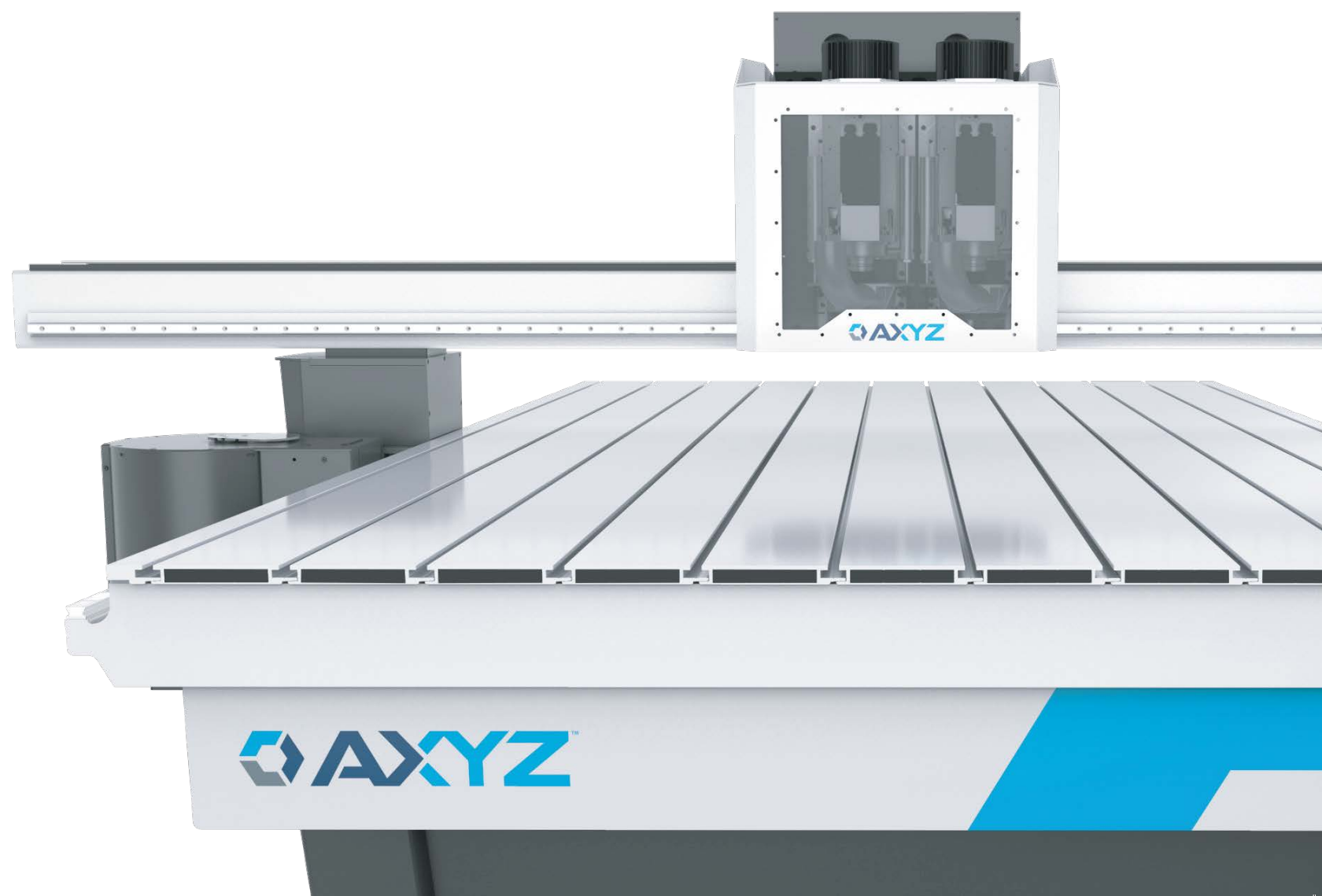


# INFINITE Series



# INFINITE

Continuing the legacy of XYZ Automation CNC routers, the Infinite Series incorporates the reliability, robustness and cutting edge-technology that has always been a major part of XYZ products. The Infinite introduces a new generation of CNC routers built for today's consumer demands.

## Fast

XYZ manufacturing lead times are among the shortest in the industry. Even custom machine systems can be engineered, manufactured and delivered to meet your exacting timescales.

## Flexible

The standard Infinite Series machine can be specified in thousands of different configurations to meet almost any application requirement. Despite this flexibility there is no compromise on quality. Components are sourced from top manufacturers such as HSD and Elte (spindles), THK (bearings) and Teknic (servo motors and drives).

## Direct

XYZ interacts directly with more than 90% of our customers. With sales and support offices in Canada, the United States, the UK, Poland and India, we are near you geographically, and only a phone call or email away electronically. So, if you're purchasing a machine, require service, need engineering support or need to buy parts, you'll be dealing directly with XYZ employees.

Process Width

**10000** 3270 mm

**8000** 2635 mm

**6000** 2159 mm

**5000** 1842 mm

**4000** 1524 mm

**2000** 711 mm

# Process Areas

The Infinite Series CNC routers are available in a wide variety of standard and custom sizes.

With process areas up to 3270mm wide by 15240mm long and beyond, there is always a solution to suit your exact application requirements and budget.



# A Versatile Solution With Endless Possibilities

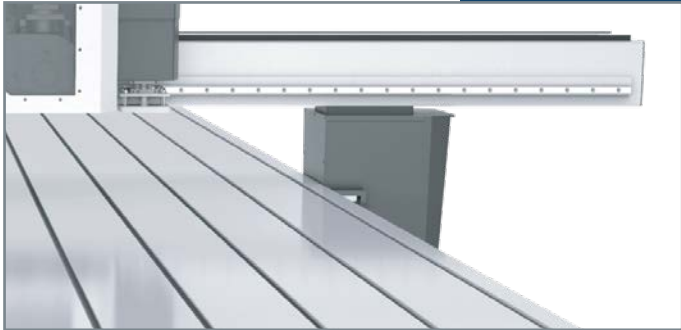
As the most configurable CNC machine solution on the market today, the Infinite Series can be customised to handle the widest range of CNC tooling and applications options in the industry. No job is too small or too big for the Infinite.



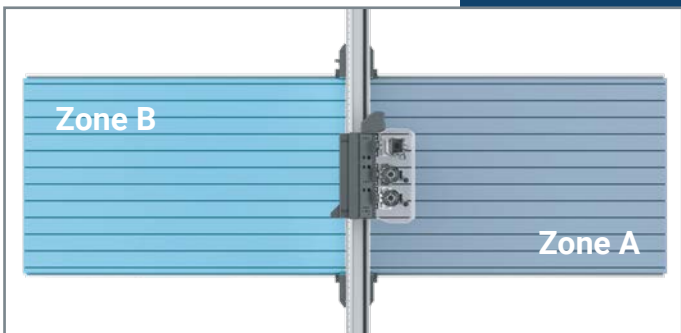
Choose a single, double or even triple-head configuration for applications that typically require multi-tool cutting operations. A twin carriage option is also available, enabling you to copy cut two parts at the same time, effectively doubling production capacity and enabling a faster turnaround on jobs.



The versatility of the AXYZ oscillating and tangential knife cutting units allow an expansive range of material to be processed with ease and precision. Combine a routing spindle with an automatic toolchange and add one or more knife tools for maximum flexibility to process a massive range of rigid and semi-rigid sheet materials.



For applications that need a greater vertical clearance such as mould making or three dimensional carving, the standard 150mm gantry height can be extended to 250mm, 300mm or even greater.



Pendulum processing allows truly continuous production by splitting the process area into two virtual zones so that a sheet can be processed on one zone while parts and waste from the other are removed.



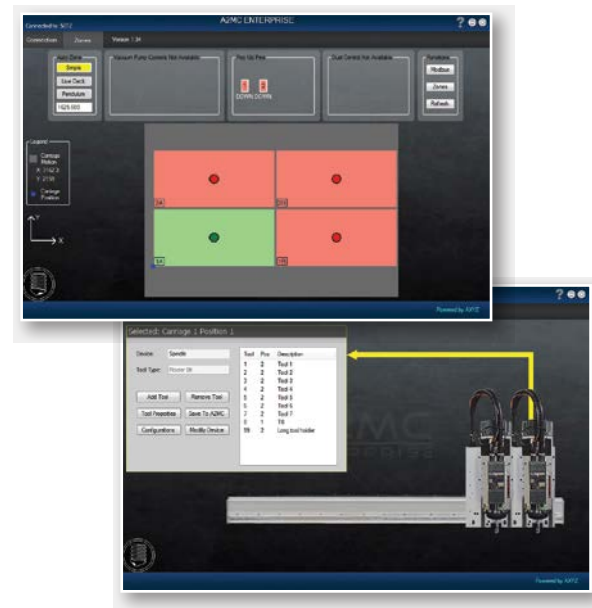
The twin carriage option enables you to copy cut two parts at the same time, effectively doubling production capacity and enabling a faster turnaround on jobs.

# A2MC Machine Controller

The A2MC is a next generation of machine control systems and is standard on all Infinite Series machines. With high-capacity, solid-state storage, there is plenty of room for programs which run fast and smoothly on the dedicated motion processor. The A2MC connects the machine to your local area network for instant and error-free program download and also includes a full remote diagnostic capability for fast support, system updates and application training.



The AXYZ SmartConsole brings unprecedented ease of use, context sensitive menus, real-time display of machine status and many more time-saving, functional and productivity features. It provides a graphical preview and current status of a running job and allows program feeds and speeds to be changed without pausing the program.



The A2MC Enterprise provides a powerful and easy to use graphical interface for setting up and monitoring your machine. Using a series of Windows-based apps it has been designed to help you get the best performance from your CNC router.



The tool length sensor is used to automatically measure the length of a tool and create an accurate tool length offset. This saves you time and ensures precise and consistent cutting depths with all tools.

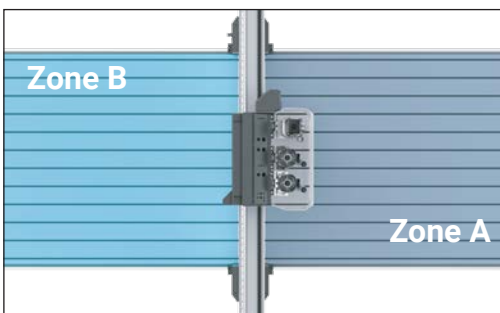




The innovative design of the aluminium vacuum bed allows zoned areas to be opened or closed as needed. Flat sheet materials are held as securely as possible while cutting problems caused by movement or vibration of the materials are virtually eliminated.



Auto zone management allows the router to operate in Live Deck mode which will automatically activate and deactivate zones according to the live position of the cutting head.



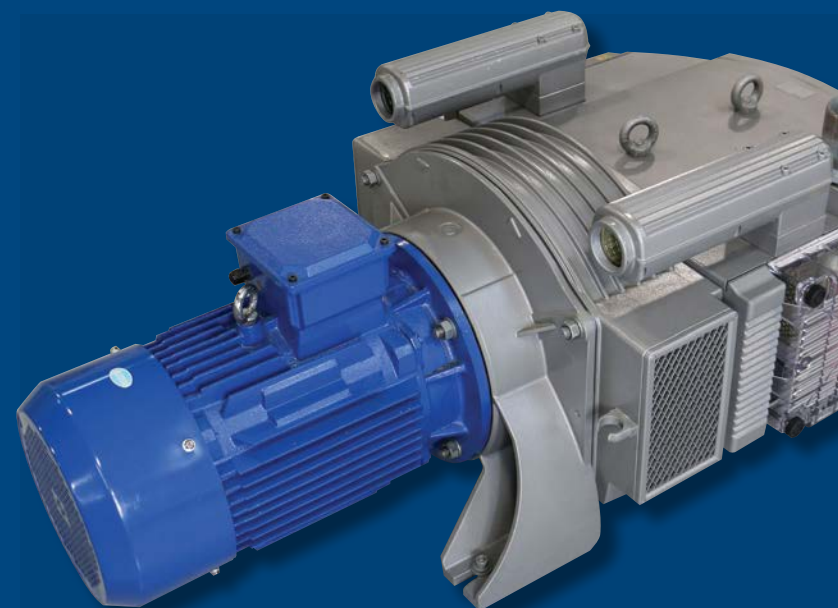
Pendulum Processing mode allows continuous production on two virtual beds. Eliminate machine downtime in between jobs to achieve up to twice the productivity.

# Hold Down Options

Holding the workpiece securely is an essential requirement. Infinite Series machines provide a choice of deck construction, zone configuration and control options.

Choose from a range of pumps and blowers to suit your applications.

Custom hold down solutions can be supplied for more challenging applications.



# Features



## Gantry Height

The standard 150mm gantry height can be changed to suit specific needs.



## Router Spindle Options

Choose from manual, quick-release, high-power and high-speed spindles for optimum processing of rigid sheet materials.



## Tool Length Sensor

An automatic tool length sensor which maintains accurate and consistent cut depths is fitted as standard on all AXYZ machines.



## Automatic Tool Changer

The industry leading automatic toolchange systems feature a closed, protected design for safe and fast processing of complex jobs.



## Zone Controls

Vacuum zones can be switched with manual valves or automatically by the machine controller.





### Choice of Knife Tools

Various knife tools are available to process a range of flexible and semi-rigid materials.



### Drive System

Choose from standard or helical racks for your choice of productivity and precision. The Z axes feature precision ballscrew drives as standard.



### SmartConsole

Full machine control at your fingertips for fast and easy machine setup in an intuitive and compact package.



### Zoned Vacuum Bed

All XYZ machines have high pressure aluminium zoned vacuum decks to maximise hold down and reduce waste.



### Solid Machine Base

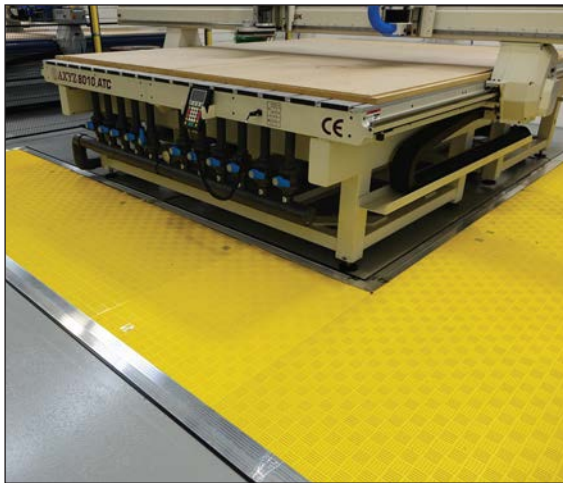
A rigid, welded steel frame, fitted with an aluminium deck, creates a strong structure to support the most demanding processes.



INFINITE 6010

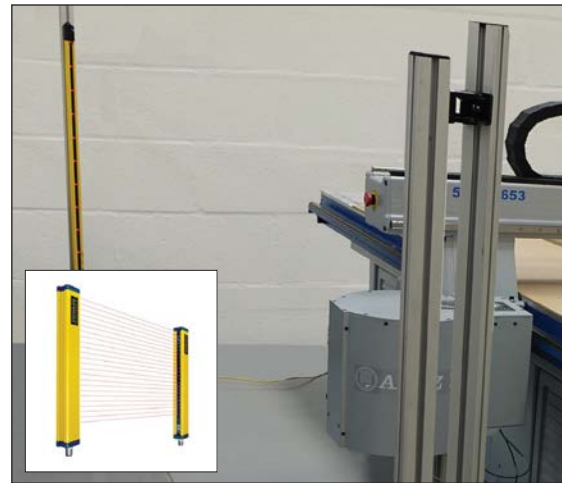
# Safety Options

Safety is an important consideration for all CNC Router installations. Depending on machine placement and application, one or more different types of guarding methods may be most appropriate. We offer a choice of safety solutions which can be used alone or as a combination to meet your unique requirements.



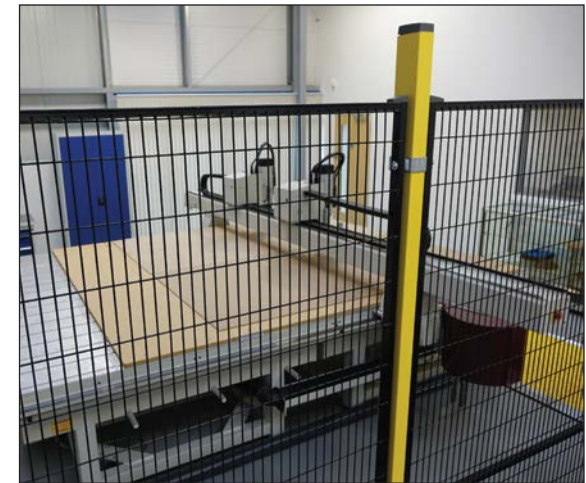
## Pressure Sensitive Mats

Pressure sensitive mats are presence sensing safety devices (PSSD) used to monitor protected areas. Primarily used where other types of guarding may be deemed inflexible or impractical. Pressure sensitive mats can also be used in conjunction with alternative safety solutions such as an interlocked fence or light curtain for complex installations.



## Safety Light Curtain

Safety light curtains offer a cost effective and reliable safety solution to prevent access into hazardous areas. Each curtain has built-in guarding, the narrowest exposed lens surface in the industry, and are designed with recessed impact resistant housing that prevents damage from parts, tools and equipment.



## Fences

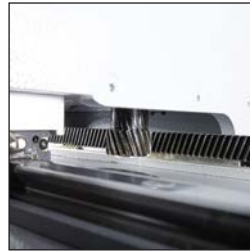
Steel mesh fence guarding is a robust and versatile safety option which is supplied in 1m sections complete with posts and mounting fixings. The fences can be used in conjunction with pressure sensitive mats and light curtains to provide a complete safety solution for every machine configuration.

# Configuration Options



## ATC - Automatic Tool Changer

Combined with an HSD quick release spindle, and using an automatic carousel with 7, 10, 14, 21 or 33 positions, the ATC system is the fastest method of changing tools on a regular basis.



## Helical Rack

These are designed to provide superior high-speed performance and will deliver greater accuracy, smoother cutting and quieter running, making them suitable for use in all high precision and demanding applications.



## Multiple Tools

Choose a single, double or even triple-head carriage for multiple tasking operations, popular for applications that typically require only two or three tooling processes. Rout, profile, trim and drill in a seamless sequence.



## High Performance Option

The High Performance Option enables the machine to run up to 50m/min, delivering shorter job cycle times and greater throughput capacity.



## Long-Stroke Carriage

This allows you to machine thin materials with short tools but also process thicker materials with long-reach tools. A popular option for applications such as mold making and three dimensional carving.



## Multiple Carriages

To improve efficiency, multiple carriages can be mounted on one gantry to allow you to run multiple versions of the same job. Each carriage is independently driven to maintain part accuracy.



## Extended Gantry Length

Extended gantry lengths allow for full processing width when utilising wider carriages that accommodate multiple tools. They can also be utilised for custom cutting where "off-the-table" material processing is required.



## Direct-Drive Servo Motors

Delivering high speed and high torque using a precision direct-drive planetary gearhead transmission. For high-volume applications where cycle times need to be kept to a minimum, the servo drives can help boost productivity.



## Extended Gantry Height

For applications that need greater vertical clearance such as mold making or 3D carving, extended gantry heights of 200mm, 250mm, and 300mm are available.



## Heavy-Duty Steel Gantry

For situations that benefit from the greater mass of a steel gantry, our heavy-duty steel gantries are available for any Infinite Series machine.



# Cutting Options



## Quick Release Spindles

5 HP and 10 HP HSD quick release spindles are incredibly quiet and robust. With a simple yet powerful pneumatic quick release feature, they can be operated manually or with our ATC automatic tool changer.



## Collet Spindles

The Elite line of collet spindles are precision balanced for fast, clean cutting and ultra-quiet operation. Available in 3, 5 and 10 HP models, their excellent design provides years of trouble free use.



## Pneumatic/Electric Drills

Fixture mounted tools that combine linear feed and rotation for drilling operations. Available with pneumatic feed and either pneumatic or electric rotation.



## Multi-Spindle Drilling Head

A key productivity tool for cabinet makers, case good manufacturers, custom millworkers, exhibit and display manufacturers streamlining your production process dramatically.



## HSD 40,000 RPM High Speed Spindle

The HSD spindle operates at 6.7HP when running at speeds of 40,000RPM delivering high speed processing, while continuing to deliver excellent edge finish. Ideal for general purpose cutting of woods, plastics and non-ferrous metals.



## Kiss Cutting Knife

The Kiss Cutting Knife expands the functionality of XYZ CNC routers allowing them to cut a wider range of materials. The knife offers the same key flexibility as the Vinyl Knife Head but does not need its own Z axis.



## Heavy-Duty Collet Drag Knife

Designed to cut a wide variety of flexible and semi-rigid materials the heavy-duty drag knife can easily cut paper, cardboard, rubber up to 10mm, corrugated paper and plastic.



## Oscillating Knife

This is an important tool for any company that needs to process thin flexible materials including foam core, gator foam, corrugated plastic or cardboard delivering clean cut edges without fraying.



## Multi Purpose Tangential Knife

A robust knife intended for heavier, thicker and harder materials than other knives can accommodate. Full directional control of the blade allows straight edges, sharp corners and all radii to be cut cleanly and accurately.



## Tangential Knife Cartridge for 45° Blades

Specially designed to hold knife blades at a 45° angle and can be used to create 'V' cuts in materials such as Xanita, Reboard and others.



## Tangential Knife Cartridge for Box Cutter Blades

Holds straight, multi purpose blades suitable for cutting a wide variety of materials from thin polyester film to thick card and foam board.



## Tangential Knife Cartridge for Saber Blade

A robust, multi purpose tool ideal for cutting hard materials such as laminates, Styrene, Sintra and similar up to about 1-2mm thick.



## Tangential Knife Cartridge for Pizza Wheel

A choice of pizza wheel cartridges are available which can accommodate 50mm or 100mm diameter rotary blades. Ideal for cutting tough or abrasive materials such as gasket, fiberglass foams and insulation.



## Tangential Knife Cartridge for Creasing Wheels

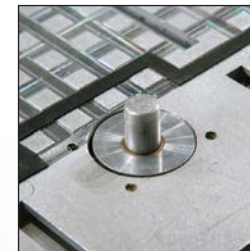
Designed to fit a range of different sized and profiled creasing wheels for use in sample making applications.

# Registration Options



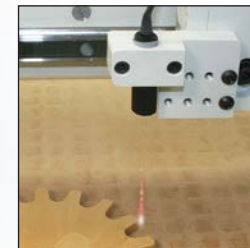
## XYZ Vision System

The AVS is a simple, low cost camera mounted on the head of the machine which when combined with a router or knife system, enables you to accurately cut out digitally printed images.



## Pop-Up Location Pins

Pop up location pins are an innovative feature which are pneumatically activated to allow fast and repeatable placement of your cutting materials onto the machine.



## Laser Digitiser

A fast and accurate way of capturing the geometry of any two dimensional part that is placed on the table and can convert existing templates and fixtures into automated cutting files where original drawings do not exist.



# Additional Options



## High Capacity Pressure Foot

The high capacity pressure foot integrates with any dust extraction system for efficient debris removal resulting in faster, safer processing.

## Pressure Foot Options



## Nose Rider Collar

The nose rider collar sets the protrusion of the cutting tool through the bottom of the foot. Perfect for accurate grooving or slotting applications in materials which may have an inconsistent thickness.



## Bellows Seal

The bellows seal significantly enhances the dust extraction process by helping to create a cyclonic vortex within the pressure foot chamber.



## Blue Glide Donut

A unique and highly durable accessory designed for low friction. It reduces friction by up to 90% allowing smoother and faster cutting and minimising the possibility of surface damage.



## The Brush Donut

The brush donut avoids any marking of the material while at the same time providing an effective solution for the removal of dust and swarf.



## Universal 5Y Pressure Foot

The 5Y pressure foot accepts 50mm or 100mm diameter hose and integrates with any dust extraction system. It allows contactless, highly efficient swarf extraction.



## Unist Mister

For cutting non-ferrous metals including aluminium, brass and copper, the Unist mister provides a continuous output of a microfine lubricant mist, providing improved cut finish and longer tool bit life.



## Vortex Cold Guns

A cost-effective option that utilises filtered, compressed air and a Venturi effect expansion chamber to produce cold air for spot cooling, providing improved edge finish and longer tool life.



## 2D Barcode Reader

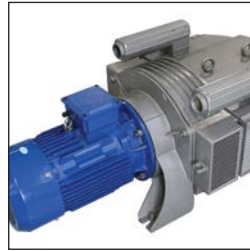
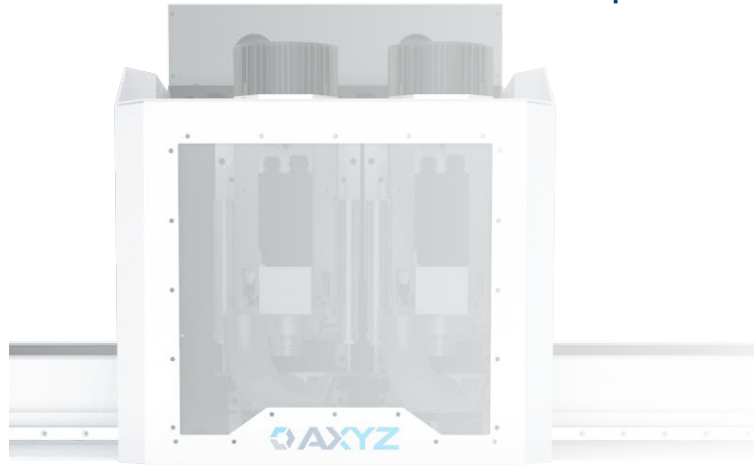
Used to automate certain machine operations such as loading programs and starting the machine. It is a fast and convenient way to improve productivity and reduce the possibility of errors and wasted materials.



## EZ Ryder

A purpose-built mounting plate option that reduces or eliminates glide vibration when nose riding. It does this by giving the operator the ability to reduce pressure foot loading by up to 100%.

## Vacuum Hold Down Options



### Becker Dry Vane Vacuum Hold Down Pump

The Becker dry vane vacuum pump is perfectly suited for vacuum hold down on all Infinite Series routers. It is a quiet and reliable source for vacuum hold down.



### Regenerative Blower for Vacuum Hold Down

The Becker regenerative blower option is a low-cost solution for vacuum hold down. Best used where cut parts are at least 1250 sq cm in size.



### Precision Spoil Board

Moisture resistant MDF spoil board. This is mechanically fixed to the T slot bed and acts as a sacrificial diffuser. It can be skimmed to provide a stable and flat working surface and is user replaceable.



### Auto Zone Management

Allows the zoned vacuum system to operate in Live Deck, Pendulum Processing or independent switching modes. Live Deck will automatically activate and deactivate zones according to the position of the cutting head.



## Dust Extraction Options



### Vacuum Manifold

An automated solution for multi head machines allowing focused debris collection at the active head, without the need to run multiple vacuum extraction lines to the table or manually open and close vacuum hose valves.



### Vacuum Arm

The vacuum hose steel support arm effectively and conveniently provides a third hand in supporting the dust extraction vacuum hose. The swivelling vacuum arm allows for snag-free, full process table operation.



### Mucksucker

A large capacity, general purpose extraction system which incorporates a cyclonic facility allowing the collection of substantial volumes of material and is ideal where heavy duty pick-up is required.

