

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

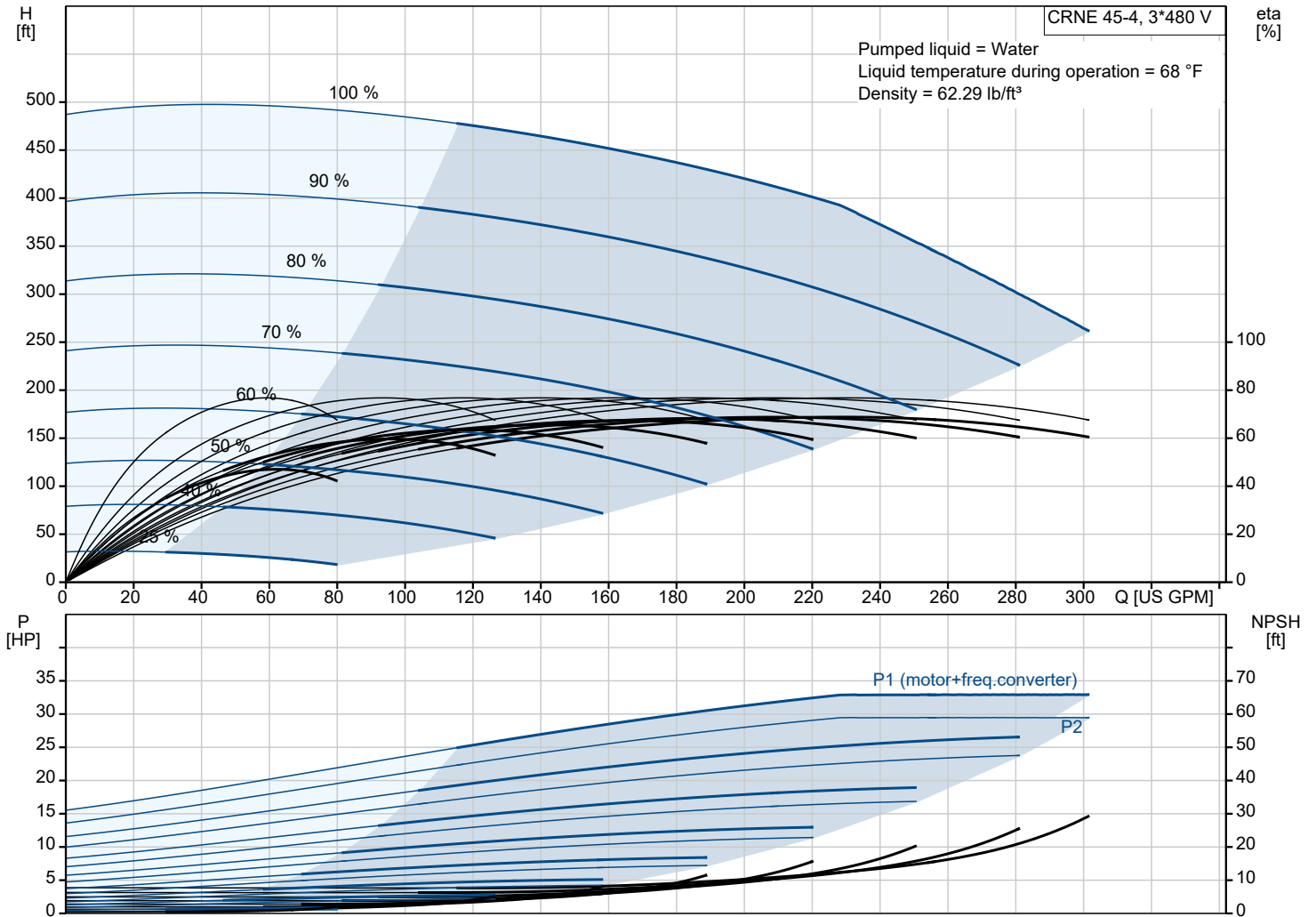


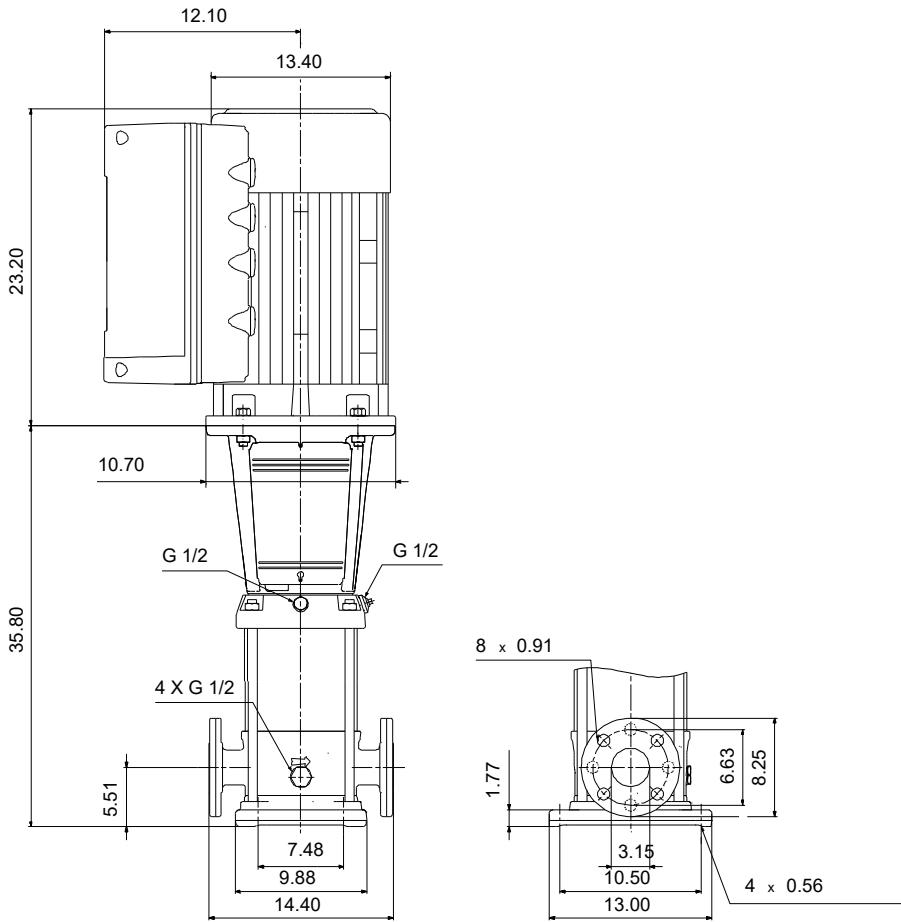
CRNE 45-4 N-G-A-E-HQQE

Vertical, multistage centrifugal pump with integrated frequency converter. Pump materials in contact with the liquid are in high-grade stainless steel (EN 1.4401)

Note! Product picture may differ from actual product

Conditions of Service		Pump Data		Motor Data	
Liquid:	Water	Max pressure at stated temp:	435 psi / 250 °F	Rated power - P2:	30 HP
Temperature:	68 °F	Liquid temperature range:	-40 .. 248 °F	Rated voltage:	460 V
Specific Gravity:	1.000	Maximum ambient temperature:	104 °F	Mains frequency:	60 Hz
		Shaft seal:	HQQE	Enclosure class:	IP55
		Product number:	98183875	Insulation class:	F
				Motor protection:	YES
				Motor type:	180AA
				Eta 1/1:	91.7 %





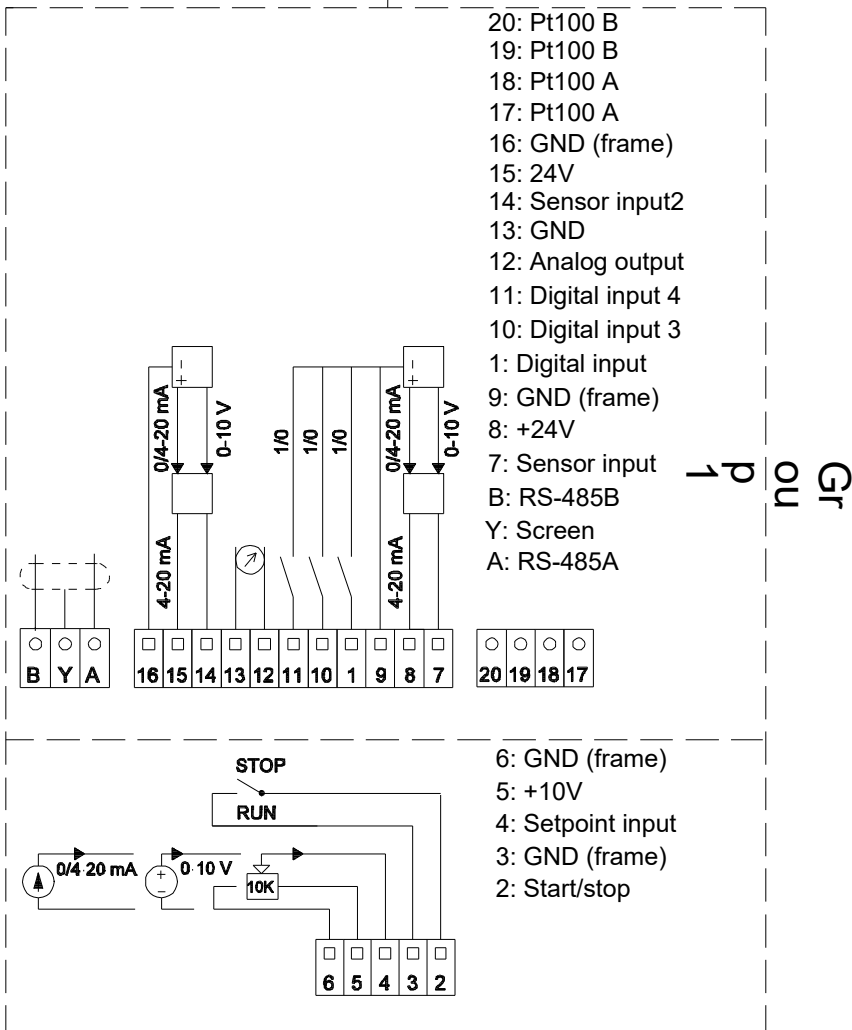
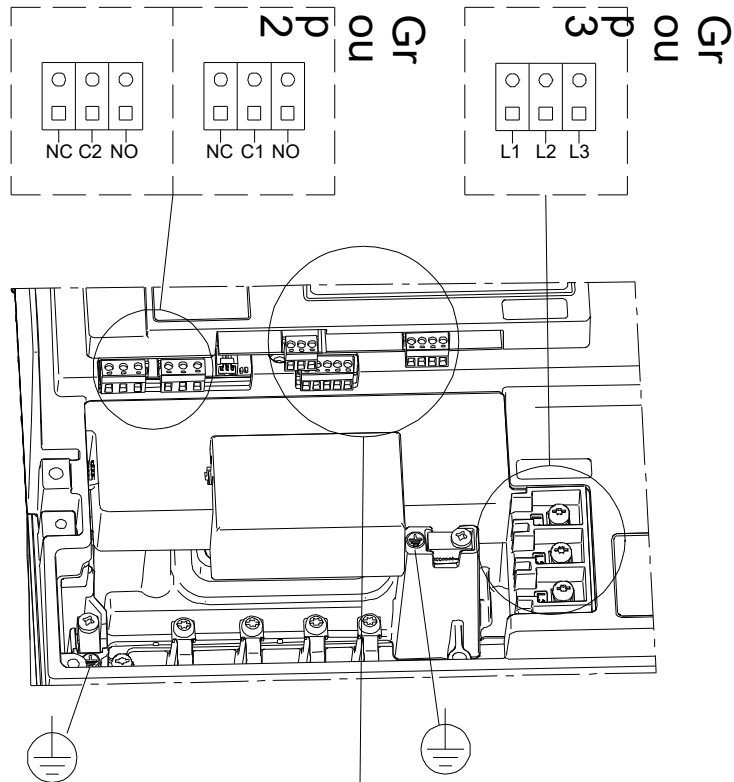
Materials:

- Base: Stainless steel
- Base: EN 1.4408
- Base: AISI 316
- Impeller: Stainless steel
- Impeller: AISI 316
- Impeller: EN 1.4401
- Material code: A
- Code for rubber: E

Qty.	Description
1	<p data-bbox="124 85 432 118">CRNE 45-4 N-G-A-E-HQQE</p> <p data-bbox="124 118 389 141">Product No.: 98183875</p> <p data-bbox="124 174 1520 253">Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). Pump materials in contact with the liquid are in high-grade 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 ANSI flanges.</p> <p data-bbox="124 264 839 286">The pump is fitted with a 3-phase, fan-cooled asynchronous motor.</p> <p data-bbox="124 293 1520 342">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 data-bbox="124 349 1477 398">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 operating panel has indicator lights for "Operation" and "Fault".</p> <p data-bbox="124 405 1469 483">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 data-bbox="124 495 719 517">The terminal box holds terminals for these connections:</p> <ul data-bbox="164 524 1453 846" 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; the factory-fitted pressure sensor is connected to one of these inputs • 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 data-bbox="124 880 201 902">Liquid:</p> <p data-bbox="124 909 557 931">Pumped liquid: Water</p> <p data-bbox="124 938 624 960">Liquid temperature range: -40 .. 248 °F</p> <p data-bbox="124 967 549 990">Selected liquid temperature: 68 °F</p> <p data-bbox="124 996 606 1019">Density: 62.29 lb/ft³</p> <p data-bbox="124 1059 237 1081">Technical:</p> <p data-bbox="124 1088 743 1111">Pump speed on which pump data are based: 3541 rpm</p> <p data-bbox="124 1117 633 1140">Rated flow: 238 US GPM</p> <p data-bbox="124 1146 572 1169">Rated head: 385.8 ft</p> <p data-bbox="124 1176 563 1198">Actual impeller diameter: 5.37 in</p> <p data-bbox="124 1205 571 1227">Pump orientation: Vertical</p> <p data-bbox="124 1234 557 1256">Shaft seal arrangement: Single</p> <p data-bbox="124 1263 563 1285">Code for shaft seal: HQQE</p> <p data-bbox="124 1292 576 1314">Approvals: CURUS</p> <p data-bbox="124 1321 633 1344">Approvals for drinking water: NSF/ANSI 61</p> <p data-bbox="124 1350 683 1373">Curve tolerance: ISO9906:2012 3B</p> <p data-bbox="124 1413 233 1435">Materials:</p> <p data-bbox="124 1442 647 1525">Base: Stainless steel EN 1.4408 AISI 316</p> <p data-bbox="124 1532 647 1615">Impeller: Stainless steel EN 1.4401 AISI 316</p> <p data-bbox="124 1621 533 1644">Bearing: SIC</p> <p data-bbox="124 1650 571 1673">Support bearing: Graflon</p> <p data-bbox="124 1713 250 1736">Installation:</p> <p data-bbox="124 1742 563 1765">t max amb: 104 °F</p> <p data-bbox="124 1771 603 1794">Maximum operating pressure: 435.11 psi</p> <p data-bbox="124 1800 660 1856">Max pressure at stated temp: 435 psi / 250 °F 435 psi / -40 °F</p> <p data-bbox="124 1863 549 1886">Type of connection: ANSI</p> <p data-bbox="124 1892 557 1915">Size of inlet connection: 3 inch</p> <p data-bbox="124 1921 557 1944">Size of outlet connection: 3 inch</p> <p data-bbox="124 1951 560 1973">Pressure rating for connection: PN 40</p> <p data-bbox="124 1980 557 2002">Flange rating inlet: 300 lb</p> <p data-bbox="124 2009 563 2031">Flange size for motor: 284TC</p> <p data-bbox="124 2072 288 2094">Electrical data:</p> <p data-bbox="124 2101 563 2123">Motor standard: NEMA</p> <p data-bbox="124 2130 563 2152">Motor type: 180AA</p>

Qty.	Description
	IE Efficiency class: NEMA Premium / IE3 60Hz
	Rated power - P2: 30 HP
	Power (P2) required by pump: 30 HP
	Mains frequency: 60 Hz
	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
	Efficiency: IE3 91,7%
	Motor efficiency at full load: 91.7 %
	Number of poles: 2
	Enclosure class (IEC 34-5): IP55
	Insulation class (IEC 85): F
	Motor No: 85901139
	Controls:
	Frequency converter: Built-in
	Pressure sensor: Y
	Others:
	DOE Pump Energy Index VL: 0.46
	Net weight: 510 lb
	Gross weight: 527 lb
	Shipping volume: 29 ft ³

98183875 CRNE 45-4 N-G-A-E-HQQE 60 Hz



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