

# eHEnergizer

## High Energy Ignition System

The "eHEnergizer" PHE-24 and PHE-120 High Energy Igniters are specifically designed for safe and reliable ignition of pilots and small gas fired burners for process heaters, boilers and other combustion equipment typically found in refineries and gas plants. They are designed to fit into existing pilots making them ideal for both retrofit and new installations.



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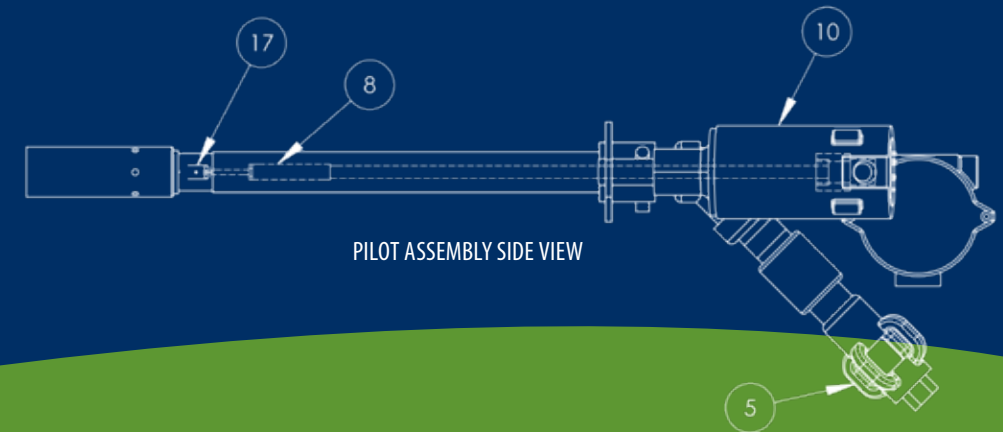
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## High Energy Igniter Tip

The PHE is designed to work with the champion FHE159-6 High Energy Igniter Tip. This tip is readily available, easily replaced and very cost effective. The tip is commonly found in gas turbine engines used in the aviation industry. The igniter tip works under water, immersed in dirt, surrounded by steam or any other fluid. It is extremely reliable and typically provides 1 million sparks before it needs replacing.



## Simple, Compact and Easy to Install

The PHE is compact and light weight and fastens directly to the pilot requiring minimal space. The installation is fast, neat, simple and rugged.

The unit is designed such that the igniter tip can be removed without removing the pilot.

Models are available in either 24V(dc) or 120 V(ac). At 24 V(dc), less than 1A is required for operation. The unit can therefore be driven directly from the BMS PLC with no interposing relay.

Only two field wires are required for electrical hook-up. There are no external junction boxes, relays or enclosures required. The wire can be run directly from the PLC to the igniter.

## HEI Technology

High Energy Igniters generate a very large current (>40A) for a very small period of time. A bank of capacitors is charged and the energy created is then rapidly discharged through a high power transistor.

The main advantage of HEI is the reliability it offers - it will work under any circumstances. Unlike High Voltage Ignition (HVI) water and dirt will not affect the HEI performance as the energy from the spark "blasts" the dirt away and water actually enhances the spark.

A useful analogy would be to think of traditional (HVI) as a continuous stream of water hitting a surface. In comparison HEI takes that same stream of water, uses it to fill a cup (capacitor), and then dumps the entire contents at once. Obviously, dumping a full cup of water all at once has a much greater impact than a continuous trickle.



PHE MOUNTED ON PILOT ASSEMBLY

## Extremely Rugged and Reliable

### BUILT FOR THE WORLDS HARSHEST ENVIRONMENTS

The electronics are housed in a heavy duty copper free cast aluminum enclosure. The enclosure is Waterproof (NEMA 4/IP66), Dustproof, Explosion Proof (Class I Div I) and Tamper Resistant.

The system has an extremely wide operating temperature range from (-50C<sup>0</sup> to +75C<sup>0</sup>).

The PHE is specifically designed for outdoor, wet, dirty and hazardous environments.

The unit is built from military grade, high quality solid state electronic components. There are no moving or high stress parts to wear out.

All components operate at less than 70% of their rated capacity.



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