



BIOMETHANE FLARE

Enclosed High Efficiency – Mod. HEB

DESCRIPTION

This type of Flare is designed for a specific use in Biomethane production plants where it is necessary to burn both the biogas upstream of the upgrading system and the biomethane generated after the treatment.

TCD Italia has also developed a special system that allows the simultaneous management of both gas flows, using a dedicated bi-fuel burner that also keeps stable the gases pressure inside the digester.

The flare is designed in order to obtain a high combustion efficiency and thus obtain values of CO and NOx downstream of the combustion, very low and traceable through dedicated nozzle accessible from outside.

The high efficiency flare consists of a burner installed at the base, equipped with a high-energy ignition Pilot and a flame detection system via UV scanner.

The combustion air is conveyed by means of an automatic damper which by means of a Thermocouple immersed into the combustion chamber zone, automatically modulates the appropriate air flow, ensuring the constant combustion temperature up to a maximum of 1.200 °C (visible and adjustable from control panel).

The supporting structure is composed of a vertical combustion chamber, internally coated with ceramic fiber and specially sized to ensure appropriate residence time of the gas inside the combustion chamber.

The ignition system is automatic type, operated by the electrical panel installed on the bottom side and initially involves the pilot's ignition and subsequently the opening of the main Biogas valve.

This Biogas Flare, unlike the elevated type, develops an influential radiation value at ground, since the flame is fully contained within the combustion chamber.

This model also allows a suitable combustion even in the presence of very low amounts of methane in the Biogas (from 25% to 70% in volume and with a Turn down 5:1).





SITE UTILITIES

Power supply	Volt	400
Auxiliary circuits Power	Volt	230-24
Frequency	Hz	50
Electrical Insulation (Local Panel)	Gr.	IP54
Electrical Protection (Field equipments)	Gr.	IP65
Instrument Air Type		Wet, without Oil
Instrument Air Dew point	°C	-25
Instrument Air Pressure	bar _g	6

SUPPLIER DATA

FLARE	Mod.	HEB
Type		Enclosed High Efficiency
Biogas Flow (max.)	Nm ³ /h	2.000
Biomethane (max.)	Nm ³ /h	1.000
Combustion Temperature	°C	1.000
Gas Residence Time in the Combustion Chamber	Sec.	0.3
Total Height (from ground)	ml.	4 > 12
Type of support		Selfstanding
Gas Pipe Material		Aisi 304
Combustion Chamber Material		CS
Burner Material		Aisi 316/310
Biogas "A" Inlet Flange		EN 1092-1 PN10
Biomethane "B" Inlet Flange		EN 1092-1 PN10
Flame Detector		UV Scanner
Internal Insulation		Ceramic Fiber
External Insulation (Only in the Top parts Ig. 1 ml.)		Aisi 304