

BUFFER TANK  
STORAGE TANK  
HYDRAULIC SEPARATOR

# buffmax



## OPTIMIZE ANY TYPE OF HYDRONIC SYSTEM

- Temperature and pressure indicator
- Automatic air vent
- Large-diameter connections
- Available from 30 - 200 US Gallons
- Immersion well with multiple positions
- 10-year warranty



Peak-performance  
heating systems



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## The tank that makes all the difference

### BUFFER TANK

The **BuffMax**® optimizes runtimes and limits on/off cycling of the energy source. When the minimum system load is lower than the energy source's minimum capacity, the system will generate short cycles. This causes premature wear of the equipment and substantially decreases the system's energy efficiency.

### STORAGE TANK

Any hydronic heating system with the **BuffMax**® stores energy like a battery. When a demand is made for limited heating (for example, when there is little difference between indoor and outdoor temperatures) or when it is used with a low-capacity energy source, the energy required will first come from the tank's thermal storage.

### HYDRAULIC SEPARATOR

Adding a **BuffMax**® tank to a hydronic heating system helps to evacuate air, eliminate impurities and ensure the optimal functioning of the pumps—not only for the energy source but also for the distribution system.

**The BuffMax® tank is recommended to optimize the performance of several different types of heating systems :**

- Low-mass boilers
- Biomass systems
- Geothermal and heat pump applications
- Multi-zone systems
- Solar energy systems



BY REDUCING ON/OFF CYCLING, IT IMPROVES AND MAXIMIZES  
THE HEATING SYSTEM'S EFFICIENCY— ALL WHILE REDUCING  
MAINTENANCE AND REPAIR COSTS.



### STANDARD EQUIPMENT

- 2" HFC-free polyurethane insulation
- 150 psi maximum operating pressure (125 psi for ASME units)
- 4 openings for hydraulic separation
- Immersion well with multiple positions
- Tanks available in 7 sizes
- ASME models available
- Adjustable legs
- 10-year warranty



### OPTIONAL EQUIPMENT

- Extra tapplings
- Custom tapping diameters
- Flange connections
- Aquastat control
- Insulation for chilled water

- 1- Automatic air vent
- 2- Boiler water connection
- 3- Temperature and pressure indicator
- 4-  $\frac{3}{4}$ " NPT drain valve
- 5- Immersion well
- 6-  $\frac{3}{4}$ " drain

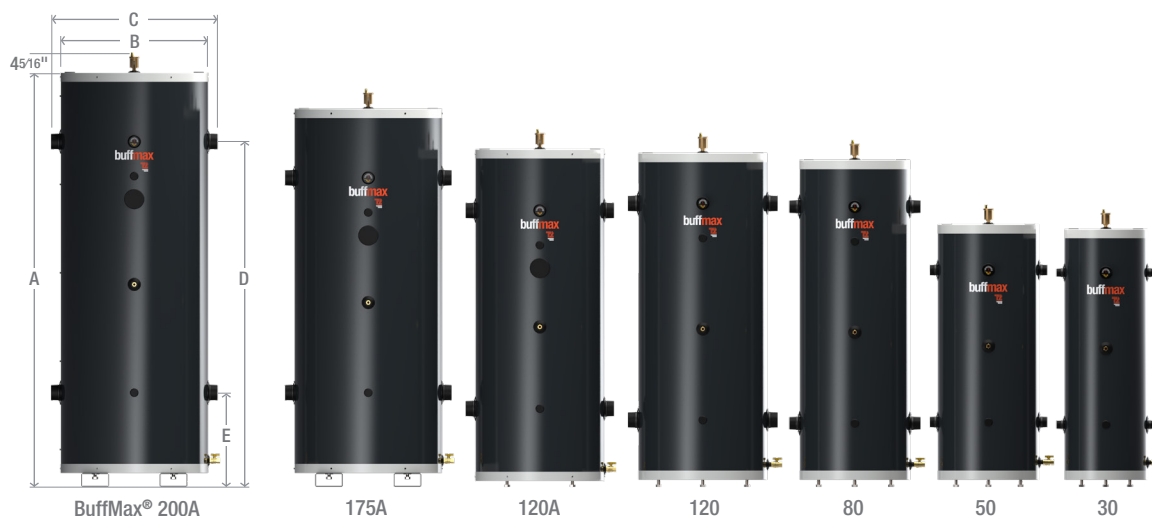


## SELECTING THE RIGHT SIZE

The buffer tank size is selected to ensure a minimum runtime for the boiler. Use the following equation to determine the right size for the application:

$$\text{Tank capacity (US gallon)} = \frac{\text{Desired run time} \times (\text{Minimum output} - \text{Minimum system load})}{(\text{System Delta T} \times 500)}$$

- Desired runtime: the minimum runtime of the boiler (in minutes), typically between 5 and 10 minutes
- Minimum output: the boiler's minimum capacity (BTU/h)
- Minimum system load: the building's smallest heat demand (BTU/h)
- System Delta T: the temperature differential in degrees Fahrenheit between the tank's inlet and outlet, typically between 10°F and 20°F



## MODELS AND SPECS

| MODEL        | VOLUME<br>US GAL. | A         | B   | C        | D         | E         | STANDARD<br>CONNECTIONS | WEIGHT<br>LB |
|--------------|-------------------|-----------|-----|----------|-----------|-----------|-------------------------|--------------|
| BuffMax 30   | 30                | 56"       | 18" | 21 1/2"  | 46 1/2"   | 13 1/2"   | 1 1/2" NPT              | 125          |
| BuffMax 50   | 50                | 57"       | 22" | 25 1/2"  | 47 1/16"  | 14 1/16"  | 2" NPT                  | 160          |
| BuffMax 80   | 80                | 71"       | 24" | 28 1/2"  | 60 13/16" | 13 13/16" | 2 1/2" NPT              | 245          |
| BuffMax 120  | 119               | 72 1/2"   | 28" | 32 1/2"  | 61 1/2"   | 14 9/16"  | 3" NPT                  | 330          |
| BuffMax 120A | 120               | 73 5/16"  | 28" | 32 1/4"  | 60"       | 17"       | 3" NPT                  | 405          |
| BuffMax 175A | 175               | 82 1/16"  | 32" | 36 3/16" | 67 1/16"  | 20 7/16"  | 3" NPT                  | 550          |
| BuffMax 200A | 200               | 89 15/16" | 32" | 36 3/16" | 74 15/16" | 20 7/16"  | 3" NPT                  | 590          |

**10-YEAR WARRANTY**  
ON THE TANK

**2-YEAR WARRANTY**  
ON MECHANICAL PARTS



Thermo 2000 manufactures peak-performance heating systems for domestic hot water and hydronic heating systems. Since 1978, the company's innovations have provided sustainable solutions for residential, commercial and institutional applications.

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