



**DESIGN
ENVELOPE**



COMPASS[®]

**Intelligent High Efficiency
Design Envelope**

COMPASS R CERTIFIED TO NSF-61 & 372
COMPASS H CERTIFIED TO NSF-372

**Lowest operating cost with our
Design Envelope Technology**

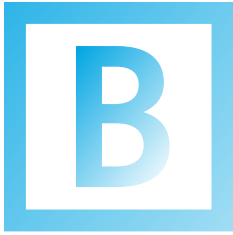
**Ideally suited for both new and
retrofit installations**

**YEAR 2¹/₂
WARRANTY**

SOLUTION OUTLINE

FILE NO: 10.19
DATE: JUNE 2023

SUPERSEDES: 10.19
DATE: JANUARY 2023



uilt-in Intelligence and ECM efficiency make Compass the best circulator for your building.



Design Envelope technology with first-in-industry dry rotor permanent magnet motor,

VALUE FOR CONTRACTORS

Patented Auto setting makes startup simple

Easy access to terminal block

Quick release clamp makes repairs a snap

Labor savings from easy installation

Connect to external components with integrated 0-10V DC Input

VALUE FOR OWNERS

Out-of-the-box optimum energy savings and reduced carbon footprint with Design Envelope technology foot print

Up to 25% energy savings over standard ECM variable speed circulators

Up to 80% energy savings compared to traditional fixed-speed circulators

Reliable design includes built-in mechanical and electronic protection

Lowest lifecycle cost - energy savings combined with reliable low-maintenance design minimizes operating costs



EXPERTISE AND EXPERIENCE

With Design Envelope technology, COMPASS circulators cover a wide performance range

Easy upgrade for current installed models of two-piece and three-piece circulators, with no piping modifications

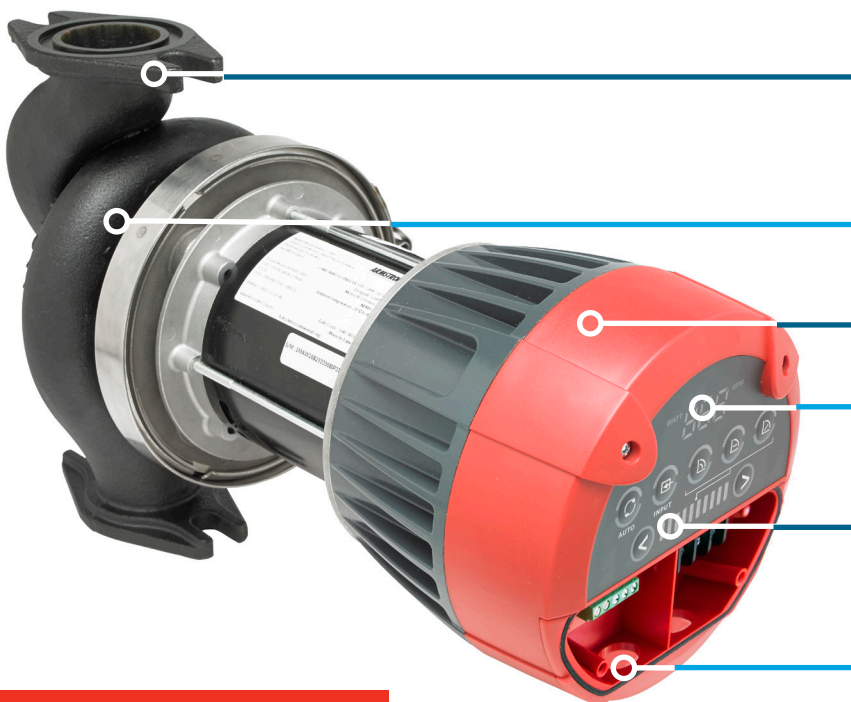
Multiple control options, including

Auto mode, simplify selection and commissioning

Oversized terminal box

Posi-Start technology ensures smooth start-up and protects the circulator

KEY FEATURES OF COMPASS R & H



Bolt-for-bolt connection compatibility with installed base of two and three-piece and wet rotor circulators, stainless steel and ductile iron models

Optimized hydraulics with a high-efficiency dry rotor design

Permanent Magnet motor plus Design Envelope variable speed technology and Posi-Start

Easy-to-read control panel

Multiple control options including patented** auto mode which adjusts the speed to match flow demand

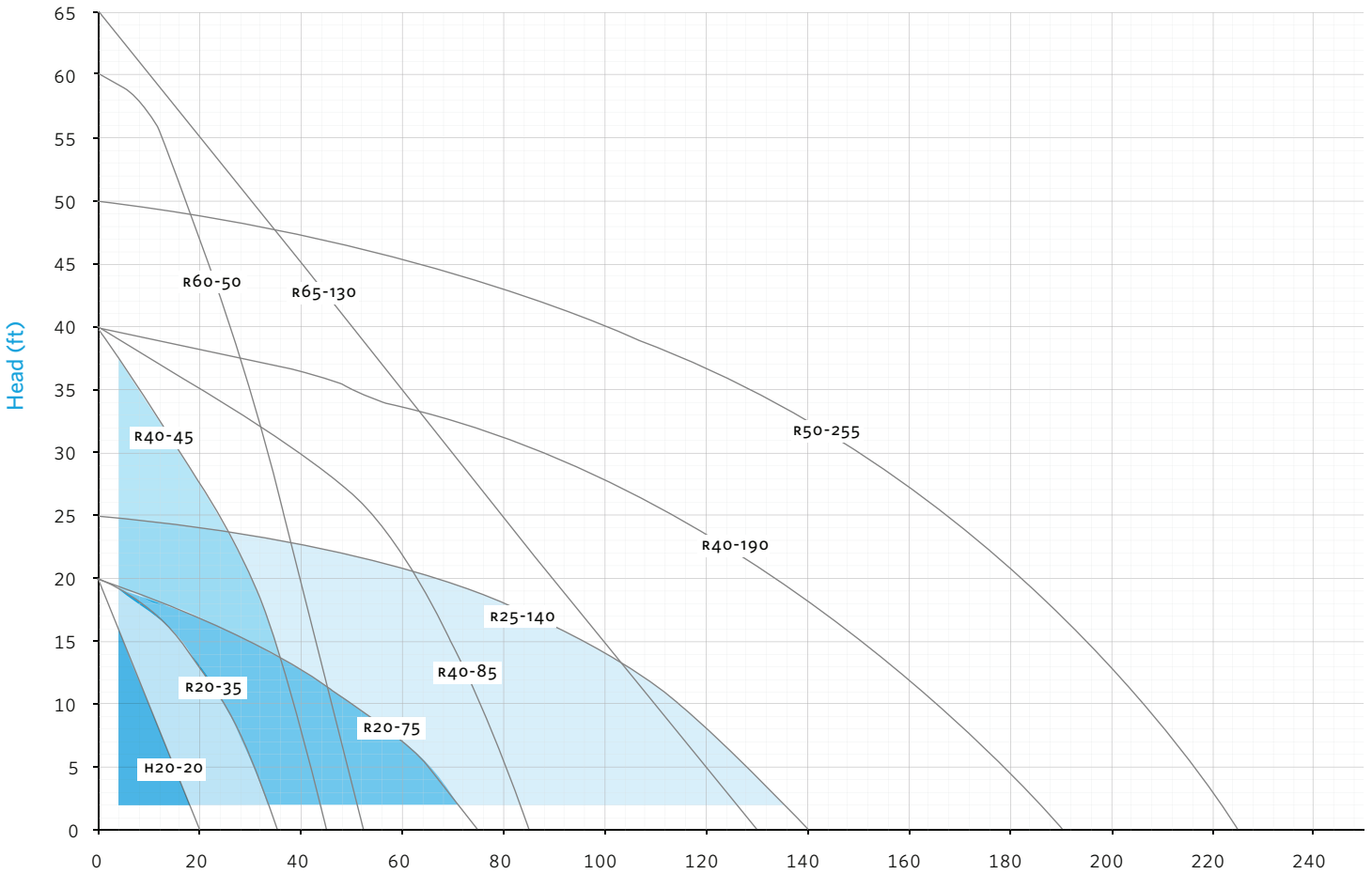
** Patent # 050868

Easy access to terminal block for wiring

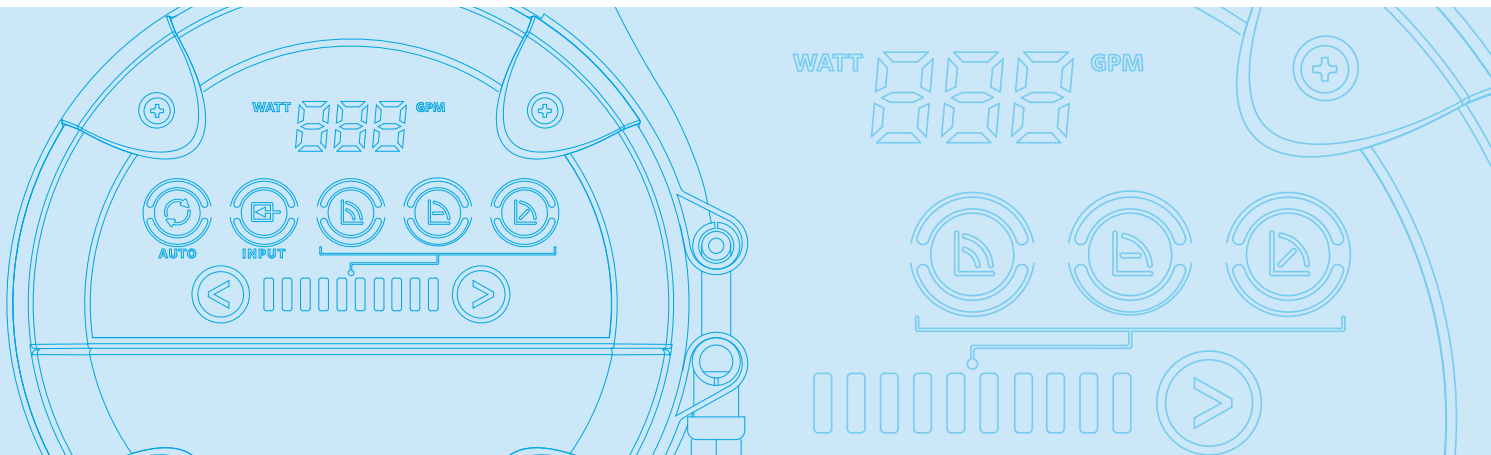


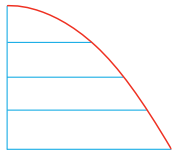
Selectable by model name
or by flow and head pressure

Compass R Selection Guide



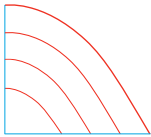
Selecting the optimum circulator based on design duty point is as easy as finding the rated flow and head pressure on the selection chart above.





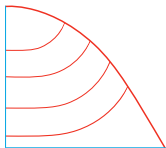
Fixed head mode

A constant pressure is maintained for any flow rate. The head pressure is selected on the control panel.



Fixed speed mode

For any flow the speed of the pump is maintained. The speed setting must fit the site conditions and is selected on the control panel.



Proportional pressure mode

The circulators head pressure increases or decreases based on the flow increasing or decreasing. The maximum head is selected on the control panel.

AUTO/EXTERNAL CONTROL

- AUTO (default) - adapts to system demand over time
- 0-10 V DC external control INPUT

MANUAL CONTROL OPTIONS

- Fixed Head Curve
- Fixed Speed Curve
- Proportional Pressure Curve






Control panel and mode selection



Five light fields, 10 level indicators

NUMBER OF SPEED SETTINGS PER PUMP

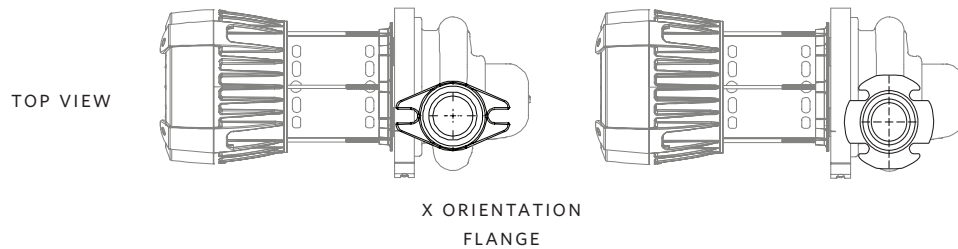
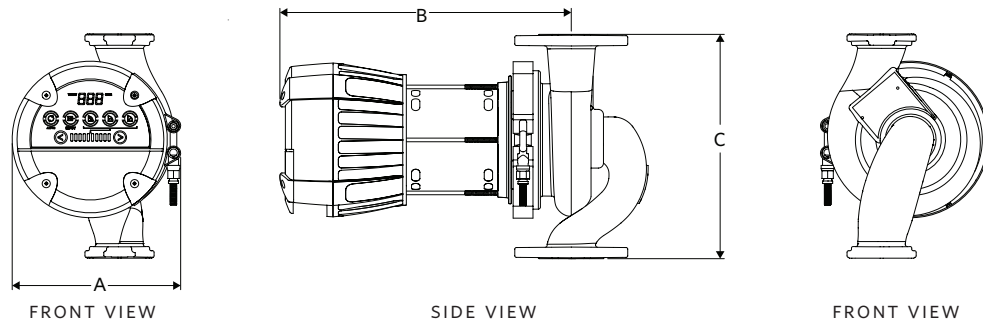
MODEL	MAX. LEVELS
COMPASS H20-20*	3
COMPASS R20-35*	3
COMPASS R40-45*	6
COMPASS R20-75*	3
COMPASS R60-50	8
COMPASS R40-85	6
COMPASS R25-140*	5
COMPASS R40-190	6
COMPASS R50-225	8
COMPASS R65-130	10

The Proportional Pressure (), Fixed Head (), and Fixed Speed () curves default to the maximum level, and can be decreased/increased using the Mode Select buttons. The maximum level is indicated by dim lights; the levels brightens when increased or dims when decreased. See the list below for the maximum levels per Compass R model.

* The Red highlighted models are available today.

COMPASS R DIMENSIONS AND MOTOR DETAILS

MODEL	FLANGE TO FLANGE DIMENSION inch (mm)	MOTOR		CONNECTION	FLANGE ORIENTATION	BOLT TO BOLT inch (mm)	DIMENSIONS inch (mm)			WEIGHT lbs (kg)
		HP	PHASE AND VOLT				A	B	C	
Compass R 20-35	6.5 (165.1)	3/4	1 phase 115 V 60HZ	2 bolt flange	Y Orientation	3.16-3.44 (80.2-87.4)	6.38 (162)	11.46 (291)	6.50 (165)	10 (4.5)
Compass R 20-75	8.5 (215.9)	3/4	1 phase 115 v 60HZ or 1 phase 208-240V 50/60HZ	2 bolt flange	X Orientation	3.16-3.44 (80.2-87.4)	6.38 (162)	11.04 (280)	8.50 (216)	18 (8.1)
Compass R 40-45	6.5 (165.1)	3/4		2 bolt flange	Y Orientation	3.16-3.44 (80.2-87.4)	6.38 (162)	11.46 (291)	6.50 (165)	10 (4.5)
Compass R 25-140	10.0 (254.0)	1/2		4 bolt flange	N/A	5.06 (128.52)	7.92 (201)	10.75 (273)	10.00 (254)	30 (13.6)



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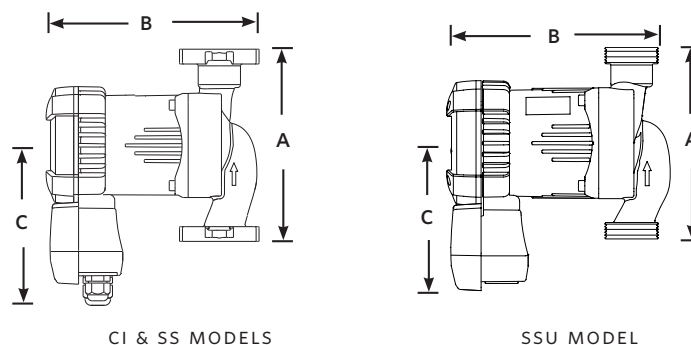
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COMPASS H DIMENSIONS AND MOTOR DETAILS

MODEL	PORT TO PORT inch	MOTOR		DIMENSIONS inch (mm)		
		HP	PHASE AND VOLT	A	B	C
Compass H 20-20 CI/SS Flanged	45	3/4	1 phase 115 v 50/60HZ	6.50 (165)	7.08 (180)	5.75 (146)
Compass H 20-20 Union	45	3/4		6.00 (152)	7.08 (180)	5.75 (146)



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