

# **ECM High-Efficiency Circulator**

The Taco 00e° VR series are ECM high-efficiency, wet-rotor, self-sensing commercial circulators ideal for HVAC and potable water applications. The wide range of models with Low, Medium, or High head options provide differential head pressures up to 65 ft. and flow ranges up to 320 GPM. BMS communication with Modbus, BACnet, 0-10Vdc, and PWM come standard while high-efficiency ECM technology reduces power consumption up to 85%. The stainless steel models are NSF 61 & 372 domestic and commercial hot rated.



Stainless Steel Models

- Intuitive user interface with real-time feedback
- Constant speed, constant pressure, proportional pressure, and TacoAdapt™, self-adjusting proportional pressure
- BMS communication; Modbus, BACnet, 0-10Vdc, PWM
- Parallel pump control; cascading, auto-rotate & main/ standby
- Standard #125 ANSI flanges (Companion flange kit sold separately)









# **Efficiency & Simplicity**

## A solution for every application

The Taco 00e VR series is built to exacting specifications meeting the widest range of HVAC and NSF 61 & 372 domestic and commercial hot water applications. They are suitable for use with fluids at temperatures from 14 to 230°F (-10 to 110°C) and feature 175psi working pressure. All models incorporate a stainless steel rotating assembly, stainless steel rotor can, and the option of a stainless steel volute.

# **Smart protection and flexible voltages**

Non-overloading ECM high-efficiency offers smart protection with integrated soft-start technology. Single phase voltage range 110-240 volts up to 800 watts, single phase 200-240 volts above 800 watts.

# **Parallel pumping**

Intuitive lead-lag 24 hour alternation, main-standby for redundancy and cascading mode for additional capacity.



**Proportional Pressure** 



**Constant Pressure** 



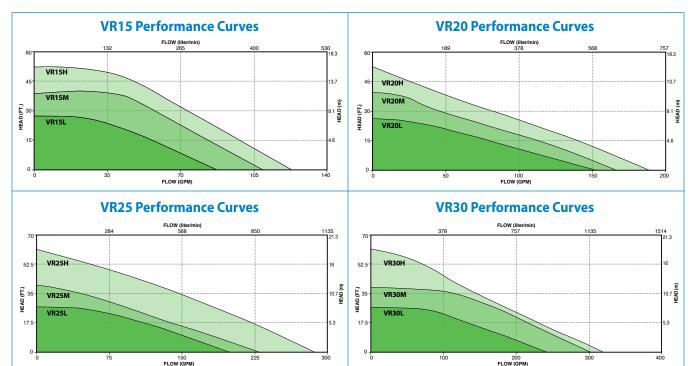
**Constant Speed** 

#### **Built-in Protections:**

- Dry run protection
- Overcurrent protection
- Line surge protection
- Thermal monitoring
- Heat sink status
- Over temperature protection
- Current limit protection Over & under voltage protection

# **Pumping Iron. Pumping Steel.**







The award winning Taco Tags use wireless NFC technology to provide you with all relevant information for a specific product right on your phone. Detailed specifications,

technical documents, instruction manuals, how-to videos and more are all quickly and easily accessible. This digital library contains the most up-to-date information for that specific piece of equipment.

By utilizing the power of Taco Tags, Taco is ensuring you have the resources you need to make fast, informed decisions in the field, increasing your productivity while saving you time.



# 00e® VR Series — **ECM High-Efficiency Circulators**

## **Pump Specifications**

Max. Operating Pressure: 175 PSI (12 bar) Water Temperature Range: 36° - 230°F (2° - 110°C) Ambient Temperature Range: 32° - 104°F (0°- 40°C) Ambient Humidity: Less than 95%, for indoor use only

#### **Materials of Construction**

Casing (HVAC)	Cast iron
Casing (DHW)	304 Stainless Steel
Impeller	PES GF-30
Shaft	ANSI 420
Bearing	Carbon Sleeve Type

#### **Minimum Inlet Pressure**

remp.	VK15-20	VK25-30
112°F (50°C)	7.3 PSIA / 0.5 Bar	4.36 PSIA / 0.3 Bar
176°F (80°C)	11.6 PSIA / 0.8 Bar	14.5 PSIA / 1.0 Bar
230°F (110°C)	20.3 PSIA / 1.4 Bar	20.3 PSIA / 1.4 Bar

VD15 20







VD2E 20

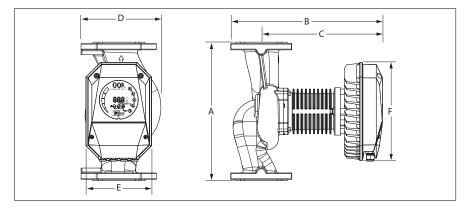
Stainless Steel Models

### **Operating Modes**

#### TacoAdapt™ Proportional Pressure Constant Pressure Constant Speed Night Setback **BACnet** ModBus 0-10Vdc **PWM** Twin Pump Mode

### **Electrical Specifications**

24 Volt	Max current up to 100mA, Output Voltage
Supply Outlet	+/- 20% of 24 Volts, Output Ripple under 1 Volt
Relay	230 Vac, 3A, AC1 Potential Free
Output (s)	Changeover Contact
Analog Inputs	Max Input Voltage 32Vdc, 2 Inputs, 1 output
Ethernet	RJ-45 Connector, Http server and FTP Client server



#### **Index Ratings, Dimensions, and Weights**

Model	Energy	Energy	rgy Circulator			Flange		A		В		2		)		E	Cast	Iron	Stainle	ss Steel
Number	Rating	Energy Index	Size*	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg	lbs.	kg			
VR15L	140	0.46		9.8	250	14.2	361	11.7	296	6.3	161	6.3	161	26.3	12.0	27.7	12.6			
VR15M	133	0.47	11/2"	9.8	250	14.2	361	11.7	296	6.3	161	6.3	161	26.3	12.0	27.6	12.5			
VR15H	131	0.48		9.8	250	14.6	371	12.0	306	6.3	161	6.3	161	29.5	13.4	30.5	13.9			
VR20L	141	0.42		11	280	14.2	360	11.3	287	6.9	175	6.3	161	29.7	13.5	31.0	14.1			
VR20M	135	0.45	2"	11	280	14.2	360	11.3	287	6.9	175	6.3	161	31.0	14.1	32.4	14.7			
VR20H	130	0.47		11	280	14.5	369	11.7	297	6.9	175	6.3	161	32.7	14.9	34.1	15.5			
VR25L	134	0.47		13.4	340	14.7	373	11.7	297	7.7	196	6.3	161	39	17.7	41.2	18.7			
VR25M	129	0.49	2½"	13.4	340	15	382	12.1	307	7.7	196	6.3	161	41	18.6	42.9	19.5			
VR25H	125	0.50		13.4	340	16.5	419	13.5	344	7.8	198	7.4	188	52.5	23.8	55.9	25.4			
VR30L	127	0.51		14.2	360	16.1	410	12.5	317	8.8	223	6.3	161	54.8	24.9	58.6	26.6			
VR30M	118	0.57	3″	14.2	360	17.6	446	13.9	353	8.8	223	7.4	188	66.1	30.0	72.0	32.7			
VR30H	128	0.27		14.2	360	17.6	446	13.9	353	8.8	223	7.4	188	66.1	30.0	71.8	32.6			

<sup>\*</sup>Flange Type (4 Bolt #125 ANSI)

Model Numbers are followed by: " $-\mathbf{F}$ " for Cast Iron or " $-\mathbf{SF}$ " for Stainless Steel

#### 00e Series — VR Circulator Submittal Data Sheets:

Model	Submittal	Model	Submittal
VR15L	301-257	VR20L	301-260
VR15M	301-258	VR20M	301-261
VR15H	301-259	VR20H	301-262



00e Series — VR Circulator Submittal Data Sheets:

Model	Submittal	Model	Submittal
VR25L	301-263	VR30L	301-266
VR25M	301-264	VR30M	301-267
VR25H	301-265	VR30H	301-268
VR25H	301-265	VR30H	301-268

Taco Inc., 1160 Cranston Street, Cranston, RI 02920 / (401) 942-8000 Taco (Canada) Ltd., 8450 Lawson Road, Unit #3, Milton, Ontario L9T 0J8 / (905) 564-9422

