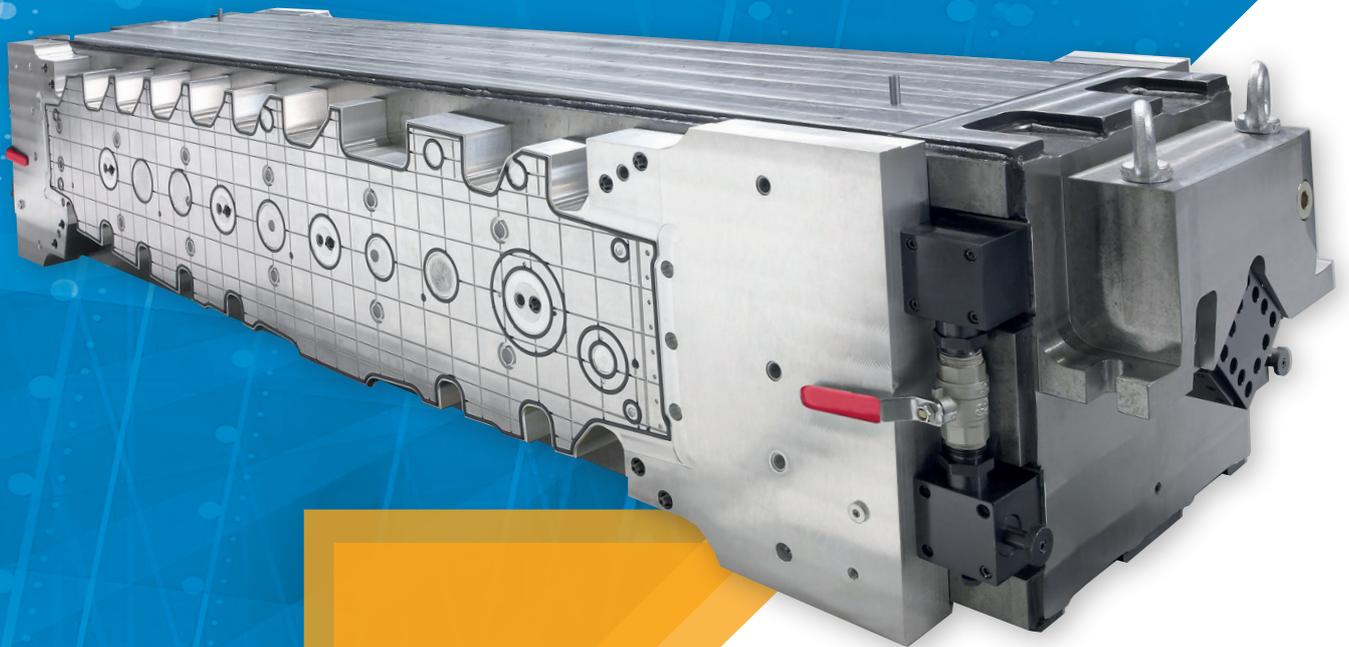


# HYFORE

— WORKHOLDING —

It's gripping stuff...

PORTFOLIO



## GETTING THE MOST OUT OF CNC MACHINES

Hyfore Workholding – we support manufacturers with a total solution to workholding production, designing and manufacturing bespoke fixtures, the quality of which increase CNC machine tool productivity with quicker cycle times and a higher quality component, in-turn increasing efficiency and profit margins.

All produced in-house in our Coventry based factories, [hyfore.shop](http://hyfore.shop) also helps our clients with a vast range of standard workholding, with ranges from the world leaders to their sectors, such as Hardinge, Kosmek and Midaco. All enhanced with software from Mastercam, CAMplete and Cimco, with automation handled by Halter, confirming Hyfore as the market leader and real full workholding solution, supplying into the UK and Europe.

## COST-EFFECTIVE BESPOKE DESIGN

Hyfore's highly-qualified, specialist engineers are dedicated to providing complete turnkey solutions for customers' manufacturing requirements, including:

- + Mechanical and electronic design using CAD/CAM 3D modelling; this capability gives us a clear advantage when viewing complex fixtures and tool cutter-paths, in relation to the fixture design.
- + Quality testing and prove-out to agreed standards
- + Project management
- + After-sales service support
- + Simultaneous engineering contracts

## ROTARY DEVICES

Our range of rotary devices for workpiece manipulation includes fourth and fifth-axis rotaries, indexers and rotary couplings.

Hyfore's unique blend of innovative design, quality, precision, manufacturing capability and in-depth experience make us the natural partner in your quest to maintain a truly world-class production environment.

## HYDRAULIC FIXTURES & ACCESSORIES

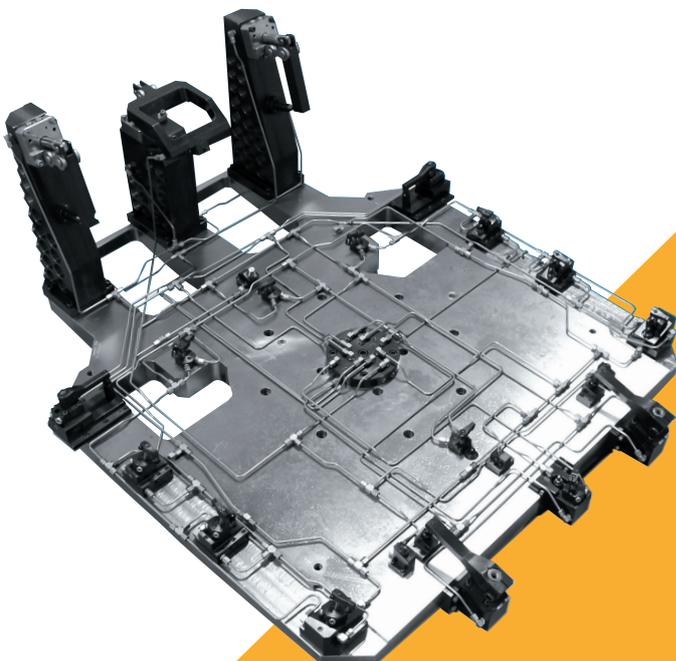
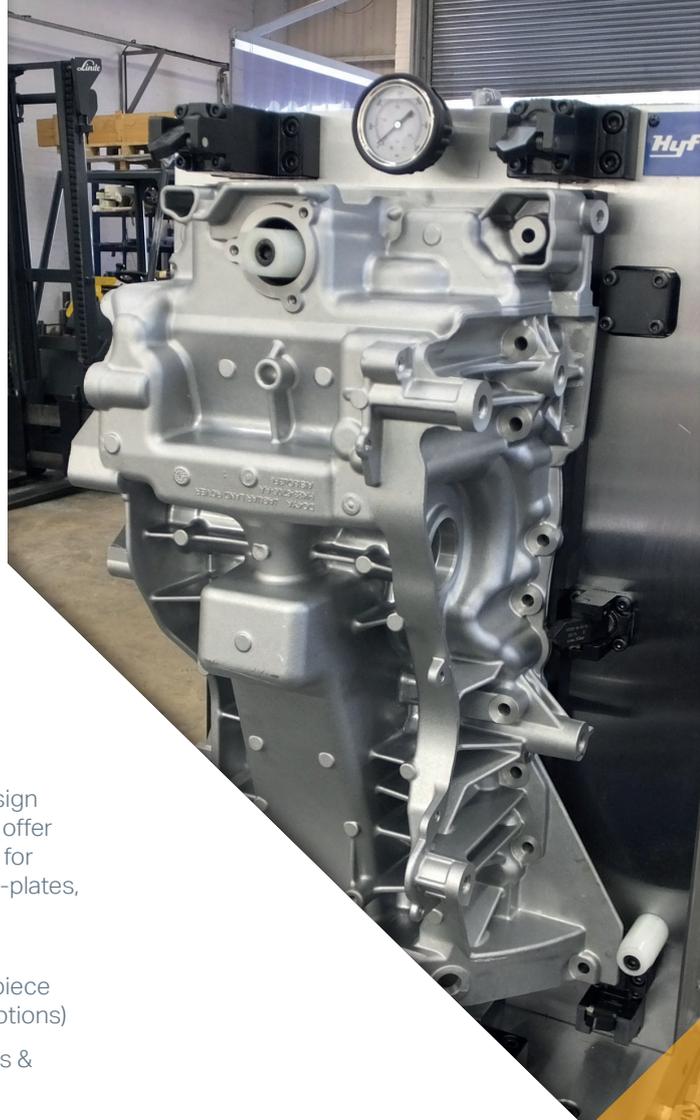
Hyfore design and manufacture a wide range of component fixturing devices, both power-clamped and manual.

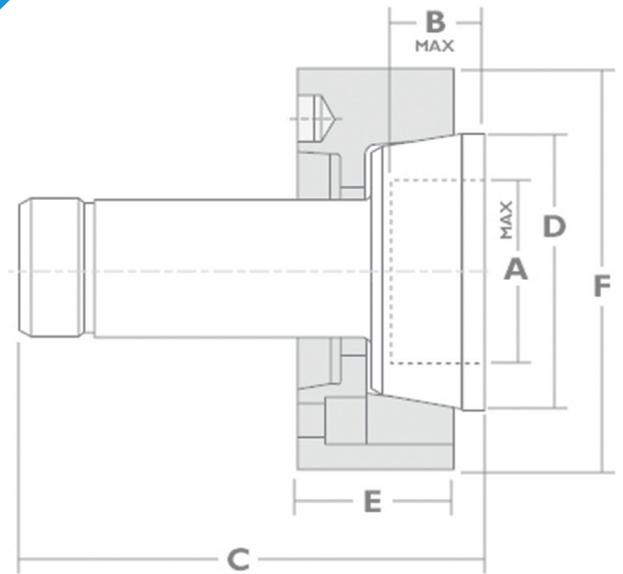
Each device can be hard-mounted to the machine table or mounted in Hyfore's designed rotary devices for the machining of multiple component faces within one clamping. Our range of hydraulic-clamps are fully designed and manufactured in-house. They are renowned amongst the best systems available to industry, due to their compact design and high clamping forces.

## WORKPIECE HOLDING

To complement Hyfore's design of powered fixtures, we also offer a range of standard designs for workpiece fixtures and base-plates, including:

- + Tombstone fixtures (one-piece castings and fabricated options)
- + Cubes (one-piece castings & fabricated options)
- + Snap-on (zero point) plates
- + Fixture plates to suit any base elements
- + A range of clamps and devices
- + Special fixtures including: design, development and prove-out using manual pneumatic and hydraulic clamping and chuck options





**LOW VOLUME PRODUCTION**

**SUB-CONTRACT SERVICES**

**REVERSE ENGINEERING**

**CMM INSPECTION**

**PROTOTYPING**

## REFINING YOUR PROCESSES

Hyfore delivers a total turnkey capability – helping customers through prototyping, low-volume manufacture and component verification service.

Equipped with 3 and 4-axis machining centres, CNC turning machines and the latest CMM inspection equipment. We help customers develop and verify their processes, manufacture prototypes and carry out one-off and low-volume machining as a pre-production, product development or special requirements service.

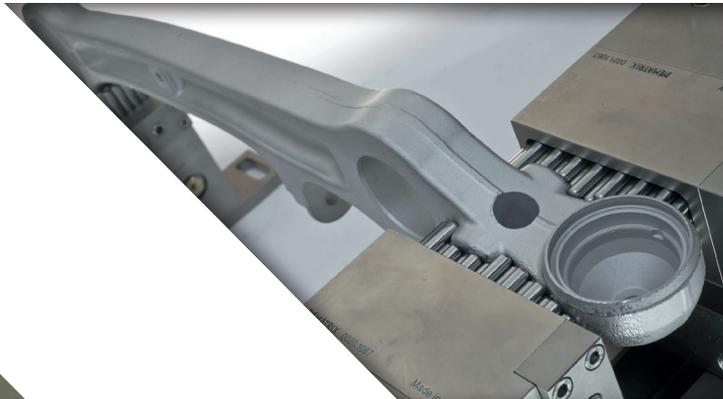
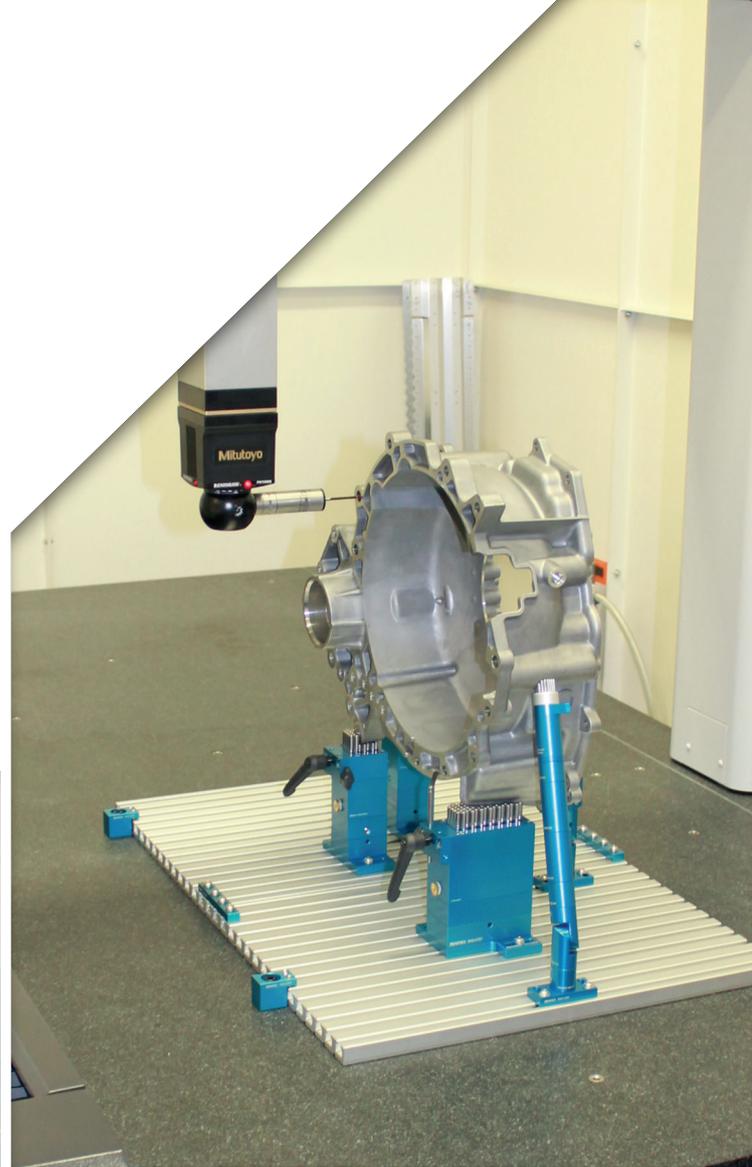


## CAN YOUR EXISTING CMM MACHINE COPE WITH ALL THE COMPONENTS YOU CURRENTLY MANUFACTURE?

- + Sub-contract CMM measurement service available from Hyfore at short notice
- + Our in-house CMM equipment can accommodate part measurements up to X 950mm / Y 1605mm / Z 800mm

## DO YOU HAVE A CURRENT BOTTLENECK SITUATION WITH YOUR OWN CMM?

Contact Hyfore to see how we can help, It's gripping stuff...



## CMM SERVICE

The Very Latest Mitutoyo  
CMM Temperature  
Controlled Room

## BRIEF SPECIFICATIONS

- + CRYSTA-APEX S9168
- + X 950 mm / Y 1605 mm / Z 800 mm
  - + MCOSMOS-3
- + For full integration with 3D models
  - + Both on-line and off-line programming capabilities
- + Scanning & profile analysis program





Hyfore Workholding has over 100,000 individual products for sale covering the spectrum from collets and workholding accessories to precision engineering equipment such as probing and quality control products as well as everyday consumables from leading brands.

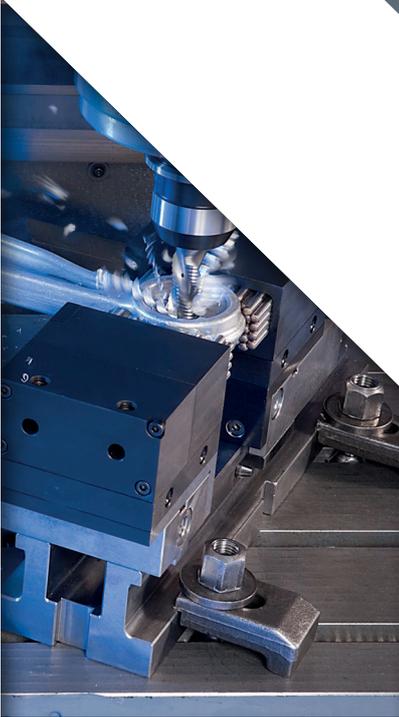
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**OVER 100,000 PRODUCTS...**

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**hyfore.shop**





## WORKHOLDING

- + Collets for Lathes
- + Expanding Mandrels
- + Collet Chucks
- + Manual & Power Chucks
- + Vices – Standard & 5th Axis
- + Magnetic Clamping
- + Revolving Centres
- + Custom Workholding/Fixtures

## TOOLING

- + BT/HSK/Face & Taper
- + VDI
- + BMT
- + Block Tooling
- + ER Collet Chucks / Collets
- + Bushings
- + Driven Tooling
- + Angle Heads

## ROTARY

- + Indexers
- + 4th Axis
- + 5th Axis
- + Trunnion Supports
- + Tailstocks

## MACHINE ACCESSORIES

- + Tooling Trolleys
- + Cabinets
- + Benches
- + Hand Tools
- + Pallet Changing System
- + Probes
- + Swarf Bins

## METROLOGY

- + Pre-Setters
- + Micrometers
- + Calipers
- + Gauges
- + Sub-contract CMM Service – Mitutoyo CMM Programming

# OUR TRUSTED PARTNERS



Acrow was founded in 1985 with their factory being located at Taichung City, Taiwan. They are a leading specialist manufacturer of CNC Tooling Systems in Taiwan. Their factory is over 7,500 m<sup>2</sup>. Acrow installs CNC lathes, CNC machining centers and CNC grinding machines to manufacturers and inspection is carried out with electronic air gauges, numerical control machines and other high precision inspection instruments.

Acrow produces more than 90,000 tool-holders every year and distributes into Taiwan, China, Europe, Germany, Switzerland, Japan, USA, Australia, Southeast Asia, Russia and South Africa markets.

They are continually investing in R & D as well as new facilities and strives to not only meet, but also exceed customers' expectations with regards to quality and demand.



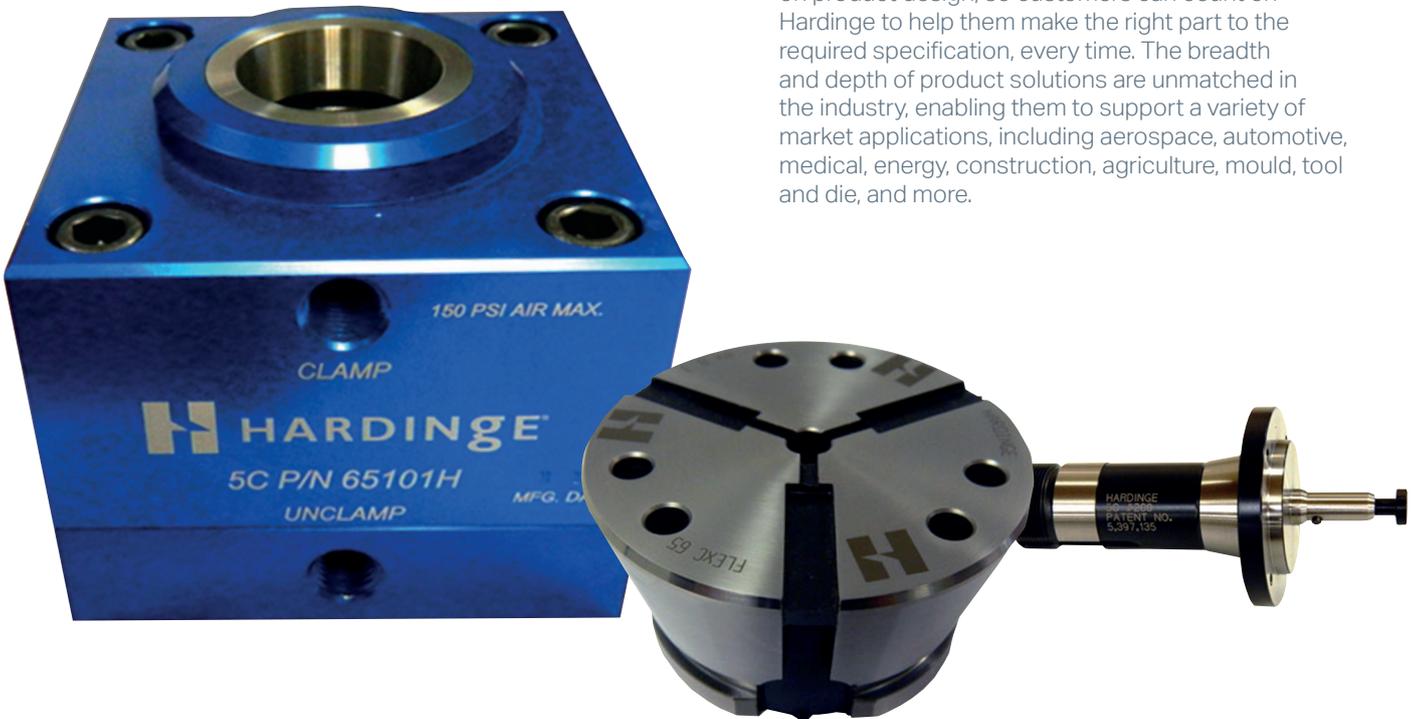
The rich heritage of Buck Chuck USA continues to remain the industry standard for quality. For over 75 years Buck Chuck USA has engineered and built the finest Workholding products. In 2013, Buck Chuck became part of the Hardinge Group of companies, serving the Workholding Market Worldwide offering a complete line of high quality workholding. Buck Chuck continues to improve its product offering with the introduction of the new ATSC and the recently improved AT chuck lines.

Buck Chuck pride themselves on chucks that are the best in the business. The Steel bodied ATSC has set a new industry benchmark for quality. Both of these products are made to strict ISO standards and have the Buck Chuck trademarked Ajust-Tru® feature, which allows concentricity adjustments to near zero.

# HARDINGE

## WORKHOLDING

Hardinge is the leader in providing a wide range of highly reliable turning, milling, grinding and workholding solutions. They never compromise on product design, so customers can count on Hardinge to help them make the right part to the required specification, every time. The breadth and depth of product solutions are unmatched in the industry, enabling them to support a variety of market applications, including aerospace, automotive, medical, energy, construction, agriculture, mould, tool and die, and more.



# KOSMEK

Kosmek Japan has more than 30 years' experience of clamping solutions for workholding, mould and die change, press and factory automation.

Optimisation is the objective, through innovative and patented Kosmek clamping technology. Kosmek achieve hydraulic clamping forces by using pneumatic clamping elements.

Delivering technological leadership with more than 300 patents, you can be assured of a high performance pneumatic solution.

Customers achieve greater added value – with overall improved workplace safety and reliability.

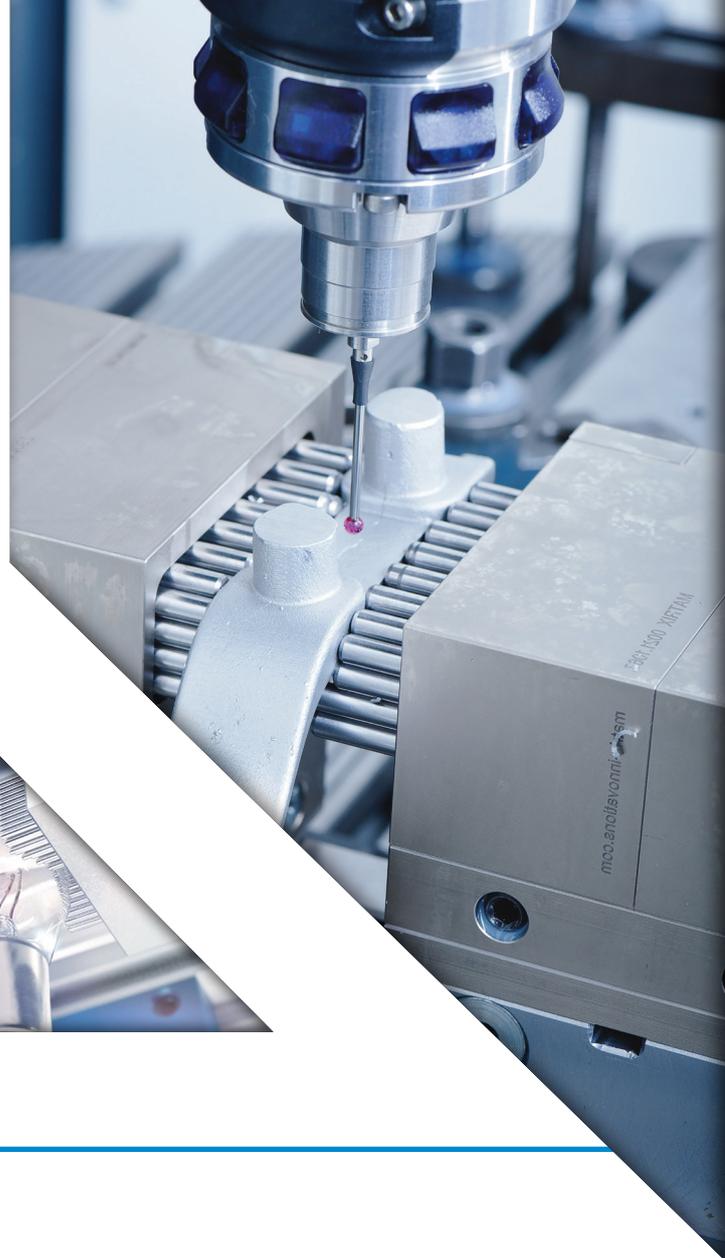




Since it was founded in 1997, Matrix GmbH has been a developer of mould clamping systems. The idea of developing clamping jaws based on the pin cushion principle was the first step towards a true innovation.

Following a development time of just 11 months to the first prototype and patenting, the company initially focused on the field of metrology and acquired a number of prestigious customers.

Matrix clamping systems went into production in 1999. There are various modules with differently-sized pin fields, as well as additional relevant modules in measuring technology for the improved securing of complex components.



Founded in 1969, Midaco is a leading global manufacturer of innovative products that are designed to save manufacturing time; increase output and give your company a competitive edge while realizing additional profit. Products include a full line of state-of-the-art pallet changers and supplemental items for CNC machining centers to ensure customers receive the most out of their investment.



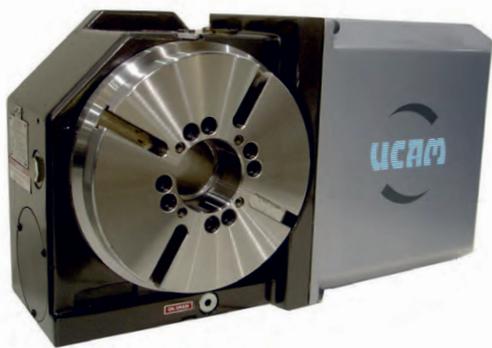
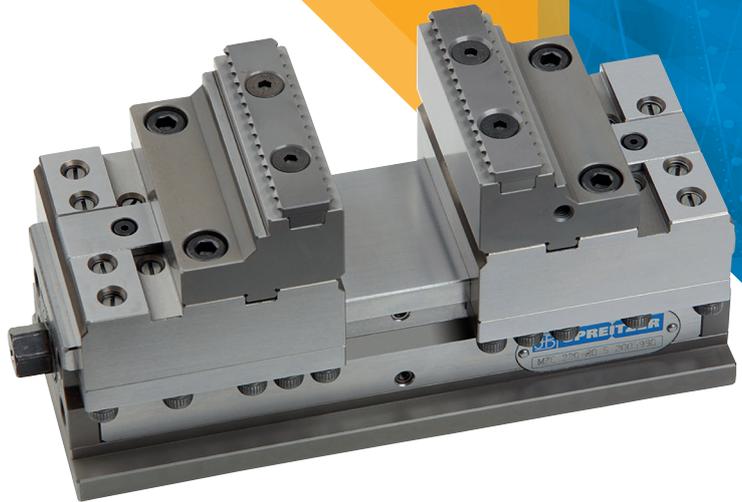


The name Spreitzer Precision Tools stands for the development, construction and production of complex system solutions in the field of clamping and measuring since 1983.

Areas of performance stretch from modular clamping systems and modular construction systems for machining centres to manual quality control and construction of special devices, touching on mechanical clamping systems along the way.

Development and construction is carried out on modern and high-performance 3D-CAD-work stations in order to shorten the lead-times for routine jobs. As a result of this, more time can be spent on the more creative parts of a project.

It is important for our customers who are requiring specialised constructions that we use a 3D-CAD-system as this provides quick access to draft and construction drawings thanks to a problem free exchange of data including all accessible data formats.



UCAM specialises in the manufacturing of precision CNC rotary tables, index tables and pallet changing solutions for machine tool applications.

UCAM products are known for their quality, reliability and performance in challenging and high demanding applications in various industries such as automobile, aerospace, power generation, medical & orthopedic implants, oil & gas exploration, pumps & valves, general engineering etc.

Using state-of-the-art, cutting edge technology, continuous product innovation through research and development and pro-active customer relation management has made UCAM a global brand in the machine tool industry.

An ISO 9001 company, UCAM is focused towards delivering quality products to its customers.



## MANUAL TURRET MILL SERIES 1

Iconic original milling, drilling and boring machine offering simplicity, rigidity, unerring accuracy and long-life.

- + One-shot lubrication system
- + Chrome-plated ways and gibs
- + Colour - machine tool grey
- + Manual drawbar for R-8
- + Electrics - NFPA-CE standard
- + Imperial dials



\* Knee travel reduced by 1 in. (25.4mm) with Flood Coolant  
 \*\*Power case door open  
 All specifications subject to change without notice

RANGE	
Table Travel (X-Axis)	36 in. (914 mm)
Saddle Travel (Y-Axis)	12 in. (305 mm)
Quill Travel	5 in. (127 mm)
Knee Travel (Z-Axis)*	16 in. (406 mm)
Ram Travel	12 in. (305 mm)
Throat Distance (min.)	6.75 in. (171 mm)
Throat Distance (max.)	18.75 in. (476 mm)
Table to Spindle Nose Gage Line (min.)	2.5 in. (64 mm)
Table to Spindle Nose Gage Line (max.)	18.25 in. (463 mm)
TABLE	
Overall Size	49 x 9 in. (1245 x 229 mm)
Working Surface	49 x 9 in. (1245 x 229 mm)
T-slots Centers	3 @ 2.5 in. (64 mm)
T-slot Size	0.625 in. (16 mm)
Height above Floor (max.)	47.25 in. (1200 mm)
Weight of Workpiece (max.)	750lb (340kg)
SPINDLE (2J HEAD)	
AC Power Rating (30 min. duty cycle)	3 hp (2.2 kW)
AC Power Rating (continuous)	2 hp (1.5 kW)
Spindle Taper	R-8
Tooling	R-8 Collets
OPTIONAL SPINDLE TAPER	
Spindle Taper	#30
Tool Holder	Erickson Quick-Change #30
SPEED RANGE	
High (infinitely variable)	500 – 4200 rpm
Low	60 – 500 rpm
Power Quill Feed	0.0015 in./rev (0.038 mm)
Manual Adjust	0.003 in./rev (0.076 mm)
DRILLING CAPACITY	
Power Quill Feed	3/4 in. (19 mm)
Milling Capacity (mild steel)	3/4 in. (19 mm)
Boring Range (mild steel)	6 in. dia. (152 mm)
Spindle Diameter	1.875 in. (48 mm)
Quill Diameter	3.375 in. (86 mm)
POSITIONING	
Auto (X, Y)	100 ipm (2540 mm/min)
Manual (X, Y)	100 ipm (2540 mm/min)
Feedrate Range (X, Y)	0.1 – 100 ipm (2 – 2540 mm/min)
Minimum Increment	0.0001 in. (0.003 mm)
SPACE AND WEIGHT	
Floor Area	8.3 x 5.3 ft. (2.53 x 1.62 m) 8.3 X 7.8 ft. (2.53 X 2.4 m)**
Height	7.04 ft. (2.15 m)
Net Weight	1930 lb (875 kg)
Shipping Weight	2075 lb (941 kg)
POWER	
Input Power	208/230/460 volts, 3 phase, 50/60 cycle
Power Capacity	4kVA

# Mastercam

Hyfore is an authorised Mastercam supplier and delivers CAD/CAM software tools for all types of programming, from the most basic to extremely complex.

Two axis machining, multi-axis milling and turning, wire EDM, router applications, free-form artistic modelling and cutting, 3D design, drafting, surface and solid modelling – whatever your machining needs, there is a Mastercam product for your budget and application.

Mastercam is the most widely used CAM software worldwide and remains the programme of choice among CNC programmers. Mastercam X8 is the next generation of its popular program, delivering the most comprehensive packages with powerful new toolpaths and techniques.



## CAMplete SOLUTIONS INC

CAMplete offer four products to solve our customers problems, including, CAMplete Truepath, CAMplete Truepath Lite, CAMplete Turnmill, and Intelligent Protection system (IPS). The software is tailor-made to your machine, as opposed to a generic solution.

With users all over the globe, CAMplete's post-processing and machine simulation solutions help users get the most out of their 5-Axis and 3-Axis milling machines. CAMplete doesn't just save you time and money with G-Code simulation and verification software, they also understand what it takes to machine parts. CAMpletes software offers everything you need.



## CIMCO WHEN RELIABILITY MATTERS

Hyfore is also a supplier of Cimco CAD/CAM software products. Cimco offers 5 elements – Cimco DNC-Max 7, Cimco MDC-Max 7, MDC-Max Web Client, Cimco NC-Base 7 and Cimco Edit 7, all of which Hyfore supplies and supports with in-depth product training available. Cimco programmes are integral to efficiency on the shop floor, providing not only great tools to get the job done, but also a powerful and integrated platform for editing, designing, visualising, managing and communicating CNC programmes and related content.



CNCCALC



MDCMAX



NFSFTP



DNCMAX



MDM



EDIT



DNCMAX



DNCMAX



DNCMAX



# HALTER

Hyfore Workholding is the UK distributor for Halter CNC Automation, the Netherlands based supplier of machine tool robotic loading and unloading systems.

Sitting alongside Hyfore's workholding products, Halter offers a further dimension to its turnkey, FMS and machine automation capabilities which are increasingly an integral part of customer specifications.

Best known for its 'Load Assistant' which uses a Fanuc robot arm with the Halter smart control and smart loading system, Halter CNC Automation has over 25 years' experience in supplying robotic solutions to increase the productivity of machining centres.

A feature of Halter automation systems is the simplicity of smart control programming system which does not require previous robotic experience. It is a universal system for both CNC lathes and CNC machining centres.



# OTHER TRUSTED PARTNERS



Since its founding by Andreas Maier in 1890, AMF has lived through many exciting times. Today, they are the leading manufacturer in Europe, supplying over 5,000 different products from the fields of clamping, hand tools and locks. With this extensive product range they can meet all customers' needs and requirements.

But providing optimal quality means meeting challenges at all levels: Expert consultation, modern team organisation, individual solutions (including special developments), flexibility in response to changing conditions, etc. They look towards shaping the market together with employees and customers – both now and in the future.



Through innovation, Blum-Novotest is a global leader in measuring and testing technology. A reliable partner to the global machine tool, automotive and aerospace industries.

- + Measuring components for machine tools
- + Measuring machines for mass production
- + Test stands for the automotive and hydraulic industry



The Bott Group is a world-leading manufacturer and supplier of workshop equipment, in-vehicle equipment and workplace systems. With production facilities in Germany, United Kingdom and Hungary, and with licensed partners and importers across the globe, Bott has a worldwide service network enabling us to respond to local needs. From design and manufacture to supply and installation, Bott has a strong reputation for high product quality, service excellence and value for money.



Haimer is a family run, medium size company located in Igenhausen, Bavaria near Augsburg, Germany. They design, produce and sell innovative, high precision products for metal cutting as well as for other branches including automotive, aerospace, energy, rail and general machining.

Haimer offer a large selection of tool holders in all popular interfaces and lengths, shrinking and balancing machines, 3-D Sensors, solid carbide cutting tools and tool presetting machines.



Incorporated in 1989, Nikken Kosakusho Europe Limited is a subsidiary of Nikken Kosakusho Works Limited Japan. Its principle activities are the import, distribution and supply of the entire Nikken product range, which encompasses CNC rotary tables, NC tooling systems and measuring devices including Elbo Controlli tool presetters. Nikken annually produces some 500,000 tool holders, 3,500 rotary tables and 250,000 reamers.



Renishaw is one of the world's leading engineering and scientific technology companies, with expertise in precision measurement. The company supplies products and services used in applications as diverse as jet engine and wind turbine manufacture, through to dentistry and brain surgery. It is also a world leader in the field of additive manufacturing (also referred to as metal 3D printing), where it is the only UK business that designs and makes industrial machines which 'print' parts from metal powder.



Sankyo Automation has been a worldwide leader in CAM-driven indexing technology since 1987, and continues to develop new and innovative technology in motion control.

The high quality of Sankyo products is a direct result of innovative design, strict process control, and a continual effort to strive for improvement.



It's gripping stuff...

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