Table 6 (Continued)

Bell & Gossett Plain Steel Compression Tank Selection Guide

45 psi Relief Valve, 190°F Average Water Temperature

Net BTUH	Type of Radiation	System Gallons	System Fill Pressure		
			12 psi	16 psi	20 psi
50,000	C.I. Radiators	77	15	15	15
	C.I, Radiators, Tube Type	44	15	15	15
	Copper Fin Base Board	19	15	15	15
	Fan Coil/Air Handling Units	18	15	15	15
	Radiant Tubing, 5/8"	40	15	15	15
75,000	C.I. Radiators	118	15	24	24
	C.I, Radiators, Tube Type	69	15	15	15
	Copper Fin Base Board	31	15	15	15
	Fan Coil/Air Handling Units	30	15	15	15
	Radiant Tubing, 5/8"	63	15	15	15
100,000	C.I. Radiators	155	24	24	30
	C.I, Radiators, Tube Type	89	15	15	24
	Copper Fin Base Board	40	15	15	15
	Fan Coil/Air Handling Units	37	15	15	15
	Radiant Tubing, 5/8"	82	15	15	15
125,000	C.I. Radiators	192	24	30	40
	C.I, Radiators, Tube Type	109	15	24	24
	Copper Fin Base Board	47	15	15	15
	Fan Coil/Air Handling Units	44	15	15	15
	Radiant Tubing, 5/8"	99	15	15	15
150,000	C.I. Radiators	233	30	40	60
	C.I, Radiators, Tube Type	132	15	24	30
	Copper Fin Base Board	58	15	15	15
	Fan Coil/Air Handling Units	54	15	15	15
	Radiant Tubing, 5/8"	121	15	15	15
175,000	C.I. Radiators	270	30	40	60
	C.I, Radiators, Tube Type	152	24	24	30
	Copper Fin Base Board	65	15	15	15
	Fan Coil/Air Handling Units	61	15	15	15
	Radiant Tubing, 5/8"	139	15	15	15
200,000	C.I. Radiators	312	40	60	80
	C.I, Radiators, Tube Type	175	24	30	40
	Copper Fin Base Board	76	15	15	15
	Fan Coil/Air Handling Units	71	15	15	15
	Radiant Tubing, 5/8"	160	15	15	15
250,000	C.I. Radiators	369	40	60	80
	C.I, Radiators, Tube Type	220	24	40	60
	Copper Fin Base Board	95	15	15	24
	Fan Coil/Air Handling Units	89	15	15	24
	Radiant Tubing, 5/8"	174	15	15	15
300,000	C.I. Radiators	452	60	80	100
	C.I, Radiators, Tube Type	266	30	40	60
	Copper Fin Base Board	117	15	24	24
	Fan Coil/Air Handling Units	109	15	24	24
	Radiant Tubing, 5/8"	210	15	15	24
400,000	C.I. Radiators	626	80	100	135
	C.I, Radiators, Tube Type	357	40	60	80
	Copper Fin Base Board	158	24	24	40
	Fan Coil/Air Handling Units	148	24	24	30
	Radiant Tubing, 5/8"	277	15	15	24

1) Boiler water volumes are for modern, low water content cast iron boilers. Use the next larger tank for older, large water volume cast iron boilers.
2) BTUH ratings are net, not boiler input.
3) The compression tank must be fitted with a Bell & Gossett ATF airtrol tank fitting
4) The expansion of the radiant tubing water is calculated at 130° F.
5) Cast iron type radiation allows for a large volume of water in the distribution piping. These older systems were often designed as gravity systems or were pumped systems with large steel piping.
6) System cold fill temperature calculated at 40° F.
7) The high system pressure is calculated 10% below the relief valve setting. ASME allows pressure relief valves to start weeping at within 10% of their pressure setting. A system that has a 45 psi relief valve should be designed to operate at no more that 45 psi.

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