



CNC ROUTERS
LASER ENGRAVER CUTTERS
CNC MILLS & CNC LATHES
CNC PLASMA CUTTERS
CAD/CAM SOFTWARE
REPAIRS & UPGRADES OF ALL CNC



Computerized Tools
For Transforming
Ideas Into Reality



DIGITAL FABLAB PRODUCTS FOR STEM, CAREER, & TECHNICAL EDUCATION

Forest Scientific Competitive Advantages

The more research you do, the more convinced that although Forest Scientific Corporation may not always be the lowest price, it is the best quality, value, and best choice for your school.

1. **Made bi-coastally in the USA** at our world headquarters in Tionesta, PA and in Phoenix, AZ.
2. **Single Source, On-Site, Parts & Labor 36 month warranty** on all new CNC machines made by Forest Scientific Corporation. Most of our competitors warranties are 1 year and parts only. This means that you will save the \$3,000.00- \$6,000.00 that others charge to have someone come on-site per visit from the factory if a problem occurs during the warranty.
Do not assume other manufacturers will come to your school for free. They won't.
3. **On-site training** is available for you and your students to ensure a successful start. It is more effective for initial training to be on your own equipment than to go to a training site. With your approval, students are trained to assist and help train other students. **Written & video tutorials** and curriculum are available to show your students while teaching classes. Additional training is available on-site, at our Phoenix training center, and over the internet.
4. **Free phone and internet support is available nearly 24/7.** Versus being charged by the minute during restricted office hours to get help. You can talk to someone in the evening and on weekends so you are not limited to office hours. Even our CEO freely gives out his cell number to call or text.
5. Unless otherwise specified, **all FSC machines come fully assembled.** Most of our competitors erector set kits will require 40-80+ hours of your time to assemble. Our machines are often running within an hour of arrival if the electricity & airline are ready. Buy a machine, not a box of parts.
6. **Our CNC controls connect to the computer via USB** or Cat 5, not outdated parallel port, serial port, ISA ports, or other port that require a DOS or other outdated computer. **Do not assume that the technology is current.** Most of the companies that you get the most mail from are very out of date.
7. Hardened, profiled, made in Ohio, **Precision THK linear ways and bearings not just wheels on plate steel or angle iron.** These machines cannot be bumped out of place like most of the machines in the same price range. The grease fitting on each linear bearing ensure a dependable life.
8. **All our CNC machines use industry standard Fanuc style G&M codes,** not a proprietary language. Thus you are teaching marketable skills, not just playing with a dead end *toybot*. You can **use any CAD/CAM software producing industry standard G-Codes** such as Mastercam, Surfcam, Edgecam, Enroute, Vcarve, Fusion 360, SolidWorksCam, Rhinocam, Inventor with HSM, and more.
9. We use more powerful stepper & servo motors on our machines to be more reliable.
10. **Welded steel frames,** and structural aluminum hold up better in the long term than bent sheet metal and bolted angles because they will not work loose or get out of alignment over time.
11. FSC machines have an Emergency Stop and safety reminders for users to operate the machine safely.
12. Forest Scientific Corporation machines and upgrades are designed to be updated at a low cost when technology changes.
13. **Our local dealers are caring professionals providing on-site support second to none.**

If you have any questions or need clarification call John at 1-800-956-4056 X1001.



Dear Educators:

Thank you for reviewing this years catalog. This year I have decided to showcase some of the many associations and organizations we support and conferences at which we exhibit. Since there is not room to list them all, we listed the national or international organization rather than all of the individual state affiliate organizations. I am especially proud of the picture of the First Robotics competition with my sons in the picture. My oldest son John Paul is now in university studying to be a CTE Teacher.

We manufacture everything in the United States in Tionesta, PA and Phoenix, AZ. We provide training on-site at the time of delivery, webinars and individualized refresher training via the internet, and in our training center in Phoenix. We also hold special sessions at many of the conferences and regionally at customer sites. There is no excuse for anyone not to be able to run a Forest Scientific CNC machine. We also have Project Based Learning curriculum and tutorials with written and video modalities for teachers and students.

Forest Scientific Corporation provides a 36 month on-site parts & labor warranty on all new machines we manufacture unless otherwise noted, 24 month on-site parts & labor warranty on all lasers, and 18 month on-site warranty on all upgrades and used machines. Invest with confidence knowing that you will be well supported. If you own any older CNC machines, no matter who built it, we can update it and make it better than when it was new. When you have any questions or need creative strategies to finance your order, please do not hesitate to call me any time at 1-800-956-4056 X 1001 or call or text my cell +1-412-726-0574. If I do not answer I will call as soon as I have coverage again.

TABLE OF CONTENTS

PAGE#	ITEM
2	Competitive Advantages
3	Letter & TOC
4	FabBot
5	Convert-A-Table Router / Plasma
6	Most popular Routers
7	Most popular Plasma Cutters
8	Michelangelo Clean room router and Luthier Max Router
9	Mitey Series Wood Lathe, Milling Machines, & Small Lathe
10	CimBiotic Robotic FMS Work Cell
11	CNC Wood Lathe & Precision Bed Mill
12	Upgrade old CNC Machines
13	Upgrade old CNC Machines
14	Drill / Tap chart
15	Special offers
16	Values in Used upgraded machines & WaterJet
17	CAD/CAM Options
18	Plasma Accessories
19	CNC Tooling & Accessories
20	Back Cover CRP -New Laser and Waterjet alternative for Clean room cutting

Sincerely,

John E. Martincic
President, CEO
sales@forestscientific.com



*All pricing & specifications subject to change without notice
This Catalog pricing effective 1/8/2018*

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FabBot Series Routers and Plasma Cutters

This series was created for home shops and schools on a very limited budget

These machines are turn-key packages with a computer, CAD/CAM, 3 year limited warranty, personalized online training, and unlimited phone, and on line tech support.

Shown with optional enclosure



FabBot Desktop Series CNC Router Models

Include: Aluminum T Slot table, Hold Downs, 1-3/4HP router, wrenches, CAD/CAM, training tutorials, and starter set of bits. Operates on 110V 15A

FabBot 15" x 11" x 2"

FabBot 22" x 15" x 2.9"

FabBot 24" x 24" x 4"

Optional enclosures for above

3D Subtractive Rapid prototype software

FabBot Platform Series CNC Router Models

Include: standard MDF table, 1-3/4HP router, wrenches, Aluminum frame construction with integrated stand, dust hood, CAD/CAM, training tutorials, and starter set of bits can operate on 110V 20A 6" Z Travel The floor space is about 2' larger than the work area.

FabBot 48" x 20"(fits through 36" door)

FabBot 48" x 48"

FabBot 48" x 96"

Optional

MDF w/Aluminum T Slot & Clamps 4x4

MDF w/Aluminum T Slot & Clamps 4x8

Upgrade to 3-1/4 HP Router

FabBot Platform Series Plasma Models

Each of the CNC Plasma cutters below include CAD/CAM software, Auto Torch Height, Hypertherm 45 Plasma system, and training tutorials. 110V 20 A machine

240 V 50A plasma cutter

The floor space is about 2' larger than the work area.

FabBot 48" x 20"(fits through 36" door)

FabBot 48" x 48"

FabBot 48" x 96"

Options

On Site install and training (lower 48)

Converter to run 45 A Plasma on 110V

To upgrade to on-site Parts & Labor warranty

includes delivery, installation, and training

(FabBots do not come with the on-site warranty)

Hypertherm Plasma Cutters Upgrades

Powermax 45 Pierce 1/2" steel and cut up to 7/8"

Powermax 65 Pierce 5/8" steel and cut up to 1"

Powermax 85 Pierce 3/4" steel and cut up to 1-1/2"

Powermax 105 Pierce 7/8" steel and cut up to 2"

Optional Torch Break Away

Comes standard - **Best option for most schools**

Optional upgrade

Optional upgrade

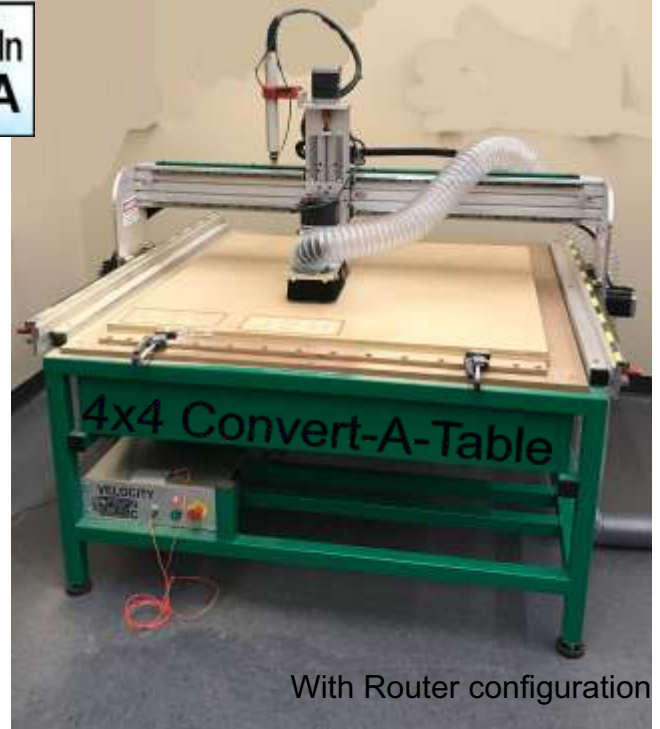
Optional upgrade

Optional upgrade

Convert-A-Table PLASMA CUTTER / ROUTER



With Plasma Configuration



With Router configuration

Convert-A-Table CNC Router / Plasma Models

- CAT 24" x 20" (fits through 36" door)
- CAT 48" x 20" (fits through 36" door)
- CAT 48" x 48"
- CAT 48" x 96"
- CAT 60" x 120"

Includes: Plasma water table, router clamping table, 3-1/4HP router, Powermax 45, Automatic Torch height, Break-a-way system, welded steel stand, dust hood, CAD/CAM, Control computer, computer arm, and starter set of bits and deluxe clamp set. Powermax 45 requires 240V50A, the rest of the machine Operates on 110V 30A 8." Z Travel Floor space 2' greater than work area.

Convert-A-Table easily changes from a CNC Router to a CNC Plasma cutter. This is a great option if you have very limited space and only need one function at a time. The disadvantages are that you only have one machine instead of 2 and these machines can not have a vacuum table system due to the conversion between router and plasma. The 48"X20" machine makes it possible to fit through a standard 36" door. With this heavy duty frame that can plow through wood with the robust 3-1/4HP router while the water table is sealed off. Remove the router table and you have the water table for plasma cutting. No other machine is designed to correctly do both Routing and Plasma cutting well. Conversion between the 2 functions takes less than 10 minutes.

Options

- | | |
|------------------------------------|---------------------------------|
| Velocity remote jog pendant | Vinyl Cutting head |
| Dust Control Computer Cab | Velocity touch digitizing probe |
| Increase Clearance Height to 12" Z | 3-D Tooling Kit |
| 56-D2 Razor Cardboard cutter | 57-Pen Router pen holder w/pens |

Hypertherm Plasma Cutters Upgrades

- | | | |
|--------------|--|--|
| Powermax 45 | Pierce 1/2" steel and cut up to 7/8" cut | Comes standard - Best option for most schools |
| Powermax 65 | Pierce 5/8" steel and cut up to 1" cut | Optional upgrade |
| Powermax 85 | Pierce 3/4" steel and cut up to 1-1/2" cut | Optional upgrade |
| Powermax 105 | Pierce 7/8" steel and cut up to 2" cut | Optional upgrade |

Most popular CNC Routers *The most common models used in education*

Each of the CNC Routers below are fully assembled, include control computer with arm, clamping kit, MDF Table top with T slot clamping kit, tool Touch Off, and tooling kit.



Titan Series CNC Router Models

The Titan Routers are cost effective heavy duty machines made of structural aluminum. Include: 3-1/4HP router, wrenches, Aluminum frame, dust hood, and starter set of bits can operate on 110V 20A 8.5" Z Travel The floor space is about 2' larger than the work area. This is a great model for upstairs and other installations requiring special handling since they are lighter weight than steel.

- TitanR 24" x 20"(fits through 36" door)
- TitanR 48" x 20"(fits through 36" door)
- TitanR 48" x 48"
- TitanR 48" x 96"
- TitanR 60" x 120"



Maker-Fab Series Router Models

Include: 3-1/4HP router, wrenches, welded steel frame, dust hood, and starter set of bits can operate on 110V 20A 8.5" Z Travel The floor space is about 2' larger than the work area.

- RMF 24" x 20"(fits through 36" door)
- RMF 48" x 20"(fits through 36" door)
- RMF 48" x 48"
- RMF 48" x 96"
- RMF 60" x 120"



HS48X48

HS Series Router Models

Standard model for education and small shop

Include: 3-1/4HP router, wrenches, welded steel, stand, dust hood, and starter set of bits can operate on 110V 20A The floor space is about 2' larger than the work area. HS Series routers feature Closed Loop Hybrid Servo Technology for reliable rapid speeds in excess of 500 IPM. 10.5" Z Clearance

Ideal for a serious cabinet making program.

- HS 24" x 24"
- HS 48" x 24"
- HS 48" x 48"
- HS 48" x 96"
- HS 60" x 120"
- HSFV-ATC 4' x 4' with 5HP & 8 position ATC
- HSFV-ATC 4' x 8' with 5HP & 8 position ATC
- HSFV-ATC 5' x 10' with 5HP & 8 position ATC

Optional Upgrades:

Vacuum Table systems includes pump & Table

- 24X24 Vac System upgrade 110V
- 48X24 Vac System upgrade 110V
- 48X48 Vac System upgrade 220V3PH
- 48X48 Vac System upgrade 110V
- 48X96 Vac System upgrade 220V3PH
- 48X96 Vac System upgrade 110V
- 60X120 Vac System upgrade
- If Vac Table Sys added later add
- 4" Fourth Axis
- 6" Fourth Axis
- Jog Pendant

Aluminum T-Slot Table

- 48X20 or 24 T-Slot Table upg.
- 48X48 T-Slot Table upgrade
- 48X96 T-Slot Table upgrade
- 60X120 T-Slot Table Upgrade

Note: High Frequency spindles are quieter and ideal if you plan to cut metals.

Spindle upgrades

- 2.2HP 1PH High Freq. spindle
- 5HP 3 PH High Freq. spindle
- 10HP 3 PH High Freq. spindle
- 5HP Manual quick change Spindle

Most popular CNC Plasmas *The most common models used in education*

Each of the CNC Plasma cutters below include a Torch Break Away system, Automatic Torch Height, integrated water table, CAD/CAM software, Hypertherm 45 Plasma system, and control computer with arm for a Turn-Key package just plug into your electric.



Titan Series Plasma Models

The Titan Plasma cutters are cost effective heavy duty machines made of structural aluminum and come standard with a water table. The floor space is about 2' larger than the work area. This is a great model for upstairs and other installations requiring special handling since they are lighter weight than steel.

- TitanP 24" x 20"(fits through 36" door)
- TitanP 48" x 20"(fits through 36" door)
- TitanP 48" x 48"
- TitanP 48" x 96"
- TitanP 60" x 120"



Maker-Fab Series Plasma Models

The Maker-Fab Plasma cutters are cost effective heavy duty machines made of a welded steel frame with integrated Water Table. The extra rigidity is great for handling the abuse of students and will last for many years.

- PMF 24" x 20"(fits through 36" door)
- PMF 48" x 20"(fits through 36" door)
- PMF 48" x 48"
- PMF 48" x 96"
- PMF 60" x 120"



HS Series Plasma Models

The HS-Series Plasma cutters are heavier duty machines made with a larger tubular welded steel frame with integrated Water Table. The extra rigidity is great for handling the abuse of students and will stand the test of time with 24/7 commercial use. It's Closed loop Hybrid Servo control assures accuracy at the fastest speeds.

- HSPB 24" x 24"
- HSPB 48" x 24"
- HSPB 48" x 48"
- HSPB 48" x 96"
- HSPB 60" x 120"

Our plasma tables have replaceable leafs that you can easily make by shearing steel so you won't need to buy expensive table parts and pay to ship them across the country.

Hypertherm Plasma Cutters Upgrades

Powermax 45	Pierce 1/2" steel and cut up to 7/8" cut	Comes standard - Best option for most schools
Powermax 65	Pierce 5/8" steel and cut up to 1" cut	Optional upgrade
Powermax 85	Pierce 3/4" steel and cut up to 1-1/2" cut	Optional upgrade
Powermax 105	Pierce 7/8" steel and cut up to 2" cut	Optional upgrade

Hypertherm Consumable Packages **SEE PAGE 18**

The Michelangelo 3D Modeler

Innovative CNC router designed for classroom use
TECH ED, DRAFTING, WOODWORKING, ART



**Maximum Fully Enclosed size
to fit through a 36" Door**

TRAVEL
X=35" Y=13.5" Z=8.5"
Z Clearance 6.5"



**Includes Computer, Vacuum table system
&
Dust collection system**

TOOLING

Router Wrenches.....1 Set
Collets.....1/4", 1/2"
Starter bit set and vacuum table gasketing

ELECTRICAL

Main Power..... 110V 20A
Spindle Motor.....3 1/4 HP 10K-21K RPM

Michelangelo Stepper Version

Michelangelo Hybrid Servo Version



Guitar Making CNC Router



<http://www.guitarbuilding.org/>



The LuthierMax Series of CNC routers was designed for guitar making in collaboration with engineers from Fender® Guitars (who are using this model) and www.guitarbuilding.org to make this machine student friendly and robust. Fixtures built into the table make it easy to machine your own guitar necks and bodies for both standard size and longer base guitars in your classroom. This is the largest fully assembled CNC router that fits through a standard 36" classroom door. Travels X49" Y20" Z8.5"

Floor space approximately 76' X 34". All models (except ATC model) use 110V normal wall outlet electric. *Servo & ATC models have a larger footprint that will not fit through the 36" door opening. Call for more info.*

LuthierMax CNC Router Models:

LuthierMax CNC Router 110V,20A
LuthierMax CNC Router Hy Servo
LuthierMax PRO with ATC CNC Router

LuthierMax Options:

Vacuum Table System
Guitar Making Class Start up kit
Guitar Making CNC Bit Kit

MITHEY SERIES

Machines for educational training, prototyping, design, and industrial production worldwide

MITHEY MILL

X - Travel 9" (23cm)
Y - Travel 5" (13cm)
Z - Travel 6.25"(15.88cm)
Table 2.75" X 13"
(7 X 33 cm)
110V 20A



MMSV Stepper Standard version
MMHY Hybrid Servo Standard version
MMSVB Stepper Ball Screw version
MMHYB Hybrid Servo Ball Screw ver.

Mitey Mill Options:

4" Vise
4" 4th Axis
10K RPM Spindle

MITHEY LATHE

X - Travel 4.25" (10.8cm)
Center Distance 8"(20cm)
Swing over bed 3.5" (8cm)
Swing over carriage 1.88"
(4.78cm)
110V 20A



MLSV Stepper Standard version
MLHY Hybrid Servo Standard Version
MLSVB Stepper Ball Screw version
MLHYB Hybrid Servo Ball Screw version

Mitey Lathe Options:

Deluxe QC tooling package
Threading capability
Knurling tooling

MITHEY WOOD LATHE

18"X 4" Capacity
(45 X 10 cm)
110V 20A



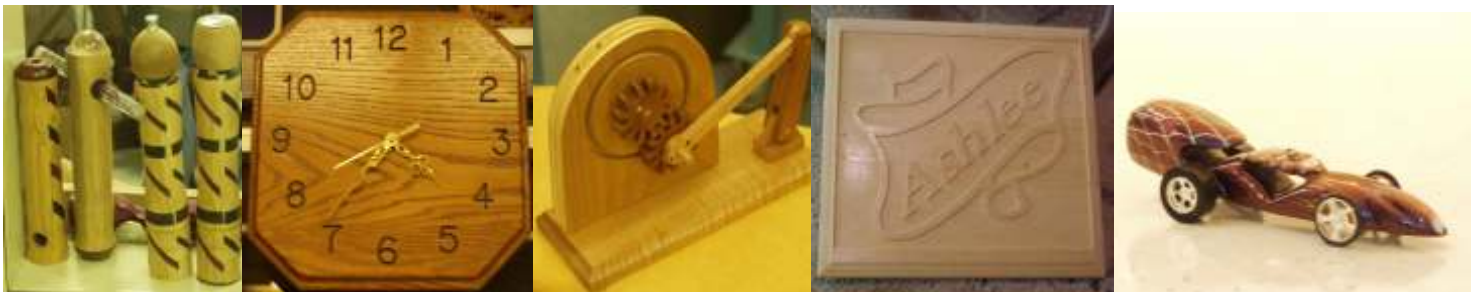
MWLS Stepper Version
MWLHS Hybrid Servo

MITHEY ROUTER

Travels
18"X x 9"Y x 6.5"Z
(45X x 23Y x 16Z cm)
110V 20A



MRLS Stepper Version
MRLHS Hybrid Servo



CIMBIOTIC FMS Robotic Work cell



Complete FMS system in one safe, fully enclosed work envelope. Can be integrated with other modules via a conveyor system.

Your students will learn:

- CNC Programming
- G-Codes
- CAD/CAM
- Robotics
- Flexible Manufacturing
- PLC programming
- Material Properties
- Pneumatics
- Interfacing

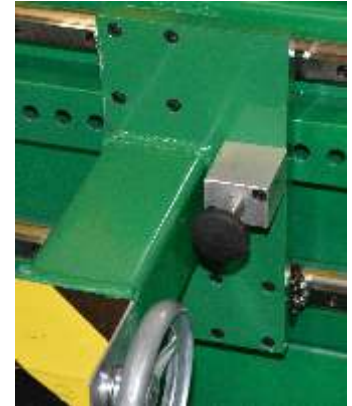
- CimBiotic Lathe Work Cell with Generic PLC
- CimBiotic Lathe Work Cell with Siemens PLC
- CimBiotic Lathe Work Cell with Allen-Bradley PLC
- CimBiotic 4 Axis Mill Work Cell with Generic PLC
- CimBiotic 4 Axis Mill Work Cell with Siemens PLC
- CimBiotic 4 Axis Mill Work Cell with Allen-Bradley PLC

CNC WOOD LATHE



WL4000

- * Cut up to a 40" X 10" Part
- * Hardened Profiled Rails
- * Spindle #2MT int Taper
- * Tailstock #2MT int Taper
- * Ball Drive Screws
- * Anti Backlash Nuts
- * 1 or 5 HP Spindle Motor
- * Ready for dust collector
- * Compatible with CAD/CAM
- * Uses G&M Codes
- * 36 Month On-Site warranty



WL4000 Positive Locking Tail Stock

Machines:

- WL4000 Standard Stepper 120V 20A
- WL4000HY Hybrid Servo 120V 20A
- WL4000PRO (faster & 5HP 3PH) 220V 30A 3PH

Used machines \$\$ CALL

Precision CNC Bed Mill

Choose from a 2.2, 5, or 10 HP Spindle



Enclosed
or
Open



Materials you can machine:

Almost anything

Steel

Aluminum

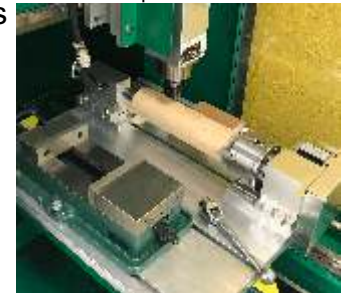
Titanium

Plastics

Brass

Wood

Shown with optional vice & 4th axis



Rigid Fixed Gantry with moving bed available in the following sizes:

- | | | |
|-------------|--------------|-------------|
| 2'X20"-2.2 | 3'X20"-2.2 | 4'X20"-2.2 |
| 2'X20"-5 | 3'X20"-5 | 4'X20"-5 |
| 2'X20"-10 | 3'X20"-10 | 4'X20"-10 |
| 2'X20"-5ATC | 3'X20"-5 ATC | 4'X20"-5ATC |
| Enclosure | Enclosure | Enclosure |

6"-4th Axis w/Tailstock Mister/Cooler
Optional Machinist kit with T-Slot clamping, 5" vise, & Collet set

Optional 4 Position ATC
Closed-Loop Hybrid Servo

Spindle options Collet style, Quick change, or Automatic Tool Changer Spindle

GET OLD MACHINES OUT OF THE JUNK PILE

We Service all brands

Stretch your budget

Unlike new equipment, upgrades usually do not come out of your own budget. Most upgrades are financed through other budgets including: district repair budgets; technology funds since we are changing the computer in the machine; or through special needs funds. Once these machines are upgraded, they will be much easier for a special needs student to be successful. Upgrades often make it possible for the vocational-technical supervisor to tap into funds that otherwise would not be available. Equipment purchased under Perkins can often be repaired under Perkins. Also, it is often much easier to get school boards to approve repairs on existing equipment than purchasing new equipment. Depending on the machine, most upgrades range from 1/2 to 1/20th of the replacement cost of a machine and will usually allow it to operate better than new.

CNC Upgrade Price: Includes everything needed - software, electronics, install, 18 month warranty, and training. Add CAM software and a modern PC computer with 2 USB 2.0 Ports.

Upgrade Older Forest Scientific Serial Velocity Controls to USB \$

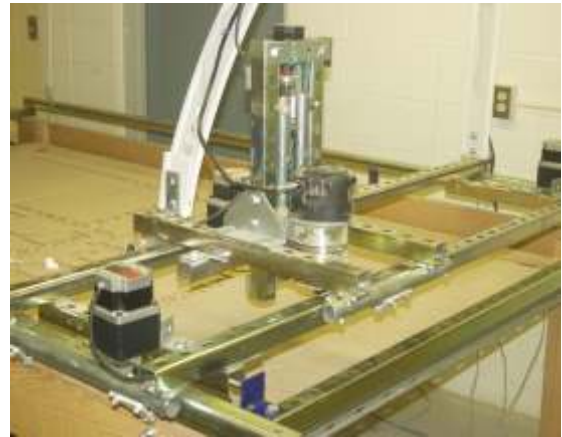
Upgrade Older Forest Scientific Pre-2009 USB Velocity Controls to current \$



Light Machines
CNC Router
VC-LMCR
Upgrade



Light Machines
Spectralight Mill
or Spectralight Lathe
Upgrade



All Shopbot Routers
VC-SHOPB Upgrade
OR
VC-SHOPBCL for Closed loop version



Light Machines
Pro Light Lathe or Mill
VC-PL
Upgrade



All Techno Routers
Gantry style & Davince
Under 2'X2'
VC-Techno
Upgrade

Techno LC Routers
Techno Plasma cutters

AXYZ Millenium Routers
AXYZ 4x4 & 4x8 Routers w/o ATC
AXYZ 4x4 & 4x8 Routers with ATC

PlasmaCAM

Torchmate

**IF YOU DO NOT SEE IT
HERE CALL FOR HELP**



For a fraction of replacement cost, update old DOS machines to Windows



All Phoenix/ Magnum/
Paxton Wood Lathes
VC-PMPPL
Upgrade



All Phoenix/ Magnum/
Paxton Routers VC-PMPPR
Upgrade
Vac pump



All Paxton Lathes VC-PPL
Upgrade

All Paxton Mills VC-PPM
Upgrade



D&M 3 or 4 & Lab Volt 5400 Mills
VC-DMM34 Upgrade

D&M 3, 4, or Lab Volt 5300 Lathe
VC-DML34 Upgrade



D&M 5 or Lab Volt 5500
VC-DML5
Upgrade



D&M 5, 6 or Lab Volt 5600
VC-DMM5
Upgrade



All Emco Compact 5 Lathes
VC-CP5L
Upgrade



Emco Compact 5 Lathes
If it has a Tool Turret
Add VC-CPTT



ALL Emco F1 Mills
VC-EF1M
Upgrade



All Denford Routers
VC-DFMR
Upgrade



All Denford MicroMills,
Scantek, LabVolt, B&G,
& Midwest
VC-DFMM
Upgrade

All Denford MicroLathes,
Scantek, LabVolt, B&G,
& Midwest
VC-DFML
Upgrade



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1-800-956-4056

www.forestsscientific.com

Most Common Metric Screw & Tap Drill Sizes

Tap Size	Diameter (in)	Diameter (mm)	Thread count (TPI)	Thread pitch (mm)	Tap drill size
M2X0.4	0.0787	2.0000	≈64	0.400	1.6 mm
M2.5x0.45	0.0984	2.5000	≈57	0.450	2.05 mm
M3x0.5	0.1181	3.0000	≈51	0.500	2.5 mm
M4x0.7	0.1575	4.0000	≈37	0.700	3.3 mm
M5x0.8	0.1969	5.0000	≈32	0.800	4.2 mm
M6x1	0.2362	6.0000	≈26	1.000	5 mm
M7x1	0.2756	7.0000	≈26	1.000	6 mm
M8x1	0.315	8.0000	≈26	1.000	7 mm
M8x1.25	0.315	8.0000	≈21	1.250	6.8 mm
M10x1.5	0.3937	10.0000	≈17	1.500	8.5 mm
M10x1.25	0.3937	10.0000	≈21	1.250	8.8 mm
M10x1	0.3937	10.0000	≈26	1.000	9 mm
M12x1.5	0.4724	12.0000	≈17	1.500	10.5 mm
M12x1.75	0.4724	12.0000	≈15	1.750	10.2 mm
M14x1.5	0.5512	14.0000	≈17	1.500	12.5 mm
M16x2	0.6299	16.0000	≈13	2.000	14 mm

Most Common Imperial English Screw & Tap Drill Sizes

Tap Size	Diameter (in)	Diameter (mm)	Thread count (TPI)	Thread pitch (mm)	Tap drill size
#4-40	0.1120	2.8448	40	0.635	#43
#6-32	0.1380	3.5052	32	0.794	#36
#8-32	0.1640	4.1656	32	0.794	#29
#10-32	0.1900	4.8260	32	0.794	#21
#10-24	0.1900	4.8260	24	1.058	#25
1/4-20	0.2500	6.3500	20	1.270	#7
1/4-28	0.2500	6.3500	28	0.907	#3
5/16-18	0.3125	7.9375	18	1.411	F
3/8-16	0.3750	9.5250	16	1.588	5/16 in
7/16-14	0.4375	11.1125	14	1.814	U
1/2-13	0.5000	12.7000	13	1.954	27/64 in
9/16-12	0.5625	14.2875	12	2.117	31/64 in
5/8-11	0.6250	15.8750	11	2.309	17/32 in
3/4-10	0.7500	19.0500	10	2.540	21/32 in

DIGITAL FABLAB PRODUCTS FOR STEM, CAREER, & TECHNICAL EDUCATION

Forest Scientific Corp and our dealer network carry many products that are not in this catalog.

If you have a need for:

- CAD or CAD/CAM software
- Lasers
- 3D Printers
- Custom sized or special purpose machines
- Training
- Service on existing equipment

Call 1-800-956-4056

FREE posters available on request

- Drill & Tap size (like on previous page)
- Ruler reading
- Fractions to decimals
- Various safety posters
- G-Codes
- more being added

Call 1-800-956-4056

Like Forest Scientific Corporation of FaceBook to receive special FaceBook only offers and learn about training and other special events.

Dust Collection Package



Dust collection system ideal for CNC Router

- Includes
- dust collector 1250 CFM 120V
- 100' hose
- 4 clamps



Large Format routers

Used Upgraded Machines

Turnkey packages with control computer and CAD/CAM - All lathes include 1 seat of Mastercam all mills include 40 seats of Vectric CAD/CAM



18" CNC WOOD LATHE

YOUR CHOICE CNC MILLS OR LATHES
\$CALL vs \$11,999.00
FOR METAL, PLASTIC, OR WAX

FIRST COME, FIRST SERVE.

All of these machines have been rebuilt and upgraded. The price includes, delivery, on-site training, and an 18 month warranty. With the upgrades these machines are better than when they were new. CALL FOR DETAILS.

Heavy Duty Versions



4 Available



2 Available



1 Available



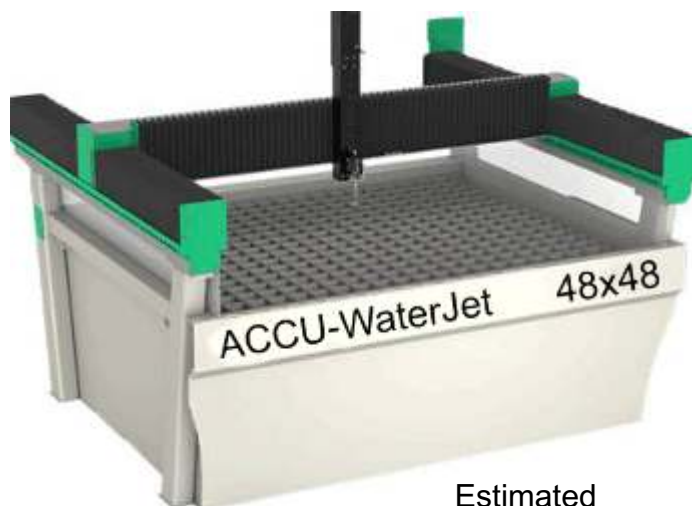
4 Available



New WaterJet Cutters



Call for MiteyJet information
 Low cost WaterJet



Model	Travel	Estimated Floor Space	Price
ACCU48X24 Waterjet 30	50" X 26" Y	12'X12'	
ACCU48X48 Waterjet 30	50" X 50" Y	12'X14'	
ACCU48X96 Waterjet 30	50" X 98" Y	12'X18'	

CAD/CAM SOFTWARE OPTIONS

Please consult with your dealer to find the best package to meet your needs. They may have options not listed here. These prices apply to education only.

For Lathe, Mill, Router, Plasma **MasterCAM** *Educational License with a machine*

Single User with machine or upgrade purchase	\$ CALL	Additional Educational Lab Licenses	\$CALL
Upgrade from earlier version	\$ CALL	Mastercam University	\$CALL

EnRoute, for Routers, Plasmas, & Mills

Classroom License - Please specify how many stations

New seats of EnRoute 6

EnRoute Plus with kerf comp 2D	\$ CALL
EnRoute Pro with kerf comp 3D	\$ CALL

Upgrade pricing from EnRoute 3, 4, or 5 to EnRoute 6

3, 4, or 5 Pro to EnRoute 6 Pro	\$ CALL
3, 4, or 5 Plus to EnRoute6 Plus	\$ CALL
3, 4, or 5 Plus 2D to EnRoute 6 Pro 3D	\$ CALL
Upgrade from EnRoute 6 Plus to 6 Pro	\$ CALL

Vetric CAD/CAM for CNC Routers & Mills 40 educational seats in a single lab or classroom

2D Products

Cut2D Desktop for 2x2 or smaller work area	\$ CALL
Cut2D Pro	\$ CALL
Vcarve Desktop for 2x2 or smaller work area	\$ CALL
VCarve Pro	\$ CALL

3D Products

Aspire	\$ CALL
Cut3D	\$ CALL
PhotoVCarve	\$ CALL

VECTOR ART - PREMADE ART 2D for LASERS, Mills, Routers & Plasma 3D for Routers & Mills only Instant Success for your students

2D Products

Vector Art 1 over 6K images	\$ CALL
Vector Art 2 over 5K images	\$ CALL
Vector Art 3 over 6K images	\$ CALL
PlasmaArt Collection	\$ CALL

3D Products

Vector Art 3D Animal Collection	\$ CALL
Vector Art 3D Flourishes and Ornaments	\$ CALL
Vector Art 3D Symbols & Icons	\$ CALL
Vector Art 3D Dasch's fine cuts	\$ CALL

CorelDraw Academic Current Version

For Lasers

CorelDraw Single seat
Corel Draw 100 Seat License

Corel Draw 50 Seat License
Corel Draw 250 Seat License

Curriculum and DVD Training available for all above CAD/CAM packages

Note: Software purchased through Forest Scientific Corporation or an authorized dealer of Forest Scientific Corporation will have Free installation and support assistance. If software is purchased directly from the Vendor or online, we will offer support at a fee. Realize, the software from another vendor will need customization and configuration to work properly.

Surfcam and Rhino users, please call for special pricing to upgrade to current products

Hypertherm Powermax Consumables

Essentials consumables kits

- 851512 Powermax 45 XP Essential consumables kit
- 851467 Powermax 65 Essential consumables kit
- 851470 Powermax 85 Essential consumables kit
- 851473 Powermax 105 Essential consumables kit
- 851476 Powermax 125 Essential consumables kit

PowerMax 45 -85 Cutting Consumables

- 220857 Swirl Ring 45-85A
- 220953 Ohmic retaining Cap 45-105A

- 220817 Shield 45-85A
- 228763 Bulk pack of 10 220817 Shields

- 220941 Nozzle Fine Cut 30-45A Multiples of 5
- 228765 Bulk pack of 25 220941 nozzles

- 220842 Standard Electrode 45-105 Multiples of 5
- 228767 Bulk pack of 25 220842 standard electrodes

- 220777 Copper Plus Long life Electrode Multiples of 5
- 22893 Bulk pack of 25 220777

Powermax 65

- 220819 Nozzle 45-65A Multiples of 5
- 228759 Bulk pack of 25 220819 nozzles

PowerMax 85

- 220816 Nozzle 65-85A Multiples of 5
- 228760 Bulk pack of 25 220816

Powermax 105 Only

- 220993 Shield Powermax 105
- 228799 Bulk pack of 10 Shield Powermax 105

- 220990 Nozzle 105A Multiples of 5
- 228797 Bulk pack of 25 220990

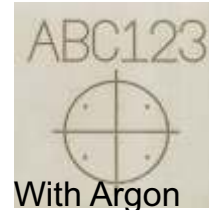
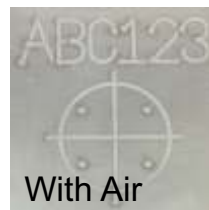
- 220994 Swirl Ring 105A

Powermax Cutting Consumables Estimated Annual Supply

- 11-4500 Powermax 45 XP consumables kit 851512, 228767, 228765
- 11-6500 Powermax 65 Essential consumables kit 851467, 228767, 228759
- 11-8500 Powermax 85 Essential consumables kit 851470, 228767, 228760
- 11-1050 Powermax 105 Essential consumables kit 851473, 228767, 2287797

Powermax 45XP Marking consumables

- 420542 Shield
- 420415 Nozzle



Powermax 45XP Marking examples



Shield



Ohmic Retaining Cap



Nozzle



Electrode



Swirl Ring

CNC Accessories

Most common educational use excerpts from our tooling catalog

Part #	Cutting Dia	Shank Dia	Length	Price
--------	-------------	-----------	--------	-------

Straight bottom cutting Panel cutting bit

49-SST198 Str. 2 flute bit	1/8"	1/4"	2-1/2"	
49-SST220 Str. 2 flute bit	1/4"	1/4"	2-1/2"	
24-102-0885P Str. plunge bit	1/2"	1/2"	2-1/2"	

Economy Upspiral Flat bottom end mill

24-106-0202 1/8" Up	1/8"	1/4"	2"	
49-SRU118 1/4" Up	1/4"	1/4"	2-1/2"	
49-SRU153 1/2" Up	1/2"	1/2"	3"	

Small Bits (BN=ball nose FN=flat nose)

31-VSC3dfn-500 2 flute	1/64"	1/8"	1-1/2"	
31-VSC3dbn-500 2 flute	1/64"	1/8"	1-1/2"	
31-VSC3dfn-503 2 flute	1/16"	1/8"	1-1/2"	
31-VSC3dbn-503 2 flute	1/16"	1/8"	1-1/2"	
31-VSC3dfn-501 2 flute	1/32"	1/8"	1-1/2"	
31-VSC3dbn-501 2 flute	1/32"	1/8"	1-1/2"	

Down Spiral bits (prevent chipping on top)

49-SRD203	1/8"	1/4"	2"	
49-SRD218	1/4"	1/4"	2"	
49-SRD253	1/2"	1/2"	3"	

Plungable round over bits

49-SE1568 1/8" radius	1/8"	1/4"	2"	
49-SE1572 1/4" radius	1/4"	1/4"	2"	
49-SE1580 3/8" radius	1/2"	1/2"	2-1/4"	
49-SE1582 1/2" radius	1"	1/2"	2-1/4"	

Compression up/down spiral

Item #	A	B	Shank	\$
24-107-0402	1/4"	7/8"	1/4"	
24-107-0815	1/2"	1-1/8"	1/2"	

Mitey Series Accessories

Mill

41-7402	1/8	End Mill	3/8 shank	
41-7403	3/16	End Mill	3/8 shank	
41-7404	1/4	End Mill	3/8 shank	
41-7406	3/8	End Mill	3/8 shank	
41-7400	6 piece set	1/8, 5/32, 3/16, 1/4, 5/16, 3/8		
41-3551	Milling Vise	2"		
35-428-9020	Milling Vise	4"		
41-3079	3/8	End Mill Holder		
41-6079	1/4	End Mill Holder		
41-6081	1/8	End Mill Holder		
41-3020	5/32	Hex T-driver		
41-3013	Step block	hold down set		
41-1072	1/4"	drill Chuck, with access		
41-32540	High-speed	Belt mill or lathe		

Lathe

41-1191	Lathe Live Center			
41-11940	60° Carbide tool bit			
41-11950	Right Hand, HSS (1/4" SQ)			
41-11960	Left Hand, HSS (1/4" SQ)			
41-3086	Cut Of Tool Blade			
41-3002	Cut-off Tool Holder & Tool			
41-3003	1/4"	Tool Post		

Specialty Router Tooling

56-D2	Razor Cardboard cutter			
57-Pen Router Bit with pens	1/2"	Shank		
57-Replacement Pen set				
57-Diamond Drag Engraving Bit	1/4"	Shank		
57-Diamond Drag Engraving Bit	1/2"	Shank		
11-328	Vinyl Cutting head			

Individual 3-D Router Bits

Part #	Cutting Dia	Shank Dia	Length	Price
49-SRU103 (Flatnose)	1/8"	1/4"	2"	
49-SBNU125 (Ballnose)	1/8"	1/4"	2"	
49-SRU123 (Flatnose)	1/4"	1/4"	3"	
49-SBNU250 (Ballnose)	1/4"	1/4"	2-1/2"	
31-SPCLE250(Ballnose/)	1/4"	1/4"	4"	
49-SRU153 (Flatnose)	1/2"	1/2"	3"	
49-SRU167 (Flatnose)	1/2"	1/2"	4"	
49-SBNU500 (Ballnose)	1/2"	1/2"	3"	
31-SPCLE500 (Ballnose)	1/2"	1/2"	4"	

HSD & ATC Tool Holders & Collets

52-A1741H0001	ISO30 ATC Tool Holder			
52-7501A9300	ISO 30 tool forks			
55-04232-1/8	ER32 Collet 1/8"			
55-04232-1/4	ER32 Collet 1/4"			
55-04232-1/2	ER32 Collet 1/2"			
55-04232-05	ER32 Collet 5MM			
55-04616	ER32 Wrench			
55-04615	ER25 Wrench			
55-04225-1/8	ER25 Collet 1/8"			
55-04225-1/4	ER25 Collet 1/4"			
55-04225-1/2	ER25 Collet 1/2"			

Lettering V-Groove bit CUT DIA Shank

49-SLIN062	10 Degree	1/16"	1/4"	
24-132-9002	60/90 Double ended bit	1/4"		
49-SCVG260	90 Degree	1/4"	1/4"	
49-SCVG264	60 Degree	1/4"	1/4"	
49-SE1502	90 Degree	1/2"	1/4"	
49-SE1503	90 Degree	1/2"	1/2"	
49-SE1560	60 Degree	1/2"	1/2"	

Spoil Board Bit

For resurfacing your MDF table or spoil boards

49-spoil-25	2spoil board bit			
49-spoil-insert	inserts 10 pack			
49-spoil-screw	replacement screw			
49-spoil--wrench	replacement wrench			

Router Collets/ Accessories

1/2" Router Collet	34-42950
1/4" Router Collet	34-42999
3/8" Router Collet	34-42975
3HP Porter Cable Rout Wrench	34-42596
53-RB102	1/4" to 1/8" Collet reducer
49-SE6390	1/2" to 1/8" Collet reducer

CNC Router/Wood Lathe Accessories

Vacuum Table Gasketing / hold down supplies

Router Gasket (Forest Scientific Vac pump	11-800
Router Gasket (softer for Venturi Magnum routers)	11-801
1/16"X1/2" Adhesive router gasket	23-8694k11
1/8"X1/2" Adhesive router gasket	23-8694k16
3/16"X1/2" Adhesive router gasket	23-8694k17
1/4"X1/2" Adhesive router gasket	23-8694k12
Double sided Masking tape	23-76405A13

CNC Wood Lathe tooling

FS Wood Lathe Tool	30-46-415
Universal Carbide Cutter (magnum)	28-700
HSS Cutter Big Lathe (magnum)	28-720
HSS Cutter Small Lathe (magnum)	28-735
Modify HSS holder for carbide	11-901

Replacement parts for Magnum/Phoenix

Replacement Venturi	29-NZH113BS-T01-T02
Replacement Flexi motor coupling	11-425
Phoenix EZM Belt	32-2L200
Limit Switches (magnum)	39-SW128-ND

CRP Clean Room Metal Torch



Cut:
Steel
Aluminum
Copper
Brass

**Cost
Effective
Alternative
to a
\$600K Laser**

Fully Enclosed

Run in a Clean Room

**Cut Steel Faster than a WaterJet
with Lower Operational Cost**

110 V or 240V operation requires compressed air
Closed-Loop Hybrid Servo Control System
Downdraft grid table and ports to exhaust fumes outside or to a filtration system
Automatic torch height
Automatic voltage detection, current set from computer
Includes fine marking, and standard cutting consumables

Model	Travel	Price
CRP2418	24" X 18" Y	
CRP3618	36" X 18" Y	
CRP48X24	48" X 24" Y	

Optional in room filtration system
Optional ultra quiet dry air compressor

Perfect for an Engineering Lab

Capabilities:
Near laser quality fine cutting up to 1/4" steel
Able to cut up to 5/8" steel
Low resolution metal marking



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Computerized tools for transforming ideas into reality.