

STUDENT MACHINE SHOP

EQUIPMENT DESCRIPTIONS



MILLING MACHINES

Milling: a machine tool in which a horizontal arbor or vertical spindle rotates a cutting tool above a horizontal table, which is used to move a workpiece.



>> There are a total of six milling machines in the student machine shop. There is one manual milling machine along with five CNC milling machines. Students can be trained on any of the following machines, and once they are trained, they are allowed to use any of the milling machines for any of their design projects.

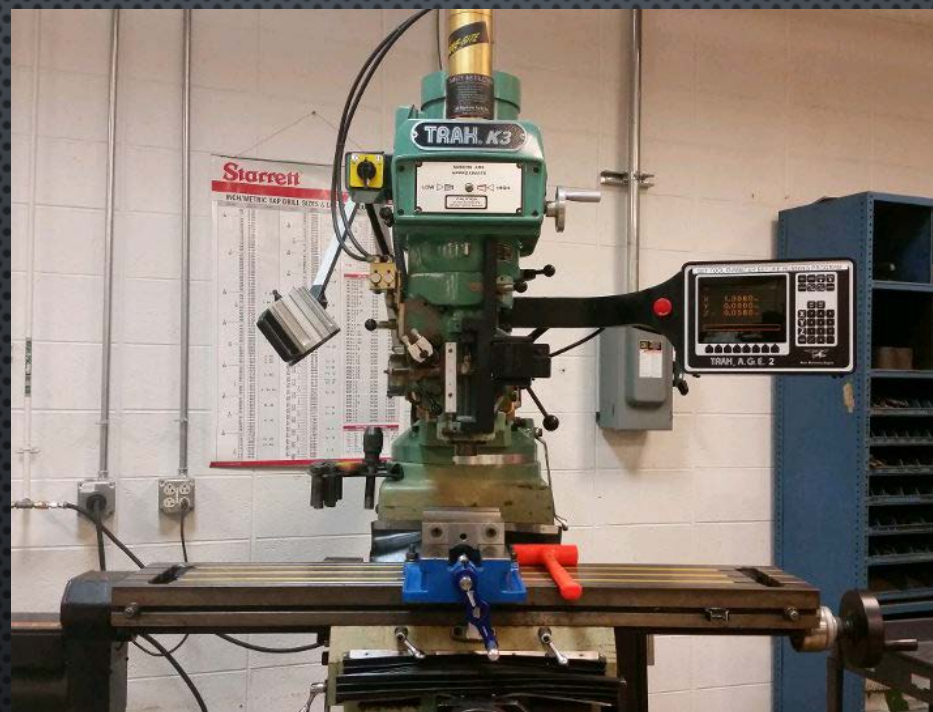
BRIDGEPORT MANUAL VERTICAL MILLING MACHINE WITH DIGITAL READOUT



BRIDGEPORT VERTICAL MILLING MACHINE WITH PROTOTRAK EDGE 2 AXIS CNC CONTROL



TRAK K3 VERTICAL MILLING MACHINE WITH PROTOTRAK A.G.E. 2 AXIS CNC CONTROL



TRAK K3 VERTICAL MILLING MACHINE WITH PROTOTRAK EMX 2 AXIS CNC CONTROL [1]



TRAK K3 VERTICAL MILLING MACHINE WITH PROTOTRAK EMX 2 AXIS CNC CONTROL [2]



TRAK K3 VERTICAL MILLING MACHINE WITH PROTOTRAK SMX 2 AXIS CNC CONTROL



MAZAK VCU-500C 3 AXIS CNC MILLING MACHINE



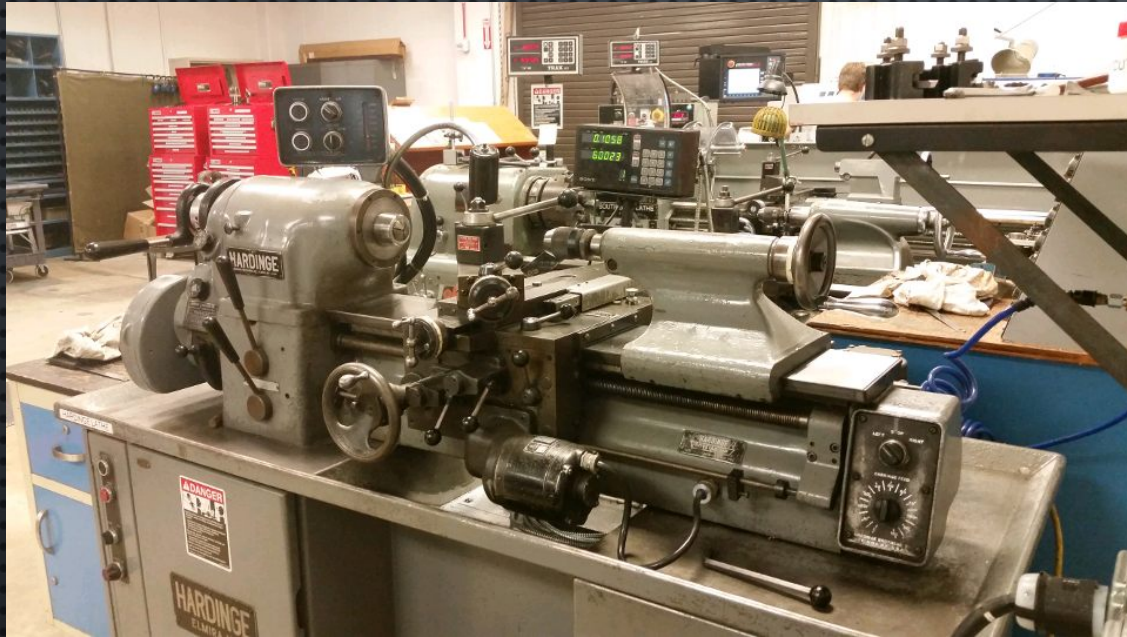
LATHES

Lathe: a machine used for shaping wood, metal, or other material by means of a rotating drive that turns the piece being worked on against changeable cutting tools.



>> There are a total of four lathes in the student machine shop. Students can be trained on any of the following machines, and once they are trained, they are allowed to use any of the lathes for any of their design projects.

HARDINGE HLV-H 11" X 18" TOOL ROOM METAL LATHE WITH DIGITAL READOUT



CLAUSING 15" X 48" METAL LATHE WITH DIGITAL READOUT



SOUTH BEND TURN-ADO 16" X 60" METAL LATHE WITH DIGITAL READOUT



PROTOTRAK 18" X 45" SX CNC METAL LATHE WITH SLX CONTROLLER



DRILL PRESSES

Drill Press: a powered vertical drilling machine in which the drill is pressed to the work automatically or by a hand lever.



Fosdick 10" High Speed
Drill Press

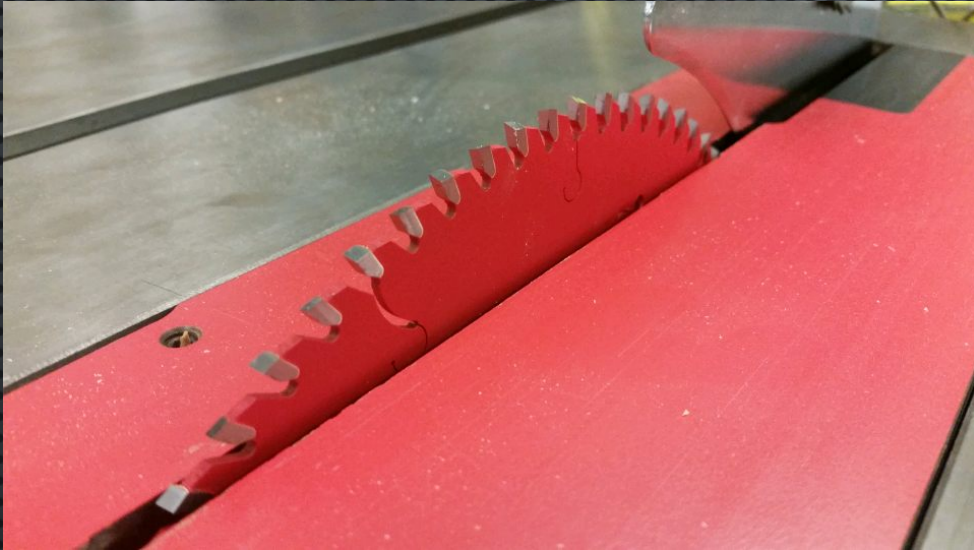


Rockwell 17" Variable
Speed Drill Press



SAWS

Saw: a tool used for cutting wood and other materials, typically with a long, thin serrated steel blade.



>> Students must take extreme caution when using any of these machines. Saws can be very dangerous if not used properly.

DO-ALL 36" METAL CUTTING VERTICAL BAND SAW



POWERMATIC 20" METAL CUTTING VERTICAL BAND SAW



RONG-FU INDUSTRY CO., LTD HORIZONTAL METAL CUTTING BAND SAW



SAW STOP TABLE SAW FOR WOOD AND PLASTIC



CENTRAL MACHINERY 16" SCROLL SAW



BLACK AND DECKER PANEL SAW



SHEET METAL EQUIPMENT

Sheet Metal Equipment: used to cut sheet metal by moving the edge of a blade through it.

Tennsmith 52" Air
Powered Shear



Pexto 48"
Sheet Metal
Roller



MSC 48" Box
and Pan
Bending Brake

PRESSES

Press: a machine tool that changes the shape of a workpiece by the application of pressure or fits two pieces of material together; otherwise known as a press fit.

Red Arrow 25
Tin Hydraulic
Shop Press



Greenerd 16"
Arbor Press



Greenerd 4"
Arbor Press



Dake 10"
Arbor Press



GRINDERS AND SANDERS

Grinders: a machine that has a rigid, coarse wheel rotating at a certain speed that is used for precision machining of metal or other materials.



10" Pedestal
Grinder with
Buffing Extension
and Wire Wheel



Marathon 6"
Pedestal Grinder



Delta 6"
Pedestal Grinder

GRINDERS AND SANDERS

Sander: a non-rigid piece of paper, disk or cloth that is covered with an abrasive material and rotates at a certain speed and is used to smooth or flatten a material, typically wood.



D.P.I. 2" Belt Sander



Rockwell Delta 6" Belt and 12" Disc Sander

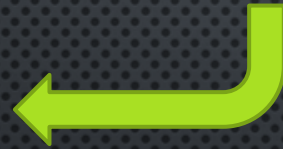


DUST AND MIST COLLECTORS

The purpose of dust and mist collectors is to cut back on the amount of debris that is left over from sanding, cutting or drilling a material.



Torit Dryflo Coolant
Mist Collector



Rikon 1 hp Saw
Dust Collector



WELDING EQUIPMENT

Welding: joining together (metal pieces or parts) by heating the surfaces to the point of melting using a blowtorch, electric arc, or other means, and uniting them by pressing, hammering, etc.

Oxy-Acetylene Cutting and Welding Torch Set



Miller Synchronwave 250DX T.I.G. Welder



Miller Millermatic 212 M.I.G. Welder with Spoolmate3035 Spool Gun for Aluminum Welding

