

INNOVATIVE Application Solutions



Pharmaceutical

The pharmaceutical, biomedical, life sciences, laboratory and medical research industries require a skillful group of design and application engineers to provide precise process fluid temperature control.

Mokon's real-world approach to challenging applications provides enhanced process heating and cooling systems to assist in the development of technologically advanced solutions that help improve the quality and standard of life.

From calculating heating and cooling loads to selecting the best design system to deliver the performance required, Mokon is the preferred choice of many industry leaders. Here are a couple examples of key application breakthroughs that may be of interest to you, our customer.

Application Details

A research and development laboratory contacted Mokon looking for individual heating and cooling systems to effectively control the temperature of its specially formulated compound to be used as a resorbable hemostatic agent for bone hemostasis.

Considerations

The mixing of the sensitive ingredients proved challenging as the blended compound had both low thermal conductivity and low tolerance for temperature fluctuation.

Solution

Mokon's application engineer proposed the Full Range self-supporting heating and cooling combination system that offered consistent and precise temperature control of the special putty used to stop bleeding in bones. With the combination system, there was no need for multiple units, freeing up laboratory space.



Application Details

An equipment manufacturer of fermentors, bioreactors and other products that control the conditions for growing and detecting microorganisms needed a dependable partner willing to design and build custom temperature control systems.

Considerations

The system required NEMA 4X stainless steel wash down design, 24/7 operation, a timed easy start-up sequence, and needed to be integrated with their sterilization system.

Solution

Mokon provided a custom chiller complete with wash down features and a small heating loop to deliver optimum temperature control to help develop vaccines and generation of new drugs. This combination system offered constant and accurate temperature control all in one package.



Combination heating and chilling system with all stainless steel cabinetry, NEMA 4X, and wash down design.



Designed to Perform. Built to Last.

Building an efficient, durable and high-quality Mokon...

When designing systems for medical or pharmaceutical applications, Mokon uses a range of different metals and materials to assure quality performance and safe use. 300-series stainless steel is the most widely used metal for sanitary applications due to its durability. Nickel content in the steel provides structural strength for the unit while chromium offers greater corrosion resistance. 3-A Sanitary Standards require 316 (or 18/10) stainless steel for most surfaces and allow the use of 304 stainless steel for utility usage (i.e. pipes). The use of 303 stainless steel is restricted under these standards.

Mokon products can be installed either inside the sanitary facility, partially using remote interface electrical panels, or outside the area or building. Typical applications include:

- Cleanroom/sanitary environments
- Mixers and blenders
- Reactors, sterilizers and fermentors
- Vessels/tanks
- Extrusion
- Injection, blow molding
- Heat exchanger

MOKON Products and Features:

- Water and Heat Transfer Oil Systems
- Portable and Central Chillers
- Custom Engineered Systems and Control Panels
- Single and multi-zone closed and open loop circuitry
- Stainless steel cabinets and components
- TEFC motors and magnetic drive seal-less pumps
- Tri-clamp and flanged connections
- 3-A heat exchangers and heat remover designs
- NEMA 4X rated panels and wash down designs
- SCR and solid state relays
- PID electronic controllers with communication capabilities
- Certification capabilities include: ASME, CE, CSA, NEMA, NFPA, and UL



Custom in-line heating/cooling system with ASME code stamped heater and heat exchanger with modulating cooling control.



Heating and cooling system with NEMA 4X electrical enclosure and components, stainless steel cabinetry for wash down, and CE rated.



Designed to Perform. Built to Last.

2150 Elmwood Avenue, Buffalo, New York 14207 • Ph 716-876-9951 • Fx 716-874-8048 • sales@mokon.com • www.mokon.com

PHARM 1/16 MOKON 006628