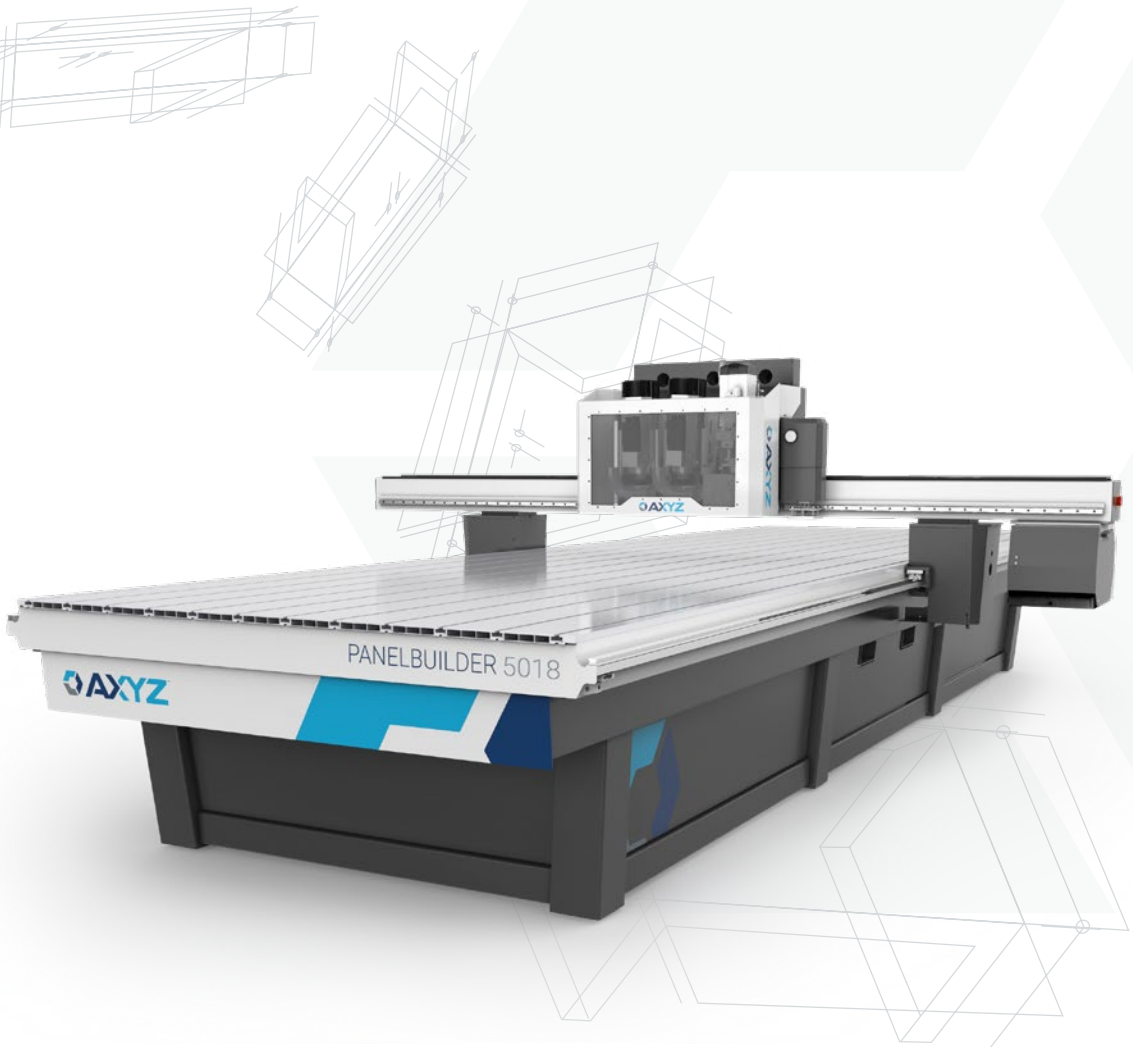




*The World's Leading
Panel Fabrication System*



WXYZ Automation Group is a leading global manufacturer of CNC router, knife and waterjet systems. Designed and built at our state of the art factory in Canada, WXYZ CNC routers are supplied and supported through a global network of sales and support offices and authorised dealers. With the widest range of standard machine configurations in the industry, WXYZ specializes in matching machinery to customer's unique needs and budgets.

FAST

WXYZ has changed the whole concept of speed when delivering a customized machine. With our exceptional manufacturing processes, WXYZ offers the shortest manufacturing lead times in the industry.

FLEXIBLE

One of the greatest strengths of WXYZ is the ability to configure a machine to suit specific manufacturing needs. The ability to produce our own machine controller has made the impossible possible, passing the benefits onto both new and existing customers. WXYZ offers a range of configurations to meet almost any application requirement, and despite this flexibility, our refined processes have ensured there is no compromise on quality.

DIRECT

We have sales and support offices in Canada, the United States, the UK, Poland and India, enabling us to directly interact with more than 90% of our customers. Our dedicated sales team have the skills and knowledge to provide customized customer service, and answer any questions in a convenient location.

OVERVIEW

One Process One Solution

The PANELBuilder system for ACM/MCM, High Pressure Laminate and Fibre Cement Board fabricators is designed, built and delivered by XYZ, a global leader in CNC Routers. Hundreds of fabricators big and small around the world have invested in their manufacturing facilities by installing PANELBuilder CNC Routers. With a low cost of entry and high return on investment, it is easy to see why.

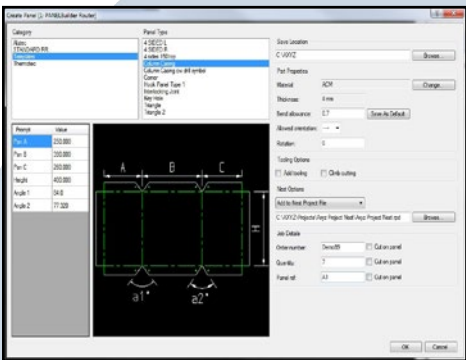
The solution comprises both software and hardware which work seamlessly together for fast and efficient production.



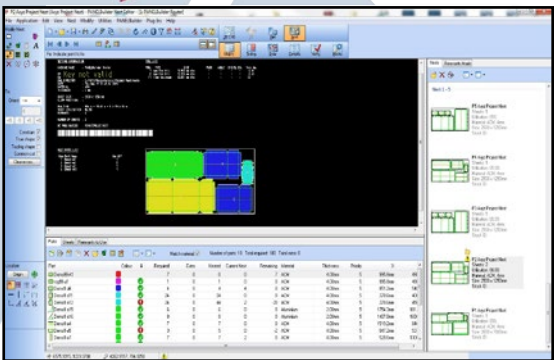
Software

The AXYZ PANELBuilder comes with exclusive software developed specially to meet the needs of panel fabricators worldwide. If you're an existing CAD user, you'll appreciate the easy integration with your CAD system for flexible nesting, automation and machine programming functionality. If you're working on large projects, the PANELBuilder's ability to create panels automatically from spreadsheet data will prove to be a huge timesaver. Hundreds of panels can be created in seconds simply by importing data on a spreadsheet. This includes information about the panel type, dimensions, material, grain direction requirements and more.

Define panels from library of parametric templates.

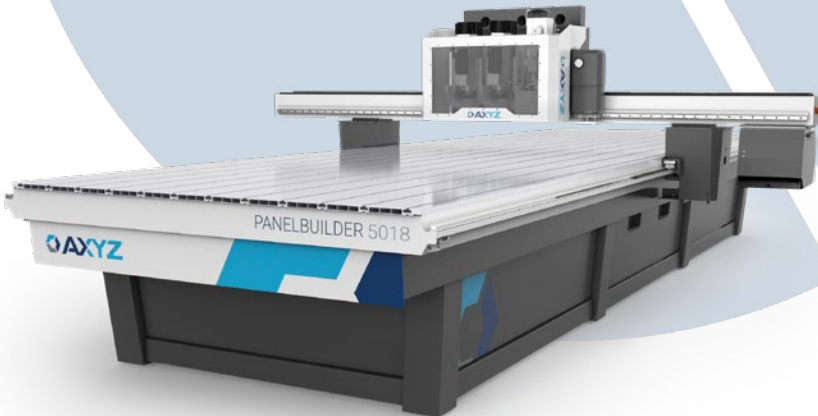


Optionally add panels created in other software eg: AutoCAD.



Manufacture on multi head machine for grooving, drilling and profile cutting.

Optional Pendulum Processing for continuous operation.



Nest for optimal production, auto programming and job sheet creation.

Machine System

The **PANELBuilder** CNC Routers from **AXYZ** are designed specifically for processing large volumes of ACM/MCM, High Pressure Laminates and Fibre Cement Board sheets in the fastest and most efficient way possible.

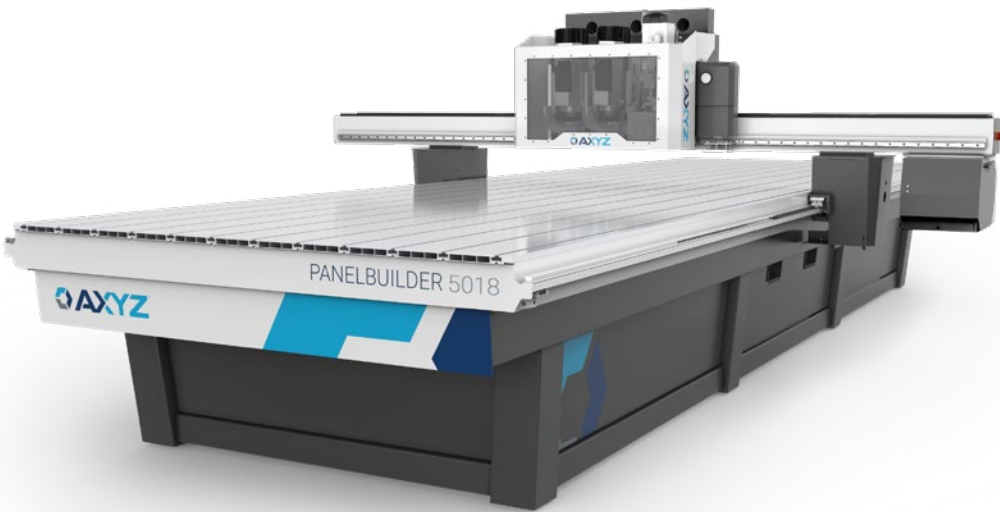
The machine itself can be configured to suit your exact needs. Process areas can be selected from 60" x 120" (1,524 x 3,048mm) to a massive 85" x 480" (2,159 x 12,192mm) or longer in increments of 24" (600mm), allowing one or more standard size sheets to be processed at once.

A typical **PANELBuilder** Router will have two or three cutting heads which allows a virtually instant change between tools used for grooving, drilling and profile cutting and eliminates the need for an automatic toolchanger system.

Alternatively, a single or twin head setup working with an automatic toolchanger can also provide a flexible solution and may be more suitable for some requirements. In addition there are a wide range of optional features and accessories which you can choose from to create your ideal solution.

Typical **PANELBuilder** Systems

AXYZ 5018 **PANELBuilder** System



TYPICAL PROCESS AREAS

72" x 216" (1,842mm x 5,486mm)	72" x 408" (1,842mm x 10363mm)	84" x 216" (2133mm x 5486mm)
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- **Head Configuration:** Up to three 5 or 10 HP router spindles and/or Saw head
- **Chip Extraction:** Three high capacity pressure feet for efficient chip and dust removal coupled to an auto switching manifold.
- **Depth Control:** Two or more floating head nose riders for accurate depth control
- **Material Hold Down:** High performance vacuum pump for safe and secure material clamping while cutting.
- **Material Location:** Automatic pop-up pins for precise material alignment.

Alternative Head Configurations

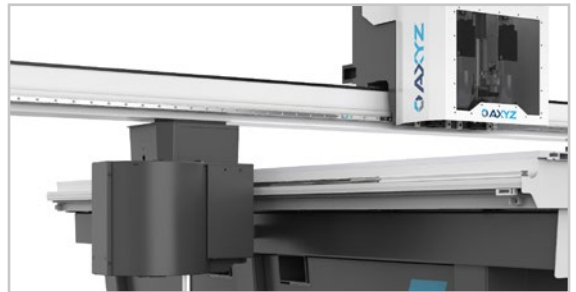
1 Carriage with 2 or 3 Spindles

Three router spindles mounted on a single carriage to allow processing of jobs requiring up to 3 tools with no downtime for tool changing.



1 Carriage with 2 Spindles and Auto Toolchange

A single 5Hp ELTE spindle mounted adjacent to a 10Hp HSD spindle which works with the Automatic Tool Changer. This provides an extremely versatile configuration suitable for working with a wide range of materials and applications.



Saw Device

Designed for high speed straight line processing of a wide range of materials including Composites, High Pressure Laminates and Fibre Cement Board.



Spray Mister

An automatic spray mister unit which can be used to apply lubricant and coolant when required for processing certain materials, eg: solid aluminum sheet.



Software

Other PANELBuilder Features:

Batch Drawing Import

If you have a lot of panel designs supplied by a customer or created in other CAD systems these can be easily imported using industry standard DXF and DWG formats.

Multi-Panel DXF Import

Automatically imports and separates multiple panel drawings within one DXF file.

Auto Scrap Cut Lines

Where scrap is unavoidable, the machine can be programmed to automatically cut this into smaller pieces for removal and disposal.

Tool Library

Tooling is easily defined and saved in a library for use on all projects.

Cut Sequencing

The order of cutting is automatically set by PANELBuilder but can be manually adjusted if required.

Labelling

Automatic label generation makes it easy to identify and keep track of manufactured panels at later assembly and finishing stages. Labels can be printed or even engraved on the panel and barcode labelling is also supported.

Automated Label Printer

The optional Automated Label Printer accessory is a fast and accurate method of panel identification. Comes with standard or user-definable label locations, templates and defined label generation.

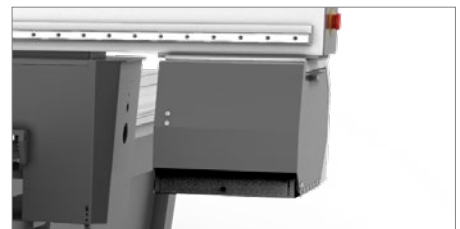
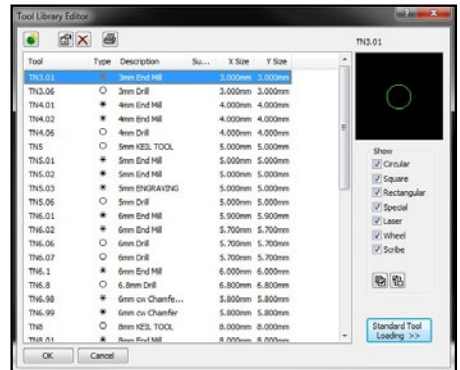
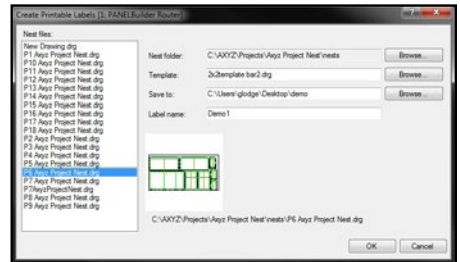
PANELTracker

Optional management reporting app for tracking the progress of projects and managing recutting of damaged panels.

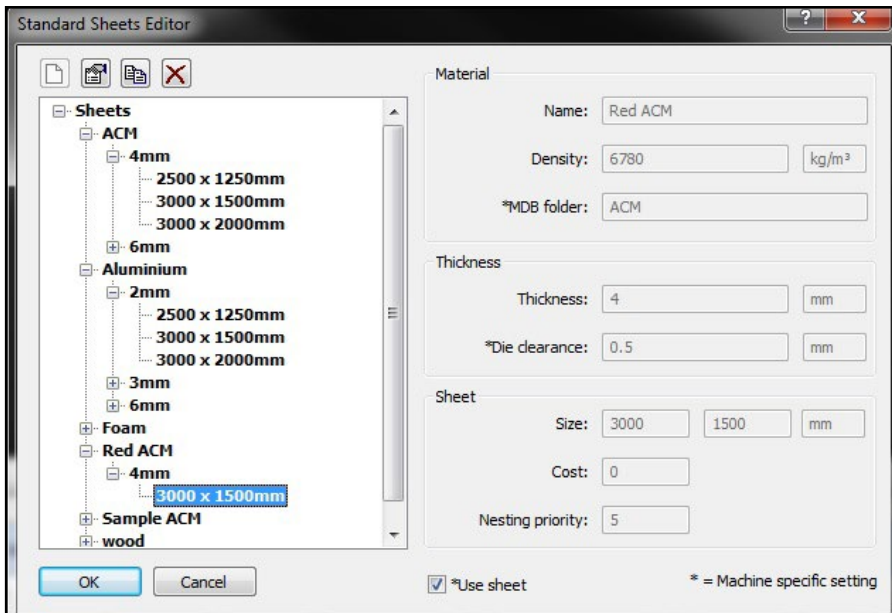
Material Library, Remnants and Filler Parts

As well as providing very efficient nesting of parts, PANELBuilder offers additional functionality to substantially reduce waste and cut costs.

- A library of standard material types and sizes is maintained with stock levels automatically updated globally as well as on a project basis. This ensures you always have the right types and quantities of material available at all times.
- Often it is impossible to fully utilize a standard size sheet of material on a particular job. Leftover sheets remnants can be automatically stored and used up on subsequent jobs where possible.
- A useful 'filler parts' feature provides another way to reduce waste by automatically cutting extra copies of commonly used parts in any leftover areas of a sheet.



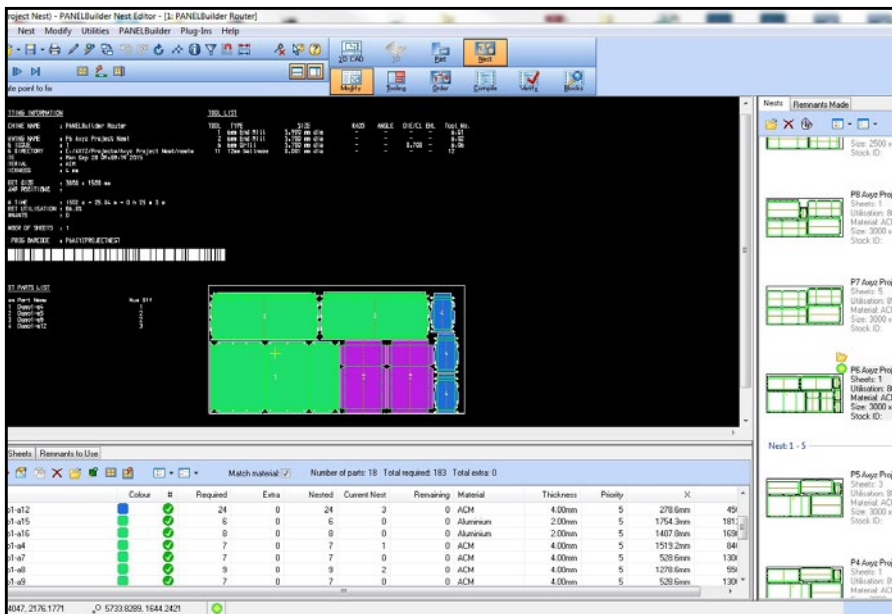
Software



Automated Machine Programming

Creating the NC programs for the XYZ PANELBuilder router couldn't be easier. Whatever your machine configuration the programs are automatically generated ready for downloading to the machine and cutting.

Detailed job sheets are printed for the operator to ensure the right material is loaded for each job.



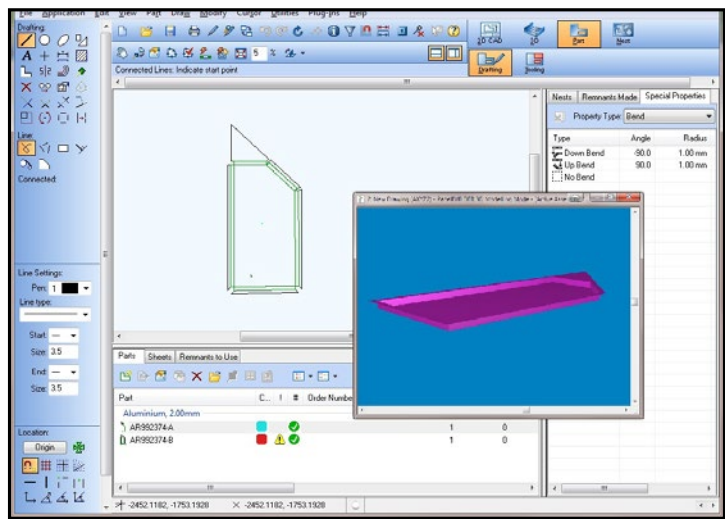
Nesting and Material Optimization

PANELBuilder contains a sophisticated nesting algorithm which can save an enormous amount of time and significantly reduce waste. The nesting process allows full control of settings such as panel orientation for grain alignment, clearance between parts, common line cutting, part priority and many more. Instant nesting feedback including material utilization allows alternative solutions to be easily assessed.

Software

The PANELBuilder Software has been specially developed by XYZ to meet the needs of Panel Fabricators worldwide.

It is a complete CAD/CAM solution incorporating all of the functionality needed for one-off or high volume panel production. Alternatively, thanks to its open architecture design it can be used in conjunction with existing CAD systems to provide powerful and flexible nesting, automation and machine programming functionality.



Parametric Templates

Create a library of standard panel templates using the built in 2D CAD system. Panels can optionally be saved as a parametric template which allows multiple copies of that panel to be constructed at any desired size with just a few mouse clicks.

Auto Panel Creation from Spreadsheet Data

This is a huge time saver on large projects and allows hundreds or even thousands of panels to be created in seconds by importing data from a spreadsheet. The data can include panel type, dimensions, material, grain direction requirements and more.

Extrusion System Setup

This setup allows you to define multiple extrusions by name or type and facilitate the fabrication of panels by defining extrusion lengths. Available options for reduction or mitre of extrusion is based on panel fabrication in use.

Extrusion Library					
Extrusion Types Extrusion Type Usage <u>Advanced Usage</u>					
Name	Type	Thumbnail	Reduction	Mitred	
Default	Angle		0	☐	Add
Top	Dox		0	☐	Delete
Bottom	Channel		0.25	☒	
Left	Channel		0.5	☐	
Right	Angle		0	☐	
XYZ-EXTRUSION-MARKER	Angle		0	☐	
STIFF	Rectangle		1	☐	

Machine Options



Spindles

Our spindles are precision balanced for fast, clean cutting and ultra quiet operation. Operating at variable speeds up to 24,000rpm with high speed bearings, their excellent design provides years of trouble free use. We feature ELTE & HSD brand spindles in 5 or 10 HP models.



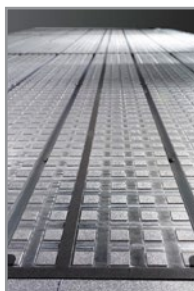
Automatic Tool Calibration

All PANELBuilder machines include an automatic tool length sensor. This is extremely useful for multi tool machines by providing an easy to use and highly accurate method of setting tool bit heights at the press of a button.



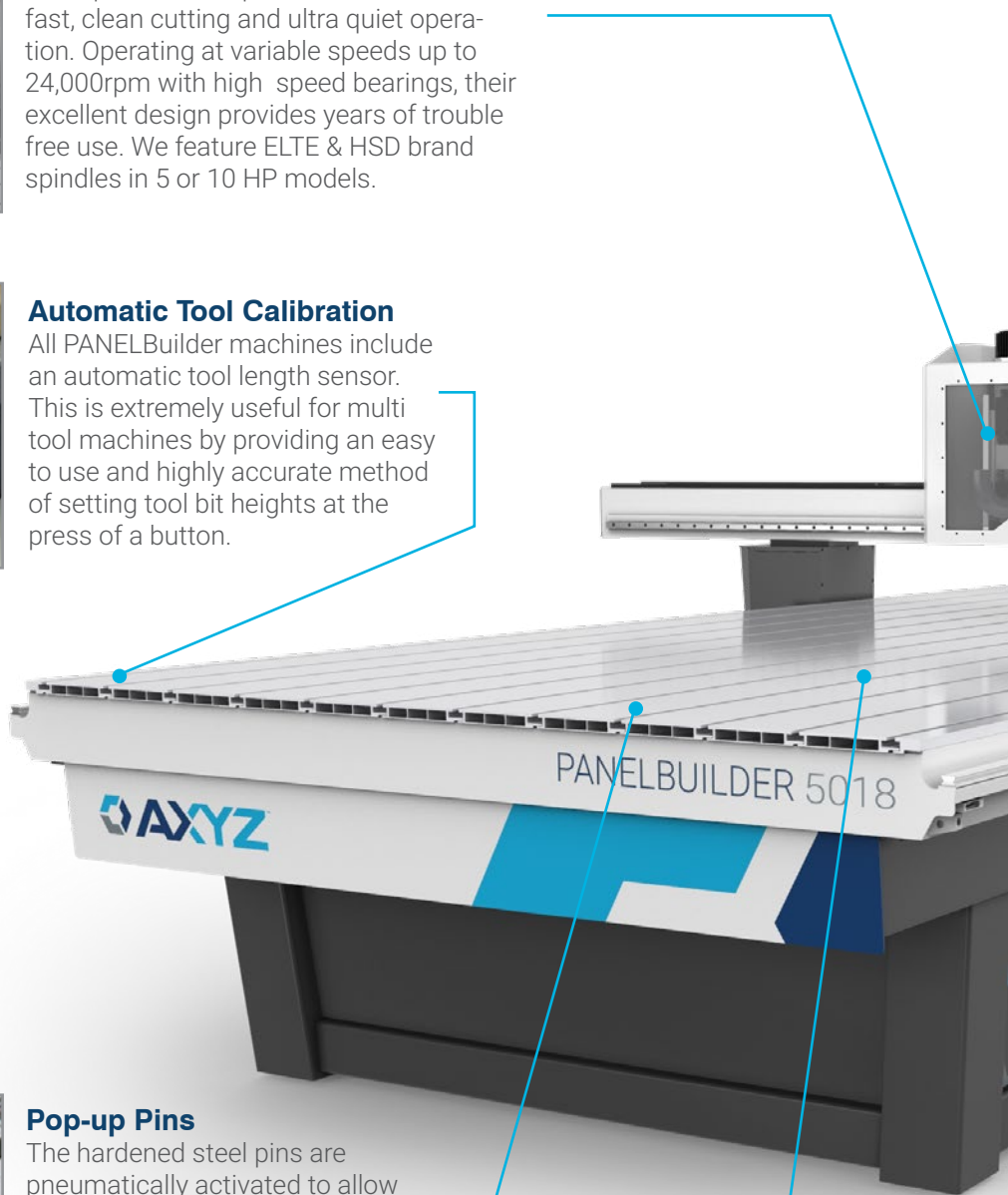
Pop-up Pins

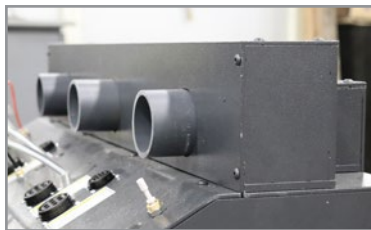
The hardened steel pins are pneumatically activated to allow fast, repeatable placement of your cutting materials on the machine. Pop up pins can be fitted in both front and rear locations for pendulum processing operation.



Aluminum Vacuum Deck

This innovative design allows zoned areas of the surface to be opened or closed to vacuum hold down as needed. The deck system is also functional as a t-slot clamping and fixturing bed for non-vacuum hold down situations.





Vacuum Manifold

The vacuum manifold is available for twin and triple head configurations. It contains fully automatic valves for switching suction to the currently active head. Waste extraction is extremely efficient and reduces the need for manual debris removal.



Automated Label Printer

The Automated Label Printer is an optional device which can be fully integrated with your PANELBuilder machine for quick labelling and identification of individual panels as they are machined.



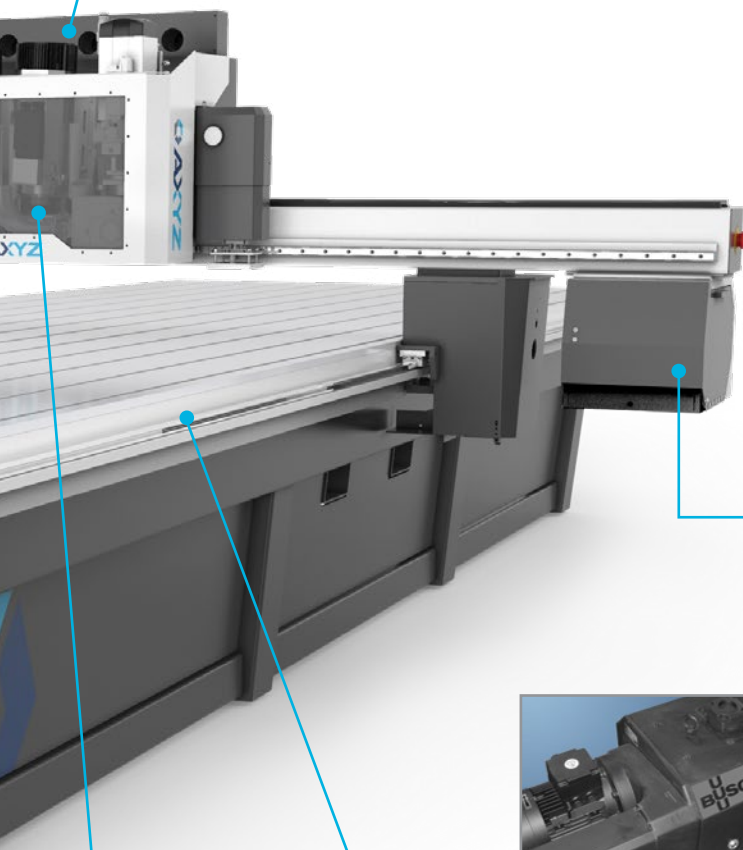
Hold Down Vacuum Pump

A maintenance free vacuum pump with high efficiency for powerful material clamping while cutting.



High Capacity Pressure Feet

The High Capacity chip extraction foot is a vital component of your AXYZ CNC Router. The pressure foot is specially designed for optimal chip extraction as well as assisting with material stability for high quality of cut.



Automated Label Printer

Automated Label Printer

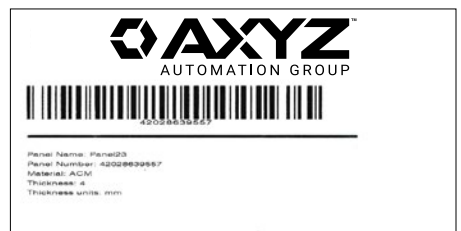
Manually writing product codes or applying pre-printed labels onto individual parts is an arduous and time consuming task which is easily prone to human error. The Automated Label Printer is an optional device which can be fully integrated with your PANELBuilder machine for quick labelling and identification of individual panels as they are machined.

Benefits

- Eliminates problems and potential errors associated with the manual labelling approach. This enables greater accuracy, easier tracking and a more productive workshop.
- Can print 1D or 2D Data Matrix codes as well as standard text. When used with the 2D Barcode Reader, this enables accurate production data to be easily collected for use in management information systems such as PANELTracker.
- Minimal impact on production times. Data is automatically included in the program output from PanelBuilder software

Features

- Fast print and apply speed
- Can print up to 32 characters ID barcode
- Works with the AXYZ 2D Barcode Reader
- Compatible with PANELTracker software V.19
- Permanent, semi-permanent adhesive labels available.



PANELTracker

PANELTracker

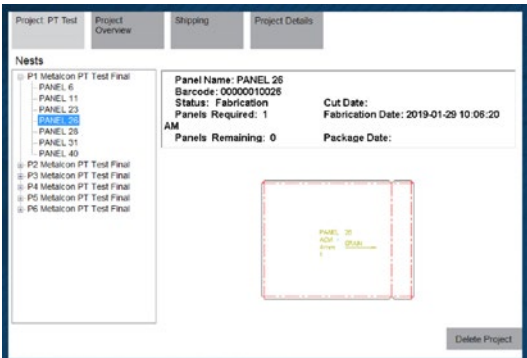
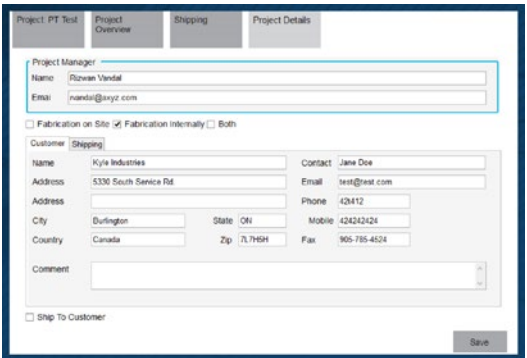
PANELTracker is an integrated application that provides valuable project information for all stakeholders involved in the manufacturing process. Wireless barcode readers ensure data capture is fast and error free, helping production establish inventory levels and live project status.

With our continuing process of improvements with the PANELBuilder solution we've come up with a better way to help track and manage your panel production. With the introduction of PANELTracker and the Automated Label Printer (ALP), we can now generate labels from PANELBuilder that will automatically be applied to the panel. PANELTracker, a panel production control software, will help you manage the flow of panels within various manufacturing processes, with the ability to pull real-time data on panel production.



PANELTracker app provides overall project information including:

- Number of panels to be cut
- Number of panels that have been cut
- Number of fabricated panels
- Panels waiting to be shipped
- Panels to be re-cut



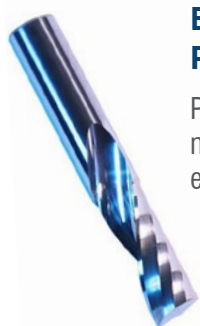
Specific Cutting Tools & Accessories

The PANELBuilder solution is designed to process all types of composite sheets materials such as Alucobond (3A Composites), Alpolic (Mitsubishi Chemical), Reynobond (Alcoa) and others.

These composites are mainly formed of thin aluminum skins surrounding a fire resistant mineral, polyethylene or honeycomb aluminum core to give an overall sheet thickness of usually 3 – 6 mm. Sometimes the skin will be some other metal instead of aluminum such as stainless

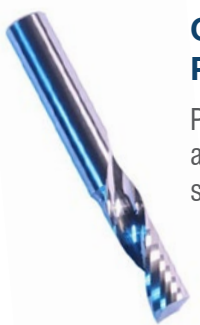
steel, titanium, copper or zinc. Many fabricators will also work with solid aluminum wall panels, usually 4 mm thick.

Specialist XYZ Application Engineers have sourced a range of cutting tools suitable for use on all of these materials which provide superior cutting performance at cost effective prices. These experts are always available to provide help and assistance if needed.



Belin Upcut ACM Profiling Tools

Profiling of 3, 4, 6 mm material producing superior edge equality.



Onsrud Upcut ACM Profiling Tools

Profiling of 0.118", 0.157" and 0.23" material producing superior edge equality.



Pressure Foot

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



Nose Rider

The Nose Rider collar sets the protrusion of the cutting tool through the bottom of the foot and is ideal for accurate grooving or slotting applications in materials of inconsistent thickness.



EZ Ryder

A purpose built mounting plate that reduces/eliminates glide vibration when nose riding.



Blue Donut

A unique and highly durable accessory designed for low friction. It reduces friction by 90% allowing smoother and faster cutting.



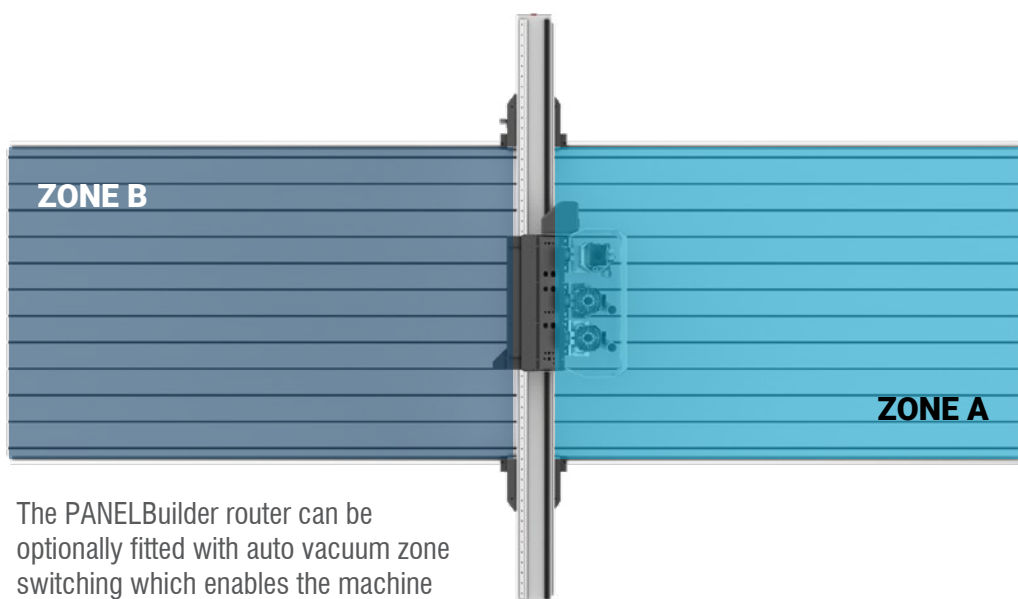
XYZ V-Cutters

V-groove with flat tip to produce the required angle and fold radius.

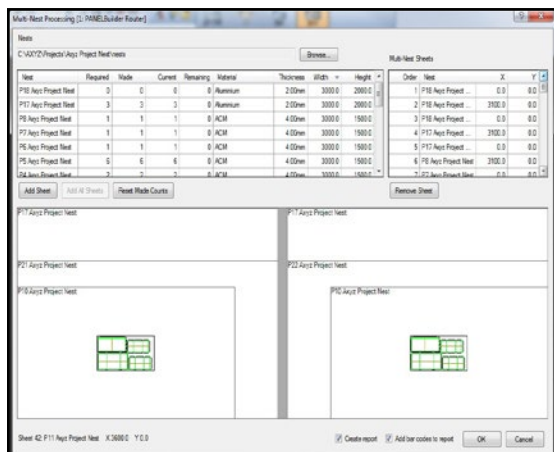
Continuous Production with Pendulum Processing

The most efficient way to manufacture panels is to keep the machine cutting at all times. This is easily achieved using the PANELBuilder **'Pendulum Processing'** feature.

This allows the machine bed to be split into 2 virtual zones so that a sheet can be processed on one zone while the operator removes the parts and waste from the other zone and a new sheet loaded ready to be cut. Automatic switching of the vacuum hold down and material locating pins are fully integrated for seamless, continuous production.



The PANELBuilder router can be optionally fitted with auto vacuum zone switching which enables the machine controller to switch bed vacuum zones on and off as required.

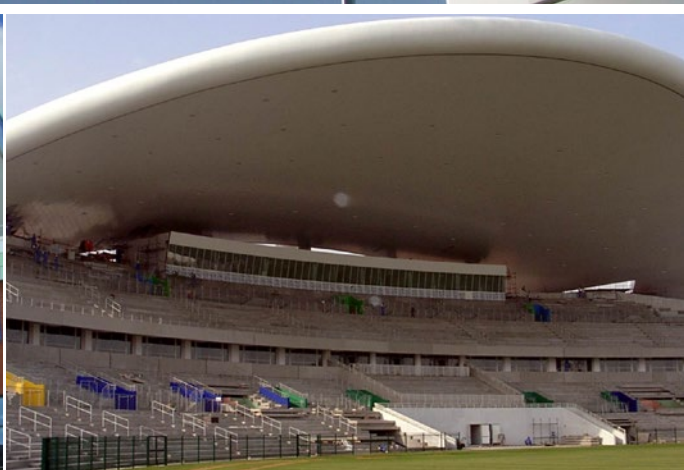


The PANELBuilder programming software provides an intuitive graphical interface for scheduling jobs to be cut on each of the virtual zones.

Auto zone switching can be easily overridden by the operator when needed for processing single large sheets of material.

Project Examples





Technical Support

Expert Operational Training Program

To fully harness the power of the PANELBuilder System, your team will be trained by our professional training group.

Each PANELBuilder System includes a comprehensive installation and training program. This ensures your design and fabrication team are capable of programming your new CNC Router with PANELBuilder software and can operate the machine safely and confidently.

Additional training is available through any of our locations across North America, Europe and the Middle East.



Professional Technical Application Support

The PANELBuilder system is a result of years of testing and field interaction with fabricators in the panel cladding industry. Technical and application support is available from your local XYZ Customer Care Team. Our team of experienced service engineers will help you get back into production as soon as possible.

*Call today for more information on how a **PANELBuilder** System can work for you.*

Our Sales Specialists will work with you to identify your specific application needs, and provide an accurate quotation for the system most suitable for your business.

*For more detailed information and videos showing PANELBuilder machines and software, visit our dedicated website at:
axyz.com/panelbuilder*





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