

thermoscientific



Thermo Scientific EK Immersion Coolers

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at every degree



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Thermo Scientific EK Immersion Coolers

Cool your heating thermostats, water baths, cold/vapor traps, and direct contact applications with Thermo Scientific™ EK Immersion Coolers, featuring a broad temperature range with optional temperature control capability, high cooling power, and outstanding time-to-temperature. EK Immersion Coolers offer an alternative solution to circulators, cooling coils and ice, dry ice, or liquid nitrogen.

These economical, easy-to-use systems contain a cold probe that is inserted into an application to provide point-of-use cooling. With a cooling probe there is no need for fluid maintenance or the expense of tap water.

EK Immersion Coolers are designed to either continually drive toward the lowest possible temperature (as low as -90°C) or, in many cases, be set to a specific target temperature. The lowest achievable temperature varies depending upon the application heat load, quality of insulation, and ambient conditions.

Choose from multiple probe options, as well as a number of accessories, including trolley and clamp. Its flexible hose allows for convenient placement of the cooling probe.

EK Immersion Coolers are ideal for both fluid immersion and direct contact heat transfer. They are used in a variety of applications, including:

- Vapor trapping
- Solvent trapping
- Freezing point testing
- Dewar applications
- Dry ice/liquid nitrogen replacement
- Material characterization/thermal analysis
- Exothermic reactions
- Lyophilization/freeze drying
- Impact testing
- Direct cooling of custom applications
- Custom probes for additional applications



Thermo Scientific™ EK45 Immersion Cooler with a SAHARA S21 Stainless-Steel Heated Bath Circulator

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EK 45 Immersion Cooler

This portable cooler features a controller with digital temperature LED display, reaching temperatures down to as low as -45°C . The compact size of the EK 45 is ideal for pairing with counter-cooled

applications making it an economical, sustainable alternative for dry ice, liquid nitrogen, and other quick-chill solutions. The small footprint and sleek handle make this unit convenient for setting up as needed with vapor/solvent trapping, Dewar or other benchtop applications. Multiple probe options are available to meet your custom application need.



EK 90 Immersion Cooler

This more robust cooler is designed to cool to temperatures as low as -90°C . The EK 90 begins driving immediately down to -90°C , with the option of controlling the temperature

setting on select models via a digital temperature LED display. Similar to the EK 45, this cooler was designed with overall footprint in mind. The capacity to achieve such low temperatures in such a quick timeframe makes this unit ideal for the direct contact cooling method used in material characterization, as well as cooling reactors, Dewars, and any vapor/solvent trapping applications. Multiple probe options are available meet your custom application need.

[Consult sales for any custom configurations](#)

Probes

Choose the right configuration for your unique application needs

The portfolio of EK Immersion Coolers includes several different probe types. Not all probes are compatible with each immersion cooler. Please see ordering information for available configurations.

Rigid Coil Probe

71mm W x 190mm L
(2.78" W x 7.47" L)



Flexible Probe

14.3mm W x 900mm L
(0.56" W x 35.38" L)



Short Rigid Probe

17.8mm W x 91mm L
(0.69" W x 3.59" L)



CC-100 Rigid (R) Probe

30.2mm W x 254mm L
(1.19" W x 10.0" L)



Specifications

	EK 45	EK 90
Working Temperature Range	-45 °C to 40 °C	-90 °C to 40 °C
Cooling Capacity (Watts)		
20 °C	350	300
-10 °C	250	280
-40 °C	50	170
-60 °C	—	100
Dimensions (HxWxD)	384 x 224 x 539 mm (15.1 x 8.8 x 21.2 in)	492 x 380 x 454 mm (19.4 x 14.9 x 17.9 in)
Hose Length	150 cm	150 cm
Certifications	CE	CE
Warranty	2 Year	2 Year

Ordering Information

Thermo Scientific Immersion Cooler		Probe			
		Rigid Coil	Flexible	Short Rigid	CC-100 Rigid (R)
Product	Cat. No.				
EK 45 Immersion Cooler					
EK 45 Rigid Coil Probe, 230V/50-60Hz	3281451	✓			
EK 45 Rigid Coil Probe, 115V/60Hz	3281452	✓			
EK 45 Flexible Probe, 230V/50-60Hz	3281461		✓		
EK 45 Flexible Probe, 115V/60Hz	3281462		✓		
EK 90 Immersion Cooler					
EK 90 Short Rigid Probe, 230V/50Hz	3296101			✓	
EK 90 Short Rigid Probe, 200V/50-60Hz	3296105			✓	
EK 90 CC-R Probe, 230V/50Hz	3298001				✓
EK 90 CC-R Probe, 115V/60Hz	3298002				✓
EK 90 Immersion Cooler with Temperature Setpoint Option					
EK 90 Temperature Setpoint Option, Flexible Probe, 230V/50Hz	3291901		✓		
EK 90 Temperature Setpoint Option, Flexible Probe, 115V/60Hz	3291902		✓		
EK 90 Temperature Setpoint Option, Flexible Probe, 208-230V/60Hz	3291905		✓		
Immersion Cooler Accessories					
Trolley with casters for the EK 90	3330508				
Probe holder for walls with thickness of 1 to 25 mm	3330602				

Find out more at thermofisher.com/immersioncoolers