

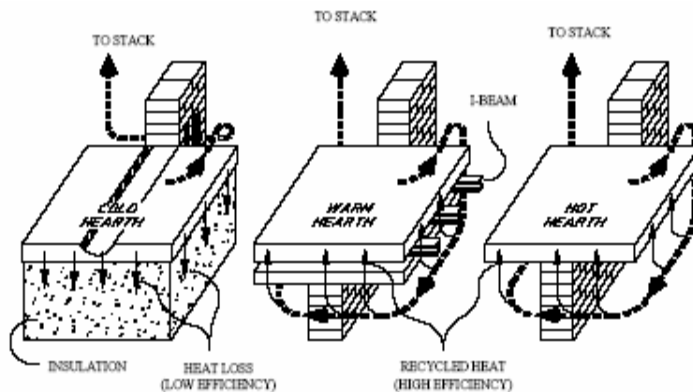


How Hot Is Your Hearth?

Cold hearth, warm hearth, hot hearth: A cremation chamber floor can be any one of these. In cremation equipment, isn't every hearth hot? The difference is a matter of degree (no temperature puns intended).

The *cold hearth* can be found in cremators with an in-line design. The afterchamber in this design is behind the cremation chamber. Heated combustion gases are drawn from the front of the unit toward the back, down and then up through the afterchamber at the back, and then out. With nothing heating its underside, the cold hearth is heated only on its upper face: the cremation chamber floor. Energy is drawn out of the cremation chamber, resulting in poor energy efficiency.

MCD implemented a “*warm hearth*” design in many of its older models. Part of the afterchamber is underneath the hearth; A 3” airspace separates the hearth and the afterchamber roof. The hearth (cremation chamber floor), poured onto a flat surface, is supported by several I-beams. This allows heat transfer to the underside of the hearth for more energy efficiency.



MCD's design of today uses hot hearths which were introduced in cremation equipment by MCD over 30 years ago. The hot hearth is really hot because it serves as both the floor of the cremation chamber and the roof of the afterchamber.

Heated by the cremation burner and by combustion of the case, the hot hearth also absorbs heat from the afterchamber beneath, from combustion gases that move under the hearth on their way through the afterchamber. The hot hearth design offers major benefits in three important areas:

Fluid control. Because the entire hearth is hotter, moisture released from the remains vaporizes more rapidly during cremation. A cold hearth can also accumulate heat on its upper cremation chamber floor surface, but that isn't enough to prevent fluid runoff problems.

Thermal efficiency. The hot hearth helps complete successive cremations in less time - each up to 30 minutes faster than the first cremation of the day. Why? If the hearth were not absorbing heat on both its upper and lower surfaces, more of the heat from the cremation process would move out of the afterchamber, rise through the stack, and be lost into the atmosphere. The necessary heat would have to be replenished by more burner activity during each cremation.

Longer refractory life. Refractory expands and contracts when exposed to high temperatures, eventually resulting in wear and spalling (peeling of the refractory surface). A cold hearth's hot surface experiences more stress, expanding and contracting more than its underside. The hot hearth design exposes both surfaces to heat, so the stress of thermal expansion is more evenly spread out over the material. The refractory material lasts longer.

For service, sales or assistance please call (800) 327-2831

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