

BURNER MODEL TriOx 3012

INVISIFLAME MODE⁵

NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION

SPECIFICATIONS		OPERATIONAL INFORMATION			
Capacity (at 5% Excess Air)	(MMBTU/hr)	2.1	6.4	10.7	14.9
	(kW)	560	1,690	2,830	3,950
Air Capacity	(SCFH)	20,800	63,200	105,700	147,600
	(nm ³ /hr)	560	1,690	2,830	3,950
Air Pressure (Body)	(in.w.c.)	0.3	2.9	8.2	15.9
	(mbar)	0.8	7.3	20.3	39.6
Gas Inlet Pressure	(in.w.c.)	0.4	4.1	11.5	22.5
	(mbar)	1.1	10.2	28.7	55.9
Combustion Zone Length ⁴	(ft)	8.0	12.0	15.0	18.0
	(m)	2.4	3.7	4.6	5.5
Combustion Zone Diameter ⁴	(ft)	3.0	3.5	4.0	5.0
	(m)	0.9	1.1	1.2	1.5
Maximum Excess	(Air %)	500	750	1,000	1,500
	(Fuel %)	+30	+30	+30	+30

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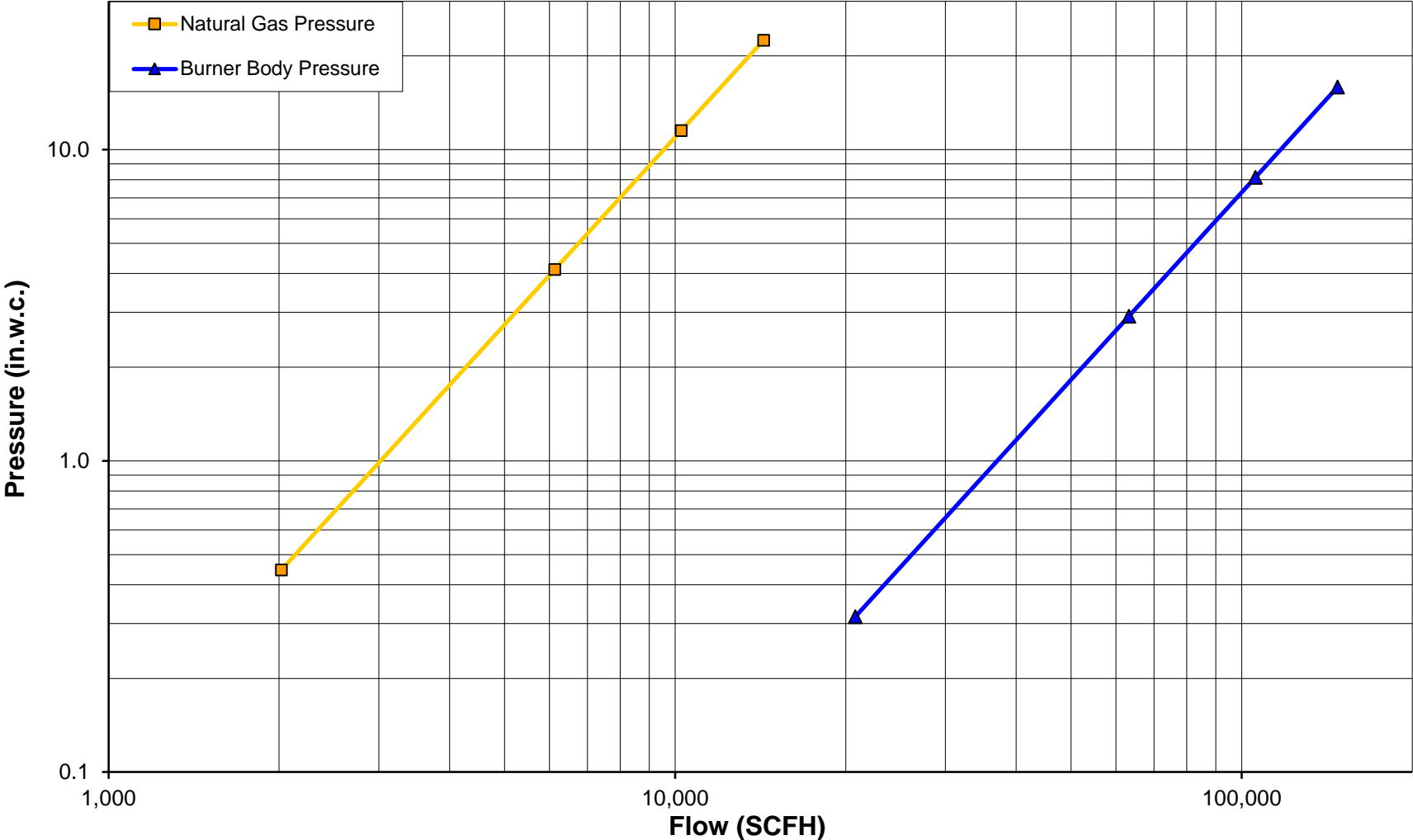
NATURAL GAS, 900°F / 482°C COMBUSTION AIR OPERATION

SPECIFICATIONS		OPERATIONAL INFORMATION			
Capacity (at 5% Excess Air)	(MMBTU/hr)	1.3	4.0	6.6	9.2
	(kW)	340	1,050	1,750	2,450
Air Capacity	(SCFH)	12,800	39,100	65,400	91,300
	(nm ³ /hr)	340	1,050	1,750	2,450
Air Pressure (Body)	(in.w.c.)	0.3	2.9	8.2	15.9
	(mbar)	0.8	7.3	20.3	39.5
Gas Inlet Pressure	(in.w.c.)	0.4	4.1	11.5	22.4
	(mbar)	1.1	10.2	28.7	55.8
Combustion Zone Length ⁴	(ft)	7.0	10.0	12.0	15.0
	(m)	2.1	3.0	3.7	4.6
Combustion Zone Diameter ⁴	(ft)	2.5	3.0	3.5	4.0
	(m)	0.8	0.9	1.1	1.2
Maximum Excess	(Air %)	250	500	750	1,000
	(Fuel %)	+30	+30	+30	+30

- NOTES: 1. Capacities based on Natural Gas with HHV of 1034 BTU/ft³ (Standard), and LHV of 10.21 kWh/nm³ (Metric), 0.59 S.G., and a stoichiometric ratio of 9.74:1 with burner firing into chamber under no pressure at 5% excess air.
2. Air and fuel flows based on STP operating conditions at sea level and industry standard air and gas piping practices.
3. Flame detection is not possible on the 3000 and 4000 Invisiflame™ Mode only versions of the burner.
4. The combustion zone when operating Invisiflame™ Mode is not visible unless used with preheated combustion air.
5. Invisiflame™ Mode is suitable for furnace or chamber temperatures above 1600°F or 870°C only. For temperatures less than 1600°F or 870°C the TriOx burner must be used in Firing Mode only.

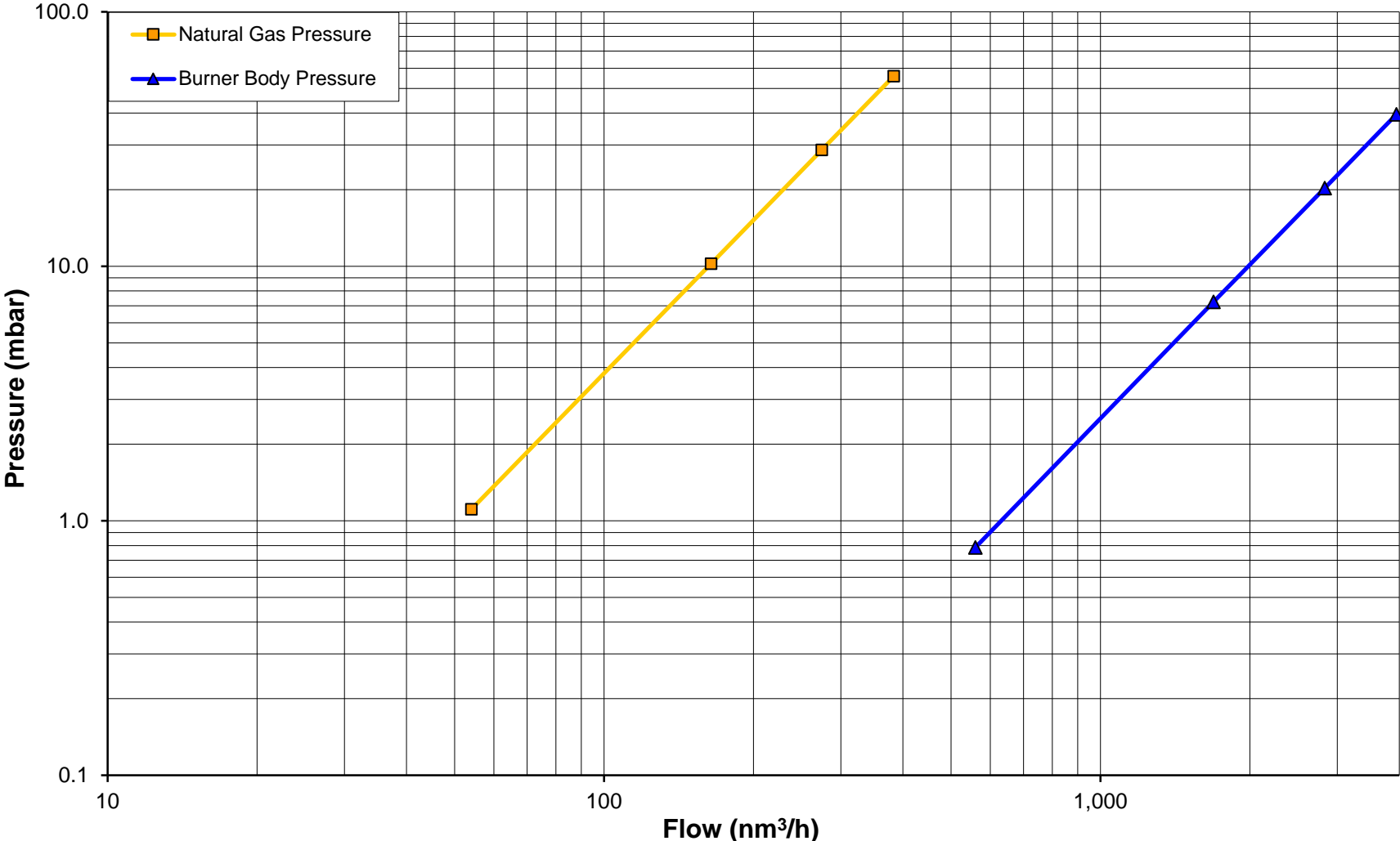
TriOx 3012 Burner Pressure Curves

InvisiFlame Mode, Ambient Combustion Air
Natural Gas 1034 BTU/scf (HHV), S.G. 0.59



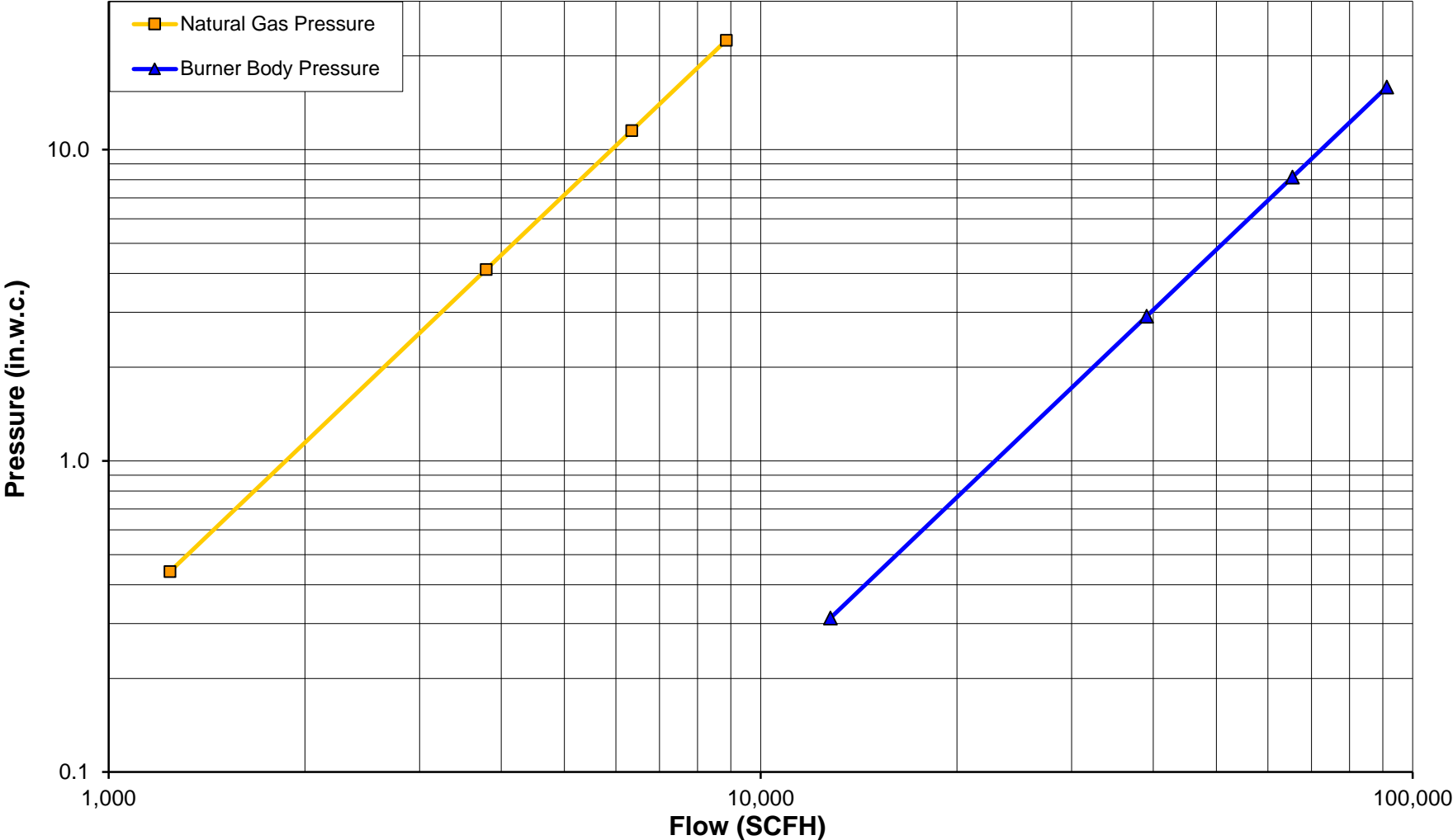
TriOx 3012 Burner Pressure Curves

InvisiFlame Mode, Ambient Combustion Air
Natural Gas 10.21kWh/nm³ (LHV), S.G. 0.59



TriOx 4012 Burner Pressure Curves

InvisiFlame Mode, 900°F Combustion Air
Natural Gas 1034 BTU/scf (HHV), S.G. 0.59



TriOx 4012 Burner Pressure Curves

InvisiFlame Mode, 482°C Combustion Air
Natural Gas 10.21kWh/nm³ (LHV), S.G. 0.59

