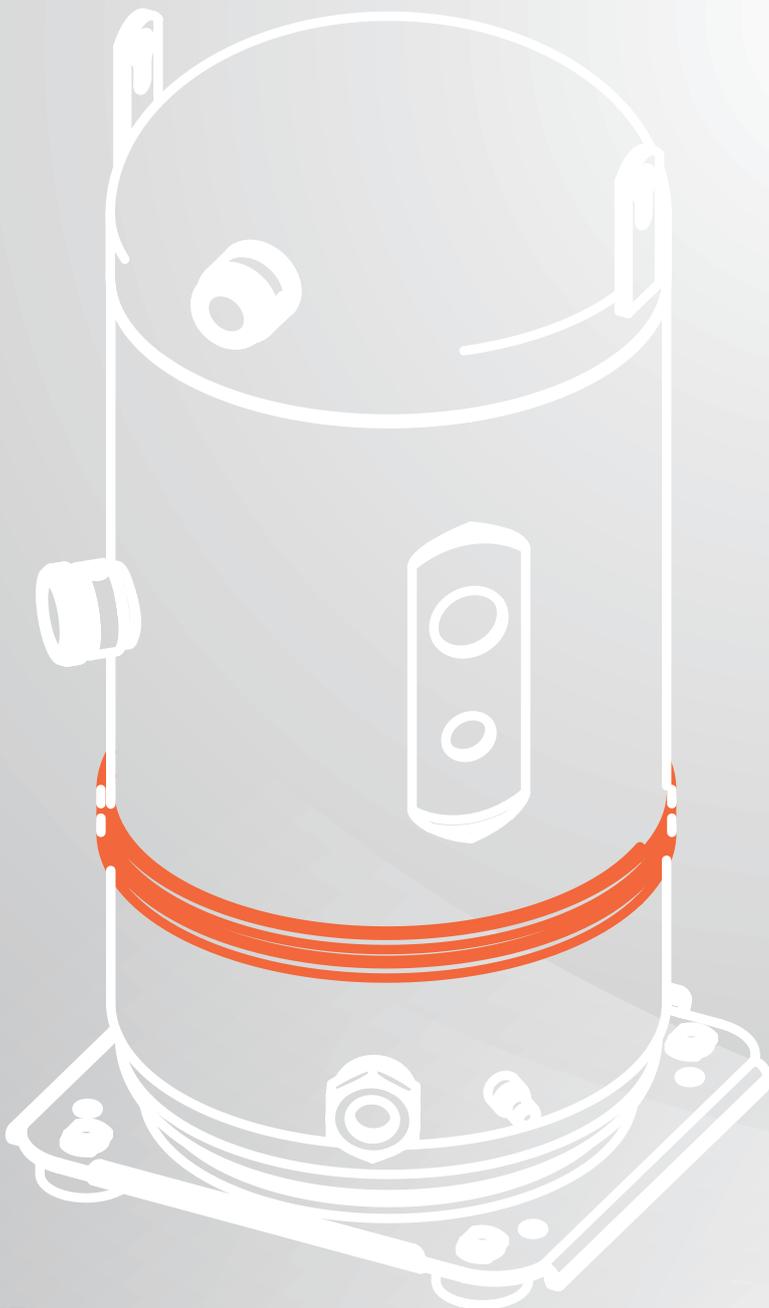


# SILICONE HEATER

## CRANKCASE HEATING

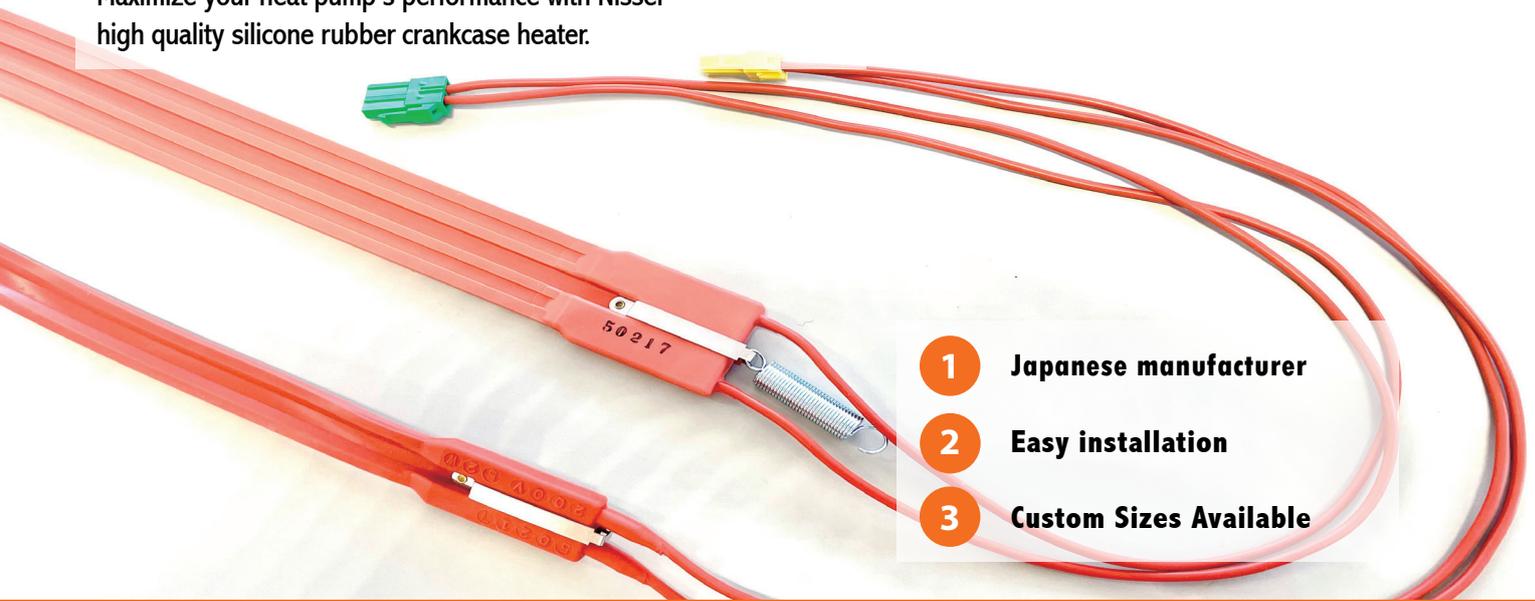


**FKK** corporation  
**NISSEI ELECTRIC**



# Crankcase silicone heaters

Maximize your heat pump's performance with Nissei high quality silicone rubber crankcase heater.



- 1 Japanese manufacturer
- 2 Easy installation
- 3 Custom Sizes Available

## Purpose of crankcase heater

A crankcase heater is a device used in refrigeration and air conditioning systems to prevent refrigerant from condensing inside the compressor's crankcase.

### Prevents Refrigerant Migration and Dilution of Oil:

When a compressor is off, refrigerant can migrate and condense in the crankcase oil due to temperature differences.

When the compressor starts, the sudden mixing of refrigerant with oil can cause foaming, reducing lubrication and leading to compressor damage.

### Protects Compressor from Liquid Slugging:

If refrigerant accumulates in the crankcase, it can enter the cylinders as liquid when the compressor starts, leading to hydraulic lock or slugging, which can break internal components.

### Maintains Proper Lubrication:

The heater keeps the oil warm, ensuring it remains at the right viscosity for lubrication.

## How It Works

The crankcase heater is wrapped around the compressor.

It usually operates when the compressor is off, preventing refrigerant condensation in the crankcase.

## Silicone rubber heater difference

The main benefit of a silicone crankcase heater compared to a traditional metal crankcase heater is its flexibility and even heat distribution. If you need better efficiency, durability, and flexibility, a silicone crankcase heater is the superior choice over a traditional metal one.

## Silicone heater technology benefits

- **Flexible & Wrap-Around Design:** Conforms to the compressor's shape for better contact and heat transfer, unlike rigid metal heaters.
- **Even Heat Distribution:** Prevents hot spots with uniform heating, while metal heaters may cause uneven warming.
- **Energy Efficiency:** Superior heat transfer reduces energy waste, requiring less power than metal alternatives.
- **Durability & Moisture Resistance:** Weatherproof and corrosion-resistant, ensuring longevity in harsh conditions.

## Application

- Compatible with air-source, water-source, and geothermal heat pumps, air conditioner
- Works with major compressor brands: Copeland, Danfoss, Mitsubishi, etc

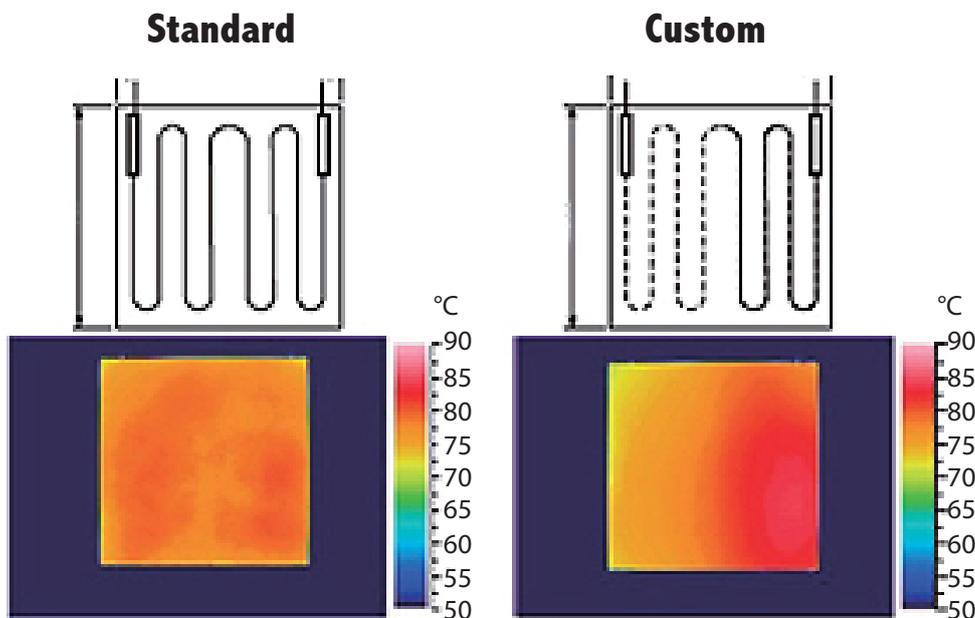
## Why choose Nissei Electric silicone heaters?

With 40 years of expertise in silicone heater production for the heating market, Nissei Electric stands as one of the most experienced companies in the industry. Committed to innovation and quality, Nissei Electric continues to lead the market, proudly serving Japan's top heat pump manufacturers.

- **Flexible & Durable:** Made of high-quality silicon for long-lasting performance
- **Even Heat Distribution:** uniform heating element inside, preventing hot spots
- **Energy Efficient:** Low power consumption
- **Easy Installation:** Wrap-around design with secure fasteners or spring
- **Easy customization:** Available in various sizes and custom heat distribution designs and fixing
- **Weather-Resistant:** Works in extreme temperatures
- **Durable:** Resistant to oxidation and corrosion and more durable
- **High cost performance:** up to 40% cheaper than metal heater
- **Cable customization:** order made cable and connector
- **Compliance:** CE, RoHS, REACH standards compliant

## Heat distribution customization

Nissei Electric offers customizable heat distribution, directing warmth precisely where it's needed for optimal efficiency.



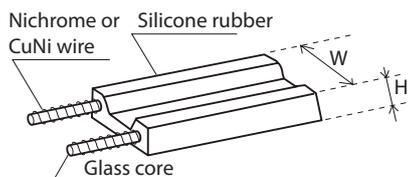
# Silicone rubber belt heaters

Silicone rubber belt heater for heat pump compressor unit  
heat retention and freeze prevention

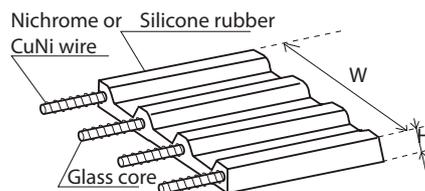
## Complete customization

We tailor the length, width, thickness, cable length, attachment system, and connector to fit your specific system requirements. Our silicon belt heaters are available in 1 to 4 cores designs to suit various applications.

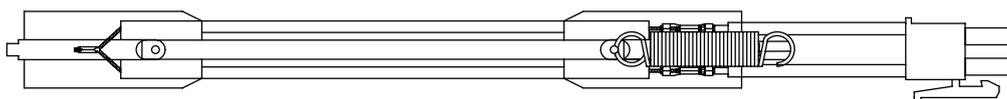
2 cores structure



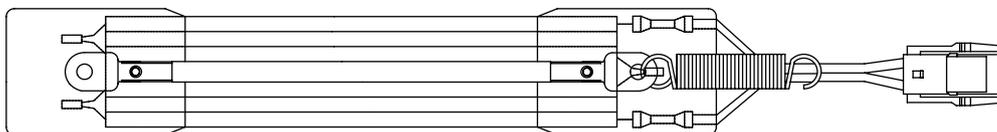
4 cores structure



Example of 1 core heater drawing

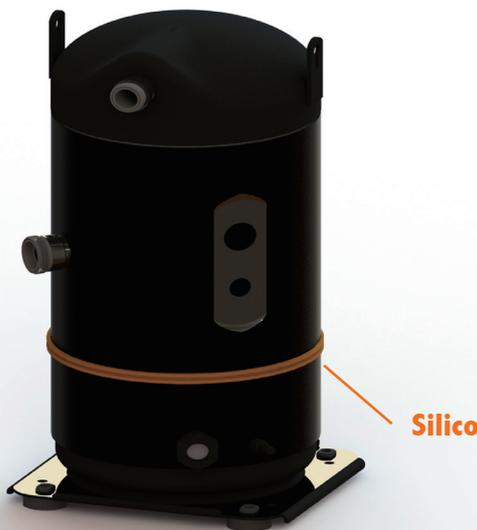


Example of 2 cores heater drawing

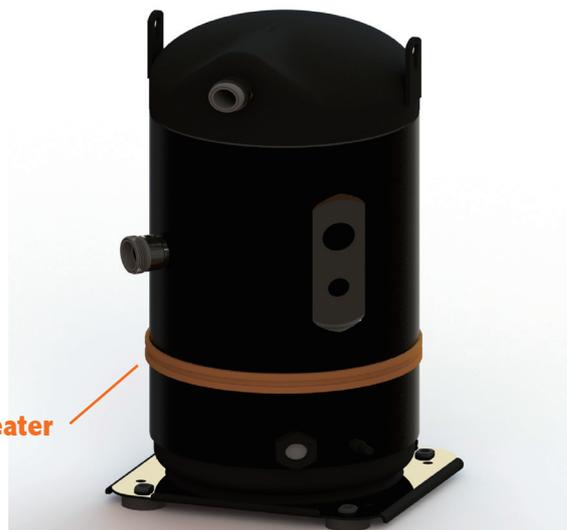


To align with the compressor's power, size, and heating requirements, we can easily adjust the heater's width for optimal performance.

Narrow heater 1 core



Wide heater 4 cores



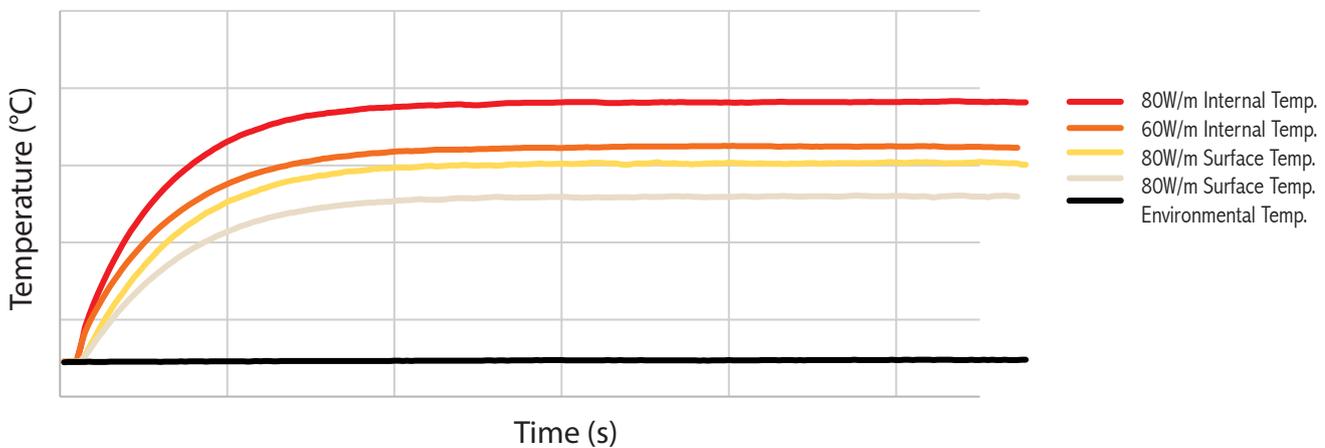
Silicone belt heater

## Specifications

Below table shows some examples of different models specifications.

Model	Type	Dimension W x H (mm)	Power (W/m)	Surface temperature (°C)
SRHB 6.5	2 cores	6.5 × 3.7	Max 60	180
SRHB 10	2 cores	10 × 4.0	Max 80	180
SRHB 15	2 cores	15 × 4.0	Max 80	180
SRHB 28	4 cores	28 × 4.0	Max 128	180

## Surface and internal temperature



## About Nissei Electric co. Ltd.

As a leading innovator in insulating materials, cable solutions, heaters, optical fiber, laser technology, antennas, and specialized products, Nissei Electric has built a reputation for excellence. With over 700 employees, Nissei Electric is a key player in the automotive and heating industries, delivering cutting-edge solutions to global markets.

Discover more on Nissei Electric website: <https://www.nissei-el.co.jp/english/>

FKK Corporation is the distributor of Nissei Electric company for European territory.



**NISSEI ELECTRIC**



# Heat pump equipment from H&S

H&S Kabeltechnik, which is the sister company of H&S Sensortechnik, offers a wide range of heat pump equipment



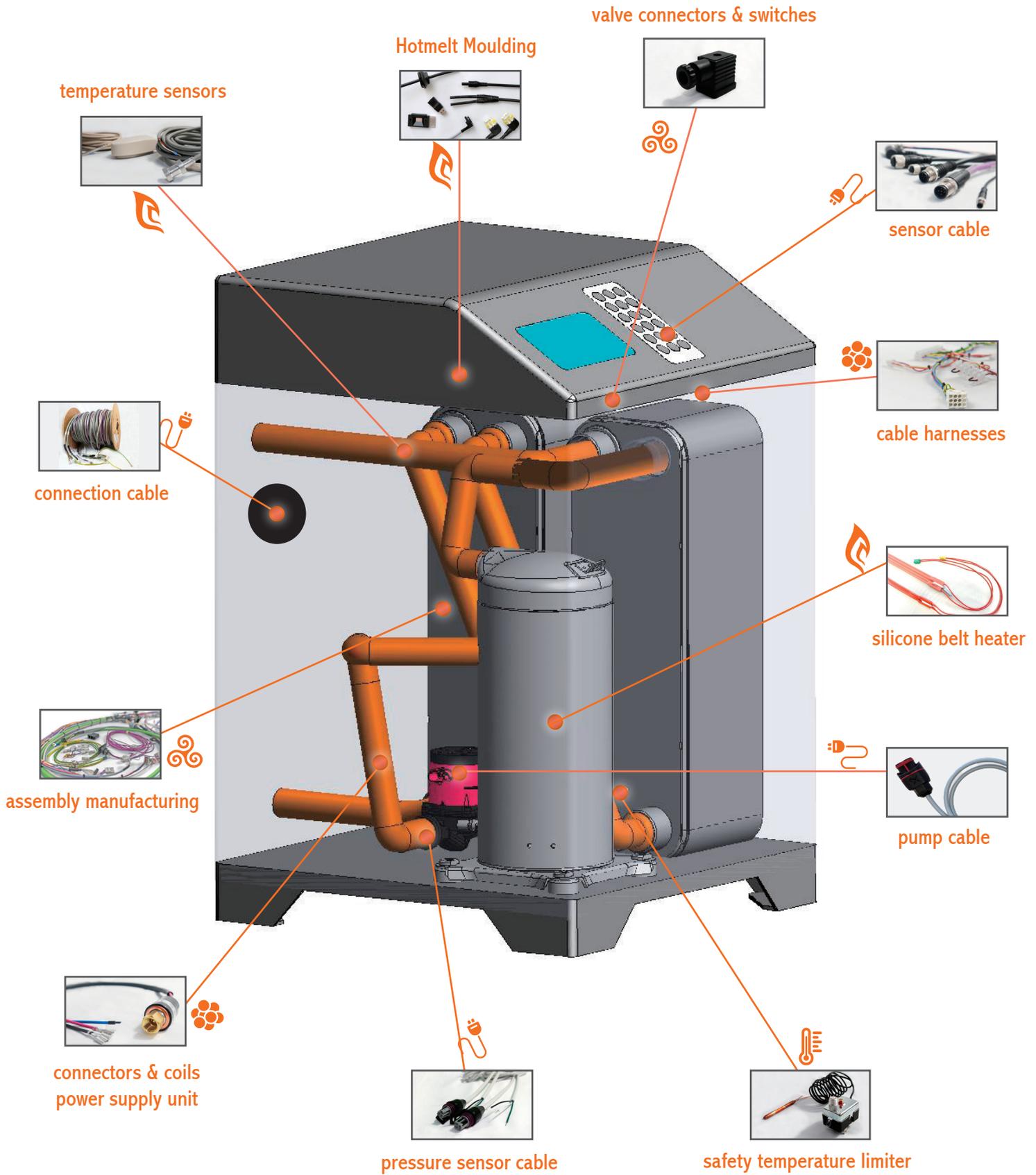
## High quality solutions for your heat pump

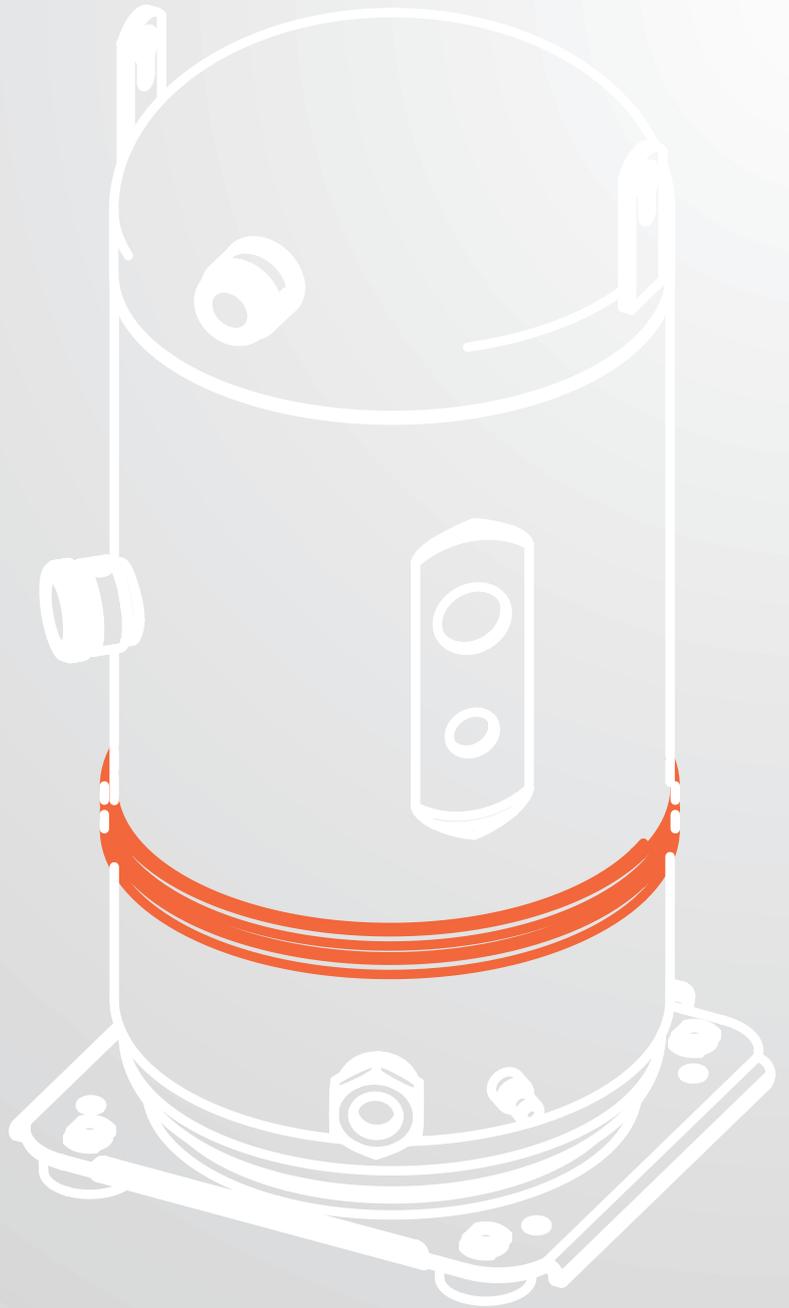
Our product range includes a wide variety of high-quality products for heat pumps, suitable for various applications. We offer temperature sensors, valve connectors, safety temperature limiters, and custom-made cable sets, all tailored to meet your specific requirements. Our expertise lies in developing solutions that are both technically precise and reliable. We place the highest value on product quality and easy integration into existing systems. Customer satisfaction is our top priority, and we are continuously working to provide you with the best possible solutions.

### Our Locations:



# Our wide range:





[www.hs-sensortechnik.at](http://www.hs-sensortechnik.at)

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