MPCA – Mini Portable Air Cooled Chillers

Our MPCA is a fully self contained, industrial grade mini portable chiller and available from 1.5 to 20 tons. The MPCA comes complete with pump and tank, is fully wired, charged with R-22 refrigerant and tested under simulated load conditions at the factory before shipment to the job site to ensure easy installation and start-up.

SUPERIOR BY DESIGN

Our use of the highest quality components and a robust design assures a dependable, long lasting, trouble free machine and clean corrosion free environment. All components are bolted to a heavy gauge steel frame with industrial swivel casters. The attractive metal panels provide a better appearance and reduce sound levels while allowing for easy maintenance.

HIGHEST QUALITY COMPONENTS

At the heart of the 1-13 ton MPCA is a Danfoss reciprocating water-cooled condensing unit. The 15 and 20 ton units house a Copeland scroll air-cooled condensing unit. The condensing units chosen are the most reliable, energy efficient and durable units available. They come complete with fan cycling head pressure control and an integrated sub-cooler for higher efficiency.

High efficiency designs use high efficiency components, reducing operation costs and help meet upcoming energy regulation. Long life components selected for dependability and reduced warranty costs.

We use a solid-state temperature controller to monitor and regulate system temperature. Hot gas bypass on 4 to 20 ton units ensure accurate temperature control and energy savings at partial loads. All electrical components are mounted in a electrical panel that is professionally wired and numbered to correspond with the electrical schematic.

FULL FEATURED

To monitor the MPCA's operation, we include digital readout of the set point and actual fluid temperature, power, pump and compressor indicator lights, no flow and 50% load indicator.

HOST OF SAFETIES

Standard safeties include a high refrigerant pressure relief valve, automatic low refrigerant pressure cut-off, manual high refrigerant pressure cut-off, low flow cut-off and freeze protection.

STAINLESS STEEL EVAPORATOR

The MPCA uses a highly efficient, stainless steel brazed plate evaporator. Each of the type 304 stainless steel plates has ridged patterns that are brazed together to form two separate channel systems that allow the refrigerant and fluid to flow in counter directions. Since all the plate material performs heat transfer, it has a large surface area per volume and with the vigorous turbulence created by the ridged pattern, the brazed plate design allows for closer approach temperatures and efficient heat transfer properties that are three time more efficient than shell and tube models. For ease of maintenance, an inline strainer with removable stainless steel screen in the evaporator's coolant supply line protects it from solids.

NON-FERROUS WATER PATH CONSTRUCTION

All chilled water piping is manufactured of non-ferrous material to help ensure clean process water and completely insulated with closed cell foam to prevent condensation and conserve energy. The chiller's internal, vented tank is also insulated and features a sight glass, drain and make-up port.

TANK AND PUMP

The internal tank in this chiller is insulated and made of medium density polyethylene (MDPE). The tank includes a sight glass, drain, and make up port.

The non-ferrous, stainless steel, centrifugal pump is selected to run at 3500 rpm and is of a closed-coupled design and selected to provide high pressure, high flow to your process. The pump is trimmed with a discharge, throttling valve to allow adjustment of the flow rate. A valved, water-by pass line prevents dead heading the pump if the water loop is interrupted downstream. We also include a liquid filled pressure gauge for reliable pump pressure readings without fluctuations.

AVAILABLE OPTIONS

25 gal. stainless steel tank, automatic water make-up valve, Nema 4 control panel, low water level alarm, high temperature alarm and low temperature alarm.