

## BURNER MODEL TriOx 3014

### INVISIFLAME MODE<sup>5</sup>

#### NATURAL GAS, AMBIENT COMBUSTION AIR OPERATION

SPECIFICATIONS		OPERATIONAL INFORMATION			
<b>Capacity (at 5% Excess Air)</b>	(MMBTU/hr)	<b>2.9</b>	<b>8.8</b>	<b>14.7</b>	<b>20.9</b>
	(kW)	<b>770</b>	<b>2,340</b>	<b>3,910</b>	<b>5,540</b>
Air Capacity	(SCFH)	28,600	87,200	145,800	206,900
	(nm <sup>3</sup> /hr)	770	2,340	3,910	5,540
Air Pressure (Body)	(in.w.c.)	0.3	2.9	8.2	16.4
	(mbar)	0.8	7.3	20.3	40.9
Gas Inlet Pressure	(in.w.c.)	0.5	4.6	12.8	25.9
	(mbar)	1.2	11.4	31.9	64.3
Combustion Zone Length <sup>4</sup>	(ft)	8.0	13.0	15.0	18.0
	(m)	2.4	4.0	4.6	5.5
Combustion Zone Diameter <sup>4</sup>	(ft)	3.0	5.0	5.5	6.0
	(m)	0.9	1.5	1.7	1.8
Maximum Excess	(Air %)	500	750	1,000	1,500
	(Fuel %)	+30	+30	+30	+30

## BURNER MODEL TriOx 4014

### INVISIFLAME MODE<sup>5</sup>

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

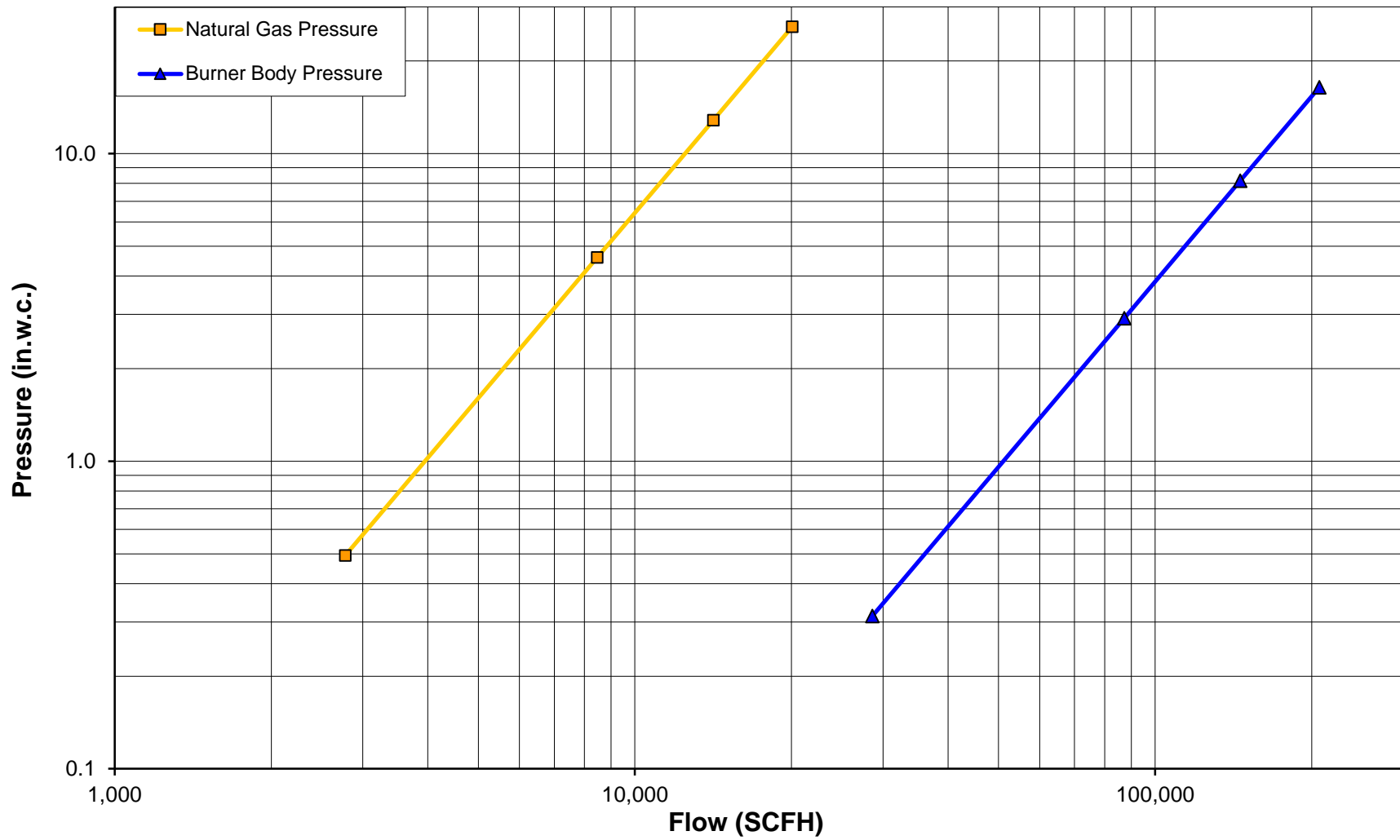
SPECIFICATIONS		OPERATIONAL INFORMATION			
<b>Capacity (at 5% Excess Air)</b>	(MMBTU/hr)	<b>1.8</b>	<b>5.5</b>	<b>9.1</b>	<b>13.0</b>
	(kW)	<b>470</b>	<b>1,450</b>	<b>2,420</b>	<b>3,430</b>
Air Capacity	(SCFH)	17,700	54,000	90,300	128,100
	(nm <sup>3</sup> /hr)	470	1,450	2,420	3,430
Air Pressure (Body)	(in.w.c.)	0.3	2.9	8.1	16.4
	(mbar)	0.8	7.2	20.3	40.8
Gas Inlet Pressure	(in.w.c.)	0.2	1.8	5.1	10.3
	(mbar)	0.5	4.6	12.7	25.6
Combustion Zone Length <sup>4</sup>	(ft)	7.0	11.0	13.0	15.0
	(m)	2.1	3.4	4.0	4.6
Combustion Zone Diameter <sup>4</sup>	(ft)	2.5	3.0	4.0	4.0
	(m)	0.8	0.9	1.2	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/ft<sup>3</sup> (Standard), and LHV of 10.21 kWh/nm<sup>3</sup> (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 3014 Burner Pressure Curves

InvisiFlame Mode, Ambient Combustion Air

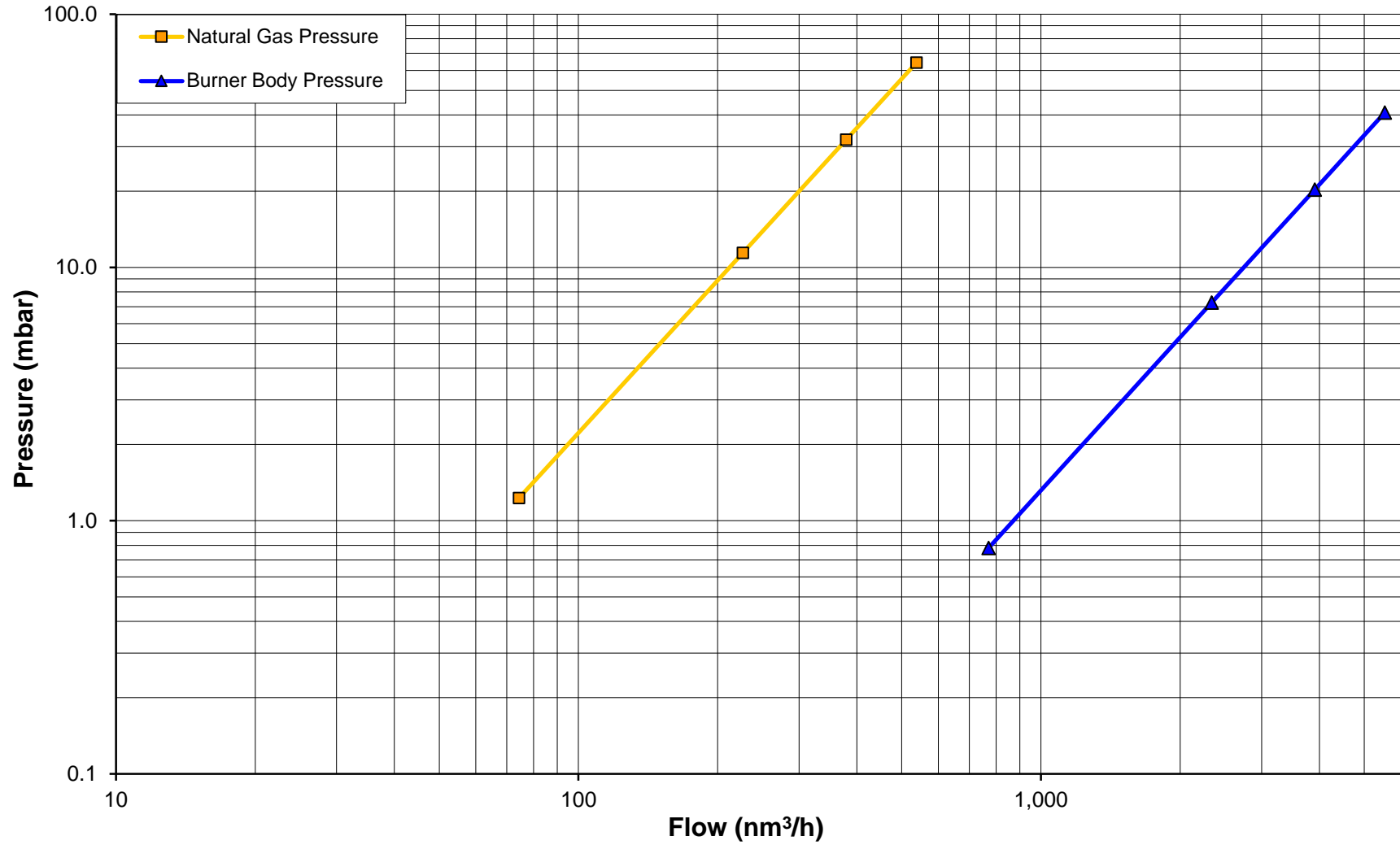
Natural Gas 1034 BTU/scf (HHV), S.G. 0.59



# TriOx 3014 Burner Pressure Curves

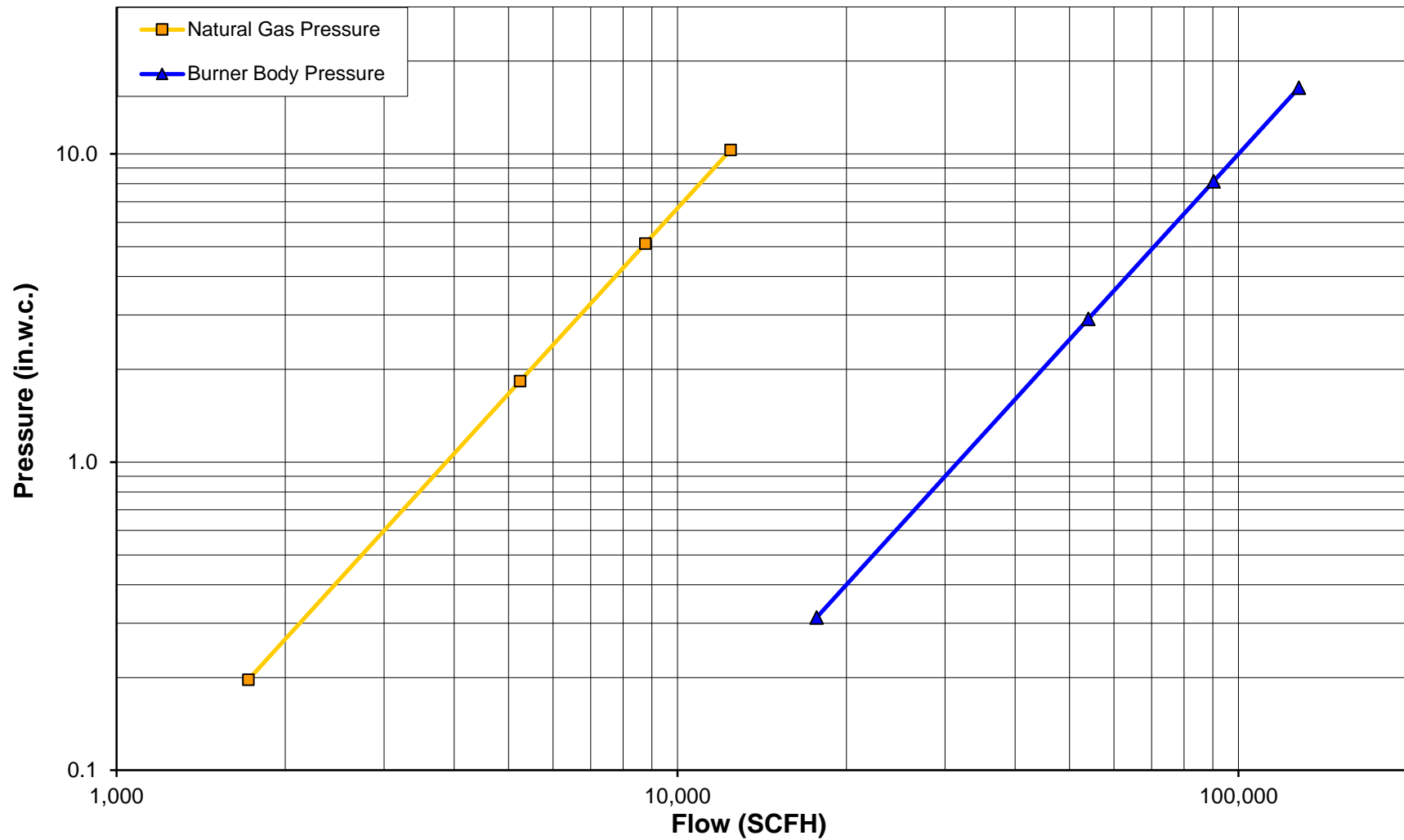
InvisiFlame Mode, Ambient Combustion Air

Natural Gas 10.21kWh/nm<sup>3</sup> (LHV), S.G. 0.59



# TriOx 4014 Burner Pressure Curves

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



# TriOx 4014 Burner Pressure Curves

InvisiFlame Mode, 482°C Combustion Air  
Natural Gas 10.21kWh/nm<sup>3</sup> (LHV), S.G. 0.59

