



## Accurate Gauging & Instruments Pvt. Ltd.

Precision Measuring Instruments and Measuring Services

Gauge House, 67, Hadapsar Industrial Estate, Pune - 411 013, India.

Tel: +91-020-66039000, 26870158 Fax: +91-020-26870858, Service Fax : +91-020-26813945

Email: [accurate@vsnl.com](mailto:accurate@vsnl.com) Web: [www.accurategauging.com](http://www.accurategauging.com)

# Training Program On Coordinate Measuring Machines (CMMs)

Dear Sir,

Accurate Gauging & Instruments Pvt. Ltd. is a leading manufacturer of Precision Measuring Dimensional Measuring Instruments in India. Our wide range of products includes Pin gauges, Slip Gauges and many others up to Co-ordinate Measuring Machines.

The use of coordinate measuring machines (CMMs) has moved from the laboratory to the shop floor, and increasingly, from large factories into small job shops as well. As a result, there is growing demand for the skilled users of CMMs, as an aid to making the best and value added output of it.

Being in existence and transacting business for more than 30 years Accurate has accumulated vast information in its data bank. It would interest you to note that Accurate intends to share this knowledge in a disciplined and a formal manner with the people connected with Quality or the Standards Room in our endeavor to enhance the Indian Quality to Top World Class Quality.

With this view, we have created a Training Division. We realize that there is a need for such “Share, Teach & Learn” activity on regular basis. We therefore conduct training courses periodically on the subject mentioned above. So far the response has been very encouraging.

We would like to illustrate below the details of the same to enable you to decide on deputing your concerned personnel for the program. Please be informed that the program is not necessarily for the Quality department. It is equally beneficial to the Production related personnel.

This 3-day training program on 3Dimensional Coordinate Measuring Machine focuses on a small investment in operator training will maximize productivity, increase the return on your substantial equipment investment and allow you to use this sophisticated machinery to your best competitive advantage. This practical program begins with an easily grasped explanation of how a CMM works, includes step-by-step visual demonstrations and provides a series of hands-on exercises in measuring practice parts.

Syllabus of the training is enclosed herewith for your perusal.

Training faculty with rich experience, requisite in the field is drawn from our own organization.

### Target Audience

- Operators.
- Engineers.
- Quality Heads.
- Others who need to understand coordinate metrology and basic CMM operation.

We have organized open house programs at our premises in Pune and Chennai, as also in house programs in organizations like, Karmobiles in Bangalore, Gabriel and Mahindra Sona in Nasik, Eicher Tractors in Faridabad, Bajaj Auto in Pune etc.

Thanking you and looking forward to hearing from you,

Yours faithfully,

Ms Shveta Dadhore

Technical Coordinator

TRAINING AND CALIBRATION DIVISION

For further information contact: [cmmsupport@accurategauging.com](mailto:cmmsupport@accurategauging.com)

Ph. No. 020-66039239 / 38

Fax No.020-66039277



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Venue: Accurate Engineering Co. Pvt. Ltd.  
67, Gauge House, POBox No.1202,  
Hadapsar Ind. Estate, Hadapsar, Pune-411 013.

Duration: 3 days.

Time: 9.00 a.m. – 5.00 p.m.

Training Fee: Rs.10,000/ + 10.3% Service Tax per Participant (Non Residential) inclusive of training Material, lunch & tea.

NOTE: Registration will be restricted for 5 participants on first come first serve basis. Please send your nomination/s in the attached Registration form, along with Demand Draft/Cheque in favor of:  
Accurate Gauging & Instruments Pvt. Ltd.  
Pune 411 013.

## TIME TABLE OF TRAINING COURSE ON 3D CMM

Day 1 – 0900hrs to 1700hrs

	TIME	SYLLABUS
	0900hrs	Registration
SECTION I	0930 hrs – 1030 hrs	<b>Introduction to Coordinate Measuring Machines.</b> <ul style="list-style-type: none"><li>➤ Coordinate Metrology.</li><li>➤ Necessity of CMM.</li><li>➤ Development History of CMM.</li><li>➤ Constructions of CMMs.</li><li>➤ The coordinate Measuring Process.</li></ul>
	1030 hrs	Tea - 15 minutes
	1045 hrs – 1300 hrs	<b>Environment and Accessories:</b> <ul style="list-style-type: none"><li>➤ Temperature and temperature gradients</li><li>➤ Humidity.</li><li>➤ Air quality.</li><li>➤ Refrigerated air dryers</li><li>➤ Probing and software.</li></ul>
	1300 hrs	Lunch - 45 minutes
SECTION II	1345 hrs – 1530 hrs	<b>Practice Exercises:</b> <ul style="list-style-type: none"><li>➤ Qualifications of Probes.</li><li>➤ Use of star probes.</li></ul>
	1530 hrs	Tea Break - 15 minutes
	1545 hrs – 1700 hrs	<b>Practice Exercises:</b> <ul style="list-style-type: none"><li>➤ Geometry alignment on parts.</li><li>➤ Measurements of Geometrical Measurements.</li><li>➤ Relations and GD&amp;T measurements</li></ul>

P.T.O



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## Day 2 – 0900hrs to 1700hrs

	TIME	SYLLABUS
SECTION III	09.00 hrs – 1030 hrs	<b>Probing Technology:</b> <ul style="list-style-type: none"> <li>➤ Contact and No contact Probes.</li> <li>➤ Trigger and scan Probes.</li> <li>➤ Kinematics and strain gauge probes.</li> <li>➤ Laser and optical probes.</li> </ul>
	1030 hrs	<b>Tea – 15 minutes</b>
	1045 hrs – 1300 hrs	<ul style="list-style-type: none"> <li>➤ Probe Head technologies.</li> <li>➤ Special Probes.</li> </ul> <b>Applications and software features:</b> <ul style="list-style-type: none"> <li>➤ Prismatic Component Inspection.</li> <li>➤ Profile and Surface measurements concepts.</li> <li>➤ Blade and gear Inspection concepts.</li> <li>➤ Pipe inspection concepts.</li> </ul>
	1300 hrs	<b>Lunch - 45 minutes</b>
SECTION IV	1345 hrs – 1530 hrs	<b>Practice Exercises:</b> <ul style="list-style-type: none"> <li>➤ Manual &amp; CNC programming.</li> <li>➤ Digitizing -Reverse Engineering application.</li> </ul>
	1530 hrs	<b>Tea Break - 15 minutes</b>
	1545 hrs 1700 hrs	<b>Practice Exercises:</b> <ul style="list-style-type: none"> <li>➤ Databases.</li> <li>➤ Output reports.</li> </ul>

## Day 3 – 0900hrs to 1700hrs

	TIME	SYLLABUS
SECTION V	0900 hrs – 1030 hrs	<b>Practice Exercises:</b> <ul style="list-style-type: none"> <li>➤ Last day Revisions</li> <li>➤ Cad Comparisons.</li> </ul>
	1030 hrs	<b>Tea - 15 minutes</b>
	1045 hrs 1300 hrs	<b>Brain Storming:</b> <ul style="list-style-type: none"> <li>➤ Question Answer session.</li> <li>➤ Discussion on practical problems and solutions.</li> </ul>
	1300 hrs	<b>Lunch - 45 minutes</b>
SECTION VI	1345 hrs – 1700 hrs	<b>Assessment Test 1 Hr.</b> <b>VISIT TO CALIBRATION LAB. ACCURATE ENGG. CO. PUNE.</b> <b>Inspection Service Cell Pune.</b> <b>Certificate Distribution</b>



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**Note: Depending upon the number of registrations of the candidates for the training program, we may schedule training program additionally other than our schedule disclosed to our customers.**

### REGISTRATION FORM

To,

M/s. Accurate Gauging & Instruments Pvt. Ltd.,  
67, Hadapsar Industrial Estate, Pune – 411 013

Contact Person – Miss Shveta Dadhore

Phone – 020 – 66039239- 38 / Fax No. 020 – 66039277

E-mail – [cmmsupport@accurategauging.com](mailto:cmmsupport@accurategauging.com)

Dear Sir,

Please register the following delegate (s) for the participation in training Program on 3 DIMENSIONAL CMM.

To be held at - Accurate Gauging & Instruments Pvt. Ltd.  
67, Gauge House, POBox No.1202,  
Hadapsar Ind. Estate, Hadapsar, Pune–411 013.

Time: 9.00 a.m. – 5.00 p.m

Phone: 020 – 66039239 / 38

Delegate Information

Sr.	NAME	DEPT.	DESIGNATION
1			
2			
3			

#### ORGANISATION / COMPANY INFORMATION

Name			
Address			
Phone			
Fax		E-mail	
Payment Details	Demand Draft / Cheque No. _____ Dt. _____ Rs. _____, is enclosed herewith		

Authorized Signatory

Stamp

Date.