

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

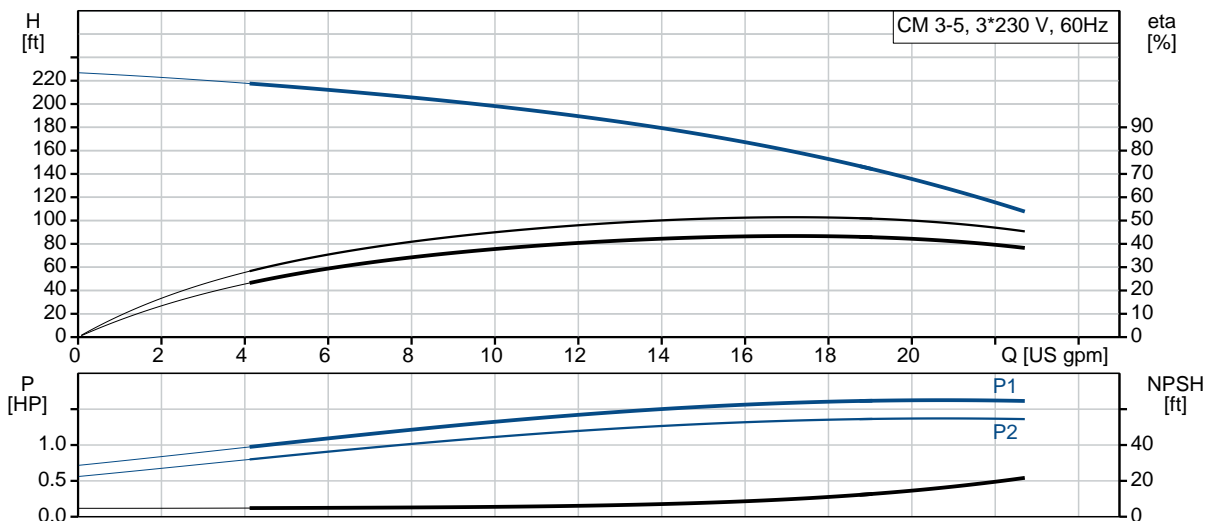
CM 3-5 A-S-A-E-AQQE E-A-A-N

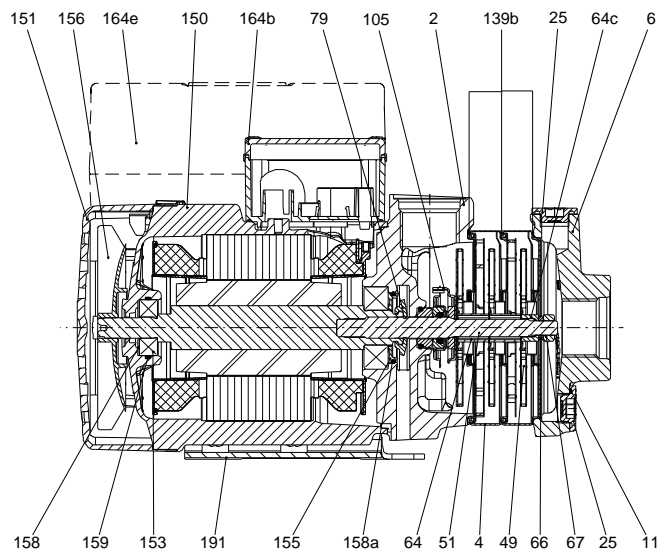
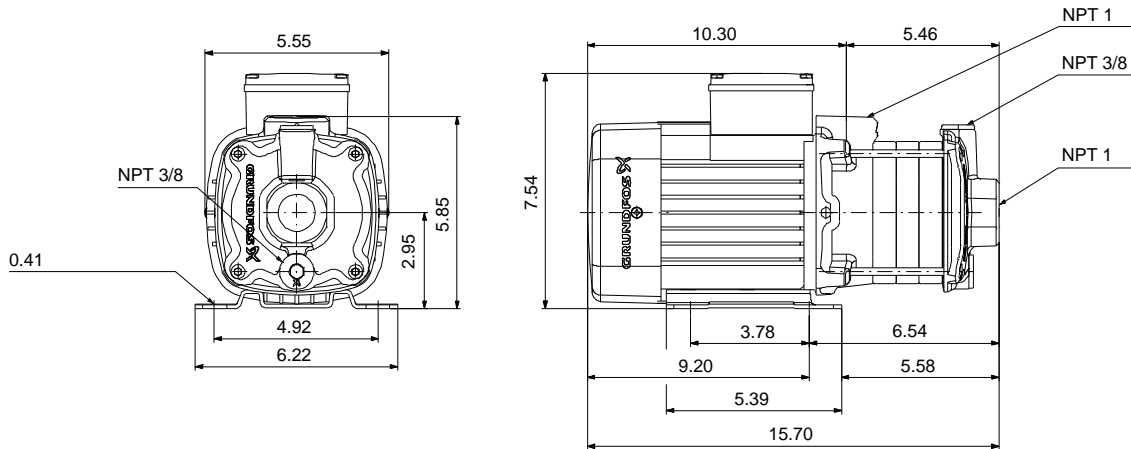


CM are reliable, quiet and compact horizontal end-suction pumps. The modular pump design makes it easy to make customised solutions. The CM pumps are available in cast iron and stainless steel

Product photo could vary from the actual product

Conditions of Service	Pump Data	Motor Data
Flow: _____	Max pressure at stated temperature: 145 psi / 194 °F	Main frequency: 60 Hz
Head: _____	Liquid temperature range: -4 .. 194 °F	Enclosure class: IP55
Efficiency: _____	Maximum ambient temperature: 131 °F	
Liquid: Water	Shaft seal: AQQE	
Temperature: 68 °F	Product number: 99080189	
NPSH required: ft		
Viscosity: _____		
Specific Gravity: 1.000		





165x100


Materials:

Pump housing: Cast iron
ASTM A48-25A

Impeller: Stainless steel
AISI 304
EN 1.4301

Material code: A

Code for rubber: E

Count	Description
1	<p>CM 3-5 A-S-A-E-AQQE E-A-A-N</p>  <p>Product photo could vary from the actual product</p> <p>Product No.: 99080189</p> <p>Compact, reliable, horizontal, multistage, end-suction centrifugal pump with axial suction port and radial discharge port. The shaft, impellers and chambers are made of stainless steel. The inlet and discharge parts are made of cast iron. The mechanical shaft seal is a special designed, unbalanced O-ring seal. Pipework connection is via internal NPT pipe threads.</p> <p>The pump is fitted with a 3-phase, foot-mounted, fan-cooled asynchronous motor.</p> <p>Further product details</p> <p>Pump and motor are integrated in a compact and user-friendly design. The pump is fitted to a low base plate, making it ideal for installation in systems where compactness is important.</p> <p>The state-of-the-art design and materials of the shaft seal ensure high wear resistance, improved sticking and dry-running capabilities and long operating life.</p> <p>Servicing the pump requires no special service tools. Service parts are in stock for quick delivery and are available as kits, single parts or bulk. Service videos are available on www.youtube.com.</p> <p>Pump</p> <p>A combination of a stop ring and a Nord-lock® washer secures a tight and reliable fixation of the impeller spacing pipes to the splined pump shaft. It is possible to remove and fit the hydraulic parts from the pump side. The inlet part, chambers and discharge part are held together by four staybolts.</p> <p>The pump is fitted with an unbalanced O-ring seal with a rigid torque-transmission system. It has a fixed seal driver ensuring a reliable rotation of all parts. The dynamic secondary seal is an O-ring.</p> <p>Primary seal:</p> <ul style="list-style-type: none"> • Rotating seal ring material: silicon carbide (SiC) • Stationary seat material: silicon carbide (SiC) <p>This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.</p> <p>Secondary seal material: EPDM (ethylene-propylene rubber)</p> <p>EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.</p>



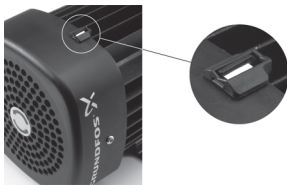
The pump shaft is connected to the motor shaft through a left thread and tight fit. The shaft cannot be dismantled.

Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to EN 50347. Electrical tolerances comply with EN 60034.

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

An installation indicator is fitted to the motor fan cover. Based on the motor cooling air, it indicates the direction of rotation of the motor. The motor is fitted with a directional sticker.



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

Controls:

Frequency converter: NONE

Liquid:

Pumped liquid: Water
Liquid temperature range: -4 .. 194 °F
Selected liquid temperature: 68 °F
Density: 62.29 lb/ft³

Technical:

Pump speed on which pump data are based: 3480 rpm
Rated flow: 16.4 US gpm
Rated head: 164.1 ft
Code for shaft seal: AQQE
Curve tolerance: ISO9906:2012 3B

Materials:

Pump housing: Cast iron
EN-GJL-200
ASTM A48-25A



Company name:

Created by:

Phone:

Date:

3/26/2020

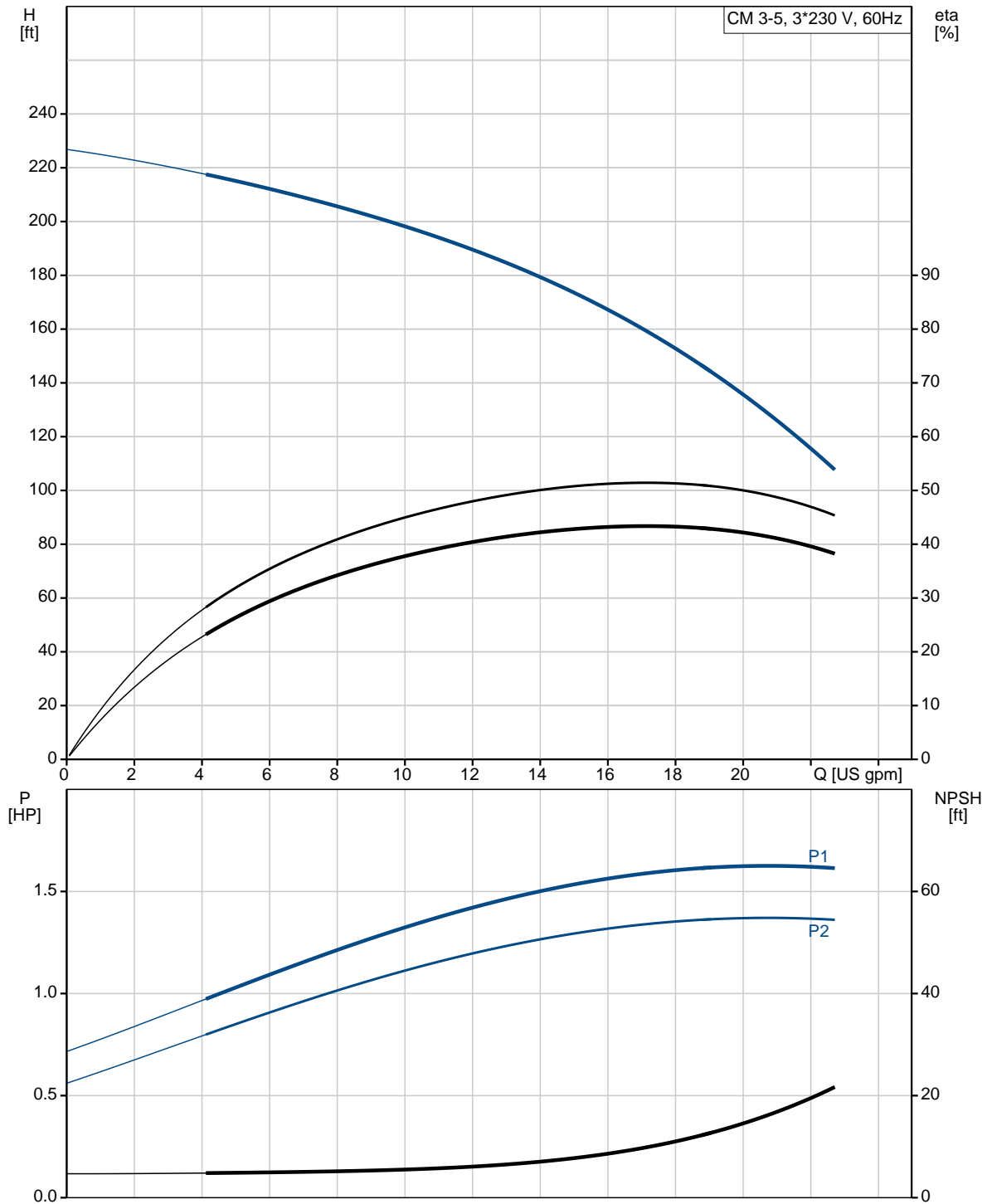
Count	Description
	<p>Impeller: Stainless steel EN 1.4301 AISI 304</p> <p>Installation: Range of ambient temperature: -4 .. 131 °F Maximum operating pressure: 145.04 psi Max pressure at stated temperature: 145 psi / 194 °F 145 psi / 194 °F</p> <p>Type of connection: NPT(F) Size of suction port: 1 inch Size of outlet port: 1 inch Outlet position: 12</p> <p>Electrical data: Motor standard: NEMA Frame size: 80B IE efficiency class: IE3 / NEMA Premium Rated power - P2: 1.48 HP Main frequency: 60 Hz Suitable for 50/60 Hz: N Phase: 3 Rated voltage: 208-230YY/440-480Y V Service factor: 1.00 Rated current: 5,2-5,1/2,55-2,65 A Rated speed: 3430-3470 rpm Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F Built-in motor protection: NONE</p> <p>Others: Terminal box position: 12 Minimum efficiency index, MEI η_{me}: 0.7 Net weight: 34.5 lb Gross weight: 40 lb Approvals: CE,WRAS,ACS,TR,EAC Custom tariff no.: 8413.70.2040</p>



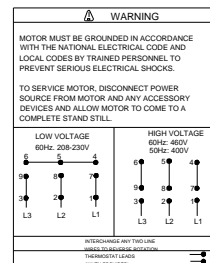
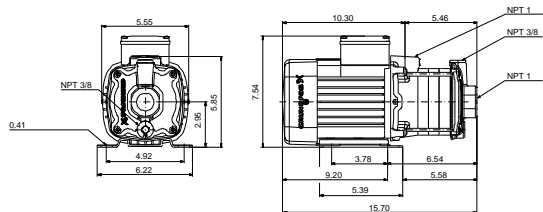
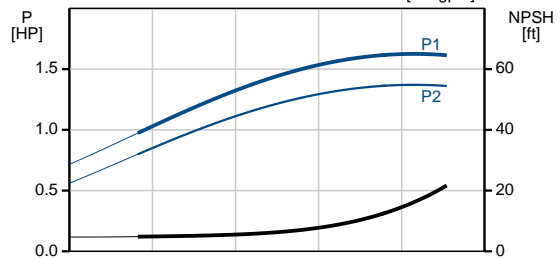
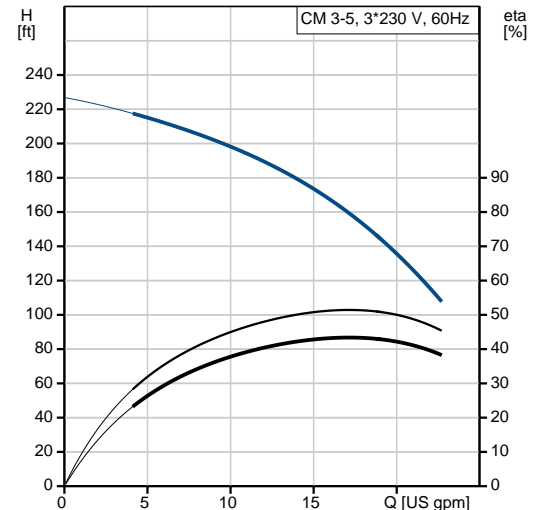
Company name:
Created by:
Phone:

Date: 3/26/2020

99080189 CM 3-5 A-S-A-E-AQQE E-A-A-N 60 Hz



Description	Value
General information:	
Product name:	CM 3-5 A-S-A-E-AQQE E-A-A-N
Product No.:	99080189
EAN:	5712606357673
	5712606357673
Technical:	
Pump speed on which pump data are based:	3480 rpm
Rated flow:	16.4 US gpm
Rated head:	164.1 ft
Impellers:	5
Code for shaft seal:	AQQE
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Materials:	
Pump housing:	Cast iron EN-GJL-200 ASTM A48-25A
Impeller:	Stainless steel EN 1.4301 AISI 304
Material code:	A
Code for rubber:	E
Installation:	
Range of ambient temperature:	-4 .. 131 °F
Maximum operating pressure:	145.04 psi
Max pressure at stated temperature:	145 psi / 194 °F
	145 psi / 194 °F
Type of connection:	NPT(F)
Size of suction port:	1 inch
Size of outlet port:	1 inch
Outlet position:	12
Connect code:	S
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-4 .. 194 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³
Electrical data:	
Motor standard:	NEMA
Frame size:	80B
IE efficiency class:	IE3 / NEMA Premium
Rated power - P2:	1.48 HP
Main frequency:	60 Hz
Suitable for 50/60 Hz:	N
Phase:	3





Company name:

Created by:

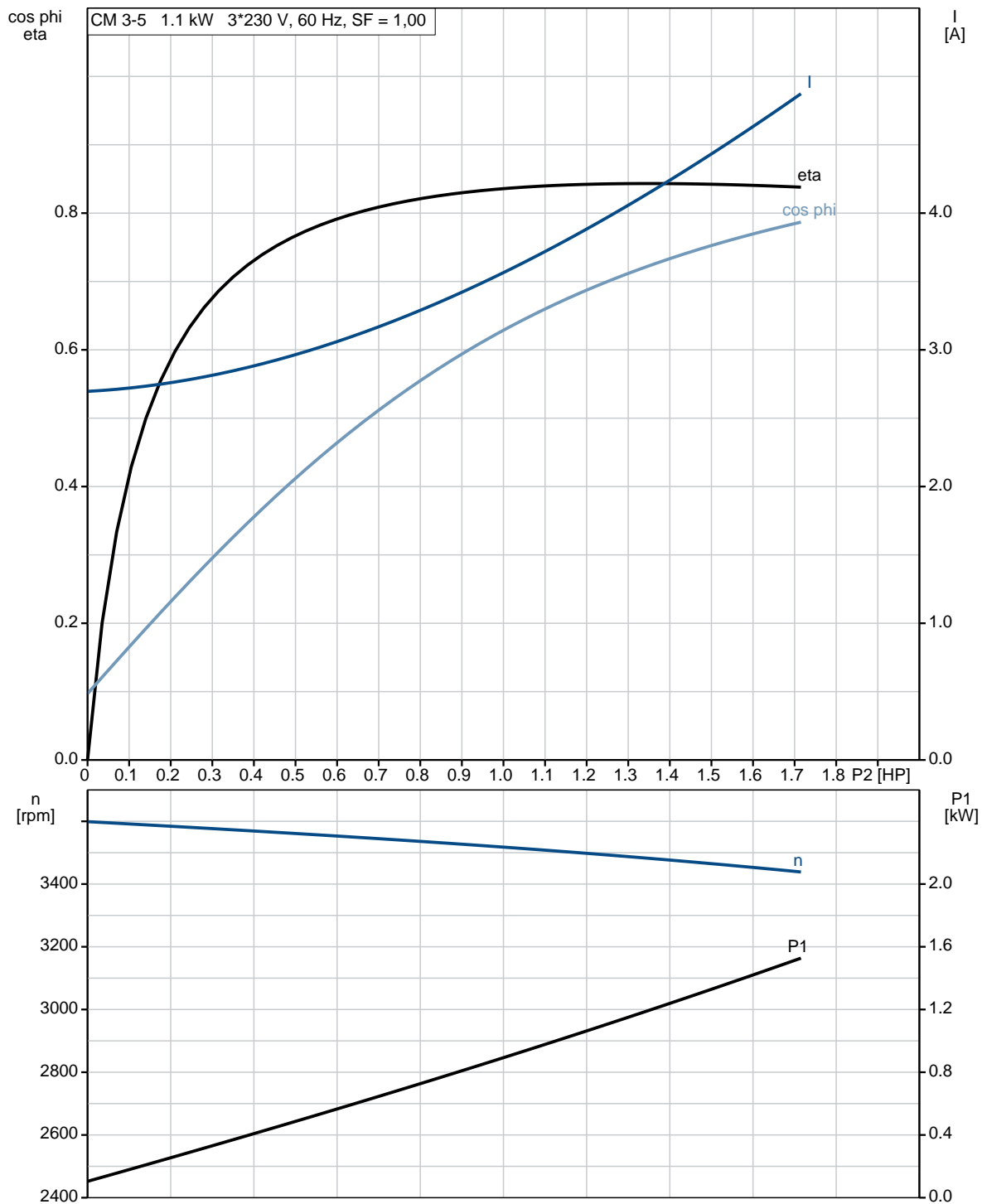
Phone:

Date:

3/26/2020

Description	Value
Rated voltage:	208-230YY/440-480Y V
Service factor:	1.00
Rated current:	5,2-5,1/2,55-2,65 A
Rated speed:	3430-3470 rpm
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	NONE
Controls:	
Frequency converter:	NONE
Others:	
Terminal box position:	12
Minimum efficiency index, MEI â‰¥%â‰¥:	0.7
Net weight:	34.5 lb
Gross weight:	40 lb
Approvals:	CE,WRAS,ACS,TR,EAC
Custom tariff no.:	8413.70.2040

99080189 CM 3-5 A-S-A-E-AQQE E-A-A-N 60 Hz

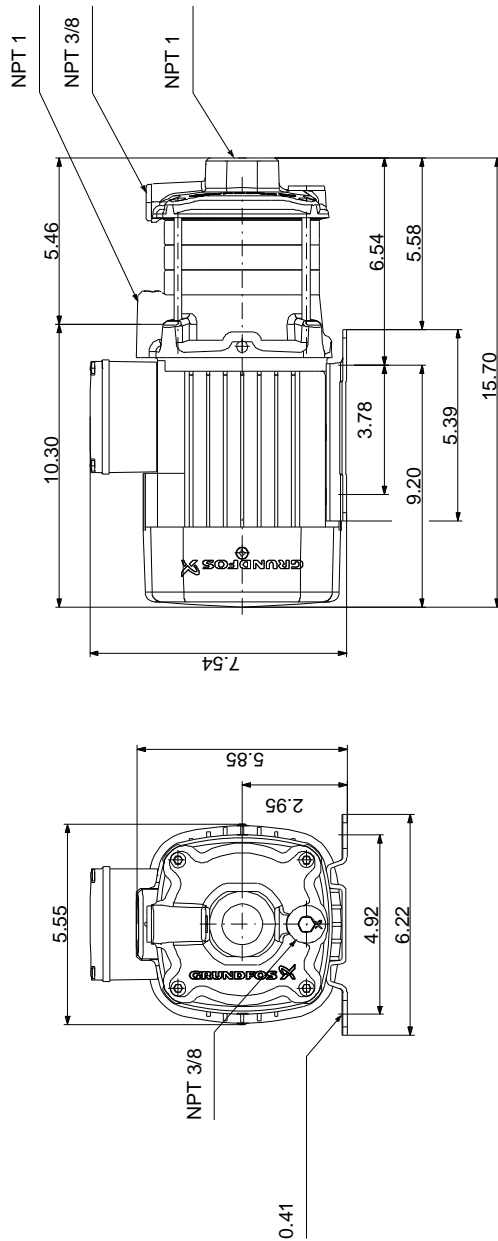




Company name:
Created by:
Phone:

Date: 3/26/2020

99080189 CM 3-5 A-S-A-E-AQQE E-A-A-N 60 Hz



Note! All units are in [in] unless otherwise stated.
Disclaimer: This simplified dimensional drawing does not show all details.

99080189 CM 3-5 A-S-A-E-AQQE E-A-A-N 60 Hz

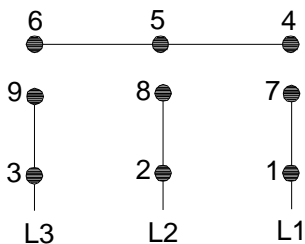


WARNING

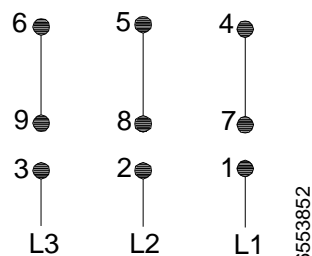
MOTOR MUST BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES BY TRAINED PERSONNEL TO PREVENT SERIOUS ELECTRICAL SHOCKS.

TO SERVICE MOTOR, DISCONNECT POWER SOURCE FROM MOTOR AND ANY ACCESSORY DEVICES AND ALLOW MOTOR TO COME TO A COMPLETE STAND STILL.

LOW VOLTAGE 60Hz. 208-230V



HIGH VOLTAGE 60Hz: 460V 50Hz: 400V



INTERCHANGE ANY TWO LINE

WIRES TO REVERSE ROTATION

THERMOSTAT LEADS

(WHEN PROVIDED)



All units are [in] unless otherwise presented.