

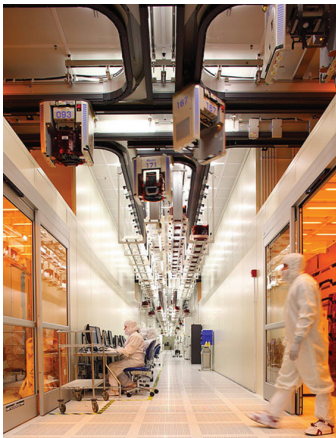
IM Flash Technologies



Front entrance to IM Flash facility
Photo: IM Flash Technology Building

The Challenge

IM Flash Technologies, LLC was developed in 2006 as a joint venture of Micron Technology and Intel, formed to manufacture NAND Flash memory for use in consumer electronics, removable storage and hand held communication devices. Manufacturing products exclusively for Micron and Intel, IM Flash combines



Staff working in facility's lab room.
Photo: IM Flash Technology building

Micron's expertise in developing NAND technology and operating highly efficient manufacturing facilities with Intel's multi-level cell technology and history of innovation in the Flash memory business.

IM Flash Technologies was expanding its manufacturing process at its state-of-the-art campus in Lehi, Utah. Their manufacturing process is highly sensitive and specialized, requiring stringent temperature, humidity, and filtration control. The driving force behind these requirements is higher yield through less contamination and a more consistent operating environment. The tighter

parameters are also required to support smaller line widths in manufacturing and more sensitive operating equipment. Ultimately, meeting these criteria should result in greater revenue and return on investment.

The new manufacturing area was being built out within an existing, unoccupied building. The process footprint would command the entire space. Therefore, mechanical systems engineers sought an HVAC solution that could fit within an existing, adjacent corridor that would not intrude upon the footprint of the manufacturing process.

The Solution

The on-site facility mechanical engineer at IM Flash Technologies shared that ClimateCraft custom air handling units were chosen due to reasonable price for a high level of manufacturing quality.

IM Flash wanted quality units with some specific requests:

- Multi-fan array to increase efficiency, fan redundancy and minimize the air handler footprint.
- Fiberglass insulation within stainless steel walls to maintain air quality and control insulation exposure to air stream.
- Internal spring isolation and low fan vibration design critical for clean room operation.



Technician working in lab.
Photo: IM Flash Technology Building

- An additional precaution to the original outside air intake louver designed to prevent water entrainment, the outside air intake section was provided with a fully welded floor and a floor drain. Counter-flashing was installed from the wall liners over the upturned lip to cover the seam between the upturned lip and the wall liner, for added prevention.
- Detailed cleaning requirements of the ClimateCraft units to reduce risk of contamination to manufacturing process, including sealing openings against dirt, dust or moisture; degreasing unit & cleaning with isopropyl alcohol after assembly before shipping; double bagging and shrink wrapping unit after cleaning.
- L10-100K requirements on motor bearings to minimize the levels of recurring maintenance required for a facility that runs continuously*.

The Benefit

IM Flash maintains an on-going master plan for its campus. Therefore, they were willing to invest time with ClimateCraft to develop detailed, custom specifications for their air handling units.

“We chose ClimateCraft because we were looking for a high quality, dependable product at a reasonable price. We looked at a few alternatives, but the ClimateCraft units met all of our needs: achieving stringent control requirements and physical space constraints for installation, quality manufacturing, and price,” commented an IM Flash facility engineer.

** The American Bearing Manufacturers Association (ABMA), defines the Basic Rating Life, L10 as the bearing life associated with a 90% reliability when operating under conventional conditions, i.e. after a stated amount of time 90% of a group of identical bearings will not yet have developed metal fatigue.*



IM Flash Facility in Lehi, Utah
Photo: IM Flash Technology Buildings

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