

Immersion chillers E



INDUSTRIAL COOLING AND HEATING



Industrial cooling and heating.

Partner of the industry for over 50 years.

Since 1971 **DELTATHERM®** has belonged to **Hirmer GmbH**, a family business with its headquarters in Much near Cologne, one of the leading German manufacturers of cooling and temperature control systems.

Thanks to our broadly diversified product portfolio, we can react individually to the specific requirements of our customers from a wide range of industries. We manufacture chillers, heat exchanger systems, temperature control units, heaters as well as cooling systems and cooling components – from individual units to series production. In close cooperation with our customers, our engineers meet every challenge and develop customised solutions and individual designs.

An expanding worldwide network of service partners supports our factory customer service in 60 countries on six continents. We always have 95 % of all replacement parts in stock, ready for dispatch within 24 hours. Quality, process safety, ease of maintenance and user-friendliness are our top priorities.

The safety of your production plants and of the production process are, to a large extent, dependent upon how well and how reliably your processes are temperature-controlled or cooled.

At **DELTATHERM®**, qualified specialists - from trained tradespeople to master craftsmen and engineers - ensure the optimal mixture of planning, project engineering, diligent manufacturing methods and thorough quality control.

Thanks to an in-house planning and design department, software development, control system construction, including an on-premises paint shop, we cover almost the entire vertical range of manufacture for cooling and temperature control units.

Purchased components such as pumps, valves, relays etc. are acquired from market-leading or renowned manufacturers.

All devices and systems are subject to a comprehensive functional test before dispatch. Because we are fully aware of what a plant standstill and the resulting production downtimes can cost our customers, we offer:

- Global plant service
- Service hotline to our experts, in German and English
- All standard components in stock and available globally in the shortest time by express mail
- Replacement part availability > 95 %
- An expanding worldwide network of service partners with locations on 6 continents – in Europe, North America, South America, Africa, Asia and Australia
- Online service, through which we can check and maintain your systems
- Ensuring the productivity of your **DELTATHERM®** machines

 Made
 in
 Germany



Series type E

Standard immersion chillers for mounting in the capacity range 1.7 kW to 107 kW.

Type E standard equipment

- Submersible part made from high-quality stainless steel frame
- Base plate made from high-quality stainless steel
- Pipe coil evaporator made from stainless steel
- Pipe coil mounting made from PE or stainless steel
- Cabinet, protection class at least IP 54
- All standard systems approved for up to 42 °C ambient temperature
- The most modern compressor technology with efficient and low-noise scroll compressors
- Condenser with copper pipes and pressed-on aluminium lamellae
- Temperature control via digital thermostat with temperature hysteresis ± 1.0 K
- TÜV-tested high and low pressure limiter in the cooling circuit
- Environmentally-friendly and CFC-free coolant
- CE-compliant / ISO 9001 / EN 60204
- Air vacuum filter
- Flat evaporator for low medium level

Type E options

- DC control voltage
- Piping for better heat exchange
- Winter starting device
- Collective fault message
- Potential-free fault message
- Special voltages
- Frequency 60 Hz
- Medium temperature max + 40 °C
- Wire marking
- Harting plug or other connector
- Coolant R 134 a
- Temperature hysteresis from ± 0.3 K
- System able to be switched off by temperature alarm
- Special piping for highly viscous oils
- Ambient temperature > 45 °C
- Differential control
- Water-cooled condensers
- Radial fan for external air compression
- UL-/CSA-compliant
- IP 65
- Special immersion dimensions
- Labels in multiple languages
- Remote monitoring via internet

Due to the wide range of versions of our products the images only represent a few examples. The actual devices can differ substantially.

Technical data

| Series type E | | E2 | E3 | E4 | E5 | E6 | E7 | E8 | E9 | E10 | E11 |
|--|------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Cooling capacity at medium temperature | kW | | | | | | | | | | |
| +10 °C | | 1,1 | 2,3 | 3,8 | 4,3 | 5,2 | 6,2 | 7,3 | 9,0 | 11,6 | 15,0 |
| +15 °C | | 1,5 | 2,8 | 4,5 | 5,5 | 6,5 | 7,6 | 9,0 | 11,0 | 14,0 | 18,3 |
| +20 °C | | 1,7 | 3,1 | 5,2 | 6,4 | 7,8 | 9,2 | 11,0 | 13,4 | 16,6 | 22,3 |
| Ambient temperature in | °C | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| Compressor drive | kW | 0,9 | 1,5 | 1,3 | 1,5 | 1,7 | 2,0 | 2,4 | 2,9 | 3,5 | 4,8 |
| Number of fans | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| Air power | m³/h | 2250 | 2250 | 2250 | 2250 | 2250 | 3280 | 5640 | 5640 | 5640 | 11280 |
| Total connection capacity | kW | 1,0 | 1,7 | 1,5 | 1,7 | 1,9 | 2,2 | 3,1 | 3,5 | 4,1 | 6,3 |
| Width (W) | mm | 785 | 785 | 785 | 785 | 785 | 785 | 785 | 785 | 785 | 1085 |
| Length (L) | mm | 785 | 785 | 785 | 785 | 785 | 785 | 785 | 785 | 785 | 1085 |
| Total height (H) | mm | 982 | 982 | 982 | 982 | 1597 | 1597 | 1597 | 1597 | 1597 | 2035 |
| Cover height (H1) | mm | 482 | 482 | 482 | 482 | 1127 | 1127 | 1127 | 1127 | 1127 | 1435 |
| Submersible part length (L2) | mm | 715 | 715 | 715 | 715 | 715 | 715 | 715 | 715 | 715 | 1000 |
| Submersible part width (W2) | mm | 715 | 715 | 715 | 715 | 715 | 715 | 715 | 715 | 715 | 1000 |
| Immersion depth (H2) | mm | 470 | 470 | 470 | 470 | 470 | 470 | 470 | 470 | 470 | 600 |
| Min. medium level emulsion flat evaporator (M) | mm | 30 | 60 | 60 | 90 | 90 | 90 | 120 | 150 | 180 | 210 |
| Min. medium level oil flat evaporator (M) | mm | 60 | 90 | 120 | 150 | 180 | 210 | 240 | 300 | 360 | 360 |
| Weight approx. | kg | 98 | 110 | 120 | 130 | 140 | 150 | 160 | 165 | 190 | 270 |
| Electrical connection | | 230 V 50 Hz | 230 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz |
| Series type E | | E12 | E13 | E14 | E15 | E16 | E17 | E18 | E19 | E20 | E21 |
| Cooling capacity at medium temperature | kW | | | | | | | | | | |
| +10 °C | | 16,0 | 19,0 | 20,7 | 25,0 | 28,0 | 30,0 | 36,0 | 47,0 | 59,0 | 72,0 |
| +15 °C | | 19,5 | 23,0 | 25,2 | 30,0 | 34,0 | 37,0 | 43,0 | 57,0 | 72,0 | 88,0 |
| +20 °C | | 23,9 | 27,0 | 30,0 | 35,5 | 41,0 | 45,0 | 52,0 | 69,0 | 87,0 | 107,0 |
| Ambient temperature in | °C | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| Compressor drive | kW | 5,5 | 5,6 | 6,2 | 7,9 | 8,2 | 9,3 | 11,2 | 14,7 | 18,4 | 22,2 |
| Number of fans | | 2 | 2 | 2 | 2 | 4 | 4 | 4 | 4 | 6 | 6 |
| Air power | m³/h | 11280 | 11280 | 11280 | 11280 | 16920 | 16920 | 22560 | 22560 | 33840 | 33840 |
| Total connection capacity | kW | 6,9 | 7,0 | 7,6 | 8,7 | 11,0 | 12,5 | 14,0 | 17,5 | 23,5 | 27,1 |
| Width (W) | mm | 1085 | 1085 | 1085 | 1085 | 1085 | 1085 | 1085 | 1085 | 1085 | 1085 |
| Length (L) | mm | 1085 | 1085 | 1085 | 1085 | 2085 | 2085 | 2085 | 2085 | 2085 | 2085 |
| Total height (H) | mm | 2035 | 2035 | 2035 | 2035 | 2227 | 2227 | 2227 | 2227 | 3230 | 3230 |
| Cover height (H1) | mm | 1435 | 1435 | 1435 | 1435 | 1477 | 1477 | 1477 | 1477 | 2230 | 2230 |
| Submersible part length (L2) | mm | 1000 | 1000 | 1000 | 1000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Submersible part width (W2) | mm | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Immersion depth (H2) | mm | 600 | 600 | 600 | 600 | 750 | 750 | 750 | 750 | 1000 | 1000 |
| Min. medium level emulsion flat evaporator (M) | mm | 330 | 330 | 360 | 270 | 300 | 330 | 390 | 330 | 420 | 390 |
| Min. medium level oil flat evaporator (M) | mm | 300 | 300 | 330 | 390 | 450 | 510 | 390 | 510 | 480 | 600 |
| Weight approx. | kg | 320 | 330 | 340 | 350 | 450 | 470 | 630 | 910 | 1500 | 1700 |
| Electrical connection | | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz | 400 V 50 Hz |



„We focus on only one thing: customer satisfaction. We achieve satisfaction through our high product quality, permanently available service and the highest level of flexibility, through which we find individual solutions for all requirements. And we live out this claim - every day, for over 50 years.“

Sascha and Mario Hirmer
Managing Directors

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Further products from our product range



Industrial series cooling towers with
open or closed circuits from 80 to
18,000 kW cooling capacity



Dry and hybrid coolers for water, oil
or emulsion from 0.5 to 15,000 kW
cooling capacity



Rack chillers in the power range
from 0.15 to 3 kW cooling capacity;
as heat exchanger up to 10 kW



Industrial cooling machines for water,
oil and emulsion from 0.2 to 5,000 kW
cooling capacity



Temperature control systems for water
up to 160 °C and oil up to 350 °C



Immersion chillers for water, oil
and emulsion from 1.7 to 115 kW
cooling capacity

Technical modifications and errors reserved.

