



THE MYDAX ADVANTAGE as simple as 1,2,3

1. Proportional Control Provides Low Thermal Stress Refrigeration

Your number one advantage when you buy a Mydax chiller is our use of a low thermal stress refrigeration system. The U.S. Patent Office granted Mydax a patent on this technology in 1988; since that time, our unique design has proven to be a highly reliable chiller. Mydax chillers are used in every demanding industry from Medical and Pharmaceutical Sciences, to Semiconductor fab equipment, Lasers and Space to name a few.

If you are not satisfied with the shutdowns and service problems that go hand in hand with conventional chillers, you will appreciate the benefits of Mydax's technology. Most of the wear and breakdowns on a chiller are caused by the temperature cycling of the refrigeration circuit's plumbing and components. This cycling, long associated with conventional chillers, is eliminated in the Mydax design!

The **Mydax Proportional Refrigeration** technology smoothly adjusts the flow of refrigerant along the compressor's power curve, based on the amount of cooling required. If the unit is in a high power slew, refrigerant gas will be smoothly turned on for maximum flow to the evaporator. When little cooling power is required, gas flow to the evaporator is reduced and only a minimum flow of refrigerant is modulated smoothly into the bypass heat exchanger. Mydax's microprocessor eases the thermal stress on components by using this method of proportional flow control.

2. Construction Technique and Choice of Components is Vital

Mydax Chillers are built with Pride. Our employees believe in the integrity that our customers have come to depend on from the Mydax name. Each chiller is carefully constructed by knowledgeable builders, all units are then thoroughly inspected and tested to ensure they meet design specifications.

- Steel tube frames are completely welded eliminating the weaknesses found in typical bolted-together sheet metal systems.
- All permanent copper fittings in the refrigeration circuit are brazed; this eliminates leak-prone flare fittings and low-temperature solder joints. All circuits are sniffed before initial operation with a helium leak detector to locate even the smallest leak.
- Components are chosen from only the most reliable manufacturers. Since pump seals are a primary reliability concern, we'll make a recommendation based upon the type of fluid and temperatures used. Our compressors are selected from either Danfoss/Maneurop, Copeland, or Bitzer -- the most reliable compressors in the industry.

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- Units built for operating over extreme temperature ranges are carefully insulated with appropriate materials to reduce losses and ice build up; all seams are taped or glued.
- The chiller construction and ratings are in accordance with ARI 590-92. Our chillers are designed in compliance with UL-471, UL-1995, NFPA-79 Industrial Machinery safety design standards and the National Electrical Code NFPA-70. All models may be submitted for CE and UL/ETL markings.

3. Diagnostics and Self Protection Safeguards Your Chiller

Our embedded microprocessor operates the chiller in much the same way as the electronic ignition on a car; it is constantly adjusting the operation and controls for optimal performance. If operations become too close to predefined limits, the controller can send an alarm to the user to prevent a shut-down. This is what we call "self-diagnostics". During operation, parameters used to control the system are available on the Test Panel displays; if a fault occurs, these numbers alone can often be enough to assess the problem and suggest possible corrective action.

Alarms can be programmed to provide early-warning detection of possible failures so corrective action can be taken before a fault occurs.

- Condenser Hot indicates the air flow through an air-cooled condenser has become blocked by dirt or snow. This can be helpful beyond scheduled periodic maintenance.
- With the built-in flowmeter, an alarm can provide warning if the recirculation loop becomes restricted or a fluid line ruptures.
- A level sensor in the fluid reservoir can warn that the fluid level in the tank becomes low. Servicing this "Fill Tank" message can avoid costly system shut-downs if the fluid were to drain to the lower tank-empty sensor.
- An over-temperature alarm will warn if the fluid is beyond the operating range.

Protection devices are wired into a Safety Interlock loop that will stop the chiller in the event of a serious problem. These are set in accordance with safety and fire protection codes to prevent a catastrophic failure from being hazardous or damaging other components. Each chiller is equipped with a minimum of a refrigerant high-pressure switch and a tank-empty switch. Heated units have an over-temperature switch as well.

An RS-232C port comes standard on all chillers for remote control and monitoring. A Windows™ based application program is available from Mydax for remotely controlling your chiller or logging the performance data into a file.