

# **TEMPERATURE CONTROL TECHNOLOGY** FOR TEST BENCHES -45 °C TO +130 °C











# **TEMPERATURE CONTROL TECHNOLOGY** FOR TEST BENCHES

## SHORT CYCLE TIMES

• Buffer tanks for faster cooling of the test specimen with a volume of 100 litres up to 200 litres (depending on size)

## CONTROLLABLE

### **HIGHEST QUALITY**

(up to +/- 0.1 l/min.) via 3-way valve and magnetic-inductive

• Welded pipes made of stainless steel, insulated to prevent condensation

DURABLE

## **PROCESS RELIABILITY**

• Specification and feedback for various process values/data via digital interface







## LOW NOISE

 Noise reduction insulation (optional)

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• Designed to reduce noise emission

## ENERGY-SAVING

- Specification and feedback for various process values/data via digital interface
- Energy-optimised operation by means of frequency converters for circulating pumps

## ACCESSORIES/SERVICE

- Collection and refill containers for type CHT
- Commissioning and training
- Maintenance and servicing contract
- In-house service personnel



• Comprehensive sensor technology detects device status, including in the cooling and

## FLEXIBLE

# **TEMPERATURE CONTROL TECHNOLOGY** FOR TEST BENCHES

The unit consists of three independent circuit types: coolant circuit, intermediate circuit, test circuit (optionally 1 or 2 similar test circuits).

- The coolant circuit generates refrigeration and is activated if required. The refrigeration is transferred to the intermediate circuit via heat exchangers. Only as much refrigeration energy is produced as is necessary for the process.
- The intermediate circuit stores coolant (glycol, Fragotherm W-KFA) and transfers it to the test circuit. The test circuit supplies the test object according to the required parameters, such as flow, temperature and pressure.

PERFORMANCE					
TECHNICAL DATA		CHT5	CHT15	CHT20	CHT30
Refrigeration output	kW	5	15	20	30
at -30°C gross supply temperature					
Refrigeration output	kW	1	5	10	20
at -40°C gross supply temperature					
Consumer circuits		1 or 2 (more on request)			
Heat output	kW	0, 3, 6, 12, 18	0, 12, 18, 24	0, 18, 24, 36	0, 18, 24, 36
Circulating medium		WaterGlycol (more on request)			
Temperature range	°C	-40 bis +100 °C/130 °C			
		-45 bis +100 °C /130 °C			
Flow control		1-20 l/min			
(+/- 5% accuracy)		1-40 l/min			
		1-60 l/min			
Interfaces		Modbus TCP Profibus/Profinet (more on request)			
Coolant		R449A (GWP =1397)	R449A(GWP = 1397)	R410A (GWP = 2088)	R410A (GWP = 2088)







### **FUNCTION DESCRIPTION**

The unit consists of three independent circuit types: coolant circuit, intermediate circuit, test circuit

- The coolant circuit generates refrigeration and is activated if required. The refrigeration is transmitted to the intermediate circuit via heat exchangers.
- The intermediate circuit stores coolant (glycol, Fragotherm W-KFA) • and transfers it to the test circuit.
- The test circuit supplies the test object according to the required • parameters, such as flow, temperature and pressure.

The refrigeration circuit maintains the intermediate circuit's target temperature according to specification. The integrated pump transfers the medium through the evaporator and, depending on refrigeration demand, through the heat exchanger to cool the test circuit. Refrigeration output is controlled by a 3-way valve in the intermediate circuit. Heat output is generated directly in the test circuit via an electric heater. In the optional Eco mode, the buffer storage temperature is increased for higher process temperatures to switch off the compressor earlier, thereby reducing energy consumption.



## **PRACTICALLY UNBEATABLE:** OUR APPLICATIONS FOR E-MOBILE TEST BENCHES

TEMPERATURE CONTROL

Our series of temperature control units is used wherever precise temperatures are required. Here are a few examples:

# **CONSULTING IS OUR STRENGTH**

We always strive to ensure that you, as our customer, can perform your work even better. We provide comprehensive support in line with our motto: Single – created for your perfection.

INVERTERS

ELECTRIC MOTORS

LIFE CYCLE TESTS

FOR E-MOBILITY TEST BENCHE

**CAR BATTERIES** 

TECHNOLOGY

...and much more





Contact us directly!

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