

### Submittal Data

PROJECT:	Hurley Engineering-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:	



### TPE3 65-180 S-A-G-A-BQQE-HAC

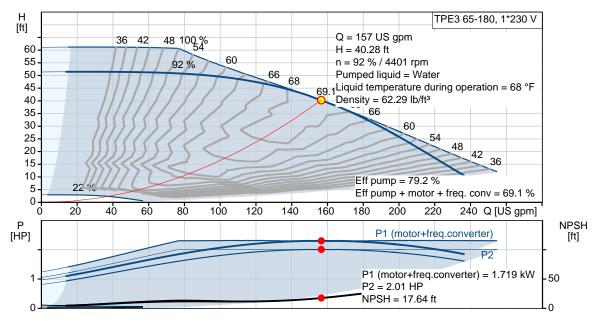
Single-stage in-line pumps with frequency converters

Product photo could vary from the actual product

Conditions of Service		
Flow:	157 US gpm	
Head:	40.28 ft	
Efficiency:	69.1 %	
Liquid:	Water	
Temperature:	68 °F	
NPSH required:	17.64 ft	
Viscosity:		
Specific Gravity:	1.000	

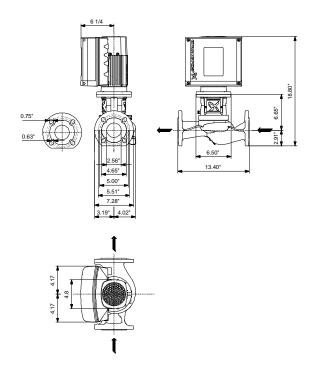
Pump Data	
Liquid temperature range:	-13 248 °F
Maximum ambient temperature:	122 °F
Shaft seal:	BQQE
Pipe connection:	DN 65
Product number:	98819683

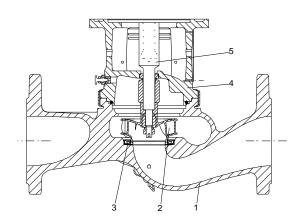
Motor Data		
Rated power - P2:	2 HP	
Rated voltage:	200-240 V	
Main frequency:	60 Hz	
Number of poles:	0	
Enclosure class:	IP55	
Insulation class:	F	
Motor protection:	YES	
Motor type:	90B	
Motor_efficiency:	87.5 %	





## Submittal Data





#### Materials:

Pump housing: Cast iron

**ASTM A48-40 B** 

Composite PES/PP 30% GF Impeller:

Material code:



Created by: Phone:

**Date:** 2/26/2020

Project:

Client:

Reference number:

Client number: Contact:

Count

# Description TPE3 65-180 S-A-G-A-BQQE-HAC



Product photo could vary from the actual product

Product No.: 98819683

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.

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: 4470 rpm

Actual calculated flow: 157 US gpm
Resulting head of the pump: 40.28 ft
Actual impeller diameter: 3.07 in
Code for shaft seal: BQQE

Curve tolerance: ISO9906:2012 3B2

Materials:

Pump housing: Cast iron

ASTM A48-40 B



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Count | Description

EN 1561 EN-GJL-250

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 65
Pressure rating for pipe connection: PN 16

Flange size for motor: 56C

Electrical data:

Motor type: 90B
IE Efficiency class: IE5
Rated power - P2: 2 HP
Main frequency: 60 Hz

Rated voltage: 1 x 200-240 V Rated current: 9.20-7.60 A

Cos phi - power factor: 0.99

Rated speed: 480-5900 rpm IE efficiency: 87.5%

Motor efficiency at full load: 87.5 %
Number of poles: 0
Enclosure class (IEC 34-5): IP55
Insulation class (IEC 85): F

Motor Number: 99630347

Others:

DOE Pump Energy Index VL: 0.39
Net weight: 65.7 lb
Gross weight: 65.7 lb
Country of origin: HU

Custom tariff no.: 8413.70.2022



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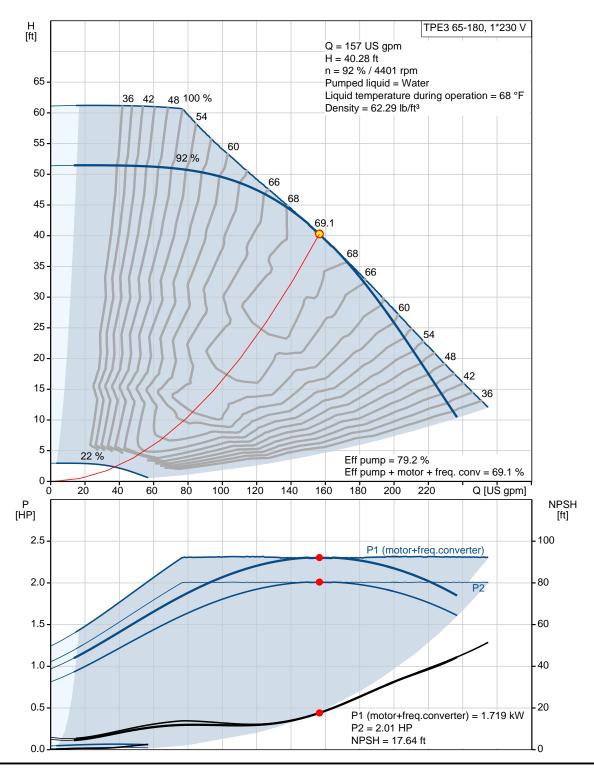
Date: 2/26/2020

Project: Client: Reference number:

Client number:

Contact:

### 98819683 TPE3 65-180 S-A-G-A-BQQE-HAC 60 Hz





Created by: Phone:

**Date:** 2/26/2020

Project:

Reference number:

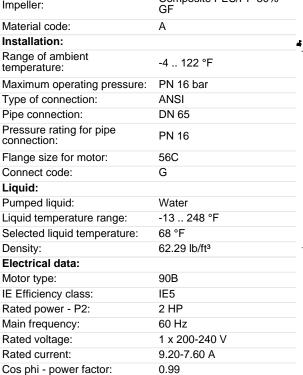
Client:

Client number:

Contact:

Description	Value
General information:	
Product name:	TPE3 65-180 S-A-G-A-BQQE-HAC
Product No.:	98819683
EAN:	5712601844819
	5712601844819
Technical:	
Pump speed on which pump data is based:	4470 rpm
Actual calculated flow:	157 US gpm
Resulting head of the pump:	40.28 ft
Head max:	59.06 ft
Actual impeller diameter:	3.07 in
Code for shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B2
Pump version:	A
Model:	A
Materials:	
Pump housing:	Cast iron
	ASTM A48-40 B
	EN 1561 EN-GJL-250
Impeller:	Composite PES/PP 30% GF
Material code:	A
Installation:	
Range of ambient temperature:	-4 122 °F
Maximum operating pressure:	PN 16 bar
Type of connection:	ANICI

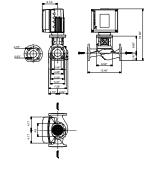
	H [ft]	TPE3 65-180, 1*230 V	]
	լույ	Q = 157 US gpm	1
	65 -	H = 40.28 ft	
		n = 92 % / 4401 rpm	
	60 -	Pumped liquid = Water	1
	55 -	Liquid temperature during operation = 68 °F	
		Density = 62.29 lb/ft <sup>3</sup>	
	50 -	66	1
	45 -	68	
		69.1	
	40 -	68	1
	35 -	66	
	30 -	60	
	25 -	54	
		48	
	20 -	40	
	15 -	36	
	40		
	10 -		1
	5 -	22 70 Eff pump = 79.2 %	
	0 -	Eff pump + motor + freq. conv = 69.1 %	
	0	50 100 150 200 Q [US gpm]	_
	P		NPSH
	[HP]		[ft]
		P1 (motor+freq.converter)	
	0		400
	2 <b>-</b>	P2	100
	1 -		50
			00
		P1 (motor+freq.converter) = 1.719 kW P2 = 2.01 HP	
		NPSH = 17.64 ft	
ı	0 -	INF 311 – 17.04 IL	$L_0$
_			

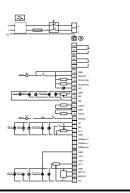


480-5900 rpm

87.5%

87.5 %





Rated speed:

IE efficiency:

Motor efficiency at full load:



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**Date:** 2/26/2020

Project:

Reference number:

Client:

Client number:

Contact:

Description	Value
Number of poles:	0
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Motor protection:	YES
Motor Number:	99630347
Controls:	
Control panel:	HMI300 - Graphical
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Others:	
DOE Pump Energy Index VL:	0.39
Net weight:	65.7 lb
Gross weight:	65.7 lb
Config. file no:	98481405
Country of origin:	HU
Custom tariff no.:	8413.70.2022



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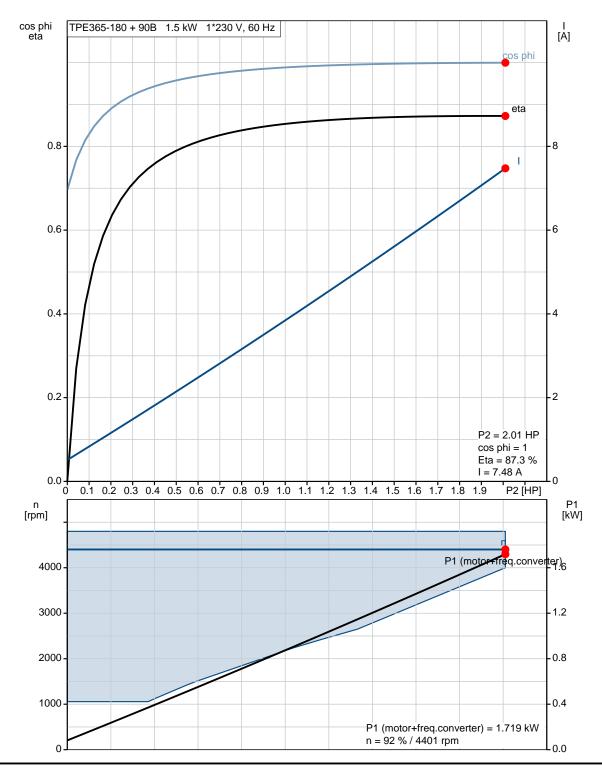
**Date:** 2/26/2020

Project: Client:

Reference number: Client number:

Contact:

### 98819683 TPE3 65-180 S-A-G-A-BQQE-HAC 60 Hz





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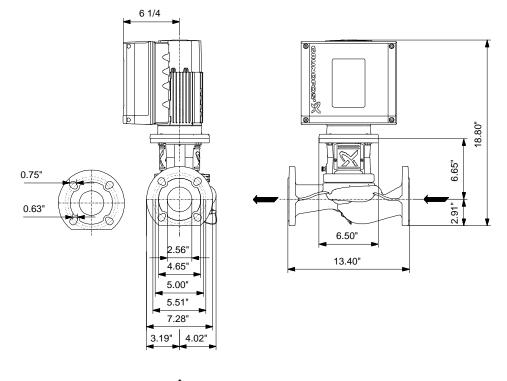
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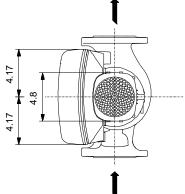
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### 98819683 TPE3 65-180 S-A-G-A-BQQE-HAC 60 Hz





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



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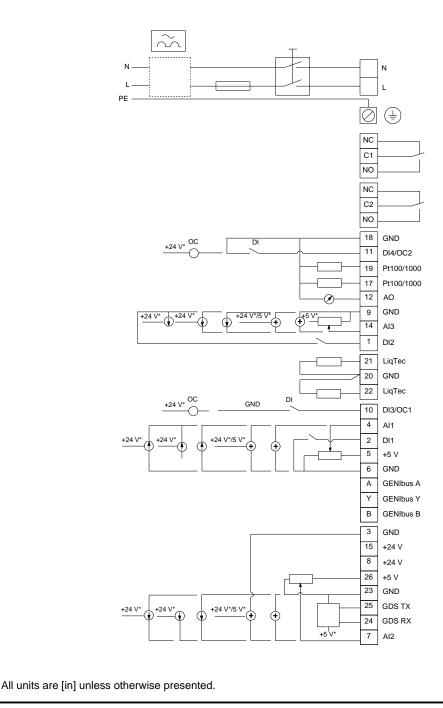
**Date:** 2/26/2020

Project: Client:

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### 98819683 TPE3 65-180 S-A-G-A-BQQE-HAC 60 Hz





Created by: Phone:

**Date:** 2/26/2020

Project:

Client:

Reference number:

Client number: Contact:

**Order Data:** 

Product name: TPE3 65-180 S-A-G-A-BQQE-HAC

Amount: 1

Product No.: 98819683

Total: Price on request