

# CR, CRI, CRN

Vertical multistage centrifugal pumps  
60 Hz



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# 1. Product introduction

This data booklet deals with Grundfos CR, CRI and CRN pumps with these nominal flow sizes:

- CR, CRN, CRI 1s, 1, 3, 5, 10, 15, 20
- CR, CRN 32, 45, 64.

Options for larger flow sizes are described in the data booklet for CR, CRN 95-155, 60 Hz available on Grundfos Product Center at <http://net.grundfos.com/qr/i/99407996>.



TM02 7698 3803

Fig. 1 CR, CRI and CRN pumps

## Pump Energy Index

Pump Energy Index (PEI) was established by the U.S. Department of Energy (DOE) and adopted by Canada as the standard metric used to evaluate pump efficiency. The value is the ratio of the pump efficiency rating (PER) divided by the calculated minimally compliant PER ( $PER_{STD}$ ) for the pump type. This provides a representation of a pump's actual performance compared to the minimal standard performance required by regulation. The lower the PEI value, the more efficient a pump is at the tested operating points.

PER is determined by defined testing parameters required by the DOE. This includes testing a particular pump model at its best efficiency point (BEP).

For PEI values there are two different versions:

- $PEI_{CL}$  (constant load): Applies to a bare-shaft pump and a pump sold with a motor
- $PEI_{VL}$  (variable load): Applies to pumps sold with a motor and controller (such as VFD, VSD)

The DOE has set the maximum PEI value as 1.00. Any pump, pump and motor, or pump, motor and controller that exceeds a PEI value of 1.00 can no longer be manufactured after January 26, 2020.

PEI is a generalized efficiency value. PEI cannot be used to determine the efficiency of a pump in a specific application.

Product type	Poles	$PEI_{CL}$ bare-shaft pump	$PEI_{CL}$ pump with motor	$PEI_{VL}$ pump with motor plus controller*	Impeller diameter [in (mm)]
CR, CRN, CRI 10	2	0.87	0.87	0.48	3.66 (92.90)
CR, CRN, CRI 15	2	0.91	0.91	0.48	4.13 (104.80)
CR, CRN, CRI 20	2	0.91	0.91	0.47	4.13 (104.80)
CR, CRN 32	2 4	0.87 0.90	0.87 0.91	0.45 0.50	4.66 (118.40)
CR, CRN 45	2 4	0.89 0.91	0.89 0.91	0.46 0.47	5.34 (136)
CR, CRN 64	2 4	0.93 0.94	0.93 0.94	0.46 0.48	5.59 (142)

\*Grundfos CUE continuous controls.

## Features and benefits

Grundfos CR, CRI, CRN pumps are vertical multistage centrifugal pumps. The in-line design enables installation in a horizontal one-pipe system where the inlet and outlet ports are in the same horizontal plane and have the same pipe dimensions. This design provides a more compact pump design.

Grundfos CR pumps are available in various sizes and various numbers of stages to provide the flow rate and the pressure required.

CR pumps are designed for a variety of applications ranging from pumping potable water to pumping chemicals. The pumps are therefore suitable for a wide variety of pumping systems where the performance and material of the pump meet specific demands.

A CR pump consists of two main components: the motor and the pump unit.

The pump unit consists of optimized hydraulics, various types of connections, a sleeve, a pump head and various other parts.

CR pumps are available in various material versions according to the pumped liquid.

CR pumps fitted with EPDM elastomers are compliant with ANSI/NSF 61 and ANSI/NSF 372. See UL file MH26400 or contact Grundfos.

## Pump

The CR pumps are non-self-priming, vertical multistage centrifugal pumps. The pumps are available with a Grundfos or Baldor® standard motor.

The pump consists of a base and a pump head. The chamber stack and the sleeve are secured between the pump head and the base by means of staybolts. The base has inlet and outlet ports on the same level (in-line).

All pumps are fitted with a maintenance-free mechanical shaft seal of the cartridge type.

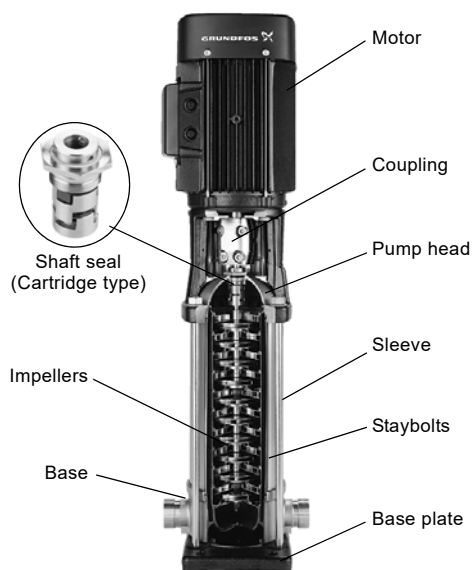


Fig. 2 CR pump

GR5357 - GR3395

## Grundfos E-motors

We also offer frequency-controlled CRE and CRNE pumps which are the ideal choice for a number of applications characterized by a demand for variable flow at constant pressure. These pumps are suited for water supply systems and pressure boosting as well as for industrial applications. Depending on the application, the pumps offer energy savings, increased comfort and improved processing.

## Optional motors

The Grundfos standard range of motors covers a wide variety of application demands. However, for special applications or operating conditions, custom-built motor solutions can be provided.

For special applications or operating conditions, Grundfos offers custom-built motors such as:

- explosion proof motors
- motors with anti-condensation heating unit
- low-noise motors
- motors with thermal protection.

## Motor protection

Single-phase Grundfos specified motors up to 7.5 HP have a built-in thermal overload switch.

Three-phase motors must be connected to a motor-protective circuit breaker according to local regulations.




Three-phase Grundfos ML motors 5 HP (4 kW) and larger have a built-in thermistor (PTC) according to DIN 44082 (TP 211 according to IEC 34-11).

## Motor

### Grundfos ML standard and Baldor® motors

CR, CRI and CRN pumps are fitted with a Grundfos specified motor. The motors are all heavy-duty 2-pole, NEMA C-face motors.

### Electrical data

<b>Mounting designation</b>	NEMA
<b>Insulation class</b>	F & B
<b>Efficiency class</b>	Premium efficiency - EISA compliant
<b>Enclosure class</b>	TEFC - Totally Enclosed Fan Cooled (Grundfos standard) ODP - Open Drip Proof - on request
<b>60 Hz standard voltages</b>	1 x 115/208-230 V 3 x 208-230/460 V 3 x 575 V
The motors are rated for:	
	Baldor                      ML
<b>Approvals</b>	  

## Terminal box positions

As standard the terminal box is mounted on the inlet side of the pump.

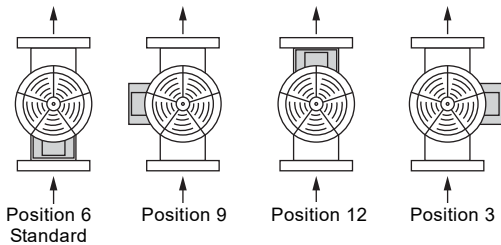


Fig. 3 Terminal box positions

## Viscosity

Pumping liquids with densities or kinematic viscosities higher than those of water will cause a considerable pressure drop, a drop in the hydraulic performance and a rise in the power consumption.

In such situations, the pump must be fitted with a larger motor. If in doubt, contact Grundfos.

## Ambient temperature and altitude

If the ambient temperature exceeds the maximum temperature limits of the pump or the pump is installed at an altitude exceeding the altitude values in the chart below, the motor must not be fully loaded due to the risk of overheating.

Overheating may result from excessive ambient temperatures or the low density and consequently low cooling effect of the air at high altitudes. In such cases, it may be necessary to use a motor with a higher rated output (P2).

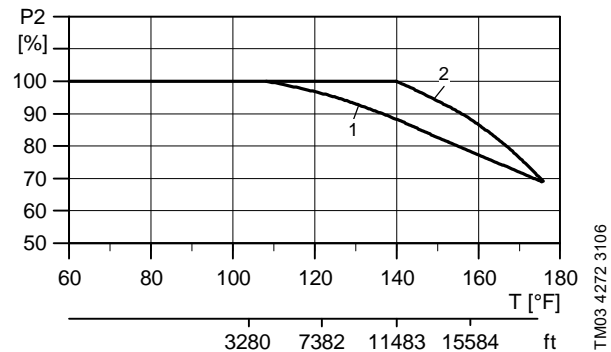


Fig. 4 Relationship between motor output (P2) and ambient temperature (T) and altitude (ft)

### Legend

Pos.	Description
1	NEMA energy-efficient motors
2	NEMA premium-efficiency motors

**Example:** From fig. 4 it appears that P2 must be reduced to 88 % when a pump with a NEMA premium-efficiency ML motor is installed at 15,584 ft (4750 m) above sea level. At an ambient temperature of 167 °F (75 °C), P2 of a standard-efficiency motor must be reduced to 74 % of rated output.

In cases where both the maximum temperature and the maximum altitude are exceeded, the derating factors must be multiplied. Example:  $0.89 \times 0.89 = 0.79$ .

## 2. Applications

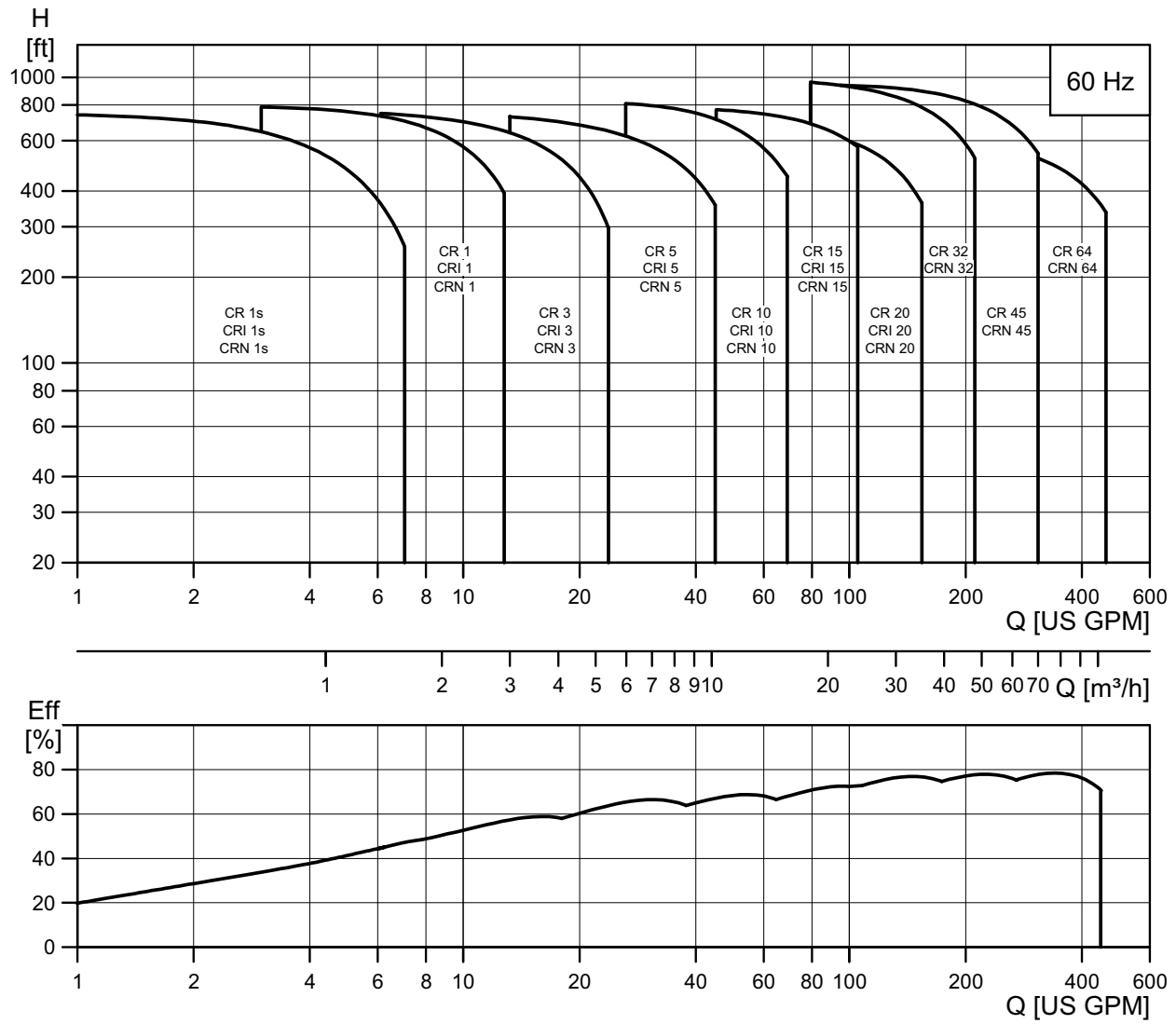
Application	CR, CRI	CRN
<b>Water supply</b>		
Filtration and transfer at waterworks	•	○
Distribution from waterworks	•	○
Pressure boosting in mains	•	○
Pressure boosting in high-rise buildings, hotels, etc.	•	○
Pressure boosting for industrial water supply	•	○
<b>Industry</b>		
<b>Pressure boosting</b>		
Process water systems	•	•
Washing and cleaning systems	•	•
Vehicle washing tunnels	•	○
Fire fighting systems	•	
<b>Liquid transfer</b>		
Cooling and air-conditioning systems (refrigerants)	•	○
Boiler feed and condensate systems	•	○
Machine tools (cooling lubricants)	•	•
Aquafarming ★	•	○
<b>Special transfer duties</b>		
Oils and alcohols	•	•
Acids and alkalis ★		•
Glycol and coolants	•	
<b>Water treatment</b>		
Ultra-filtration systems		•
Reverse osmosis systems ★		•
Softening, ion exchange, demineralizing systems		•
Distillation systems		•
Separators	•	•
Swimming pools ★		•
<b>Irrigation</b>		
Field irrigation (flooding)	•	○
Sprinkler irrigation	•	○
Drip-feed irrigation	•	○

• Recommended version.

○ Alternative version.

★ CRT, CRTE version available. For further information about CRT, CRTE pumps, see [Pumped liquids](#) on page 14 or the related CRT, CRTE product guide.

### 3. Performance range



TM07 5469 4219

## 4. Product range

Range	CR 1s	CR 1	CR 3	CR 5	CR 10	CR 15	CR 20
Nominal flow rate [US gpm]	4.5	8.5	15	30	55	95	110
Temperature range [°F]	-4 to +250						
Temperature range [°F] - on request	-40 to +356						
Max. working pressure [psi] ★	362	362	362	362	362	362	362
Max. working pressure [psi] - on request	-	725	725	725	725	725	725
Max. pump efficiency [%]	35	49	59	67	70	72	72
<b>CR pumps</b>							
CR: Flow range [US gpm]	0.5 - 5.7	1 - 12.8	1.5 - 23.8	3-45	5.5 - 70	9.5 - 125	11-155
CR: Max. pump pressure (H [ft])	760	790	790	780	820	800	700
CR: Motor power [HP]	0.33 - 2	0.33 - 3	0.33 - 5	0.75 - 7.5	0.75 - 15	2-25	3-25
<b>Version</b>							
CR: Cast iron and stainless steel AISI 304	•	•	•	•	•	•	•
CRI: Stainless steel AISI 304	•	•	•	•	•	•	•
CRN: Stainless steel AISI 316	•	•	•	•	•	•	•
CRT, CRTE: Titanium	-	See CRT, CRTE product guide					-
<b>CR pipe connection</b>							
Oval flange (NPT)	1"	1"	1"	1.25"	2"	2"	2"
Oval flange (NPT) - on request	1.25"	1.25"	1.25"	1"	1.5"	-	-
ANSI flange size	1.25"	1.25"	1.25"	1.25"	2"	2"	2"
ANSI flange size - on request	-	-	-	-	-	-	-
ANSI flange class	250 lb.	250 lb.	250 lb.	250 lb.	250 lb.	250 lb.	250 lb.
<b>CRI pipe connection</b>							
Oval flange (NPT)	1"	1"	1"	1.25"	2"	2"	2"
Oval flange (NPT) - on request	1.25"	1.25"	1.25"	1"	1.5"	-	-
ANSI flange size	1.25"	1.25"	1.25"	1.25"	2"	2"	2"
ANSI flange class	300 lb.	300 lb.	300 lb.	300 lb.	300 lb.	300 lb.	300 lb.
Clamp coupling (NPT) - on request	1", 1.25"	1", 1.25"	1", 1.25"	1", 1.25"	1.5", 2"	1.5", 2"	1.5", 2"
Union (NPT ext. Thread) - on request	2"	2"	2"	2"	-	-	-
<b>CRN pipe connection</b>							
PJE (Victaulic)	1.25"	1.25"	1.25"	1.25"	2"	2"	2"
PJE (Victaulic) - on request	-	-	-	-	-	-	-
ANSI flange size	1.25"	1.25"	1.25"	1.25"	2"	2"	2"
ANSI flange size - on request	-	-	-	-	-	-	-
ANSI flange class	300 lb.	300 lb.	300 lb.	300 lb.	300 lb.	300 lb.	300 lb.
Clamp coupling (NPT) - on request	1", 1.25"	1", 1.25"	1", 1.25"	1", 1.25"	1.5", 2"	1.5", 2"	1.5", 2"
Union (NPT ext. Thread) - on request	2"	2"	2"	2"	-	-	-
<b>CRT pipe connection</b>							
PJE coupling (Vitaalic)	-	1.25"	1.25"	1.25"	2"	2"	-
ANSI flange size - on request	-	-	-	-	2"	2"	-

• Available.

★ See section 7. *Operating conditions* on page 14 for specific working pressures.

Range	CR 32	CR 45	CR 64
Nominal flow rate [US gpm]	140	220	340
Temperature range [°F]		-22 to +250 <sup>1)</sup>	
Temperature range [°F] - on request		-40 to +356	
Max. working pressure [psi] ★	435	435	435
Max. working pressure [psi] - on request	580	580	580
Max. pump efficiency [%]	76	78	79
<b>CR pumps</b>			
CR: Flow range [US gpm]	14-210	22-310	34-450
CR: Max. pump pressure (H [ft])	995	940	565
CR: Motor power [HP]	5-50	7.5-60	10-60
<b>Version</b>			
CR:			
Cast iron and stainless steel AISI 304	•	•	•
CRI:			
Stainless steel AISI 304	-	-	-
CRN:			
Stainless steel AISI 316	•	•	•
CRT, CRTE:			
Titanium	-	-	-
<b>CR pipe connection</b>			
Oval flange (NPT)	-	-	-
Oval flange (NPT) - on request	-	-	-
ANSI flange size	2.5"	3"	4"
ANSI flange size - on request	3"	4"	5" <sup>2)</sup>
ANSI flange class	125/ 250 lb.	125/ 250 lb.	125/ 250 lb.
<b>CRI pipe connection</b>			
Oval flange (NPT)	-	-	-
Oval flange (NPT) - on request	-	-	-
ANSI flange size	-	-	-
ANSI flange class	-	-	-
Clamp coupling (NPT) - on request	-	-	-
Union (NPT ext. Thread) - on request	-	-	-
<b>CRN pipe connection</b>			
PJE (Victaulic)	-	-	-
PJE (Victaulic) - on request	3"	4"	4"
ANSI flange size	2.5"	3"	4"
ANSI flange size - on request	3"	-	-
ANSI flange class	150/ 300 lb.	150/ 300 lb.	150/ 300 lb.
Clamp coupling (NPT) - on request	-	-	-
Union (NPT ext. Thread) - on request	-	-	-
<b>CRT pipe connection</b>			
PJE coupling (Vitaalic)	-	-	-
ANSI flange size - on request	-	-	-

• Available.

★ See section 7. *Operating conditions* on page 14 for specific working pressures.

<sup>1)</sup> CRN 32 to CRN 64 with HQQE shaft seal: -40 °F to +250 °F.

<sup>2)</sup> CR 5" flange is not manufactured to ANSI specification. Gasket contact surface is approximately 0.25".

## 5. Identification

### Type key

Example	CR	32	s	-4	-2	-A	-G	-A	-E	-HQQE	O	C	B
Type range: CR, CRI, CRN, CRT													
Flow rate [m <sup>3</sup> /h]													
Undersize impeller (all impellers) CR 1s, CRI 1s, CRN 1s													
Number of impellers													
Number of reduced-diameter impellers CR, CRE, CRN, CRNE 32, 45, 64													
Code for pump version													
Code for pipe connection													
Code for materials													
Code for rubber parts													
Code for shaft seal													
Code for motors [HP (kW)]													
Code for phase and voltage [V]													
Code for speed variant [rpm]													

### Key to codes

Code	Description
<b>Pump version</b>	
A	Basic version
B	Oversize motor
C	CR compact
D	Pump with pressure intensifier*
E	Pump with certificate
F	Pump for high temperatures (with air-cooled top)
G	E-pump without operating panel
H	Horizontal version
I	Different pressure rating
J	E-pump with a different maximum speed
K	Pump with low NPSH
L	Pump including Grundfos CUE and certificate
M	Magnetic drive
N	With sensor
O	Cleaned and dried
P	Undersize motor
Q	High-pressure pump with high-speed MGE motor*
R	Belt driven pump
S	High-pressure pump
T	Thrust handling device*
U	ATEX approved pump
V	Cascade function
W	Deep-well pump with ejector*
X	Special version
Y	Electropolished
Z	Pumps with bearing flange

Code	Description
<b>Pipe connection</b>	
A	Oval flange
B	NPT thread
CA	FlexiClamp
CX	Triclamp*
F	DIN flange
FC	DIN 11853-2 flange (collar flange)
FE	EN 1092-1, type E
G	ANSI flange
J	JIS flange
N	Changed diameter of ports
P	PJE coupling (Victaulic type)
X	Special version

Code	Description
<b>Materials</b>	
A	Basic version
C	Carbon free pump
D	Carbon-graphite filled PTFE (bearings)/Tungsten carbide
E	Pickled and passivated (Only Japan)
H	Flanges and base plate EN 1.4408
K	Bronze (bearings)/Tungsten carbide
L	Motor stool, base plate and flanges EN 1.4408
M	Motor stool, base plate, coupling and flanges EN 1.4408 and coupling guards in cobber. Bolts, nuts and spacing pipes EN 1.4401 or higher grade
N	Flanges EN 1.4408
P	PEEK neck ring
Q	Silicon carbide/Silicon carbide bearing in pump and Silicon carbide/Silicon carbide seal faces in thrust handling device
R	Silicon carbide/Silicon carbide bearing
S	PTFE neck rings
T	Base plate EN 1.4408
U	Silicon carbide/Silicon carbide bearing in pump and Silicon carbide/Tungsten carbide seal faces in thrust handling device
X	Special version

Code	Description
<b>Rubber parts in pump</b>	
E	EPDM
F	FXM (Fluoraz®)
K	FFKM (Kalrez®)
N	Neoprene
V	FKM (Viton®)
<b>Shaft seal type designation</b>	
A	O-ring seal with fixed driver*
H	Balanced cartridge seal with O-ring
O	Double seal, back-to-back*
P	Double seal, tandem*
X	Special version*
<b>Seal face material</b>	
B	Carbon, synthetic resin-impregnated
U	Cemented tungsten carbide
Q	Silicon carbide
X	Other ceramics*
<b>Secondary seal material (rubber parts)</b>	
E	EPDM
F	FXM (Fluoraz®)
K	FFKM (Kalrez®)
V	FKM (Viton®)
<b>Motors [HP (kW)]</b>	
C	0.33 (0.25)
D	0.5 (0.37)
E	0.75 (0.55)
F	1 (0.75)
G	1.5 (1.1)
H	2 (1.5)
I	3 (2.2)
K	5 (4)
L	7.5 (5.5)
M	10 (7.5)
N	15 (11)
O	20 (15)
P	25 (18.5)
Q	30 (22)
<b>Phase and voltage (V)</b>	
A	1x200-240V
B	3x200-240V
C	3x440-480V
D	3x380-500V
X	Not defined
<b>Speed variant (rpm)</b>	
A	1450-2000
B	2900-4000
C	4000-5900
2	2-pole
4	4-pole

\* Option. See the CR "Custom-built pumps" data booklet available on Grundfos Product Center. See QR code or link below.



<http://net.grundfos.com/qr/i/96486346>

## Shaft seal

Example	-H	-Q	-Q	-E
Shaft seal type designation				
Material of rotating seal face				
Material of stationary seal face				
Material of secondary seal (rubber parts)				

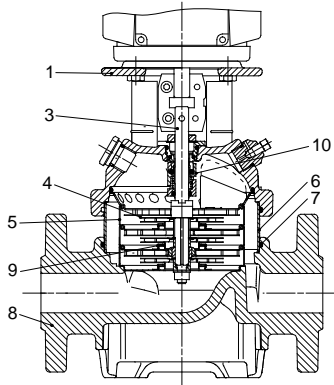
## 6. Construction

### CR 1s, 1, 3, 5, 10, 15 and 20



TM02 1198 0601 - GR7377 - GR7379

#### Sectional drawing



TM02 1194 1403

#### Materials: CR

Pos.	Designation	Materials	AISI/ASTM
1	Pump head	Cast iron	A 48-30 B
3	Shaft	Stainless steel	AISI 316 <sup>1)</sup> AISI 431 <sup>2)</sup>
4	Impeller	Stainless steel	AISI 304
5	Chamber	Stainless steel	AISI 304
6	Sleeve	Stainless steel	AISI 304
7	O-ring for outer sleeve	EPDM or FKM	
8	Base	Cast iron	A 48-30 B
9	Neck ring	PTFE	
10	Shaft seal	Cartridge type	
	Bearing rings	Silicon carbide	
	Rubber parts	EPDM or FKM	
12	FGJ flange	Cast iron	A 48-30 B

1) CR 1s, 1, 3, 5

2) CR 10, 15, 20

3) Stainless steel available on request.

4) CF 8M is cast equivalent of AISI 316 stainless steel.

5) CRI/CRN 1s, 1, 3, 5

6) CRN 10, 15, 20

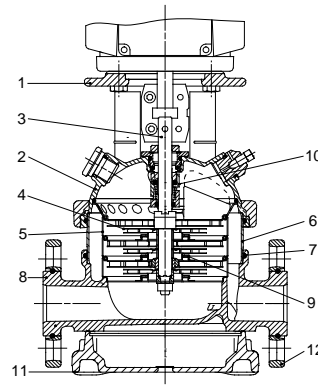
7) CRI 10, 15, 20

### CRI, CRN 1s, 1, 3, 5, 10, 15 and 20



TM02 1808 2001 - GR7373 - GR7375

#### Sectional drawing



TM03 2156 3805

#### Materials: CRI, CRN

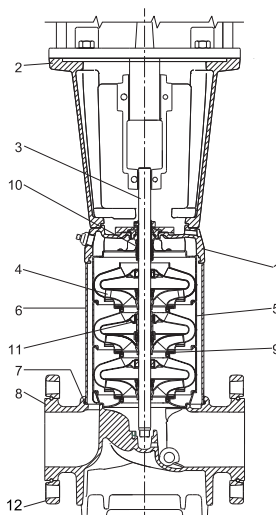
Pos.	Designation	Materials	AISI/ASTM
1	Pump head	Cast iron <sup>3)</sup>	A 48-30 B
2	Pump head cover	Stainless steel	CF 8M <sup>4)</sup>
3	Shaft	Stainless steel	AISI 316 <sup>5)</sup> AISI 329 <sup>6)</sup> AISI 431 <sup>7)</sup>
8	Base	Stainless steel	CF 8M <sup>4)</sup>
9	Neck ring	PTFE	
10	Shaft seal	Cartridge type	
11	Base plate	Cast iron <sup>3)</sup>	A 48-30 B
	Bearing rings	Silicon carbide	
	Rubber parts	EPDM or FKM	
<b>CRI</b>			
4	Impeller	Stainless steel	AISI 304
5	Chamber	Stainless steel	AISI 304
6	Sleeve	Stainless steel	AISI 304
7	O-ring for outer sleeve	EPDM or FKM	
12	FGJ flange ring	Ductile iron <sup>3)</sup>	A 65-45-12
	Oval flange	Stainless steel	AISI 316
<b>CRN</b>			
4	Impeller	Stainless steel	AISI 316
5	Chamber	Stainless steel	AISI 316
6	Sleeve	Stainless steel	AISI 316
7	O-ring for outer sleeve	EPDM or FKM	
12	FGJ flange ring	Ductile iron <sup>3)</sup>	A 65-45-12

## CR 32, 45 and 64



TM01 2150 1298

## Sectional drawing



TM06 0691 0714

## Materials: CR

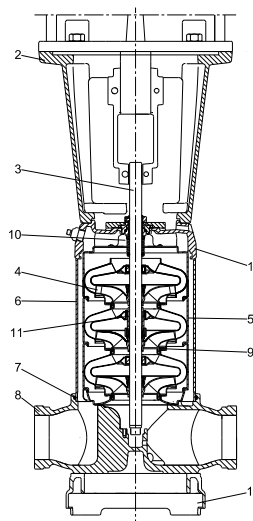
Pos.	Designation	Materials	AISI/ASTM
1	Pump head	Cast iron EN-GJS-500-7	ASTM 80-55-06
2	Motor stool	Cast iron EN-GJL-200	ASTM 25B
3	Shaft	Stainless steel	AISI 431
4	Impeller	Stainless steel	AISI 304
5	Chamber	Stainless steel	AISI 304
6	Sleeve	Stainless steel	AISI 304
7	O-ring for sleeve	EPDM or FKM	
8	Base	Cast iron EN-GJS-500-7	ASTM 80-55-06
9	Neck ring	Carbon-graphite-filled PTFE	
10	Shaft seal		
11	Bearing ring	SiC/SiC	
12	Flange ring	Ductile iron	A 65-45-12
	Rubber parts	EPDM or FKM	

## CRN 32, 45 and 64



TM02 7399 3403

## Sectional drawing



TM01 1837 3713

## Materials: CRN

Pos.	Designation	Materials	AISI/ASTM
1	Pump head	Stainless steel	CF 8M equal to AISI 316
2	Motor stool	Cast iron EN-GJL-200 <sup>1)</sup>	ASTM 25B
3	Shaft	Stainless steel	
4	Impeller	Stainless steel	AISI 316
5	Chamber	Stainless steel	AISI 316
6	Sleeve	Stainless steel	AISI 316
7	O-ring for sleeve	EPDM or FKM	
8	Base	Stainless steel	CF 8M equal to AISI 316
9	Neck ring	Carbon-graphite-filled PTFE	
10	Shaft seal		
11	Bearing ring	SiC/SiC	
12	Base plate	Cast iron EN-GJS-500-7 <sup>1)</sup>	ASTM 88-55-06
	Flange ring	Ductile iron <sup>1)</sup>	A 65-45-12
	Rubber parts	EPDM or FKM	

<sup>1)</sup> Stainless steel available on request.

## 7. Operating conditions

### Pumped liquids

The pumps are suitable for pumping thin, non-explosive liquids, not containing solid particles or fibers. The liquid must not chemically attack the pump materials. When pumping liquids with a density and/or viscosity higher than that of water, oversized motors must be used, if required.

Whether a pump is suitable for a particular liquid depends on a number of factors of which the most important are the chloride content, pH value, temperature and content of chemicals and oils.

Please note that aggressive liquids, such as sea water and some acids, may attack or dissolve the protective oxide film of the stainless steel and thus cause corrosion. The CR, CRI, CRN pump types are suitable for the following liquids:

#### CR, CRI

- Non-corrosive liquids.

For liquid transfer, circulation and pressure boosting of cold or hot clean water.

#### CRN

- Industrial liquids.

In systems where all parts in contact with the liquid must be made of high-grade stainless steel.

#### CRT

- Saline liquids
- hypochlorites
- acids.

For saline or chloride-containing liquids, such as sea water or oxidizing agents, such as hypochlorites, CRT pumps of titanium are available. See separate product guide on CRT.

### List of pumped liquids

A number of typical liquids are listed on the following pages.

Other pump versions may be applicable, but those stated in the list are considered to be the best choices. The table is intended as a general guide only, and cannot replace actual testing of the pumped liquids and pump materials under specific working conditions. The list must, however, be applied with some caution as factors such as the following may affect the chemical resistance of a specific pump version:

- concentration of the pumped liquid
- liquid temperature
- pressure.

Safety precautions must be made when pumping dangerous liquids.

#### Notes

<b>D</b>	Often with additives.
<b>E</b>	Density and/or viscosity differ from that of water. Allow for this when calculating motor output and pump performance.
<b>F</b>	Pump selection depends on many factors. Contact Grundfos.
<b>H</b>	Risk of crystallization/precipitation in shaft seal
<b>1</b>	The pumped liquid is highly inflammable.
<b>2</b>	The pumped liquid is combustible.
<b>3</b>	Insoluble in water.
<b>4</b>	Low self-ignition point.

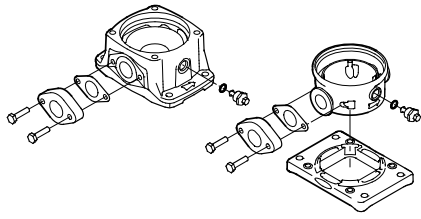
Pumped liquid	Note	Liquid concentration, liquid temperature	CR		CRN	
			1s, 1, 3, 5, 10, 15, 20	32, 45, 64	1s, 1, 3, 5, 10, 15, 20	32, 45, 64
Acetic acid CH <sub>3</sub> COOH		5 %, 68 °F			HQQE	HQQE/HBQE
Acetone CH <sub>3</sub> COCH <sub>3</sub>	1, F	100 %, 68 °F			HBQE	HQQE/HBQE
Alkaline degreasing agent	D, F		HQQE	HQQE/HBQE		
Ammonium bicarbonate NH <sub>4</sub> HCO <sub>3</sub>	E	20 %, 86 °F			HQQE	HQQE/HBQE
Ammonium hydroxide NH <sub>4</sub> OH		20 %, 104 °F	HQQE	HQQE/HBQE		
Aviation fuel	1, 3, 4, F	100 %, 68 °F	HQB	HQQV/HBQV		
Benzoic acid C <sub>6</sub> H <sub>5</sub> COOH	H	0,5 %, 68 °F			HQQV	HQQV/HBQV
Boiler water		< 248 °F	HQQE	HQQE/HBQE		
	F	248 °F - 356 °F	-	-		
Calcareous water		< 194 °F	HQQE	HQQE		
Calcium acetate (as coolant with inhibitor) Ca(CH <sub>3</sub> COO) <sub>2</sub>	D, E	30 %, 122 °F	HQQE	HQQE		
Calcium hydroxide Ca(OH) <sub>2</sub>	E	Saturated solution, 122 °F	HQQE	HQQE		
Chloride-containing water	F	< 86 °F, max. 500 ppm			HQQE	HQQE
Chromic acid H <sub>2</sub> CrO <sub>4</sub>	H	1 %, 68 °F			HQQV	HQQV/HBQV
Citric acid HOC(CH <sub>2</sub> CO <sub>2</sub> H) <sub>2</sub> COOH	H	5 %, 104 °F			HQQE	HQQE/HBQE
Completely desalinated water (demineralized water)		< 248 °F			HQQE	HQQE/HBQE
Condensate		< 194 °F	HQQE	HQQE/HBQE		
Copper sulfate CuSO <sub>4</sub>	E	10 %, 122 °F			HQQE	HQQE
Corn oil	D, E, 3	100 %, 176 °F	HQQV	HQQV/HBQV		
Diesel oil	2, 3, 4, F	100 %, 68 °F	HQB	HQQV/HBQV		
Domestic hot water (potable water)		< 248 °F	HQQE	HQQE/HBQE		
Ethanol (ethyl alcohol) C <sub>2</sub> H <sub>5</sub> OH	1, F	100 %, 68 °F	HQQE	HQQE/HBQE		
Ethylene glycol HOCH <sub>2</sub> CH <sub>2</sub> OH	D, E	50 %, 122 °F	HQQE	HQQE		
Formic acid HCOOH		5 %, 68 °F			HQQE	HQQE/HBQE
Glycerine (glycerol) OHCH <sub>2</sub> CH(OH)CH <sub>2</sub> OH	D, E	50 %, 122 °F	HQQE	HQQE/HBQE		
Hydraulic oil (mineral)	E, 2, 3	100 %, 212 °F	HQQV	HQQV/HBQE		
Hydraulic oil (synthetic)	E, 2, 3	100 %, 212 °F	HQQV	HQQV/HBQE		
Isopropyl alcohol CH <sub>3</sub> CHOHCH <sub>3</sub>	1, F	100 %, 68 °F	HQB	HQQV/HBQV		
Lactic acid CH <sub>3</sub> CH(OH)COOH	E, H	10 %, 68 °F			HQQE	HQQE/HBQE
Linoleic acid C <sub>17</sub> H <sub>31</sub> COOH	E, 3	100 %, 68 °F	HQQV	HQQV/HBQV		
Methanol (methyl alcohol) CH <sub>3</sub> OH	1, F	100 %, 68 °F	HQQE	HQQE/HBQE		
Motor oil	E, 2, 3	100 %, 176 °F	HQQV	HQQV/HBQV		
Naphthalene C <sub>10</sub> H <sub>8</sub>	E, H	100 %, 176 °F	HQQV	HQQV/HBQV		
Nitric acid HNO <sub>3</sub>	F	1 %, 68 °F			HQQE	HQQE/HBQE
Oil-containing water		< 212 °F	HQQV	HQQV/HBQV		
Olive oil	D, E, 3	100 %, 176 °F	HQQV	HQQV/HBQV		
Oxalic acid (COOH) <sub>2</sub>	H	1 %, 68 °F			HQQE	HQQE/HBQE
Ozone-containing water (O <sub>3</sub> )		1 PPM, < 105 °F			HQQE	HQQE/HBQE
Peanut oil	D, E, 3	100 %, 194 °F	HQQV	HQQV/ HBQV		
Petrol/gasoline	1, 3, 4, F	100 %, 68 °F	HQB	HQQV/HBQV		
Phosphoric acid H <sub>3</sub> PO <sub>4</sub>	E	20 %, 68 °F			HQQV	HQQV/HBQV
Propanol C <sub>3</sub> H <sub>7</sub> OH	1, F	100 %, 68 °F	HQQV	HQQV/HBQV		
Propylene glycol CH <sub>3</sub> CH(OH)CH <sub>2</sub> OH	D, E	50 %, 194 °F	HQQE	HQQE		
Potassium carbonate K <sub>2</sub> CO <sub>3</sub>	E	20 %, 122 °F	HQQE	HQQE		
Potassium formate (as coolant with inhibitor) KOOCH	D, E	30 %, 122 °F	HQQE	HQQE		
Potassium hydroxide KOH	E	20 %, 122 °F			HQQE	HQQE
Potassium permanganate KmnO <sub>4</sub>		5 %, 68 °F			HQQE	HQQE/HBQE
Rape seed oil	D, E, 3	100 %, 176 °F	HQQV	HQQV/HBQV		
Salicylic acid C <sub>6</sub> H <sub>4</sub> (OH)COOH	H	0,1 %, 68 °F			HQQE	HQQE/HBQE
Silicone oil	E, 3	100 %	HQQV	HQQV/HBQV		
Sodium bicarbonate NaHCO <sub>3</sub>	E	10 %, 140 °F			HQQE	HQQE/HBQE
Sodium chloride (as coolant) NaCl	D, E	30 %, < 41 °F, pH > 8	HQQE	HQQE		
Sodium hydroxide NaOH	E	20 %, 122 °F			HQQE	HQQE
Sodium hypochlorite NaOCl	F	0,1 %, 68 °F			HQQE	HQQE
Sodium nitrate NaNO <sub>3</sub>	E	10 %, 140 °F			HQQE	HQQE/HBQE

Pumped liquid	Note	Liquid concentration, liquid temperature	CR		CRN	
			1s, 1, 3, 5, 10, 15, 20	32, 45, 64	1s, 1, 3, 5, 10, 15, 20	32, 45, 64
Sodium phosphate $\text{Na}_3\text{PO}_4$	E, H	10 %, 140 °F			HQQE	HQQE
Sodium sulfate $\text{Na}_2\text{SO}_4$	E, H	10 %, 140 °F			HQQE	HQQE/HBQE
Softened water		< 248 °F			HQQE	HQQE/HBQE
Soybean oil	D, E, 3	100 %, 176 °F	HQQV	HQQV/HBQV		
Sulfuric acid $\text{H}_2\text{SO}_4$	F	1 %, 68 °F			HQQV	HQQV/HQQV
Sulfurous acid $\text{H}_2\text{SO}_3$		1 %, 68 °F			HQQE	HQQE/HBQE
Swimming pool water (low chloride)		Max. 5 ppm free chlorine ( $\text{Cl}_2$ )	HQQE	HQQE/HBQE		

## Operating and inlet pressure

### Maximum operating pressure and temperature range

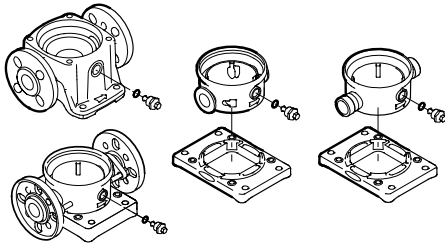
#### Oval flange



TM02 1379 1101

	Max. operating pressure [psi]	Liquid temp. range [°F]
CR, CRI, CRN 1s	232	-4 to +248
CR, CRI, CRN 1	232	-4 to +248
CR, CRI, CRN 3	232	-4 to +248
CR, CRI, CRN 5	232	-4 to +248
CR 10-1 → CR 10-6	145	-4 to +248
CRI, CRN 10-1 → CRI, CRN 10-10	232	-4 to +248
CR 15-1 → CR 15-5	145	-4 to +248
CRI, CRN 15-1 → CRI, CRN 15-8	232	-4 to +248
CR 20-1 → CR 20-5	145	-4 to +248
CRI, CRN 20-1 → CRI, CRN 20-7	232	-4 to +248

#### ANSI, Clamp, PJE



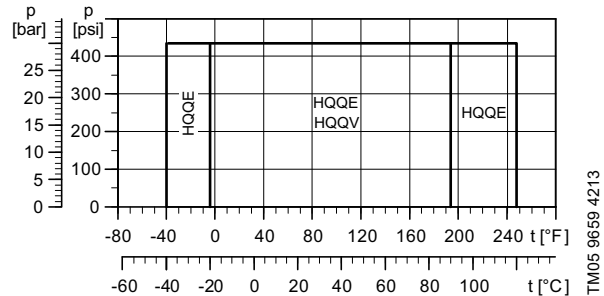
TM02 8635 0904

	Max. operating pressure [psi]	Liquid temp. range [°F]
CR, CRI, CRN 1s	362	-4 to +248
CR, CRI, CRN 1	362	-4 to +248
CR, CRI, CRN 3	362	-4 to +248
CR, CRI, CRN 5	362	-4 to +248
CR, CRI 10-1 → 10-10	232	-4 to +248
CR, CRI 10-12 → 10-17	362	-4 to +248
CRN 10 (all stages)	362	-4 to +248
CR, CRI 15-1 → 15-8	232	-4 to +248
CR, CRI 15-9 → 15-12	362	-4 to +248
CRN 15 (all stages)	362	-4 to +248
CR, CRI 20-1 → 20-7	232	-4 to +248
CR, CRI 20-8 → 20-10	362	-4 to +248
CRN 20 (all stages)	362	-4 to +248
CR, CRN 32-1-1 → 2-5	232	-22 to +248
CR, CRN 32-6-2 → 32-11-2	435	-22 to +248
CR, CRN 45-1-1 → 45-4-2	232	-22 to +248
CR, CRN 45-4-1 → 45-8-1	435	-22 to +248
CR, CRN 64-1-1 → 64-3	232	-22 to +248
CR, CRN 64-4-2 → 64-5-2	435	-22 to +248

## Operating range of the shaft seal

The operating range of the shaft seal depends on operating pressure, pump type, type of shaft seal and liquid temperature. The following curves apply to clean water and water with anti-freeze liquids. For selecting the right shaft seal, see [Pumped liquids](#) on page 14.

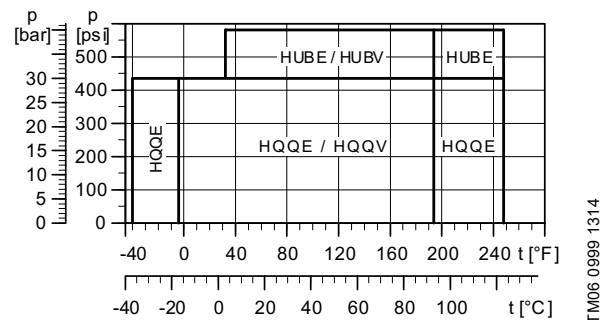
### CR 1s to CR 20



TM05 9659 4213

Fig. 5 Operating range of standard shaft seals for CR 1s to CR 20

### CR 32 to CR 64 (3 - 60 HP)



TM06 0999 1314

Fig. 6 Operating range of standard shaft seals for CR 32 to CR 64 (3 - 60 HP)

### HP

Shaft seal	Description	Max. temp. range [°F]
HQQE	O-ring (cartridge) (balanced seal), SiC/SiC, EPDM	-40 °F to +248 °F
HQQV	O-ring (cartridge) (balanced seal), SiC/SiC, FKM	-4 °F to +194 °F
HUBE	O-ring (cartridge) (balanced seal), TC/carbon, EPDM	+32 °F to +248 °F
HUBV	O-ring (cartridge) (balanced seal), TC/carbon, FKM	+32 °F to +194 °F

**Note:** TC= tungsten carbide

See section [Variants](#) on page 67, in case of extreme temperatures:

- low temperatures down to -40 °F or
- high temperatures up to +356 °F.

## Maximum inlet pressure

The following table shows the maximum permissible inlet pressure. However, the current inlet pressure plus the pressure against a closed valve must always be lower than the maximum permissible operating pressure.

If the maximum permissible operating pressure is exceeded, the bearing in the motor may be damaged and the life of the shaft seal reduced.

Pump type	Stages		Max. [psi (bar)]
	60 Hz	50 Hz	
CR, CRI, CRN 1s	2-27	2-36	145 (10)
CR, CRI, CRN 1	2-25	2-36	145 (10)
	27		217 (15)
CR, CRI, CRN 3	2-17	2-29	145 (10)
	19-25	31-36	217 (15)
CR, CRI, CRN 5	2-9	3-16	145 (10)
	10-24	18-36	217 (15)
CR, CRI, CRN 10	1-5	1-6	116 (8)
	6-17	7-22	145 (10)
CR, CRI, CRN 15	1-2	1-3	116 (8)
	3-12	4-17	145 (10)
CR, CRI, CRN 20	1	1-3	116 (8)
	2-10	4-17	145 (10)
CR, CRN 32	1-1 - 2	1-1 - 4	58 (4)
	3-2 - 6	5-2 - 10	145 (10)
	7-2 - 11-2	11-14	217 (15)
CR, CRN 45	1-1 - 1	1-1 - 2	58 (4)
	2-2 - 3	3-2 - 5	145 (10)
	4-2 - 8-1	6-2 - 13-2	217 (15)
CR, CRN 64	1-1	1-1 - 2-2	58 (4)
	1 - 2-1	2-1 - 4-2	145 (10)
	2 - 5-2	4-1 - 8-1	217 (15)

## Examples of operating and inlet pressures

The values for operating pressures and inlet pressures shown in the tables must not be considered individually but must always be compared. See the following examples:

### Example 1:

Pump (see page 40): CRE 3-10 A-A-A  
 Max. operating pressure: 232 psi (16 bar)  
 Max. inlet pressure: 145 psi (10 bar)  
 Outlet pressure against a closed valve: 139.2 psi (9.5 bar)

This pump is not allowed to start at an inlet pressure of 145 psi, but at an inlet pressure of  $232.0 - 139.2 = 92.8$  psi (6.39 bar).

### Example 2:

Pump (see page 46): CRE 10-2 A-GJ-A  
 Max. operating pressure: 232 psi (16 bar)  
 Max. inlet pressure: 116 psi (8 bar)  
 Outlet pressure against a closed valve: 42 psi (3 bar)

This pump is allowed to start at an inlet pressure of 116 psi (8 bar), as the outlet pressure is only 42 psi, which results in an operating pressure of  $116 + 42 = 158$  psi (11 bar). On the contrary, the maximum operating pressure of this pump is limited to 158 psi, as a higher operating pressure will require an inlet pressure of more than 116 psi (8 bar).

In case the inlet or operating pressure exceeds the pressure permitted, see section [Variants](#) on page 67.

## 8. Selection and sizing

### Selection of pumps

Base the selection of pumps on these parameters:

- Duty point of the pump. See page 19.
- Sizing data such as pressure loss as a result of height differences, friction loss in the pipes, pump efficiency. See page 19.
- Pump materials. See page 21.
- Pump connections. See page 21.
- Shaft seal. See page 21.

#### Duty point of the pump

From a duty point, you can select a pump on the basis of the curve charts in the section 9. *Performance curves* starting on page 24.

Ideally, the duty point should match the best efficiency on the pump curve. See the example in fig. 19.

#### Sizing data

When sizing a pump, take these parameters into account.

- Required flow rate and pressure at the draw-off point.
- Pressure loss as a result of height differences ( $H_{geo}$ ).
- Friction loss in the pipes ( $H_f$ ). It may be necessary to account for pressure loss in connection with long pipes, bends, valves, or similar.
- Best efficiency at the estimated duty point.
- NPSH value.

For calculation of the NPSH value, see *Minimum inlet pressure - NPSHA* on page 22.

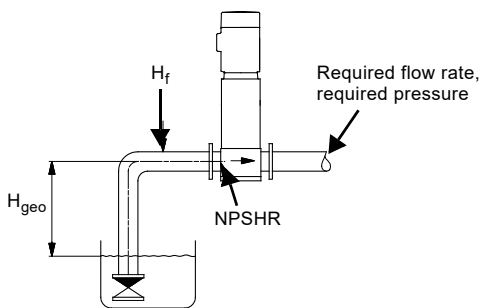
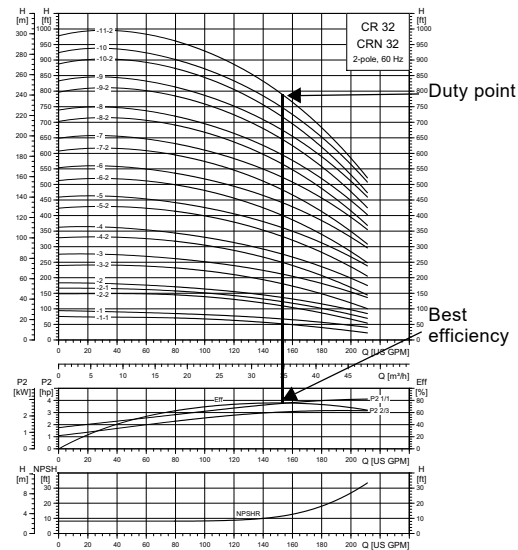


Fig. 7 Sizing data

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### Pump efficiency

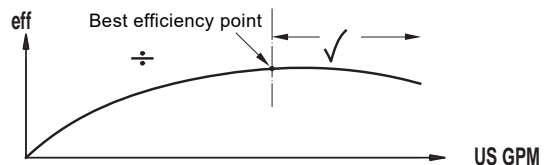
Before determining the best efficiency point, identify the operation pattern of the pump. If the pump is expected to always operate at the same duty point, then select a pump which is operating at a duty point corresponding to the best efficiency of the pump.



TM02 0039 4719

Fig. 8 Example of a CR pump's duty point

As the pump is sized on the basis of the highest possible flow rate, it is important to always have the duty point to the right of the best efficiency point on the efficiency curve (Eff). This must be considered in order to keep efficiency high when the flow rate drops.



TM02 8579 0504

Fig. 9 Best efficiency

Normally, pumps with an external variable frequency drive (VFD) are used in applications characterized by a variable flow rate. Consequently, it is not possible to select a pump that is constantly operating at its best efficiency.

In order to achieve optimum operating economy, the pump must be selected on the basis of the following criteria:

- The maximum required duty point must be as close as possible to the QH curve of the pump.
- The required duty point must be positioned so that P2 is close to the maximum point of the 100 % curve.

Between the minimum and maximum performance curves, pumps with a VFD have an infinite number of performance curves each representing a specific speed. Therefore, it may not be possible to select a duty point close to the 100 % curve.

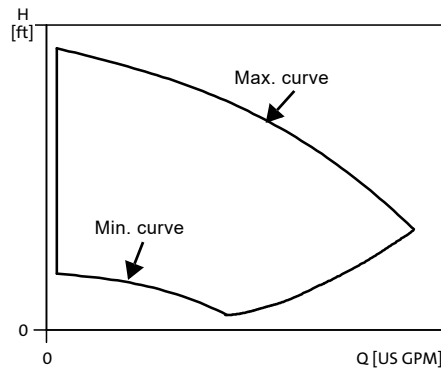


Fig. 10 Minimum and maximum performance curves

In situations where it is not possible to select a duty point close to the 100 % curve the affinity equations to the right can be used. The head (H), the flow rate (Q) and the input power (P) are all the appropriate variables for the motor speed (n). See fig. 11.

#### Note:

The approximated formulas apply on the condition that the system characteristic remains unchanged for  $n$  and  $n_x$  and that it is based on the formula  $H = k \times Q^2$ , where  $k$  is a constant.

The power equation implies that the pump efficiency is unchanged at the two speeds. In practice this is not quite correct.

To obtain a precise calculation of the power savings resulting from a reduction of pump speed, take into account the efficiencies of the frequency converter and the motor.

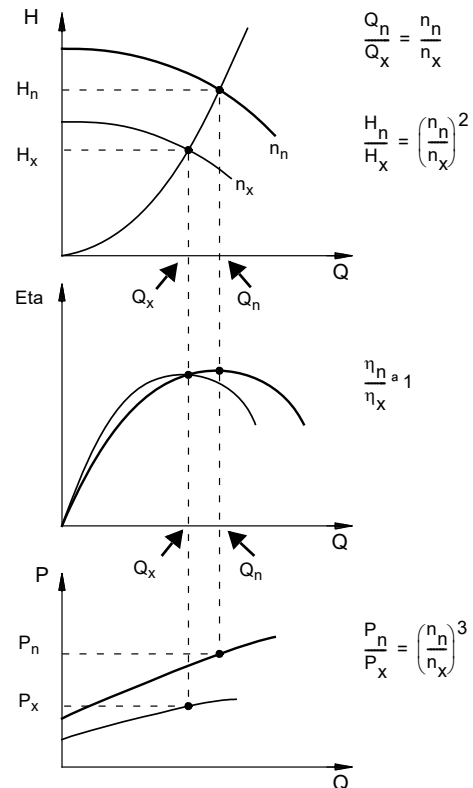


Fig. 11 Affinity equations

#### Legend

$H_n$	Rated head in feet
$H_x$	Current head in feet
$Q_n$	Rated flow rate in US gpm
$Q_x$	Current flow rate in US gpm
$n_n$	Rated motor speed in $\text{min}^{-1}$ ( $n_n = 3500 \text{ min}^{-1}$ )
$n_x$	Current motor speed in $\text{min}^{-1}$
$\eta_n$	Rated efficiency in %
$\eta_x$	Current efficiency in %

### Grundfos Product Center

We recommend that you size your pump in Grundfos Product Center, which is a selection program offered by Grundfos.

Grundfos Product Center features a user-friendly and easy-to-use virtual guide which leads you through the selection of the pump for the application in question.

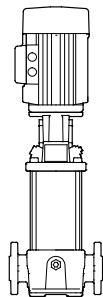
For further information see [Grundfos Product Center](#) on page 73.

### Pump material

Select the material variant on the basis of the liquid to be pumped. The product range covers these basic types.

- The CR, CRI pump types are suitable for clean, non-aggressive liquids, such as potable water and oils.
- The CRN pump type is suitable for industrial liquids and acids, see [Pumped liquids](#) on page 14 or contact Grundfos.

For saline or chloride-containing liquids, such as sea water, CRT pumps of titanium are available.



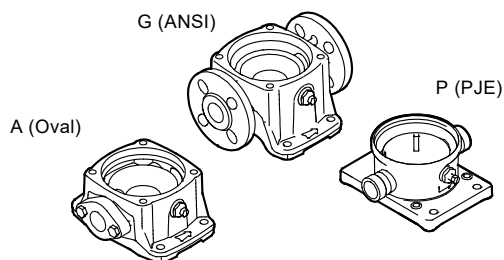
TM03 2155 3805

Fig. 12 CR pump

### Pump connection

Selection of pump connection depends on the rated pressure and the pipes. To meet any requirement, the CR, CRI and CRN pumps offer a wide range of flexible connections such as:

- Oval flange (NPT) - fig. 13
- ANSI flange - fig. 13
- PJE coupling - fig. 13
- Clamp coupling
- Union (NPT[M])
- Other connections on request.



TM02 1201 0601

Fig. 13 Pump connections

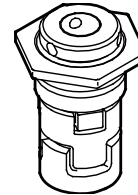
### Shaft seal

As standard, the CR range is fitted with a Grundfos shaft seal (Cartridge type) suitable for the most common applications, see fig. 14.

The following three key parameters must be taken into account when selecting the shaft seal:

- Type of pumped liquid
- liquid temperature
- maximum pressure.

Grundfos offers a wide range of shaft seal variants to meet specific demands, see [Pumped liquids](#) on page 14.



TM02 0538 4800

Fig. 14 Shaft seal (Cartridge type)

### Inlet pressure and operating pressure

Do not exceed the limit values stated on page 17 and page 18 as regards these pressures:

- maximum inlet pressure
- maximum operating pressure.

### Minimum inlet pressure - NPSHA

We recommend that you calculate the inlet pressure "H" in these situations:

- The liquid temperature is high.
- The flow rate is significantly higher than the rated flow rate.
- Water is drawn from depths.
- Water is drawn through long pipes.
- Inlet conditions are poor.

To avoid cavitation, make sure that there is a minimum pressure on the inlet side of the pump.

Calculate the maximum suction lift "H" in feet of head as follows:

$$H = p_b \times 2.31 - \text{NPSHR} - H_f - H_v$$

$P_b$  = Barometric pressure in psi.

$P_b$  can be set to 14.7 psi at sea level. In closed systems,  $p_b$  indicates system pressure in psi.

NPSHR = Net Positive Suction Head Required in feet of head. To be read from the NPSHR curve at the highest flow rate the pump will be delivering.

$H_f$  = Friction loss in the inlet pipe in feet of head at the highest flow rate the pump will be delivering.

$H_v$  = Vapor pressure in feet of head. To be read from the vapor pressure scale.  $H_v$  depends on the liquid temperature  $T_m$ .

If the "H" calculated is positive, the pump can operate at a suction lift of maximum "H" feet.

If the "H" calculated is negative, an inlet pressure of minimum "H" feet is required.

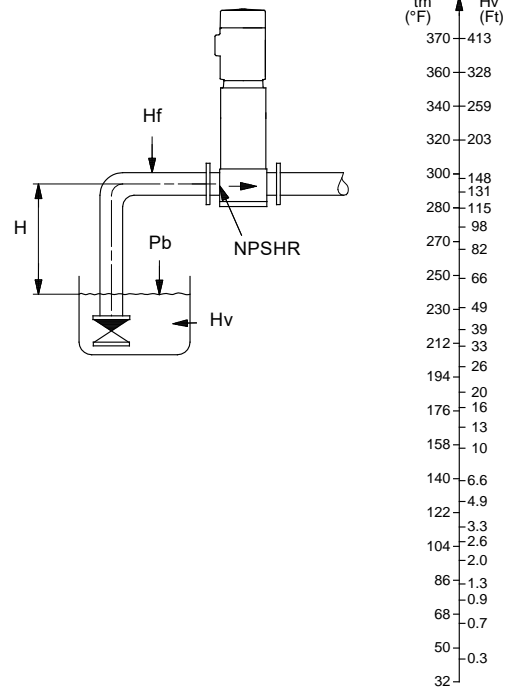


Fig. 15 Minimum inlet pressure - NPSHR

#### Note:

To avoid cavitation, never select a pump with a duty point too far to the right on the NPSHR curve.

Always check the NPSHR value of the pump at the highest possible flow rate.

In case a lower NPSHR value is required, see [Variants](#) on page 67.

TM02 7729 3903

## How to read the curve charts

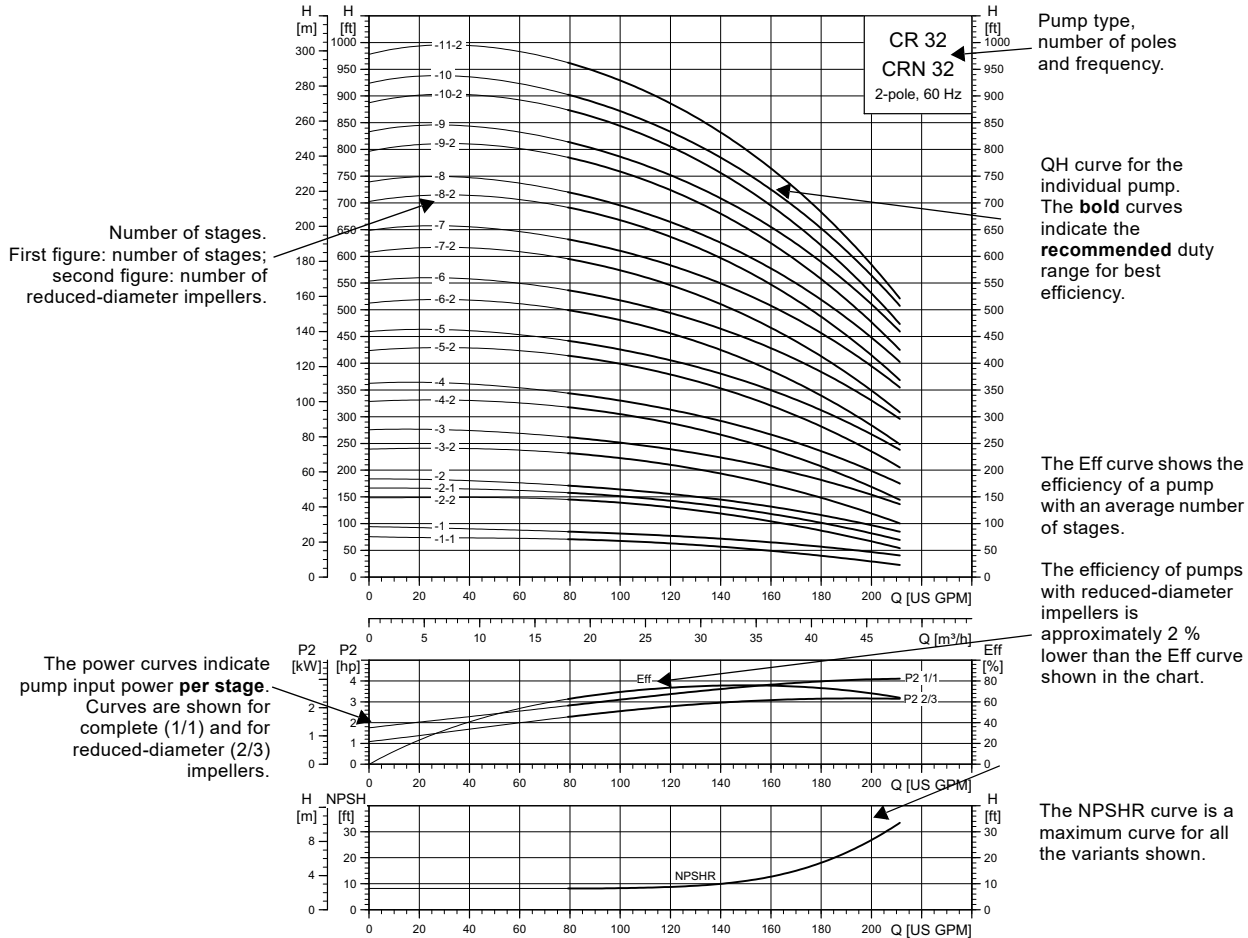


Fig. 16 How to read the curve charts

TM02 0039 47/19

## Guidelines to performance curves

The guidelines below apply to the curves shown on the following pages:

- Tolerances to ANSI or ISO standards, if indicated on the curve chart.
- The motors used for the measurements are standard motors (ODP, TEFC).
- Measurements have been made with airless water at a temperature of 68 °F (20 °C).
- The curves apply to the following kinematic viscosity:  $\nu = 1 \text{ mm}^2/\text{s}$  (1 cSt).
- Due to the risk of overheating, the pumps must not be used at a flow rate below the minimum flow rate.
- The QH curves apply to actual speed with the motor types mentioned at 60 Hz.

The curve below shows the minimum flow rate as a percentage of the nominal flow rate in relation to the liquid temperature. The dotted line shows a CR pump fitted with an air-cooled top assembly.

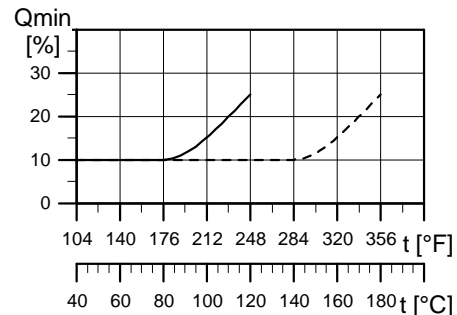
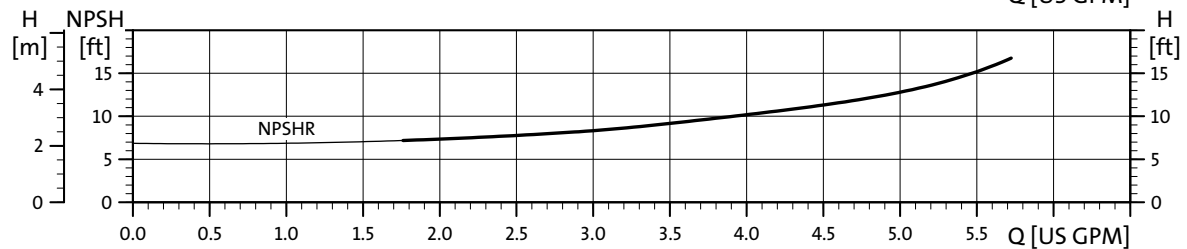
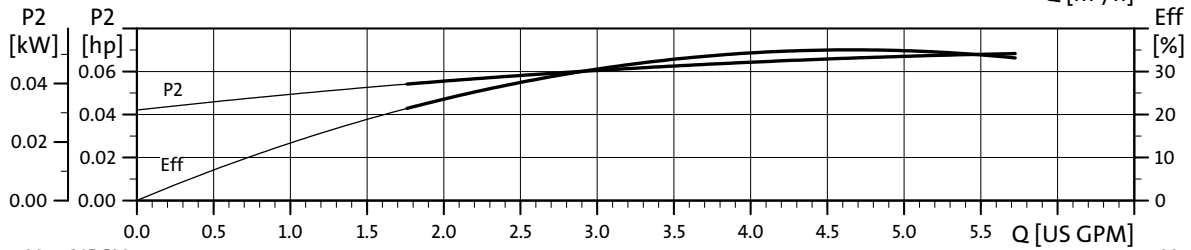
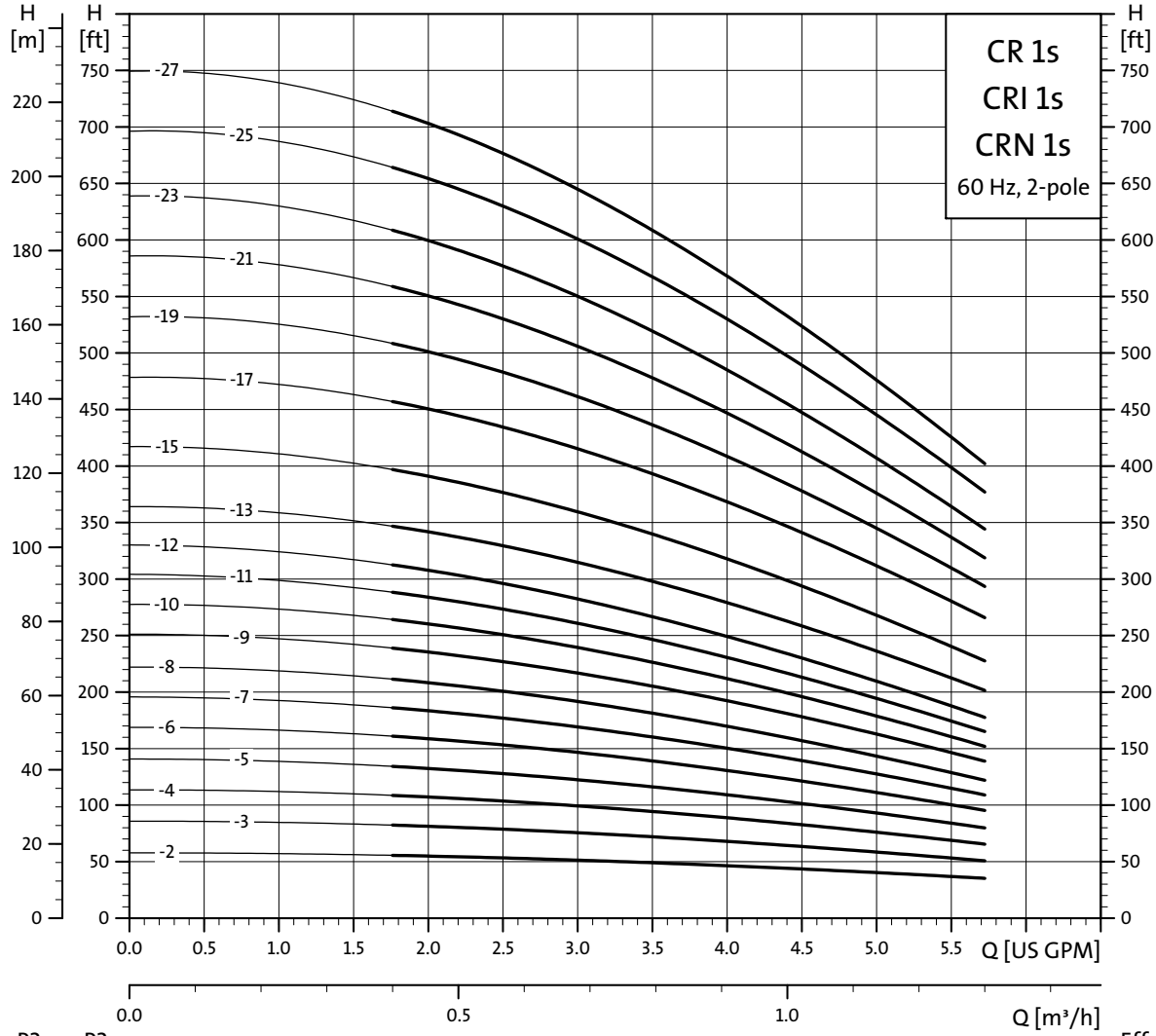


Fig. 17 Minimum flow rate

TM02 7538 1609

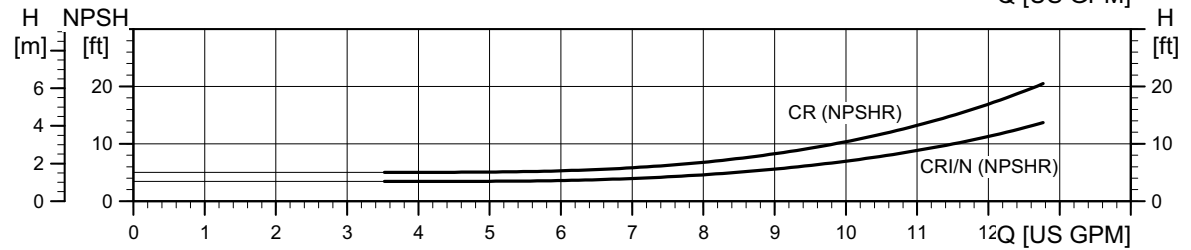
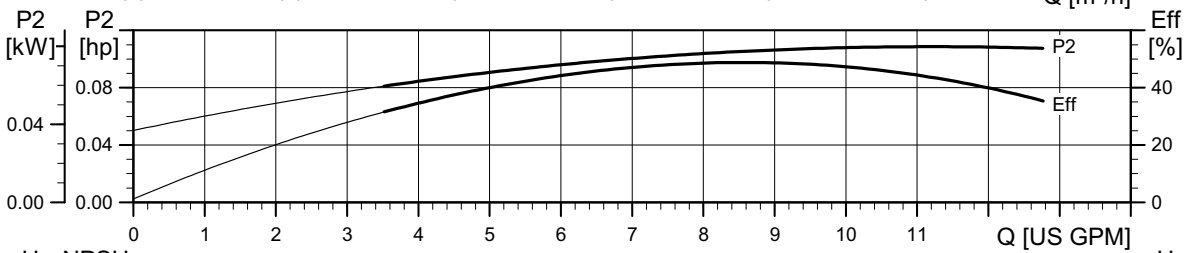
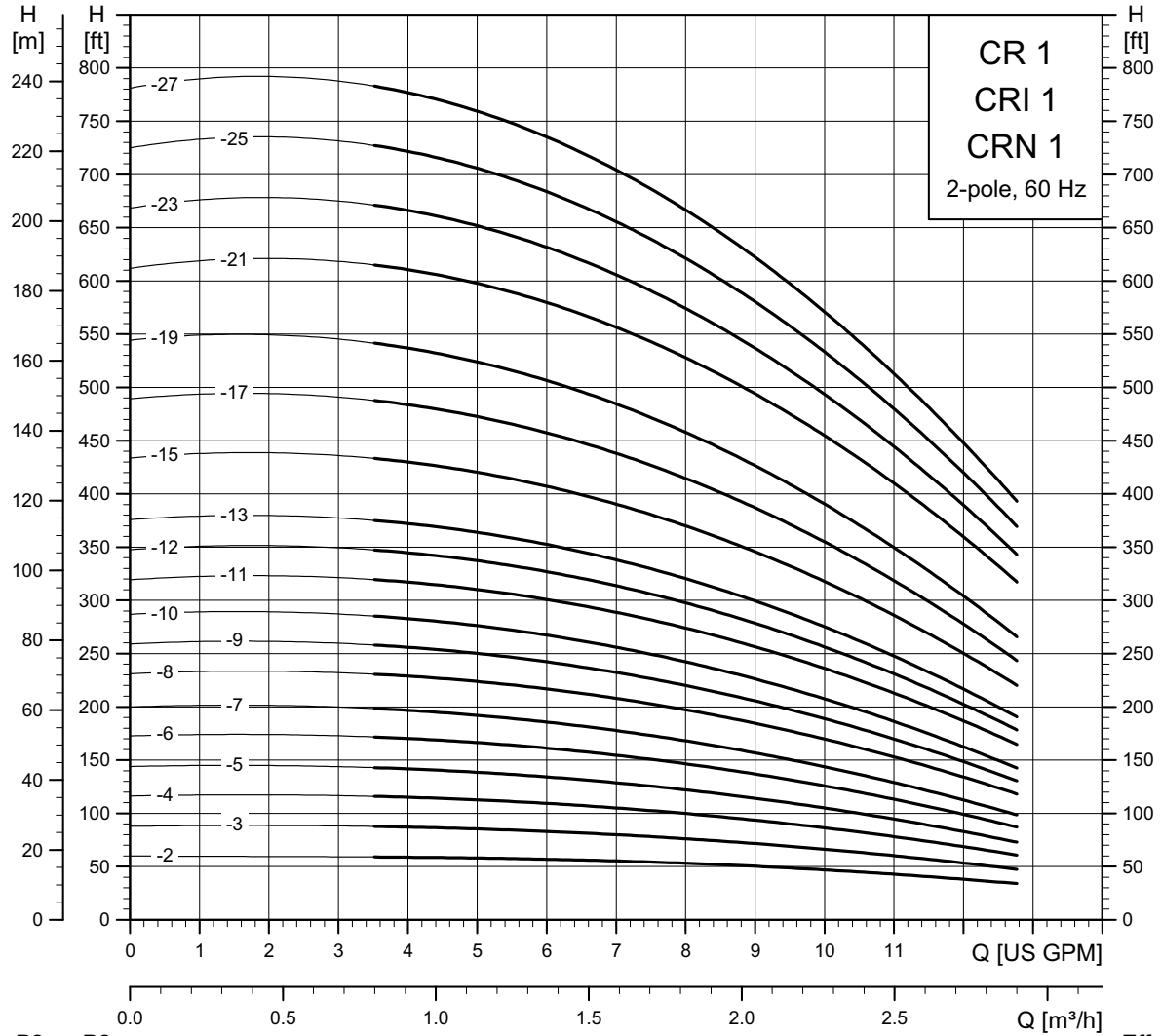
# 9. Performance curves

## CR, CRI, CRN 1s



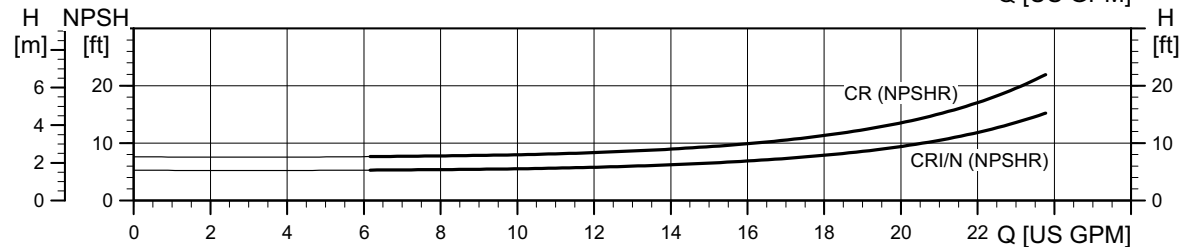
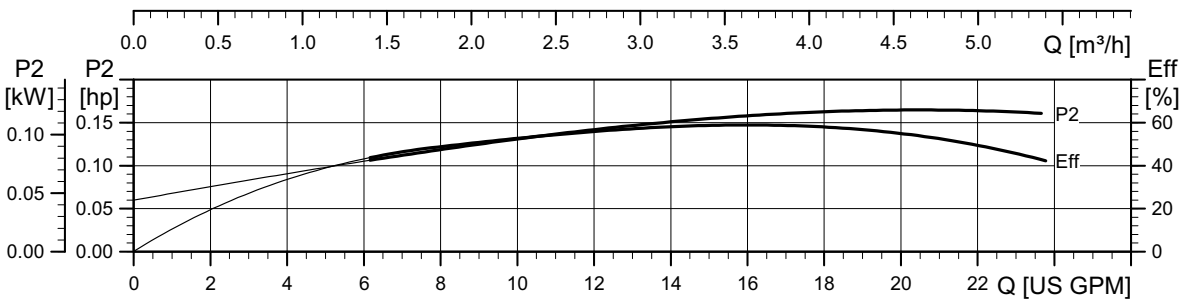
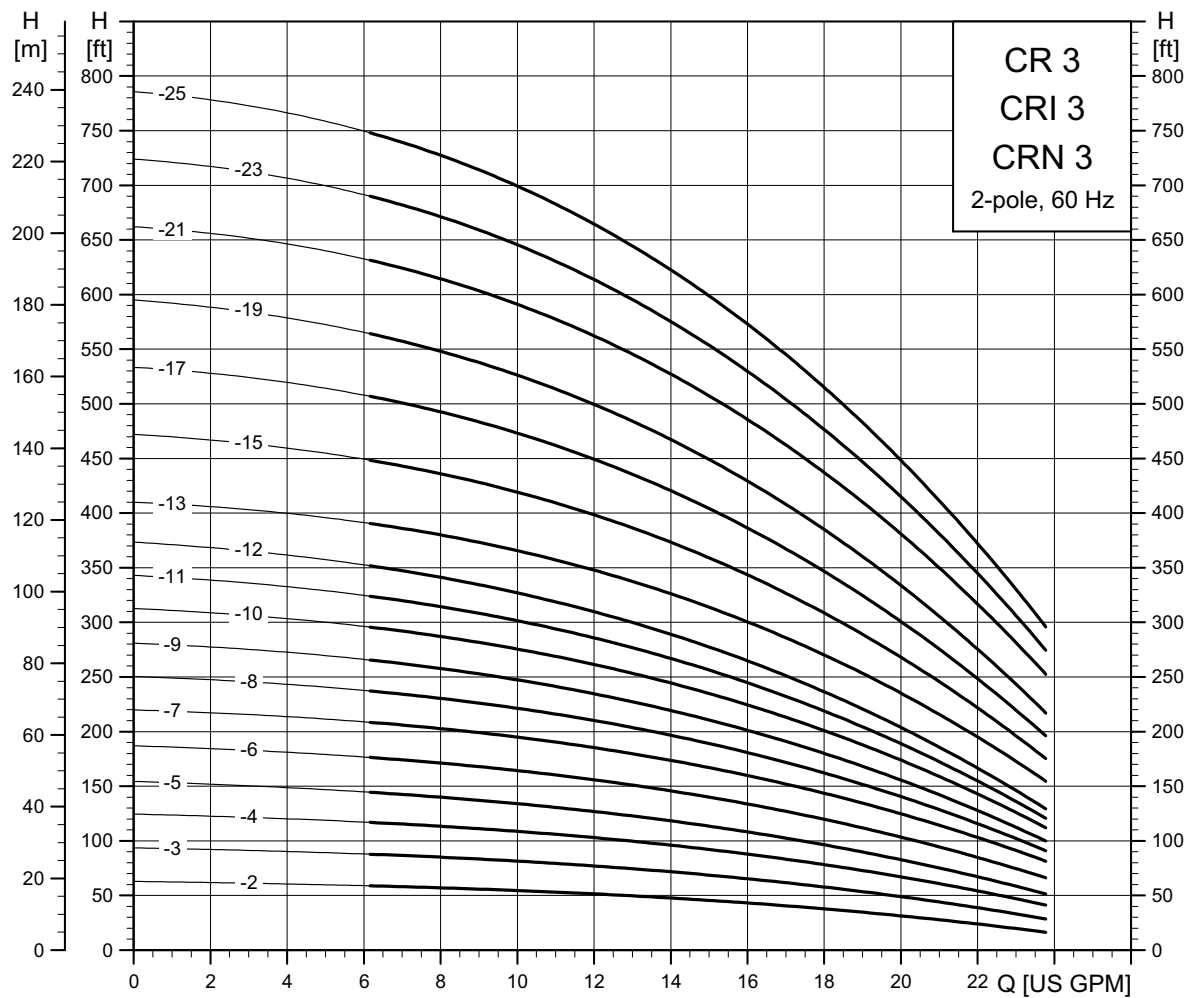
TM02 5741 4719

CR, CRI, CRN 1



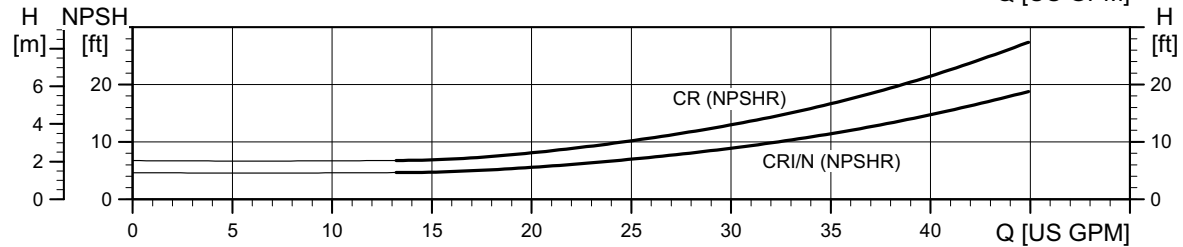
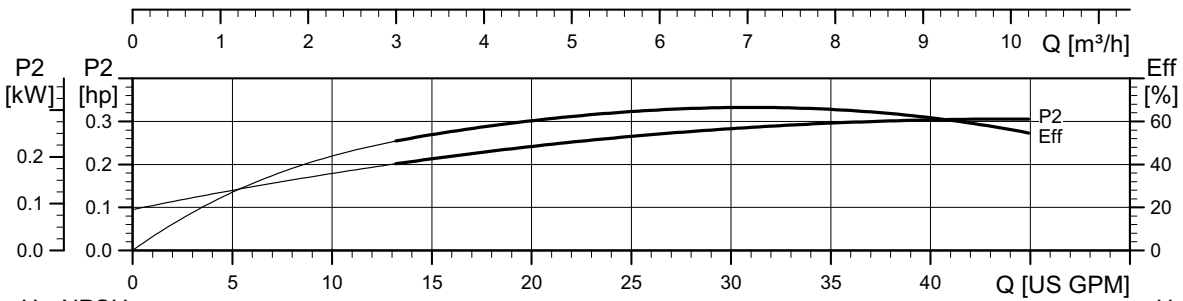
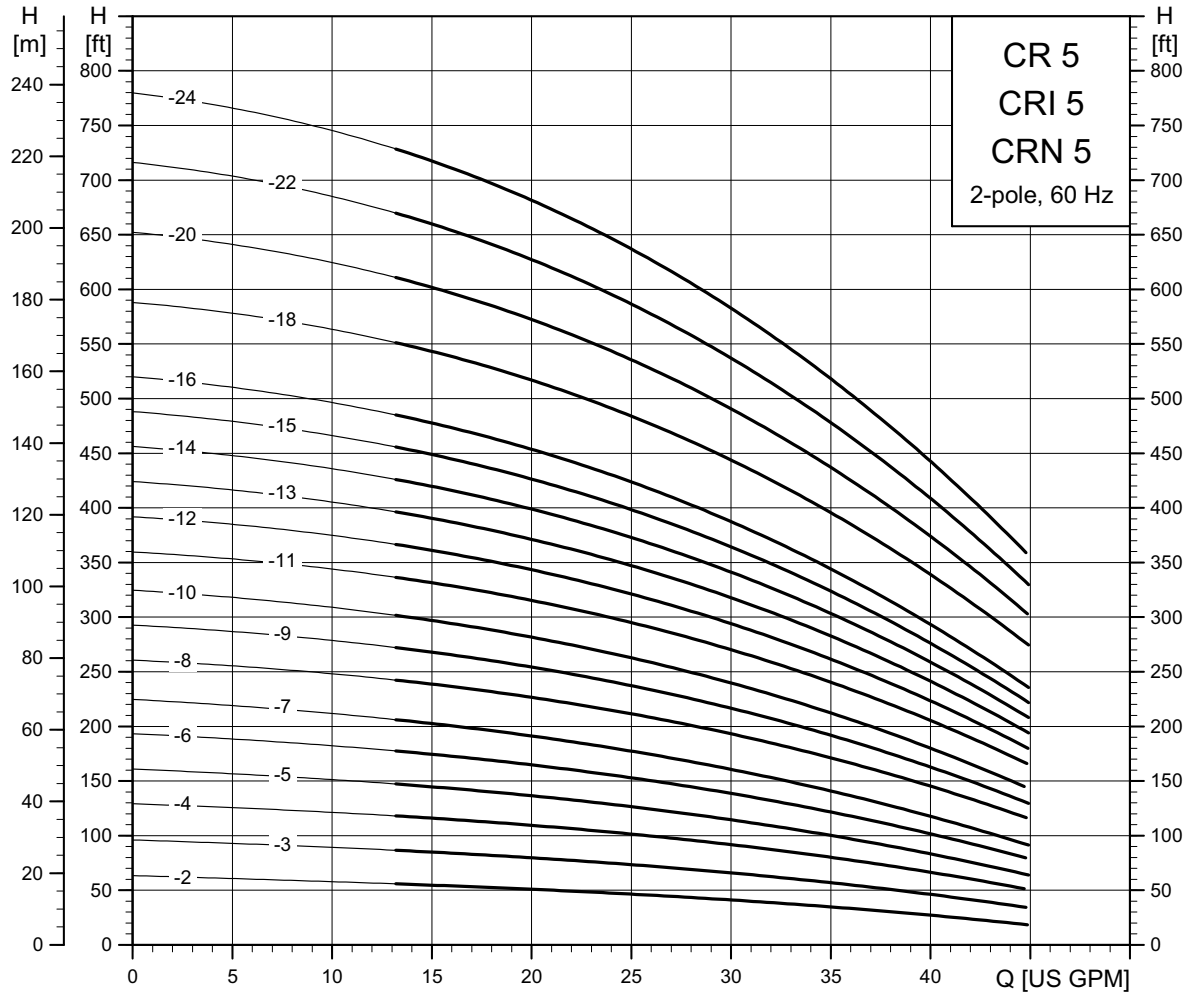
TM02 4083 4719

**CR, CRI, CRN 3**



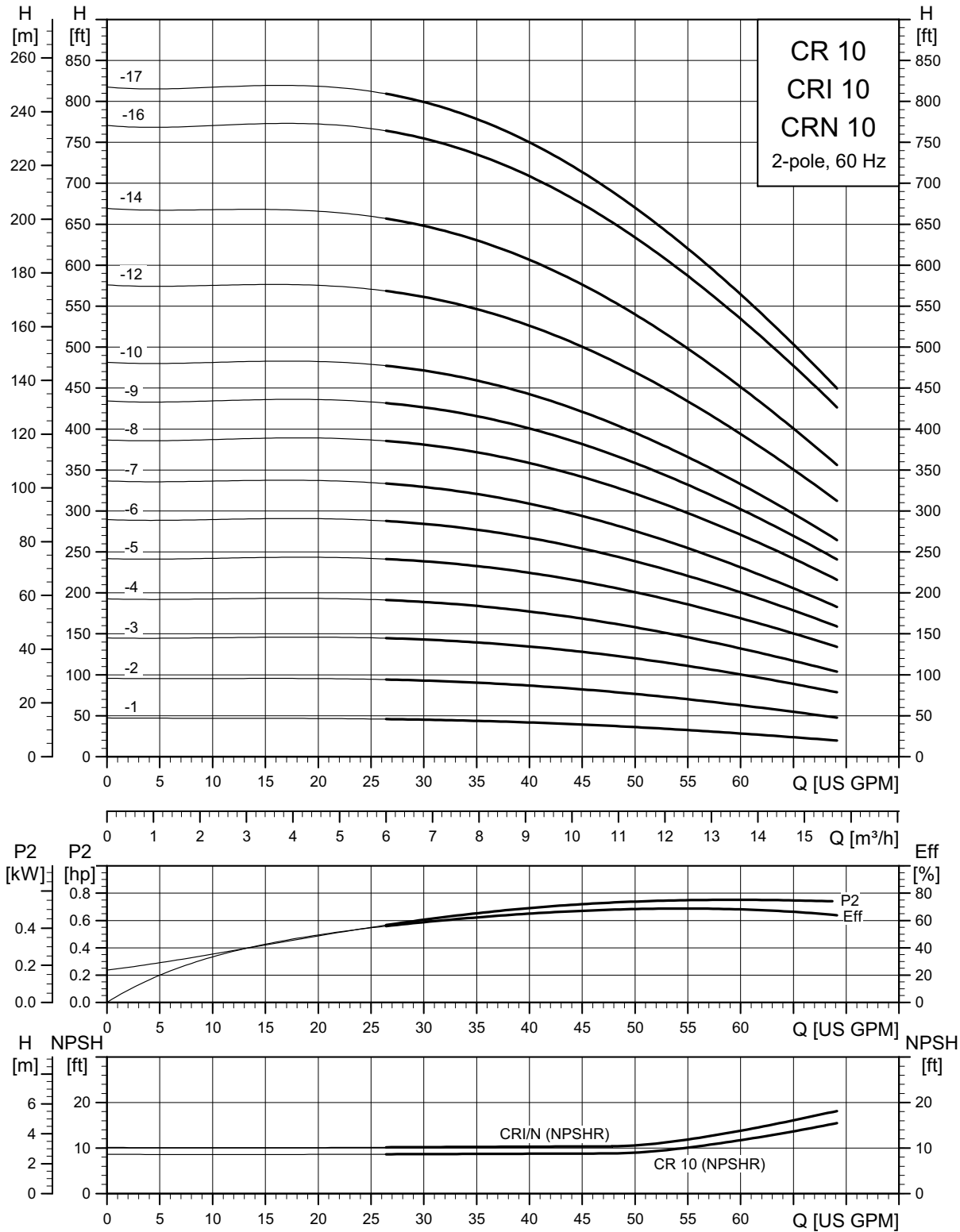
TM02 4084 4719

**CR, CRI, CRN 5**



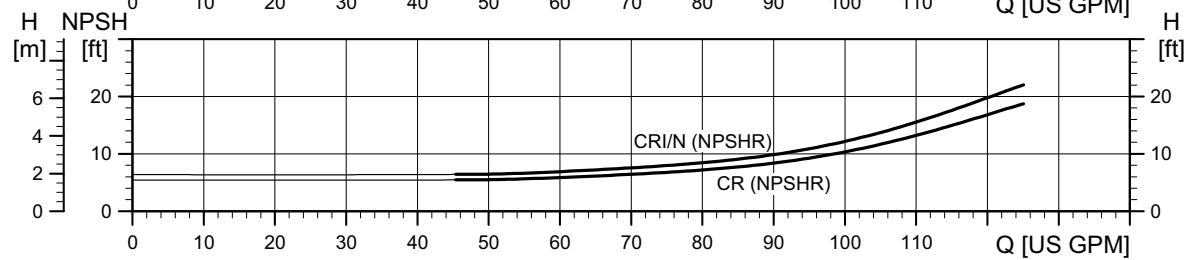
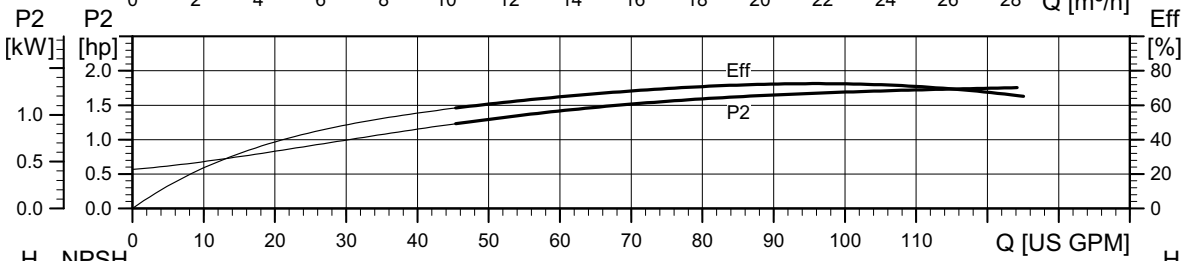
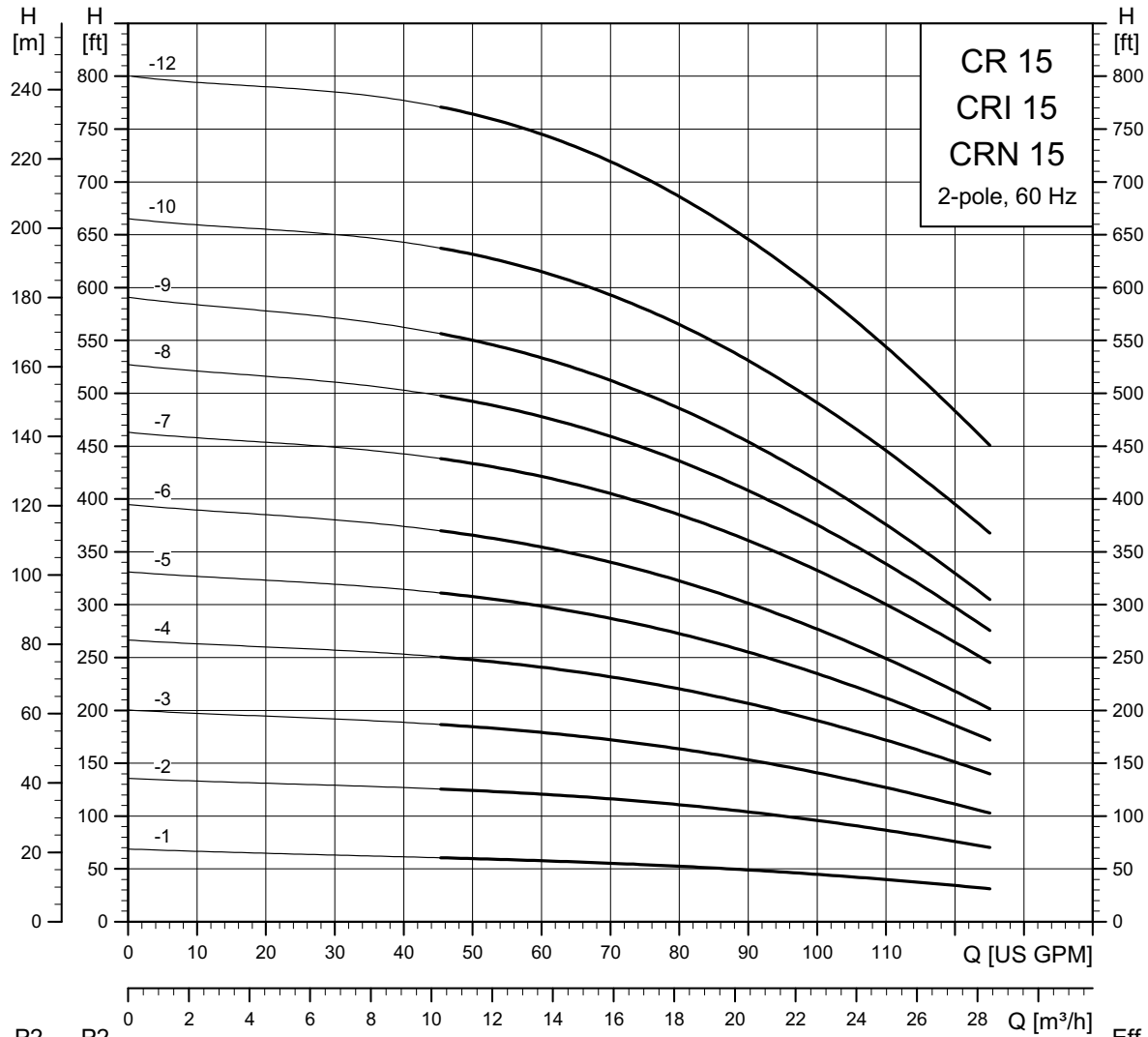
TM02 4085 4719

CR, CRI, CRN 10



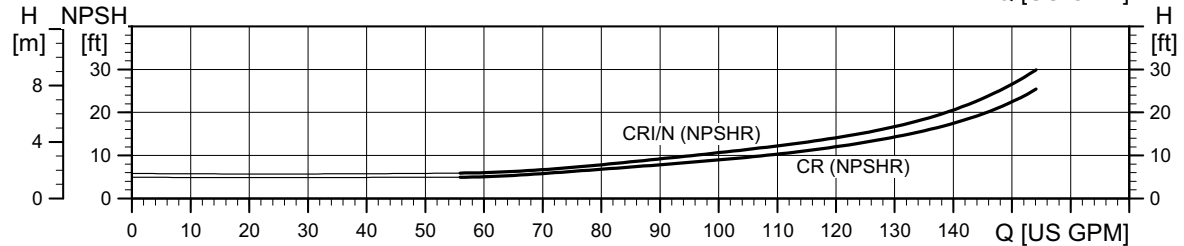
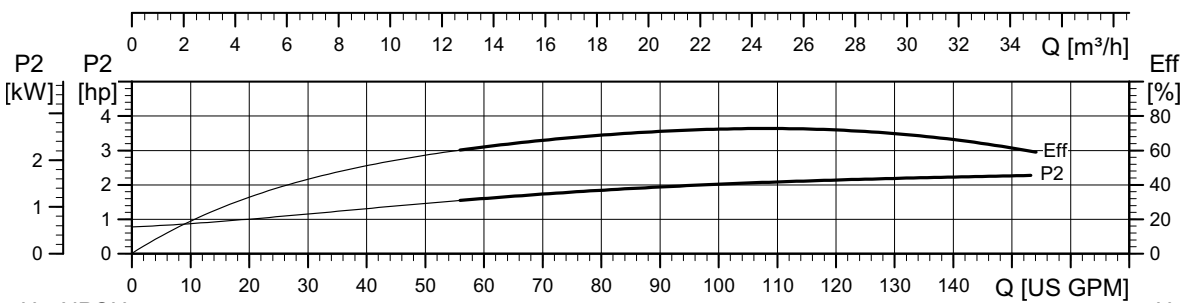
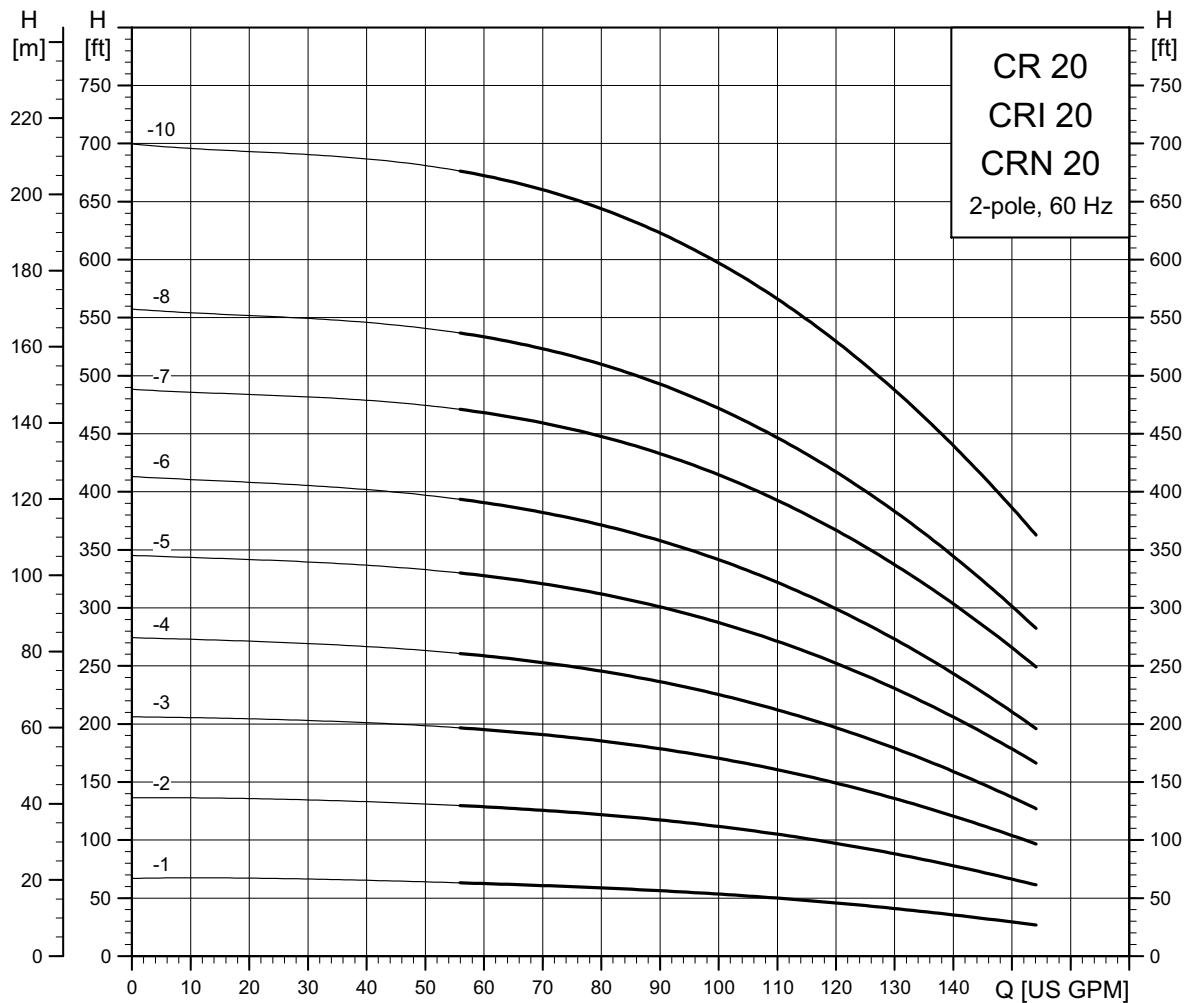
TM02 7221 4719

**CR, CRI, CRN 15**



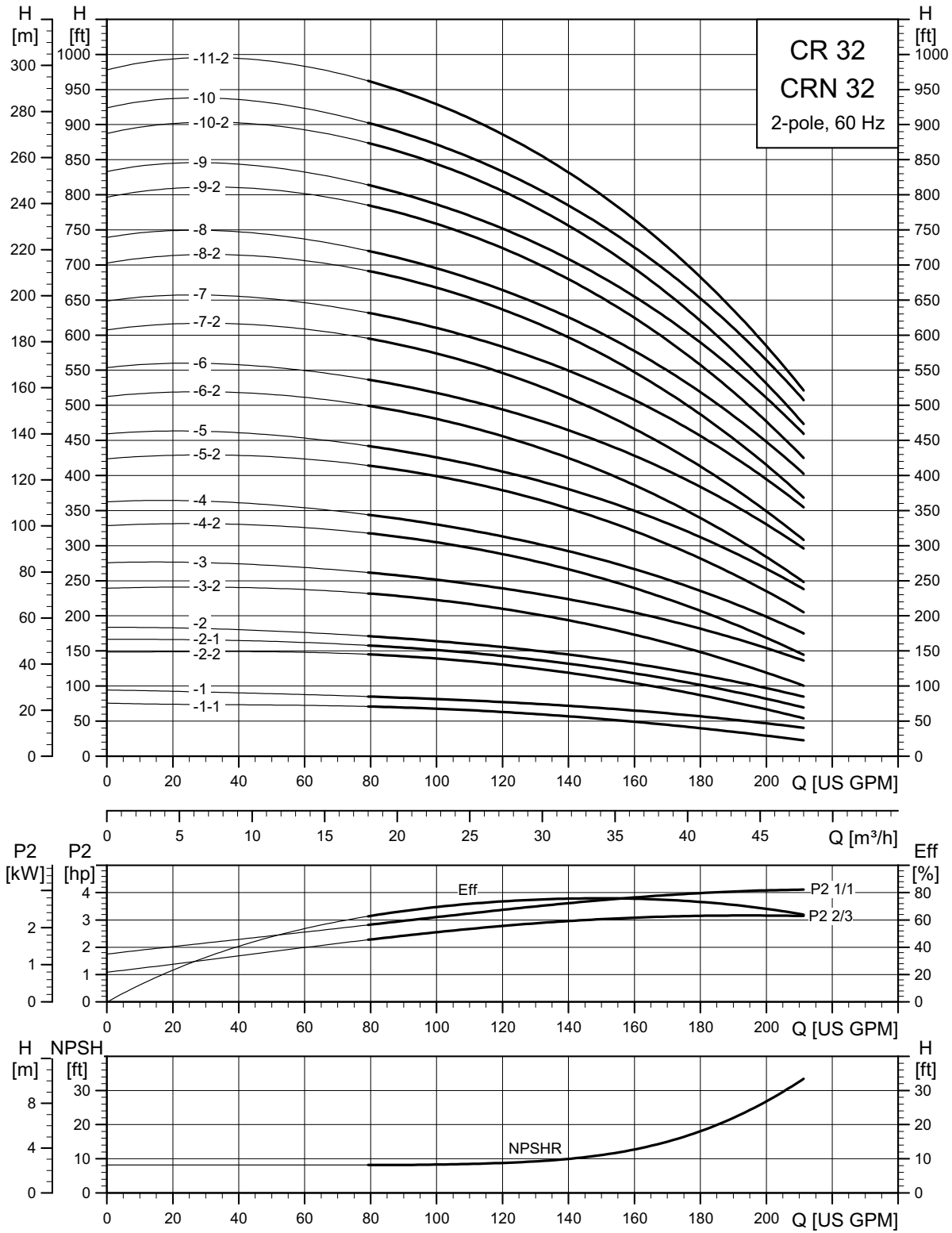
TM02 7222 4719

**CR, CRI, CRN 20**



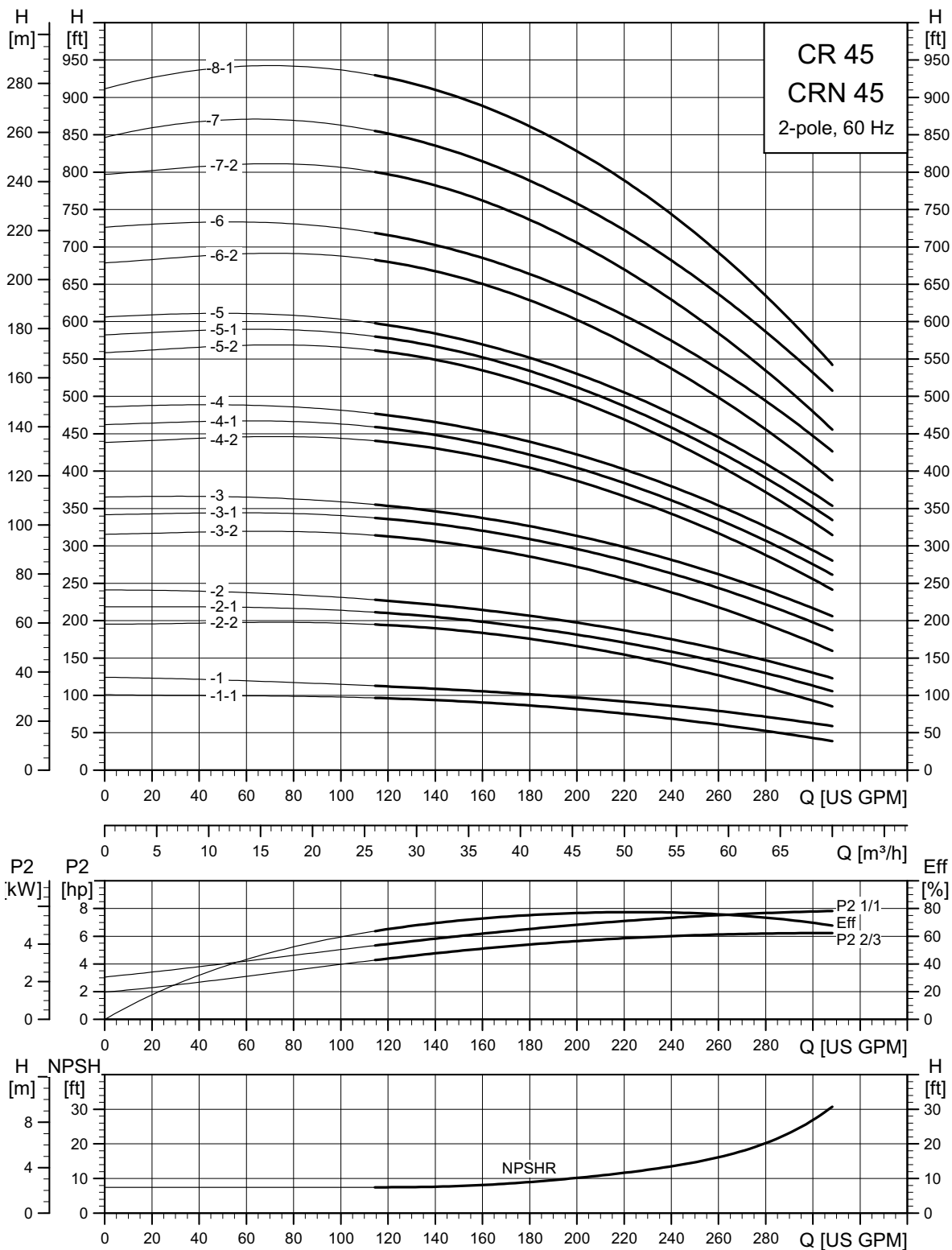
TM02 7223 4719

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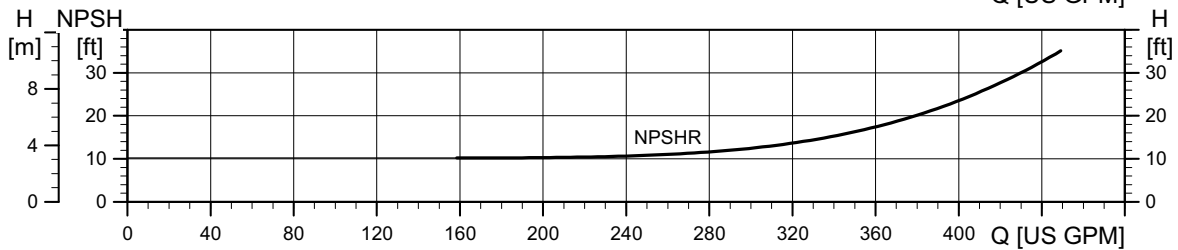
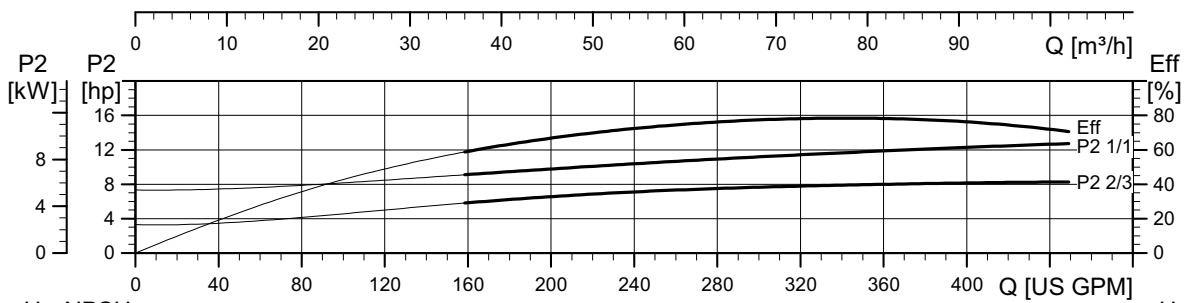
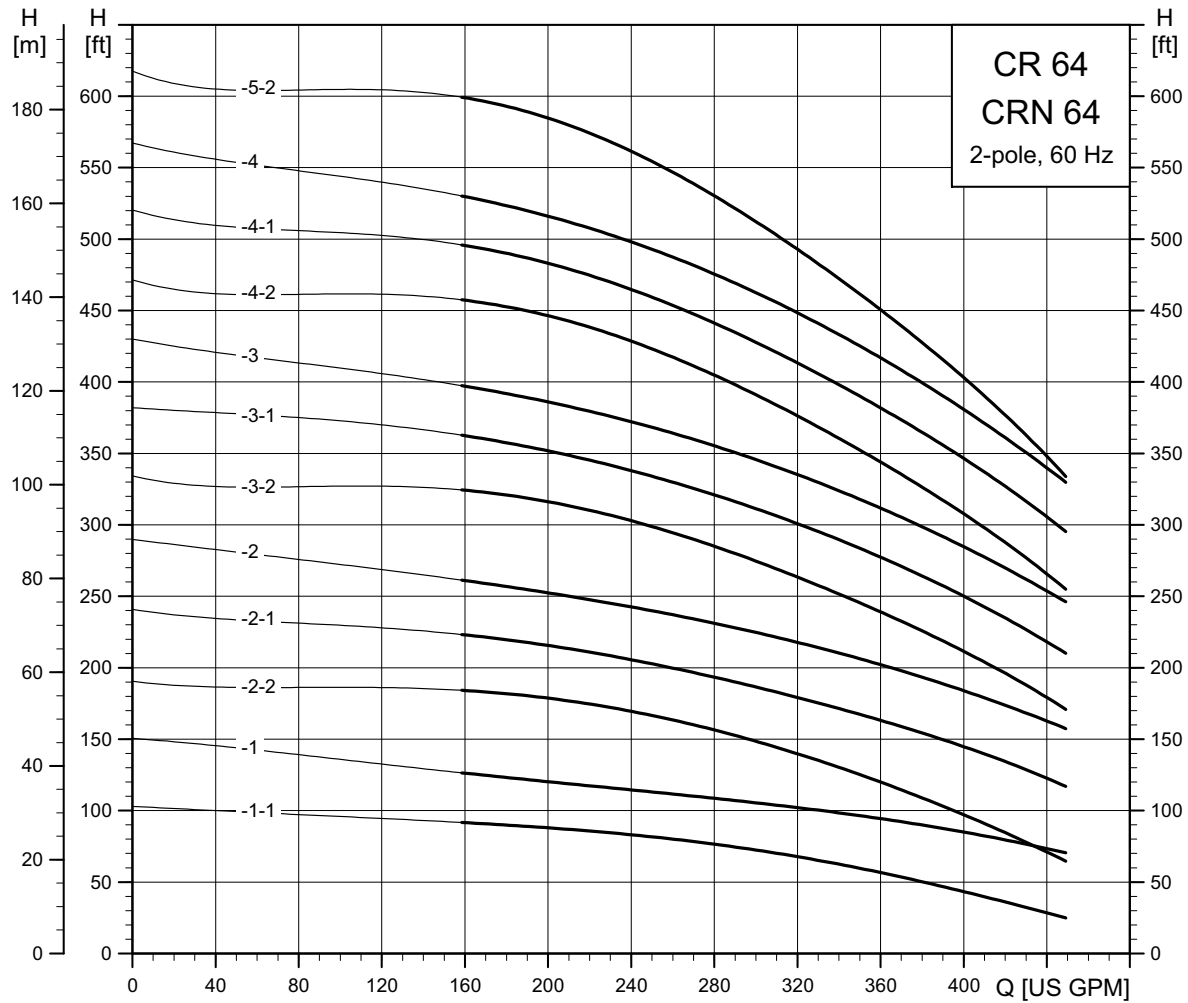
TM02.0039 4719

CR, CRN 45



TM02 0040 4719

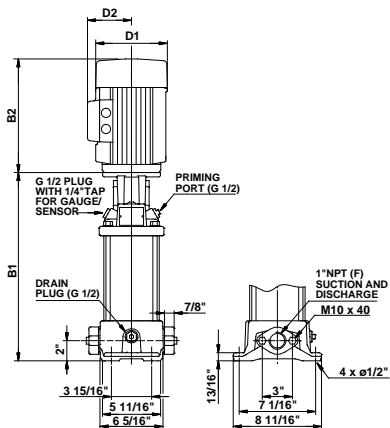
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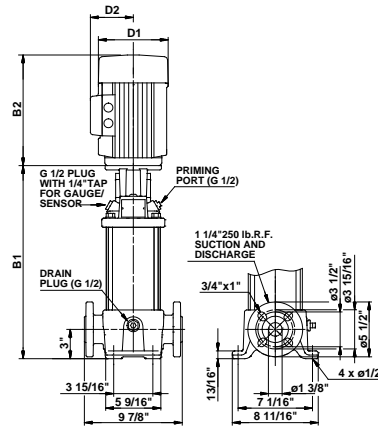
TM02 0041 4719

# 10. Technical data

## CR 1s



TM03 1450 2205



TM03 1451 2205

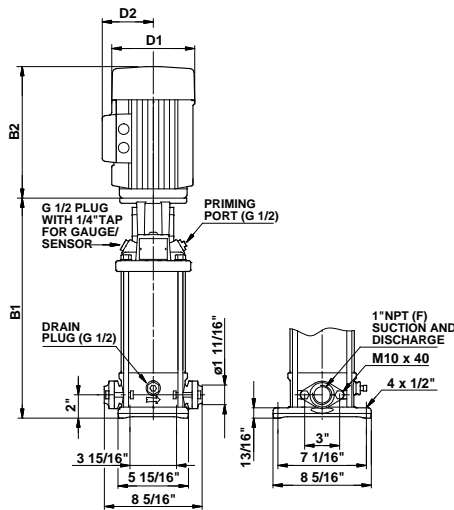
Pump type	P2 [HP]	Ph.	Oval*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC		B1+B2	
					D1	D2		
CR 1s-2	1/3	1	•	11.97 (305)	6.19 (158)	5.18 (132)	21.26 (541)	69 (32)
		3	•	11.97 (305)	5.55 (141)	4.57 (117)	19.41 (494)	67 (31)
CR 1s-3	1/3	1	•	11.97 (305)	6.19 (158)	5.18 (132)	21.26 (541)	69 (32)
		3	•	11.97 (305)	5.55 (141)	4.57 (117)	19.41 (494)	67 (31)
CR 1s-4	1/3	1	•	12.68 (323)	6.19 (158)	5.18 (132)	21.97 (559)	70 (32)
		3	•	12.68 (323)	5.55 (141)	4.57 (117)	20.12 (512)	68 (31)
CR 1s-5	1/3	1	•	13.39 (341)	6.19 (158)	5.18 (132)	22.68 (577)	71 (33)
		3	•	13.39 (341)	5.55 (141)	4.57 (117)	20.83 (530)	69 (32)
CR 1s-6	1/2	1	•	14.09 (358)	6.19 (158)	5.18 (132)	23.38 (594)	75 (35)
		3	•	14.09 (358)	5.55 (141)	4.57 (117)	21.53 (547)	70 (32)
CR 1s-7	1/2	1	•	14.80 (376)	6.19 (158)	5.18 (132)	24.09 (612)	76 (35)
		3	•	14.80 (376)	5.55 (141)	4.57 (117)	22.24 (565)	71 (33)
CR 1s-8	1/2	1	•	15.51 (394)	6.19 (158)	5.18 (132)	24.80 (630)	77 (35)
		3	•	15.51 (394)	5.55 (141)	4.57 (117)	22.95 (583)	72 (33)
CR 1s-9	3/4	1	•	16.22 (412)	6.19 (158)	5.18 (132)	26.13 (664)	82 (38)
		3	•	16.22 (412)	5.55 (141)	4.57 (117)	23.66 (601)	73 (34)
CR 1s-10	3/4	1	•	16.93 (431)	6.19 (158)	5.18 (132)	26.84 (682)	83 (38)
		3	•	16.93 (431)	5.55 (141)	4.57 (117)	24.37 (619)	74 (34)
CR 1s-11	3/4	1	•	17.64 (449)	6.19 (158)	5.18 (132)	27.55 (700)	84 (39)
		3	•	17.64 (449)	5.55 (141)	4.57 (117)	25.08 (638)	75 (35)
CR 1s-12	3/4	1	•	18.35 (467)	6.19 (158)	5.18 (132)	28.26 (718)	85 (39)
		3	•	18.35 (467)	5.55 (141)	4.57 (117)	25.79 (656)	76 (35)
CR 1s-13	1	1	•	19.06 (485)	7.19 (183)	5.73 (146)	30.25 (769)	101 (46)
		3	•	19.06 (485)	5.55 (141)	4.57 (117)	26.50 (674)	77 (35)
CR 1s-15	1	1	•	20.47 (520)	7.19 (183)	5.73 (146)	31.66 (805)	103 (47)
		3	•	20.47 (520)	5.55 (141)	4.57 (117)	27.91 (709)	78 (36)
CR 1s-17	1 1/2	1	•	21.89 (557)	7.19 (183)	5.73 (146)	33.57 (853)	107 (49)
		3	•	21.89 (557)	5.55 (141)	4.57 (117)	30.51 (775)	84 (39)
CR 1s-19	1 1/2	1	-	23.31 (593)	7.19 (183)	5.73 (146)	34.99 (889)	109 (50)
		3	-	23.31 (593)	5.55 (141)	4.57 (117)	31.93 (812)	86 (40)
CR 1s-21	1 1/2	1	-	24.72 (628)	7.19 (183)	5.73 (146)	36.40 (925)	111 (51)
		3	-	24.72 (628)	5.55 (141)	4.57 (117)	33.34 (847)	88 (40)
CR 1s-23	1 1/2	1	-	26.14 (664)	7.19 (183)	5.73 (146)	37.82 (961)	113 (52)
		3	-	26.14 (664)	5.55 (141)	4.57 (117)	34.76 (883)	90 (41)
CR 1s-25	2	1	-	27.56 (701)	7.19 (183)	5.73 (146)	40.12 (1020)	126 (58)
		3	-	27.56 (701)	7.01 (179)	4.33 (110)	38.78 (986)	112 (51)
CR 1s-27	2	1	-	28.98 (737)	7.19 (183)	5.73 (146)	41.54 (1056)	127 (58)
		3	-	28.98 (737)	7.01 (179)	4.33 (110)	40.20 (1022)	115(52)

All dimensions in inches unless otherwise noted.

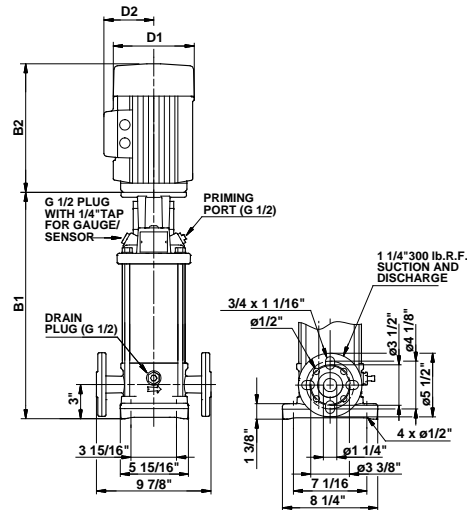
\* Oval flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pump and the weight is approximately 9 lbs less.

- Available.

CRI 1s



TM03 1452 2205



TM03 1453 2205

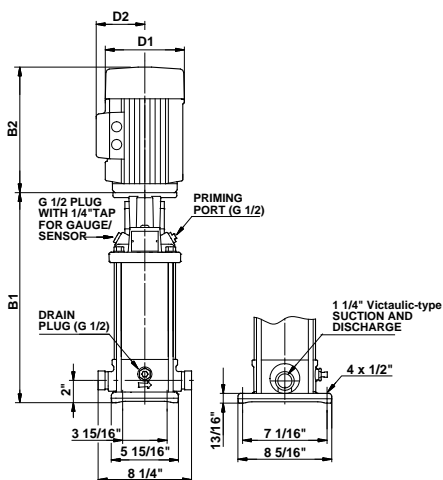
Pump type	P2 [HP]	Ph.	Oval*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC			
					D1	D2	B1+B2	
CRI 1s-2	1/3	1	•	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	64 (30)
		3	•	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRI 1s-3	1/3	1	•	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	64 (30)
		3	•	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRI 1s-4	1/3	1	•	12.80 (326)	6.19 (158)	5.18 (132)	22.09 (562)	65 (30)
		3	•	12.80 (326)	5.55 (141)	4.57 (117)	20.24 (515)	63 (29)
CRI 1s-5	1/3	1	•	13.50 (343)	6.19 (158)	5.18 (132)	22.79 (579)	66 (30)
		3	•	13.50 (343)	5.55 (141)	4.57 (117)	20.94 (532)	64 (30)
CRI 1s-6	1/2	1	•	14.21 (361)	6.19 (158)	5.18 (132)	23.50 (597)	70 (32)
		3	•	14.21 (361)	5.55 (141)	4.57 (117)	21.65 (550)	65 (30)
CRI 1s-7	1/2	1	•	14.92 (379)	6.19 (158)	5.18 (132)	24.21 (615)	71 (33)
		3	•	14.92 (379)	5.55 (141)	4.57 (117)	22.36 (568)	65 (30)
CRI 1s-8	1/2	1	•	15.63 (398)	6.19 (158)	5.18 (132)	24.92 (633)	72 (33)
		3	•	15.63 (398)	5.55 (141)	4.57 (117)	23.07 (586)	66 (30)
CRI 1s-9	3/4	1	•	16.34 (416)	6.19 (158)	5.18 (132)	26.25 (667)	77 (35)
		3	•	16.34 (416)	5.55 (141)	4.57 (117)	23.78 (605)	68 (31)
CRI 1s-10	3/4	1	•	17.05 (434)	6.19 (158)	5.18 (132)	26.96 (685)	78 (36)
		3	•	17.05 (434)	5.55 (141)	4.57 (117)	24.49 (623)	69 (32)
CRI 1s-11	3/4	1	•	17.76 (452)	6.19 (158)	5.18 (132)	27.67 (703)	79 (36)
		3	•	17.76 (452)	5.55 (141)	4.57 (117)	25.20 (641)	70 (32)
CRI 1s-12	3/4	1	•	18.46 (469)	6.19 (158)	5.18 (132)	28.37 (721)	79 (36)
		3	•	18.46 (469)	5.55 (141)	4.57 (117)	25.90 (658)	70 (32)
CRI 1s-13	1	1	•	19.17 (487)	7.19 (183)	5.73 (146)	30.36 (772)	96 (44)
		3	•	19.17 (487)	5.55 (141)	4.57 (117)	26.61 (676)	71 (33)
CRI 1s-15	1	1	•	20.59 (523)	7.19 (183)	5.73 (146)	31.78 (808)	97 (44)
		3	•	20.59 (523)	5.55 (141)	4.57 (117)	28.03 (712)	73 (34)
CRI 1s-17	1 1/2	1	•	22.01 (560)	7.19 (183)	5.73 (146)	33.69 (856)	102 (47)
		3	•	22.01 (560)	5.55 (141)	4.57 (117)	30.63 (779)	79 (36)
CRI 1s-19	1 1/2	1	-	23.43 (596)	7.19 (183)	5.73 (146)	35.11 (892)	104 (48)
		3	-	23.43 (596)	5.55 (141)	4.57 (117)	32.05 (815)	81 (37)
CRI 1s-21	1 1/2	1	-	24.84 (631)	7.19 (183)	5.73 (146)	36.52 (928)	106 (49)
		3	-	24.84 (631)	5.55 (141)	4.57 (117)	33.46 (850)	82 (38)
CRI 1s-23	1 1/2	1	-	26.26 (668)	7.19 (183)	5.73 (146)	37.94 (964)	107 (49)
		3	-	26.26 (668)	5.55 (141)	4.57 (117)	34.88 (886)	84 (39)
CRI 1s-25	2	1	-	27.68 (704)	7.19 (183)	5.73 (146)	40.24 (1023)	120 (55)
		3	-	27.68 (704)	7.01 (179)	4.33 (110)	38.90 (989)	108(49)
CRI 1s-27	2	1	-	29.09 (739)	7.19 (183)	5.73 (146)	41.65 (1058)	122 (56)
		3	-	29.09 (739)	7.01 (179)	4.33 (110)	40.31 (1024)	110 (50)

All dimensions in inches unless otherwise noted.

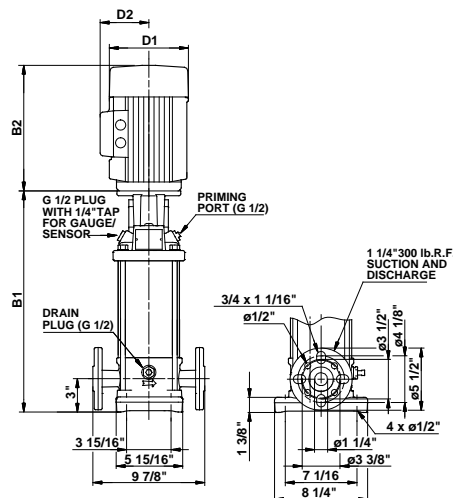
\* Oval flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pump and the weight is approximately 9 lbs less.

- Available.

CRN 1s



TM03 1454 2205



TM03 1453 2205

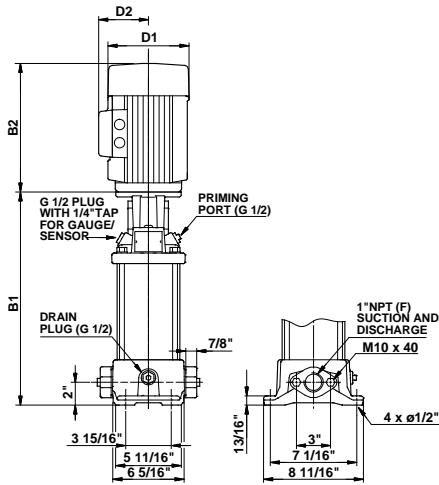
Pump type	P2 [HP]	Ph.	PJE*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC		B1+B2	
					D1	D2		
CRN 1s-2	1/3	1	•	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	63 (29)
		3	•	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	61 (28)
CRN 1s-3	1/3	1	•	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	64 (30)
		3	•	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRN 1s-4	1/3	1	•	12.80 (326)	6.19 (158)	5.18 (132)	22.09 (562)	65 (30)
		3	•	12.80 (326)	5.55 (141)	4.57 (117)	20.24 (515)	63 (29)
CRN 1s-5	1/3	1	•	13.50 (343)	6.19 (158)	5.18 (132)	22.79 (579)	66 (30)
		3	•	13.50 (343)	5.55 (141)	4.57 (117)	20.94 (532)	64 (30)
CRN 1s-6	1/2	1	•	14.21 (361)	6.19 (158)	5.18 (132)	23.50 (597)	70 (32)
		3	•	14.21 (361)	5.55 (141)	4.57 (117)	21.65 (550)	65 (30)
CRN 1s-7	1/2	1	•	14.92 (379)	6.19 (158)	5.18 (132)	24.21 (615)	71 (33)
		3	•	14.92 (379)	5.55 (141)	4.57 (117)	22.36 (568)	65 (30)
CRN 1s-8	1/2	1	•	15.63 (398)	6.19 (158)	5.18 (132)	24.92 (633)	72 (33)
		3	•	15.63 (398)	5.55 (141)	4.57 (117)	23.07 (586)	66 (30)
CRN 1s-9	3/4	1	•	16.34 (416)	6.19 (158)	5.18 (132)	26.25 (667)	77 (35)
		3	•	16.34 (416)	5.55 (141)	4.57 (117)	23.78 (605)	68 (31)
CRN 1s-10	3/4	1	•	17.05 (434)	6.19 (158)	5.18 (132)	26.96 (685)	78 (36)
		3	•	17.05 (434)	5.55 (141)	4.57 (117)	24.49 (623)	69 (32)
CRN 1s-11	3/4	1	•	17.76 (452)	6.19 (158)	5.18 (132)	27.67 (703)	78 (36)
		3	•	17.76 (452)	5.55 (141)	4.57 (117)	25.20 (641)	69 (32)
CRN 1s-12	3/4	1	•	18.46 (469)	6.19 (158)	5.18 (132)	28.37 (721)	79 (36)
		3	•	18.46 (469)	5.55 (141)	4.57 (117)	25.90 (658)	70 (32)
CRN 1s-13	1	1	•	19.17 (487)	7.19 (183)	5.73 (146)	30.36 (772)	96 (44)
		3	•	19.17 (487)	5.55 (141)	4.57 (117)	26.61 (676)	71 (33)
CRN 1s-15	1	1	•	20.59 (523)	7.19 (183)	5.73 (146)	31.78 (808)	97 (44)
		3	•	20.59 (523)	5.55 (141)	4.57 (117)	28.03 (712)	73 (34)
CRN 1s-17	1 1/2	1	•	22.01 (560)	7.19 (183)	5.73 (146)	33.69 (856)	102 (47)
		3	•	22.01 (560)	5.55 (141)	4.57 (117)	30.63 (779)	79 (36)
CRN 1s-19	1 1/2	1	•	23.43 (596)	7.19 (183)	5.73 (146)	35.11 (892)	104 (48)
		3	•	23.43 (596)	5.55 (141)	4.57 (117)	32.05 (815)	81 (37)
CRN 1s-21	1 1/2	1	•	24.84 (631)	7.19 (183)	5.73 (146)	36.52 (928)	105 (48)
		3	•	24.84 (631)	5.55 (141)	4.57 (117)	33.46 (850)	82 (38)
CRN 1s-23	1 1/2	1	•	26.26 (668)	7.19 (183)	5.73 (146)	37.94 (964)	107 (49)
		3	•	26.26 (668)	5.55 (141)	4.57 (117)	34.88 (886)	84 (39)
CRN 1s-25	2	1	•	27.68 (704)	7.19 (183)	5.73 (146)	40.24 (1023)	120 (55)
		3	•	27.68 (704)	7.01 (179)	4.33 (110)	38.90 (989)	108 (49)
CRN 1s-27	2	1	•	29.09 (739)	7.19 (183)	5.73 (146)	41.65 (1058)	122 (56)
		3	•	29.09 (739)	7.01 (179)	4.33 (110)	40.31 (1024)	109 (49)

All dimensions in inches unless otherwise noted.

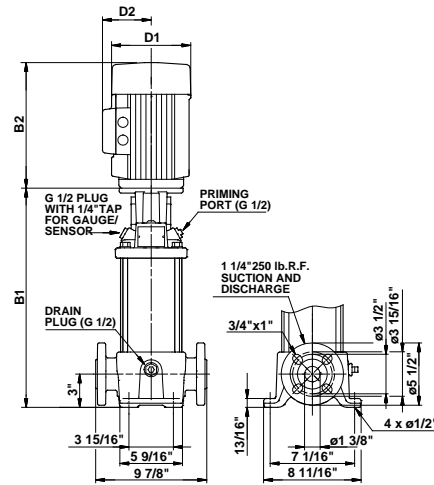
\* PJE flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pump and the weight is approximately 9 lbs less.

• Available.

CR 1



TM03 1450 2205



TM03 1451 2205

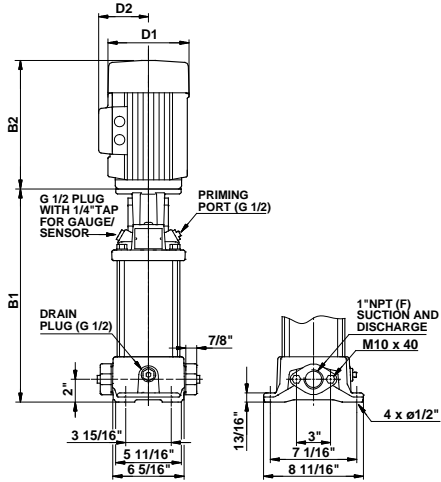
Pump type	P2 [HP]	Ph.	Oval*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC			
					D1	D2	B1+B2	
CR 1-2	1/3	1	•	11.97 (305)	6.19 (158)	5.18 (132)	21.26 (541)	69 (32)
		3	•	11.97 (305)	5.55 (141)	4.57 (117)	19.41 (494)	67 (31)
CR 1-3	1/3	1	•	11.97 (305)	6.19 (158)	5.18 (132)	21.26 (541)	69 (32)
		3	•	11.97 (305)	5.55 (141)	4.57 (117)	19.41 (494)	67 (31)
CR 1-4	1/2	1	•	12.68 (323)	6.19 (158)	5.18 (132)	21.97 (559)	73 (34)
		3	•	12.68 (323)	5.55 (141)	4.57 (117)	20.12 (512)	68 (31)
CR 1-5	1/2	1	•	13.39 (341)	6.19 (158)	5.18 (132)	22.68 (577)	75 (35)
		3	•	13.39 (341)	5.55 (141)	4.57 (117)	20.83 (530)	69 (32)
CR 1-6	3/4	1	•	14.09 (358)	6.19 (158)	5.18 (132)	24.00 (610)	80 (37)
		3	•	14.09 (358)	5.55 (141)	4.57 (117)	21.53 (547)	71 (33)
CR 1-7	3/4	1	•	14.80 (376)	6.19 (158)	5.18 (132)	24.71 (628)	81 (37)
		3	•	14.80 (376)	5.55 (141)	4.57 (117)	22.24 (565)	72 (33)
CR 1-8	1	1	•	15.51 (394)	7.19 (183)	5.73 (146)	26.70 (679)	93 (43)
		3	•	15.51 (394)	5.55 (141)	4.57 (117)	22.95 (583)	72 (33)
CR 1-9	1	1	•	16.22 (412)	7.19 (183)	5.73 (146)	27.41 (697)	94 (43)
		3	•	16.22 (412)	5.55 (141)	4.57 (117)	23.66 (601)	74 (34)
CR 1-10	1 1/2	1	•	16.93 (431)	7.19 (183)	5.73 (146)	28.61 (727)	95 (44)
		3	•	16.93 (431)	5.55 (141)	4.57 (117)	25.55 (649)	74 (34)
CR 1-11	1 1/2	1	•	17.64 (449)	7.19 (183)	5.73 (146)	29.32 (745)	102 (47)
		3	•	17.64 (449)	5.55 (141)	4.57 (117)	26.26 (668)	76 (35)
CR 1-12	1 1/2	1	•	18.35 (467)	7.19 (183)	5.73 (146)	30.03 (763)	103 (47)
		3	•	18.35 (467)	5.55 (141)	4.57 (117)	26.97 (686)	77 (35)
CR 1-13	1 1/2	1	•	19.06 (485)	7.19 (183)	5.73 (146)	30.74 (781)	104 (48)
		3	•	19.06 (485)	5.55 (141)	4.57 (117)	27.68 (704)	78 (36)
CR 1-15	2	1	•	20.47 (520)	7.19 (183)	5.73 (146)	33.03 (839)	114 (52)
		3	•	20.47 (520)	7.01 (179)	4.33 (110)	31.69 (805)	101 (46)
CR 1-17	2	1	•	21.89 (557)	7.19 (183)	5.73 (146)	34.45 (876)	116 (53)
		3	•	21.89 (557)	7.01 (179)	4.33 (110)	33.11 (841)	104 (47)
CR 1-19	3	1	-	24.41 (621)	8.60 (219)	6.87 (175)	39.06 (993)	155 (71)
		3	-	24.41 (621)	7.01 (179)	4.33 (110)	37.64 (957)	118 (54)
CR 1-21	3	1	-	25.83 (657)	8.60 (219)	6.87 (175)	40.48 (1029)	158 (72)
		3	-	25.83 (657)	7.01 (179)	4.33 (110)	39.06 (993)	121 (55)
CR 1-23	3	1	-	27.24 (692)	8.60 (219)	6.87 (175)	41.89 (1065)	159 (73)
		3	-	27.24 (692)	7.01 (179)	4.33 (110)	40.47 (1028)	125 (57)
CR 1-25	3	1	-	28.66 (728)	8.60 (219)	6.87 (175)	43.31 (1101)	161 (74)
		3	-	28.66 (728)	7.01 (179)	4.33 (110)	41.89 (1065)	127 (58)
CR 1-27	3	1	-	30.08 (765)	8.60 (219)	6.87 (175)	44.73 (1137)	163 (74)
		3	-	30.08 (765)	7.01 (179)	4.33 (110)	43.31 (1101)	129 (59)

All dimensions in inches unless otherwise noted.

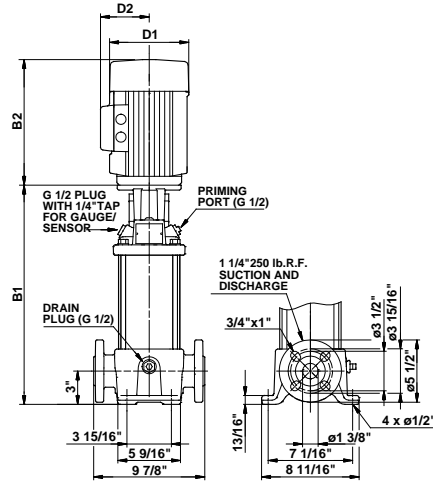
\* Oval flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pump and the weight is approximately 9 lbs less.

• Available.

CRI 1



TM03 1450 2205



TM03 1451 2205

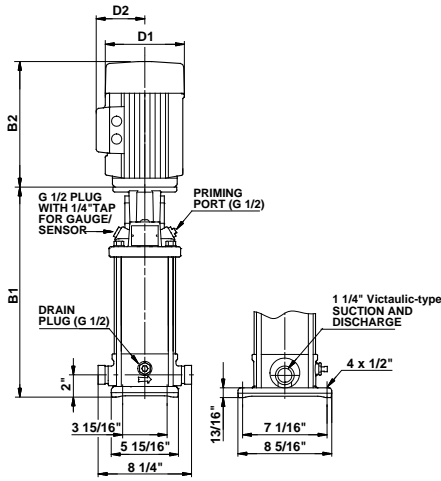
Pump type	P2 [HP]	Ph.	Oval*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC			
					D1	D2	B1+B2	
CRI 1-2	1/3	1	•	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	64 (30)
CRI 1-2	1/3	3	•	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRI 1-3	1/3	1	•	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	64 (30)
CRI 1-3	1/3	3	•	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRI 1-4	1/2	1	•	12.80 (326)	6.19 (158)	5.18 (132)	22.09 (562)	68 (31)
CRI 1-4	1/2	3	•	12.80 (326)	5.55 (141)	4.57 (117)	20.24 (515)	63 (29)
CRI 1-5	1/2	1	•	13.50 (343)	6.19 (158)	5.18 (132)	22.79 (579)	69 (32)
CRI 1-5	1/2	3	•	13.50 (343)	5.55 (141)	4.57 (117)	20.94 (532)	64 (30)
CRI 1-6	3/4	1	•	14.21 (361)	6.19 (158)	5.18 (132)	24.12 (613)	74 (34)
CRI 1-6	3/4	3	•	14.21 (361)	5.55 (141)	4.57 (117)	21.65 (550)	65 (30)
CRI 1-7	3/4	1	•	14.92 (379)	6.19 (158)	5.18 (132)	24.83 (631)	75 (35)
CRI 1-7	3/4	3	•	14.92 (379)	5.55 (141)	4.57 (117)	22.36 (568)	66 (66)
CRI 1-8	1	1	•	15.63 (398)	7.19 (183)	5.73 (146)	26.82 (682)	88 (40)
CRI 1-8	1	3	•	15.63 (398)	5.55 (141)	4.57 (117)	23.07 (586)	67 (31)
CRI 1-9	1	1	•	16.34 (416)	7.19 (183)	5.73 (146)	27.53 (700)	89 (41)
CRI 1-9	1	3	•	16.34 (416)	5.55 (141)	4.57 (117)	23.78 (605)	68 (31)
CRI 1-10	1 1/2	1	•	17.05 (434)	7.19 (183)	5.73 (146)	28.73 (730)	90 (41)
CRI 1-10	1 1/2	3	•	17.05 (434)	5.55 (141)	4.57 (117)	25.67 (653)	69 (32)
CRI 1-11	1 1/2	1	•	17.76 (452)	7.19 (183)	5.73 (146)	29.44 (748)	97 (44)
CRI 1-11	1 1/2	3	•	17.76 (452)	5.55 (141)	4.57 (117)	26.38 (671)	70 (32)
CRI 1-12	1 1/2	1	•	18.46 (469)	7.19 (183)	5.73 (146)	30.14 (766)	98 (45)
CRI 1-12	1 1/2	3	•	18.46 (469)	5.55 (141)	4.57 (117)	27.08 (688)	71 (33)
CRI 1-13	1 1/2	1	•	19.17 (487)	7.19 (183)	5.73 (146)	30.85 (784)	99 (45)
CRI 1-13	1 1/2	3	•	19.17 (487)	5.55 (141)	4.57 (117)	27.79 (706)	72 (33)
CRI 1-15	2	1	•	20.59 (523)	7.19 (183)	5.73 (146)	33.15 (843)	109 (50)
CRI 1-15	2	3	•	20.59 (523)	7.01 (179)	4.33 (110)	31.81 (808)	95 (43)
CRI 1-17	2	1	•	22.01 (560)	7.19 (183)	5.73 (146)	34.57 (879)	110 (50)
CRI 1-17	2	3	•	22.01 (560)	7.01 (179)	4.33 (110)	33.23 (845)	97 (44)
CRI 1-19	3	1	-	24.53 (624)	8.60 (219)	6.87 (175)	39.18 (996)	148 (68)
CRI 1-19	3	3	-	24.53 (624)	7.01 (179)	4.33 (110)	37.76 (960)	112 (51)
CRI 1-21	3	1	-	25.94 (659)	8.60 (219)	6.87 (175)	40.59 (1031)	150 (69)
CRI 1-21	3	3	-	25.94 (659)	7.01 (179)	4.33 (110)	39.17 (995)	114 (52)
CRI 1-23	3	1	-	27.36 (695)	8.60 (219)	6.87 (175)	42.01 (1068)	152 (69)
CRI 1-23	3	3	-	27.36 (695)	7.01 (179)	4.33 (110)	40.59 (1031)	118 (54)
CRI 1-25	3	1	-	28.78 (732)	8.60 (219)	6.87 (175)	43.43 (1104)	154 (70)
CRI 1-25	3	3	-	28.78 (732)	7.01 (179)	4.33 (110)	42.01 (1068)	121 (55)
CRI 1-27	3	1	-	30.20 (768)	8.60 (219)	6.87 (175)	44.85 (1140)	156 (71)
CRI 1-27	3	3	-	30.20 (768)	7.01 (179)	4.33 (110)	43.43 (1104)	123 (56)

All dimensions in inches unless otherwise noted.

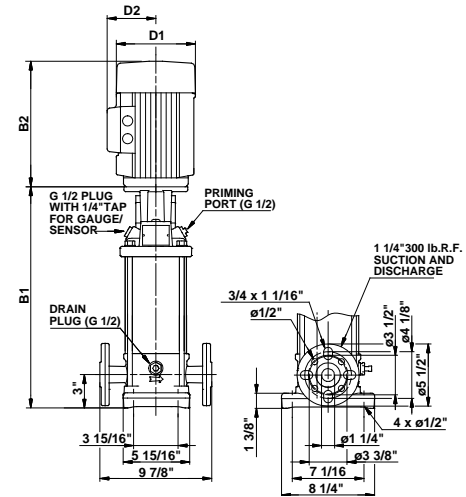
\* Oval flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pump and the weight is approximately 9 lbs less.

• Available.

CRN 1



TM03 1454 2205



TM03 1453 2205

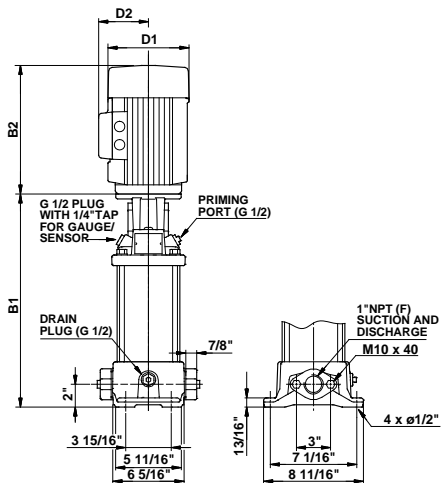
Pump type	P2 [HP]	Ph.	PJE*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC			
					D1	D2	B1+B2	
CRN 1-2	1/3	1	●	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	64 (30)
		3	●	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRN 1-3	1/3	1	●	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	64 (30)
		3	●	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRN 1-4	1/2	1	●	12.80 (326)	6.19 (158)	5.18 (132)	22.09 (562)	68 (31)
		3	●	12.80 (326)	5.55 (141)	4.57 (117)	20.24 (515)	63 (29)
CRN 1-5	1/2	1	●	13.50 (343)	6.19 (158)	5.18 (132)	22.79 (579)	69 (32)
		3	●	13.50 (343)	5.55 (141)	4.57 (117)	20.94 (532)	64 (30)
CRN 1-6	3/4	1	●	14.21 (361)	6.19 (158)	5.18 (132)	24.12 (613)	74 (34)
		3	●	14.21 (361)	5.55 (141)	4.57 (117)	21.65 (550)	65 (30)
CRN 1-7	3/4	1	●	14.92 (379)	6.19 (158)	5.18 (132)	24.83 (631)	75 (35)
		3	●	14.92 (379)	5.55 (141)	4.57 (117)	22.36 (568)	66 (30)
CRN 1-8	1	1	●	15.63 (398)	7.19 (183)	5.73 (146)	26.82 (682)	88 (40)
		3	●	15.63 (398)	5.55 (141)	4.57 (117)	23.07 (586)	67 (31)
CRN 1-9	1	1	●	16.34 (416)	7.19 (183)	5.73 (146)	27.53 (700)	89 (41)
		3	●	16.34 (416)	5.55 (141)	4.57 (117)	23.78 (605)	68 (31)
CRN 1-10	1 1/2	1	●	17.05 (434)	7.19 (183)	5.73 (146)	28.73 (730)	90 (41)
		3	●	17.05 (434)	5.55 (141)	4.57 (117)	25.67 (653)	69 (32)
CRN 1-11	1 1/2	1	●	17.76 (452)	7.19 (183)	5.73 (146)	29.44 (748)	97 (44)
		3	●	17.76 (452)	5.55 (141)	4.57 (117)	26.38 (671)	70 (32)
CRN 1-12	1 1/2	1	●	18.46 (469)	7.19 (183)	5.73 (146)	30.14 (766)	98 (45)
		3	●	18.46 (469)	5.55 (141)	4.57 (117)	27.08 (688)	71 (33)
CRN 1-13	1 1/2	1	●	19.17 (487)	7.19 (183)	5.73 (146)	30.85 (784)	99 (45)
		3	●	19.17 (487)	5.55 (141)	4.57 (117)	27.79 (706)	72 (33)
CRN 1-15	2	1	●	20.59 (523)	7.19 (183)	5.73 (146)	33.15 (843)	108 (49)
		3	●	20.59 (523)	7.01 (179)	4.33 (110)	31.81 (808)	95 (43)
CRN 1-17	2	1	●	22.01 (560)	7.19 (183)	5.73 (146)	34.57 (879)	110 (50)
		3	●	22.01 (560)	7.01 (179)	4.33 (110)	33.23 (845)	97 (44)
CRN 1-19	3	1	●	23.53 (598)	8.60 (219)	6.87 (175)	39.18 (996)	148 (68)
		3	●	23.53 (598)	7.01 (179)	4.33 (110)	37.76 (960)	112 (51)
CRN 1-21	3	1	●	25.94 (659)	8.60 (219)	6.87 (175)	40.59 (1031)	150 (69)
		3	●	25.94 (659)	7.01 (179)	4.33 (110)	39.17 (995)	114 (52)
CRN 1-23	3	1	●	27.36 (695)	8.60 (219)	6.87 (175)	42.01 (1068)	152 (69)
		3	●	27.36 (695)	7.01 (179)	4.33 (110)	40.59 (1031)	118 (54)
CRN 1-25	3	1	●	28.78 (732)	8.60 (219)	6.87 (175)	43.43 (1104)	154 (70)
		3	●	28.78 (732)	7.01 (179)	4.33 (110)	42.01 (1068)	121 (55)
CRN 1-27	3	1	●	30.20 (768)	8.60 (219)	6.87 (175)	44.85 (1140)	155 (71)
		3	●	30.20 (768)	7.01 (179)	4.33 (110)	43.43 (1104)	123 (56)

All dimensions in inches unless otherwise noted.

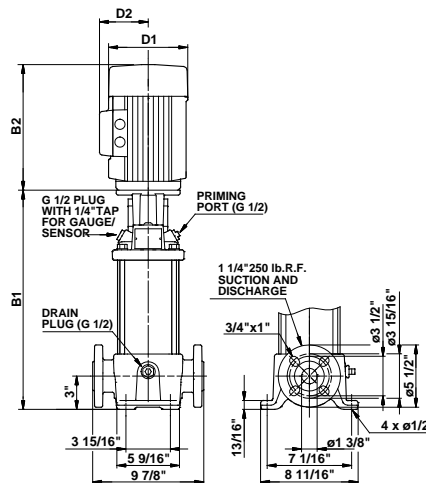
\* PJE flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pump and the weight is approximately 9 lbs less.

● Available.

CR 3



TM03 1450 2205



TM03 1451 2205

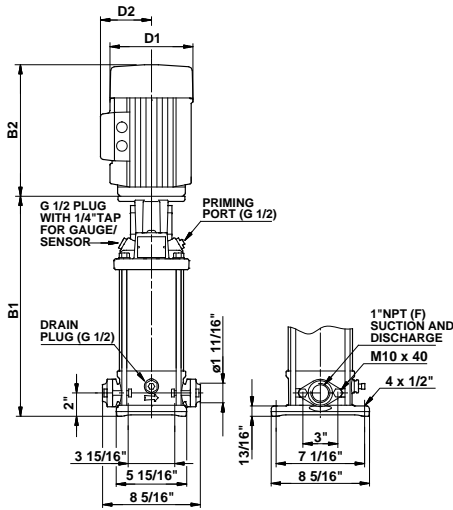
Pump type	P2 [HP]	Ph.	Oval*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC			
					D1	D2	B1+B2	
CR 3-2	1/3	1	•	11.97 (305)	6.19 (158)	5.18 (132)	21.26 (541)	69 (32)
		3	•	11.97 (305)	5.55 (141)	4.57 (117)	19.41 (494)	67 (31)
CR 3-3	1/2	1	•	11.97 (305)	6.19 (158)	5.18 (132)	21.26 (541)	73 (34)
		3	•	11.97 (305)	5.55 (141)	4.57 (117)	19.41 (494)	67 (31)
CR 3-4	3/4	1	•	12.68 (323)	6.19 (158)	5.18 (132)	22.59 (574)	78 (36)
		3	•	12.68 (323)	5.55 (141)	4.57 (117)	20.12 (512)	69 (32)
CR 3-5	3/4	1	•	13.39 (341)	6.19 (158)	5.18 (132)	23.30 (592)	79 (36)
		3	•	13.39 (341)	5.55 (141)	4.57 (117)	20.83 (530)	70 (32)
CR 3-6	1	1	•	14.09 (358)	7.19 (183)	5.73 (146)	25.28 (643)	91 (42)
		3	•	14.09 (358)	5.55 (141)	4.57 (117)	21.53 (547)	71 (33)
CR 3-7	1 1/2	1	•	14.80 (376)	7.19 (183)	5.73 (146)	26.48 (673)	95 (44)
		3	•	14.80 (376)	5.55 (141)	4.57 (117)	23.42 (595)	72 (33)
CR 3-8	1 1/2	1	•	15.51 (394)	7.19 (183)	5.73 (146)	27.19 (691)	96 (44)
		3	•	15.51 (394)	5.55 (141)	4.57 (117)	24.13 (613)	73 (34)
CR 3-9	1 1/2	1	•	16.22 (412)	7.19 (183)	5.73 (146)	27.90 (709)	97 (44)
		3	•	16.22 (412)	5.55 (141)	4.57 (117)	24.84 (631)	74 (34)
CR 3-10	2	1	•	16.93 (431)	7.19 (183)	5.73 (146)	29.49 (750)	109 (50)
		3	•	16.93 (431)	7.01 (179)	4.33 (110)	28.15 (716)	93 (42)
CR 3-11	2	1	•	17.64 (449)	7.19 (183)	5.73 (146)	30.20 (768)	110 (50)
		3	•	17.64 (449)	7.01 (179)	4.33 (110)	28.86 (734)	97 (44)
CR 3-12	2	1	•	18.35 (467)	7.19 (183)	5.73 (146)	30.91 (786)	111 (51)
		3	•	18.35 (467)	7.01 (179)	4.33 (110)	29.57 (752)	99 (45)
CR 3-13	3	1	•	20.16 (513)	8.60 (219)	6.87 (175)	34.81 (885)	147 (67)
		3	•	20.16 (513)	7.01 (179)	4.33 (110)	33.39 (849)	114 (52)
CR 3-15	3	1	•	21.57 (548)	8.60 (219)	6.87 (175)	36.22 (920)	149 (68)
		3	•	21.57 (548)	7.01 (179)	4.33 (110)	34.80 (884)	115 (53)
CR 3-17	3	1	•	22.99 (584)	8.60 (219)	6.87 (175)	37.64 (957)	150 (69)
		3	•	22.99 (584)	7.01 (179)	4.33 (110)	36.22 (920)	116 (53)
CR 3-19	5	1	-	24.41 (621)	10.62 (270)	7.46 (190)	39.93 (1015)	179 (82)
		3	-	24.41 (621)	8.66 (220)	5.28 (135)	39.92 (1014)	175 (80)
CR 3-21	5	1	-	25.83 (657)	10.62 (270)	7.46 (190)	41.35 (1051)	181 (83)
		3	-	25.83 (657)	8.66 (220)	5.28 (135)	41.34 (1051)	177 (81)
CR 3-23	5	1	-	27.24 (692)	10.62 (270)	7.46 (190)	42.76 (1087)	182 (83)
		3	-	27.24 (692)	8.66 (220)	5.28 (135)	42.75 (1086)	179 (82)
CR 3-25	5	1	-	28.66 (728)	10.62 (270)	7.46 (190)	44.18 (1123)	184 (84)
		3	-	28.66 (728)	8.66 (220)	5.28 (135)	44.17 (1122)	181 (83)

All dimensions in inches unless otherwise noted.

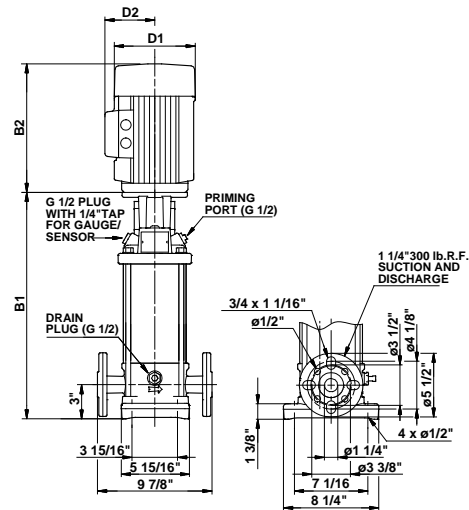
\* Oval flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pump and the weight is approximately 9 lbs less.

● Available.

CRI 3



TM03 1452 2205



TM03 1453 2205

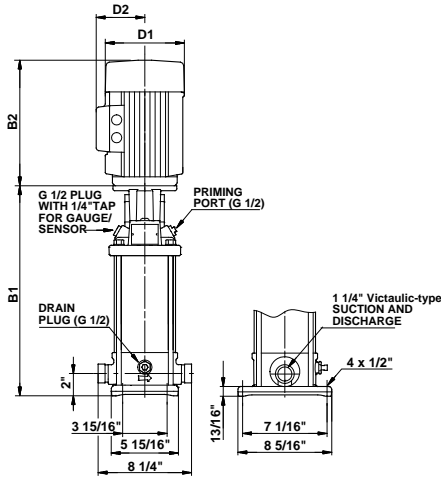
Pump type	P2 [HP]	Ph.	Oval*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC			
					D1	D2	B1+B2	
CRI 3-2	1/3	1	•	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	64 (30)
		3	•	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRI 3-3	1/2	1	•	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	67 (31)
		3	•	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRI 3-4	3/4	1	•	12.80 (326)	6.19 (158)	5.18 (132)	22.71 (577)	73 (34)
		3	•	12.80 (326)	5.55 (141)	4.57 (117)	20.24 (515)	63 (29)
CRI 3-5	3/4	1	•	13.50 (343)	6.19 (158)	5.18 (132)	23.41 (595)	74 (34)
		3	•	13.50 (343)	5.55 (141)	4.57 (117)	20.94 (532)	65 (30)
CRI 3-6	1	1	•	14.21 (361)	7.19 (183)	5.73 (146)	25.40 (646)	86 (40)
		3	•	14.21 (361)	5.55 (141)	4.57 (117)	21.65 (550)	65 (30)
CRI 3-7	1 1/2	1	•	14.92 (379)	7.19 (183)	5.73 (146)	26.60 (676)	90 (41)
		3	•	14.92 (379)	5.55 (141)	4.57 (117)	23.54 (598)	67 (31)
CRI 3-8	1 1/2	1	•	15.63 (398)	7.19 (183)	5.73 (146)	27.31 (694)	91 (42)
		3	•	15.63 (398)	5.55 (141)	4.57 (117)	24.25 (616)	68 (31)
CRI 3-9	1 1/2	1	•	16.34 (416)	7.19 (183)	5.73 (146)	28.02 (712)	92 (42)
		3	•	16.34 (416)	5.55 (141)	4.57 (117)	24.96 (634)	69 (32)
CRI 3-10	2	1	•	17.05 (434)	7.19 (183)	5.73 (146)	29.61 (753)	104 (48)
		3	•	17.05 (434)	7.01 (179)	4.33 (110)	28.27 (719)	88 (40)
CRI 3-11	2	1	•	17.76 (452)	7.19 (183)	5.73 (146)	30.32 (771)	105 (48)
		3	•	17.76 (452)	7.01 (179)	4.33 (110)	28.98 (737)	93 (42)
CRI 3-12	2	1	•	18.46 (469)	7.19 (183)	5.73 (146)	31.02 (788)	106 (49)
		3	•	18.46 (469)	7.01 (179)	4.33 (110)	29.68 (754)	93 (42)
CRI 3-13	3	1	•	20.28 (516)	8.60 (219)	6.87 (175)	34.93 (888)	140 (64)
		3	•	20.28 (516)	7.01 (179)	4.33 (110)	33.51 (852)	107 (49)
CRI 3-15	3	1	•	21.69 (551)	8.60 (219)	6.87 (175)	36.34 (924)	142 (65)
		3	•	21.69 (551)	7.01 (179)	4.33 (110)	34.92 (887)	110 (50)
CRI 3-17	3	1	•	23.11 (587)	8.60 (219)	6.87 (175)	37.76 (960)	143 (65)
		3	•	23.11 (587)	7.01 (179)	4.33 (110)	36.34 (924)	110 (50)
CRI 3-19	5	1	-	24.53 (624)	10.62 (270)	7.46 (190)	40.05 (1018)	172 (79)
		3	-	24.53 (624)	8.66 (220)	5.28 (135)	40.04 (1018)	168 (77)
CRI 3-21	5	1	-	25.94 (659)	10.62 (270)	7.46 (190)	41.46 (1054)	174 (79)
		3	-	25.94 (659)	8.66 (220)	5.28 (135)	41.45 (1053)	170 (78)
CRI 3-23	5	1	-	27.36 (695)	10.62 (270)	7.46 (190)	42.88 (1090)	175 (80)
		3	-	27.36 (695)	8.66 (220)	5.28 (135)	42.87 (1089)	172 (79)
CRI 3-25	5	1	-	28.78 (732)	10.62 (270)	7.46 (190)	44.30 (1126)	177 (81)
		3	-	28.78 (732)	8.66 (220)	5.28 (135)	44.29 (1125)	174 (79)

All dimensions in inches unless otherwise noted.

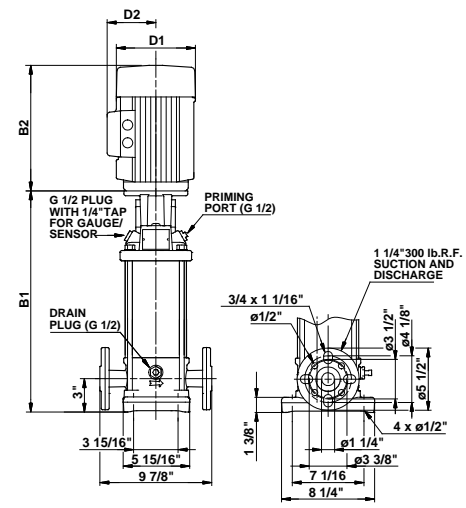
\* Oval flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pump and the weight is approximately 9 lbs less.

- Available.

CRN 3



TM03 1454 2205



TM03 1453 2205

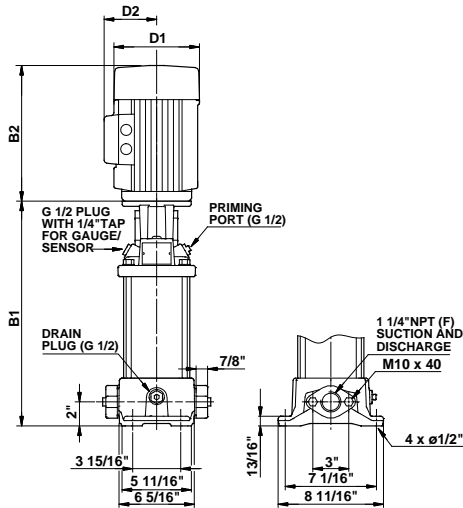
Pump type	P2 [HP]	Ph.	PJE*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC			
					D1	D2	B1+B2	
CRN 3-2	1/3	1	•	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	64 (30)
		3	•	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRN 3-3	1/2	1	•	12.09 (308)	6.19 (158)	5.18 (132)	21.38 (544)	67 (31)
		3	•	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRN 3-4	3/4	1	•	12.80 (326)	6.19 (158)	5.18 (132)	22.71 (577)	73 (34)
		3	•	12.80 (326)	5.55 (141)	4.57 (117)	20.24 (515)	63 (29)
CRN 3-5	3/4	1	•	13.50 (343)	6.19 (158)	5.18 (132)	23.41 (595)	73 (34)
		3	•	13.50 (343)	5.55 (141)	4.57 (117)	20.94 (532)	64 (30)
CRN 3-6	1	1	•	14.21 (361)	7.19 (183)	5.73 (146)	25.40 (646)	86 (40)
		3	•	14.21 (361)	5.55 (141)	4.57 (117)	21.65 (550)	65 (30)
CRN 3-7	1 1/2	1	•	14.92 (379)	7.19 (183)	5.73 (146)	26.60 (676)	90 (41)
		3	•	14.92 (379)	5.55 (141)	4.57 (117)	23.54 (598)	67 (31)
CRN 3-8	1 1/2	1	•	15.63 (398)	7.19 (183)	5.73 (146)	27.31 (694)	91 (42)
		3	•	15.63 (398)	5.55 (141)	4.57 (117)	24.25 (616)	68 (31)
CRN 3-9	1 1/2	1	•	16.34 (416)	7.19 (183)	5.73 (146)	28.02 (712)	92 (42)
		3	•	16.34 (416)	5.55 (141)	4.57 (117)	24.96 (634)	69 (32)
CRN 3-10	2	1	•	17.05 (434)	7.19 (183)	5.73 (146)	29.61 (753)	104 (48)
		3	•	17.05 (434)	7.01 (179)	4.33 (110)	28.27 (719)	88 (40)
CRN 3-11	2	1	•	17.76 (452)	7.19 (183)	5.73 (146)	30.32 (771)	105 (48)
		3	•	17.76 (452)	7.01 (179)	4.33 (110)	28.98 (737)	93 (42)
CRN 3-12	2	1	•	18.46 (469)	7.19 (183)	5.73 (146)	31.02 (788)	106 (49)
		3	•	18.46 (469)	7.01 (179)	4.33 (110)	29.68 (754)	93 (42)
CRN 3-13	3	1	•	20.28 (516)	8.60 (219)	6.87 (175)	34.93 (888)	139 (64)
		3	•	20.28 (516)	7.01 (179)	4.33 (110)	33.51 (852)	105 (48)
CRN 3-15	3	1	•	21.69 (551)	8.60 (219)	6.87 (175)	36.34 (924)	142 (65)
		3	•	21.69 (551)	7.01 (179)	4.33 (110)	34.92 (887)	107 (49)
CRN 3-17	3	1	•	23.11 (587)	8.60 (219)	6.87 (175)	37.76 (960)	143 (65)
		3	•	23.11 (587)	7.01 (179)	4.33 (110)	36.34 (924)	110 (50)
CRN 3-19	5	1	•	24.53 (624)	10.62 (270)	7.46 (190)	40.05 (1018)	172 (79)
		3	•	24.53 (624)	8.66 (220)	5.28 (135)	40.04 (1018)	168 (77)
CRN 3-21	5	1	•	25.94 (659)	10.62 (270)	7.46 (190)	41.46 (1054)	174 (79)
		3	•	25.94 (659)	8.66 (220)	5.28 (135)	41.45 (1053)	170 (78)
CRN 3-23	5	1	•	27.36 (695)	10.62 (270)	7.46 (190)	42.88 (1090)	175 (80)
		3	•	27.36 (695)	8.66 (220)	5.28 (135)	42.87 (1089)	171 (78)
CRN 3-25	5	1	•	28.78 (732)	10.62 (270)	7.46 (190)	44.30 (1126)	177 (81)
		3	•	28.78 (732)	8.66 (220)	5.28 (135)	44.29 (1125)	173 (79)

All dimensions in inches unless otherwise noted.

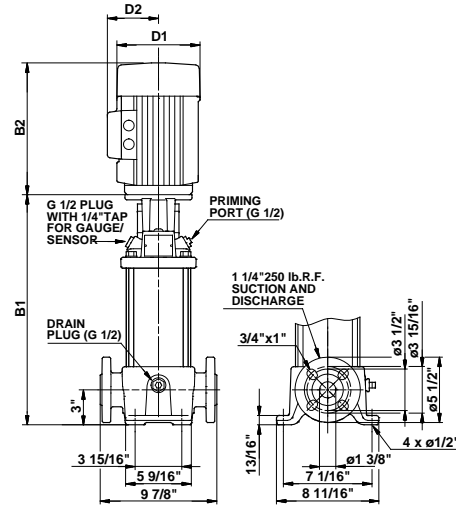
\* PJE flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pump and the weight is approximately 9 lbs less.

- Available.

CR 5



TM03 1455 2205



TM03 1451 2205

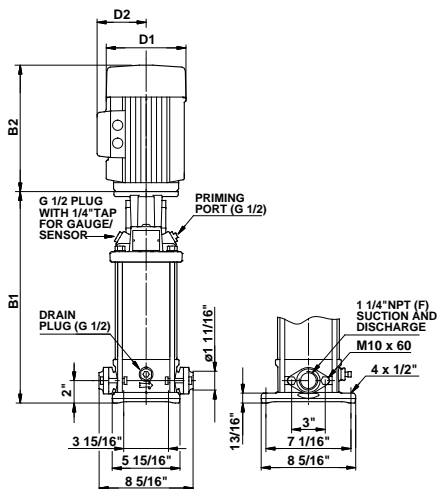
Pump type	P2 [HP]	Ph.	Oval*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC			
					D1	D2	B1+B2	
CR 5-2	3/4	1	●	11.97 (305)	6.19 (158)	5.18 (132)	21.88 (556)	77 (35)
		3	●	11.97 (305)	5.55 (141)	4.57 (117)	19.41 (494)	68 (31)
CR 5-3	1	1	●	13.03 (331)	7.19 (183)	5.73 (146)	24.22 (616)	90 (41)
		3	●	13.03 (331)	5.55 (141)	4.57 (117)	20.47 (520)	69 (32)
CR 5-4	1 1/2	1	●	14.09 (358)	7.19 (183)	5.73 (146)	25.77 (655)	94 (43)
		3	●	14.09 (358)	5.55 (141)	4.57 (117)	22.71 (577)	71 (33)
CR 5-5	2	1	●	15.16 (386)	7.19 (183)	5.73 (146)	27.72 (705)	106 (49)
		3	●	15.16 (386)	7.01 (179)	4.33 (110)	26.38 (671)	90 (41)
CR 5-6	2	1	●	16.22 (412)	7.19 (183)	5.73 (146)	28.78 (732)	108 (49)
		3	●	16.22 (412)	7.01 (179)	4.33 (110)	27.44 (697)	93 (42)
CR 5-7	3	1	●	18.39 (468)	8.60 (219)	6.87 (175)	33.04 (840)	143 (65)
		3	●	18.39 (468)	7.01 (179)	4.33 (110)	31.62 (804)	110 (50)
CR 5-8	3	1	●	19.45 (495)	8.60 (219)	6.87 (175)	34.10 (867)	145 (66)
		3	●	19.45 (495)	7.01 (179)	4.33 (110)	32.68 (831)	112 (51)
CR 5-9	3	1	●	20.51 (521)	8.60 (219)	6.87 (175)	35.16 (894)	147 (67)
		3	●	20.51 (521)	7.01 (179)	4.33 (110)	33.74 (857)	114 (52)
CR 5-10	5	1	●	21.57 (548)	10.62 (270)	7.46 (190)	37.09 (943)	170 (78)
		3	●	21.57 (548)	8.66 (220)	5.28 (135)	37.08 (942)	168 (77)
CR 5-11	5	1	●	22.64 (576)	10.62 (270)	7.46 (190)	38.16 (970)	172 (79)
		3	●	22.64 (576)	8.66 (220)	5.28 (135)	38.15 (970)	169 (77)
CR 5-12	5	1	●	23.7 (602)	10.62 (270)	7.46 (190)	39.22 (997)	177 (81)
		3	●	23.7 (602)	8.66 (220)	5.28 (135)	39.21 (996)	170 (78)
CR 5-13	5	1	●	24.76 (629)	10.62 (270)	7.46 (190)	40.28 (1024)	178 (81)
		3	●	24.76 (629)	8.66 (220)	5.28 (135)	40.27 (1023)	171 (78)
CR 5-14	5	1	●	25.83 (657)	10.62 (270)	7.46 (190)	41.35 (1051)	180 (82)
		3	●	25.83 (657)	8.66 (220)	5.28 (135)	41.34 (1051)	176 (80)
CR 5-15	5	1	●	26.89 (684)	10.62 (270)	7.46 (190)	42.41 (1078)	181 (83)
		3	●	26.89 (684)	8.66 (220)	5.28 (135)	42.40 (1077)	177 (81)
CR 5-16	5	1	●	27.95 (710)	10.62 (270)	7.46 (190)	43.47 (1105)	182 (83)
		3	●	27.95 (710)	8.66 (220)	5.28 (135)	43.46 (1104)	178 (81)
CR 5-18	7 1/2	1	-	30.59 (777)	10.22 (260)	7.62 (194)	46.12 (1172)	200 (91)
		3	-	30.59 (777)	8.66 (220)	5.28 (135)	46.19 (1171)	188 (86)
CR 5-20	7 1/2	1	-	32.72 (832)	10.22 (260)	7.62 (194)	48.25 (1226)	203 (93)
		3	-	32.72 (832)	8.66 (220)	5.28 (135)	48.23 (1226)	190 (87)
CR 5-22	7 1/2	1	-	34.84 (885)	10.22 (260)	7.62 (194)	50.37 (1280)	300 (137)
		3	-	34.84 (885)	8.66 (220)	5.28 (135)	50.35 (1279)	287 (131)
CR 5-24	7 1/2	1	-	36.97 (940)	10.22 (260)	7.62 (194)	52.50 (1334)	302 (137)
		3	-	36.97 (940)	8.66 (220)	5.28 (135)	52.48 (1333)	290 (132)

All dimensions in inches unless otherwise noted.

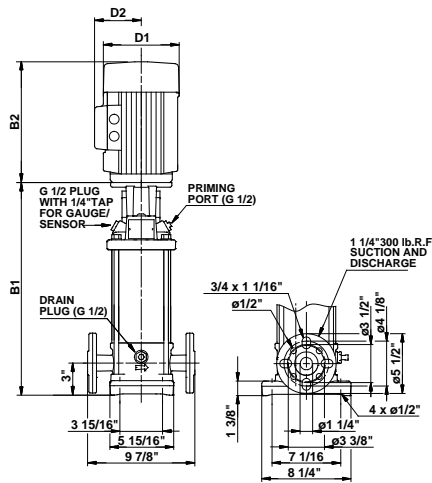
\* Oval flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pumps and the weight is approximately 9 lbs less.

● Available.

CRI 5



TM03 1456 2205



TM03 1453 2205

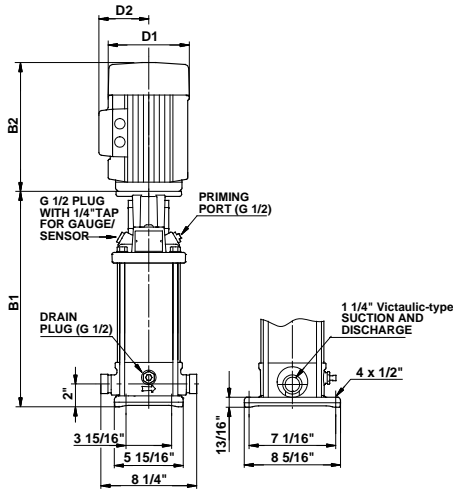
Pump type	P2 [HP]	Ph.	Oval*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC			
					D1	D2	B1+B2	
CRI 5-2	3/4	1	●	12.09 (308)	6.19 (158)	5.18 (132)	22.00 (559)	71 (33)
		3	●	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRI 5-3	1	1	●	13.15 (335)	7.19 (183)	5.73 (146)	24.34 (619)	85 (39)
		3	●	13.15 (335)	5.55 (141)	4.57 (117)	20.59 (523)	64 (30)
CRI 5-4	1 1/2	1	●	14.21 (361)	7.19 (183)	5.73 (146)	25.89 (658)	89 (41)
		3	●	14.21 (361)	5.55 (141)	4.57 (117)	22.83 (580)	66 (30)
CRI 5-5	2	1	●	15.28 (389)	7.19 (183)	5.73 (146)	27.84 (708)	101 (46)
		3	●	15.28 (389)	7.01 (179)	4.33 (110)	26.50 (674)	84 (38)
CRI 5-6	2	1	●	16.34 (416)	7.19 (183)	5.73 (146)	28.90 (735)	103 (47)
		3	●	16.34 (416)	7.01 (179)	4.33 (110)	27.56 (701)	86 (39)
CRI 5-7	3	1	●	18.51 (471)	8.60 (219)	6.87 (175)	33.16 (843)	136 (62)
		3	●	18.51 (471)	7.01 (179)	4.33 (110)	31.74 (807)	103 (47)
CRI 5-8	3	1	●	19.57 (498)	8.60 (219)	6.87 (175)	34.22 (870)	138 (63)
		3	●	19.57 (498)	7.01 (179)	4.33 (110)	32.80 (834)	105 (48)
CRI 5-9	3	1	●	20.63 (525)	8.60 (219)	6.87 (175)	35.28 (897)	140 (64)
		3	●	20.63 (525)	7.01 (179)	4.33 (110)	33.86 (861)	107 (49)
CRI 5-10	5	1	●	21.69 (551)	10.62 (270)	7.46 (190)	37.21 (946)	163 (74)
		3	●	21.69 (551)	8.66 (220)	5.28 (135)	37.20 (945)	160 (73)
CRI 5-11	5	1	●	22.76 (579)	10.62 (270)	7.46 (190)	38.28 (973)	165 (75)
		3	●	22.76 (579)	8.66 (220)	5.28 (135)	38.27 (973)	162 (74)
CRI 5-12	5	1	●	23.82 (606)	10.62 (270)	7.46 (190)	39.34 (1000)	170 (78)
		3	●	23.82 (606)	8.66 (220)	5.28 (135)	39.33 (999)	163 (74)
CRI 5-13	5	1	●	24.88 (632)	10.62 (270)	7.46 (190)	40.40 (1027)	171 (78)
		3	●	24.88 (632)	8.66 (220)	5.28 (135)	40.39 (1026)	164 (75)
CRI 5-14	5	1	●	25.94 (659)	10.62 (270)	7.46 (190)	41.46 (1054)	173 (79)
		3	●	25.94 (659)	8.66 (220)	5.28 (135)	41.45 (1053)	169 (77)
CRI 5-15	5	1	●	27.01 (687)	10.62 (270)	7.46 (190)	42.53 (1081)	174 (79)
		3	●	27.01 (687)	8.66 (220)	5.28 (135)	42.52 (1081)	170 (78)
CRI 5-16	5	1	●	28.07 (713)	10.62 (270)	7.46 (190)	43.59 (1108)	175 (80)
		3	●	28.07 (713)	8.66 (220)	5.28 (135)	43.58 (1107)	171 (78)
CRI 5-18	7 1/2	1	-	30.71 (781)	10.22 (260)	7.62 (194)	46.24 (1175)	193 (88)
		3	-	30.71 (781)	8.66 (220)	5.28 (135)	46.22 (1174)	181 (83)
CRI 5-20	7 1/2	1	-	32.83 (834)	10.22 (260)	7.62 (194)	48.36 (1229)	196 (89)
		3	-	32.83 (834)	8.66 (220)	5.28 (135)	48.34 (1228)	183 (84)
CRI 5-22	7 1/2	1	-	34.96 (888)	10.22 (260)	7.62 (194)	50.49 (1283)	293 (133)
		3	-	34.96 (888)	8.66 (220)	5.28 (135)	50.47 (1282)	280 (128)
CRI 5-24	7 1/2	1	-	37.09 (943)	10.22 (260)	7.62 (194)	52.62 (1337)	295 (134)
		3	-	37.09 (943)	8.66 (220)	5.28 (135)	52.60 (1337)	283 (129)

All dimensions in inches unless otherwise noted.

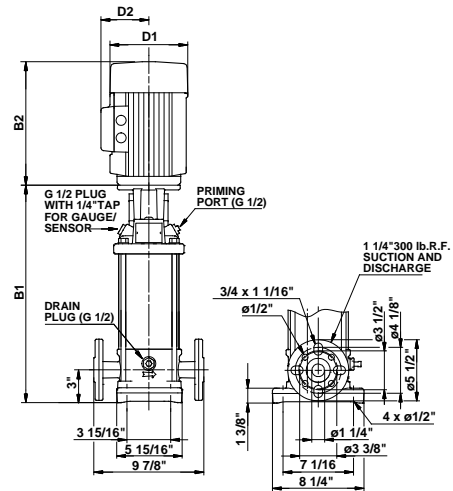
\* Oval flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pumps and the weight is approximately 9 lbs less.

● Available.

CRN 5



TM03 1454 2205



TM03 1453 2205

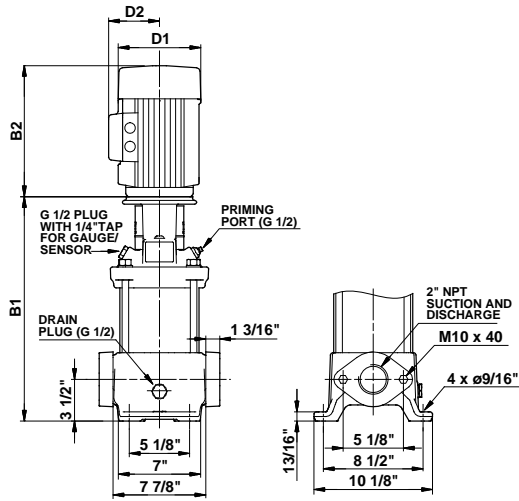
Pump type	P2 [HP]	Ph.	PJE*	ANSI dimensions [inch (mm)]				Ship. wt. [lbs (kg)]
				B1	TEFC			
					D1	D2	B1+B2	
CRN 5-2	3/4	1	•	12.09 (308)	6.19 (158)	5.18 (132)	22.00 (559)	71 (33)
		3	•	12.09 (308)	5.55 (141)	4.57 (117)	19.53 (497)	62 (29)
CRN 5-3	1	1	•	13.15 (335)	7.19 (183)	5.73 (146)	24.34 (619)	85 (39)
		3	•	13.15 (335)	5.55 (141)	4.57 (117)	20.59 (523)	64 (30)
CRN 5-4	1 1/2	1	•	14.21 (361)	7.19 (183)	5.73 (146)	25.89 (658)	89 (41)
		3	•	14.21 (361)	5.55 (141)	4.57 (117)	22.83 (580)	65 (30)
CRN 5-5	2	1	•	15.28 (389)	7.19 (183)	5.73 (146)	27.84 (708)	101 (46)
		3	•	15.28 (389)	7.01 (179)	4.33 (110)	26.53 (674)	84 (38)
CRN 5-6	2	1	•	16.34 (416)	7.19 (183)	5.73 (146)	28.90 (735)	103 (47)
		3	•	16.34 (416)	7.01 (179)	4.33 (110)	27.56 (701)	86 (39)
CRN 5-7	3	1	•	18.51 (471)	8.60 (219)	6.87 (175)	33.16 (843)	136 (62)
		3	•	18.51 (471)	7.01 (179)	4.33 (110)	31.74 (807)	103 (47)
CRN 5-8	3	1	•	19.57 (498)	8.60 (219)	6.87 (175)	34.22 (870)	138 (63)
		3	•	19.57 (498)	7.01 (179)	4.33 (110)	32.80 (834)	105 (48)
CRN 5-9	3	1	•	20.63 (525)	8.60 (219)	6.87 (175)	35.28 (897)	139 (64)
		3	•	20.63 (525)	7.01 (179)	4.33 (110)	33.86 (861)	105 (48)
CRN 5-10	5	1	•	21.69 (551)	10.62 (270)	7.46 (190)	37.21 (946)	163 (74)
		3	•	21.69 (551)	8.66 (220)	5.28 (135)	37.20 (945)	160 (73)
CRN 5-11	5	1	•	22.76 (579)	10.62 (270)	7.46 (190)	38.28 (973)	165 (75)
		3	•	22.76 (579)	8.66 (220)	5.28 (135)	38.27 (973)	161 (74)
CRN 5-12	5	1	•	23.82 (606)	10.62 (270)	7.46 (190)	39.34 (1000)	170 (78)
		3	•	23.82 (606)	8.66 (220)	5.28 (135)	39.33 (999)	163 (74)
CRN 5-13	5	1	•	24.88 (632)	10.62 (270)	7.46 (190)	40.40 (1027)	171 (78)
		3	•	24.88 (632)	8.66 (220)	5.28 (135)	40.39 (1026)	164 (75)
CRN 5-14	5	1	•	25.94 (659)	10.62 (270)	7.46 (190)	41.46 (1054)	172 (79)
		3	•	25.94 (659)	8.66 (220)	5.28 (135)	41.45 (1053)	169 (77)
CRN 5-15	5	1	•	27.01 (687)	10.62 (270)	7.46 (190)	42.53 (1081)	173 (79)
		3	•	27.01 (687)	8.66 (220)	5.28 (135)	42.52 (1081)	170 (78)
CRN 5-16	5	1	•	28.07 (713)	10.62 (270)	7.46 (190)	43.59 (1108)	175 (80)
		3	•	28.07 (713)	8.66 (220)	5.28 (135)	43.58 (1107)	171 (78)
CRN 5-18	7 1/2	1	•	30.71 (781)	10.22 (260)	7.62 (194)	46.24 (1175)	193 (88)
		3	•	30.71 (781)	8.66 (220)	5.28 (135)	46.22 (1174)	180 (82)
CRN 5-20	7 1/2	1	•	32.83 (834)	10.22 (260)	7.62 (194)	48.36 (1229)	196 (89)
		3	•	32.83 (834)	8.66 (220)	5.28 (135)	48.34 (1228)	183 (84)
CRN 5-22	7 1/2	1	•	34.96 (888)	10.22 (260)	7.62 (194)	50.49 (1283)	292 (133)
		3	•	34.96 (888)	8.66 (220)	5.28 (135)	50.47 (1282)	279 (127)
CRN 5-24	7 1/2	1	•	37.09 (943)	10.22 (260)	7.62 (194)	52.62 (1337)	295 (134)
		3	•	37.09 (943)	8.66 (220)	5.28 (135)	52.60 (1337)	282 (128)

All dimensions in inches unless otherwise noted.

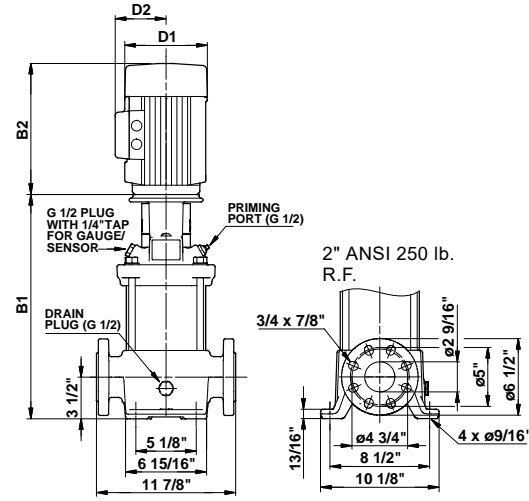
\* PJE flanged pump B1 and B1+B2 dimensions are one inch less than ANSI flanged pumps and the weight is approximately 9 lbs less.

- Available.

CR 10



TM03 1460 2205



TM03 1461 2205

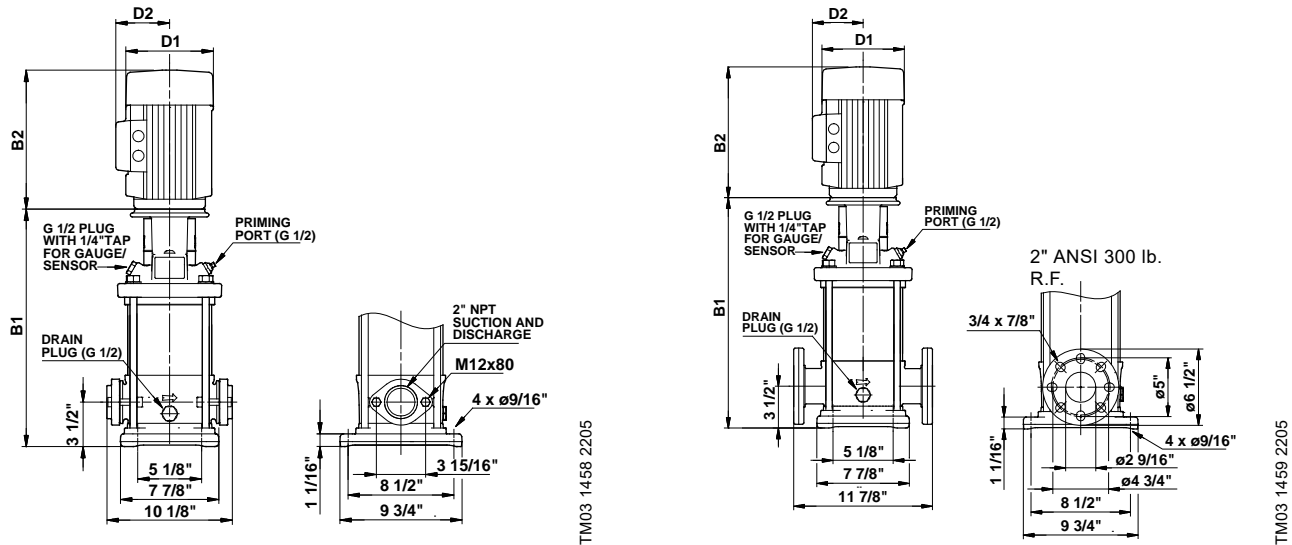
Pump type	P2 [HP]	Ph.	Oval*	ANSI dimensions [inch (mm)]										Ship. wt. [lbs (kg)]
				B1	TEFC			ODP						
					D1	D2	B1+B2	D1	D2	B1+B2				
CR 10-1	3/4	1	●	15.28 (389)	6.19 (158)	5.18 (132)	25.19 (640)	-	-	-	115 (53)			
		3	●	15.28 (389)	5.55 (141)	4.57 (117)	22.72 (578)	-	-	-	106 (49)			
CR 10-2	1 1/2	1	●	15.28 (389)	7.19 (183)	5.73 (146)	26.96 (685)	-	-	-	128 (59)			
		3	●	15.28 (389)	5.55 (141)	4.57 (117)	23.90 (608)	-	-	-	106 (49)			
CR 10-3	3	1	●	17.20 (437)	8.60 (219)	6.87 (175)	31.85 (809)	-	-	-	183 (84)			
		3	●	17.20 (437)	7.01 (179)	4.33 (110)	30.43 (773)	-	-	-	149 (68)			
CR 10-4	3	1	●	18.39 (468)	8.60 (219)	6.87 (175)	33.04 (840)	-	-	-	183 (84)			
		3	●	18.39 (468)	7.01 (179)	4.33 (110)	31.62 (804)	-	-	-	151 (69)			
CR 10-5	5	1	●	19.57 (498)	10.62 (270)	7.46 (190)	35.09 (892)	-	-	-	209 (95)			
		3	●	19.57 (498)	8.66 (220)	5.28 (135)	35.08 (892)	-	-	-	206 (94)			
CR 10-6	5	1	●	20.75 (528)	10.62 (270)	7.46 (190)	36.27 (922)	-	-	-	212 (97)			
		3	●	20.75 (528)	8.66 (220)	5.28 (135)	36.26 (922)	-	-	-	208 (95)			
CR 10-7	7 1/2	1	-	22.25 (566)	10.22 (260)	7.62 (194)	37.78 (960)	-	-	-	232 (106)			
		3	-	22.25 (566)	8.66 (220)	5.28 (135)	37.76 (960)	-	-	-	221 (101)			
CR 10-8	7 1/2	1	-	23.43 (596)	10.22 (260)	7.62 (194)	38.96 (990)	-	-	-	234 (107)			
		3	-	23.43 (596)	8.66 (220)	5.28 (135)	38.94 (990)	-	-	-	223 (102)			
CR 10-9	7 1/2	1	-	24.61 (626)	10.22 (260)	7.62 (194)	40.14 (1020)	-	-	-	236 (108)			
		3	-	24.61 (626)	8.66 (220)	5.28 (135)	40.12 (1020)	-	-	-	225 (103)			
CR 10-10	7 1/2	1	-	25.79 (656)	10.22 (260)	7.62 (194)	41.32 (1050)	-	-	-	238 (108)			
		3	-	25.79 (656)	8.66 (220)	5.28 (135)	41.30 (1050)	-	-	-	227 (103)			
CR 10-12	10	1	-	28.15 (716)	10.23 (260)	10.30 (262)	44.22 (1124)	-	-	-	355 (162)			
		3	-	28.15 (716)	10.24 (261)	6.26 (160)	42.88 (1090)	-	-	-	232 (106)			
CR 10-14	15	3	-	33.06 (840)	12.52 (318)	8.00 (204)	52.05 (1322)	10.62 (270)	7.33 (187)	49.37 (1254)	414 (188)			
CR 10-16	15	3	-	35.43 (900)	12.52 (318)	8.00 (204)	54.41 (1382)	10.62 (270)	7.33 (187)	51.74 (1315)	422 (192)			
CR 10-17	15	3	-	37.80 (961)	12.52 (318)	8.00 (204)	56.81 (1443)	10.62 (270)	7.33 (187)	54.11 (1375)	426 (194)			

All dimensions in inches unless otherwise noted.

\* Oval flanged pump B1 and B1+B2 dimensions are equal to ANSI flanged pumps and the weight is approximately 3 lbs less.

- Available.

CRI 10



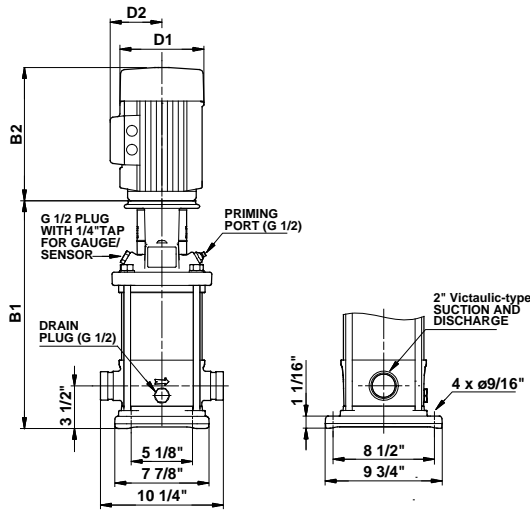
Pump type	P2 [HP]	Ph.	Oval*	ANSI dimensions [inch (mm)]						Ship. wt. [lbs (kg)]	
				B1	TEFC			ODP			
					D1	D2	B1+B2	D1	D2		B1+B2
CRI 10-1	1	1	•	15.20 (387)	6.19 (158)	5.18 (132)	25.11 (638)	-	-	-	106 (49)
		3	•	15.20 (387)	5.55 (141)	4.57 (117)	22.64 (576)	-	-	-	98 (45)
CRI 10-2	1 1/2	1	•	15.20 (387)	7.19 (183)	5.73 (146)	26.88 (683)	-	-	-	122 (56)
		3	•	15.20 (387)	5.55 (141)	4.57 (117)	23.82 (606)	-	-	-	100 (46)
CRI 10-3	3	1	•	17.13 (436)	8.60 (219)	6.87 (175)	31.78 (808)	-	-	-	175 (80)
		3	•	17.13 (436)	7.01 (179)	4.33 (110)	30.36 (772)	-	-	-	143 (65)
CRI 10-4	3	1	•	18.31 (466)	8.60 (219)	6.87 (175)	32.96 (838)	-	-	-	177 (81)
		3	•	18.31 (466)	7.01 (179)	4.33 (110)	31.54 (802)	-	-	-	143 (65)
CRI 10-5	5	1	•	19.49 (496)	10.62 (270)	7.46 (190)	35.01 (890)	-	-	-	203 (93)
		3	•	19.49 (496)	8.66 (220)	5.28 (135)	35.00 (889)	-	-	-	199 (91)
CRI 10-6	5	1	•	20.67 (526)	10.62 (270)	7.46 (190)	36.19 (920)	-	-	-	206 (94)
		3	•	20.67 (526)	8.66 (220)	5.28 (135)	36.18 (919)	-	-	-	202 (92)
CRI 10-7	7 1/2	1	•	22.17 (564)	10.22 (260)	7.62 (194)	37.70 (958)	-	-	-	225 (103)
		3	•	22.17 (564)	8.66 (220)	5.28 (135)	37.68 (958)	-	-	-	212 (97)
CRI 10-8	7 1/2	1	•	23.35 (594)	10.22 (260)	7.62 (194)	38.88 (988)	-	-	-	228 (103)
		3	•	23.35 (594)	8.66 (220)	5.28 (135)	38.86 (988)	-	-	-	214 (98)
CRI 10-9	7 1/2	1	•	24.53 (624)	10.22 (260)	7.62 (194)	40.06 (1018)	-	-	-	230 (105)
		3	•	24.53 (624)	8.66 (220)	5.28 (135)	40.04 (1018)	-	-	-	217 (99)
CRI 10-10	7 1/2	1	•	25.71 (654)	10.22 (260)	7.62 (194)	41.24 (1048)	-	-	-	232 (106)
		3	•	25.71 (654)	8.66 (220)	5.28 (135)	41.22 (1047)	-	-	-	219 (100)
CRI 10-12	10	1	-	28.07 (713)	10.23 (260)	10.30 (262)	44.14 (1122)	-	-	-	347 (158)
		3	-	28.07 (713)	10.24 (261)	6.26 (160)	42.80 (1088)	-	-	-	225 (103)
CRI 10-14	15	3	-	32.95 (837)	12.52 (318)	8.00 (204)	51.93 (1319)	10.62 (270)	7.33 (187)	49.26 (1252)	403 (183)
CRI 10-16	15	3	-	35.31 (897)	12.52 (318)	8.00 (204)	54.29 (1379)	10.62 (270)	7.33 (187)	51.62 (1312)	413 (188)
CRI 10-17	15	3	-	37.68 (958)	12.52 (318)	8.00 (204)	56.65 (1439)	10.62 (270)	7.33 (187)	53.99 (1372)	418 (190)

All dimensions in inches unless otherwise noted.

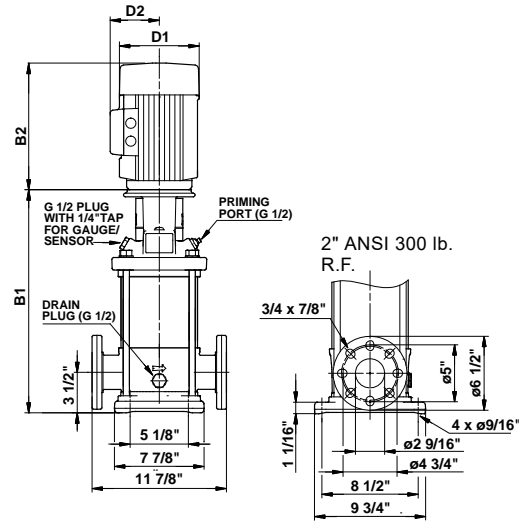
\* Oval flanged pump B1 and B1+B2 dimensions are equal to ANSI flanged pumps and the weight is approximately 7 lbs less.

- Available.

CRN 10



TM03 1457 2205



TM03 1459 2205

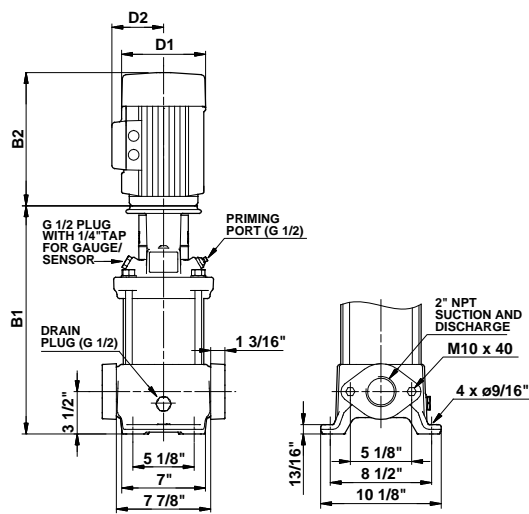
Pump type	P2 [HP]	Ph.	PJE*	ANSI dimensions [inch (mm)]									Ship. wt. [lbs (kg)]
				B1	TEFC			ODP					
					D1	D2	B1+B2	D1	D2	B1+B2			
CRN 10-1	3/4	1	●	15.20 (387)	6.19 (158)	5.18 (132)	25.11 (638)	-	-	-	106 (49)		
		3	●	15.20 (387)	5.55 (141)	4.57 (117)	22.64 (576)	-	-	-	97 (44)		
CRN 10-2	1 1/2	1	●	15.20 (387)	7.19 (183)	5.73 (146)	26.88 (683)	-	-	-	121 (55)		
		3	●	15.20 (387)	5.55 (141)	4.57 (117)	23.82 (606)	-	-	-	99 (45)		
CRN 10-3	3	1	●	17.13 (436)	8.60 (219)	6.87 (175)	31.78 (808)	-	-	-	176 (80)		
		3	●	17.13 (436)	7.01 (179)	4.33 (110)	30.36 (772)	-	-	-	143 (65)		
CRN 10-4	3	1	●	18.31 (466)	8.60 (219)	6.87 (175)	32.96 (838)	-	-	-	176 (80)		
		3	●	18.31 (466)	7.01 (179)	4.33 (110)	31.54 (802)	-	-	-	145 (66)		
CRN 10-5	5	1	●	19.49 (496)	10.62 (270)	7.46 (190)	35.01 (890)	-	-	-	203 (93)		
		3	●	19.49 (496)	8.66 (220)	5.28 (135)	35.00 (889)	-	-	-	199 (91)		
CRN 10-6	5	1	●	20.67 (526)	10.62 (270)	7.46 (190)	36.19 (920)	-	-	-	205 (93)		
		3	●	20.67 (526)	8.66 (220)	5.28 (135)	36.18 (919)	-	-	-	201 (92)		
CRN 10-7	7 1/2	1	●	22.17 (564)	10.22 (260)	7.62 (194)	37.7 (958)	-	-	-	227 (103)		
		3	●	22.17 (564)	8.66 (220)	5.28 (135)	37.68 (958)	-	-	-	214 (98)		
CRN 10-8	7 1/2	1	●	23.35 (594)	10.22 (260)	7.62 (194)	38.88 (988)	-	-	-	229 (104)		
		3	●	23.35 (594)	8.66 (220)	5.28 (135)	38.86 (988)	-	-	-	216 (98)		
CRN 10-9	7 1/2	1	●	24.53 (624)	10.22 (260)	7.62 (194)	40.06 (1018)	-	-	-	232 (106)		
		3	●	24.53 (624)	8.66 (220)	5.28 (135)	40.04 (1018)	-	-	-	218 (99)		
CRN 10-10	7 1/2	1	●	25.71 (654)	10.22 (260)	7.62 (194)	41.24 (1048)	-	-	-	234 (107)		
		3	●	25.71 (654)	8.66 (220)	5.28 (135)	41.22 (1047)	-	-	-	221 (101)		
CRN 10-12	10	1	●	28.07 (713)	10.23 (260)	10.30 (262)	44.14 (1122)	-	-	-	346 (157)		
		3	●	28.07 (713)	10.24 (261)	6.26 (160)	42.80 (1088)	-	-	-	225 (103)		
CRN 10-14	15	3	●	32.95 (837)	12.52 (318)	8.00 (204)	51.93 (1319)	10.62 (270)	7.33 (187)	49.25 (1251)	403 (183)		
CRN 10-16	15	3	●	35.31 (897)	12.52 (318)	8.00 (204)	54.29 (1379)	10.62 (270)	7.33 (187)	51.63 (1312)	413 (188)		
CRN 10-17	15	3	●	37.68 (958)	12.52 (318)	8.00 (204)	56.65 (1439)	10.62 (270)	7.33 (187)	54.00 (1372)	418 (190)		

All dimensions in inches unless otherwise noted.

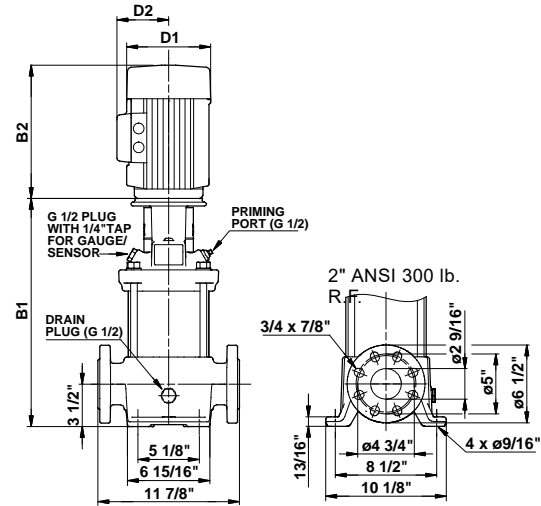
\* PJE flanged pump B1 and B1+B2 dimensions are equal to ANSI flanged pumps and the weight is approximately 9 lbs less.

- Available.

CR 15



TM03 1460 2205



TM03 1461 2205

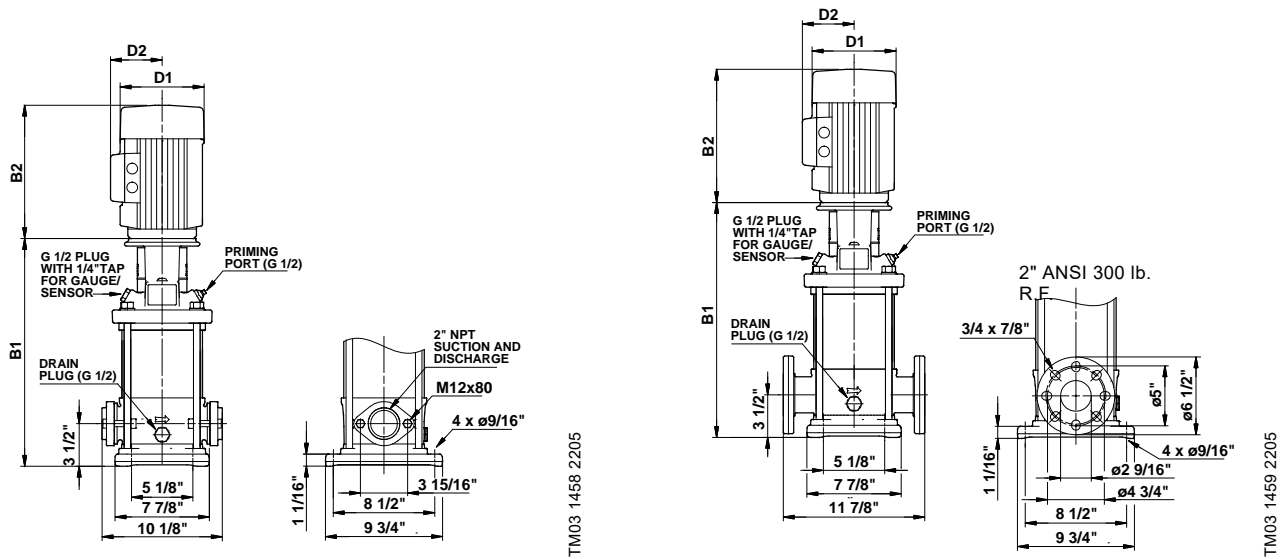
Pump type	P2 [HP]	Ph.	Oval*	ANSI dimensions [inch (mm)]						Ship. wt. [lbs (kg)]	
				B1	TEFC			ODP			
					D1	D2	B1+B2	D1	D2		B1+B2
CR 15-1	2	1	•	16.46 (419)	7.19 (183)	5.73 (146)	29.02 (738)	-	-	-	139 (64)
		3	•	16.46 (419)	7.01 (179)	4.33 (110)	27.68 (704)	-	-	-	126 (57)
CR 15-2	5	1	•	17.20 (437)	10.62 (270)	7.46 (190)	32.72 (832)	-	-	-	205 (93)
		3	•	17.20 (437)	8.66 (220)	5.28 (135)	32.71 (831)	-	-	-	201 (92)
CR 15-3	7 1/2	1	•	19.29 (490)	10.22 (260)	7.62 (194)	34.82 (885)	-	-	-	223 (102)
		3	•	19.29 (490)	8.66 (220)	5.28 (135)	34.80 (884)	-	-	-	212 (97)
CR 15-4	7 1/2	1	•	21.06 (535)	10.22 (260)	7.62 (194)	36.59 (930)	-	-	-	225 (103)
		3	•	21.06 (535)	8.66 (220)	5.28 (135)	36.57 (929)	-	-	-	214 (98)
CR 15-5	10	1	•	22.83 (580)	10.23 (260)	10.30 (262)	38.90 (989)	-	-	-	342 (156)
		3	•	22.83 (580)	10.24 (261)	6.26 (160)	37.56 (955)	-	-	-	218 (99)
CR 15-6	15	3	-	27.17 (691)	12.52 (318)	8.00 (204)	46.18 (1173)	10.62 (270)	7.33 (187)	43.48 (1105)	347 (158)
CR 15-7	15	3	-	28.94 (736)	12.52 (318)	8.00 (204)	47.91 (1217)	10.62 (270)	7.33 (187)	45.25 (1150)	378 (172)
CR 15-8	15	3	-	30.71 (781)	12.52 (318)	8.00 (204)	49.69 (1262)	10.62 (270)	7.33 (187)	47.02 (1195)	409 (186)
CR 15-9	20	3	-	32.48 (825)	12.52 (318)	8.00 (204)	51.46 (1307)	11.50 (293)	8.92 (227)	52.17 (1326)	417 (190)
CR 15-10	20	3	-	34.25 (870)	12.52 (318)	8.00 (204)	53.23 (1352)	11.50 (293)	8.92 (227)	53.94 (1371)	421 (191)
CR 15-12	25	3	-	37.17 (945)	12.52 (318)	8.00 (204)	60.00 (1524)	11.50 (293)	8.94 (228)	57.98 (1473)	422 (192)

All dimensions in inches unless otherwise noted.

\* Oval flanged pump B1 and B1+B2 dimensions are equal to ANSI flanged pumps and the weight is approximately 3 lbs less.

- Available.

CRI 15



ANSI dimensions [inch (mm)]

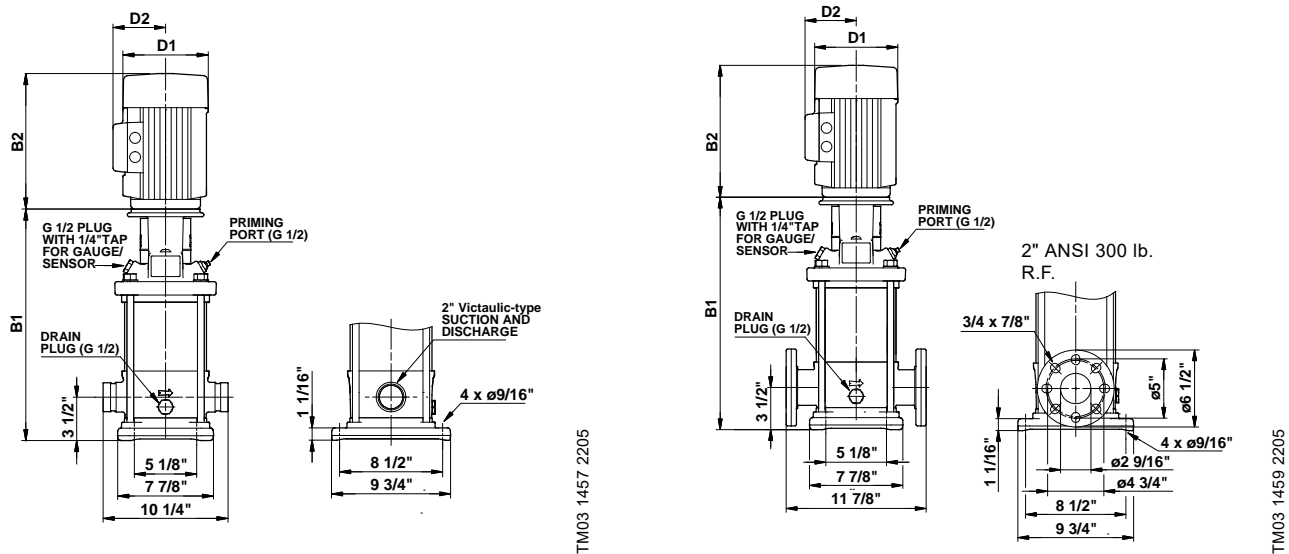
Pump type	P2 [HP]	Ph.	Oval*	TEFC			ODP			Ship. wt. [lbs (kg)]	
				B1	D1	D2	B1+B2	D1	D2		B1+B2
CRI 15-1	2	1	•	16.38 (417)	7.19 (183)	5.73 (146)	28.94 (736)	-	-	-	130 (59)
		3	•	16.38 (417)	7.01 (179)	4.33 (110)	27.60 (702)	-	-	-	117 (53)
CRI 15-2	5	1	•	17.13 (436)	10.62 (270)	7.46 (190)	32.65 (830)	-	-	-	198 (90)
		3	•	17.13 (436)	8.66 (220)	5.28 (135)	32.64 (830)	-	-	-	195 (89)
CRI 15-3	7 1/2	1	•	19.21 (488)	10.22 (260)	7.62 (194)	34.74 (883)	-	-	-	216 (98)
		3	•	19.21 (488)	8.66 (220)	5.28 (135)	34.72 (882)	-	-	-	203 (93)
CRI 15-4	7 1/2	1	•	20.98 (533)	10.22 (260)	7.62 (194)	36.51 (928)	-	-	-	218 (99)
		3	•	20.98 (533)	8.66 (220)	5.28 (135)	36.49 (927)	-	-	-	205 (93)
CRI 15-5	10	1	•	22.76 (579)	10.23 (260)	10.30 (262)	38.83 (987)	-	-	-	333 (152)
		3	•	22.76 (579)	10.24 (261)	6.26 (160)	37.49 (953)	-	-	-	212 (97)
CRI 15-6	15	3	•	27.05 (688)	12.52 (318)	8.00 (204)	46.02 (1169)	10.62 (270)	7.33 (187)	43.36 (1102)	336 (153)
CRI 15-7	15	3	•	28.82 (733)	12.52 (318)	8.00 (204)	47.80 (1214)	10.62 (270)	7.33 (187)	45.13 (1147)	369 (168)
CRI 15-8	15	3	•	30.59 (777)	12.52 (318)	8.00 (204)	49.57 (1259)	10.62 (270)	7.33 (187)	46.90 (1192)	402 (183)
CRI 15-9	20	3	-	32.36 (822)	12.52 (318)	8.00 (204)	51.34 (1304)	11.50 (293)	8.92 (227)	52.05 (1323)	410 (186)
CRI 15-10	20	3	-	34.13 (867)	12.52 (318)	8.00 (204)	53.11 (1349)	11.50 (293)	8.92 (227)	53.82 (1368)	413 (188)
CRI 15-12	25	3	-	37.05 (942)	12.52 (318)	8.00 (204)	59.88 (1521)	11.50 (293)	8.94 (228)	57.86 (1470)	413 (188)

All dimensions in inches unless otherwise noted.

\* Oval flanged pump B1 and B1+B2 dimensions are equal to ANSI flanged pumps and the weight is approximately 7 lbs less.

- Available.

CRN 15



TM03 1457 2205

TM03 1459 2205

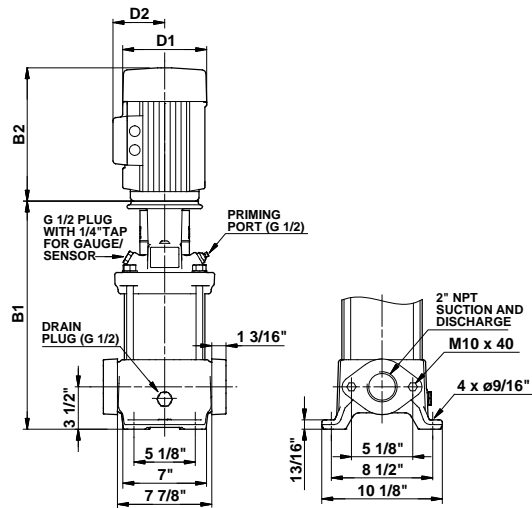
Pump type	P2 [HP]	Ph.	PJE*	ANSI dimensions [inch (mm)]									Ship. wt. [lbs (kg)]
				B1	TEFC			ODP					
					D1	D2	B1+B2	D1	D2	B1+B2			
CRN 15-1	2	1	•	16.38 (417)	7.19 (183)	5.73 (146)	28.94 (736)	-	-	-	130 (59)		
		3	•	16.38 (417)	7.01 (179)	4.33 (110)	27.6 (702)	-	-	-	117 (53)		
CRN 15-2	5	1	•	17.44 (443)	10.62 (270)	7.46 (190)	32.96 (838)	-	-	-	203 (93)		
		3	•	17.13 (436)	8.66 (220)	5.28 (135)	32.64 (830)	-	-	-	195 (89)		
CRN 15-3	7 1/2	1	•	19.21 (488)	10.22 (260)	7.62 (194)	34.74 (883)	-	-	-	216 (98)		
		3	•	19.21 (488)	8.66 (220)	5.28 (135)	34.72 (882)	-	-	-	205 (93)		
CRN 15-4	7 1/2	1	•	20.98 (533)	10.22 (260)	7.62 (194)	36.51 (928)	-	-	-	218 (99)		
		3	•	20.98 (533)	8.66 (220)	5.28 (135)	36.49 (927)	-	-	-	207 (94)		
CRN 15-5	10	1	•	22.76 (579)	10.23 (260)	10.30 (262)	38.83 (987)	-	-	-	335 (152)		
		3	•	22.76 (579)	10.24 (261)	6.26 (160)	37.49 (953)	-	-	-	214 (98)		
CRN 15-6	15	3	•	27.05 (688)	12.52 (318)	8.00 (204)	46.02 (1169)	10.62 (270)	7.33 (187)	43.36 (1102)	336 (153)		
CRN 15-7	15	3	•	28.82 (733)	12.52 (318)	8.00 (204)	47.80 (1214)	10.62 (270)	7.33 (187)	45.13 (1147)	369 (168)		
CRN 15-8	15	3	•	30.59 (777)	12.52 (318)	8.00 (204)	49.57 (1259)	10.62 (270)	7.33 (187)	46.90 (1192)	402 (183)		
CRN 15-9	20	3	•	32.36 (822)	12.52 (318)	8.00 (204)	51.34 (1304)	11.50 (293)	8.92 (227)	52.05 (1323)	410 (186)		
CRN 15-10	20	3	•	34.13 (867)	12.52 (318)	8.00 (204)	53.11 (1349)	11.50 (293)	8.92 (227)	53.82 (1368)	413 (188)		
CRN 15-12	25	3	•	37.05 (942)	12.52 (318)	8.00 (204)	59.88 (1521)	11.50 (293)	8.94 (228)	57.86 (1470)	413 (188)		

All dimensions in inches unless otherwise noted.

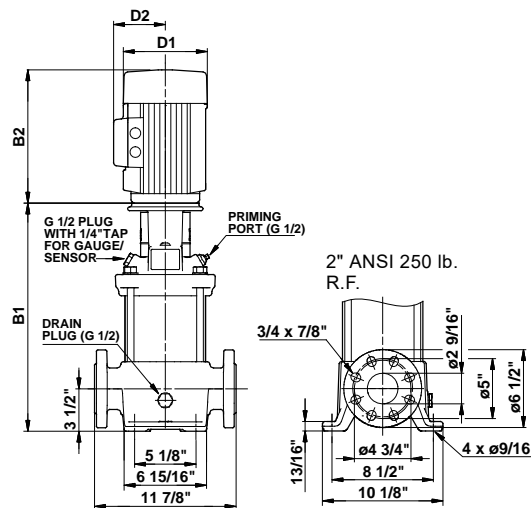
\* PJE flanged pump B1 and B1+B2 dimensions are equal to ANSI flanged pump and the weight is approximately 9 lbs less.

- Available.

CR 20



TM03 1460 2205



TM03 1461 2205

ANSI dimensions [inch (mm)]

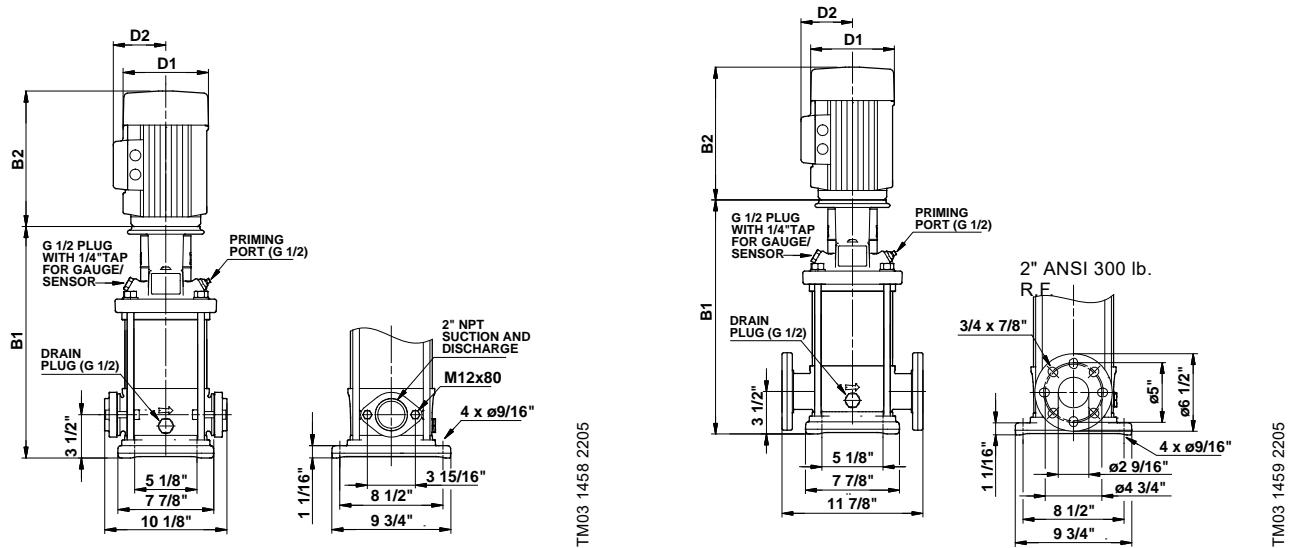
Pump type	P2 [HP]	Ph.	Oval*	B1	TEFC			ODP			Ship. wt. [lbs (kg)]
					D1	D2	B1+B2	D1	D2	B1+B2	
CR 20-1	3	1	●	17.20 (437)	8.60 (219)	6.87 (175)	31.85 (809)	-	-	-	181 (83)
					7.01 (179)	4.33 (110)	30.43 (773)	-	-	-	147 (67)
CR 20-2	5	1	●	17.20 (437)	10.62 (270)	7.46 (190)	32.72 (832)	-	-	-	205 (93)
					8.66 (220)	5.28 (135)	32.71 (831)	-	-	-	201 (92)
CR 20-3	7 1/2	1	●	19.29 (490)	10.22 (260)	7.62 (194)	34.82 (885)	-	-	-	223 (102)
					8.66 (220)	5.28 (135)	34.80 (884)	-	-	-	209 (95)
CR 20-4	10	1	●	21.06 (535)	10.23 (260)	10.30 (262)	37.13 (944)	-	-	-	337 (153)
					10.24 (261)	6.26 (160)	35.79 (910)	-	-	-	214 (98)
CR 20-5	15	3	●	25.39 (645)	12.52 (318)	8.00 (204)	44.37 (1127)	10.62 (270)	7.33 (187)	41.70 (1060)	369 (168)
CR 20-6	15	3	●	27.17 (691)	12.52 (318)	8.00 (204)	46.18 (1173)	10.62 (270)	7.33 (187)	43.48 (1105)	373 (170)
CR 20-7	20	3	●	28.94 (736)	12.52 (318)	8.00 (204)	47.91 (1217)	11.5 (293)	8.92 (227)	48.63 (1236)	409 (186)
CR 20-8	20	3	-	30.71 (781)	12.52 (318)	8.00 (204)	49.69 (1262)	11.5 (293)	8.92 (227)	50.40 (1281)	413 (188)
CR 20-10	25	3	-	33.62 (854)	12.52 (318)	8.00 (204)	56.46 (1434)	11.5 (293)	8.94 (228)	54.43 (1383)	413 (188)

All dimensions in inches unless otherwise noted.

\* Oval flanged pump B1 and B1+B2 dimensions are equal to ANSI flanged pumps and the weight is approximately 3 lbs less.

- Available.

CRI 20



TM03 1458 2205

TM03 1459 2205

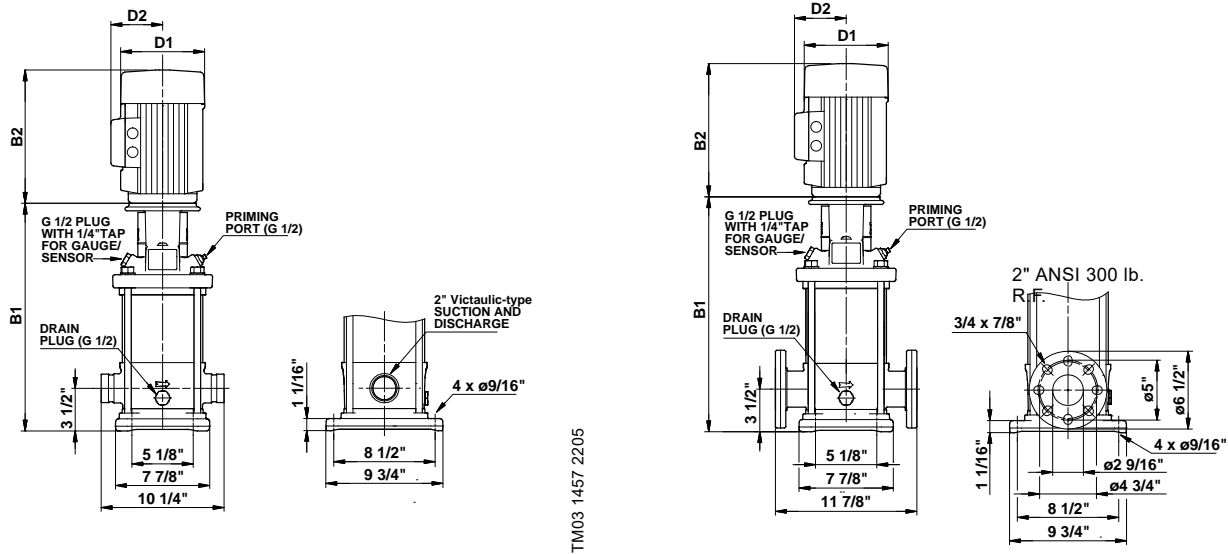
Pump type	P2 [HP]	Ph.	ANSI dimensions [inch (mm)]							Ship. wt. [lbs (kg)]	
			Oval*	B1	TEFC			ODP			
					D1	D2	B1+B2	D1	D2		B1+B2
CRI 20-1	3	1	•	17.13 (436)	8.60 (219)	6.87 (175)	31.78 (808)	-	-	-	174 (79)
		3	•	17.13 (436)	7.01 (179)	4.33 (110)	30.36 (772)	-	-	-	140 (64)
CRI 20-2	5	1	•	17.13 (436)	10.62 (270)	7.46 (190)	32.65 (830)	-	-	-	198 (90)
		3	•	17.13 (436)	8.66 (220)	5.28 (135)	32.64 (830)	-	-	-	195 (89)
CRI 20-3	7 1/2	1	•	19.21 (488)	10.22 (260)	7.62 (194)	34.74 (883)	-	-	-	216 (98)
		3	•	19.21 (488)	8.66 (220)	5.28 (135)	34.72 (882)	-	-	-	203 (93)
CRI 20-4	10	1	•	20.98 (533)	10.23 (260)	10.30 (262)	37.05 (942)	-	-	-	331 (151)
		3	•	20.98 (533)	10.24 (261)	6.26 (160)	35.71 (908)	-	-	-	205 (93)
CRI 20-5	15	3	•	25.28 (643)	12.52 (318)	8.00 (204)	44.29 (1125)	10.62 (270)	7.33 (187)	41.59 (1057)	362 (165)
CRI 20-6	15	3	•	27.05 (688)	12.52 (318)	8.00 (204)	46.02 (1169)	10.62 (270)	7.33 (187)	43.36 (1102)	367 (167)
CRI 20-7	20	3	•	28.82 (733)	12.52 (318)	8.00 (204)	47.80 (1214)	11.50 (293)	8.92 (227)	48.51 (1233)	402 (185)
CRI 20-8	20	3	-	30.59 (777)	12.52 (318)	8.00 (204)	49.57 (1259)	11.50 (293)	8.92 (227)	50.28 (1278)	406 (185)
CRI 20-10	25	3	-	33.50 (851)	12.52 (318)	8.00 (204)	56.34 (1431)	11.50 (293)	8.94 (228)	54.31 (1380)	407 (185)

All dimensions in inches unless otherwise noted.

\* Oval flanged pump B1 and B1+B2 dimensions are equal to ANSI flanged pumps and the weight is approximately 7 lbs less.

- Available.

CRN 20



TM03 1457 2205

TM03 1459 2205

ANSI dimensions [inch (mm)]

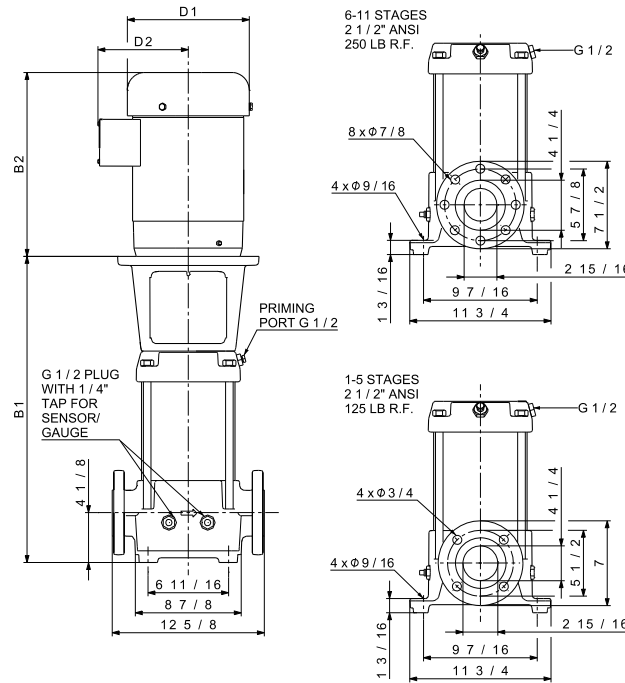
Pump type	P2 [HP]	Ph.	PJE*	B1	TEFC			ODP			Ship. wt. [lbs (kg)]
					D1	D2	B1+B2	D1	D2	B1+B2	
CRN 20-1	3	1	●	17.13 (436)	8.60 (219)	6.87 (175)	31.78 (808)	-	-	-	174 (79)
		3	●	17.13 (436)	7.01 (179)	4.33 (110)	30.36 (772)	-	-	-	140 (64)
CRN 20-2	5	1	●	17.13 (436)	10.62 (270)	7.46 (190)	32.65 (830)	-	-	-	198 (90)
		3	●	17.13 (436)	8.66 (220)	5.28 (135)	32.64 (830)	-	-	-	195 (89)
CRN 20-3	7 1/2	1	●	19.21 (488)	10.22 (260)	7.62 (194)	34.74 (883)	-	-	-	216 (98)
		3	●	19.21 (488)	8.66 (220)	5.28 (135)	34.72 (882)	-	-	-	203 (93)
CRN 20-4	10	1	●	20.98 (533)	10.23 (260)	10.30 (262)	37.05 (942)	-	-	-	331 (151)
		3	●	20.98 (533)	10.24 (261)	6.26 (160)	35.71 (908)	-	-	-	207 (94)
CRN 20-5	15	3	●	25.28 (643)	12.52 (318)	8.00 (204)	44.29 (1125)	10.62 (270)	7.33 (187)	41.59 (1057)	365 (166)
CRN 20-6	15	3	●	27.05 (688)	12.52 (318)	8.00 (204)	46.02 (1169)	10.62 (270)	7.33 (187)	43.36 (1102)	367 (167)
CRN 20-7	20	3	●	28.82 (733)	12.52 (318)	8.00 (204)	47.80 (1214)	11.50 (293)	8.92 (227)	48.51 (1233)	402 (183)
CRN 20-8	20	3	●	30.59 (777)	12.52 (318)	8.00 (204)	49.57 (1259)	11.50 (293)	8.92 (227)	50.28 (1278)	406 (185)
CRN 20-10	25	3	●	33.50 (851)	12.52 (318)	8.00 (204)	56.34 (1431)	11.50 (293)	8.94 (228)	54.31 (1380)	407 (185)

All dimensions in inches unless otherwise noted.

\* PJE flanged pump B1 and B1+B2 dimensions are equal to ANSI flanged pumps and the weight is approximately 9 lbs less.

● Available.

CR 32

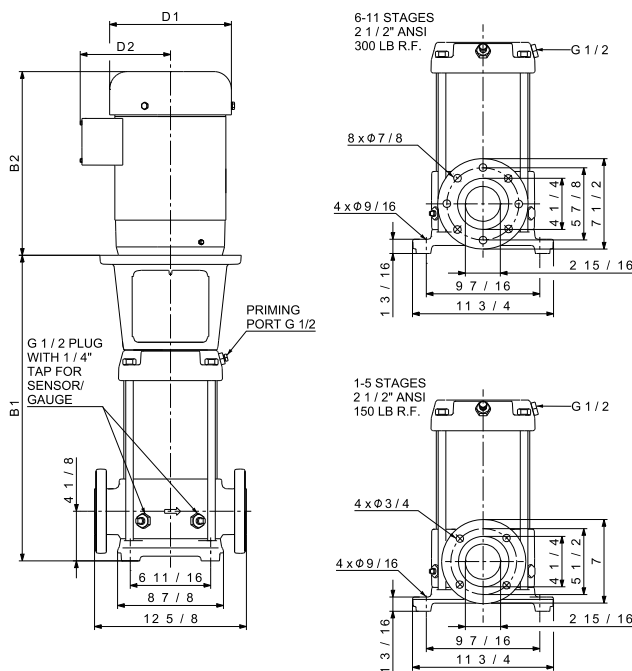


TMD2 7699 1009

Pump type	P2 [HP]	Ph.	ANSI dimensions [inch (mm)]								
			B1	TEFC			ODP			Ship. wt. <sup>1)</sup> [lbs (kg)]	
				D1	D2	B1+B2	D1	D2	B1+B2		
CR 32-1-1	5	1	20.08 (511)	10.62 (270)	7.46 (190)	35.60 (905)	-	-	-	240 (109)	
		3	19.88 (505)	8.66 (220)	5.28 (135)	35.39 (899)	-	-	-	218 (99)	
CR 32-1	5	1	20.08 (511)	10.62 (270)	7.46 (190)	35.60 (905)	-	-	-	228 (104)	
		3	19.88 (505)	8.66 (220)	5.28 (135)	35.39 (899)	-	-	-	218 (99)	
CR 32-2-2	7 1/2	1	22.83 (580)	10.22 (260)	7.62 (194)	38.36 (975)	-	-	-	245 (112)	
		3	22.64 (576)	8.66 (220)	5.28 (135)	38.15 (970)	-	-	-	229 (104)	
CR 32-2-1	7 1/2	1	22.83 (580)	10.22 (260)	7.62 (194)	38.36 (975)	-	-	-	245 (112)	
		3	22.64 (576)	8.66 (220)	5.28 (135)	38.15 (970)	-	-	-	229 (104)	
CR 32-2	10	1	22.83 (580)	10.23 (260)	10.30 (262)	38.90 (989)	-	-	-	300 (137)	
		3	22.64 (576)	10.24 (261)	6.26 (160)	37.87 (962)	-	-	-	229 (104)	
CR 32-3-2	10	1	25.59 (650)	10.23 (260)	10.30 (262)	41.66 (1059)	-	-	-	295 (134)	
		3	25.39 (645)	10.24 (261)	6.26 (160)	40.12 (1020)	-	-	-	236 (108)	
CR 32-3	15	3	29.72 (755)	12.52 (318)	8.00 (204)	48.70 (1237)	10.62 (270)	7.33 (187)	46.03 (1170)	332 (151)	
CR 32-4-2	15	3	32.48 (825)	12.52 (318)	8.00 (204)	51.46 (1307)	10.62 (270)	7.33 (187)	48.79 (1240)	339 (154)	
CR 32-4	20	3	32.48 (825)	12.52 (318)	8.00 (204)	51.46 (1307)	11.50 (293)	8.92 (227)	52.17 (1326)	344 (157)	
CR 32-5-2	20	3	35.24 (896)	12.52 (318)	8.00 (204)	54.25 (1378)	11.50 (293)	8.92 (227)	54.93 (1396)	351 (160)	
CR 32-5	20	3	35.24 (896)	12.52 (318)	8.00 (204)	54.25 (1378)	11.50 (293)	8.92 (227)	54.93 (1396)	351 (160)	
CR 32-6-2	25	3	37.99 (965)	12.52 (318)	8.00 (204)	60.83 (1545)	11.50 (293)	8.94 (228)	58.80 (1494)	351 (160)	
CR 32-6	25	3	37.99 (965)	12.52 (318)	8.00 (204)	60.83 (1545)	11.50 (293)	8.94 (228)	58.80 (1494)	351 (160)	
CR 32-7-2	30	3	40.75 (1036)	12.52 (318)	8.00 (204)	63.58 (1615)	11.50 (293)	8.94 (228)	62.56 (1590)	444 (202)	
CR 32-7	30	3	40.75 (1036)	12.52 (318)	8.00 (204)	63.58 (1615)	11.50 (293)	8.94 (228)	62.56 (1590)	423 (192)	
CR 32-8-2	30	3	43.50 (1105)	12.52 (318)	8.00 (204)	66.34 (1685)	11.50 (293)	8.94 (228)	65.31 (1659)	436 (198)	
CR 32-8	40	3	43.50 (1105)	15.32 (390)	13.11 (333)	66.69 (1694)	13.25 (337)	12.21 (311)	66.75 (1696)	631 (287)	
CR 32-9-2	40	3	46.26 (1176)	15.32 (390)	13.11 (333)	69.45 (1765)	13.25 (337)	12.21 (311)	69.51 (1766)	637 (289)	
CR 32-9	40	3	46.26 (1176)	15.32 (390)	13.11 (333)	69.45 (1765)	13.25 (337)	12.21 (311)	69.51 (1766)	637 (289)	
CR 32-10-2	40	3	49.02 (1246)	15.32 (390)	13.11 (333)	72.21 (1835)	13.25 (337)	12.21 (311)	72.27 (1836)	645 (293)	
CR 32-10	40	3	49.02 (1246)	15.32 (390)	13.11 (333)	72.21 (1835)	13.25 (337)	12.21 (311)	72.27 (1836)	645 (293)	
CR 32-11-2	50	3	51.77 (1315)	16.88 (429)	14.12 (359)	79.58 (2022)	13.25 (337)	12.21 (311)	74.52 (1893)	671 (305)	

<sup>1)</sup> Weights are based on pumps with TEFC motor, see the price list for individual weights. All dimensions in inches unless otherwise noted.

CRN 32

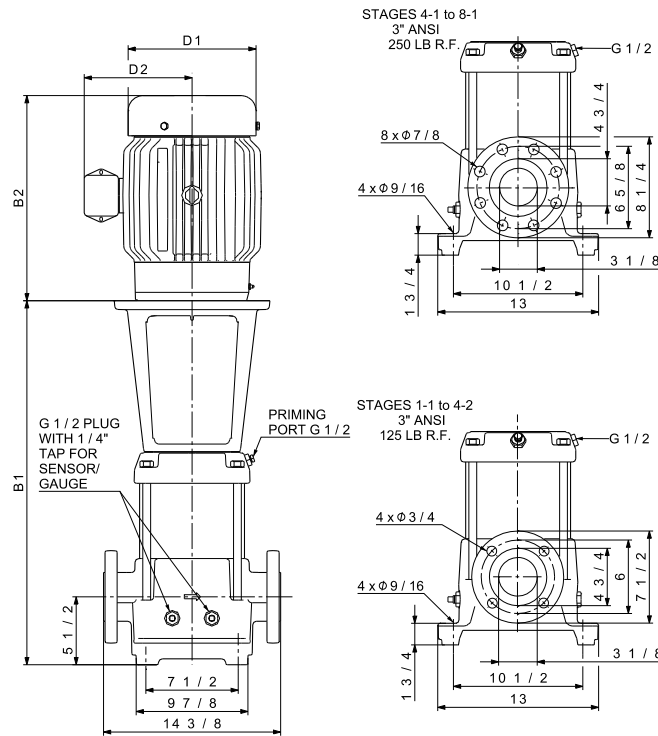


TM02 7703 1009

Pump type	P2 [HP]	Ph.	ANSI dimensions [inch (mm)]						Ship. wt. <sup>1)</sup> [lbs (kg)]	
			B1	TEFC			ODP			
				D1	D2	B1+B2	D1	D2		B1+B2
CRN 32-1-1	5	1	20.08 (511)	10.62 (270)	7.46 (190)	35.60 (905)	-	-	-	245 (112)
		3	19.88 (505)	8.66 (220)	5.28 (135)	35.39 (899)	-	-	-	223 (102)
CRN 32-1	5	1	20.08 (511)	10.62 (270)	7.46 (190)	35.60 (905)	-	-	-	233 (106)
		3	19.88 (505)	8.66 (220)	5.28 (135)	35.39 (899)	-	-	-	223 (102)
CRN 32-2-2	7 1/2	1	22.83 (580)	10.22 (260)	7.62 (194)	38.36 (975)	-	-	-	250 (114)
		3	22.64 (576)	8.66 (220)	5.28 (135)	38.15 (970)	-	-	-	234 (107)
CRN 32-2-1	7 1/2	1	22.83 (580)	10.22 (260)	7.62 (194)	38.36 (975)	-	-	-	250 (114)
		3	22.64 (576)	8.66 (220)	5.28 (135)	38.15 (970)	-	-	-	234 (107)
CRN 32-2	10	1	22.83 (580)	10.23 (260)	10.30 (262)	38.90 (989)	-	-	-	305 (139)
		3	22.64 (576)	10.24 (261)	6.26 (160)	37.37 (950)	-	-	-	234 (107)
CRN 32-3-2	10	1	25.59 (650)	10.23 (260)	10.30 (262)	41.66 (1059)	-	-	-	300 (137)
		3	25.39 (645)	10.24 (261)	6.26 (160)	40.12 (1020)	-	-	-	241 (110)
CRN 32-3	15	3	29.72 (755)	12.52 (318)	8.00 (204)	48.70 (1237)	10.62 (270)	7.33 (187)	46.03 (1170)	337 (153)
CRN 32-4-2	15	3	32.48 (825)	12.52 (318)	8.00 (204)	51.46 (1307)	10.62 (270)	7.33 (187)	48.79 (1240)	343 (156)
CRN 32-4	20	3	32.48 (825)	12.52 (318)	8.00 (204)	51.46 (1307)	11.50 (293)	8.92 (227)	52.17 (1326)	348 (158)
CRN 32-5-2	20	3	35.24 (896)	12.52 (318)	8.00 (204)	54.25 (1378)	11.50 (293)	8.92 (227)	54.93 (1396)	355 (162)
CRN 32-5	20	3	35.24 (896)	12.52 (318)	8.00 (204)	54.25 (1378)	11.50 (293)	8.92 (227)	54.93 (1396)	355 (162)
CRN 32-6-2	25	3	37.99 (965)	12.52 (318)	8.00 (204)	60.83 (1545)	11.50 (293)	8.94 (228)	58.80 (1494)	355 (162)
CRN 32-6	25	3	37.99 (965)	12.52 (318)	8.00 (204)	60.83 (1545)	11.50 (293)	8.94 (228)	58.80 (1494)	355 (162)
CRN 32-7-2	30	3	40.75 (1036)	12.52 (318)	8.00 (204)	63.58 (1615)	11.50 (293)	8.94 (228)	62.56 (1590)	448 (204)
CRN 32-7	30	3	40.75 (1036)	12.52 (318)	8.00 (204)	63.58 (1615)	11.50 (293)	8.94 (228)	62.56 (1590)	427 (194)
CRN 32-8-2	30	3	43.50 (1105)	12.52 (318)	8.00 (204)	66.34 (1685)	11.50 (293)	8.94 (228)	65.31 (1659)	440 (200)
CRN 32-8	40	3	43.50 (1105)	15.32 (390)	13.11 (333)	66.69 (1694)	13.25 (337)	12.21 (311)	66.75 (1696)	635 (289)
CRN 32-9-2	40	3	46.26 (1176)	15.32 (390)	13.11 (333)	69.45 (1765)	13.25 (337)	12.21 (311)	69.51 (1766)	641 (291)
CRN 32-9	40	3	46.26 (1176)	15.32 (390)	13.11 (333)	69.45 (1765)	13.25 (337)	12.21 (311)	69.51 (1766)	641 (291)
CRN 32-10-2	40	3	49.02 (1246)	15.32 (390)	13.11 (333)	72.21 (1835)	13.25 (337)	12.21 (311)	72.27 (1836)	648 (294)
CRN 32-10	40	3	49.02 (1246)	15.32 (390)	13.11 (333)	72.21 (1835)	13.25 (337)	12.21 (311)	72.27 (1836)	648 (294)
CRN 32-11-2	50	3	51.77 (1315)	16.88 (429)	14.12 (359)	79.58 (2022)	13.25 (337)	12.21 (311)	74.52 (1893)	674 (306)

1) Weights are based on pumps with TEFC motor, see the price list for individual weights. All dimensions in inches unless otherwise noted.

CR 45

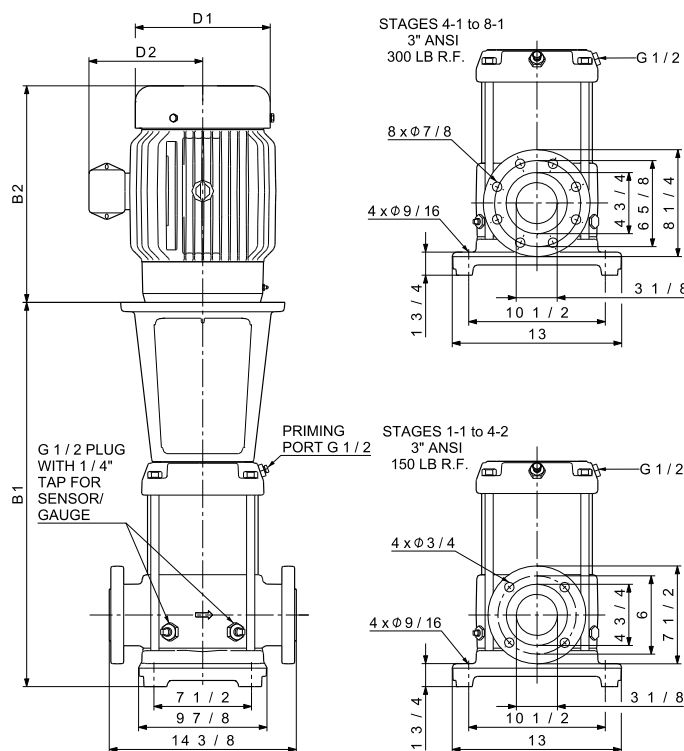


TM02 7700 1009

Pump type	P2 [HP]	Ph.	ANSI dimensions [inch (mm)]						Ship. wt. <sup>1)</sup> [lbs (kg)]	
			B1	TEFC			ODP			
				D1	D2	B1+B2	D1	D2		B1+B2
CR 45-1-1	7 1/2	1	22.20 (564)	10.22 (260)	7.62 (194)	37.73 (959)	-	-	-	259 (118)
		3	22.01 (560)	8.66 (220)	5.28 (135)	37.52 (954)	-	-	-	243 (111)
CR 45-1	10	1	22.20 (564)	10.23 (260)	10.30 (262)	38.27 (973)	-	-	-	314 (143)
		3	22.01 (560)	10.24 (261)	6.26 (160)	36.74 (934)	-	-	-	243 (111)
CR 45-2-2	15	3	29.49 (750)	12.52 (318)	8.00 (204)	48.46 (1231)	10.62 (270)	7.33 (187)	45.80 (1164)	347 (158)
CR 45-2-1	15	3	29.49 (750)	12.52 (318)	8.00 (204)	48.46 (1231)	10.62 (270)	7.33 (187)	45.80 (1164)	347 (158)
CR 45-2	15	3	29.49 (750)	12.52 (318)	8.00 (204)	48.46 (1231)	10.62 (270)	7.33 (187)	45.80 (1164)	347 (158)
CR 45-3-2	20	3	32.64 (830)	12.52 (318)	8.00 (204)	51.61 (1311)	11.50 (293)	8.92 (227)	52.33 (1330)	361 (164)
CR 45-3-1	25	3	32.64 (830)	12.52 (318)	8.00 (204)	55.47 (1409)	11.50 (293)	8.94 (228)	53.45 (1358)	353 (161)
CR 45-3	25	3	32.64 (830)	12.52 (318)	8.00 (204)	55.47 (1409)	11.50 (293)	8.94 (228)	53.45 (1358)	353 (161)
CR 45-4-2	30	3	35.79 (910)	12.52 (318)	8.00 (204)	58.62 (1489)	11.50 (293)	8.94 (228)	57.60 (1464)	426 (194)
CR 45-4-1	30	3	35.79 (910)	12.52 (318)	8.00 (204)	58.62 (1489)	11.50 (293)	8.94 (228)	57.60 (1464)	432 (196)
CR 45-4	30	3	35.79 (910)	12.52 (318)	8.00 (204)	58.62 (1489)	11.50 (293)	8.94 (228)	57.60 (1464)	432 (196)
CR 45-5-2	40	3	38.94 (990)	15.32 (390)	13.11 (333)	62.13 (1579)	13.25 (337)	12.21 (311)	62.19 (1580)	634 (288)
CR 45-5-1	40	3	38.94 (990)	15.32 (390)	13.11 (333)	62.13 (1579)	13.25 (337)	12.21 (311)	62.19 (1580)	634 (288)
CR 45-5	40	3	38.94 (990)	15.32 (390)	13.11 (333)	62.13 (1579)	13.25 (337)	12.21 (311)	62.19 (1580)	634 (288)
CR 45-6-2	50	3	42.09 (1070)	16.88 (429)	14.12 (359)	69.90 (1776)	13.25 (337)	12.21 (311)	64.84 (1647)	679 (308)
CR 45-6	50	3	42.09 (1070)	16.88 (429)	14.12 (359)	69.90 (1776)	13.25 (337)	12.21 (311)	64.84 (1647)	679 (308)
CR 45-7-2	50	3	45.24 (1150)	16.88 (429)	14.12 (359)	73.05 (1856)	13.25 (337)	12.21 (311)	67.99 (1727)	689 (313)
CR 45-7	60	3	45.24 (1150)	19.00 (483)	14.90 (379)	76.03 (1932)	15.12 (385)	13.19 (336)	71.37 (1813)	869 (395)
CR 45-8-1	60	3	48.39 (1230)	19.00 (483)	14.90 (379)	79.18 (2012)	15.12 (385)	13.19 (336)	74.52 (1893)	878 (399)

<sup>1)</sup> Weights are based on pumps with TEFC motor, see the price list for individual weights. All dimensions in inches unless otherwise noted.

CRN 45

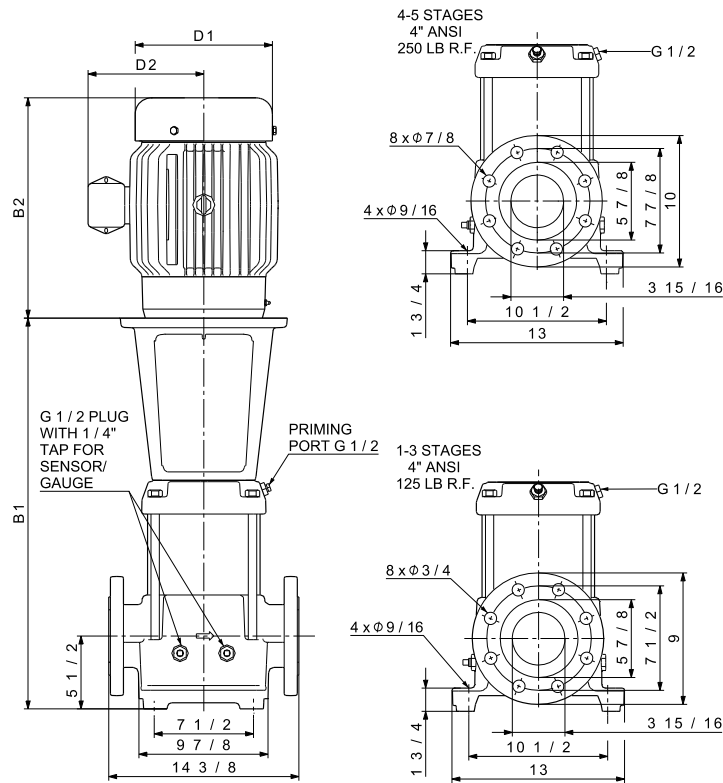


TM02 7704 1009

Pump type	P2 [HP]	Ph.	ANSI dimensions [inch (mm)]									Ship. wt. <sup>1)</sup> [lbs (kg)]
			B1	TEFC			ODP					
				D1	D2	B1+B2	D1	D2	B1+B2			
CRN 45-1-1	7 1/2	1	22.20 (564)	10.22 (260)	7.62 (194)	37.73 (959)	-	-	-	259 (118)		
		3	22.01 (560)	8.66 (220)	5.28 (135)	37.52 (954)	-	-	-	243 (111)		
CRN 45-1	10	1	22.20 (564)	10.23 (260)	10.30 (262)	38.27 (973)	-	-	-	314 (143)		
		3	22.01 (560)	10.24 (261)	6.26 (160)	36.74 (934)	-	-	-	243 (111)		
CRN 45-2-2	15	3	29.49 (750)	12.52 (318)	8.00 (204)	48.46 (1231)	10.62 (270)	7.33 (187)	45.80 (1164)	347 (158)		
CRN 45-2-1	15	3	29.49 (750)	12.52 (318)	8.00 (204)	48.46 (1231)	10.62 (270)	7.33 (187)	45.80 (1164)	347 (158)		
CRN 45-2	15	3	29.49 (750)	12.52 (318)	8.00 (204)	48.46 (1231)	10.62 (270)	7.33 (187)	45.80 (1164)	347 (158)		
CRN 45-3-2	20	3	32.64 (830)	12.52 (318)	8.00 (204)	51.61 (1311)	11.50 (293)	8.92 (227)	52.33 (1330)	361 (164)		
CRN 45-3-1	25	3	32.64 (830)	12.52 (318)	8.00 (204)	55.47 (1409)	11.50 (293)	8.94 (228)	53.45 (1358)	353 (161)		
CRN 45-3	25	3	32.64 (830)	12.52 (318)	8.00 (204)	55.47 (1409)	11.50 (293)	8.94 (228)	53.45 (1358)	353 (161)		
CRN 45-4-2	30	3	35.79 (910)	12.52 (318)	8.00 (204)	58.62 (1489)	11.50 (293)	8.94 (228)	57.60 (1464)	427 (194)		
CRN 45-4-1	30	3	35.79 (910)	12.52 (318)	8.00 (204)	58.62 (1489)	11.50 (293)	8.94 (228)	57.60 (1464)	430 (196)		
CRN 45-4	30	3	35.79 (910)	12.52 (318)	8.00 (204)	58.62 (1489)	11.50 (293)	8.94 (228)	57.60 (1464)	430 (196)		
CRN 45-5-2	40	3	38.94 (990)	15.32 (390)	13.11 (333)	62.13 (1579)	13.25 (337)	12.21 (311)	62.19 (1580)	632 (287)		
CRN 45-5-1	40	3	38.94 (990)	15.32 (390)	13.11 (333)	62.13 (1579)	13.25 (337)	12.21 (311)	62.19 (1580)	632 (287)		
CRN 45-5	40	3	38.94 (990)	15.32 (390)	13.11 (333)	62.13 (1579)	13.25 (337)	12.21 (311)	62.19 (1580)	632 (287)		
CRN 45-6-2	50	3	42.09 (1070)	16.88 (429)	14.12 (359)	69.90 (1776)	13.25 (337)	12.21 (311)	64.84 (1647)	677 (308)		
CRN 45-6	50	3	42.09 (1070)	16.88 (429)	14.12 (359)	69.90 (1776)	13.25 (337)	12.21 (311)	64.84 (1647)	677 (308)		
CRN 45-7-2	50	3	45.24 (1150)	16.88 (429)	14.12 (359)	73.05 (1856)	13.25 (337)	12.21 (311)	67.99 (1727)	687 (312)		
CRN 45-7	60	3	45.24 (1150)	19.00 (483)	14.90 (379)	76.03 (1932)	15.12 (385)	13.19 (336)	71.37 (1813)	867 (394)		
CRN 45-8-1	60	3	48.39 (1230)	19.00 (483)	14.90 (379)	79.18 (2012)	15.12 (385)	13.19 (336)	74.52 (1893)	876 (398)		

1) Weights are based on pumps with TEFC motor, see the price list for individual weights. All dimensions in inches unless otherwise noted.

CR 64

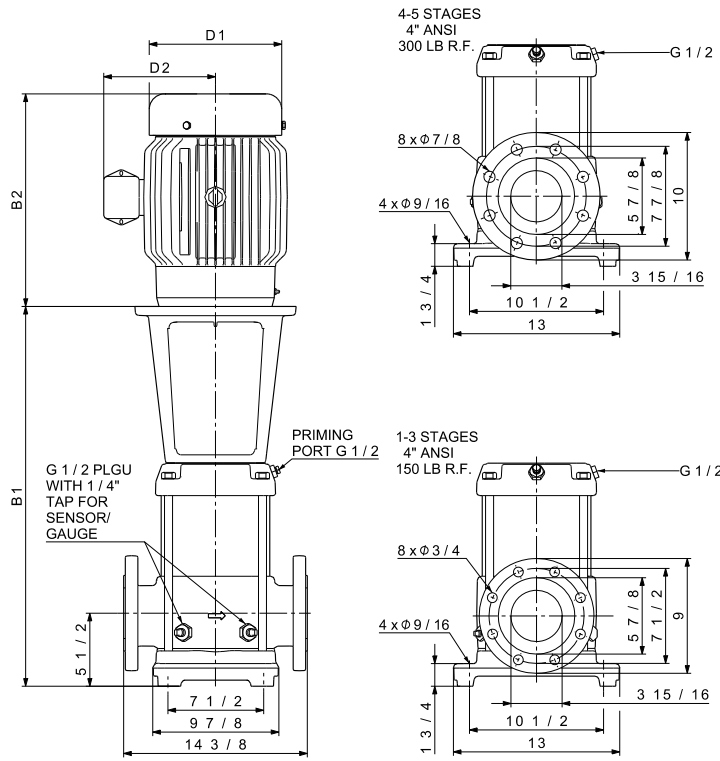


TM02 7701 1009

Pump type	P2 [HP]	Ph.	ANSI dimensions [inch (mm)]								
			B1	TEFC			ODP			Ship. wt. <sup>1)</sup> [lbs (kg)]	
				D1	D2	B1+B2	D1	D2	B1+B2		
CR 64-1-1	10	1	22.09 (562)	10.23 (260)	10.30 (262)	38.16 (970)	-	-	-	268 (122)	
		3	22.09 (562)	10.24 (261)	6.26 (160)	36.82 (936)	-	-	-	252 (115)	
CR 64-1	15	3	26.42 (672)	12.52 (318)	8.00 (204)	45.39 (1153)	10.62 (270)	7.33 (187)	42.73 (1086)	348 (158)	
CR 64-2-2	20	3	29.69 (755)	12.52 (318)	8.00 (204)	48.70 (1237)	11.50 (293)	8.92 (227)	49.38 (1255)	363 (165)	
CR 64-2-1	20	3	29.69 (755)	12.52 (318)	8.00 (204)	48.70 (1237)	11.50 (293)	8.92 (227)	49.38 (1255)	363 (165)	
CR 64-2	25	3	29.69 (755)	12.52 (318)	8.00 (204)	52.52 (1334)	11.50 (293)	8.94 (228)	50.50 (1283)	355 (162)	
CR 64-3-2	30	3	32.91 (836)	15.32 (390)	8.00 (204)	55.75 (1416)	11.50 (293)	8.94 (228)	54.72 (1390)	430 (196)	
CR 64-3-1	40	3	32.91 (836)	15.32 (390)	13.11 (333)	56.10 (1425)	13.25 (337)	12.21 (311)	56.16 (1427)	624 (284)	
CR 64-3	40	3	32.91 (836)	15.32 (390)	13.11 (333)	56.10 (1425)	13.25 (337)	12.21 (311)	56.16 (1427)	624 (284)	
CR 64-4-2	40	3	36.18 (919)	15.32 (390)	13.11 (333)	59.37 (1508)	13.25 (337)	12.21 (311)	59.43 (1510)	624 (284)	
CR 64-4-1	50	3	36.18 (919)	16.88 (429)	14.12 (359)	63.99 (1626)	13.25 (337)	12.21 (311)	58.93 (1497)	676 (307)	
CR 64-4	50	3	36.18 (919)	16.88 (429)	14.12 (359)	63.99 (1626)	13.25 (337)	12.21 (311)	58.93 (1497)	676 (307)	
CR 64-5-2	60	3	39.41 (1002)	19.00 (483)	14.90 (379)	70.20 (1784)	15.12 (385)	13.19 (336)	65.54 (1665)	866 (393)	

<sup>1)</sup> Weights are based on pumps with TEFC motor, see the price list for individual weights. All dimensions in inches unless otherwise noted.

CRN 64



TM02 7705 1009

Pump type	P2 [HP]	Ph.	ANSI dimensions [inch (mm)]							Ship. wt. <sup>1)</sup> [lbs (kg)]
			B1	TEFC			ODP			
				D1	D2	B1+B2	D1	D2	B1+B2	
CRN 64-1-1	10	1	22.09 (562)	10.23 (260)	10.30 (262)	38.16 (970)	-	-	-	269 (123)
		3	22.09 (562)	10.24 (261)	6.26 (160)	36.82 (936)	-	-	-	253 (115)
CRN 64-1	15	3	26.42 (672)	12.52 (318)	8.00 (204)	45.39 (1153)	10.62 (270)	7.33 (187)	42.73 (1086)	349 (159)
CRN 64-2-2	20	3	29.69 (755)	12.52 (318)	8.00 (204)	48.70 (1237)	11.50 (293)	8.92 (227)	49.38 (1255)	364 (166)
CRN 64-2-1	20	3	29.69 (755)	12.52 (318)	8.00 (204)	48.70 (1237)	11.50 (293)	8.92 (227)	49.38 (1255)	364 (166)
CRN 64-2	25	3	29.69 (755)	12.52 (318)	8.00 (204)	52.52 (1334)	11.50 (293)	8.94 (228)	50.50 (1283)	357 (162)
CRN 64-3-2	30	3	32.91 (836)	12.52 (318)	8.00 (204)	55.75 (1416)	11.50 (293)	8.94 (228)	54.72 (1390)	432 (196)
CRN 64-3-1	40	3	32.91 (836)	15.32 (390)	13.11 (333)	56.10 (1425)	13.25 (337)	12.21 (311)	56.16 (1427)	625 (284)
CRN 64-3	40	3	32.91 (836)	15.32 (390)	13.11 (333)	56.10 (1425)	13.25 (337)	12.21 (311)	56.16 (1427)	625 (284)
CRN 64-4-2	40	3	36.18 (919)	15.32 (390)	13.11 (333)	59.37 (1508)	13.25 (337)	12.21 (311)	59.43 (1510)	625 (284)
CRN 64-4-1	50	3	36.18 (919)	16.88 (429)	14.12 (359)	63.99 (1626)	13.25 (337)	12.21 (311)	58.93 (1497)	678 (308)
CRN 64-4	50	3	36.18 (919)	16.88 (429)	14.12 (359)	63.99 (1626)	13.25 (337)	12.21 (311)	58.93 (1497)	678 (308)
CRN 64-5-2	60	3	39.41 (1002)	19.00 (483)	14.90 (379)	70.20 (1784)	15.12 (385)	13.19 (336)	65.54 (1665)	868 (394)

<sup>1)</sup> Weights are based on pumps with TEFC motor, see the price list for individual weights. All dimensions in inches unless otherwise noted.

## 11. Motor data

### Standard motors in the CR range

Motors used in the CR pump range are:

- Grundfos ML motors
- Grundfos specified Baldor® motors.

The information in the tables below applies to the following motor types and sizes:

Type	Phase	Motor range [HP]	Cooling method
ML	3	1/3 - 30	TEFC
	1	1/3 - 10	TEFC
Baldor	3	40-100	TEFC
	3	15-125	ODP

Grundfos CR pumps are supplied with heavy-duty 2-pole, NEMA energy-efficient C-frame motors built or selected according to rigid Grundfos specifications. All CR pump motors have heavy-duty bearings for maximum thrust requirements.

### ODP motors

(Open Drip Proof, constant speed)

HP	Ph	ODP frame	ODP S.F.	ODP voltage [V]	ODP motor eff. %	ODP insul. class	ODP KVA code	ODP full-load current	ODP service-factor current	ODP starting current
15	3	254TCZ	1.15	208-230/460	89.5	F	H	37-35 / 17.5	40 - 39.4 / 19.7	225-248/124
20	3	254TC	1.15	230/460	90.2	B	G	48/24	55 /27.5	306/153
25	3	284TSCZ	1.15	208-230/460	91	B	G	64-59 / 29.5	74-67 / 33.5	335-374/187
30	3	284TSC	1.15	230/460	91	F	H	70/35	80/40	480/240
40	3	286TSCZ	1.15	230/460	91.7	F	F	94/47	108/54	542/271
50	3	324TSCZ	1.15	230/460	92.4	F	G	116/58	134/67	706/353
60	3	324TSCZ	1.15	230/460	93	B	G	132/66	152/76	844/422
75	3	364TSCZ	1.15	230/460	93	F	G	168/84	192/96	1110/555

Baldor motor



TM02 7696 3803

It is not recommended that an off-the-shelf standard Baldor® motor be used on a Grundfos pump. Ideally, the best motor choice would be the Grundfos specified motor.

Single-phase Grundfos specified motors up to 7.5 HP have a built-in thermal overload switch.

Other motor types are available, such as Explosion-proof, Mill and Chem duty, Premium Efficiency. Contact your local Grundfos company for more information.

Pumps supplied by Grundfos Canada are normally supplied with motors from other manufactures. 575 volt motors meet NEMA energy-efficient standards.

Dimensions and data will vary. Contact your local Grundfos company for more information.

All values are subject to change without notice.

### TEFC motors

(Totally Enclosed Fan Cooled, constant speed)

Baldor motor



TM02 7696 3803

Grundfos ML motors



Gr7848sh



GR 7845



TM04 2512 2708

HP	Ph	Frame	S.F.	Voltage [V]	Motor eff. [%]	Insul. class	KVA code	Full-load current [A]	Service-factor current [A]	Starting current [A]	Motor type
1/3	1	56C	1.35	115/230	55	B	K	6.0 / 3.0	7.6 / 3.8	28 / 14	Baldor
	3	56C	1.35	208-230/460	78.5	F	L	1.12 - 1.1 / 0.55	1.5 - 1.45 / 0.75	7.1 - 7.7 / 3.9	ML
1/2	1	56C	1.6	115/230	62	B	K	7.4 / 3.7	9.8 / 4.9	39 / 19.5	Baldor
	3	56C	1.25	208-230/460	78.5	F	K	1.64 - 1.55 / 0.78	2.0 - 1.9 / 0.95	9.7 - 10.1 / 5.1	ML
3/4	1	56C	1.25	115/230	66	B	K	9.6 / 4.8	11.4 / 5.7	56/28	Baldor
	3	56C	1.25	208-230/460	79	F	K	2.4 - 2.3 / 1.2	2.9 - 2.75 / 1.4	14.2 - 15 / 7.8	ML
1	1	56C	1.25	115/230	66	B	K	12 / 6.0	14.4 / 7.2	77 / 38.5	Baldor
	3	56C	1.25	208-230/460	80	F	J	3.25 - 3.35 / 1.68	4.0 - 3.9 / 1.95	19.2 - 21.8 / 10.9	ML
1 1/2	1	56C	1.3	115/208-230	71	B	K	17 / 9.5 - 8.6	20.4 / 11.3 - 10.2	106 / 58.6 - 53	Baldor
	3	56C	1.15	208-230/460	84	F	M	4.7 - 4.6 / 2.3	5.2 - 5.1 / 2.55	33.8 - 36.8 / 18.4	ML
2	1	56C	1.15	115/208-230	74	F	K	23 / 12.7 - 11.5	25.4 / 14.0 - 12.7	156/86-78	Baldor
	3	56C	1.15	208-230/460	85.5	F	M?	6.0 - 5.8 / 2.9	6.8 - 6.6 / 3.3	48.0 - 52.8 / 26.4	ML
3	1	182TC	1.15	115/208-230	75	F	H	29 / 16 - 14.5	31.8 / 18 - 15.9	170/94-85	Baldor
	3	182TC	1.15	208-230/460	86.5	F	M	8.5 - 8.2 / 4.1	9.6 - 9.2 / 4.6	79.9 - 79.5 / 39.8	ML
5	1	213TCZ	1.15	208-230	80	F	J	24-22	27-25	188-170	Baldor
	3	182TC	1.15	208-230/460	88.5	F	L	14.1 - 13.1 / 7.29	16.2 - 15.0 / 8.4	207-193/107	ML
7 1/2	1	213TC	1.15	208-230	82	F	F	33.8-31	38.5-35.5	244-220	Baldor
	3	213TC	1.15	208-230/460	89.5	F	N	19.5 - 18.1 / 9.09	22.4 - 20.8 / 10.4	289-267/135	ML
10	1	213TC	1.15	230	85.5	F	F	40	46	284	Baldor
	3	215TC	1.15	208-230/460	90.2	F	K	26.5 - 24.6 / 12.4	29.0 - 27.0 / 13.6	261-243/123	ML
15	3	254TC	1.15	208-230/460	91	F	J	37.5 - 34 / 17	41.0 - 37.5 / 18.6	369-338/168	ML
20	3	254TC	1.15	208-230/460	91	F	K	50.5 - 46 / 23	55.5 - 50.5 / 25.5	450-410/207	ML
25	3	284TSC	1.15	230/460	91.7	F	J	62.0 - 56 / 28	68.0 - 61.5 / 31.0	510-462/233	ML
30	3	286TSC	1.15	230/460	91.7	F	H	74.0 - 67.0 / 33.5	81.5 - 73.5 / 37.0	595-537/271	ML
40	3	324TSC	1.15	230/460	91.7	F	G	88/44	102/51	614/307	Baldor
50	3	326TSCZ	1.15	230/460	93	F	G	110/55	128/64	746/393	Baldor
60	3	364TSCZ	1.15	230/460	93	F	G	134/67	154/77	918/459	Baldor
75	3	365TSCZ	1.15	230/460	93	F	G	166/83	188/94	1162/581	Baldor

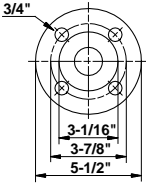
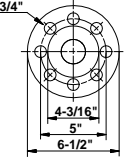
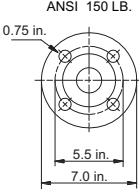
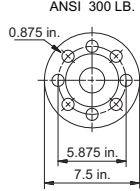
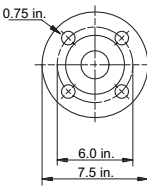
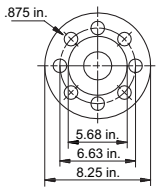
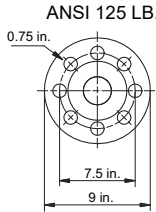
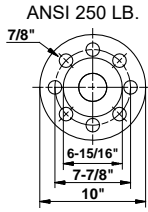
# 12. Accessories

## Pipe connections

Various sets of counterflanges and couplings are available for pipe connection.

### Counterflanges for CR

A set consists of two counterflanges, two gaskets, bolts and nuts.

Counterflange	Pump type	Description	Pressure class	Pipe connection	Product number
	TM02 5691 3802	CR 1s CR 1 CR 3 CR 5	Threaded	ANSI 250 lb. 1 1/4" NPT	91122260
	TM02 5692 3802	CR 10 CR 15 CR 20	Threaded	ANSI 250 lb. 2" NPT	335021
	TM02 5693 3802 TM02 5694 3802	CR 32	Threaded	ANSI 125 lb. 2 1/2" NPT	559601
			Threaded	ANSI 250 lb. 2 1/2" NPT	345050
	TM02 5695 3802 TM02 5696 3802	CR 45	Threaded	ANSI 125 lb. 3" NPT	569601
			Threaded	ANSI 250 lb. 3" NPT	91121952
	TM02 5697 3802 TM02 5698 3802	CR 64	Threaded	ANSI 125 lb. 4" NPT	579801
			Threaded	ANSI 250 lb. 4" NPT	3600028

### Counterflanges for CRN

Counterflanges for CRN pumps are made of stainless steel according to AISI 316.

A set consists of two counterflanges, two gaskets, bolts and nuts.

Counterflange	Pump type	Description	Pressure class	Pipe connection	Product number
	TM02 5691 3802 <b>CRI, CRN 1s, 1, 3 and 5</b>	Threaded	ANSI 300 lb.	1 1/4" NPT	91129013
	TM02 5692 3802 <b>CRI, CRN 10, 15, 20</b>	Threaded	ANSI 300 lb.	2" NPT	339919
	TM02 5693 3802 TM02 5694 3802 <b>CRN 32</b>	Threaded	ANSI 150 lb.	2 1/2" NPT	91121951
		Threaded	ANSI 300 lb.	2 1/2" NPT	0ID00138
	TM02 5695 3802 TM02 5696 3802 <b>CRN 45</b>	Threaded	ANSI 150 lb.	3" NPT	91121953
		Threaded	ANSI 300 lb.	3" NPT	91121954
	TM02 5697 3802 TM02 5698 3802 <b>CRN 64</b>	Threaded	ANSI 150 lb.	4" NPT	0ID00148
		Threaded	ANSI 300 lb.	4" NPT	91121955

### PJE couplings for CRN

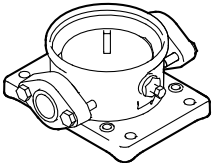
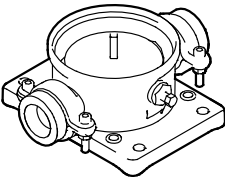
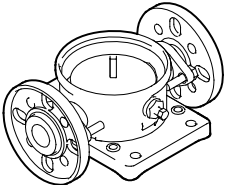
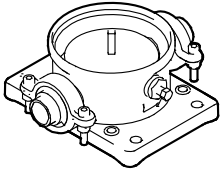
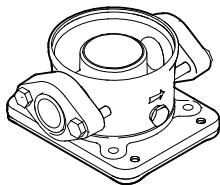
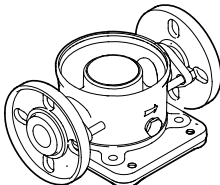
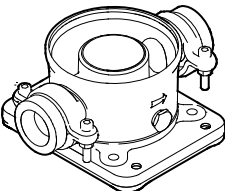
Couplings for CRN pumps are made of stainless steel according to AISI 316.

A set consists of two couplings, two gaskets, two pipe stubs, bolts and nuts.

Couplings	Pump type	Pipe stub	Rated pressure	Pipe connection	Rubber parts	Number of coupling sets needed	Product number
	TM00 3808 1094 <b>CRI, CRN 1s, 1, 3, 5</b>	Threaded	1160 psi	1 1/4" NPT	EPDM	1	4013010
					FKM	1	0ID00118
	<b>CRI, CRN 10, 15, 20</b>	Threaded	1015 psi	2" NPT	EPDM	1	331301
					FKM	1	0ID00128

## FlexiClamp base connections

All sets comprise the necessary number of bolts and nuts as well as a gasket or O-ring.

Base connections	Pump type	Connection	Pipe connection	Rubber parts	Product number
	TM02 1144 0601 <b>CRI, CRN 1s, 1, 3, 5</b>	Oval (cast iron)	1" NPT	Klingersil	96468491
			1 1/4" NPT	Klingersil	96470781
		Oval (stainless steel)	1" NPT	Klingersil	96480850
			1 1/4" NPT	Klingersil	96480851
	TM02 1145 0601 <b>CRI, CRN 1s, 1, 3, 5</b>	Union ext. threaded	2" NPT	EPDM	96480852
				FKM	96480853
	TM02 1146 0601 <b>CRI, CRN 1s, 1, 3, 5</b>	ANSI (FGJ) (stainless steel)	1 1/4" NPT	EPDM	96480858
				FKM	96480859
	TM02 1147 0601 <b>CRI, CRN 1s, 1, 3, 5</b>	Clamp, threaded pipe stub	1" NPT	EPDM	96480854
				FKM	96480855
			1 1/4" NPT	EPDM	96480856
				FKM	96480857
	TM02 7237 2803 <b>CRI, CRN 10, 15, 20</b>	Oval (cast iron)	2" NPT	Klingersil	96498838
		Oval (stainless steel)	2" NPT	Klingersil	96498839
	TM02 7238 2803 <b>CRI, CRN 10, 15, 20</b>	ANSI (FGJ) (stainless steel)	2" NPT	EPDM	96511402
				FKM	96511403
	TM02 7239 2803 <b>CRI, CRN 10, 15, 20</b>	Clamp, threaded pipe stub	1 1/2" NPT	EPDM	96500271
				FKM	96500272
			2" NPT	EPDM	96500273
				FKM	96500274
			2" NPT	EPDM	96508602
				FKM	96508603

## CR flange guide

### Commonly asked questions

#### What is the "pressure class"?

- The pressure class is a pressure rating expressed as a dimensionless number.
- Pressure class does not affect the pump operating pressure.
- The class rating charts in ANSI B16.5 give actual pounds per square inch maximum allowable pressure at a given temperature.
- 150 lb, 150# or Class 150 are different ways to write the same pressure class.



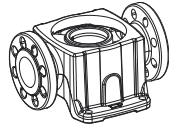

#### What factors determine the required pressure class?

Pressure ratings are affected by the following:

- Material
- sealing methods
- operating temperatures.

#### Are pump flanges compatible with mating flanges of a different pressure class?

- The multiflange used on a CR 1s through 20 can be used on both 125 lb and 250 lb installations.
- The multiflange on a CRI/CRN 1s through 20 can be used on both 150 lb and 300 lb installations.
- All other mating flange classes must match the pump flange class.

Pump	Flange	Size	Material	Pressure class	Mate with:
CR 1s to 5		1.25 in	Cast Iron	250 lb	125 or 250 lb
CRI, CRN 1s to 5		1.25 in	Ductile Iron	300 lb	150 or 300 lb
CR 10 to 20		2 in	Cast Iron	250 lb	125 or 250 lb
CRI, CRN 10 to 20		2 in	Ductile Iron	300 lb	150 or 300 lb

## 13. Variants

### Lists of variants - on request

Although the Grundfos CR, CRI, CRN product range offers a number of pumps for different applications, customers require specific pump solutions to satisfy their needs.

Below please find the range of options available for customizing the CR pumps to meet the customers' demands. Contact Grundfos for further information or for requests other than the ones mentioned below.

### Motors

Variant	Description
<b>Explosion-proof motors</b>	For operation in hazardous atmospheres, explosion-proof or dust-ignition-proof motors may be required.
<b>Motors with anti-condensation heating unit</b>	For operation in humid environments motors with built-in anti-condensation heating may be required.
<b>Premium efficient motors</b>	Grundfos offers motors from 1 to 100 HP with a Premium efficiency class.
<b>Different motor brand</b>	If technically possible, Grundfos can fit the pump with a motor of a brand other than the standard. This will normally increase the time of delivery. Alternatively, the pump can be supplied without a motor (motor thrust rating must be checked).
<b>Oversized motor</b>	Ambient temperatures above 104 °F or installation at altitudes of more than 3280 ft above sea level require the use of an oversized motor (that is, derating).
<b>4-pole motors</b>	Grundfos offers standard motors fitted with 4-poles.

### Connections and other variants

Variant	Description
<b>Pipe connections</b>	In addition to the wide range of standard flange connections, a 232 psi DIN standard clamping flange is available. Customized flanges are available according to specifications.
<b>TriClamp connections</b>	TriClamp connections are of a hygienic design with a sanitary coupling for use in the pharmaceutical and food industry.
<b>Electropolished pumps</b>	To substantially reduce the risk of corrosion of the materials. For use in the pharmaceutical and food industry.

### Shaft seals

Variant	Description
<b>Shaft seal with FFKM O-ring material</b>	We recommend shaft seals with FFKM or FXM O-ring material for applications where the pumped liquid may damage the standard O-ring material.
<b>Seal with flush, quench seal</b>	Recommended for applications involving crystallizing, hardening or sticky liquids.
<b>Cool-Top® shaft seal system</b>	Recommended for applications involving extremely high temperatures. No conventional mechanical shaft seal can withstand liquid temperatures of up to 356 °F for any length of time. For that type of application, we recommend Grundfos' unique air-cooled shaft seal system. In order to ensure a low liquid temperature around the standard shaft seal, the pump is fitted with a special air-cooled shaft seal chamber. No separate cooling is required.
<b>Double shaft seal with pressure chamber</b>	Recommended for applications involving poisonous or explosive liquids. Protects the surrounding environment and the people working in the vicinity of the pump. Consists of two seals mounted in a "back-to-back" arrangement inside a separate pressure seal chamber. As the pressure in the chamber is higher than the pump pressure, leakage is prevented. A dosing pump or a special pressure-intensifier generates the seal chamber pressure.
<b>CRN MAGdrive</b>	Magnetically driven pumps for industrial applications. Key applications are industrial processes involving the handling of aggressive, environmental, dangerous or volatile liquids, such as organic compounds and solvents.

### Pumps

Variant	Description
<b>Horizontally mounted pump</b>	For safety or height reasons, certain applications, for instance on ships, require the pump to be mounted in the horizontal position. For easy installation the pump is equipped with brackets that support motor and pump.
<b>Low-temperature pump to -40 °F</b>	Exposed to temperatures down to -40 °F, coolant pumps may require neck-rings with a different diameter in order to prevent impeller drag.
<b>High-speed pump up to 681 psi</b>	For high-pressure applications, a unique pump capable of generating up to 681 psi pressure is available. The pump is equipped with a high-speed motor, type MLE. The direction of rotation is the opposite of that of standard pumps, and the chamber stack is turned upside-down, as a result of which the pumped liquid flows in the opposite direction.
<b>High-pressure pump up to 696 psi</b>	For high-pressure applications, a unique double pump system capable of generating up to 696 psi pressure is available.
<b>Low-NPSH pump (improved suction)</b>	Recommended for boiler-feed applications where cavitation may occur due to poor inlet conditions.
<b>Belt-driven pumps</b>	Belt-driven pumps designed to operate in places with limited space or where no electrical power is available.
<b>Pumps for pharmaceutical and biotechnological applications</b>	CRN pumps designed for applications requiring the sterilization and CIP capability of pipes, valves and pumps. (CIP = Clean-In-Place).



# 14. Submittal data

<b>CR, CRI, CRN</b>  <b>Vertical Multistage Centrifugal Pumps</b>	Company name: Prepared by: Phone number: (    ) Fax number: (    ) Date: <span style="float: right;">Page 1 of:</span> Quote number:
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Client Information	
Project title:	Client name:
Reference number:	Client number:
Client contact:	Client phone number: (    )

Location Information			
For:	Unit:		
Site:	Service:		
Address:	City:	State:	Zip Code:

Application Information							
Operating Conditions				Pumped Fluid			
	Max.	Norm.	Min.	Fluid type:  Fluid Temperature (°F) at designated temperature Specific Gravity Vapor Pressure (psia)  Viscosity (cp)  Fluid ph: Hazardous: Flammable: Other:			
				Rated	Max.	Norm.	Chlorides (ppm): Corrosion/Erosion caused by:
Capacity (gpm)							
Inlet Pressure (psig)							
Outlet Pressure (psig)							
Differential Head (ft)							
Hydraulic Power (HP) at designated capacity							
NPSH Available (ft)							
Service							
Continuous							
Intermittent (starts/day):							

Pump Information	
Model Information from Type Key and Codes:	----> (Example: CR 5-10 A-FGJ-A-E-HQQE )
Quantity Required:	
Minimum required flow rate:	NPSH required at duty point:

Product Guide additional information pages	
Materials page number:	Performance curve page number:
Technical data page number:	Motor data page number:

Motor Information			
HP:	Phase:	Voltage:	Enclosure:

**Custom-built pump information (optional):**

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**Additional Information**

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## 15. Quotation text

### CR, CRI, CRN

Vertical, non-self-priming, multistage, in-line, centrifugal pump for installation in pipe systems and mounting on a foundation.

The pump has the following characteristics:

- Impellers and intermediate chambers are made of AISI \_\_\_\_\_ Stainless steel
- Pump head and base are made of \_\_\_\_\_
- Power transmission is via cast iron split coupling. \_\_\_\_\_
- Pipe connections is via \_\_\_\_\_
- The motor is a \_\_\_\_\_ -phase AC motor

#### Technical

Rated flow rate: \_\_\_\_\_ gpm  
 Rated head: \_\_\_\_\_ Feet  
 Minimum liquid temperature: \_\_\_\_\_ °F  
 Maximum liquid temperature: \_\_\_\_\_ °F  
 Type of shaft seal: \_\_\_\_\_

#### Materials

Material, pump housing: \_\_\_\_\_  
 Material, shaft: AISI \_\_\_\_\_ Stainless steel  
 Material, impeller: AISI \_\_\_\_\_ Stainless steel  
 Material, sleeve: AISI \_\_\_\_\_ Stainless steel  
 Material, seal metal: AISI \_\_\_\_\_ Stainless steel  
 – seal face: \_\_\_\_\_  
 – seal face: \_\_\_\_\_  
 – seal elastomer: \_\_\_\_\_

#### Installation

Maximum ambient temperature: \_\_\_\_\_ °F  
 Max. pressure at stated temp.: \_\_\_\_\_ PSI / °F  
 Standard, pipe connection: \_\_\_\_\_  
 Size, pipe connection: \_\_\_\_\_  
 Rated pressure, pipe connection: \_\_\_\_\_ PSI  
 Frame size for motor: \_\_\_\_\_ NEMA

#### Electrical data

Motor type: \_\_\_\_\_  
 Rated power (P2): \_\_\_\_\_ HP  
 Frequency: \_\_\_\_\_ Hz  
 Rated voltage: \_\_\_\_\_ V  
 Rated current: \_\_\_\_\_ A  
 Service factor: \_\_\_\_\_  
 Starting current: \_\_\_\_\_ A  
 Rated speed: \_\_\_\_\_ RPM  
 Full-load motor efficiency: \_\_\_\_\_ %  
 Insulation class: \_\_\_\_\_

#### Additional

Gross weight: \_\_\_\_\_ Lbs  
 Shipping volume: \_\_\_\_\_  
 Model: \_\_\_\_\_

Quotation text

# 16. Grundfos Product Center

Online search and sizing tool to help you make the right choice.

<http://product-selection.grundfos.com>

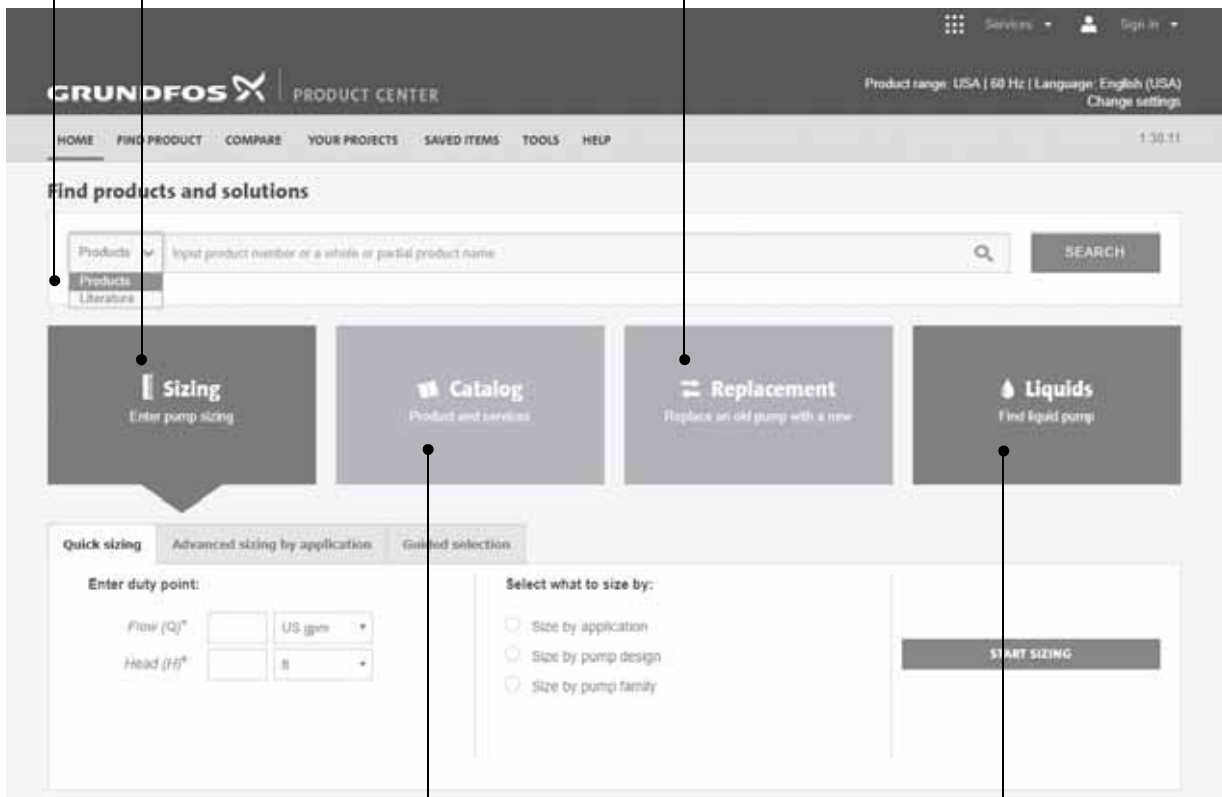


This drop-down menu enables you to set the search function to "Products" or "Literature".

"SIZING" enables you to size a pump based on entered data and selection choices.

"REPLACEMENT" enables you to find a replacement product. Search results will include information on the following:

- the lowest purchase price
- the lowest energy consumption
- the lowest total life cycle cost.



"CATALOGUE" gives you access to the Grundfos product catalogue.

"LIQUIDS" enables you to find pumps designed for aggressive, flammable or other special liquids.

## All the information you need in one place

Performance curves, technical specifications, pictures, dimensional drawings, motor curves, wiring diagrams, spare parts, service kits, 3D drawings, documents, system parts. The Product Center displays any recent and saved items - including complete projects - right on the main page.

## Downloads

On the product pages, you can download installation and operating instructions, data booklets, service instructions, etc. in PDF format.

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ECM: 1271414

**GRUNDFOS Chicago**

3905 Enterprise Court  
P.O. Box 6620  
Aurora, IL 60598-0620  
Phone: +1-630-236-5500  
Fax: +1-630-236-5511

**GRUNDFOS Kansas City**

9300 Loiret Boulevard  
Lenexa, Kansas 6619  
Phone: +1-913-227-3400  
Fax: +1-913-227-3500

**GRUNDFOS CBS**

902 Koomey Road  
Brookshire, TX 77423  
Phone: +1-281-994-2700  
Fax: +1-800-945-4777

[www.grundfos.us](http://www.grundfos.us)

**Canada**

GRUNDFOS Canada  
2941 Brighton Road  
Phone: +1-905-829-9533  
Fax: +1-905-829-9512

[www.grundfos.ca](http://www.grundfos.ca)

**México**

GRUNDFOS México  
Boulevard TLC No. 15  
Parque Industrial Stiva Aeropuerto  
Phone: +011-52-81-8144-4000  
Fax: +011-52-81-8144-4010

[www.grundfos.mx](http://www.grundfos.mx)