

Tel: 01678 521567  
Fax: 08700 510010  
Email: [info@calserv.co.uk](mailto:info@calserv.co.uk)  
Web: [www.calserv.co.uk](http://www.calserv.co.uk)  
UKAS Laboratory 0794

Calserv  
Ty Isaf  
Frongoch  
Bala, Gwynedd  
LL23 7NU

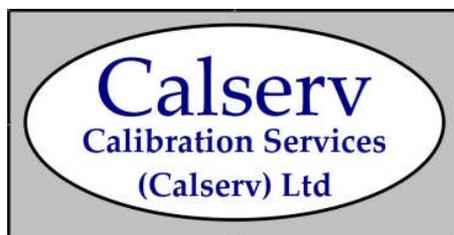
## **Calserv's ICERO 0°C Ice Point Bath**



### **Calserv Icer0 Bath.**

- It can maintain 0°C ± 0.010°C for at least 24hrs in an ambient of 23°C.
- The purchase cost is a fraction of conventional units.
- The running cost is estimated at pence per week.
- The unit is simple to use and takes up a tiny amount of desktop space (200mm x 130mm).
- It is highly portable – total weight only 1.5kg including cable.
- There are no re-calibration costs.
- It is versatile and takes all types of temperature measuring probes.
- It can be used for referencing thermocouples.
- It requires minimal time and effort to maintain.
- In our continuous running test the bath maintained 0°C ± 10mk over 48 hours at an ambient of 20°C.

The Calserv Icer0 is an easy way to help you keep a check on your standards and make sure that your instruments are performing within your operating tolerance. Your own in-house checks will enable you to extend your re-calibration periods and hence make savings on your business running costs.



## Calserv Izero

The Calserv Ice point bath is a high accuracy stirred ice-water bath that is quick to set-up and easy to use. It can calibrate most types of thermometers at 0°C either as a fixed-point calibration or by comparison to a standard thermometer.

It is capable of high accuracy as a fixed point 0°C ± 0.010°C with de-ionised water and ice. Or even smaller uncertainties can be obtained if a suitably calibrated standard thermometer is used with it for comparison calibrations. An optional range of standard thermometers are available from Calserv.

The Calserv Ice point does not require crushed ice but simply uses ice cubes that can be easily made using trays, bags or by machines.

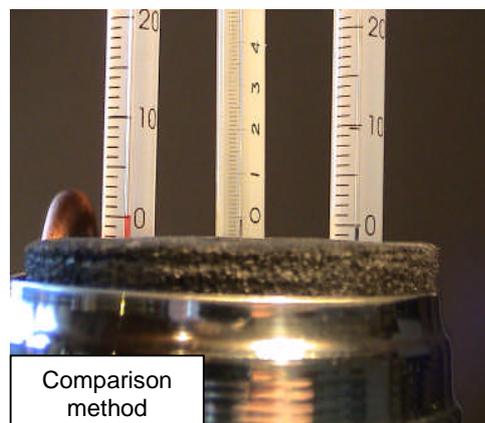
Once filled with ice and water it can maintain 0°C ± 0.010°C for at least 24hrs making it suitable for referencing thermocouples for long periods of time. It has a small footprint and is bench standing.

Unlike some baths that either use electric motors or high current Peltier coolers that can interfere with resistance thermometer and thermocouple calibrations, the Calserv Ice point has a low electrical noise output.

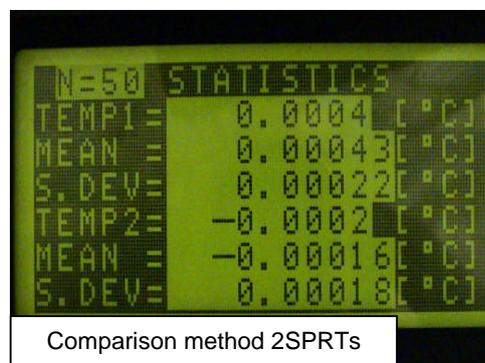
It is a low cost bath that is cheap to run but is unrivalled in the value it represents. We use it in our UKAS laboratory where the Best Measurement Capability at 0°C is ± 0.005°C.



Fixed-point method



Comparison method



Comparison method 2SPRTs

Comparison Uncertainties.	
Source	Uncertainty °C
Standard PRT	0.003
Standard PRT drift	0.001
Repeatability	0.001
Bridge ratio	0.001
Ratio due to ≤±0.01°C in Bath	0.0003
Connections	0.001
Bath stability	0.00015
Bath Uniformity: radial	0.0014
Bath Uniformity: axial	0.0015

If you have any other questions or would like a quotation for an ICERO, please contact us:

**Calibration Services (Calserv) Ltd.**

E-mail: [info@calserv.co.uk](mailto:info@calserv.co.uk)

Tel: 01678 521567

Fax: 08700 510010