



## Buffer Tank Air Eliminator

### Total System Efficiency

System run time is important to overall operating efficiency. To prevent short cycling of the system, it is important to limit the boiler(s) to 6 cycles or fewer per hour.

Lochinvar Buffer Tanks are a cost effective way to enhance small load effectiveness and increase heating system efficiency. Lochinvar Buffer Tanks are also engineered as the system air separator, further reducing the installed cost of your system, since there is no need for a separate system air separator.

#### Outstanding Features:

- **Increase System Efficiency** - Prevent system short cycling for greater system efficiency and longevity.
- **Air Elimination System** - Eliminates the need for a separate system air separator. The unique air collection/elimination system has a built-in air separator with automatic air vent, which reduces system installed cost. The tank's tangential connections create a swirling action in the center of the unit as water enters and exits, pushing any air held in the system to the center of the tank. The collection tube at the tank's center captures that air and releases it through the air eliminator installed on top of the tank.
- **ASME Construction** - All models constructed in accordance with ASME Section VIII, Div. 1 standards and labeled for 125 psi working pressure at 400°F.
- **Channel Iron Skid Mounted with Lifting Lugs** - For handling and installation ease.
- **Energy Saving Performance** - Jacketed tanks meet the efficiency requirements of the latest ASHRAE Energy Efficiency Standards. The 2" foam insulation provides low standby loss for optimum performance and economy.
- **Five Year Limited Warranty** - Provides protection against tank failure resulting from defects in materials or workmanship.



#### Optional Equipment:

- Temperature & Pressure Gauge
- Handhole Cleanout
- Manway (300 & 500 Gallon Models Only)
- Extra Tappings

### Buffer Tank Sizing & Selection

#### Formula Sizing Mode

For maximum system efficiency, boiler run time should be limited to six (6) cycles per hour. If applicable, lesser run times may be used. To determine the tank volume for a desired run time, use the following formula or make a selection from the quick sizing table.

$$\frac{\text{Desired Run Time} \times (\text{Minimum Boiler Output} - \text{Minimum System Load})}{\text{Boiler Temperature Rise} \times 8.33 \times 60 \text{ Minutes per Hour}}$$

#### Example of Buffer Tank Sizing:

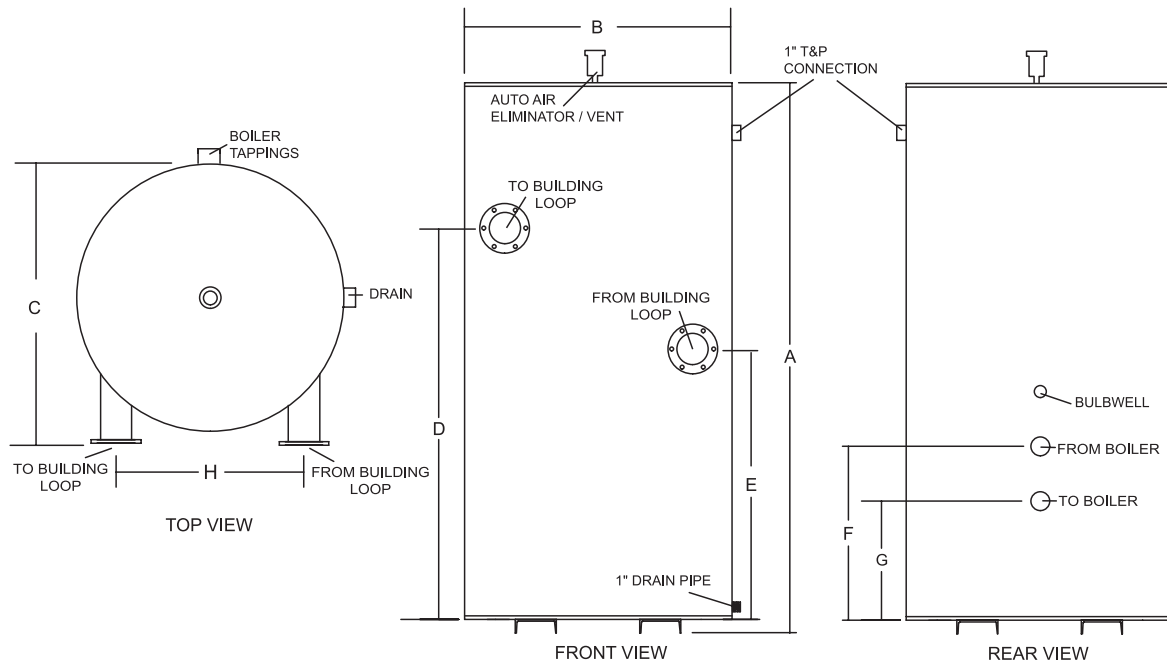
PBN1001 Boiler Run Cycle = 10 Min.

Temp. Rise = 40°F

Min. Load = 100,000 Btu/Hr

(10) (870,000 - 100,000) divided by 40 x 8.33 x 60 = 385 Gallons

## Buffer Tank / Air Eliminator Dimensions & Specifications

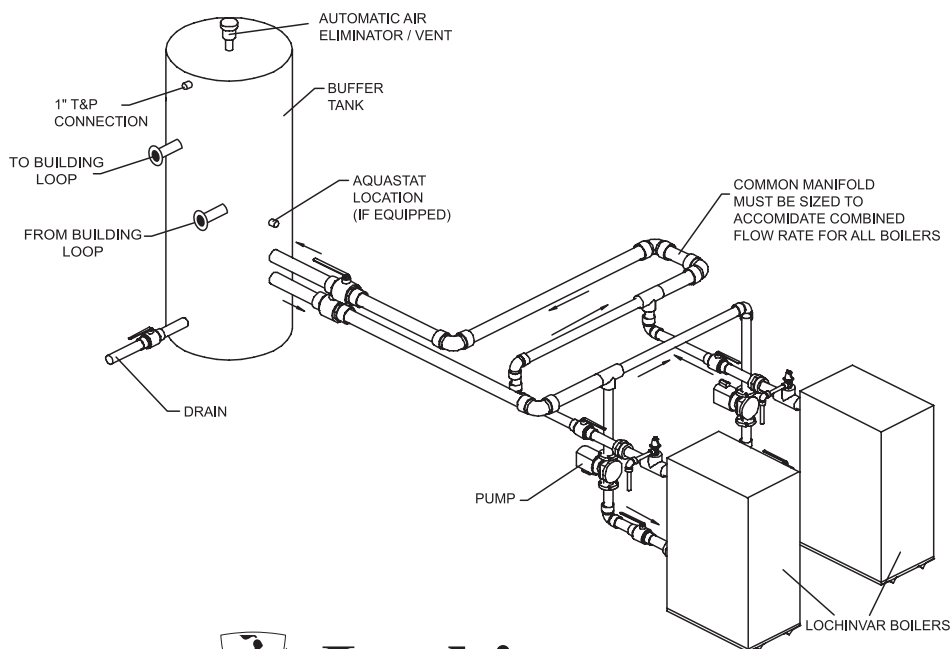


Model Number	Gallon Capacity	A	B	C	D	E	F	G	H	Supply/Return Connections	Boiler Tappings	Weight (lbs.)
RVU120	120	59"	32"	33-1/4"	40"	28"	23-1/2"	15-1/2"	20-1/2"	3" NPT	3" NPT	405
RVU200	200	89-1/2"	32"	33-1/4"	70-1/4"	58-1/4"	23-1/2"	15-1/2"	20-1/2"	3" NPT	3" NPT	650
RVU300	300	80"	40"	42"	55-1/2"	44-1/2"	25-1/2"	17-1/2"	27-1/2"	4" FL	3" NPT	1350
RVU500	500	91-1/2"	46"	48"	65"	53"	27"	19"	31-1/2"	6" FL	3" NPT	1673

Notes: Custom Sizes and Configurations are Available. Consult Factory for details.

Additional Recirculation & Supply Return Connections Sizes Available. Consult Factory for details.

## Typical Piping Arrangement for Buffer Tank / Air Eliminator in Boiler Systems



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