DALRADA
Climate Technology

Revolutionary heat pump technology *providing advanced decarbonized heating and cooling for healthcare facilities.*

DCT One Series:

Healthcare Facilities Applications

Problem:

The U.S. Department of Energy estimates that the American healthcare industry is responsible for contributing over 655 million metric tons of carbon emissions annually. Additionally, on average, 30% of a healthcare building's energy is wasted.

Energy is wasted in a variety of ways: heating, cooling, lighting, ventilation, and hot water heating, among others. The high energy consumption and resulting rising costs associated with traditional boilers and chillers have created a pressing need for more efficient technology in healthcare facilities.

Did You Know?

Every DCT One Series machine installed has the potential to eliminate 250,000 kilograms of CO_2 equivalent.

Solution:

DALRADA CLIMATE TECHNOLOGY HEAT PUMPS FOR COMMUNITY HEALTH

Through renewable and sustainable energy innovation, cost-saving and combustion-free **Dalrada Climate Technology heat pumps reduce carbon and improve energy efficiency**, ultimately recovering lost energy while supporting the global initiative of Net Zero emissions.

Eliminate the negative health and climate impacts of energy consumption while enhancing patient outcomes and minimizing costs.

Healthcare facilities consume close to 10% of the total energy used in the U.S.

- Inpatient healthcare is ranked by the EPA as the second-largest commercial energy user in the U.S.
- The healthcare sector is responsible for 8.5% of all greenhouse gas emissions in the U.S.

THE HEAT PUMP FOR HEALTHCARE

Dalrada Climate Technology heat pumps harvests low energy waste back into the system, presenting significant cost-saving opportunities and increasing long-term sustainability.

This advanced heat pump technology allows further healthcare investment:

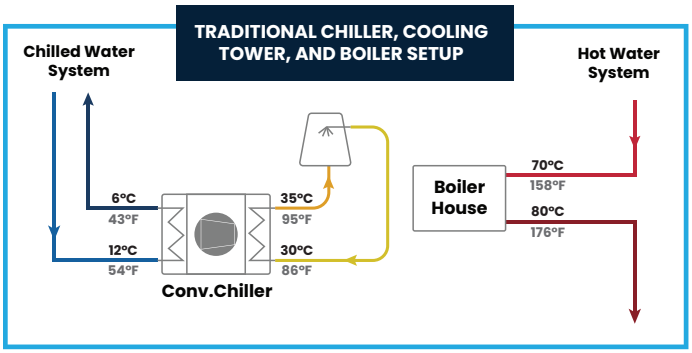
- Increased hiring and staff development training
- Cutting-edge medical therapies and technologies
- Facility renovation and expansion

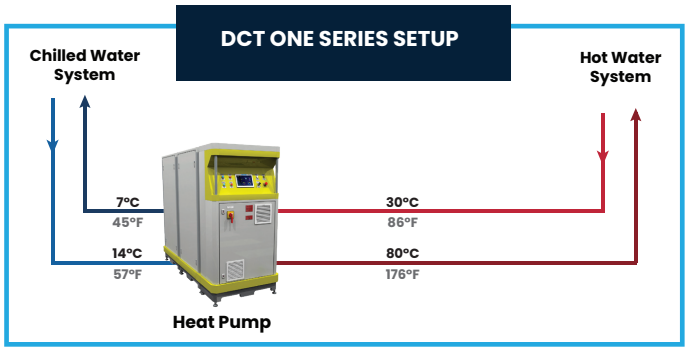
Up to 7X More Efficient

than conventional heating & cooling systems

DALRADA CLIMATE TECHNOLOGY HEAT PUMP ADVANTAGES

- Effectively decarbonizes heat
- Combustion-free process
- Reduces global warming potential (GWP)
- Uses carbon dioxide (CO_2) as refrigerant in transcritical refrigeration cycle
- Reduces Ozone-depleting potential (ODP)
- Retrofittable design, modular build
- Climate agnostic, works in multiple regions
- Can be implemented into new and existing building infrastructures





DCT ONE SERIES STANDARD CAPABILITIES

- Delivers up to **150 kW** of heating and **105 kW** of cooling power with **43 kW** of electrical input, making it ideal for various commercial building applications
- Every **1 kW** of electrical energy input produces **4.5 kWth** of heating energy and extracts **2.5 kWth** of cooling energy from a suitable source, giving a **COPhc of 1:7** for most applications.
- Closed system featuring a transcritical refrigeration cycle that employs supercritical CO_2 as the working fluid.
- Outperforms most traditional heating and cooling systems and can serve as a replacement solution for both.
- Uses non-toxic, non-flammable, environmentally-friendly natural refrigerants that are completely CFC and HFC free.

Reduce environmental impact *and* ***save money*** *on heating and cooling costs with DCT One Series, a true healthcare facility solution.*

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www.DalradaClimateTech.com

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