

**XYZ**  
Machine Tools

on all new XYZ CNC products  
**FREE TRAINING**

The Company



OVER 350 NEW MACHINES ALWAYS IN  
**UK STOCK**

ProtoTRAK®  
**SIEMENS**

 **HEIDENHAIN**

# XYZ CATALOGUE 2019/20

ProtoTRAK Milling

ProTURN Lathes

Vertical Machining Centres CAD/CAM

Turning Centres and Automation

XL Lathes and Manual Machines



# 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 35 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 18,000 sq ft Parts Department with over £1.5 million of parts held in stock.**



**The largest supplier of CNC into the UK.**



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 Programming Helpline** for as long as you need it.

**Free training on any machine at one of the XYZ UK Training Centres.**



**On site training is available.**



## XYZ MACHINE TOOLS

- PROVEN QUALITY AND RELIABILITY FOR OVER 35 YEARS
- OVER 20,000 UK INSTALLATIONS
- UK SALES & SERVICE BACK UP
- FULL PRODUCT TRAINING
- FINANCE PACKAGES TO SUIT
- MACHINE RENTAL
- PART EXCHANGE
- FULL 12 MONTH WARRANTY
- EXTENDED WARRANTIES
- NATIONWIDE SERVICE ENGINEERS
- PROGRAMMING HELPLINES
- SAME DAY SPARES DESPATCH

Take a look inside the HQ of XYZ Machine Tools

<http://www.xyzmachinetools.com/video/overview>



**The 98,000 sq ft XYZ Devon factory holds over 350 machine tools in UK stock, all ready for delivery and installation**



# 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. 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)

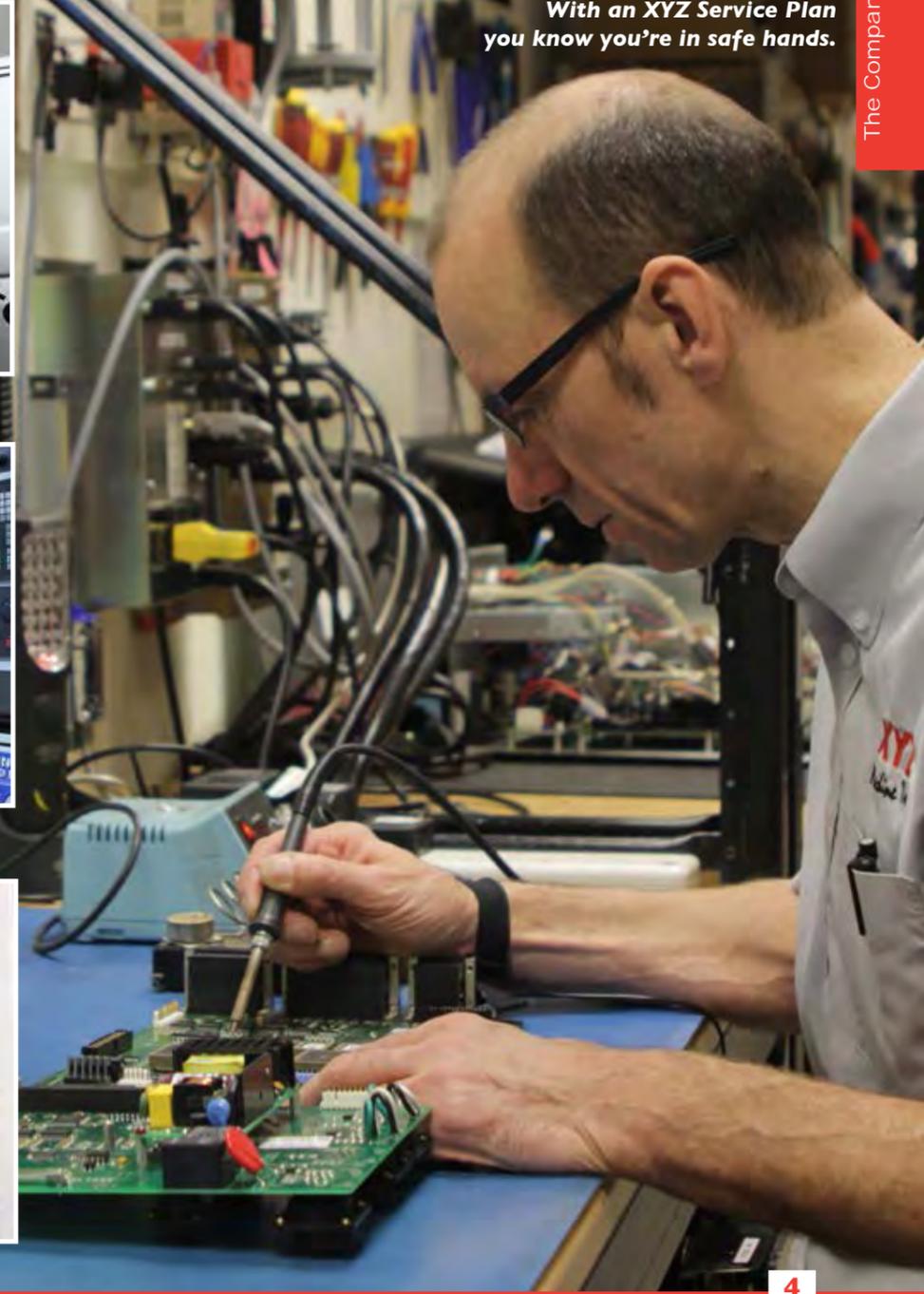


*The XYZ Servicing Handbook - your personal passport to stress-free machine tool operation.*

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**
- **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.



Nigel Atherton  
MANAGING DIRECTOR

*The bitterness of poor quality remains long after the sweetness of low price is forgotten.* Mark Twain

- XYZ Machine Tools deliver an average of 1000 machine tools to UK customers every year.
- XYZ Devon holds over £1.5 million of spare parts in its 18,000 sq ft Parts Department.
- At any one time XYZ has 350 machine tools in stock ready for delivery and installation.
- XYZ has five 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 access to the XYZ Programming Support Helpline for as long as you need it.



92,000 ft² UK factory



18,000 ft² parts department



## 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 LONDON

944 Yeovil Road, Slough Trading Estate,  
Slough. SL1 4NH

### XYZ HALIFAX

Opening Autumn 2019

ISO 9001



## 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.



## The XYZ Sales advisors

Who's your **XYZ** Area Sales Manager ?

Visit the XYZ website at

**www.xyzmachinetools.com** and click on the map to see who your Area Sales Manager is. Talk to the experts and learn how to maximise your low volume and prototype production with the very best technology from ProtoTRAK, Siemens and Heidenhain.

# XYZ Case Studies

With over 35 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



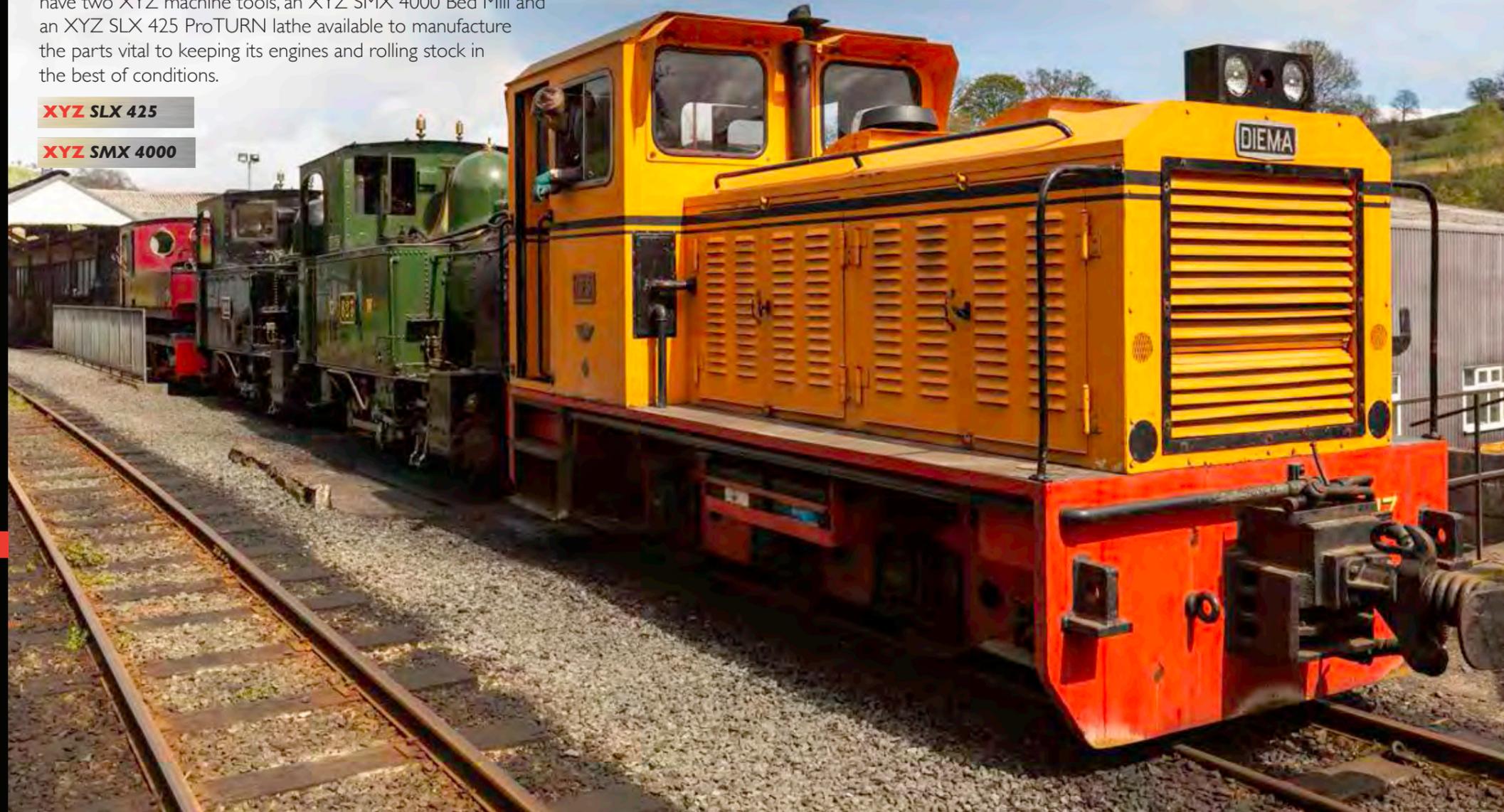
**XYZ 2-OP double your profits**  
A true story filmed at PTG in Plymouth.  
**Duration: 3 min 47 sec**

## Keeping railway heritage rolling

Now almost 120 years old the Welshpool and Llanfair Light Railway continues to operate thanks to a dedicated team of volunteers and full and part-time engineering staff, who now have two XYZ machine tools, an XYZ SMX 4000 Bed Mill and an XYZ SLX 425 ProTURN lathe available to manufacture the parts vital to keeping its engines and rolling stock in the best of conditions.

**XYZ SLX 425**

**XYZ SMX 4000**



**XYZ SLX 425**



**JAW Engineering**

JAW Engineering provide local industry with low volume sub-contract capacity and emergency breakdown support for customers.

**XYZ UMC-5X**



**Rivercircle**

Several factors were in favour of the XYZ UMC-5X including machine construction and design gave us confidence it would perform.

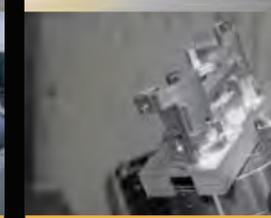
**XYZ 500 LR**



**DJM Engineering**

It is a refreshing change to get such service from a supplier, it is how we like to treat our customers.

**XYZ 710 HD**



**Restormel Machine**

Five-axis was the next step for us, the XYZ 710VMC with a Lehmann five-axis unit was the right move.

**XYZ EMX MILLS**



**Babcock International**

Investment in XYZ mills and lathes means we are much better placed to deliver the training that we need.

**XYZ 500 LR**



**R&M Electrical Group**

The benefits of investing in XYZ machining capacity at R&M Electrical Group go beyond simple cycle time savings and efficiencies.

**XYZ SLX 1630**



**LC Precision Eng'g**

We have seen growth through word of mouth, on the strength of our reputation for quality, and a willingness to invest.

**XYZ CT 65 LTY**



**Monument Tools**

The simplicity of the control on the XYZ means we can quickly produce batches of 10-off prototypes [or production volumes].

**XYZ UMC-5X**



**Investment Casting**

The first job on the XYZ UMC-5X was an injection mould tool, manufacturing time reduced by 60 per cent.

**XYZ SLX 1630**



**Maverick Chanters**

The impact of the SLX lathe allowed Maverick to produce what it wanted, when it wanted, with lead times virtually non-existent.

**XYZ TC 400**



**Standfast Precision**

Most of our work is in the oil & gas sector, mainly providing parts for instrumentation and logging systems.

**XYZ 2-OP**



**Karpas Engineering**

We all have dreams and Thomas Karpasitis is no different, except he has made his dream into reality.

**XYZ 2010 HD**



**Voestalpine**

Voestalpine High Performance Metals UK Ltd has built a reputation for supplying speciality metals to the most demanding sectors

**XYZ 1510 HS**



**Stevens & Carlotti**

Investment in XYZ machines has enhanced productivity and, has opened opportunities to develop a dedicated sub-contract machining capability.

**XYZ SMX SLV**



**ES Precision**

Lasers and machine tools are now being put to work providing a sub-contract service combining the best of both worlds



# 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 35 years. Our winning principles of combining outstanding build quality with the world's best control systems, namely ProtoTRAK®, Siemens and Heidenhain, have seen the **XYZ** product range grow to 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 it's 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 its class.



**XYZ** Manual Mills, Lathes and Grinders



**NEW**  
**XYZ** ProtoTRAK®  
KMX Turret Mill  
3 Models available



**NEW**  
**XYZ** ProtoTRAK®  
RMX Bed Mills  
4 Models available



**NEW**  
**XYZ** ProTURN®  
RLX Lathes  
7 Models available



**XYZ** 2-OP  
1 Model available



**NEW**  
**XYZ** LR Range  
3 Models available



**NEW**  
**XYZ** VMC HD Range  
4 Models available



**XYZ** High Speed VMC  
1 Model available



**NEW**  
**XYZ** 5 Axis Simultaneous  
and 4+1 VMC  
2 Models available



**XYZ** Turning Centres  
4 Models available



**NEW**  
**XYZ** Robotic Automation  
4 Models available



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



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

# Free XYZ product training

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



Mike

MIKE CORBETT - XYZ APPLICATIONS MANAGER

## FREE ProtoTRAK® training

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'. 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.

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

XYZ offer free unlimited classroom training for the first 12 months from date of order on all their ProtoTRAK controlled machine Tools. This broad-based course at any of our demonstration centres, introduces delegates to the basics of programming, use of the most popular features of the control and setting up the machine for production of parts.

### One on One Training

If you would like to focus more on the specialties of the parts you manufacture, these courses at each XYZ Centre for up to 3 delegates and for which we make a small charge, offers you the chance to have an instructor to yourself and learn in greater depth the features to help benefit your business.

### Training On-Site

Training on the machine you have purchased can be undertaken at your premises at a day rate cost for up to 3 delegates. This offers our customers a quick way to get up and running in their environment on the parts that need producing.

### Advanced Training

Once a user has the basics and needs to develop their programming skills to the next level, these advanced courses which are classroom based aim to deliver on improving customers knowledge and help to reduce programming time and increase the machines productivity.

### Telephone Support

XYZ's telephone support is available once a training course has been attended. This help on the end of the telephone is to assist the user if encounters errors when programming or as a gentle reminder if a function has not been used for a while.

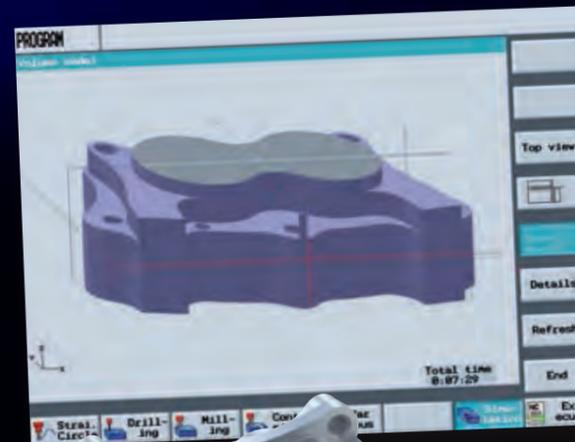
**By the end of your 'Advanced Training Days' complex components like this will be a real doddle, programmed within minutes.**



## FREE SIEMENS and HEIDENHAIN training

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 programmed after three days 'Standard Training' by most experienced engineers with no previous CNC experience.**

### VMC and Turning Centre Training **Standard Training - 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.

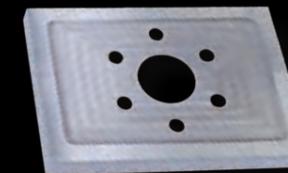
### Training On-Site

Training at your own site can be arranged at a cost for a maximum of three people. These courses are very client focussed, 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, Siemens and Heidenhain. 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.**

NEW

# ProtoTRAK®

## milling and turning

- **BETTER**  
New Hardware, Faster Feeds, 24 NEW features.
  - **EASIER**  
Now with 15.6" touch screen.
  - **FASTER**  
Drawing to finished component much faster than before.
- Call now for your Desk Top Demo.**



ProtoTRAK® CNC FROM ONLY  
**£99 A WEEK**  
+VAT SUBJECT TO STATUS

ProtoTRAK® Turret Mills  
**XYZ KMX 1500** pages 25, 26  
**XYZ KMX 2000** pages 25, 26  
**XYZ KMX SLV** pages 25, 26

ProtoTRAK® Bed Mills  
**XYZ RMX 2500** pages 27, 28  
**XYZ RMX 3500** pages 27, 28  
**XYZ RMX 4000** pages 27, 28  
**XYZ RMX 5000** pages 27, 28

ProtoTRAK® Production  
**XYZ 2-OP**  
 Portable 3 axis CNC pages 29, 30

ProtoTRAK® Lathes  
**XYZ PROTURN RLX 1630** page 36  
**XYZ PROTURN RLX 355** page 37  
**XYZ PROTURN RLX 425** 1.25 and 2 metre Gap Bed Lathe page 38  
**XYZ PROTURN RLX 555** 1 and 1.75 metre Gap Bed Lathe page 39  
**XYZ PROTURN RLX 555** 3 metre Gap Bed Lathe page 40

## Milling, turning and more

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.



**XYZ ProtoTRAK® KMX Turret Mills**  
3 Model available  
Guards removed for clarity

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

## Why ProtoTRAK

**ProtoTRAK is the ideal control for short runs.**

**The simplicity of ProtoTRAK makes training very simple and with only one days training you can be making profitable parts. Often much faster than on a machining or turning centre.**



**XYZ ProTURN® Lathes**  
7 Models available

**XYZ 2-OP**  
1 Model available

Get the new RMX and RLX control brochures. **Call 01823 674200** or visit the website to download.

Or better still call to book your Desk Top Demo.

# ProtoTRAK®

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

ProtoTRAK was first developed 35 years ago by Southwestern Industries in California. They focussed their entire efforts into finding an engineering solution that would provide 'consistent high efficiency performance on low-volume and complex prototype production'. From these focussed 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 KMX and RMX for mills and the RLX 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® KMX

**A two-axis CNC control designed especially for Turret Mills, 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 KMX in action and you will realise the days of a conventional DRO on a mill are over.**



### ProtoTRAK® RMX

**This 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. 'Adaptive Material Removal' provides ground breaking 'area clearance', saving hours on jobs and improving surface finishes, as well as extending tool life. 3D surfacing with on-board DNC and the capability to handle virtually unlimited program sizes is also included.**

## Turning



### ProtoTRAK® RLX

**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** Allowing operators to see the geometry of the program as they enter the data, which 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.



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

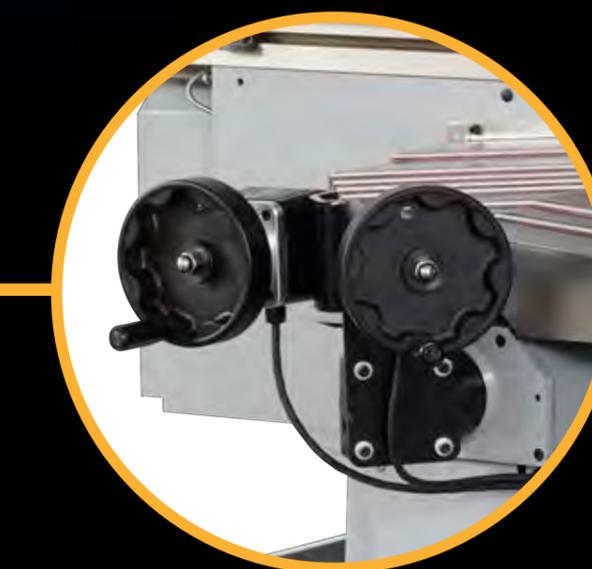
**EASY** No previous CNC experience is required with ProtoTRAK, as the quick and easy plain English format requires just a few hours training for even the most inexperienced machinist to be creating programs. This allows you to increase productivity and profitability.

**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.



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 - 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 centres lathes.  
**1 min 55 sec**

## ProtoTRAK® Verify

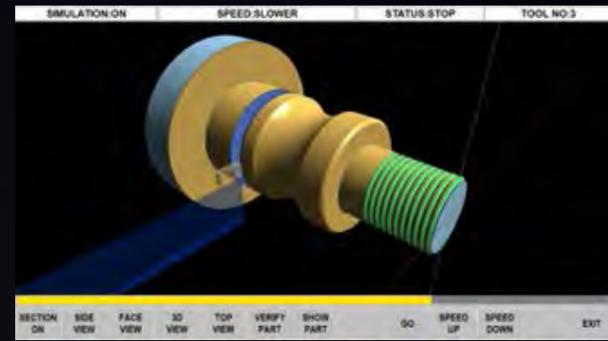
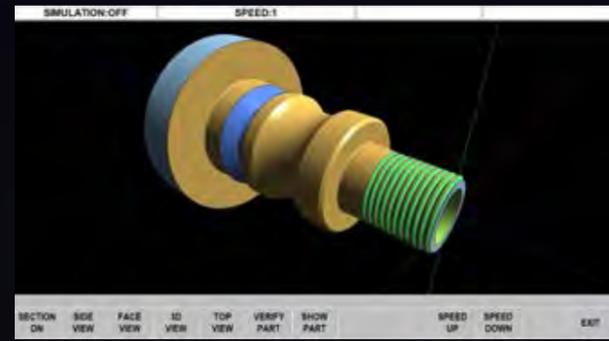
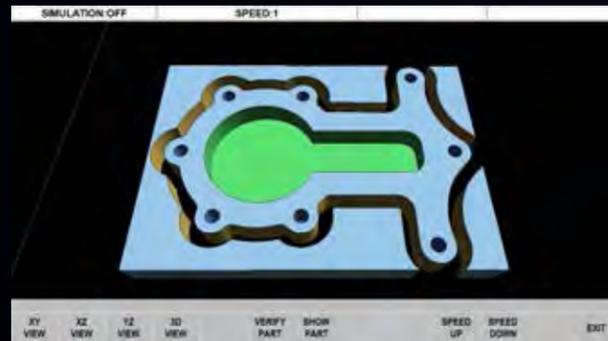
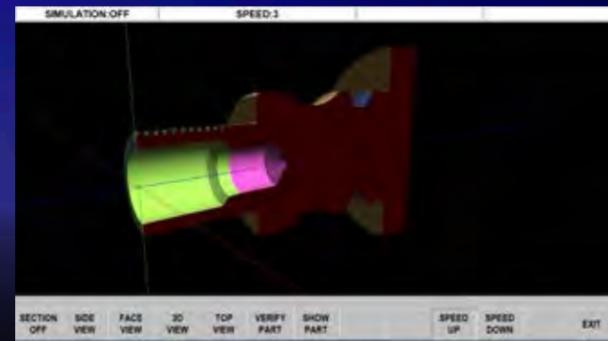
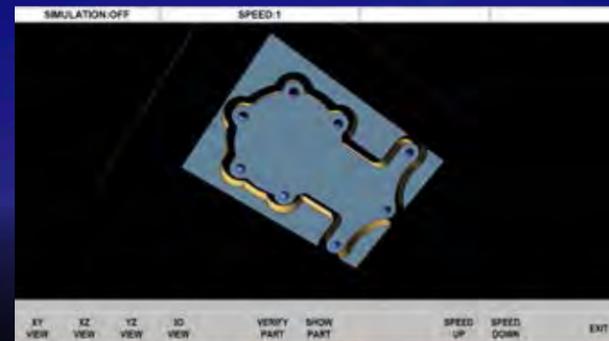
One of the many advanced features of the ProtoTRAK RMX and RLX controls is the ability to have a visual representation of the part that has been programmed as a solid model. This VERIFY feature supplements the tool path function, which will show where each tool will machine by allowing the operator to 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 RMX 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 RLX 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.

To see the ProtoTRAK verify video please visit

<http://www.xyzmachinetools.com/video/verify>



## ProtoTRAK® DXF

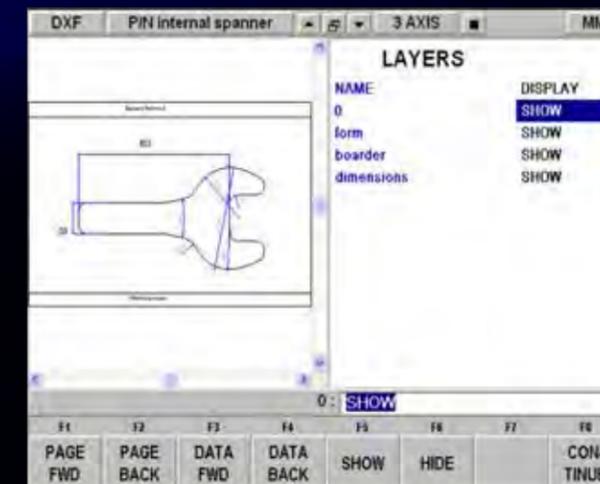
Programming is easy on the ProtoTRAK control, but it can be made even easier. Fitting the optional DXF converter makes light work of programming profiles and selecting hole patterns by taking them straight from the CAD drawings in either DXF or DWG formats.

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 programming menu to select the operations required directly from the drawing, means no dimensional mistakes will ever be made again.

Touchscreen makes this even simpler.

To see the ProtoTRAK DXF video please visit

<http://www.xyzmachinetools.com/video/dxf>



## 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.

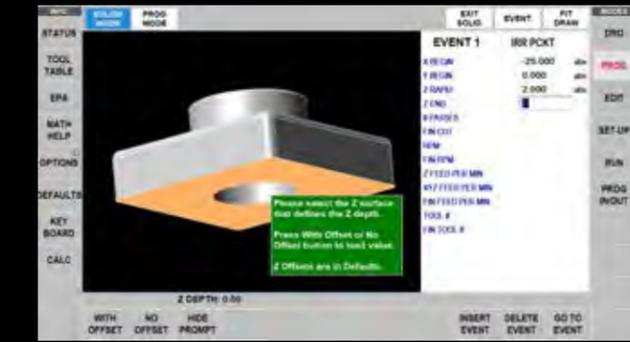
To see the ProtoTRAK parasolid video please visit

<http://www.xyzmachinetools.com/video/parasolid>



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.





**NEW**  
**Introducing the new ProtoTRAK<sup>®</sup> KMX**

■ **BETTER**  
 New Hardware,  
 Faster Feeds,  
 24 NEW features.

■ **EASIER**  
 Now with 15.6" touch screen.

■ **FASTER**  
 Drawing to finished  
 component much faster  
 than before.

“The KMX and RMX controls on the XYZ range of Turret and Bed Mills is a formidable combination, a serious contender to the XYZ VMCs.”

*N Atherton*  
 Nigel Atherton  
 XYZ MANAGING DIRECTOR

**Productivity**

- ProtoTRAK RMX CNC integrated into the machine at the factory.
- TRAKing – control of program run.
- Programmable Spindle Control.

**Flexibility**

- Manual, two or three axis.
- Real handwheels so you can work manually.
- DRO mode with power feed, teach and more.
- Head swivels right and left.

**Strength and Power**

- Wide saddle.
- Box ways.
- Bed support of table and saddle.
- Low and high gear range.
- Entire ram moves along the column for rigidity.

**Precision**

- Ballscrews in the table, saddle and column.
- Brushless servo motors with .000003" encoder resolution.
- Quill scale and column ballscrew encoder integrated into one Z dimension.
- Turcite coating on bearing surfaces to reduce friction.

Get the new RMX control brochure  
 Call 01823 674200  
 or visit the web-site to get yours



ProtoTRAK<sup>®</sup>  
 CNC FROM ONLY  
**£99**  
 A WEEK  
 +VAT SUBJECT TO STATUS

**and touchscreen RMX for the mill**



To see more about tap, swipe, pan, zoom and other touchscreen gestures watch the videos at the XYZ website [www.xyzmachinetools.com](http://www.xyzmachinetools.com)

**Interact with your part graphics. You can zoom, pan or rotate your drawings and 3D models by using the touchscreen.**

*Now with touch screen*

Or, better still, get a demo in your machine shop. Talk to your XYZ Salesman about the new ProtoTRAK controls. Chances are, he'll have a Demo Box with him.

ProtoTRAK® Turret Mills

- XYZ KMX 1500** pages 25, 26
- XYZ KMX 2000** pages 25, 26
- XYZ KMX SLV** pages 25, 26

ProtoTRAK® Bed Mills

- XYZ RMX 2500** pages 27, 28
- XYZ RMX 3500** pages 27, 28
- XYZ RMX 4000** pages 27, 28
- XYZ RMX 5000** pages 27, 28

ProtoTRAK® Production

- XYZ 2-OP** pages 29, 30
- Portable CNC**

# ProtoTRAK® turret 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 RMX ProtoTRAK CNC control with 2 or 3 axis capabilities.



## Get the Desk Top Demo



Get the ProtoTRAK Desk Top Demo, it only takes 30 minutes and happens at your place. Alternatively visit the website and see the ProtoTRAK videos.



**XYZ KMX 1500**  
Entry Level machine and control, after only one day you will wonder why you ever used a manual mill.

*Guards removed for clarity*



**XYZ KMX 2000**  
This machine has always been our best selling CNC Turret Mill, with its size capability and price making it a real winner.



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



**XYZ RMX 2500**  
This brings 3 axis milling within reach of all UK toolrooms.



**XYZ RMX 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 RMX 4000**  
This 1000mm 'X' travel machine offers massive capacity at a very competitive price.



**XYZ RMX 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.

# XYZ ProtoTRAK® KMX Turret Mill

## 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®

KMX 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 servo motors 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 KMX 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 KMX 1500

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



## XYZ KMX 2000

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



## XYZ KMX SLV

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

	XYZ KMX 1500	XYZ KMX 2000	XYZ KMX SLV
Spindle Drive Motor	2.25 kw (3 HP)	2.25 kw (3 HP)	3.75 kw (5 HP)
Vari Speed Range High / Low	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-3	15.9 mm 3 off	15.9 mm 3 off	15.9 mm 3 off
Longitudinal travel - X axis	660 mm	762 mm	1000 mm
Cross travel - Y axis	305 mm	380 mm	410 mm
Knee vertical travel - Z axis	406 mm	400 mm	400 mm
Slide type	Hardened Way	Hard Chrome	Hardened Box Way
Ram travel	350 mm	450 mm	450 mm
Spindle taper	R8 / 30 ISO optional	R8 / 30 ISO optional	40 ISO
Quill power feeds	.038 .076 .15 mm	.038 .076 .15 mm	.038 .076 .15 mm
Quill travel	127 mm	127 mm (110 mm if RMX3)	127 mm (110 mm if RMX3)
Quill diameter	86 mm	86 mm	105 mm
Max table load	350 kg	350 kg	580 kg
Swivel on turret	360°	360°	360°
Head tilt front to back	45°-45°	45°-45°	45°-45°
Head tilt left to right	90°-90°	90°-90°	90°-90°
Max throat depth	686 mm	686 mm	700 mm
Net weight approx	1250 kg	1350 kg	1850 kg

## Standard Equipment

**Vari Speed 2 Range Head.**  
**Chrome Slides or Box Ways.**  
**3 Axis DRO.**  
**2 Axis CNC.**  
**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®.**  
**Riser Blocks.**  
**Air Drawbars.**  
**4th Axis DRO.**  
**Offline Software.**  
**Tooling, Vices etc.**  
**Parasolid and DXF Convertors.**  
**Millstar (Quill DRO).**

## 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.



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

# XYZ ProtoTRAK® RMX Bed Mill

## Motor / Head

All RMX Bed Mills have programmable spindle speed 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®

RMX 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 RMX 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 servo motors 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.

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

Programmable spindle speeds of 40-5000 rpm are standard and TRAKing is available as an option on all models.



## XYZ RMX 2500

3HP PROGRAMMABLE VARIABLE SPEED HEAD  
49" x 9" (1245 x 228mm) TABLE  
30" x 15" x 22" (762 x 381 x 560mm) TRAVEL  
5000 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.

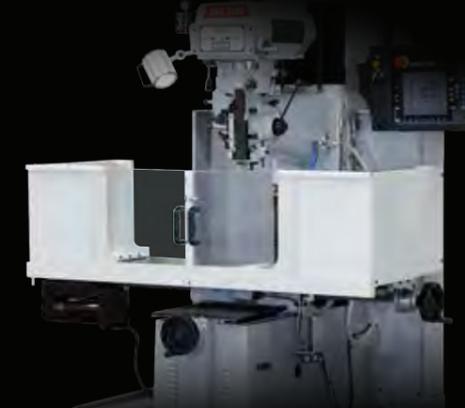


## XYZ RMX 3500

5HP PROGRAMMABLE VARIABLE SPEED HEAD  
54" x 14" (1370 x 356mm) TABLE  
31" x 20" x 20" (787 x 508 x 508mm) TRAVEL  
PROGRAMMABLE 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 RMX 4000

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



## XYZ RMX 5000

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

	XYZ RMX 2500	XYZ RMX 3500	XYZ RMX 4000	XYZ RMX 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	40-5000 rpm programmable	40-5000 rpm programmable	40-5000 rpm programmable	40-5000 rpm programmable
2 Speed ranges	40-600 / 300-5000 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 <small>Can be extended to 530mm but this restricts Y axis travel to 480mm.</small>	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

## XYZ 2-OP

### 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.**



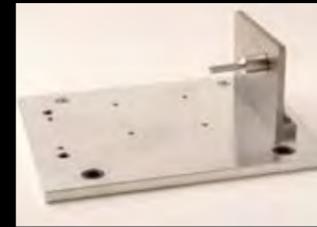
## Options to fit your exact needs



**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.



**Programmable Pneumatic Speed 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.

## 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**

### 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 programming (free download).**  
**External USB drive.**

**NEW**  
**Introducing the new touchscreen Proto**

**TRAK<sup>®</sup> RLX for the lathe**

■ **BETTER**  
 New Hardware,  
 Faster Feeds,  
 21 NEW features.

■ **EASIER**  
 Now with 15.6" touch screen.

■ **FASTER**  
 Drawing to finished  
 component much faster  
 than before.

“With a choice of swings, bed lengths and spindle bores, the XYZ RLX range has a lathe to make you more productive.”

*N Atherton*  
 Nigel Atherton  
 XYZ MANAGING DIRECTOR

- ProtoTRAK RLX is possibly the simplest CNC control available today.
- 15.6" touchscreen makes the control simple and intuitive.
- Gesture control makes controlling the screen quick and easy.
- Constant Surface Speed control for improved tool life and surface finishes.
- Electronic handwheels allows Tapers, Radii and Fillets to be produced manually.
- Enhanced ProtoTRAK Assistant is your on board help at the touch of the screen.
- Proturn Lathes are standard with TRAKing<sup>®</sup> 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.
- Choice of toolholding, quick change toolpost, 4 station indexer or 8 station turret.
- Optional DXF software allows program production straight from the drawing.

Get the new RLX control brochure  
 Call 01823 674200  
 or visit the website to download.



ProtoTRAK<sup>®</sup>  
 CNC FROM ONLY  
**£99**  
 A WEEK  
 +VAT SUBJECT TO STATUS



To see more about tap, swipe, pan, zoom and other touchscreen gestures watch the videos at the XYZ website  
[www.xyzmachinetools.com](http://www.xyzmachinetools.com)

**Interact with your part graphics. You can zoom, pan or rotate your drawings and 3D models by using the touchscreen.**

Or, better still, get a demo in your machine shop. Talk to your XYZ Salesman about the new ProtoTRAK RLX control. Chances are, he'll have a Demo Box with him.

## ProtoTRAK® Lathes

**XYZ PROTURNS RLX 1630** page 36

**XYZ PROTURNS RLX 355** page 37

**XYZ PROTURNS RLX 425** page 38

1.25 and 2 metre Gap Bed Lathe

**XYZ PROTURNS RLX 555** page 39

1 and 1.75 metre Gap Bed Lathe

**XYZ PROTURNS RLX 555** page 40

3 metre Gap Bed Lathe

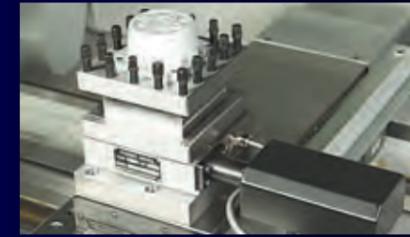
# ProtoTRAK® on the lathe

The ProtoTRAK® RLX control is available across the ProTURN range, from small lathes through to three metre between centre lathes.

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



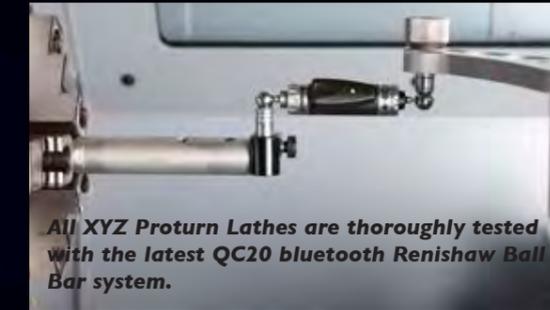
## Improved precision and production options



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



*If you're considering buying a large turning centre fitting an 8 station turret to a large ProTURN could give you very similar results at a fraction of the price. Perhaps 80% of the performance at 30% of the price.*



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



*Optional drilling attachment.*

## Get the Desk Top Demo



Get the ProtoTRAK Desk Top Demo, it only takes 30 minutes and happens at your place. Alternatively visit the website and see the ProtoTRAK videos.



**XYZ PROTURNS RLX 1630**

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



**XYZ PROTURNS RLX 355**

High speed, high precision, rigidity and performance.



**XYZ PROTURNS RLX 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 PROTURNS RLX 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 PROTURNS RLX 555** 3 metre Gap Bed Lathe

The 'heavyweight' ProTURN with heavier bed and base. For larger capacity lathes see the XL range on pages 93 to 96.

# XYZ ProTURN® Lathes - time proven quality

## Control

The latest generation of ProtoTRAK RLX 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 RLX 1630).

## Cast Bed & Base

Unlike most other Lathes that are cast or fabricated in two or three pieces and then bolted together, the Proturn RLX is a one piece solid ribbed casting that provides 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 RLX 1630 does not have a single piece casting.



XYZ PROTURN RLX 555 3 metre Gap Bed Lathe

## TRAKing®

Proturn 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.



## 8 Station Turret

**If you're considering buying a large turning centre fitting an 8 station turret to a large/longbed ProTURN could give you very similar results at a fraction of the price. Perhaps 80% of the performance at 30% of the price.**

# XYZ PROTURN RLX 1630

**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 RLX 1630
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	DI-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 RLX 355

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



### 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.**  
**Swarf Conveyor.**

	XYZ RLX 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 RLX 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**



XYZ ProTURN RLX 425 x 2 metre

### 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.**  
**Swarf Conveyor.**

	XYZ RLX 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 on the lathe  
 From small lathes up to 3 metres between centres lathes.  
**1 min 55 sec**

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 RLX 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**



### 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.  
Swarf Conveyor.

	<b>XYZ RLX 555- 1 and 1.75 metre</b>
Swing over bed	560 mm
Swing in gap	780 mm
Gap in front of faceplate	227 mm max
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

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



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

## XYZ PROTURN RLX 555

**3 METRE GAP BED LATHE  
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.  
Swarf Conveyor.

	<b>XYZ RLX 555- 3 metre</b>
Swing over bed	560 mm
Swing in gap	935 mm
Gap in front of faceplate	297 mm max
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



### 8 Station Turret

*If you're considering buying a large turning centre fitting an 8 station turret to a large/longbed ProTURN could give you very similar results at a fraction of the price. Perhaps 80% of the performance at 30% of the price.*

# XYZ VMCs

## Why VMC ?

ProtoTRAK is ideal for low volume production but when moderate to large quantities or many tools are required, machining or turning centres are the answer.

### XYZ LR Range

**XYZ 500 LR** page 55, 56

**XYZ 750 LR** page 57, 58

**XYZ 1000 LR** page 59, 60



### XYZ HD Range

**XYZ 660 HD** page 61, 62

**XYZ 800 HD** page 63, 64

**XYZ 1100 HD** page 65, 66

**XYZ 1510 HD** page 69, 70

**XYZ 2010 HD** page 71, 72

**XYZ 2510 HD** page 71, 72

**XYZ 3010 HD** page 71, 72



### XYZ High Speed, Five Axis and TCM Ranges

**XYZ 1060 HS** page 67, 68

**XYZ TCM RANGE** page 73, 74

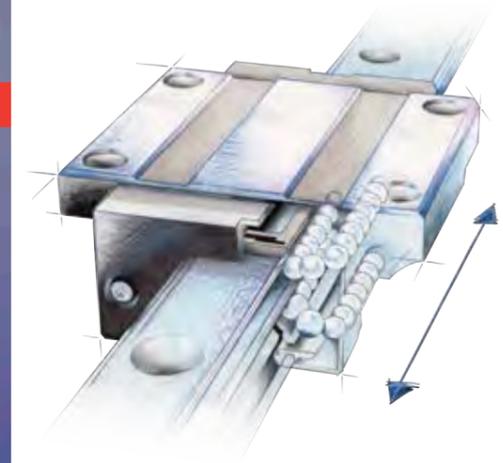
**XYZ UMC-4+I** page 75, 76

**XYZ UMC-5X** page 75, 76



### Linear Rail Ball Bearing Slides

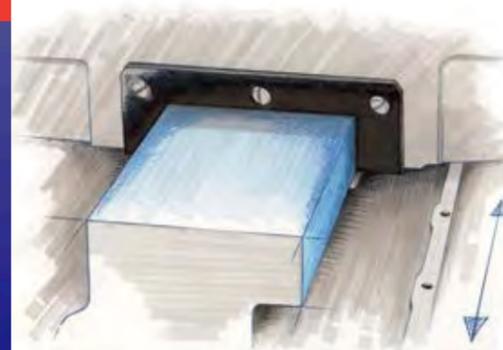
The use of linear rails on machining centres has been common for many years, as they allow users to take advantage of improvements in digital motion control and modern cutting tool performance, therefore maximising their competitiveness. Now, with the latest design advances in linear rail technology, XYZ Machine Tools feel that they meet its own stringent performance standards, while still providing a cost advantage and the arrival of the three machine XYZ LR range is the result.



### Hardened Box Way Slides

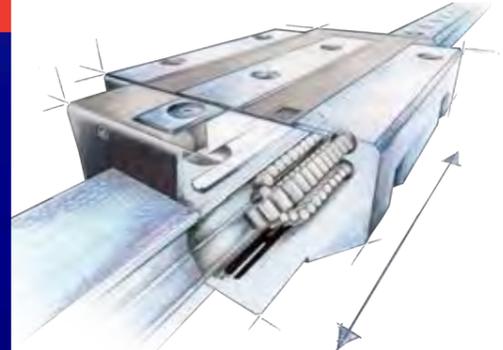
Hardened box ways with Turcite coated slides have been the first choice for XYZ machines for many years, as they are renowned for providing the best solution for machine tool construction.

The combination of machine weight and hardened box slideways guarantees a highly rigid machining platform, providing exceptional vibration damping, especially on intermittent cutting across a wide range of materials, such as Inconel, titanium, cast iron or stainless steel.



### Linear Roller Bearing Slides

XYZ Machine Tools makes use of linear roller bearing slide technology for high-speed, high-precision applications that also call for enhanced slideway stiffness and rigidity whilst cutting. These slideways provide a large bearing contact area and can be found on XYZ's 1060 HS and UMC-5X high speed five-axis machines, where they provide optimum cutting performance for the applications that these machines face.



# SIEMENS



## From 500 LR to 3010 HD, 5 axis and beyond.

Siemens or Heidenhain are the perfect conversational controls, and both are world leaders in production control systems.

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

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

# SIEMENS



# HEIDENHAIN



### Linear Rail Ball Bearing Slides



#### XYZ 500 LR

XYZ 500 LR makes machining even more affordable.

#### XYZ 750 LR

XYZ 750 LR hits the spot for cost-effective machining.

#### XYZ 1000 LR

The XYZ 1000 LR provides large capacity at an affordable price.

### Hardened Box Way Slides



#### XYZ 660 HD

Optimise the profitability of a small space with this top selling VMC. The 660 HD is at the top of its class with power and performance in abundance.

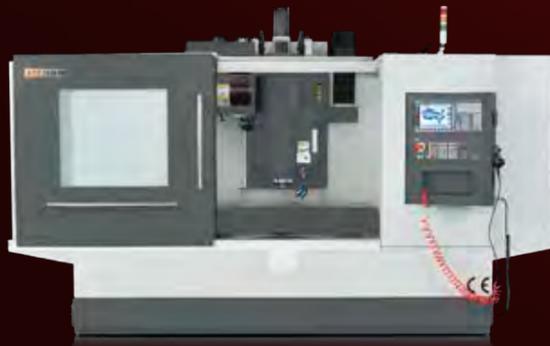
#### XYZ 800 HD

The mid range 800 HD offers great capacity and cutting performance.

#### XYZ 1100 HD

The 1100 HD is a real workhorse with a solid casting, rigid box ways. A great metal remover.

### Hardened Box Way Slides



#### XYZ 1510 HD

1500mm 'X' travel on this solid cast machine, with a hunger for metal removal. Give yourself a competitive advantage, charge higher rates for those bigger jobs or get more smaller jobs on the table. There may well be a shortage of bigger capacity machines in your area.



#### XYZ Heavyweight Vertical Machining Centres

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

### Linear Roller Bearing Slides



#### XYZ TCMs large X axis range of Travelling Column Machines

The perfect big scale production platform with up to 10,000mm on the X axis, perfect for those large Aerospace/Energy components.

#### XYZ 1060 HS

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

#### XYZ 4+1 and UMC-5X

This 4+1 multi-face machine, or the 5 axis simultaneous UMC are both built to the highest of standards to be the best in their class.

**XYZ**  
Machine Tools

PROUDLY PRESENTS

**SIEMENS**

**HEIDENHAIN**

At XYZ Machine Tools we know how important it is to have powerful CNC controls that remain easy to learn and easy to set up.

We pride ourselves on providing only 'the right machine tool and control for the job', to do this we have over the past 30 years fitted many of the leading CNC controls but today, after much testing and deliberation we now predominantly fit the Siemens 828D ShopMill or Heidenhain to our VMCs, and the Siemens 828D ShopTurn to our Turning Centres.

The XYZ range of extra large lathes is fitted with the more powerful 840DSL ShopTurn control and the high speed VMC is fitted with the 840DSL ShopMill or Heidenhain TNC 620/640 HSCI control. In our opinion these controls offer the best value for money for the production of low volume and advanced prototyping on a broad range of materials.

All of these controls fitted by XYZ can be easily programmed without any 'G coding' knowledge and programming can be done off-line, using CAD/CAM or other applications of your choice.

Simply compact.  
Simply perfect.



Increased productivity and ease of use, are the key elements of the latest Siemens and Heidenhain controls fitted to **XYZ's** range of VMC's and Turning Centres.

Getting the best from your production machining and turning centres is reliant on using a flexible CNC control that the operators want to use and program. At XYZ we understand that having the right control for the work you are producing and engaging the user leads to a more productive machine. From our experience and research the Siemens and Heidenhain controls deliver on both fronts.

**Siemens for Milling**

Using either the 828D or 840D SL controls, programming on the shopfloor is easy with the conversational formats developed by Siemens. The LR range is supplied with the 828D control with cycle support as standard so no G codes are required but these controls can be upgraded to having the full Shopmill jobshop software package which is supplied as standard on the Heavy Duty, Heavyweight and UMC 4+1 models. Developed over many years, Shopmill has evolved into the ultimate and most flexible control software for production type machines. Due to the need for increased performance and processing power, the 1060 HS and UMC-5X machines are fitted with Siemens 840D SL controls which using special high speed machining features produce smooth surface finishes and ensure cycle time reductions when doing mould and die work. Taking programs from Cam software is easy using either USB ports or network (RJ45) connections.

**Siemens for Turning**

Fitted to the complete range of XYZ turning centres and XL range, Siemens 828D controls with the Shopturn software allows users to get the very best from XYZ's production turning equipment. With the conversational Shopturn Jobshop turning software, producing programs for standard 2 axis lathes and machines fitted with Live tooling and Y axis has never been easier and quicker. Selecting the feature you require and answering the prompts generates a working program in minutes. But, working with Siemens, XYZ have developed extra capabilities such as tailstock programming, Barfeed cycles for pneumatic and servo type feeders and automatic use of the tool setting probes.

**Heidenhain for Milling**

Some workshops have been established for many years and have controls that were purchased a number of years ago. This leads to operators being familiar with a system of working or a CAM system with post processors already proven. To give these workshops the opportunity to benefit from the quality of

machines and backup from XYZ, we are now supplying our HD range of VMC's with the latest Heidenhain TNC620 touchscreen control. This latest generation of TNC product brings the Heidenhain programming concept to a full touchscreen and uses all of the modes of operation and programming functions such as cycle definitions and contouring functions to an easy to use interface. The UMC-5X is offered with the TNC 640 control which still uses the Heidenhain shopfloor programming system but also gives the user the functionality to swivel the workpiece and execute simultaneous 5 axis programs that developing workshops and aerospace manufacturing companies need.

**Programming away from the machine**

Both Siemens and Heidenhain offer offline programming packages that allow users to generate programs for the controls away from the machine itself. Loaded onto a desktop or laptop computer, users can use the same programming methods they have learnt on the machine but in a more comfortable environment.

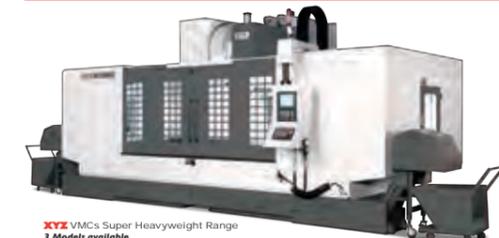
**XYZ Vertical Machining Centres**



XYZ Linear Rail VMCs 3 Models available  
 XYZ VMCs Heavy Duty Range 4 Models available  
 XYZ UMC-5X 5 Axis Simultaneous or XYZ UMC 4+1 Multi-face Machining Centre  
 XYZ High Speed VMC  
 XYZ Turning Centres 4 Models available

**XYZ Turning Centres**

**XYZ Heavyweight VMCs**



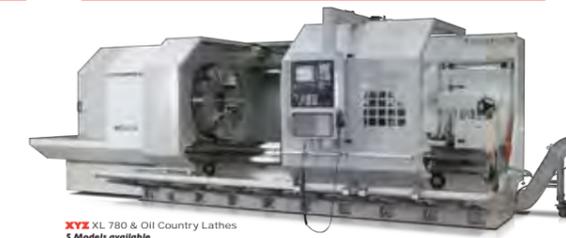
XYZ VMCs Super Heavyweight Range 3 Models available

**XYZ Travelling Column Machine-TCM**



XYZ TCMs for large scale production 3 Models available

**XYZ XL, and Oil Country Lathes**



XYZ XL 780 & Oil Country Lathes 5 Models available

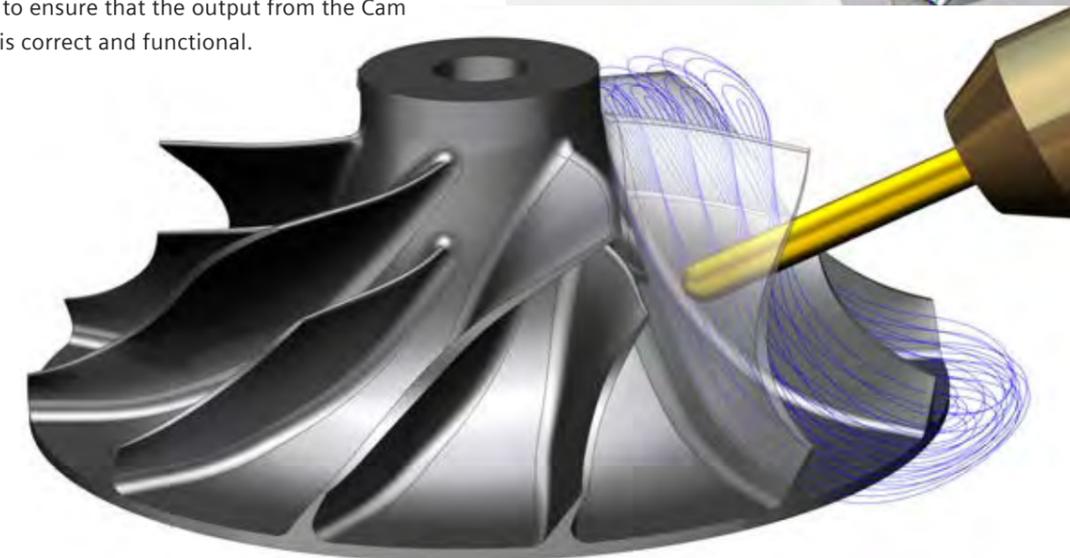


## CAD/CAM program generation

With the digital world moving ever faster, here at XYZ we understand that many customers want to use their CAD/CAM facilities to program their CNC Machine. XYZ can support both our customers and CAD/CAM suppliers in the generation of the coding required to run ProtoTRAK, Siemens and Heidenhain controlled machines. With our extensive knowledge of machining strategies and machine performance, we can assist you in getting the most from your 2.5D through to 5 axis simultaneous machines and increase productivity using high speed and adaptive machining toolpaths.

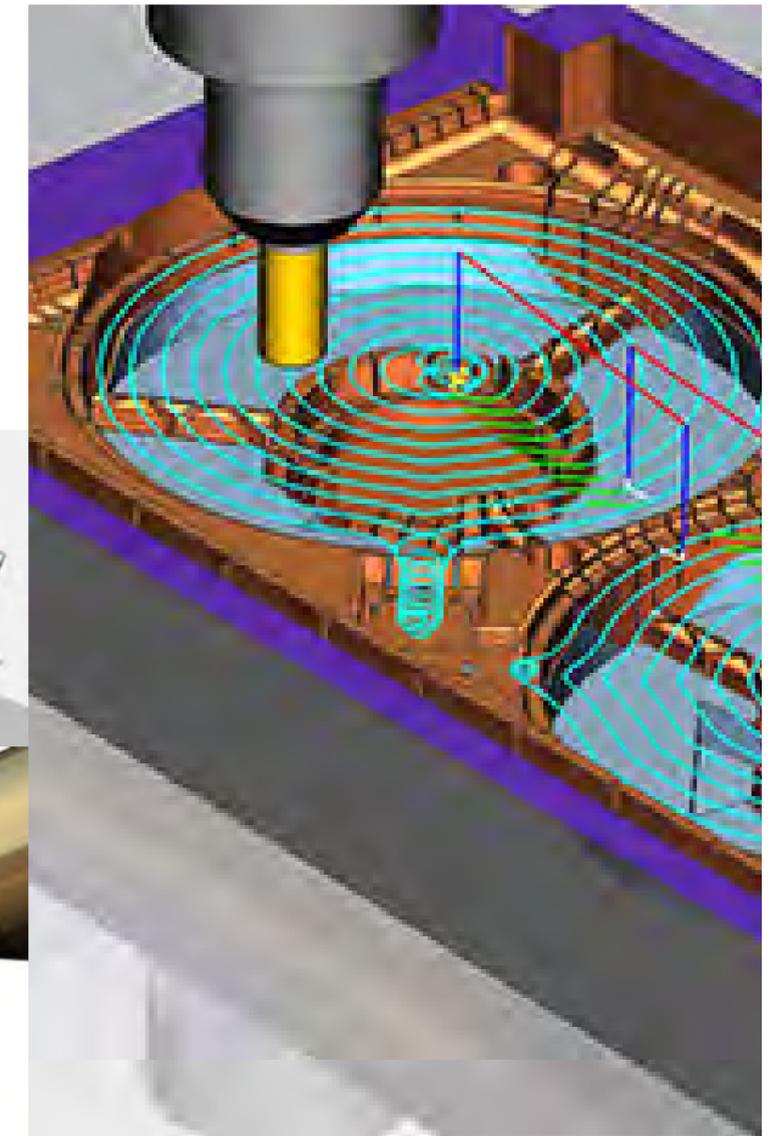
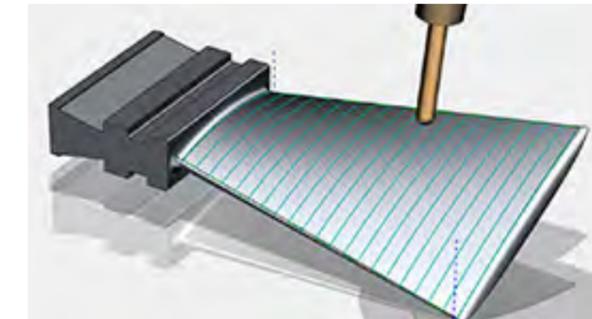
There are many 3rd party Cam software packages on the market suiting a multitude of budgets but, they are only of benefit to user if they produce the correct coding for the machine controller through the post processor functionality. With many years of machining experience and understanding G code programs, XYZ's Applications and support staff can assist in testing post processed programs and advise on changes that need to be made so that the best possible performance is gained from the machine, achieving good surface finishes and in the quickest cycle time.

No matter if you are generating programs for machines in 2.5 axis with Z level machining and hole production techniques, 3 axis surfaces machining on complex mould and die parts, 4th axis machining wrapping profiles and pockets around bars, multi face machining on the UMC 4+1 or even doing impeller type full 5 axis machining, XYZ's team can advise on the coding required and test the generated program to ensure that the output from the Cam package is correct and functional.



XYZ work alongside many of the industries well known names and many of our signature demonstration parts have been produced using these software packages.

As technology moves on, XYZ ensure we are kept abreast of the new and innovative developments in the CAD/CAM world which enables us to discuss with our customers the most productive ways of manufacturing parts, helping our customers to gain the advantage in this competitive manufacturing world.



**All leading CAD/CAM systems can integrate with the XYZ range of CNC machines. XYZ Machine Tools are happy to talk to your supplier to ensure post processing is correct and integration is smooth and hassle free.**

At **XYZ** the Siemens controls that we fit have many software options included that we consider essential for everyday machining.

**Not all machine tool suppliers do this.**



Turning, the **XYZ** standard Siemens control features.

Siemens ShopTurn control type:	Siemens 828D			
XYZ Machine Model name:	XYZ Turning Centres	XYZ LTY Turning Centres	XYZ XL 780	XYZ XL 1100
ShopTurn programming	✓	✓	✓	✓
Program guide for creating G code programs	✓	✓	✓	✓
ISO Dialect for accepting 'Fanuc' programs	✓	✓	✓	✓
Screen size	15" touchscreen	15" touchscreen	10.4"	10.4"
Compact flash card for program storage	✓	✓	✓	✓
USB Port	✓	✓	✓	✓
Animated help videos	✓	✓	✓	✓
Line trace graphics	✓	✓	✓	✓
2D Solid model graphics	✓	✓	✓	✓
3D Solid model graphics with section views	✓	✓	✓	✓
Real time simulation	✓	✓	✓	✓
Tool life management	✓	✓	✓	✓
Standard tool probing cycles	✓	✓	✓	✓
Extended probing cycles for in process checking *	✓	✓	✓	✓
Viewing of HTML, BMP, PDF, and JPEG files	✓	✓	✓	✓
Residual material detection in contour profiles	✓	✓	✓	✓
Bar feed conversational screens for servo or pneumatic units	✓	✓	N/A	N/A
Factory network for linking to existing networks	○	○	○	○
Safety functions (Conform According to IEC 61508 SIL 2, EN ISO 13849-1 PL d & category 3)	✓	✓	✓	✓
XYZ Custom screens for additional functionality	✓	✓	✓	✓
Transfer of Programs written in MDI into control memory	✓	✓	✓	✓
Saving workpart datum and tooling data	✓	✓	✓	✓
Commanding changes to Spindle speeds and feedrates as program executes	✓	✓	✓	✓
Contour Handwheel for program proving out	○	○	○	○
Polygon Turning	N/A	○	N/A	N/A
Gear Hobbing	N/A	○	N/A	N/A



✓ Included as standard    \* Only standard if work setting probes are fitted  
 ○ Optional  
 N/A Not available

**For further information on the XYZ Siemens controls please call 01823 674200 to speak to your XYZ Area Sales Manager.**

Milling, the **XYZ** standard Siemens control features.

Siemens control type:	Siemens 828D			Siemens 840 DSL	
XYZ Machine Model name:	XYZ LR Range	XYZ HD Range & UMC4+1	XYZ Heavyweights Range	XYZ 1060 HS	XYZ UMC-5X
Ready to cut automatic warm up cycles	✓	✓	✓	✓	✓
Program guide for creating G code programs	✓	✓	✓	✓	✓
ISO Dialect for accepting 'Fanuc' programs	✓	✓	✓	✓	✓
Screen size	10.4"	15" touchscreen	15" touchscreen	19" touchscreen	19" touchscreen
User CF card program storage	✓	✓	✓	✓	✓
USB port	✓	✓	✓	✓	✓
Advanced surface for 3D milling (COMPCAD)	✓	✓	✓	✓	✓
Safety functions (Conform According to IEC 61508 SIL 2, EN ISO 13849-1 PL d & category 3)	✓	✓	✓	✓	✓
Animated help videos	✓	✓	✓	✓	✓
Line trace graphics	✓	✓	✓	✓	✓
2D solid model graphics	✓	✓	✓	✓	✓
Standard workpiece and tool setting cycles	✓	✓	✓	✓	✓
Extended probing cycles for in process checking *	✓	✓	✓	✓	✓
Viewing of HTML, BMP, PDF, and JPEG files	✓	✓	✓	✓	✓
Tracyl cylindrical transformation for wrapping around a cylinder **	✓	✓	✓	✓	✓
Traori Kinematic option for 5 axis machining ***	N/A	✓	✓	✓	✓
ShopMill Programming	○	✓	✓	✓	✓
Real time simulation	○	✓	✓	✓	✓
Tool life management with sister tools	○	✓	✓	✓	✓
Residual material detection in contour pockets	○	✓	✓	✓	✓
Multiple clamping for same or different parts on multiple datums	○	✓	✓	✓	✓
3D solid model graphics with section view	○	✓	✓	✓	✓
Advanced technology function for pockets with islands	○	✓	✓	✓	✓
XYZ Custom screens for additional functionality	○	✓	✓	✓	✓
Transfer programs written in MDI into control memory	○	✓	✓	✓	✓
Saving workpart datum and tooling data	○	✓	✓	✓	✓
Commanding changes to spindle speeds and feedrates as program executes	○	✓	✓	✓	✓
Factory network for linking to existing networks	○	○	○	○	○
Contour Handwheel for program proving out	○	○	○	○	○

✓ Included as standard    \* Only standard if table and spindle probe are fitted.  
 ○ Optional    \*\* Only standard if 4th axis is fitted.  
 N/A Not available    \*\*\* Only standard if control is upgraded to 840D SL and 5 axis unit is fitted.

**For further information on the XYZ Siemens controls please call 01823 674200 to speak to your XYZ Area Sales Manager.**



Vertical Machining Centres CAD/CAM

# XYZ Vertical Machining Centres - quality proven

XYZ HD 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 servo motors 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.

The new XYZ LR range of VMCs have been built to the same exacting standards and now feature the latest in linear bearing technology.



**XYZ LR Frame**  
This frame design is similar on all three XYZ LR models. The XYZ 500 LR, XYZ 750 LR and the XYZ 1000 LR. The only items that change are rail sizes, weight and overall size.



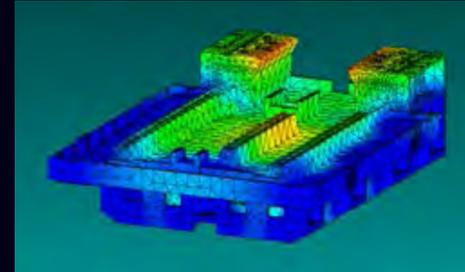
**XYZ 660 HD and 800 HD Frame**  
This frame design is similar on both models of HD VMCs. The only items that change are box section sizes, weight and overall size.



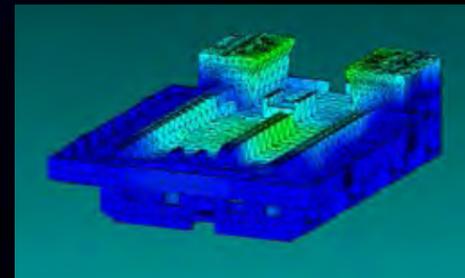
**XYZ 1100 HD Frame**  
This frame design is only available on the XYZ 1100 HD the base casting supports the full X and Y travels allowing up to 1500 Kg of table load which is fully supported throughout the traverse.

## 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).

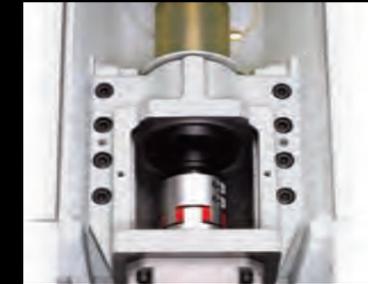
## Fully protected

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



## Direct drive on three axes

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



**Linear Rails on all axes of the LR Range**



## Automatic Lubrication

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



## 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 are available as an optional extra on all XYZ VMC's.

#### Coolant Tank

All XYZ VMC's 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 flow.



#### Laser Inspection

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



Multi face 5 axis milling is available as an option on all XYZ HD VMCs. For 5 axis simultaneous machining the Siemens 840 DSL control is required, this is standard on the **XYZ 1060 HS** and optional on the HD range.



5th axis as shown on the VMC.

#### Swarf Management

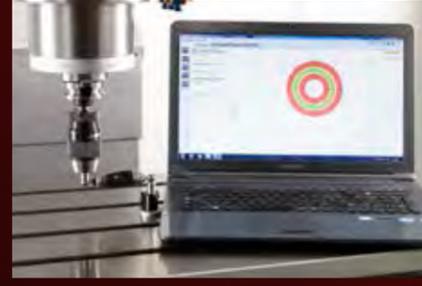
Swarf management is achieved by 'swarf conveyor with bin' available as an option on all XYZ VMC's.

Optional on:  
**XYZ LR Range** and **XYZ HD Range**  
Standard on:  
**XYZ 1060 HS, 1100 HD, 2010 HD, 2510 HD, 3010 HD, XYZ UMC-5X** and the **XYZ UMC 4+1**.



#### 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.



#### Automated Tool Changers

##### Armless Carousel Tool changer.

The **XYZ LR Range** and the **XYZ 660 HD** have carousel tool changers as standard with 8 second tool to tool time.



##### Arm Type 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.

Standard on:  
**XYZ 800 HD, XYZ 1100 HD, XYZ Heavyweight Range, XYZ 1060 HS** and the **XYZ UMC 4+1 and UMC-5X** (UMCs have options of 24, 30, 48 and 60 stations).  
Optional on:  
**XYZ 660 HD** and the **XYZ LR 750 / 1000**.



##### Spindle Air Blast

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

#### 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

The high pressure coolant option efficiently dissipates 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.



Spindle Oil Cooler  
Optional on all VMCs with high speed spindle.

#### High Performance Spindles

##### 8000 rpm and 10,000 rpm Spindle.

The 8000 rpm spindle is fitted as standard on all LR VMCs, the 10,000 rpm spindle is fitted as standard on all HD 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. 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.



##### 10,000, 12,000, 15,000, 18,000 and 24,000 rpm Spindle options.

All spindle types are dynamically balanced to give smooth and accurate cutting performance even at high speeds.



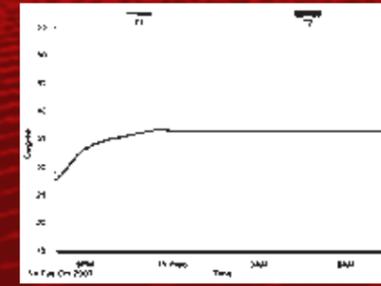
Standard on:  
**XYZ 1060 HS, XYZ UMC-5X** and the **XYZ UMC 4+1**.

Optional on:  
All other **XYZ 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 500 LR**

**SPINDLE 18 HP / 13 kW**  
**580 x 400 mm TABLE**  
**510 x 400 x 450 mm TRAVEL**  
**8000 RPM SPINDLE**  
**SOLID CASTING 2400 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

**Siemens 828D Control.**  
**Optimised Digital Servos.**  
**Rigid Tapping.**  
**Flood Coolant.**  
**Worklight.**  
**12 Station Carousel.**  
**Easy Clean Swarf Tray.**  
**Steel Concertina Guards on all axes.**  
**Powder Coated Guarding.**  
**Pull Studs.**  
**USB Port.**  
**Compact Flash Card Slot.**

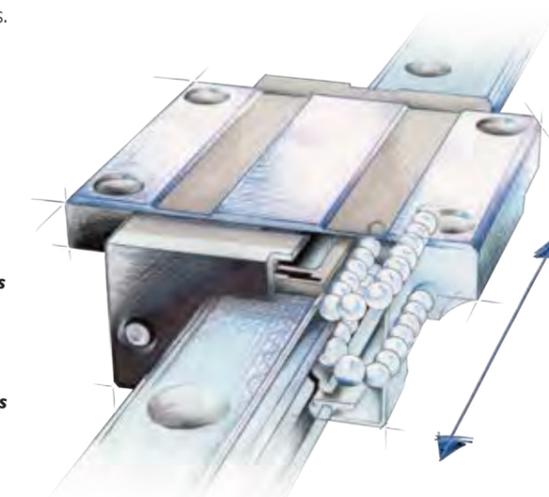
Optional Equipment

**4th Axis Rotary Table.**  
**Swarf Conveyor and Bin.**  
**Renishaw/Heidenhain Toolsetting and Probing.**  
**12,000 RPM Spindle.**  
**Through Spindle Coolant.**  
**Remote Electronic Handwheel.**  
**Side Vision Panels.**  
**Offline Programming.**  
**ShopMill Advanced Software.**  
**Contour Handwheel (wind the handwheel to run through the program).**  
**Factory Networking.**  
**Advanced Swarf Management System.**

	<b>XYZ 500 LR</b>
X Travel	510 mm
Y Travel	400 mm
Z Travel	450 mm
Table size	580 x 400 mm
Spindle centre to column	415 mm
Spindle to table	100 - 550 mm
Column front to table centre	215 - 615 mm
Rapid feed XYZ axis	20,000 mm/min
Cutting feed rates	1-20,000 mm/min
Max table load	250 kg
T slot size	16 mm
T slot number & pitch	3 @ 125 mm
Spindle speed	5-8000 rpm
Spindle motor	18 HP / 13 kW
Spindle taper	BT 40
Tool magazine capacity	12 carousel
Tool change time tool to tool	8 sec
Max tool diameter	100 mm
Max tool weight	6 kg
Coolant capacity	105 L
Ballscrew size (grade C3)	28 mm P8
AC servo motor size	X and Y 8Nm Z 12Nm
Machine weight	2400 kg
Footprint W x D x H	1660 x 1860 x 2300 mm

XYZ 500 LR makes machining even more affordable

The XYZ 500 LR is the smallest machine in XYZ's new linear rail technology range. As part of this new range of machines, the XYZ 500 LR offers price competitive performance with axis travels of 510 x 400 x 450 mm, 8000 rpm spindle and 20m/min cutting feedrates. The move to linear rail technology comes after recent significant design advances in these rails, which now makes them compatible with XYZ's quality/performance criteria. With their addition to the XYZ range the LR machines offer a lower cost introduction to VMC ownership. XYZ Machine Tools is happy to demonstrate the capability of these machines at any of its UK showrooms.



For more details on the **XYZ 500 LR build specification** please see pages 51 to 54

Linear Rail Ball Bearing Slides

The use of linear rails on machining centres has been common for many years, as they allow users to take advantage of improvements in digital motion control and modern cutting tool performance, therefore maximising their competitiveness. Now, with the latest design advances in linear rail technology, XYZ Machine Tools feel that they meet its own stringent performance standards, while still providing a cost advantage and the arrival of the three machine XYZ LR range is the result.

**XYZ 750 LR**

**SPINDLE 18 HP / 13 kW**  
**830 x 410 mm TABLE**  
**750 x 440 x 500 mm TRAVEL**  
**8000 RPM SPINDLE**  
**SOLID CASTING 3500 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

**Siemens 828D Control.**  
**Optimised Digital Servos.**  
**Rigid Tapping.**  
**Flood Coolant.**  
**Worklight.**  
**20 Station Carousel.**  
**Easy Clean Swarf Tray.**  
**Steel Concertina Guards on all axes.**  
**Powder Coated Guarding.**  
**Pull Studs.**  
**USB Port.**  
**Compact Flash Card Slot.**

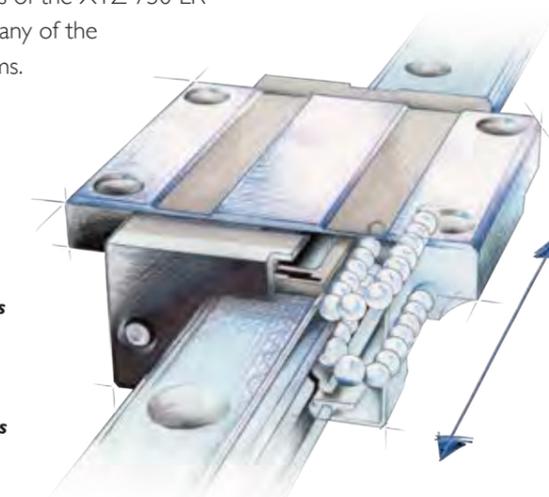
Optional Equipment

**4th Axis Rotary Table.**  
**Swarf Conveyor and Bin.**  
**Renishaw/Heidenhain Toolsetting and Probing.**  
**12,000RPM Spindle.**  
**Through Spindle Coolant.**  
**Remote Electronic Handwheel.**  
**Side Vision Panels.**  
**Offline Programming.**  
**24 Station Arm Type ATC.**  
**ShopMill Advanced Software.**  
**Contour Handwheel (wind the handwheel to run through the program).**  
**Factory Networking.**  
**Advanced Swarf Management System.**

	<b>XYZ 750 LR</b>
X Travel	750 mm
Y Travel	440 mm
Z Travel	500 mm
Table size	830 x 410 mm
Spindle centre to column	500 mm
Spindle to table	100 - 600 mm
Column front to table centre	305 - 745 mm
Rapid feed XYZ axis	20,000 mm/min
Cutting feed rates	1-20,000 mm/min
Max table load	500 kg
T slot size	16 mm
T slot number & pitch	3 @ 100 mm
Spindle speed	5 - 8000 rpm
Spindle motor	18 HP / 13 kW
Spindle taper	BT 40
Tool magazine capacity	20 carousel (24 arm type optional)
Tool change time tool to tool	8 sec (2.5 sec)
Max tool diameter	80 mm
Max tool weight	7 kg
Coolant capacity	125 L
Ballscrew size (grade C3)	32 mm P8
AC servo motor size	X and Y 8Nm Z 12Nm
Machine weight	3500 kg
Footprint W x D x H	2100 x 2150 x 2450 mm

XYZ 750 LR hits the spot for cost-effective machining

Sitting in the middle of the new XYZ LR range of linear rail machines, the XYZ 750 LR's capacity will make it the most popular choice for those looking to step up to CNC vertical machining centre operation at a very competitive price. With axis travels of 750 x 440 x 500 mm the XYZ 750 LR has the capacity to handle the majority of work passing through a typical machine shop. Add to that the 8000 rpm, BT 40 spindle, 20 position toolchanger and a maximum table load of 500 kg it is a more than capable machine. Demonstrations of the XYZ 750 LR are available at any of the XYZ showrooms.



For more details on the **XYZ 750 LR** build specification please see pages 51 to 54

Linear Rail Ball Bearing Slides

The use of linear rails on machining centres has been common for many years, as they allow users to take advantage of improvements in digital motion control and modern cutting tool performance, therefore maximising their competitiveness. Now, with the latest design advances in linear rail technology, XYZ Machine Tools feel that they meet its own stringent performance standards, while still providing a cost advantage and the arrival of the three machine XYZ LR range is the result.

**XYZ 1000 LR**

**SPINDLE 18 HP / 13 kW**  
**1060 x 500 mm TABLE**  
**1000 x 500 x 500 mm TRAVEL**  
**8000 RPM SPINDLE**  
**SOLID CASTING 4600 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

**Siemens 828D Control.**  
**Optimised Digital Servos.**  
**Rigid Tapping.**  
**Flood Coolant.**  
**Worklight.**  
**20 Station Carousel.**  
**Easy Clean Swarf Tray.**  
**Steel Concertina Guards on all axes.**  
**Powder Coated Guarding.**  
**Pull Studs.**  
**USB Port.**  
**Compact Flash Card Slot.**

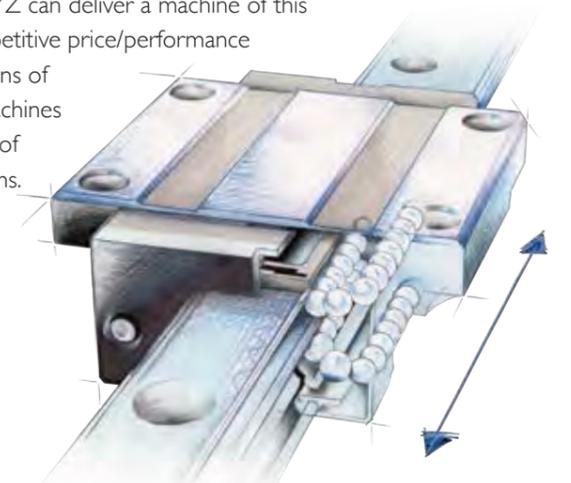
Optional Equipment

**4th Axis Rotary Table.**  
**Swarf Conveyor and Bin.**  
**Renishaw/Heidenhain Toolsetting and Probing.**  
**12,000RPM Spindle.**  
**Through Spindle Coolant.**  
**Remote Electronic Handwheel.**  
**Side Vision Panels.**  
**Offline Programming.**  
**24 Station Arm Type ATC.**  
**ShopMill Advanced Software.**  
**Contour Handwheel (wind the handwheel to run through the program).**  
**Factory Networking.**  
**Advanced Swarf Management System.**

	<b>XYZ 1000 LR</b>
X Travel	1000 mm
Y Travel	500 mm
Z Travel	500 mm
Table size	1060 x 500 mm
Spindle centre to column	532 mm
Spindle to table	100 - 600 mm
Column front to table centre	382 - 782 mm
Rapid feed XYZ axis	20,000 mm/min
Cutting feed rates	1-20,000 mm/min
Max table load	800 kg
T slot size	16 mm
T slot number & pitch	4 @ 125 mm
Spindle speed	5 - 8000 rpm
Spindle motor	18 HP / 13 kW
Spindle taper	BT 40
Tool magazine capacity	20 carousel (24 arm type optional)
Tool change time tool to tool	8 sec (2.5 sec)
Max tool diameter	80 mm
Max tool weight	7 kg
Coolant capacity	160 L
Ballscrew size (grade C3)	32 mm P8
AC servo motor size	X and Y 8Nm Z 12Nm
Machine weight	4600 kg
Footprint W x D x H	2530 x 2200 x 2500 mm

The XYZ 1000 LR provides large capacity at affordable prices

As the largest machine in the new XYZ Linear rail series of vertical machining centres the XYZ 1000 LR has an impressive specification, including 1000 mm of travel in the X-axis and 500 mm in both the Y and Z axes. It shares the same 13 kW, 8000 rpm, BT 40 spindle with the other machines in the range as well as the standard 20 position tool carousel. It also has the option of a 24 station arm-type tool changer. The recent development in linear rail technology now means that XYZ can deliver a machine of this size to a very competitive price/performance ratio. Demonstrations of XYZ's linear rail machines are available at any of the XYZ showrooms.



**For more details on the XYZ 1000 LR build specification please see pages 51 to 54**

**Linear Rail Ball Bearing Slides**

**The use of linear rails on machining centres has been common for many years, as they allow users to take advantage of improvements in digital motion control and modern cutting tool performance, therefore maximising their competitiveness. Now, with the latest design advances in linear rail technology, XYZ Machine Tools feel that they meet its own stringent performance standards, while still providing a cost advantage and the arrival of the three machine XYZ LR range is the result.**

**XYZ 660 HD**

**SPINDLE 33 HP / 25 kW**  
**720 x 420 mm TABLE**  
**660 x 450 x 500 mm TRAVEL**  
**10,000 RPM SPINDLE**  
**SOLID CASTING 3400 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

**Siemens 828D ShopMill or Heidenhain TNC 620 Control. Touch Screen.**  
**Optimised Digital Servo's.**  
**Hardened Table.**  
**Rigid Tapping.**  
**High Pressure Flood Coolant.**  
**Coolant Washdown.**  
**LED Worklight.**  
**12 Station Tool Changer.**  
**Remote Electronic Handwheel.**  
**Easy Clean Swarf Tray.**  
**Steel Concertina Guards on all Axes.**  
**Stainless Steel Floor Pan.**  
**Powder Coated Guarding.**  
**Pull Studs.**  
**Networking.**  
**USB Port.**

Optional Equipment

**4th Axis Rotary Table.**  
**5th Axis Rotary Table.**  
**Swarf Conveyor & Bin.**  
**12,000 rpm Spindle.**  
**Through Spindle Coolant.**  
**Offline Programming.**  
**Renishaw/Heidenhain Toolsetting and Probing.**  
**Contour Handwheel (wind the handwheel to run through the program).**  
**Oil Skimmer.**  
**Advanced Swarf Management System.**



5th axis option is available on all XYZ Vertical Machining Centres except the LR Range.

	<b>XYZ 660 HD</b>
X Travel	660 mm
Y Travel	450 mm
Z Travel	500 mm
Table size	720 x 420 mm
Spindle centre to column	490 mm
Spindle to table	100 - 600 mm
Column front to table centre	290 - 740 mm
Rapid feed XYZ axis	24 M/min Box Way
Cutting feed rates	24 M/min
Max table load	500 kg
T slot size	16 mm
T slot number & pitch	4 @ 100 mm
Spindle speed	10,000 rpm
Spindle motor	33 HP / 25 kW
Spindle taper	BT 40
Tool magazine capacity	12 carousel
Tool change time tool to tool	4-5 sec
Max tool diameter	95 mm
Max tool weight	6 kg
Coolant capacity	130 L
Ballscrew size (grade C3)	32 mm P10
AC servo motor size	X and Y 8.5Nm Z 12Nm
Machine weight	3400 kg
Footprint W x D x H	2000 x 2100 x 2600 mm

The new XYZ 660 HD with increased travels in X & Y of 660 mm and 450 mm

With a small footprint of just 2000 x 2100 x 2600 mm this VMC will give modern day production capabilities to most shopfloors, with room to spare! The XYZ 660 is the smallest HD VMC in our range with a solid ribbed casting, wide box slideways and powerful direct drives on all three axes.

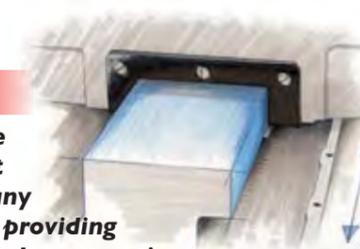
The XYZ 660 HD features an automatic 12 station toolchanger and can accommodate most components with travels of 660 mm x 450 mm x 500 mm. At XYZ we believe that it's really important that you see a VMC cutting metal before you buy, simply looking at photographs and spec sheets just isn't good enough.



For more details on the XYZ 660 HD build specification please see pages 51 to 54

Hardened Box Way Slides

Hardened box ways with Turcite coated slides have been the first choice for XYZ machines for many years, as they are renowned for providing the best solution for machine tool construction. The combination of machine weight and hardened box slideways guarantees a highly rigid machining platform, providing exceptional vibration damping, especially on intermittent cutting across a wide range of materials, such as Inconel, titanium, cast iron or stainless steel.



**SIEMENS**

**HEIDENHAIN**

# XYZ 800 HD

**SPINDLE 33 HP / 25 kW**  
**920 x 480 mm TABLE**  
**800 x 500 x 510 mm TRAVEL**  
**10,000 RPM SPINDLE**  
**SOLID CASTING 4400 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

**Siemens 828D ShopMill or Heidenhain TNC 620 Control. Touch Screen.**  
**Optimised Digital Servo's.**  
**Hardened Table.**  
**Rigid Tapping.**  
**High Pressure Flood Coolant.**  
**Coolant Washdown.**  
**LED Worklight.**  
**24 Station Arm Type Tool Changer.**  
**Remote Electronic Handwheel.**  
**Easy Clean Swarf Tray.**  
**Steel Concertina Guards on all Axes.**  
**Stainless Steel Floor Pan.**  
**Powder Coated Guarding.**  
**Pull Studs.**  
**Networking.**  
**USB Port.**

### Optional Equipment

**4th Axis Rotary Table.**  
**5th Axis Rotary Table.**  
**Swarf Conveyor & Bin.**  
**12,000 rpm Spindle.**  
**Through Spindle Coolant.**  
**Offline Programming.**  
**Renishaw/Heidenhain Toolsetting and Probing.**  
**Contour Handwheel (wind the handwheel to run through the program).**  
**Oil Skimmer.**  
**Advanced Swarf Management System.**



5th axis option is available on all XYZ Vertical Machining Centres except the LR Range.

	XYZ 800 HD
X Travel	800 mm
Y Travel	500 mm
Z Travel	510 mm
Table size	920 x 480 mm
Spindle centre to column	550 mm
Spindle to table	100 - 610 mm
Column front to table centre	300-800 mm
Rapid feed XYZ axis	24 M/min Box Way
Cutting feed rates	24 M/min
Max table load	900 kg
T slot size	16 mm
T slot number & pitch	4 @ 100 mm
Spindle speed	10,000 rpm
Spindle motor	33 HP / 25 kW
Spindle taper	BT 40
Tool magazine capacity	24 arm type
Tool change time tool to tool	2.5 sec
Max tool diameter	78 mm
Max tool weight	7 kg
Coolant capacity	150L
Ballscrew size (grade C3)	40 mm P10
AC servo motor size	X and Y 8.5Nm Z 12Nm
Machine weight	4400 kg
Footprint W x D x H	2250 x 2250 x 2750 mm

The new XYZ 800 HD with increased travels in X & Y of 800 mm and 500mm

The XYZ 800 HD 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 800 HD 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 UK showrooms for a demonstration of the XYZ HDs.



For more details on the XYZ 800 HD build specification please see pages 51 to 54

### Hardened Box Way Slides

Hardened box ways with Turcite coated slides have been the first choice for XYZ machines for many years, as they are renowned for providing the best solution for machine tool construction. The combination of machine weight and hardened box slideways guarantees a highly rigid machining platform, providing exceptional vibration damping, especially on intermittent cutting across a wide range of materials, such as Inconel, titanium, cast iron or stainless steel.



**XYZ 1100 HD**

**SPINDLE 33 HP / 25 kW**  
**1200 x 600 mm TABLE**  
**1100 x 610 x 610 mm TRAVEL**  
**10,000 RPM SPINDLE**  
**SOLID CASTING 7000 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

**Siemens 840D ShopMill or Heidenhain TNC 620 Control. Touch Screen.**  
**Optimised Digital Servo's.**  
**Hardened Table.**  
**Rigid Tapping.**  
**Twin Swarf Augers.**  
**Swarf Conveyor & Bin from Auger.**  
**High Pressure Flood Coolant.**  
**Coolant Washdown.**  
**LED Worklight.**  
**30 Station Arm Type Tool Changer**  
**Pneumatically Counter Balanced Head.**  
**Remote Electronic Handwheel.**  
**Easy Clean Swarf Tray.**  
**Steel Concertina Guards on all Axes.**  
**Stainless Steel Floor Pan.**  
**Powder Coated Guarding.**  
**Pull Studs.**  
**Networking.**  
**USB Port.**

Optional Equipment

**4th Axis Rotary Table.**  
**5th Axis Rotary Table.**  
**12,000 rpm Spindle.**  
**Through Spindle Coolant.**  
**Offline Programming.**  
**Renishaw/Heidenhain Toolsetting and Probing.**  
**Contour Handwheel (wind the handwheel to run through the program).**  
**Oil Skimmer.**  
**Advanced Swarf Management System.**

	<b>XYZ 1100 HD</b>
X Travel	1100 mm
Y Travel	610 mm
Z Travel	610 mm
Table size	1200 x 600 mm
Spindle centre to column	675 mm
Spindle to table	150 - 760 mm
Column front to table centre	360 - 970 mm
Rapid feed XYZ axis	24 M/min Box Way
Cutting feed rates	24 M/min
Max table load	1500 kg
T slot size	18 mm
T slot number & pitch	4 @ 125 mm
Spindle speed	10,000 rpm
Spindle motor	33 HP / 25 kW
Spindle taper	BT 40
Tool magazine capacity	30 arm type
Tool change time tool to tool	2 sec.
Max tool diameter	78 mm
Max tool weight	7 kg
Coolant capacity	240L
Ballscrew size (grade C3)	40 mm P12
AC servo motor size	X, Y and Z 20Nm
Machine weight	7000 kg
Footprint W x D x H	3100 x 2250 x 2820 mm



5th axis option is available on all XYZ Vertical Machining Centres except the LR Range.

The new XYZ 1100 HD with increased travels in X & Y of 1100 mm and 610mm

This completely new structure has a newly designed base that allows for better support of the X and Y travel and increases table load capacity from 800 kg to a massive 1500 kg. There is never any table overhang and the table is always fully supported. Built on a solid Meehanite, computer modelled, ribbed casting with induction hardened, ground and Turcite-B coated, slides gives the XYZ 1100 HD superb vibration absorption and rigidity. The optimised digital servo motors 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 depend 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 XYZ 1100 HD build specification please see pages 51 to 54.

**Hardened Box Way Slides**

**Hardened box ways with Turcite coated slides have been the first choice for XYZ machines for many years, as they are renowned for providing the best solution for machine tool construction. The combination of machine weight and hardened box slideways guarantees a highly rigid machining platform, providing exceptional vibration damping, especially on intermittent cutting across a wide range of materials, such as Inconel, titanium, cast iron or stainless steel.**



# XYZ 1060 HS

**SPINDLE 23 HP / 17 kW**  
**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 840 DSL**  
**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 840DSL High Speed ShopMill Control.**  
**19" Touch Screen.**  
**12,000 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.**  
**Stainless Steel Floor Pan.**  
**Powder Coated Guarding.**  
**USB Port.**  
**Networking.**

## Optional Equipment

**4th Axis Rotary Table.**  
**5th Axis Rotary Table.**  
**Linear Scales.**  
**Offline Programming.**  
**15,000 RPM Spindle.**  
**Renishaw/Heidenhain Toolsetting and Probing.**  
**Contour Handwheel (wind the handwheel to run through the program).**  
**Advanced Swarf Management System.**

	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 Roller Linear Way
Cutting feed rates	1-43,000 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	23 HP / 17 kW
Spindle taper	BT 40
Tool magazine capacity	30 arm type
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 (includes conveyor)



5th axis option is available on all XYZ Vertical Machining Centres except the LR Range.

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 840DSL 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.

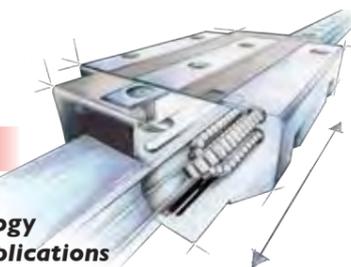
The XYZ 1060 HS can easily be upgraded to 4 or 5 axis.



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

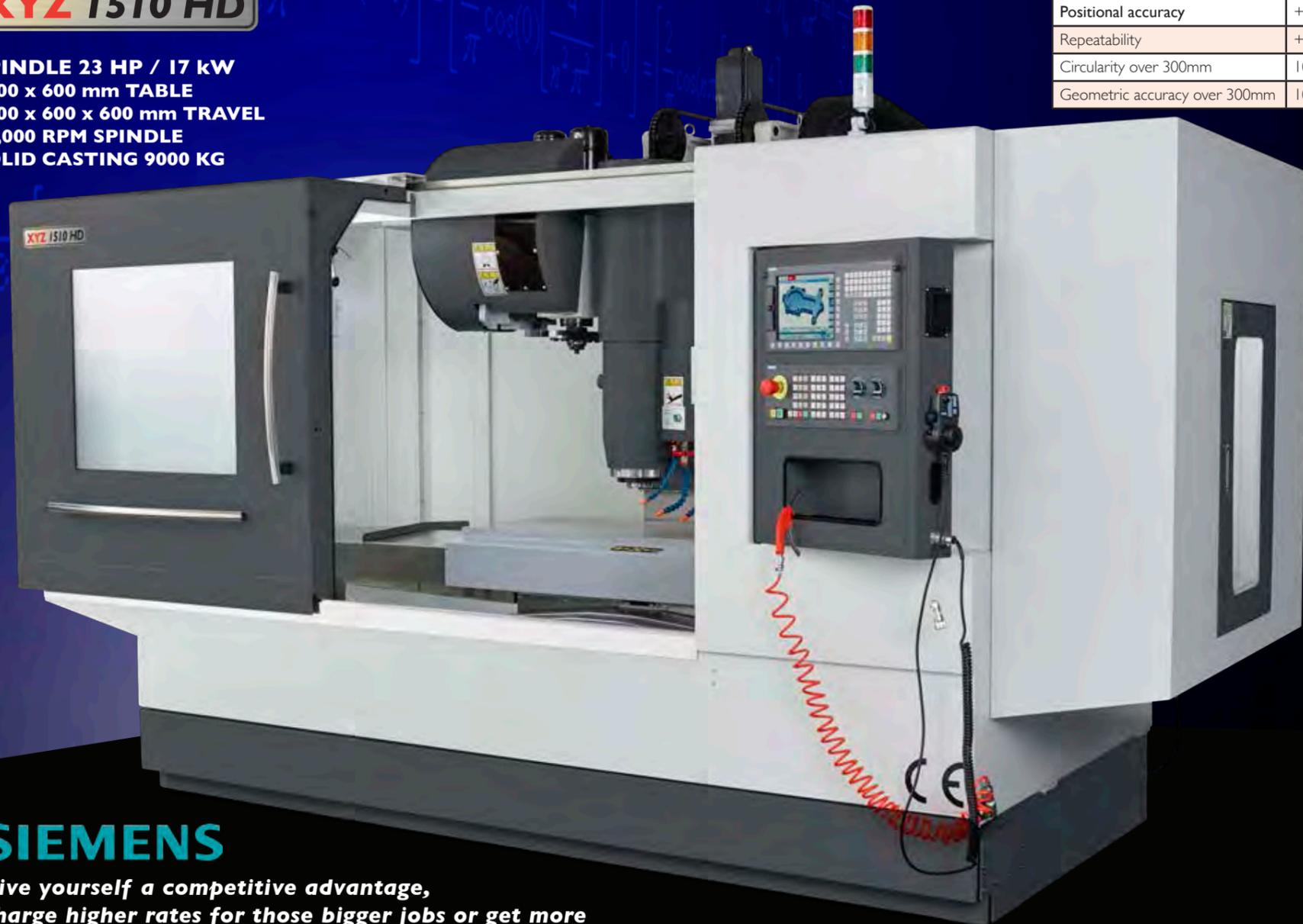
## Linear Roller Bearing Slides

XYZ Machine Tools makes use of linear roller bearing slide technology for high-speed, high-precision applications that also call for enhanced slideway stiffness and rigidity whilst cutting. These slideways provide a larger bearing contact area and can be found on the XYZ 1060 HS and XYZ UMC-5X high speed five-axis machines, where they provide optimum cutting performance for the applications that these machines face.



**XYZ 1510 HD**

**SPINDLE 23 HP / 17 kW**  
**1600 x 600 mm TABLE**  
**1500 x 600 x 600 mm TRAVEL**  
**10,000 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

**Siemens 828D ShopMill Control.**  
**Optimised Digital Servo's.**  
**Hardened Table.**  
**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.**  
**ZF Gearbox.**  
**32 Station Arm Type Tool Changer.**  
**Through Spindle Coolant.**  
**Offline Programming.**  
**Renishaw/Heidenhain Toolsetting and Probing.**  
**Contour Handwheel (wind the handwheel to run through the program).**  
**Advanced Swarf Management System.**

	<b>XYZ 1510 HD</b>
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	1-16,000 mm/min
Max table load	1200 kg
T slot size	18 mm
T slot number & pitch	5 @ 75 mm
Spindle speed	5 - 10,000 rpm
Spindle motor	23 HP / 17 kW
Spindle taper	BT 40
Tool magazine capacity	24 or 32 arm type
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 servo motor size	X and Y 16Nm Z 16Nm
Machine weight	8250 kg
Footprint W x D x H	4200 x 2850 x 2910 mm

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

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

Performance proven in the toughest of sub-contract machine shop environments 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 HD features extended linear rail supports for the larger 1500mm X axis saddle. For the full build specification of the XYZ VMCs see pages 51 to 54.**

**Hardened Box Way Slides**

**Hardened box ways with Turcite coated slides have been the first choice for XYZ machines for many years, as they are renowned for providing the best solution for machine tool construction. The combination of machine weight and hardened box slideways guarantees a highly rigid machining platform, providing exceptional vibration damping, especially on intermittent cutting across a wide range of materials, such as Inconel, titanium, cast iron or stainless steel.**

**SIEMENS**

*Give yourself a competitive advantage, charge higher rates for those bigger jobs or get more smaller jobs on the table. There may well be a shortage of bigger capacity machines in your area.*

**XYZ 2010 HD**

TABLE 2200 x 1000 mm  
TRAVEL 2000 x 1000 x 800 mm  
8000 RPM SPINDLE  
16 M/MIN RAPIDS  
SOLID CASTING 20,000 KG

**XYZ 2510 HD**

TABLE 2700 x 1000 mm  
TRAVEL 2500 x 1000 x 800 mm  
8000 RPM SPINDLE  
16 M/MIN RAPIDS  
SOLID CASTING 23,000 KG

**XYZ 3010 HD**

TABLE 3100 x 1000 mm  
TRAVEL 3000 x 1000 x 800 mm  
8000 RPM SPINDLE  
16 M/MIN RAPIDS  
SOLID CASTING 25,000 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

**Siemens 828D ShopMill 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.**  
**Offline Programming.**  
**Renishaw/Heidenhain Toolsetting and Probing.**  
**Contour Handwheel (wind the handwheel to run through the program).**  
**Advanced Swarf Management System.**

	XYZ 2010-2510-3010 HDs
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
Table size	2200 - 2700 - 3100 x 1000 mm
Spindle centre to column surface	600 - 1600 mm
Rapid feed X,Y,Z axes	16,000 mm/min
Cutting feed rates	1 - 16,000 mm/min
Ballscrew diameter	50 mm P12
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 arm type
Max tool diameter	110 mm
Max tool weight	15 Kg
Spindle speed	8000 rpm
Spindle motor	30 HP / 23 kW continuous
	36 HP / 27 kW 30 minutes
	56 HP / 42 kW 2.5 minutes in 10
Coolant capacity	300 L
Machine weight	20,000 / 23,000 / 25,000 Kg

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

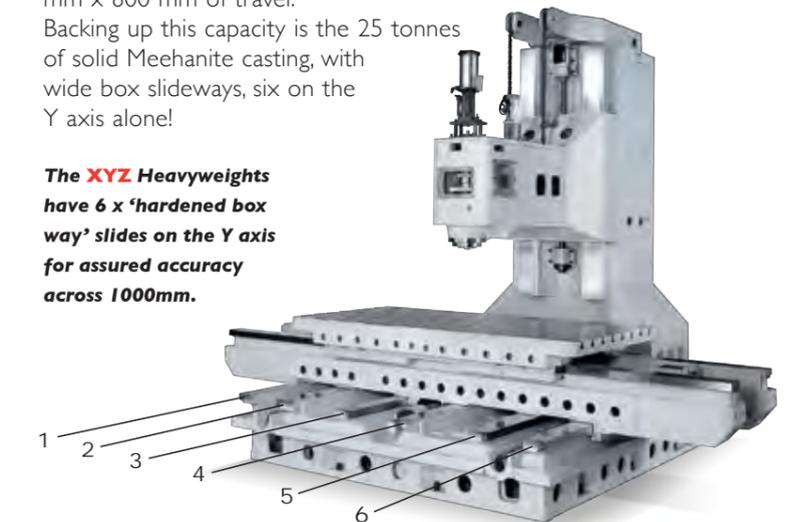


XYZ VMCs  
The VMC range with easy to use control and full 5 axis ability.  
**Duration:**  
**2 min 7 sec**

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, aerospace and renewables demanding larger capacity machine tools. Enter the XYZ Super Heavyweight VMCs, 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 XYZ 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 51 to 54

**Hardened Box Way Slides**

Hardened box ways with Turcite coated slides have been the first choice for XYZ machines for many years, as they are renowned for providing the best solution for machine tool construction. The combination of machine weight and hardened box slideways guarantees a highly rigid machining platform, providing exceptional vibration damping, especially on intermittent cutting across a wide range of materials, such as Inconel, titanium, cast iron or stainless steel.

**XYZ 4000 TCM**

4000 x 800 mm TABLE  
4000 x 800 x 600 mm TRAVEL  
8000 RPM SPINDLE  
SOLID CASTING 22,000 KG

**XYZ 6000 TCM**

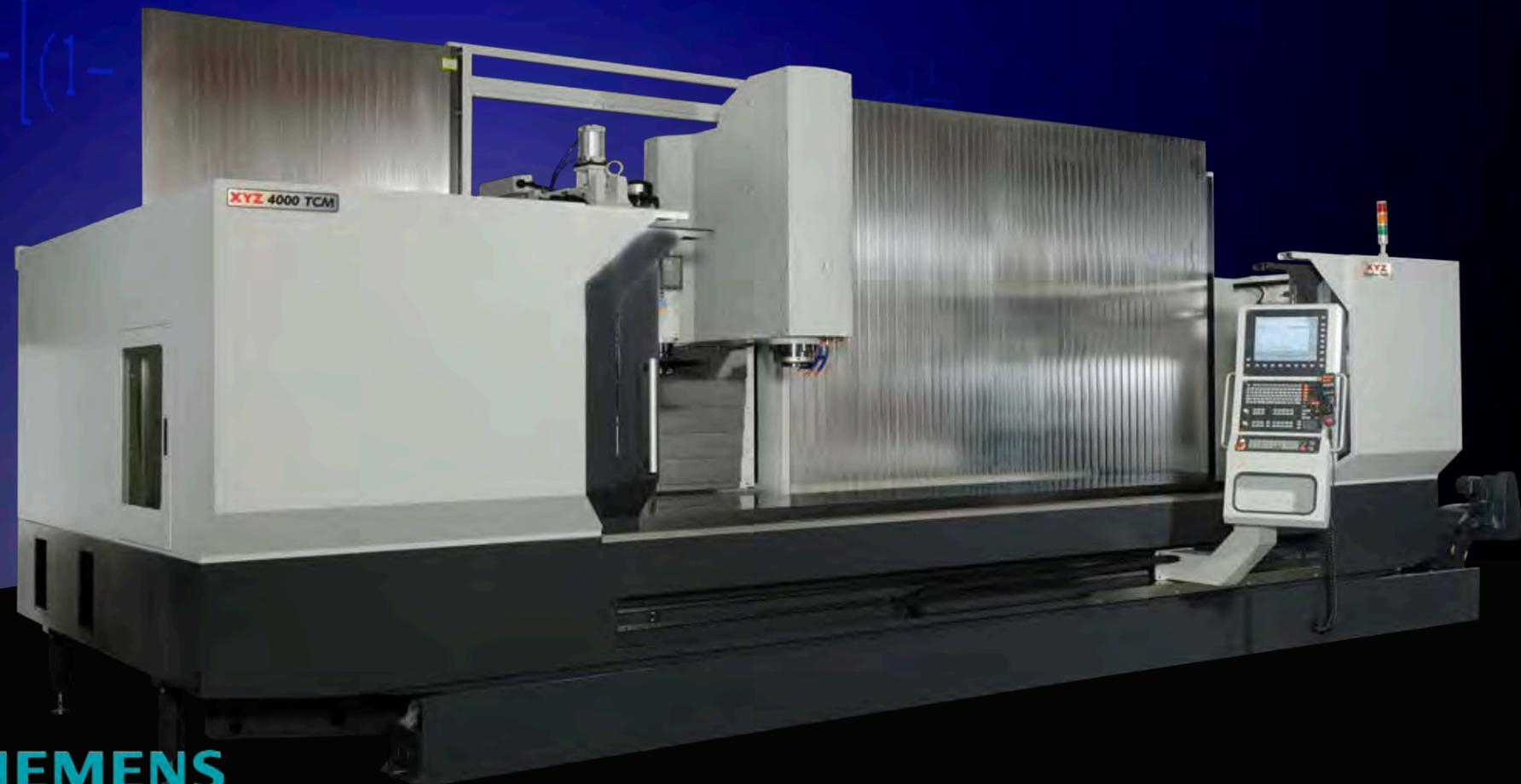
6000 x 800 mm TABLE  
6000 x 800 x 600 mm TRAVEL  
8000 RPM SPINDLE  
SOLID CASTING 25,000 KG

**XYZ 8000 TCM**

8000 x 800 mm TABLE  
8000 x 800 x 600 mm TRAVEL  
8000 RPM SPINDLE  
SOLID CASTING 28,000 KG

**XYZ 10000 TCM**

10,000 x 800 mm TABLE  
10,000 x 800 x 600 mm TRAVEL  
8000 RPM SPINDLE  
SOLID CASTING 32,000 KG



**SIEMENS**  
**HEIDENHAIN**

Standard Equipment

Siemens 828D ShopMill Control or Heidenhain TNC 620.  
X axis linear scale.  
Full splash guard.  
Coolant and Wash-down.  
Auto lubrication pump.  
8000 rpm spindle, BT40.  
X/Y/Z rapid 24 M / Min.  
24 station Arm Type ATC.  
Metal telescopic cover for 3 axis.  
Swarf Auger with bin.

Optional Equipment

12,000 rpm spindle and cooler.  
BT50 spindle.  
Tilt head (B axis).  
Two speed gearbox.  
Through spindle coolant.  
Upgrade to 30 station ATC.  
Swarf Conveyor and bin.  
Linear Scales.  
Contour Handwheel (wind the handwheel to run through the program).

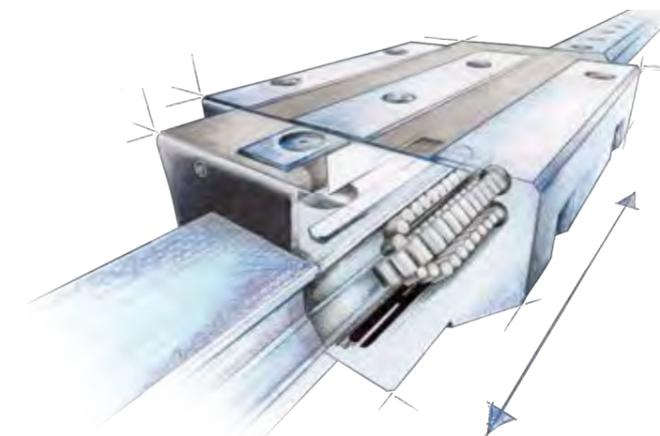
XYZ 4000, 6000, 8000 and 10000 TCM	
Table Size (W x L)	800mm x / 4000 / 6000 / 8000 / 10,000 mm
Travelling Column X Axis	4000 / 6000 / 8000 / 10,000 mm
Y Axis travel	800 mm
Z Axis travel	600 mm (800mm optional)
Spindle taper	BT40 (BT50 optional)
Spindle speed	60 - 8000 rpm 15HP
Spindle SI continuous	20 HP / 15 kW
S2-30 mins	24 HP / 18 kW
S6 25% (2.5 mins in 10)	38 HP / 28.5 kW
X / Y / Z Axis rapid	24 M / min
Cutting feedrate	24,000 mm / min
X Axis Transmission	Backlash free dual gearbox with GUDEL (Swiss made) high precision gear rack.
Z & Y Axis	Ballscrew
X / Y / Z Slide way	Roller linear way
Weight	22,000 Kg / 25,000 Kg / 28,000 Kg / 32,000 Kg



The perfect Aerospace production platform with up to 10,000 mm on the X axis.

Introducing the large X axis range of Travelling Column Machines, perfect for those large Aerospace/Energy components.

Make easy work of those big aerospace components with the XYZ range of large X-axis Travelling Column machines. The machines benefit from the latest Siemens 828D Shopmill control featuring advanced and easy to program conversational software, along with 'roller' linear ways that ensure optimum precision and speed.



**Linear Roller Bearing Slides**

XYZ Machine Tools makes use of linear roller bearing slide technology for high-speed, high-precision applications that also call for enhanced slideway stiffness and rigidity whilst cutting. These slideways provide a larger bearing contact area and can be found on the XYZ 1060 HS and XYZ UMC-5X high speed five-axis machines, where they provide optimum cutting performance for the applications that these machines face.

**XYZ UMC 4+1**

**XYZ UMC-5X**

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



High precision, high speed, 4+1 or simultaneous 5 axis VMC.

- Siemens 828 or 840DSL ShopMill Control (TNC 640 HSCI Heidenhain optional).
- Front loading 600mm diameter trunnion rotary table 90 rpm.
- High accuracy rotary axis direct drive high torque motor 90 rpm no worm and wheel.
- Tilting axis servo worm drive with brake +/- 120° (2.5 sec full rotation, torque motor optional).
- Maximum table load of 600 kg.
- Traori / Kinematic functions for XYZ UMC-5X axis simultaneous machining.
- 12,000 / 15,000 rpm in-line spindle or high speed 18,000 / 24,000 rpm motorised built-in spindle.
- High pressure through spindle coolant system.
- Side-mounted 24, 30, 48 or 60 tools ATC for quick tool changing.
- Linear scales X Y and Z (option on XYZ UMC 4+1).
- High precision encoders on A and C axis pivot centres.
- Thermal growth compensation (XYZ UMC-5X only).
- Patented Smart Machining Technology (XYZ UMC-5X only).
- Gantry frame machine.
- Over 200 installed in Europe.
- Comes with fully dedicated 5 axis XYZ Service, Programming and Sales Engineers.

Travels	XYZ UMC 4+1 and XYZ UMC-5X
X and Y	600 mm
Z	500 mm
A (tilt)	+120° / -120°
C (rotation)	360°
Trunnion	
Table size	600 mm dia
Capacity	600 Kg
Number of T slots	7
T slot width	14 mm
Standard spindle	
Speed	12,000rpm (15,000 rpm optional)
Drive system	In line direct drive
Max torque	239 Nm @1100 rpm
Max rating	35 kW water cooled
Optional spindle	
Speed	18,000 / 24,000 rpm
Drive system	Motorised
Max torque	40 Nm
Max rating	25 kW
Feedrates (linear)	
Rapids X,Y and Z	36 M/ min
Max cutting	36 M/ min
Feedrates (rotary)	
Rapids C	540°/sec (90 rpm ) opt 600°/sec (100 rpm)
Rapids A (tilting)	99°/sec (16.6 rpm ) opt 300°/sec (50 rpm)
Tool changer	
Capacity	24 / 30 / 48 / 60
Tool type/taper	BT / BBT / CAT / DIN 40 or HSK A63
Max tool length	300mm
Tool to tool	1.5 sec
Chip to chip	2.3 sec
General	
Coolant capacity	20 Bar-TSC 370 L (70 Bar-TSC 570 L optional)
Air requirement	6 Bar 600 L / min
Power	400VAC±10 / 70 KVA (no transformer required)

**SIEMENS**

Machine in just one set-up

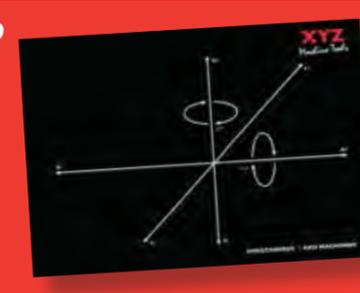
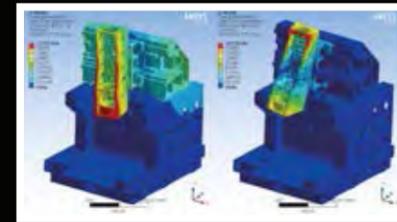
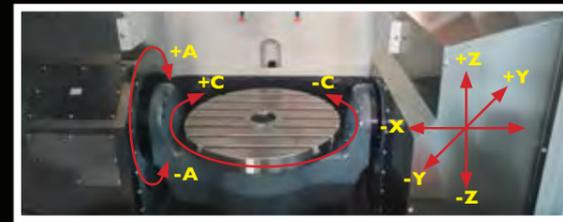
Simultaneous 5 axis machining.

ANSYS analysed for optimal rigidity.

Spindle options.

Tool laser management. Control options.

Call 01823 674200 for copies of the full technical 12 page brochure or visit the website to download.



NEW

# XYZ ROBO-TEND



*N Atherton*  
Nigel Atherton  
XYZ MANAGING DIRECTOR

“This brings true mobile robot automation within the reach of traditional sub-contract engineering businesses.”

A fully integrated tending system for both Milling and Turning.

Wheel in the blank billets - **wheel out the finished batch.**

- Minimise your labour costs.
- Works 24/7 without holidays, tea, chatting or comfort breaks.
- Finance from less than £2 per hour.
- Payback can be just a few months if purchased outright.
- British designed and built.
- **KUKA Cybertech Robot** as standard (other makes are available).
- 10 kg Robot capacity (larger available).
- Vision system.
- Modular system (drawer or conveyor).
- Quick and easy change from one machine to another with conversational set up\*
- Integrates with VMC's or Turning Centres.

\* The **XYZ ROBO-TEND** is only currently available for new XYZ Siemens controlled machines. Other machines and controls may require interface. Price on application.

FREE TRAINING  
For up to 3 people on installation day.

FROM LESS THAN  
**£2**  
PER HOUR  
+VAT SUBJECT TO STATUS

Once integrated, the same **XYZ ROBO-TEND®** unit can be used on a Machining Centre or Turning Centre, across the entire shopfloor as and when needed.

To get the new **ROBO-TEND** brochure call 01823 674200 or visit the website to download



**NEW**

# 1 Wheel it up.

The robot trolley is wheeled up to the front of the chosen machine tool and then locked into position.



The ROBO-TENDs 'Turnover Station' allows component 'flipping' for second operation work, this gives ROBO-TEND even greater flexibility.



Interchangeable pin plate insert

# 2 Lock it into position.

The loading trolley is then securely attached to the robot trolley. The robot identifies the trolley and its contents. The guard locks and ROBO-TEND becomes live.



The **XYZ ROBO-TEND** located on a Turning Centre.

# 3 Tell it the billet size.

With a conversational interface the robot controller can be programmed to know the shape of billet, material size and number of parts in the drawers.



With a wide central walkway between the robot trolley and loading trolley, the operator has easy access to the machine for workholding replacement, inspection and maintenance.

## XYZ ROBO-TEND

**FREE TRAINING**  
For up to 3 people on installation day.

### Standard

	XYZ ROBO-TEND 10	XYZ ROBO-TEND 15	XYZ ROBO-TEND 20	XYZ ROBO-TEND 25
Max payload of robot	10 kg	15 kg	20 kg	25 kg
Max weight of component*	8kg with standard gripper	13kg with standard gripper	18kg with standard gripper	23kg with standard gripper
Max size of component*	Can be modified to suit specific requirements within payload	Can be modified to suit specific requirements within payload	Can be modified to suit specific requirements within payload	Can be modified to suit specific requirements within payload
Max reach	1420 mm	1610 mm	1725 mm	2100 mm
Footprint W x D x H	2300 x 1000 x 1800mm	2400 x 1100 x 1900mm	2400 x 1200 x 1900mm	2400 x 1200 x 1900mm

\* There may be limitations on components and sizes that can be gripped and your requirements should be discussed and agreed in writing prior to order.

### Options

Options	Description	Notes
Dual pneumatic gripper	Removes machined components and places new blanks in one process.	Additional gripper weight will reduce the max weight of component by 1.5kg
Servo (Electric) Gripper	Allows a wide range of billet sizes to be handled without a manual gripper change.	Required if machined component is considerably different to the blank size or if components vary in size in different drawers and you don't want to change the gripper manually.
Dual Servo (Electric) Gripper	Allows a wide range of billet sizes to be handled without a manual gripper change. Removes machined components and places new blanks in one process.	Required if machined component is considerably different to the blank size or if components vary in size in different drawers and you don't want to change the gripper manually. Additional gripper weight will reduce the max weight of component by 2kg.
Increased depth of drawers	Allows parts to stand taller while keeping within the component payload.	Increases or decreases component size and quantities available in the drawers.
Vertical Conveyor Feed System	Allows a vertical conveyor with minimum footprint to store a larger number of blanks.	Option increases the buffer of blanks and reduces the frequency to replenish the machine. The machine can also run continuously while being replenished.

### Standard equipment.

- KUKA Robot and Siemens Control Panel.
- User Friendly Conversational Control.
- Vision System.
- Guarding.
- One-way drawer system.
- Simple Gripper Mill or Lathe.

### Optional equipment and features.

- Servo or dual grippers.
- Automatic vices.
- Vertical conveyor system.
- Turnover Station.
- Two-way drawer system (allows component intervention whilst robot and machine continue to work).
- Additional storage trolleys.
- Bespoke systems available.



**Why TC ?**

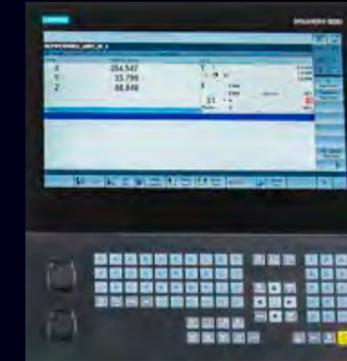
ProtoTRAK is ideal for low volume production but when moderate to large quantities or many tools are required turning centres or machining centres are the answer.

**XYZ Turning Centre Range**

- XYZ CT 65** page 85, 86
- XYZ CT 65 LTY** page 87, 88
- XYZ TC 400** page 89, 90
- XYZ TC 320 LTY** page 91, 92

**SIEMENS**

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



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



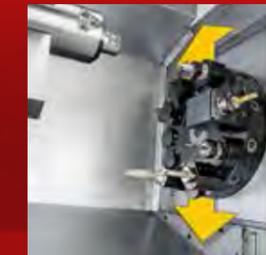
XYZ Turning Centres  
The XYZ Turning Centres for all your production turning.  
**Duration: 2 min**

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. 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.

Turned component, parts catcher and tool setting probe.



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 CT 65**  
The smallest Turning Centre in our range to optimise your shop floor production space.



**XYZ CT 65 LTY**  
The LTY with milling and turning in one machine tool.



**XYZ TC 400**  
Large capacity production turning on a solid cast box way Turning Centre.



**XYZ TC 320 LTY**  
Large capacity production turning and milling on a solid cast box way Turning Centre.

# 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 servo motors on each axis as standard, while full c-axis and live tooling are available as options.

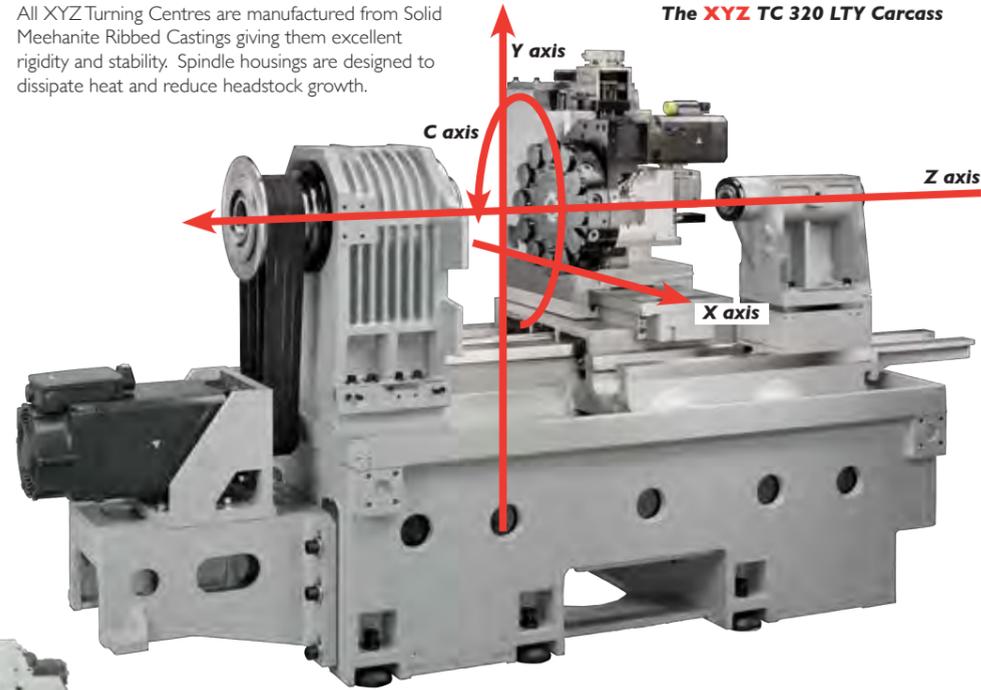
All in all, XYZ turning centres offer the complete package for a wide variety of components.



### Tailstock

XYZ CT 65 and the XYZ TC 400 Tailstock bodies are positioned manually and clamped hydraulically with adjustable barrel pushing pressure. The LTY Tailstocks are fully programmable.

All XYZ Turning Centres are manufactured from Solid Meehanite Ribbed Castings giving them excellent rigidity and stability. Spindle housings are designed to dissipate heat and reduce headstock growth.



The XYZ TC 320 LTY Carcass



The XYZ COMPACT TURN 65 Carcass

### Box Slideways of the XYZ TC 320 LTY

The 320 LTY is fitted with large hardened and ground guideways giving superb rigidity and performance.



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.

### 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.



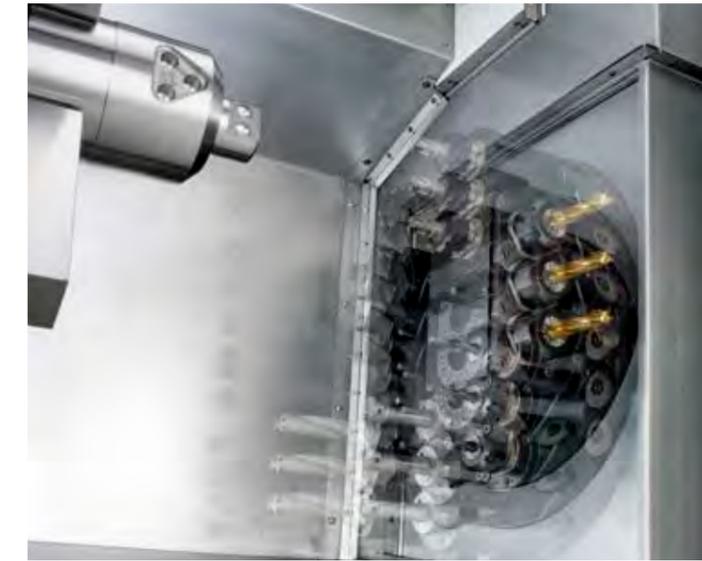
Pre setting arm in the tool measurement position

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

With either 65 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 Sauter (German) 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 bin 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.

## XYZ CT 65

**SPINDLE 23 HP / 17 kW**  
**200 mm HYDRAULIC CHUCK**  
**65 mm BAR CAPACITY**  
**4500 RPM**  
**SMALL FOOTPRINT**



**SIEMENS**

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

**Siemens 828D ShopTurn Control.**  
**Hydraulic 200mm 3 Jaw Chuck.**  
**Sauter 'German' VDI Turret.**  
**Parts Catcher.**  
**Through Tool and Flood Coolant.**  
**Remote Electronic Handwheel.**  
**USB Port.**  
**Networking.**  
**Renishaw Automatic Tool Setting Arm.**  
**Swarf Conveyor & Bin.**  
**Hydraulic Tailstock.**

### Optional Equipment

**Collet Chuck.**  
**Bar Puller.**  
**Barfeed Units.**  
**Offline Programming.**  
**Contour Handwheel (wind the handwheel to run through the program).**  
**Advanced Swarf Management System.**

	<b>XYZ COMPACT TURN 65</b>
Power chuck diameter	200 mm
Maximum swing	400 mm
Swing over carriage cover	400 mm
Maximum turned diameter	220 mm
Maximum turned length	260 mm
X axis travel	185 mm
Y axis travel	not applicable
Z axis travel	320 mm
Spindle centre height from floor	998 mm
Spindle nose	A2-6
Bar capacity	65 mm
Spindle front bearing internal dia	100 mm
Max spindle speed	4500 rpm
Spindle motor	23 HP / 17 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
Servo motors (X,Z & turret)	8 Nm
Turret	12 Station 30VDI
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> inc conveyor

Can be supplied without conveyor.

The XYZ CT 65, it might be small but it packs a mighty production punch.

The XYZ Compact Turn 65 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 CT 65 ideal for both experienced and novice CNC users.

The CT 65 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**

**For the full build specification of the XYZ Turning Centres see pages 83 and 84.**



## XYZ CT 65 LTY

**SPINDLE 23 HP / 17 kW**  
**65 mm BAR CAPACITY**  
**4500 RPM**  
**Live tooling**  
**70mm Y axis**



**SIEMENS**

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**

	<b>XYZ CT 65 LTY live tooling C axis</b>
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

**Siemens 828D ShopTurn Control.**  
**Hydraulic 200mm 3 Jaw Chuck.**  
**Sauter 'German' VDI Turret.**  
**Parts Catcher.**  
**Through Tool and Flood Coolant.**  
**Remote Electronic Handwheel.**  
**USB Port.**  
**Networking.**  
**Renishaw Automatic Tool Setting Arm.**  
**Swarf Conveyor & Bin.**  
**Programmable Hydraulic Tailstock.**

### Optional Equipment

**Collet Chuck.**  
**Bar Puller.**  
**Barfeed Units.**  
**Offline Programming.**  
**Contour Handwheel.**  
**Gear Hobbing.**  
**Polygon Turning.**  
**Advanced Swarf Management System.**

The 'Y' axis of the **XYZ COMPACT TURN 65 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.



	<b>XYZ COMPACT TURN 65 LTY</b>
Power chuck diameter	200 mm
Maximum swing	400 mm
Swing over carriage cover	400 mm
Maximum turned diameter	220 mm
Maximum turned length	<b>490 mm</b>
X axis travel	<b>220 mm</b>
Y axis travel	<b>+/- 35 mm (70 mm)</b>
Z axis travel	<b>500 mm</b>
Spindle centre height from floor	<b>1150 mm</b>
Spindle nose	A2-6
Spindle bore	76 mm
Bar capacity	65 mm
Spindle front bearing internal dia	100 mm
Max spindle speed	4500 rpm
Spindle S1 continuous	12 HP / 9 kW
S2-30 mins	15 HP / 11 kW
S6 25% (2.5 mins in 10)	23HP / 17 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)	<b>32/40 mm</b>
Servo motors (X,Z & turret)	<b>8/11 Nm</b>
Turret	12 Station 30VDI
Live Tool max rpm	<b>4000 rpm</b>
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	<b>4400 kg</b>
Footprint W x D x H approx	<b>3345 x 1800 x 1930 mm inc conveyor</b>

**Bold type shows the difference between the XYZ CT 65 and the XYZ CT 65 LTY**

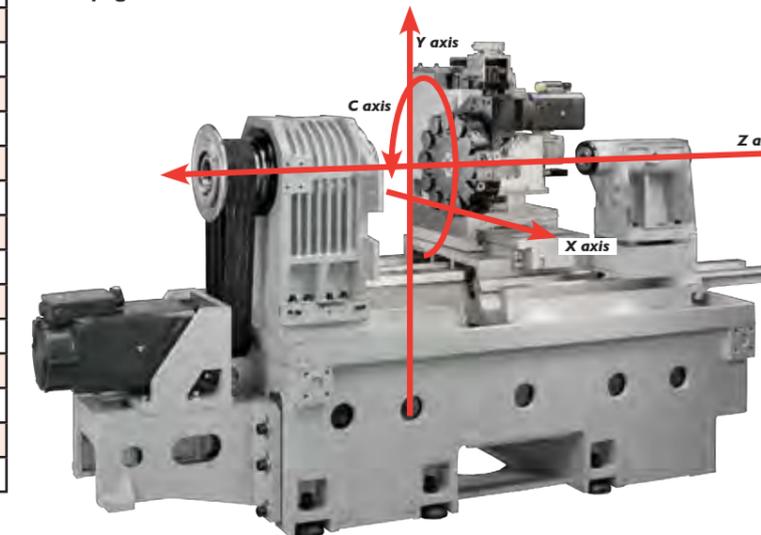
## The CT 65 LTY Turning Centre for quick one hit mill/turn production.

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

The CT 65 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 65 LTY finished.

**For the full build specification of the XYZ Turning Centres see pages 83 and 84.**



## XYZ TC 400

**SPINDLE 43 HP / 32 kW**  
**300mm CHUCK (380mm optional\*)**  
**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

**Siemens 828D ShopTurn Control.**  
**Hydraulic 300mm 3 Jaw Chuck (380mm optional).**  
**Sauter 'German' VDI Turret.**  
**Automatic Tool Setting Arm.**  
**Swarf Conveyor & Bin.**  
**Hydraulic Tailstock.**  
**Through Tool Flood Coolant.**  
**Remote Electronic Handwheel.**  
**USB Port.**  
**Networking.**

### Optional Equipment

**Collet Chuck.**  
**Bar Puller.**  
**Barfeed Units.**  
**Offline Programming.**  
**Contour Handwheel (wind the handwheel to run through the program).**  
**Advanced Swarf Management System.**

	<b>XYZ TC 400</b>
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	1020 mm
Spindle nose	A2-8
Spindle bore	91 mm
Bar capacity	78 mm
Spindle front bearing internal dia	130 mm
Max spindle speed	3300 rpm
Spindle motor	43HP / 32 kW
Min spindle speed for full power	1500 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
Servo motors (X,Z)	X: 2.29 kW, 11Nm Z: 3.3 kW, 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 tailstock. Many of these options are costly extras with 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 93 to 96.



For the full build specification of the XYZ Turning Centres see pages 83 and 84.

## XYZ TC 320 LTY

**SPINDLE 43 HP / 32 kW**  
**300mm CHUCK (380mm optional\*)**  
**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

**Siemens 828D ShopTurn Control.**  
**Hydraulic 315mm 3 Jaw Chuck.**  
**Sauter 'German' VDI Turret.**  
**Automatic Tool Setting Arm.**  
**Swarf Conveyor & Bin.**  
**VDI Turret.**  
**Full 'C' Axis.**  
**Live Tooling.**  
**100mm Y axis.**  
**Programmable Hydraulic Tailstock.**  
**Through Tool and Flood Coolant.**  
**Remote Electronic Handwheel.**  
**USB Port.**  
**Networking.**

### Optional Equipment

**Parts Catcher.**  
**Collet Chuck.**  
**Bar Puller.**  
**Barfeed Units.**  
**Offline Programming.**  
**Contour Handwheel.**  
**Gear Hobbing.**  
**Polygon Turning.**  
**Advanced Swarf Management System.**

*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 (380 mm optional*)
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	3300 rpm
Spindle motor	43HP / 32 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
Servo motors (X,Y,Z & turret)	1.7 kW, 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

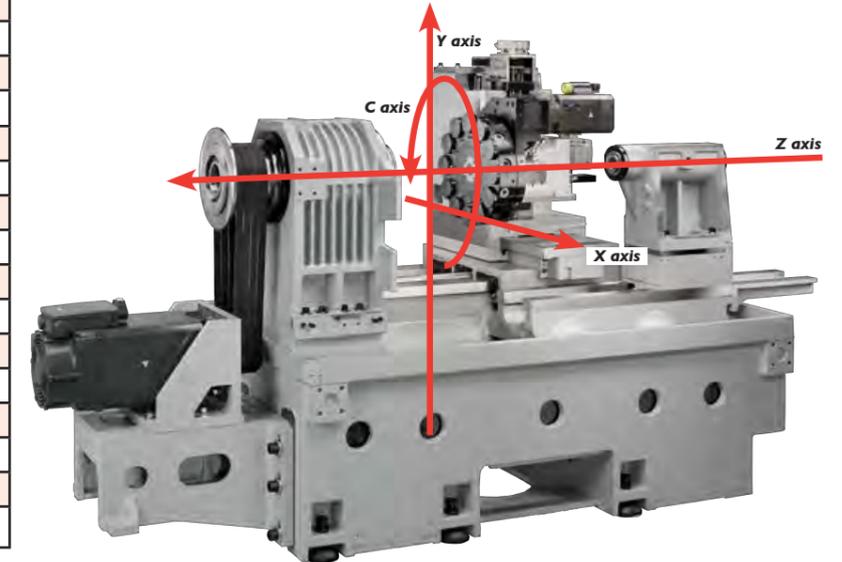
\* Renishaw Toolsetting arm has to be removed.

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 83 and 84.**



# XYZ XL LATHES

## XYZ XL Lathes and Oil Country Lathes

- XYZ XL 780** page 94
- XYZ XL 1100** page 95, 96
- XYZ XL 1200** page 95, 96
- XYZ XL 1500** page 95, 96
- XYZ OIL COUNTRY** page 95, 96



The XYZ XL780 is also available with a Rock Steady



### XYZ XL 780

**SPINDLE 43 HP / 32 kW**  
**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.

#### 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.

#### Optional Equipment

- Siemens Contour Handwheel (wind the handwheel to run through the program)
- Offline Programming.
- Face Plates, Steadies and Chucks.
- Factory Networking.
- 8 Station Turret.
- Conveyor and Bin.
- Advanced Swarf Management System.

#### Cast Bed & Base

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

	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	43 HP / 32 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

Coming soon with  
**ProtoTRAK® RLX**



**8 Station Turret**  
 If you're considering buying a large turning centre, fitting an 8 station turret to a large/longbed CNC Lathe could give you very similar results at a fraction of the price. Perhaps 80% of the performance at 30% of the price.

SIEMENS

# 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.

## 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

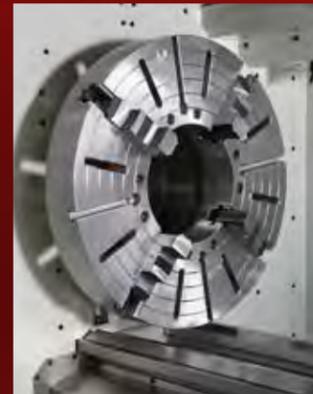
**SWING OVER BED 1200mm**  
**SPINDLE BORE 160mm (up to 420mm opt)**  
**DISTANCE BETWEEN CENTRES 1M-10M**  
**SPINDLE SPEEDS RPM:**  
**H200-600, L 20-300**

## XYZ XL 1500

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

## XYZ OIL COUNTRY

**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.**



## SIEMENS

### 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.

**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 OIL COUNTRY
Bed type	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	1100 mm
Swing over cross slide	750 mm	950 mm	1130 mm	750 mm
Cross slide travel	550 mm	750 mm	750 mm	638 mm
Distance between centres	1M - 6M	1M - 10M	1M - 10M	1.5M - 16M (Stock 3 metre)
Spindle bore standard <i>Larger available</i>	160 mm	160 mm	160 mm	420 mm
Spindle nose	A2-11	A2-11	A2-11	A2-28
Spindle taper	MT 15	MT 15	MT 15	MT 15
Spindle motor	94 HP / 70 kW max 50 HP/ 37 Kw continuous	94 HP / 70 kW max 50 HP/ 37 Kw continuous	94 HP / 70 kW max 50 HP/ 37 Kw continuous	85 HP / 63.3 kW continuous
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	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	300 mm
Tailstock taper	MT6	MT6	MT6	MT6
Tailstock diameter	115 mm	125 mm	125 mm	115 mm
Bed width	533 mm	692 mm	692 mm	544 mm
<b>Weight capacity</b>				
Chuck only	1000 Kg	1500 Kg	1500 Kg	1000 Kg
Chuck and tailstock	4000 Kg	4000 Kg	4000 Kg	4000 Kg
Chuck, steady and tailstock	7000 Kg	6000 Kg	6000 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>	Length 4070 mm	Length 4280 mm	Length 4280 mm	Length 5700 mm
	Depth 2300 mm	Depth 2500 mm	Depth 2500 mm	Depth 2300 mm
<i>Add 1,100 mm to the length to allow for the standard swarf conveyor.</i>	Height 2200 mm	Height 2300 mm	Height 2400 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>	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

**XYZ 1500 XYZ 2000 XYZ SLV**



Guards removed for clarity

	<b>XYZ 1500</b>	<b>XYZ 2000</b>	<b>XYZ SLV</b>
Newall Digital Readout	DRO	DRO	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

entry level ProtoTRAK KMX system and machine on pages 15 and 25.

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.

**XYZ eTURN 1325/1340 XYZ TRAINER 1330 XYZ 1550 VS**



Longer and shorter beds are available.

	<b>XYZ eTURN 1325/1340</b>	<b>XYZ TRAINER 1330/1340</b>	<b>XYZ 1530/1550 VS</b>
Swing over bed	330 mm	330 mm	390 mm
Swing in gap (opt)	NA	495 mm	610 mm (standard)
Gap in front of face plate (opt)	NA	150 mm	150 mm
Swing over cross slide	198 mm	190 mm	240 mm
Distance between centres	584 / 965 mm	750 / 965 mm	750 / 1250 mm
Cross slide travel	180 mm	190 mm	230 mm
Spindle speed	35-2000 rpm 3HP	53-2000 rpm	18-2500 rpm
Type of spindle nose	D 1-4	D 1-4	D 1-6
Main spindle bore	38 mm	36 mm	54 mm

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 1020**

**250 x 500mm magnetic chuck.**  
Larger Grinders available



**LARGER GRINDERS AVAILABLE**

	<b>XYZ 1020</b>	<b>XYZ 1224</b>	<b>XYZ 1632</b>	<b>XYZ 2040</b>
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.

**To get the XYZ for Education brochure call 01823 674200 or visit the website to download**



**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.

	<b>FT 1000</b>	<b>FT 800</b>	<b>FT 400</b>	<b>FT 200</b>	<b>FT 90</b>
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**

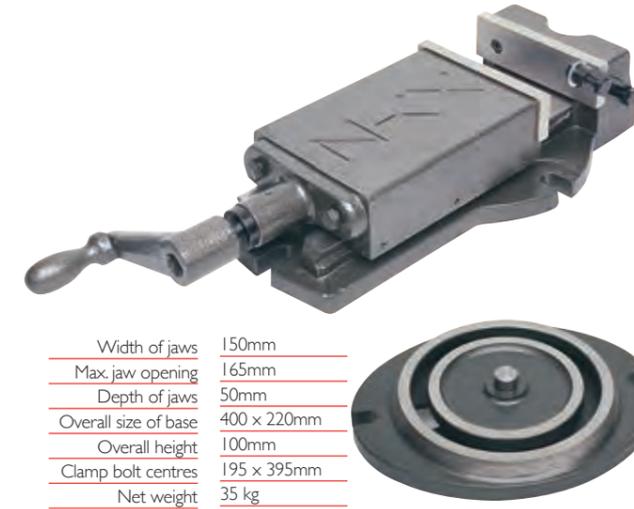
- Vertical guide arms carrying carbide faced guides.
- Fast & accurate blade tensioning.
- Standard blade size 25x3300mm.
- Conveniently placed controls.
- 90° - 45° mitering.

	<b>XYZ 260</b>
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.**

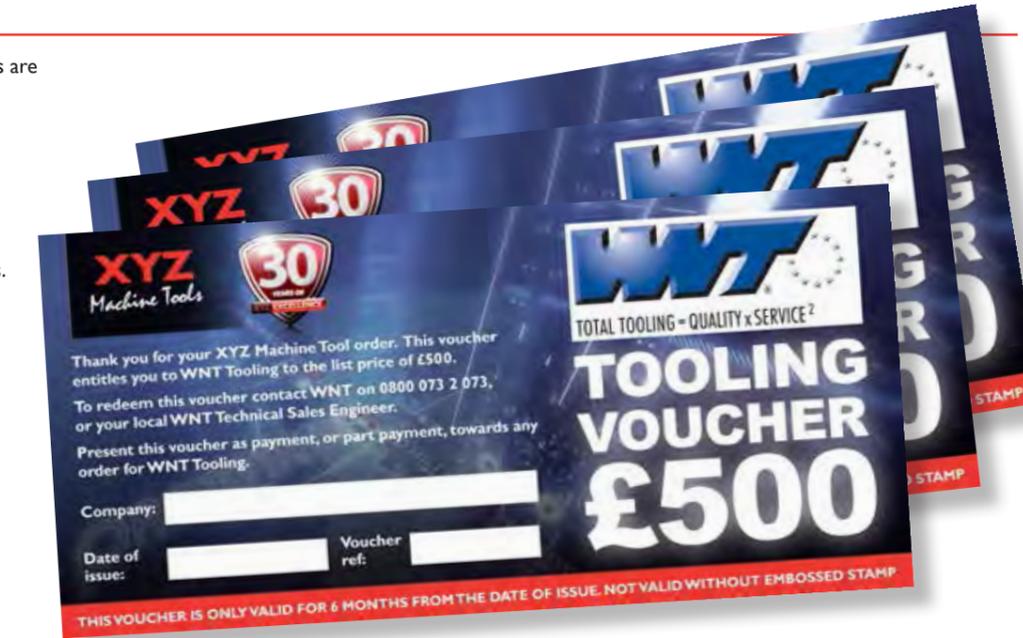
Rugged construction. Body is made of high quality ductile cast iron for extra rigidity. Sliding bedways flame hardened and ground. Concealed spindle for extra protection. Hydra booster system for extra clamping pressure. Quick action clamping. Optional swivel base. Draw down jaws.



**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.

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



## CNC 4TH AXIS

### CNC 4th Axis for the XYZ VMC range.

For more information see pages 41 to 72.

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



## KITAGAWA TT 4th 5th AXIS ROTARY TABLES

Kitagawa NCRT Model	TT101	TT140	TT150	TT182	TT200	TT251
Faceplate Diameter	Ø110	Ø140	Ø150	Ø180	Ø200	Ø250
Chuck Diameter	Ø110	Ø130	Ø165	Ø165	Ø190	Ø232
Centre Height	140	200	150	180	180	225
Faceplate Register	Ø50H7	Ø60H7	Ø60H7	Ø65H7	Ø65H7	Ø100H7
Through Bore	Ø32	Ø32	Ø40	Ø40	Ø40	Ø70
Max Load Horizontal	35kg	50kg	50kg	60kg	60kg	100kg
Max Load Tilted	20kg	30kg	30kg	40kg	40kg	60kg
Max RPM Rotate Axis	41.6rpm	41.6rpm	41.6rpm	33.3rpm	33.3rpm	33.3rpm
Max RPM Tilt Axis	25rpm	16.6rpm	16.6rpm	16.6rpm	16.6rpm	16.6rpm
Max Clamping Torque Rotate	180Nm	280Nm	350Nm	450Nm	600Nm	900Nm
Max Clamping Torque Tilt	300Nm	500Nm	550Nm	800Nm	1200Nm	1200Nm
Weight	73kg	158kg	141kg	163kg	170kg	260kg

All dimensions in millimeters unless stated otherwise



## KITAGAWA 4th AXIS ROTARY TABLES WITH CONTROLLER FOR PROTOTRAK RMX BED MILLS

Kitagawa NCRT Model	MR120	MR160	MR200	MR250
Faceplate Diameter	Ø128	Ø165	Ø202	Ø250
Chuck Diameter	Ø130	Ø165	Ø190	Ø232
Centre Height	120	140	140	180
Faceplate Register	Ø50H7	Ø50H7	Ø65H7	Ø100H7
Through Bore	Ø32	Ø40	Ø45	Ø70
Max Load Horizontal	120kg	160kg	200kg	250kg
Max Load Vertical	60kg	80kg	100kg	125kg
Max RPM	50rpm	41.6rpm	33.3rpm	33.3rpm
Max Clamping Torque	150Nm	310Nm	350Nm	600Nm
Weight	33kg	41kg	61kg	85kg

All dimensions in millimeters unless stated otherwise



## Terms and Conditions

All details contained within this catalogue are accurate at the time of going to press, but please be aware that XYZ Machine Tools Ltd has a policy of continuous development. Because of this some details may be subject to change without prior notice. Please be sure to confirm all specifications and details prior to ordering.

### XYZ MACHINE TOOLS LIMITED TERMS AND CONDITIONS OF SALE

Please read this document carefully as all goods sold by XYZ Machine Tools Limited will be supplied subject to these terms and conditions of sale.

#### 1. Definitions

1.1 In these terms and conditions, the following definitions shall apply:

"Company" means XYZ Machine Tools Limited (company number 1765883) whose registered office is at Centenary House, Peninsula Park, Rydon Lane, Exeter EX2 7XE.

"Purchaser" means the person, firm or company placing an order for Goods.

"Goods" means the goods described in the Confirmed Order.

"Confirmed Order" means an order for the Goods as confirmed by the Company under clause 3.4

"Due Date" means the date referred to in clause 6.1.

1.2 Any reference in these terms and conditions to any provision of a statute shall be construed as a reference to that provision as amended, re-enacted or extended at the relevant time.

#### 2. Contract

2.1 These terms and conditions apply to all contracts for the sale of Goods by the Company to the Purchaser. No variation will be effective unless agreed in writing by a director of the Company.

2.2 The Company's employees or agents are not authorised to make any representations concerning the Goods unless confirmed by the Company in writing. Any advice or recommendation given by the Company or its employees or agents to the Purchaser which is not confirmed in writing is followed or acted upon entirely at the Purchaser's own risk.

2.3 The descriptions and illustrations contained in the Company's catalogues, price lists, specifications and other advertisement matter are intended merely as an indication of the type of goods described therein and none of the above shall form part of any contract with the Purchaser.

#### 3. Order and Acceptance

3.1 The Company will provide the Purchaser with a written quotation for the Goods. Any order made by the Purchaser against such quotation constitutes an offer by the Purchaser to buy the Goods.

3.2 The Purchaser shall be responsible to the Company for the accuracy of any information contained in its order.

3.3 Any Goods from stock are subject to availability at the time an order is submitted by the Purchaser.

3.4 No order submitted by the Purchaser shall be deemed to be accepted by the Company unless and until confirmed in writing by the Company.

3.5 The quantity and description of the Goods shall be as specified in, or referred to, in the Confirmed Order.

3.6 No Confirmed Order may be cancelled by the Purchaser except with the agreement in writing of the Company and on terms that the Purchaser shall indemnify the Company in full against all costs (including the cost of all labour and materials used), damages, charges and expenses incurred by the Company as a result of cancellation.

3.7 A separate contract shall arise in respect of each Confirmed Order.

#### 4. Price of the Goods

4.1 The price for the Goods shall be the price set out in or referred to in the Confirmed Order (or, in the case of any error or omission, as subsequently notified by the Company to the Purchaser) provided the Company may increase the price for any reason under clause 6.2.

4.2 The price is exclusive of Value Added Tax.

4.3 The price is exclusive of delivery charges. If the Purchaser requires delivery of the Goods the Company reserves the right to add to the price the cost of any packaging, carriage and/or insurance.

4.4 The price is exclusive of any duties, imposts and levies. The price for any imported parts incorporated in the Goods may be subject to fluctuation and the Purchaser agrees that any Confirmed Order is based on the current rate of import duty and rate of exchange at the time of the Confirmed Order unless otherwise specified.

4.5 Unless otherwise agreed in writing, payment shall be made in pounds sterling, and if the price for the Goods is quoted by the Company in a currency other than pounds sterling payment shall be calculated at the rate of exchange at the time of the Confirmed Order.

#### 5. Delivery

5.1 The Company will use reasonable endeavours to deliver on any date indicated in the Confirmed Order for the delivery of Goods but delivery dates should be regarded as approximate only and delivery time shall not be of the essence of the contract.

5.2 Delivery shall take place when the Company notifies the Purchaser that the Goods are ready for collection from the Company's premises unless the Purchaser has required the Company to make delivery at the Purchaser's premises in which case delivery shall take place when the Goods are delivered to such premises and off loaded from the transporting vehicle.

#### 6. Terms of Payment

6.1 Payment for the Goods shall be made by the Purchaser to the Company immediately upon delivery of the Goods or, if otherwise agreed between the Company and the Purchaser, within 30 days after the end of the month of despatch by the Company of an invoice for the Goods.

6.2 If the Company is unable to effect delivery or despatch the Goods by reason of the Purchaser failing to take delivery of the Goods or by reason of the Purchaser's instructions or lack of instructions the Company shall be entitled to notify the Purchaser that the Goods are ready for delivery or despatch and to add to its invoice reasonable additional carriage for insurance and/or storage costs resulting from the delay in delivery or despatch of the Goods.

6.3 Time for payment shall be of the essence.

6.4 If the Purchaser fails to make any payment on the Due Date then, without prejudice to any other right or remedy available to the Company, and without incurring any liability for any loss or damage caused to the Purchaser, the Company shall be entitled to:

a. cancel any Confirmed Order and/or suspend any further deliveries of goods to the Purchaser;

b. appropriate any payment made by the Purchaser to such of the Goods (or goods supplied under any other contract between the Company and the Purchaser) as the Company may think fit; and

c. charge the Purchaser interest (both before and after judgement) on the amount unpaid at the rate of 6 per cent per annum above the base rate of HSBC Bank plc from time to time or the statutory rate applicable under The Late Payments of Commercial Debts (Interest) Act 1998 as amended (whichever is greater), in either case such interest to accrue on a daily basis from the Due Date until the date of actual payment.

#### 7. Risk and Property

7.1 The risk of damage to or loss of the Goods shall pass to the Purchaser at the time of delivery or, if the Purchaser fails to take delivery of the Goods, at the time when the Company has tendered delivery of the Goods.

7.2 Notwithstanding delivery and the passing of risk in the Goods or any other provision of these terms and conditions the property in the Goods shall not pass to the Purchaser until the Company has received in cash or in cleared funds:

a. payment in full of the price of the Goods, and

b. payment in full for all other goods agreed to be sold by the Company to the Purchaser for which payment is then due or accruing due.

7.3 Until such time as the property in the Goods passes to the Purchaser:

a. the Purchaser shall hold the Goods as the Company's fiduciary agent and bailee and shall keep the Goods properly stored and insured for the Company's benefit and identified as the Company's property; and

b. the Company shall be entitled at any time to require the Purchaser to deliver up the Goods to the Company and if the Purchaser fails to do so the Company, its employees and/or its agents may forthwith enter upon any premises of the Purchaser or any third party where the Goods are stored and repossess the Goods; and

c. the Purchaser shall afford the Company inspection of any documents relating to such Goods for the purpose of tracing them.

7.4 The Purchaser shall not be entitled to pledge, or purport to pledge or in any way charge or purport to charge by way of security for any indebtedness, any of the Goods which remain the property of the Company.

#### 8. Acceptance of Goods

The Purchaser shall be responsible for inspecting the Goods:

a. where they are collected by the Purchaser (or its agent) from the Company's premises, at the time of collection; or

b. where they are delivered to the Purchaser's premises, within 3 working days of delivery and shall at the relevant time notify the Company if the Purchaser's shall consider the Goods to be in any way damaged, unsatisfactory or otherwise not in conformity with the contract. In the absence of such notification the Purchaser shall be deemed to have accepted the Goods.

#### 9. Warranty

9.1 Subject to the conditions of this clause and of clause 10 the Company warrants that Goods will at their time of acceptance under Clause 8, remain free from defects in material and workmanship for the shorter of a period of 12 months or for 2000 hours of use.

9.2 The above warranty is given by the Company subject to the following conditions:

a. the Company shall be under no liability in respect of any defect arising from wilful damage, negligence, failure to follow the Company's instructions, misuse, alteration to the Goods (including by the removal of any guard or cover) or repair of the Goods in each case by the Purchaser, its employees or agents;

b. that it does not extend to parts, materials or equipment not manufactured by the Company, in respect of which the Purchaser shall only be entitled to the benefit of any warranty or guarantee given by the relevant manufacturer;

c. the Company shall be under no liability if full payment for any of the Goods has not been made by the Due Date.

9.3 Subject as expressly provided in these terms and conditions and except where the Goods are sold to a person dealing as a consumer (within the meaning of the Unfair Contract Terms Act 1977) all warranties and conditions or other terms implied by statute or common law are excluded to the fullest extent permitted by law. Where Goods are sold to a consumer the statutory rights of the consumer are not affected by these terms and conditions.

9.4 Without prejudice to clause 9.2 (b) any claim made by the Purchaser which is based on any defect in the quality or condition of the Goods shall be notified to the Company in writing within 14 days from the date on which the defect or failure became apparent. Where such a claim is notified to the Company, the Company shall be given the opportunity of remedying the defect or failure and supplying (where necessary) replacement parts and completion of such remedial work shall constitute fulfilment of the Company's obligations under the contract. Remedial work and replacement parts will be provided free of charge, provided the Purchaser at its own cost returns to the Company the relevant Goods.

9.5 Without prejudice to clause 9.4 the Company at its sole discretion shall be entitled to refund the Purchaser the price of the Goods and shall have no further liability to the Purchaser under the contract.

9.6 Except in respect of death or personal injury caused by the negligence of the Company the total liability of the Company to the Purchaser under this contract shall not exceed the price of the Goods.

9.7 Except in respect of death or personal injury caused by the negligence of the Company, the Company shall not be liable to the Purchaser by reason of any representation (unless fraudulent), warranty, condition or other term of the contract for any loss or damage (whether for loss of profit or goodwill), for consequential loss which arise out of or in connection with the supply of the Goods.

9.8 The Company shall not be liable to the Purchaser or be deemed to be in breach of the contract by reason of any delay in performing or any failure to perform the Company's obligations in relation to the Goods if the delay or failure was due to any cause beyond the Company's reasonable control. Without prejudice to the generality of the foregoing, the following shall be regarded as causes beyond the Company's reasonable control

a. act of God, explosion, flood, tempest, fire or accident;

b. war or threat of war, sabotage, insurrection, civil disturbance;

c. acts, restrictions, regulations, byelaws, prohibitions or measures of any kind on the part of any governmental, parliamentary or local authority;

d. import or export embargoes;

e. strikes, lock outs, or any other industrial actions or trade disputes (whether involving employees of the Company or a third party);

f. difficulty in obtaining labour, fuel, parts or Goods from their manufacturer.

#### 10. Acknowledgements by the Purchaser

Without prejudice to clause 9.2 (a) the Purchaser acknowledges by placing an order for the Goods:

a. that if the Goods are incorrectly installed the Goods may cause serious danger to persons and property and that the Purchaser accepts responsibility for the proper installation of the Goods; and

b. the Purchaser must use the Goods in a safe manner and comply with all applicable health and safety laws and regulations when instructing its employees or agents in the use of the Goods; and

c. that it has read these terms and conditions and that it considers these terms and conditions are reasonable.

#### 11. Indemnity

11.1 Certain component parts incorporated into the Goods may have intellectual property rights belonging to their original manufacturer and may not be reproduced, altered or used in any way without the written permission of the manufacturer.

11.2 The Purchaser will indemnify the Company and keep it indemnified against all damages, penalties, costs and expenses for which the Company becomes liable as a result of third party claims or demands made against the Company as a result of the failure of the Purchaser to comply with any of its obligations under the contract.

#### 12. Notices

Any notice under the contract shall be properly given in writing and sent by first class post or facsimile transmission or by electronic mail to the address of the intended recipient as stated in the contract or to such address as the Company and the Purchaser from time to time communicate to each other as their respective addresses for service and shall be deemed served, in the case of postal notice, on the expiry of 24 hours from time of posting or, if by facsimile transmission or electronic mail, at the time of transmission provided that a facsimile or electronic mail confirmatory receipt is obtained by the sender.

#### 13. General

13.1 If any provision of these terms and conditions is held by any competent authority to be invalid or unenforceable in whole or in part the validity of the other provisions of these terms and conditions and the remainder of the provision in question shall not be affected thereby.

13.2 These terms and conditions and any contract incorporating them shall be governed by and construed in accordance with English Law and all disputes hereunder shall be submitted to the non-exclusive jurisdiction of the English courts.

#### 14. Non-transferable

14.1 The Purchaser's rights and obligations under this contract shall not be transferred or assigned directly or indirectly either in part or whole to any third party without the prior written consent of the Company.

14.2 Unless otherwise agreed between the Company and the Purchaser a person who is not party to this contract has no right under the Contracts (Rights of Third Parties) Act 1999 to enforce any terms of this contract but this does not affect any right or remedy of a third party which exists or is available apart from that Act.

#### 15. Termination

Without prejudice to clause 6.4 the Company shall be entitled to cancel the contract with the Purchaser in the following circumstances:

a. if a petition is presented for the winding up, administration or bankruptcy of the Purchaser, if the Purchaser has a receiver appointed in respect of its assets or any other insolvency proceedings are commenced by or against it;

b. if any distress or execution is levied upon the Purchaser, its property or assets;

c. if the Purchaser ceases, or threatens to cease to carry on business;

d. if the Company reasonably apprehends that any of the events mentioned in clauses (a)-(c) above are about to occur in relation to the Purchaser and notifies the Purchaser accordingly; in each case without incurring any liability for any loss or damage caused to the Purchaser and without prejudice to the Company's rights to payment under clauses 3, 6 and 11.2.

# XYZ Machine Tools

## XYZ across the UK

### XYZ DEVON Main Factory and Administration

Woodlands Business Park, Burllescombe,  
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 LONDON

944 Yeovil Road, Slough Trading Estate,  
Slough. SL1 4NH

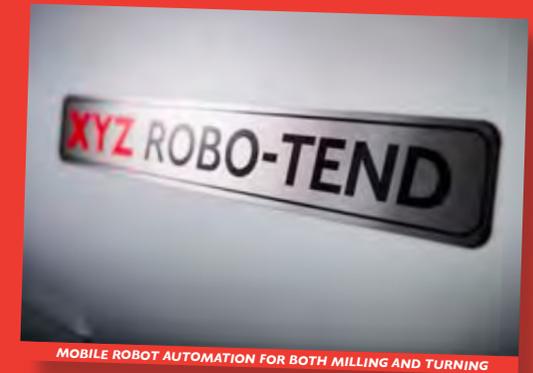
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