

Mechanical Engineering Department
Center of excellence – CNC/VMC

Name of Lab I/C :- Prof. Kupade D. M.

CNC trainer: - 1) CNC Lathe:- Mr. Chourange Sahil

2) CNC Milling:- Mr. Dhole Samarth.

CNC Laboratory

Description:-The CNC Laboratory provides environment for students to reinforce their understanding of the machining fundamentals and tools specifications.

Area:- 25'x25'=625 sq.feet

Features: - CNC Lab equipped with two CNC Machines

1) CNC Lathe machine



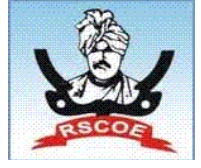
Features: -

specifications	Units
Control system	FANUC
Specifications	
Swing over bed	500 mm
Sing over carriage	250 mm
Maximum turning diameter	320 mm
Distance between centre	312 mm
Maximum turning length	300 mm
Spindle	
Spindle Nose	A2-5
Bore through spindle	52.5 mm
Front bearing bore	80mm



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Maximum bar capacity	25(36)mm
Maximum spindle speed	4000 rpm
Spindle motor power	5.5/7.5kw
Standard chuck size	165 mm
Axes	
Type of guide ways	Linear motion
X-Axis stroke	165 mm
Z-axis stroke	300 mm
X and Z axis rapid rate	30 m/min
Tooling	
Number of tools maximum	8
Boring bar diameter maximum	40mm
OD Turning tool size	25x25 mm
Tail stock	
Tailstock base travel	135 mm
Tailstock Quill travel	75mm
Tailstock Quill Dia.	60mm
Quill Taper	MT-4



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2) CNC Milling Machine



Features: -

specifications	Units
Control system	FANUC
Capacity	
Table longitudinal travel (X-axis)	500 mm
Table cross travel (Y-axis)	400 mm
Head stock travel ((Z-axis)	400 mm
Spindle nose face to table top	150-550 mm
Distance from floor to table	975 mm
Spindle centre column- front distance	480 mm
Table	
Table size	410 x700 mm
T-slot(NO/SIZE/PITCH)	3/14/150
Maximum load on table	500 kg
Spindle	
Spindle taper	B140
SPEED	800 RPM
Automatic Tool Changer-TWIN ARM	
Number of tools	24
PULL STUD-MASS 403	P40-T01
Max tool diameter –all pockets full	75 mm
Max diameter –hen adjacent pocket empty	140 mm
Maximum tool length	250mm
Maximum tool weight	8 kg
Tool to tool changing time	2.5 sec.
Accuracy	
Positioning accuracy	0.010 mm
Repeatability Accuracy	0.007 mm

Utilization: -Providing CNC Hands on training as well as perform practices and try to make Industry ready through current Technology. Up to till date 400 students are benefitted with CNC Hands on training.



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Area of Particles: -

1. Two axis –CNC Turning centre, performs all operations like Simple plain turning, Step turning, Grooving, Threading, Drilling operation
2. Three axis –CNC Milling machine., performs operations like Drilling, I.D. Grooving, Tapping, Face milling, Side milling, Profile milling etc.