

REQUEST FOR PROPOSAL

For

**Supply, Installation, Testing and Commissioning of
Thermal Chamber**



July 2020

Indian Institute of Astrophysics

Bangalore – 560 034

INDIA

1. Introduction

Optics Laboratory for Indian Institute of Astrophysics (IIAP), Bangalore carries out research and development on optical systems which are being used in ground based and space based telescopes for the purpose of astronomical observations.

As part of the precision optics polishing activity, grinding/polishing tools has to be prepared, for which the thermal chamber will be used. The pitch is melted in a big pot on a stove, and poured onto the lap with a dam around the edges. After melting the pitch in the thermal chamber, its surface is either grooved or attached with certain ceramic tiles to make the grinding/polishing tool. Figure 1 shows the model view of the thermal chamber.

In pursuance of the above, the Director, Indian Institute of Astrophysics, Bangalore, invites techno-commercial proposals, for supply, installation, testing and commissioning of thermal chamber with the required accessories as per the Technical specifications mentioned in 3.0

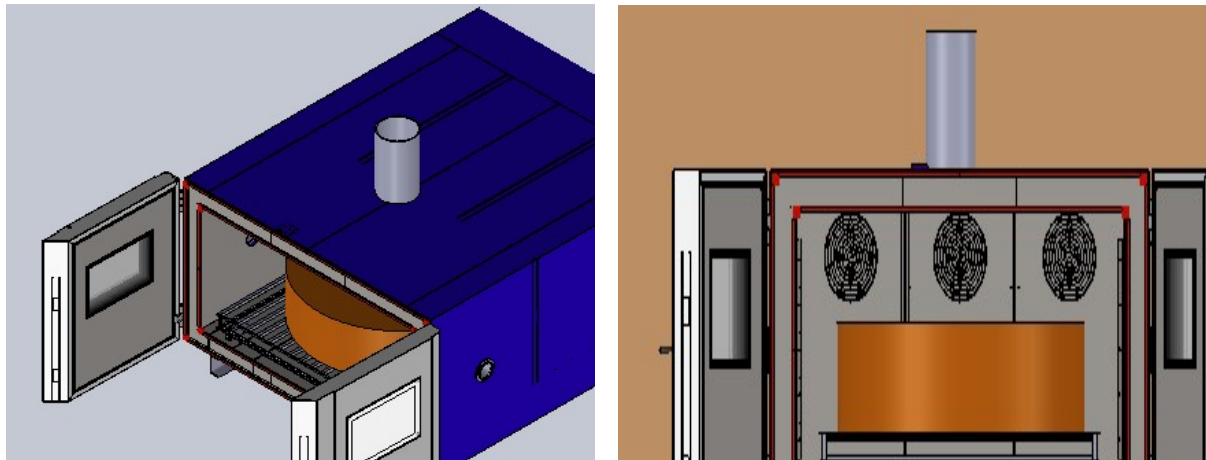


Figure 1: Model view of the thermal chamber

2. Scope of Supply

- a) Supply, installation, testing, commissioning and demonstration of thermal chamber at works of vendor and IIA Bangalore
- b) The thermal chamber should have warranty for the trouble free operation for a period of at least one year after the commissioning of the system.

3. Specifications

Sl.No.	Description	Specification	Remarks
1.	Temperature Range	Ambient temperature, 20°C + 200°C	
2.	Volume	250 liters	
3.	Internal chamber dimensions (W*H*D)	600X600X500mm	
4	Uniformity	±1°C (Variations throughout the chamber after stabilization)	
5	Operating mode	Unit should be able to work in manual mode as well as in auto mode with programmable heating cycles.	
6.	Setting resolution	Temperature : 1degC	
7	Temperature fluctuation	Less than or equal to 1°C	
8	Temperature heat up time	Ambient temperature + 200°C to be attained within 40minutes of time	
Construction:			
9	Tray mechanism	The chamber should have telescopic tray mechanism to slide the job (Optics) into/from the chamber	
10	Exterior material	SS304 stainless steel plate with melamine resin coating	
11	Interior material	SS304 stainless steel plate	
12	Insulation material	Thermal insulation foams (glass wool needs to be avoided)	
13	Heater	Electrical heater	
14	Exhaust mechanism	Mounted from the side/top of the oven with centrifugal fan.	
15	Door locking mechanism	The door should be firmly locked by lever, thermal sealing to be ensured.	

4. Acceptance test

Supplier shall demonstrate the equipment capability at their works and after installation and commissioning at works and IIA, Bangalore.

5. Installation, Commissioning and Training

- a) Testing shall be done at works of vendor and after installation at IIA
- b) Supplier shall provide training on operation of the equipment to IIA representatives

6. Technical bid

Bidder shall furnish following details / documents in their technical bid

- a) Detailed description of the equipment offered with respect to each of the above specification.
- b) Detailed drawings showing the dimensions of the system and its major components.
- c) Detailed list of scope of supply included in the offer.
- d) List of major items with make and model number.
- e) Catalogues, leaflets, brochures, application notes etc. for all the major components and equipment's proposed.
- f) Compliance table with remarks.
- g) Deviation table if any with remarks and detailed justification.
- h) Un-priced commercial bid.
- i) Any other details relevant to the requirement.
- j) List of suggested spares.
- k) A set of tools to maintain and operate the system.
- l) Details of service centres and network in India