



Burner Capacity Information, BBG 1004/2004

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	320,000	1,550,000	2,200,000	2,690,000	3,090,000
	(kW)	80	410	580	710	820
Air Capacity	(scfh)	3,320	16,100	22,800	27,900	32,000
	(nm ³ /hr)	89	431	611	747	857
Air Inlet Pressure	(in.w.c.)	0.3	6.9	13.9	20.8	27.7
	(mbar)	0.7	17.2	34.5	51.7	68.9
Gas Inlet Pressure	(in.w.c.)	0.1	0.5	0.9	1.3	1.5
	(mbar)	0.1	1.2	2.2	3.1	3.7
Flame Length (at 10% Excess Air)	(in)	30	40	55	65	70
	(mm)	760	1020	1400	1650	1780
Flame Diameter (at 10% Excess Air)	(in)	10	15	15	20	20
	(mm)	250	380	380	510	510
Maximum Operating Excess	(Air)	100%	400%	600%	600%	600%
	(Fuel)	30%	30%	30%	30%	30%
Maximum Ignition Gas	(scfh)	450	2,250	N/R	N/R	N/R
	(nm ³ /hr)	12.1	60.3	N/R	N/R	N/R
Minimum Ignition Gas	(scfh)	175	425	N/R	N/R	N/R
	(nm ³ /hr)	4.7	11.4	N/R	N/R	N/R

Burner Capacity Information, BBG 3004

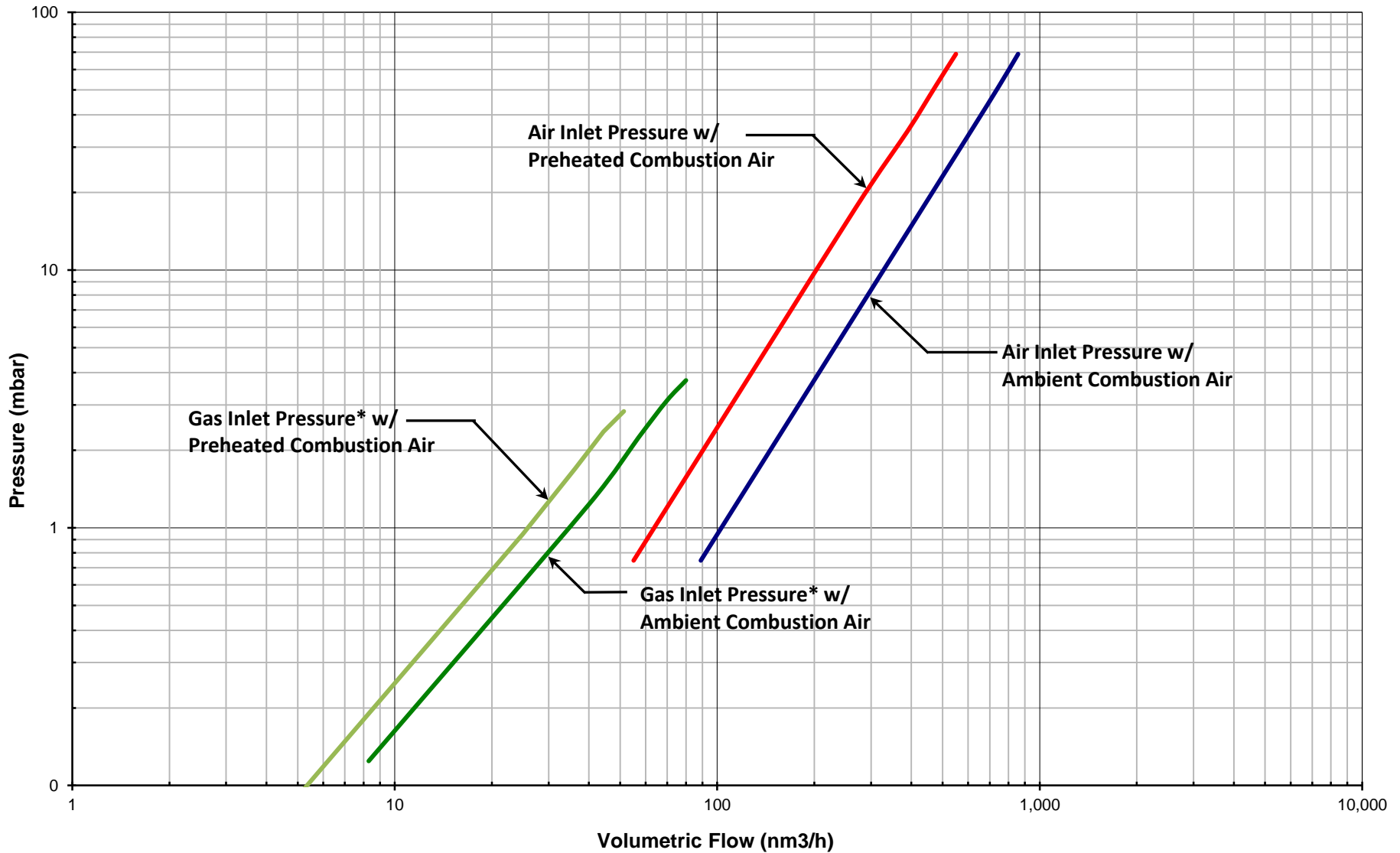
NATURAL GAS, 900°F/482°C PREHEATED COMBUSTION AIR OPERATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	200,000	960,000	1,400,000	1,710,000	1,980,000
	(kW)	50	250	370	450	520
Air Capacity	(scfh)	2,055	9,975	14,500	17,750	20,525
	(nm ³ /hr)	55	267	388	475	550
Air Inlet Pressure	(in.w.c.)	0.3	6.9	13.9	20.8	27.7
	(mbar)	0.7	17.2	34.5	51.7	68.9
Gas Inlet Pressure	(in.w.c.)	0.0	0.4	0.7	0.9	1.1
	(mbar)	0.1	0.9	1.7	2.4	2.8
Flame Length (at 10% Excess Air)	(in)	25	30	35	35	40
	(mm)	640	760	890	890	1020
Flame Diameter (at 10% Excess Air)	(in)	10	10	15	15	15
	(mm)	250	250	380	380	380
Maximum Operating Excess	(Air)	100%	350%	500%	500%	500%
	(Fuel)	30%	30%	30%	30%	30%
Maximum Ignition Gas	(scfh)	275	725	1,450	N/R	N/R
	(nm ³ /hr)	7.4	19.4	38.8	N/R	N/R
Minimum Ignition Gas	(scfh)	110	175	275	N/R	N/R
	(nm ³ /hr)	2.9	4.7	7.4	N/R	N/R

NOTES:

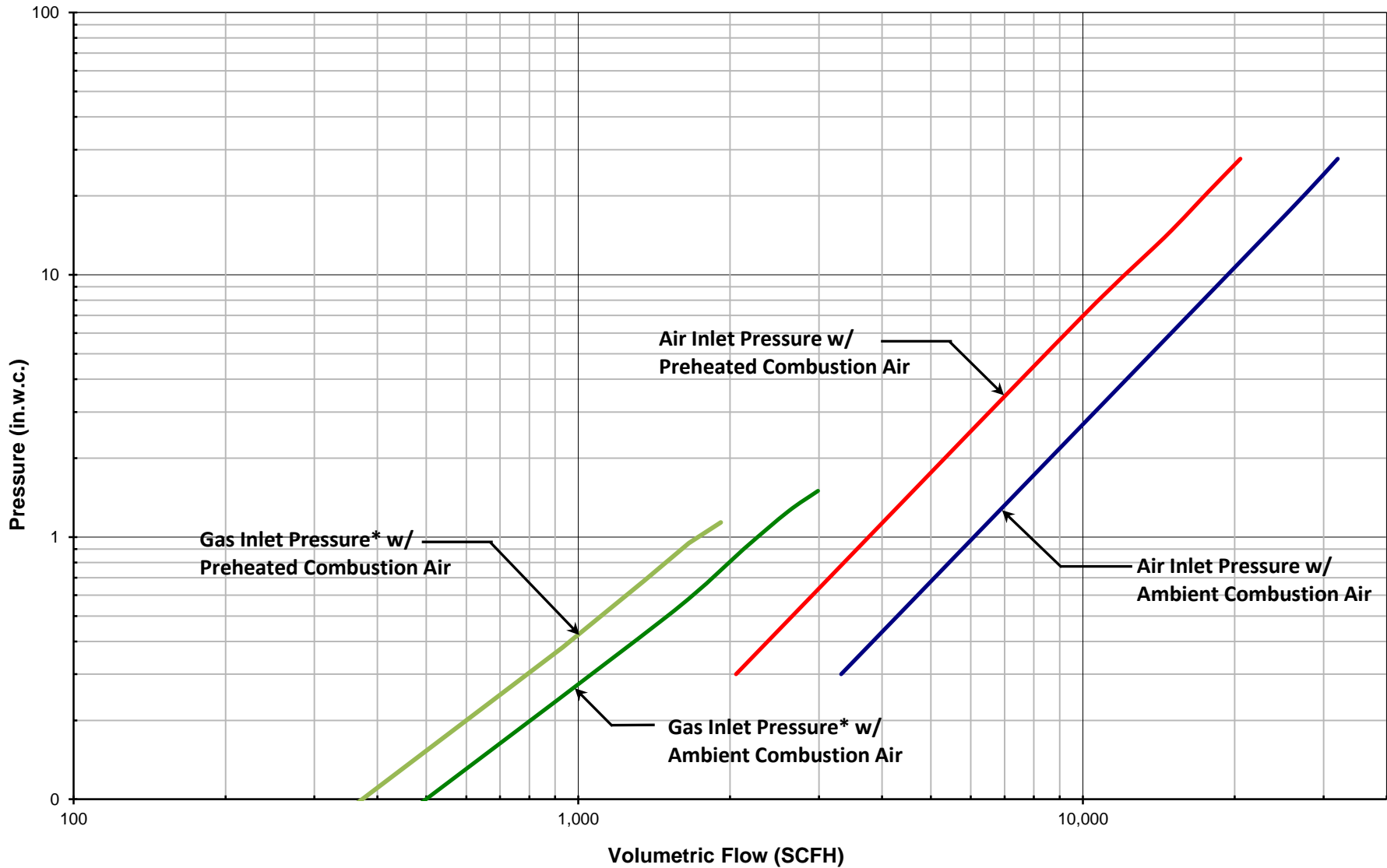
- Capacities based on Natural Gas with HHV of 1034 BTU/ft³ (Standard), and LHV of 10.21 kWh/nm³ (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 10% excess air.
- Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
- Gas inlet pressure given for reference only and should not be used for measuring fuel flow to the burner.
- Flame lengths measured from end of the combustion tile.
- Flame detection via UV scanner.
- Ignition limits are established with (1) IPG5411 gas pilot, (2) IPE50 spark igniter, and (3) ZMI 16 gas pilot; with metered air and fuel flows and 5kV/15mA spark ignition transformer; for limits listed as N/R ignition is Not Recommended at this capacity.
- Burner is suitable for use on gaseous fuels other than Natural Gas and with combustion air other than ambient temperature, consult Hauck.

BBG 2004/3004 Pressure Curves
Natural Gas 1034 BTU/ft³ (HHV Standard) / 10.21 kWh/nm³ (LHV Metric), 0.59 S.G.
and Ambient and Preheated Combustion Air



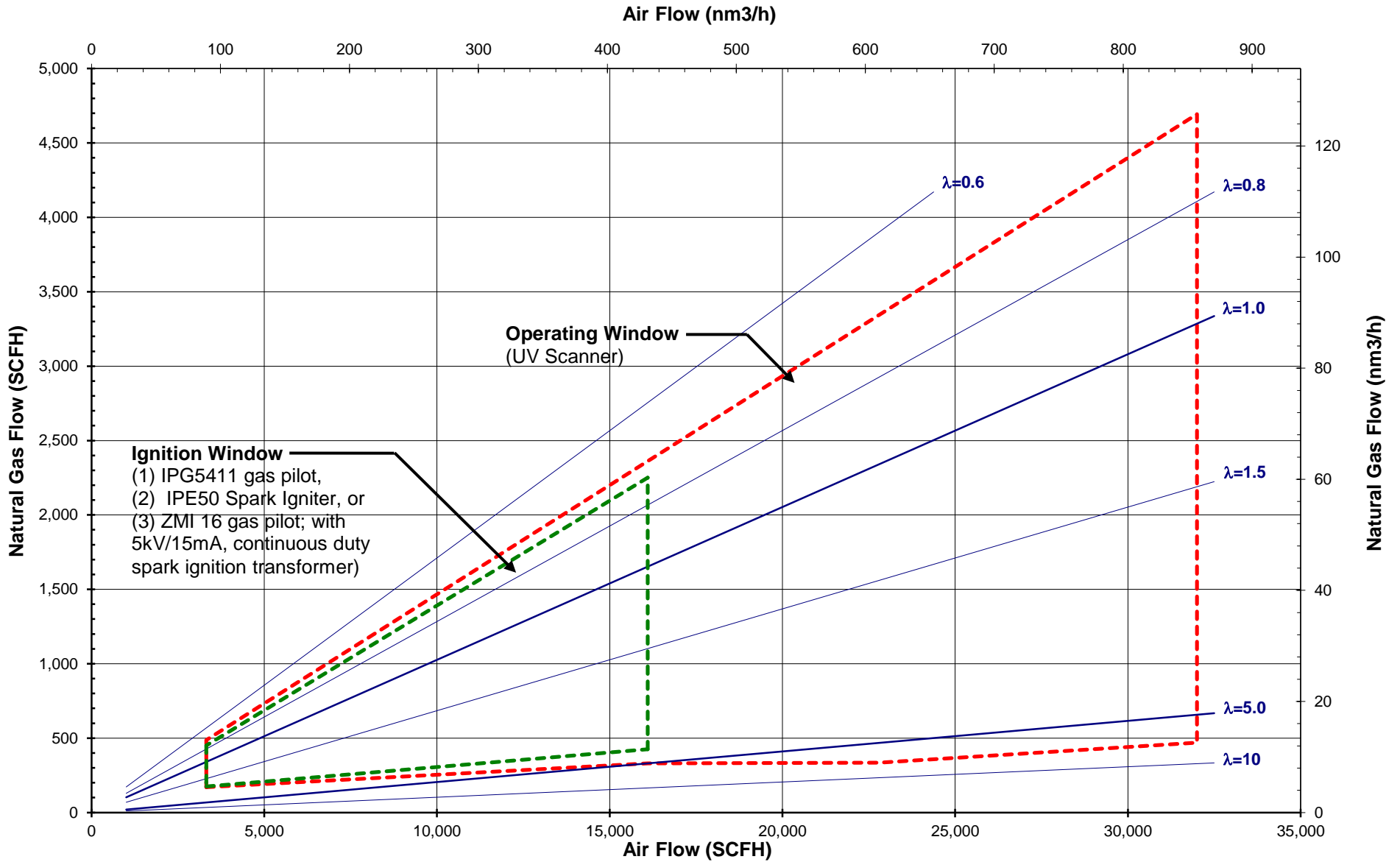
*Note: Gas Inlet Pressure for BBG burner is not suitable for fuel flow measurement and is given for component sizing and reference only

BBG 2004/3004 Pressure Curves
Natural Gas 1034 BTU/ft³ (HHV Standard) / 10.21 kWh/nm³ (LHV Metric), 0.59 S.G.
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BBG 2004/3004 Operating and Ignition Window
 Natural Gas 1034 BTU/ft³ (HHV Standard) / 10.21 kWh/nm³ (LHV Metric), 0.59 S.G.
 and Ambient Combustion Air



Ignition Window
 (1) IPG5411 gas pilot,
 (2) IPE50 Spark Igniter, or
 (3) ZMI 16 gas pilot; with
 5kV/15mA, continuous duty
 spark ignition transformer)

Operating Window
 (UV Scanner)