

## 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-CAB

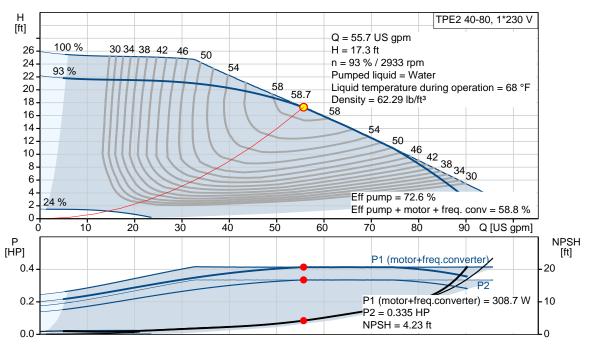
Single-stage stainless steel in-line pumps with frequency converters

Product photo could vary from the actual product

Conditions of Service		
Flow:	55.7 US gpm	
Head:	17.3 ft	
Efficiency:	58.8 %	
Liquid:	Water	
Temperature:	68 °F	
NPSH required:	4.23 ft	
Viscosity:		
Specific Gravity:	1.000	

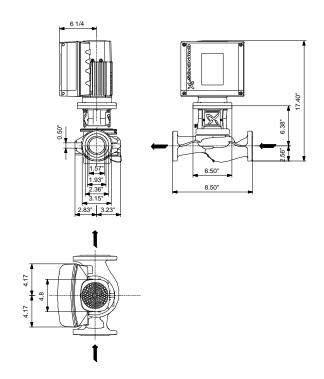
Pump Data				
Liquid temperature range:	-13 248 °F			
Maximum ambient temperature:	122 °F			
Shaft seal:	BQQE			
Pipe connection:	DN 40			
Product number:	98817690			

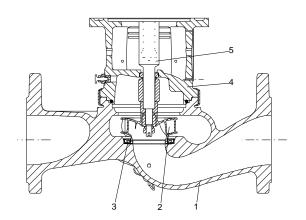
Motor Data			
Rated power - P2:	0.33 HP		
Rated voltage:	200-240 V		
Main frequency:	60 Hz		
Number of poles:	0		
Enclosure class:	IP55		
Insulation class:	F		
Motor protection:	YES		
Motor type:	71A		
Motor_efficiency:	81.1 %		





# Submittal Data





### Materials:

Pump housing: Stainless steel

ASTM CF8

Composite PES/PP 30% GF Impeller:

Material code:



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Count | Description

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



Product No.: 98817690

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



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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: 55.7 US gpm
Resulting head of the pump: 17.3 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
Type of connection: ANSI
Pipe connection: DN 40
Pressure rating for pipe connection: PN 16
Flange size for motor: 56C

**Electrical data:** 



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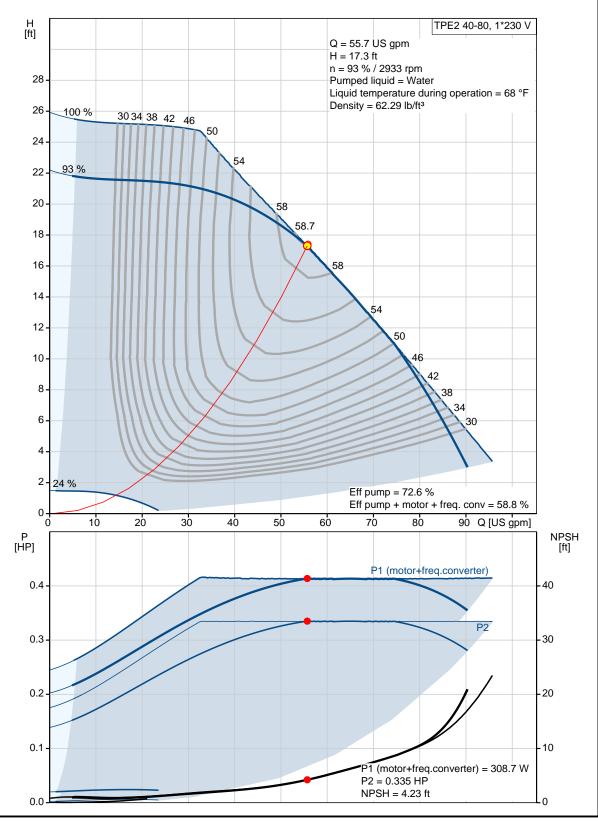
Count **Description** 71A Motor type: IE Efficiency class: IE5 Rated power - P2: 0.33 HP Main frequency: 60 Hz Rated voltage: 1 x 200-240 V Rated current: 1.75-1.50 A Cos phi - power factor: 0.95 Rated speed: 360-4000 rpm IE efficiency: 81.1% Motor efficiency at full load: 81.1 % Number of poles: 0 Enclosure class (IEC 34-5): IP55 Insulation class (IEC 85): F Motor Number: 99630318 Others: Net weight: 46.5 lb Gross weight: 62.4 lb



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# 98817690 TPE2 40-80 N-A-G-I-BQQE-CAB 60 Hz

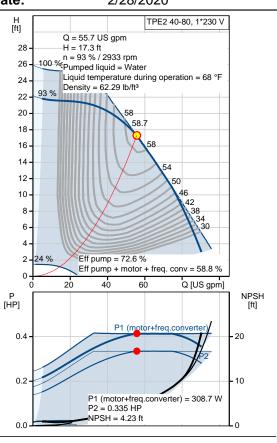


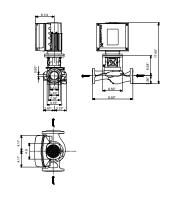


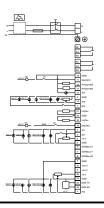
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**Date:** 2/28/2020

Description	Value	
General information:		
Product name:	TPE2 40-80 N-A-G-I-BQQE-CAB	
Product No.:	98817690	
EAN:	5712601809528	
	5712601809528	
Technical:		
Pump speed on which pump data is based:	2970 rpm	
Actual calculated flow:	55.7 US gpm	
Resulting head of the pump:	17.3 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/ft <sup>3</sup>	
Electrical data:		
Motor type:	71A	
IE Efficiency class:	IE5	
Rated power - P2:	0.33 HP	
Main frequency:	60 Hz	
Rated voltage:	1 x 200-240 V	
Rated current:	1.75-1.50 A	
Cos phi - power factor:	0.95	
Rated speed:	360-4000 rpm	
IE efficiency:	81.1%	
Motor efficiency at full load:	81.1 %	
Number of poles:	0	
Enclosure class (IEC 34-5):	IP55	
Insulation class (IEC 85):	F	
Motor protection:	YES	
Motor Number:	99630318	
Controls:		









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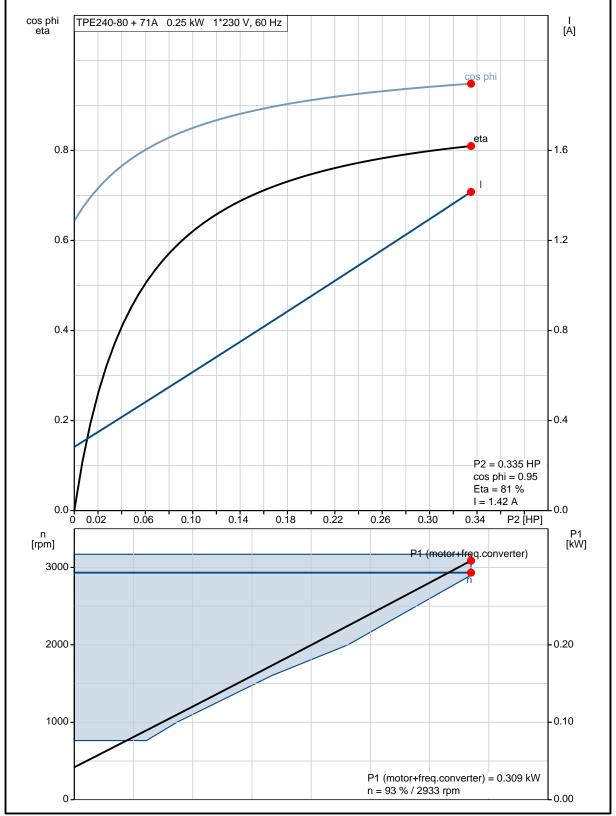
Description	Value
Control panel:	HMI300 - Graphical
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Others:	
Net weight:	46.5 lb
Gross weight:	62.4 lb
Config. file no:	98819168



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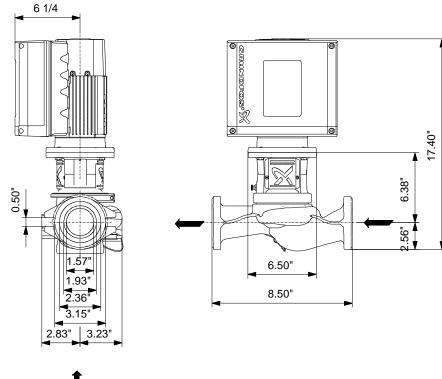


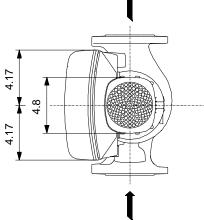


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## 98817690 TPE2 40-80 N-A-G-I-BQQE-CAB 60 Hz





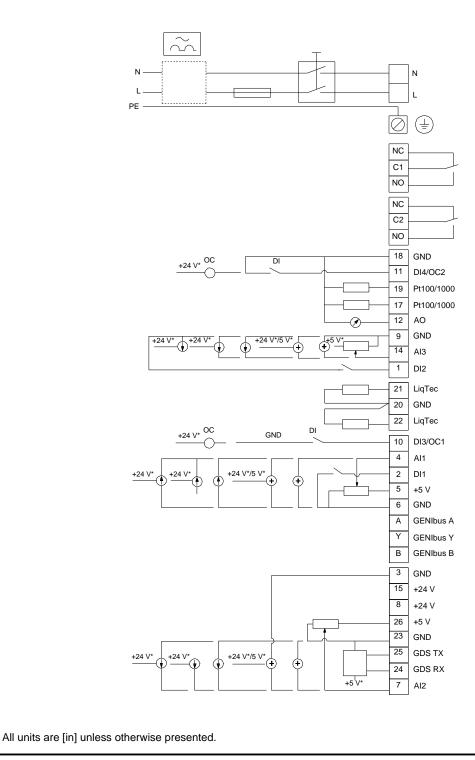
Note! All units are in [in] unless otherwise stated. Disclaimer: This simplified dimensional drawing does not show all details.



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## 98817690 TPE2 40-80 N-A-G-I-BQQE-CAB 60 Hz





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**Date:** 2/28/2020

**Order Data:** 

Product name: TPE2 40-80 N-A-G-I-BQQE-CAB

Amount: 1

Product No.: 98817690

Total: Price on request