PRODUCT RANGE 2025

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Contents

The World Turns On Colchester

Precision, performance & reliability

Colchester Machine Tool Solutions has been manufacturing high quality machine tools for over 130 years, over which time we've gained the trust of the machining industry across the world. All of our products are designed and manufactured to exceed the highest international quality and safety standards, with precision, performance, and reliability at the forefront.

British designed and engineered

Our core machine tools are British designed and engineered, providing years of outstanding service with the absolute minimum of maintenance. Backed by our highly skilled customer support team, our machines provide greater longevity and an outstanding return on investment.

> Trusted in the industry for over 100 years
> Globally over 100,000 machines in operation
> Bespoke design & engineering consultancy
> Extensive product training
> Preventative maintenance & servicing packages
> Nationwide engineer support
> Financing & part exchange packages
> Fast despatch of spares & accessories

Not just machine tools

At Colchester Machine Tool Solutions, we're more than just suppliers of high-quality machine tools – we're your partners in precision engineering.

Our solutions-based approach means we don't settle for "off-the-shelf" solutions. We work closely with you to fully understand your requirements and deliver customised solutions tailored to your workshop's exact specifications. Whether it's integrating specific health and safety features or adapting our machine tools to handle specialised parts and materials, we ensure you get the right machine for the right job.

From design and manufacture to aftercare, our dedication to providing personalised service spans the entire customer journey. Our global customer support network offers quick access to spares and servicing, backed by our team of highly trained, factory-based engineers. Wherever you are in the world, our experienced support staff are ready to respond swiftly and keep your operations running smoothly.

With Colchester, you're not just buying a machine – you're investing in a long-term engineering partner committed to your success.

Global Reach

Supplying precision manual and CNC machine tools in over 60 countries across four continents. Our extensive global presence ensures that manufacturers worldwide benefit from our industry-leading innovation, tailored support, and the highest standards of precision and reliability.

European Technology Centre in Elland, West Yorkshire.

Tornado CNC Turning Centres

The Tornado range of slant bed CNC turning centres delivers high-performance machining across a wide variety of industries, from engineering and manufacturing to educational environments. Available in 2-axis and 3-axis (MillTurn) configurations, these versatile machines provide an exceptional return on investment and are designed to meet the needs of modern production environments.

Featuring rigid construction with advanced linear guideway technology, Tornado turning centres ensure fast, precise, and smooth machining, all within a compact footprint that maximises floor space. Their ergonomic design further enhances operator comfort and productivity.

Built with high-quality Meehanite cast iron construction, Tornado machines offer superior rigidity and accuracy, combined with precise linear guideways for outstanding machining efficiency and long-term value.

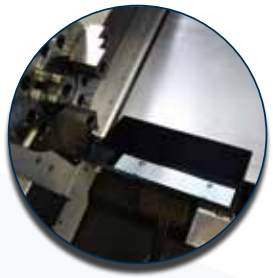
With Colchester's heritage of engineering excellence and trusted after-sales support, the Tornado CNC turning centres are the ideal solution for businesses looking to invest in precision, reliability, and outstanding performance.

Benefits

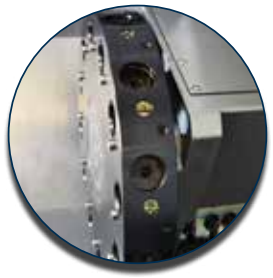
- 2-axis and 3-axis (MillTurn) configurations to suit a variety of applications
- Linear guideway technology for fast, smooth, and accurate machining
- Meehanite cast iron construction for superior rigidity and precision
- Compact footprint with ergonomic design for operator comfort
- Exceptional machining efficiency and lifetime value

Standard Features

- FANUC 0i-TF Plus CNC control system with 15" screen & Manual Guide i (option of Siemens 828D CNC control systems with 15" screen and ShopTurn)
- VDI auto indexing tool turret
- Swarf (Chip) conveyor
- Parts catcher
- Renishaw tool setting probe
- 20 bar coolant system
- LED status lights
- Easy access to work zone
- Compact footprint with large machining envelope
- Automation & Industry 4.0 ready



Parts Catcher



VDI Turret

Tool Setting Probe

SPECIFICATION		Tornado SL 2-Axis Turning Centre					Tornado SL 3-Axis Turning Centre			
		SL25	SL30	SL35		SL40	SL25MC	SL30MC	SL35MC	SL40MC
			SL3OL	SL35L		SL40L		SL30LMC	SL35LMC	SL40LMC
CONTROL SYSTEM		**FANUC 0i-TF Plus 15"**								
CAPACITIES										
Max. Swing Over Bed	mm/inch	530 /20.9	600 / 23.6	650 / 25.6		750 / 29.5	530 /20.9	600 /23.6	650 / 25.6	750 / 29.5
Max. Over Cross Slide	mm/inch	350 / 13.8	400 / 15.7	450 / 17.7		550 / 21.7	350 / 13.8	400 / 15.7	450 / 17.7	550 / 21.7
Max. Cutting Diameter	mm/inch	350 /13.8	400 /15.7	450 / 17.7		550 / 21.7	280 / 11	330/13	360 /14.2	550 /21.7
Max. Cutting Length	mm/inch	400 / 15.7	600/ 23.6 1000 / 39.4	600/ 23.6 1000 /39.4		950/37.4 1500 /59	380 /15	540 / 21.26 940/37	540 / 21.26 940/37	830/32.7 1380/54.3
Chuck Size	inch	8"	8" STD (10" OPT)	10" STD (12" OPT)		15" STD (18" OPT)	8*	8" STD (10" OPT)	10" STD (12" OPT)	15" STD (18" OPT)
Draw Tube Bore	mm/inch	52/2	65/2.6	78/3.1		103/4.1	52/2	65/ 2.6	78/3.1	103/4.1
SPINDLE										
Max.Speed	rpm	5000	4500	3500		2500	5000	4500	3500	2500
Spindle Motor Output (Peak)	kw	11	15	18.5		37	11	15	18.5	37
Spindle Torque (Peak)	N-m	202	305	727		2944 (gear box)	202	305	727	2944 (gear box)
Spindle Nose	-	A2-6	A2-6	A2-8		A2-11	A2-6	A2-6	A2-8	A2-11
TRAVELS / FEEDRATES										
X Axis Travels	mm/inch	195+15/7.7+0.5	220+20 /8.6+0.8	235+20 /9.2+0.8		285+25/11.2+1	195+5/7.6+0.2	220+5/8.6+0.2	235+5/9.2+0.2	285+25/11.2+1
Z Axis Travels	mm/inch	435 / 17,1	610/24 1010 /39.8	630/ 24.8 1025 /40.4		975/38.4 1520 / 58.9	435 / 17.1	600/ 23.6 1000 /39.4	600 / 23.6 1000/39.4	900 / 35.4 1450 / 57.1
Rapid Feed X/Z	"m/min ipm"	36/1417	36 /1417	36 /1417		30/1181 36 /1417	36/1417	36/1417	36 /1417	30 / 1181 / 36 / 1417
Cutting Feed X/Z	"m/min ipm"	10 / 394	10 /394	10 / 394		10/394	10 / 394	10 / 394	10/394	10 / 394
VDI TURRET (BMT on SL40MC series)										
Number of Tools	station	12	12	12		12	12	12	12	12
O.D Tool Size	mm/inch	20/0.79	25 /0.98	25/0.98		32 /1.26	20/0.79	25 /0.98	25/0.98	BMT65
Boring Bar Shank	mm/inch	32/1.26	40 / 1.57	40 / 1.57		50 / 1.97	ER25	ER32	ER32	ER4O
Motor of Power Turret	kw/HP	-	-	-		-	3.7/5.5	3.5 /5.5	3.5 /5.5	5.5/7
Max. Speed of Power Tooling	rpm	-	-	-		-	5000	4000	4000	4000
Tool Exchange (Neighbour Tool)	sec.	0.35	0.35	0.35		0.5	0.52	0.52	0.52	0.57
TAILSTOCK										
Quill Travel	mm/inch	100 / 3.9 (OPT)	100 /3.9	100 /3.9		100 / 3.9	100 (OPT)	100 /3.9	100 / 3.9	100 /3.9
Tailstock Travel	mm/inch	410 / 16.1 (OPT)	610/24 1010 / 31.7	630/24.8 102.5 /40.3		975 /38.4 1550 /61	410 / 16.1 (OPT)	570 970	570 970	900 /35.4 1450/57.1
Quill Taper	-	-	MT4	MT4		MT5	MTA (OPT)	MT4	MT4	MT5
ACCURACY										
Positioning	mm/inch	0.01 / 0.0039	0.01 / 0.0039	0.01 / 0.0039		0.01 / 0.0039	0.01 / 0.0039	0.01 / 0.0039	0.01 / 0.0039	0.01 / 0.0039
Repeatability	mm/inch	±0.003/±0.0012	±0.003/±0.0012	±0.003/±0.0012		±0.003/±0.0012	±0.003/±0.0012	±0.003/±0.0012	±0.003/±0.0012	±0.003/±0.0012
GENERAL										
Tank Capacity	litres/gal	160 / 42	240 / 52.8	270 / 59.4		280 / 61.6	160 / 42	240 / 52.8	270 / 59.4	280 / 61.6
Chip Disposal	-	Conveyor	Conveyor	Conveyor		Conveyor	Conveyor	Conveyor	Conveyor	Conveyor
Power Requirement	KVA	25	28	30		35	30	30	30	35
Floor Space (W x L)	mm/inch^2	2450 x 1500 / 97 x 59	2930 x 1745 / 115.3 x 69	3050 x 1844 / 120 x 73		3900 x 2165 / 154x 85	2450 x 1500 / 97 x 59	2930 x 1745 / 115.3 x 69	3050 x 1844 / 120 x 73	3050 x 2165 / 153.5 x 85
Weight	kgs/lb	4000 / 8378	5600 / 10582 / 6500 / 14330	5600 / 12346 / 6500 / 14330		6700 / 19842 / 7700 / 16975	4000 / 8378	5600 / 11023	5800 / 12787	6700 / 19842

Tornado SL20/25 MSY Sub-Spindle CNC Turning Centre

The Tornado SL20/25 MSY is designed to deliver unparalleled productivity and versatility with its integrated sub-spindle and Y-axis capabilities. This advanced CNC turning centre supports 5-axis single-hit machining, allowing manufacturers to efficiently produce complex components with exceptional precision and speed.

By automatically transferring workpieces from the main spindle to the sub-spindle, the Tornado SL20/25 MSY facilitates seamless turning, milling, and drilling on both sides of the component. This eliminates the need for multiple setups, drastically reducing cycle times and improving overall throughput.

The addition of the Y-axis expands the machine's functionality, enabling precise off-centre milling for keyways, flats, and contoured surfaces, further enhancing its capability to produce intricate parts with superior accuracy.

With its advanced technology and multi-tasking capabilities, the Tornado SL20/25 MSY is an essential asset in any production environment, providing a powerful solution for achieving both superior accuracy and extraordinary efficiency.

Benefits

- Integrated sub-spindle for seamless workpiece transfer and dual-side machining
- Single-hit machining for reduced cycle times and increased productivity
- Y-axis machining for precise off-centre milling of complex geometries
- Advanced milling and drilling capabilities for greater part complexity and flexibility
- Perfect for industries requiring high precision and efficiency

Heavy Duty Construction

SPECIFICATION	TORNADO SL20 MSY	TORNADO SL25 MSY
CONTROL SYSTEM	**Fanuc 0i-TF Plus with Manual Guide i 15" Screen (Siemens 828D Option)**	
CAPACITY		
Guideway	Roller Linear guideways	
Swing Over Bed	550mm	
Max Turning Diameter	290mm	
Max Working Length	522mm	
Bar Capacity	42mm	52mm
Chuck Size (Main Spindle)	150mm (6")	200mm (8")
Chuck Size (Sub Spindle)	150mm (6")	
FEEDRATE		
Rapid Traverse X/Z	30m/min	
Cutting Feed X/Z	10m/min	
SPINDLE (MAIN)		
Spindle Speed	6000rpm	5000rpm
Spindle Nose	A2-5	A2-6
Spindle Power	15Kw	
Motor	Fanuc Alpha i12	
SPINDLE (SUB)		
Spindle Speed	6000rpm	
Spindle Nose	A2-5	
Spindle Power	11Kw	
Motor	Fanuc Alpha i3	
C-AXIS		
Minimum Programmable Increment	0.001deg	
Positional Measurement	Fanuc BZ encoder	
TURRET		
Type (12 Station)	VDI 30 (BMT45 option)	
Tool Dimension	20x20mm	
Boring Bar	32mm	
Live Tool Power	3.7 / 5.5Kw	
Speed	5000rpm Din 1809 tool drive	
Y-Axis	+/- 40mm	
POSITIONING		
Positioning	0.01mm	
Repeatability	+/- 0.003mm	
MACHINE		
Power Requirements	25Kva	
Machine Size Including Swarf Conveyor	L3540 x W1500	
Weight	4000Kgs	

Alpha CNC/Manual Combination Lathes

The Alpha XS & XC series offers a comprehensive range of high-performance 2- and 3-axis flat-bed CNC/manual combination centre lathes, designed to provide unmatched versatility for a wide range of machining tasks. These lathes enable operators to switch seamlessly between manual operation for traditional tasks and CNC control for more complex machining operations, making them ideal for diverse production environments.

Equipped with the latest state-of-the-art customised Fanuc CNC control system with 10.4" touch screen, the Alpha X series delivers four distinct modes of operation:

- Manual operation for traditional machining
- Conversational programming for simplified control
- Full automatic CNC operation for complex tasks
- Offline CAD/CAM programming for enhanced precision and efficiency
- This flexibility makes the Alpha XS & XC series the ultimate turning machines, capable of meeting the demands of both precision manual tasks and high-speed CNC operations.

Fanuc 0i-TF Plus With 10.4" Touch Screen

Alpha XS 2-axis

The Harrison Alpha XS CNC combination lathe range is expertly engineered for fast, high-quality repeatability, ensuring exceptional accuracy and surface finish that meet the exacting standards of toolroom accuracy (DIN 8605). This precision significantly reduces component production costs, making it an ideal solution for manufacturers seeking to optimise their operations.

Alpha XC 3-axis

Built to toolroom accuracy, the Harrison Alpha XC range incorporates turning with milling, drilling and tapping functionality, reducing the need for second operation production for one-offs and small to medium batches of components.

Integrated Milling Drilling & Tapping Functionality

Benefits of Alpha XS & XC

- 2- and 3-axis configuration for versatile machining applications
- Seamless transition between manual and CNC operations
- Customised Fanuc CNC control offering four modes of operation
- Ideal for both traditional machining and complex CNC tasks
- Offline CAD/CAM programming for precision and flexibility

Whether for manual or CNC tasks, the Alpha XS & XC series delivers the performance, precision, and versatility needed to handle all your turning requirements with maximum efficiency.

Full spec table on page 18.

MultiTurn CNC/Manual Combination Lathes

The Colchester Multiturn CNC flat-bed centre lathe range is engineered for fast, high-quality repeatability, delivering exceptional accuracy and surface finishes that meet the exacting standards of toolroom accuracy (DIN 8605). This precision significantly reduces component production costs, making it an essential asset for modern manufacturing.

With a flatbed configuration and bed lengths of up to 6 metres, the Multiturn is versatile enough to handle a wide variety of materials, including long shafts, billets, bar stock, and castings. The lathe's hardened and ground bedways, constructed from high-performance cast iron, ensure robust manufacturing and maximum CNC capability.

All Multiturn lathes are equipped with the latest Siemens CNC control system, featuring the integrated ShopTurn conversational programming system, which simplifies operation and programming. This makes the Multiturn ideally suited for one-off and small to medium-sized batch machining.

The Colchester Multiturn XC 3-axis CNC flat-bed lathe range adds further versatility by combining turning with driven tool and C-axis functionality, making it ideal for intricate machining tasks. Additionally, the Multiturn XC MillTurn range incorporates turning, milling, drilling, and tapping capabilities, significantly reducing the need for second-operation production.

Standard Features

- Siemens 828D CNC control system with 10.4" colour screen
- ShopTurn conversational programming system
- PBI Super Precision 3-Jaw scroll chuck
- Dickson quick change tool post and tool holders
- Automatic slideways and ballscrew lubrication system
- Manual tailstock
- Coolant pump system
- Machine work light
- Roll-out swarf bin
- Easy access to work zone
- Large machining envelope
- Automation ready
- Industry 4.0 ready
- Easy installation

Optional Features

- Auto indexing tool turret
- Tooling packs
- 3 jaw scroll chuck and 4-jaw independent chuck options
- Parat & Multifix toolpost options
- Swarf conveyor
- Travelling and stationary steady rests
- Hydraulic chucking / tailstock / steady rests
- Extended warranty contracts
- Service / maintenance contracts

Full spec table on page 19.

ALPHA	1350XS	1400XS	1460XS	1550XS	1660XS	1760XS
Distance between centres	650mm	1200mm	1500mm	2000 / 3000 / 4000mm	1550 / 2000 / 3000 / 4000 / 5000 / 6000mm	
Swing over bed	350mm	400mm	460mm	554mm	660mm	760mm
Swing in gap	535mm	585mm	730mm	830mm	940mm	1040mm
Gap width from faceplate	165mm	165mm	216mm	216mm	300mm	
Swing over cross-slide	196mm	246mm	270mm	370mm	460mm	560mm
Spindle bore	42mm	55mm	78mm	104mm	104mm	155mm
Spindle nose	D1-4	D1-6	D1-8	D1-11	D1-11 (A2-11)	A2-11
Spindle speeds: Low range	1 to 366rpm	1 to 297rpm	1 to 247rpm	1 to 224rpm	26-224rpm	10-150rpm
Medium range	1 to 1088rpm	1 to 861rpm	1 to 740rpm	1 to 672rpm	225-670rpm	151-490rpm
High range	1 to 3500rpm	1 to 2700rpm	1 to 2200rpm	1 to 2000rpm	670-2000rpm	491-1400rpm
Main motor	7.5kW	7.5kW	11kW	15kW	18.5kW	
Tailstock quill travel	140mm	140mm	180mm	180mm	300mm	
Tailstock quill diameter	63mm	73mm	95mm	95mm	105mm	
Tailstock taper	No. 4 MT	No. 5 MT	No. 6 MT	No. 6 MT	No. 6 MT	
Electrical supply required	22kVA	22kVA	24kVA	24kVA	35kVA	
Overall length	2400mm	2900mm	3600mm	4100 / 5100mm	4200 / 4700 / 5700 / 6700 / 7700 / 8700mm	
Overall width	1700mm	1700mm	2000mm	2000mm	2250mm	
Overall height	1500mm	1500mm	1750mm	1750mm	2260mm	
Overall weight (nett)	1900kg	2370kg	3430kg	3690kg / 4600kg	4300 / 4800 / 6000 / 7200 / 8400 / 9800kg	4500 / 5000 / 6200 / 7400 / 8600 / 10000kg

	1400XC	1550XC	1760XC
Spindle Motor Power	9.5kW	18.5kW	22kW
No. of Tool Stations	8 (all driven)	8 (4 driven)	12
Tooling Type	VDI 20 / DIN 5480	VDI 40 / DIN 1809	VDI 40 / DIN 5482
Max. Power Driven Tool	2.2kW	3.7kW	8kW
Max. Driven Tool Speed	6000 rpm	6000rpm	5000rpm

MULTITURN	1000	2000	3000	4000	5000	6000
Distance between centres	650mm	1200mm	1500mm	2000 / 3000 / 4000mm	1550 / 2000 / 3000 / 4000 / 5000 / 6000mm	
Swing over bed	350mm	400mm	460mm	554mm	660mm	760mm
Swing in gap	535mm	585mm	730mm	830mm	940mm	1040mm
Gap width from faceplate	165mm	165mm	216mm	216mm	300mm	
Swing over cross-slide	196mm	246mm	270mm	370mm	460mm	560mm
Spindle bore	42mm	55mm	78mm	104mm	104mm	155mm
Spindle nose	D1-4	D1-6	D1-8	D1-11	D1-11 (A2-11)	A2-11
Spindle speeds: Low range	1 to 366rpm	1 to 297rpm	1 to 247rpm	1 to 224rpm	26-224rpm	10-150rpm
Medium range	1 to 1088rpm	1 to 861rpm	1 to 740rpm	1 to 672rpm	225-670rpm	151-490rpm
High range	1 to 3500rpm	1 to 2700rpm	1 to 2200rpm	1 to 2000rpm	670-2000rpm	491-1400rpm
Main motor	7kW	7kW	11kW	11kW	17kW	
Tailstock quill travel	140mm	140mm	180mm	180mm	300mm	
Tailstock quill diameter	63mm	73mm	95mm	95mm	105mm	
Tailstock taper	No. 4 MT	No. 5 MT	No. 6 MT	No. 6 MT	No. 6 MT	
Electrical supply required	22kVA	22kVA	24kVA	24kVA	35kVA	
Overall length	2400mm	2900mm	3600mm	4100 / 5100mm	4200 / 4700 / 5700 / 6700 / 7700 / 8700mm	
Overall width	1700mm	1700mm	2000mm	2000mm	2250mm	
Overall height	1500mm	1500mm	1750mm	1750mm	2260mm	
Overall weight (nett)	1900kg	2370kg	3430kg	3690kg / 4600kg	4300 / 4800 / 6000 / 7200 / 8400 / 9800kg	4500 / 5000 / 6200 / 7400 / 8600 / 10000kg

	2000XC	4000XC	6000XC
Spindle Motor Power	7kW	11kW	17kW
No. of Tool Stations	8 (all driven)	8 (4 driven)	12
Tooling Type	VDI 20 / DIN 5480	VDI 40 / DIN 1809	VDI 40 / DIN 5482
Max. Power Driven Tool	2.2kW	3.7kW	8kW
Max. Driven Tool Speed	6000 rpm	6000rpm	5000rpm

Student CNC Lathe

The compact Colchester Student CNC lathe is expertly designed and engineered in the UK, utilising the same robust construction as the market-leading Colchester Student geared head centre lathe. Equipped with the latest FANUC CNC controls, this lathe provides users with unparalleled flexibility in programming, including ISO, conversational Manual Guide I, or via CAD/CAM interfaces, making it ideal for both educational and industrial applications.

Engineered for fast, high-quality repeatability, the Colchester Student CNC lathe delivers exceptional accuracy and surface finishes that adhere to the exacting standards of toolroom accuracy (DIN 8605). This precision not only enhances the quality of machined components but also significantly reduces production costs, making it a valuable asset in any workshop.

Standard Features

- FANUC 0i-TF Plus CNC control system with 10.4" colour screen
- Manual Guide I conversational programming system
- Alpha Link CAD/CAM offline programming software
- PBI Super Precision 3-Jaw scroll chuck
- Dickson quick change tool post and tool holders
- Automatic slideways and ballscrew lubrication system
- Manual tailstock
- Coolant pump system
- Machine work light
- Easy access to work zone
- Compact footprint
- Automation ready

Dickson Quick Change Toolpost

Fanuc 0i-TF Plus with Manual Guide i

SPECIFICATION	STUDENT CNC LATHE
Swing Over Bed (mm)	300
Centre Height (mm)	167
Swing Over Cross Slide (mm)	210
Swing In Gap (mm)	480
Distance Between Centres (mm)	1,000
Spindle Nose	(Camlock) D1-4
Spindle Bore (mm)	40
Spindle Speed (rpm)	3,000
Feed Rate (mm)	1-3,000/min
Rapid Traverse (mm)	4,000/min
Motor (kW)	5.5
Floor Space LxWxH (mm)	2,150 x 1,320 x 1,520
Power Supply (400V)	16Kva
Weight (Kgs)	975

Manual Centre Lathes

Colchester & Harrison manual centre lathes are renowned worldwide for their quality and reliability, built to endure rugged, heavy-duty use. Engineered for longevity, our lathes provide years of outstanding service with minimal maintenance, ensuring that your investment stands the test of time.

Despite their robust construction, all Colchester & Harrison manual lathes excel in delivering fine precision turning, making them suitable for a wide range of machining applications.

Our comprehensive range of lathes is designed with exceptional ease of use in mind. Coupled with a vast selection of optional and ancillary equipment, these lathes guarantee top-of-the-range performance, even for the most complex and challenging tasks.

Student / M300 & Student VS

The Colchester Student 2500 / Harrison M300 are robust, versatile centre lathes, available as geared head or variable speed spindle drive, these truly are the ultimate training lathes and are the number one lathe for education worldwide.

The Student / M300 lathe has features for easy control of its comprehensive capabilities. It has the power to deal with heavy metal removal, at the same time offering precision for fine tolerance turning.

The Student / M300 is a full-function machine capable of the entire range of turning operations, and through the available range of accessories its scope and versatility can be increased even further. Quality, reliability and longevity make it one of the most outstanding lathes of its kind and is ideally suited for industry, the toolroom, training and secondary and tertiary education applications.

Master / V350
Triumph / V390

The Colchester Master VS 3250 / Harrison V350 and Colchester Triumph VS 2500 / Harrison V390 are robust, versatile, variable speed centre lathes, renowned for superior performance providing outstanding value for money.

These rugged centre lathes introduce the latest technology to meet the machining requirements of modern tooling. Heavy metal removal and fine precision finishing are accomplished on this superb machine smoothly, quietly, and efficiently. A comprehensive range of accessories are available to further enhance the lathes' scope and versatility. Each variable speed model is fitted as standard with the very latest state of the art ACU-RITE digital readout systems and linear encoders.

ACU-RITE digital readouts (DRO) make your manually-operated machine tools more profitable, improve productivity and raise the quality of the machined workpiece. The large LCD display clearly shows the actual axis positions. The context-sensitive graphical user guidance makes working with ACU-RITE digital readouts a pleasure.

All DRO's have integrated as standard constant surface speed (CSS) control. This powerful feature dramatically increases productivity over conventional centre lathes by automatically controlling the spindle speed during machining.

The standard DRO with integrated CSS functionality allows exactly the right speed for every job so tools perform better, cycle times are optimised and quality greatly improves.

Triumph VS
/ V390

Manual Centre Lathes

Mascot / V460
Mastiff / V550

The Colchester Mascot VS 2000 / Harrison V460 and Colchester Mastiff VS 1800 / Harrison V550 are heavy weight variable speed centre lathes designed and built to withstand rugged, heavy duty machining. All our lathes give years of outstanding service with unrivalled return on investment.

Heavy metal removal and fine precision finishing are at the core of all our centre lathes performance. Our range offers a vast choice of optional accessories and equipment, further enhancing the performance and versatility to tackle even the most complex and challenging machining operations.

Each variable speed model is fitted as standard with the very latest state of the art ACU-RITE digital readout systems and linear encoders.

All DRO's have integrated as standard constant surface speed (CSS) control. This powerful feature dramatically increases productivity over conventional centre lathes by automatically controlling the spindle speed during machining.

The standard DRO with integrated CSS functionality allows exactly the right speed for every job so tools perform better, cycle times are optimised and quality greatly improves.

Mascot VS / V460

Magnum / V660
Magnum LS / V800

The Colchester Magnum / Harrison V660 manual centre lathe, with an impressive swing capacity of 670mm, is expertly designed to withstand rugged, heavy-duty use, catering specifically to customers in the heavy turning sector. Its counterpart, the Colchester Magnum LS / Harrison V800, boasts an even greater swing capacity of 820mm, making it the ideal choice for larger workpieces.

Renowned for their exceptional quality and reliability, Colchester's heavy-duty centre lathes deliver outstanding service while requiring minimal maintenance throughout their working life. The Magnum and Magnum LS manual centre lathes are built with the power and strength necessary to meet almost any large turning requirement.

These lathes are particularly well-suited for demanding applications in industries such as oil and gas, power generation, utilities, and shipbuilding. Their robust construction and standard production features ensure consistent performance and longevity, making them a valuable asset for any workshop.

Standard Features

- Infinitely variable spindle speed with integrated digital display
- Spindle power load meter
- 3-Jaw PBI scroll chuck
- Dickson Quick change toolpost with tool holders
- Machine work light
- Coolant pump system
- Machine toolkit
- Thread Dial Indicator
- Roll-out swarf (chip) bin
- Saddle mounted operators control station
- Rapid power traverse of saddle and cross slide movement

Magnum / V660

SPECIFICATION	Student / M300	Master VS / V350	Triumph VS / V390	Mascot VS / V460		Mastiff VS / V550	Magnum / V660	Magnum LS / V800
Height of Centres	167mm	170mm	195mm	230mm		280mm	335mm	412mm
Bed Length Between Centres	635/1000mm	650mm	1200mm	1000/1500/2000mm		1000/1500/2000/3000/4000mm	1500/2000/3000/4000/5000/6000mm	
Swing over Bed	330mm	350mm	400mm	460mm		554mm	670mm	820mm
Swing in Gap	480mm	535mm	585mm	730mm		830mm	910mm	1060mm
Swing over Cross Slide	210mm	196mm	246mm	270mm		370mm	430mm	580mm
Spindle Bore	40mm	42mm	54mm	76mm		104mm	104 / 155mm	104 / 155 / 230mm
Spindle Nose Mounting	D1-4 Camlock	D1-4 Camlock	D1-6 Camlock	D1-8 Camlock		D1-11 Camlock	D1-11 / A2-11	D1-11 / A2-11 / A2-15
Morse Taper in Nose Bush	No. 3 MT	No. 3 MT	No. 4 MT	No. 5 MT		No. 5 MT	No. 6 MT	No. 6 MT
Number of Speed Ranges	12	3 Variable	3 Variable	3 Variable		3 Variable	3 Variable	3 Variable
Range	40-2500rpm	17-3250rpm	14-2500rpm	20-2000rpm		18-1800rpm	18-1800 / 1000 rpm	18-1800/1000/600 rpm
Motor	2.2kW	7.5kW	7.5kW	11kW		11kW	22kW	22kW
Number of Metric Pitches	45	51	51	66		66	59	59
Range of Metric Pitches	0.2 to 14mm	0.2 to 14mm	0.2 to 14mm	0.2 to 14mm		0.2 to 14mm	0.2 to 14mm	0.2 to 14mm
Number of Imperial Pitches	52	56	56	73		73	51	51
Range of Imperial Pitches	2 to 56 TPI	2 to 56 TPI	2 to 56 TPI	2 to 84 TPI		2 to 84 TPI	2 to 84 TPI	2 to 84 TPI
Number of Diametral Pitches	18	20	20	27		27	27	27
Range of Diametral Pitches	8 to 56 DP	8 to 56 DP	8 to 56 DP	8 to 72 DP		8 to 72 DP	8 to 72 TPI	8 to 72 TPI
Number of Module Pitches	18	20	20	20		20	20	20
Range of Module Pitches	0.3 to 3.5 MOD	0.2 to 3.5 MOD	0.2 to 3.5 MOD	0.2 to 3.5 MOD		0.2 to 3.5 MOD	0.2 to 3.5mm	0.2 to 3.5mm
Width over Bedways	140mm	318mm	318mm	400mm		400mm	480mm	480mm
Travel of Cross Slide	135mm	250mm	250mm	300mm		300mm	406mm	406mm
Travel of Top Slide	90mm	90mm	125mm	195mm		195mm	165mm	165mm
Tailstock Travel	100mm	140mm	140mm	180mm		180mm	300mm	300mm
Taper in Tailstock Barrel	No. 3 MT	No. 4 MT	No. 5 MT	No. 6 MT		No. 6 MT	No. 6 MT	No. 6 MT
Weight (Net)	640 / 720kg	1480kg	1725kg	2730 / 2870 / 3120kg		2820 / 2890 / 3120 / 3700kg	3700 / 4000 / 4700 / 5400kg	4400 / 4900 / 6000 / 7100kg
Dimensions L x W x H	1.68 x .97 x 1.40 2.13 x 1.02 x 1.45	2.03 x 1.35 x 1.65	2.72 x 1.35 x 1.65	2.75 / 3.25 / 3.75 x 1.70 x 2.05		2.75 / 3.25 / 3.75 / 4.75 x 1.70 x 2.10	3.85 / 4.35 / 5.35 / 6.35 / 7.35 / 8.3 x 1.8 x 1.9	3.85 / 4.35 / 5.35 / 6.35 x 1.8 x 1.9

Large Capacity Heavy Duty Lathes

Magnum HD

The Colchester Magnum Heavy Duty (HD) has 4 versions based on swing over bed of 880mm, 1010mm, 1135mm and the 1275mm. Manufactured with a one-piece bed, floor type casting, the Magnum HD series of large capacity, high specification manual lathes give more versatility to specialise, ultra heavy duty machining applications.

The high-quality casting construction assures optimum rigidity and stability for years of trouble-free operation. Machines are available in up to 12m distance between centres and are ideal for ultra heavy duty, large capacity applications.

Standard Features

- One piece bed, floor type casting
- Alloy steel spindle with opposed taper roller bearings
- 2 shear bed way with extra way supporting the apron
- All ways are hardened and ground
- Hardened and ground gears and shafts
- Electromagnetic spindle brake
- 4-way tool post and tool holders
- Manual tailstock with saddle pin body movement
- Coolant pump system
- Machine work light
- 18 speed geared headstock
- Rapid power traverse to saddle, cross slide and top slide

SPECIFICATION	MAGNUM HD 880	MAGNUM HD 1010	MAGNUM HD 1135	MAGNUM HD 1275
CAPACITY				
Centre height	445mm	510mm	575mm	645mm
Swing over bed	880mm	1010mm	1135mm	1275mm
Swing over cross-slide	615mm	745mm	875mm	1015mm
Swing in gap	1340mm	1470mm	1600mm	1740mm
Gap width from headstock	600mm			
Distance between centres	1500 / 2000 / 3000 / 4000 / 5000 / 6000 / 7000 / 8000 / 9000 / 10000 / 11000 / 12000mm			
BED				
Width (w/o aux. guide)	560mm			
Width (w/ aux. guide)	660mm			
CARRIAGE				
Cross slide travel	670mm			
Compound rest travel	450mm			
4-way toolpost width	205mm			
HEADSTOCK				
Spindle motor power	22kW (30kW / 37kW option)			
Spindle bore	154 to 560mm			
Spindle nose	A2-11 to A2-28			
TAILSTOCK				
Quill diameter	115mm			
Quill thread	200mm			
Quill inner taper	MT6			
Bearing surface on bedways	500mm			

Magnum HD CNC

The Colchester Magnum HD series of large capacity, high-specification CNC lathes are designed with a one-piece bed and floor-type casting, offering superior versatility for specialised turning applications. Available in four versions, the Magnum HD lathes feature swing-over-bed options of 880mm, 1010mm, 1135mm, and 1275mm, providing a broad range of capabilities to suit various machining needs.

Constructed with high-quality castings, the machines ensure optimum rigidity and stability, delivering years of reliable, trouble-free operation. With a maximum 12m distance between centres, the Magnum HD series is perfect for ultra-heavy-duty, large-capacity applications.

For added functionality, the MillTurn option combines turning, milling, drilling, and tapping in one machine, significantly reducing the need for secondary operations and streamlining production.

Standard Features

- One piece bed, floor type casting
- Alloy steel spindle with opposed taper roller bearings
- FANUC 0i-TF Plus CNC control system with 10.4" colour screen
- Manual Guide I conversational programming system
- 4-way hydraulic tool post and tool holders
- Automatic slideways and ballscrew lubrication system
- Carriage driven tailstock with manual quill movement
- Coolant pump system
- Machine work light
- Rear swarf conveyor with swarf cart
- 4-step auto change variable speed headstock

SPECIFICATION	MAGNUM HD CNC 880	MAGNUM HD CNC 1010	MAGNUM HD CNC 1135	MAGNUM HD CNC 1275
CONTROLLER	**Fanuc 0i-TF Plus with Manual Guide i**			
CAPACITY				
Centre height	445mm	510mm	575mm	645mm
Swing over bed	880mm	1010mm	1135mm	1275mm
Swing over cross-slide	615mm	745mm	875mm	1015mm
Distance between centres	1500 / 2000 / 3000 / 4000 / 5000 / 6000mm			
BED				
Width	560mm			
CARRIAGE				
Cross slide travel	350mm			
HEADSTOCK				
Spindle motor power	30 / 37kW (37.5 / 45kW option)			
Spindle bore	154 to 420mm			
Spindle nose	A2-11 to A2-28			
TURRET				
Standard toolpost	Hydraulic 4 way toolpost (VDI Disc option)			
No. of tool stations	4 / 8 or 12			
Tool shank cross section	32 x 32mm			
Tool shank diameter max.	63.5mm			
TRAVEL				
Cross Slide (x-axis) travel	630mm			
Longitudinal (z-axis) travel	1500 / 2000 / 3000 / 4000 / 5000 / 6000mm			
Cutting feed rate	X axis: 0.001~250, Z-axis: 0.001~400 mm/rev			
Rapid travel	X-axis: 6, Z-axis: 7.5 m/min			
Ball screw diameter	X-axis: 50, Z-axis: 80mm			
TAILSTOCK				
Quill type	Built-in type, dead tailstock quill			
Quill diameter	145mm			
Quill travel	200mm			

Storm Vertical Machining Centres

The Storm VMC range offers a comprehensive solution for high-precision milling, designed to meet the diverse needs of the engineering, manufacturing, and education sectors. Whether you require the speed and efficiency of linear guideways (VL series), the stability of box ways (VH series), or the versatility of compact Toolroom variants (EH series), Storm VMCs provide an exceptional return on investment with their robust and high-performance capabilities.

Engineered for strength and precision, each machine in the Storm VMC range features a rigid construction that ensures fast, smooth, and accurate machining, while maintaining a compact footprint to save valuable floor space. The machines are also ergonomically designed with the operator in mind, delivering both comfort and ease of use.

Available with Siemens, FANUC, or Heidenhain CNC control systems, Storm VMCs integrate advanced safety features as standard, offering peace of mind alongside precision engineering.

Storm VL Series (linear guideways)

The Storm VL VMC range is engineered to deliver exceptional efficiency, accuracy, and value over the lifetime of your machine. With a high-speed spindle paired with precise linear guideways, these vertical milling machines are designed to enhance productivity without compromising on quality.

The VL series integrates versatility and rigidity as standard, ensuring smooth and precise machining, no matter the complexity of the job. Our commitment to superior design, process control, and build quality ensures a flawless component finish, offering you the performance and reliability needed in today's competitive manufacturing landscape.

For industries that demand both speed and precision, the Storm VL series offers the perfect balance, delivering high-performance results with lasting value.

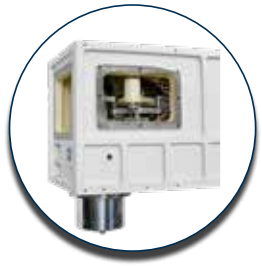
Precision Linear Guideways

Storm VH Series (box ways) Storm VHG Series (geared head)

The Storm VH VMC range is built for heavy-duty performance, featuring box-way construction for unmatched stability and precision in the most challenging machining tasks. Designed with extra-wide, heavy-duty box ways, these vertical milling machines ensure vibration-free operation, making them ideal for high-torque, high-load applications.

For even greater cutting power, the VH series is available with a geared head spindle configuration, delivering higher material removal rates without sacrificing precision. Whether you're working with tough materials or need to perform heavy cutting, the super-rigid construction of the VH range guarantees consistent, high-quality results.

Engineered for industries that require both strength and precision, the Storm VH series is your go-to solution for heavy-duty, high-performance machining with reliability and accuracy at its core.



Geared Head (option)

Heavy Duty Boxway Construction

Storm VL Series - Specification

* Option

SPECIFICATION	VL-1050	VL-1200	VL-1300	VL-1600	VL-1690	VL-2090
TRAVEL						
X/Y/Z travel	1,050 / 610 / 610 mm	1,200 / 610 / 610 mm	1,300 / 700 / 700 mm	1,600 / 700 / 700 mm	1,600 / 900 / 850 mm	2,000 / 900 / 850 mm
X/Y/Z ballscrews	C3 40 mm	C3 40 mm	C3 45 mm	C3 45 mm	C3 50 mm	C3 50 mm
Spindle nose to table surface	150 ~ 760 mm	150 ~ 760 mm	130 ~ 830 mm	130 ~ 830 mm	150 ~ 1,000 mm	150 ~ 1,000 mm
TABLE						
Table size	1,150 x 600 mm	1,300 x 600 mm	1,450 x 700 mm	1,750 x 700 mm	1,800 x 850 mm	2,200 x 850 mm
T-slot (Size/Q'ty/Dist)	18 mm x 5 x 100 mm	18 mm x 5 x 100 mm	18 mm x 5 x 125 mm	18 mm x 5 x 125 mm	5 mm x 22 x 150 mm	5 mm x 22 x 150 mm
Max. table load	700 kgs	1,200 kgs	1,500 kgs	1,500 kgs	1,500 kgs	2,000 kgs
SPINDLE						
Taper	BT40	BT40	BT40	BT40	BT40	BT40
Speed	10,000rpm	10,000rpm	10,000rpm	10,000rpm	10,000rpm	10,000rpm
Transmission	Belt	Belt	Belt	Belt	Belt	Belt
FEED RATE						
Rapid feed rate of X/Y/Z Axes	36 / 36 / 36 M/min	36 / 36 / 36 M/min	30 / 30 / 24 M/min	30 / 30 / 24 M/min	20 / 20 / 15 M/min	15 / 15 / 12 M/min
Cutting feed rate	1 ~ 10 M/min	1 ~ 10 M/min	1 ~ 10 M/min	1 ~ 10 M/min	1 ~ 10 M/min	1 ~ 10 M/min
AUTOMATIC TOOL CHANGER						
Tool storage capacity	Twin Arm 24	Twin Arm 24	Twin Arm 24	Twin Arm 24	Twin Arm 24	Twin Arm 24
Max. tool diameter	Full: Ø80 mm	Full: Ø80 mm	Full: Ø80 mm	Full: Ø80 mm	Full: Ø80 mm	Full: Ø80 mm
	Next empty: Ø150 mm	Next empty: Ø150 mm	Next empty: Ø125 mm	Next empty: Ø125 mm	Next empty: Ø150 mm	Next empty: Ø150 mm
Max. tool length	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm
Max. tool weight	7 kgs	7 kgs	7 kgs	7 kgs	7 kgs	7 kgs
CNC CONTROL & MOTOR						
CNC control	Fanuc / Siemens	Fanuc / Siemens	Fanuc / Siemens	Fanuc / Siemens	Fanuc / Siemens	Fanuc / Siemens
Spindle motor	11Kw / 11Kw	11Kw / 11Kw	11Kw / 11Kw	11Kw / 11Kw	15Kw / 11Kw	15Kw / 11Kw
MACHINE SIZE						
Machine dimensions (LxWxH)	3,530 x 3,165 x 3,197 mm	3,530 x 3,165 x 3,197 mm	3,730 x 3,240 x 3,238 mm	4,430 x 3,236 x 3,236 mm	4,330 x 4,321 x 3,527 mm	5,130 x 4,321 x 3,486 mm
Machine net weight (approx.)	6,310 kgs	6,310 kgs	8,510 kgs	8,860 kgs	16,000 kgs	17,390 kgs
The mentioned specifications & dimensions are subject to change without notice.						

Storm VH Series - Specification

* Option

SPECIFICATION	VH-510	VH-610	VH-850	VH-1000	VH-1100	VH-1300	VH-1320	VH-1600	VH-2000
TRAVEL									
X/Y/Z travel	510 / 410 / 460 mm	610 / 460 / 510 mm	850 / 510 / 560 mm	1,020 / 510 / 560 mm	1,100 / 700 / 710 mm	1,300 / 700 / 710 mm	1,320 / 710 / 650 mm	1,600 / 800 / 800 mm	2,000 / 900 / 800 mm
X/Y/Z ballscrews	C3 32 mm	C3 40 mm	C3 40 mm	C3 40 mm	C3 40 mm		C3 45 mm	C3 50 mm	
Spindle nose to table surface	130 ~ 590 mm	130 ~ 640 mm	130 ~ 690 mm		130 ~ 840 mm		130 ~ 780 mm	200 ~ 1,000 mm	
TABLE									
Table size	600 x 370 mm	800 x 450 mm	1,000 x 500 mm	1,200 x 500 mm	1,300 x 650 mm	1,500 x 650 mm	1,500 x 700 mm	1,800 x 840 mm	2,200 x 850 mm
T-slot (Size/Q'ty/Dist))	14 mm x 3 x 100 mm	18 mm x 3 x 100 mm	18 mm x 5 x 100 mm		18 mm x 5 x 100 mm		18 mm x 5 x 100 mm	22 mm x 5 x 150 mm	
Max. table load	500 kgs	800 kgs	750 kgs		1,300 kgs	1,500 kgs	1,500 kgs	2,200 kgs	2,500 kgs
SPINDLE									
Taper	BT40		BT40		BT40			BT40	
Speed	10,000rpm		10,000rpm		10,000rpm			10,000rpm	
Transmission	Belt		Belt		Belt			Belt	
FEED RATE									
Rapid feed rate of X/Y/Z Axes	24 / 24 / 16 M/min		24 / 24 / 16 M/min		24 / 24 / 15 M/min			15 / 15 / 12 M/min	
Cutting feed rate	1 ~ 10 M/min		1 ~ 10 M/min		1 ~ 10 M/min			1 ~ 10 M/min	
AUTOMATIC TOOL CHANGER									
Tool storage capacity	Twin Arm 24		Twin Arm 24		Twin Arm 24			Twin Arm 24	
Max. tool diameter	Full: Ø100 mm		Full: Ø100 mm		Full: Ø80 mm			Full: Ø120 mm	
	Next empty: Ø150 mm		Next empty: Ø150 mm		Next empty: Ø150 mm			Next empty: Ø200 mm	
Max. tool length	250 mm		250 mm		300 mm			350 mm	
Max. tool weight	7 kgs		7 kgs		7 kgs			7 kgs	
CNC CONTROL & MOTOR									
CNC control	Fanuc / Siemens		Fanuc / Siemens		Fanuc / Siemens			Fanuc / Siemens	
Spindle motor	11Kw / 9Kw	11Kw / 9Kw	11Kw / 9Kw		15Kw / 11Kw			15Kw / 11Kw	
MACHINE SIZE									
Machine dimensions (LxWxH)	2,000 x 2,305 x 2,460 mm	2,160 x 2,435 x 2,550 mm	2,980 x 2,955 x 3,044 mm		3,200 x 3,349 x 3,105 mm		3,800 x 2,522 x 2,900 mm	4,400 x 3,325 x 3,300 mm	5,500 x 3,540 x 3,300 mm
Machine net weight (approx.)	2,800 kgs	4,000 kgs	6,200 kgs	5,650 kgs	5,770 kgs	6,600 kgs	8,000 kgs	18,000 kgs	25,000 kgs
The mentioned specifications & dimensions are subject to change without notice.									

Storm EH-610 Toolroom

The Storm EH-610 VMC combines a compact footprint with a rigid box way design, delivering high-precision machining that is ideal for both industrial toolrooms and educational environments. Its robust construction ensures superior performance and accuracy, offering excellent value over the machine's lifetime.

Engineered for versatility, the EH-610 excels in applications where space is at a premium, yet uncompromised precision and reliability are required. Whether used in a professional toolroom or as a training platform in education, this machine provides a dependable solution for a wide range of machining tasks.

Benefits

- Compact footprint optimised for space-conscious environments
- Heavy-duty box way design for high precision and durability
- Outstanding performance for industry and educational applications
- Lifetime value with exceptional accuracy and reliability

Standard Features

- Choice of Siemens, FANUC or Heidenhain CNC control systems with integrated safety
- Coolant wash down & air clean down gun
- Easy access to work zone
- Small footprint with large machining envelope
- Industry 4.0 ready

Optional Features

- Tool setting and component probing
- Through spindle coolant
- Mist extraction
- Oil skimmer
- Swarf conveyor
- Advanced training

SPECIFICATION	EH-610
TRAVEL	
X/Y/Z travel	610 / 350 / 460 mm
X/Y/Z ballscrews	C3 32 mm
Spindle nose to table surface	70 ~ 530 mm
TABLE	
Table size	710 x 350 mm
T-slot (Size/Q'ty/Dist)	16 mm x 5 x 63 mm
Max. table load	350 kgs
SPINDLE	
Taper	BT40
Speed	10,000rpm
Transmission	Belt
FEED RATE	
Rapid feed rate of X/Y/Z Axes	15 / 15 / 15 M/min
Cutting feed rate	1 ~ 10 M/min
AUTOMATIC TOOL CHANGER	
Tool storage capacity	Arm type 24
Max. tool diameter	Full: Ø100 mm
	Next empty: Ø150 mm
Max. tool length	250 mm
Max. tool weight	7 kgs
CNC CONTROL & MOTOR	
CNC control	Fanuc / Siemens
Spindle motor	11Kw / 9Kw
MACHINE SIZE	
Machine dimensions (LxWxH)	1,920 x 1,758 x 2,310 mm
Machine net weight (approx.)	2,600 kgs
The mentioned specifications & dimensions are subject to change without notice.	

Manual Turret Mills

SP150VS & SP520VS

The SP range of knee-type mills is engineered to deliver a higher degree of accuracy compared to standard models, boasting a spindle runout of just 0.003mm.

Each spindle is hardened and ground, ensuring long-lasting performance, while all slideways are precision hand scraped to guarantee exceptional accuracy in every machining operation.

With a selection of two models available, featuring both dovetail and box ways, the SP range offers the flexibility needed for various applications in training and toolrooms alike. The SP range stands out as a reliable choice for those seeking precision engineering solutions, providing the accuracy and flexibility necessary for a diverse array of machining tasks.

Benefits

- Superior accuracy with a spindle runout of 0.003mm
- Hardened and ground spindles for enhanced durability
- Precision hand scraped slideways for consistent accuracy
- Available in two models with dovetail (SP150VS) and box ways (SP520VS) for versatile applications
- Ideal for both training environments and toolroom settings

Options Available

- Air Power drawbar (standard on SP520VS model)
- Y-axis power feed
- Interlocked table guard
- 2 or 3-axis ACU-RITE Digital Readout

SPECIFICATION	SP150VS	SP520VS
Table Size (mm)	230 x 1245	254 x 1370
T-Slot (no. x size) (mm)	3 x 16	3 x 16
Longitudinal Travel (X) (mm)	850 (765 with Digital Readout)	775 (680 with Digital Readout)
Cross Travel (Y) (mm)	305	410
Vertical Travel Knee (mm)	406	450
Ram Travel (mm)	356	560
Quill Travel (mm)	127	127
Head Swivel (R/L)	+/- 90 Degrees	+/- 90 Degrees
Head Tilt (Up/Down)	+/- 45 Degrees	+/- 45 Degrees
Spindle Motor (hp)	3	5
Spindle Taper	R8 (ISO30)	ISO40
Quill Feed (mm)	0.04/0.08/0.14	0.04/0.08/0.14
Spindle Speed	50-3750 (2 Speed)	54-2875 (2 Speed)
Overall Height (mm)	2140	2375
Overall Depth (mm)	1618	2120
Overall Width (mm)	1670	1840
Net Weight (kgs)	950	1600

CNC Turret Mills

CV-400

The Colchester CV-400 CNC Turret Mill is a standout machine, offering exceptional versatility for both education and industry. Equipped with the Fanuc 0i-MF Plus control system, complete with Manual Guide i, this mill provides users with the flexibility needed for efficient programming. Even those with basic machining skills can quickly start producing parts within just a few hours.

Designed with full compatibility for CAD/CAM systems, the CV-400 ensures seamless integration into modern manufacturing processes, enhancing productivity and efficiency. The Colchester CV-400 is the ideal choice for those seeking a reliable and user-friendly CNC turret mill that meets the diverse needs of modern machining environments.

Benefits

- Versatile design suitable for both educational and industrial applications
- Fanuc 0i-MF Plus control with Manual Guide i for easy programming
- Fully compatible with CAD/CAM systems for streamlined operations

Standard Equipment

- Fanuc 0i-MF Plus control with Manual Guide i
- MPG hand wheel
- Precision ballscrews on X, Y, & Z
- Interlocked table guard
- Machine toolkit
- Air power drawbar

SPECIFICATION	CV-400
Table Size (mm)	254 x 1,370
T-Slot (no. x size) (mm)	3 x 16
Max Table Load (kgs)	350
X Axis Travel (mm)	845
Y Axis Travel (mm)	370
Knee Travel (mm)	390
Quill Travel (mm)	110
Spindle Taper	ISO30
Spindle Speed (rpm)	5,000 inverter
Rapid Traverse	5m/min
Motor (hp)	3

Manual Bed Mills

A comprehensive range of manual bed milling machines designed to meet the precise needs of the engineering and manufacturing industries. Our machines are engineered for durability, accuracy, and versatility, ensuring they deliver superior results.

Our manual bed milling machines are designed with the user in mind, incorporating advanced features that enhance productivity, precision, and durability. Whether you are engaged in complex angular machining or heavy-duty operations, our machines provide the reliability and performance you need.

Standard Features

- X-Axis Auto Feed Variable-speed control
- High Precision Ballscrews on XY Axes
- Heavy Duty Wide Saddle
- Rigid Square Ways on X and Y
- Meehanite Casting
- Hardened and Ground Slideways (X,Y & Z) and Table
- Turcite-B Coated on the X,Y & Z Axes Slideways and Gibs
- Adjustable Milling Head
- Counter-balance Weight Device
- Telescopic Steel Cover

Available Models

- 1. B185: Features a 305mm x 1270mm table, ideal for precise and demanding machining tasks. Available with either a 10-step (B185-SP) or variable speed (B185VS-SP) spindle.
- 2. B410: Features a larger 375mm x 1270mm table, providing more workspace and versatility for complex projects. Available with either a 16-step (B410-SP) or variable speed (B410VS-SP) spindle.

CNC Bed Mills

A premier range of CNC bed mills designed to meet the highest standards of precision, durability, and performance. Engineered to deliver exceptional results for your most complex machining tasks, our CNC bed mills are built to last.

Our CNC bed mills are designed with advanced features that enhance productivity, precision, and durability. Whether you are tackling intricate machining operations or heavy-duty tasks, our machines deliver unparalleled performance and reliability.

Standard Features

- NST#40 Spindle with 5HP Inverter Motor
- Headstock with Heavy Duty Back Gears
- Precision Spindle Material
- High-Grade Meehanite Cast Iron Construction
- Dovetail and Box Way Design
- High Precision Ballscrews on XY Axes
- Hardened and Ground Slideways and Table
- Enhanced Drive Torque
- Protected Slideways

Available Models

- 1. CB-1000: Featuring a 1270mm x 380mm table, this model is perfect for a wide range of precision machining tasks.
- 2. CB-1300: With an 1800mm x 450mm table, this model offers additional workspace and versatility for more complex projects.
- 3. CB-1600: Boasting a 2200mm x 500mm table, this model is ideal for large-scale machining operations that require extensive table space.

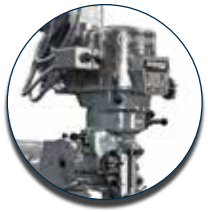
Series 1 Knee Mill

The most popular and versatile knee mill ever produced, setting the standard in manual milling. The Bridgeport Series 1 Knee Mill is the original milling, drilling and boring machine with over 370,000 machines built over the past 70+ years.

The long-term reliability of a Series 1 mill is the result of its design features, the quality of its components, and the craftsmanship of its hand-scraped ways and precision ground fits. Rigidity starts with the main frame components of a machine, and for this reason, the strength and damping qualities of grey cast iron was chosen.

Features

- One-Shot Lubrication System
- Chrome-Plated Ways and Gibs
- 2 or 3-Axis Digital Readout (option)
- Power Drawbar for R-8 or #30 Quick-Change Spindle Table Guard (option)



Patented Head Design

Hand-Scraped Ways

SPECIFICATION	SERIES 1 KNEE MILL
RANGE - TABLE TRAVEL (X-AXIS)	
Without Power Feed	914mm (36")
With Power Feed	838mm (33")
Saddle Travel	305mm (12")
Quill Travel	127mm (5")
Knee Tavel (Z-axis)	406mm (16")
Ram Travel	305mm (12")
Throat Distance (min.)	171mm (6.75")
Throat Distance (max.)	476mm (18.75")
Table to Spindle Nose Gage Line (min.)	64mm (2.5")
Table to Spindle Nose Gage Line (max.)	463mm (18.25")
TABLE	
Overall Size	1245 x 299mm (49 x 9")
Working Surface	1245 x 299mm (49 x 9")
T-slot Centres	3 at 64mm (2.5")
T-slot Size	16mm (0.625")
Height Above Floor (max.)	1200mm (47.25")
Weight of Workpiece (max.)	340kg (750 lbs.)
SPINDLE	
AC Power Rating (30 min. duty cycle)	2.2 kW (3 Hp)
AC Power Rating (continuous)	1.5 kW (2 Hp)
Spindle Taper	R-8
Tooling	R-8 Collets
OPTIONAL SPINDLE TAPER	
Spindle Taper	#30 ISO
Tool Holder	Erickson Quick-Change #30 ISO
SPEED RANGE	
High (Infinitely Variable)	500 - 4200 RPM at 60 Hz
Low	60 - 500 RPM at 60 Hz
Power Quill Feed (3)	0.038mm/rev (0.0015"), 0.076mm/rev (0.003"), 0.152mm/rev (0.006")
DRILLING CAPACITY	
Power Quill Feed	9.5mm (3/8")
Milling Capacity (mid steel)	2 Cl/min.
Boring Range (mid steel)	152mm dia. (6")
Spindle Diameter	48mm (1.875")
Quill Diameter	86mm (3.375")
POSITIONING	
Feedrate Range (X, Y)	13 - 889mm/min. (0.50 - 35 IPM)
Minimum Increment	0.003mm (0.0001")
SPACE AND WEIGHT	
Floor Area	2.14 x 3mm (7 ft x 10 ft)
Height	2.21mm (87")
Net Weight	875kg (1930 lbs.)
Shipping Weight	941kg (2075 lbs.)
POWER	
Input Power	208/230/460 volts, 3 Phase, 50/60 Cycle
Power Capacity	4 kVA

5-Axis VMC

Dive into the world of Bridgeport 5-axis Vertical Machining Centres (VMCs) – the pinnacle of machining excellence. Explore how our cutting-edge 5-axis VMCs can revolutionise your manufacturing processes and elevate your productivity to new heights.

The Bridgeport 5-AX series machines are equipped with industry-leading features that enable speed, power, accuracy, and durability–all in a compact design and at an affordable price. 5-AX series Vertical Machining Centres are rigid and reliable, consisting of a robust, one-piece cast iron base, heavy-duty linear guideways and ball screws, and many value-added standard features.

V320

Bridgeport's high specification V-Series Vertical Machining Centres (VMCs) are extremely compact and rugged mills; developed for applications that require both the utmost in speed and accuracy.

- Low overall centre of gravity to assist in the reduction of vibration
- Three carriage support for the spindle head
- Wide spaced guide ways for higher overall stiffness with minimal overhangs and better distribution of cutting forces
- Siemens SINUMERIK ONE 15" control

SPECIFICATION	UNIT	V320 5AX
TRAVELS		
X-Y-Z Axes	mm	510, 610 (+/ - 305), 510
Max. Swing diameter	mm	@ 407
Spindle Nose To Table @ 0 deg	mm	20 - 530
Spindle Nose To tilting @ 90 deg.	mm	20 - 530
Y-Axis Throat Distance	mm	628
5 AXIS ROTARY TABLE		
Table Diameter Size	mm	320
Tilting Degree (A Degree)		+30°- -120°
Table Rotation Degree (C Degree)		360°
Max. Work Piece Range Diameter x Height	mm	• 400 × 320
Load Capacity	kg	Vertical: 100, Horizontal: 150
T-Slots (Size x Number of Slot)		12 mm x 4
Clamp Torque in Rotary (C axis)		70 Kg-m
Clamp Torque in Tilt (A axis)		140 Kg-m
SPINDLE TRANSMISSION		
Taper		NO.40 (BBT40)
Speed Range (Max. RPM)	rpm	10000
Lubrication		10000-Grease, 12000-Grease
Transmission		Coupling (HT Spindle)
AUTOMATIC TOOL CHARGER (ATC)		
Tool Capacity		30 Tools
Type		Swing Arm
Pull Stud Type		1.BT or Modified BT for CAT & ANSI 2. DIN (SK)
Tool Selection		Bi-directional
Max. Tool Diameter (Full Drum)	mm	75
Max. Tool Diameter (Adj. Pockets Empty)	mm	150
Max. Tool Length	mm	240
Max. Tool Weight	kg	7
GENERAL SPECIFICATIONS		
Machine Weight (Estimated)	kg	7405
Machine Overall Length (Estimated)	mm	3663 (Include the Chip conveyor)
Machine Overall Depth (Estimated)	mm	2670
Machine Overall Height (Estimated)	mm	3195
Coolant Tank Capacities	litre	300
Compressed Air Require (Min.)	bar	6
Power Requirements (Fla/ Volts/ Phase)		47 amp/ 400 volt/ 3 phase

V650

Bridgeport V650 5AX 5-Axis vertical machining centre is developed and designed to meet the processing needs of complex parts in high precision manufacturing industries.

The high-quality grey cast iron box-type bed design improves the rigidity of the bed structure, whilst the optimised design of the headstock structure enhances thermal stability.

The X/Y/Z axes adopt precision grade roller linear guide rails and heavy-duty sliders to enhance the load-carrying capacity of the transmission system and improve the processing performance of the machine.

The B/C axis has a tighter structural design and excellent accessibility, which facilitates the integration of manual operation and automation systems.

The latest generation of high-end CNC system from Siemens, Sinumerik One, adopts a newly designed hardware platform, which improves the operation speed and precision in an all-round way. The integrated machine simulation function provides users with advanced program and cycle simulation.

SPECIFICATION	UNIT	V650 5AX
TRAVELS		
X/Y/Z Axes Travels	mm	620 × 520 x 460
B-Axis Swing Range		-50° ~ +110°
C-Axis Rotation Range		360°
Spindle Nose to Table	mm	150 - 610 mm
Three Axes Linear Guide		Roller Type
TABLE		
Table Size	mm	Φ650
Load Capacity (Horizontal)	kg	300
Load Capacity (Tilt)	kg	200
T-Slots (Number x Size x Spacing)	mm	5 x 18 x 100
SPINDLE		
Spindle Taper		BBT40
Spindle Speed		15000 rm
Spindle Transmission		Direct Connected
Spindle Power		11/ 16.5 kW (S1/ S6-40%)
Maximum Torque at Base Speed		63/ 95 Nm (S1/ S6-40%)
AUTOMATIC TOOL CHARGER (ATC)		
ATC Type		Mechanical
Tool Capacity		40T
Max. Tool Dia. (Full Drum)	mm	Φ75
Max. Tool Dia. (Full Drum/Adj. Pocket Empty)	mm	Φ125
Max. Tool Length	mm	250
Max. Tool Weight	kg	7
GENERAL SPECIFICATION		
Machine Weight	kg	8200
Machine Length (Approx.)	mm	4250
Machine Depth (Approx.)	mm	4120
Machine Height (Approx.)	mm	3100

XT 630

This innovative Bridgeport XT 630 5AX 5 axis machining centre represents the first of a new generation of machining centres from Bridgeport. It features a travelling beam structure that extends the machining performance in terms of complexity, capacity and geometric and positioning accuracy.

The 630mm diameter table on the XT 630 5AX accommodates a table load capacity of 350kg coupled with 850mm swing diameter. This creates the capacity for complex machining solutions demanded by aerospace, automotive, power generation, medical, mould tool and die and other high precision manufacturing sectors.

Standard Features

- Remote MPG Hand Wheel
- A-Axis Rotary Encoder
- Pads and Screws
- Work Light
- Auto Central Grease Lubrication
- Coolant Chip Flush
- Coolant Wash Gun

SPECIFICATION	UNIT	XT 630 5AX		
CONTROL				
		Heidenhain TNC 640 FS (19")		
		SIEMENS Sinumerik ONE (19")		
TRAVELS				
Linear X-Y-Z Axis	mm	X: 762 mm Y: 630 mm Z: 610		
Rotary A Axis (Tilt) C Axis (Rotary)		A Tilt +30°~-120° C Rotary 360°		
Maximum Swing Diameter C axis		® 850 mm at face plate surface		
Spindle Nose To Table@ 0deg.	mm	150 - 760		
Spindle Nose To tilting@ 90deg.	mm	29 - 459		
TABLE				
Table Diameter Size	mm	@630		
Max.Work Piece Range Diameter x Height	mm	Cylinder ®900 m x 340		
Max.Work Piece Range Diameter x Height	mm	@850 mm x 480 mm (with corner chamfer)		
Load Capacity	kg	350		
T-Slots (Size x Number of Slot)	mm	14mm x 8		
Table hole		Д140 H7		
A axis CL to table	mm	50 mm x 50		
Clamping Torque in Rotary (C axis)		3200 Nm		
Clamping Torque in Tilt (A axis)		5000 Nm		
Tilt Axis		Twin drive Tilt Axis		
SPINDLE				
		HEIDENHAIN + SIEMENS	HEIDENHAIN	SIEMENS
Taper		DIN 69893 (HSK-A63)	NO.40 (BBT40)	NO.40 (BBT40)
Speed Range (Max. RPM)		24000 rpm	15000 rpm	15000 rpm
Lubrication		Oil Air	Oil Air	Oil Air
Spindle		Oil Spindle Chiller	Oil Spindle Chiller	Oil Spindle Chiller
Cooling type		DDS	DDS	DDS
Spindle power (S1 Cont./S6-40%)		25kw/ 35k	10w/ 14k	13kw/ 19.5kw
Maximum Torque at Spindle Base Speed		118.9 Nm/ 2870 rpm (S6 40%)	89.4 Nm/ 1500 rpm (S6 60%)	88.5 Nm/ 453 rpm (S6 60%)
AUTOMATIC TOOL CHARGER (ATC)				
Type		Swing Arm		
Tool Type		BT / CAT / ISO / HSK-A63		
Tool Selection		Bi-directional		
Tool Capacity		24 Tools / 48 Tools / 60 Tools		
Max. Tool Diameter (Full Drum)	mm	80		
Max. Tool Diameter (Adj. Pockets Empty)	mm	125		
Max. Tool Length	mm	300		
Max. Tool Weight	kg	8		
Tool Change Time (T-T)		< 2 sec		
Tool Change Time (C-C) ISO 10791-9		< 5 sec		
GENERAL SPECIFICATIONS				
Machine Weight	kg	14600		
Machine Overall Length	mm	2572		
Machine Overall Depth	mm	4623		
Machine Overall Height	mm	3536		
Coolant Tank Capacity (L/min)		200 L Conveyor tank + 280 L Settlement tank		
Coolant Flow Rate		220 L/ min		
Air Requirements (L/min)	cm^2	6 kg/ cm^2		
Power Requirements (Fla/Volts/Phase)		50A/ 400V/ 30		

Pillar Drills

Colchester's range of pillar drills is renowned for its robustness and extended life cycle, engineered to minimise vibrations and noise while maintaining peak performance. Designed with generous safety factors, these drills offer exceptional resistance to material fatigue, even after 20 years of heavy industrial use. Their substantial build quality, heavier than competing models, reflects their superior durability and performance.

The drill housings feature thick walls and large casting radii, constructed from high-strength, dampening materials to ensure consistent heat balance during continuous operation. The pillars are designed with larger diameters, thicker walls, and a solid inner centre bar, providing a torsion-free, right-angled head construction for effective vibration dampening.

For enhanced longevity, the drives are built for smooth, reliable operation, incorporating larger bearing combinations, high-quality V-belt drives, and optimised gear drives to minimise wear, ensuring these machines stand the test of time in demanding environments.

Standard Features

- Heavy duty industrial drilling machines complete with variable speed settings
- Belt drive or heavy duty gear transmission
- Bench or floor mounted
- Perfect for production applications with quick-change tooling
- Heavy duty precision head ensures exact alignment

Radial Drills

Colchester's range of radial drills is renowned for their exceptional robustness and long-life cycle. The complete lineup includes ten models, from the CL720A to the CLC2500. With a steel drilling capacity of up to 80mm, our radial arm drills are engineered to handle any task with superior efficiency and speed.

Standard Features

- High-Speed Gears: Constructed from Nickel-Chrome steel, our gears are heat-treated and ground to ensure exceptional durability and performance.
- Premium Cast-Iron Arm: Featuring heat-treated and ground slides, our cast-iron arm guarantees smooth and precise head positioning.
- Powerful Spindle Drive Motors: Engineered for heavy-duty cutting, our spindle drive motors deliver reliable performance in any environment.
- Enhanced Spindle Balance Mechanism: Our specially fitted mechanism extends spring life, providing optimal balance and longevity.

Manual & Automatic Grinders

Colchester's Surface Grinders are constructed of high-grade cast iron with heavy walls and reinforced honeycomb ribbing providing excellent rigidity and dampening. The enlarged column and base create high stability and rigidity. Hydraulic longitudinal table movement and servo motor drive for cross feed movement, and rapid up/down motor for fast wheel positioning. The saddle rests on precision hand-scraped double V-ways, and the table rests on precision hand-scraped V and Flat ways coated with TURCIT B along with auto lubrication gives excellent wear resistance.

Standard Features

- High precision cartridge spindle
- Anti-wear guideways coated with 'TURCITE-B'
- Enlarged column and base create high stability and rigidity
- Automatic lube system for greater longevity
- Timing belt table drive with high tensile steel cores, ensuring smooth table movement & longevity
- Heavy-duty cast iron construction

ASDIII PLC touch panel (Automatic Grinder only)

Tool Holding

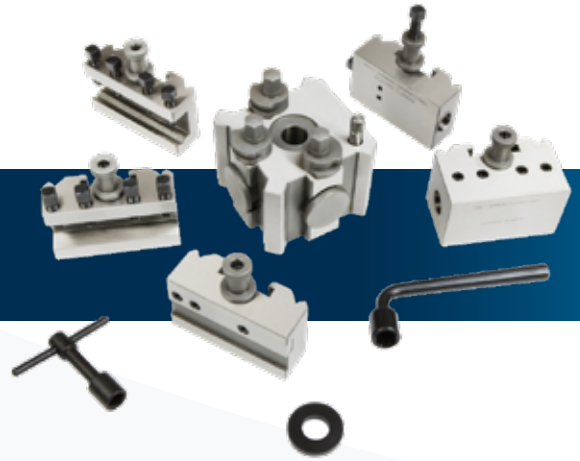
Dickson Quick Change Toolpost

The world renowned Dickson Quick Change Toolpost was developed as a major advancement from the conventional four way toolpost and this simple, robust design uses hardened and ground components to give high levels of accuracy and repeatability.

A versatile range of supplied toolholders can be interchanged in seconds, providing a flexible approach to machining, giving proven significant set-up time savings.

Centre height adjustment is achieved in seconds with a simple knurled nut, eliminating the need for packing pieces. Dickson Quick Change Toolpost kits are supplied with 4 off standard toolholders and 1 off 'V' / boring bar toolholder as standard.

Additional morse taper, plain bore, parting off and extended toolholders are also available as options. The stud assembly which attaches the toolpost onto the machine top slide are also available.



Work Holding

Pratt Burnerd International is a leading supplier of high-precision, high-quality manual and power chucking solutions, catering to the needs of industrial subcontractors and OEMs worldwide. Renowned for its engineering excellence and commitment to quality, Pratt Burnerd offers innovative chucking systems that deliver superior performance, durability, and reliability in demanding machining applications.

Manual Chucks

Pratt Burnerd offers a range of high-quality manual chucks, each chuck is crafted from durable materials and ensures reliable, precise performance. Unlock the full potential of your machining operations with our premium manual chucks. Engineered for precision, reliability, and versatility, our manual chucks are essential tools for any professional workshop.

The **Super Precision Chuck**, a trusted choice on the world's most popular manual lathes for many years, excels in high-speed applications. Constructed from high-strength nodular iron, it features hardened and ground jaw strips to ensure extended working life. Available in sizes ranging from 80mm to 400mm.

The **Standard Accuracy Chuck** is our cost-effective alternative to the SP chuck, specifically designed to enhance the performance of older lathes. These slightly slower-rated chucks are ideal for applications where high speed and ultra-precision are not essential, making them a perfect choice for older machines.

The **Dust Proof Chuck** is ideal for mass production workshops where dust often causes chuck breakdowns, reducing productivity. Want to use your existing Serrated Soft and Hard Top Jaws. Look no further than the Dust Proof Manual Chuck. Available in sizes 160mm to 315mm.

Setrite Chuck

The **Light Duty Lever Operated Scroll Chuck** have been designed specifically for use on small precision machines. Grip is reduced, this facilitates holding fragile or easily deformable components.

The **Super Thin Non-Rotating Chuck** this versatile, low-profile 3-jaw chuck excels in applications like drill presses, mills, machining centres, and grinding machines, offering three pinions at a 45-degree angle for smooth, easy operation. Flange-type mounting ensures quick, secure installation. Available in four sizes (160mm to 315mm) to suit various needs.

Griptru Chucks often employed in grinding operations, enable operators to re-align the front body of the chuck and, consequently, the workpiece in relation to the spindle nose. This feature enhances accuracy to within 0. 005mm.Six-jaw chucks are available to minimize distortion in thin-walled components and to evenly distribute the gripping force, resulting in an improved finish.

The **Setrite Chuck** boasts a 12µm TIR repeatability on duplicate parts, the design incorporates adjusting screws, allowing for fine adjustments, with standard sizes ranging from 160mm to 380mm. Constructed with a steel body, nitride-hardened scroll, and hardened pinion, it is built for durability and long-lasting performance. Chucks with six jaws are available to reduce distortion in thin-walled components and to distribute the gripping force more evenly, resulting in a better finish.

The **Metric Independent Chuck** is the most economical choice for turning one-off components and short runs especially those of an irregular shape Available in sizes ranging from 160 to 400 mm, it boasts a robust SG iron body for durability and reliability. All screws, bearings, and reversible jaws are crafted from steel, ensuring exceptional strength and reliability.

Large Scroll Chucks available as medium duty Steel Body Scroll Chucks and Heavy duty Large King Bore Oil Country 3 Jaw Scroll Chucks.

Large 4 Jaw Independent Chucks available as Medium & Heavy Duty 4-Jaw independent steel body chucks and King Bore oil control 4-Jaw Independent chucks.

Front Hand Wheel 5C Collet Chucks with front hand wheel operation and suitable for 5C collets, these chucks offer fast and easy change operation, reducing operator fatigue, and providing quick change over between chuck to collet chuck with no linkages or drawtubes.

Dust Proof Chuck

Power Chucks

Pratt Burnerd has built an outstanding reputation for designing innovative, high-technology, and extremely accurate power chucks that are sold worldwide. These power chucks are engineered to deliver superior precision and performance, meeting the demanding requirements of modern machining operations across diverse industries. Known for their robust construction and cutting-edge technology, Pratt Burnerd's power chucks ensure exceptional reliability, efficiency, and accuracy, making them a trusted choice for industrial subcontractors and OEMs on a global scale.

The **Gripfast Combination Power Chuck** is engineered for ultra-quick jaw changes in just seconds, making it ideal for small batch production on CNC lathes and turning centres. With a simple half turn of a key, each jaw can be released, removed and replaced with a pre-set second set of jaws that are locked in position, simply by returning the key to its original position. As each chuck is supplied with two sets of base jaws allowing setup times as short as 40 to 60 seconds. Additional sets of base jaws can be supplied suitable for your existing library of top jaws. If top jaws are undisturbed then repeatability remains the same, whether simply operating the chuck or returning the jaws to the chuck hours or days later. For added convenience, an optional jaw setting fixture is available, enabling top jaws to be preset off the machine for the next job, all while the machine continues running—a true time-saver.

Doubles as a collet chuck as the master jaws have a keyed radius in front that accept standard W & S collet pads thereby eliminating time wasted on switching over to collet chuck.

High RPM up to 6000 using standard top jaws, without loss of gripping force due to internally counter balanced design. 3 point adjusting feature in the chuck body and a 12-micron repeatability.

Gripfast Combination
Power Chuck

International Power Chucks are specifically engineered for use on CNC lathes, delivering exceptional rigidity and high clamping accuracy. Constructed from high-grade alloy steel, all mating surfaces are hardened, ground, and directly lubricated to ensure long-lasting performance. This model is a three-jaw wedge-style power chuck with a large through hole, providing versatility for various applications. Each chuck is supplied with a blank drawtube connector nut with a Ø20mm pilot hole, along with soft, blank top jaws that have serrated edges as standard. This design guarantees reliable gripping and precision for a wide range of machining operations.

Self-Contained Power Chucks have a built-in air cylinder, providing an efficient solution for converting a manual lathe into a production machine with a straightforward retrofit. Designed for safety, these chucks operate independently of the air supply once gripping is engaged. The absence of a separate actuating cylinder and drawtube ensures an unrestricted bore. To operate the SCPC, an additional unit is required, which interlocks with the machine spindle, preventing the chuck from being actuated while the spindle is under power, ensuring both safety and operational integrity.

The **Gripsafe Chuck Force Measurement Gripmeter** provides a straightforward solution for accurately measuring chuck gripping force, ensuring the safety of operators, trainees, and managers. In compliance with current health and safety regulations, regular inspection and maintenance of workholding equipment is required to ensure it remains safe and fit for use. The Gripsafe streamlines this process, allowing for quick and effortless measurements. Results are easily recorded using advanced measurement and analysis software, making it a critical component of any comprehensive health and safety maintenance program.

Gripsafe Chuck
Force Measurement
Gripmeter

Lightning Permanent Laser Marking System

The Lightning Laser Marking System is a powerfully simple solution designed to meet your marking requirements with ease. This affordable permanent laser marking system boasts robust marking capabilities, making it an ideal choice for various applications.

Equipped with a high-quality MOPA fibre laser source, Lightning effortlessly marks a wide range of metals and plastics at the press of a button. Its user-friendly design ensures that you can achieve precise and effective markings quickly and efficiently, streamlining your production processes.

Lightning Class 1 Permanent Laser Marking System

The Lightning Class 1 Fully Enclosed Laser Marking System is designed with safety and efficiency in mind, providing a powerful yet simple solution for your marking needs. This affordable permanent laser marking system delivers robust marking capabilities, ensuring precision and reliability across various applications.

With its fully enclosed design, the Lightning system enhances safety while allowing for optimal performance, making it suitable for diverse environments.

Lightning I Class 4 Permanent Laser Marking System

The Lightning I (Integrated) is a Class 4 laser marking system designed for both open environments and seamless integration into production lines. Its versatile design allows you to mount Lightning to a tool-post, making it perfect for marking applications that demand open space and flexibility.

Whether you require a standalone marking solution or an integrated component for automated lines, the Lightning I delivers exceptional performance for unattended or turnkey applications.

Lightning Class 1

Features & Benefits

- MOPA fibre laser source provides high-quality and effortless marking
- 15 selectable pulse durations means that Lightning can mark a wider range of metal and plastics than a basic q-switched fibre laser system
- Lightning's easy setup and maintenance enables excellent ease of use for the operator
- A RAL (Red Aiming Laser) allows you to accurately position the part before starting the marking process
- Programmable Z axis removes the need for focus finding, simply input the part height and let the software do the rest (Lightning Class 1 only)
- EZCAD user-friendly software allows the operator to create text or image-based graphics and fine tune in real-time
- Optional extras include larger marking fields, higher wattage laser sources, rotary devices for radial marking and fume extraction

Optional Accessories

Rotary Device
for radial marking

Upgraded Lens
for increased marking field

Lightning Class 4
Laptop not included
Toolpost is an optional extra

Automation Solutions

In today's fast-paced manufacturing landscape, efficiency is key to staying competitive. At Colchester Machine Tool Solutions, we offer cutting-edge automation solutions designed to revolutionise your production processes and drive unparalleled productivity gains. From robotic loading systems to automatic barfeed system integration, our automation technologies streamline operations, reduce costs, and maximise output, empowering you to thrive in a rapidly evolving industry.

Storm VMC and ZeroCob Machine Tending Robot System

Maximise Your Manufacturing Efficiency with the Colchester Storm VL-550 VMC and ZeroCob Machine Tending Robot System. Elevate your productivity and precision with this unbeatable combination.

Enhance the capabilities of your Storm VL-550 with the ZeroCob Machine Tending Robot System. This robust solution includes the NACHI MZ10LF Industrial Robot, Smart Hub, and a comprehensive safety enclosure, ensuring seamless integration and maximum efficiency.

Automatic Barfeed Systems

At Colchester Machine Tool Solutions, we understand the importance of efficiency and productivity in the manufacturing industry. That's why we offer cutting-edge automatic barfeed systems designed to maximise the performance of your CNC turning machines. Our barfeed solutions enable seamless material handling, reduced setup times, and increased throughput, allowing you to stay ahead of the competition.

Automated Laser Marking Interface

Our exciting collaboration with Olympus Technologies has enabled us to offer fully integrated turnkey solutions for our permanent laser marking machines.

Now offering a new interface between our range of Laser Marking Machines and Olympus Technologies Universal Robots A/S enabling automation of the laser marking process.

With the new UR+ certified 'Colchester Laser Marking Interface', the robot arm takes care of the entire process; from loading and starting a specific laser marking program, to the unloading of finished product.

Featuring easy-to-use programming, this new solution offers seamless collaboration between robot and laser marking system.

The key benefits to automating your laser process are speed, consistency and capacity - enabling batch processing & 2nd or 3rd shift capabilities with ease. Compatible with Class 1 & Class 4 lasers.

Support & Service

With over 100,000 machines in operation, our commitment to you extends far beyond the initial purchase. When you invest in our high-quality machine tools, you gain not just a superior product but also access to a dedicated level of service that your investment truly deserves.

From your first interaction with our highly trained sales team to the seamless support provided by our worldwide distribution partners, we are with you every step of the way. Our swift and efficient service and spares department ensures that, in the unlikely event you encounter any issues with your machine tool, we are ready to assist you promptly.

At our European Technology Centre in West Yorkshire, we maintain an extensive stock inventory of over £4 million in spare parts, all designed to minimise your machine downtime. We are proud to offer same-day dispatch on parts, ensuring you can quickly get back to production without unnecessary delays.

Our commitment to after-sales support means that you can operate with confidence, knowing that we are always here to support your business and ensure your machinery runs smoothly.

Spare Parts

Learn More

Colchester Machine Tool Solutions is the only destination for genuine spare parts for Colchester, T S Harrison and Pratt Burnerd International products.

Whether you are looking for an individual machine component or a technical manual, we stock over £5million spares for our machine tools, lasers & accessories, giving us the ability to service machines up to 30 years old.

Quality is our top priority. All our spare parts are meticulously manufactured and rigorously tested to meet or exceed industry standards, ensuring durability and optimal performance.

Minimise downtime with our prompt and reliable delivery service. We understand the urgency when it comes to spare parts, and our streamlined processes ensure that your order reaches you in the shortest possible time.

Have questions or need assistance in finding the right spare part? Our knowledgeable customer support team is here to help. Contact us via phone, or email, for expert guidance.

Telephone our hotline on: +44 (0) 1924 412603
Email: spares@colchester.co.uk

Bespoke Design & Engineering

Learn More

At Colchester Machine Tool Solutions, we understand that the foundation of groundbreaking products lies in impeccable engineering design. Our engineering design services are crafted to transform your ideas into reality, ensuring innovation, precision, and excellence at every step of the process.

Our team of experienced engineers thrives on challenges. We specialise in creating bespoke solutions across our machine tool and laser products, tailored to meet the unique requirements of each customer. From concept to execution, your vision is our blueprint.

We leverage the latest tools and technologies to ensure that your engineering designs not only meet industry standards but also exceed expectations. Our commitment to innovation sets us apart from the competition.

Our diverse team brings together experts from various engineering disciplines. Whether it's mechanical, electrical, or software engineering, we have the knowledge and skills to provide comprehensive solutions for your projects.

Your input is invaluable, and we work closely with you throughout the design process. Regular updates, feedback sessions, and transparent communication ensure that the final product aligns perfectly with your expectations.

Essential Training

Learn More

Unlock the full potential of your workforce with our bespoke training programs tailored to your exact needs. Explore how our specialised training can enhance skills, productivity, and operational excellence within your business.

We are committed to supporting our range of machine tools in the wider manufacturing industry, whether beginning your career or requiring further knowledge and skills to reduce component manufacturing times. Our machine tool training is not one-size-fits-all. We understand the unique requirements of the manufacturing industry and tailor our programs to address specific challenges, ensuring that your workforce gain skills that directly impact your operational efficiency.

1. Basic Machine Tool Operation: Introduce your team to the fundamentals of machine tool operation, covering safety, basic maintenance, and efficient use of our machine tools.

2. Advanced CNC Programming: Empower your workforce with advanced skills in CNC programming, enabling them to optimise machine performance and adapt to evolving technological trends.

3. Precision Machining Techniques: Master the art of precision machining with specialised training in techniques that enhance accuracy, surface finish, and overall product quality.

4. Maintenance and Troubleshooting: Equip your team with the knowledge to perform routine maintenance and troubleshoot common issues, minimising downtime and maximising machine lifespan.

Flexible Financing

Learn More

We believe in more than just one-size-fits-all solutions. Our experienced sales team work with you to understand your unique needs, crafting personalised packages that align perfectly with your financial goals. We strive to offer you the best financial solutions without compromising your budget, helping you achieve your goals without unnecessary financial strain.

We can provide assistance to manufacturers looking to finance their capital investment through hire purchase, operating leases, finance leases or refinancing, ensuring that managing your finances is convenient and stress-free.

Save £££'s with the Full Expensing Scheme

Take advantage of the Government's Full Expensing Scheme and save tax on new investment in qualifying capital equipment from Colchester.

Here is an example of how it could work:

A company incurs expenditure of £1.5m on new state-of-the-art machine Tools from Colchester Machine Tool Solutions. Without the benefit of full expensing, the business would be required to spread the allowances on this investment over multiple years, limiting the immediate deduction available. However, with full expensing, the business is able to deduct the entire £1.5m in the tax year of the purchase.

Assuming the company is subject to the main rate of Corporation Tax, the company stands to save £375,000 in taxes (£1.5m x 25%) in the year 2024 through full expensing. As a result, the company's cash flow is improved and has the opportunity to reinvest the tax savings offered by full expensing into further operational improvements or additional strategic investments.

Service & Preventative Maintenance Plans

Learn More

We believe that outstanding customer service is the heart of any successful business. Our name has been trusted in the industry for over 100 years. The knowledge and experience we've gained throughout this time is reflected in the longevity and build quality of all Colchester, Harrison and Pratt Burnerd International machine tools & precision work holding equipment.

Our commitment to excellence goes beyond transactions; it's about building lasting relationships with our valued customers. Help is always at hand from our expert team of engineers manning the service helpdesk at our European Technology Centre in West Yorkshire. They are equipped with the knowledge and skills to address your queries and resolve issues efficiently.

Entrust your machinery to the hands of our skilled and experienced field service engineers. Our team possesses deep expertise in machine tool servicing, ensuring that your equipment receives the meticulous attention it deserves.

We understand the value of your time. Our streamlined processes and commitment to efficiency ensure that your concerns are addressed promptly without compromising on the quality of service.

Reduce your servicing costs with a fixed price **Service Plan**

Sit back and enjoy the benefits

- Genuine Colchester & Harrison spare parts
- 10% discounted spare parts
- Pay in full or spread the cost over monthly payments
- Fix prices at today's rate to protect against future increases
- Multiple machine discounts available
- Remove the internal burden of maintenance and repairs
- Reduce future unplanned downtime
- Improve safety by keeping machines in good working order
- Help maximise your overall equipment efficiency

	1 Year Plan	3 Year Plan	5 Year Plan
30-point machine health check	✓	✓	✓
Safety functionality check for all interlocks & guards	✓	✓	✓
Screw & slideways backlash adjustment	✓	✓	✓
Headstock & drive assembly inspection	✓	✓	✓
Headstock lubrication functionality test and filter replacement	✓	✓	✓
Machine lubrication functionality test (one shot/slide lube)	✓	✓	✓
Lubrication of all independent points (oil & grease)	✓	✓	✓
Coolant system functionality test	✓	✓	✓
Bed wiper replacement, saddle & tailstock	✓	✓	✓
Back-up battery replacement, control & drives	✓	✓	✓
Work holding safety functionality grip test	✓	✓	✓
Headstock oil change	✗	✗	✓

Engineered For Education

Learn More

Colchester Machine Tool Solutions is Engineered For Education, meaning that we have made a commitment to sharing knowledge and giving opportunities to the next generation of machinists and operators.

Through this, we supply to official training facilities such as universities & colleges throughout the UK & Europe with high quality manual & CNC machine tools at competitive prices. We also offer:

- Full telephone support from our applications team
- Specialised training for tutors ("train the trainer") and students
- Machine tool manuals (digital or printed)

Safety Features

All of our machine tools meet and exceed all international safety standards & CE regulations, with many enhanced safety features available as options including:

- Additional emergency stop devices
- Additional guarding interlocks
- Additional machine guarding

Colchester Machine Tool Solutions' range of education machine tools and workholding equipment gives you exceptional ease of use and a huge choice of optional and ancillary equipment. This guarantees top of the range performance, from the most basic, to the most complex of jobs.

Our education equipment can be found in the majority of training establishments throughout the world.

Recommended Machine Tools for Education

Student Manual Centre Lathe

Student CNC Lathe

Tornado SL25 CNC Turning Centre

Manual Turret Mill

CV-400 CNC Turret Mill

Storm EH-610 Toolroom VMC

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Colchester
Machine Tool Solutions