

Comparing Process Gas Electrothermal Heaters made by MHI and others as perceived by MHI Inc. 2026

Features for Comparison	MHI Airtorch®	Competitor	Why are better-constructed, better-built, modern designs with IP protection units important? How do superior technologies impact a user?
Power: Is derating of Power required in the Air or Gas heater during use?	Derating is not required.  Customer Testimonials	Varies; could be derated by 20% typically.	Not requiring any derating is a clear advantage. When derated, the user can access only low power for their application. Derating MW systems is a disadvantage tied to the cost of operation.
The typical powers offered to date by the manufacturer.	1 MW –45 MW, Single units 1KW - 1 MW in single units. Very versatile.	Generally, do not span this range for a single unit.	
Pressure drop for a high-temperature exit temperature.	Typically, 0.25 psi or lower, or as shown in the quote. The pressure drop is reported at the use temperature	Typically, four times more, ~1 psi, or as described by the manufacturer. Please ensure the pressure drop is reported at the use temperature.	A lower pressure drop indicates less energy loss. It often determines the heater's life. With a low pressure-drop, you can use a lower-cost blower. Lower pressure drops are good for dusty gases.
Maximum exit temperature offered.	30°C to 1200°C, depending on the model. (About 80°F to 2280°F)	Typically, only 30°C– 700°C. (About 80°F to 1300°F)	Higher temperature capability indicates longer life, even at lower operating temperatures.
Electric Panel.	UL 508A or as required. CE-6 level standard Made by MHI to superior standards. World-renowned.	As listed (the user should inquire whether the entire panel is rated or only the enclosure is rated).	Safety Standards. It is best to follow known electrical codes.
Energy Efficiency.	Typically, 95% and above	Varies: Typically, ~80%.	Higher efficiency improves process cost and supports decarbonization.
Does the shell require external insulation? Shell materials.	Shell is stainless steel or as requested. No external insulation.	Very often, stainless is not used for comparison.	Better efficiency. Safety.
Can the shell be rated to ASME or CRN standards?	Yes.	Yes.	Ratings provide safety and uniformity.
SCR Quality and Flexibility for Current Limit?	Phase Angle or Zero Cross Over – software adjustable. The user has complete control. Power managed for the grid. MHI has excellent power control philosophies	Varies.	Power managed for the grid. Zero-crossing or phase-angle and current-limit adjustment provides better efficiency and more proportional control, making changes softer and improving life.
What is the size of a 1 MW or 30 MW	About 24" - 30" About 70'. Compact footprint.	Generally, much larger	Compactness offers several advantages, from space to lower transportation and installation costs.
Torispheical terminations.	Yes, almost always or as required.	Generally, it is not provided. Either no termination or Conical.	Fluid flow should be managed.
Provision of Exact Mating Flanges and Pipes	Yes, almost always. MHI has access to vessel manufacturers as required and makes its own vessels when required.	Varies	Companies like MHI provide Ease of installation and compatibility.
The location of the exit process thermocouple.	Typically, in the pipe tubing, i.e., in the exit flow.	Generally located upstream near the radiator.	The reading should be in the flow when located in the pipe. This is more accurate.
What does the Warranty cover?	Depending on the model, MHI provides a 1-year Warranty on heaters. Not just on manufacturing defects.	Varies. It is unusual to have a guaranteed life for heaters.	Quality and technology are reflected in the Warranty. MHI uses the GAXP® or others as required patented long-life heaters.

For High temperatures above 100 °C and 100 kW, the capital and operating costs of the MHI Airtorch unit are particularly attractive compared with other heating methods, including Induction, Heat Pumps, Plasma, and Heat Exchangers. Please contact MHI @ 513-772-0404 or through the web at mhi-inc.com