

Burner Capacity Information, Hauck NMC 230

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION, LOW PRESSURE ATOMIZATION

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	730,000	1,700,000	2,350,000	3,330,000	3,980,000
	(kW)	190	450	620	880	1,050
Secondary Air Capacity	(scfh)	6,213	16,320	23,100	33,240	39,960
	(nm ³ /hr)	166	437	619	890	1,070
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)	1,300	1,300	1,300	1,300	1,300
	(nm ³ /hr)	35	35	35	35	35
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	5.0	6.0
	(mbar)	2.7	6.4	8.8	12.5	14.9
Flame Length (at 10% Excess Air)	(in)	16	30	42	54	60
	(mm)	410	760	1070	1370	1520
Flame Diameter (at 10% Excess Air)	(in)	6	8	10	12	12
	(mm)	150	200	250	300	300
Maximum Operating Excess	(Air)	500%	600%	600%	600%	600%
	(Fuel)	30%	30%	30%	30%	30%

Burner Capacity Information, Hauck NMC-H 230

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 10% Excess Air)	(BTU/hr)	510,000	1,140,000	1,560,000	2,190,000	2,610,000
	(kW)	130	300	410	580	690
Secondary Air Capacity	(scfh)	5,296	11,796	16,157	22,678	27,000
	(nm ³ /hr)	142	316	433	607	723
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)	1,300	1,300	1,300	1,300	1,300
	(nm ³ /hr)	35	35	35	35	35
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	3.8	4.6
	(mbar)	2.1	4.8	6.7	9.5	11.3
Flame Length (at 10% Excess Air)	(in)	12	23	32	41	45
	(mm)	300	570	800	1030	1140
Flame Diameter (at 10% Excess Air)	(in)	5	7	9	11	11
	(mm)	140	180	230	270	270
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/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 230

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

SPECIFICATIONS		OPERATIONAL INFORMATION				
Capacity (at 20% Excess Air)	(BTU/hr)	800,000	1,650,000	2,210,000	3,060,000	3,620,000
	(kW)	210	440	580	810	960
Secondary Air Capacity	(scfh)	6,213	16,320	23,100	33,240	39,960
	(nm ³ /hr)	166	437	619	890	1,070
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)	3,420	3,420	3,420	3,420	3,420
	(nm ³ /hr)	92	92	92	92	92
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)	5.8	11.9	16.0	22.1	26.2
	(lph)	22	45	61	84	99
Flame Length (at 20% Excess Air)	(in)	16	30	42	60	66
	(mm)	410	760	1070	1520	1680
Flame Diameter (at 20% Excess Air)	(in)	6	8	10	12	12
	(mm)	150	200	250	300	300
Maximum Operating Excess	(Air)	100%	100%	250%	400%	400%
	(Fuel)	30%	30%	30%	30%	30%

Burner Capacity Information, Hauck NMC-H 230

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)	620,000	1,160,000	1,520,000	2,070,000	2,430,000
	(kW)	160	310	400	550	640
Secondary Air Capacity	(scfh)	3,996	10,496	14,857	21,378	25,700
	(nm ³ /hr)	107	281	398	573	688
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)	3,420	3,420	3,420	3,420	3,420
	(nm ³ /hr)	92	92	92	92	92
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)	4.5	8.4	11.0	15.0	17.6
	(lph)	17	32	42	57	67
Flame Length(at 20% Excess Air)	(in)	12	23	32	45	50
	(mm)	300	570	800	1140	1260
Flame Diameter(at 20% Excess Air)	(in)	5	7	9	11	11
	(mm)	140	180	230	270	270
Maximum Operating Excess	(Air)	80%	80%	200%	320%	320%
	(Fuel)	30%	30%	30%	30%	30%

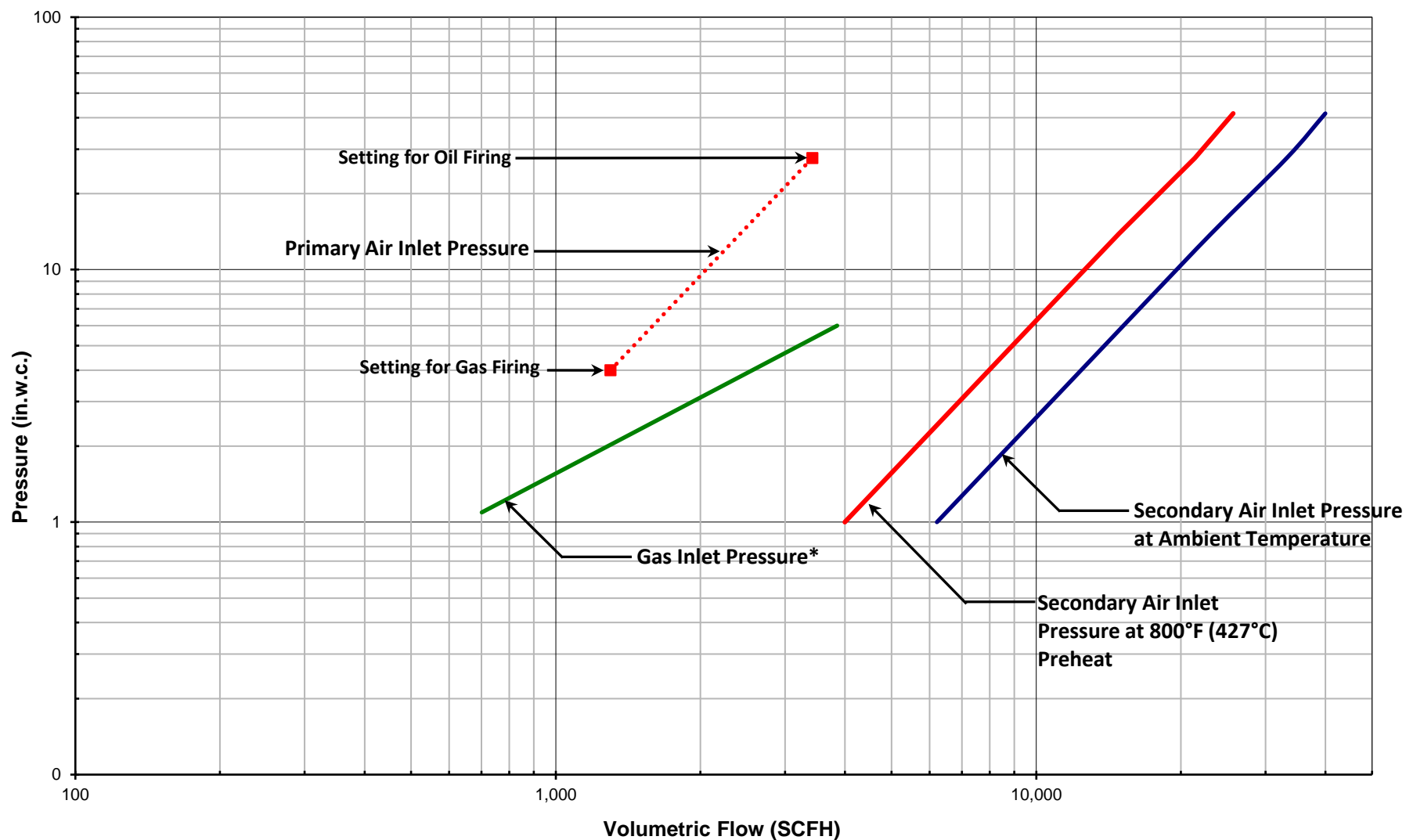
NOTES:

- 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 230 Pressure Curves

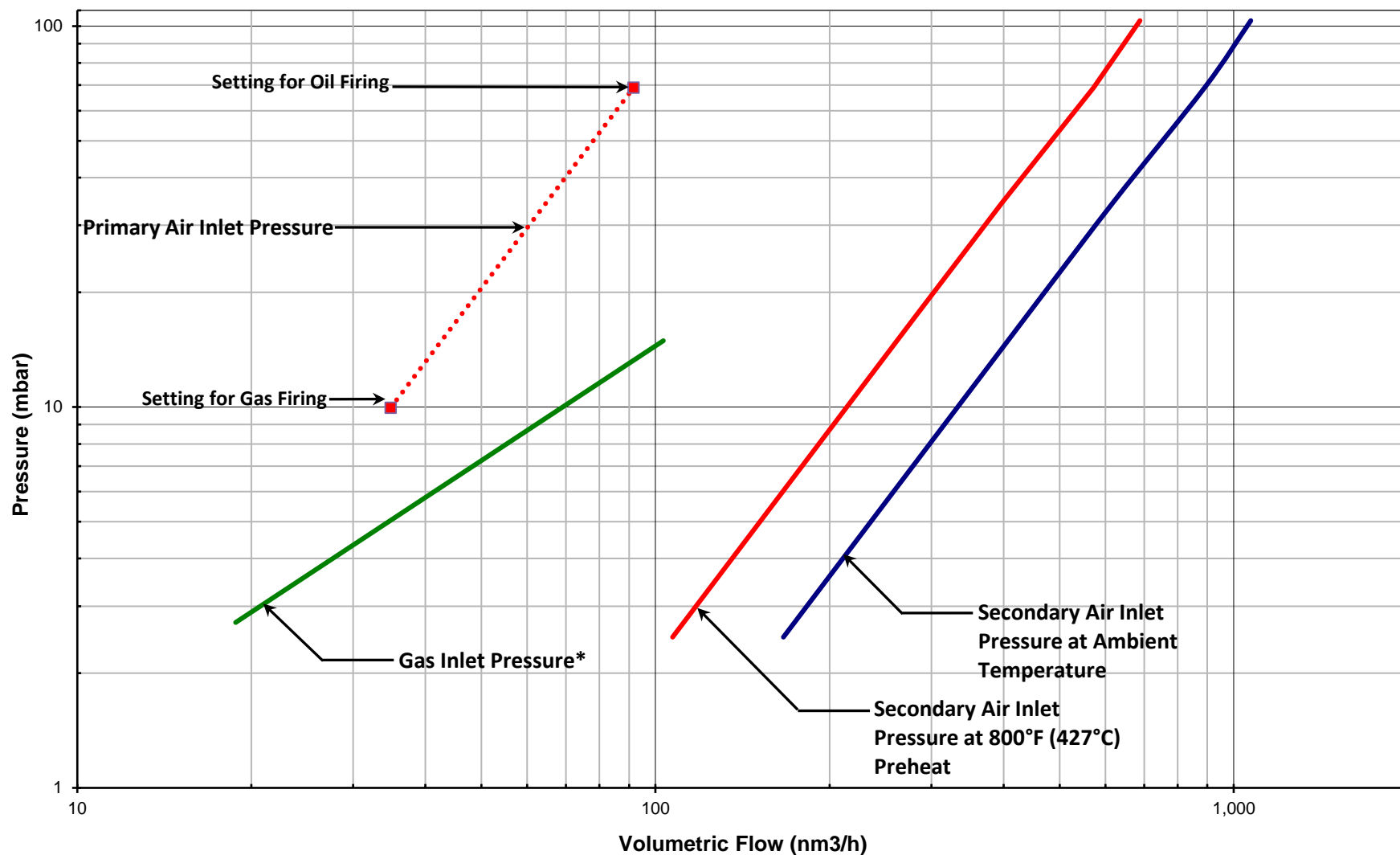
Natural Gas 1034 BTU/ft³ (HHV Standard) / 10.21 kWh/nm³ (LHV Metric), 0.59 S.G.
and Ambient and Preheated Combustion Air



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

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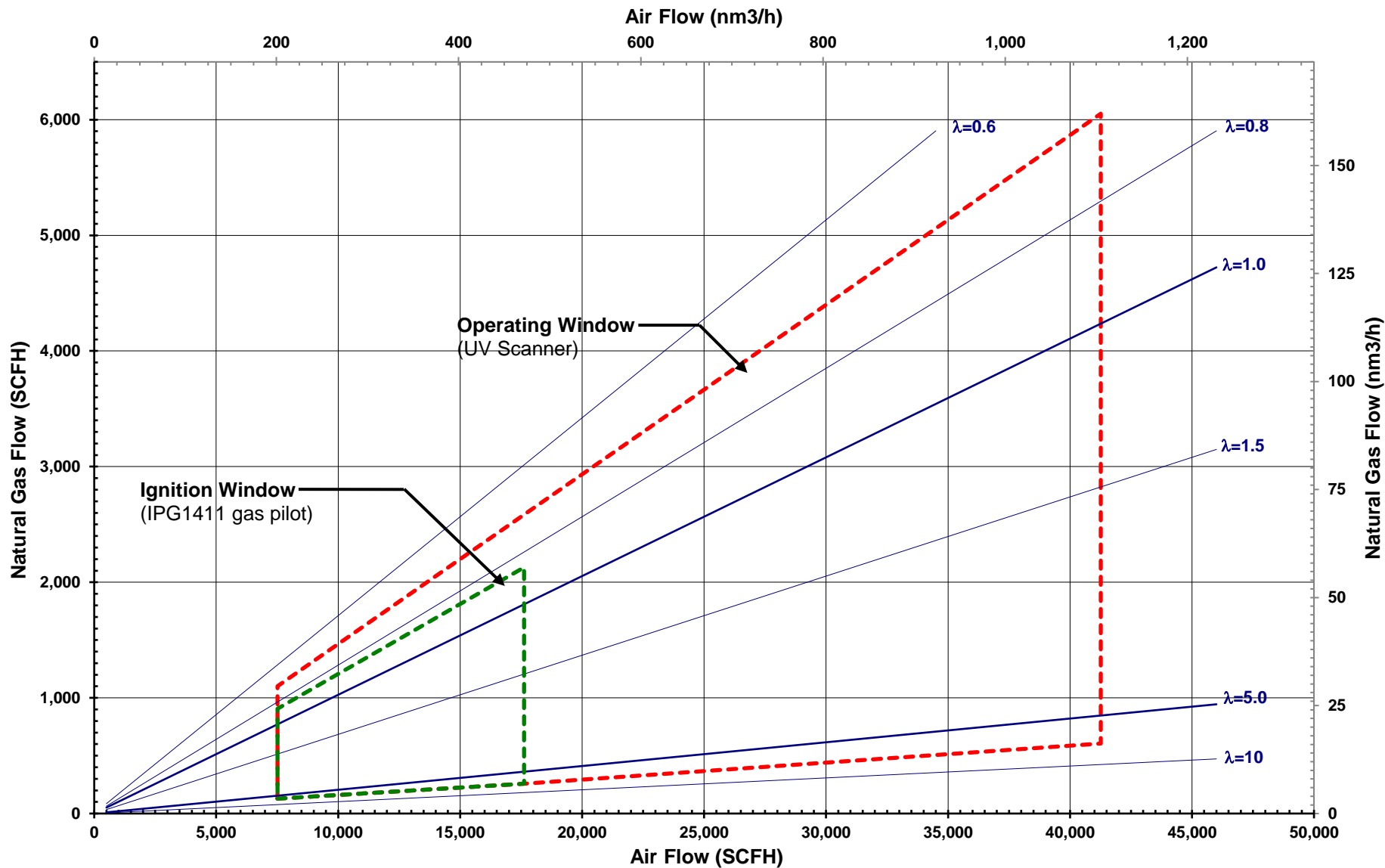
NMC/NMC-H 230 Pressure Curves Natural Gas 1034 BTU/ft³ (HHV Standard) / 10.21 kWh/nm³ (LHV Metric), 0.59 S.G. and Ambient and Preheated Combustion Air



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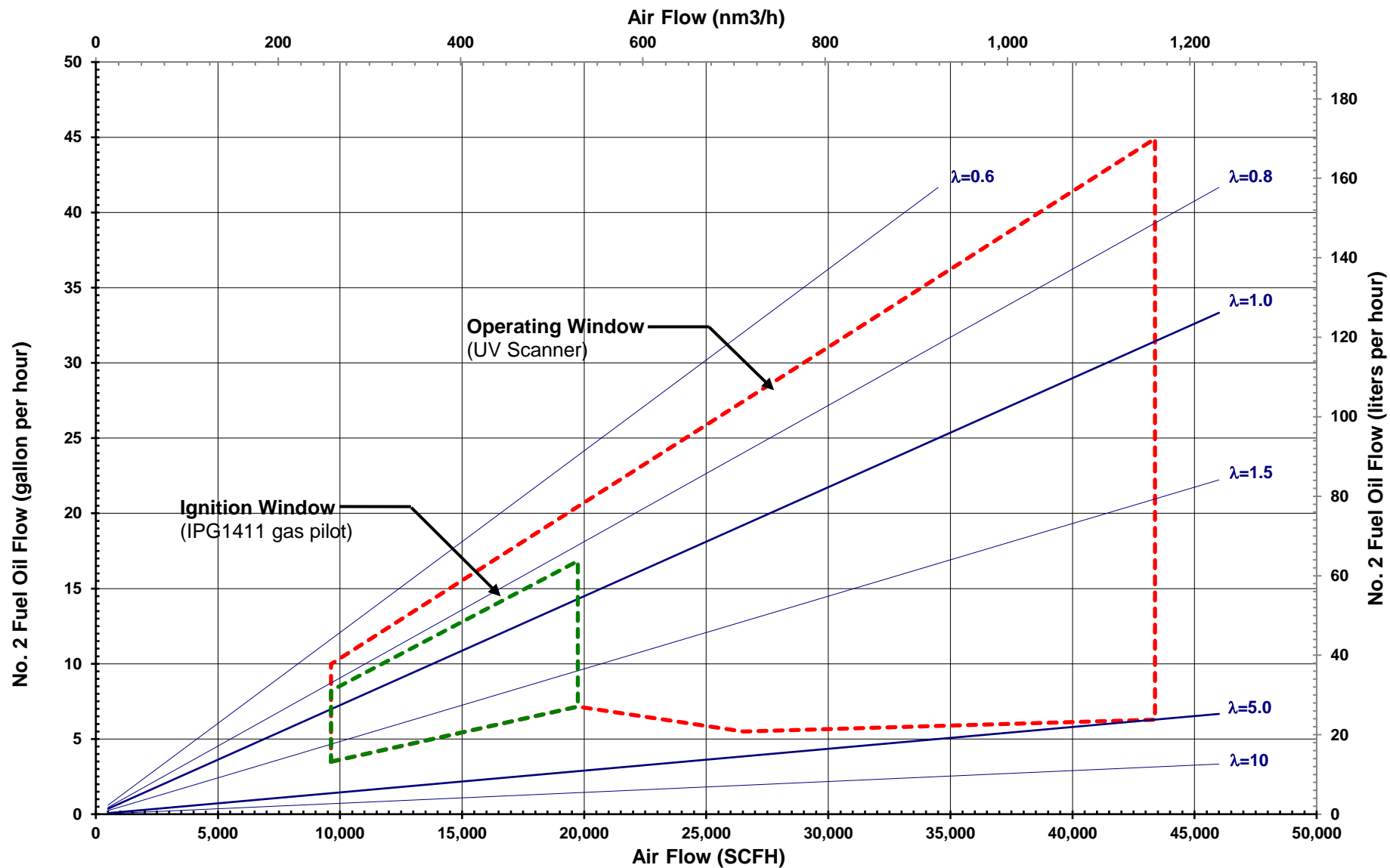
NMC/NMC-H 230 Operating and Ignition Window

Natural Gas 1034 BTU/ft³ (HHV Standard) / 10.21 kWh/nm³ (LHV Metric), 0.59 S.G.
and Ambient Combustion Air



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NMC/NMC-H 230 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



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