



## DESIGN ENVELOPE

### COMPASS high-efficiency wet-rotor circulators

NSF-372\* | COMPLIES WITH  
EER ≤ 0.22

YEAR  
WARRANTY

## SOLUTION OUTLINE

FILE NO: 10.19  
DATE: SEPTEMBER 2017

SUPERSEDES: 10.19  
DATE: MAY 2016



our choice of circulator has a surprisingly large effect on your building project.

**T**he right circulator will generate energy savings for years. Advanced variable speed technology increases circulator efficiency; even though the circulator and motor are small, the energy savings can add up. Homeowners will appreciate the reduced operating costs and reduced carbon footprint.

For contractors, a well-designed circulator is easy to install and will reduce or eliminate customer complaints. For wholesalers and contractors, a circulator that covers a broad range of operating requirements makes the selection process easier, leaving more time for serving customers.

Inventory costs are also important. The right choice of circulator lets you serve more customers and installations with only one model. Keeping fewer circulator models on your shelf, or in your trucks, cuts your inventory investment and your operating costs.

**ENERGY SAVINGS**

**UP TO 70%**



Easy access for wiring the terminal block

**FOR DETAILS ON**

- Design Envelope selections
- Demand-based variable speed operation
- Sensorless technology

please see the [Design Envelope solution outline](#)  
(FILE NO. 100.11)



kWh

**DESIGN ENVELOPE**

**D**esign Envelope is a revolutionary technology pioneered by Armstrong that offers simplified circulator selection, lowest installed cost, expanded application flexibility and optimized energy efficiency. Armstrong Design Envelope technology, previously offered in Armstrong pumps from one horsepower to 450 hp, is now available in Armstrong circulators. Design Envelope technology augments the value of Armstrong circulators through increased operating range and sensorless, demand-based control.

## KEY BENEFITS

**R**esponding to the need for a better circulator, Armstrong offers COMPASS, an advanced solution that benefits everyone involved in a heating system project. By selecting the right circulator, wholesalers, homeowners, and contractors can all come out ahead.

COMPASS circulators incorporate advanced functionality to assist with your construction and service projects and improve the long-term enjoyment of the building spaces you help create.

Easy sizing and selection of the COMPASS circulator simplifies your job as a wholesaler or contractor and reduces your inventory requirements.

In the field, the front mounted terminal block reduces installation time.

The COMPASS “auto” algorithm intelligently adapts to system demand, so you get the right setup every time and your customers enjoy comfortable room temperatures.

Ultimately, COMPASS circulators provide reliable performance, backed by a five-year warranty, with noticeable reductions in energy consumption and operating costs.

## KEY FEATURES



**Broad operating range, producing up to 20 feet of head and 20 USgpm flow**

**Design Envelope technology providing sensorless demand-based control**

**Efficient motor technology and intelligent variable speed operation**

**Easy to read display**

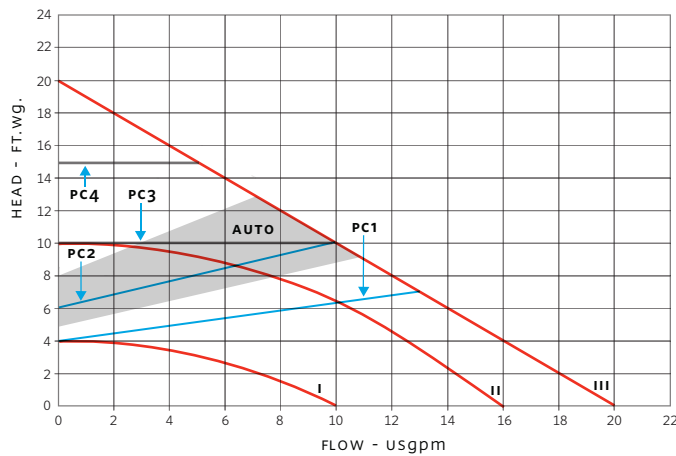
**Eight different modes of operation providing versatility to cover the performance of a wide range of fixed speed circulators**

**Large wiring chamber and front-mounted terminal block**

# PERFORMANCE

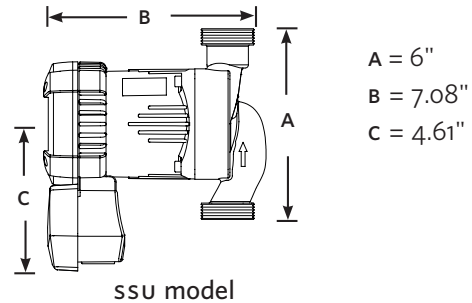
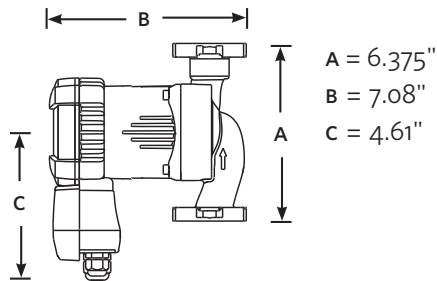
POWER RANGE 5W-45W	
MAX FLOW RATE 20 USgpm	
MAX HEAD PRESSURE 20 ft	
MODEL	ITEM NO.
COMPASS 20 -20CI	180203-606 (flange)
*COMPASS 20-20SS	180203-607 (flange)
COMPASS 20-20SSU	180203-604 (union)

## COMPASS PERFORMANCE CURVES



## EIGHT MODE OPTIONS

- AUTO Circulator adapts to system demand over time.
- PC1 Lowest proportional-pressure curve
- PC2 Highest proportional-pressure curve
- PC3 Lowest constant-pressure curve
- PC4 Highest constant pressure curve
- III Highest constant speed
- II Medium constant speed
- I Lowest constant speed



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