# Technical Specifications for Contact Angle Goniometer

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| **General Specification:** |
| Design | * A research-grade modular contact angle goniometer that can be used to for measuring static contact angle of a drop by Sessile Drop Method
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| Measurement and Control | * Fully automated contact angle measurement with a digital camera
* Movable sample stand
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| **Size, capacity and resolution** |
| Maximum sample dimensions | $200×\infty ×50$ mm or higher |
| Maximum measurable surface tension | 2000 mN/m or higher |
| Minimum measurable surface tension | 0.01 mN/m or lower |
| Surface tension resolution | $0.01$ mN/m or lower |
| Contact angle measuring range | 0 to $180^{∘}$  |
| Contact angle resolution | $0.1^{∘}$ or lower |
| Maximum camera resolution | $1024×768$ pixels or higher |
| Maximum camera frame rate | 200 fps or higher |
| Dosing system | Manual and software-controlled high precision dosing system |
| **Control and data acquisition** |
| Basic control | * Software for control of device from a PC
* Ability to control temperature and dosing
* Automatic angle measurements
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| Data acquisition | * Capabilities for high speed image processing
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| **Additional requirements** |
| Power supply | 220-240 V, 50-60Hz AC |
| **Technical support** |
| Round the clock technical support not only during the warranty period but beyond that upon the payment of annual maintenance contract | Required |

In addition, the instrument should be compatible with the following accessories:

1. Temperature control chamber with a temperature range of 0 to $150^{∘}$C
2. Accessory to measure advancing and receding contact angle of a drop by Tilting Plate Method.
3. Accessory to measure surface tension and interfacial tension by Pendant Drop Method.
4. High temperature dosing system capable of working at temperatures at least as high as $200^{∘}$C.

The price for the above accessories must be quoted separately.

Please also include the following in the quotation:

* List of other optional accessories available for the equipment
* Cost of essential utilities such as personal computer, compressor, filter, circulator, etc.
* Delivery and installation charges

In addition, please consider the following aspects while supplying the quotation

* We are an academic institution. If you have any special discount offers for such establishments, please state them explicitly in the quotation
* We would like to have your commitment in terms of maintenance. Please offer free annual maintenance contract (after warranty period) so that the instrument will be maintained for an additional 2 years at least.
* Please specify policy for the purchase of spares and additional attachments within 1 year of procurement
* Demonstration of having provided such satisfactory technical support to customers in India will be an added advantage.
* The vendor should supply a list of academic institutions/research laboratories wherein they have supplied similar equipment.