



Burner Capacity Information, BBC 1120/2120

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION, LOW PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	10,110,000	44,440,000	62,390,000	76,080,000	87,780,000
	(kW)	2,670	11,750	16,500	20,120	23,220
Secondary Air Capacity	(scfh)	93,288	449,013	635,000	776,780	898,025
	(nm ³ /hr)	2,499	12,028	17,010	20,808	24,056
Secondary 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
Primary Air Capacity	(scfh)	11,500	11,500	11,500	11,500	11,500
	(nm ³ /hr)	308	308	308	308	308
Primary Air Inlet Pressure	(in.w.c.)	6.9	6.9	6.9	6.9	6.9
	(mbar)	17.2	17.2	17.2	17.2	17.2
Gas Inlet Pressure	(in.w.c.)	0.1	0.4	0.7	1.1	1.5
	(mbar)	0.2	1.0	1.7	2.7	3.7
Flame Length (at 10% Excess Air)	(in)	48	168	192	192	216
	(mm)	1220	4270	4880	4880	5490
Flame Diameter (at 10% Excess Air)	(in)	24	48	48	54	54
	(mm)	610	1220	1220	1370	1370
Maximum Operating Excess	(Air)	250%	500%	550%	600%	650%
	(Fuel)	30%	30%	30%	30%	30%

Burner Capacity Information, BBC 3120

NATURAL GAS, 900°F/482°C PREHEATED SECONDARY AIR OPERATION, LOW PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	6,680,000	27,940,000	39,050,000	47,520,000	54,760,000
	(kW)	1,770	7,390	10,330	12,570	14,480
Secondary Air Capacity	(scfh)	57,753	277,975	393,116	480,889	555,949
	(nm ³ /hr)	1,547	7,446	10,531	12,882	14,893
Secondary 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
Primary Air Capacity	(scfh)	11,500	11,500	11,500	11,500	11,500
	(nm ³ /hr)	308	308	308	308	308
Primary Air Inlet Pressure	(in.w.c.)	6.9	6.9	6.9	6.9	6.9
	(mbar)	17.2	17.2	17.2	17.2	17.2
Gas Inlet Pressure	(in.w.c.)	0.1	0.3	0.5	0.8	1.1
	(mbar)	0.2	0.8	1.3	2.1	2.8
Flame Length (at 10% Excess Air)	(in)	36	126	144	144	162
	(mm)	910	3200	3660	3660	4110
Flame Diameter (at 10% Excess Air)	(in)	22	43	43	49	49
	(mm)	550	1100	1100	1230	1230
Maximum Operating Excess	(Air)	200%	400%	440%	480%	520%
	(Fuel)	30%	30%	30%	30%	30%

NOTES:

1. Capacities based on Natural Gas with HHV of 1034 BTU/ft³ (Standard) / LHV of 10.21 kWh/nm³ (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 at 10% excess air; with burner firing into chamber under no pressure.
2. Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
3. Fuel inlet pressures given for reference only and should not be used for measuring fuel flow to the burner.
4. Flame lengths measured from end of the combustion tile.
5. Flame detection via UV scanner; for detection limits refer to the Burner Operating and Ignition Window.
6. Ignition via IPG5413 gas pilot; for ignition limits refer to the Burner Operating and Ignition Window.
7. Burner is suitable for use on gaseous and liquid fuels other than those listed, and with combustion air other than ambient temperature or that listed; for further information consult Hauck.



Burner Capacity Information, BBC 1120/2120

NO. 2 FUEL OIL, AMBIENT COMBUSTION AIR OPERATION, LOW PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	10,770,000	40,420,000	55,920,000	67,730,000	77,840,000
	(kW)	2,850	10,690	14,790	17,910	20,590
Secondary Air Capacity	(scfh)	93,288	449,013	635,000	776,780	898,025
	(nm ³ /hr)	2,499	12,028	17,010	20,808	24,056
Secondary 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
Primary Air Capacity	(scfh)	36,000	36,000	36,000	36,000	36,000
	(nm ³ /hr)	964	964	964	964	964
Primary Air Inlet Pressure	(in.w.c.)	27.7	27.7	27.7	27.7	27.7
	(mbar)	68.9	68.9	68.9	68.9	68.9
Fuel Oil Flow(at 20% Excess Air)	(gph)	78	293	405	491	564
	(lph)	295.5	1,109	1,534	1,858	2,135
Flame Length (at 20% Excess Air)	(in)	48	144	168	192	192
	(mm)	1220	3660	4270	4880	4880
Flame Diameter (at 20% Excess Air)	(in)	24	36	42	48	48
	(mm)	610	910	1070	1220	1220
Maximum Operating Excess	(Air)	250%	350%	400%	450%	500%
	(Fuel)	30%	30%	30%	30%	30%

Burner Capacity Information, BBC 3120

NO. 2 FUEL OIL, 900°F/482°C PREHEATED SECONDARY AIR OPERATION, LOW PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	7,810,000	26,160,000	35,760,000	43,070,000	49,330,000
	(kW)	2,070	6,920	9,460	11,390	13,050
Secondary Air Capacity	(scfh)	57,753	277,975	393,116	480,889	555,949
	(nm ³ /hr)	1,547	7,446	10,531	12,882	14,893
Secondary 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
Primary Air Capacity	(scfh)	36,000	36,000	36,000	36,000	36,000
	(nm ³ /hr)	964	964	964	964	964
Primary Air Inlet Pressure	(in.w.c.)	27.7	27.7	27.7	27.7	27.7
	(mbar)	68.9	68.9	68.9	68.9	68.9
Fuel Oil Flow(at 20% Excess Air)	(gph)	57	190	259	312	357
	(lph)	214.3	718	981	1,181	1,353
Flame Length(at 20% Excess Air)	(in)	36	108	126	144	144
	(mm)	910	2740	3200	3660	3660
Flame Diameter(at 20% Excess Air)	(in)	22	32	38	43	43
	(mm)	550	820	960	1100	1100
Maximum Operating Excess	(Air)	200%	280%	320%	360%	400%
	(Fuel)	30%	30%	30%	30%	30%

NOTES:

- Capacities based on No. 2 Fuel Oil with HHV of 138,000 BTU/USgal (Standard) / LHV of 10.3 kWh/liter (Metric), 0.87 S.G., and a stoichiometric ratio of 1380:1 at 20% excess air; with burner firing into chamber under no pressure.
- Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
- Fuel inlet pressures 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; for detection limits refer to the Burner Operating and Ignition Window.
- Ignition via IPG5413 gas pilot; for ignition limits refer to the Burner Operating and Ignition Window.
- Burner is suitable for use on gaseous and liquid fuels other than those listed, and with combustion air other than ambient temperature or that listed; for further information consult Hauck.



Burner Capacity Information, BBC 1120/2120

LIQUID PROPANE, AMBIENT COMBUSTION AIR OPERATION, LIQUID PROPANE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	11,600,000	43,510,000	60,190,000	72,910,000	83,790,000
	(kW)	3,070	11,510	15,920	19,280	22,160
Secondary Air Capacity	(scfh)	93,288	449,013	635,000	776,780	898,025
	(nm ³ /hr)	2,499	12,028	17,010	20,808	24,056
Secondary 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
Primary Air Capacity	(scfh)	36,000	36,000	36,000	36,000	36,000
	(nm ³ /hr)	964	964	964	964	964
Primary Air Inlet Pressure	(in.w.c.)	27.7	27.7	27.7	27.7	27.7
	(mbar)	68.9	68.9	68.9	68.9	68.9
Liquid Propane Flow	(gph)	127	476	658	797	916
	(lph)	479.8	1,800	2,490	3,016	3,466
Liquid Propane Inlet Pressure	(psig)	5	75	144	211	278
	(bar)	0.4	5.2	9.9	14.5	19.2
Flame Length (at 20% Excess Air)	(in)	48	144	192	192	216
	(mm)	1220	3660	4880	4880	5490
Flame Diameter(at 20% Excess Air)	(in)	24	42	48	54	54
	(mm)	610	1070	1220	1370	1370
Maximum Operating Excess	(Air)	100%	300%	400%	500%	500%
	(Fuel)	30%	30%	30%	30%	30%

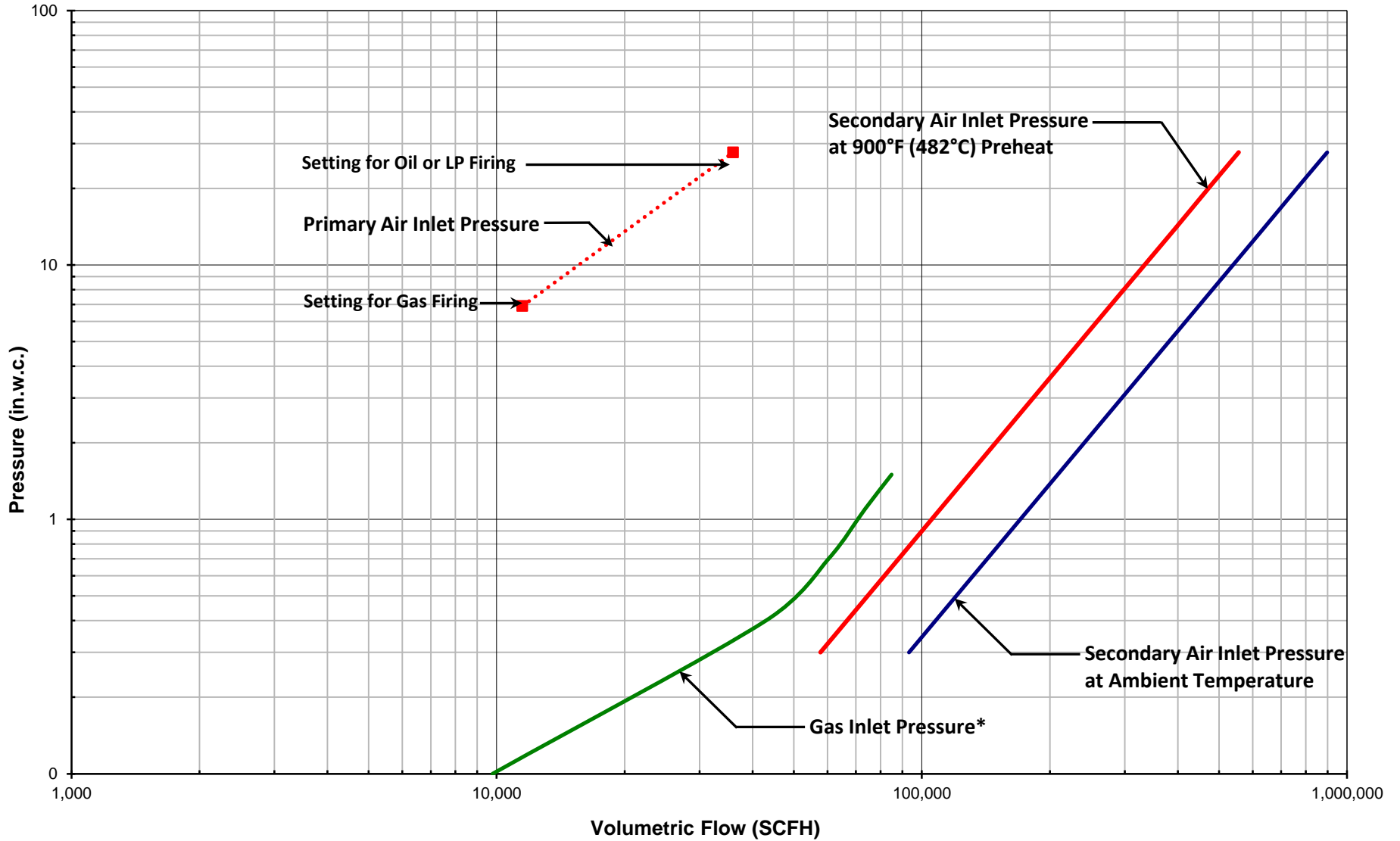
NO. 6 FUEL OIL, AMBIENT COMBUSTION AIR OPERATION, HIGH PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	9,140,000	39,540,000	55,450,000	67,550,000	77,910,000
	(kW)	2,420	10,460	14,670	17,870	20,610
Secondary Air Capacity	(scfh)	93,288	449,013	635,000	776,780	898,025
	(nm ³ /hr)	2,499	12,028	17,010	20,808	24,056
Secondary 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
Primary Air Capacity	(scfh)	11,500	11,500	11,500	11,500	11,500
	(nm ³ /hr)	308	308	308	308	308
Primary Air Inlet Pressure	(in.w.c.)	6.0	6.0	6.0	6.0	6.0
	(mbar)	14.9	14.9	14.9	14.9	14.9
Atomizing Air Capacity	(scfh)	2,280	2,880	3,360	3,450	3,600
	(nm ³ /hr)	61	77	90	92	96
Atomizing Air Inlet Pressure	(psig)	18	44	64	74	84
	(bar)	1.2	3.0	4.4	5.1	5.8
Fuel Oil Flow	(gph)	61	264	370	450	519
	(lph)	231	999	1,400	1,703	1,964
Fuel Oil Inlet Pressure	(psig)	20	47	66	77	88
	(bar)	1.4	3.2	4.6	5.3	6.1
Flame Length(at 20% Excess Air)	(in)	48	144	168	192	192
	(mm)	1220	3660	4270	4880	4880
Flame Diameter(at 20% Excess Air)	(in)	24	42	42	48	48
	(mm)	610	1070	1070	1220	1220
Maximum Operating Excess	(Air)	200%	300%	300%	300%	300%
	(Fuel)	30%	30%	30%	30%	30%

NOTES:

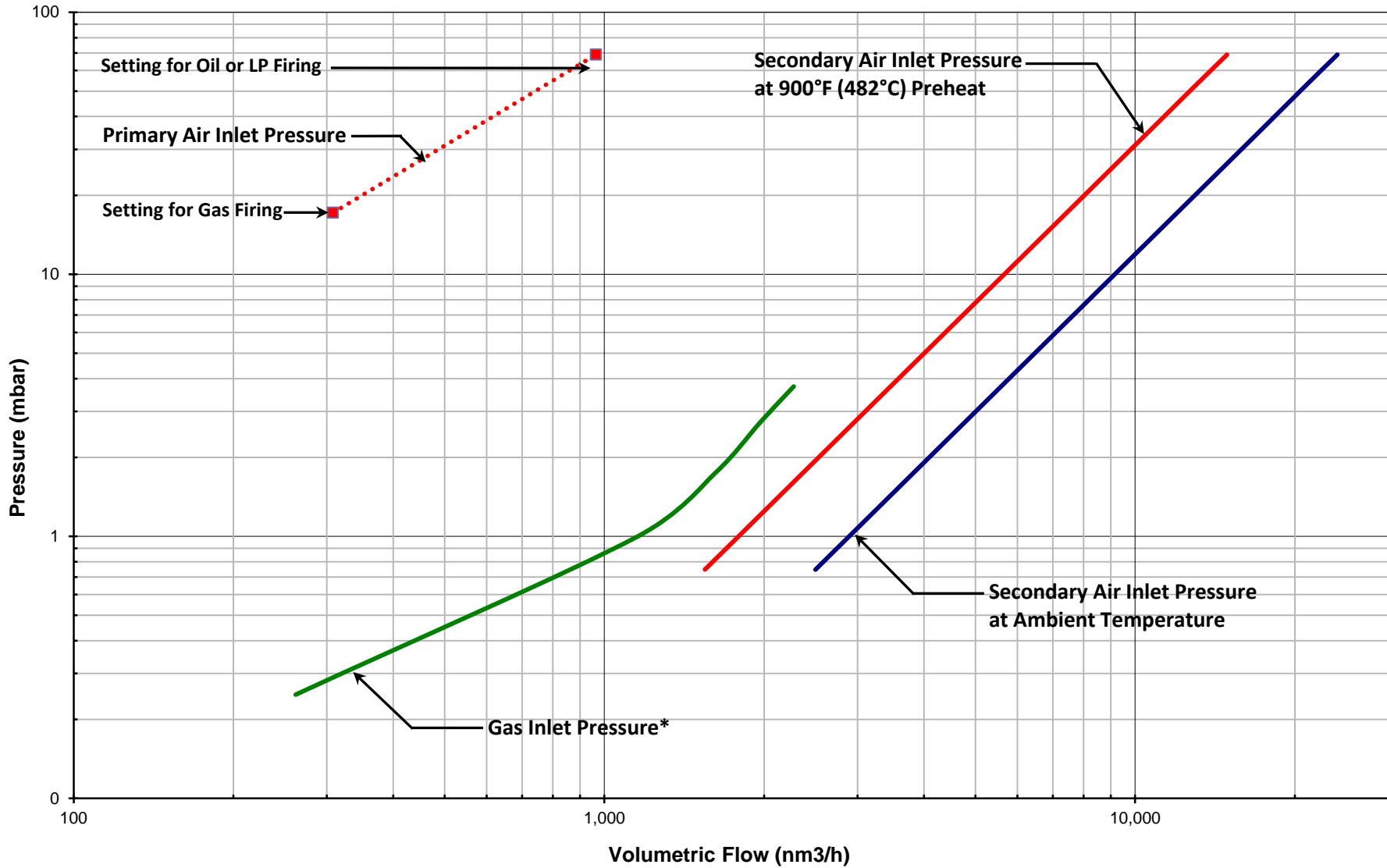
- Capacities based on 1) Liquid Propane with HHV of 91,500 BTU/gal (Standard) / LHV of 6.5 kWh/liter (Metric), 0.51 S.G., and a stoichiometric ratio of 850:1 at 20% excess air, or 2) No. 6 Fuel Oil with HHV of 150,000 BTU/USgal (Standard) / LHV of 11.2 kWh/liter (Metric), 1.02 S.G., and a stoichiometric ratio of 1465:1 at 20% excess air; all cases with burner firing into chamber under no pressure.
- Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
- Fuel inlet pressures 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; for detection limits refer to the Burner Operating and Ignition Window.
- Ignition via IPG5413 gas pilot; for ignition limits refer to the Burner Operating and Ignition Window.
- Burner is suitable for use on gaseous and liquid fuels other than those listed, and with combustion air other than ambient temperature or that listed; for further information consult Hauck.

BBC 1120/2120/3120 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



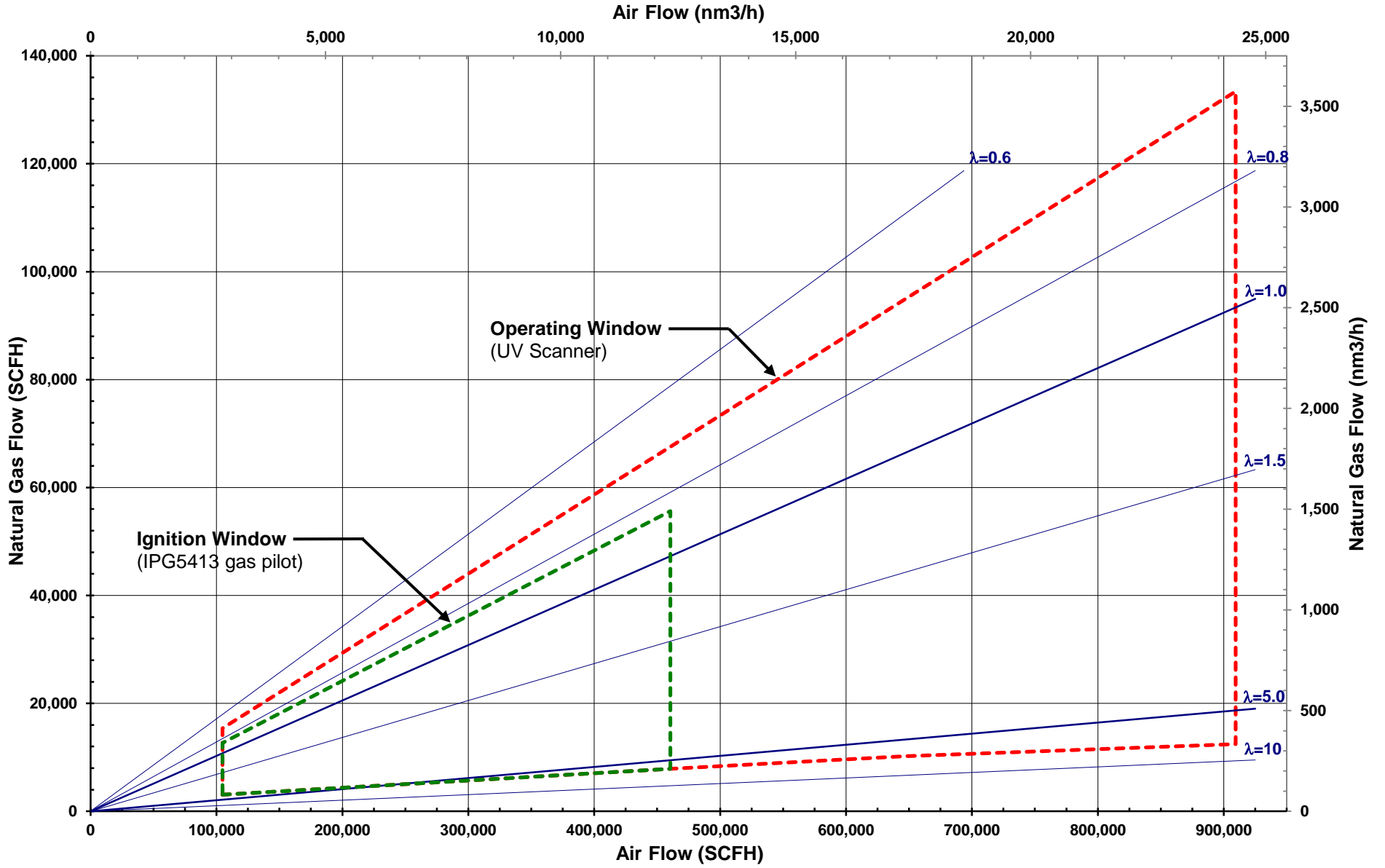
*Note: Gas Inlet Pressure for BBC burner is not suitable for fuel flow measurement and is given for component sizing and reference only

BBC 1120/2120/3120 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 BBC burner is not suitable for fuel flow measurement and is given for component sizing and reference only

BBC 1120/2120/3120 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



BBC 1120/2120/3120 Operating and Ignition Window
No. 2 Fuel Oil 138,000 BTU/gal (HHV Standard) / 10.3 kWh/liter (LHV Metric), 0.87 S.G.
and Ambient Combustion Air

