



**Ascendent Technology Sdn. Bhd.** (1093652-W)



**Applicable**



**Claimable**



## MEASURING INSTRUMENT CALIBRATION

**(Can be Customized)**

### **SATISFACTION GUARANTEED**

We ensure satisfaction in our training courses.

If you think this training does not meet the objective as mentioned in the brochure, we will replace you with other training with the same or less value (valid 1 year).

### **PROGRAMME OVERVIEW:**

This calibration training module is the combination of (1) Caliper, (2) Micrometer, (3) Height Gauge, (4) Plug Gauge, (5) Thread Plug Gauge, & (6) Hole Test. It is designed to meet ISO quality management system requirement include ISO 9001, ISO14001, ISO/TS 16949, ISO 22000, ISO/IEC 17025, GMP, HACCP and other quality management systems.

### **TARGET GROUP:**

Quality Managers, Technical Managers, Laboratory Managers, Supervisors, Chemist, Engineer, Signatories of test reports & certificates, Laboratories Personnel.

### **OBJECTIVE:**

At the end of the course, participants are expected to:

- ✓ Acquire basic knowledge in using the equipment
- ✓ Perform calibration independently that meet ISO requirement.
- ✓ Perform necessary calculations include uncertainty estimation based on ISO Guide. [According to the model given only]
- ✓ Understand and interpret calibration report include Uncertainty and its application in equipment "fit for purpose"
- ✓ Understand the term calibration, verification, calibration interval.
- ✓ Acquire general knowledge relates to traceability in the context of ISO 9001:2000, ISO/TS 16949 and ISO/IEC 17025:2017 instrument measurement system

## **CONTENT:**

### **A. Interpretation of calibration report in the context of ISO 9001:2000, ISO/TS 16949 and ISO/IEC 17025:2017 instrument measurement system**

- ✓ Understand and interpret calibration report in the context of ISO 9001:2000, ISO/TS 16949 and ISO/IEC 17025:2005 instrument measurement system
- ✓ Uncertainty elaboration and its application in equipment "fit for purpose" in the context of ISO 9001:2000, ISO/TS 16949 and ISO/IEC 17025:2017 instrument measurement system
- ✓ Understand the term calibration, verification, and calibration interval.

### **B. Principle of metrology and ISO requirement**

- ✓ International System of Units (SI)
- ✓ Traceability
- ✓ The use of uncertainty in calibration reports.

### **C. Calibration of mechanical equipment**

This section emphasis on performance characteristic of equipment calibration, basis of test, calibration procedure and important criteria in determining specific equipment uncertainty of test.

#### **C. 1 Calibration of Caliper**

- 1.1** Principle of metrology and ISO requirement on calibration.
- 1.2** Traceability
- 1.3** Error in Measurement
- 1.4** Understand the equipment and its uses
- 1.5** Reading the digital & Vernier scale in caliper
- 1.6** Correct method of handling
- 1.7** Care and maintenance
- 1.8** Step-by-step data collection with respect to metrology characteristics of caliper. For example flatness of fixed and slider jaws, parallelism of the jaws, linearity and repeatability.
- 1.9** Practice of at least 2 models, step-by-step guiding on calibration procedure
- 1.10** Uncertainty calculation and presenting calibration result.
- 1.11** Work example

#### **C.2 Calibration of Micrometer**

- 2.1** Principle of metrology and ISO requirement on calibration.
- 2.2** Traceability
- 2.3** Error in Measurement
- 2.4** Understand the equipment and its uses
- 2.5** Reading the digital & analog scale of micrometer
- 2.6** Correct method of handling
- 2.7** Care and maintenance
- 2.8** Step-by-step data collection with respect to metrology characteristics of micrometer.
- 2.9** Practice of at least 2 models, step-by-step guiding on calibration procedure
- 3.10** Uncertainty evaluation and presenting calibration result.
- 3.11** Work example

### **C.3 Calibration of Height Gauge, Plug Gauge, Thread Plug Gauge, & Hole Test.**

- 3.1** Principle of metrology and ISO requirement on calibration.
- 3.2** Traceability
- 3.3** Error in Measurement
- 3.4** Understand the equipment and its use
- 3.5** Correct method of handling
- 3.6** Care and maintenance
- 3.7** Step by step data collection with respect to metrology characteristics of individual instrument according to JIS
- 3.8** Practice of at least 2 models, step-by-step guiding on calibration procedure
- 3.9** Uncertainty calculation and presenting calibration result.  
Calculation and Interpretation
- 3.10** Conclusion and Q & A sessions
- 3.11** Form and formulae
- 3.12** Work example

### **METHODOLOGY :**

Lectures, discussion, demonstration, hands-on practice and practical exercises

### **CERTIFICATE :**

Participants are required to complete a project usually at the end of training or within 2 weeks of completion of the training

Certificate of competency - achieves score points above 70 %

Certificate of attendance - score points below 70 % or no submission of assessment

## REGISTRATION FORM (E016):

Mr / Ms		
<b>Public Training</b>		
<b>Course Fee</b> : RM 3,000 Per Pax <b>Duration</b> : 3 Days <b>Time</b> : 9:00 AM - 5:00 PM <b>Venue</b> : Ascendent Training Room <b>HRDF</b> : SBL-KHAS	Designation : ..... NRIC : ..... Mobile No. : ..... Email : .....  Participant : ..... Designation : ..... NRIC : ..... Mobile No. : ..... Email : .....  Participant : ..... Designation : ..... NRIC : ..... Mobile No. : ..... Email : .....  Participant : ..... Designation : ..... NRIC : ..... Mobile No. : ..... Email : .....	
<b>In-house Training</b>		
<b>Course Fee</b> : RM 6,000 Per Day  <b>HRDF</b> : SBL-Khas Claimable  <b>Maximum No.</b> : 5 - 25 Candidates	Participant : ..... Designation : ..... NRIC : ..... Mobile No. : ..... Email : .....  Participant : ..... Designation : ..... NRIC : ..... Mobile No. : ..... Email : .....	
<b>CANCELLATION / POSTPONEMENT POLICY</b>		
<ol style="list-style-type: none"> <li>1. Ascendent Technology Sdn.Bhd. reserves the right to cancel, postpone or make any changes to the venue and training dates due to unavoidable circumstances.</li> <li>2. Reservation can be made by telephone or email, but will only be confirmed upon the received of completed registration form and payment.</li> <li>3. Please do not make any travel arrangements until you have received written confirmation for your registration from us.</li> <li>4. No cancellation is allowed but a candidate replacement can be arranged.</li> <li>5. For confirm cancellation: 7 days notice prior to commencement will subjected to RM250 service charge. If less than 7 days notice, there will be no refund.</li> <li>6. Confirm postponement for in-house training less than 14 days notice prior to commencement will subjected to 50% service charge on total invoice.</li> </ol>	<div style="background-color: black; color: white; text-align: center; padding: 5px; margin-bottom: 10px;"><b>PAYMENT DETAILS</b></div> <p>All cheques should be crossed and made payable to: <b>ASCENDENT TECHNOLOGY SDN BHD</b> Bank A/C No. <b>Maybank</b> 5127-6360-6820.</p> <p>Admittance will be permitted upon receipt of full payment 2 weeks before the course is conducted.</p> <p>Training certificate will be awarded upon received of full payment.</p>	
<b>FOR HR DEPARTMENT</b>		
Company Name:	Contact Person: Mr / Ms:	
Address:	Designation:	
	Department:	
	Email:	
	Mobile No:	
	Signature:	
Training Date:	Company Stamp:	
Telephone:		
Type of Industry:		
Tel: 603-6156 0813 / 2813   HP: 012-417 3813 / 012-375 2813 Email: sales@ascendent.com.my   Web: www.ascendent.com.my		