



Burner Capacity Information, BBC 1106/2106

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION, LOW PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	1,000,000	3,480,000	4,670,000	5,610,000	6,480,000
	(kW)	260	920	1,240	1,480	1,710
Secondary Air Capacity	(scfh)	6,750	32,500	44,825	54,500	63,500
	(nm ³ /hr)	181	871	1,201	1,460	1,701
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)	3,600	3,600	3,600	3,600	3,600
	(nm ³ /hr)	96	96	96	96	96
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.)	0.0	1.7	3.6	5.4	7.3
	(mbar)	0.1	4.2	9.0	13.4	18.2
Flame Length (at 10% Excess Air)	(in)	36	72	84	90	96
	(mm)	910	1830	2130	2290	2440
Flame Diameter (at 10% Excess Air)	(in)	12	24	28	28	30
	(mm)	300	610	710	710	760
Maximum Operating Excess	(Air)	200%	350%	350%	350%	350%
	(Fuel)	30%	30%	30%	30%	30%

Burner Capacity Information, BBC 3106

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	750,000	2,290,000	3,030,000	3,600,000	4,140,000
	(kW)	200	610	800	950	1,100
Secondary Air Capacity	(scfh)	4,179	20,120	27,750	33,740	39,312
	(nm ³ /hr)	112	539	743	904	1,053
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)	3,600	3,600	3,600	3,600	3,600
	(nm ³ /hr)	96	96	96	96	96
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.)	0.0	1.3	2.7	4.1	5.5
	(mbar)	0.1	3.2	6.8	10.2	13.8
Flame Length (at 10% Excess Air)	(in)	27	54	63	68	72
	(mm)	690	1370	1600	1710	1830
Flame Diameter (at 10% Excess Air)	(in)	11	22	25	25	27
	(mm)	270	550	640	640	690
Maximum Operating Excess	(Air)	160%	280%	280%	280%	280%
	(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 1106/2106

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	1,080,000	3,230,000	4,250,000	5,060,000	5,810,000
	(kW)	290	850	1,120	1,340	1,540
Secondary Air Capacity	(scfh)	6,750	32,500	44,825	54,500	63,500
	(nm ³ /hr)	181	871	1,201	1,460	1,701
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)	6,200	6,200	6,200	6,200	6,200
	(nm ³ /hr)	166	166	166	166	166
Primary Air Inlet Pressure	(in.w.c.)	24.2	24.2	24.2	24.2	24.2
	(mbar)	60.2	60.2	60.2	60.2	60.2
Fuel Oil Flow(at 20% Excess Air)	(gph)	7.8	23	31	37	42
	(lph)	30	88	117	139	159
Flame Length (at 20% Excess Air)	(in)	30	72	84	84	90
	(mm)	760	1830	2130	2130	2290
Flame Diameter (at 20% Excess Air)	(in)	12	16	24	24	28
	(mm)	300	410	610	610	710
Maximum Operating Excess	(Air)	100%	350%	400%	500%	600%
	(Fuel)	30%	30%	30%	30%	30%

Burner Capacity Information, BBC 3106

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)	860,000	2,190,000	2,830,000	3,330,000	3,790,000
	(kW)	230	580	750	880	1,000
Secondary Air Capacity	(scfh)	4,179	20,120	27,750	33,740	39,312
	(nm ³ /hr)	112	539	743	904	1,053
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)	6,200	6,200	6,200	6,200	6,200
	(nm ³ /hr)	166	166	166	166	166
Primary Air Inlet Pressure	(in.w.c.)	24.2	24.2	24.2	24.2	24.2
	(mbar)	60.2	60.2	60.2	60.2	60.2
Fuel Oil Flow(at 20% Excess Air)	(gph)	6.3	16	21	24	27
	(lph)	24	60	78	91	104
Flame Length(at 20% Excess Air)	(in)	23	54	63	63	68
	(mm)	570	1370	1600	1600	1710
Flame Diameter(at 20% Excess Air)	(in)	11	14	22	22	25
	(mm)	270	370	550	550	640
Maximum Operating Excess	(Air)	80%	280%	320%	400%	480%
	(Fuel)	30%	30%	30%	30%	30%

NOTES:

1. 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.
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.



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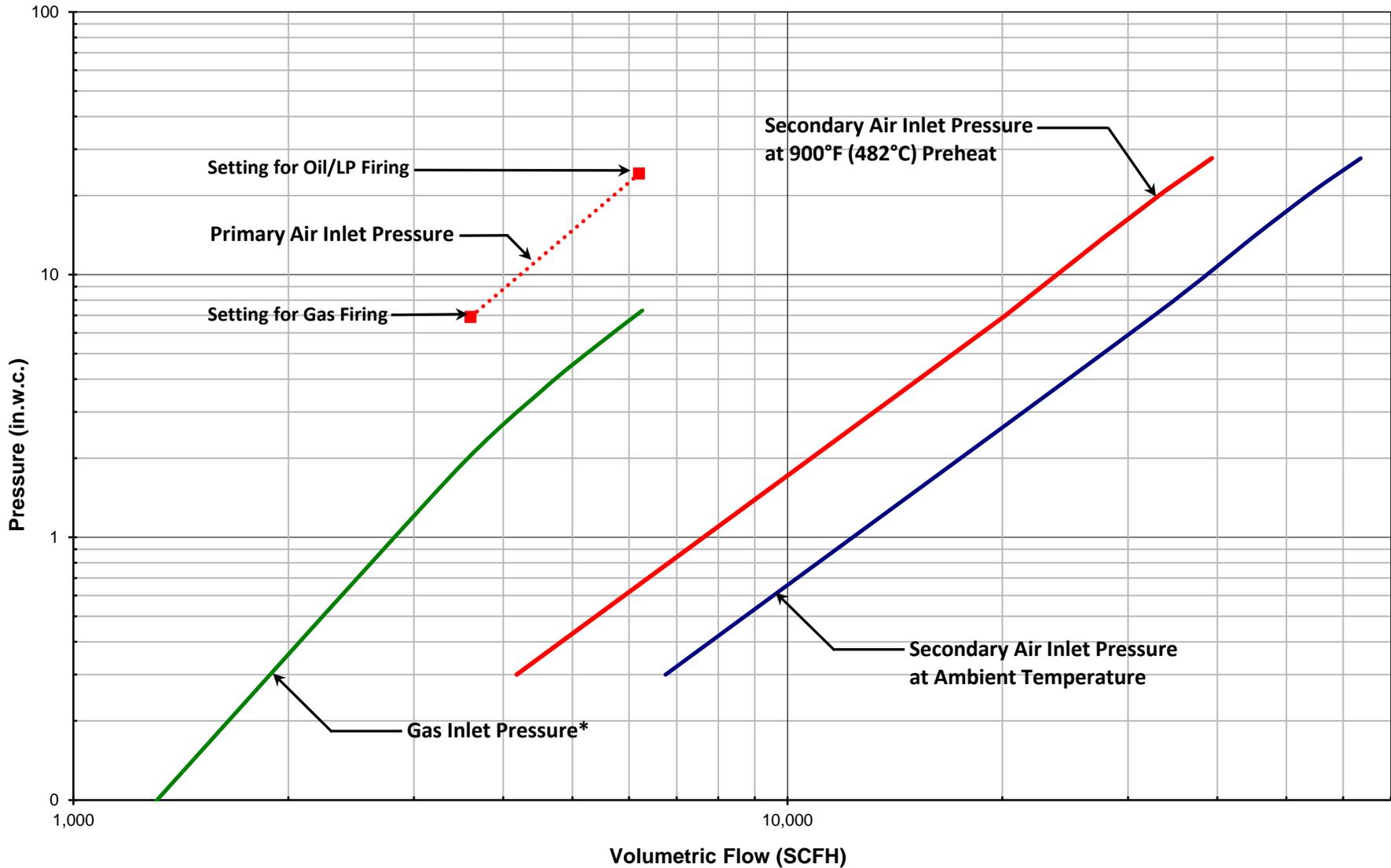
NO. 6 FUEL OIL, AMBIENT COMBUSTION AIR OPERATION, HIGH PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	1,310,000	3,510,000	4,570,000	5,400,000	6,170,000
	(kW)	350	930	1,210	1,430	1,630
Secondary Air Capacity	(scfh)	6,750	32,500	44,825	54,500	63,500
	(nm ³ /hr)	181	871	1,201	1,460	1,701
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)	8,000	8,000	8,000	8,000	8,000
	(nm ³ /hr)	214	214	214	214	214
Primary Air Inlet Pressure	(in.w.c.)	4.0	4.0	4.0	4.0	4.0
	(mbar)	10.0	10.0	10.0	10.0	10.0
Atomizing Air Capacity	(scfh)	620	665	700	750	775
	(nm ³ /hr)	17	18	19	20	21
Atomizing Air Inlet Pressure	(psig)	23	37	42	48	52
	(bar)	1.6	2.6	2.9	3.3	3.6
Fuel Oil Flow	(gph)	8.7	23	30	36	41
	(lph)	33	87	114	136	155
Fuel Oil Inlet Pressure	(psig)	25	48	46	51	55
	(bar)	1.7	3.3	3.2	3.5	3.8
Flame Length(at 20% Excess Air)	(in)	36	60	72	84	84
	(mm)	910	1520	1830	2130	2130
Flame Diameter(at 20% Excess Air)	(in)	12	16	16	24	24
	(mm)	300	410	410	610	610
Maximum Operating Excess	(Air)	50%	100%	125%	150%	200%
	(Fuel)	30%	30%	30%	30%	30%

NOTES:

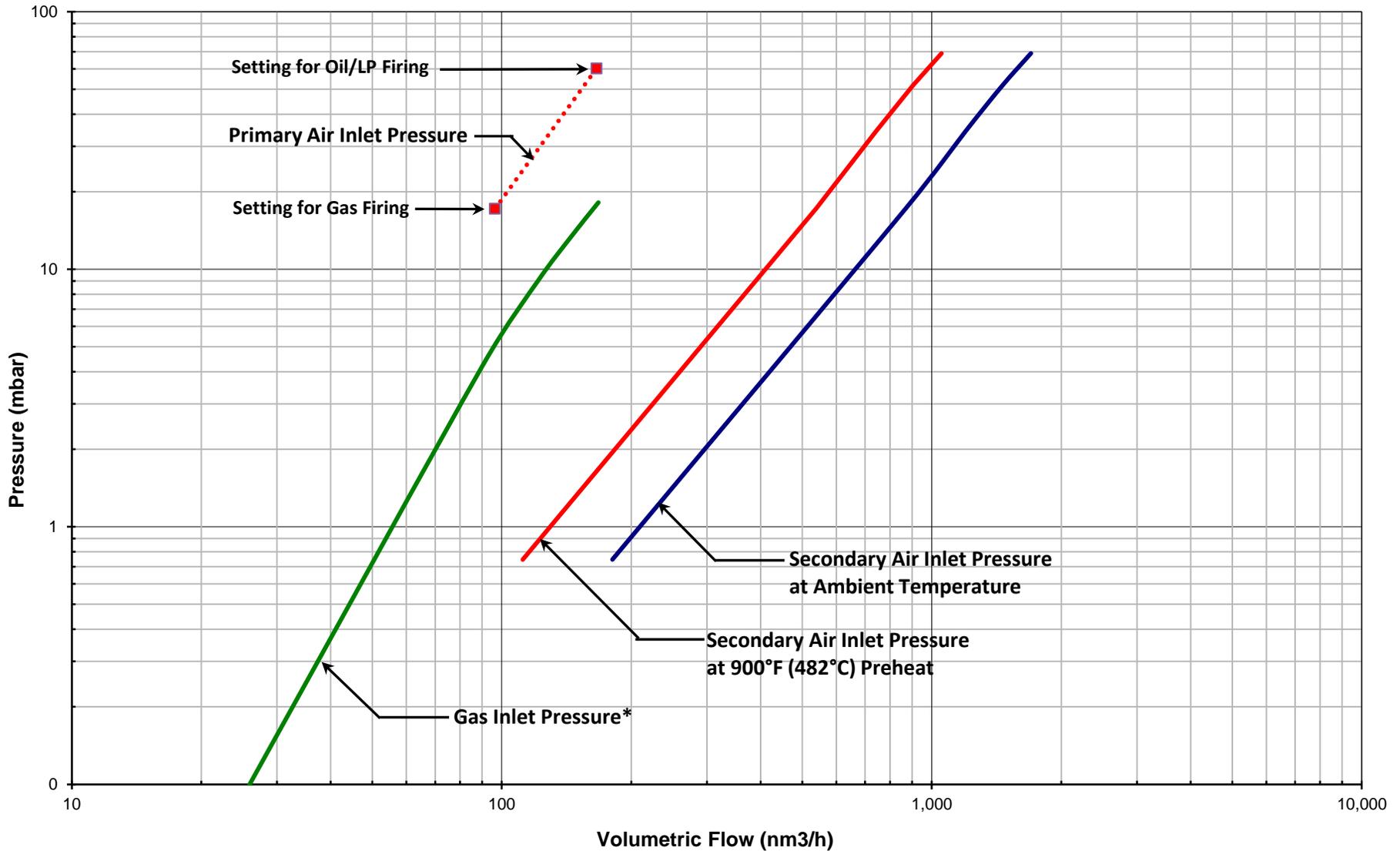
1. Capacities based on No. 6 Fuel Oil with HHV of 150,000 BTU/USgal (Standard) / LHV of 11.2 kWh/liter (Metric), 1.02 S.G., and a stoichiometric ratio of 1465:1 at 20% excess air; all cases with burner firing into chamber under no pressure.
2. Air and fuel flows based on STP operating conditions at sea 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 IPG5411 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.

BBC 1106/2106/3106 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



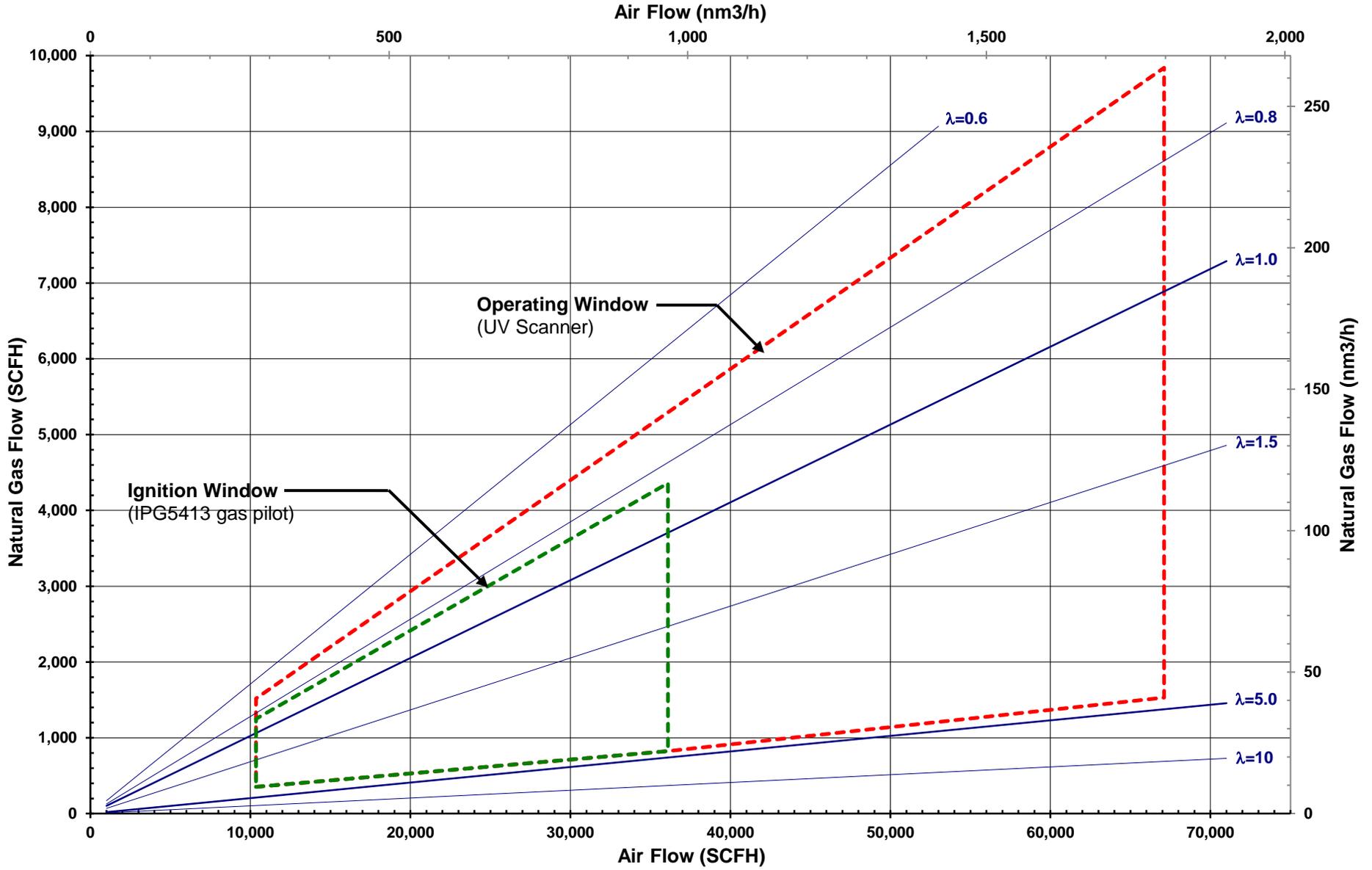
*Note: Gas Inlet Pressure for BBC burner is not suitable for fuel flow measurement and is given for component sizing and reference only

BBC 1106/2106/3106 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 1106/2106/3106 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 1106/2106/3106 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

