

Buffer Tank (Storage) for a MOD/CON

Posted by Other/s

Use this formula to determine Storage Tanks size for MODCON boilers.

Formula:

If Mod/Con is operating on its lowest turn down ratio use this formula to size tank:

- (Lowest boiler firing rate) – (Smallest zone in btu's)
- (Btu's) x (Desired min run time: usually 10 minutes) = cycle factor
- (Cycle factor) / [(delta T) x (500)] = tank size (in gallons)

Example:

75,000 BTU ModCon boiler with 3:1 turn down ratio and 5,000 Btu/h for the smallest zone, and a 20 deg delta T.

1. $(25,000) - (5,000) = 20,000$ Btus
2. $(20,000) \times (10 \text{ minutes}) = 200,000$ cycle/factor
3. $(200,000) / [(20) \times (500)] = \mathbf{20 \text{ gallon tank size}}$