



SOLUTION OUTLINE

FILE NO: 10.125 DATE: OCTOBER 2012 UPERSEDES: 10.125

UNMATCHED ERFORMANCE

Armstrong Astro 2 threespeed circulators provide unmatched performance over a wide range of head and flow requirements.



he three-speed design allows users to match the requirements of an installation exactly. It also helps with:

Reduced Inventory The complete range of 12 Astro 2 three-speed circulators replaces 128 models of competitors' pumps.

Adaptability After a circulator is installed you might need to change the performance to accommodate:

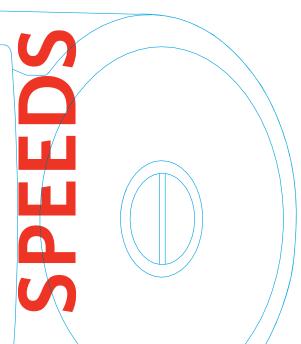
• Over/under estimated system resistance in the original design

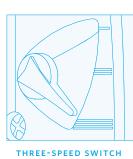
- Increased number of zones due to a building addition
- Addition of system elements such as an indirect hot water tank or spa

With Astro 2 three-speed units installed you can easily adjust the operating speed to handle these changed performance requirements.

Astro 2 circulators (except sweat connection models) include a removable check valve that eliminates the need for additional check valves in the system. For replacement installations, the check valve can be removed as required.











Key features

COMPLIANCE WITH LEAD-FREE REGULATIONS

Lead-free bronze and stainless steel models of Astro 2 certified <0.25 weighted average percent lead (NSF 372) and complies with California Health and Safety Code Section 116875 (commonly known as AB1953).

INTERNATIONAL CODE COMPLIANCE

Astro 2 units are ETL listed for the US and Canada and conform to UL std. 778 and Canadian electrical safety standards CSA std. C22.2 No. 108-01.

THREE-SPEEDS

Reduce your inventory with a variety of performance curves. Twelve pumps replace 128 circulators. Correct design issues in the field by adjusting the circulator output.

REMOVABLE CHECK VALVE

Reduce costs by eliminating multiple system check valves. Helps prevent reverse flow and induced heat migration.

EASY CONNECTION

Models are available with union, sweat or flange connections. Models are also available with rotated flanges for installation in tight locations, where clearance is an issue.

TECHNICAL DATA

Flow range: 0 - 64 USgpm / 0 - 4.04 L/S Head range: 0 - 31 FEET / 0 - 9.45 METERS

Motor: 6онz single phase

Volts: 115V

Max. fluid temperature*: 230°F / 110°C

Max. working pressure: 150 PSI / 1034 kPa

*Since water conditions can vary with geographical location (i.e. amount and type of dissolved solids) it is recommended that the operating temperature of the fluid for open (potable) systems be kept as low as possible (i.e. below 150°F or 65°C) to avoid precipitation of calcium.

MATERIALS OF CONSTRUCTION

Pump body: • cast iron (closed system)

lead-free bronze (open system)**

stainless steel (open system)**

Impeller: polyether imide (PEI) Shaft: ceramic

Bearings: ceramic Gasket material: EPDM

**Certified <0.25 weighted average percent lead (NSF 372) and complies with California Health and Safety code section 116875 (commonly known as AB1953).

THE CHECK IS INSIDE



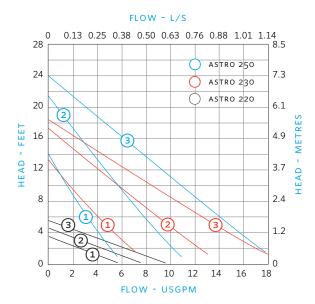
The integral check valve prevents reverse direction flow without the need to install a discrete check valve, saving capital cost and installation labour.

PERFORMANCE CURVES

ASTRO 225BS, 225SSU

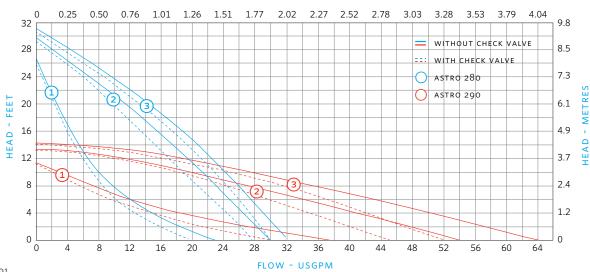
FLOW - L/S 0.38 0.50 0.63 0.76 0.88 0.13 0.25 ASTRO 225BS 12 3.7 ASTRO 225SSU 3.0 10 HEAD - FEET 2.4 6 1.8 (1) 4 1.2 2 0.6 0 0 10 12 0 14 FLOW - USGPM

ASTRO 220, 230, 250



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

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