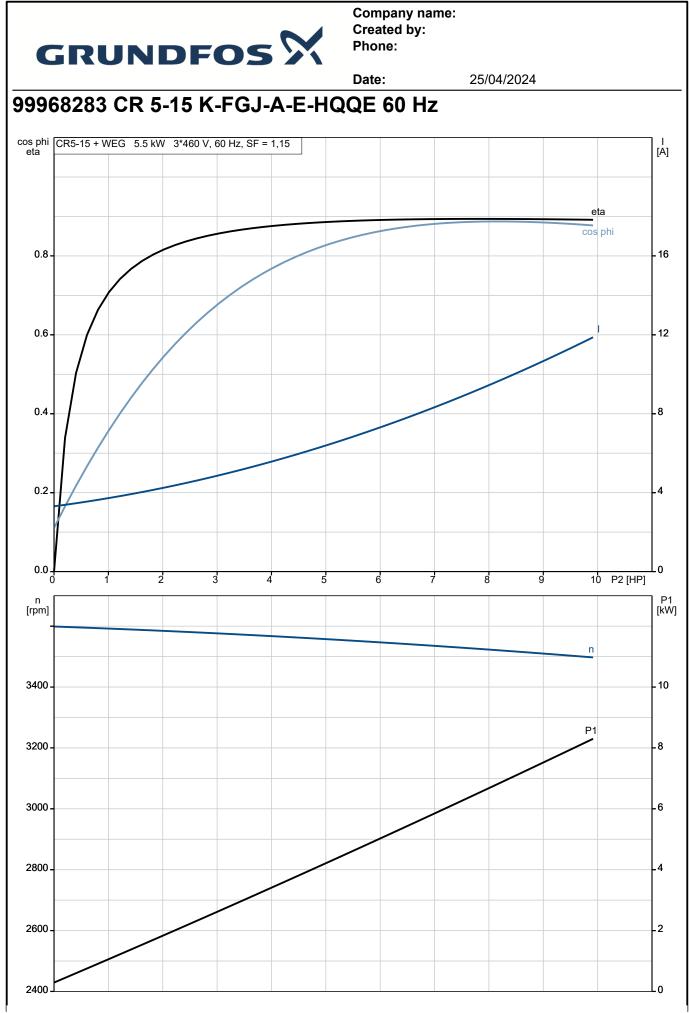
 T5-BLK
 T6-GRY

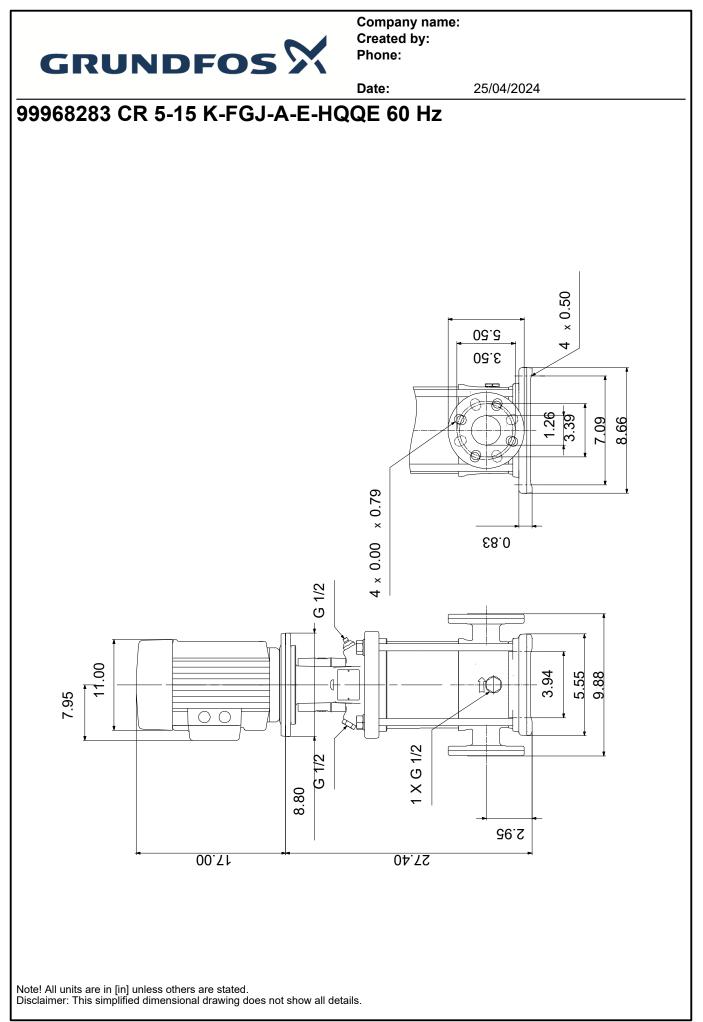
 T7-PNK
 T8-RED

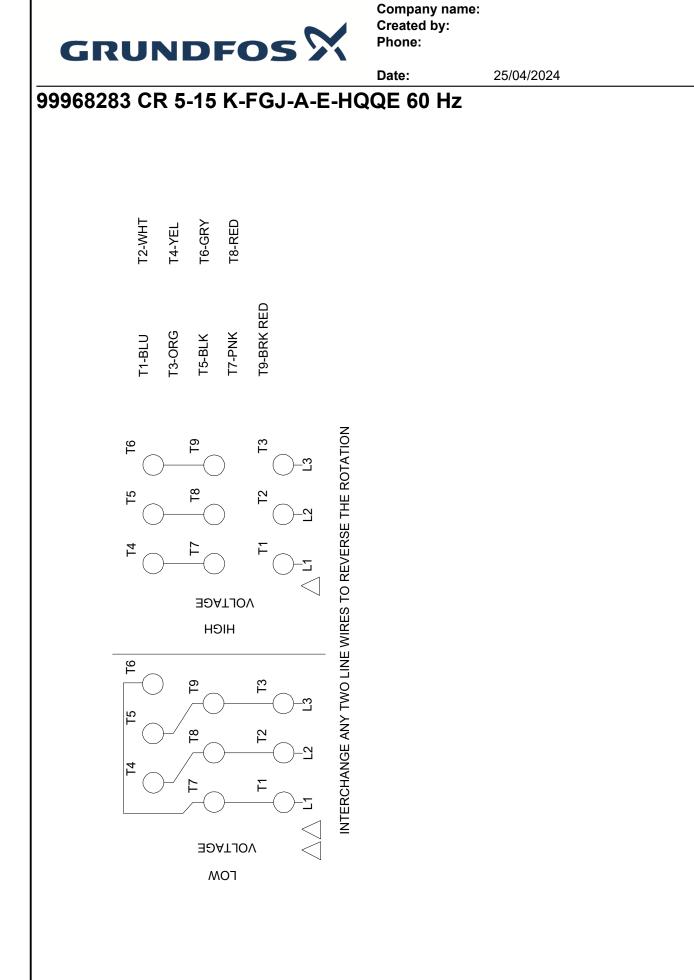
 T9-BRK RED



		Date:	25/04/2024
Description	Value		
Service factor:	1.15	_	
Rated current:	17.3/8.67 A		
Starting current:	760 %		
Full load SF current:	19.9/9.97 A		
Cos phi - power factor:	0.89		
Rated speed:	3530 rpm		
IE efficiency:	IE3 89,5%		
IE Efficiency class:	IE3 / NEMA Premium		
Motor efficiency at full load:	89.5 %		
Motor efficiency at 3/4 load:	88.5 %		
Motor efficiency at 1/2 load:	87.5 %		
Number of poles:	2		
Enclosure class (IEC 34-5):	IP55		
Insulation class (IEC 85):	F		
Built-in motor protection:	NONE		
Motor No:	99882381		
Controls:			
Frequency converter:	None		
Others:			
DOE Pump Energy Index CL:	0.94		
Net weight:	210 lb		
Gross weight:	227 lb		
Shipping volume:	13.1 ft <sup>3</sup>		
Country of origin:	US		
Custom tariff no.:	8413.70.2040		







Note! All units are in [in] unless others are stated.