

## Viridian® — VT2218

### Delta-T Variable Speed, ECM High-Efficiency Circulator

The Viridian VT2218 circulator is a temperature sensing, self-adjusting, variable speed wet rotor circulator with an ECM permanent magnet motor. Operating modes include Delta-T differential temperature, 4 fixed speeds, set point heat, set point cool and boiler protection.



- Delta-T operation maximizes system efficiency and comfort
- High-efficiency ECM motor uses up to 85% less electricity
- Can save hundreds in fuel costs
- LCD displays operating mode, temperature or speed setting, watts, supply & return temperatures
- Easy to program and install
- *Sure Start* automatic unblocking mode



## Features

# The ONLY temperature sensing pump in its class.

- **22' Shut-off Head, 18 gpm max flow**
- **ECM High-Efficiency Motor**
- **Operates in 5 different modes:**
  - Delta-T (5-50°F) Variable Speed [factory pre-set : 20°F ΔT]
  - Multi-Speed (4 fixed speeds)
  - Set Point Heat (50-220°F) variable speed with boiler protection option
  - Set Point Cool (32-100°F)
  - Boiler Protection (100-160°F), protects boiler from low return water temperature
- **Full Speed Over-ride**
  - For system fill and purging
- **Full backlit LCD displays:**
  - Operating mode, temperature or speed setting, watts, supply & return temperatures
  - Error code diagnostics
  - English or Metric units
- **Use with a Taco ZVC Zone Valve Control or SR Switching Relay for ON/OFF operation.**
- **Sensors and Integral Flow Check (IFC®) included**
- **Whisper quiet operation**
- **BIO Barrier® protects the pump from black system contaminants**
- **Sure Start mode automatically corrects locked rotor condition**

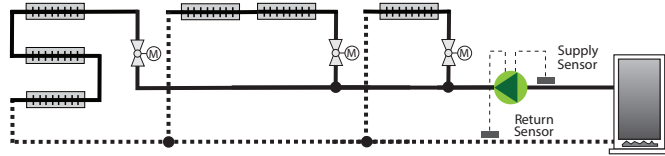


# Applications & Performance

## Typical Variable Speed Applications

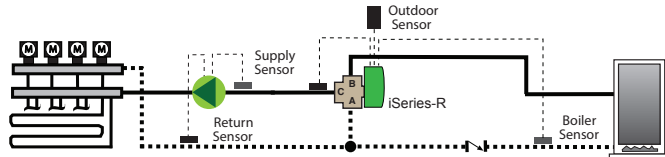
### Delta-T

Across a series loop system using zone valves



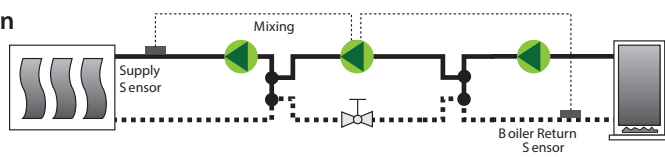
### Delta-T

Across multi-zone radiant manifolds with loop actuators



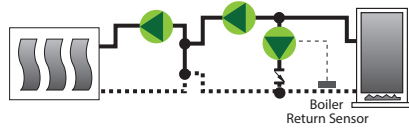
### Radiant Injection with boiler protection

Decreases speed to protect boiler from low return water temperature and flue gas condensation



### Boiler Protection — by-pass loop

Increases speed to protect boiler from low return water temperature and flue gas condensation



### Heating or Chilled Water Cooling

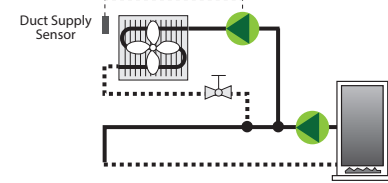
Fan coil fixed water temperature

#### Set Point Heat

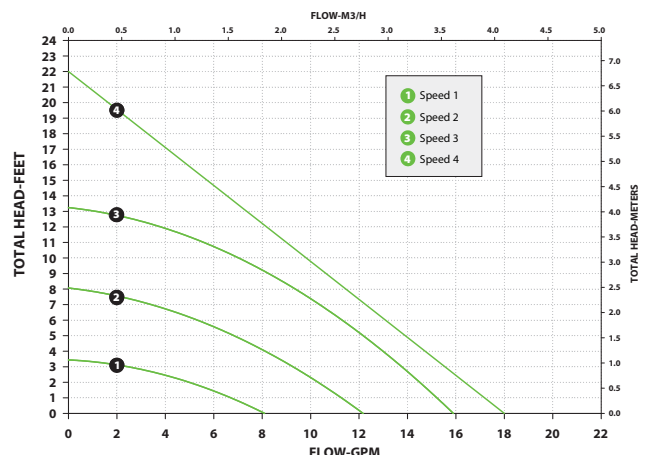
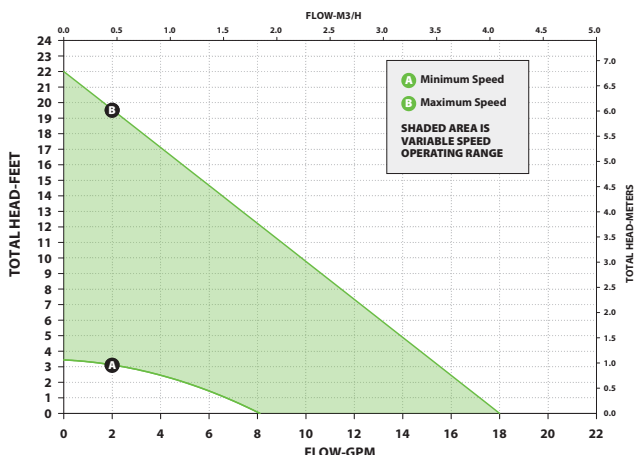
Decreases speed on temperature rise

#### Set Point Cool

Increases speed on temperature rise



## Performance Curves for the Viridian® VT2218



# **Submittal Data Information** **Viridian® High Efficiency Circulator**

Submittal Data # 101-169  
Supersedes: 08/21/14

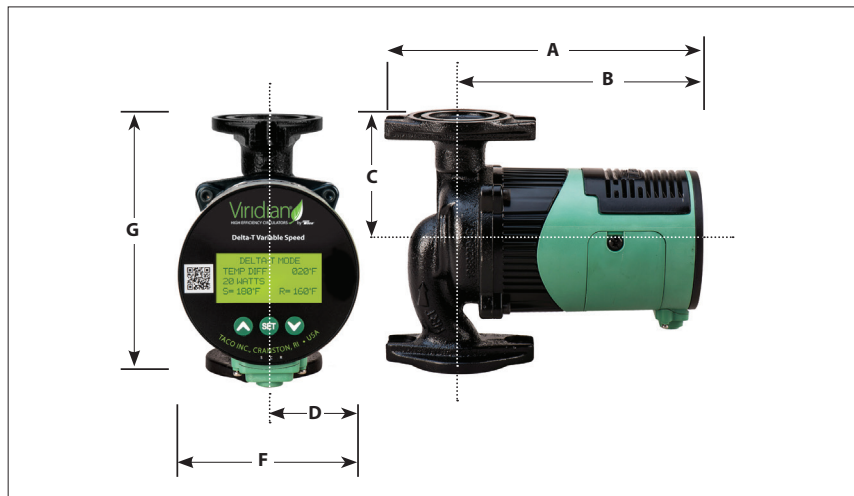
Effective: 07/10/15

## **Specifications**

- Maximum Shut-off Head: 22 feet
- Maximum Flow: 18 gpm
- Maximum Operating Pressure: 125 psi (862 kPa)
- Maximum Water Temp: 230°F (110°C)
- Minimum Water Temp: 36°F (2°C)
- Electrical specifications:
  - Voltage: 110-120V, 50/60 Hz, Single phase
  - Operating Power Range: 9W to 58W
  - Maximum AMP Rating: 0.67
- Equipped with a cast iron casing and should be used for closed loop systems only.
- Taco circulator pumps are for indoor use only
- Acceptable for use with water or maximum of 50% water/glycol solution.

## **Applications**

The VT2218 is a temperature sensing, variable speed circulator ideal for Delta-T or setpoint temperature applications. Typical uses include hydronic systems zoned with zone valves, radiant loops, injection pumping, snow-melt or hydro-air fan coils. Can also be used in constant speed mode for zoning with circulators, indirect water heaters or primary boiler loops.



## **Materials of Construction:**

Casing: ..... Cast Iron  
 Stator Housing: ..... Aluminum/Composite  
 Cartridge: ..... Stainless Steel  
 Impeller: ..... Non-Metallic  
 Shaft: ..... Ceramic  
 Bearings: ..... Ceramic  
 O-Ring & Gaskets: ..... EPDM  
 Integral Flow Check (IFC):  
   Body, Plunger ..... Acetal  
   O-ring Seal ..... EPDM  
   Spring ..... Stainless Steel

## **Pump Dimensions & Weights**

Model	A		B		C		D		F		G		Ship Wt.	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	Kg
VT2218F	8-1/8	207	6	153	3-1/4	82	2	54	4-1/4	107	6-3/8	161	7-3/4	3.52

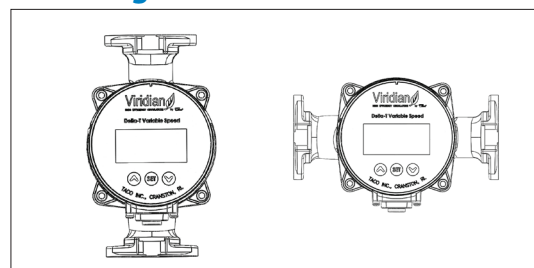
## **Electrical Data**

Model	Volts	Hz	Ph	Max.Amps	RPM
VT2218F	110/120	50/60	1	.67	1650 - 4200
Motor Type	ECM, Permanent Magnet, Electronically Protected				

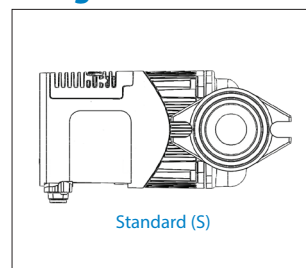
## **Maximum Watts**

Speed 1	Speed 2	Speed 3	Speed 4
9	24	40	58

## **Mounting Positions**



## **Flange Orientation**



Taco Inc., 1160 Cranston Street, Cranston, RI 02920 / (401) 942-8000 / Fax (401) 942-2360  
 Taco (Canada) Ltd., 8450 Lawson Road, Unit #3, Milton, Ontario L9T 0J8 / (905) 564-9422 / Fax (905) 564-9436  
[www.TacoComfort.com](http://www.TacoComfort.com)