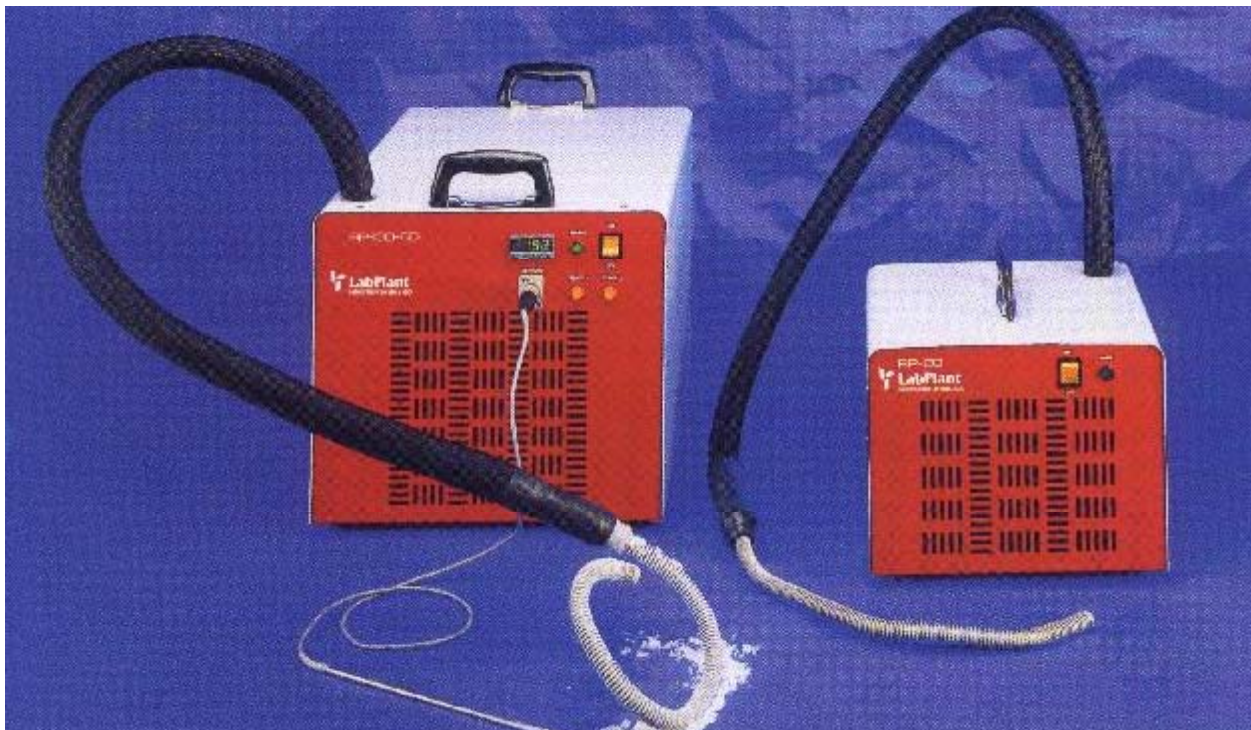


**REFRIGERATED IMMERSION PROBE**

Cooling to  $-45^{\circ}\text{C}$  &  $-85^{\circ}\text{C}$



**Features**

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Rugged construction with new low profile design

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The most advanced "state of the art" self tuning electronic control system

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Designed for safe continuous operation

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Control better than  $\pm 0.50$  K stability

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Digital readout of set and actual temperature

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Eliminates potentially dangerous handling and storage of dry ice and liquid nitrogen

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Standard flexible probe to suit most applications - special design probes available

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Available with or without controller

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**Applications**

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Trap cooling

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Low temperature reactions

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Low temperature material fracture test

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Experiments in tundra plant germination

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Temperature sensor calibration

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Electronic components testing

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Contracting components for assembly

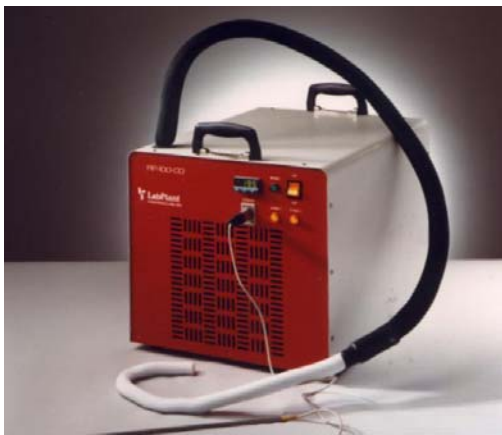
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Thermometer calibration

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Freeze drying

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**Operation**

Lab-Plant refrigerated immersion probes are extremely simple to operate:-  
 The probe is immersed in a suitable liquid (usually Methanol but others are available) in a dewar vessel or other well insulated liquid container. The refrigeration system is then switched on. When using versions with controllers, the Pt100 sensor is also immersed and the controller set to the required temperature. Best temperature stability is achieved if the liquid is stirred.

Two basic versions of Lab-Plant refrigerated immersion probes are available:-

- Simple refrigeration unit for cooling, requiring external temperature control - eg for use in a thermostatic bath.
- Including a self-tuning PID digital controller and a sensor for integral temperature control.

In addition, the RP-60 & RP-100 Lab-Plant refrigerated immersion probes are available with three options of probe size:-  
 Standard Flexible, Short Rigid & Long Flexible (see technical specifications for details).  
 Other custom manufactured probes are available.

**Options Available**

RP-60, RP-100 - Basic unit with continuous cooling requiring external temperature control.

RP-60-CD, RP-100-CD - Units with self tuning PID digital controller and temperature sensing probe which control temperatures by adjusting the flow of refrigerant to the cooling probe using a solenoid valve.

**Accessories**

- RZR2020 - overhead stirrer with 8.5mm chuck
  - BR10 - stainless steel 4 blade stirrer impeller
  - MR3000 - magnetic stirrer, powerful enough to use with most dewars
  - EG-25 - egg shaped Teflon coated magnetic spinbar suitable for use in round bottom flasks or dewars 25 x 12 mm
- Details of insulated stainless steel baths are available on request.

	<b>RP-60</b>	<b>RP-100</b>
Minimum Operating Temperature (Based on using approx. 2 litres Methanol in a dewar with liquid constantly stirred)	-45°C	-85°C
Maximum Probe Temperature (Probe should not be immersed in liquid at a higher temperature)		
Heat Removal at:-		
-10°C (Watts)	200	195
-30°C	140	160
Time RP100 - 0 to -85°C = 4hrs in 2ltr methanol stirred, insulated Dewar		
Time RP60 - 0 to -45°C = 4hrs in 2ltr methanol stirred, insulated Dewar		
Compressor Sizes	1/2 hp	2 x 12 hp in cascade
Unit Dimensions (HxWxD) mm		340 x 390 x 485
Hose Dimensions (L x Ø) mm		1500 x 45
Unit Weight, kg	21	46
Probes Available:-	Standard Flexible 460x16Ø mm Long Flexible 635x12Ø mm Short Rigid 200x30Ø mm	



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