

ASTRO 2 | THREE SPEED CIRCULATORS | SUBMITTAL

File No: 10.584
Date: NOVEMBER 20, 2012
Supersedes: 10.584
Date: JULY 23, 2012

Job: _____ Representative: _____

Ordered by: _____ Date: _____
Engineer: _____ Submitted by: _____ Date: _____
Contractor: _____ Approved by: _____ Date: _____

TECHNICAL DATA

Certification: ETL listed for US and Canada (conforms to UL STD.778 certified to CSA STD. C22.2 NO.108-01) NSF 372 (for lead free bronze and stainless steel models)

Flow range: 0 to 64 USgpm (0 to 4.04 L/s)

Head range: 0 to 31.0 feet (0 to 9.45 m)

Maximum fluid temperature: 230°F (110°C)**

Maximum working pressure: 150 psi (1034 kPa)

MATERIALS OF CONSTRUCTION

Pump body: Cast iron (closed systems)
Lead free bronze* (open systems)
Stainless steel* (open systems)

Impeller: PA66

Shaft: Ceramic

Bearings: Ceramic

Gasket material: EPDM

****NOTE:** For open systems, it is recommended that the fluid temperature be less than 150°F (66°C) to avoid precipitation of calcium.

DIMENSIONS AND WEIGHTS

LEAD FREE BRONZE	A	B	C	D	E	F	CONNECTION TYPE & SIZE	WEIGHT
Astro 225Bs ½" SWT	5.00 (127)	5.00 (127)	4.13 (105)	—	3.00 (76)	—	Sweat - ½"	6.0 (2.7)
Astro 225Bs ¾" SWT	5.00 (127)	5.00 (127)	4.13 (105)	—	3.00 (76)	—	Sweat - ¾"	6.0 (2.7)
STAINLESS STEEL**	A	B	C	D	E	F	CONNECTION TYPE & SIZE	WEIGHT
Astro 220ssu	6.00 (152)	5.00 (127)	4.00 (102)	—	3.00 (76)	—	Union - 1¼" NPSM	6.5 (2.9)
Astro 225ssu	6.00 (152)	5.00 (127)	4.00 (102)	—	3.00 (76)	—	Union - 1¼" NPSM	6.5 (2.9)
Astro 230ss	6.38 (162)	6.00 (150)	4.00 (102)	4.00 (102)	3.00 (76)	3.25 (80)	Flange - (2) ½" dia. bolt holes	8.0 (3.6)
Astro 250ss	6.38 (162)	6.00 (150)	4.00 (102)	4.00 (102)	3.00 (76)	3.25 (80)	Flange - (2) ½" dia. bolt holes	8.0 (3.6)
CAST IRON	A	B	C	D	E	F	CONNECTION TYPE & SIZE	WEIGHT
Astro 230ci	6.38 (162)	6.00 (150)	4.00 (102)	4.00 (102)	3.00 (76)	3.25 (80)	Flange - (2) ½" dia. bolt holes	8.0 (3.6)
Astro 230ci-R	6.38 (162)	5.63 (137)	4.00 (102)	4.00 (102)	3.00 (76)	3.25 (80)	Flange - (2) ½" dia. bolt holes	8.0 (3.6)
Astro 250ci	6.38 (162)	6.00 (150)	4.00 (102)	4.00 (102)	3.00 (76)	3.25 (80)	Flange - (2) ½" dia. bolt holes	8.0 (3.6)
Astro 250ci-R	6.38 (162)	5.63 (137)	4.00 (102)	4.00 (102)	3.00 (76)	3.25 (80)	Flange - (2) ½" dia. bolt holes	8.0 (3.6)
Astro 280ci	6.50 (165)	6.37 (162)	4.87 (124)	4.00 (102)	3.50 (90)	3.13 (80)	Flange - (2) ½" dia. bolt holes	10.1 (4.6)
Astro 290ci	8.50 (216)	6.65 (169)	5.20 (132)	4.00 (102)	3.50 (90)	3.45 (88)	Flange - (2) ½" dia. bolt holes	13.2 (6.0)

NOTE: All dimensions are in inches (mm) and weights in lbs (kg).

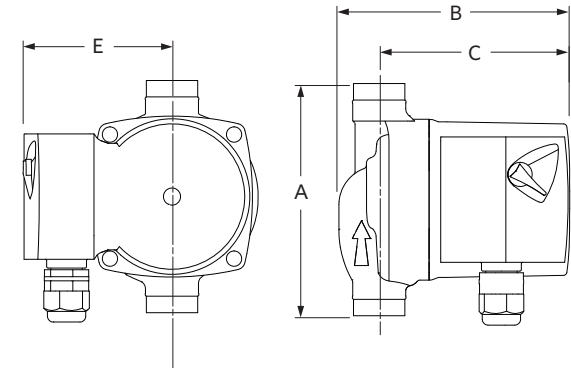
* Certified <0.25 weighted average percent lead and complies with California Health and Safety Code Section 116875 (commonly known as AB 1953).

MOTOR DATA

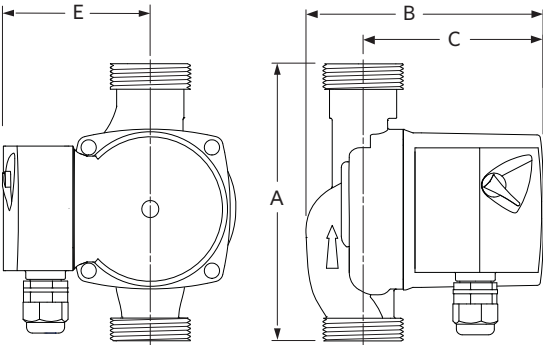
MODEL	SPEED	FULL LOAD AMP DRAW (A)	NOMINAL POWER (W)
ASTRO 220SSU	3	0.29	33
	2	0.27	
	1	0.20	
ASTRO 225BS	3	0.64	75
	2	0.49	
	1	0.38	
ASTRO 225SSU	3	0.69	83
	2	0.55	
	1	0.43	
ASTRO 230SS/CI/CI-R	3	0.81	97
	2	0.58	
	1	0.45	
ASTRO 250SS/CI/CI-R	3	0.98	117
	2	0.79	
	1	0.65	
ASTRO 280CI	3	1.90	218
	2	1.80	
	1	1.50	
ASTRO 290CI	3	1.90	218
	2	1.60	
	1	1.40	

Motor: 60HZ single phase
Volts: 115V

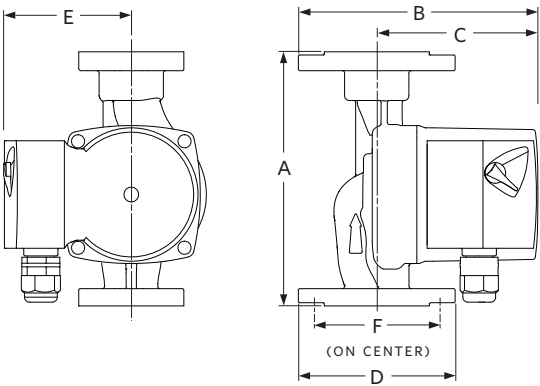
ASTRO 225BS



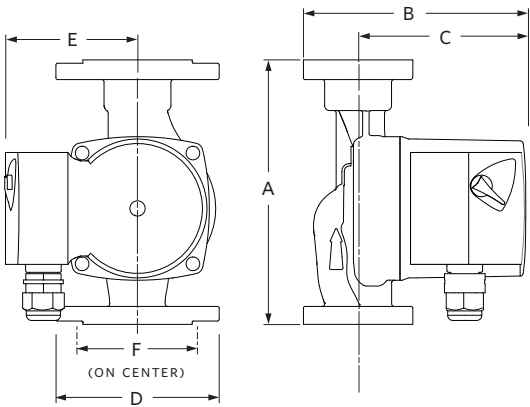
ASTRO 220SSU & 225SSU



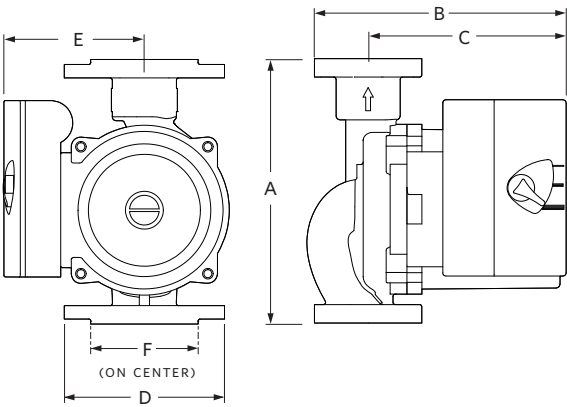
ASTRO 230SS/CI & 250SS/CI



ASTRO 230CI-R & 250CI-R



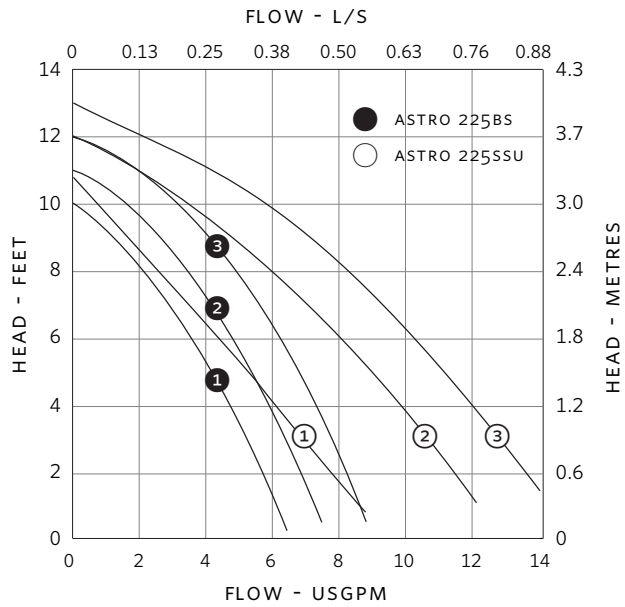
ASTRO 280CI & 290CI



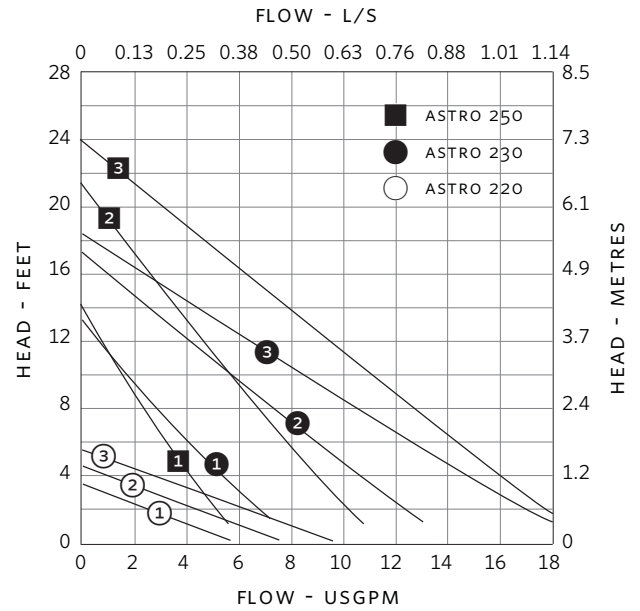
- HARDWARE KIT**
Companion flange kit (contain two (2) flanges hardware and gaskets)
Cast iron: 0.75", 1", 1.25", 1.5"
Bronze: 0.75", 1", 1.25", 1.5"
Union fitting (contain two (2) half unions and gaskets)
1.25" NPSM to:
Brass: 0.5" sweat, 0.75" sweat, 0.75" FNPT

PERFORMANCE CURVES

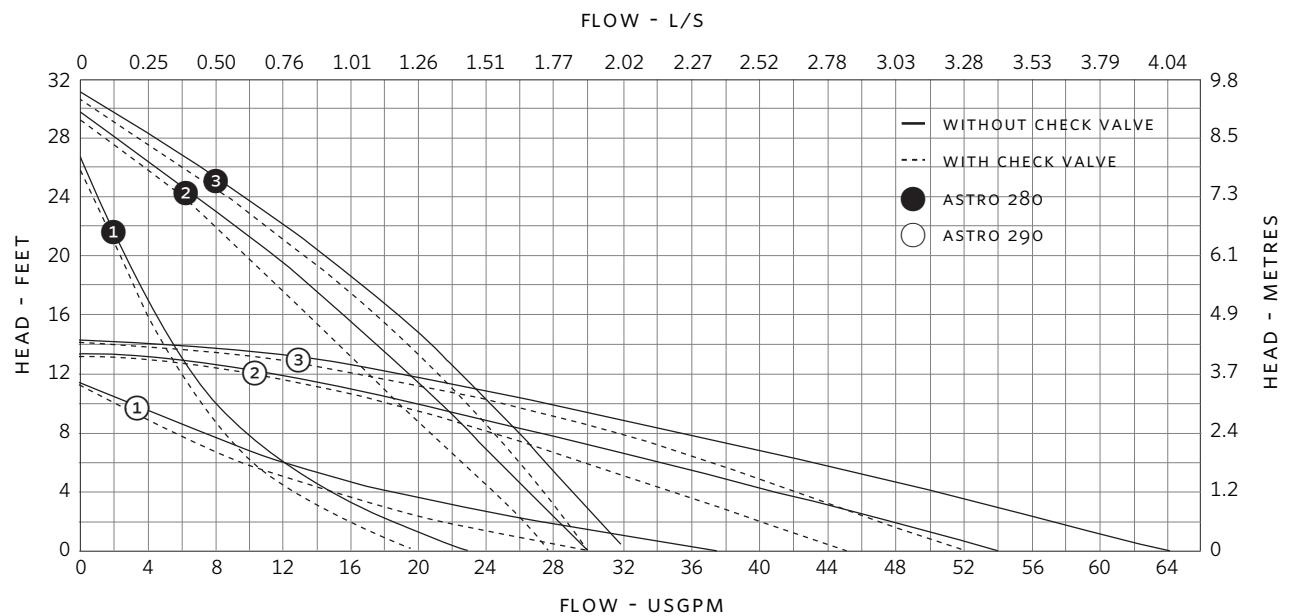
ASTRO 225BS, 225SSU



ASTRO 250, 230, 220



ASTRO 280, 290



TORONTO
+1 416 755 2291

BUFFALO
+1 716 693 8813

BIRMINGHAM
+44 (0) 8444 145 145

MANCHESTER
+44 (0) 8444 145 145

BANGALORE
+91 (0) 80 4906 3555

SHANGHAI
+86 21 3756 6696

ARMSTRONG INTEGRATED
ESTABLISHED 1934

ARMSTRONGINTEGRATED.COM