MULTISTACK

MSH_E,K,P

DHRC® MODULAR 1234ze (HIGH TEMP) REFRIGERANT

MULTISTACK.COM

The future is now. Decarbonization has become the single most important new concept in the world of HVAC since the invention of vapor compression refrigeration. This means, quite simply, that everything we once did with natural gas, coal, and other fossil fuels will cease to exist. Legislation requires it, conscience demands it, and as engineering professionals our mission must be to provide decarbonization solutions.

Multistack's focus is on providing optimized solutions that support environmentally conscious design practice; that requires more than just an understanding of how to live and build sustainably. It requires that we develop new and radically different approaches to heating and cooling the built environment. We deploy cutting-edge technologies to provide the most effective, efficient, and sustainable solutions in the modular or packaged HVAC marketplace. ***Join us on the journey as we trailblaze the way to the carbon-free horizon.***

Does your project have simultaneous heating and cooling loads? Is your project attempting to implement electrification in a retrofit, while minimizing first cost associated with a retrofit of air handling unit coils? Then you are going to need a heat recovery chiller capable of making hot water at temperatures high enough to use in those existing coils.

- **Multistack's DHRC** with R-1234ze refrigerant is the ideal solution.

A major design principle of sustainability and electrification is using all the heat you own. Sending any thermal energy to a cooling tower, air-cooled condenser, or ground loop that could be harnessed to reduce energy consumption is simply poor design practice. **Multistack** has been designing heat recovery chillers since 1999 when they pioneered the concept of DHRC® (Dedicated Heat Recovery Chillers).

Stack up your project's challenges (rigging into existing buildings, turndown, desire for low GWP refrigerants, electrification goals, all while needing hot water temperatures to work in systems that had or want to reduce the fuel use in high temperature condensing boilers) and **let Multistack's DHRC solve them**.

Like many complex technical challenges developing a reliable and efficient DHRC is so much more than simply assembling refrigeration components. Sophisticated controls are required that can analyze both the heating and cooling setpoints and modulate capacity with precision to maintain them without the loss of control or high/low-pressure safety trips. Software is truly the heart of any successful heat recovery chiller and **Multistack** has perfected it.

The new low GWP refrigerants are good for the environment and enhance our ability to make high quality hot water as well:

- R-513A (an A1 refrigerant) can deliver temperatures up to 175°F.
- R-1234ze (an A2L refrigerant) can deliver temperatures in excess of 180°F (R-515B is an option).

Reach out to your local **Multistack** design professional to discuss how we can help you realize your goals for decarbonization and sustainability.

The Multistack Group

Customer Driven Innovation℠

The right choice for the future... today.

OUR MISSION

To design and build reliable, energy-efficient equipment that fully supports the transition from fossil fuels to renewables through electrification.

OUR VISION

To create a world where environmentally sensitive design practice, reliability, and redundancy coexist and are embodied in the worlds most advanced HVAC equipment.

SUSTAINABLE CHOICES

At **Multistack**, we recognize and respect the importance of providing HVAC solutions that promote energy and water efficiency, utilize the best refrigerant choices available, and embrace the transition from fossil fuels to electrification.

Water and air-cooled **MagLev®** chiller platforms achieve superb efficiency across their full range of operation. Our unique **MagLev** chiller design and unrivaled Transitional Efficiency chiller control algorithms deliver outstanding part-load performance at all condenser-water or ambient temperature conditions.

MagLev chillers offer refrigerant choices recognized worldwide as safer for the environment: R-1234ze, R-513A, and R-515B. **Multistack** scroll chillers offer R-454B as the replacement for the high GWP R-410A. R-454B has a GWP of 466, which is 78 percent lower than R-410A. We encourage you to explore our natural refrigerant offering as well.

Our modular product's design allows you the freedom to use just enough energy to meet your current needs, while offering you the flexibility of incorporating additional modules as your operations grow. Minimizing embodied energy is an important design focus and we pride ourselves that our modular chillers deliver the industry's highest cooling and heating output per pound. If you're looking to cool and heat your building with as little environmental impact as possible, look no further than **Multistack**!

Reach out to your local **Multistack** design professional to discuss how we can help you realize your design goals for:

- Decarbonization
- Electrification
- Energy efficiency
- Water usage efficiency
- Energy & heat recovery
- Choosing sustainable refrigerants
- Minimizing refrigerant charge
- Minimizing embodied energy
- Minimizing environmental and physical footprint

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