

## Submittal Data

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

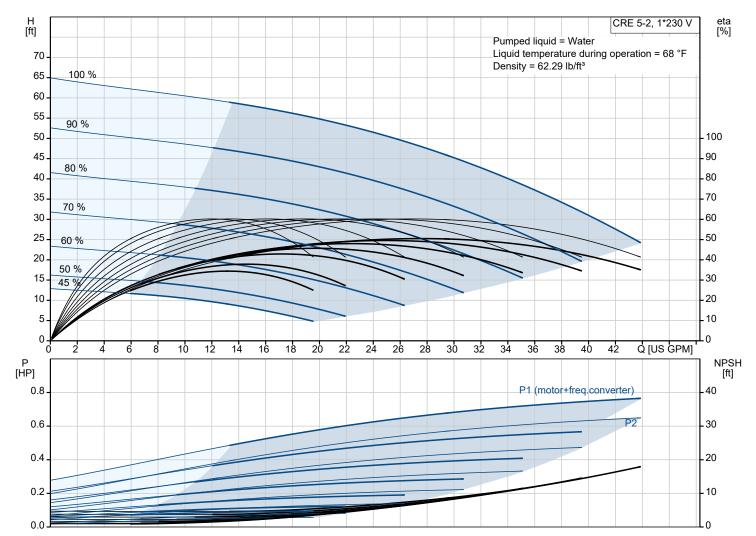


#### CRE 5-2 N-FGJ-A-E-HQQE

Vertical, multistage centrifugal pump with integrated frequency converter. The pump head and base are in cast iron - all other wetted parts are in stainless steel (EN 1.4301)

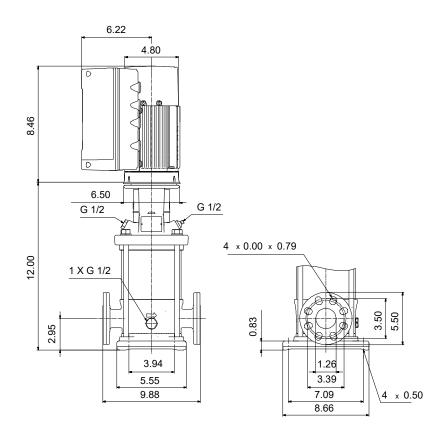
Note! Product picture may differ from actual product

Conditions of	of Service	Pump Data		Motor Da	ata
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 122 °F HQQE 99340864	Rated power - P2: Rated voltage: Mains frequency: Enclosure class: Insulation class: Motor protection: Motor type: Eta 1/1:	0.75 HP 200-240 V 60 Hz IP55 F ELEC 71A 85.3 %



## Submittal Data

# **GRUNDFOS**



#### Materials:

Base: Cast iron Base: EN 1561 EN-GJL-200 Base: **ASTM A48-25B** Impeller: Stainless steel Impeller: AISI 304 Impeller: EN 1.4301 Material code: А Code for rubber: Е

Qty. Description				
1 CRE 5-2 N-FGJ-A-E-HQQE	CRE 5-2 N-FGJ-A-E-HQQE			
Pice X				
Product No.: 99340864	Note! Product picture may differ from actual product			
– all other wetted parts are in si	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 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 motor efficiency is classifie The motor includes a frequency	The pump is fitted with a 1-phase, fan-cooled, permanent-magnet, synchronous motor. The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2. The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of			
the motor speed, which again e	enables adaptation of the performance to a given requirement. tor terminal box features a four-inch TFT display, push-buttons and the Grundfos Eye indicator.			
The push-buttons are used to n	The display gives an intuitive and user-friendly interface to all functions. The push-buttons are used to navigate through the menu structure to access pump and performance data on site and enable setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop".			
Communication with the pump settings as well as reading out consumption".	is also possible by means of Grundfos GO Remote (accessory). The remote control enables further of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power			
<ul><li> "Power on": Motor is run</li><li> "Warning": Motor is still</li></ul>	<ul> <li>"Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)</li> </ul>			
The terminal box has a number and outputs are required:				
inputs	)-20 mA, 0-5 V, 0-10 V, 0.5 - 3.5 V; the factory-fitted pressure sensor is connected to one of these			
<ul> <li>5 V voltage supply to po</li> <li>one analog output, 0-10</li> </ul>				
<ul> <li>two configurable digital i</li> <li>two Pt100/Pt1000 inputs</li> </ul>	two configurable digital inputs or open-collector outputs			
LiqTec, dry-running prot	ection sensor input			
<ul> <li>Grundfos Digital Sensor</li> <li>24 V voltage supply for s</li> </ul>				
0 11 9	two signal-relay outputs (potential-free contacts)			
interface for Grundfos C	IM fieldbus module.			
Liquid:				
Pumped liquid:	Water			
Liquid temperature range: Selected liquid temperature:	-4 248 °F 68 °F			
Density:	62.29 lb/ft <sup>3</sup>			
Technical:	Technical:			
Pump speed on which pump da				
Rated flow:	30.4 US GPM			
Rated head: Pump orientation:	42.98 ft Vertical			
Shaft seal arrangement:	Single			
Code for shaft seal:				
Approvals:	CURUS			
Approvals for drinking water: Curve tolerance:	NSF/ANSI 61 ISO9906:2012 3B			
Materials:				

Gy         Description           Base:         Cast iron BYTE ALS200 Stainless steel EN 1.4301 ALS200 ALS200 Base:         Cast iron BYTE ALS200 ALS200 ALS200 ALS200 ALS200 Base:           Impelie:         Stainless steel EN 1.4301 ALS200 Base:         Stainless steel EN 1.4301 ALS200 Base:           Hamilton:         Stainless steel EN 1.4301 ALS200 Base:         Stainless steel EN 1.4301 Base:           Maximum perating pressure:         322.50 pail Base:         Base:           Maximum perating pressure:         325.30 i / 4" F           Type of connection:         DN 2552 Base:         DN 2552 Base:           Size of fulle connection:         DN 2552 Base:         DN 2552 Base:           Flange stee for motor:         DN 2552 Base:         DN 2552 Base:           Flange stee for motor:         SB 250 FBase:         THP Prover (P2) required by pump:           Motor facture:         NEMA Motor facture:         NEMA Motor facture:           Maxim facture:         1 0.75 HP Prover (P2) required by pump:         0.75 HP Prover (P2) required by pump:           Maxim facture:         1 3.89 0.0 A Service factor:         1.0           Rated voltage:         1 3.89 0.0 A Service factor:         3.89 0.0 A Service factor:           Rated voltage:         1 3.89 0.0 A Service factor:         3.89 0.0 A Service factor:           Rated voltage:         3.89 0	Oty	Description	
EN 1661 EN-GJL-200 ASTM A48-25BImpeller:Stainless steel EN 1.4301 Alst 304Bearing:SICInstallation:tt max amb:122 'FMaximum operating pressure:362.59 psiMax pressure at stated term:365 psi /250 'F365 psi /24 'F365 psi /24 'FType of connection:DN 25/32Size of outlet connection:DN 25/32Size of outlet connection:DN 25/32Pressure rating for connection:DN 25/32Pressure rating for connection:N 25/32Pressure rating for connection:DN 25/32Pressure rating for connection:N 25/32Pressure standard:NEMAMotor type:71ALie Efficiency class:Lie5Rated power (P2) required by pump:0.75 HPPower (P2) required by pump:0.75 HPPower (P2) required by pump:0.75 HPMains frequency:60 HzRated speed:360-4000 rpmEfficiency class:Lie5Rated speed:360-4000 rpmEfficiency:83%	Qty.		•
ASTM A48-25B         Impeller:       Stalless steel EN 1 4301 AISI 304         Bearing:       SIC         Installation:		Base:	
Impeller:Stainless steel EN 1.4301 AIS 304Bearing:SICInstallation:Itaki 304Imax amb:122 °FImaximum operating pressure:362.59 psiMaximum operating pressure:362.59 psiMax pressure at stated temp:363 psi / 250 °F363 psi / 4 °F363 psi / 4 °FType of connection:DIN / ANSI / JISSize of outlet connection:DN 25/32Pressure rating for connection:DN 25/32Pressure factor:1.0Rated power - P2:0.75 HPPower (P2) required by pump:0.75 HPPower (P2) required by pump:0.75 HPPower (P2) required by pump:0.75 HPPower (P2) required for connection:9.88Pressure sate (EC 34-5):IP56Insulation class (IEC 35):F5Insulation class (IEC 35):F5Insulati			
Image: Since and Sin		Impeller	
AISI 304         Bearing:       SiC         Installation:       Itaxamb:         Installation:       122 °F         Maximum operating pressure:       362 59 psi         Max pressure at stated temp:       363 psi / 4 °F         Type of connection:       DIN / ANSI / JIS         Size of inlet connection:       DN 25/32         Pressure rating for connection:       DN 25/32         Bate dout connection:       DN 25/32         Bate dout connection:       DN 25/32         Pressure rating for connection:       DN 25/32         Bate dout connection:			
Bearing:       SIC         Installation:       122 °F         Maximum operating pressure:       362.59 psi         Max pressure at stated temp:       363 psi / 250 °F         363 psi / 4 °F       363 psi / 4 °F         Type of connection:       DIN / ANSI / JIS         Size of inite connection:       DN 25/32         Pressure rating for connection:       DN 25/32         Bated power - P2:       0.75 HP         Maxing frequency:       60 Hz         Rated opeed:       300-4000 rpm         Enclosure class (IEC 85):       F			
Installation:       122 °F         Imax amb:       122 °F         Maximum operating pressure:       362,59 psi         Max pressure at state temp:       363 psi / 250 °F         363 psi / 4 °F       7         Type of connection:       DIN / ANSI / JIS         Size of inlet connection:       DN 25/32         Pressure rating for connection:       DN 25/32         Pressure rating for connection:       DN 25/32         Flange rating inlet:       250 lb         Flange size for motor:       56C         Electrical data:       Motor standard:         Motor type:       71A         IE Efficiency class:       IE5         Rated power - P2:       0.75 HP         Power (P2) required by pump:       0.75 HP         Motor type:       1 x 200-240 V         Service factor:       1.0         Rated outrent:       3.45-290 A         Cos phi - power factor:       0.98         Rated speed:       360-4000 pm         Efficiency:       85.3 %         Motor efficiency at full load:       85.3 %         Enclosure class (IEC 85):       F         Motor No:       98362271         Controls:       Frequency converter:		Bearing:	
Imax amb:12: °FMaximum operating pressure:362,59 paiMax pressure at stated temp:363 pai / 250 °F363 pai / 4 °F363 pai / 4 °FType of connection:DN 25/32Size of nulet connection:DN 25/32Pressure rating for connection:DN 25/32Pressure rating for connection:DN 25/32Pressure rating for connection:DN 25/32Pressure rating for connection:Size of oullet connection:Flange rating inlet:250 lbFlange size for motor:56CElectrical data:Motor type:71AIE Efficiency class:IE5Rated power - P2:0.75 HPPower (P2) required by pump:0.75 HPPower (P2) required by pump:0.75 HPMaxins frequency:60 HzRated voltage:1 x 200-240 VService factor:0.98Rated speed:360-4000 rpmEfficiency atalities:1955Insulation class (IEC 34-5):F55Insulation class (IEC 34-5):F55Insulation class (IEC 35):FMotor reficiency at uil load:85.3 %Motor No:98362271Controls:FFrequency converter:Built-inPressure sensor:YOthers:YNet weight:64.1 lbGross weight:75.1 lb			
Maximum operating pressure:       362.59 psi         Max pressure at stated temp:       363 psi / 4 ° F         Type of connection:       DIN / ANSI / JIS         Size of inlet connection:       DN 25/32         Pressure rating for connection:       DN 25/32         Pressure rating for connection:       DN 25/32         Pressure rating for connection:       DN 25/32         Flange rating inlet:       250 lb         Flange rating inlet:       250 lb         Flange size for motor:       56C         Electrical data:       NEMA         Motor type:       71A         IE Efficiency class:       IE5         Rated power - P2:       0.75 HP         Mains frequency:       60 Hz         Rated voltage:       1 x 200-240 V         Service factor:       1.0         Rated over factor:       0.98         Rated speed:       360.4000 rpm         Efficiency:       85.3%         Motor No:       98362271         Controls:       Frequency converter:         Frequency converter:       Built-in         Pressure sensor:       Y         Others:       64.1 lb         Gors weight:       64.1 lb         Gors weight: </td <td></td> <td></td> <td></td>			
Max pressure at stated temp:363 psi / 250 °F 363 psi / 4 °FType of connection:DIN / ANSI / JISSize of inlet connection:DN 25/32Pressure rating for connection:PN 25Flange rating inlet:250 lbFlange size for motor:56CElectrical data:Motor standard:NEMAMotor type:71AIE Efficiency class:IE5Rated power - P2:0.75 HPPower (P2) required by pump:0.75 HPPower (P2) required by pump:0.75 HPPower (P2) required to pump:0.75 HPRated voltage:1 x 200-240 VService factor:1.0Rated speed:360-4000 rpmEfficiency:85.3%Motor efficiency at full load:85.3%Motor No:98362271Controls:FFrequency converter:Built-inPressure sensor:YOthers:64.1 lbGross weight:75.1 lb			
383 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:       Soft         Pressure rating for connection:       Soft         Pressure rating for connection:       Soft         Pressure rating for connection:       Soft P         Pressure rating for connection:       Soft P         Pressure rating for connection:       Soft P         Pressure factor:       10         Rated speed:       360-4000 rp			
Type of connection:DIN / ANSI / JISSize of inlet connection:DN 25/32Size of outlet connection:DN 25/32Pressure rating for connection:PN 25Flange rating inlet:250 lbFlange size for motor:56CElectrical data:Motor standard:Motor standard:NEMAMotor type:71AIE Efficiency class:IE5Rated power (P2) required by pump:0.75 HPPower (P2) required by pump:0.75 HPMains frequency:60 HzRated voltage:1 x 200-240 VService factor:1.0Rated speed:360-4000 rpmEfficiency:85.3 %Enclosure ficiency at full load:85.3 %Enclosure class (IEC 34-5):IP55Insulation class (IEC 34-5):FMotor No:98362271Controls:Frequency converter:Frequency converter:Built-inPressure sensor:YOthers:64.1 lbGross weight:75.1 lb		Max pressure at stated temp:	
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:       56C         Electrical data:       NEMA         Motor standard:       NEMA         Mains frequency:       60 Hz         Rated outge:       1 x 200-240 V         Service factor:       0.98         Rated speed:       360-4000 rpm         Efficiency:       85.3 %         Enclosure class (IEC 34-5):       F		Turne of connections	
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Pressure rating for connection:PN 25Flange rating inlet:250 lbFlange size for motor:56CElectrical data:Motor standard:Motor standard:NEMAMotor type:71AIE Efficiency class:IE5Rated power - P2:0.75 HPPower (P2) required by pump:0.75 HPMains frequency:60 HzRated voltage:1 x 200-240 VService factor:1.0Rated speed:345-2.90 ACos phi - power factor:0.98Rated speed:360-4000 rpmEfficiency:85.3%Motor efficiency at full load:85.3%Motor No:98362271Controls:FFrequency:Built-inPressure sensor:YOthers:64.1 lbNet weight:64.1 lbGross weight:75.1 lb			
Flange rating inlet:250 lbFlange size for motor:56CElectrical data:NEMAMotor standard:NEMAMotor type:71AIE Efficiency class:IE5Rated power - P2:0.75 HPPower (P2) required by pump:0.75 HPMains frequency:60 HzRated voltage:1 x 200-240 VService factor:1.0Rated current:3.45-2.90 ACos phi - power factor:0.98Rated speed:360-4000 rpmEfficiency:85.3%Motor officiency at full load:85.3 %Enclosure class (IEC 34-5):IP55Insulation class (IEC 34-5):FMotor No:98362271Controls:FFrequency converter:Built-inPressure sensor:YOthers:64.1 lbGross weight:75.1 lb			
Flange size for motor:56CElectrical data: Motor standard:NEMA Motor type:Motor type:71AIE Efficiency class:IE5Rated power - P2:0.75 HPPower (P2) required by pump:0.75 HPMains frequency:60 HzRated voltage:1 x 200-240 VService factor:1.0Rated speed:360-4000 rpmEfficiency:85.3%Motor efficiency at full load:85.3 %Enclosure class (IEC 34-5):IP55Insulation class (IEC 35):FMotor No:98362271Controls:Frequency converter:Pressure sensor:YOthers:KNet weight:64.1 lbGross weight:75.1 lb			
Motor standard:NEMAMotor type:71AIE Efficiency class:IE5Rated power - P2:0.75 HPPower (P2) required by pump:0.75 HPMains frequency:60 HzRated voltage:1 x 200-240 VService factor:1.0Rated current:3.45-2.90 ACos phi - power factor:0.98Rated speed:360-4000 rpmEfficiency:85.3%Motor officiency at full load:85.3 %Enclosure class (IEC 34-5):IP55Insulation class (IEC 85):FMotor No:98362271Controls:FFrequency converter:Built-inPressure sensor:YOthers:Chars:Net weight:64.1 lbGross weight:75.1 lb			56C
Motor standard:NEMAMotor type:71AIE Efficiency class:IE5Rated power - P2:0.75 HPPower (P2) required by pump:0.75 HPMains frequency:60 HzRated voltage:1 x 200-240 VService factor:1.0Rated current:3.45-2.90 ACos phi - power factor:0.98Rated speed:360-4000 rpmEfficiency:85.3%Motor officiency at full load:85.3 %Enclosure class (IEC 34-5):IP55Insulation class (IEC 85):FMotor No:98362271Controls:FFrequency converter:Built-inPressure sensor:YOthers:Chars:Net weight:64.1 lbGross weight:75.1 lb			
Motor type:71AIE Efficiency class:IE5Rated power - P2:0.75 HPPower (P2) required by pump:0.75 HPMains frequency:60 HzRated voltage:1 x 200-240 VService factor:1.0Rated current:3.45-2.90 ACos phi - power factor:0.98Rated speed:360-4000 rpmEfficiency:85.3%Motor efficiency at full load:85.3 %Enclosure class (IEC 34-5):IP55Insulation class (IEC 85):FMotor No:98362271Controls:Frequency converter:Pressure sensor:YOthers:64.1 lbGross weight:75.1 lb			
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Mains frequency:60 HzRated voltage:1 x 200-240 VService factor:1.0Rated current:3.45-2.90 ACos phi - power factor:0.98Rated speed:360-4000 rpmEfficiency:85.3%Motor efficiency at full load:85.3 %Enclosure class (IEC 34-5):IP55Insulation class (IEC 85):FMotor No:98362271Controls:FFrequency converter:Built-inPressure sensor:YOthers:KNet weight:64.1 lbGross weight:75.1 lb			
Rated voltage:1 x 200-240 VService factor:1.0Rated current:3.45-2.90 ACos phi - power factor:0.98Rated speed:360-4000 rpmEfficiency:85.3%Motor efficiency at full load:85.3 %Enclosure class (IEC 34-5):IP55Insulation class (IEC 85):FMotor No:98362271Controls:Frequency converter:FullBuilt-inPressure sensor:YOthers:Net weight:Net weight:64.1 lbGross weight:75.1 lb			
Service factor:1.0Rated current:3.45-2.90 ACos phi - power factor:0.98Rated speed:360-4000 rpmEfficiency:85.3%Motor efficiency at full load:85.3 %Enclosure class (IEC 34-5):IP55Insulation class (IEC 85):FMotor No:98362271Controls:FFrequency converter:Built-inPressure sensor:YOthers:Net weight:Net weight:64.1 lbGross weight:75.1 lb			
Cos phi - power factor:0.98Rated speed:360-4000 rpmEfficiency:85.3%Motor efficiency at full load:85.3 %Enclosure class (IEC 34-5):IP55Insulation class (IEC 85):FMotor No:98362271Controls:Frequency converter:Built-inPressure sensor:YOthers:YNet weight:64.1 lbGross weight:75.1 lb			
Rated speed:360-4000 rpmEfficiency:85.3%Motor efficiency at full load:85.3 %Enclosure class (IEC 34-5):IP55Insulation class (IEC 85):FMotor No:98362271Controls:Frequency converter:Frequency converter:Built-inPressure sensor:YOthers:YNet weight:64.1 lbGross weight:75.1 lb		Rated current:	3.45-2.90 A
Efficiency:       85.3%         Motor efficiency at full load:       85.3 %         Enclosure class (IEC 34-5):       IP55         Insulation class (IEC 85):       F         Motor No:       98362271         Controls:       Frequency converter:         Frequency converter:       Built-in         Pressure sensor:       Y         Others:       64.1 lb         Gross weight:       75.1 lb			
Motor efficiency at full load:       85.3 %         Enclosure class (IEC 34-5):       IP55         Insulation class (IEC 85):       F         Motor No:       98362271         Controls:       Frequency converter:         Frequency converter:       Built-in         Pressure sensor:       Y         Others:       64.1 lb         Gross weight:       75.1 lb			
Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F Motor No: 98362271 Controls: Frequency converter: Built-in Pressure sensor: Y Others: Net weight: 64.1 lb Gross weight: 75.1 lb		Efficiency:	
Insulation class (IEC 85): F Motor No: 98362271 Controls: Frequency converter: Built-in Pressure sensor: Y Others: Net weight: 64.1 lb Gross weight: 75.1 lb		Motor efficiency at full load:	
Motor No:     98362271       Controls:		Inclosure class (IEC 34-5):	
Controls: Frequency converter: Built-in Pressure sensor: Y Others: Net weight: 64.1 lb Gross weight: 75.1 lb		Motor No:	
Frequency converter:       Built-in         Pressure sensor:       Y         Others:       Y         Net weight:       64.1 lb         Gross weight:       75.1 lb			50002211
Frequency converter:       Built-in         Pressure sensor:       Y         Others:       Y         Net weight:       64.1 lb         Gross weight:       75.1 lb		Controls:	
Others: Net weight: 64.1 lb Gross weight: 75.1 lb			Built-in
Net weight:64.1 lbGross weight:75.1 lb		Pressure sensor:	Y
Net weight:64.1 lbGross weight:75.1 lb			
Gross weight: 75.1 lb			

