

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

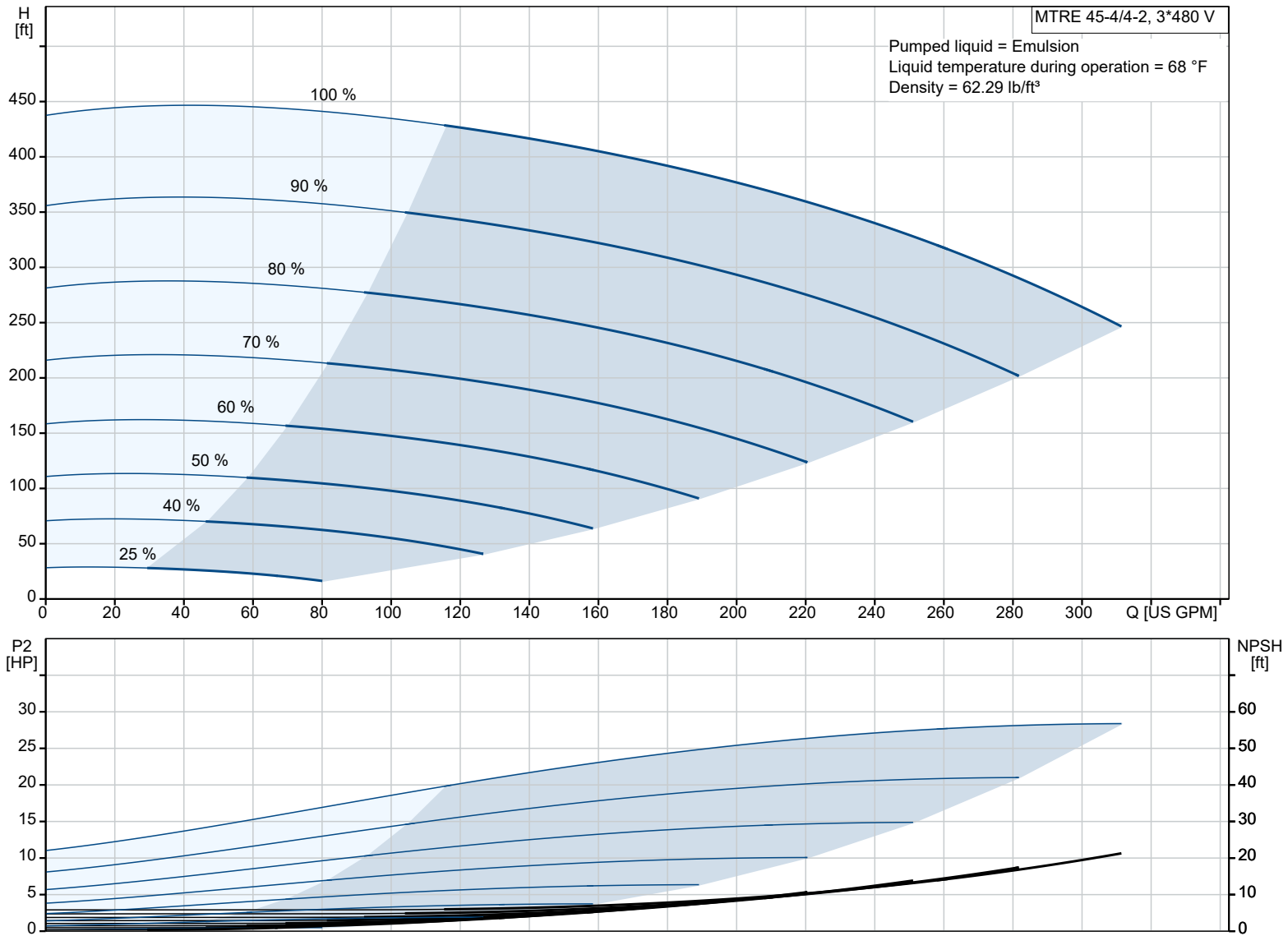


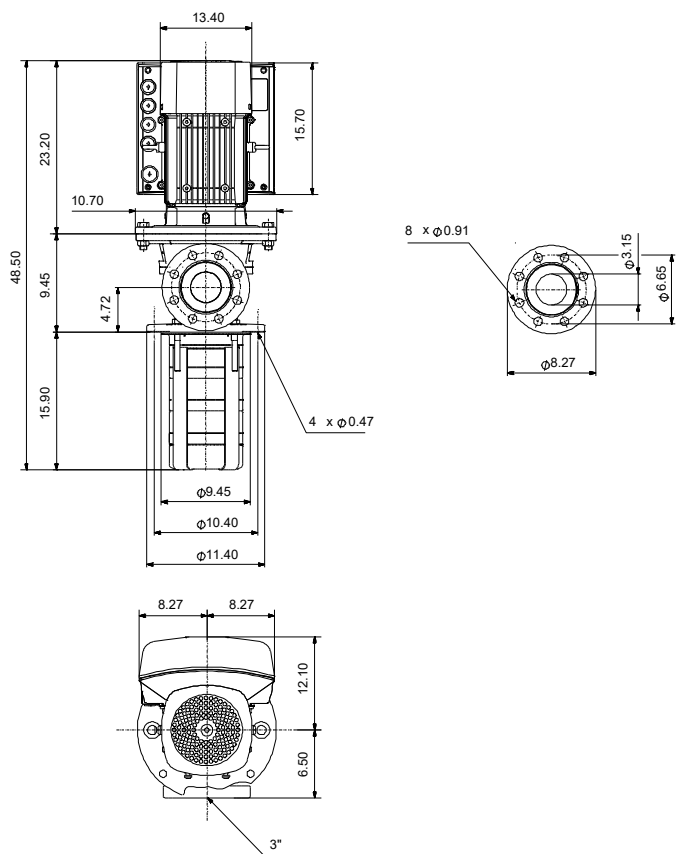
MTRE 45-4/4-2 A-G-A-HUUV

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.

Note! Product picture may differ from actual product

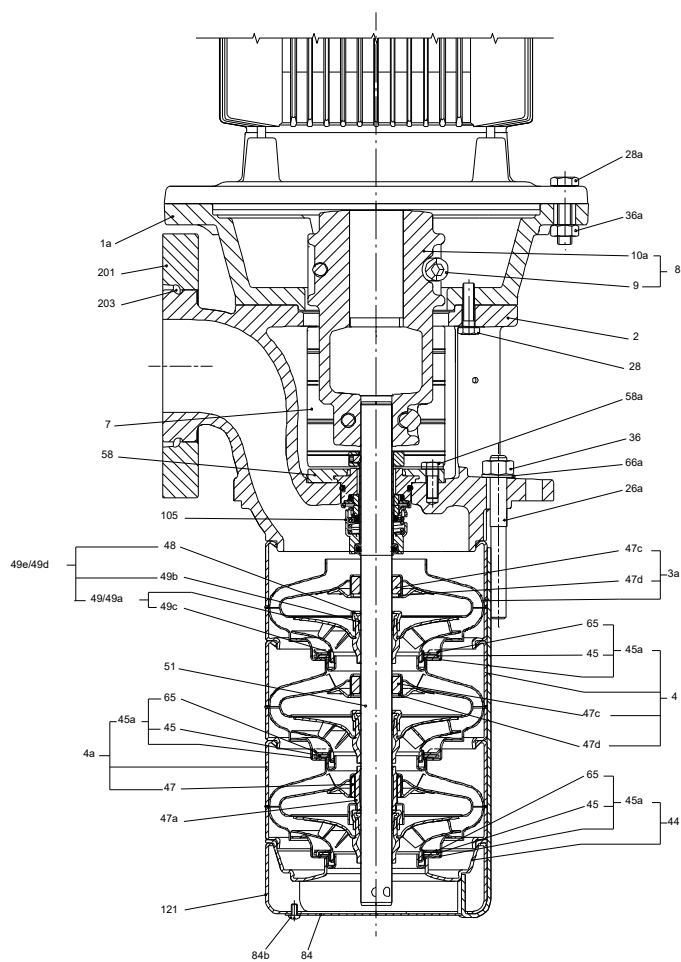
Conditions of Service	Pump Data	Motor Data
Efficiency: %	Max pressure at stated temp: 363 psi / 194 °F	Rated power - P2: 30 HP
Liquid: Emulsion	Liquid temperature range: 14 .. 194 °F	Rated voltage: 460 V
Temperature: 68 °F	Maximum ambient temperature: 104 °F	Mains frequency: 60 Hz
NPSH required: ft	Shaft seal: HUUV	Enclosure class: IP55
Specific Gravity: 1.000	Product number: 98472480	Insulation class: F
		Motor protection: YES
		Motor type: 180AA
		Eta 1/1: 91.7 %






Materials:

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



Qty.	Description
1	<p>MTRE 45-4/4-2 A-G-A-HUUV</p>  <p>Product No.: 98472480</p> <p>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:</p> <ul style="list-style-type: none"> • 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. <p>A cartridge shaft seal ensures high reliability, safe handling, and easy access and service. The pump is fitted with a 3-phase, fan-cooled asynchronous motor.</p> <p>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.</p> <p>An operating panel on the motor terminal box enables 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:</p> <ul style="list-style-type: none"> • "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). <p>Communication with the pump is 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".</p> <p>The terminal box holds terminals for these connections:</p> <ul style="list-style-type: none"> • pump start/stop input (potential-free contact) • remote setpoint setting via analog signal, 0-10 V, 0(4)-20 mA • 10 V voltage supply for setpoint potentiometer, I_{max} = 5 mA • three analog sensor inputs, 0-10 V, 0(4)-20 mA • 24 V voltage supply for sensor, I_{max} = 40 mA • one analog output • three digital inputs • two Pt100 inputs • two potential-free fault signal relays with changeover contact, reporting "Fault", "Operation" or "Ready" • RS-485 GENIbus connection • interface for Grundfos CIM fieldbus module. <p>Controls:</p> <p>Frequency converter: Built-in</p> <p>Liquid:</p> <p>Pumped liquid: Emulsion</p> <p>Liquid temperature range: 14 .. 194 °F</p> <p>Selected liquid temperature: 68 °F</p> <p>Density: 62.29 lb/ft³</p> <p>Technical:</p> <p>Pump speed on which pump data are based: 3541 rpm</p> <p>Rated flow: 238 US GPM</p> <p>Rated head: 341.2 ft</p> <p>Chambers: 4</p> <p>Drainage back to tank: N</p> <p>Pump orientation: Vertical</p> <p>Code for shaft seal: HUUV</p> <p>Approvals: CE</p> <p>Approvals for motor: CE, cURus, RCM, UKCA,SEPRO</p>

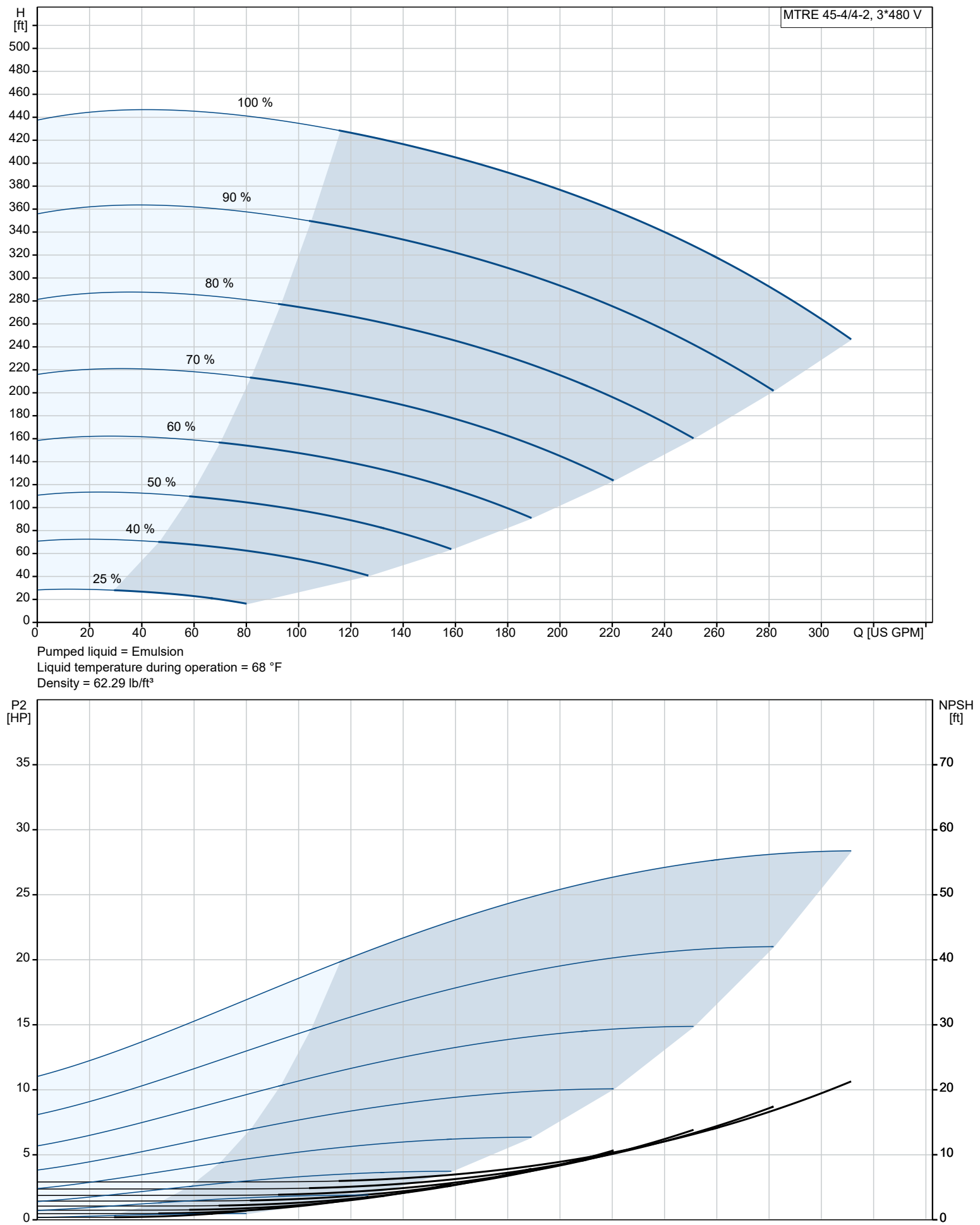
Qty.	Description
1	<p>Energy approvals for motor: CE</p> <p>Curve tolerance: ISO9906:2012 3B</p> <p>Cable gland entry: 1xM40+1xM20+4xM16 knock out</p> <p>Materials:</p> <p>Pump head: Cast iron EN 1561 EN-GJL-200 ASTM A48-25B</p> <p>Impeller: Stainless steel EN 1.4301 AISI 304</p> <p>Installation:</p> <p>t max amb: 104 °F</p> <p>Maximum operating pressure: 362.59 psi</p> <p>Max pressure at stated temp: 363 psi / 194 °F</p> <p>Type of connection: ANSI</p> <p>Size of outlet connection: 3 inch</p> <p>Immersion depth: 15.9 in</p> <p>Flange size for motor: 286TC</p> <p>Electrical data:</p> <p>Motor standard: NEMA</p> <p>Motor type: 180AA</p> <p>IE Efficiency class: NEMA Premium / IE3 60Hz</p> <p>Rated power - P2: 30 HP</p> <p>Mains frequency: 60 Hz</p> <p>Suitable for 50/60 Hz: Y</p> <p>Rated voltage: 3 x 460 V</p> <p>Service factor: 1.15</p> <p>Rated current: 36.5 A</p> <p>Cos phi - power factor: 0.88</p> <p>Rated speed: 480-3540 rpm</p> <p>Motor efficiency at full load: 91.7 %</p> <p>Number of poles: 2</p> <p>Enclosure class (IEC 34-5): IP55</p> <p>Insulation class (IEC 85): F</p> <p>Motor No: 85901139</p> <p>Cable gland entry: 1xM40+1xM20+4xM16 knock out</p> <p>Others:</p> <p>Terminal box position: 6</p> <p>Minimum efficiency index, MEI ≥: 0.70</p> <p>Net weight: 458 lb</p> <p>Gross weight: 683 lb</p> <p>Shipping volume: 43 ft³</p> <p>Country of origin: US</p> <p>Custom tariff no.: 8413.70.2040</p>



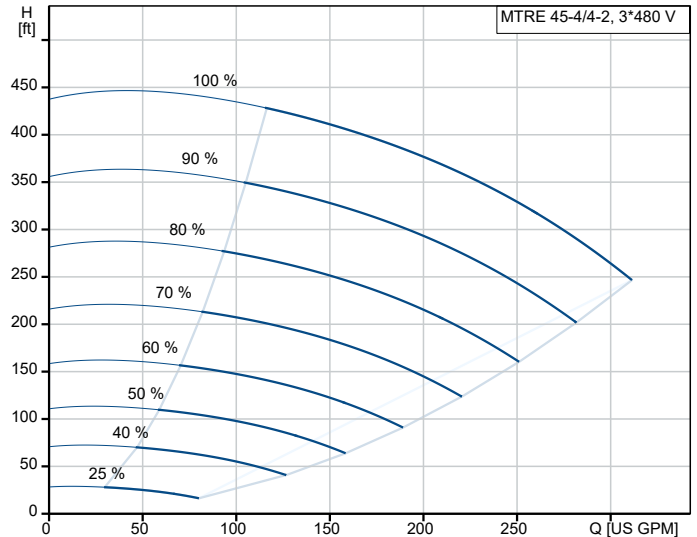
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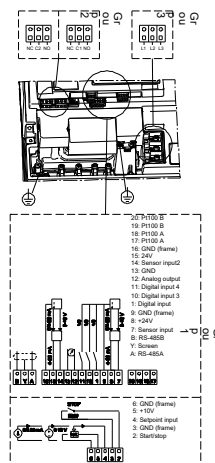
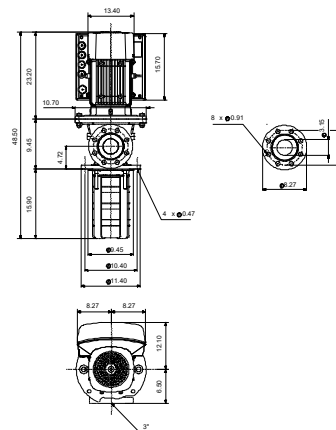
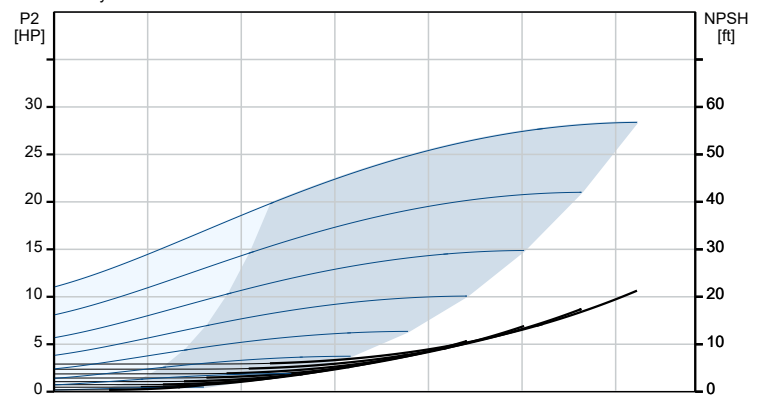
98472480 MTRE 45-4/4-2 A-G-A-HUUV 60 Hz



Description	Value
General information:	
Product name:	MTRE 45-4/4-2 A-G-A-HUUV
Product No:	98472480
EAN number:	5711495666095
Technical:	
Pump speed on which pump data are based:	3541 rpm
Rated flow:	238 US GPM
Rated head:	341.2 ft
Chambers:	4
Impellers:	4
Number of reduced-diameter impellers:	2
Drainage back to tank:	N
Pump orientation:	Vertical
Code for shaft seal:	HUUV
Approvals:	CE
Approvals for motor:	CE, cURus, RCM, UKCA, SEPRO
Energy approvals for motor:	CE
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	B
Cable gland entry:	1xM40+1xM20+4xM16 knock out
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:	104 °F
Maximum operating pressure:	362.59 psi
Max pressure at stated temp:	363 psi / 194 °F
Type of connection:	ANSI
Size of outlet connection:	3 inch
Immersion depth:	15.9 in
Flange size for motor:	286TC
Connect code:	G </td
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:	180AA
IE Efficiency class:	NEMA Premium / IE3 60Hz
Rated power - P2:	30 HP
Mains frequency:	60 Hz
Suitable for 50/60 Hz:	Y
Rated voltage:	3 x 460 V
Service factor:	1.15
Rated current:	36.5 A
Cos phi - power factor:	0.88
Rated speed:	480-3540 rpm
Motor efficiency at full load:	91.7 %
Number of poles:	2
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	YES
Motor No:	85901139
Cable gland entry:	1xM40+1xM20+4xM16 knock out



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



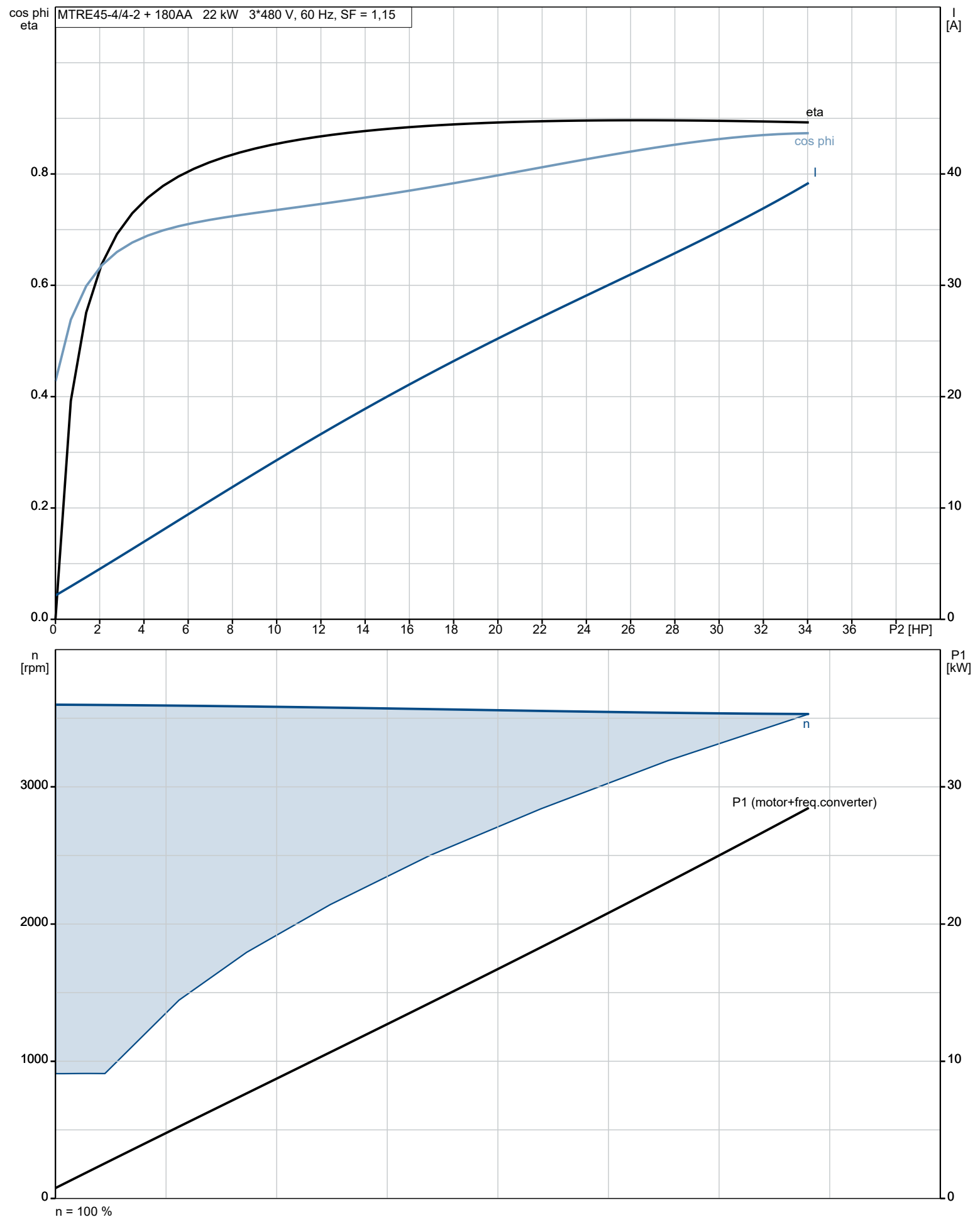


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Created by:
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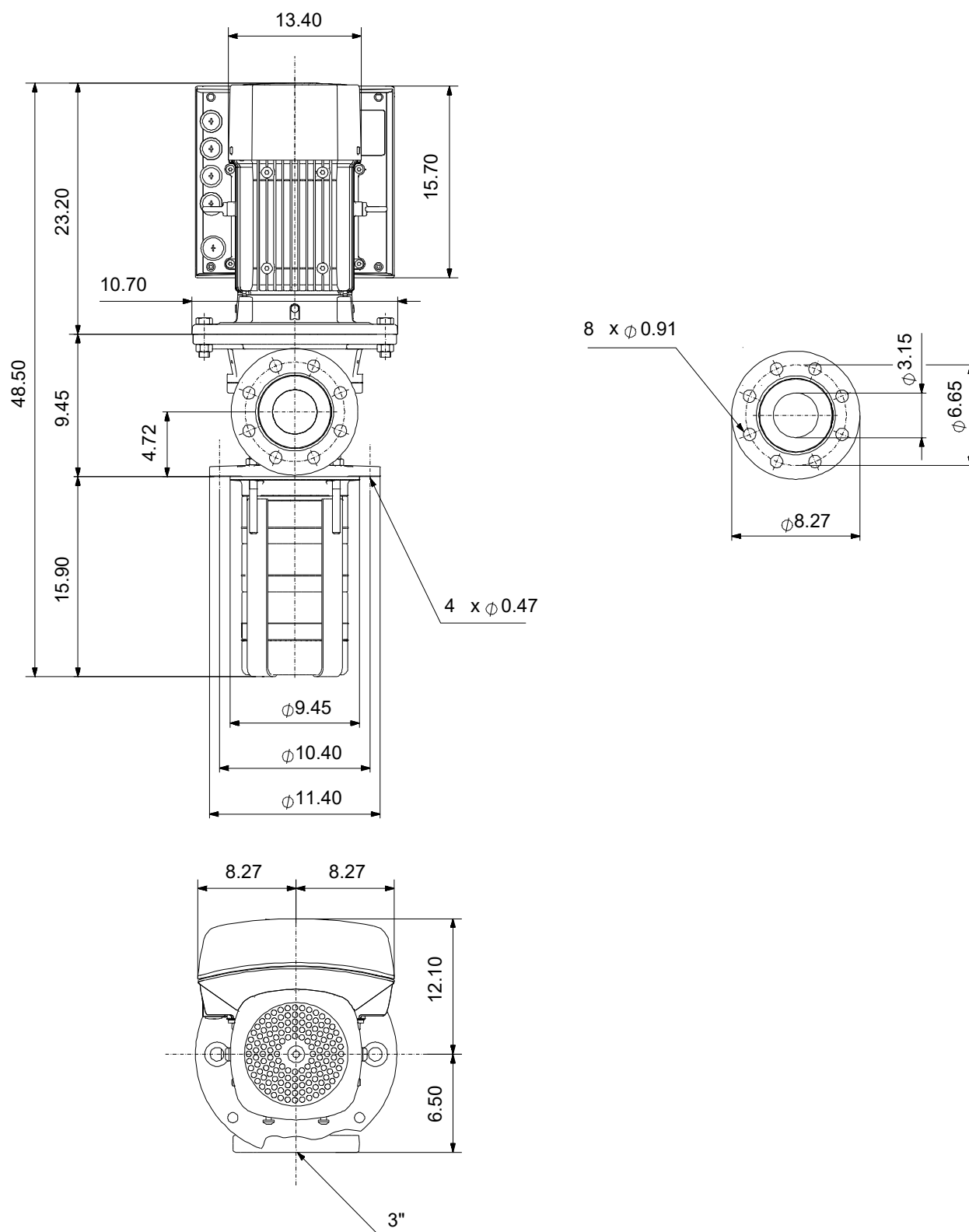
Date: 20/02/2023

Description	Value
Controls:	
Control panel:	Standard
Function Module:	ADVANCED I/O
Frequency converter:	Built-in
Others:	
Terminal box position:	6
Minimum efficiency index, MEI ≥:	0.70
Net weight:	458 lb
Gross weight:	683 lb
Shipping volume:	43 ft³
Country of origin:	US
Custom tariff no.:	8413.70.2040

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