

Burner Capacity Information, Hauck NMC 210

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION, LOW PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	90,000	210,000	290,000	400,000	490,000
	(kW)	20	60	80	110	130
Secondary Air Capacity	(scfh)	765	2,010	2,838	4,020	4,920
	(nm ³ /hr)	20	54	76	108	132
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)	165	165	165	165	165
	(nm ³ /hr)	4	4	4	4	4
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)	6	10	12	16	20
	(mm)	150	250	300	410	510
Flame Diameter (at 10% Excess Air)	(in)	4	6	6	6	8
	(mm)	100	150	150	150	200
Maximum Operating Excess	(Air)	100%	750%	1000%	750%	500%
	(Fuel)	30%	30%	30%	30%	30%

Burner Capacity Information, Hauck NMC-H 210

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	60,000	140,000	190,000	270,000	320,000
	(kW)	20	40	50	70	80
Secondary Air Capacity	(scfh)	657	1,458	1,990	2,750	3,329
	(nm ³ /hr)	18	39	53	74	89
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)	165	165	165	165	165
	(nm ³ /hr)	4	4	4	4	4
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	1.9	2.7	3.7	4.6
	(mbar)	2.1	4.8	6.7	9.3	11.3
Flame Length (at 10% Excess Air)	(in)	5	8	9	12	15
	(mm)	110	190	230	300	380
Flame Diameter (at 10% Excess Air)	(in)	4	5	5	5	7
	(mm)	90	140	140	140	180
Maximum Operating Excess	(Air)	80%	600%	800%	600%	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 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 210

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	100,000	200,000	270,000	370,000	450,000
	(kW)	30	50	70	100	120
Secondary Air Capacity	(scfh)	765	2,010	2,838	4,020	4,920
	(nm ³ /hr)	20	54	76	108	132
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)	432	432	432	432	432
	(nm ³ /hr)	12	12	12	12	12
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)	0.7	1.5	2.0	2.7	3.2
	(lph)	3	6	7	10	12
Flame Length (at 20% Excess Air)	(in)	6	10	12	16	20
	(mm)	150	250	300	410	510
Flame Diameter (at 20% Excess Air)	(in)	4	6	6	6	8
	(mm)	100	150	150	150	200
Maximum Operating Excess	(Air)	100%	175%	275%	300%	300%
	(Fuel)	30%	30%	30%	30%	30%

Burner Capacity Information, Hauck NMC-H 210

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

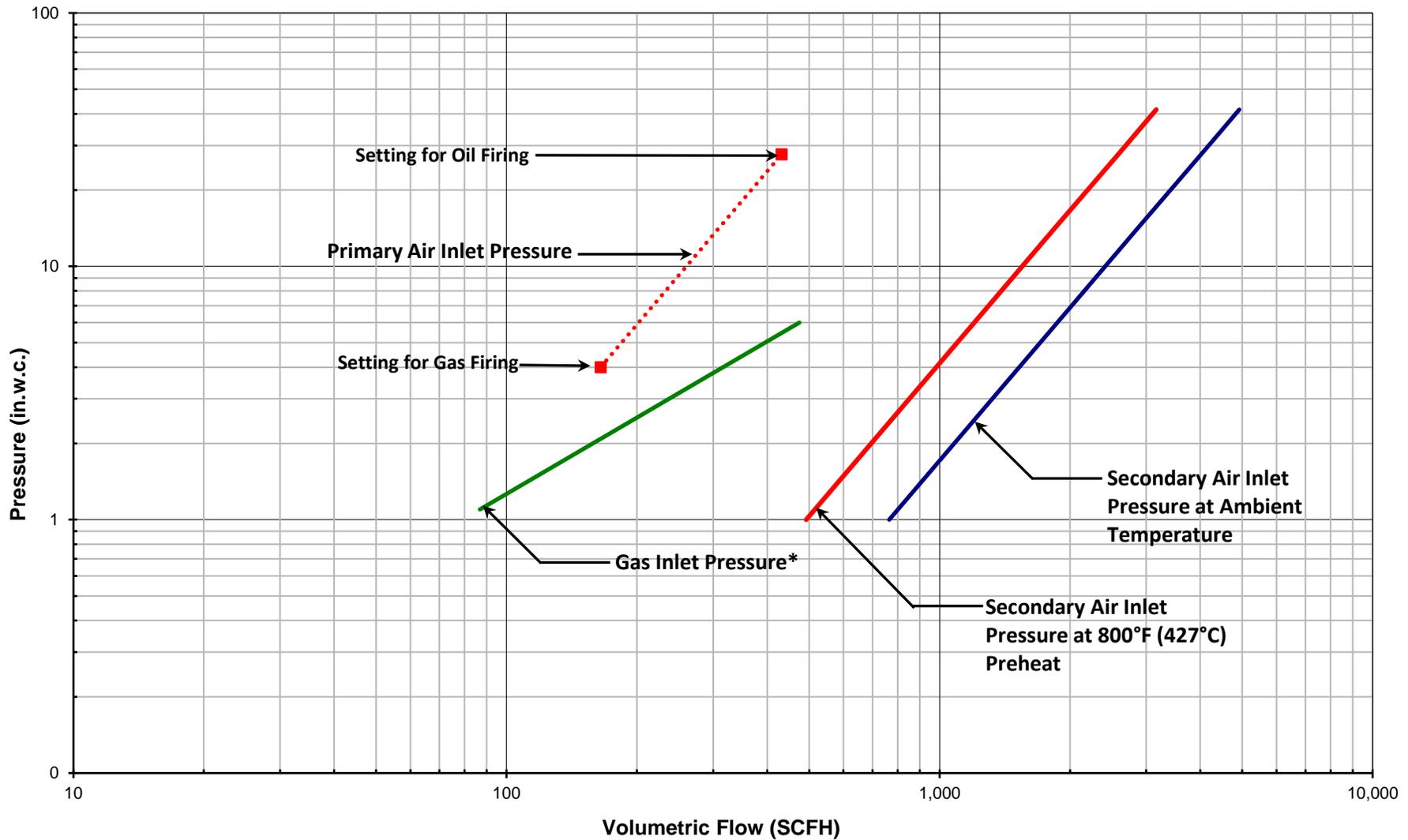
SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	80,000	140,000	190,000	250,000	300,000
	(kW)	20	40	50	70	80
Secondary Air Capacity	(scfh)	492	1,293	1,825	2,585	3,164
	(nm ³ /hr)	13	35	49	69	85
Secondary Air Inlet Pressure	(in.w.c.)	1.0	6.9	13.9	27.7	41.6
	(mbar)	2.5	17.2	34.5	68.9	103.4
Primary Air Capacity	(scfh)	432	432	432	432	432
	(nm ³ /hr)	12	12	12	12	12
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)	0.6	1.0	1.4	1.8	2.2
	(lph)	2	4	5	7	8
Flame Length(at 20% Excess Air)	(in)	5	8	9	12	15
	(mm)	110	190	230	300	380
Flame Diameter(at 20% Excess Air)	(in)	4	5	5	5	7
	(mm)	90	140	140	140	180
Maximum Operating Excess	(Air)	80%	140%	220%	240%	240%
	(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.
- 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.

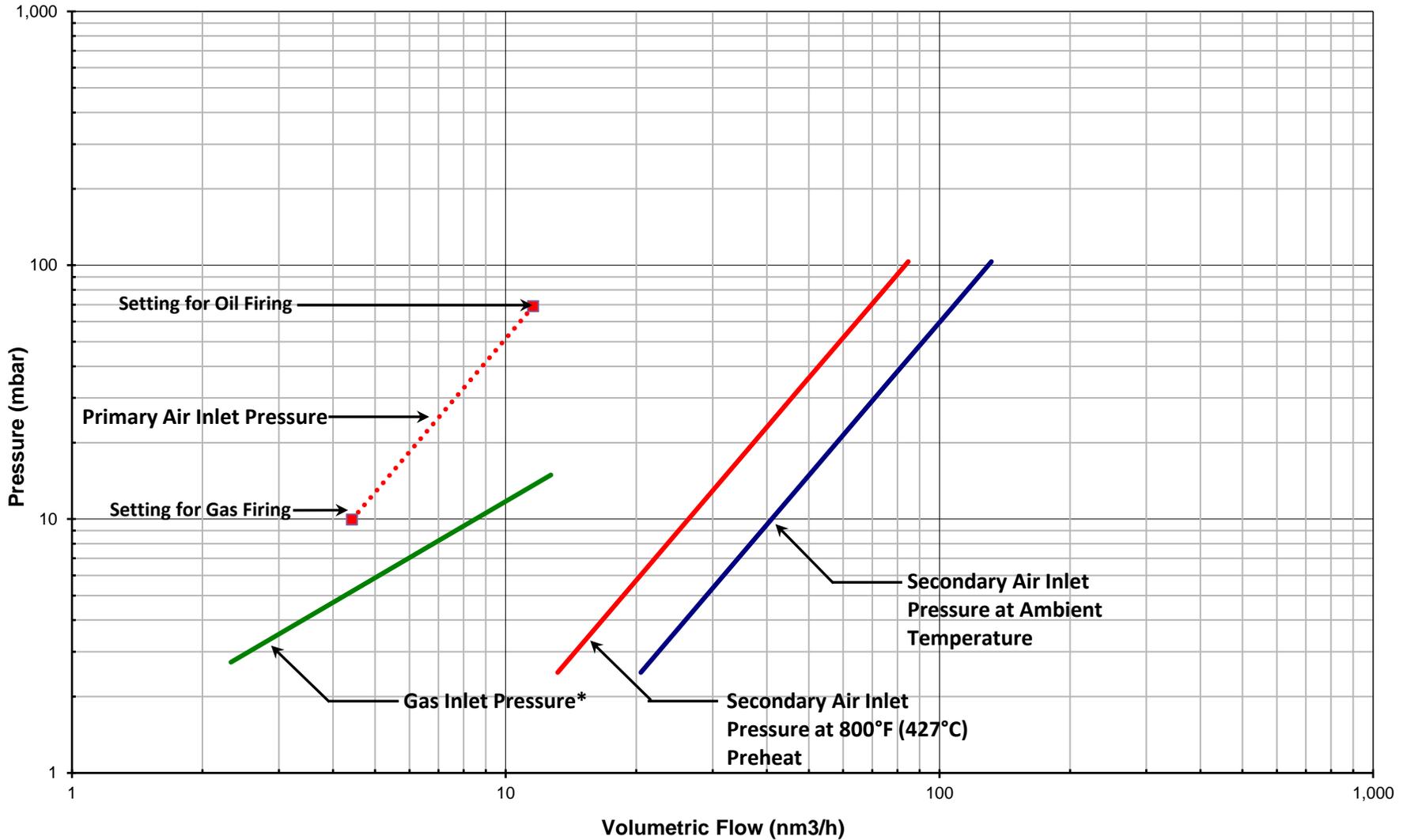
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NMC/NMC-H 210 Pressure Curves
Natural Gas 1034 BTU/ft³ (HHV Standard) / 10.21 kWh/nm³ (LHV Metric), 0.59 S.G.
and Ambient and Preheated Combustion Air



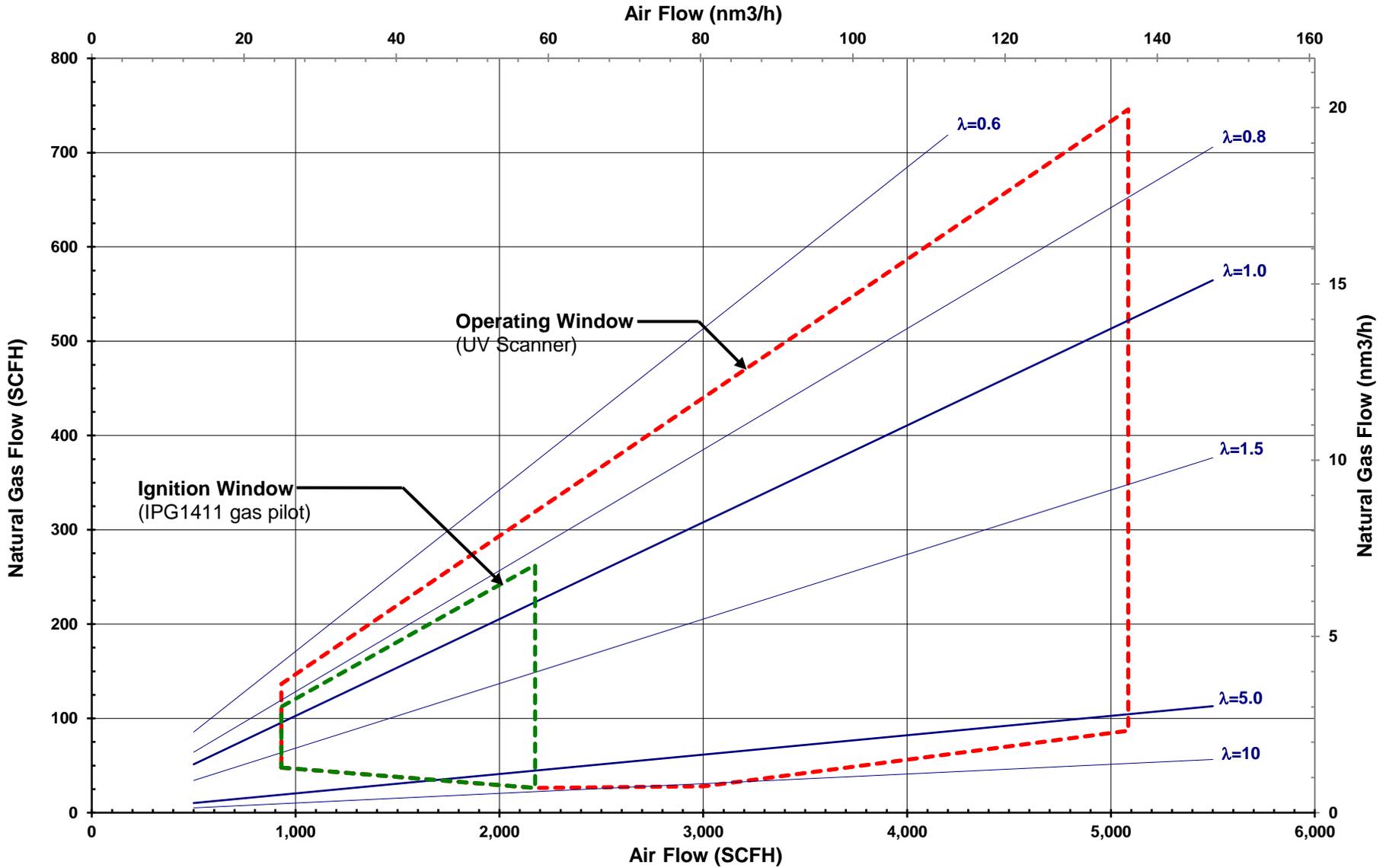
*Note: Gas Inlet Pressure for NMC burner is not suitable for fuel flow measurement and is given for component sizing and reference only

NMC/NMC-H 210 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 NMC burner is not suitable for fuel flow measurement and is given for component sizing and reference only

NMC/NMC-H 210 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



NMC/NMC-H 210 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

