GRUNDFOS

Submittal Data

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

Note! Product picture may differ from actual product

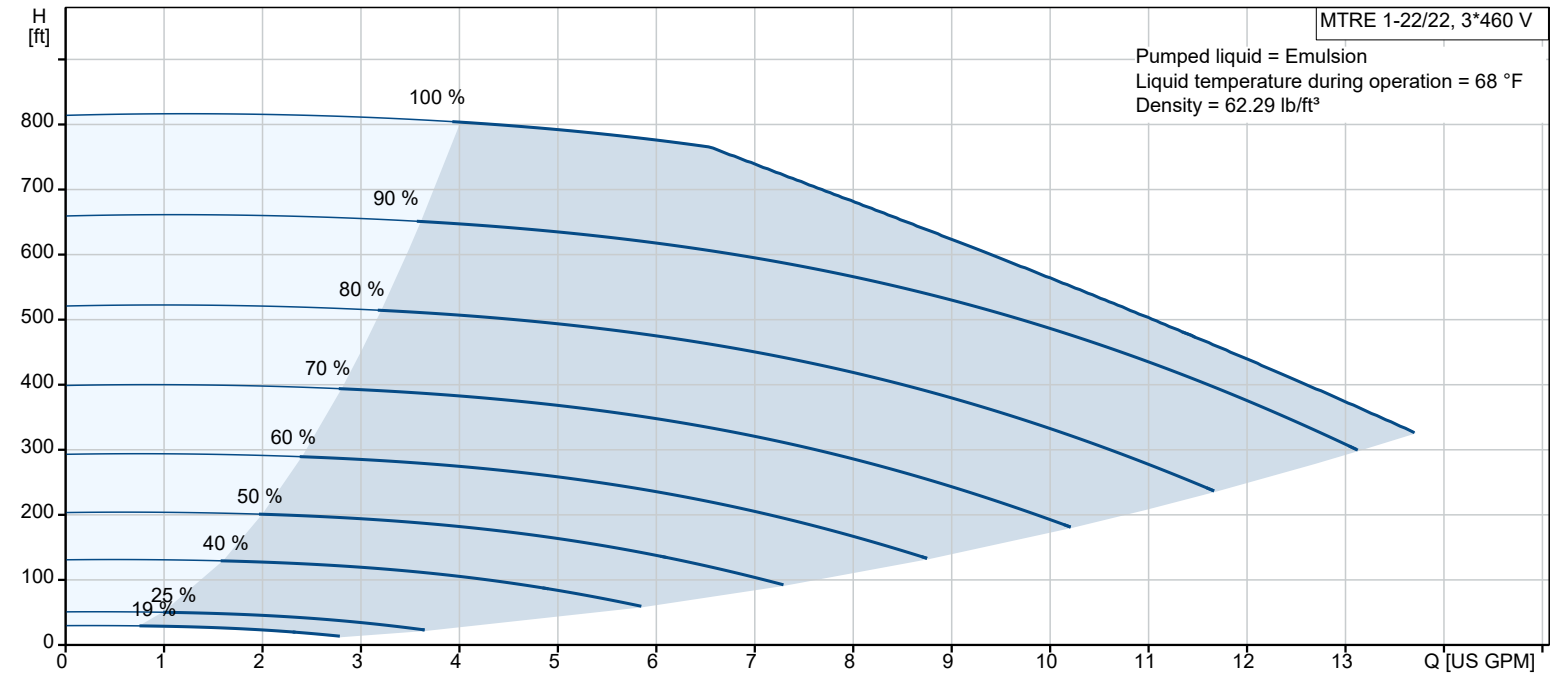
MTRE 1-22/22 A-WB-A-HUUV

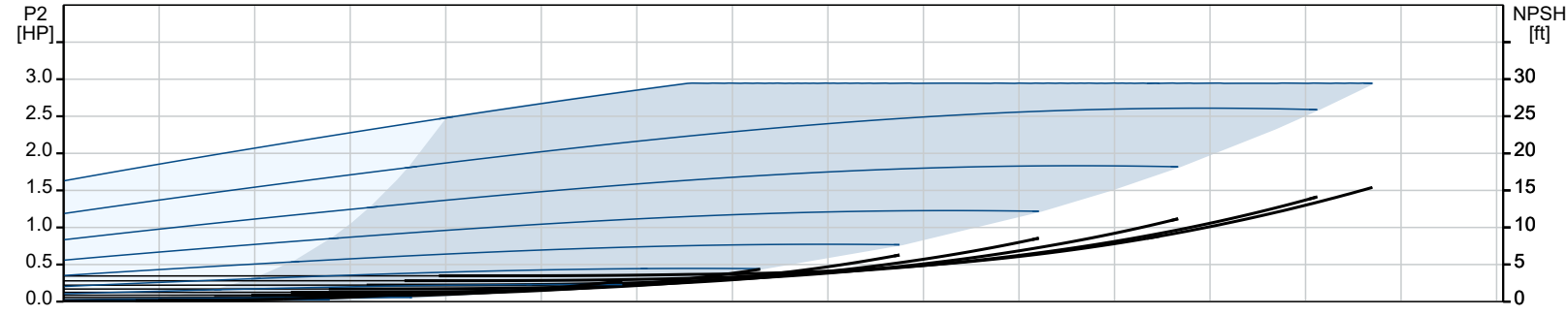
Vertical multistage centrifugal pump with integrated frequency converter designed for tank top mounting and for pumping of cooling lubricants and cutting oils for machine tools, cooling applications, industrial liquid transfer and similar applications.

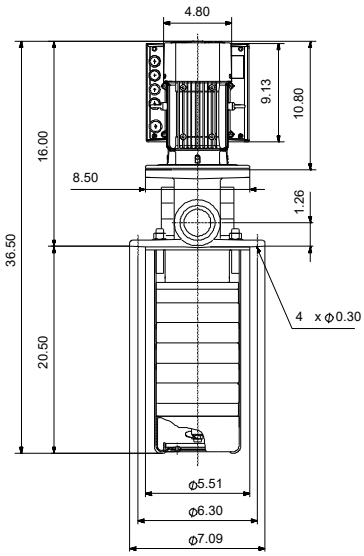
Conditions of Service	
Efficiency:	%
Liquid:	Emulsion
Temperature:	68 °F
NPSH required:	ft
Specific Gravity:	1.000

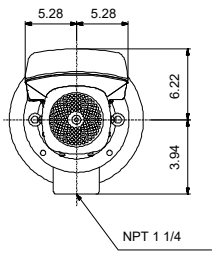
Pump Data	
Max pressure at stated temp:	363 psi / 194 °F
Liquid temperature range:	14 .. 194 °F
Maximum ambient temperature:	122 °F
Shaft seal:	HUUV
Product number:	98400054

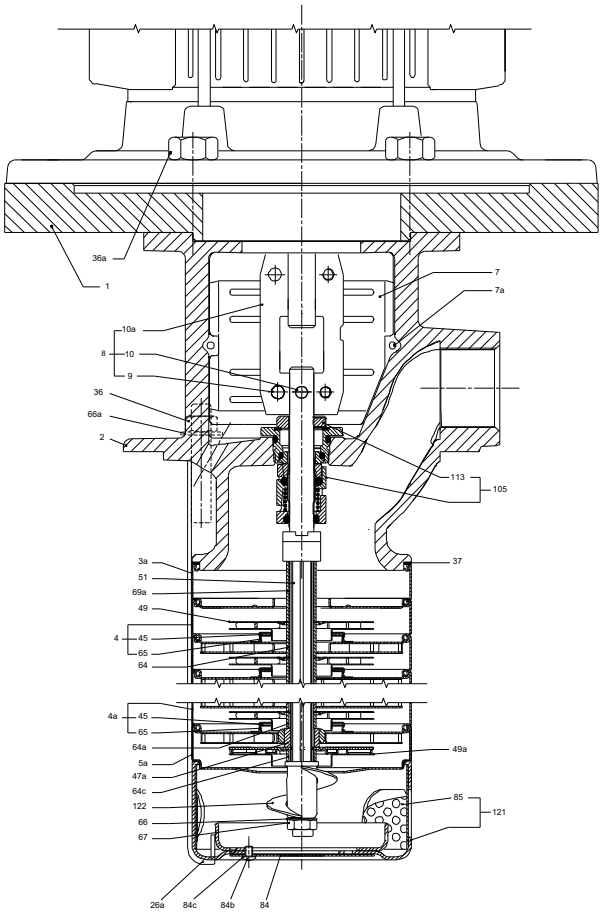
Motor Data	
Rated power - P2:	3 HP
Rated voltage:	440-480 V
Mains frequency:	60 Hz
Enclosure class:	IP55
Insulation class:	F
Motor protection:	ELEC
Motor type:	90D
Eta 1/1:	90.7 %











Materials:

Impeller:	Stainless steel
Impeller:	AISI 304
Impeller:	EN 1.4301
Material code:	A

Company name: Specs
Created by:
Phone:

Date: 17/02/2023

Qty.	Description
1	**MTRE 1-22/22 A-WB-A-HUUV**

Product No.: 98400054

Multistage, immersible, self-priming, centrifugal pump for vertical installation in tanks etc.
The pump head and base are in cast iron – all other wetted parts are in stainless steel.
The pump has the following characteristics TEST:

- Dimensions according to DIN 5440.
- Impellers, intermediate chambers and spline shaft are made of Stainless steel.
- Mechanical shaft seal according to EN 12756.
- Power transmission via sintered metal split coupling.

A cartridge shaft seal ensures high reliability, safe handling, and easy access and service.
The pump is fitted with a 3-phase, fan-cooled, permanent-magnet, synchronous motor.

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.
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".
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).

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 terminal box has a number of inputs and outputs enabling the motor to be used in advanced applications where many inputs and outputs are required:

- two dedicated digital inputs
- three analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 - 3.5 V
- 5 V voltage supply to potentiometer and sensor
- one analog output, 0-10 V, 0(4)-20 mA
- two configurable digital inputs or open-collector outputs
- two Pt100/Pt1000 inputs
- LiqTec, dry-running protection sensor input
- Grundfos Digital Sensor input and output
- 24 V voltage supply for sensors
- two signal-relay outputs (potential-free contacts)
- GENIbus connection
- interface for Grundfos CIM fieldbus module.

Controls:

Frequency converter:	Built-in

Liquid:

Pumped liquid:	Emulsion
Liquid temperature range:	14 .. 194 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³

Technical:

GRUNDFOS

Company name: Specs
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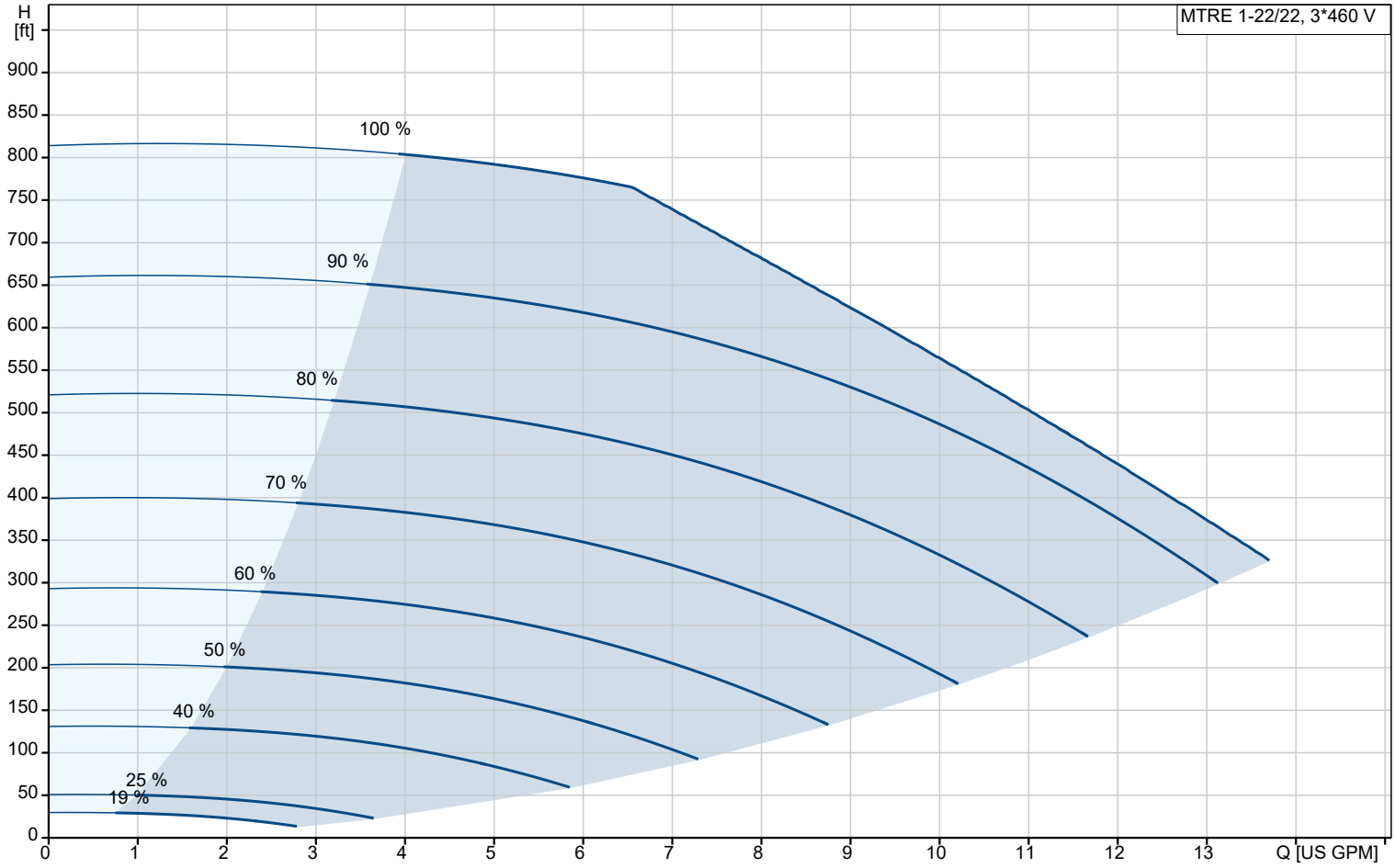
Date: 17/02/2023

Qty.	Description	
1	Pump speed on which pump data are based:	3461 rpm
	Rated flow:	9.69 US GPM
	Rated head:	494.4 ft
	Chambers:	22
	Drainage back to tank:	N
	Pump orientation:	Vertical
	Code for shaft seal:	HUUV
	Approvals:	CE
	Approvals for motor:	CE, RCM, cURus, IE5, IES2,UKCA, SEPRO
	Energy approvals for motor:	CE
	Curve tolerance:	ISO9906:2012 3B
	Cable gland entry:	4xM20 blind plug
	Materials:	
	Pump head:	Cast iron EN 1561 EN-GJL-200 ASTM A48-25B
	Impeller:	Stainless steel EN 1.4301 AISI 304
	Installation:	
	t max amb:	122 °F
	Maximum operating pressure:	362.59 psi
	Max pressure at stated temp:	363 psi / 194 °F
	Type of connection:	NPT(F)
	Size of outlet connection:	1 1/4 inch
	Immersion depth:	20.5 in
	Flange size for motor:	182TC
	Electrical data:	
	Motor standard:	NEMA
	Motor type:	90D
	IE Efficiency class:	IE5
	Rated power - P2:	3 HP
	Mains frequency:	60 Hz
	Suitable for 50/60 Hz:	Y
	Rated voltage:	3 x 440-480 V
	Service factor:	1.15
	Rated current:	3.8 A
	Cos phi - power factor:	0.89
	Rated speed:	360-4000 rpm
	Motor efficiency at full load:	90.7 %
	Enclosure class (IEC 34-5):	IP55
	Insulation class (IEC 85):	F
	Motor No:	98362284
	Cable gland entry:	4xM20 blind plug
	Others:	
	Terminal box position:	6
	Minimum efficiency index, MEI ≥:	0.70
	Net weight:	66 lb
	Gross weight:	106 lb
	Shipping volume:	8.12 ft³
	Country of origin:	US
	Custom tariff no.:	8413.70.2040

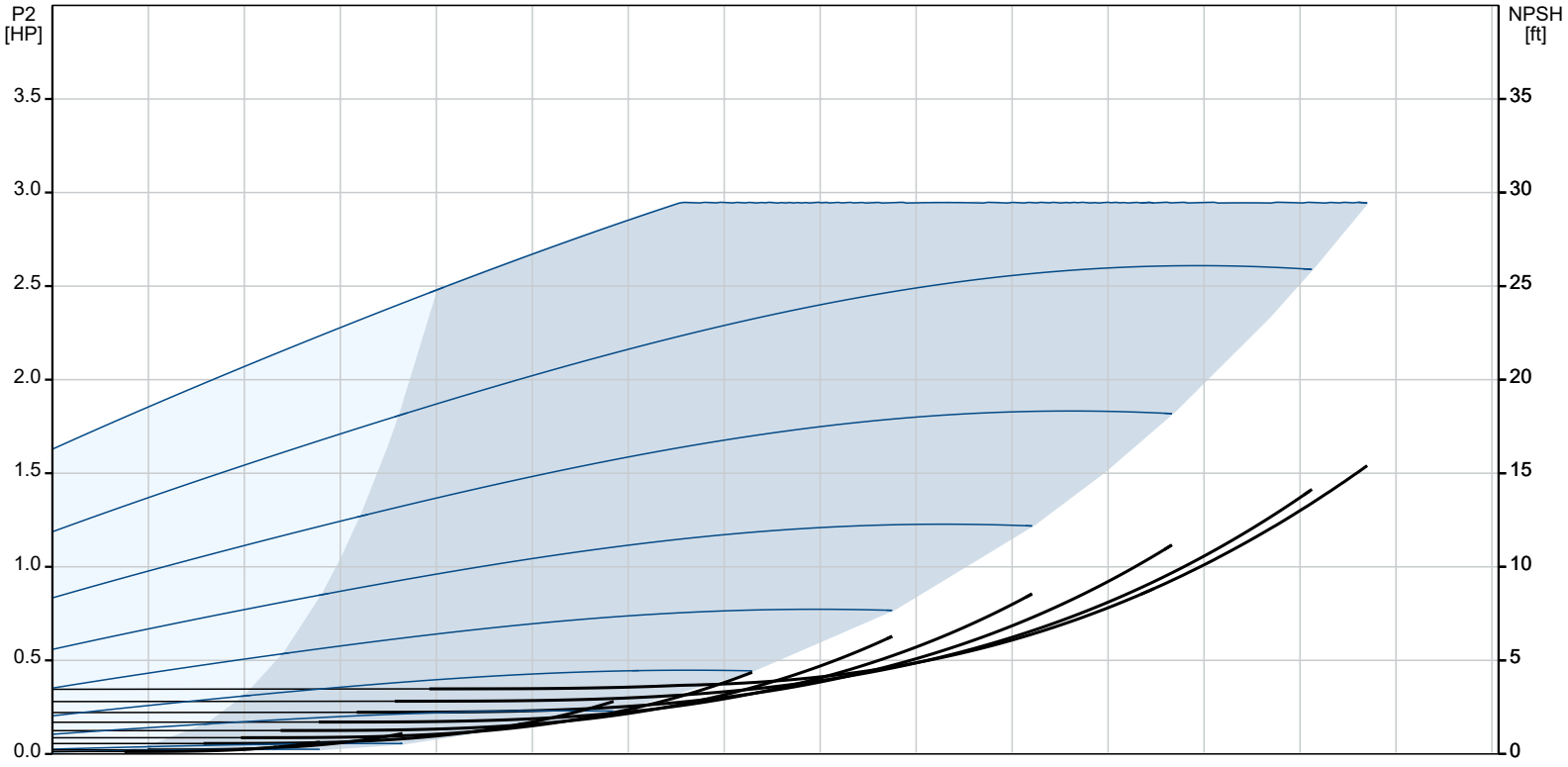
Company name: Specs
Created by:
Phone:

Date: 17/02/2023

98400054 MTRE 1-22/22 A-WB-A-HUUV 60 Hz



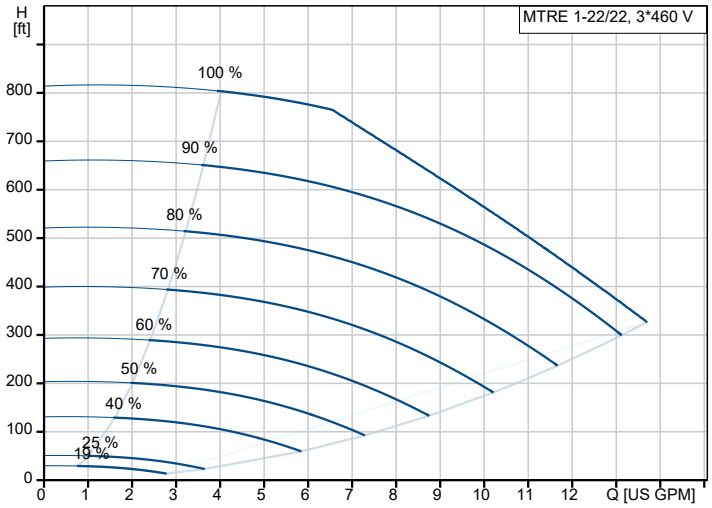
Pumped liquid = Emulsion
Liquid temperature during operation = 68 °F
Density = 62.29 lb/ft³



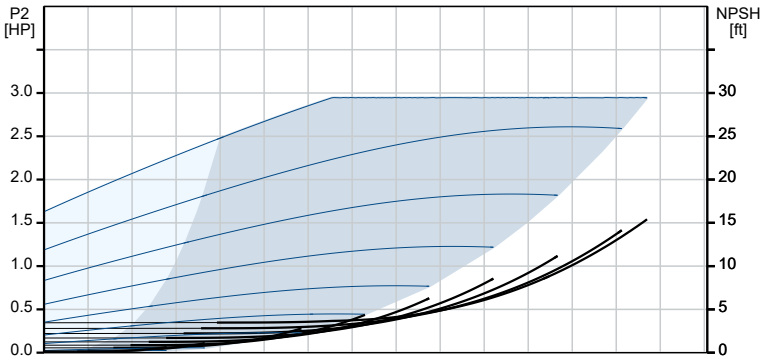
Company name: Specs
Created by:
Phone:

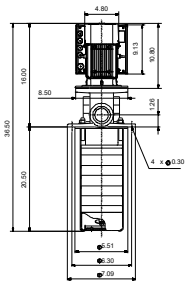
Date: 17/02/2023

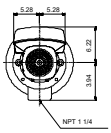
Description	Value
General information:	
Product name:	MTRE 1-22/22 A-WB-A-HUUV
Product No:	98400054
EAN number:	5711494355402
Technical:	
Pump speed on which pump data are based:	3461 rpm
Rated flow:	9.69 US GPM
Rated head:	494.4 ft
Chambers:	22
Impellers:	22
Number of reduced-diameter impellers:	0
Drainage back to tank:	N
Pump orientation:	Vertical
Code for shaft seal:	HUUV
Approvals:	CE
Approvals for motor:	CE, RCM, cURus, IE5, IES2,UKCA, SEPRO
Energy approvals for motor:	CE
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Cable gland entry:	4xM20 blind plug
Materials:	
Pump head:	Cast iron
Pump head:	EN 1561 EN-GJL-200
Pump head:	ASTM A48-25B
Impeller:	Stainless steel
Impeller:	EN 1.4301
Impeller:	AISI 304
Material code:	A
Installation:	
t max amb:	122 °F
Maximum operating pressure:	362.59 psi
Max pressure at stated temp:	363 psi / 194 °F
Type of connection:	NPT(F)
Size of outlet connection:	1 1/4 inch
Immersion depth:	20.5 in
Flange size for motor:	182TC
Connect code:	WB
Liquid:	
Pumped liquid:	Emulsion
Liquid temperature range:	14 .. 194 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³
Electrical data:	
Motor standard:	NEMA
Motor type:	90D
IE Efficiency class:	IE5
Rated power - P2:	3 HP
Mains frequency:	60 Hz
Suitable for 50/60 Hz:	Y
Rated voltage:	3 x 440-480 V
Service factor:	1.15
Rated current:	3.8 A
Cos phi - power factor:	0.89
Rated speed:	360-4000 rpm
Motor efficiency at full load:	90.7 %
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	ELEC

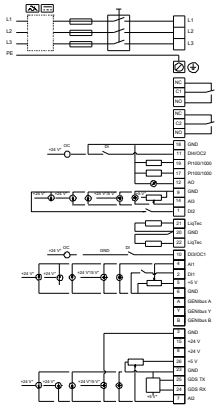


Pumped liquid = Emulsion
Liquid temperature during operation = 68 °F
Density = 62.29 lb/ft³









GRUNDFOS

Company name: Specs
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Description	Value
Motor No:	98362284
Cable gland entry:	4xM20 blind plug
Controls:	
Control panel:	Graphical
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Others:	
Terminal box position:	6
Minimum efficiency index, MEI ≥:	0.70
Net weight:	66 lb
Gross weight:	106 lb
Shipping volume:	8.12 ft³
Country of origin:	US
Custom tariff no.:	8413.70.2040

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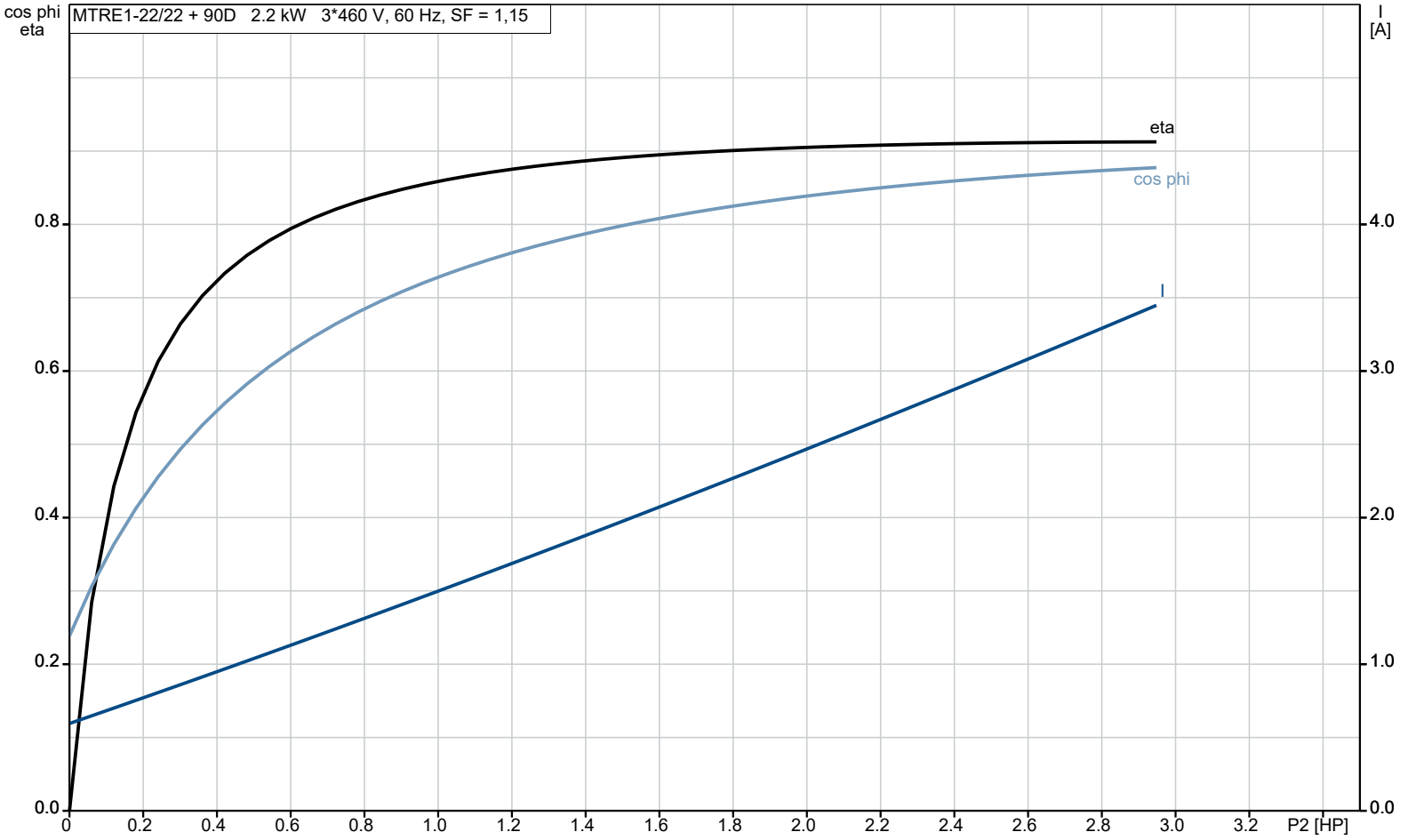
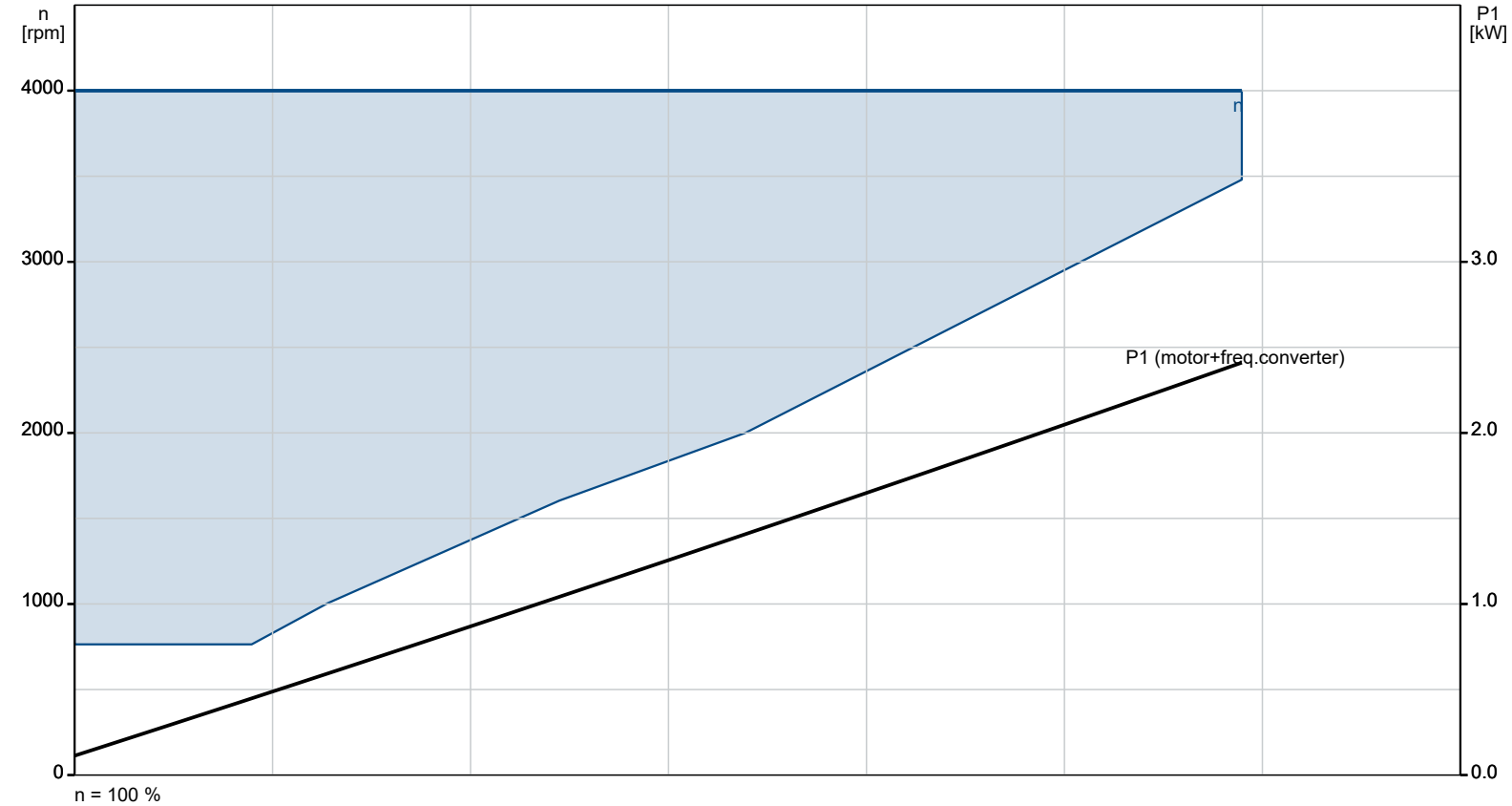
98400054 MTRE 1-22/22 A-WB-A-HUUV 60 Hz





Company name: Specs
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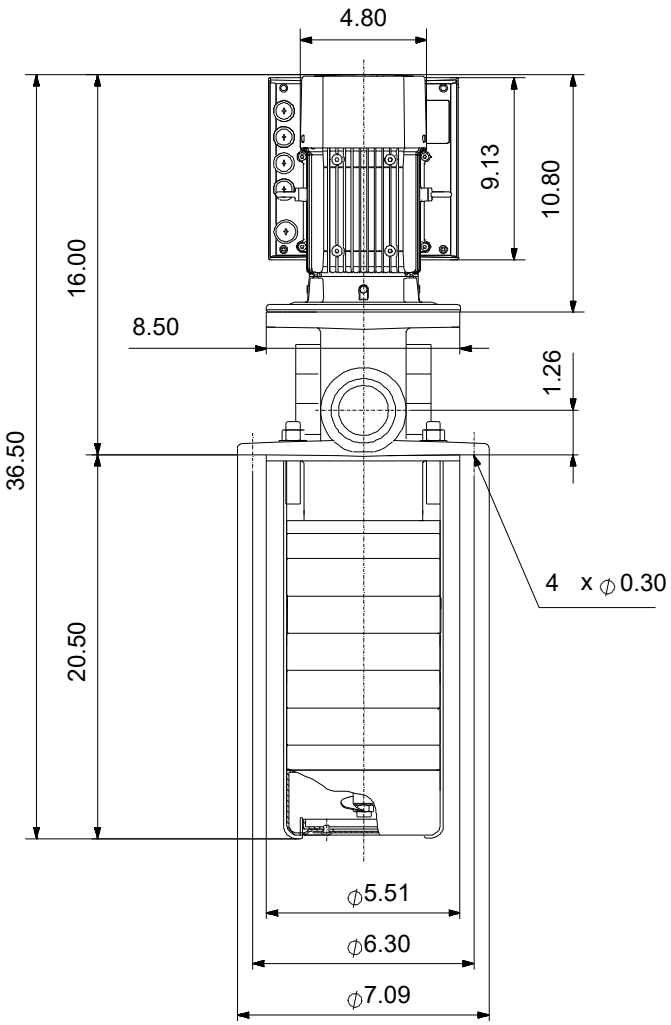
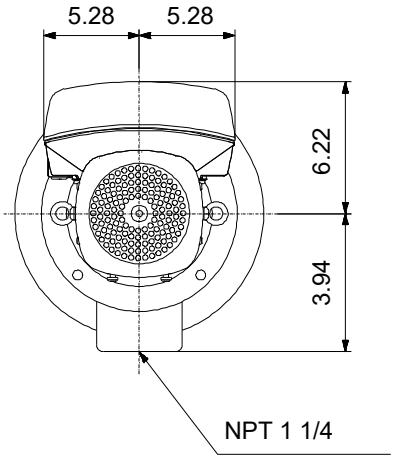
98400054 MTRE 1-22/22 A-WB-A-HUUV 60 Hz



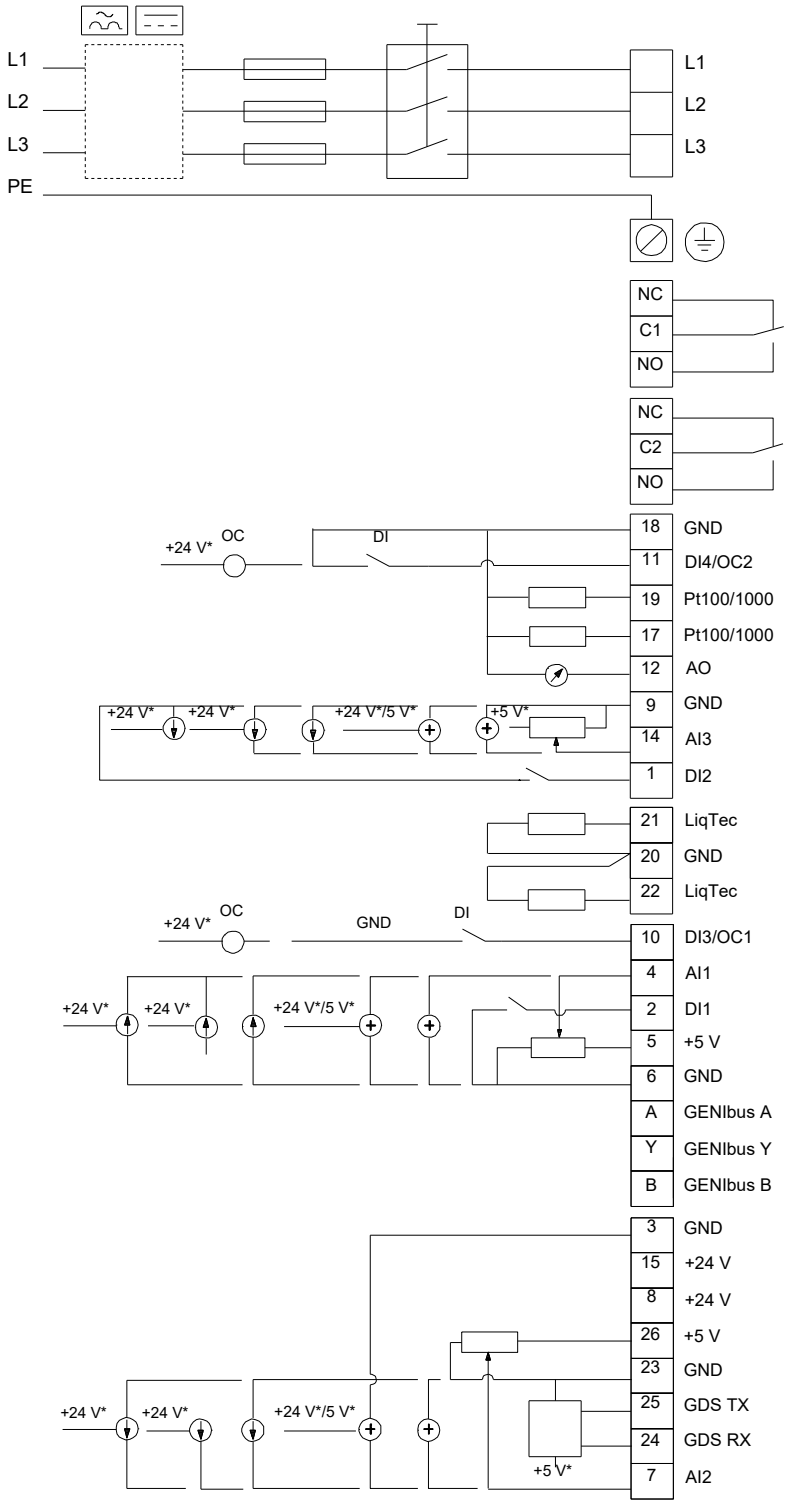


Note! All units are in [in] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Company name: Specs
Created by:
Phone:

Date: 17/02/2023

98400054 MTRE 1-22/22 A-WB-A-HUUV 60 Hz



Note! All units are in [in] unless others are stated.