
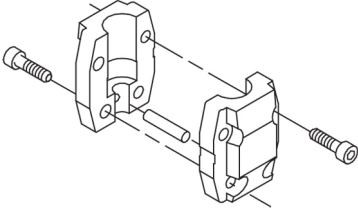
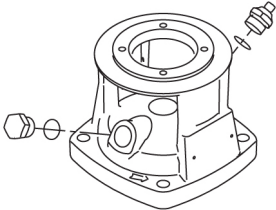
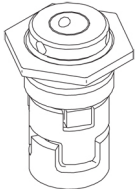
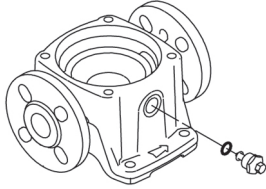
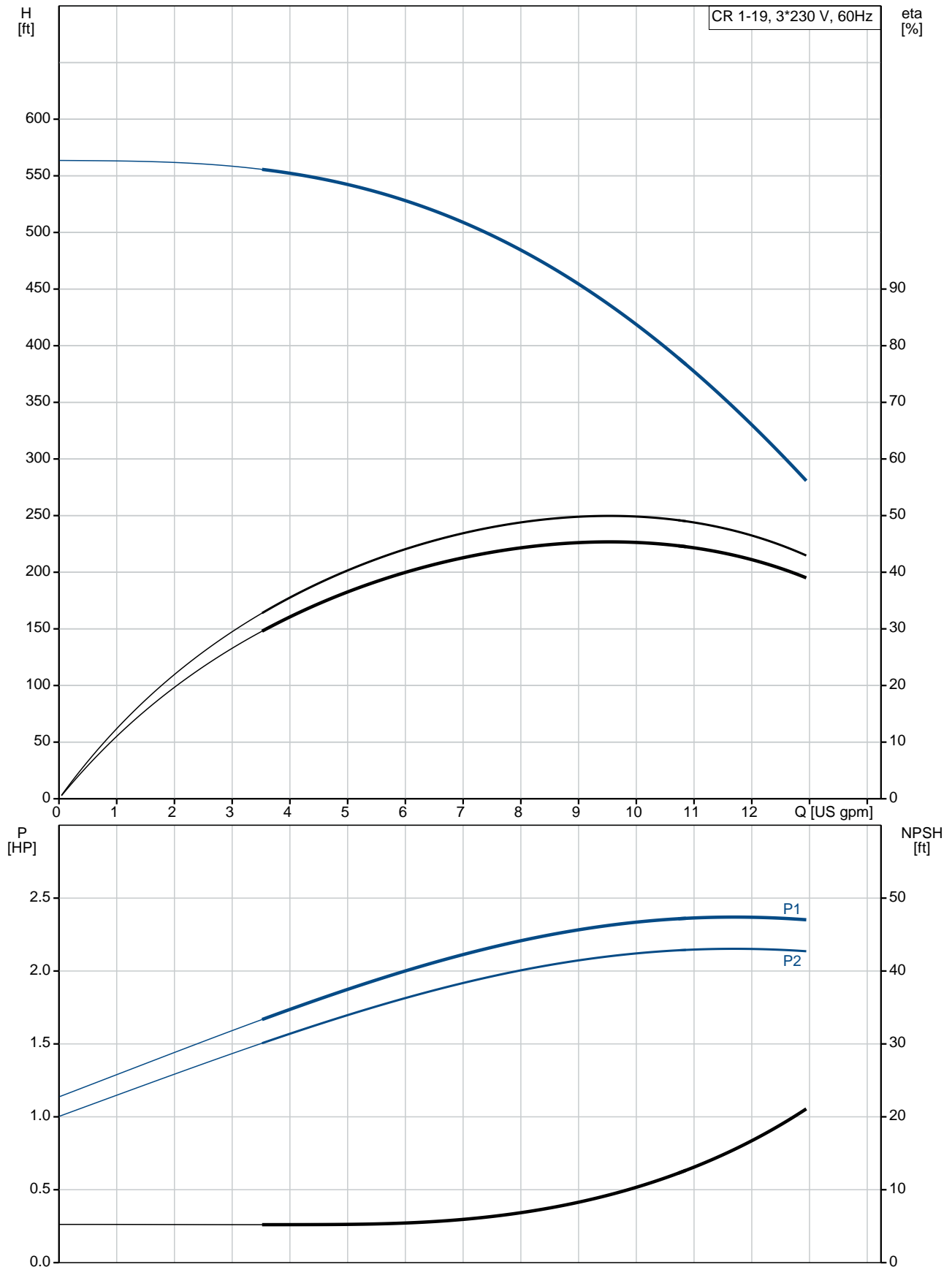


Count	Description
1	<p>CR 1-19 A-FGJ-A-E-HQQE</p>  <p>Product No.: 97749650</p> <p>Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and base are in cast iron – all other wetted parts are in stainless steel. A cartridge shaft seal ensures high reliability, safe handling, and easy access and service. Power transmission is via a rigid split coupling. Pipe connection is via combined DIN-ANSI-JIS flanges.</p> <p>The pump is fitted with a 3-phase, fan-cooled asynchronous motor.</p> <p>Further product details</p> <p>Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface. An integral part of the process is a pretreatment. The entire process consists of these elements:</p> <ol style="list-style-type: none"> 1) Alkaline-based cleaning. 2) Zinc phosphating. 3) Cathodic electro-deposition. 4) Curing to a dry film thickness 18-22 my m. <p>The colour code for the finished product is NCS 9000/RAL 9005.</p> <p>Pump</p> <p>A standard split coupling connects the pump and motor shaft. It is enclosed in the pump head/motor stool by means of two coupling guards.</p>  <p>The pump head, pump head cover and flange for motor mounting is made in one piece. The pump head has a combined 1/2" priming plug and vent screw.</p>  <p>The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system. This seal type is assembled in a cartridge unit which makes replacement safe and easy. Due to the balancing, this seal type is suitable for high-pressure applications. The cartridge construction also protects the pump shaft from possible wear from a dynamic O-ring between pump shaft and shaft seal.</p> <p>Primary seal:</p> <ul style="list-style-type: none"> • Rotating seal ring material: silicon carbide (SiC) • Stationary seat material: silicon carbide (SiC)

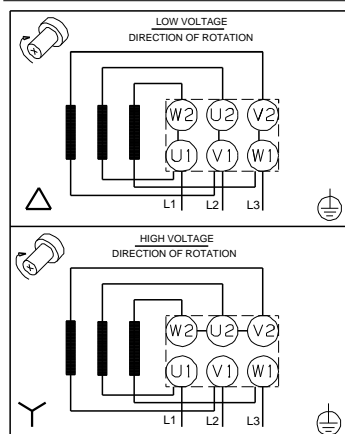
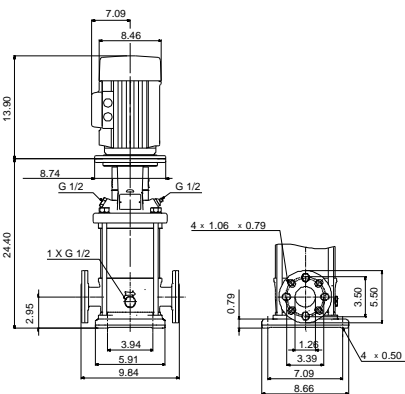
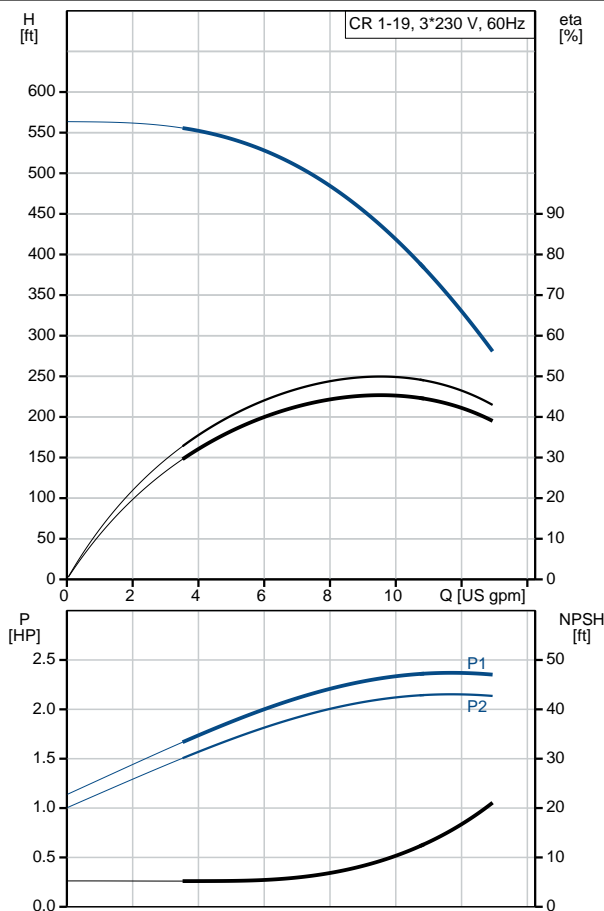
Count	Description
	<p>This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.</p> <p>Secondary seal material: EPDM (ethylene-propylene rubber)</p> <p>EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.</p>  <p>The shaft seal is screwed into the pump head.</p> <p>The pump has a special air-cooled shaft-seal chamber generating the same insulation effect as that of a vacuum flask. No external cooling is necessary; the ambient temperature is sufficient. An automatic vent vents the pump seal chamber.</p> <p>The chambers and impellers are made of stainless-steel sheet. The chambers are provided with a PTFE neck ring offering improved sealing and high efficiency. The impellers have smooth surfaces, and the shape of the blades ensure a high efficiency.</p> <p>The base is made of cast iron. The flanges and base are cast in one piece. The outlet side of the base has a combined drain plug and bypass valve. The pump is secured to the foundation by four bolts through the base plate.</p>  <p>Motor</p> <p>The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with tapped-hole flange (FT).</p> <p>Motor-mounting designation in accordance with IEC 60034-7: IM B 14 (Code I) / IM 3601 (Code II).</p> <p>Electrical tolerances comply with IEC 60034.</p> <p>The motor efficiency is classified as premium efficiency in accordance with EISA2007.</p> <p>The motor does not incorporate motor protection and must be connected to a motor-protective circuit breaker which can be manually reset. The motor-protective circuit breaker must be set according to the rated current of the motor (I₁/1).</p> <p>The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center.</p> <p>Technical data</p> <p>Liquid:</p> <p>Pumped liquid: Water</p> <p>Liquid temperature range: -4 .. 248 °F</p> <p>Selected liquid temperature: 68 °F</p> <p>Density: 62.29 lb/ft³</p> <p>Technical:</p> <p>Rated pump speed: 3452 rpm</p> <p>Rated flow: 9.69 US gpm</p>

Count	Description
	<p>Rated head: 399 ft</p> <p>Pump orientation: Vertical</p> <p>Shaft seal arrangement: Single</p> <p>Code for shaft seal: HQQE</p> <p>Approvals on nameplate: CURUS, NSF61</p> <p>Curve tolerance: ISO9906:2012 3B</p> <p>Materials:</p> <p>Base: Cast iron EN 1561 EN-GJL-200 ASTM A48-25B</p> <p>Impeller: Stainless steel EN 1.4301 AISI 304</p> <p>Bearing: SIC</p> <p>Installation:</p> <p>Maximum ambient temperature: 140 °F</p> <p>Maximum operating pressure: 362.59 psi</p> <p>Max pressure at stated temperature: 363 psi / 250 °F 363 psi / -4 °F</p> <p>Type of connection: DIN / ANSI / JIS</p> <p>Size of inlet connection: DN 25/32</p> <p>Size of outlet connection: DN 25/32</p> <p>Pressure rating for connection: PN 25</p> <p>Flange rating inlet: 250 lb</p> <p>Flange size for motor: 182TC</p> <p>Electrical data:</p> <p>Motor standard: NEMA</p> <p>Motor type: 90HA</p> <p>IE Efficiency class: NEMA Premium / IE3 60Hz</p> <p>Rated power - P2: 3 HP</p> <p>Power (P2) required by pump: 3 HP</p> <p>Main frequency: 60 Hz</p> <p>Rated voltage: 3 x 208-230YY/460Y V</p> <p>Service factor: 1.15</p> <p>Rated current: 8,50-8,20/4,10 A</p> <p>Starting current: 850-970 %</p> <p>Cos phi - power factor: 0.85-0.82</p> <p>Rated speed: 3500-3520 rpm</p> <p>IE efficiency: IE3 86,5%</p> <p>Motor efficiency at full load: 86.5 %</p> <p>Motor efficiency at 3/4 load: 89.4 %</p> <p>Motor efficiency at 1/2 load: 89.0 %</p> <p>Number of poles: 2</p> <p>Enclosure class (IEC 34-5): 55 Dust/Jetting</p> <p>Insulation class (IEC 85): F</p> <p>Motor Number: 99540186</p> <p>Controls:</p> <p>Frequency converter: NONE</p> <p>Others:</p> <p>Net weight: 107 lb</p> <p>Gross weight: 122 lb</p> <p>Shipping volume: 10.1 ft³</p> <p>Country of origin: US</p> <p>Custom tariff no.: 8413.70.2040</p>

97749650 CR 1-19 A-FGJ-A-E-HQQE 60 Hz



Description	Value
General information:	
Product name:	CR 1-19 A-FGJ-A-E-HQQE
Product No.:	97749650
EAN:	5710623716176 5710623716176
Technical:	
Rated pump speed:	3452 rpm
Rated flow:	9.69 US gpm
Rated head:	399 ft
Maximum head:	548.9 ft
Stages:	19
Impellers:	19
Number of reduced-diameter impellers:	0
Low NPSH:	N
Pump orientation:	Vertical
Shaft seal arrangement:	Single
Code for shaft seal:	HQQE
Approvals on nameplate:	CURUS, NSF61
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Cooling:	TEFC
Materials:	
Base:	Cast iron EN 1561 EN-GJL-200 ASTM A48-25B
Impeller:	Stainless steel EN 1.4301 AISI 304
Material code:	A
Code for rubber:	E
Bearing:	SIC
Installation:	
Maximum ambient temperature:	140 °F
Maximum operating pressure:	362.59 psi
Max pressure at stated temperature:	363 psi / 250 °F 363 psi / -4 °F
Type of connection:	DIN / ANSI / JIS
Size of inlet connection:	DN 25/32
Size of outlet connection:	DN 25/32
Pressure rating for connection:	PN 25
Flange rating inlet:	250 lb
Flange size for motor:	182TC
Connect code:	FGJ
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-4 .. 248 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³
Electrical data:	
Motor standard:	NEMA
Motor type:	90HA
IE Efficiency class:	NEMA Premium / IE3 60Hz
Rated power - P2:	3 HP
Power (P2) required by pump:	3 HP
Main frequency:	60 Hz





Company name:

Created by:

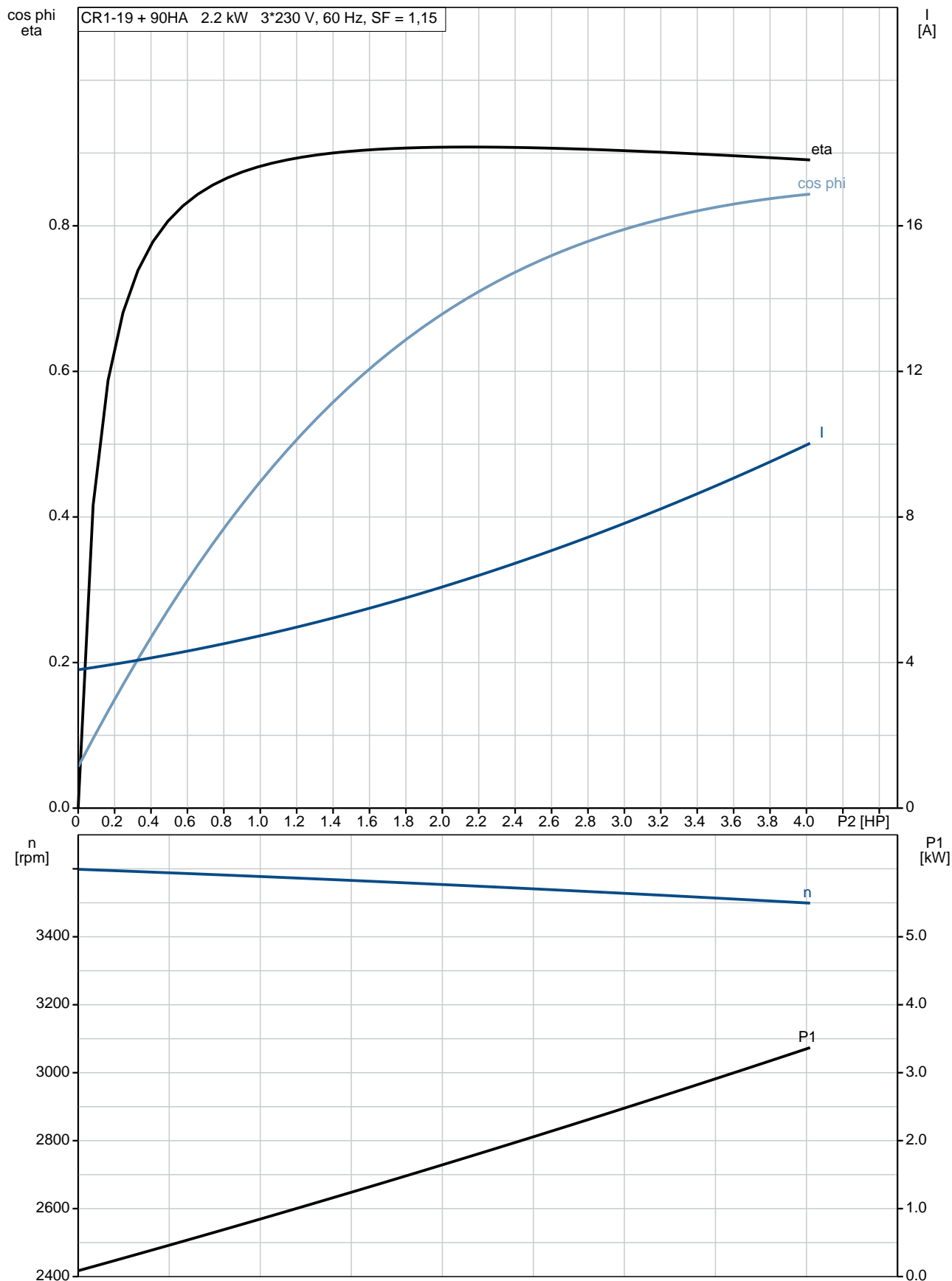
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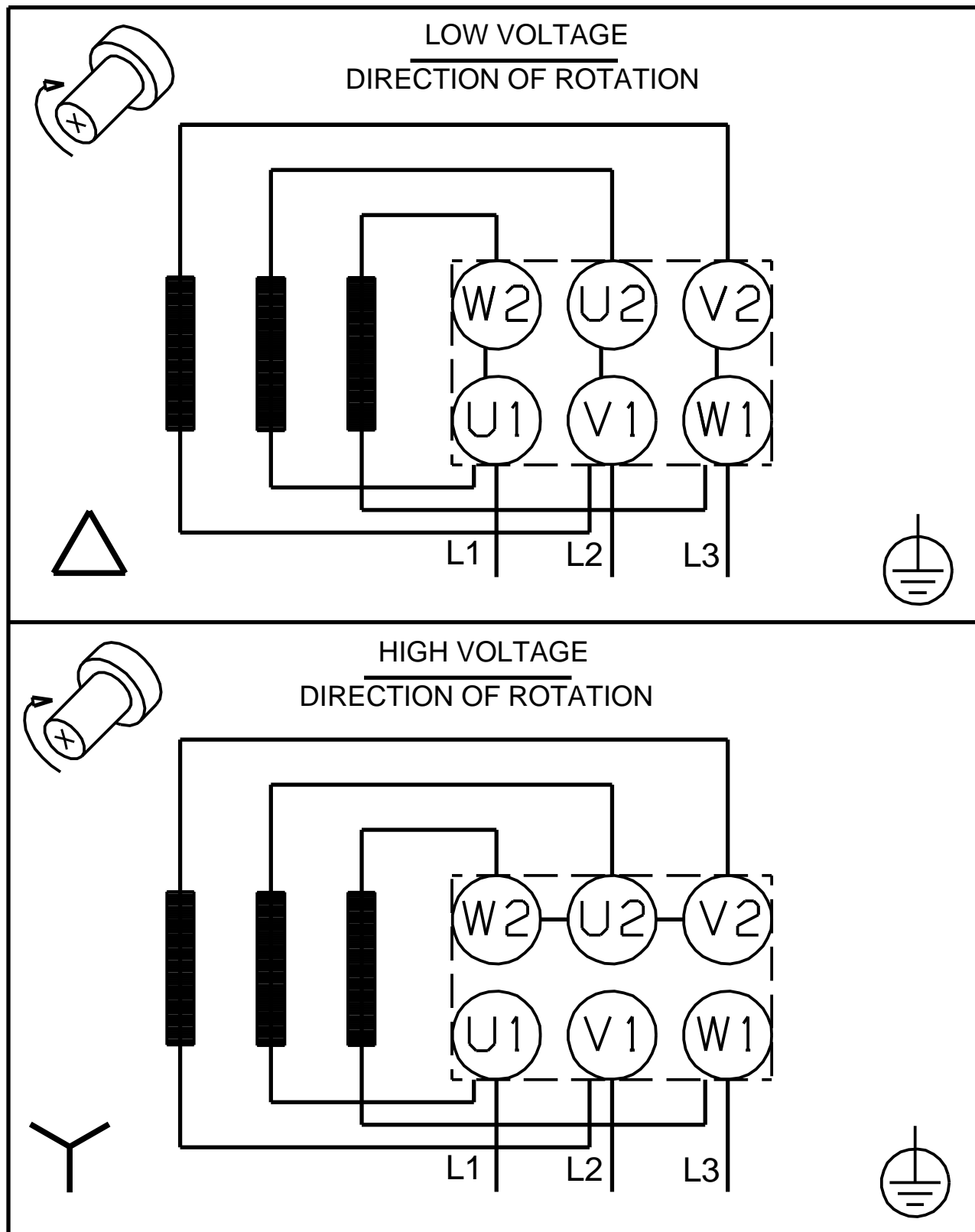
4/16/2020

Description	Value
Rated voltage:	3 x 208-230YY/460Y V
Service factor:	1.15
Rated current:	8,50-8,20/4,10 A
Starting current:	850-970 %
Load current:	9,60-9,20/4,60 A
Cos phi - power factor:	0.85-0.82
Rated speed:	3500-3520 rpm
IE efficiency:	IE3 86,5%
Motor efficiency at full load:	86.5 %
Motor efficiency at 3/4 load:	89.4 %
Motor efficiency at 1/2 load:	89.0 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protection:	NONE
Motor Number:	99540186
Controls:	
Frequency converter:	NONE
Others:	
Net weight:	107 lb
Gross weight:	122 lb
Shipping volume:	10.1 ft ³
Country of origin:	US
Custom tariff no.:	8413.70.2040

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All units are [in] unless otherwise presented.