

# CAD-CAM Center"

## A State of Art Technology Center

Picturesque View of CAD CAM Center



### Brief Overview of CAD-CAM Center

- CAD CAM center situated at heart of VNIT Nagpur is another jewel in the illustrious achievements of Department of Mechanical Engineering VNIT Nagpur.
- Inaugurated on 30<sup>th</sup> January 2006 by Prof. V.S Sohoni (Chairman VNIT Nagpur), this CAD-CAM center is instituted to provide young enthusiastic engineers and researchers a completely equipped research and educational facilities which could match standards of world's leading technical organizations and institutes.
- CAD CAM center houses latest machines like CNC-WEDM, ECM, CNC-VMC, Rapid Prototyping machine, CNC-CMM, Induction furnace to name a few and provide all the latest research facilities for engineers and scientists under one roof.

CAD-CAM Center also runs short and Long term certificate courses for Degree/Diploma students comprising of various aspects in Computer aided Manufacturing and Design

Latest Machines available at CAD-CAM Center

- CNC-Vertical Machining Center
- Rapid Prototyping Machine
- Wire cut Electric Discharge Machine setup
- Electrochemical Machine setup
- Surface Roughness Machine
- Coordinate Measuring Machine
- Reverse Engineering Machine
- Tool Force Dynamometer

Facilities at CAD-CAM Center

- Computer Lab. With Internet Facility
- Guidance by Eminent Professors
- CAD-CAM Operator and Instructor
- Hands on experience on the Machines
- Completely functional machines
- Clean, Hygienic and Peaceful studying/working environment

Air Conditioned Computer Lab. at CAD-CAM Center



Air Conditioned Class Room at CAD-CAM Center



### CNC-Vertical Machining Center

Machine Make	BMVAgni-TC24/20 by BFW India
Machine Functions	Milling, Drilling, Boring ,Tapping and Chamfering
Special Features	High speed non stop machining, high quality surface finish, Automatic controls
Date of Purchase	2006
Price	27.80 Lacs

### CNC-Vertical Machining Center View



### Reverse Engineering Machine

Machine Make	Precimet- Metatronic
Machine Functions	Dimensional analysis, Reverse Engineering
Special Features	CMM with reverse engineering Kit,
Date of Purchase	2006
Price	13.20 Lacs



### Rapid Prototyping Machine View



### Sample Specimens made on RP Machine



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Special Features	CMM with reverse engineering Kit,

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#### Reverse Engineering Machine View



#### WEDM Machine

Machine Make	“ELECTRONIKA” Make EZEECUT Wire EDM machine
Machine Functions	Intricate shapes, Narrow slots, Complex shapes
Special Features	High quality surface finish, and Automatic programming , machining of very hard metals
Date of Purchase	2003
Price	7.20 Lacs

#### WEDM Machine View



Control Panel

WEDM Setup

ECM Machine

Machine Make	“METATECH” Model ECMAC-II
Machine Functions	Useful for machining small intricate parts, High Material removal rate,
Special Features	High quality surface finish, can drill minute holes and Automatic programming
Date of Purchase	2005
Price	9.20 Lacs

ECM Machine View





Surface Roughness Machine

Machine Make	“Mitutoyo” Japan make SURFTEST SV-500
Machine Functions	Roughness parameters, waviness, surface finish measurement
Special Features	High degree precision in surface finish, measures almost every Surface roughness parameter like Ra, Rt, Rv etc.
Date of Purchase	2004
Price	5.6 Lacs



### Surface Roughness Machine View



Surface Roughness Machine



Measurement Screen

### Coordinate Measuring Machine

Machine Make	“Mitutoyo” Japan make CRYSTA Apex-C
Machine Functions	Precision Coordinate measurement, Dimensional Accuracy
Special Features	Automatic control of movement, Air bearings, 2D 3D measurements possible,
Date of Purchase	2005
Price	18.20 Lacs

### Coordinate Measuring Machine View

Machine Make	“Kistler” Dynoware 9272
Machine Functions	Tool force measurement, Toque measurement, evaluation of all three components of force Fx, Fy Fz and Torque
Special Features	Online display of Forces, Range can be adjusted for calculation purpose,
Date of Purchase	2007

Price	15 Lacs
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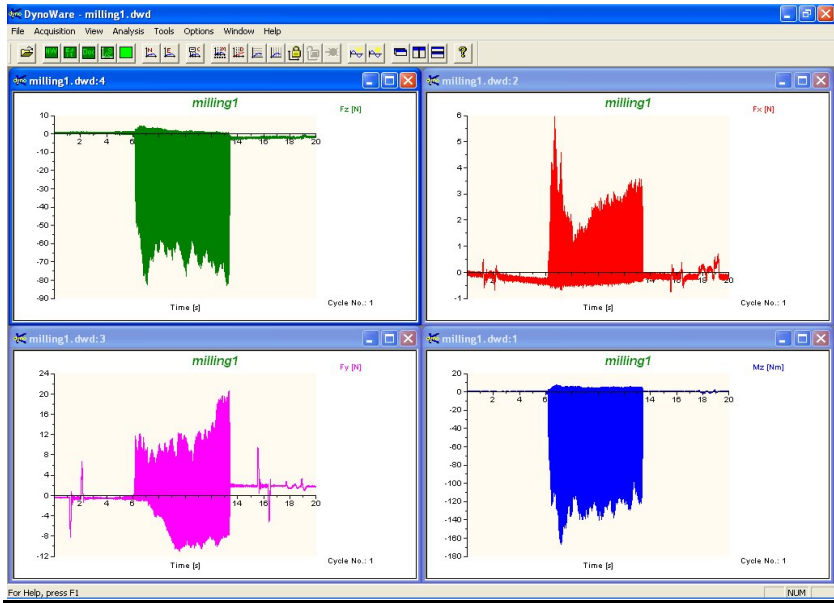
Tool Force Measurement Dynamometer View



Coordinate Measuring machine

Measurement Screen

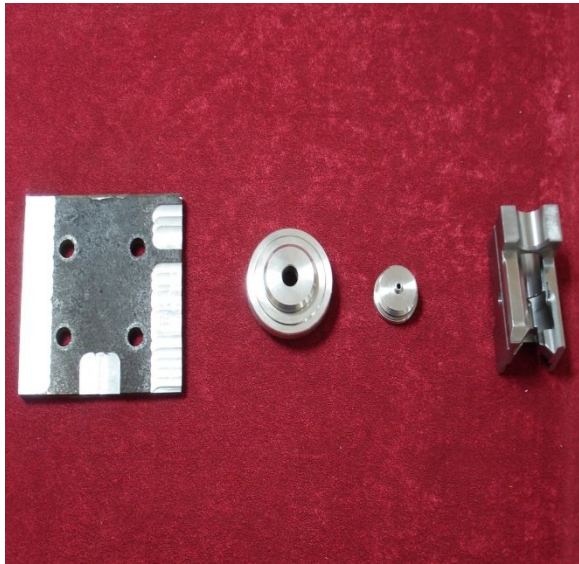
Tool Force Measurement Dynamometer (Drilling and Milling)



Dynamometer Machine

Measurement Screen

Parts Manufactured at CAD-CAM Center



Vertical Machining Center

WEDM Setup



