

Low Temperature Coolers

Two simple ways to chill.

Enhance and simplify your low-temperature laboratory work with a PolyScience Low Temperature Cooler. Available in both immersion probe and flow-through styles, they provide rapid, low-cost cooling of liquids to temperatures as low as -100°C . Typical applications include the cooling of exothermic reactions, freeze point determinations, freeze drying, impact testing, lyophilization, and vapor and solvent trapping.

- **Immersion Probe Style Coolers**

Excellent for trapping and Dewar-type applications and reduce the expense of using dry ice or liquid nitrogen. A flexible hose allows convenient placement of the cooling probe.

- **Flow-through Style Coolers**

Extend the temperature range of non-refrigerated circulators to below ambient and boost the cooling capacity of refrigerated circulators. These coolers also offer an extremely economic alternative to the tap water cooling of heated circulating baths when rapid cool-downs or operation at or near ambient is needed.



Low Temperature Coolers – Immersion Probe

Key Specifications

	IP-100	IP-80	IP-60	IP-35
Temperature Range:	-100° to -60°C	-80° to -40°C	-60° to -20°C	-35° to +40°C
Cooling Capacity:	85 W at -65°C 35 W at -80°C	150 W @ -60°C 85 W @ -80°C	75 W at -20°C 0 W at -60°C	1004 W at 20°C 106 W at -30°C
Temperature Control:	Fixed at -100°C	Fixed at -80°C	Fixed at -60°C	Fixed at -35°C
Temperature Readout:	Yes	Yes	No	No



Features:

- Continuous cooling to temperatures as low as -100°C
- Designed to run at maximum cooling
- An economical alternative to dry ice or liquid nitrogen
- Excellent for trapping applications, freeze drying, and rapidly cooling small volumes of liquids



Immersion Probe Dimensions

	Insulated Flexible Hose	Rigid Coil Probe (3")	Rigid Coil Probe (1.5")	Rigid Coil Probe (1.75")	Rigid Cold Finger Probe	Flexible Cold Finger Probe
Model	IP-100, IP-80, IP-60, IP-35	IP-100, IP-35	IP-80, IP-60	IP-35	IP-100	IP-100
Diameter	IP-100, IP-80: 2.83"/7.14 cm IP-60, IP-35: 1.5"/3.81 cm	3"/7.62 cm	1.5"/3.81 cm	1.75"/4.44 cm	0.75"/1.91 cm	0.625"/1.59 cm
Length	IP-100, IP-80: 6'/1.83 m IP-60, IP-35: 4'/1.22 m	Coil: 9"/22.9 cm Exposed: 17"/43.2 cm	Coil: 4"/10.2 cm Exposed: 15"/38.1 cm	Coil: 7"/17.8 cm Exposed: 16.5"/41.9 cm	3.75"/9.53 cm	15 /38.1 cm

**IP-100**

Temperature Range:
-100° to -60°C

Probe: Rigid Coil (3"/7.62 cm),
Cold Finger, or Flexible

Overall Dimensions: (L x W x H)
20.1 x 15 x 22.3"
51.1 x 38.1 x 56.6 cm

Rigid Coil Part Number:
120 VAC/60 Hz: P10N6A101B
240 VAC/60 Hz: P10N6A102E

Rigid Cold Finger Part Number:
120 VAC/60 Hz: P10N3A101B
240V/60Hz: P10N3A102E

Flexible Cold Finger Part Number:
120 VAC/60 Hz: P10N4A101B
240 VAC/60 Hz: P10N4A102E



C 155859 US

IP-80

Temperature Range:
-80° to -40°C

Probe: Rigid Coil (1.5"/3.81 cm)
Overall Dimensions: (L x W x H)
20.1 x 15 x 22.3"
51.1 x 38.1 x 56.6 cm

Part Number:
120 VAC/60 Hz: P80NHA101B
240 VAC/50 Hz: P80NHA102E



C 155859 US

IP-60

Temperature Range:
-60° to -20°C

Probe: Rigid Coil (1.5"/3.81 cm)
Overall Dimensions: (L x W x H)
11 x 10 x 9"
27.9 x 25.4 x 22.9 cm

Part Number:
120 VAC/60 Hz: P60N2A101B
240 VAC/60 Hz: P60N2A102E

**IP-35**

Temperature Range:
-35° to +40°C

Probe: Rigid Coil (1.75"/4.44 cm or
3"/7.62 cm)

Overall Dimensions: (L x W x H)
17 x 14 x 14"
43.2 x 35.6 x 35.6 cm

1.75" Rigid Coil Part Number:
120 VAC/60 Hz: P40N7A101B
240 VAC/50 Hz: P40N7A102E

3" Rigid Coil Part Number:
120 VAC/60 Hz: P35N5A101B
240 VAC/50 Hz: P35N5A102E



Electrical plugs for the part numbers listed are standard U.S. and European types. See page 128 for additional plug types and part numbers.

FT Series Flow Through Cooler

Key Specifications

Temperature Range: -25° to +40°C

Cooling Capacity: 745 W at 20°C
260 W at -10°C

Temperature Control: Fixed at -25°C¹

Inlet and Outlet Size: 3/8"/9.5 mm

Dimensions: 17 x 14 x 14"
(L x W x H) 43.2 x 35.6 x 35.6 cm

Part Number:

120 VAC/60 Hz **F25NOA101B**
240 VAC/50 HZ **F25NOA102E**



Features:

- Continuous cooling to -25°C
- Designed to run at maximum cooling
- Ideal for use with heated and refrigerated circulating baths

Temperature control must be provided by an external circulator; an anti-freeze solution is required in the circulating system.



Electrical plugs for the part numbers listed are standard U.S. and European types. See page 128 for additional plug types and part numbers.