Sheet Metal Shears

There are two types of sheet metal shears, each can cut up to 16 gauge steel. One shear can be used to cut a 90 degree edge, the other is a straight cut shear.

Sheet Metal Brake

The box brake allows for angle bends on sheet metal up to 120 degrees that is up to a thickness of 14 gauge steel.
In TIG (Tungsten Inert Gas) welding, a tungsten electrode heats the metal being welded, and gas (most commonly Argon), protects the weld puddle from airborne contaminants. TIG welding produces clean, precise welds on steels and aluminums.

MIG (Metal Inert Gas) welding is the process of using direct current electricity and a wire-fed system to melt and join a wide range of metals of different thicknesses together.

Oxy/Acetylene Torch uses a fuel gas and oxygen to weld, braze or cut metals. By changing the nozzle and/or varying the flow of each gas a different flame can be used for either cutting or welding.

This air plasma cutter can sever 1.75-in. thick steel and has a rated cutting capacity of 1.25”. The Spectrum Model 1251 cuts 3/4-in. steel at 25 in/min, 5/8-in. steel at 40 in/min and 1/4-in. steel at almost 140 in/min. It also cuts stainless, aluminum, copper, and any metal that conducts electricity. The plasma cutting process improves productivity and cut quality.
Turret Punch
The manual turret punch allows for rapid creation of holes in sheet metal. The hole size ranges from 1/16 to 1 1/2 and can punch up to 14 gauge steel.

Vertical Band Saw
The DoALL V3-2013 vertical band saw has a cutting area of 26 x 13 inches. The 3 hp motor drives the band saw blade in a speed range of 30 to 5,500 feet per minute.
**Horizontal Band Saw**
The DoALL 400M structure band saw with a 2 hp motor can cut material up to 9 inches x 16 inches cross section. Coolant is used to prolong blade life.

**Hydraulic Shear**
Hydraulic shear is capable of cutting up to 16 gauge steel, with a width up to 36 inches.
Lagun FTV-1 Manual Mills
The two manual Lagun FTV-1 mills have a table size of 10 x 44 inches. Using a 3 hp motor the FTV-1 can get an rpm range from 55 to 4,250. Equipped with power feed and Digital Read Outs, these milling machines are very versatile.

Nardini Mascote Lathe
The Nardini Mascote lathe uses 6 Hp motor to spin material that is cut with mounted tools. Able to hold material 12 inches in diameter with up to a length of 40 inches. The Nardini is also capable of cutting multiple thread pitches, right hand and left hand direction.
ATV-618-ET Lathe

The ATV-618-ET lathe spins material up to 9 inches in diameter to perform various operations, such as cutting, sanding, knurling, drilling, or deformation with tools that are applied to the workpiece to create an object that has symmetry about an axis of rotation.

Drill Presses

The two drill presses are a free-standing tool fitted with a rotating cutting tool, usually a drill bit, used for drilling holes in various materials.
Laser Cutter
Universal Laser system’s M300 30 Watt laser cutter, used to cut wood or acrylic of various thicknesses.

Variable Power Supply
Variable power supplies that output in DC and AC voltage.

Waveform Generator and Osciliscopes
Waveform generator and osciliscopes for monitoring electrical signals of circuits.
TAZ –bot-3 3D Printer

TAZ-bot-3 used for prototype prints, mainly utilizing a flexible material used for hinges. The TAZ can print within a 10x10x10 inch volume, utilizing abs, pla, or other exotic materials.
Fortus 250mc 3D Printer
The Fortus 250mc can print more complex prints and uses a support material that can be dissolved out. With a bed dimensions of 10 x10 x 12 inches larger parts can be printed in high detail.
This CNC Toolroom Mill has liberal travels of 40" x 16" x 16" and there is plenty of room for work, holding multiple vises and/or chucks, 5C indexers, and small rotaries on the large table. The unenclosed design and standard T-slots simplify clamping of oversized and odd-shaped parts. Brushless servomotors on all axes provide precise positioning, and a one-piece cast-iron base/column damps vibration and gives rigidity for heavy cuts. The TM-2 features a 4000-rpm, 7.5 hp (5.6 kW) vector drive spindle that uses standard 40-taper tooling.
SL-20 CNC Lathe
The SL-20 CNC lathe spins the material with a 20 hp motor, and shapes it using one of 12 held tools. Able to spin up to 4000 rpm allows for a polished finish no matter the material. The chuck can hold up to 8.3 in diameter material that is up to 21 inches long.

Haas VF-4 CNC Machine Center
The Haas VF-4 with 5th axis capability has a travel of 50" x 20" x 20" allowing for multiple parts to be run at the same time. The enclosed design allow for clean operation of the CNC, while the T-slots allow for simple mounting to the table. The VF 4 has a max rpm of 8100 with a 30 hp (22.4W) inline Direct-Drive standard 40-taper tooling.