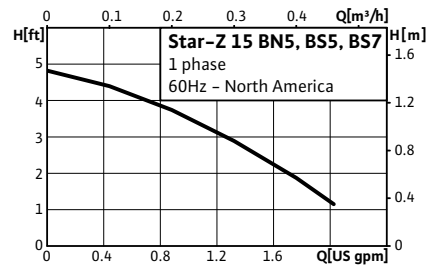


Standard Circulating Pumps

Product review: Wilo-Star-Z

Range: Wilo-Star-Z



> Single head pumps:

- Seal-less magnetic drive circulator with union or solder connection

> Applications:

- Domestic hot water re-circulation systems

> Special features:

- NSF approved for drinking water applications
- Pump is delivered together with a 6' power cord with three pronged electrical plug

> Product advantages:

- The Star-Z 15 are compact, ready-to-install pumps with ½" union NPT type threading (model Star-Z 15 BN5) or with sweat pipe connections (model Star-Z 15 BS5 / BS7).

Standard Circulating Pumps

Product review: Wilo-Star-Z



Equipment/function Wilo-Star-Z		
	Wilo-Star-Z...	
	15 BN	15 BS
Manual functions		
Setting the speed stages	1	1
Equipment/Scope of delivery		
Pump	•	•
Impedance protected motor requiring no external overload protection	•	•
6' power cord with three pronged electrical plug	•	•
Gaskets for union connection	•	•
Installation and operating instructions	•	•

• = available, — = not available

Standard Circulating Pumps

Product review: Wilo-Star-Z

Technical data Wilo-Star-Z

	Wilo-Star-Z...	
	15 BN5	15 BS5, BS7
Approved fluids (other fluids on request)		
Heating water	–	–
Water/glycol mixtures (max. 1:1; mixtures with more than 20 % glycol require reassessment of the hydraulic criteria)	–	–
Domestic hot water	•	•
Performance		
Max. head [ft]	4.8	4.8
Max. head [m]	1.45	1.45
Max. rate of flow [USGPM]	2.0	2.0
Max. rate of flow [m³/h]	0.45	0.45
Acceptable field of application		
Temperature range for application in heating and cooling installations	–	–
Temperature range for open circulating systems [°F]	–	–
Temperature range in domestic hot water systems [°F]	68 °F (20 °C) up to 150 °F (65 °C) (continuous operation) 68 °F (20 °C) up to 160 °F (70 °C) (intermittent operation)	
Max. ambient temperature [°F]	105 °F (40 °C)	105 °F (40 °C)
Max. operating pressure p _{max} [psi]	145 psi (10 bar)	145 psi (10 bar)
Pipe connections		
Residential 2 bolt flanged	–	–
Residential 2 bolt flanged rotated 90°	–	–
Union connection	•	–
Internal sweat	–	•
Electrical connections		
Power supply 1~ [V]	115	115
Power supply 3~ [V]	–	–
Frequency [Hz]	60	60

• = available, – = not available

Standard Circulating Pumps

Product review: Wilo-Star-Z



Technical data Wilo-Star-Z

	Wilo-Star-Z...	
	15 BN5	15 BS5, BS7
Motor/Electronics		
Power electronics	—	—
Degree of protection	IP 42	IP 42
Insulation class	F	F
Materials		
Pump housing	Ecobrase	Ecobrase
Impeller	Plastic PPE (Noryl)	Plastic PPE (Noryl)
Shaft	Stainless steel X90 CrMo18 (1.4112)	Stainless steel X90 CrMo18 (1.4112)
Bearing	Epoxy-impregnated carbon	Epoxy-impregnated carbon
Minimal static inlet pressure at pump suction port [psi] to avoid cavitation at fluid temperatures		
105 °F (40 °C)	0.71	0.71
150 °F (65 °C)	2.84	2.84

• = available, — = not available

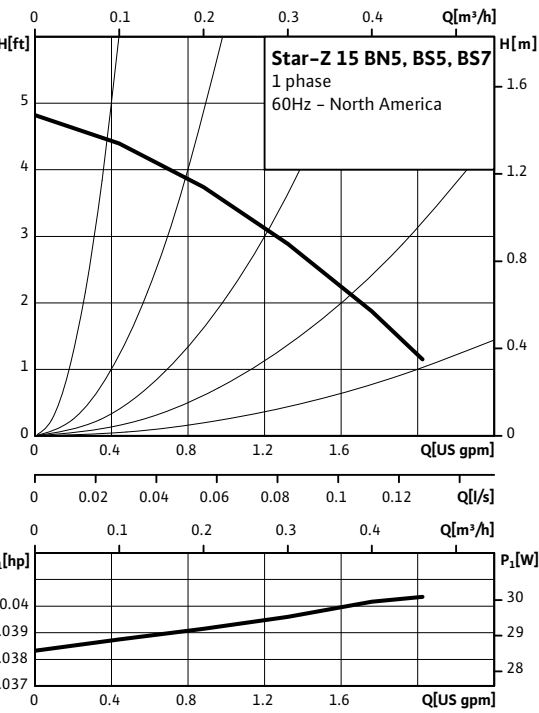
Standard Circulating Pumps

Wilo-Star-Z

Pump curves

Wilo-Star-Z 15 BN5, BS5, BS7

$\Delta p-v$ (variable)



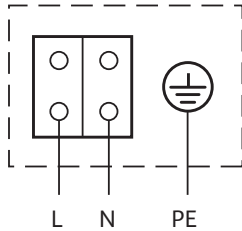
Standard Circulating Pumps

Wilo-Star-Z



Wiring diagrams, motor data

Wiring diagram



Note:

The pump is delivered together with a three pronged 115 V power cable which should be plugged into a standard electrical socket. The terminal box should not be opened for electrical connection.

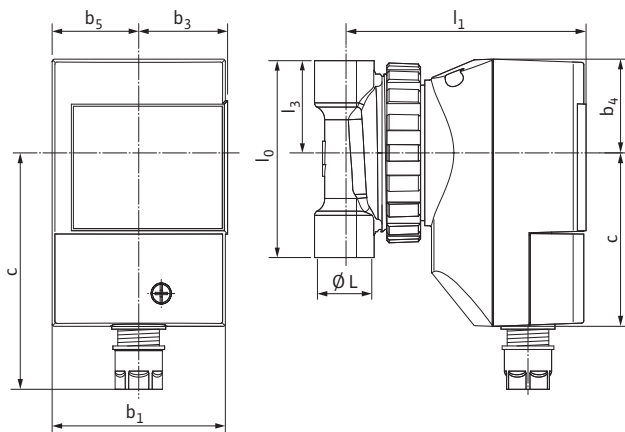
Motor data							
Wilo-Star-Z...	Speed	Power consumption		Current 1~115 V	Current 1~230 V	Motor protection	Screwed cable gland
	n	P ₁		I		–	–
	[rpm]	[hp]	[W]	[A]		–	[in]
15 BN5	3100	0,043	32	0.77	–	integrated	–
15 BS5	3100	0,043	32	0.77	–	integrated	–
15 BS7	3100	0,043	32	0.77	–	integrated	–

Standard Circulating Pumps

Wilo-Star-Z

Dimensions, weights

Dimension drawing



Dimensions, weights

Wilo-Star-Z...	Pipe connection		Pump dimensions							
	Ø L		l ₀		l ₁		l ₃		b ₁	
	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]
15 BN5	1/2 NPT	15	3 1/8	79	4 3/16	106.7	1 7/16	37	3 1/16	77
15 BS5	1/2	16	3 1/8	79	4 3/16	106.7	1 7/16	37	3 1/16	77
15 BS7	3/4	22	3 1/8	79	4 3/16	106.7	1 7/16	37	3 1/16	77

Dimensions, weights (continuation)

Wilo-Star-Z...	Pump dimensions										Weight approx. net	
	b ₃		b ₄		b ₅		c		d		-	
	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[lbs]	[kg]
15 BN5	1 9/16	39.5	1 9/16	40	1 1/2	38.5	2 15/16	74	4	101	4.10	1.86
15 BS5	1 9/16	39.5	1 9/16	40	1 1/2	38.5	2 15/16	74	4	101	4.03	1.83
15 BS7	1 9/16	39.5	1 9/16	40	1 1/2	38.5	2 15/16	74	4	101	4.14	1.88