Submittal Data

PROJECT:	TPE3 READY TO SHIP	UNIT TAG:		QUANTITY:	1
		TYPE OF SERVICE:			
REPRESENTATIVE:	Hurley Engineering	SUBMITTED BY:	Devin Carle	DATE:	2/10/2020
ENGINEER:		APPROVED BY:		DATE:	
CONTRACTOR:	To Be Determined	ORDER NO.:		DATE:	

TPE2 40-80 N-A-G-I-BQQE-CCB

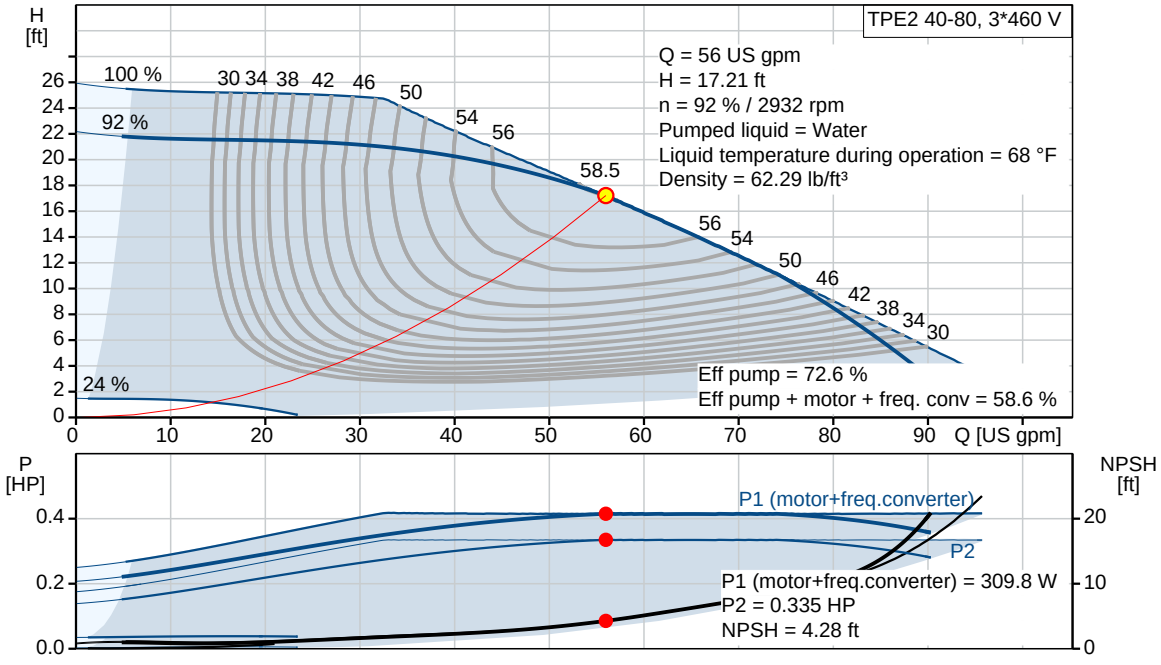
Single-stage stainless steel in-line pumps with frequency converters

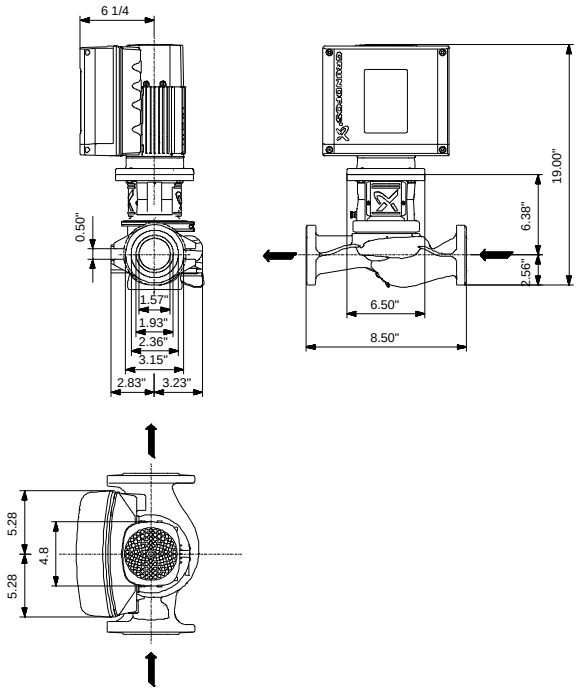
Product photo could vary from the actual product

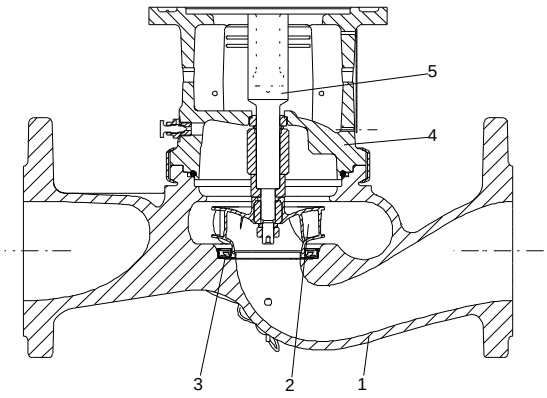
Conditions of Service	
Flow:	56 US gpm
Head:	17.21 ft
Efficiency:	58.6 %
Liquid:	Water
Temperature:	68 °F
NPSH required:	4.28 ft
Viscosity:	
Specific Gravity:	1.000

Pump Data	
Liquid temperature range:	-13 .. 248 °F
Maximum ambient temperature:	122 °F
Shaft seal:	BQQE
Pipe connection:	DN 40
Product number:	98817713

Motor Data	
Rated power - P2:	0.33 HP
Rated voltage:	440-480 V
Main frequency:	60 Hz
Number of poles:	0
Enclosure class:	IP55
Insulation class:	F
Motor protection:	YES
Motor type:	71A
Motor_efficiency:	78.3 %







Materials:

Pump housing:	Stainless steel ASTM CF8
Impeller:	Composite PES/PP 30% GF
Material code:	I

Company name: Hurley Engineering
Created by:
Phone:

Date: 2/28/2020

Count	Description
1	**TPE2 40-80 N-A-G-I-BQQE-CCB**

Product photo could vary from the actual product

Product No.: 98817713

The pump is of the top-pull-out design, i.e. the power head (motor, pump head and impeller) can be removed for maintenance or service while the pump housing remains in the pipework.

The shaft seal is according to EN 12756. Pipework connection is via PN 16 ANSI flanges.

Pipework connection is via PN 16 ANSI flanges.

The pump is fitted with a 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 enables adaptation of the performance to a given requirement.

Further product details

The stainless-steel pump housing makes the pump suitable for circulation of hot water.

The operating panel on the motor terminal box features a four-inch TFT display, push-buttons and the Grundfos Eye indicator.

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 is also possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

The Grundfos Eye indicator on the operating panel provides visual indication of pump status:

- "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)
- "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)
- "Alarm": Motor has stopped (flashing red indicator lights).

Pump

Pump housing and pump head are electrocoated to improve the corrosion resistance.

Electrocoating includes:

1) Alkaline-based cleaning.

Count	Description

2) Pretreatment with zinc phosphate coating.
3) Cathodic electrocoating (epoxy).
4) Curing of paint film at 200-250 °C.

The pump is fitted with an unbalanced rubber bellows seal with torque transmission across the spring and around the bellows. Due to the bellows, the seal does not wear the shaft, and the axial movement is not prevented by deposits on the shaft.

Primary seal:

- 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.

A circulation of liquid through the duct of the air vent screw ensures lubrication and cooling of the shaft seal.

Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.

The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.

Technical data

Controls:

Frequency converter:	Built-in

Liquid:

Pumped liquid:	Water
Liquid temperature range:	-13 .. 248 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³

Technical:

Pump speed on which pump data is based:	2970 rpm
Actual calculated flow:	56 US gpm
Resulting head of the pump:	17.21 ft
Actual impeller diameter:	2.91 in
Code for shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B2

Materials:

Pump housing:	Stainless steel ASTM CF8 EN 1.4308
Impeller:	Composite PES/PP 30% GF

Installation:

Range of ambient temperature:	-4 .. 122 °F
Maximum operating pressure:	PN 16 bar

GRUNDFOS

Company name: Hurley Engineering
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Phone:

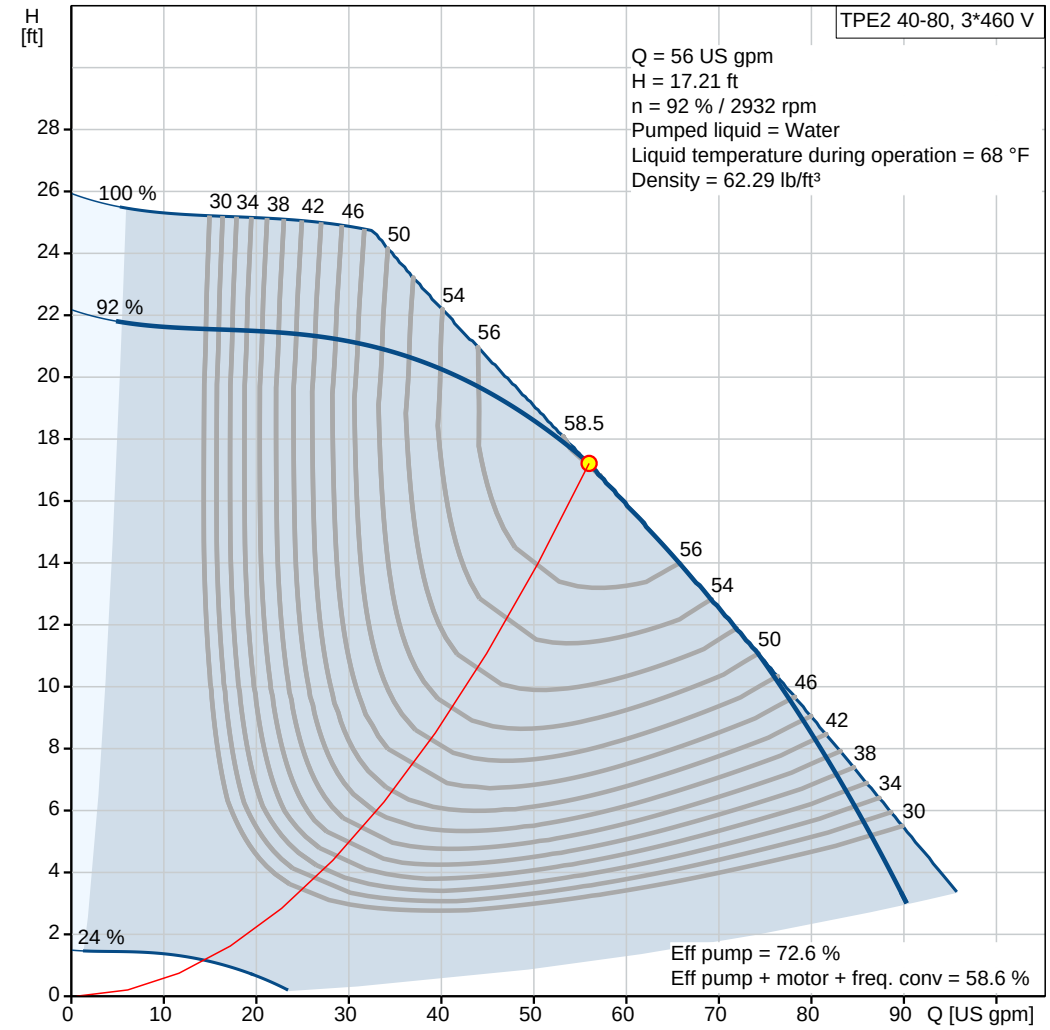
Date: 2/28/2020

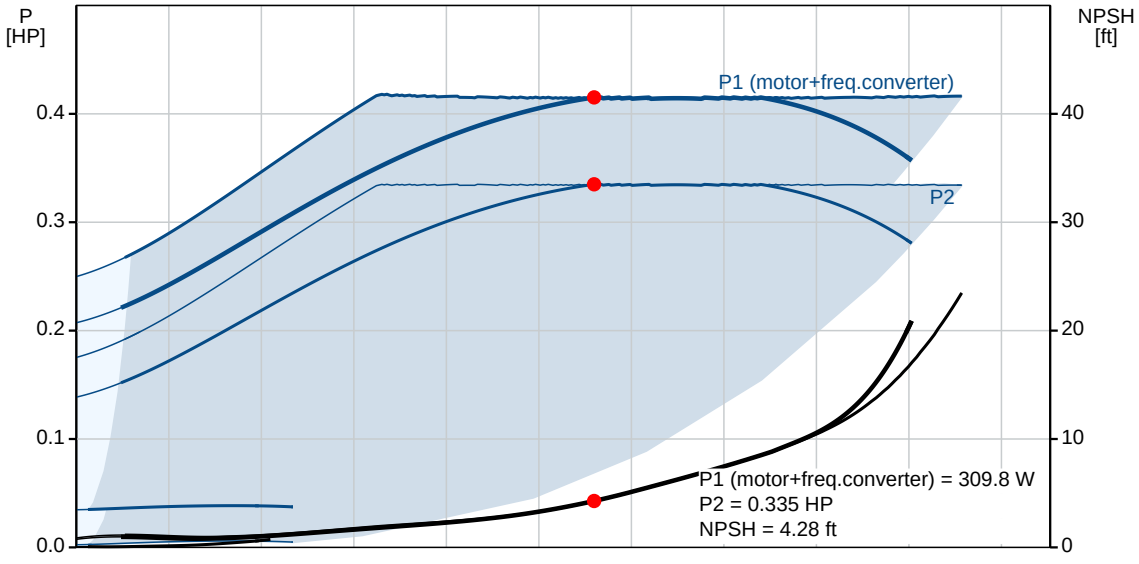
Count	Description	
	Type of connection:	ANSI
	Pipe connection:	DN 40
	Pressure rating for pipe connection:	PN 16
	Flange size for motor:	56C
	Electrical data:	
	Motor type:	71A
	IE Efficiency class:	IE5
	Rated power - P2:	0.33 HP
	Main frequency:	60 Hz
	Rated voltage:	3 x 440-480 V
	Rated current:	0.85 A
	Cos phi - power factor:	0.52
	Rated speed:	360-4000 rpm
	IE efficiency:	78.3%
	Motor efficiency at full load:	78.3 %
	Number of poles:	0
	Enclosure class (IEC 34-5):	IP55
	Insulation class (IEC 85):	F
	Motor Number:	99630334
	Others:	
	Net weight:	50.3 lb
	Gross weight:	66.8 lb

Company name: Hurley Engineering
Created by:
Phone:

Date: 2/28/2020

98817713 TPE2 40-80 N-A-G-I-BQQE-CCB 60 Hz

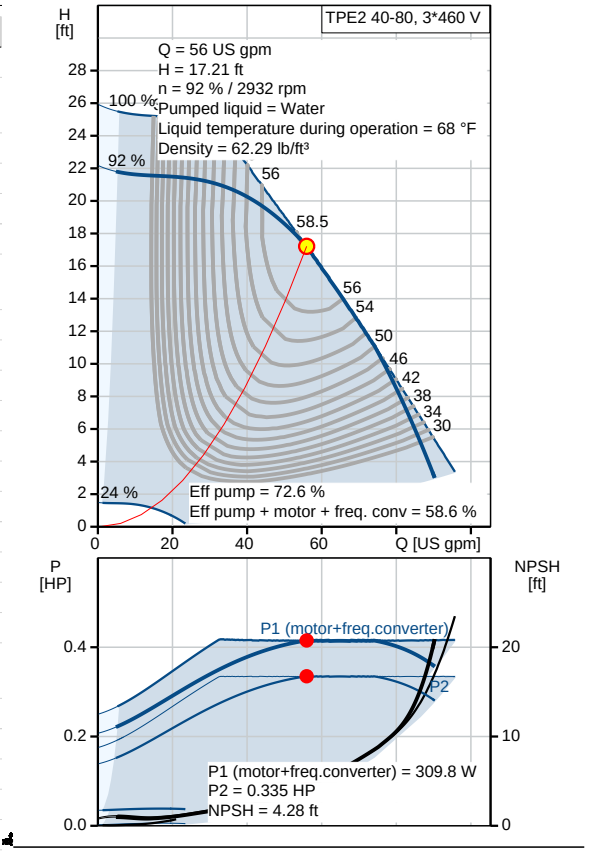


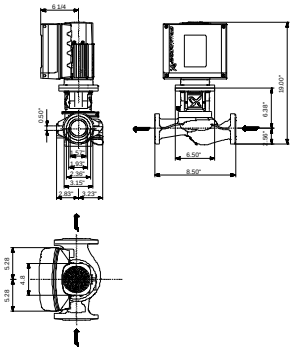


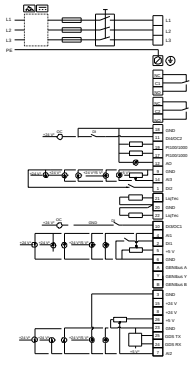
Company name: Hurley Engineering
Created by:
Phone:

Date: 2/28/2020

Description	Value
General information:	
Product name:	TPE2 40-80 N-A-G-I-BQQE-CCB
Product No.:	98817713
EAN:	5712601809771
	5712601809771
Technical:	
Pump speed on which pump data is based:	2970 rpm
Actual calculated flow:	56 US gpm
Resulting head of the pump:	17.21 ft
Head max:	26.25 ft
Actual impeller diameter:	2.91 in
Code for shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B2
Pump version:	A
Materials:	
Pump housing:	Stainless steel
	ASTM CF8
	EN 1.4308
Impeller:	Composite PES/PP 30% GF
Material code:	I
Installation:	
Range of ambient temperature:	-4 .. 122 °F
Maximum operating pressure:	PN 16 bar
Type of connection:	ANSI
Pipe connection:	DN 40
Pressure rating for pipe connection:	PN 16
Flange size for motor:	56C
Connect code:	G
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-13 .. 248 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³
Electrical data:	
Motor type:	71A
IE Efficiency class:	IE5
Rated power - P2:	0.33 HP
Main frequency:	60 Hz
Rated voltage:	3 x 440-480 V
Rated current:	0.85 A
Cos phi - power factor:	0.52
Rated speed:	360-4000 rpm
IE efficiency:	78.3%
Motor efficiency at full load:	78.3 %
Number of poles:	0
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Motor protection:	YES
Motor Number:	99630334
Controls:	







GRUNDFOS

Company name: Hurley Engineering
Created by:
Phone:

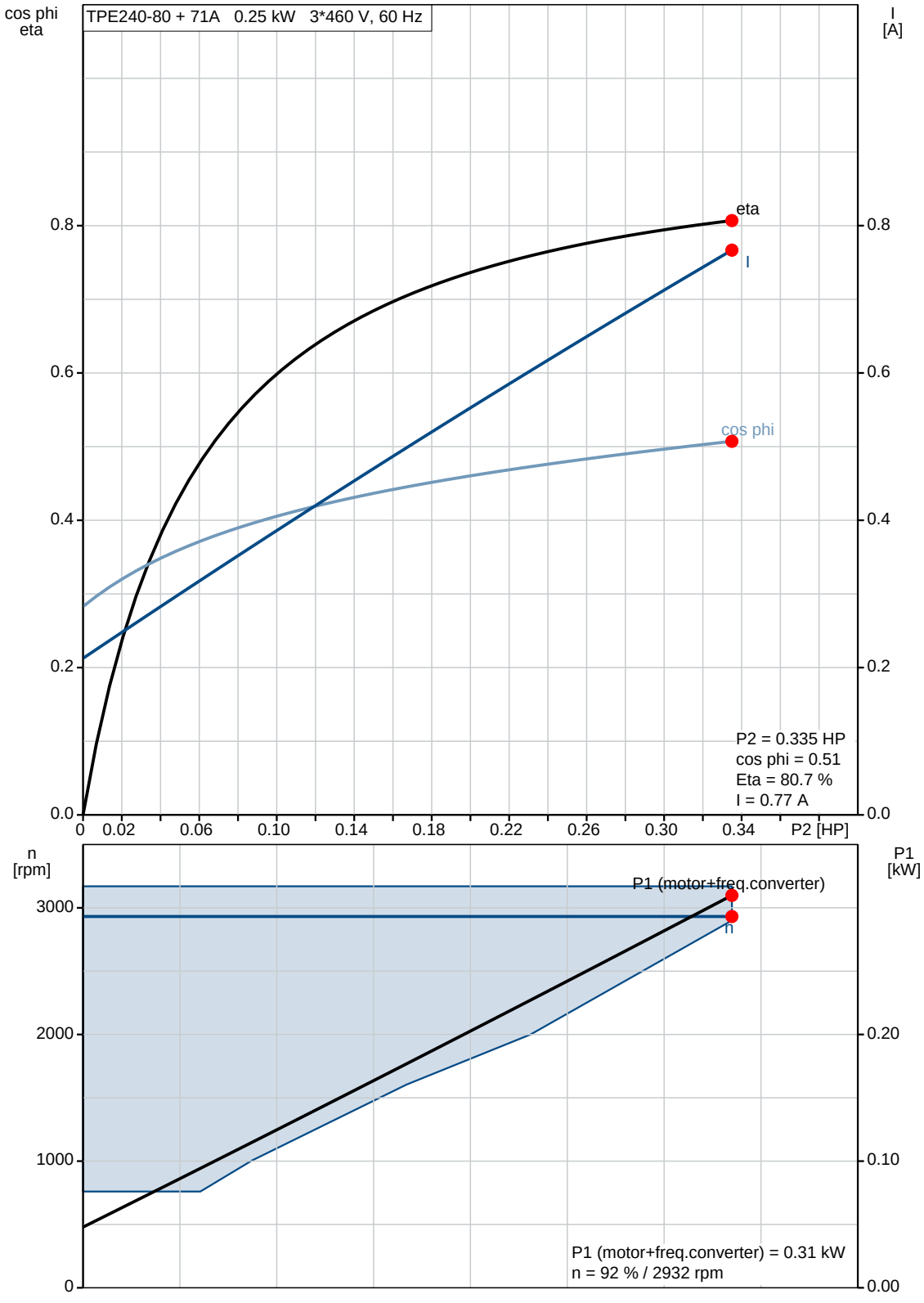
Date: 2/28/2020

Description	Value
Control panel:	HMI300 - Graphical
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Others:	
Net weight:	50.3 lb
Gross weight:	66.8 lb
Config. file no:	98819250

Company name: Hurley Engineering
Created by:
Phone:

Date: 2/28/2020

98817713 TPE2 40-80 N-A-G-I-BQQE-CCB 60 Hz



Company name: Hurley Engineering
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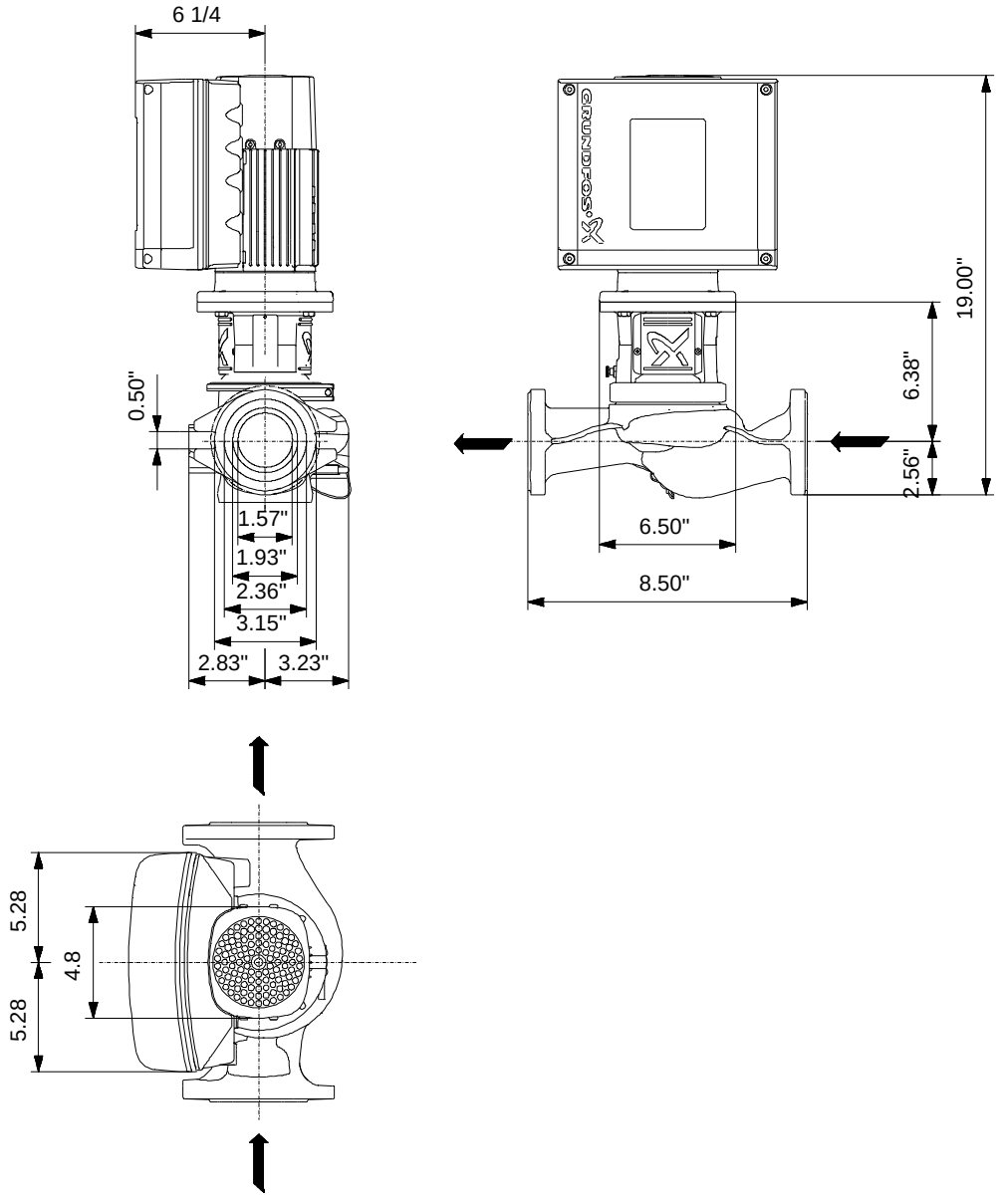
Date: 2/28/2020

98817713 TPE2 40-80 N-A-G-I-BQQE-CCB 60 Hz

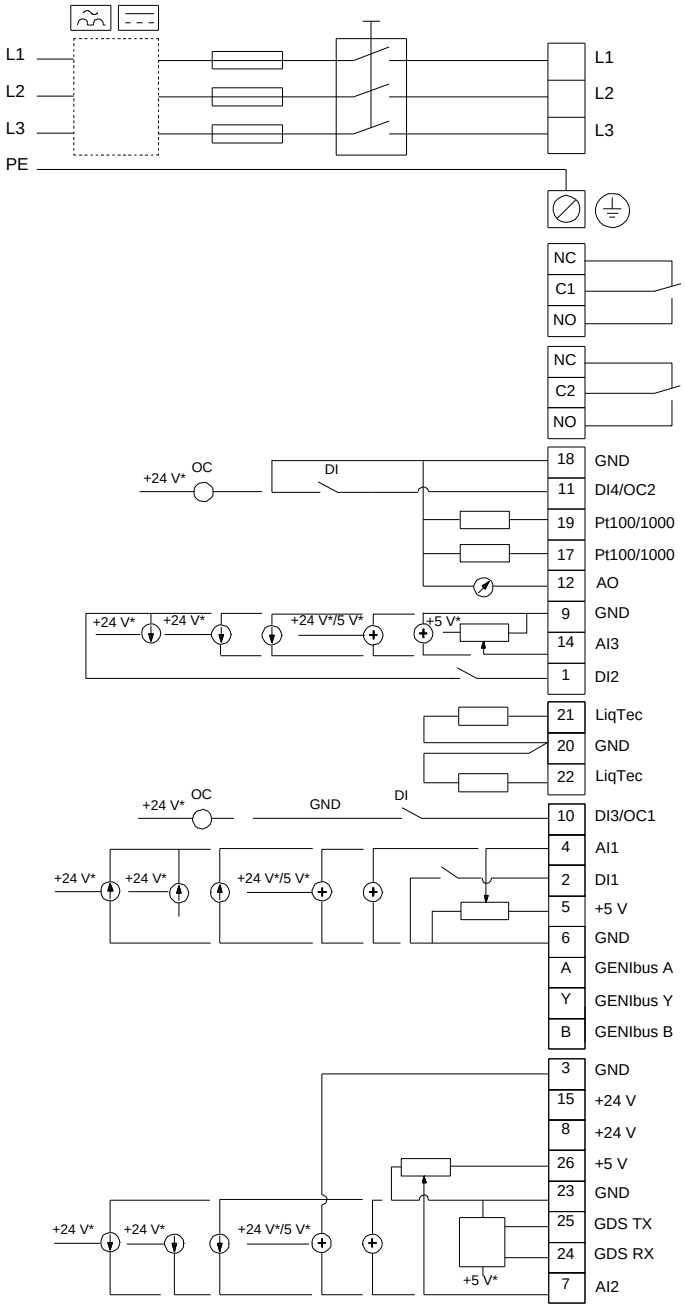


Note! All units are in [in] unless otherwise stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Company name: Hurley Engineering
Created by:
Phone:

Date: 2/28/2020

98817713 TPE2 40-80 N-A-G-I-BQQE-CCB 60 Hz



All units are [in] unless otherwise presented.

GRUNDFOS

Company name: Hurley Engineering
Created by:
Phone:

Date: 2/28/2020

Order Data:

Product name: TPE2 40-80 N-A-G-I-BQQE-CCB
Amount: 1
Product No.: 98817713

Total: Price on request