

GENESISRANGE



BLACKMAN & WHITE LTD
UNIT 8
THE STREET INDUSTRIAL ESTATE
HEYBRIDGE
MALDON
ESSEX
CM9 4XB
UNITED KINGDOM

T: +44 (0) 1621 843 404
F: +44 (0) 1621 842 115

WWW.BLACKMANANDWHITE.COM

THE TECHNIQUE OF CUTTING



GENESIS2200/2300

Durable and impressively versatile, the Genesis range offers a wide scope of cutting and marking technologies for the majority of cutting needs. Driven by tried and tested industry led software, cut parts can either be designed, imported or reproduced from templates by digitising, automatically nested to optimise material efficiency, and then cut to high levels of accuracy and speed.

Configured to order and manufactured in the UK, the Genesis range comprises 3 machine options – the **Conveyorised Genesis 2300**, the **Flatbed Genesis 2200**, and the **Genesis 2200 Laser**. With a broad range of cutting widths, the Genesis can be tailored to seamlessly integrate with, and optimise production.



SOFTWARE

Our machines are powered by tried and tested software solutions.

Liaising closely with our customers, we choose the software package specific to their needs. The software range we offer is broad, each one offering a cutting-edge solution.

For leather cutting, scanning and projection systems aid operator nesting. Job inventory control and part number projection then enables fast and efficient hide processing.

Pattern scanning enables rapid pattern production from templates created on almost any type of material. Manipulation by Computer Aided Design allows for compensation for curve correction and line straightness. In addition, notches can be created and the parts checked for mirror symmetry.

For high-volume production demands, a system fully integrated into the production process is required. The operator has the flexibility with our software to automate nesting from a batch list on almost any database package.

Powerful software allows for import filters from all popular 2D and 3D modelling packages. Automatic part identification with an ink jet marking unit then eliminates any need for manual marking.

Design variables such as material stretch and distortion under load as seen in the Tensile structures industry require complex calculations and modelling. Inexpensive advanced plug in modules model the design with optimal material usage. This software also supports unwrapping of 3D models to 2D panels, popularly used in the marine industry for creating covers.



TOOLING&MARKING

With both passive and driven cutting options complementing a range of marking and labelling technologies, Blackman & White offer an unrivalled breadth of tooling to cut the majority of applications.

Knife Cutting: To suit the materials which are being cut, customers have the option of rotary or fixed blades on a multi-tool head as well as the unique self-sharpening driven 'pizza' wheel and oscillating blade. The quickly interchangeable nature of the tooling gives the operator optimal cutting flexibility with a high degree of time efficiency. This versatility allows for a wide range of applications from PVC sheeting and composites to aramids such as Kevlar. Another exciting development, unique to Blackman & White, is the ability to simultaneously knife and laser cut on the same machine reducing floor space and the need to procure a separate machine for each function.

Laser Cutting: The laser option on the Genesis 2200 static table and Mastercut further enhances the cutting possibilities. This comes with a 50, 100 or 200 watt power option and ensures an immaculate finish on materials needing to be cut cleanly and accurately and requiring a sealed edge. The laser unit's lightweight construction allows it to be carried on the gantry with no reduction in speed or movement.

Digital Pattern Recognition: A digital camera option is available to automatically align cut patterns to a digital print – a particularly popular option for digital printers and signage manufacturers. The software cleverly compensates for material to stretch and skew so that jobs can be loaded on to the machine and processed automatically without any operator intervention. This can be operated in conjunction with the 5 metre wide cutter with cutting widths of up to 5 metres, ideal for wide format digital printing.

Ink Jet printing and Ink Spray Printing: All cutting machines offer a pen holder for part marking as standard, but for more advanced requirements for print marking and labelling, ink jet and ink spray marking tooling can be integrated onto the machine for identification of cut parts.

Abrading of Hypalon materials: The Blackman & White Abrading head, specifically designed for the manufacture of rigid inflatable boats, is a recent highly popular tooling option which has been added to the range of tooling. This enables cutting and then sanding to optimise adhesion.

Label placing: This is an invaluable option for placing adhesive labels to component parts. Software driven, this has proven to be extremely effective for part identification and is available on the Genesis static bed and Mastercut.

GENESIS2300 CONVEYOR

With the benefits of huge cost savings and productivity increases and with a minimal floor space requirement, the **Genesis 2300 Conveyor** blade cutter continues to receive excellent reviews from customers. Working with the Blackman & White Genesis 2300 they have taken their capabilities to the next level.

The **Genesis 2300 Conveyor** blade cutter offers multiple tooling options on a moving bed for streamlined knife cutting, optimising time and operator efficiency. The conveyerised bed and continuous feed facility means fast loading and unloading of material of up to 4 metres wide, and cutting of longer shapes limited only by the length of the material roll. Material is held onto the table by vacuum, holding it in place securely to enable fast and accurate cutting. Optional vacuum zoning significantly improves energy efficiency by focusing the vacuum according to the parts which are required to be cut.

With a cut speed of up to 1500mm per second, tooling can be powered or unpowered to suit the types of material being cut. Unpowered fixed knife and creasing tool on a twin cutting shaft offer a heavy duty mass production solution for some materials, whilst the powered ACTI-V tooling suite features an easily interchangeable range of 'drop in' tools. The powered driven wheel and vibrating knife, hot knife and 45 degree bevel heads are some of the options within this tooling suite giving superb repeatability and capability for high volume production on a range of materials. In addition, routing and rotary punch options are ideal for more demanding applications.

For part marking, a penholder comes as standard on the machine. For more involved marking requirements, an inkjet printer or ink spray can be mounted. A label printing and placing option is also available for non-permanent part labelling.

SPECIFICATIONS

Features	Comment
Twin cutting heads	Tangentially steered tools
Fixed knife	Steel or carbide blade
Rotary knife	Pizza wheel style
Plotter penholder	
Rotary punch	Optional
AKTI-V tooling	Driven wheel / Oscillating knife
Laser cutter	Available on laser gantry
Router	Optional
Inkjet printer	High speed part marking
Vacuum bed	Heavy duty side channel vacuum pumps Automatic vacuum control for material framing.
Safety cut off switch	Safe edge system
Cutting widths	1.5m up to 3.2m
Cutting frame lengths	1.6m up to 6m
Maximum cutting speed	1750mm/sec



GENESIS2200 BLADE

Aspiring to high levels of productivity and efficiency, customers globally have chosen the Blackman & White **Genesis 2200** blade cutter for its cutting edge capability configured to their requirements. With an impressive portfolio of cutting solutions including 80 metre length machines and the only simultaneous laser and knife combined cutter, Blackman & White prove that durability, reliability and customer satisfaction come as standard on the **Genesis 2200**.

The Genesis 2200 represents cut accuracy and speed on a fixed bed for materials up to 5 metres wide. Powered by software offering design and nesting capability, the **Genesis 2200** offers cutting edge technology that moves with the times.

Like the conveyerised **Genesis 2300** table, material is clamped onto the table by vacuum which secures single layers of material for fast and accurate cutting. Optional vacuum zoning means that the vacuum can be focused in a particular area, increasing energy efficiency.

With a cut speed of up to 1500mm per second, tooling can be powered or unpowered to suit the types of material being cut. Unpowered fixed knife and creasing tool cutting on a twin cutting shaft offer a heavy duty mass production solution for some materials, whilst the powered ACTI-V tooling suite features an easily interchangeable range of 'drop in' tools. The powered driven wheel and vibrating knife, hot knife, and 45 degree bevel heads are some of the options within this tooling suite giving superb repeatability and capability for high volume production. In addition, routing and rotary punch options are ideal for demanding applications.

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SPECIFICATIONS

Features	Comment
Twin cutting heads	Tangentially steered tools
Fixed knife	Steel or carbide blade
Rotary knife	Pizza wheel style
Plotter penholder	
Optional rotary punch	Optional
AKTI-V tooling	Driven wheel / Oscillating knife
Laser cutter	Available on laser gantry
Router	Optional
Inkjet printer	High speed part marking
Vacuum bed	Heavy duty side channel vacuum pumps Reverse blow option for material loading.
Safety cut off switch	Safe edge system
Cutting widths	1.5m up to 5m
Cutting frame lengths	1.5m up to 50m
Maximum cutting speed	1500mm/sec

GENESIS2200 LASER

In the global marketplace, increasingly discerning customers require superior quality products. The **Genesis 2200 Laser** ensures that this expectation is met, enabling Blackman & White customers to stand strong against their competition.

The **Genesis 2200 Laser** cuts through single and multiple layers of material and gives an immaculate finish on materials with high speed and accuracy on a fixed bed. Where the finished cut requires a sealed edge, easily tears or frays, Blackman & White can provide either a laser or a twin gantry combined knife and laser cutting system.

Working in conjunction with market leading design and nesting software, the **Genesis 2200 Laser** offers cutting edge technology that moves with the times. Fume extraction maintains the working environment even when cutting pvc.

SPECIFICATIONS

Features	Comment
Laser power	50, 100, 200 and 400 Watt
Pen marking	Interchangeable pen system
Inkjet printer	High speed part marking
Vacuum bed	Heavy duty side channel vacuum pumps.
Safety cut off switch	Safe edge system
Cutting widths	1.5m up to 2m
Cutting frame length	1.6m up to 50m
Maximum cutting speed	1500mm/sec
Fume extraction	Custom designed filtration

Genesis 2200 Blade



Genesis 2200 Laser

