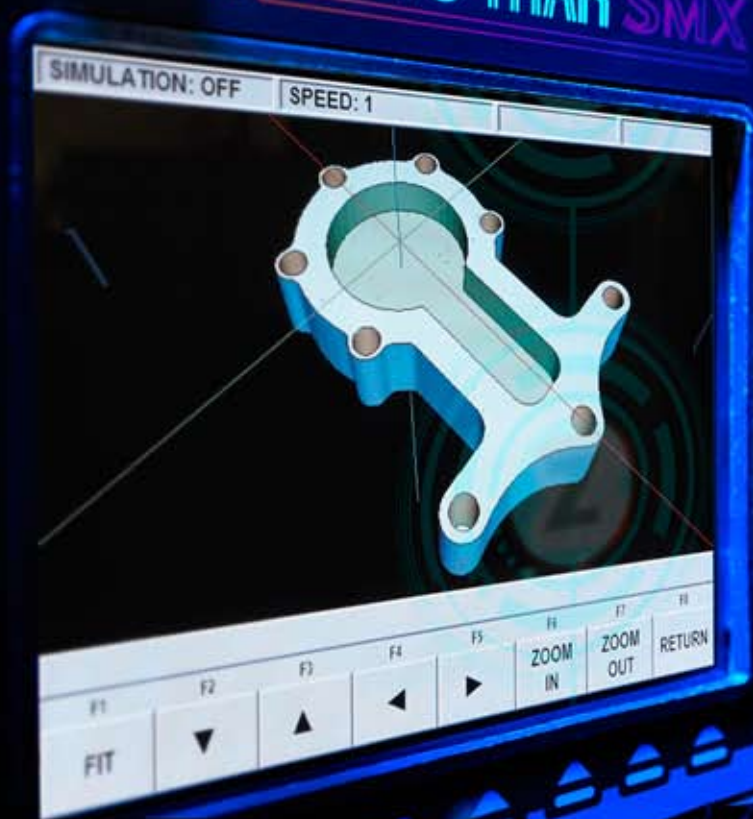


**XYZ**  
Machine Tools

CATALOGUE  
2016-17

PROTO TRAK<sup>SMX</sup>



- XYZ ProtoTRAK Turret Mills
- XYZ ProtoTRAK Bed Mills
- XYZ 2-OP
- XYZ LPM Machining System
- XYZ ProTURN Lathes
- XYZ Vertical Machining Centres
- XYZ High Speed VMC
- XYZ Super Heavyweight VMCs
- XYZ Turning Centres
- XYZ Extra Large Lathes
- XYZ Manual Machine Tools

XL Lathes and  
Manual Machines

Turning Centres

Vertical Machining  
Centres

ProTURN Lathes

ProtoTRAK Milling

The Company



# XYZ Machine Tools

Welcome to the latest  
XYZ Product Catalogue.

Please remember that each and every  
machine tool within this Catalogue has  
been designed and built to be  
**‘the very best in its class’**,  
and all of our machine tools  
are backed up with our first rate  
**XYZ Customer Support Teams.**



*N Atherton*  
Nigel Atherton  
MANAGING DIRECTOR

Visit the website to see the video



**XYZ 30 years in the making**  
Nigel Atherton who formed XYZ in  
1984 sees it like this.  
**Duration: 3 min 55 sec**



*Inside the Devon Showroom  
and Training Centre.*



*The 18000 sq ft Parts Department with over  
£1.5 million of parts held in stock.*



*The largest supplier of CNC into the UK.*



*The XYZ Devon  
factory recently  
enlarged to 92000 sq ft*

*XYZ holds over 300 machine  
tools in UK stock, ready for  
delivery and installation*



When you commit to an XYZ  
product, XYZ commits to you.

This means that while your machine  
tool has the support of the  
**XYZ Spares Department**,  
and **XYZ Service Team**,  
you will be backed up by the  
free support of the  
**XYZ Applications Training Team**  
and the free  
**XYZ Programing Helpline**  
for as long as you need it.

**Free ‘Siemens VMC’ training at one of  
the XYZ UK Training Centres.**



*On site ‘ProtoTRAK®’ training is available.*





# XYZ Service Plans

Most vehicle owners, even non-engineers, understand that routine maintenance is required for smooth, trouble-free, running. The same applies to machine tools, all machine tools. That's why XYZ provides tailor-made Service Plans for all of its machine tools. To learn about the details of the Service Plan that fits your machine tools, please call us or visit [www.xyzmachinetools.com](http://www.xyzmachinetools.com)

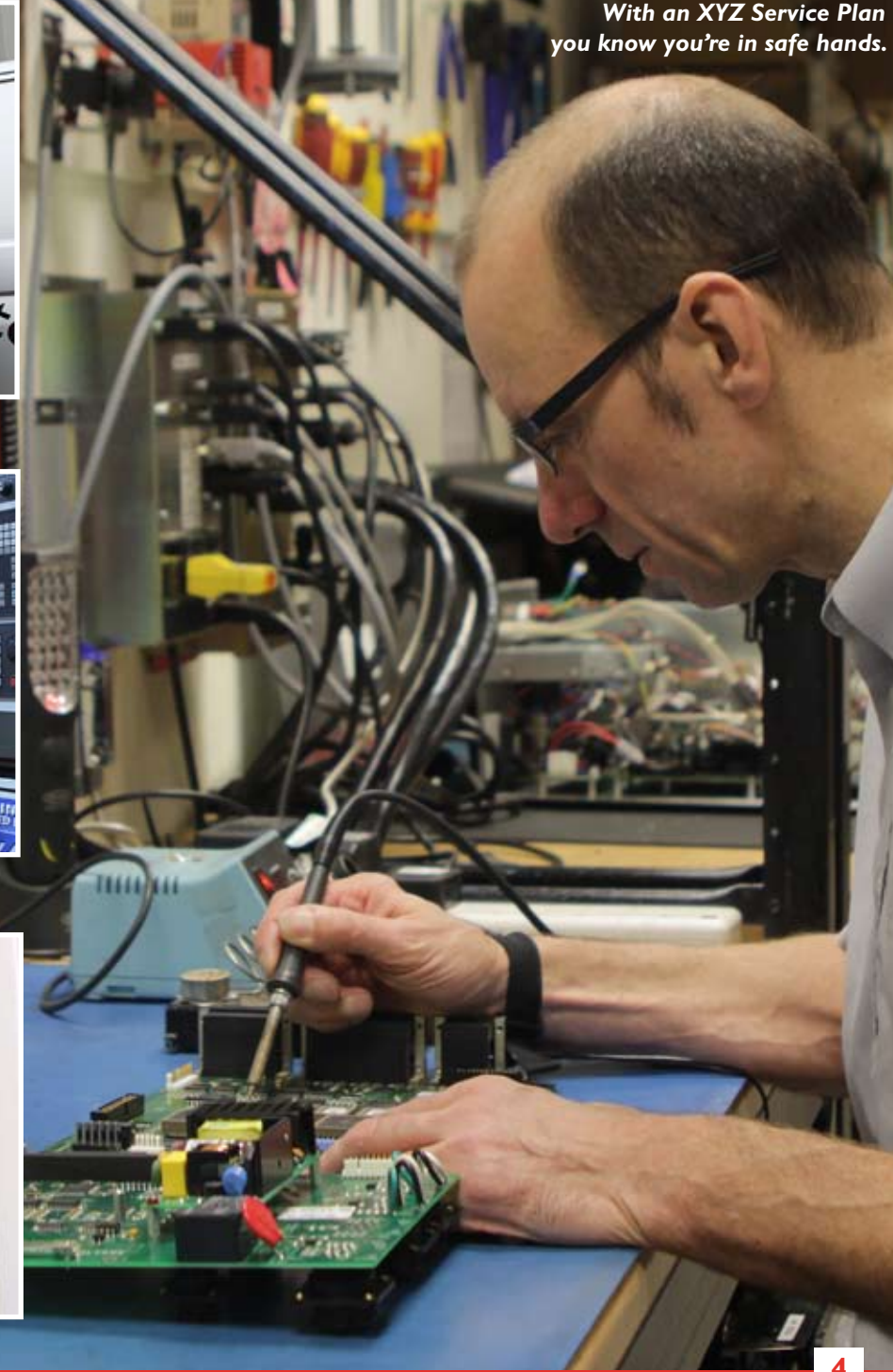


The XYZ Servicing Handbook - your personal passport to stress-free machine tool operation.

There are five types of XYZ Service Plans to ensure the perfect running of your machine tool. The type of Service Plan you need depends on which machine tools you have purchased.

- **ProtoTRAK Mills and XYZ 2-OP**  
**25 point Annual Service**
- **ProtoTRAK Lathes**  
**25 point Annual Service**
- **Mini Mill, LPM**  
**and Machining Centres**  
**25 point Annual Service**
- **Turning Centres**  
**25 point Annual Service**
- **XL and Oil Country Lathes**  
**25 point Annual Service**

*These XYZ Service Plans are completely optional, in the same way as regularly servicing your car is optional.*



With an XYZ Service Plan you know you're in safe hands.



## XYZ Price Promise

We believe above all in fairness and treating customers as we would like to be treated.

You can rest assured that the price you pay is the price every company pays.... Big, Small, New or Regular every customer pays the same.

Our price negotiation policy is simple and straightforward. XYZ promises that everyone gets our best price, automatically, every time.

*N Atherton*

Nigel Atherton  
MANAGING DIRECTOR



- XYZ Machine Tools delivers an average of 1000 machine tools to UK customers every year.
- XYZ Devon holds over £1.5 million of spare parts in its 18000 sq ft Parts Department.
- At any one time XYZ has 300 machine tools in stock ready for delivery and installation.
- XYZ has six Showrooms and Training Centres strategically located across the UK.
- All XYZ machine tools are fully-supported by the XYZ UK Service Team to keep you 'up and running' at all times.
- Customers receive free training at an XYZ Centre and have free lifelong access to the XYZ Programing Support Helpline.



92,000 ft² UK factory



18,000 ft² parts department



## The people

When you buy an XYZ machine tool you automatically get XYZ Team Support. That's a UK team of hand-picked people dedicated to keeping your business at the top. This team is trained and resourced to make sure you get the very best from your XYZ machine tools. And it is a team that you can count on at any time.

## XYZ across the UK

**XYZ DEVON Main Factory and Administration**  
Woodlands Business Park, Burlescombe, Tiverton, Devon. EX16 7LL

**XYZ BLACKBURN**  
Thwaites Close, Shadsworth Industrial Estate, Blackburn, Lancashire. BB1 2QQ

**XYZ NUNEATON TECHNICAL CENTRE**  
5/6 Tungsten Court, Hemdale Business Park, Nuneaton. CV11 6GZ

**XYZ SHEFFIELD (WNT Showroom)**  
Sheffield Airport Business Park, Europa Link, Sheffield. S9 1XU

**XYZ LIVINGSTON**  
Opening soon.

**XYZ LONDON**  
Meridian Business Park, Fleming Road, Waltham Abbey, Essex. EN9 3BZ



ISO 9001



## The XYZ Sales advisors

### Who's your XYZ Sales Advisor ?

Visit the XYZ website at [www.xyzmachinetools.com](http://www.xyzmachinetools.com) and click on the map to see who your Sales Advisor is. Talk to the experts and learn how to maximise your low volume and prototype production with the very best technology from ProtoTRAK and Siemens.



# XYZ Case Studies

With over 30 years of history, XYZ has supplied 1000s of machine tools to a lot of engineering businesses and for many different reasons. Here is a taster of some of the experiences of XYZ customers. We hope these stories are of interest and may inspire you to investigate how XYZ can help your business develop. Visit [www.xyzmachinetools.com](http://www.xyzmachinetools.com) to see the most recent Case Studies or to see the XYZ 2-OP video.

Visit the website to see the video



**XYZ 2-OP double your profits**  
A true story filmed at PTG in Plymouth.  
**Duration: 3 min 47 sec**

## Keeping Warbirds in the air

This is the story of how Eye Tech Engineering, and its owner's love of flying, kept some of the most precious WW2 aircraft in the air. The XYZ 2-OP played a pivotal role in the business, which is now split 50/50 between the original subcontracting, and restoration of iconic Rolls-Royce Merlin engines and parts for the Vintage Aircraft industry.



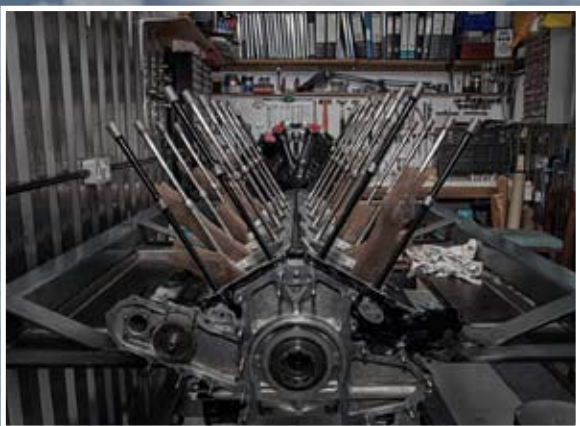
The iconic Rolls-Royce Merlin engine awaiting rebuild.

Maurice Hammond of Eye Tech Engineering flying one of his P51 Mustangs.



Leah Young operating the XYZ 2-OP.

A partly refurbished Merlin engine.



### Specialist lighting



#### MKB Engineering

Supplying bespoke lighting systems to theatres, factories, offices and high-end domestic customers.

### Sub-contracting



#### Bernard Holmes Precision

We can now meet the demands of customers, who in many cases want parts machined that day.

### Training



#### BEMA

BEMA creates its own in-house training facility for member and non-member companies.

### Automotive



#### Jenvey Dynamics

By having virtually everything under our direct control we are able to react much more effectively to customers.

### Motor sport



#### Julian Godfrey Eng'g

The power behind the throne, these XYZ machines give us much more control over design and manufacture.

### Innovative adventure



#### Gilo Industries

Gilo Cardozo MBE of Gilo Industries has created the world's first fully CNC'd paramotor which Bear Grylls flew over Everest.

### Aerospace and more



#### Aerotech Precision

An unusually comprehensive in-house CNC milling and turning service from the very small to the very large.

### Metal Presses



#### Crabtree of Gateshead

Est. over 100 years ago Crabtree turn raw steel and cast iron into multi-million pound metal presses.

### Toolmaking



#### BK Tooling

Aiming for 10 micron tolerance and to remove hand finishing of moulds and electrodes completely.

### Sub-contracting



#### Clayden Precision

The advantages of the y-axis on the Compact Turn 52 LTY machine all made perfect sense."

### Custom bikes, and more



#### Lamb Engineering

Eclectic is an often used word, but in the case of precision sub-contractor Lamb Engineering it is one that fits perfectly.

### Vacuum pumps



#### HiVac

This machine allows us to achieve excellent surface finishes. The axis travels are also fantastic especially the one metre travel on the Y-axis".

### Motor Sport



#### Omex Technology

XYZ gives Omex the confidence to expand with employee numbers now doubled.

### Motor sport



#### Nova Racing

Nova Racing puts the motion into motorsport and now every part we make goes through the XYZ 1060 HSVMCs.

### Cast products



#### Bridport Foundry

Managed growth at the Foundry with a perfect transition to the new ProtoTRAK control.





## Introducing the **XYZ** thoroughbreds, each one the best in its class.

Here at **XYZ** we have been developing, testing, and refining our range of machine tools for over 30 years. Our winning principles of combining outstanding build quality with the world's best control systems, namely ProtoTRAK® and Siemens, has seen the **XYZ** product range become the nation's first choice for prototype and low-volume production. But that's just the start of it, because when you combine great value products with excellent support its easy to see why **XYZ** has grown to be the largest supplier of CNC machine tools in the UK. So here it is, the finished article, the **XYZ** range, each one the very best in it's class.



**XYZ Manual Mills, Lathes and Grinders**



**XYZ ProtoTRAK® EMX Turret Mill**  
1 Model available

**XYZ ProtoTRAK® SMX Turret Mills**  
2 Models available



**XYZ ProtoTRAK® SMX Bed Mills**  
4 Models available



**XYZ ProTURN® Lathes**  
7 Models available



**XYZ Prototrak® LPM system**  
1 Model available



**XYZ Mini Mill 560**  
1 Model available



**XYZ Vertical Machining Centres**  
3 Models available



**XYZ High Speed VMC**  
1 Model available



**XYZ Turning Centres**  
4 Models available



**XYZ Heavyweight Vertical Machining Centres**  
3 Models available



**XYZ XL & Oil Country Lathes**  
5 Models available



# Get more from your XYZ machine tool with the XYZ Training Courses

“Unleash the full power of your ProtoTRAK® and Siemens controls with our Advanced Training Days”

Mike

MIKE CORBETT - XYZ APPLICATIONS MANAGER

## PROTOTRAK® Training Courses

When you buy any new XYZ ProtoTRAK® Mill or XYZ ProTURN® Lathe you also get full UK Support and that includes the FREE 'Standard Training Option'.

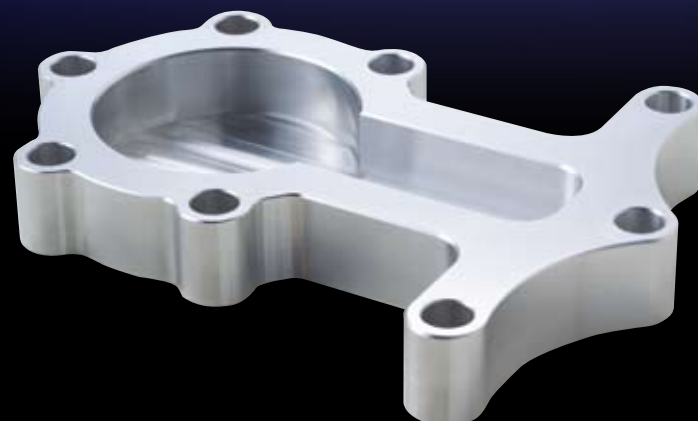
### ProtoTRAK Milling and Turning Training Standard Training Option - FREE

One free training day for a maximum of three people at any XYZ Centre with access to the XYZ Telephone Support Lines on completion.

#### Training On-Site

Training at your own site can be arranged at a cost for a maximum of three people. These courses are very client focused and offer a quick way to get you up and running on the jobs you produce.

*By the end of your 'Advanced Training Days' complex components like this will be a real doddle, programed within minutes.*



After you've completed your 'Standard Training' you get access to the XYZ Telephone Support Lines should you need it and there's always the prospect of advanced training courses for the future.

#### Advanced Training

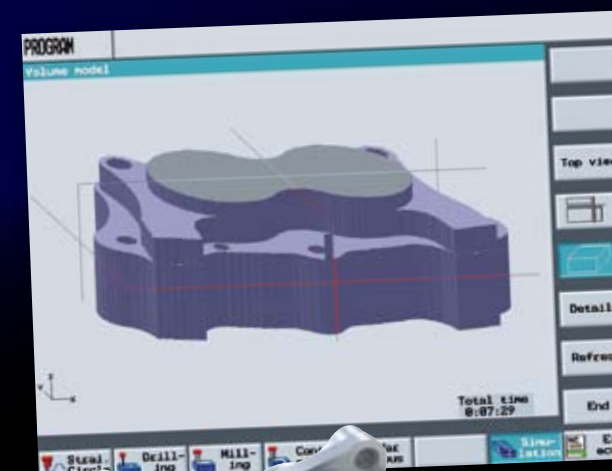
Unleash the full power of your ProtoTRAK and Siemens controls with our Advanced Training Days available at any XYZ centre. These courses have been developed for existing ProtoTRAK users who want to maximise the performance of their control and to highlight features that may not be used regularly that will open up the full potential of ProtoTRAK and improve workflow for customers.



## SIEMENS Training Courses

When you buy any new XYZ Machining Centre or Turning Centre you get the FREE 'Standard Training Option'. After completing your 'Standard Training' you get access to the XYZ Telephone Support Line should you need it.

This free, three days training starts with the first two days at an XYZ Centre, followed by a period of time to allow you to put into practice all that has been learnt so far. This 'breathing space' in the training course allows the 3rd and final day to be used either as a 'refresher course', or as a more 'advanced training day' based on the aspects that have now been learnt.



*Complex components like this brake caliper, can easily be programed after three days 'Standard Training' by most experienced engineers with no previous CNC experience.*

### Siemens ShopMill and ShopTurn Training Standard Training Option - FREE

Three **free** training days on Vertical Machining Centres and Turning Centres for a maximum of three people at any XYZ Centre. Please note the first two days training is followed by a 'breathing space' before the final days training. Access to the XYZ Telephone Support Lines on completion.

#### Training On-Site

Training at your own site can be arranged at a cost for a maximum of three people. These courses are very client focused, and offer a quick way to get you up and running on the jobs you produce.

#### Advanced Training

Unleash the full power of your control with our 'Advanced Training Days' available at any XYZ UK Centre. These are courses designed for existing users who want to get more from their control and brush-up on features they don't often get to use. Advanced Training can also focus on particular functions of the control specifically to improve your current production work flows.

*Most engineers can easily produce a simple component featuring bolt hole tapping and metal removal within the first few hours of the 'Standard Training'.*



*With five axis capability and an Advanced Training course complex components like this can be realised in just one-hit.*

Training is available at any of the 6 XYZ Centres across the UK.



### Training & Applications Team



All of the XYZ Training and Applications Team have years of experience and are always up to speed with the latest developments from ProtoTRAK and Siemens. These are the guys that will make your training experience an enjoyable one.

If you would like to know more about the XYZ Training Courses, please call 01823 674200 and ask to speak to the Training Department.



# PROTOTRAK®

the ultimate  
in easy to  
use CNC.

The ProtoTRAK® control was designed from the ground up to be the 'easy to use' control.

The current range of ProtoTRAK controls for the mill or lathe is simply the best technology solution for small batch and prototype production available today.

Program at the control in minutes or use ProtoTRAK offline software, DXF or parasolid converter options. Alternatively read in G code generated programs from a CAM system.



Available on a  
range of mills,  
lathes and the  
LPM machining  
system.



**XYZ ProtoTRAK®  
EMX Turret Mills**  
1 Model available  
Guards removed for clarity



**XYZ ProtoTRAK®  
SMX Turret Mills**  
2 Models available  
Guards removed for clarity



**XYZ ProtoTRAK®  
SMX Bed Mills**  
4 Models available  
Guards removed for clarity



**XYZ ProTURN® Lathes**  
7 Models available



**XYZ 2-OP**  
1 Model available



**XYZ ProtoTRAK® LPM  
Machining System**  
1 Model available

The new **XYZ PROTOTRAK LPM** voted 'best machine' at the Metalworking Production Advanced Manufacturing Awards.

The LPM is a complete machining system that makes 'idle machine time' a thing of the past. Create complex parts in just minutes with the easy to use ProtoTRAK control.





# PROTO TRAK®

The ProtoTRAK CNC/Manual control is simply the best technology solution for small batch machining available today.

ProtoTRAK was first developed 30 years ago by Southwestern Industries in California. They focused their entire efforts into finding an engineering solution that would provide 'consistent high efficiency performance on low-volume and complex prototype production'. From these focused efforts ProtoTRAK began its evolution process with the introduction, in 1984, of the first ProtoTRAK branded product. ProtoTRAK is now a runaway success, with over 15,000 users in the UK and 100,000 worldwide.

The ProtoTRAK control is now available as the EMX and SMX for mills and the SLX for lathes. These three variants offer unrivalled milling and turning capabilities, with greater stability, amazing graphics, and are even more intuitive to use than before; with plain English prompts still proving to be a firm winner with machinists throughout the world.

**ProtoTRAK, unlike many alternatives, is not simply a watered-down high volume production control – it's the genuine finished article designed from the ground up as a control for one-off and low volume production.**

## Milling



### ProtoTRAK® EMX

*The entry-level two-axis CNC with up to four-axis DRO display (optional) is able to create cycles like bolt hole circles, circular and rectangular pockets, even complex profiles. See the EMX in action and you will realise the days of a conventional DRO on a mill are over.*



### ProtoTRAK® SMX

*This two- or three-axis CNC offers the latest ProtoTRAK technology. Canned cycles include pockets of every shape conceivable, with islands; thread milling; bolt hole patterns; drilling; tapping; and boring. AGE profiling means no more calculations! The unique 'Guess' key means that if a dimension is missing from a drawing the operator can simply guess the approximate position of a point or intersection. 3D surfacing with on-board DNC and the capability to handle virtually unlimited program sizes is also included.*

## Turning



### ProtoTRAK® SLX

*This is the ultimate in 'easy to use' lathe controls. Like all ProtoTRAK® controls the machine can be used manually or under full CNC control, with clearance cycles, profiling, grooving, drilling routines, standard and custom threads.*

## The features and benefits of ProtoTRAK®

**TRAKing** Is one of ProtoTRAK's most significant features as it boosts operator confidence on mills and lathes. This is highlighted more for previous non-CNC users. TRAKing allows operators to run through the program using the machine handles, building confidence as any programming errors are identified while under manual control.

**LOOK** A one-button checking process allowing operators to LOOK at the program as they proceed, which again allows for verification of the program, saving time and money while avoiding any costly mistakes. As with TRAKing it gives operators additional confidence.

**VERIFY** This feature of ProtoTRAK gives a graphical interpretation of the part about to be machined, providing the required feedback that your program matches your expectations. Features such as Verify speed up the machining process by giving the confidence that the cutter path is exactly as you expect it to be.

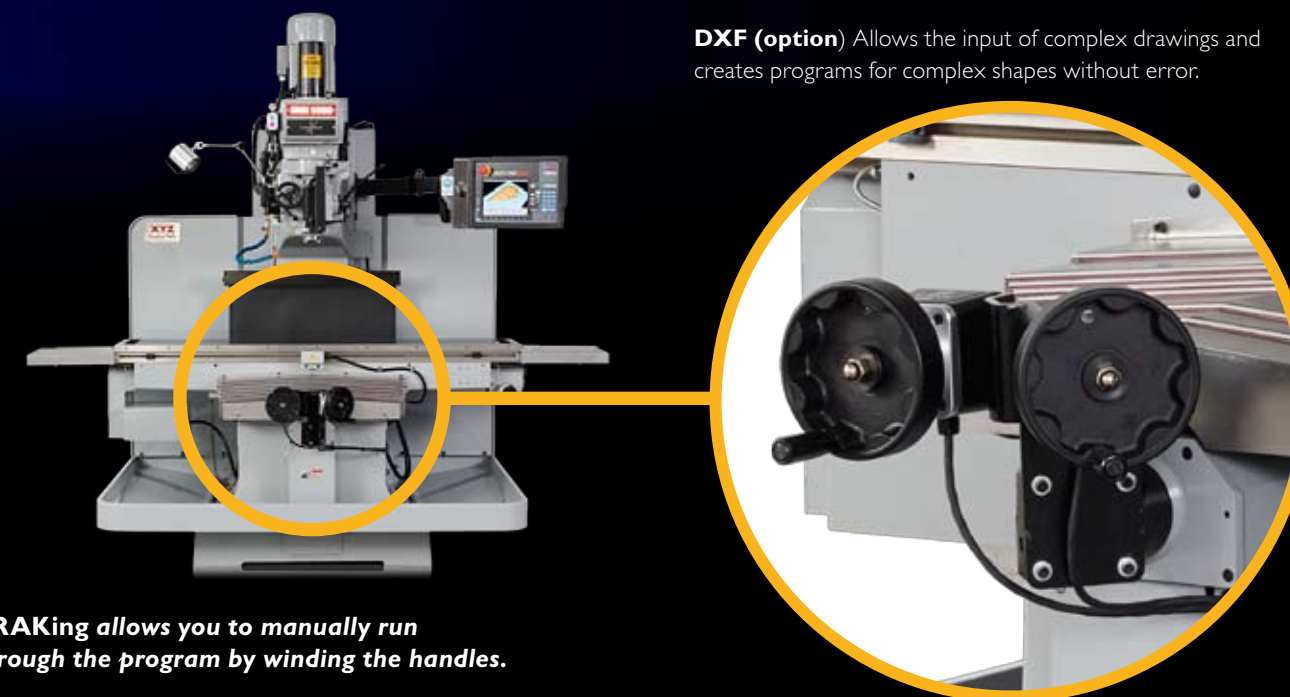
**EASY** No previous CNC experience is required with ProtoTRAK, as the quick and easy plain English format requires just a few hours training for even the most inexperienced machinist to be creating programs. This allows you to increase productivity and profitability.

**Do One** Need to machine a taper on a turned part? No more adjusting cross slides, simply select the taper function, input the angle and the ProTURN lathe will produce the angle just by turning the handwheel, it also works for radii and fillets.

**List Step** Another user interface that allows step by step movement through the program allowing you to identify and correct any errors.

**Parasolid (option)** If your part is available as a solid model, ProtoTRAK is able to read these files and quickly convert them into code that the machine can use. Either at the machine or offline.

**DXF (option)** Allows the input of complex drawings and creates programs for complex shapes without error.



**TRAKing allows you to manually run through the program by winding the handles.**

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



### ProtoTRAK CNC made easy

Designed from the ground up to be the easy to use CNC.  
**1 min 22 sec**



### EMX - just like riding a bike

So simple we train you in under an hour.  
**2 mins**



### ProtoTRAK 2 axis

Everyday ProtoTRAK 2 axis-quick and easy.  
**1 min 33 sec**



### ProtoTRAK 3 axis

Reach the highest levels of modern day machining.  
**2 min 3 sec**



### ProtoTRAK on the lathe

From small lathes up to 3 metres between centre lathes.  
**1 min 55 sec**



### The new XYZ LPM

See the new LPM, it's a ProtoTRAK with a toolchanger and more.  
**2 min 4 sec**

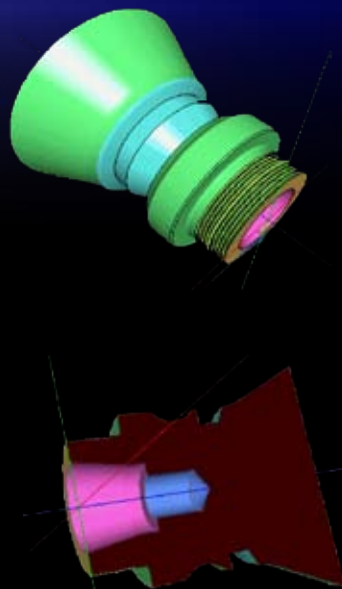
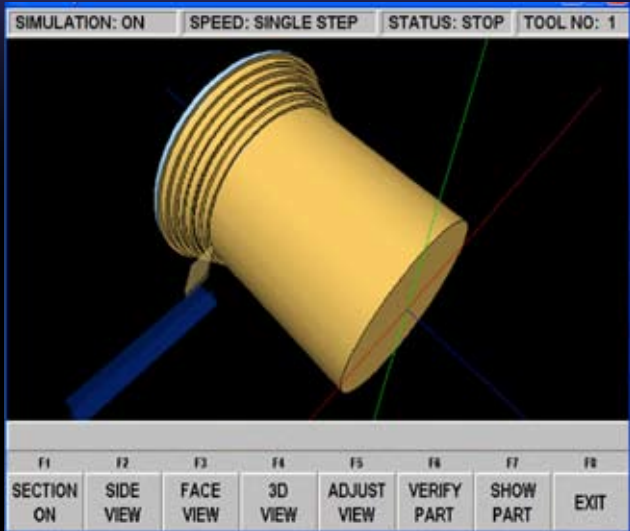
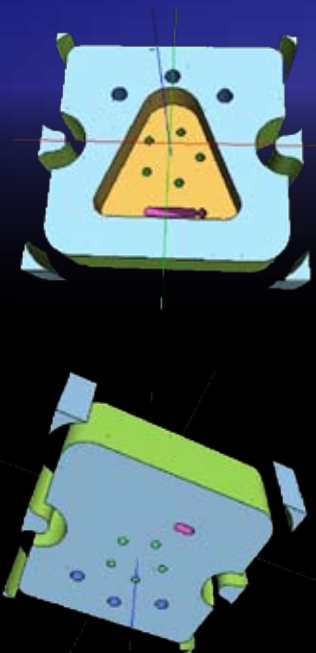
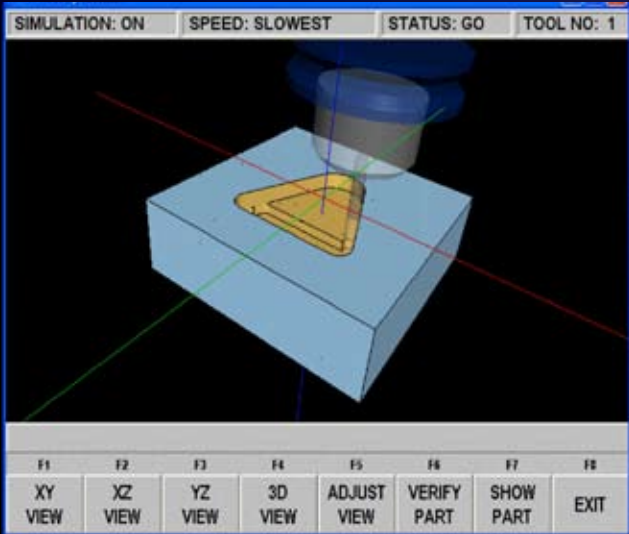


# PROTOTRAK® Verify

One of the many advanced features of the ProtoTRAK SMX and SLX controls is the ability to have a visual representation of the part that has been programed as a solid model. This VERIFY feature supplements the tool path function, which will show where each tool will machine by allowing the operator to specify the material size that the part is to be made from, then running the program as if machining is taking place. The prove out can be performed at different speeds, with the option to display every operation, or just the finished part.

On the SMX milling control the part can be rotated to ensure the cutters have machined to the correct depth and have retracted between operations to avoid collisions. On the lathe SLX control the part can be sectioned so that any internal details can be viewed.

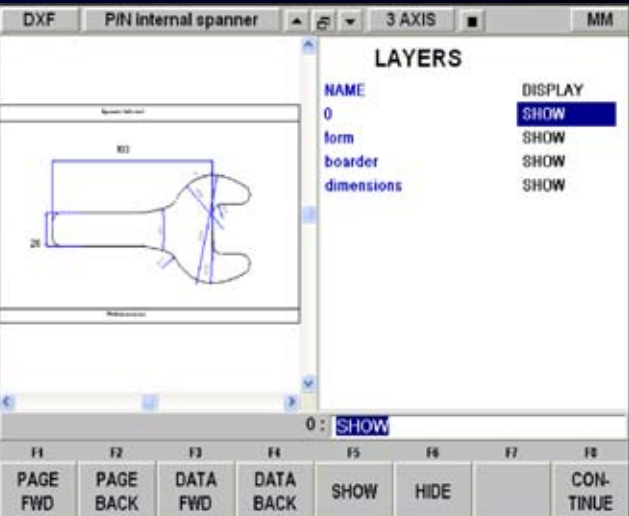
The VERIFY function is the ultimate in part program prove out and can be used for programs produced using ProtoTRAK conversational format or generated on CAD/CAM systems.



# PROTOTRAK® DXF

Programing is easy on the ProtoTRAK control, but it can be made even easier. Fitting the optional DXF converter makes light work of programing profiles and selecting hole patterns by taking them straight from the CAD drawings in either DXF or DWG formats.

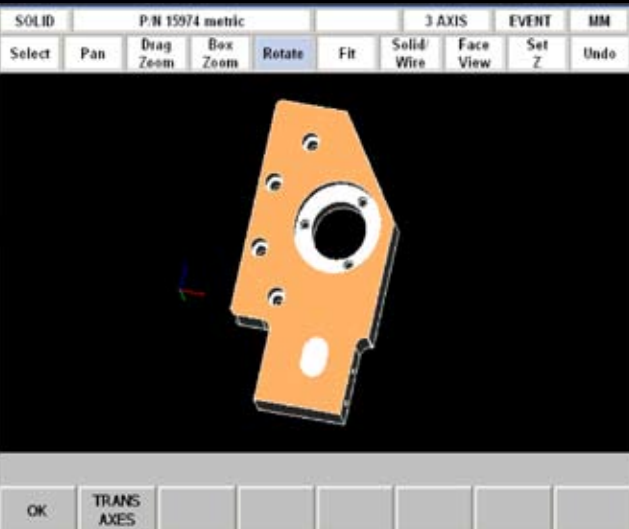
Because we don't need the supplementary data such as the drawing border and even dimensions, layers can be turned off and the machinist can decide where they would like to put the datum position. Using the standard ProtoTRAK programing menu to select the operations required directly from the drawing, means no dimensional mistakes will ever be made again.



# PROTOTRAK® Parasolid

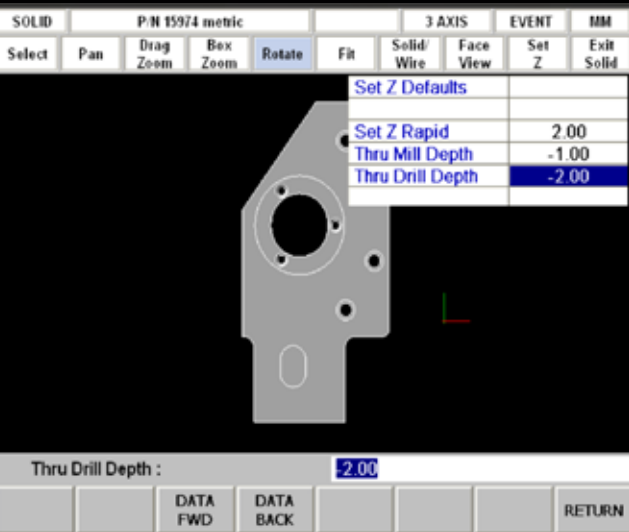
More and more companies now design their parts using solid modelling software. This data, in the form of Parasolid model (.X\_T format) can be imported directly into the ProtoTRAK control, allowing the machinist to work straight from the design.

When the model is opened it can be viewed in full 3 dimensions along with the ability to zoom, pan and rotate the part to the desired perspective. The X,Y and Z axis datum positions can be set by the programmer before selecting the events required to manufacture the part.



By using the Inquiry key the programmer can interrogate the model to find the key data they need. This will ensure that the correct tooling is used to produce the part in the best possible cycle time.

Whichever machining functions are selected the converter takes the necessary X and Y co-ordinates from the model and by simply clicking on the model the correct Z rapid and Z end heights are input to the program. The control can also allow for drill points and tool breakthrough if required.





# The economics of buying a PROTOTRAK® controlled machine tool

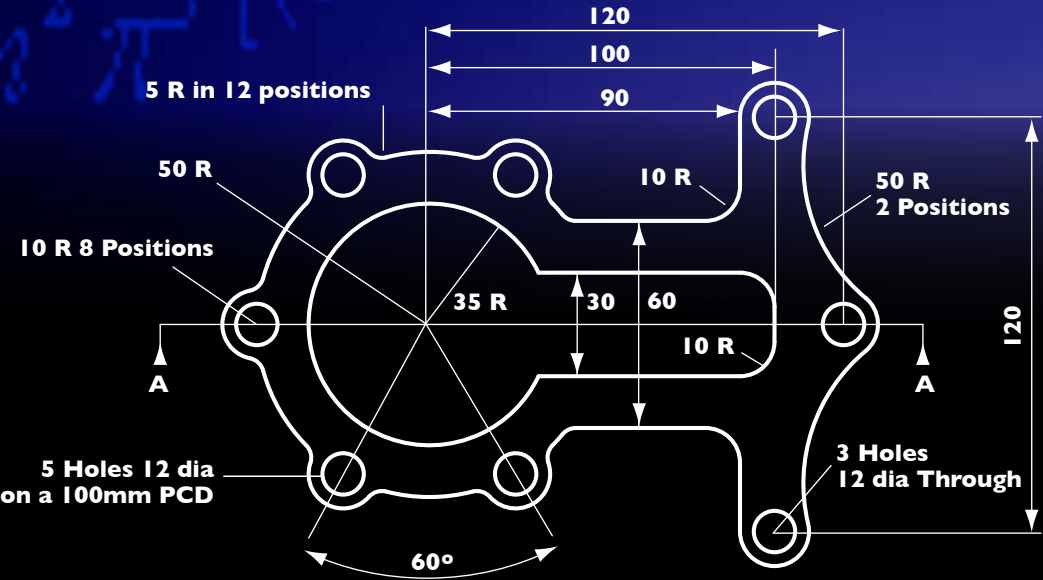
In this highly competitive age with high costs of skilled labour it is essential that you get the maximum productivity from your staff. An investment in a new ProtoTRAK® machine allows you to be more productive by producing components quicker and more accurately than you might be doing at present.

When you are busy an investment in ProtoTRAK will improve productivity. To keep you busy the efficiency of ProtoTRAK allows you to quote less per part to win the order and still be profitable.

With extended warranties and service contracts available on all XYZ machine tools you can rest assured that there will be no surprise costs and benefit from years of trouble-free fixed cost production.

**Making hard work easy**  
Program these components in minutes from scratch. Or, if drawings are produced by CAD as DXF or Solidworks files a Parasolid or DXF file converter is available as an option, making programing times even shorter.

## Milling: programing time 10 minutes

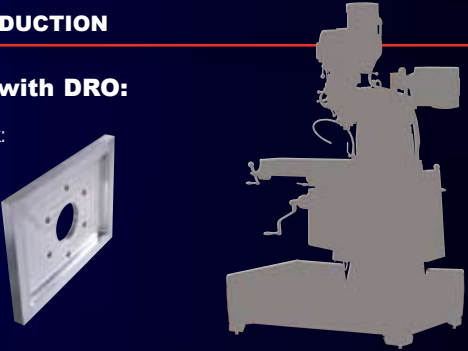


## Milling: the maths

### MANUAL PRODUCTION

#### Manual Mill with DRO:

One hour's work:



Charge to customer: **£35** per part

Profit per hour: **£19**

### PROTOTRAK PRODUCTION

#### ProtoTRAK Mill:

One hour's work:



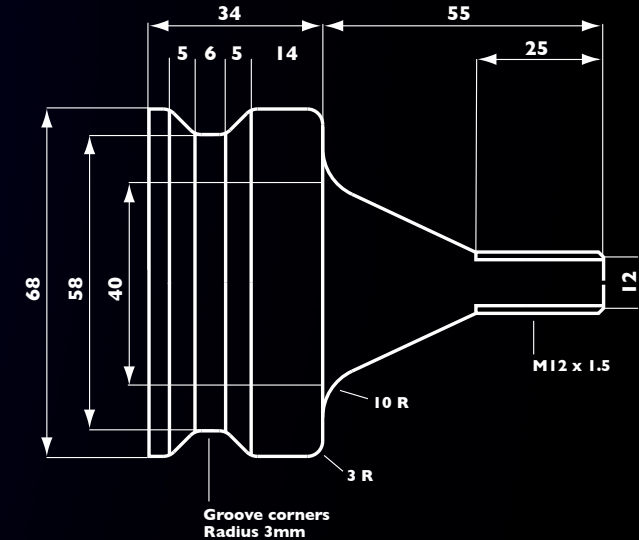
Charge to customer: **£30** per part

Profit per hour: **£104**

\*Based on a cost of £16.00 per hour for man and machine

INCREASE PROFITABILITY BY UP TO 6 FOLD

## Turning: programing time 3 minutes



## Turning: the maths

### MANUAL PRODUCTION

#### Manual Lathe with DRO:

One hour's work:



Charge to customer: **£35** per part

Profit per hour: **£19**

### PROTOTRAK PRODUCTION

#### ProtoTRAK Lathe:

One hour's work:



Charge to customer: **£30** per part

Profit per hour: **£224**

\*Based on a cost of £16.00 per hour for man and machine

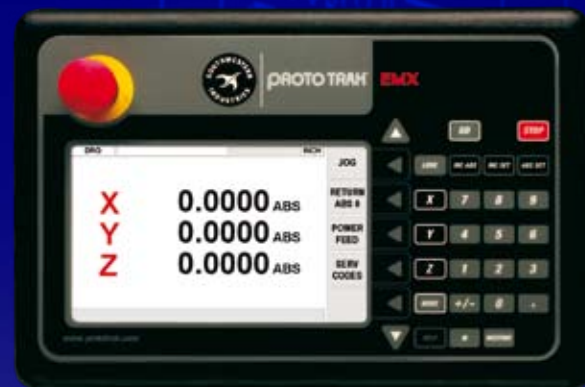
INCREASE PROFITABILITY BY UP TO 15 FOLD



# PROTOTRAK®

## on turret mills and bed mills.

From entry level CNC capability with DRO and powerfeeds for little more than the cost of a manual mill, up to the top of the range SMX ProtoTRAK CNC control with 2 or 3 axis capabilities.



See the ProtoTRAK® videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



### ProtoTRAK CNC made easy

Designed from the ground up to be the easy to use CNC.  
1 min 22 sec



### ProtoTRAK 2 axis

Everyday ProtoTRAK 2 axis-quick and easy.  
1 min 33 sec



### ProtoTRAK 3 axis

Reach the highest levels of modern day machining.  
2 min 3 sec



### EMX - just like riding a bike

So simple we train you in under an hour.  
2 mins



### XYZ EMX

Entry Level CNC-after only one day you will wonder why you ever used a manual mill.



### XYZ SMX 2000

The 'top of the range' control available as 2 or 3 Axis. This machine has always been our best seller, with its size, capability and price making it a real winner.



### XYZ SMX SLV

1000mm of 'X' Travel makes this one of the largest turret mills on the market.



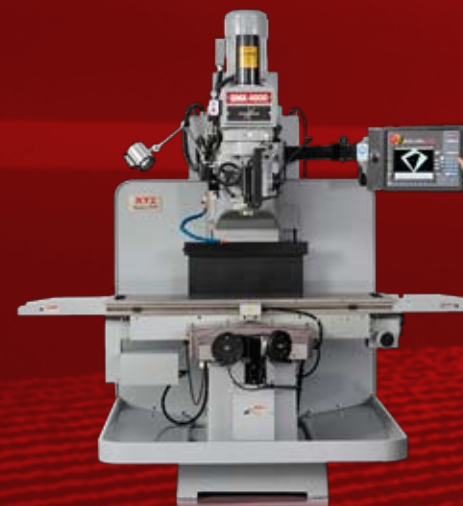
### XYZ SMX 2500

This brings 3 axis milling within reach of all UK toolrooms.



### XYZ SMX 3500

Bed Mills are essential for when 3 axis CNC machining is required. Offering 530mm of programmable 'Z' travel yet still keeping the versatility of a swivel head and manual quill.



### XYZ SMX 4000

This 1000mm 'X' travel machine offers massive capacity at a very competitive price.



### XYZ SMX 5000

Give yourself an advantage! How many companies do you know with 1500mm X axis capacity on a relatively low cost CNC Bed Mill.



Bed Mill Steel Guard.

### Guarding

All XYZ machine tools are fitted with CE compliant guards. XYZ Turret Mills are fitted with swing and slide guards and XYZ Bed Mills are fitted with steel guards.

Turret Mill Swing and Slide Guard.

Guards removed for clarity



XYZ PROTO TRAK EMX Turret Mill

Motor / Head

All Turret Mills are driven by AC motors transmitting power through a two speed gear box and variable speed cone pulleys. Precision quill bearings are dynamically balanced and built in a dust free environment to ensure smooth and accurate cutting performance.

Control

The latest generation of ProtoTRAK EMX controls provide maximum operator productivity, particularly on one-off components or small batches. Even an operator with no previous CNC experience will be producing simple or complex parts within hours.

Manual Operation

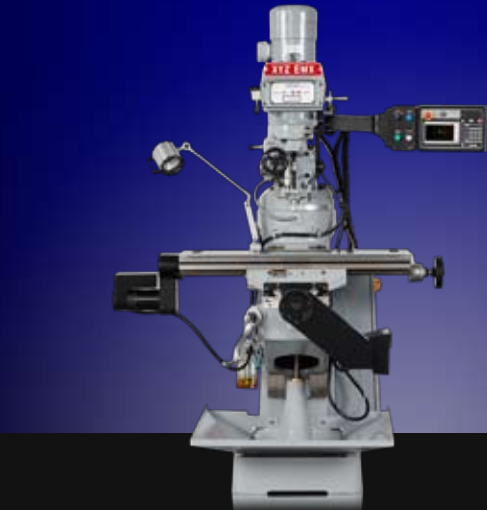
Mechanical handwheels allow the machinist to 'feel' the cutting process when manual machining is preferred, and will automatically disengage when the machine is running under CNC control.

Solid Casting

Built of solid Meehanite ribbed cast iron with induction hardened and ground slides. Turcite-B coated ways and auto lubrication to all slides and precision ground ballscrews aid accuracy and longevity.

Servo's & Ballscrews

High performance servomotors provide smooth consistent power to the precision ground ballscrews to give a perfect milled finish.



XYZ EMX  
3 HP VARIABLE SPEED HEAD  
42" x 9" (1069 x 228mm) TABLE  
26" x 12" (660 x 305mm) TRAVEL

Guarding

All machines are fitted with CE compliant guards. XYZ ProtoTRAK Turret Mills are fitted with swing and slide guards.



Turret Mill Swing and Slide Guard

Standard Equipment

- Vari Speed 2 Range Head.
- Hardened and Ground Ways.
- 2 Axis DRO.
- 2 Axis CNC.
- Precision Ground Ballscrews.
- Coolant.
- Work Light.
- Auto Lubrication.
- Interlocked Guarding.

Optional Equipment

- Riser Blocks.
- Air Drawbars.
- 3 Axis DRO.
- Offline Software (free download).
- Quillstar.
- Tooling,Vices etc.
- Fibreglass Swarf Tray.
- Millstar (Quill DRO).

	XYZ EMX
Spindle Drive Motor	2.25 kw (3 HP)
Vari Speed Range High / Low	60-4200 rpm
Table size	1069 x 228 mm
T slots-3	15.9 mm 3 off
Longitudinal travel - X axis	660 mm
Cross travel - Y axis	305 mm
Knee vertical travel - Z axis	406 mm
Slide type	Hardened Way
Ram travel	350 mm
Spindle taper	R8 / 30 ISO optional
Quill power feeds	.038 .076 .15 mm
Quill travel	127 mm
Quill diameter	86 mm
Max table load	350 kg
Swivel on turret	360°
Head tilt front to back	45°-45°
Head tilt left to right	90°-90°
Max throat depth	686 mm
Net weight approx	1250 kg



All ProtoTRAK Turret Mills and Bed Mills are Renishaw ball bar tested to ensure accuracy.

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



ProtoTRAK CNC made easy  
Designed from the ground up to be the easy to use CNC.  
1 min 22 sec



EMX - just like riding a bike  
So simple we train you in under an hour.  
2 mins



ProtoTRAK on the lathe  
From small lathes up to 3 metres between centre lathes.  
1 min 55 sec

Guards removed for clarity



XYZ PROTO TRAK<sup>®</sup> SMX Turret Mills

Motor / Head

All Turret Mill spindles are driven by AC motors transmitting power through a two speed gear box and variable speed cone pulleys. Precision quill bearings are dynamically balanced and built in a dust free, temperature controlled environment, to ensure smooth and accurate cutting performance.

TRAKing<sup>®</sup>

SMX Turret Mills have the TRAKing facility as an option which allows the operator to wind the handwheel and the machine moves through the program at that speed. The faster you wind the faster it machines. Stop or reverse the hand wheel and the machine does the same.

Servo's & Ballscrews

High performance servomotors are built into the casting to protect them from the harsh machine shop environment. These servo's provide smooth consistent power to the precision ground ballscrews to give a perfect milled finish.

Control

The latest generation of ProtoTRAK SMX control provides maximum operator productivity particularly on **one-off** components or small batches. Even an operator with no previous CNC experience will be producing simple or complex parts within hours.

Manual Operation

Mechanical handwheels allow the machinist to 'feel' the cutting process when manual machining is preferred, and will automatically disengage when the machine is running under CNC control.

Solid Casting

Built of solid Meehanite ribbed cast iron with induction hardened and ground slides, Turcite-B coated ways and auto lubrication to all slides and precision ground ballscrews aid accuracy and longevity.



XYZ SMX 2000

3HP VARIABLE SPEED HEAD  
50" x 10" (1270 x 254mm) TABLE  
30" x 15" (762 x 380mm) TRAVEL



XYZ SMX SLV

5 HP VARIABLE SPEED HEAD  
58" x 12" (1471 x 305mm) TABLE  
40" x 16" (1000 x 410mm) TRAVEL

Third axis CNC quill drive is available on all SMX turret mills. For larger Z travels and better rigidity see the Bed Mill range on pages 27 and 28.



Guarding

All machines are fitted with CE compliant guards. XYZ ProtoTRAK Turret Mills are fitted with swing and slide guards.



Turret Mill Swing and Slide Guard.

	XYZ SMX 2000	XYZ SMX SLV
Spindle Drive Motor	2.25 kw (3 HP)	3.75 kw (5 HP)
Vari Speed Range High / Low	75-4200 rpm	70-3600 rpm
Table size	1270 x 254 mm	1473 x 305 mm
T slots-3	15.9 mm 3 off	15.9 mm 3 off
Longitudinal travel - X axis	762 mm	1000 mm
Cross travel - Y axis	380 mm	410 mm
Knee vertical travel - Z axis	400 mm	400 mm
Slide type	Hard Chrome	Hardened Box Way
Ram travel	450 mm	450 mm
Spindle taper	R8 / 30 ISO optional	40 ISO
Quill power feeds	.038 .076 .15 mm	.038 .076 .15 mm
Quill travel	127 mm (110 mm if SMX3)	127 mm (110 mm if SMX3)
Quill diameter	86 mm	105 mm
Max table load	350 kg	580 kg
Swivel on turret	360°	360°
Head tilt front to back	45°-45°	45°-45°
Head tilt left to right	90°-90°	90°-90°
Max throat depth	686 mm	700 mm
Net weight approx	1250 kg	1850 kg

Standard Equipment

Vari Speed 2 Range Head.  
Chrome Slides or Box Ways.  
3 Axis DRO.  
2 Axis CNC (3 Axis optional).  
Verify Solid Model Graphics.  
Precision Ground Ballscrews.  
Coolant.  
Work Light.  
Power Rise & Fall to Knee on SLV Model.  
Auto Lubrication.  
Fibreglass Swarf Tray.  
Interlocked Guarding.

Optional Equipment

TRAKing<sup>®</sup>.  
Riser Blocks.  
Air Drawbars.  
4th Axis DRO.  
Offline Software.  
Tooling, Vices etc.  
Parasolid and DXF Convertors.  
Millstar (Quill DRO).

Guards removed for clarity



# XYZ PROTO TRAK<sup>®</sup> SMX Bed Mills

### Motor / Head

All SMX Bed Mills have programable spindle speed (except SMX 2500) and are driven by AC motors with drive to the spindle cartridge, transmitting power through non-slip latest technology Polygrip Vee belts and pulleys. The lifetime lubricated and dynamically balanced spindle cartridge ensures smooth and accurate cutting performance even at high speeds.

### Solid Casting

Built of solid Meehanite ribbed cast iron with induction hardened and ground slides. Turcite-B coated ways and auto lubrication to all slides and precision ground ballscrews aid accuracy and longevity.

### TRAKing<sup>®</sup>

SMX Bed Mills have the TRAKing facility as an option which allows the operator to wind the handwheel and the machine moves through the program. The faster you wind the faster it machines. Stop or reverse the hand wheel and the machine does the same.

### Control

The latest generation of ProtoTRAK SMX three-axis control provides maximum operator productivity, particularly on one-off components or small batches. Even an operator with no previous CNC experience will be producing simple or complex parts within hours.



Guards removed for clarity

### Servo's & Ballscrews

High performance digital servomotors are built into the casting to protect them from the harsh machine shop environment.

These high performance servo's provide smooth, consistent, power to the precision ground ballscrews to give a perfect milled finish.

SMX Bed Mills have the capability to tilt the head side to side. This offers the option of either using the manual quill or programing the head to produce angled holes or surfaces.

Programable spindle speeds of 40-5000 rpm are standard (not SMX 2500) and TRAKing is available as an option on all models.



## XYZ SMX 2500

3HP VARIABLE SPEED HEAD  
49" x 9" (1245 x 228mm) TABLE  
30" x 15" x 22" (762 x 381 x 560mm) TRAVEL  
3600 RPM SPINDLE

### Standard Equipment

Vari Speed 2 Range Head.  
Hardened and Ground Ways.  
3 Axis DRO.  
2 or 3 Axis CNC.  
Precision Ground Ballscrews.  
Coolant.  
Air Drawbar  
Work Light.  
Auto Lubrication.  
Interlocked Guarding.

### Optional Equipment

Riser Blocks.  
Offline Software.  
Tooling, Vices etc.  
DXF Converter.  
Parasolid Converter.



## XYZ SMX 3500

5HP VARIABLE SPEED HEAD  
54" x 14" (1370 x 356mm) TABLE  
31" x 20" x 20" (787 x 508 x 508mm) TRAVEL  
PROGRAMABLE 5000 RPM SPINDLE

### Guarding

All machines are fitted with CE compliant guards. XYZ Bed Mills are fitted with steel guards.



Bed Mill Steel Guard



## XYZ SMX 4000

7.5HP VARIABLE SPEED HEAD  
58" x 14" (1470 x 356mm) TABLE  
40" x 23 1/2" x 23" (1016 x 596 x 584mm) TRAVEL  
PROGRAMABLE 5000 RPM SPINDLE



## XYZ SMX 5000

7.5HP VARIABLE SPEED HEAD  
76" x 14" (1930 x 356mm) TABLE  
60" x 23 1/2" x 23" (1524 x 596 x 584mm) TRAVEL  
PROGRAMABLE 5000 RPM SPINDLE

	XYZ SMX 2500	XYZ SMX 3500	XYZ SMX 4000	XYZ SMX 5000
Spindle Drive Motor	2.2 Kw (3 HP)	3.75 Kw (5 HP)	5.75 Kw (7.5 HP)	5.75 Kw (7.5 HP)
Speed range	40-3600 rpm (Vari Speed)	40-5000 rpm <i>programmable</i>	40-5000 rpm <i>programmable</i>	40-5000 rpm <i>programmable</i>
2 Speed ranges	50-420 / 500-3600 rpm	40-600 / 300-5000 rpm	40-600 / 300-5000 rpm	40-600 / 300-5000 rpm
Table size	1245 X 228 mm	1372 x 356 mm	1474 x 356 mm	1930 x 356 mm
T slots	15.9 mm 3 off	15.9 mm 4 off	15.9 mm 4 off	15.9 mm 4 off
Longitudinal travel X axis	762 mm	787 mm	1016 mm	1524 mm
Cross travel Y axis	381 mm	508 mm	596 mm	596 mm
Head vertical travel Z axis	560 mm	500 mm <i>Can be extended to 530mm but this restricts Y axis travel to 480mm.</i>	584 mm	584 mm
Spindle taper	R8 / 30 ISO optional	40 ISO	40 ISO	40 ISO
Quill power feeds	.038 .076 .15 mm	.038 .076 .15 mm	.038 .076 .15 mm	.038 .076 .15 mm
Quill travel	127 mm	127 mm	140 mm	140 mm
Quill diameter	85.7 mm	105 mm	116 mm	116 mm
Max table load	600 kg	600 kg	850 kg	850 kg
Head tilt left to right	45°-45°	45°-45°	45°-45°	45°-45°
Throat depth	460 mm	520 mm	610 mm	610 mm
Net weight approx	1900 kg	2350 kg	3200 kg	3500 kg





## Cell manufacturing for all machine shops with NO increase in labour.

	XYZ 2-OP
X Travel	355 mm
Y Travel	305 mm
Z Travel	455 mm
Table size	457 x 381 mm
Spindle to table	70 - 525 mm
Rapid feed XYZ axis	15 M/min
Max table load	250 kg
T slot size	16 mm
T slot number & pitch	4 @ 63 mm
Spindle speed	50-6000 rpm max
Spindle motor	3 hp
Spindle taper	BT 30
Tool magazine capacity	8 station
Max tool diameter	50 mm
Machine weight	1100 kg
Footprint W x D x H	775 x 1,380 x 2,520 mm

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**XYZ 2-OP double your profit**  
A true story filmed at PTG Plymouth.  
**Duration:**  
**3 minutes 47 sec.**

The most expensive item on any shopfloor is its manpower !

Any capital cost of a machine tool should be amortised over its reasonable life of say 7 - 10 years, therefore a £50,000 machine costs £5,000 to £7,000 per year depending on the term. But labour costs may be £30,000 a year, so you need the operator kept busy running as many spindles as possible.

Everyone knows that in a production environment making masses of the same item that cellular manufacturing is the most efficient use of labour.

However, in a subcontract environment if the job is only a few hundred components, or a few days' work, it's not worth moving machines around to set up a cell. The XYZ 2-OP addresses this issue by allowing you to quickly set up a cell so smaller batch runs, can be machined with 'cellular' efficiency, dramatically reducing the time on the whole job.

If you are using any machine, quite a lot of the 'expensive' operator time can be just waiting for a machining cycle to finish. With the XYZ 2-OP the operator can use that time productively at virtually no cost to the business. The portability of the XYZ 2-OP addresses these issues and allows for higher productivity.

To learn more visit the website to see the video or call 01823 674200 to arrange a demonstration near you.

**Achieve 'cell set ups' quickly and easily without the need to employ extra skilled labour.**



## Options to fit your exact needs



**XYZ 2-OP Vice** - Special model for the **XYZ 2-OP** (recommended).



**Fixture plate** - Precision plate with primary liners, 457mm x 381mm.



**Fixture plate set up** - Includes liners, fence, and vice stop assembly.



**Vice stop** - Includes mag base and 25.4, 50.8 and 76.2mm extensions.



**Tool holders** - BT30, eight pieces of assorted sizes.



**Ball lock clamping devices** - Available in sets of four.



**Mobile tool cart** - Convenient and easy to move.



**Ball lock liners** - set of 8  
For fixture plates. High and low precision for use with primary and secondary locating holes in the **XYZ 2-OP** table.



**4th Axis Programmable Indexer**

**Quick cell set up**  
With a footprint of only 775mm x 1380mm the **XYZ 2-OP** can easily fit into the tightest of spaces.



### Standard Equipment

**ProtoTRAK® TMX 3 Axis CNC control.**  
**Optimised digital servo's.**  
**8 Station Toolchanger.**  
**6000 RPM Spindle.**  
**Jergens ball lock table.**  
**Pallet truck.**  
**Rigid Tapping.**  
**Flood coolant.**  
**Washdown coolant.**  
**Worklight.**  
**Auto Lubrication.**  
**Pull Studs.**  
**USB port.**  
**Networking.**

### Optional Equipment

**Kurt modified vice.**  
**Fixture plate for vice with fence and magnetic stops.**  
**Plain fixture plate.**  
**Ball lock clamping devices.**  
**Primary and secondary liners for fixture plates.**  
**Tooling cart.**  
**Speed indexer.**  
**4th axis with controller.**  
**Offline programing (free download).**  
**External USB drive.**

## Specifications

**ProtoTRAK System Hardware**  
**ProtoTRAK TMX CNC**  
**Three-axis CNC and DRO**  
**5" active-matrix colour LCD screen**  
**2 USB ports**  
**LED status lights built into display**  
**512 MB USB Drive (Optional)**  
**Uncluttered front panel with few hard keys**  
**Beacon light**  
**Override of program spindle speed**  
**Coolant pump**

**Software Features**  
**General Operation**  
**Clear, uncluttered screen display**  
**Prompted data inputs**  
**English language - no codes**  
**Soft keys - change within context**  
**Windows® operating system**  
**Three-axis CNC**  
**Inch/mm selectable**  
**Absolute home location**  
**Canned cycles - pockets, profiles, bolt hole patterns, etc.**  
**Rigid Tapping**  
**Reference to ball lock locations on table**



# XYZ PROTOTRAK LPM

The LPM is a complete machining system that makes 'idle machine time' a thing of the past. Create complex parts in just minutes with the easy to use ProtoTRAK.

	XYZ PROTOTRAK LPM
X Travel	785 mm
Y Travel	470 mm
Z Travel	530 mm
Table size	900 x 500 mm
Spindle centre to column	489 mm
Spindle to table	85 - 610 mm
Rapid feed XYZ axis	20M / Min
Max table load	460Kg
T slot size	18 mm
T slot number & pitch	5 x 100 mm
Max Spindle speed	8000 RPM
Spindle motor	15 HP / 11.2 Kw
Spindle taper	BT40
Tool magazine capacity	16
Max tool diameter	80 mm
Max tool weight	7 kg
Coolant capacity	220 Litres
Ballscrew size	40 mm dia x 8mm pitch
Machine weight	4,750 kg
Footprint W x D x H	3080 x 2280 x 2520 mm

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**The new XYZ LPM**  
See the new LPM, it's a ProtoTRAK with a toolchanger and more.  
**Duration:**  
**2 min 4 sec**

## Standard Equipment

Optimised Digital Servo's.  
Jergens Ball Lock Table.  
Rigid Tapping.  
Flood Coolant.  
Coolant Washdown.  
Worklight.  
16 Station Tool Changer.  
Remote Electronic Handwheel.  
Easy Clean Swarf Tray.  
Steel Concertina Guards on all Axes.  
Pull Studs.  
USB Port.  
Swarf Auger.  
Tool Setting Gauge.

## Optional Equipment

4th Axis Rotary Table.  
Fixture Trolley.  
Fixture Plates.  
Vices and Clamp Kits.  
DXF Converter.  
Parasolid Converter.  
Offline Programing.

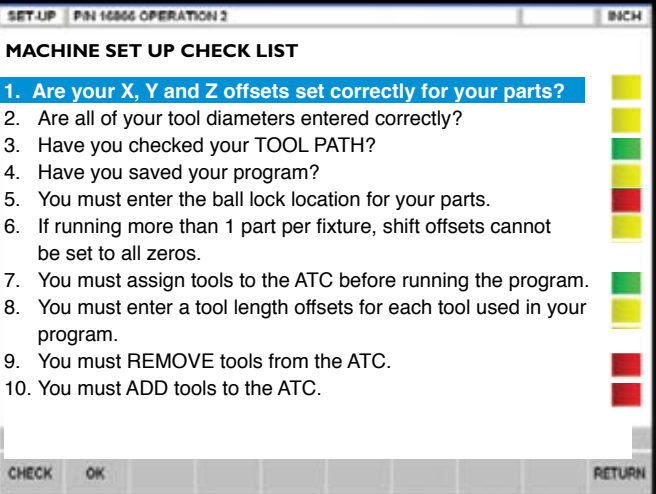


## Award winning XYZ ProtoTRAK LPM

If you already operate a ProtoTRAK the chances are you won't need an additional man to run this machine.

## easy to use

If you're an existing ProtoTRAK user, you will fully appreciate the production potential of a ProtoTRAK control with an automatic toolchanger. The ProtoTRAK LPM takes low-volume production to the next level in terms of ease-of-use and production capability. It's what you would expect from ProtoTRAK... and more.



Check list in Set Up mode makes sure you don't forget to do something before you run.

Because you already know how to program a ProtoTRAK you will easily make light work of complex setups, drastically reducing the cost of jobs that take from a few hours to a few days. You can also use all your existing ProtoTRAK programs.

## quick to set up...

The LPM table has locating bushes at precise points so the PMX control knows exactly the position of your fixture, which can be recorded for next time. The Jergens® ball lock system ensures precise and secure fixings in seconds.



## ...run and program

The LPM has a true background editing system, that allows you to program and set up the next job whilst the machine is still running.



## never forget

Now you can store photos as well as any notes about the job, all within the program and update whenever you need to.



## tool setting system

The LPM comes with a tool presetting system and tooling trolley, to allow quick and accurate tool setting. So when a new job needs to be done, simply slide the new job into position, clamp and run.





# PROTOTRAK<sup>®</sup>

## on lathes.

The ProtoTRAK<sup>®</sup> SLX control is available across the ProTurn range, from small lathes through to three metre between centre lathes.

The SLX can be used manually or under full CNC control with clearance cycles, profiling, grooving, drilling, standard and custom thread routines and more.



### Improved precision and production options



*Optional four or eight station indexing tool posts improve productivity on larger batches.*



*All XYZ Proturn Lathes are thoroughly tested with the latest QC20 bluetooth Renishaw Ball Bar system.*



*Optional drilling attachment.*

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



### ProtoTRAK CNC made easy

Designed from the ground up to be the easy to use CNC.  
*1 min 22 sec*



### ProtoTRAK on the lathe

From small lathes up to 3 metres between centre lathes.  
*1 min 55 sec*



### XYZ PROTURN SLX 1630

Capacity, capability and value! After the first day you will wonder why you ever used a manual lathe.



### XYZ PROTURN SLX 355

High speed, high precision, rigidity and performance.



### XYZ PROTURN SLX 425 1.25 and 2 metre Gap Bed Lathe

Our best selling workhorse with 80mm spindle bore and a solid one piece bed and base. Kick your competition into touch.



### XYZ PROTURN SLX 555 1 and 1.75 metre Gap Bed Lathe

104mm spindle bore, up to 1.75 metres between centres and ProtoTRAK's simplicity makes this a real winner.



### XYZ PROTURN SLX 555 3 metre Gap Bed Lathe

The 'heavyweight' ProTURN with heavier bed and base. For larger capacity lathes see the XL range on pages 71 to 74.



XYZ ProTURN® Lathes - time proven quality

- Control**

The latest generation of ProtoTRAK SLX control provides maximum operator productivity particularly on **one-off** components or small batches. Even an operator with no previous CNC experience will be producing simple or complex parts within hours.
- Guarding**

Built and guarded to comply with the latest CE regulations to ensure complete operator safety. When closed and in full CNC operation the easy lift, totally enclosed guard, ensures water tight containment of swarf and coolant.
- Headstock**

The headstock is built using Japanese induction hardened and precision ground gears. Two precision taper roller bearings and a support journal bearing ensure spindle rigidity and concentricity. High pressure oil lubrication is provided to all gears and bearings via a pump and oil cooler ensuring thermal stability, quiet running and long life.
- Swarf Tray**

Front opening easy access Swarf Tray makes light work of swarf removal and reduces the amount of space required at the rear of the machine.
- Tailstock**

Heavy tailstock with two clamp points prevents movement when machining components between centres. Repositioning is effortless and is achieved by providing an air cushion that lifts the tailstock from the bed (not on the XYZ ProTURN SLX I630).
- Cast Bed & Base**

Unlike most other Lathes that are cast or fabricated in two or three pieces and then bolted together, the Protturn SLX is a one piece solid ribbed casting that provides extremely high weight and rigidity ensuring unrivalled precision. The extra wide 'Vee and flat' bed way provides a large bearing surface that makes other Lathes seem flimsy by comparison. The lower cost SLX I630 does not have a single piece casting.



See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**ProtoTRAK on the lathe**  
From small lathes up to 3 metres between centre lathes.  
*1 min 55 sec*

**TRAKing®**

Protturn Lathes are standard with TRAKing which allows the operator to wind the handwheel and the machine moves through the program. The faster you wind the faster it machines. Stop or reverse the handwheel and the machine does the same.

**Saddle & Apron**

The apron moves with the saddle and emulates the actions of a manual lathe. This brings reassuring familiarity to the first time user of a CNC Lathe, and a joy stick provides for rapid positioning.

XYZ PROTURN SLX I630

SWING OVER BED 400mm  
SPINDLE BORE 54mm  
DISTANCE BETWEEN CENTRES 760mm  
MAX 2500 RPM



Standard Equipment

TRAKing®.  
Constant Surface Speed.  
Verify Solid Model Graphics.  
Rapid Traverse with Joy Stick.  
3 Jaw Chuck 200mm.  
Quick Change Toolpost and 6 Holders.  
Centres and Bushes.  
Tailstock.  
Interlocked Chuck Guard and Main Guard.  
Auto Lubrication.  
Coolant.  
Worklight.

Optional Equipment

4 Station Auto Indexing Toolpost.  
Faceplates, Steadies, Chucks and Collet Chucks.  
Offline Software.  
Adjustable Back Stop.  
DXF Converter.

	XYZ SLX I630
Swing over bed mm	400 mm
Swing in gap	not applicable
Gap in front of faceplate	not applicable
Swing over cross slide	218 mm
Cross Slide travel	216 mm
Distance between centres	760 mm
Maximum cutting length	760 mm
Spindle bore	54 mm
Spindle nose	D1-6 camlock
Spindle taper	MT4 in bush
Spindle motor	5.75 Kw (7.5 hp)
Spindle speeds	150-2500 rpm
Tailstock travel	127 mm
Tailstock taper	MT4
Tailstock diameter	60 mm
Bed width	320 mm
Footprint L x D x H	2090 x 1260 x 1800 mm
Weight	1750 kg

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**ProtoTRAK CNC made easy**  
Designed from the ground up to be the easy to use CNC.  
*1 min 22 sec*



# XYZ PROTURN SLX 355

SWING OVER BED 360mm  
SPINDLE BORE 52mm  
DISTANCE BETWEEN CENTRES 1000mm  
MAX 4000 RPM



See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**ProtoTRAK on the lathe**  
From small lathes up to 3 metres between centre lathes.  
*1 min 55 sec*

## Standard Equipment

TRAKing®.  
Constant Surface Speed.  
Verify Solid Model Graphics.  
2 Speed Headstock.  
Rapid Traverse with Joy Stick.  
3 Jaw Chuck 200mm.  
Quick Change Toolpost and 6 Holders.  
Centres and Bushes.  
Air Assisted Floating Tailstock.  
Interlocked Chuck Guard and Main Guard.  
Auto Lubrication.  
Coolant.  
Worklight.

## Optional Equipment

4 or 8 Station Auto Indexing Toolposts.  
Faceplates Steadies Chucks. and Collet Chucks.  
Offline Software.  
Adjustable Back Stop.  
DXF Converter.  
Drilling Attachment.

	XYZ SLX 355
Swing over bed	360 mm
Swing in Gap	not applicable
Gap in front of faceplate	not applicable
Swing over cross slide	225 mm
Cross Slide Travel	185 mm
Distance between centres	1000 mm
Maximum cutting length	900 mm
Spindle bore	52 mm
Spindle nose	D 1-6 camlock
Spindle taper	MT4 in bush
Spindle motor	5.75 Kw (7.5 hp)
Spindle speeds	50-4000 rpm - 2 ranges
Tailstock Travel	150 mm
Tailstock taper	MT 4
Tailstock diameter	60 mm
Bed Width	300 mm
Footprint L x D x H	2300 x 1370 x 1810 mm
Weight	2150 kg

# XYZ PROTURN SLX 425

AVAILABLE AS A 1.25 AND 2 METRE GAP BED LATHE  
SWING OVER BED 480mm  
SPINDLE BORE 80mm  
DISTANCE BETWEEN CENTRES 1250 & 2000mm  
MAX 2500 RPM



## Standard Equipment

TRAKing®.  
Constant Surface Speed.  
Verify Solid Model Graphics.  
3 Speed Headstock.  
Rapid Traverse with Joy Stick.  
3 Jaw Chuck 250mm.  
Quick Change Toolpost and 6 Holders.  
Centres and Bushes.  
Air Assisted Floating Tailstock.  
Interlocked Chuck Guard and Main Guard.  
Auto Lubrication.  
Coolant.  
Worklight.

## Optional Equipment

4 or 8 Station Auto Indexing Toolposts.  
Faceplates, Steadies, Chucks and Collet Chucks.  
Offline Software.  
Adjustable Backstop.  
DXF Converter.  
Drilling Attachment.

	XYZ SLX 425
Swing over bed	480 mm
Swing in gap	700 mm
Gap in front of faceplate	170 mm
Swing over cross slides	257 mm
Cross Slide travel	230 mm
Distance between centres	1250 / 2000 mm
Maximum cutting length	1080 / 1900 mm
Spindle bore	80 mm
Spindle nose	D 1-8 camlock
Spindle taper	MT7 in bush
Spindle motor	7.5 kw (10 hp)
Spindle speeds	25-2500 rpm - 3 ranges
Tailstock travel	160 mm
Tailstock taper	MT 5
Tailstock diameter	75 mm
Bed width	370 mm
Footprint L x D x H	2600/3450 x 1460 x 1810mm
Weight	2950 / 3950 kg

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**ProtoTRAK CNC made easy**  
Designed from the ground up to be the easy to use CNC.  
*1 min 22 sec*



# XYZ PROTURN SLX 555

1 and 1.75 METRE GAP BED LATHE  
SWING OVER BED 560mm  
SPINDLE BORE 104mm  
DISTANCE BETWEEN CENTRES 1000 or 1750mm  
MAX 1800 RPM



See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**ProtoTRAK on the lathe**  
From small lathes up to 3 metres between centre lathes.  
1 min 55 sec

## Standard Equipment

TRAKing®.  
Constant Surface Speed.  
Verify Solid Model Graphics.  
2 Speed Headstock.  
Rapid Traverse with Joy Stick.  
3 Jaw Chuck 315mm.  
Quick Change Toolpost and 6 Holders.  
Centres and Bushes.  
Air Assisted Floating Tailstock.  
Interlocked Chuck Guard and Main Guard.  
Auto Lubrication.  
Coolant.  
Worklight.

## Optional Equipment

4 or 8 Station Auto Indexing Toolposts.  
Faceplates, Steadies, Chucks and Collet Chucks.  
Offline Software.  
Adjustable Backstop.  
DXF Converter.  
Drilling Attachment.

	XYZ SLX 555-1 and 1.75 metre
Swing over bed	560 mm
Swing in gap	800 mm
Gap in front of faceplate	153 mm
Swing over cross slide	350 mm
Cross Slide travel	280 mm
Distance between centres	1000 / 1750 mm
Maximum cutting length	900 / 1650 mm
Spindle bore	104 mm
Spindle nose	D 1-11 camlock
Spindle taper	MT7 in bush
Spindle motor	11 Kw (15hp)
Spindle speeds	30-1800 rpm - 2 ranges
Tailstock travel	160 mm
Tailstock taper	MT 5
Tailstock diameter	90 mm
Bed width	370 mm
Footprint L x D x H	2600 / 3450 x 1570 x 1910 mm
Weight	3200 / 4100 kg

# XYZ PROTURN SLX 555

3 METRE GAP BED LATHE WITH DOUBLE DOORS  
SWING OVER BED 560mm  
SPINDLE BORE 104mm  
DISTANCE BETWEEN CENTRES 3000mm  
MAX 1800 RPM



## Standard Equipment

TRAKing®.  
Constant Surface Speed.  
Verify Solid Model Graphics.  
2 Speed Headstock.  
Rapid Traverse with Joy Stick.  
3 Jaw Chuck 315mm.  
Quick Change Toolpost and 6 Holders.  
Centres and Bushes.  
Air Assisted Floating Tailstock, with towing hitch.  
Interlocked Chuck Guard and Main Guard.  
Auto Lubrication.  
Coolant.  
Worklight.

## Optional Equipment

4 or 8 Station Auto Indexing Toolposts.  
Faceplates, Steadies, Chucks and Collet Chucks.  
Offline Software.  
Adjustable Backstop.  
DXF Converter.  
Drilling Attachment.

	XYZ SLX 555-3 metre
Swing over bed	560 mm
Swing in gap	900 mm
Gap in front of faceplate	224 mm
Swing over cross slide	350 mm
Cross Slide travel	290 mm
Distance between centres	3000 mm
Maximum cutting length	2900 mm
Spindle bore	104 mm
Spindle nose	D 1-11 camlock
Spindle taper	MT7 in bush
Spindle motor	11 Kw (15hp)
Spindle speeds	30-1800 rpm - 2 ranges
Tailstock travel	200 mm
Tailstock taper	MT 6
Tailstock diameter	105 mm
Bed width	500 mm
Footprint L x D x H	5260 x 2010 x 1910 mm
Weight	6600 kg

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**ProtoTRAK CNC made easy**  
Designed from the ground up to be the easy to use CNC.  
1 min 22 sec



# SIEMENS

## Mini Mill to 3010, 5 axis and beyond.

Siemens is the perfect conversational control and is one of the world's most popular production control systems.

**Call on 01823 674200 to  
arrange a demo and see  
the Siemens control in action.**



**At XYZ we believe that it's really important that you see a Turning Centre cutting metal before you buy. Simply looking at photographs and spec' sheets just isn't good enough.**



*Laser inspection*



*Ballbar inspection*

**See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)**



**XYZ VMCs**  
The VMC range with  
easy to use control  
and full 5 axis ability.  
**Duration:**  
**2 min 7 sec**

**With 20 years of experience working with Siemens, we know the Siemens controls on XYZ VMC's contain many standard features that are unavailable or optional from other machine tool suppliers.**



**XYZ MINI MILL 560**

Optimise the profitability of a small space with this top selling VMC. Not to be confused with the competitors lighter less robust attempts at the Mini Mill. The 560 is at the top of its class with power and performance in abundance.



**XYZ 710 VMC**

This 710 offers great capacity and performance at a very competitive price.



**XYZ 1020 VMC**

The 1020 is a real workhorse with a solid casting, rigid box ways, a great metal remover.



**XYZ 1510 VMC**

1500mm 'X' travel on this solid cast machine, with a hunger for metal removal.



**XYZ 1060 HS**

Our flagship 'High Speed VMC' offers capability and performance to the 'high-end' user.



**XYZ Heavyweight Vertical Machining Centres**

Weighing in at up to 25 tonnes with axes travels extending to 3000 mm x 1000 mm x 800 mm. There are three models available to satisfy your biggest production ambitions.



# XYZ Vertical Machining Centres - quality proven

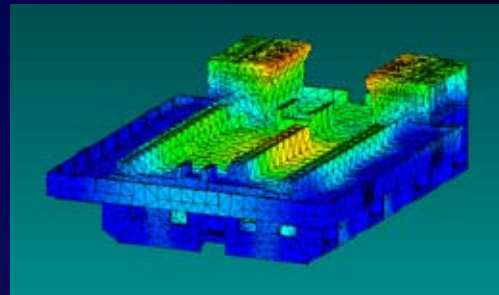
XYZ machining centres are built on the well-proven model of a solid Meehanite ribbed casting, with induction hardened and ground slides combined with Turcite-B coated ways. This combination, along with the computer modelled rib reinforcement, gives superb vibration absorption and rigidity. The XYZ machining centre range has optimised digital servomotors and automatic lubrication to slides and ballscrews, allowing fast rapid traverse rates.

These machining centres have proven their worth in the toughest of sub-contract machine shop environments, so you can be assured that an XYZ machining centre is a workhorse that you can rely on well into the future.

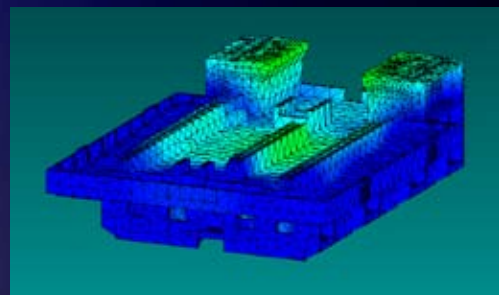


**XYZ 1020 VMC**  
The 1020's 24 station toolchanger gives a 2.5 second tool change time for optimum cycle times. The 1020 like the 710 and 1510 also boasts 'extra wide' box slideways on all three axes which are hardened and precision ground for superior vibration dampening. All slideways surfaces are also coated with Turcite-B for improved wear resistance.

**Finite Element Analysis**  
We don't just 'hope' we have a rigid machine, every XYZ machine is designed using the latest design technology, all parts and castings are analysed for areas of stress and weakness using Finite Element Analysis, so the parts and castings are the best they can be from the outset. Red points show stress and they are optimised in the final casting.



Areas of stress and weakness are identified and shown in yellow and red.



Areas of stress and weakness now eliminated.



The final casting produced is solid, rigid and reliable. (Photo shown is of the XYZ 1060 HS base casting).

**Box Way versus Linear Slides**  
The XYZ range of VMCs use induction hardened box ways and Turcite-B coated, anti-friction, slideways. This design offers the maximum rigidity and vibration absorption – far exceeding what is possible on machines using linear bearing slides. Machine tools with linear bearing slides are fine for light work, but sub-contract shops and companies machining a wide variety of materials (from aluminium to cast iron through stainless steel and Inconel) need a machine that will perform well across all of them. Linear ways have certain advantages of being lower cost and theoretically can have higher rapid traverse rates, although these are seldom achieved on short moves. These advantages are far outweighed by the superior cutting forces and machine longevity that can be achieved through use of box slideway technology on XYZ machine tools.

The only XYZ machining centre to make use of linear bearing slideways is the **XYZ 1060 HS** high speed machining centre, which is equipped with NSK or THK high precision, high quality, linear roller bearings as this machine tool is specifically designed for high speed cutting, where these slideways are appropriate. For more detail on the **XYZ 1060 HS** see pages 55 and 56.

**Hand scraped Turcite-B slide**



Induction Hardened Box Ways and Turcite coated anti-friction slide ways as featured on: **XYZ 560, 710, 1020, 1510, 2010, 2510, and 3010 VMCs.**

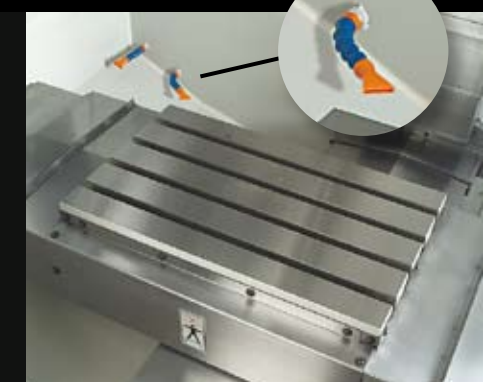
**Automatic Lubrication**  
The automatic lubrication is controlled by the CNC system that meters and distributes oil to the guideways and ballscrews to ensure all critical components are lubricated with the correct amount of oil at all times.



**Fully protected**  
All XYZ VMCs feature steel concertina guards on all axes to protect the solid ribbed castings, hardened square slides and precision ground ballscrews.

**Direct drive on three axes**  
The three axes traverse are driven by high performance servomotors, which drive ballscrews with couplings assuring high positioning accuracy under any load condition. The optimised ballscrews are preloaded to minimise backlash.

**As featured on:**  
**XYZ 560, 710, 1020, 1060 HS, 1510, 2010, 2510, and 3010 VMCs.**



**Swarf Management**  
Wash down facilities are standard on all VMCs. Swarf from the machining area is washed down to the swarf removal area. An optional conveyor can further reduce the time spent cleaning.





**4th and 5th Axis options.**



4th axis set up as shown on the 560.



4th axis set up as shown on the 1020.

4th and 5th axis are available as an optional extra on all XYZ VMCs.

**Coolant tank**

All XYZ VMCs come with large volume base mounted coolant tanks, each have two pumps, one for the main spindle supply and one for the wash down facilities to ensure consistent supply.



**Laser inspection**

The laser equipment inspects positioning accuracy. This is then used by the control to compensate for 'ballscrew pitch error' so ensuring machining accuracy and repeatability.



Achieve 4th and 5th axis milling, indexing and full helical interpolation all programmed via the control.



5th axis as shown on the VMC..

**Swarf Management**

Swarf management is achieved by 'swarf conveyor with cart' available as an option on all XYZ VMCs.

Optional on:  
**XYZ 560, 710, 1020 and 1510**  
Standard on:  
**XYZ 1060 HS, 2010, 2510 and 3010 VMCs.**



**Automated Tool Changers**

**Armless Carousel 12 Station Tool changer.**

The XYZ Mini Mill 560 features the Armless Carousel 12 Station Tool changer for 8 second tool to tool time.



**24 / 30 Station Automatic Tool Changer.**

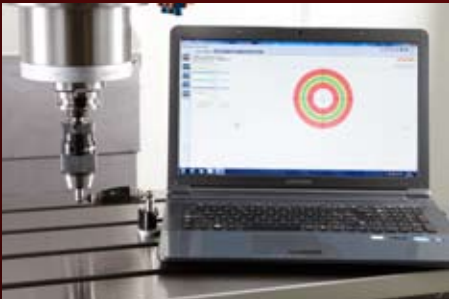
This arm type tool magazine features bi-directional, pre-selecting, random tool selection. Fast tool change is achieved in only 2-5 seconds tool to tool. This substantially increases the production efficiency of high volume or complex components.

24 Station standard on:  
**XYZ 710, 1020, 1510 and 1060HS VMCs**  
30 Station standard on:  
**XYZ 2010, 2510, and 3010 VMCs**



**Spindle air blast**

All XYZ VMCs feature spindle air blast to remove any contamination from the spindle and tooling during toolchange operations



**Ball bar testing**

Ball bar testing is performed to ensure circularity precision and accuracy. Test values are used as a reference for adjusting the machine to achieve optimum condition. The test items include backlash, lateral play, mismatched servo gains in the CNC and geometry errors such as squareness and straightness.

**Tool release device**

Tool release is designed with a buffer to prevent spindle bearing damage. The floating tool clamp/unclamping feature ensures lifetime accuracy and long service life of the spindle. During tool change an airblast automatically cleans the spindle taper.



**Through Spindle Coolant option**

Both the 8,000 and 12,000rpm spindles have 20.4kg/cm<sup>2</sup> high pressure coolant to efficiently dissipate swarf and heat from deep hole machining. This greatly enhances cutting performance and tool life as well as maintaining workpiece machining accuracy.

**Spindle oil cooler**

Controlled by digital electronics the spindle oil cooler offers high accuracy temperature control of +/- 1° C. The screen displays setting temperatures and actual temperatures for easy use. This optional extra is best suited to high speed machining.



Optional on:  
**XYZ 1020 VMCs** when fitted with the 12,000rpm spindle

**High Performance Spindles**

**8,000 rpm Spindle.**

This 8000 rpm spindle is fitted as standard on all the XYZ VMCs. The advanced design provides high axial thrust capacity, generates minimum heat and uses P4 class angular contact, high precision bearings. The labyrinth sealed design on the spindle nose prevents fine particle contamination during machining and being pressurised to 1 bar it also stops coolant ingress. All XYZ spindles are dynamically balanced for smooth and accurate cutting performance, even at high speeds. The high rigidity of the bearings makes them perfect for machining all types of materials. Drive is provided by non-slip toothed timing belts and pulleys.



**12,000 rpm Spindle option**

The 1020, 1510 and 1060 HS all have a fully sealed oil circulation system within the spindle jacket to dissipate heat from the bearings. The smaller 560 and 710 both have 12,000rpm ceramic bearing spindles. Both these spindle types are dynamically balanced to give smooth and accurate cutting performance even at high speeds and are driven by non-slip toothed timing belt and pulleys.



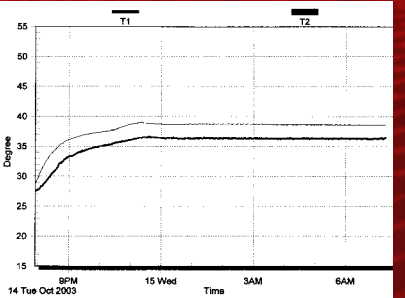
Optional on:  
**XYZ 560, 710, 1020, 1510 VMCs**  
Standard on:  
**XYZ 1060 HS VMCs**



Optional on:  
**XYZ 560, 710, 1020, 1510, 2010, 2510, and 3010 VMCs**  
Standard on:  
**XYZ 1060 HS VMCs**

**Rigorous testing of spindle**

All of XYZ's spindles are assembled by highly skilled technicians to ensure outstanding performance. All are tested for rises in temperature, spindle run-out tolerance, dynamic balance and running speed.





## XYZ MINI MILL 560

15 HP SPINDLE  
610 x 370 mm TABLE  
560 x 400 x 500 mm TRAVEL  
8000 RPM SPINDLE  
SOLID CASTING 3100 KG



Conforming to ISO 10791	
Positional accuracy	+/- 5 microns
Repeatability	+/- 2 microns
Circularity over 300mm	8 microns
Geometric accuracy over 300mm	8 microns

### Standard Equipment

**Optimised Digital Servo's.**  
**Rigid Tapping.**  
**High Pressure Flood Coolant.**  
**Coolant Washdown.**  
**Worklight.**  
**12 Station Tool Changer.**  
**Remote Electronic Handwheel.**  
**Easy Clean Swarf Tray.**  
**Steel Concertina Guards on all Axes.**  
**Pull Studs.**  
**Networking.**  
**USB Port.**  
**Compact Flash Card Slot.**

### Optional Equipment

**4th Axis Rotary Table.**  
**5th Axis Rotary Table.**  
**Swarf Conveyor & Bin.**  
**Renishaw Probing.**  
**12000 rpm Spindle.**  
**Through Spindle Coolant.**  
**Offline Programming.**  
**Renishaw Toolsetting and Probing.**



5th axis option is available on all XYZ Vertical Machining Centres

	XYZ MINI MILL 560
X Travel	560 mm
Y Travel	400 mm
Z Travel	500 mm
Table size	610 x 370 mm
Spindle centre to column	455 mm
Spindle to table	100 - 600 mm
Column front to table centre	340 - 740 mm
Rapid feed XYZ axis	20 M/min Box Way
Cutting feed rates	1-20000 mm/min
Max table load	300 kg
T slot size	16 mm
T slot number & pitch	4 @ 80 mm
Spindle speed	5 - 8000 rpm
Spindle motor	15 HP / 11.2 Kw
Spindle taper	BT 40
Tool magazine capacity	12
Tool change time tool to tool	8 sec
Max tool diameter	100 mm
Max tool weight	7 kg
Coolant capacity	180 L
Ballscrew size (grade C3)	32 mm P8
AC servomotor size	X and Y 8Nm Z 12Nm
Machine weight	3100 kg
Footprint W x D x H	1910 x 2170 x 2600 mm

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**XYZ VMCs**  
The VMC range with easy to use control and full 5 axis ability.  
**Duration:**  
**2 min 7 sec**

Optimise the profitability of your shopfloor with the top selling XYZ Mini Mill.

With a small footprint of just 1.9 x 2.1 x 2.6 metres this VMC will give modern day production capabilities to most shopfloors, with room to spare! As with all XYZ VMC construction, the Mini Mill 560 has a solid ribbed casting, wide box slideways and powerful direct drives on all three axes.

The Mini Mill 560 features an automatic 12 station toolchanger and can accommodate most components with travels of 560mm x 400mm x 500mm. At XYZ we believe that it's really important that you see a VMC cutting metal before you buy, simply looking at photographs and spec sheets just isn't good enough.

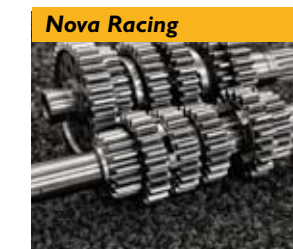
For more details on the XYZ Mini Mill 560 build specification please see pages 43 to 46



Visit the website for the latest case studies



...was extremely smooth and the learning curve both shallower and shorter than expected.



The addition of the 4th axis to two of the four XYZ Mini Mill machines is also proving invaluable.



## XYZ 710 VMC

20 HP SPINDLE  
760 x 430 mm TABLE  
710 x 450 x 500 mm TRAVEL  
8000 RPM SPINDLE  
SOLID CASTING 4000 KG



Conforming to ISO 10791	
Positional accuracy	+/- 5 microns
Repeatability	+/- 2 microns
Circularity over 300mm	8 microns
Geometric accuracy over 300mm	8 microns

### Standard Equipment

**Optimised Digital Servo's.**  
**Rigid Tapping.**  
**High Pressure Flood Coolant.**  
**Coolant Washdown.**  
**Worklight.**  
**24 Station Arm Type Tool Changer.**  
**Remote Electronic Handwheel.**  
**Easy Clean Swarf Tray.**  
**Steel Concertina Guards on all Axes.**  
**Pull Studs.**  
**Networking.**  
**USB Port.**  
**Compact Flash Card Slot.**

### Optional Equipment

**4th Axis Rotary Table.**  
**5th Axis Rotary Table.**  
**Swarf Conveyor & Bin.**  
**Renishaw Probing.**  
**12,000 rpm Spindle.**  
**Through Spindle Coolant.**  
**Offline Programming.**  
**Renishaw Toolsetting and Probing.**



5th axis option is available on all XYZ Vertical Machining Centres

	XYZ 710 VMC
X Travel	710 mm
Y Travel	450 mm
Z Travel	500 mm
Table size	760 x 430 mm
Spindle centre to column	492 mm
Spindle to table	100 - 610 mm
Column front to table centre	492 mm
Rapid feed XYZ axis	20 M/min Box Way
Cutting feed rates	1-20000 mm/min
Max table load	500 kg
T slot size	16 mm
T slot number & pitch	4 @ 100 mm
Spindle speed	5 - 8000 rpm
Spindle motor	20 HP / 15 Kw
Spindle taper	BT 40
Tool magazine capacity	24 station
Tool change time tool to tool	2.5 sec
Max tool diameter	80 mm
Max tool weight	7 kg
Coolant capacity	160L
Ballscrew size (grade C3)	32 mm P8
AC servomotor size	X and Y 8Nm Z 12Nm
Machine weight	4000 kg
Footprint W x D x H	2100 x 2240 x 2600 mm

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**XYZ VMCs**  
The VMC range with  
easy to use control  
and full 5 axis ability.  
**Duration:**  
**2 min 7 sec**

## The XYZ 710 VMC is an XYZ best seller.

The XYZ 710 VMC is a compact, highly capable and popular machine. With its solid cast ribbed structure, 24-station arm-type toolchanger, and vibration absorbing box slideways it is a rigid machine ideal for the typical sub-contractor who doesn't know what material it will be cutting from day-to-day.

The XYZ 710 can cut even the toughest materials faster than most other competitor VMCs. At XYZ we believe that it is really important in the machine buying process to see the machine cutting metal before you buy, so we encourage you to visit one of our six showrooms around the UK for a demonstration of XYZ machine capability.

**For more details on the XYZ 710 VMC  
build specification please see pages 43 to 46**



Visit the website for the latest case studies



Supplying bespoke lighting systems to theatres, factories, offices and high-end domestic customers.



Gilo Industries has created the world's first fully CNC'd paramotor which Bear Grylls flew over Everest.



## XYZ 1020 VMC

20 HP SPINDLE  
1120 x 500 mm TABLE  
1020 x 520 x 575 mm TRAVEL  
8000 RPM SPINDLE  
SOLID CASTING 6000 KG



Conforming to ISO 10791	
Positional accuracy	+/- 5 microns
Repeatability	+/- 2 microns
Circularity over 300mm	8 microns
Geometric accuracy over 300mm	8 microns

### Standard Equipment

**Optimised Digital Servo's.**  
**Rigid Tapping.**  
**High Pressure Flood Coolant.**  
**Coolant Washdown.**  
**Worklight.**  
**24 Station Arm Type Tool Changer**  
**Pneumatically Counter Balanced Head.**  
**Remote Electronic Handwheel.**  
**Easy Clean Swarf Tray.**  
**Steel Concertina Guards on all Axes.**  
**Pull Studs.**  
**Networking.**  
**USB Port.**  
**Compact Flash Card Slot.**

### Optional Equipment

**4th Axis Rotary Table.**  
**5th Axis Rotary Table.**  
**Swarf Conveyor & Bin.**  
**Renishaw Probing.**  
**12000 rpm Spindle.**  
**Through Spindle Coolant.**  
**Offline Programming.**  
**Renishaw Toolsetting and Probing.**



5th axis option is available on all XYZ Vertical Machining Centres

	XYZ 1020 VMC
X Travel	1020 mm
Y Travel	520 mm
Z Travel	575 mm
Table size	1120 x 500 mm
Spindle centre to column	570 mm
Spindle to table	125 - 700 mm
Column front to table centre	290 - 790 mm
Rapid feed XYZ axis	20 M/min Box Way
Cutting feed rates	1-20000 mm/min
Max table load	800 kg
T slot size	18 mm
T slot number & pitch	4 @ 100 mm
Spindle speed	5 - 8000 rpm
Spindle motor	20 HP / 15 Kw
Spindle taper	BT 40
Tool magazine capacity	24 station
Tool change time tool to tool	2.5 sec.
Max tool diameter	80 mm
Max tool weight	7 kg
Coolant capacity	200L
Ballscrew size (grade C3)	40 mm P10
AC servomotor size	X and Y 11Nm Z 16Nm
Machine weight	6000 kg
Footprint W x D x H	2660 x 2500 x 2800 mm

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**XYZ VMCs**  
The VMC range with easy to use control and full 5 axis ability.  
**Duration:**  
**2 min 7 sec**

The XYZ 1020 VMC with a capacity to satisfy most orders.

Built on a solid Meehanite, computer modelled, ribbed casting with induction hardened, ground and Turcite-B coated slides gives the XYZ 1020 VMC superb vibration absorption and rigidity. The optimised digital servomotors and automatic lubrication of the slides and ballscrews also ensures maximum rapid traverse rates.

Performance has been proven in some of the toughest machine shop environments to reassure customers that an XYZ machining centre is a true workhorse that you can rely on for many years of reliable and accurate operation.

At XYZ we believe that it is really important in the machine buying process to see the machine cutting metal before you buy.



**For more details on the XYZ1020 VMC build specification please see pages 43 to 46**

Visit the website for the latest case studies



Omex Technology

XYZ gives Omex the confidence to expand with employee numbers now doubled.



Julian Godfrey Eng'g

The power behind the throne, these XYZ machines give us much more control over design and manufacture.



# XYZ 1510 VMC

20 HP SPINDLE  
1600 x 600 mm TABLE  
1500 x 600 x 600 mm TRAVEL  
8000 RPM SPINDLE  
SOLID CASTING 9000 KG



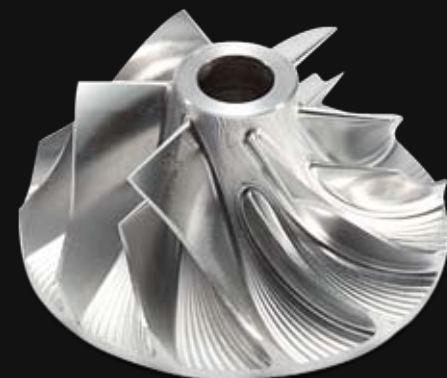
Conforming to ISO 10791	
Positional accuracy	+/- 5 microns
Repeatability	+/- 2 microns
Circularity over 300mm	10 microns
Geometric accuracy over 300mm	10 microns

## Standard Equipment

Optimised Digital Servo's.  
Rigid Tapping.  
High Pressure Flood Coolant.  
Coolant Washdown.  
Worklight.  
24 Station Arm Type Tool Changer.  
Remote Electronic Handwheel.  
Easy Clean Swarf Tray.  
Steel Concertina Guards on all Axes.  
Pull Studs.  
Networking.  
USB Port.  
Compact Flash Card Slot.

## Optional Equipment

4th Axis Rotary Table.  
5th Axis Rotary Table.  
Swarf Conveyor & Bin.  
Renishaw Probing.  
10000 rpm Spindle.  
ZF Gearbox.  
Through Spindle Coolant.  
Offline Programming.  
Renishaw Toolsetting and Probing.



5th axis option is available on all XYZ Vertical Machining Centres

	XYZ 1510
X Travel	1500 mm
Y Travel	600 mm
Z Travel	600 mm
Table size	1600 x 600 mm
Spindle centre to column	625 mm
Spindle to table	150 - 754 mm
Column front to table centre	345 - 949 mm
Rapid feed XYZ axis	16 M/min Box Way
Cutting feed rates	1-16000 mm/min
Max table load	1200 kg
T slot size	18 mm
T slot number & pitch	5 @ 75 mm
Spindle speed	5 - 8000 rpm
Spindle motor	20 HP / 15 Kw
Spindle taper	BT 40
Tool magazine capacity	24 station
Tool change time tool to tool	2.5 secs
Max tool diameter	100 mm
Max tool weight	7 kg
Coolant capacity	200 L
Ballscrew size (grade C3)	40 mm P10
AC servomotor size	X and Y 16Nm Z 16Nm
Machine weight	9000 kg
Footprint W x D x H	4200 x 2850 x 2910 mm

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**XYZ VMCs**  
The VMC range with easy to use control and full 5 axis ability.  
**Duration:**  
**2 min 7 sec**

The XYZ 1510 has an insatiable appetite for all types of metal removal.

Built on a solid Meehanite ribbed casting with induction hardened and ground slides with Turcite-B coated ways. This combination along with the computer modelled 'rib reinforcement' gives superb vibration absorption and rigidity. Optimised digital servomotors and automatic lubrication to slides and ball screws ensures fast rapids.

Performance proven in the toughest of sub-contract machine shop environments so you can be assured that an XYZ Machining Centre is a 'workhorse' you know you can rely on well into the future.

At XYZ we believe that it's really important that you see the VMC actually cutting metal before you buy. Looking at photographs and spec' tables just isn't good enough.

**The XYZ 1510 features extended linear rail supports for the larger 1500mm X axis saddle. For the full build specification of the XYZ VMCs see pages 43 to 46**



Visit the website for the latest case studies

### MH7 Precision



MH7 provides a design service to those customers that require it.

### Chirton Engineering



Building a firm foundation for future growth - with a little help from the XYZ 1510 VMC.



## XYZ 1060 HS

20 HP SPINDLE  
1210 x 600 mm TABLE  
1020 x 610 x 620 mm TRAVEL  
12,000 RPM SPINDLE (15,000 RPM Optional)  
43 M/MIN RAPIDS  
CHILLED BALLSCREWS  
SOLID CASTING 7500 KG  
SIEMENS 840D SHOPMILL CONTROL



Conforming to ISO 10791	
Positional accuracy	+/- 5 microns
Repeatability	+/- 2 microns
Circularity over 300mm	6 microns
Geometric accuracy over 300mm	6 microns

### Standard Equipment

Siemens 840D High Speed ShopMill Control with 19" Monitor.  
12000 rpm Oil Cooled Spindle.  
43 M/min Rapids.  
Temperature Controlled Ballscrews.  
Temperature Controlled Spindle.  
Pneumatically Counterbalanced Head.  
30 Station Arm Type Tool changer.  
High Pressure Coolant.  
Through Spindle Coolant.  
Coolant Washdown.  
Swarf Conveyor & Bin.  
Optimised Digital Servo's.  
Hard Drive and Networking.  
Rigid Tapping.  
Remote Electronic Handwheel.  
High Speed Concertina Guards.  
Networking.  
USB Port.

### Optional Equipment

4th Axis Rotary Table.  
5th Axis Rotary Table.  
Renishaw Probing.  
Linear Scales.  
Offline Programming.  
15000 RPM Spindle.  
Renishaw Toolsetting and Probing.



5th axis option is available on all XYZ Vertical Machining Centres

	XYZ 1060 HS
X Travel	1020 mm
Y Travel	610 mm
Z Travel	620 mm
Table size	1210 x 600 mm
Spindle centre to column	670 mm
Spindle to table	140 - 760 mm
Column front to table centre	365 - 975 mm
Rapid feed XYZ axis	43 M/min Linear Way
Cutting feed rates	1-43000 mm/min
Max table load	800 kg
T slot size	18 mm
T slot number & pitch	5 @ 125 mm
Spindle speed	12,000 rpm (15,000 rpm optional)
Spindle motor	20 HP / 15 Kw
Spindle taper	BT 40
Tool magazine capacity	24 station (30 station optional)
Tool change time tool to tool	2.5 secs
Max tool diameter	100 mm
Max tool weight	8 kg
Coolant capacity	280 L
Ballscrew size (grade C3)	40 mm P16
AC servomotor size	X and Y 27Nm Z 36Nm
Machine weight	8000 kg
Footprint W x D x H	3650 x 2680 + 800 mm for control unit x 3250 mm

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**XYZ VMCs**  
The VMC range with easy to use control and full 5 axis ability.  
**Duration:**  
**2 min 7 sec**

## The XYZ 1060 High Speed - the flagship of the XYZ VMC range.

This high accuracy and high speed Vertical Machining Centre is equipped with the latest control technology from Siemens, the 840D Siemens ShopMill control. The 1060 has top of the line THK linear roller bearings making it capable of modern fast machining for use in the aerospace and mouldmaking industries where precision is of paramount importance.  
The XYZ 1060 HS can easily be upgraded to 4 or 5 axis.



Solid casting showing the three Y axis linear bearings that form the base of this solid cast, rigid, high speed machine tool.

Visit the website for the latest case studies



Aiming for 10 micron tolerance and to remove hand finishing of moulds and electrodes completely.



We have to be tenacious and grab every advantage that comes our way.



## XYZ 2010 VMC

30 HP SPINDLE  
TABLE 2200 x 1000 mm  
TRAVEL 2000 x 1000 x 800 mm  
8000 RPM SPINDLE  
16 M/MIN RAPIDS  
SOLID CASTING 20 TONNES

## XYZ 2510 VMC

30 HP SPINDLE  
TABLE 2700 x 1000 mm  
TRAVEL 2500 x 1000 x 800 mm  
8000 RPM SPINDLE  
16 M/MIN RAPIDS  
SOLID CASTING 23 TONNES

## XYZ 3010 VMC

30 HP SPINDLE  
TABLE 3100 x 1000 mm  
TRAVEL 3000 x 1000 x 800 mm  
8000 RPM SPINDLE  
16 M/MIN RAPIDS  
SOLID CASTING 25 TONNES

Conforming to ISO 10791	
Positional accuracy	+/- 5 microns
Repeatability	+/- 2 microns
Circularity over 300mm	10 microns
Geometric accuracy over 300mm	10 microns

### Standard Equipment

Siemens 828D control.  
Coolant System.  
Auto Lubrication System.  
Work Lamp.  
Remote Electronic Handwheel.  
Spindle Air Blast.  
Work Air and Coolant gun.  
Auto Power Off (M30).  
BT40 Spindle (BT50 optional).  
Heat Exchanger for electrical cabinet.  
Rigid Tapping.  
Spindle Oil Cooler.  
Chip Conveyor with Bin.  
Pull Studs.  
Networking.  
USB Port.  
Compact Flash Card Slot.

### Optional Equipment

Through Spindle Coolant.  
Upgrade to BT50.  
Geared Head.  
4th Axis rotary table.  
5th Axis rotary table.  
Renishaw probing.  
Offline programing.  
Renishaw Toolsetting and Probing.

	XYZ 2010-2510-3010 VMC
X axis	2000 mm 2500 mm or 3000 mm
Y axis	1000 mm
Z axis	800 mm
Spindle nose to table surface	185~980 mm
Spindle centre to column surface	1080 mm
X,Y axes rapid feed	16000 mm/min
Z axis rapid feed	16000 mm/min
Ballscrew diameter	D50 x P12
Table size	2200 - 2700 - 3100 x 1000 mm
T slot size	22 mm
T slot number and pitch	8 @ 125 mm
Hardened box way slides XY and Z	6 x slides on Y axis
Max permissible table load	3000 - 3200 - 4000 Kg
Automatic toolchanger type	30 Station arm type
Max tool diameter	110 mm
Max tool weight	15 Kg
Spindle speed	8000 rpm
Spindle motor	30 HP / 23 Kw continuous
Spindle motor	36 HP / 27 Kw 30 minutes
Spindle motor	56 HP / 42 Kw 2.5 minutes in 10
Coolant capacity	300 L
Machine weight	20000 / 23000 / 25000 Kg

See the videos at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)

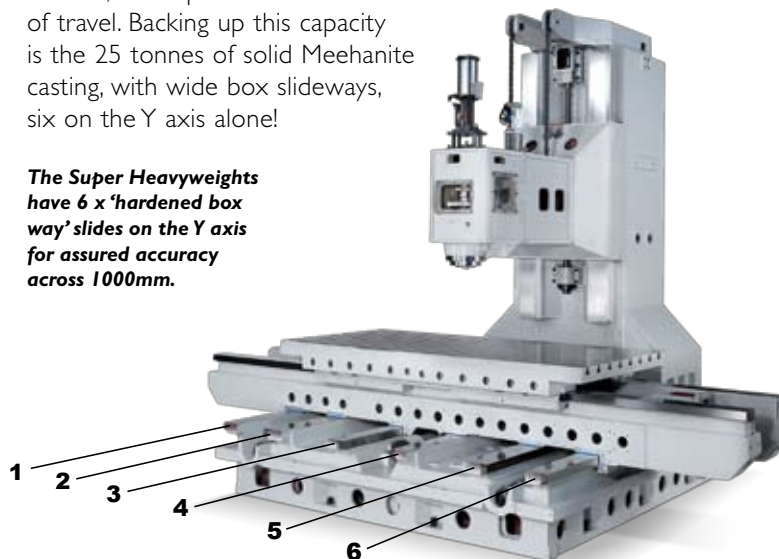


**XYZ VMCs**  
The VMC range with easy to use control and full 5 axis ability.  
**Duration:**  
**2 min 7 sec**

## The XYZ Super Heavyweights with up to 3 metres of travel

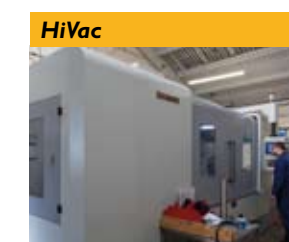
As British manufacturing grows, so it seems do the size of the components it needs to machine, with oil, gas and renewables demanding larger capacity machine tools. Enter the XYZ Super Heavyweight vertical machining centres, with up to 3000 mm x 1000 mm x 800 mm of travel. Backing up this capacity is the 25 tonnes of solid Meehanite casting, with wide box slideways, six on the Y axis alone!

*The Super Heavyweights have 6 x 'hardened box way' slides on the Y axis for assured accuracy across 1000mm.*



For the full build specification of the XYZ VMCs see pages 43 to 46

Visit the website for the latest case studies



**HiVac**  
'...excellent surface finishes, the axis travels are also fantastic especially the one metre travel on the Y-axis'.



**D & D Engineering**  
The huge XYZ 2010 VMC arriving at D&D engineering in Hull after its journey from XYZ in Burlescombe.

The **XYZ** Super Heavyweights all have a one metre Y axis travel.



# SIEMENS

## A choice to suit your needs.

Siemens is the perfect conversational control and is one of the world's most popular production control.

**Call 01823 674200 to arrange a demo and see the Siemens controls in action.**

**At XYZ we believe that it's really important that you see a Turning Centre cutting metal before you buy. Simply looking at photographs and spec' sheets just isn't good enough.**



The 'Y' axis of the XYZ TC 320 LTY can travel 50mm above and below centreline (100mm total travel), making easy work of most components that would normally require milling and turning operations.



**With 20 years of experience working with Siemens, we know the Siemens controls on XYZ Turning Centres contain many standard features that are unavailable or optional from other machine suppliers.**

See the video at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**XYZ Turning Centres**  
The XYZ Turning Centres for all your production turning.  
**Duration: 2 min**



Turned component, parts catcher and tool setting probe.



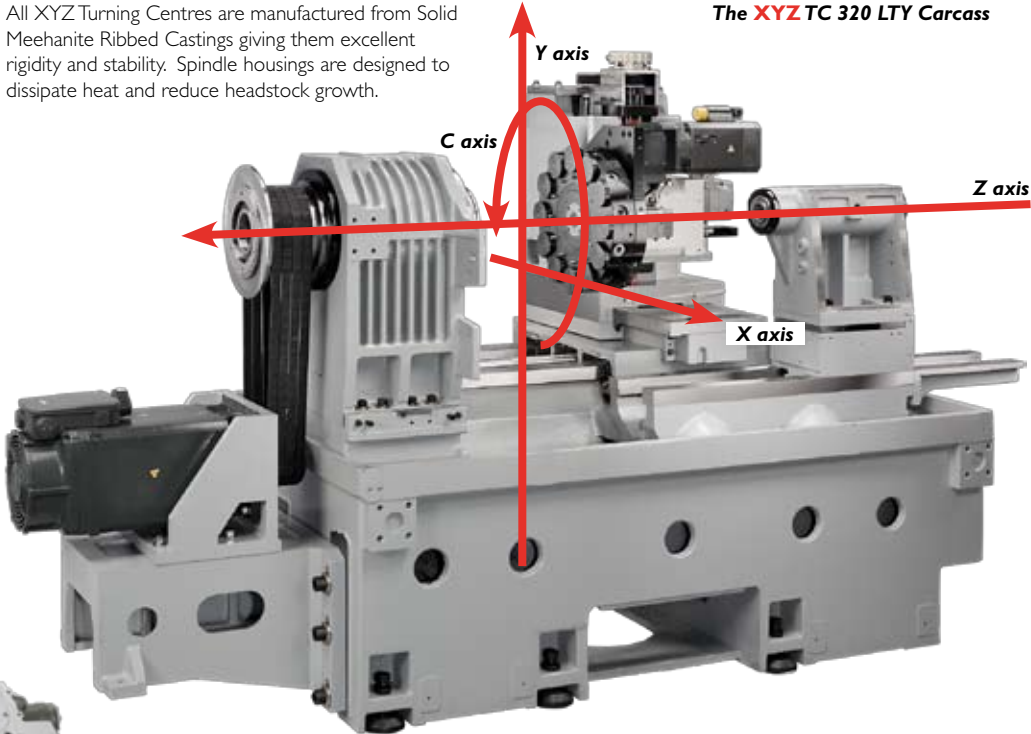
# XYZ Turning Centres - quality proven

All XYZ turning centres are constructed using solid Meehanite ribbed castings with hardened and ground, Turcite-B coated slideways providing a solid machine base. The result is a series of machines that can be put through their paces day after day for many years. Productivity features include chip conveyor, 12-station VDI turret, automatic tool setting and parts catcher and optimised digital servomotors on each axis as standard, while full c-axis and live tooling are available as options.

All in all, the XYZ turning centres offer the complete package for a wide variety of components



**Tailstock**  
XYZ CT 52 and the XYZ TC 400 Tailstock bodies are positioned manually and clamped hydraulically with adjustable barrel pushing pressure. The LTY Tailstocks are fully programmable.



The **XYZ TC 320 LTY Carcass**



The **XYZ COMPACT TURN 52 Carcass**



**Box Slideways of the XYZ TC 320 LTY**  
The 320 is fitted with large hardened and ground guideways giving superb rigidity and performance.

## Renishaw Automatic Tool Pre-Setting Arm

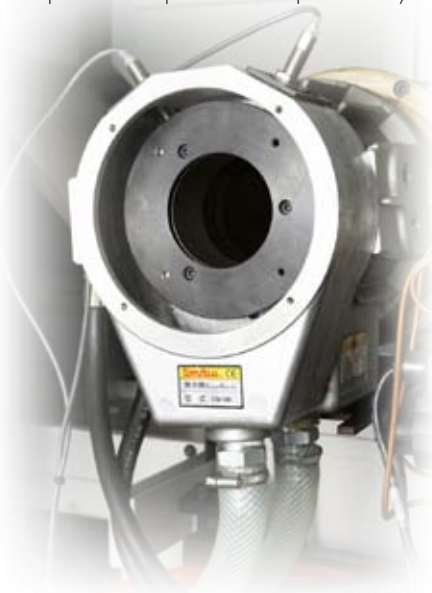
The Pre Setting Arm gives the operator consistency when measuring tool offsets. The pre-setting arm is standard on all XYZ Turning Centres.



Pre setting arm in the tool measurement position

## Hydraulic cylinder mechanism for chuck or collet clamping, unclamping

With either 52 or 77 mm bar capacity all XYZ Turning Centres are fitted with sensors to inform the operator if the part is not clamped correctly.



## VDI Turret equipped with or without driven tooling

VDI turret allows for quick change over or repositioning of tooling, and when equipped with the 'driven tool' option any one of the twelve stations can house the milling or drilling tools.



## Swarf Management

Swarf management is achieved by 'swarf conveyor with cart' on all XYZ Turning Centres.



## Barfeed

We offer a range of Barfeeds to suit your application.



Various makes of pneumatic and servo bar feeds can be supplied.

This component was machined in 'one hit' using an XYZ Turning Centre with live tooling. Engraving and radial engraving, pockets and hexagons can be easily machined.





**20 HP SPINDLE**  
**52 mm BAR CAPACITY**  
**5000 RPM**  
**SMALL FOOTPRINT**  
**FROM 1700 x 1450 mm**



A large, white industrial machine, possibly a medical imaging or diagnostic device, with a control panel and a patient bed. The machine is positioned in a room with a red and white striped background.

The XYZ Turning Centres for all your production turning.  
**Duration: 2 min**

Conforming to ISO 13041	
Positional accuracy	+/- 5 microns
Repeatability	+/- 2 microns
Cutting accuracy over 100mm	10 microns
Geometric accuracy over 100mm	10 microns

**Hydraulic 150mm 3 Jaw Chuck.  
Parts Catcher.  
VDI Turret.  
Through Tool and Flood Coolant.  
Remote Electronic Handwheel.  
USB Port.  
Compact Flash Card Slot.  
Networking.  
Renishaw Automatic Tool Setting Arm.  
Swarf Conveyor & Bin.  
Hydraulic Tailstock.**

**Collet Chuck.  
Bar Puller.  
Barfeed Units.  
Offline Programing.**

	<b>XYZ COMPACT TURN 52</b>
Power chuck diameter	150 mm
Maximum swing	400 mm
Swing over carriage cover	400 mm
Maximum turned diameter	220 mm
Maximum turned length	280 mm
X axis travel	185 mm
Y axis travel	not applicable
Z axis travel	325 mm
Spindle centre height from floor	998 mm
Spindle nose	A2-5
Bar capacity	52 mm
Spindle front bearing internal dia	100 mm
Max spindle speed	5000 rpm
Spindle motor	20 HP / 15 Kw
Min spindle speed for full power	1500 rpm
X & Z axis rapid traverse rate	20 m/min
X axis slideway configuration	Hard Box Way
Z axis slideway configuration	Hard Box Way
Ballscrew diameter (X & Z)	28/32 mm
Servomotors (X,Z & turret)	8 Nm
Turret	12 Station 30VDI
Live Tool max rpm	not applicable
Turning tool shank dimensions	20 x 20 mm
Max. boring bar diameter	32 mm
Tailstock quill taper	MT 4
Quill diameter and travel	60 x 90 mm
Max. quill thrust	800 kg
Coolant tank capacity	80 L
Coolant pump delivery	30 l/min @ 0.8 Bar
Machine weight	2900 kg
Footprint W x D x H approx	<b>2620 x 1450 x 1740 mm</b>

**Can be supplied without conveyor.**

The XYZ CT 52, it might be small but it packs a mighty production punch.

The XYZ Compact Turn 52 is a small, rigid, versatile turning centre that makes the most of its small footprint. Each Compact Turn comes complete with a wide range of standard equipment, normally offered as extras on competitor machines, these include hydraulic chuck, 12-station VDI turret, Renishaw tool setting, swarf conveyor and tailstock. Control is provided by the latest Siemens 828D ShopTurn conversational control making the CT52 ideal for both experienced and novice CNC users.

The CT 52 is perfect for the subcontractor that doesn't know what job is coming in next. This 2 axis machine and a CNC milling machine or a VMC is often a more versatile and cost effective combination than buying a lathe with Y axis or live tooling turret.

**The solid cast construction of the XYZ Compact Turn 52**

**For the full build specification  
of the XYZ Turning Centres  
see pages 59 to 62**

**Visit the website for the latest case studies**



The CT52 is ahead of other machines producing copper hammerheads at Thor Hammer Co.



The CT 52 produces parts from 5mm dia to housings using the 400mm swing capacity.





## XYZ CT 52 LTY

20 HP SPINDLE  
62 mm SPINDLE BORE  
52 mm BAR CAPACITY  
4500 RPM  
Live tooling  
70mm Y axis

See the video at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**XYZ Turning Centres**  
The XYZ Turning Centres for all your production turning.  
**Duration: 2 min**

	XYZ CT 52 LTY live tooling C axis
No. of stations	12, all live
Max rpm	4500 rpm
Power 40% rating	4 Kw
'C' axis resolution	0.001°

Conforming to ISO 13041	
Positional accuracy	+/- 5 microns
Repeatability	+/- 2 microns
Cutting accuracy over 100mm	10 microns
Geometric accuracy over 100mm	10 microns

### Standard Equipment

Hydraulic 200mm 3 Jaw Chuck.  
Parts Catcher.  
VDI Turret.  
Through Tool and Flood Coolant.  
Remote Electronic Handwheel.  
USB Port.  
Compact Flash Card Slot.  
Networking.  
Renishaw Automatic Tool Setting Arm.  
Swarf Conveyor & Bin.  
Programable Hydraulic Tailstock.

### Optional Equipment

Collet Chuck.  
Bar Puller.  
Barfeed Units.  
Offline Programming.

The 'Y' axis of the XYZ COMPACT TURN 52 LTY can travel 35mm above and below centreline (70mm total travel), making easy work of most components that would normally require milling and turning operations.



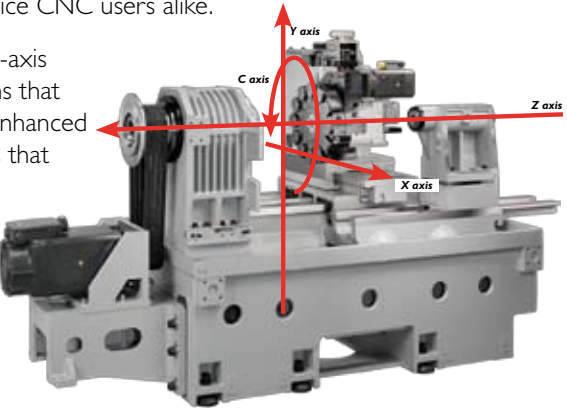
	XYZ COMPACT TURN 52 LTY
Power chuck diameter	200 mm
Maximum swing	400 mm
Swing over carriage cover	400 mm
Maximum turned diameter	220 mm
Maximum turned length	490 mm
X axis travel	220 mm
Y axis travel	+/- 35 mm (70mm)
Z axis travel	525 mm
Spindle centre height from floor	1150 mm
Spindle nose	A2-6
Spindle bore	61 mm
Bar capacity	52 mm
Spindle front bearing internal dia	100 mm
Max spindle speed	4500 rpm
Spindle motor	20 HP / 15 Kw
Min spindle speed for full power	1500 rpm
X & Z axis rapid traverse rate	20 m/min
Y axis rapid traverse rate	15 m/min
X axis slideway configuration	Hardened Box Way
Z axis slideway configuration	Hardened Box Way
Ballscrew diameter (X & Z)	32/40 mm
Servomotors (X,Z & turret)	8/11 Nm
Turret	12 Station 30VDI
Live Tool max rpm	4500 rpm
Turning tool shank dimensions	20 x 20 mm
Max. boring bar diameter	32 mm
Tailstock quill taper	MT 4
Quill diameter and travel	60 x 90 mm
Max. quill thrust	800 kg
Coolant tank capacity	80 L
Coolant pump delivery	30 l/min @ 0.8 Bar
Machine weight	4400 kg
Footprint W x D x H approx	3145 x 1800 x 1930 mm

## The CT 52 LTY Turning Centre for quick one hit mill/turn production.

The smallest y-axis turning centre in the XYZ range offers great production capabilities from a very small footprint.

The CT52 LTY is a perfectly sized, yet solidly built, versatile turning centre that makes the most of the smallest of shopfloor spaces. Standard equipment, not normally found on machines of this type, include hydraulic chuck, 12-station VDI turret, Renishaw tool setting, swarf conveyor and tailstock. The latest in conversational control technology from Siemens, the 828D ShopTurn, makes the machine ideal for experienced and novice CNC users alike.

The addition of the y-axis and live tooling means that productivity can be enhanced as many components that require turning and milling can come off the CT 52 LTY finished.



For the full build specification of the XYZ Turning Centres see pages 59 to 62

Visit the website for the latest case studies



By having virtually everything under our direct control we are able to react much more effectively to customers.



XYZ CT 52 LTY turning centre equips Firetrace to make the world a safer place.





**XYZ TC 400**

45 HP SPINDLE  
300mm CHUCK  
91 mm SPINDLE BORE  
78 mm BAR CAPACITY  
3300 RPM

See the video at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**XYZ Turning Centres**  
The XYZ Turning Centres for all your production turning.  
**Duration: 2 min**

Conforming to ISO 13041	
Positional accuracy	+/- 5 microns
Repeatability	+/- 2 microns
Cutting accuracy over 100mm	10 microns
Geometric accuracy over 100mm	10 microns

**Standard Equipment**

Hydraulic 300mm 3 Jaw Chuck (380mm optional).  
Automatic Tool Setting Arm.  
Swarf Conveyor & Bin.  
VDI Turret.  
Hydraulic Tailstock.  
Through Tool Flood Coolant.  
Remote Electronic Handwheel.  
USB Port.  
Compact Flash Card Slot.  
Networking.

**Optional Equipment**

Collet Chuck.  
Bar Puller.  
Barfeed Units.  
Offline Programing.

	XYZ TC 400
Power chuck diameter	300 mm (380mm optional)*
Maximum swing	600 mm
Swing over carriage cover	410 mm
Maximum turned diameter	400 mm
Maximum turned length	600 mm
X axis travel	275 mm
Z axis travel	650 mm
Spindle centre height from floor	1,020 mm
Spindle nose	A2-8
Spindle bore	91 mm
Bar capacity	78 mm
Spindle front bearing internal dia	130 mm
Max spindle speed	3,300 rpm
Spindle motor	45 HP / 33.5 Kw
Min spindle speed for full power	1,500 rpm
X & Z axis rapid traverse rate	10 & 20 m/min
X axis slideway configuration	Hardened Box Ways
Z axis slideway configuration	Hardened Box Ways
Ballscrew diameter (X, Z)	40 / 45 mm
Servomotors (X, Z)	X: 2.29Kw, 11Nm Z: 3.3Kw, 16Nm
Turret diameter	450 mm
Tool type	VDI 40
Number of tool stations	12
Turning tool shank dimensions	25 x 25 mm
Max. boring bar diameter	40 mm
Tailstock quill taper	MT5
Quill diameter and travel	95 x 125 mm
Max. quill thrust	2300 kg
Coolant tank capacity	115 litre
Coolant pump delivery	16 l/min @ 2.5 Bar
Machine weight	5700 kg
Footprint W x D x H approx	3700 x 2030 x 2030 mm

\* Renishaw Toolsetting arm has to be removed.

The TC 400 is the largest capacity turning centre in the XYZ range.

This large capacity workhorse of a turning centre comes complete with standard equipment that includes hydraulic chuck, 12 station turret, Renishaw tool setting, swarf conveyor and tail stock, many of these options are costly extras with many competitors machine tools. The latest Siemens 828D ShopTurn conversational control makes it ideal for both experienced and novice CNC users. For a subcontractor that doesn't know what job is coming in next week this 2 axis machine and the CNC milling machine or a VMC is often a more versatile and cost effective combination than buying a Turning Centre with Y axis or live tooling turret. For bigger turning capacity see our extra large CNC lathes on pages 71 to 74.



For the full build specification of the XYZ Turning Centres see pages 59 to 62

Visit the website for the latest case studies



Lamb Engineering

Eclectic is an often used word, but in the case of precision sub-contractor Lamb Engineering it is one that fits perfectly.



Trathen Engineering

The TC 400 is the 15th XYZ machine that we have bought and it suits our needs perfectly.



## XYZ TC 320 LTY

45 HP SPINDLE  
300mm CHUCK  
91 mm SPINDLE BORE  
78 mm BAR CAPACITY  
3300 rpm SPINDLE  
Live tooling  
100 mm Y axis

See the video at [www.xyzmachinetools.com](http://www.xyzmachinetools.com)



**XYZ Turning Centres**  
The XYZ Turning Centres for all your production turning.  
**Duration: 2 min**

Conforming to ISO 13041	
Positional accuracy	+/- 5 microns
Repeatability	+/- 2 microns
Cutting accuracy over 100mm	10 microns
Geometric accuracy over 100mm	10 microns

### Live Tooling / C Axis

	XYZ TC 320 LTY
No. of stations	12, all live
Max rpm	4500 rpm
Power 40% rating	6 Kw
'C' axis resolution	0.001°

This component was machined using live tools and 'Y' axis that is standard on the XYZ TC 320 LTY. Off centre milling, drilling, engraving and radial engraving, pockets and hexagons can be easily machined on this mill turn machine.



### Standard Equipment

**Hydraulic 315mm 3 Jaw Chuck.**  
**Automatic Tool Setting Arm.**  
**Swarf Conveyor & Bin.**  
**VDI Turret.**  
**Full 'C' Axis.**  
**Live Tooling.**  
**100mm Y axis.**  
**Programable Hydraulic Tailstock.**  
**Through Tool and Flood Coolant.**  
**Remote Electronic Handwheel.**  
**USB Port.**  
**Compact Flash Card Slot.**  
**Networking.**

### Optional Equipment

**Parts Catcher.**  
**Collet Chuck.**  
**Bar Puller.**  
**Barfeed Units.**  
**Offline Programming.**

The 'Y' axis of the XYZ TC 320 LTY can travel 50mm above and below centreline (100mm total travel), making easy work of most components that would normally require milling and turning operations.



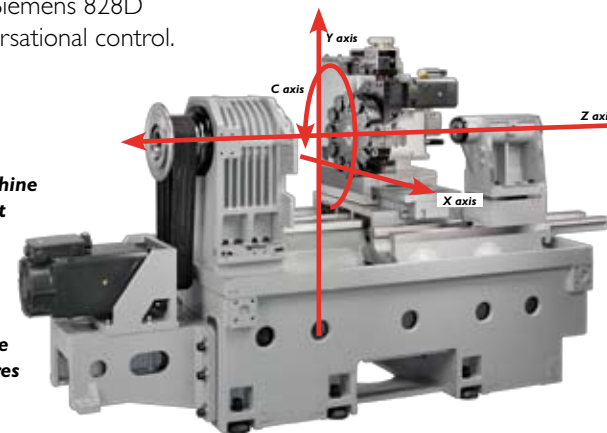
	XYZ TC 320 LTY
Power chuck diameter	300 mm
Maximum swing	450 mm
Swing over carriage cover	450 mm
Maximum turned diameter	320 mm
Maximum turned length	550 mm
X axis travel	270 mm
Y axis travel	100 mm ± 50mm
Z axis travel	600 mm
Spindle centre height from floor	1230 mm
Spindle nose	A2-8
Spindle bore	91 mm
Bar capacity	78 mm
Spindle front bearing internal dia	130 mm
Max spindle speed	3,300 rpm
Spindle motor	45 HP / 33.5 Kw
Min spindle speed for full power	1500 rpm
X & Z axis rapid traverse rate	20 & 20 m/min
Y axis rapid traverse rate	15 m/min
X axis slideway configuration	Hardened Box Ways
Y axis slideway configuration	Hardened Box Ways
Z axis slideway configuration	Hardened Box Ways
Ballscrew diameter (X,Y & Z)	40 x 36 x 45 mm
Servomotors (X,Y,Z & turret)	1.7Kw, 6Nm/3 000 rpm
Turret diameter	440 mm
Tool type	VDI 40 (5480)
Number of tool stations	12
Turning tool shank dimensions	25 x 25 mm
Max. boring bar diameter	40 mm
Tailstock quill taper	MT5
Quill diameter and travel	95 x 125 mm
Max. quill thrust	2300 kg
Coolant tank capacity	125 litre
Coolant pump delivery	16 l/min @ 4 Bar
Machine weight	6950 kg
Footprint W x D x H approx	3900 x 2130 x 2030 mm

## The TC 320 LTY packs a powerful productivity punch.

The XYZ TC 320 LTY is the largest y-axis turning centre in the XYZ range and provides users with exceptional capacity from a solid cast machine base.

The addition of the 100 mm y-axis (+/-50 mm) adds a degree of versatility to the machine that allows many parts to be machined complete, increasing productivity significantly. Added to this is the extensive list of standard equipment that makes the XYZ TC 320 LTY a highly competitive turning centre package. This list includes hydraulic chuck, 12-station (all live) VDI turret, Renishaw tool setting, swarf conveyor and the market leading Siemens 828D ShopTurn conversational control.

The TC 320 LTY is a solid cast machine with box ways that forms the base for precision turning and rigid milling. For the full build specification of the XYZ Turning Centres see pages 59 to 62



Visit the website for the latest case studies

#### Stage One Creative



For more than 30 years Stage One Creative Services has been helping to wow audiences with its productions.

#### Quickits Ltd



QK Spool Kits can be manufactured in either stainless steel or mild steel.





**XYZ XL 780**

**3 METRE GAP BED LATHE**  
**SWING OVER BED 780mm**  
**SPINDLE BORE 160mm**  
**DISTANCE BETWEEN CENTRES 3000mm**  
**MAX 1300 RPM**

**Standard Equipment**

**Siemens 828D ShopTurn Control.**  
**3 Jaw 500mm diameter steel chuck (1300 RPM Max).**  
**4 Station Auto Indexing Toolpost.**  
**Air assist 'floating' tailstock with towing hitch.**  
**Joystick control for rapid movement.**  
**Coolant.**  
**Worklight.**  
**Automatic lubrication.**  
**Electromagnetic spindle brake.**  
**Chuck guard (interlocked).**  
**Swarf guard (interlocked).**  
**Dead centres, sleeves.**  
**Networking.**  
**Compact Flash Card Slot.**  
**USB Port.**

**Optional Equipment**

**Siemens Contour (wind the hand wheel to run through the program)**  
**Offline Programming.**  
**Face Plates, Steadies and Chucks.**



**Headstock**

The Headstock is built using induction hardened and precision ground gears. Precision taper roller bearings and support journal bearings ensure spindle rigidity and concentricity. High pressure oil lubrication is provided to all gears and bearings via a pump and oil cooler ensuring thermal stability, quiet running and long life.

**Control**

We have chosen the 'Easy to program' Siemens 828D Conversational 'Shop Turn' Control as the standard control.

**Tailstock**

The massive tailstock with two clamp points prevents movement when machining components between centres. For ease of use we have incorporated air assist 'floating' tailstock with towing hitch.

**Cast Bed & Base**

This heavy machine comes with a massive one piece 500mm wide bed with induction hardened and ground slides.



*The XYZ XL780 is also available with a Rock Steady*

	XYZ XL 780
Swing over bed	780 mm
Swing in gap	1090 mm
Gap in front of faceplate	157 mm
Swing over cross slides	535 mm
Cross slide travel	430 mm
Distance between centres	3000 mm
Maximum cutting length	2900 mm
Spindle bore	160 mm
Spindle nose	A2-11
Spindle taper	MT7 in bush
Spindle motor	40 HP / 30 Kw
Spindle speeds	20-1300 rpm - 2 ranges
Tailstock travel	200 mm
Tailstock taper	MT 6
Tailstock diameter	105 mm
Bed width	500 mm
Footprint L x D x H	5400 x 2300 x 2100 mm
Weight	8600 kg





# XYZ XL and Oil Country Lathes

The XYZ XL and Oil Country Lathes are heavy-duty machines built to handle the toughest of work for either chucking or between centre applications (using the massive tailstock assembly). The solid ribbed cast construction with wide vee and flat bed ways offer excellent stability and rigidity. The powerful spindles sit in a headstock built using the highest quality gears and bearings. In combination, these features create one of the most capable and reliable ranges of large capacity lathes available in the UK.



### Headstock

The Headstock is built using induction hardened and precision ground gears. Precision taper roller bearings and support journal bearings ensure spindle rigidity and concentricity. High pressure oil lubrication is provided to all gears and bearings via a pump and oil cooler ensuring thermal stability, quiet running and long life.

### Control

We have chosen the 'Easy to program' Siemens 840D Conversational 'Shop Turn' Control as the standard control.

### Swarf Management

All XYZ Oil Country and XL Lathes come as standard with swarf conveyor and bin.

### Cast Bed & Base

This heavy machine comes with a massive one piece 544mm wide bed with induction hardened and ground slides.

### Tailstock

The massive tailstock with two clamp points prevents movement when machining components between centres.

## XYZ XL 1100

SWING OVER BED 1100mm  
SPINDLE BORE 160mm (up to 420mm opt)  
DISTANCE BETWEEN CENTRES 1M-6M  
SPINDLE SPEEDS RPM:  
H320-660, M 110-320, L 20-110

## XYZ XL 1200

SWING OVER BED 1200mm  
SPINDLE BORE 160mm (up to 420mm opt)  
DISTANCE BETWEEN CENTRES 1M-10M  
SPINDLE SPEEDS RPM:  
H200-600, L 20-300

## XYZ XL 1500

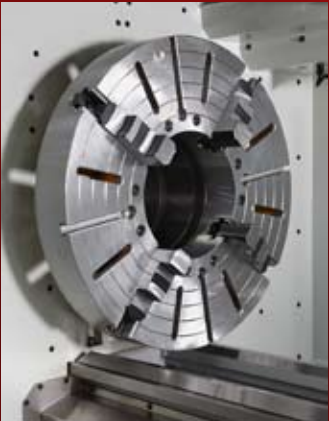
SWING OVER BED 1500mm  
SPINDLE BORE 160mm (up to 420mm opt)  
630 mm REAR 3 JAW CHUCK  
DISTANCE BETWEEN CENTRES 1M-10M  
SPINDLE SPEEDS RPM:  
H200-600, L 20-300

## XYZ XL 2200

SWING OVER BED 2200mm  
SPINDLE BORE 230mm (up to 420mm opt)  
DISTANCE BETWEEN CENTRES 2M-12M  
SPINDLE SPEEDS RPM:  
H91-430, M2 53-90, M1 10-52, L 4-9.

## XYZ OIL COUNTRY

85 HP SPINDLE  
1000 mm 4 JAW CHUCK  
630 mm REAR 3 JAW CHUCK  
DISTANCE BETWEEN CENTRES 1M-10M  
310mm or 420 mm SPINDLE BORE  
SPINDLE SPEEDS RPM:  
420mm BORE H70-250, M 40-70, L 5-40.  
310mm BORE H 200-400, M 100-200, L 20-100.



The XYZ Oil Country and XL Lathe range feature a one-piece bed and base casting.

	XYZ XL 1100	XYZ XL 1200	XYZ XL 1500	XYZ XL 2200	XYZ OIL COUNTRY
Bed type	One piece Bed and Base	One piece Bed and Base	One piece Bed and Base	One piece Bed and Base	One piece Bed and Base
Swing over bed	1100 mm	1200 mm	1500 mm	2200 mm	1100 mm
Swing over cross slide	750 mm	950 mm	1130 mm	1700 mm	750 mm
Cross slide travel	550 mm	750 mm	750 mm	1350 mm	638 mm
Distance between centres	1M - 6M	1M - 10M	1M - 10M	2M - 12M	1.5M - 16M (Stock 3 metre)
Spindle bore standard <i>Larger available</i>	160 mm	160 mm	160 mm	230 mm	420 mm
Spindle nose	A2-11	A2-11	A2-11	A2-15	A2-28
Spindle taper	MT 15	MT 15	MT 15	MT 15	MT 15
Spindle motor	50 HP / 37.2 Kw	50 HP / 37.2 Kw	50 HP / 37.2 Kw	80 HP / 59.6 Kw	85 HP / 63.3 Kw
Spindle speeds rpm <i>Based on standard spindle bore</i>	H 320-660 M 110-320 L 20-110	H 200-600  L 20-300	H 200-600  L 20-300	H 91-430 M2 53-90 M1 10-52 L 4-9	420 mm bore 310 mm bore H 70-250 H 200-400 M 40-70 M 100-200 L 5-40 L 20-100
Tailstock quill travel	300 mm	350 mm	350 mm	600 mm	300 mm
Tailstock taper	MT6	MT6	MT6	MT7	MT6
Tailstock diameter	115 mm	125 mm	125 mm	250 mm	115 mm
Bed width	533 mm	692 mm	692 mm	1270 mm	544 mm
Weight capacity					
Chuck only	1000 Kg	1500 Kg	1500 Kg	4000 Kg	1000 Kg
Chuck and tailstock	4000 Kg	4000 Kg	4000 Kg	10000 Kg	4000 Kg
Chuck, steady and tailstock	7000 Kg	6000 Kg	6000 Kg	15000 Kg	7000 Kg
Footprint LxDxH Length based upon 1 metre between centres version <i>(add 1000 mm for each extra metre of between centres distance)</i>  <i>Add 1,100 mm to the length to allow for the standard swarf conveyor.</i>	Length 4070 mm  Depth 2300 mm  Height 2200 mm	Length 4280 mm  Depth 2500 mm  Height 2300 mm	Length 4280 mm  Depth 2500 mm  Height 2400 mm	TBA	Length 5700 mm  Depth 2300 mm  Height 2200 mm
Weight Based upon 1 metre between centres version	1 metre BC machine 8000 kgs <i>(add 1100 kgs per extra metre of between centres distance)</i>	1 metre BC machine 9600 kgs <i>(add 1400 kgs per extra metre of between centres distance)</i>	1 metre BC machine 10000 kgs <i>(add 1400 kgs per extra metre of between centres distance)</i>	2 metre BC machine 24000 kgs	1.5 metre BC machine 10000 kgs <i>(add 1400 kgs per extra metre of between centres distance)</i>



# Introducing the XYZ family of manual machine tools

Despite the advances of 'easy to use' CNC systems we still offer a complete range of Manual Machine Tools which are very popular with Training Organisations and Maintenance Shops etc. For those who have to operate within a more commercially competitive environment please see the entry level ProtoTRAK EMX system and machine on pages 15 and 23. In the last 30 years XYZ have installed over 10,000 manual Turret Mills and Lathes in the UK, which have become synonymous with quality, reliability and value for money. All XYZ manual machines are built of solid ribbed cast iron to provide unrivalled rigidity and stability and all are fitted with European bearings and electrical components to full CE approval.

XYZ 1500   XYZ 2000   XYZ SLV



Guards removed for clarity

	XYZ 1500	XYZ 2000	XYZ SLV
Digital Readout	Easson DRO	Newall DP 700 DRO	Newall DP 700 DRO
Spindle Drive Motor	2.25 kw (3hp)	2.25 kw (3hp)	3.75 kw (5hp)
Vari speed range - low/high	60 - 4200 rpm	75-4200 rpm	70-3600 rpm
Table size	1069 x 228 mm	1270 x 254 mm	1473 x 305 mm
T slots	15.9 mm 3 off	15.9 mm 3 off	15.9 mm 3 off
Longitudinal travel - X axis	660 mm	750 mm	1000 mm
Cross travel -Y axis	305 mm	380 mm	410 mm
Knee vertical travel - Z axis	406 mm	406 mm	406 mm
Ram travel	305 mm	450 mm	450 mm
Spindle taper	R8 / 30 ISO optional	R8 / 30 ISO optional	40 ISO

XYZ TRAINER 1330   XYZ 1550 VS



	XYZ TRAINER 1330	XYZ 1550 VS
Swing over bed	330 mm	390 mm
Swing in gap (opt)	495 mm	610 mm (standard)
Gap in front of face plate (opt)	150 mm	150 mm
Swing over cross slide	190 mm	240 mm
Distance between centres	750 mm	1250 mm
Cross slide travel	190 mm	230 mm
Spindle speed	53-2000 rpm	18-2500 rpm
Type of slide nose	D 1-4	D 1-6
Main spindle bore	36 mm	54 mm

Longer and shorter beds are available.

XYZ 1020

250 x 500mm magnetic chuck.  
Larger Grinders available



LARGER GRINDERS AVAILABLE

	XYZ 1020	XYZ 1224	XYZ 1632	XYZ 2040
Table/Magnetic chuck size	250 x 500 mm	304 x 609 mm	406 x 812 mm	500 x 1050 mm
Max grinding length - Longitudinal	500 mm	609 mm	860 mm	1050 mm
Max grinding width - Cross	250 mm	304 mm	406 mm	550 mm
Max distance from table surface to spindle centre	500 mm	508 mm	558 mm	600 mm
Longitudinal travel - Hydraulic	558 mm	660 mm	860 mm	1100 mm
Longitudinal travel - Variable	5 - 25 m/min	5 - 25m/min	5 - 25m/min	5 - 25m/min
Cross travel - Automatic increment	0.15 mm - 15 mm	0.1 mm - 10 mm	0.1 mm - 10 mm	1 mm - 20 mm
Cross travel - Automatic travel	250 mm	304 mm	406 mm	550 mm
Cross feed handwheel - Per revolution	4 mm	5 mm	5 mm	5 mm
Cross feed handwheel - Per graduation	0.02 mm	0.02 mm	0.02 mm	0.02 mm
Down feed handwheel - Per revolution	2 mm	2 mm	1 mm	0.5 mm
Down feed handwheel - Per graduation	0.01 mm	0.01 mm	0.005 mm	0.005 mm
Spindle motor - Speeds	3000 rpm	3000 rpm	3000 rpm	1450 rpm
Spindle motor - Power ratings	2 hp	5 hp	5 hp	10 hp
Hydraulic motor - Power ratings	1 hp	1 hp	2 hp	3 hp
Standard grind wheel - Diameter	180 mm	355 mm	355 mm	355 mm
Standard grind wheel - Width	12 mm max 19 mm	38 mm	50.8 mm	38 mm
Standard grind wheel - Bore	31.75 mm	127 mm	127 mm	127 mm
Weight	1550 kg	1700 kg	2300 kg	5700 kg

## XYZ for education

XYZ Machine Tools' education team is focussed on providing UK colleges, universities, private training establishments and research centres with competitively priced manual and CNC machines tools as well as a package of service and support exclusive to the sector.

XYZ for Education is our commitment to the UK's education sector through which we offer any organisation involved in the education of the next generation of engineers special pricing on the full range of XYZ products. In addition XYZ has developed a variety of training programmes aimed at the education sector. This combination ensures that training centres are able to deliver the correct training, using techniques and machines that trainees will encounter once they return to industry, with the educators kept fully up to date with changes in machine tool development and application.

XYZ for Education is for everyone involved in education and will benefit Bursars, Teachers, Technicians and Students. With this program XYZ is actively helping to develop the engineers of tomorrow... today.

Call for the brochure





XYZ small machines and tooling

XYZ FAST TAP



Vertical and horizontal tapping, with M24 max capacity in aluminium and steel. See table below.

Fast Tap makes light work of:

- Reaming.
- Chamfering.
- Countersinking.
- Spot Facing.
- Helicoil insertion.
- Stud making.
- Assembly work - screw & nut driving.

	FT 1000	FT 800	FT 400	FT 200	FT 90
Max capacity-Steel	M6	M10	M12	M16	M24
Max capacity-Aluminium	M8	M12	M14	M24	M24
Speed (no load)	1200 rpm	800 rpm	400 rpm	250/800 rpm	90/250 rpm
Air pressure flow	90 psi	90 psi	90 psi	90 psi	90 psi
Noise max	85.0 dBA	85.1 dBA	84.2 dBA	84.2 dBA	84.1 dBA

XYZ 260 HORIZONTAL BANDSAW

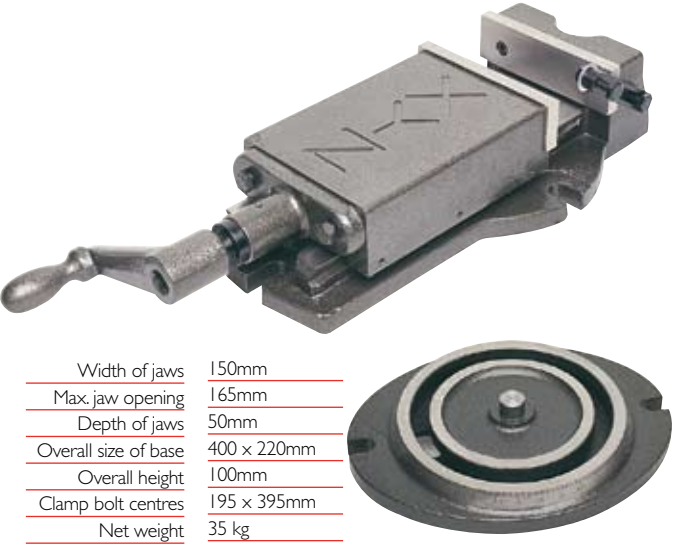
- Vertical guide arms carrying carbide faced guides.
- Fast & accurate blade tensioning.
- Standard blade size 25x3300mm.
- Conveniently placed controls.
- 90° - 45° mitering.

	XYZ 260
Cutting capacity	260 mm Round Bar
Motor	1.5 kw (2hp)
Blade speeds	21, 34, 43, 60 m/min
Blade size	25 x 0.9 x 3300 mm
Machine size LxDxH	1680 x 737 x 1050 mm
Packing size	1730 x 760 x 1130 mm
Net weight	390 kg



A-TYPE MILLING VICE

High grade iron vice body. Low overall height. Adjustable positioner. Moving jaw runs in long prismatic slides with provision for new adjustment. Hardened & ground steel jaw plates. Enclosed ACME screw with phosphor bronze nut. Optional swivel base. Drop forged handle.

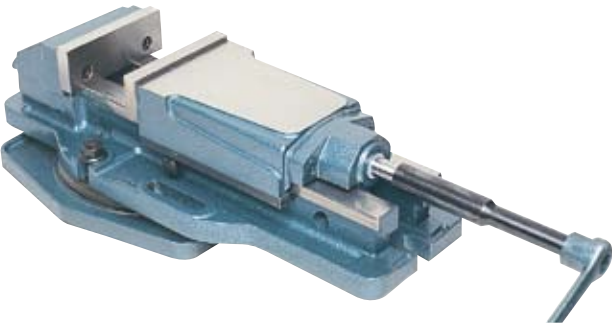


Width of jaws	150mm
Max jaw opening	165mm
Depth of jaws	50mm
Overall size of base	400 x 220mm
Overall height	100mm
Clamp bolt centres	195 x 395mm
Net weight	35 kg

12” HYDRAULIC MILLING VICE - 6” & 8” Jaw Width

12” opening. 6000Kg clampforce.

Rugged construction. Body is made of high quality ductile cast iron for extra rigidity. Sliding bedways flame hardened and ground. Concealed spindle for extra protection. Hydra booster system for extra clamping pressure. Quick action clamping. Optional swivel base. Draw down jaws.



TOOLING VOUCHERS

WNT (UK) Tooling Vouchers are available to purchase from XYZ giving additional discount plus the tooling voucher can be added to your capital purchase.

WNT (UK) Vouchers are available from £500 upwards.

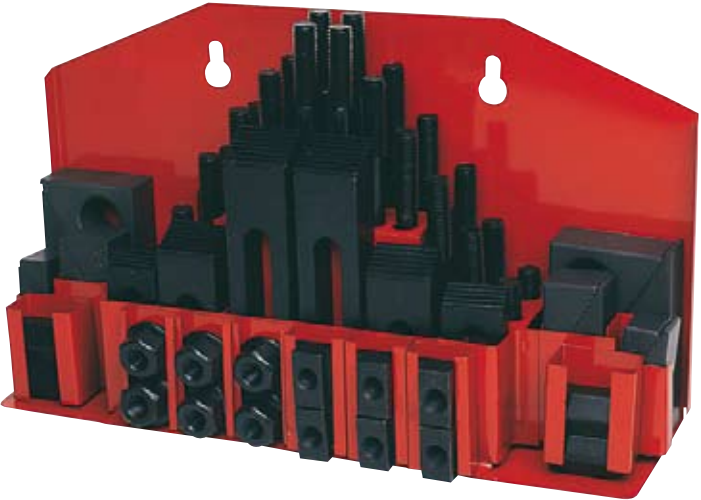


52 PIECE STEEL CLAMPING KIT

Heat treated steel black oxide finish. Block size 25mm.

Set in steel rack consists of 24 Studs (75, 100, 125, 150, 175 & 200mm lengths), 6 x T-Nuts. 4 x Coupling nuts. 6 x Flange nuts. 6 x Step clamps and 6 x Step blocks. Can be wall mounted for tidy and compact storage.

	CK-14	CK-1816
Table slot	15.8 mm	18 mm
Stud size	M12	M16
G.W.	12.5 Kg	13 Kg





For more information see pages 41 to 58.

Diameter	160 mm	200 mm	250 mm
Centre Height	135 mm	135 mm	185 mm
Centre Bore	35 mm	35 mm	52 mm
<b>Maximum Load</b>	<b>75 Kg</b>	<b>75 Kg</b>	<b>100 Kg</b>
Maximum rpm	33.3 rpm	33.3 rpm	16.6 rpm
Weight	70 Kg	84 Kg	124 Kg



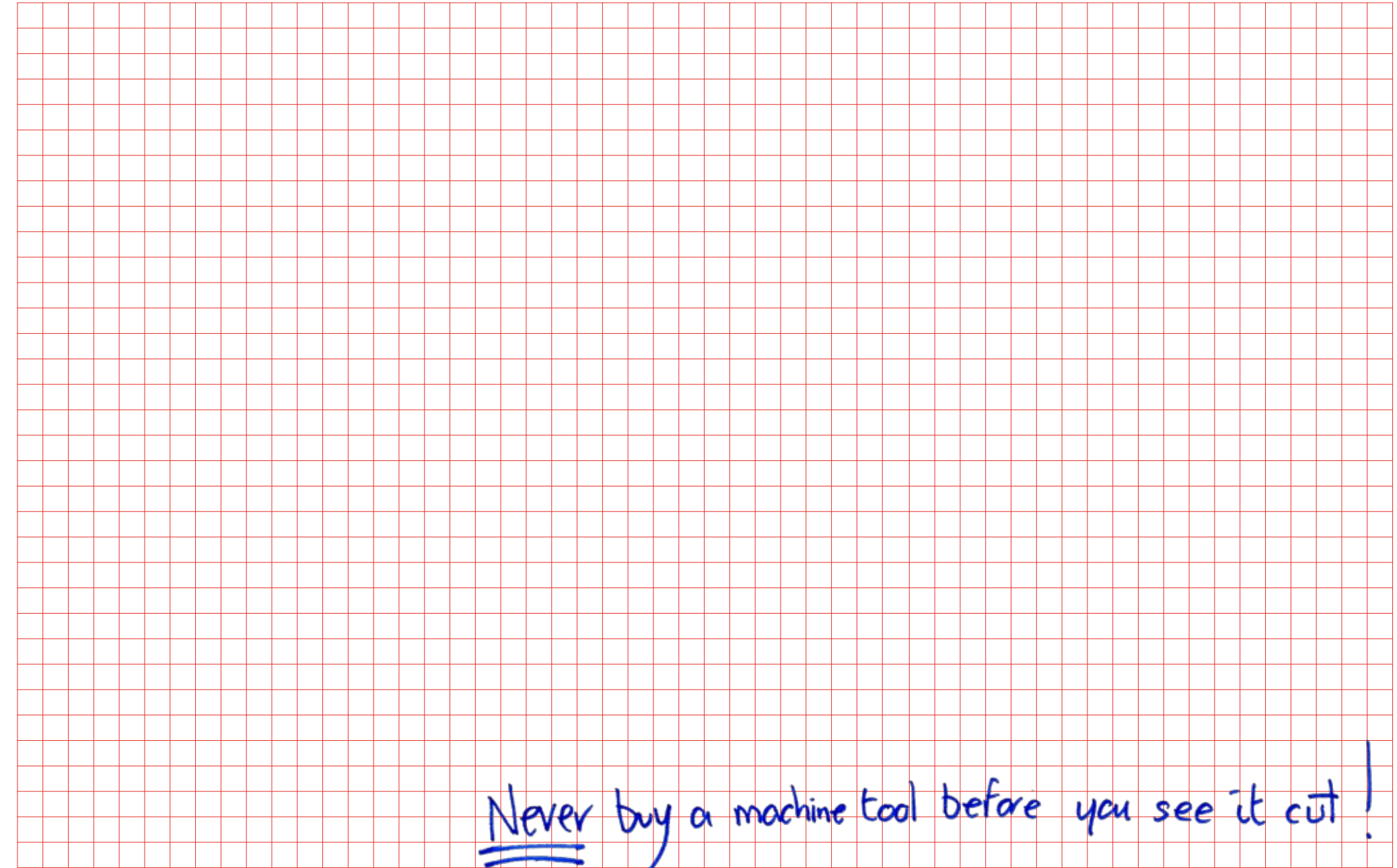
Chuck Diameter	125 mm	160 mm	200 mm	250 mm
Centre Height	150 mm	200 mm	180 mm	230 mm
Centre Bore spindle	46.5 mm	46.5 mm	46.5 mm	46.5 mm
Through Bore	31 mm	34 mm	34 mm	46.5 mm
<b>Maximum Load</b>	<b>40 Kg</b>	<b>53 Kg</b>	<b>66 Kg</b>	<b>132 Kg</b>
Maximum rpm	111 rpm	90 rpm	90 rpm	50 rpm
Weight	61 Kg	76 Kg	104 Kg	139 Kg



Chuck Diameter	125 mm	160 mm	250 mm
Centre Height	190 mm	210 mm	250 mm
Centre Bore spindle	46.5 mm	46.5 mm	46.5 mm
Through Bore	31 mm	34 mm	46.5 mm
<b>Maximum Load</b>	<b>79 Kg</b>	<b>106 Kg</b>	<b>264 Kg</b>
Maximum rpm	111 rpm	90 rpm	50 rpm
Weight	96 Kg	136 Kg	187 Kg



Chuck Diameter	120 mm	160 mm	200 mm	250 mm
Centre Height	120 mm	140 mm	140 mm	180 mm
Centre Bore spindle	50 mm	50 mm	65 mm	100 mm
Through Bore	32 mm	40 mm	45 mm	70 mm
<b>Maximum Load</b>	<b>60 Kg</b>	<b>80 Kg</b>	<b>100 Kg</b>	<b>125 Kg</b>
Maximum rpm	41.66	41.66	33.33	33.33
Weight	33 Kg	41 Kg	61 Kg	85 Kg









# XYZ

## Machine Tools

### XYZ across the UK

#### XYZ DEVON Main Factory and Administration

Woodlands Business Park, Burlescombe,  
Tiverton, Devon. EX16 7LL

#### XYZ BLACKBURN

Thwaites Close, Shadsworth Industrial Estate,  
Blackburn, Lancashire. BB1 2QQ

#### XYZ NUNEATON TECHNICAL CENTRE

5/6 Tungsten Court, Hemdale Business Park,  
Nuneaton. CV11 6GZ

#### XYZ SHEFFIELD (WNT Showroom)

Sheffield Airport Business Park,  
Europa Link, Sheffield. S9 1XU

#### XYZ LIVINGSTON

Opening soon.

#### XYZ LONDON

Meridian Business Park, Fleming Road,  
Waltham Abbey, Essex. EN9 3BZ

