Nationwide™ Boiler Incorporated
Nationwide Environmental Solutions | Pacific Combustion Engineering

Rentals • Sales • Service
24/7 • (800) 227-1966
www.nationwideboiler.com

800 HP FIRETUBE BOILER

Maximum BTU/hr Input (ie: Rated Input @ High Fire / 100% Input Rating)	800 x 42,000 = 33,600,000 BTU
Cubic Feet of Natural Gas Required	33,600,000 ÷ 1,000 = 33,600 Cu Ft
Cubic Feet of Vaporized Propane Required	33,600,000 ÷ 2,500 = 13,440 Cu Ft
Gallons of Liquid Propane Required	33,600,000 ÷ 91,600 = 366.8 Gallons
Gallons of #2 Diesel Oil Required	33,600,000 ÷ 140,000 = 240 Gallons
Minimum BTU/hr Input at a 4:1 Turndown Ratio (Low Fire)	33,600,000 ÷ 4 = 8,400,000 BTU
Cubic Feet of Natural Gas Required	8,400,000 ÷ 1,000 = 8,400 Cu Ft
Cubic Feet of Vaporized Propane Required	8,400,000 ÷ 2,500 = 3,360 Cu Ft
Gallons of Liquid Propane Required	8,400,000 ÷ 91,600 = 91.7 Gallons
Gallons of #2 Diesel Oil Required	8,400,000 ÷ 140,000 = 60 Gallons
Maximum Steam Production in lbs/hr (High Fire)	800 x 34.5 = 27,600 lbs/hr
Maximum Water Evaporation Rate	800 x .069 = 55.2 GPM
Minimum Feedwater Pump Flow (on / off pump strategy)	55.2 x 2 = 110.4 GPM
Minimum Feedwater Pump Flow (modulating pump strategy)	55.2 x 1.5 = 82.2 GPM
Minimum Feedwater Tank Storage Requirement	552.2 Gallons
Steam Temperature at 250 psi Saturated	406 °F
BTU/hr Output, Based on 80% Efficiency at High Fire	33,600,000 x .80 = 26,880,000 BTU
BTU/hr Output, Based on 80% Efficiency at Low Fire	8,400,000 x .80 = 6,720,000 BTU
Square Feet Heating Surface (sq. ft. HS) at 5 sq. ft. per HP	800 x 5 = 4,000 Sq Ft
Minimum Steam Safety Relief Valve Capacity at Boiler Design	27,600 x 1.10 = 30,360 lbs/hr
Minimum Water Softener Flow Capacity at High Fire (always based upon 100% input)	55.2 x 2 = 110.4 GPM

HQ - Fremont, CA (510) 490-7100 / **Sales Office - Visalia, CA** (559) 623-9318
Controls Division - Pacific Combustion Engineering - Washougal, WA (360) 335-1443
True Nationwide Coverage & Beyond. Representatives Located Worldwide.