

Burner Capacity Information, Hauck NMC 260

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION, LOW PRESSURE ATOMIZATION

| SPECIFICATIONS | | OPERATIONAL INFORMATION | | | | |
|-------------------------------------|---------------------------------|-------------------------|--------------------|--------------------|--------------------|---------------------|
| Capacity (at 10% Excess Air) | (BTU/hr) (kW) | 2,050,000 540 | 4,840,000 1,280 | 6,710,000 1,770 | 9,360,000 2,480 | 11,390,000 3,010 |
| Secondary Air Capacity | (scfh) (nm ³ /hr) | 17,816 477 | 46,800 1,254 | 66,180 1,773 | 93,600 2,507 | 114,660 3,072 |
| Secondary Air Inlet Pressure | (in.w.c.) (mbar) | 1.0 2.5 | 6.9 17.2 | 13.9 34.5 | 27.7 68.9 | 41.6 103.4 |
| Primary Air Capacity | (scfh) (nm ³ /hr) | 3,375 90 | 3,375 90 | 3,375 90 | 3,375 90 | 3,375 90 |
| Primary Air Inlet Pressure | (in.w.c.) (mbar) | 4.0 10.0 | 4.0 10.0 | 4.0 10.0 | 4.0 10.0 | 4.0 10.0 |
| Gas Inlet Pressure | (in.w.c.) (mbar) | 1.1 2.7 | 2.6 6.3 | 3.5 8.8 | 4.9 12.3 | 6.0 14.9 |
| Flame Length (at 10% Excess Air) | (in) (mm) | 36 910 | 54 1370 | 72 1830 | 90 2290 | 96 2440 |
| Flame Diameter (at 10% Excess Air) | (in) (mm) | 10 250 | 12 300 | 16 410 | 18 460 | 18 460 |
| Maximum Operating Excess | (Air) (Fuel) | 200% 30% | 400% 30% | 600% 30% | 400% 30% | 400% 30% |

Burner Capacity Information, Hauck NMC-H 260

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

| SPECIFICATIONS | | OPERATIONAL INFORMATION | | | | |
|-------------------------------------|---------------------------------|-------------------------|------------------|--------------------|--------------------|--------------------|
| Capacity (at 10% Excess Air) | (BTU/hr) (kW) | 1,430,000 380 | 3,230,000 850 | 4,430,000 1,170 | 6,140,000 1,620 | 7,440,000 1,970 |
| Secondary Air Capacity | (scfh) (nm ³ /hr) | 14,833 397 | 33,474 897 | 45,938 1,231 | 63,573 1,703 | 77,117 2,066 |
| Secondary Air Inlet Pressure | (in.w.c.) (mbar) | 1.0 2.5 | 6.9 17.2 | 13.9 34.5 | 27.7 68.9 | 41.6 103.4 |
| Primary Air Capacity | (scfh) (nm ³ /hr) | 3,375 90 | 3,375 90 | 3,375 90 | 3,375 90 | 3,375 90 |
| Primary Air Inlet Pressure | (in.w.c.) (mbar) | 4.0 10.0 | 4.0 10.0 | 4.0 10.0 | 4.0 10.0 | 4.0 10.0 |
| Gas Inlet Pressure | (in.w.c.) (mbar) | 0.8 2.0 | 1.9 4.8 | 2.7 6.7 | 3.7 9.3 | 4.6 11.3 |
| Flame Length (at 10% Excess Air) | (in) (mm) | 27 690 | 41 1030 | 54 1370 | 68 1710 | 72 1830 |
| Flame Diameter (at 10% Excess Air) | (in) (mm) | 9 230 | 11 270 | 14 370 | 16 410 | 16 410 |
| Maximum Operating Excess | (Air) (Fuel) | 160% 30% | 320% 30% | 480% 30% | 320% 30% | 320% 30% |

NOTES:

1. 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.
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 IPG5411 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.

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Burner Capacity Information, Hauck NMC 260

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

| SPECIFICATIONS | | OPERATIONAL INFORMATION | | | | |
|-------------------------------------|---------------------------------|-------------------------|--------------------|--------------------|--------------------|---------------------|
| Capacity (at 20% Excess Air) | (BTU/hr) (kW) | 2,220,000 590 | 4,640,000 1,230 | 6,260,000 1,660 | 8,540,000 2,260 | 10,300,000 2,720 |
| Secondary Air Capacity | (scfh) (nm ³ /hr) | 17,816 477 | 46,800 1,254 | 66,180 1,773 | 93,600 2,507 | 114,660 3,072 |
| Secondary Air Inlet Pressure | (in.w.c.) (mbar) | 1.0 2.5 | 6.9 17.2 | 13.9 34.5 | 27.7 68.9 | 41.6 103.4 |
| Primary Air Capacity | (scfh) (nm ³ /hr) | 8,880 238 | 8,880 238 | 8,880 238 | 8,880 238 | 8,880 238 |
| Primary Air Inlet Pressure | (in.w.c.) (mbar) | 27.7 68.9 | 27.7 68.9 | 27.7 68.9 | 27.7 68.9 | 27.7 68.9 |
| Fuel Oil Flow(at 20% Excess Air) | (gph) (lph) | 16.1 61 | 33.6 127 | 45.3 172 | 61.9 234 | 74.6 282 |
| Flame Length (at 20% Excess Air) | (in) (mm) | 36 910 | 60 1520 | 96 2440 | 114 2900 | 120 3050 |
| Flame Diameter (at 20% Excess Air) | (in) (mm) | 10 250 | 16 410 | 18 460 | 21 530 | 24 610 |
| Maximum Operating Excess | (Air) (Fuel) | 100% 30% | 400% 30% | 500% 30% | 500% 30% | 500% 30% |

Burner Capacity Information, Hauck NMC-H 260

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

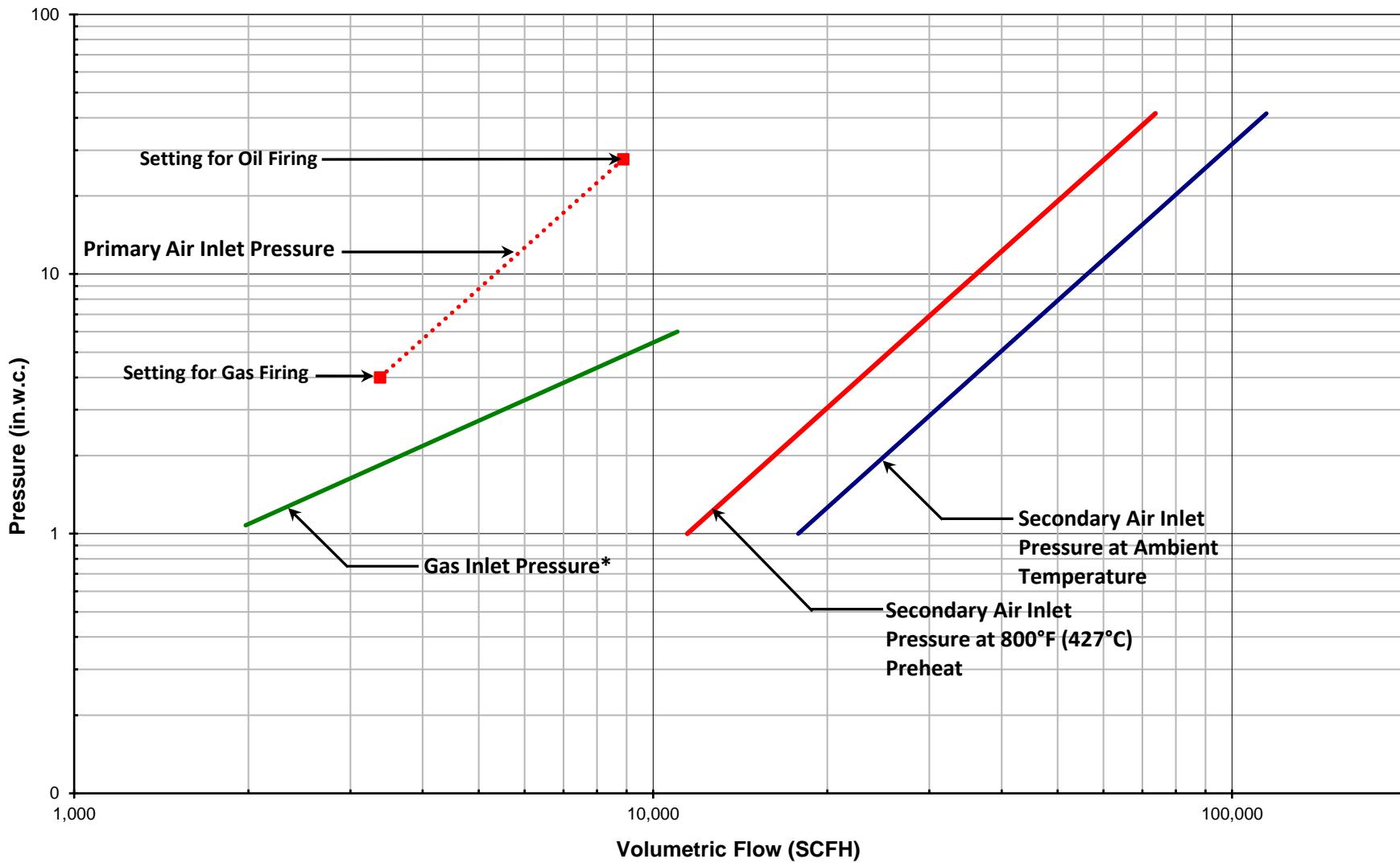
| SPECIFICATIONS | | OPERATIONAL INFORMATION | | | | |
|-------------------------------------|---------------------------------|-------------------------|------------------|--------------------|--------------------|--------------------|
| Capacity (at 20% Excess Air) | (BTU/hr) (kW) | 1,690,000 450 | 3,250,000 860 | 4,290,000 1,130 | 5,760,000 1,520 | 6,890,000 1,820 |
| Secondary Air Capacity | (scfh) (nm ³ /hr) | 11,458 307 | 30,099 806 | 42,563 1,140 | 60,198 1,613 | 73,742 1,975 |
| Secondary Air Inlet Pressure | (in.w.c.) (mbar) | 1.0 2.5 | 6.9 17.2 | 13.9 34.5 | 27.7 68.9 | 41.6 103.4 |
| Primary Air Capacity | (scfh) (nm ³ /hr) | 8,880 238 | 8,880 238 | 8,880 238 | 8,880 238 | 8,880 238 |
| Primary Air Inlet Pressure | (in.w.c.) (mbar) | 27.7 68.9 | 27.7 68.9 | 27.7 68.9 | 27.7 68.9 | 27.7 68.9 |
| Fuel Oil Flow(at 20% Excess Air) | (gph) (lph) | 12.3 46 | 23.5 89 | 31.1 118 | 41.7 158 | 49.9 189 |
| Flame Length(at 20% Excess Air) | (in) (mm) | 27 690 | 45 1140 | 72 1830 | 86 2170 | 90 2290 |
| Flame Diameter(at 20% Excess Air) | (in) (mm) | 9 230 | 14 370 | 16 410 | 19 480 | 22 550 |
| Maximum Operating Excess | (Air) (Fuel) | 80% 30% | 320% 30% | 400% 30% | 400% 30% | 400% 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 IPG5411 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.

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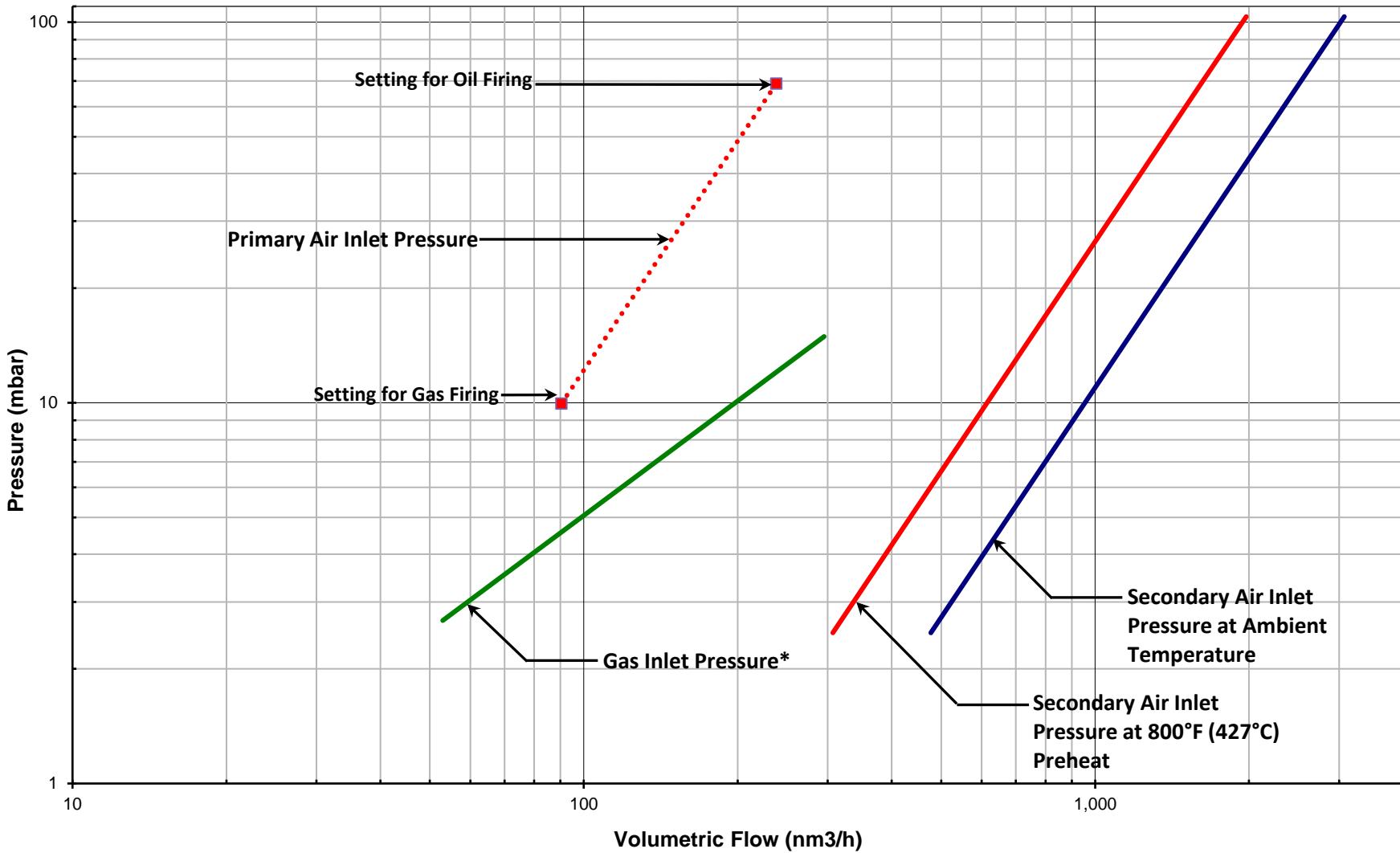
NMC/NMC-H 260 Pressure Curves
Natural Gas 1034 BTU/ft³ (HHV Standard) / 10.21 kWh/nm³ (LHV Metric), 0.59 S.G.
and Ambient and Preheated Combustion Air



*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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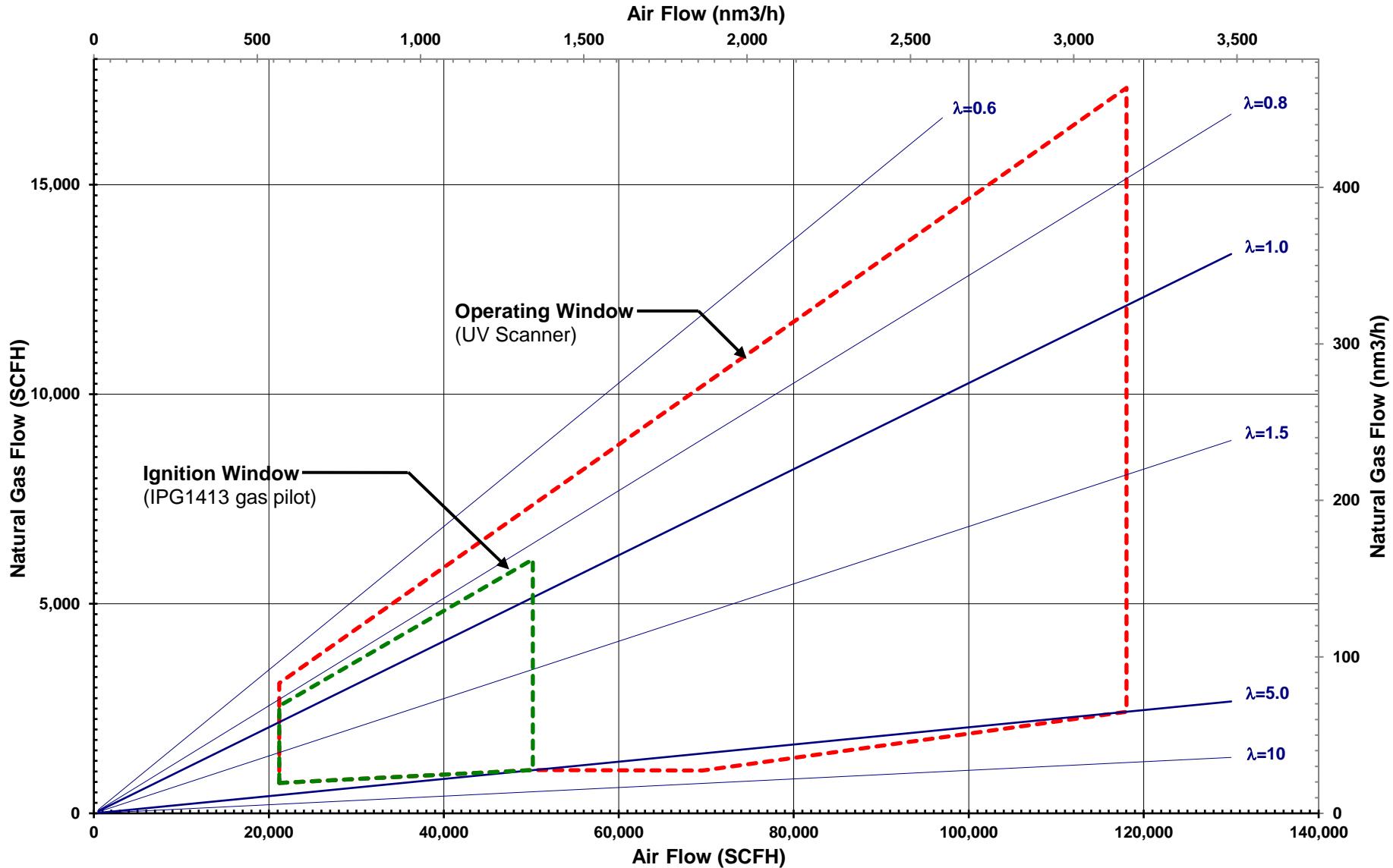
NMC/NMC-H 260 Pressure Curves
Natural Gas 1034 BTU/ft³ (HHV Standard) / 10.21 kWh/nm³ (LHV Metric), 0.59 S.G.
and Ambient and Preheated Combustion Air



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

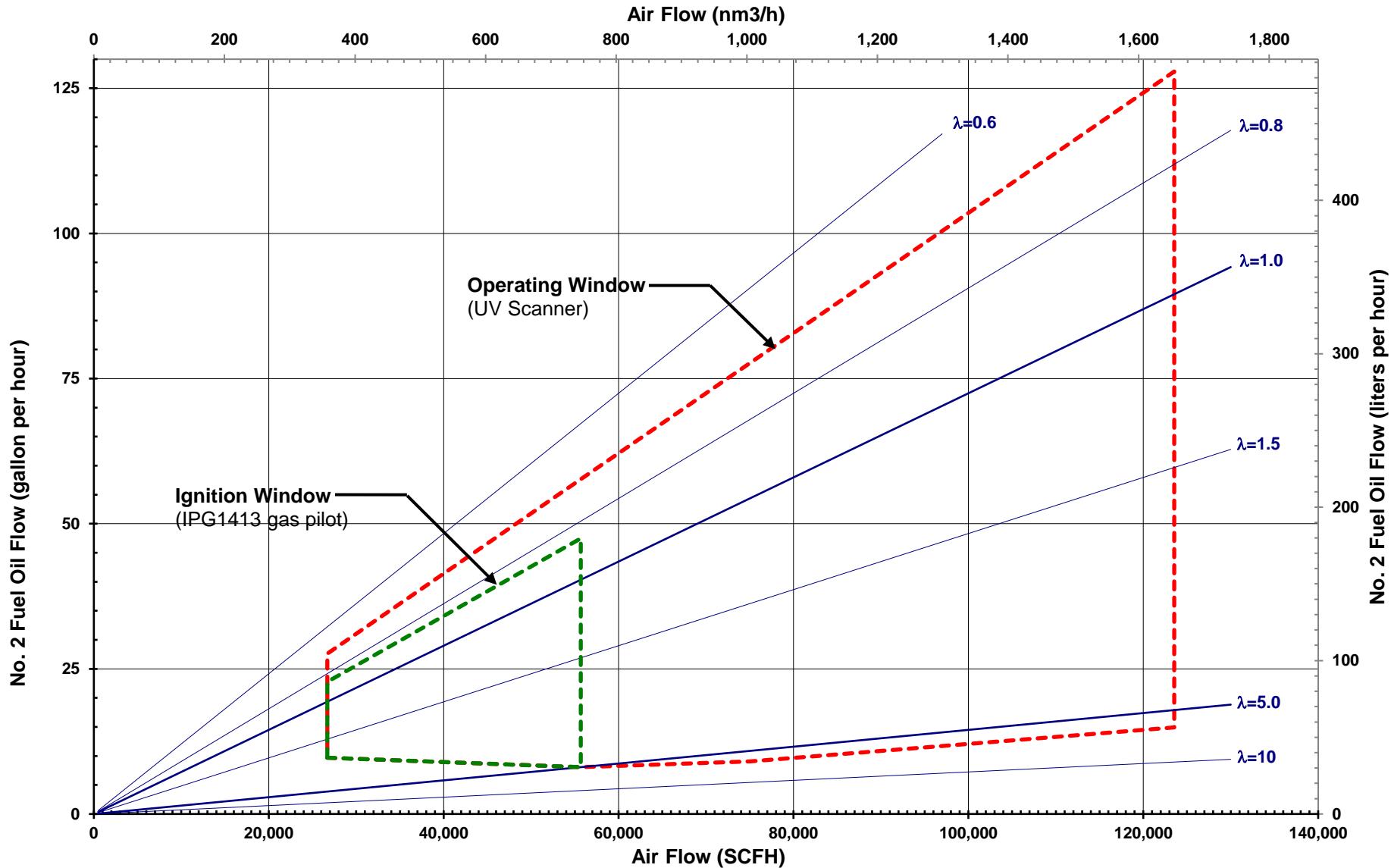
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NMC/NMC-H 260 Operating and Ignition Window
 Natural Gas 1034 BTU/ft³ (HHV Standard) / 10.21 kWh/nm³ (LHV Metric), 0.59 S.G.
 and Ambient Combustion Air



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NMC/NMC-H 260 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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