



**Rentals • Sales • Service**  
**24/7 • (800) 227-1966**  
[www.nationwideboiler.com](http://www.nationwideboiler.com)

## 1,500 HP FIRETUBE BOILER

Maximum BTU/hr Input (ie: Rated Input @ High Fire / 100% Input Rating)	$1,500 \times 42,000 = 63,000,000$ BTU
Cubic Feet of Natural Gas Required	$63,000,000 \div 1,000 = 63,000$ Cu Ft
Cubic Feet of Vaporized Propane Required	$63,000,000 \div 2,500 = 25,200$ Cu Ft
Gallons of Liquid Propane Required	$63,000,000 \div 91,600 = 687.8$ Gallons
Gallons of #2 Diesel Oil Required	$63,000,000 \div 140,000 = 450$ Gallons
Minimum BTU/hr Input at a 4:1 Turndown Ratio (Low Fire)	$63,000,000 \div 4 = 15,750,000$ BTU
Cubic Feet of Natural Gas Required	$15,750,000 \div 1,000 = 15,750$ Cu Ft
Cubic Feet of Vaporized Propane Required	$15,750,000 \div 2,500 = 6,300$ Cu Ft
Gallons of Liquid Propane Required	$15,750,000 \div 91,600 = 171.9$ Gallons
Gallons of #2 Diesel Oil Required	$15,750,000 \div 140,000 = 112.5$ Gallons
Maximum Steam Production in lbs/hr (High Fire)	$1,500 \times 34.5 = 51,750$ lbs/hr
Maximum Water Evaporation Rate	$1,500 \times .069 = 103.5$ GPM
Minimum Feedwater Pump Flow (on / off pump strategy)	$103.5 \times 2 = 207.6$ GPM
Minimum Feedwater Pump Flow (modulating pump strategy)	$103.5 \times 1.5 = 155.25$ GPM
Minimum Feedwater Tank Storage Requirement	1,035 Gallons
Steam Temperature at <u>235 psi</u> Saturated	401 °F
BTU/hr Output, Based on 80% Efficiency at High Fire	$63,000,000 \times .80 = 50,400,000$ BTU
BTU/hr Output, Based on 80% Efficiency at Low Fire	$15,750,000 \times .80 = 12,600,000$ BTU
Square Feet Heating Surface (sq. ft. HS) at 5 sq. ft. per HP	$1,500 \times 5 = 7,500$ Sq Ft
Minimum Steam Safety Relief Valve Capacity at Boiler Design	$51,750 \times 1.10 = 56,925$ lbs/hr
Minimum Water Softener Flow Capacity at High Fire (always based upon 100% input)	$103.5 \times 2 = 207.6$ 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.*