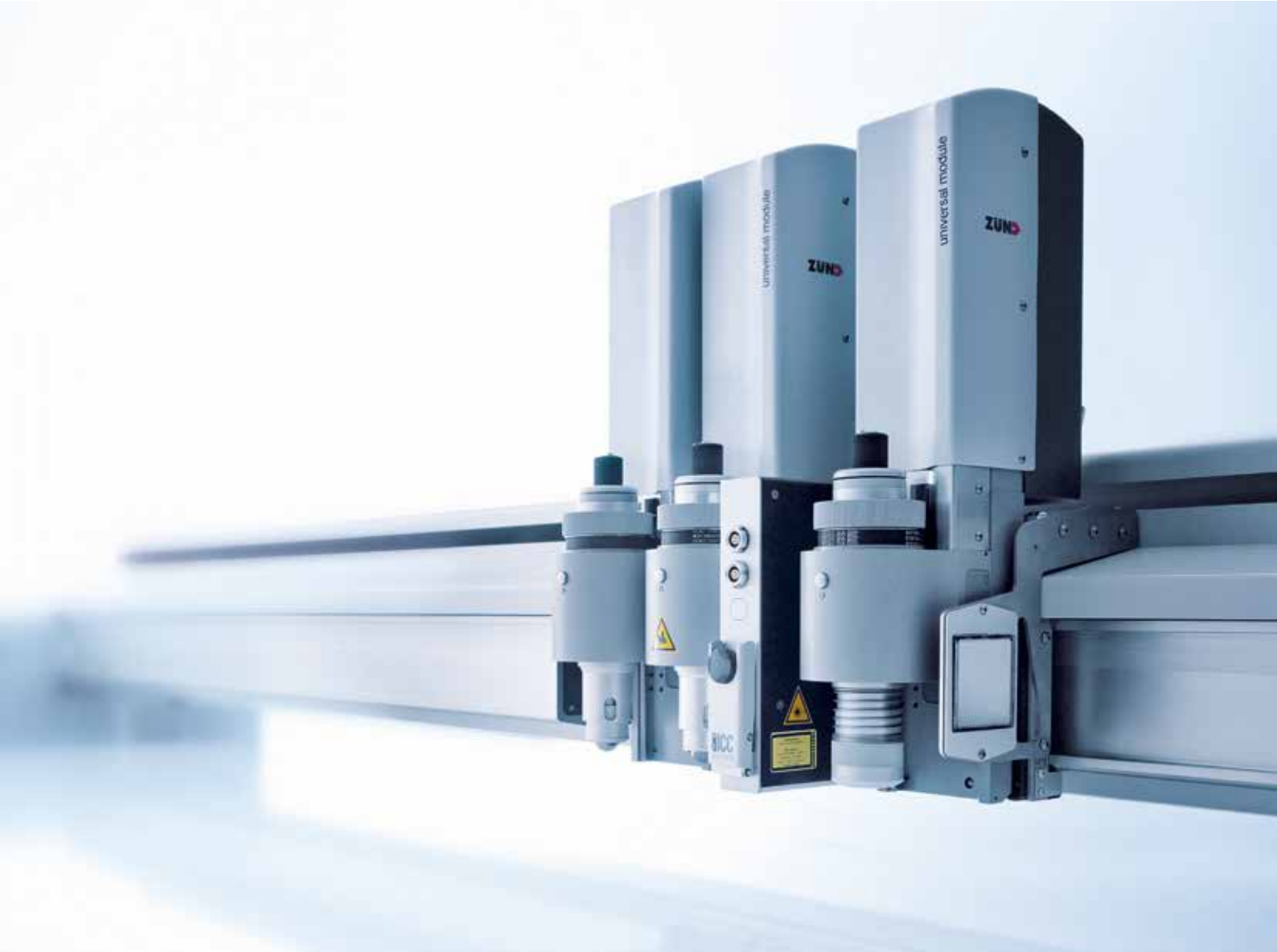


# Modules, tools, and applications

## G3 S3 Digital Cutter



Your first choice in digital cutting.

# The right modules for every application



## Universal Module

**G3 S3**

The Universal Module (UM, UM-S) accommodates a wide range of tools for many different functions. High processing speeds, stability, and proven technology distinguish the Universal Module (UM) for G3 as well as the Universal Module-S (UM-S) for the S3 line of cutters. The Universal Module makes adapting the Zünd cutting system easy and cost-effective whenever needs change. Switching from one application to another happens in a few simple steps.

A bayonet lock allows for quick tool changes. The module can operate in either pressure or position mode. A glide disk is available for both the UM and the UM-S; this option facilitates processing wavy materials.



## Kiss-Cut Module

**S3**

The main features of the Kiss-Cut Module (KCM-S) are low weight and minimal stroke, guaranteeing maximum processing speeds. In addition, this module excels in ease of use, quick tool changes, and high precision.

Depending on the application, you have the option to choose between two processing modes:

In pressure mode, the module exerts constant, user-definable pressure (between 30 and 1500 grams) on the substrate.

The top layer of pressure-sensitive materials is cut cleanly and accurately, without damage to the liner. In position mode, the tool through-cuts the material to a set depth.

The Kiss-Cut Module accommodates the universal cutting tool (CT), a cutting tool with integrated, height-adjustable glide shoe (ST), and a drawing/plotting tool (DT).



## Punch Module

**G3 S3**

The Punch Module PUM is a high-performance module designed for punching round/symmetrical holes in leather, rubber, and fabrics. Two punches operating independently permit the use of two different punch tools at any given time. This allows for creating two different hole sizes in the same job. During the punching process, the punch module presses down on the material with pneumatic force; at the same time, the punch tool simultaneously punches and rotates, creating nice, clean holes. This process guarantees high efficiency and consistent hole quality.

The PUM is capable of punching holes even in tough materials up to a thickness of 6 mm. Depending on the application, punches are available in sizes ranging from 0.5 to 5.5 mm and are made from tungsten carbide or high-speed (HSS) steel. The cut-outs are suctioned off and collected in a container at the back of the punch module. Whenever necessary, the waste container can be easily emptied and replaced.



## Marking Module

The Marking Module (MAM) accommodates various pens and drawing implements. Typical applications include plotting of dielines with ink pen on polyester, pattern marking for leather applications with silver pen, or labeling of patterns with ballpoint pen. All available Zünd drawing inserts can be used with the Marking Module. Pneumatically driven, this module offers high processing speeds and requires no maintenance.

### Variants

MAM-S: accommodates one drawing tool, pneumatic driven

MAM-D: accommodates two drawing tools, pneumatic driven

MAM-SE: accommodates one drawing tool, electric driven

MAM-DP: accommodates one drawing tool, pneumatic driven

**G3**

**S3**

Designed specifically to meet the rigorous demands of 24/7 graphics production, the G3 router module (RM-A) is the ideal module for processing rigid plastics, non-ferrous metals, aluminum composites, and many other substrates that require routing.



Excellent speed, productivity, and versatility are the defining attributes of the Zünd Router Module. A 1 kW high-frequency spindle drives the RM-A, capable of processing tough, rigid substrates up to 26 mm / 1" and softer materials up to a maximum of 50mm / 2" thick. The high frequency of the spindle in combination with the solid construction of G3 result in higher processing speeds than are possible with conventional CNC routers. This maximizes the productivity of the cutter when processing acrylics, wood, and plastics and enhances the range of materials that can be cut.

### Minimum Quantity Lubrication

Minimum quantity lubrication (MQL) permits flawless routing of solid, non-ferrous metals, such as PERALUMAN®, Signicolor® EN AQ 5754 and 3005.

### Materials and applications



**Rigid foamcore**  
Gatorboard, Forex, expanded PVC, etc.



**Acrylics**  
Plexiglass, Makrolon, polycarbonates, thermoplastics, etc.



**3D displays**



**Acrylic furnishings**



**Aluminum composites**  
Dibond, Alucore, Alubond, HyLite, Reynobond, etc.



**Wood**  
MDF, MDO, pressboard, fiberboard, veneer, and other wood products.



**Advertising and message boards**



**Table plates**

### Surface compensation

A unique surface-recognition system allows for consistent, precise engraving, v-cutting, and drilling of materials even with inconsistent material thicknesses.

### 3D routing

G3 is capable of performing simultaneous 3-axis (X, Y, Z) routing operations quickly and easily. With compatible 3D files, the G3 router can be used to produce dimensional signage.

### Dust collection

Efficient removal of dust and debris created during the routing process is critical for maintaining consistent cut quality and minimizing manual cleanup. Keeping the cutting surface clean facilitates quick changeovers between routing and cutting jobs. The suction is user-adjustable to keep small parts from being lifted or accidentally vacuumed away. The dust-collection collar is positioned automatically for the set material thickness.

The routing debris travels through the vacuum hose, which is supported by a gantry, to the vacuum cleaner. If the installation site cannot accommodate the height of the gantry, guiderails can be mounted directly to the ceiling. Depending on the application, Zünd recommends using specialized vacuum/dust extraction systems. The cutter automatically turns the vacuum system on/off as needed.

### Active air cooling

The routing module's integral heat sink channels airflow from the dust extraction unit to efficiently cool the spindle. This maximizes both performance and longevity of the router spindle.

### Revolutionary vacuum hold-down, mindful of environment

With the combination of Sealgrip™ underlay and a turbine-based vacuum generator, even very small parts can be cut. Sealgrip™ is a highly porous, sacrificial underlay material with considerable lateral friction that keeps parts from moving sideways. The cutting system automatically controls the pre-set vacuum pressure, dynamically increasing or decreasing turbine speed as needed. Conventional routing systems using standard vacuum pumps consume 6 times more energy than the G3 vacuum system with Sealgrip™ routing underlay.

# Many different materials, always the right tool

## Universal Routing Tool

G3 S3



At the core of the Universal Routing Tool (URT) is a 300 Watt router spindle. In combination with the 3 mm router bits Zünd offers, this tool delivers high-performance routing for a wide range of applications. In engraving mode, the user can set an exact processing depth for consistent cutting/engraving even if the material thickness varies. Besides softer materials, the URT is capable of processing thicker/tougher substrates in multiple passes.



**Rigid foamcore**  
Gatorboard, Forex, expanded PVC, etc.



**Acrylics**  
Plexiglass, Lexan, polycarbonates, thermoplastics, etc.



**Alu composites**  
Dibond, alu composites, etc.



**MDF sheets**  
Plywood, fiberboard, etc.



3D displays



Acrylic furnishings



Billboards



Table plates

## Universal Cutting Tool

G3 S3



The Universal Cutting Tool (UCT) is perfect for through-cutting materials with thicknesses up to approx. 3-5 mm (3/16"). A spring-loaded glide shoe permits cutting very fine details. Optionally, a fixed glide shoe can be used for cutting at set depths, e.g. when cutting printing or coating blankets. The use of drag knives allows for maximum processing speeds, and compared to motor-driven tools, the UCT is very inexpensive to purchase and maintain.



Magnetic materials



**Polypropylene**  
Thick plastic films, PE, PET, etc.



**Cardboard**  
Carton, photo paper, poster-board, display board, mirror board, Kraftboard, Finnboard,



**Corrugated/honeycomb**  
Plastic and other honeycomb materials, Coroplast, Akyprint.



Custom magnets



Clear packaging



Packaging



Honeycomb box

## Kiss-Cut Tool

G3 S3



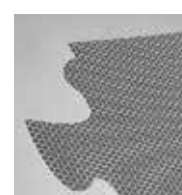
The variable knife pressure of the Kiss-Cut Tool (KCT) makes this the ideal tool for kiss-cutting thin materials to a liner. All common types of vinyl/films up to 2-3 mm (1/8") thick can be cut at maximum speeds. A fixed glide shoe allows for maintaining set cutting depths, even with e.g. reflective vinyls.



**Decorative vinyl**  
Pressure-sensitive vinyl, translucent vinyl/film, overlay materials, etc.



**Masking film**  
Masking tape/film, airbrush film, sandblast stencil, plotting film, etc.



**Reflective materials**  
Reflective traffic & warning signs, emergency vehicle graphics



**Perforated vinyl**  
Translucent/see-through vinyls.



Wrapped spherical sign



Sandblast stencil



Traffic signs



Vehicle graphics, wraps.

## Electric Oscillating Tool

G3 S3



The Electric Oscillating Tool (EOT) is available in two versions, with 0.5 mm and with 1.0 mm stroke. This tool is ideal for cutting soft and medium-density materials up to 28 mm / 1" thick. The high oscillation frequency of the EOT allows for very fast processing speeds, while the use of very pointed blades permits cutting even fine details. Zünd recommends using the tool with .5 mm stroke for materials up to approx. 3 mm (less than 1/8") for max. cutting speed; thicker materials require the EOT with 1 mm stroke.



### Foam-based materials

Kromoplast, foamcore, and similar mat., incl. rubber, felt, Egafix, Kapa.



### Corrugated

Single-wall corrugated board, carton, paperboard, etc.



### Leather

Top grain, shoe leather, sole materials, man-made leather.



### Felt

Felt, fleece, and similar materials.



### 3D Lettering



### POP displays



### Shoes



### Handbags

## Pneumatic Oscillating Tool

G3 S3



The Pneumatic Oscillating Tool (POT) is an air-driven tool. It is particularly well suited for cutting tough, dense, often multi-layered materials but can also handle soft, thicker ones. The use of air pressure combined with an 8mm stroke makes the POT an exceptionally powerful tool. Two versions of the POT are available for accommodating blades with a thickness of 0.6 mm and/or 1.5 mm. With sufficient beam clearance (e.g. on G3), materials up to a thickness of 50 mm/2" can be processed.



### Sandwich board

Honeycomb materials, incl. X-Board, Re-Board, Bio-Board, etc.



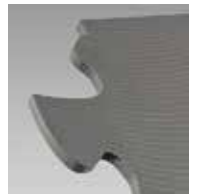
### Foam

Polystyrene, polyurethane, styrofoam, Styropor (EPS), and similar materials,



### Corrugated cardboard

Triple-wall and other thick corrugated board.



### Rubber

Silicone, natural rubber, latex, EVA foam, sponge rubber, felt.



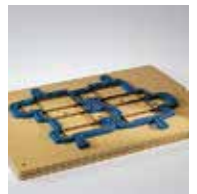
### Displays and exhibits



### Foam packaging



### Corrugated shipping boxes



### Ejection rubber

## Scoring Cutting Tool

G3 S3



The Scoring Cutting Tool is used for scoring as well as through-cutting a wide range of materials up to a thickness of 5 mm/3/16". Zünd recommends the SCT especially for carton and varnishing-plate applications. Blades that can be used with this tool include all flat-stock drag knives Zünd offers. An optional, spring-loaded glide shoe is available for processing particularly challenging materials.



### Card board

Carton, photo paper, fin-board, etc.



### Coating blankets



### Boxes



### Coating blankets

Printing blankets

## Creasing Tools

G3 S3



CTT1



CTT2



CTT3\*

Zünd offers a variety of crease tools for different types of materials. For best creasing results in specific applications, crease wheels are available in various diameters.



### Corrugated cardboard

Double-wall corrugated board, medium-weight packaging.



### Honeycomb materials

Coroplast and similar plastic honeycomb, Akyprint, etc.



### Polypropylene

Softer, flexible plastics, thermoplastics, thick films, and similar materials.



### Folding carton

Cardstock, paperboard, posterboard, chroma paper, etc.



Corrugated box



Coroplast box



Packaging



Dispenser

## Raster™ Braille Tool

G3 S3



The Raster™ method has emerged as the preferred method for producing tactile Braille signage for the blind and visually impaired. The process is quite simple: the router module drills the holes, and the Raster™ Braille Tool (RBT) inserts the spheres to create raised dots.



Wood



Aluminum



Acrylics



Plastics



Examples of signage for the blind and visually impaired.

## Universal Drawing Tool

G3 S3



The Universal Drawing Tool (UDT, DT) is used to create simple text, symbols, seamlines, dart markings, and notches with a drawing tool. Text orientation can be in any direction, at any angle. Suitable are industry-standard drawing/plotting tools, such as felt tip, ballpoint, and ink.



### Leather

Shoe leather, sole materials, top grain, man-made leather, etc.



### Paper, cardboard



### Rubber

Various gasket materials



### Teflon film



Shoes



Patterns, stencils



Insulation, roofing



Building wraps

## Power Rotary Tool

G3



The robust and powerful Zünd Power Rotary Tool (PRT) was developed specifically for cutting challenging materials economically and reliably. The materials suitable for cutting with the PRT range from fiberglass to aramid. The tool can be set to 3 rpm levels -100 %, 75 %, and 50 % of the maximum. This allows for cleanly cutting very tough materials as well as those with low melting points.



**Carbon fiber**  
in woven, non-woven, unidirectional form; single or multi-layer.



**Prepreg**  
(Preimpregnated) carbon or glass fibers in non-hardened duroplastic matrix.



**Fiberglass**  
In woven, non-woven, or unidirectional form; single or multi-layer.



**Aramid fiber**  
(Kevlar™) Synth. Polyamid-fiber in woven, non-woven, unidirectional form.



**Automotive industry**



**Sports equipment**



**Aeronautics**



**Defense industry**

## Driven Rotary Tool

G3 S3



The Driven Rotary Tool (DRT) is designed for cutting fibrous, porous materials, including fabrics, technical textiles, and composites. The driven rotary tool produces a clean cut at maximum speeds.



**Mesh**  
Translucent fabrics, banners, polyester, knits, etc.



**Textiles**  
PVC banner materials, rubberized fabrics, Lycra, Spandex, etc.



**Lighter-duty technical textiles**  
PVC, PE, cotton, etc.



**Balloon silk**  
E.g. coated and rubberized fibers; man-made, waterproof materials.



**Building wraps**



**Feather flags**



**Awnings**



**Air dancers**

## Wheel Knife Tool

G3



The Wheel Knife Tool (WKT) is designed for cutting shapes with straight edges and/or large radii. The WKT produces clean, precise cuts in carbon and fiberglass applications. Clean, dust-free material surfaces are often essential for post-processing fibrous materials. Up to 20 Kgs of pressure can be applied to the tool during cutting. To prevent damage to the cutting surface, a special PU (polyurethane) underlay is recommended.



**Fiberglass**



**Sail cloth**



**PVC**



**Carbon fiber**



**Wind turbine blades**



**Sails**



**Sun shades**



**Engine hoods**

## V-Cut Tool

G3



The seemingly impossible made nearly commonplace. 3D structural designs using the V-Cut Tool (VCT). The tool is capable of cutting at five different angles (0°, 15°, 22.5°, 30°, 45°) and, depending on material density, up to a thickness of 16 mm / 5/8".



**Sandwich board**  
Honeycomb materials, incl. X-Board, Re-Board, Bio-Board, etc..



**Foam-based materials**  
Kapaplast, Maxxboard, Kapamount, Kapabond, Foam-X, foamboard, Egafix.



X-Board



Brochure holder

11/2012

## Passepartout

G3 S3



45° high-quality angle cuts can be produced with the Passepartout Tool (PPT). Relative mode allows for precise depth control. The maximum material thickness this tool can process is 5 mm / 3/16".



Carton, matboard



Gray board



Picture framing



Archival boxes

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