These coolers are ideal for the following applications:

- to cool smaller volumes down to -90°C,
- to remove reaction heat or
- to replace tap water cooling

The lowest reachable temperature depends upon:

- the quantity of liquid
- the type of liquid and its viscosity
- the bath insulation

Flow-Through Cooler HAAKE DK15

This cooler is used in the liquid circuit of a heating circulator. Heat is removed from the liquid as it flows through the cooler.

Immersion Coolers HAAKE EK20/EK30

Used together with the open-bath circulators, these coolers provide an alternative to tap water cooling. The lowest attainable temperature and the cooling down times are illustrated in the diagrams.

The EK20 is designed for baths with a 15 cm depth and the EK30 for baths with a depth of at least 20 cm.

Vessels can of othersizes also be cooled. End temperatures of -25°C resp. -30°C can be reached in a 5 l Dewar vessel.

Immersion Cooler HAAKE EK45

This multi-purpose cooler has its own controller with digital temperature display, reaching temperatures down to -45°C in a 5 I Dewar vessel. The controller enables temperature accuracy of approx. 1°C to 2°C. Improvement is possible using a stirrer.

Immersion Cooler HAAKE EK90

This unit is designed for working temperatures down to -90°C. The cooling coil is flexible and can therefore be adapted to suit virtually any bath shape. The minimum diameter of the vessel to be cooled is 110 mm.

Comes with

EK45 and EK90:

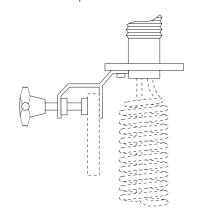
Electronic controller

Optional accessories

and Pt100 sensor (Ø 6 mm, 50 mm long, cabel 2.5 m long).

| Trolley with castors | |
|------------------------------|----------|
| for EK90 | 333-0508 |
| Holder to fix a cooler EK20, | |
| EK30 or EK45 onto a wall v | with |
| a thickness up to 25 mm | 333-0602 |

Order-No.



| Technical specification acc. to DIN 12876 | | DK15 | EK20 | EK30 | EK45 | EK90 |
|--|------|----------------------|----------------------|----------------------|----------------------|---------------|
| Working temperature range | °C | -15150 | -25150 | -30150 | -4540 | -9040 |
| Cooling at 20°C | W | 300 | 300 | 400 | 350 | 300 |
| at -10°C | W | 150 | 150 | 250 | 250 | 280 |
| at -40°C | W | - | - | - | 50 | 170 |
| at -60°C | W | - | - | - | - | 100 |
| Hose length | cm | - | 150 | 150 | 150 | 150 |
| Cooling coil dimensions (Ø x L) | mm | - | 81x145 | 81x195 | 81x195 | 13x900 |
| Smallest bending radius | mm | - | - | - | - | 40 |
| Connecting nozzles for hoses | mm Ø | 12 and 8 | - | - | - | - |
| Overall dimensions: WxLxH | cm | 23x46x38 | 23x46x38 | 23x46x38 | 23x46x38 | 38x46x49 |
| Net weight | kg | 22 | 22 | 23 | 30 | 60 |
| Total wattage | VA | 160 | 160 | 270 | 300 | 750 |
| Order-No. for 230V / 5060Hz for 115V / 60Hz | | 106-1151 106-1152 | 322-1201 322-1202 | 323-1301 323-1302 | 328-1451 328-1452 | 329-1901 – |



