

Suggested tools and items list for shop and competition pits

Major machine shop tools:

Bandsaw
Lathe (nice to have)
Drill Press
Mittersaw
Bench grinder
Benchtop Disc/belt sander
Mill (nice to have)
Horizontal bandsaw (nice to have)
Welder (nice to have)
Arbor press (3 ton or more, nice to have)
Metal break (nice to have)

Power tools:

Corded Drill and cordless (12-20 Volt battery operated)
Jigsaw and blades
Reciprocal saw and blades
Dremel and accessories (quick change cut off wheels best)

Tool accessories:

Milling bits (as needed)
Lathe bits (as needed)
Drill bits - large set or two

Hand tools:

Allen keys- Several sets, ball end
Screwdrivers including small set Nut drivers
Socket sets
Quick grips
Hacksaw with extra blades
Small Vise
C-clamps
Tin snips
Rubber mallets
Hammers
Deburring tools
Utility knife
Files - different sizes, shapes
Wrench sets including ratchet
Tap and die set
Pliers -needle nose, mini, heavy duty
Hole saws
Center punches
Locking pliers
Rivet gun and assorted rivets (1/8", 5/32", 3/16")
Snap ring pliers
Step drill bits, 1/8-1 1/8" range
Center punch set
Spring punch

Tools for electronics:

Multimeter
Soldering iron with stand
Solder vacuum
Heat gun, glue gun
Crimps
Wire strippers (self -adjusting are fantastic)
Diagonal cutters, small and medium size
Wago, short angled,
Small screw drivers, Phillips and flat
Electrical tape, black and red minimum
Chargers for 12v competition batteries (minimum of 4 batteries suggested)
Battery Beak (analyzes battery health, from AndyMark vendor)

Other supplies:

Hand towels
Permanent markers
Cable ties
Plastic storage bins for small parts
Tape measure, calipers
Small carpenters square
Scissors
Safety glasses
Small whiteboard and pens
Tool boxes
Epoxy, Superglue
Gaffers tape, red and blue (can patch tears in bumpers)
Small shop vac
Small bench broom
Leather gloves
Flash lights
Telescoping magnet to retrieve parts fallen into robot
Extension cords, 12' and 25' (2 each)
24x36" or larger (utility cart to work on and transport robot)
Power strips
Folding plastic table for pit (~4 foot)
Portable shelving for pit
Pool noodles

Many of these items can be found at Harbor Freight for great prices and some on sale at Lowes and Home Depot pre-Christmas sales now

Check Chiefdelphi.com for posts with additional suggestions (search tools, basic, minimum rookie)