

Enclosed Flame Gas Flare

Process Gas Applications



Biogas Purification and Biogas Flares
That's Our Business





Enclosed Gas Flares for Continuous or Emergency Conditions

Landfill gas applications

For landfill gas applications enclosed flame flare have been required for years for the destruction of landfill gas. As more and more landfill gas is valorized through the production of electricity or the production of renewable natural gas (RNG), enclosed flame flares are used for emergency conditions and for excess gas situation.

Anaerobic Digester (AD) biogas applications

For AD biogas applications enclosed flame flares are used to burn excess biogas from the process as well as to burn the full biogas production while the downstream biogas valorization system is stopped for maintenance or emergency conditions.

Process gas applications

Several processes produce combustible gases which for some reason need to be flared from time to time. This could be the case with off-spec gas during process start-up especially in the case of batch type processes. In these applications enclosed flame flares shall be used as they permit the analysis of the gas of combustion to confirm the respect of the air emission regulations.

Simple Process, High Efficiency

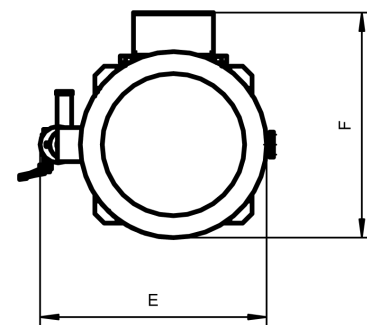
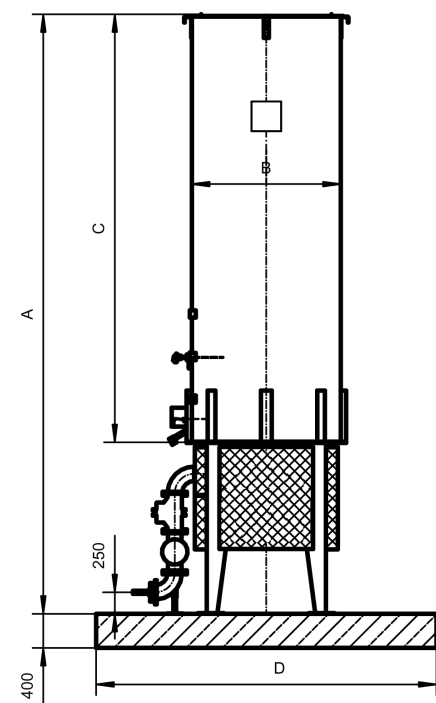
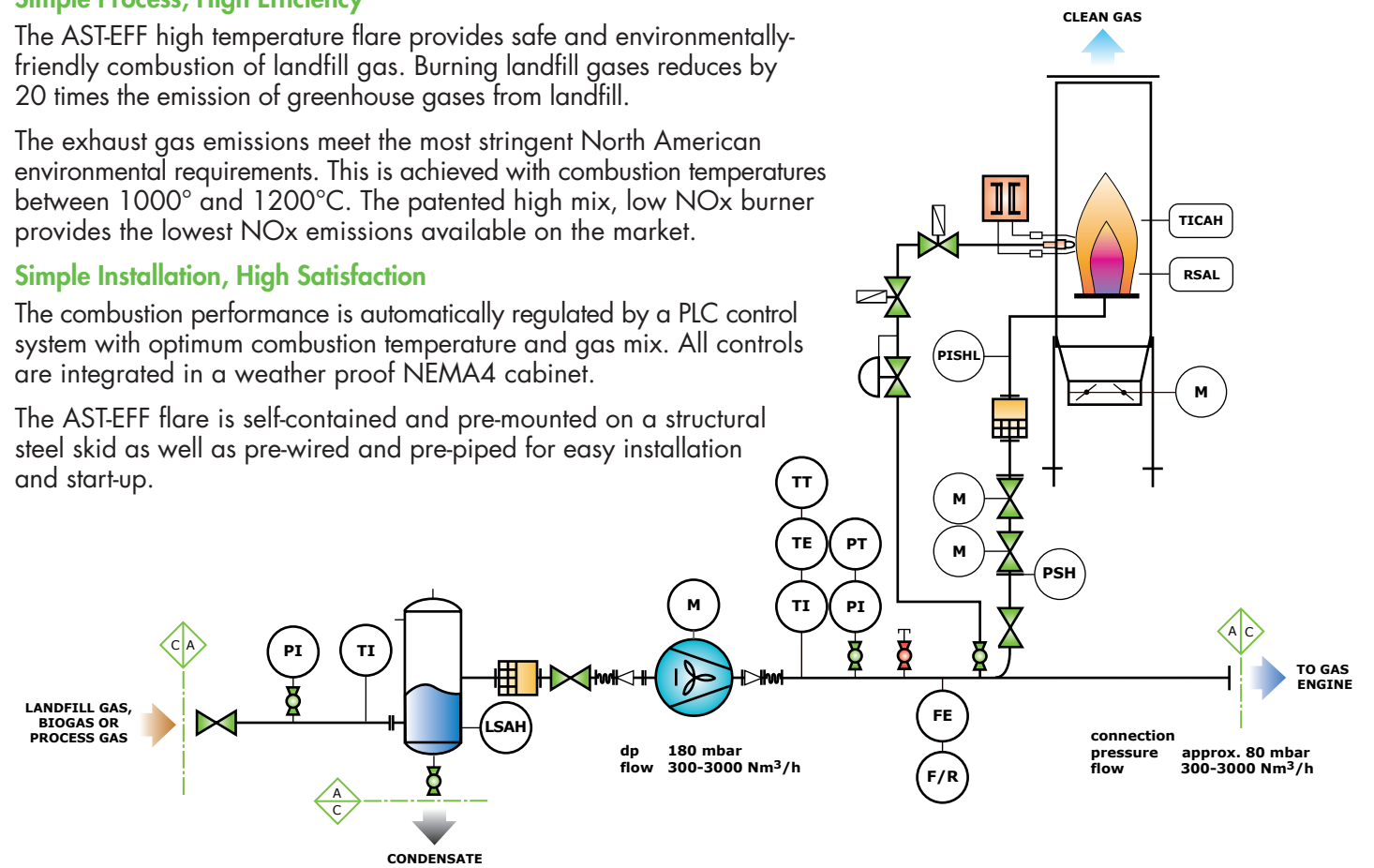
The AST-EFF high temperature flare provides safe and environmentally-friendly combustion of landfill gas. Burning landfill gases reduces by 20 times the emission of greenhouse gases from landfill.

The exhaust gas emissions meet the most stringent North American environmental requirements. This is achieved with combustion temperatures between 1000° and 1200°C. The patented high mix, low NOx burner provides the lowest NOx emissions available on the market.

Simple Installation, High Satisfaction

The combustion performance is automatically regulated by a PLC control system with optimum combustion temperature and gas mix. All controls are integrated in a weather proof NEMA4 cabinet.

The AST-EFF flare is self-contained and pre-mounted on a structural steel skid as well as pre-wired and pre-piped for easy installation and start-up.



Safety Features

- Flame arrester
- Fail safe isolation valve
- Burner control unit with UV detection

General Specifications

- Gas flow rate : 300 - 3,000 Nm³/h
- Burner capacity up to : 15,000 kW
- Methane concentration : 30 - 50 vol. %
- Combustion temperature : 1000 - 1200 °C
- Residence time : > 0.3 s
- Turn down ratio : 1 : 5
- Initial gas pressure : 80 - 100 mbar
- Expected sound pressure level at full load (at 15m distance and 2m height) : < 69 dB(A)

Options

- Frost protection
- Extended turn down ratio up to 1 : 10

More options are available on request

Specifications for Standard Units

	Gas Flow Rate (maximum)	Burner Capacity (maximum)	Flange Connection	Initial Gas Pressure at Full Load (minimum)	Dimension A	Dimension B	Dimension C	Dimension D	Dimension E	Dimension F	Weight (approximate)
AST-EFF 300	300	1,500	80	80	6,500	Ø 960	4,500	3,000	1,350	1,420	1,050
AST-EFF 600	600	3,000	100	80	6,500	Ø 1,280	4,500	3,000	1,690	1,700	1,460
AST-EFF 800	800	4,000	125	80	6,500	Ø 1,440	4,500	4,000	1,900	1,810	1,600
AST-EFF 1000	1,000	5,000	150	80	7,000	Ø 1,590	5,000	4,000	2,170	2,130	1,800
AST-EFF 1500	1,500	7,500	150	100	7,000	Ø 1,760	5,000	4,000	2,290	2,300	2,300
AST-EFF 2000	2,000	10,000	200	100	7,700	Ø 1,920	5,500	4,000	3,210	2,440	2,500
AST-EFF 2500	2,500	12,500	200	100	8,200	Ø 2,070	6,000	4,000	3,330	2,600	2,900
AST-EFF 3000	3,000	15,000	200	100	8,200	Ø 2,240	6,000	4,000	3,470	2,770	3,850

Lifetime Service Contract

AirScience is one of the few North American companies providing its customers with a lifetime service contract. For a low nominal fee, we will inspect your AST-EFF system at pre-established regular intervals. Our experienced field specialists will control the key operating parameters of your AST-EFF system and will optimize its performance by making the necessary adjustments.



Canada

AirScience Technologies Inc.

1751 Richardson, suite 3525

Montréal, Québec H3K 1G6

Phone: +1 514 937-4614 Fax: +1 514 937-4820

Email: sales@airscience.net

India

AirScience Technologies Private Ltd

Shop No. 1A -16B, NIT Faridabad

Faridabad, Haryana State, 121001

Phone: +91 9050 457 661 Fax: +91 9743 655 369

Email: sales@airscience.net

www.airscience.ca

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