

## Burner Capacity Information, Hauck NMC 220

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION, LOW PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
<b>Capacity</b> (at 10% Excess Air)	(BTU/hr)	<b>350,000</b>	<b>830,000</b>	<b>1,140,000</b>	<b>1,590,000</b>	<b>1,930,000</b>
	(kW)	<b>90</b>	<b>220</b>	<b>300</b>	<b>420</b>	<b>510</b>
Secondary Air Capacity	(scfh)	3,015	7,920	11,160	15,780	19,320
	(nm <sup>3</sup> /hr)	81	212	299	423	518
Secondary Air Inlet Pressure	(in.w.c.)	1.0	6.9	13.9	27.7	41.6
	(mbar)	2.5	17.2	34.5	68.9	103.4
Primary Air Capacity	(scfh)	645	645	645	645	645
	(nm <sup>3</sup> /hr)	17	17	17	17	17
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
Gas Inlet Pressure	(in.w.c.)	1.1	2.6	3.5	4.9	6.0
	(mbar)	2.7	6.4	8.8	12.3	14.9
Flame Length (at 10% Excess Air)	(in)	12	24	36	42	48
	(mm)	300	610	910	1070	1220
Flame Diameter (at 10% Excess Air)	(in)	6	6	8	10	10
	(mm)	150	150	200	250	250
Maximum Operating Excess	(Air)	500%	600%	600%	600%	600%
	(Fuel)	30%	30%	30%	30%	30%

## Burner Capacity Information, Hauck NMC-H 220

NATURAL GAS, 800°F/427°C PREHEATED SECONDARY AIR OPERATION, LOW PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
<b>Capacity</b> (at 10% Excess Air)	(BTU/hr)	<b>250,000</b>	<b>550,000</b>	<b>750,000</b>	<b>1,040,000</b>	<b>1,260,000</b>
	(kW)	<b>70</b>	<b>150</b>	<b>200</b>	<b>280</b>	<b>330</b>
Secondary Air Capacity	(scfh)	2,584	5,739	7,822	10,794	13,070
	(nm <sup>3</sup> /hr)	69	154	210	289	350
Secondary Air Inlet Pressure	(in.w.c.)	1.0	6.9	13.9	27.7	41.6
	(mbar)	2.5	17.2	34.5	68.9	103.4
Primary Air Capacity	(scfh)	645	645	645	645	645
	(nm <sup>3</sup> /hr)	17	17	17	17	17
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
Gas Inlet Pressure	(in.w.c.)	0.8	2.0	2.7	3.7	4.6
	(mbar)	2.1	4.9	6.7	9.3	11.3
Flame Length (at 10% Excess Air)	(in)	9	18	27	32	36
	(mm)	230	460	690	800	910
Flame Diameter (at 10% Excess Air)	(in)	5	5	7	9	9
	(mm)	140	140	180	230	230
Maximum Operating Excess	(Air)	400%	480%	480%	480%	480%
	(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 IPG5411 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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## Burner Capacity Information, Hauck NMC 220

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
<b>Capacity</b> (at 20% Excess Air)	(BTU/hr)	<b>390,000</b>	<b>800,000</b>	<b>1,070,000</b>	<b>1,460,000</b>	<b>1,750,000</b>
	(kW)	<b>100</b>	<b>210</b>	<b>280</b>	<b>390</b>	<b>460</b>
Secondary Air Capacity	(scfh)	3,015	7,920	11,160	15,780	19,320
	(nm <sup>3</sup> /hr)	81	212	299	423	518
Secondary Air Inlet Pressure	(in.w.c.)	1.0	6.9	13.9	27.7	41.6
	(mbar)	2.5	17.2	34.5	68.9	103.4
Primary Air Capacity	(scfh)	1,700	1,700	1,700	1,700	1,700
	(nm <sup>3</sup> /hr)	46	46	46	46	46
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)	2.8	5.8	7.8	10.6	12.7
	(lph)	11	22	29	40	48
Flame Length (at 20% Excess Air)	(in)	12	24	36	42	48
	(mm)	300	610	910	1070	1220
Flame Diameter (at 20% Excess Air)	(in)	6	6	8	9	9
	(mm)	150	150	200	230	230
Maximum Operating Excess	(Air)	100%	100%	170%	350%	350%
	(Fuel)	30%	30%	30%	30%	30%

## Burner Capacity Information, Hauck NMC-H 220

### NO. 2 FUEL OIL, 800°F/427°C PREHEATED SECONDARY AIR OPERATION, LOW PRESSURE ATOMIZATION

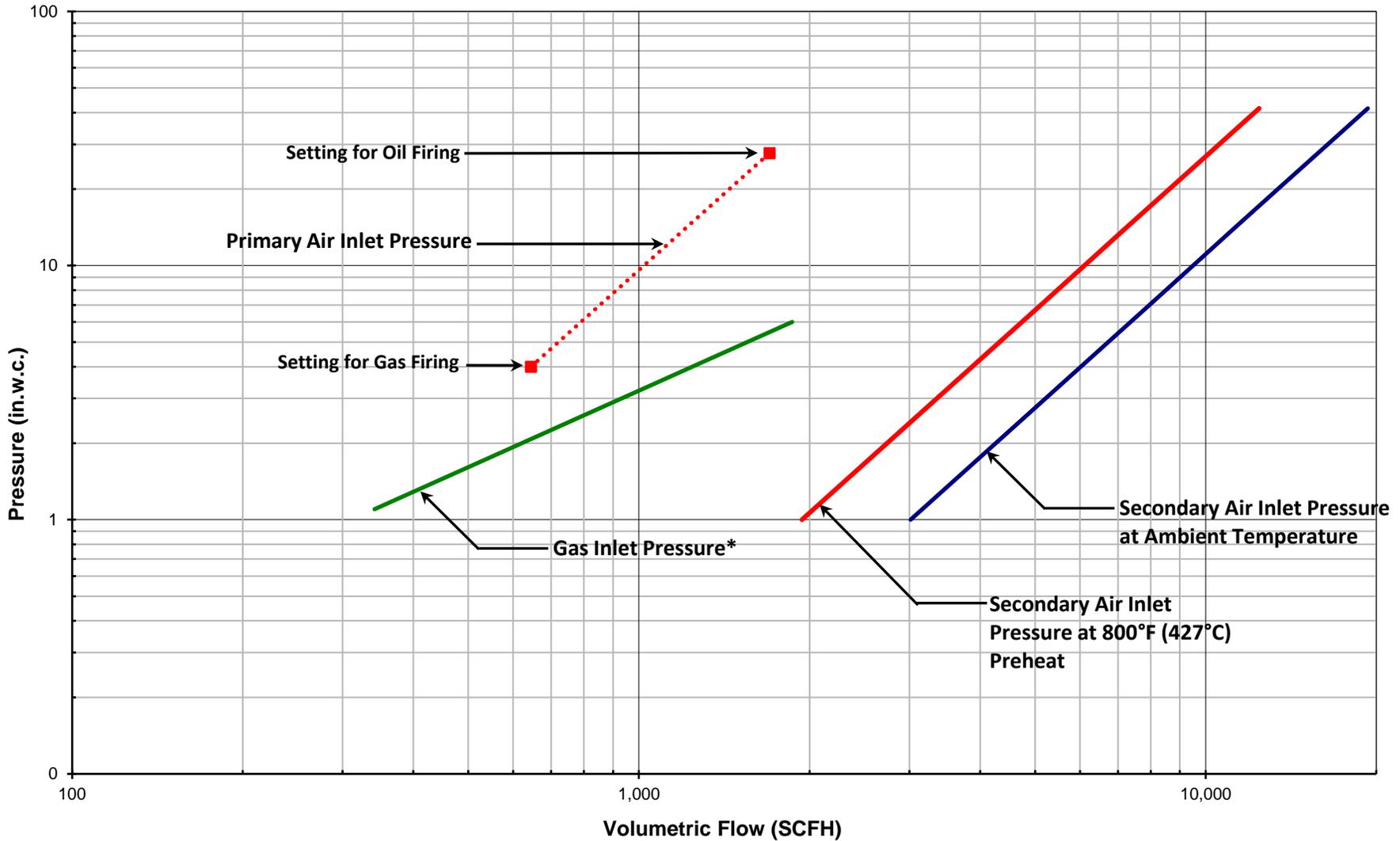
SPECIFICATIONS		OPERATIONAL INFORMATION				
<b>Capacity</b> (at 20% Excess Air)	(BTU/hr)	<b>300,000</b>	<b>570,000</b>	<b>740,000</b>	<b>990,000</b>	<b>1,180,000</b>
	(kW)	<b>80</b>	<b>150</b>	<b>200</b>	<b>260</b>	<b>310</b>
Secondary Air Capacity	(scfh)	1,939	5,094	7,177	10,149	12,425
	(nm <sup>3</sup> /hr)	52	136	192	272	333
Secondary Air Inlet Pressure	(in.w.c.)	1.0	6.9	13.9	27.7	41.6
	(mbar)	2.5	17.2	34.5	68.9	103.4
Primary Air Capacity	(scfh)	1,700	1,700	1,700	1,700	1,700
	(nm <sup>3</sup> /hr)	46	46	46	46	46
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)	2.2	4.1	5.4	7.2	8.5
	(lph)	8	16	20	27	32
Flame Length(at 20% Excess Air)	(in)	9	18	27	32	36
	(mm)	230	460	690	800	910
Flame Diameter(at 20% Excess Air)	(in)	5	5	7	8	8
	(mm)	140	140	180	210	210
Maximum Operating Excess	(Air)	80%	80%	136%	280%	280%
	(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 IPG5411 gas pilot; for ignition limits refer to the Burner Operating and Ignition Window.
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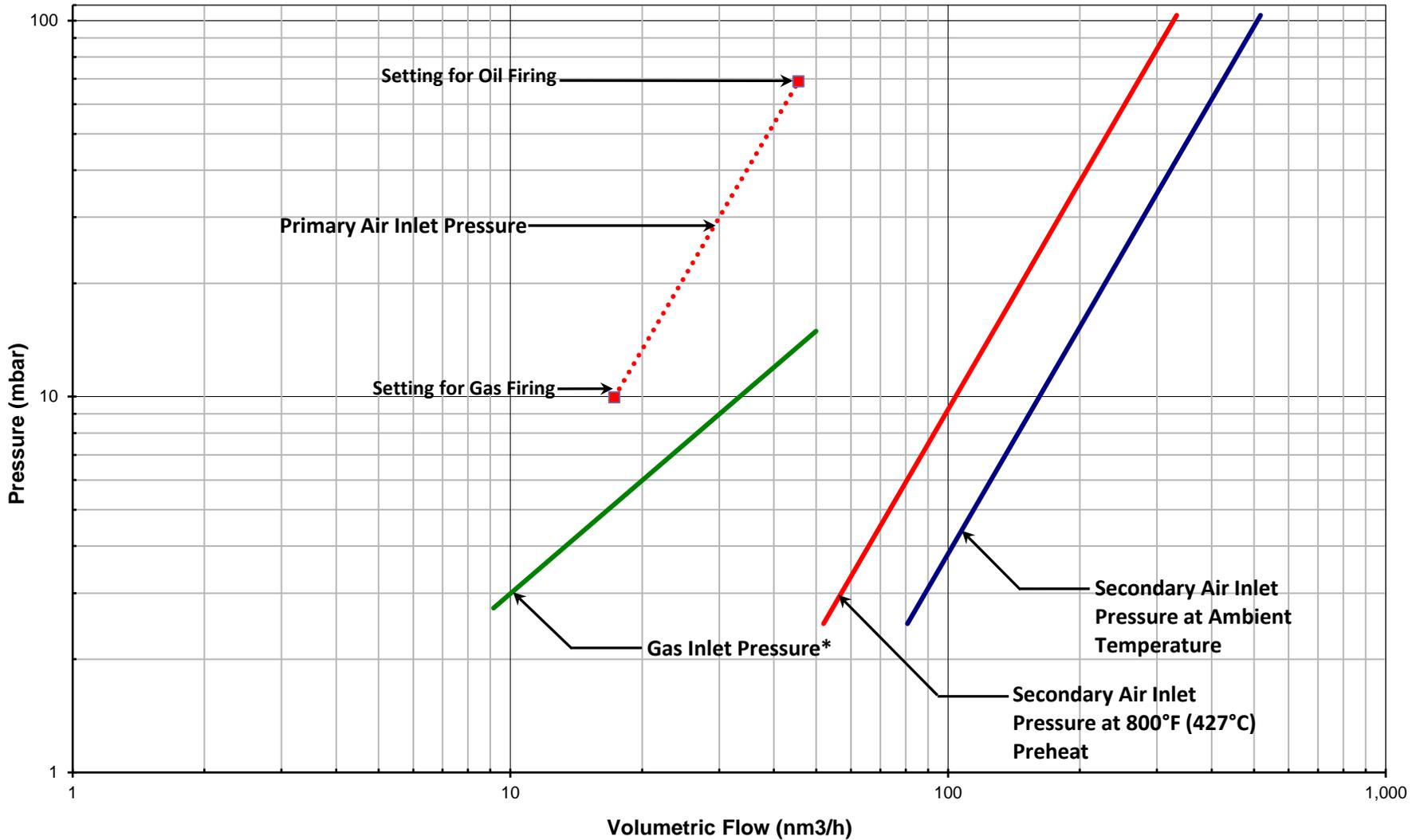
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**NMC/NMC-H 220 Pressure Curves**  
**Natural Gas 1034 BTU/ft<sup>3</sup> (HHV Standard) / 10.21 kWh/nm<sup>3</sup> (LHV Metric), 0.59 S.G.**  
**and Ambient and Preheated Combustion Air**



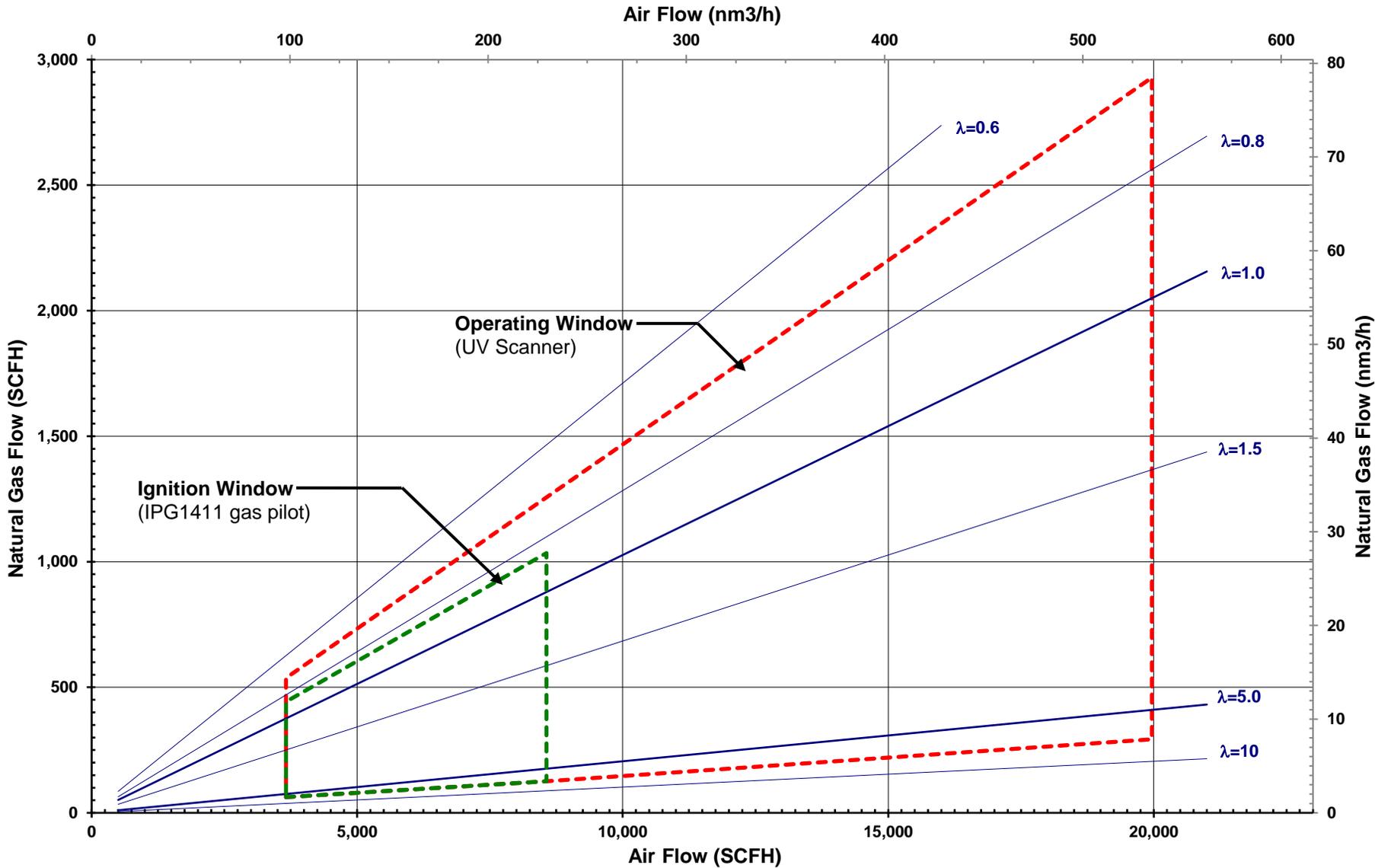
\*Note: Gas Inlet Pressure for NMC burner is not suitable for fuel flow measurement and is given for component sizing and reference only

**NMC/NMC-H 220 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 NMC burner is not suitable for fuel flow measurement and is given for component sizing and reference only

**NMC/NMC-H 220 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



**NMC/NMC-H 220 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

