
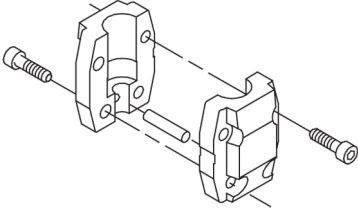
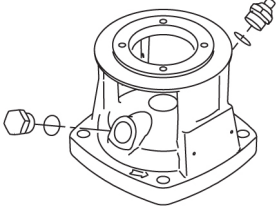
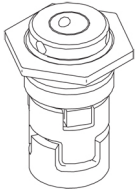
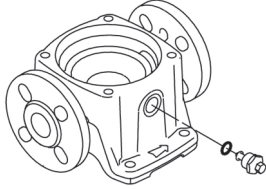


Count	Description
1	<p data-bbox="225 342 533 365"><b>CR 1-19 A-FGJ-A-V-HQQV</b></p>  <p data-bbox="225 663 488 685">Product No.: <a href="#">97749671</a></p> <p data-bbox="225 723 1445 819">Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and 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 data-bbox="225 864 959 887">The pump is fitted with a 3-phase, fan-cooled asynchronous motor.</p> <p data-bbox="225 925 544 947"><b>Further product details</b></p> <p data-bbox="225 958 1453 1055">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 data-bbox="225 1070 719 1189" style="list-style-type: none"> <li>1) Alkaline-based cleaning.</li> <li>2) Zinc phosphating.</li> <li>3) Cathodic electro-deposition.</li> <li>4) Curing to a dry film thickness 18-22 my m.</li> </ol> <p data-bbox="225 1193 935 1216">The colour code for the finished product is NCS 9000/RAL 9005.</p> <p data-bbox="225 1249 308 1272"><b>Pump</b></p> <p data-bbox="225 1283 1414 1335">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 data-bbox="225 1585 1433 1637">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 data-bbox="225 1888 1425 1984">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 data-bbox="225 2000 371 2022">Primary seal:</p> <ul data-bbox="264 2029 826 2085" style="list-style-type: none"> <li>• Rotating seal ring material: silicon carbide (SiC)</li> <li>• Stationary seat material: silicon carbide (SiC)</li> </ul>

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.            Secondary seal material: FKM (fluorocarbon rubber)            FKM has excellent resistance to oils and chemicals. Above 90 °C, FKM should only be used in media without water.</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><b>Motor</b></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).            Motor-mounting designation in accordance with IEC 60034-7: IM B 14 (Code I) / IM 3601 (Code II).            Electrical tolerances comply with IEC 60034.            The motor efficiency is classified as premium efficiency in accordance with EISA2007.            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).            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><b>Technical data</b></p> <p>Liquid:            Pumped liquid: Water            Liquid temperature range: -4 .. 194 °F            Selected liquid temperature: 68 °F            Density: 62.29 lb/ft³</p> <p><b>Technical:</b>            Rated pump speed: 3452 rpm</p>



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Date:

4/16/2020

Count	Description
	<p>Rated flow: 9.69 US gpm            Rated head: 399 ft            Pump orientation: Vertical            Shaft seal arrangement: Single            Code for shaft seal: HQQV            Approvals on nameplate: CURUS            Curve tolerance: ISO9906:2012 3B</p> <p><b>Materials:</b>            Base: Cast iron                      EN 1561 EN-GJL-200                      ASTM A48-25B            Impeller: Stainless steel                      EN 1.4301                      AISI 304            Bearing: SIC</p> <p><b>Installation:</b>            Maximum ambient temperature: 140 °F            Maximum operating pressure: 362.59 psi            Max pressure at stated temperature: 363 psi / 194 °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</p> <p><b>Electrical data:</b>            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            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 %            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 Number: 99540186</p> <p><b>Controls:</b>            Frequency converter: NONE</p> <p><b>Others:</b>            Net weight: 107 lb            Gross weight: 122 lb            Shipping volume: 10.1 ft<sup>3</sup>            Country of origin: US</p>



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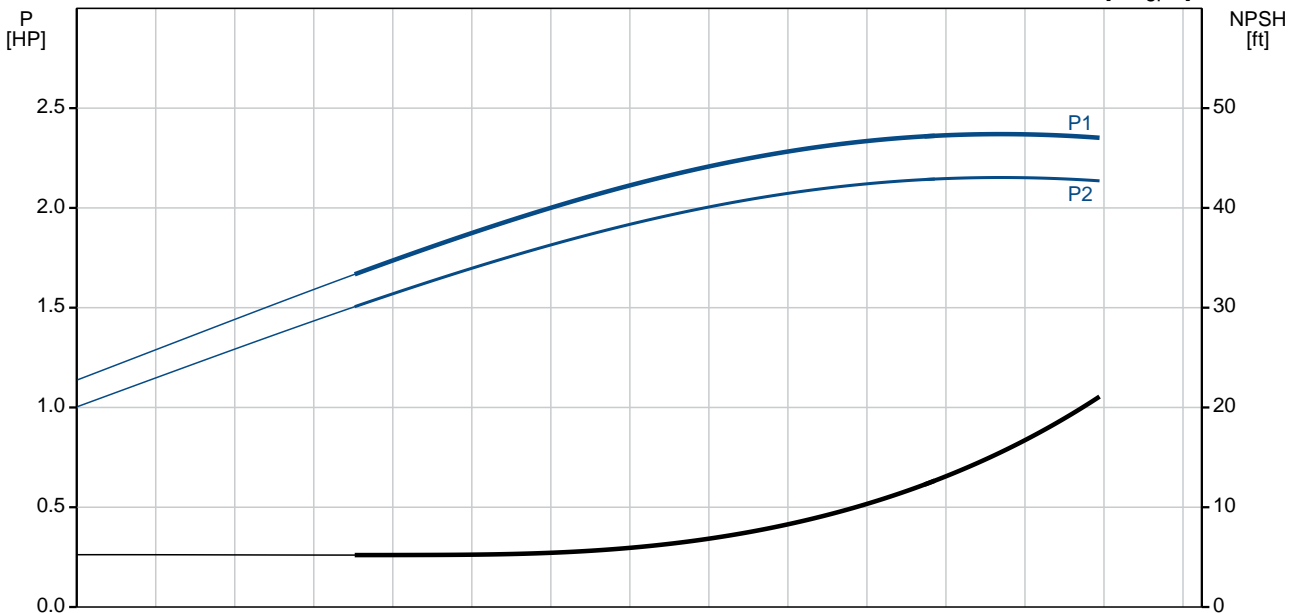
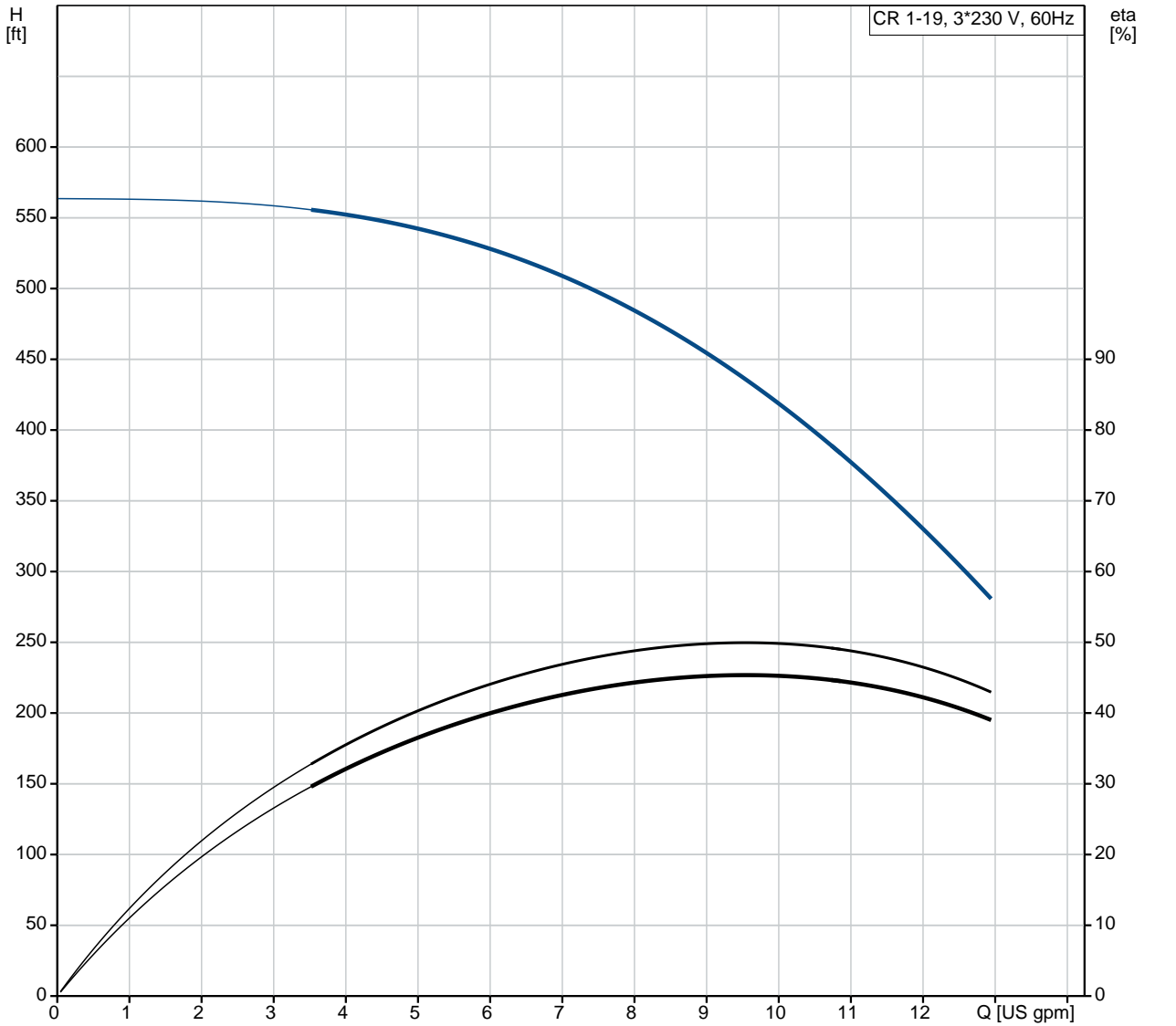
Count	Description
	Custom tariff no.: 8413.70.2040



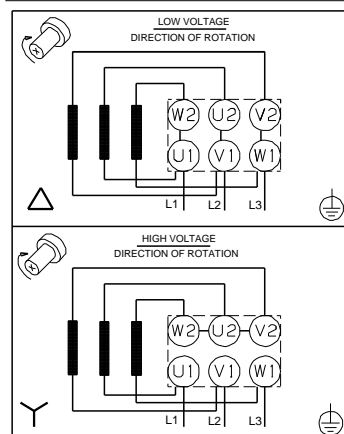
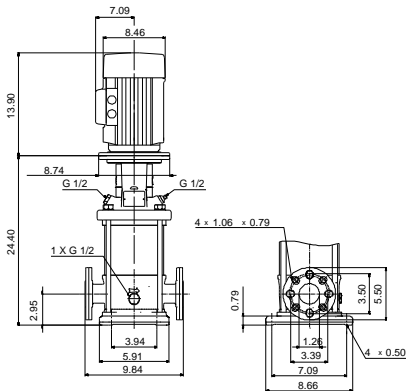
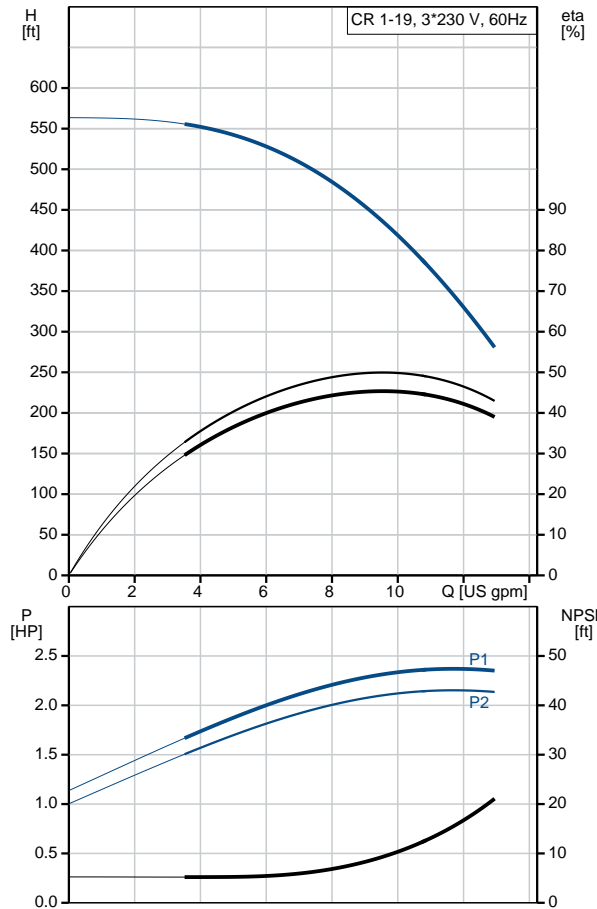
Company name:  
Created by:  
Phone:

Date: 4/16/2020

### 97749671 CR 1-19 A-FGJ-A-V-HQQV 60 Hz



Description	Value
<b>General information:</b>	
Product name:	CR 1-19 A-FGJ-A-V-HQQV
Product No.:	97749671
EAN:	5710623716206 5710623716206
<b>Technical:</b>	
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:	HQQV
Approvals on nameplate:	CURUS
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Model:	A
Cooling:	TEFC
<b>Materials:</b>	
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:	V
Bearing:	SIC
<b>Installation:</b>	
Maximum ambient temperature:	140 °F
Maximum operating pressure:	362.59 psi
Max pressure at stated temperature:	363 psi / 194 °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
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature range:	-4 .. 194 °F
Selected liquid temperature:	68 °F
Density:	62.29 lb/ft³
<b>Electrical data:</b>	
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:

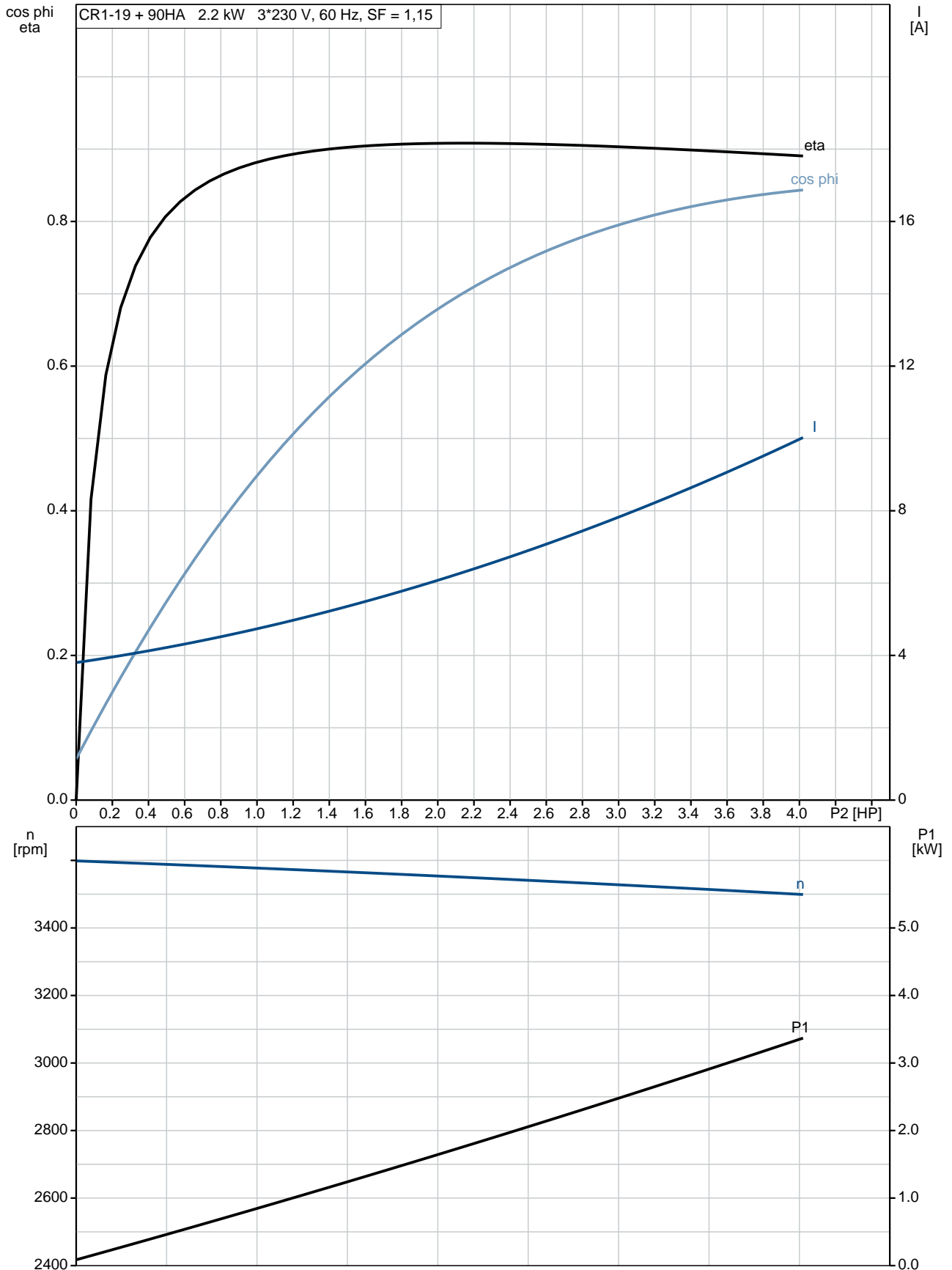
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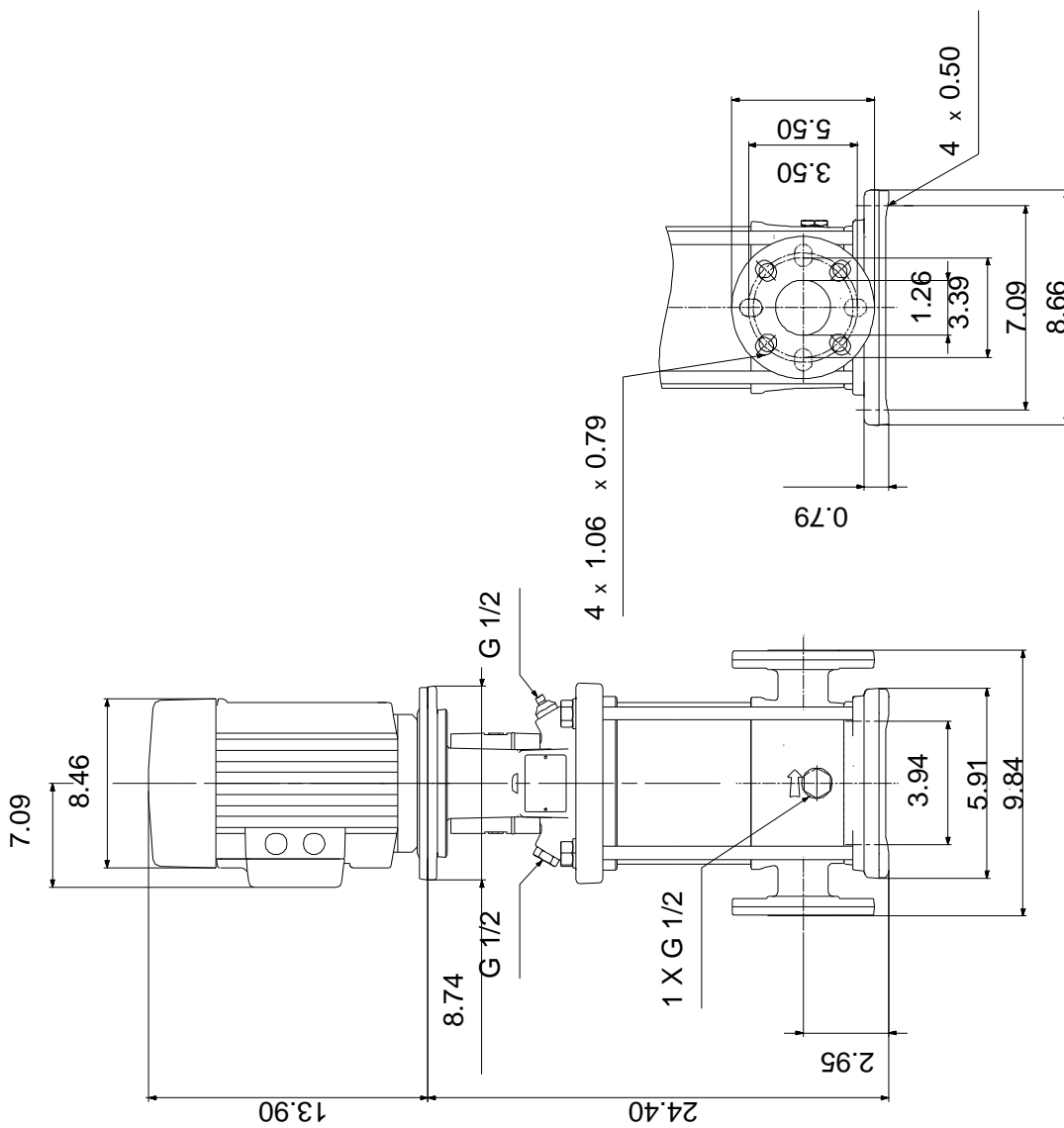
Description	Value
Rated voltage:	3 x 208-230YY/460Y V
Service factor:	1.15
Rated current:	8,50-8,20/4,10 A
Starting current:	850-970 %
Load current:	9,60-9,20/4,60 A
Cos phi - power factor:	0.85-0.82
Rated speed:	3500-3520 rpm
IE efficiency:	IE3 86,5%
Motor efficiency at full load:	86.5 %
Motor efficiency 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
<b>Controls:</b>	
Frequency converter:	NONE
<b>Others:</b>	
Net weight:	107 lb
Gross weight:	122 lb
Shipping volume:	10.1 ft <sup>3</sup>
Country of origin:	US
Custom tariff no.:	8413.70.2040

## 97749671 CR 1-19 A-FGJ-A-V-HQQV 60 Hz



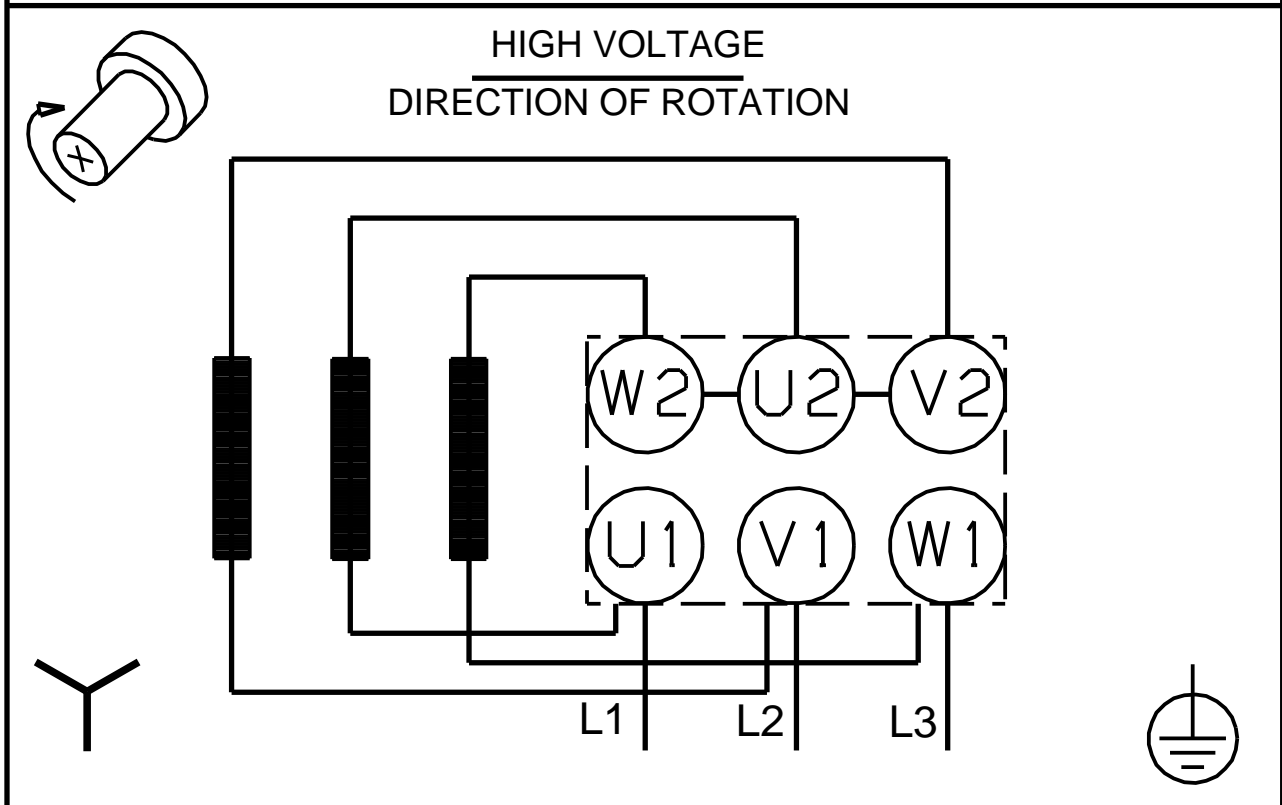
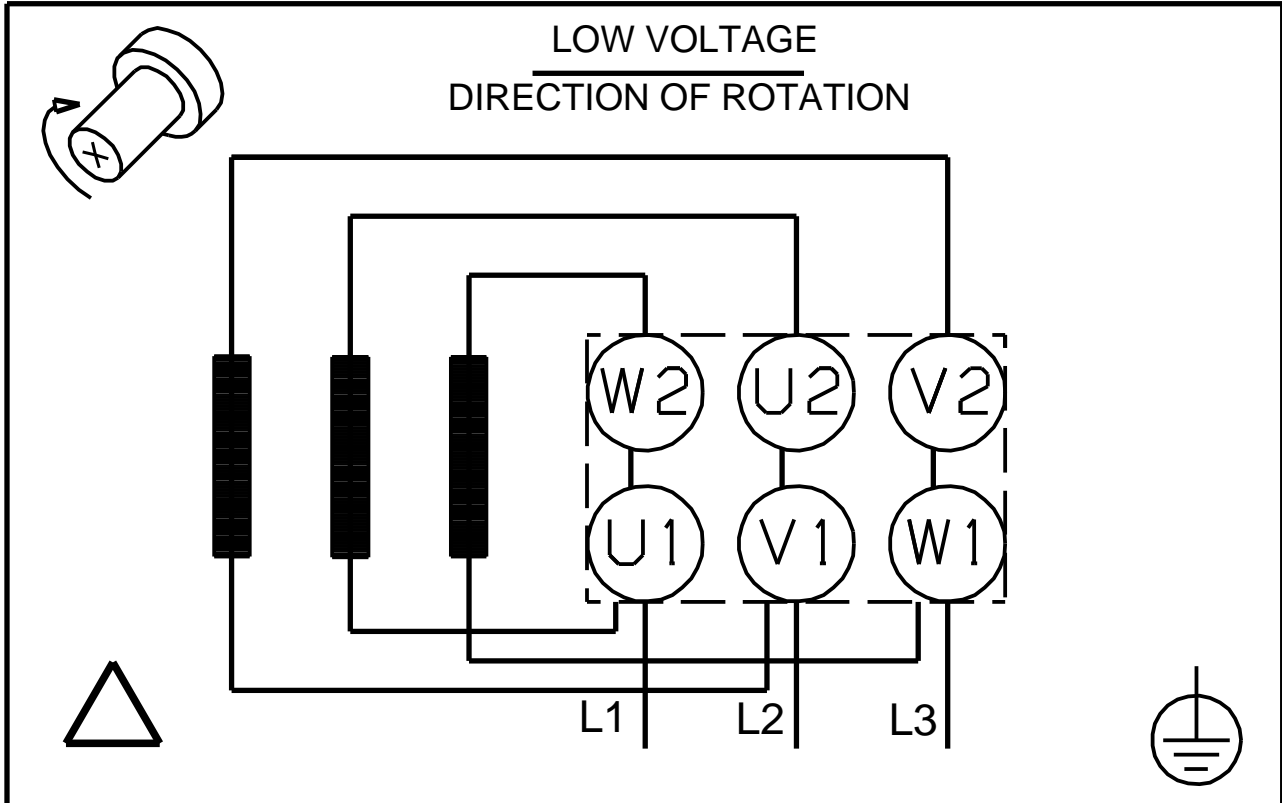


**97749671 CR 1-19 A-FGJ-A-V-HQQV 60 Hz**



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

**97749671 CR 1-19 A-FGJ-A-V-HQQV 60 Hz**



All units are [in] unless otherwise presented.