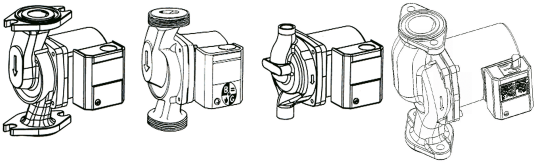


<b>JOB:</b>	<b>REPRESENTATIVE:</b>	
<b>UNIT TAG:</b>	<b>ORDER NO.</b>	<b>DATE:</b>
<b>ENGINEER:</b>	<b>SUBMITTED BY:</b>	<b>DATE:</b>
<b>CONTRACTOR:</b>	<b>APPROVED BY:</b>	<b>DATE:</b>



**Lead-Free\*\* Bronze and Stainless Steel Bodied System Lubricated Circulators**



**DESCRIPTION**

A series of in-line wet rotor circulation pumps designed specifically for quiet operation in open (potable) water systems. These pumps have lead-free\*\* bronze or stainless steel bodies.

Automatic Timer and Aquastat accessories are available. (See Submittal A-128A for details).

**CONSTRUCTION MATERIALS**

Pump Body: NBF: Bronze  
 SSF: Stainless Steel  
 Bearings: Carbon  
 Impeller: Noryl  
 Shaft: Ceramic

**OPERATING DATA**

Maximum Working Pressure: 150 psi (10.3 Bar)  
 Minimum Operating Temperature: 40°F (5°C)  
 Maximum Operating Temperature  
 NBF-25, NBF-33, NBF-36, NBF-45: 225°F (107°C)  
 All Others: 230°F (110°C)

MODEL NUMBER	PART NUMBER	CONNECTION	APPROX. SHPG. WT. Lbs. (Kg)	STANDART 60 CYCLE 115 VOLT SINGLE PHASE			TAGGING INFORMATION	QUANTITY
				WATTS	F.L. AMPS	RPM		
NBF-8S/LW	103257LF	1/2" Sweat	9.0 (4.1)	39	0.38	2800		
NBF-9U/LW	103258LF	Union (See Following Page)	9.3 (4.2)	41	0.40	2800		
SSF-9U/LW	103360LF	Union (See Following Page)	9.3 (4.2)	41	0.40	2800		
NBF-10S/LW	103259LF	1/2" Sweat	9.0 (4.1)	52	0.46	2800		
NBF-12U/LW	103261LF	Union (See Following Page)	9.3 (4.2)	55	0.48	2800		
SSF-12U/LW	103361LF	Union (See Following Page)	9.3 (4.2)	55	0.48	2800		
NBF-12F/LW	103260LF	Flange 3/4, 1, 1-1/4, 1-1/2	9.5 (4.3)	55	0.48	2800		
SSF-12F/LW	103358LF	Flange 3/4, 1, 1-1/4, 1-1/2	9.5 (4.3)	55	0.48	2800		
NBF-18S	103316LF	1/2" Sweat	9.0 (4.1)	90	0.74	3000		
NBF-22U	103255LF	Union (See Following Page)	9.3 (4.2)	92	0.80	2940		
SSF-22U	103362LF	Union (See Following Page)	9.3 (4.2)	92	0.80	2940		
NBF-22	103252LF	Flange 3/4, 1, 1-1/4, 1-1/2	9.5 (4.3)	92	0.80	2940		
SSF-22	103357LF	Flange 3/4, 1, 1-1/4, 1-1/2	9.5 (4.3)	92	0.80	2940		
NBF-25*	103418LF	Flange 3/4, 1, 1-1/4, 1-1/2	10.4 (4.7)	125	1.10	2950		
NBF-33	103351LF	Flange 3/4, 1, 1-1/4, 1-1/2	10.4 (4.7)	125	1.10	2950		
NBF-36*	103401LF	Flange 3/4, 1, 1-1/4, 1-1/2	13.1 (6.0)	270	2.30	3300		
NBF-45*	103405LF	Flange 1, 1-1/4, 1-1/2	14.5 (6.6)	270	2.30	3300		

\*3-speed circulators

\*\*Contains less than 0.25% lead content on wetted surface

**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) [choose one: 225°F (107°C) for NBF-25, NBF-33, NBF-36, NBF-45 or 230°F (110°C) for all other circulators] 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.

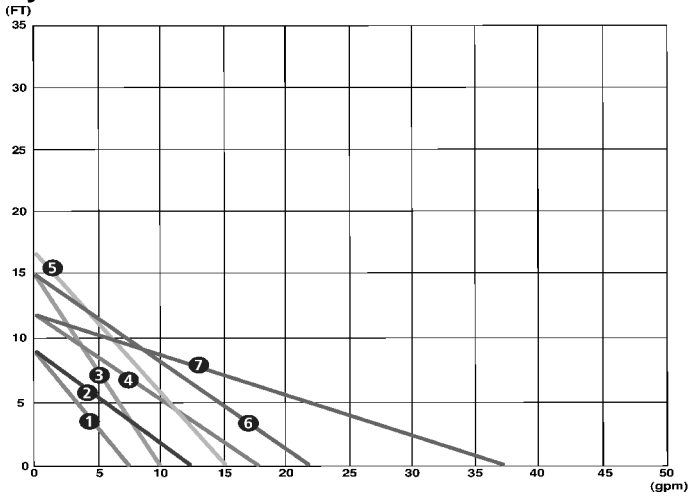
4. Pump body shall be lead-free bronze for NBF circulators or stainless steel for SSF circulators.
5. Motor stator to be isolated from circulating fluid through use of stainless steel can. Rotor to be sheathed in stainless steel.
6. Motors shall be non-overloading at any point on the pump curve. NBF-36 & NBF-45 to have built-in thermal protection. All other motors to have built-in impedance protection.
7. NBF-25 has an optional check valve.

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

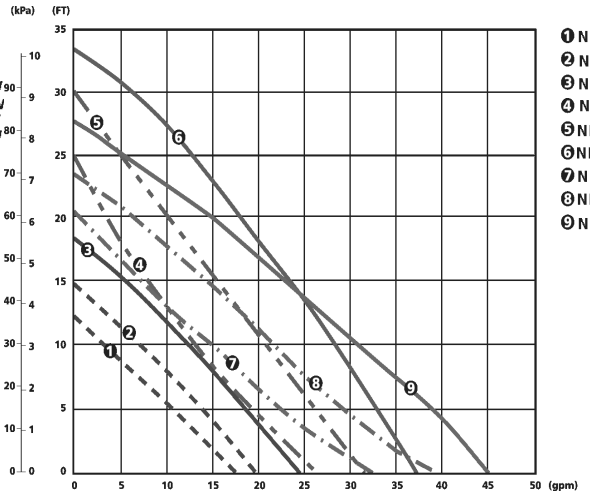
All pumps are to be ITT Industries - Bell & Gossett Model \_\_\_\_\_.

# System Lubricated Circulators

A-127K



- 1 NBF-8S/LW
- 2 NBF-9U/LW  
SSF-9U/LW
- 3 NBF-10S/LW<sup>90</sup>
- 4 NBF-12U/LW  
SSF-12U/LW  
NBF-12F/LW<sup>80</sup>  
SSF-12F/LW
- 5 NBF-18S
- 6 NBF-22  
SSF-22  
NBF-22U  
SSF-22U
- 7 NBF-33

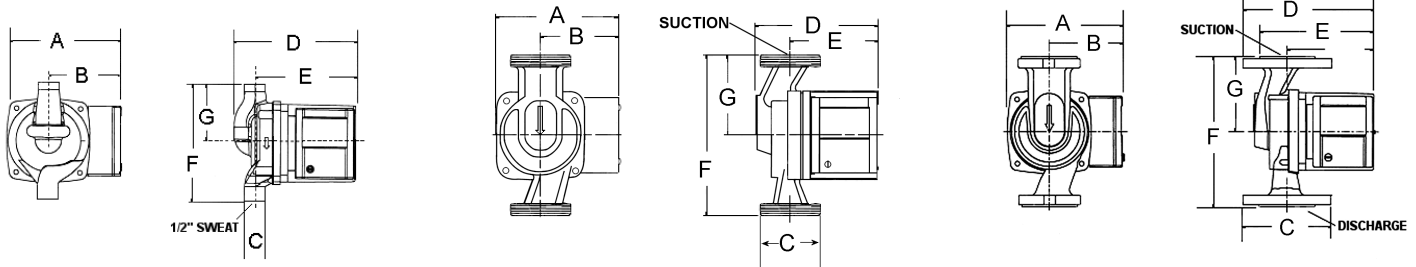
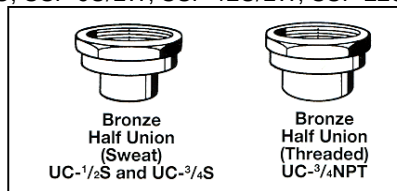


- 1 NBF-25 Speed 1
- 2 NBF-25 Speed 2
- 3 NBF-25 Speed 3
- 4 NBF-36 Speed 1
- 5 NBF-36 Speed 2
- 6 NBF-36 Speed 3
- 7 NBF-45 Speed 1
- 8 NBF-45 Speed 2
- 9 NBF-45 Speed 3

## HALF UNION CONNECTIONS

For NBF-9U/LW, NBF-12U/LW, NBF-22U, SSF-9U/LW, SSF-12U/LW, SSF-22U

MODEL NUMBER	PART NUMBER	DESCRIPTION (SETS OF 2)
UC-1/2S	113203LF	1/2" Bronze Union Sweat
UC-3/4S	113201LF	3/4" Bronze Union Sweat
UC-3/4NPT	113202LF	3/4" Bronze Union NPT Female



MODEL	PART NUMBER	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	F in (mm)	G in (mm)
NBF-8S/LW	103257LF	4-7/8 (124)	3-3/16 (81)	1/2 (13)	5-7/32 (132)	4-9/32 (109)	5 (127)	2-1/2 (63)
NBF-9U/LW	103258LF	4-7/8 (124)	3-3/16 (81)	1-1/4 (32)	5-1/16 (129)	3-11/16 (93)	6-1/8 (156)	3-1/16 (78)
SSF-9U/LW	103360LF	4-7/8 (124)	3-3/16 (81)	1-1/4 (32)	5-1/16 (129)	3-11/16 (93)	6-1/8 (156)	3-1/16 (78)
NBF-10S/LW	103259LF	4-7/8 (124)	3-3/16 (81)	1/2 (13)	5-7/32 (132)	4-9/32 (109)	5 (127)	2-1/2 (63)
NBF-12U/LW	103261LF	4-7/8 (124)	3-3/16 (81)	1-1/4 (32)	5-1/16 (129)	3-11/16 (93)	6-1/8 (156)	3-1/16 (81)
SSF-12U/LW	103361LF	4-7/8 (124)	3-3/16 (81)	1-1/4 (32)	5-1/16 (129)	3-11/16 (93)	6-1/8 (156)	3-1/16 (78)
NBF-12F/LW	103260LF	4-7/8 (124)	3-3/16 (81)	3-3/16 (81)	5-9/16 (141)	3-11/16 (93)	6-3/8 (162)	3-3/16 (82)
SSF-12F/LW	103358LF	4-7/8 (124)	3-3/16 (81)	3-3/16 (81)	5-9/16 (141)	3-11/16 (93)	6-3/8 (162)	3-3/16 (82)
NBF-18S	103316LF	4-7/8 (124)	3-3/16 (81)	1/2 (13)	5-7/32 (132)	4-9/32 (109)	5 (127)	2-1/2 (63)
NBF-22U	103255LF	4-7/8 (124)	3-3/16 (81)	1-1/4 (32)	5-1/16 (129)	3-11/16 (93)	6-1/8 (156)	3-1/16 (78)
SSF-22U	103362LF	4-7/8 (124)	3-3/16 (81)	1-1/4 (32)	5-1/16 (129)	3-11/16 (93)	6-1/8 (156)	3-1/16 (78)
NBF-22	103252LF	4-7/8 (124)	3-3/16 (81)	3-3/16 (81)	5-9/16 (141)	3-11/16 (93)	6-3/8 (162)	3-3/16 (82)
NBF-25*	103418LF	5-1/8 (130)	3-3/16 (81)	3-3/16 (81)	6-3/16 (157)	4-7/8 (124)	6-3/8 (162)	2-1/2 (63)
NBF-33	103351LF	4-7/8 (124)	3-3/16 (81)	3-3/16 (81)	6-3/16 (157)	3-11/16 (94)	6-3/8 (162)	3-3/16 (82)
NBF-36*	103401LF	5-3/4 (146)	3-9/16 (91)	3-3/16 (81)	6-3/16 (157)	5-3/8 (137)	6-3/8 (162)	3-3/16 (82)
NBF-45*	103405LF	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)

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"

\* 3-speed circulators