

# Tank Recovery Reference Guide

for use by heating contractor



## Boiler and Circulation Sizing with Vitocell DHW Storage Tanks

### IMPORTANT

Friction loss for the system piping and boiler heat exchanger is not included.

The user of this information must confirm the data with the latest version of Technical Data Manual provided for each product.

This reference guide has been designed to assist with the sizing of boiler and circulator for each DHW storage tank listed below.

The data listed below is extrapolated from the Technical Data Manual for each product and are based on a tank temperature rise of 40°F to 140°F.

### Vitocell 100-V (CVA and CVAA Series)

Capacity 42 and 53 USG (160 and 200 L)			
Boiler supply temperature	Boiler output required	Circulator requirement for tank coil	DHW continuous flow rate
158°F	58,000 Btu	8.8 GPM at 2.4 ft.	51 GPH
176°F	77,000 Btu	6.8 GPM at 2.0 ft.	92 GPH
194°F	94,000 Btu	4.5 GPM at 1.0 ft.	112 GPH
194°F	120,000 Btu	13.2 GPM at 5.3 ft.	146 GPH

Capacity 79 USG (300 L)			
Boiler supply temperature	Boiler output required	Circulator requirement for tank coil	DHW continuous flow rate
158°F	77,000 Btu	9.6 GPM at 4.5 ft.	92 GPH
176°F	102,000 Btu	6.5 GPM at 3.0 ft.	122 GPH
176°F	120,000 Btu	14 GPM at 7.0 ft.	146 GPH
176°F	146,000 Btu	7.9 GPM at 3.6 ft.	172 GPH

Capacity 119 USG (450 L)			
Boiler supply temperature	Boiler output required	Circulator requirement for tank coil	DHW continuous flow rate
158°F	85,000 Btu	5.8 GPM at 2.5 ft.	102 GPH
176°F	128,000 Btu	7.6 GPM at 4.0 ft.	152 GPH
176°F	146,000 Btu	12 GPM at 5.0 ft.	172 GPH
194°F	196,000 Btu	17.6 GPM at 11.8 ft.	233 GPH

**Vitocell 300-H (EHA Series)**

<b>Capacity 42 USG (160 L)</b>			
Boiler supply temperature	Boiler output required	Circulator requirement for tank coil	DHW continuous flow rate
176°F	72,000 Btu	5.0 GPM at 0.3 ft.	90 GPH
176°F	80,000 Btu	5.9 GPM at 0.4 ft.	105 GPH
176 °F	100,000 Btu	11 GPM at 1.0 ft.	120 GPH
194°F	120,000 Btu	10.5 GPM at 0.8 ft.	144 GPH

<b>Capacity 53 USG (200 L)</b>			
Boiler supply temperature	Boiler output required	Circulator requirement for tank coil	DHW continuous flow rate
158°F	51,000 Btu	13.2 GPM at 3.2 ft.	60 GPH
176°F	85,000 Btu	17 GPM at 5.0 ft.	102 GPH
194°F	100,000 Btu	6.6 GPM at 1.0 ft.	120 GPH
194°F	120,000 Btu	16 GPM at 7.7 ft.	144 GPH

<b>Capacity 92 USG (350 L)</b>			
Boiler supply temperature	Boiler output required	Circulator requirement for tank coil	DHW continuous flow rate
158°F	72,000 Btu	16 GPM at 5.0 ft.	88 GPH
176°F	95,000 Btu	8.8 GPM at 1.5 ft.	114 GPH
176°F	128,000 Btu	19 GPM at 7.0 ft.	146 GPH
194°F	160,000 Btu	11.5 GPM at 2.5 ft.	193 GPH

<b>Capacity 119 USG (450 L)</b>			
Boiler supply temperature	Boiler output required	Circulator requirement for tank coil	DHW continuous flow rate
158°F	90,000 Btu	8.0 GPM at 1.8 ft.	108 GPH
176°F	140,000 Btu	8.5 GPM at 2.0 ft.	168 GPH
176°F	170,000 Btu	17 GPM at 5.0 ft.	203 GPH
194°F	196,000 Btu	8.8 GPM at 2.0 ft.	234 GPH

## Vitocell 300-W (EVIA)

<b>Capacity 42 USG (160 L)</b>			
Boiler supply temperature	Boiler output required	Circulator requirement for tank coil	DHW continuous flow rate
158°F	76,000 Btu	11 GPM at 2.3 ft.	91 GPH
176°F	111,000 Btu	6.8 GPM at 1 ft.	132 GPH
176°F	120,000 Btu	9.5 GPM at 1.8 ft.	144 GPH
176°F	145,000 Btu	18.5 GPM at 5.3 ft.	175 GPH

## Vitocell 300-V (EVI Series)

<b>Capacity 53 USG (200 L)</b>			
Boiler supply temperature	Boiler output required	Circulator requirement for tank coil	DHW continuous flow rate
158°F	77,000 Btu	12.3 GPM at 2.3 ft.	93 GPH
176°F	111,000 Btu	6.8 GPM at 1.0 ft.	132 GPH
176°F	136,000 Btu	13.6 GPM at 3.5 ft.	162 GPH
194°F	153,000 Btu	6.9 GPM at 1.3 ft.	183 GPH

<b>Capacity 79 USG (300 L)</b>			
Boiler supply temperature	Boiler output required	Circulator requirement for tank coil	DHW continuous flow rate
158°F	80,000 Btu	12 GPM at 3.0 ft.	97 GPH
176°F	111,000 Btu	9.2 GPM at 2.0 ft.	132 GPH
176°F	140,000 Btu	15 GPM at 4.6 ft.	170 GPH
194°F	170,000 Btu	7.0 GPM at 2.4 ft.	204 GPH

<b>Capacity 119 USG (450 L)</b>			
Boiler supply temperature	Boiler output required	Circulator requirement for tank coil	DHW continuous flow rate
158°F	95,000 Btu	12.3 GPM at 2.6 ft.	114 GPH
176°F	136,000 Btu	9.7 GPM at 2.2 ft.	162 GPH
176°F	153,000 Btu	13.2 GPM at 3.4 ft.	182 GPH
194°F	195,000 Btu	11.5 GPM at 2.5 ft.	234 GPH

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