



**Department of Mechanical Engineering  
Indian Institute of Technology Kanpur  
Kanpur (UP) 208016 India**

Sameer Khandekar  
Professor  
Phase Change Thermal Sciences Laboratory  
Room: SL-109  
Tel: #-(0512)-259-7038  
E-mail: samkhan@iitk.ac.in

Date: 30/12/2015

Enquiry number: PCTS/ME/2015/13

**Subject: Web Enquiry**

We have to purchase heating and cooling compact circulator for research work with digital controlled display (PID2 type, high precise, adjustable controlling with temperature setting display resolution of  $\pm 0.01$  °C). The circulator must confirm to the classification as per DIN standard 12876 part1. Technical specifications are as follows:

1. **Operating Temperature Range:** -30°C to + 200°C with appropriate fluid
2. **Heating Capacity:** Between 2.0 to 2.5 kW
3. **Cooling Capacity:** Approximate 1.0 kW at 20 °C
4. **Pump Capacity:** Approximate 15 L/minute at 0.5 bar
5. **Bath Volume and material:** 20 liters, Stainless steel
6. **Input Power:** Standard 230VAC, 50Hz
7. **Temperature Stability:** Quick response, 0.01 °C with display resolution of 0.001
8. **Weight:** Light weight, but not more than 60 kg
9. **Overall size (W×L×H) m:** Typically (0.6×0.4×0.7)
10. **Bath size (W×L×H) m:** Typically (0.2×0.3×0.15)
11. **Software:** Time temperature program generator/ temperature viewer, with on board connectivity
12. **Display:** Digital preferably touch screen
13. **Connectivity:** Ethernet, USB/RS 232 addressable duly supported through external probe

Any other feature suitable to improve performance of the circulator will be given preference.

Additional accessory, if any should be quoted separately. Technical quotation and financial quotation MUST BE packed separately. Kindly send hard copy of your offer at the following address before 11 January, 2016. The offer must contain the usual terms and conditions of supply, tax, freight charges, offer validity, warranty, educational discount, and delivery period etc. Prices should be quoted on FOR-destination basis.

Thanking you,

Sameer Khandekar

SL-109, Phase Change Thermal Sciences Laboratory  
Indian Institute of Technology Kanpur (INDIA) 2080 016  
Phone: 0512-2597967, e-mail: cgoswami@iitk.ac.in