

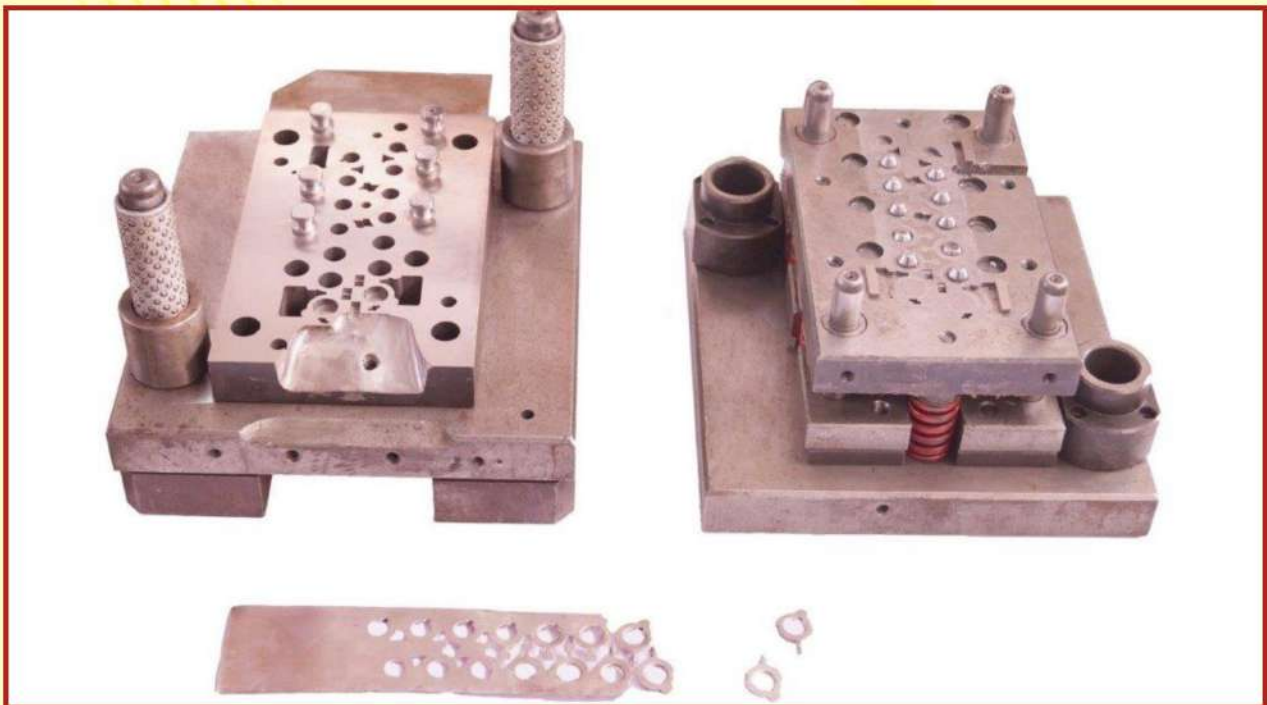
**TOOLS FOR THE PEOPLE WHO DEMAND QUALITY**



# Central Tool Room

MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES  
(AN INDO GERMAN PROJECT)

CTR Ludhiana is an Indo German project set up under bilateral agreement on technical cooperation between Government of India & Government of Germany in 1980 and it is working under administrative control of Ministry of Micro, Small & Medium Enterprises, Government of India.



**TRAINING IN TOOL AND DIE TECHNOLOGY ●**

**PRODUCT DESIGN & DEVELOPMENT ●**

**TOOL & DIE MANUFACTURING ●**

**ADDITIVE MANUFACTURING ●**

**VACUUM HEAT TREATMENT ●**

**WHITE LIGHT SCANNING ●**

**PLASMA ION NITRIDING ●**

**AN ISO 9001:2015 & ISO 14001:2015 CERTIFIED ORGANIZATION**



### PRODUCTION DEPARTMENT

- Design & Manufacturing of injection Moulds, Press Tools, Jigs, Fixtures, Gauges and precision components for Aerospace, Defence, Automotive, Pharmaceuticals and Consumer Goods Industry.
- Excellent Tool Room Infrastructure equipped with precision CNC Machines and Computer aided manufacturing facilities.
- Specialized tooling for Automotive Seating system, office equipments, Blow, fill and seal moulds for Pharmaceutical Industries and Multicavity Hot Runner system.



### TRAINING DEPARTMENT

- Training on Tool and Die technology, comprising of CAD/ CAM/ CAE, FMS, CIM, Industrial Automation, Rapid Prototyping and Reverse Engineering at different technology levels.
- Specialized skill development courses in line with requirement of micro, small & medium enterprises.
- Industry based long term training in tool and die making
- Specialized courses in tool and die technology.
- CAD / CAM for engineering graduates, Diploma and ITI certificate holders.
- Basic certificate courses in heat treatment.



### DESIGN DEPARTMENT

- Design and development of press tools, injection moulds, die casting dies, jigs, fixtures, gauges and component drawing.
- Equipped with CAD CAM CAE softwares : UNIGRAPHICS, CATIA, Solidworks, PRO-E, Autocad, Hyperform, LS-Dyna Polyworks, MAGICS and MIMICS.



### HEAT DEPARTMENT

- Heat treatment, Material Testing and facilities.
- Hardening, tempering, normalizing, case hardening, annealing and stress relieving.
- Testing hardness, micro structure and material composition of all tool steels and non ferrous alloys.
- Heat Treatment of HSS and special steels such as SP 203, Stavax, Callmax, DII, DIN2714,P20,H11, H13.



### METRO LOGICAL FACILITIES

- Equipped with Co-ordinate measuring Machine- Carl Zeiss-Prismo 5 with digitizing and reverse engineering capability.
- Nikon's Tool makers microscope,
- Tesa's Microhite.



## MACHINE LIST

Sr. No.	MACHINE	SPECIFICATION
1.	CNC MACHINING CENTRE DMC 70 V	TABLE SIZE -900 X 550MM MOVEMENT (XYZ)- 700x 550x 500
2.	CNC MACHINING CENTRE	TABLE SIZE -710 X 1700 MM MOVEMENT (XYZ)- 1500x810x 710 MM
3.	CNC VERTICAL MACHINING CENTRE VF 6, 50 T WITH LINEAR SCALE	TABLE SIZE -710 X 1625 TRAVERSE - 1500x 800 x750
4.	VERTICAL MACHINING CENTER VMC 2216	TABLE SIZE -900 X 350 MM MOVEMENT (XYZ)560x406x508
5.	5-AXIS CNC MILLING WITH SWNELLING ROTARY TABLE	TABLE LOAD 1000 KG. TRAVERSE (XxYxZ) - 650x600x500 MM, ROTARY TABLE 650MMX540MM
6.	CNC UNIVERSAL CYLINDER GRINDER LEAN PRO	CENTER DISTANCE-1000MM CENTER HEIGHT -175MM
7.	SURFACE GRINDING	TABLE SIZE 1500 x 750MM, HEIGHT 200MM
8.	SURFACE & PROFILE GRINDER JF 520	TABLE SIZE-600x 200 MM MOVEMENT (XxY) -600x200MM
9.	JIG BORING MACHINE OP-3	TABLE SIZE -595 x 320MM MOVEMENT (XxY) 400 x 250x 400 MM
10.	JIG GRINDING MACHINE	TABLE SIZE -350 x 600MM MOVEMENT (XxYxZ) -250 x 400x400 MM
11.	CNC EDM M/C MODEL - AD55L	TABLE SIZE -750X550 MM MOVEMENT (XxYxZ) 600 x 400 x 400MM
12.	CNC EDM MODEL FORM 30	TABLE SIZE -1000X700 MM MOVEMENT (XxYxZ) 600 x 400 x 400MM
13.	WIRE CUT CLASSIC 25	TABLE SIZE -750 x 550 Ra = 0.3 MM MOVEMENT 350x 250x 250
14.	CNC WIRE CUT ROBOFIL 290	TABLE SIZE -850x500 MOVEMENT (XxYxZ) -400x250x200 MAX. TAPER L.30
15.	CNC WIRE CUT BA -24	TABLE SIZE -860 x860 MOVEMENT -600 x 400x 310 MM
16.	CNC WIRE CUT Av600	TABLE SIZE -1340 x 1040 MM MOVEMENT (XxYxZ) -800 x 600x 500 MM, UV AXIS TRAVEL 500MM X 500MM
17.	PRESS MACHINE -315 TON-MECHANICAL	TABLE SIZE 1200 x 1000 MM SHUT HEIGHT 600 MM
18.	INJECTION MOULDING M/C 200T	SHOT WEIGHT -482 & 746 GMS. DISTANCE BETWEEN TIE BAR -560 x 560 MM
19.	CO-ORDINATE MEASURING MACHINE -CMM (PRIISMO5, HTG VAST) WITH DIGITIZING AND REVERSE ENGINEERING CAPABILITY	MEASURING RANGE (XxYxZ) 700 x900x 500 MEASURING UNCERTAINTY - (1.5+L/350) UM
20.	SPECTROMETER	FOR COMPOSITION/ SAMPLE DETECTION OF THE FERROUS/ NON FERROUS METALS AND ALLOYING ELEMENT
21.	WHITE LIGHT SCANNING SYSTEM	MAKE BREAUKMANN GERMAN DUAL-5 MEGA PIXEL CAMERA, WITH LATEST SCANNING SOFTWARE POLYWORKS ANDDD INSPECTION SOFTWARE
22.	INJECTION MOULDING M/C 160T SHOT WT. 370GM.	TIE BAR DISTANCE 510 X 510 MM
23.	INJECTION MOULDING M/C 80T SHOT WT. 135GM.	TIE BAR DISTANCE 300 X 300 MM

## TOOLING SPECIALIZATION :

- Blow, Fill and Seal moulds for Pharmaceutical
- Pipe Joints
- Automobile Car Seat System
- Fixtures / Gauges for defence
- Office equipment's and Stationery products
- Door closer
- Water Meters
- Door Lock
- MCB
- Hot Runner Moulds
- Precision Vices & Die Sets
- PDC Dies
- Sewing M/c Parts

# RAPID PROTOTYPING CENTRE



SLA Technology

## SLA Technology

For Enhanced Surface Finish, More Parts Resolution, Higher Accuracy

## 3D Printing

Parts in Acrylic based material

## FDM, SLA, RIM and Soft Tooling Services.



SLA Component



Vacuum Casting

## Vacuum Casting

By Silicon Molds for Short run Production.

## Medical Modeling

Directly from CT / MRI scanned data using MIMICS and RP Technologies

## 3D White Light Scanning

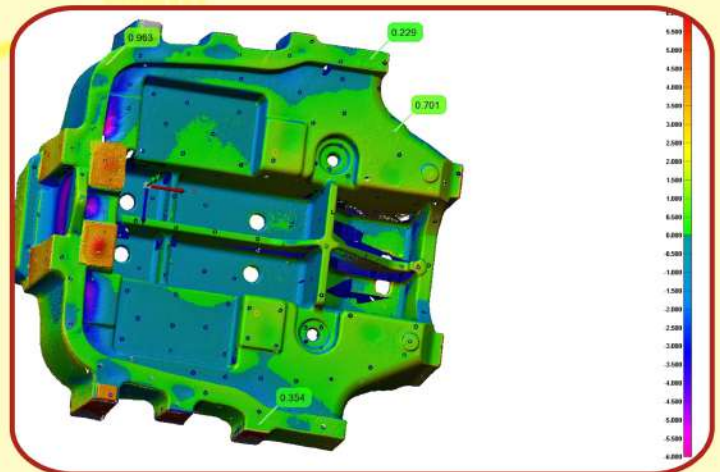
For Reverse engineering and Inspection.



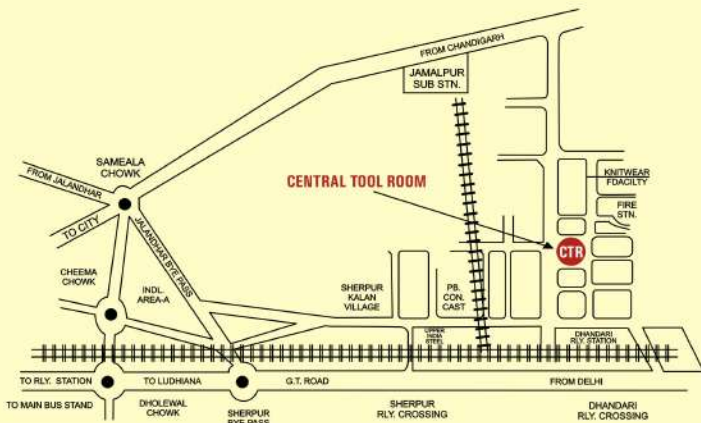
3D Printing



3D White-Light Scanning



3D Inspection



## CENTRAL TOOL ROOM

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