



## Burner Capacity Information, BBC 1112/2112

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION, LOW PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
<b>Capacity</b> (at 10% Excess Air)	(BTU/hr)	<b>3,500,000</b>	<b>13,640,000</b>	<b>18,920,000</b>	<b>23,050,000</b>	<b>26,420,000</b>
	(kW)	<b>930</b>	<b>3,610</b>	<b>5,000</b>	<b>6,100</b>	<b>6,990</b>
Secondary Air Capacity	(scfh)	27,500	132,500	187,250	230,000	265,000
	(nm <sup>3</sup> /hr)	737	3,549	5,016	6,161	7,099
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)	8,800	8,800	8,800	8,800	8,800
	(nm <sup>3</sup> /hr)	236	236	236	236	236
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	1.6	3.0	4.5	5.9
	(mbar)	0.2	4.0	7.5	11.1	14.6
Flame Length (at 10% Excess Air)	(in)	60	120	168	174	180
	(mm)	1520	3050	4270	4420	4570
Flame Diameter (at 10% Excess Air)	(in)	24	24	36	48	48
	(mm)	610	610	910	1220	1220
Maximum Operating Excess	(Air)	300%	400%	400%	500%	500%
	(Fuel)	30%	30%	30%	30%	30%

## Burner Capacity Information, BBC 3112

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
<b>Capacity</b> (at 10% Excess Air)	(BTU/hr)	<b>2,490,000</b>	<b>8,770,000</b>	<b>12,040,000</b>	<b>14,590,000</b>	<b>16,680,000</b>
	(kW)	<b>660</b>	<b>2,320</b>	<b>3,180</b>	<b>3,860</b>	<b>4,410</b>
Secondary Air Capacity	(scfh)	17,025	82,028	115,923	142,388	164,056
	(nm <sup>3</sup> /hr)	456	2,197	3,105	3,814	4,395
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)	8,800	8,800	8,800	8,800	8,800
	(nm <sup>3</sup> /hr)	236	236	236	236	236
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	1.2	2.3	3.4	4.4
	(mbar)	0.2	3.0	5.7	8.4	11.0
Flame Length (at 10% Excess Air)	(in)	45	90	126	131	135
	(mm)	1140	2290	3200	3310	3430
Flame Diameter (at 10% Excess Air)	(in)	22	22	32	43	43
	(mm)	550	550	820	1100	1100
Maximum Operating Excess	(Air)	240%	320%	320%	400%	400%
	(Fuel)	30%	30%	30%	30%	30%

### NOTES:

- Capacities based on Natural Gas with HHV of 1034 BTU/ft<sup>3</sup> (Standard) / LHV of 10.21 kWh/nm<sup>3</sup> (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 1112/2112

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
<b>Capacity</b> (at 20% Excess Air)	(BTU/hr)	<b>3,750,000</b>	<b>12,500,000</b>	<b>17,060,000</b>	<b>20,630,000</b>	<b>23,540,000</b>
	(kW)	<b>990</b>	<b>3,310</b>	<b>4,510</b>	<b>5,460</b>	<b>6,230</b>
Secondary Air Capacity	(scfh)	27,500	132,500	187,250	230,000	265,000
	(nm <sup>3</sup> /hr)	737	3,549	5,016	6,161	7,099
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)	17,500	17,500	17,500	17,500	17,500
	(nm <sup>3</sup> /hr)	469	469	469	469	469
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)	27	90.6	123.6	149.5	170.6
	(lph)	103	225.4	307.6	371.8	424.4
Flame Length (at 20% Excess Air)	(in)	84	120	132	144	156
	(mm)	2130	3050	3350	3660	3960
Flame Diameter (at 20% Excess Air)	(in)	24	36	36	42	48
	(mm)	610	910	910	1070	1220
Maximum Operating Excess	(Air)	500%	750%	1000%	1000%	1000%
	(Fuel)	30%	30%	30%	30%	30%

## Burner Capacity Information, BBC 3112

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
<b>Capacity</b> (at 20% Excess Air)	(BTU/hr)	<b>2,880,000</b>	<b>8,290,000</b>	<b>11,120,000</b>	<b>13,320,000</b>	<b>15,130,000</b>
	(kW)	<b>760</b>	<b>2,190</b>	<b>2,940</b>	<b>3,520</b>	<b>4,000</b>
Secondary Air Capacity	(scfh)	17,025	82,028	115,923	142,388	164,056
	(nm <sup>3</sup> /hr)	456	2,197	3,105	3,814	4,395
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)	17,500	17,500	17,500	17,500	17,500
	(nm <sup>3</sup> /hr)	469	469	469	469	469
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)	27	90.6	123.6	149.5	170.6
	(lph)	103	225.4	307.6	371.8	424.4
Flame Length(at 20% Excess Air)	(in)	63	90	99	108	117
	(mm)	1600	2290	2510	2740	2970
Flame Diameter(at 20% Excess Air)	(in)	22	32	32	38	43
	(mm)	550	820	820	960	1100
Maximum Operating Excess	(Air)	400%	600%	800%	800%	800%
	(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.



## Burner Capacity Information, BBC 1112/2112

### LIQUID PROPANE, AMBIENT COMBUSTION AIR OPERATION, LIQUID PROPANE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
<b>Capacity</b> (at 20% Excess Air)	(BTU/hr)	<b>4,040,000</b>	<b>13,460,000</b>	<b>18,370,000</b>	<b>22,200,000</b>	<b>25,340,000</b>
	(kW)	<b>1,070</b>	<b>3,560</b>	<b>4,860</b>	<b>5,870</b>	<b>6,700</b>
Secondary Air Capacity	(scfh)	27,500	132,500	187,250	230,000	265,000
	(nm <sup>3</sup> /hr)	737	3,549	5,016	6,161	7,099
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)	17,500	17,500	17,500	17,500	17,500
	(nm <sup>3</sup> /hr)	469	469	469	469	469
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)	44	147	201	243	277
	(lph)	167.0	365.9	499.4	603.7	689.1
Liquid Propane Inlet Pressure	(psig)	3	29	53	78	102
	(bar)	0.2	2.0	3.7	5.4	7.0
Flame Length (at 20% Excess Air)	(in)	84	108	120	132	144
	(mm)	2130	2740	3050	3350	3660
Flame Diameter(at 20% Excess Air)	(in)	24	36	36	48	48
	(mm)	610	910	910	1220	1220
Maximum Operating Excess	(Air)	300%	400%	400%	500%	500%
	(Fuel)	30%	30%	30%	30%	30%

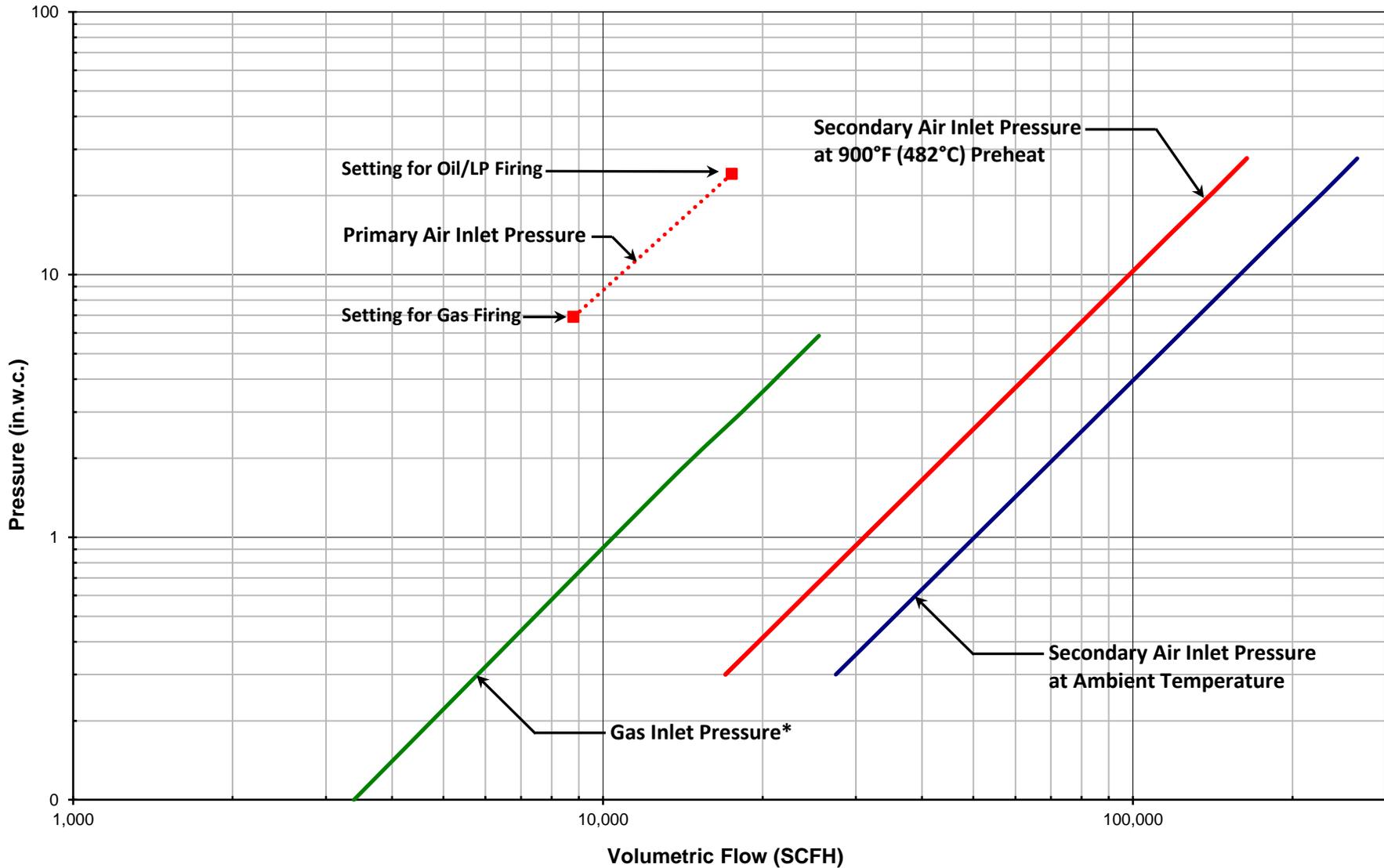
### NO. 6 FUEL OIL, AMBIENT COMBUSTION AIR OPERATION, HIGH PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
<b>Capacity</b> (at 20% Excess Air)	(BTU/hr)	<b>3,670,000</b>	<b>12,690,000</b>	<b>17,370,000</b>	<b>21,020,000</b>	<b>24,010,000</b>
	(kW)	<b>970</b>	<b>3,360</b>	<b>4,590</b>	<b>5,560</b>	<b>6,350</b>
Secondary Air Capacity	(scfh)	27,500	132,500	187,250	230,000	265,000
	(nm <sup>3</sup> /hr)	737	3,549	5,016	6,161	7,099
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)	14,400	14,400	14,400	14,400	14,400
	(nm <sup>3</sup> /hr)	386	386	386	386	386
Primary Air Inlet Pressure	(in.w.c.)	7.0	7.0	7.0	7.0	7.0
	(mbar)	17.4	17.4	17.4	17.4	17.4
Atomizing Air Capacity	(scfh)	1,142	1,795	1,877	1,958	2,000
	(nm <sup>3</sup> /hr)	31	48	50	52	54
Atomizing Air Inlet Pressure	(psig)	32	60	72	76	80
	(bar)	2.2	4.1	5.0	5.2	5.5
Fuel Oil Flow	(gph)	24	80	120	140	160
	(lph)	93	303	454	530	606
Fuel Oil Inlet Pressure	(psig)	35	64	80	86	90
	(bar)	2.4	4.4	5.5	5.9	6.2
Flame Length(at 20% Excess Air)	(in)	72	108	120	132	144
	(mm)	1830	2740	3050	3350	3660
Flame Diameter(at 20% Excess Air)	(in)	24	36	36	42	48
	(mm)	610	910	910	1070	1220
Maximum Operating Excess	(Air)	100%	300%	400%	400%	400%
	(Fuel)	30%	30%	30%	30%	30%

**NOTES:**

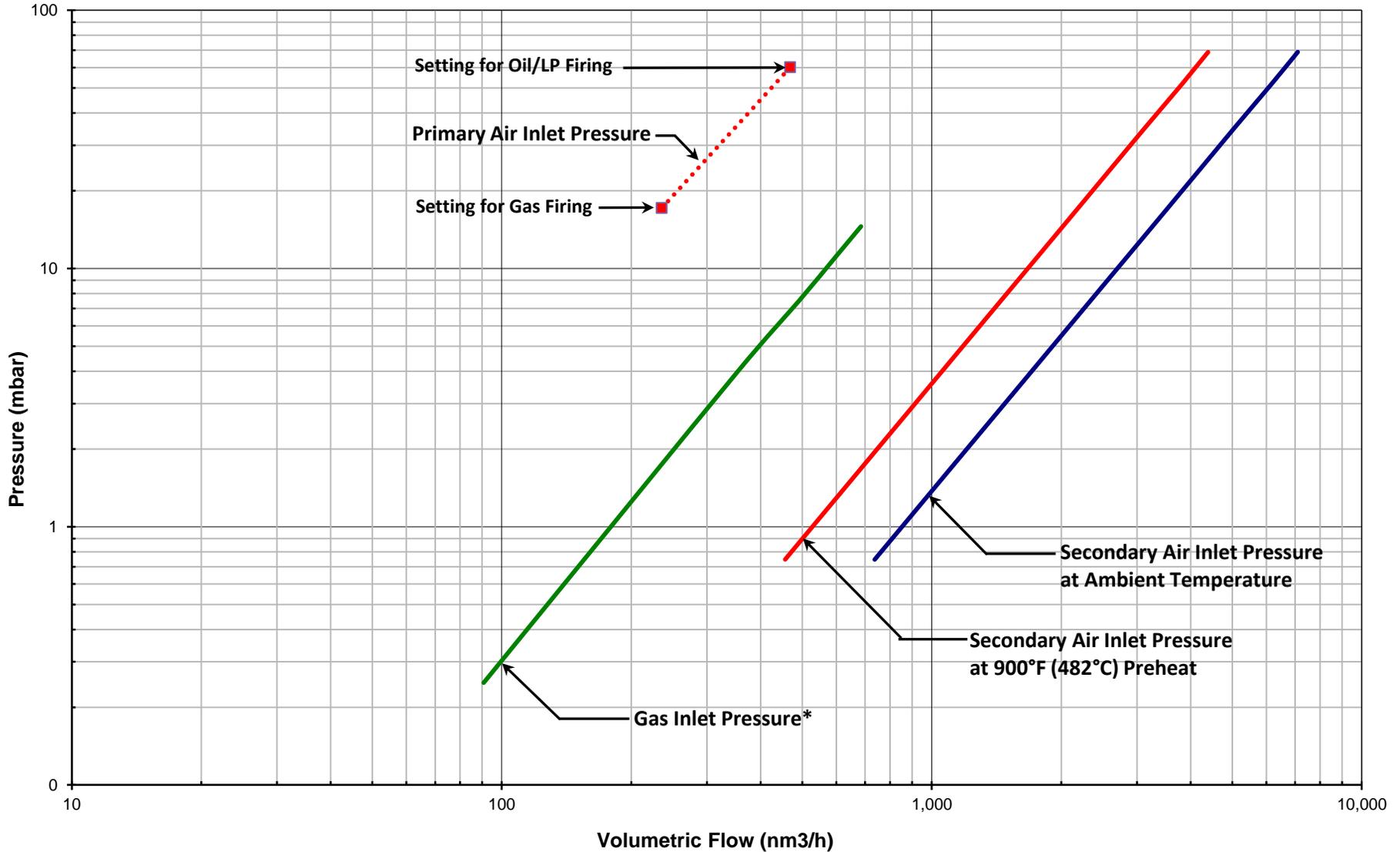
- Capacities based on 1) Liquid Propane with HHV of 91,500 BTU/gal (Standard) / LHV of 6.5 kWh/liter (Metric), 0.51 S.G., and a stoichiometric ratio of 850:1 at 20% excess air, or 2) No. 6 Fuel Oil with HHV of 150,000 BTU/USgal (Standard) / LHV of 11.2 kWh/liter (Metric), 1.02 S.G., and a stoichiometric 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 1112/2112/3112 Pressure Curves**  
**Natural Gas 1034 BTU/ft<sup>3</sup> (HHV Standard) / 10.21 kWh/nm<sup>3</sup> (LHV Metric), 0.59 S.G.**  
**and Ambient and Preheated Combustion Air**



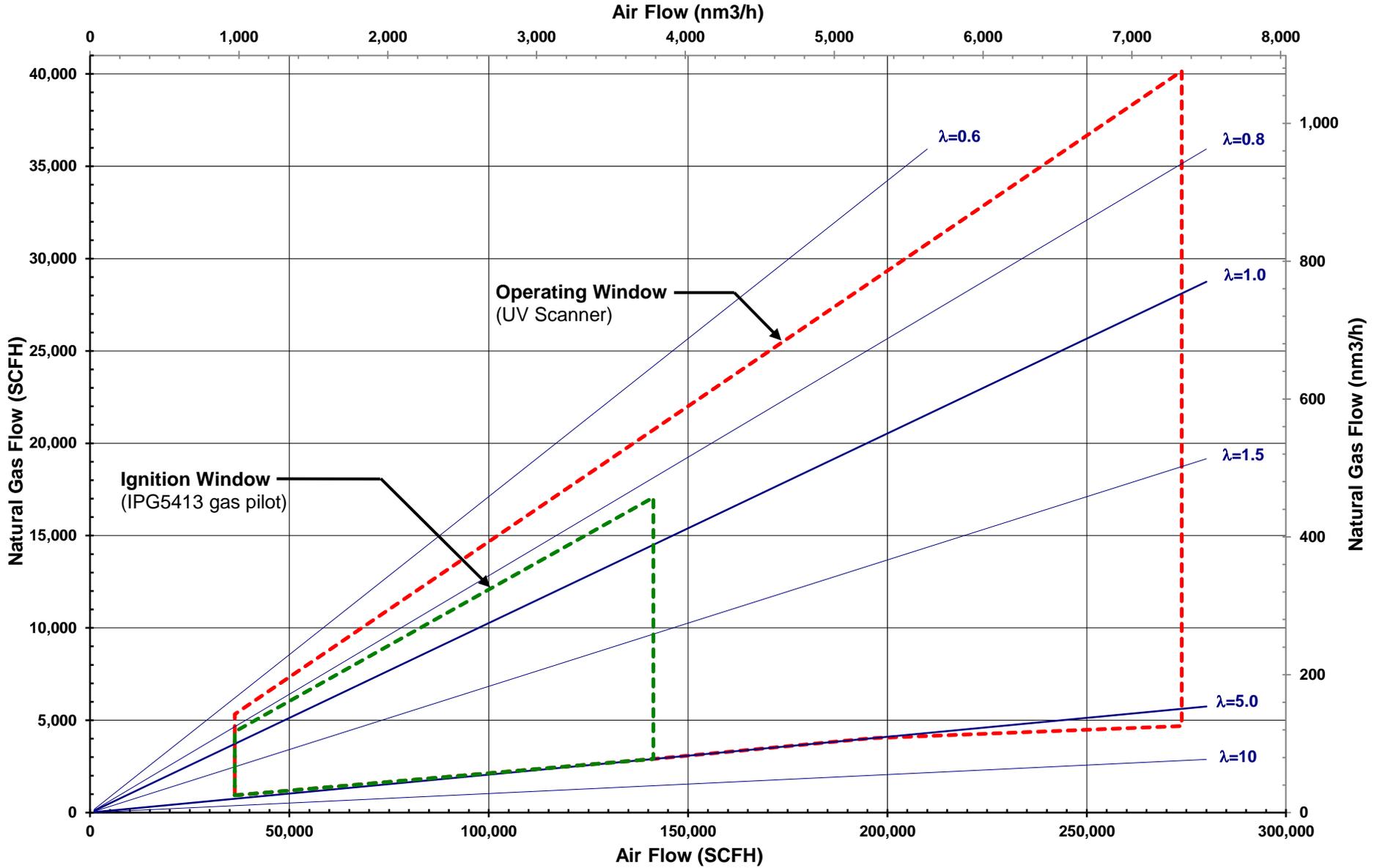
\*Note: Gas Inlet Pressure for BBC burner is not suitable for fuel flow measurement and is given for component sizing and reference only

**BBC 1112/2112/3112 Pressure Curves**  
**Natural Gas 1034 BTU/ft<sup>3</sup> (HHV Standard) / 10.21 kWh/nm<sup>3</sup> (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 1112/2112/3112 Operating and Ignition Window**  
 Natural Gas 1034 BTU/ft<sup>3</sup> (HHV Standard) / 10.21 kWh/nm<sup>3</sup> (LHV Metric), 0.59 S.G.  
 and Ambient Combustion Air



**BBC 1112/2112/3112 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**

