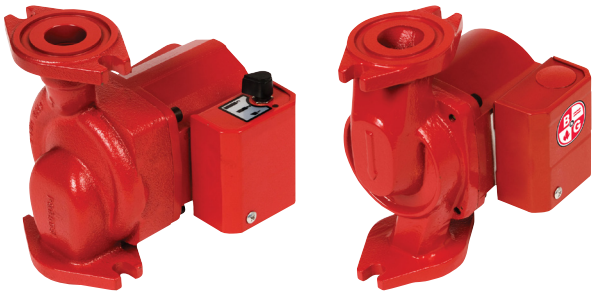


Job	Representative	
Unit tag: _____	Order number: _____	Date: _____
Engineer: _____	Submitted by: _____	Date: _____
Contractor: _____	Approved by: _____	Date: _____



NRF - system lubricated iron body circulators



Description

A flanged in-line system lubricated circulating pump designed specifically for quiet operation in a closed hydronic heating system.

Construction

Pump body: Cast iron
Impeller: Noryl
Shaft: Ceramic
Bearings: Carbon

Maximum working pressure

150 psi (10.3 Bar)

Minimum operating temperature

40°F (5°C)

Maximum operating temperature

- NRF-22: 240°F (115°C)
- NRF-25, NRF-33, NRF-36 and NRF-45: 225°F (107°C)

Schedule

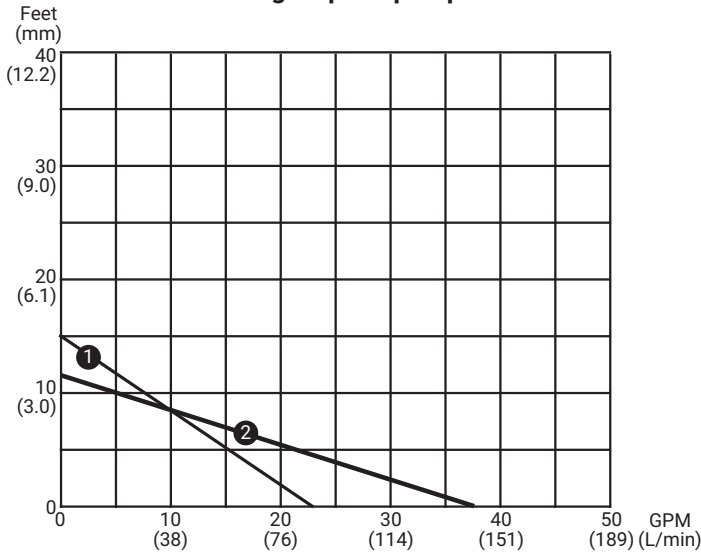
Model number	Part number	Standard 60 cycle 115 volt single phase motor characteristics				Tagging information	Quantity
		Watts	Voltage	F.L. amps	RPM		
NRF-22	103251	92	115	0.80	2940		
NRF-25*	103417	125	115	1.1	2950		
NRF-33	103350	125	115	1.1	2950		
NRF-36*	103400	270	115	2.1	3300		
NRF-45*	103404	270	115	2.1	3300		

*Three-speed pump

System lubricated iron body circulators Model NRF

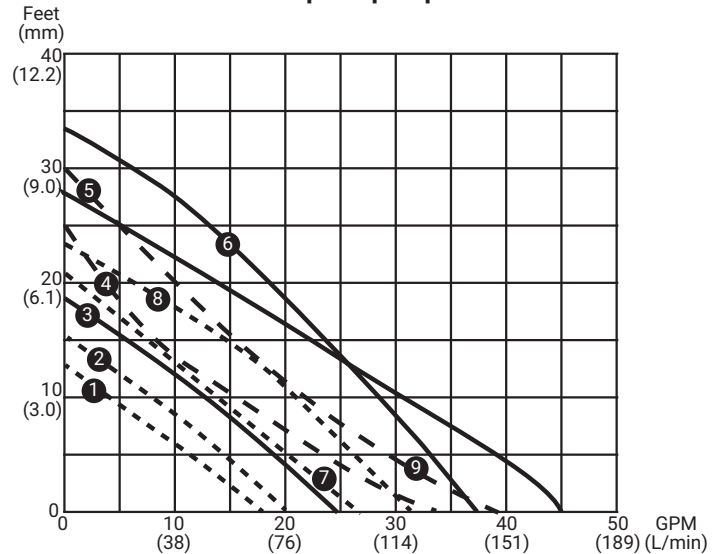
Pump performance curve

Single speed pumps

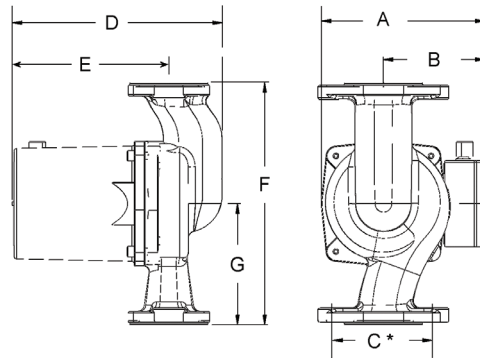


- 1. NRF-22
- 2. NRF-33

3-speed pumps



- 1. NRF-25 speed 1
- 2. NRF-25 speed 2
- 3. NRF-25 speed 3
- 4. NRF-36 speed 1
- 5. NRF-36 speed 2
- 6. NRF-36 speed 3
- 7. NRF-45 speed 1
- 8. NRF-45 speed 2
- 9. NRF-45 speed 3



Dimensions and weights

Model	Part number	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	F in (mm)	G in (mm)	Weight lb (kg)
NRF-22	103251	5-1/8 (130)	3-3/16 (81)	3-3/16 (81)	6-3/16 (157)	4-5/16 (110)	6-3/8 (162)	3-3/16 (81)	9.3
NRF-25*	103417	5-1/8 (130)	3-3/16 (81)	3-3/16 (81)	6-3/16 (157)	4-7/8 (124)	6-3/8 (162)	3-7/8 (98)	10.4
NRF-33	103350	5-1/8 (130)	3-3/16 (81)	3-3/16 (81)	6-3/16 (157)	3-11/16 (94)	6-3/8 (162)	3-3/16 (81)	10.4
NRF-36	103400	5-3/4 (146)	3-9/16 (91)	3-3/16 (81)	6-7/8 (175)	5-3/8 (137)	6-3/8 (162)	3-3/16 (81)	13.1
NRF-45*	103404	5-3/4 (146)	3-9/16 (91)	3-7/16 (87)	7-3/8 (187)	5-1/2 (140)	8-1/2 (216)	4-1/4 (108)	14.5

Dimensions are subject to change. Not to be used for construction purposes unless certified.

Companion flanges available in sizes: 3/4", 1", 1-1/4" and 1-1/2"

System lubricated iron body circulators Model NRF

Typical specifications

The contractor shall furnish and install in-line circulating pumps as illustrated on the plans and in accordance with the following specifications:

1. The pumps shall be of the horizontal system lubricated type specifically designed and guaranteed for quiet operation.
2. Pump to be suitable for _____°F (_____°C) [Select one: 240°F (115°C) for NRF-22; 225°F (107°C) for NRF-25, NRF-33, NRF-36 and NRF-45] operation at 150 psig (10.3 bar) working pressure.
3. The pumps shall have a ceramic shaft supported by carbon bearings. Bearings are to be lubricated by the circulating fluid.
4. Motor stator to be isolated from circulating fluid through use of stainless steel can. Rotor to be sheathed in stainless steel.
5. Motors shall be non-overloading at any point on the pump curve. (Select one: NRF-22, NRF-25, NRF-33) motors to have built-in impedance protection. (Select one: NRF-36, NRF-45) motors to have built-in thermal protection.
6. [Select one: NRF-25, NRF-36 or NRF-45] is available with 3-speed, thermally protected motor covering a wide range of hydraulic capabilities.
7. The pump manufacturer shall be ISO-9001 certified.

Pumps to have a capacity of _____ GPM at _____ foot head when powered by 115 volt, 60 cycle, single phase electrical supply.

All pumps are to be Bell & Gossett Model NRF-_____.

All pumps are to be Xylem - Bell & Gossett Model _____.

