



Burner Capacity Information, BBC 1108/2108

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION, LOW PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	1,740,000	6,520,000	9,040,000	11,020,000	12,550,000
	(kW)	460	1,720	2,390	2,910	3,320
Secondary Air Capacity	(scfh)	12,550	62,075	88,150	108,650	124,500
	(nm ³ /hr)	336	1,663	2,361	2,911	3,335
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)	5,500	5,500	5,500	5,500	5,500
	(nm ³ /hr)	147	147	147	147	147
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	3.2	6.4	9.3	12.2
	(mbar)	0.3	8.0	15.9	23.1	30.4
Flame Length (at 10% Excess Air)	(in)	60	84	96	108	120
	(mm)	1520	2130	2440	2740	3050
Flame Diameter (at 10% Excess Air)	(in)	24	30	30	36	36
	(mm)	610	760	760	910	910
Maximum Operating Excess	(Air)	350%	400%	400%	500%	500%
	(Fuel)	30%	30%	30%	30%	30%

Burner Capacity Information, BBC 3108

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	1,280,000	4,240,000	5,800,000	7,020,000	7,970,000
	(kW)	340	1,120	1,530	1,860	2,110
Secondary Air Capacity	(scfh)	7,769	38,429	54,572	67,263	77,075
	(nm ³ /hr)	208	1,029	1,462	1,802	2,065
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)	5,500	5,500	5,500	5,500	5,500
	(nm ³ /hr)	147	147	147	147	147
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	2.4	4.9	7.1	9.3
	(mbar)	0.2	6.0	12.1	17.6	23.0
Flame Length (at 10% Excess Air)	(in)	45	63	72	81	90
	(mm)	1140	1600	1830	2060	2290
Flame Diameter (at 10% Excess Air)	(in)	22	27	27	32	32
	(mm)	550	690	690	820	820
Maximum Operating Excess	(Air)	280%	320%	320%	400%	400%
	(Fuel)	30%	30%	30%	30%	30%

NOTES:

- 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.
- 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 1108/2108

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	1,960,000	6,090,000	8,260,000	9,970,000	11,290,000
	(kW)	520	1,610	2,180	2,640	2,990
Secondary Air Capacity	(scfh)	12,550	62,075	88,150	108,650	124,500
	(nm ³ /hr)	336	1,663	2,361	2,911	3,335
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)	11,000	11,000	11,000	11,000	11,000
	(nm ³ /hr)	295	295	295	295	295
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)	14	44.1	59.9	72.3	81.8
	(lph)	54	109.8	149.0	179.8	203.6
Flame Length (at 20% Excess Air)	(in)	66	90	102	114	120
	(mm)	1680	2290	2590	2900	3050
Flame Diameter (at 20% Excess Air)	(in)	24	30	30	36	36
	(mm)	610	760	760	910	910
Maximum Operating Excess	(Air)	400%	400%	400%	500%	500%
	(Fuel)	30%	30%	30%	30%	30%

Burner Capacity Information, BBC 3108

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)	1,560,000	4,120,000	5,460,000	6,520,000	7,340,000
	(kW)	410	1,090	1,440	1,720	1,940
Secondary Air Capacity	(scfh)	7,769	38,429	54,572	67,263	77,075
	(nm ³ /hr)	208	1,029	1,462	1,802	2,065
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)	11,000	11,000	11,000	11,000	11,000
	(nm ³ /hr)	295	295	295	295	295
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)	14	44.1	59.9	72.3	81.8
	(lph)	54	109.8	149.0	179.8	203.6
Flame Length(at 20% Excess Air)	(in)	50	68	77	86	90
	(mm)	1260	1710	1940	2170	2290
Flame Diameter(at 20% Excess Air)	(in)	22	27	27	32	32
	(mm)	550	690	690	820	820
Maximum Operating Excess	(Air)	320%	320%	320%	400%	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.



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LIQUID PROPANE, AMBIENT COMBUSTION AIR OPERATION, LIQUID PROPANE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	2,110,000	6,560,000	8,890,000	10,730,000	12,160,000
	(kW)	560	1,740	2,350	2,840	3,220
Secondary Air Capacity	(scfh)	12,550	62,075	88,150	108,650	124,500
	(nm ³ /hr)	336	1,663	2,361	2,911	3,335
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)	11,000	11,000	11,000	11,000	11,000
	(nm ³ /hr)	295	295	295	295	295
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
Liquid Propane Flow	(gph)	23	72	97	117	133
	(lph)	87.4	178.2	241.8	291.9	330.5
Liquid Propane Inlet Pressure	(psig)	2	15	28	41	53
	(bar)	0.1	1.1	1.9	2.8	3.6
Flame Length (at 20% Excess Air)	(in)	60	84	96	108	120
	(mm)	1520	2130	2440	2740	3050
Flame Diameter(at 20% Excess Air)	(in)	24	30	30	36	36
	(mm)	610	760	760	910	910
Maximum Operating Excess	(Air)	350%	400%	400%	500%	500%
	(Fuel)	30%	30%	30%	30%	30%

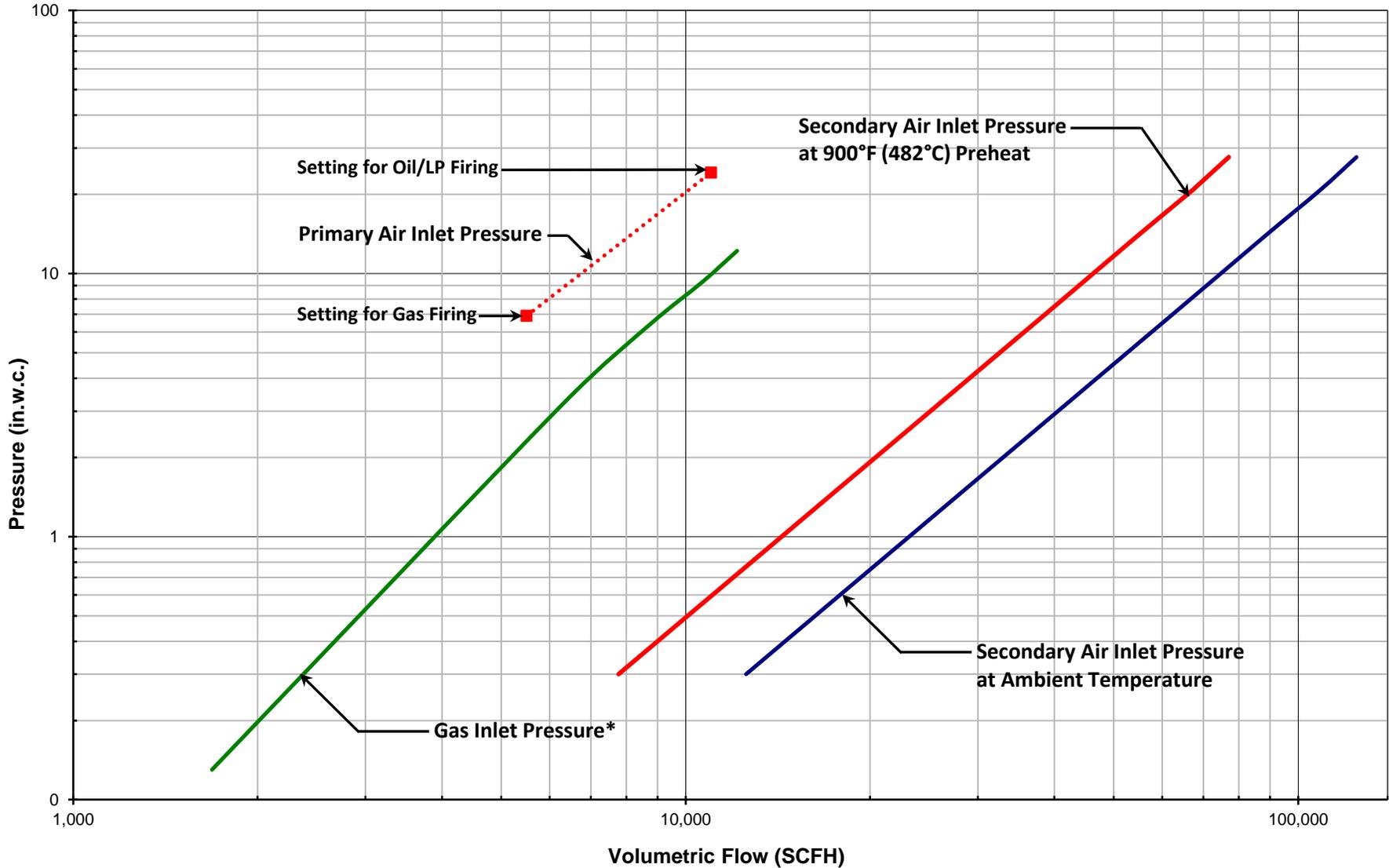
NO. 6 FUEL OIL, AMBIENT COMBUSTION AIR OPERATION, HIGH PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	1,750,000	6,010,000	8,250,000	10,010,000	11,370,000
	(kW)	460	1,590	2,180	2,650	3,010
Secondary Air Capacity	(scfh)	12,550	62,075	88,150	108,650	124,500
	(nm ³ /hr)	336	1,663	2,361	2,911	3,335
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)	7,500	7,500	7,500	7,500	7,500
	(nm ³ /hr)	201	201	201	201	201
Primary Air Inlet Pressure	(in.w.c.)	3.0	3.0	3.0	3.0	3.0
	(mbar)	7.5	7.5	7.5	7.5	7.5
Atomizing Air Capacity	(scfh)	450	815	1,060	1,142	1,200
	(nm ³ /hr)	12	22	28	31	32
Atomizing Air Inlet Pressure	(psig)	15	36	46	58	70
	(bar)	1.0	2.5	3.2	4.0	4.8
Fuel Oil Flow	(gph)	12	40	60	70	80
	(lph)	44	151	227	265	303
Fuel Oil Inlet Pressure	(psig)	16	38	48	60	72
	(bar)	1.1	2.6	3.3	4.1	5.0
Flame Length(at 20% Excess Air)	(in)	60	84	108	120	132
	(mm)	1520	2130	2740	3050	3350
Flame Diameter(at 20% Excess Air)	(in)	18	18	24	24	30
	(mm)	460	460	610	610	760
Maximum Operating Excess	(Air)	150%	200%	200%	200%	200%
	(Fuel)	30%	30%	30%	30%	30%

NOTES:

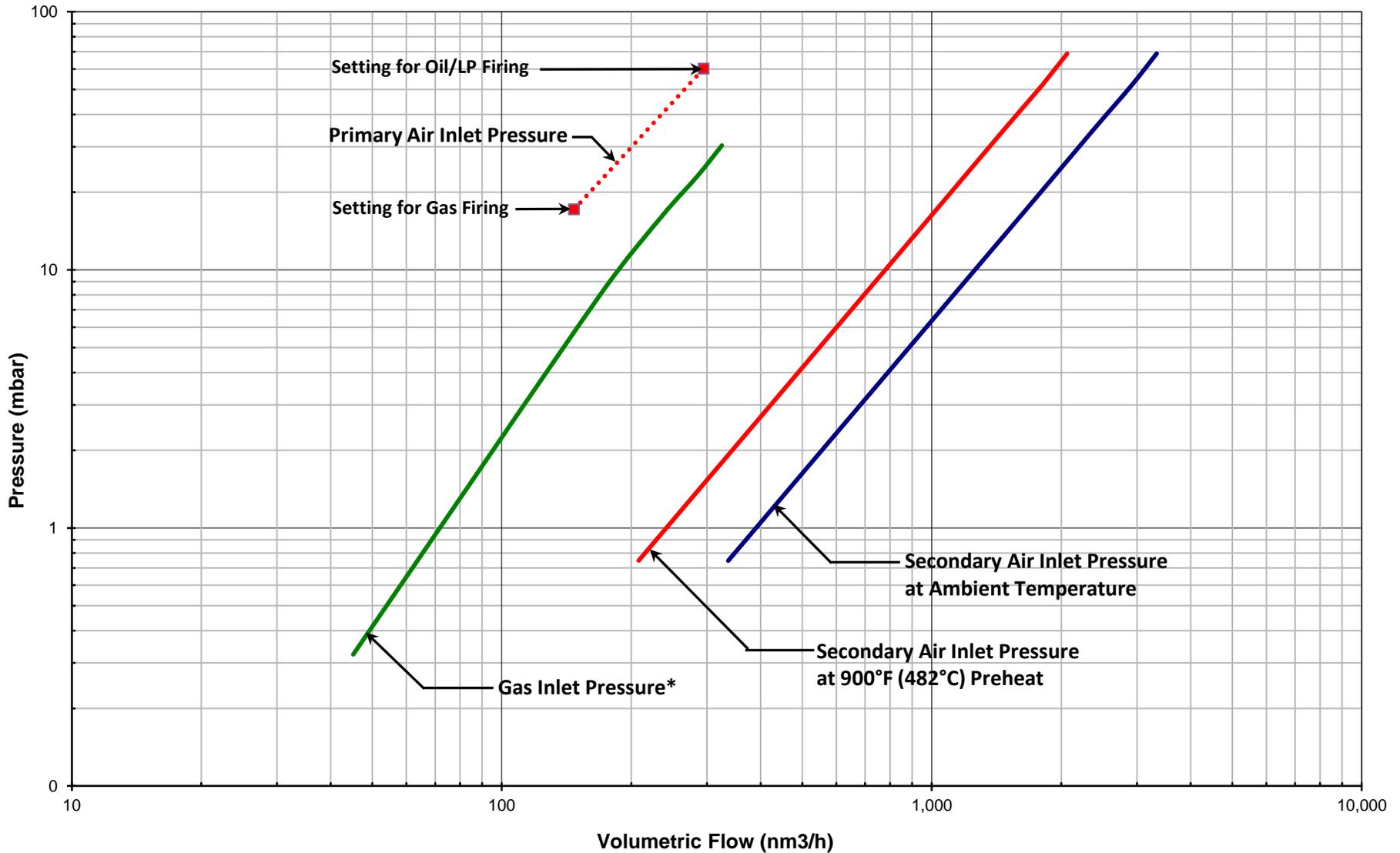
- Capacities based on 1) Liquid Propane with HHV of 91,500 BTU/gal (Standard) / LHV of 6.5 kWh/liter (Metric), 0.51 S.G., and a stoichiometric ratio of 850:1 at 20% excess air, or 2) No. 6 Fuel Oil with HHV of 150,000 BTU/USgal (Standard) / LHV of 11.2 kWh/liter (Metric), 1.02 S.G., and a stoichiometric 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 1108/2108/3108 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



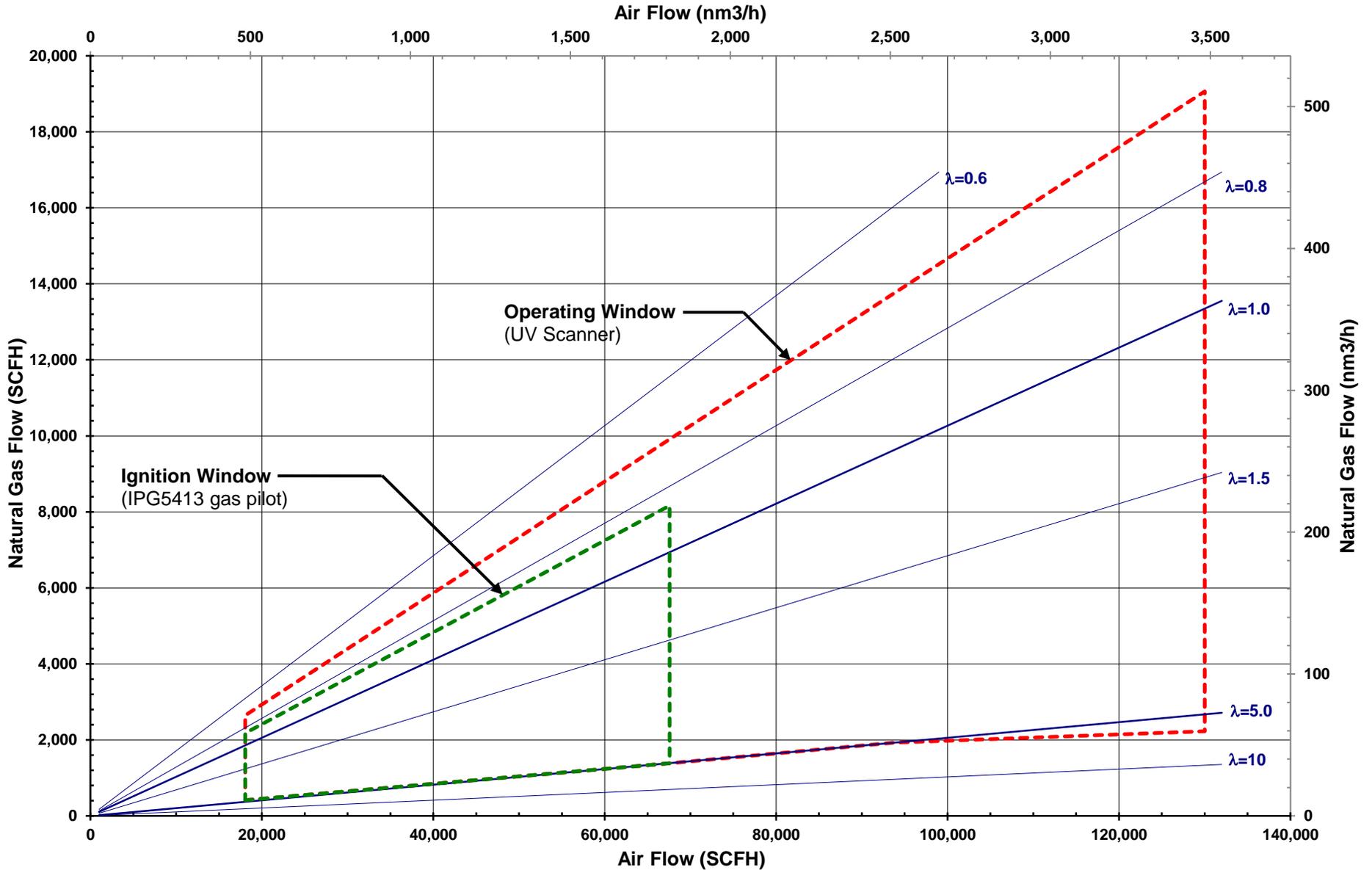
*Note: Gas Inlet Pressure for BBC burner is not suitable for fuel flow measurement and is given for component sizing and reference only

BBC 1108/2108/3108 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 1108/2108/3108 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 1108/2108/3108 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

