

Routing Systems Overview 1kW

The robust 1kW router module features outstanding speed, productivity, and versatility, making it a perfect solution for industrial applications.

This powerful routing module is used for routing, engraving, and drilling and can process a wide range of materials. It is ideally suited to routing rigid plastics, non-ferrous metals, and composite boards for producing signs and displays. Foam, wood, and MDF can also be processed.

With a powerful 1 kW high-frequency spindle, the RM-A can easily handle multi-shift, continuous operation in industrial applications.

The routing system's robust construction keeps spindle vibrations to a minimum, allow-

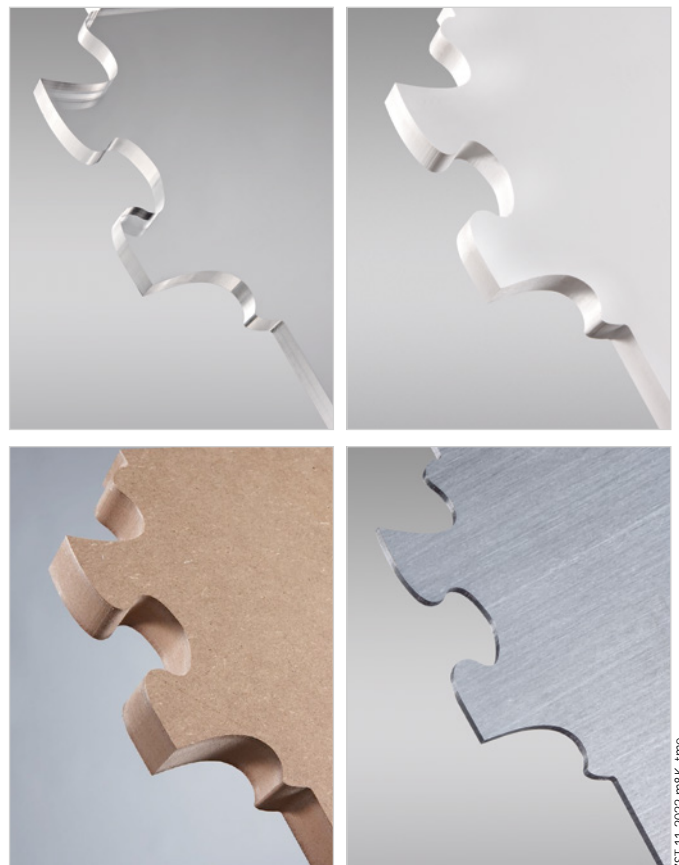
ing very high cutting speeds without any loss of edge quality. This leads to significantly higher productivity when processing acrylic, wood, and plastics.

With extended beam clearance, the RM-A can process materials up to 50 mm thick. This is particularly relevant for foam and other soft materials.

The optional Minimal Quantity Lubrication (MQL) takes the routing system to the next level. This lubrication system permits higher cutting speeds while simultaneously reducing tool

wear. Using MQL also helps improve surface and edge quality.

The Zünd range of accessories offers a comprehensive selection of router bits for many different materials and applications.



Details

1 kW high-frequency spindle for up to 50,000 rpm

Compressed air consumption approx. 40 l/min at 0.6–1.0 MPa

Maximum material thickness

- Beam clearance 60 mm: max. 50 mm material thickness
- Beam clearance 30 mm: max. 25 mm material thickness

Module versions

- RM-A: Routing module for cutters with 30 or 60 mm beam height (G3 | D3)
- RM-120: For cutters with 120 mm beam height (G3)
- RM-S: Routing module for cutters with 30 or 60 mm beam height (S3)

Benefits at a glance

Outstanding edge quality

Can route, engrave, and drill all plastics and most non-ferrous metals, as well as wood, composite boards, and foam materials

Robust, high-performance routing system for industrial use 24/7

High processing speeds

Optional Minimal Quantity Lubrication (MQL) reduces tool wear and improves surface and edge quality

Wide range of Zünd router bits available

Special product features

Effective Minimal Quantity Lubrication

The Minimal Quantity Lubrication – MQL allows a wide range of metals to be routed to extremely precise depths. Soft alloys such as Peraluman (Signicolor®) can also be processed.

Details & requirements:

- Lubricant consumption: 0.5 ml/h
- 0.5 l lubricant included
- Ideal for aluminum, ACM panels (e.g. Dibond,), acrylics, as well as other metals and plastics
- Improved surface and edge quality
- Less tool wear because of reduced friction
- No lubricant residue on the material or cutter
- Not suitable for printed boards

3D routing

Zünd cutters can execute movements in all three axes at once. Provided you have access to compatible 3D data, you can route out three-dimensional signs, lettering, and other items with the RM-A.

Details & requirements:

- Zünd HPGL data required for three-dimensional routing

Surface compensation

With the RM-A, it is also possible to precisely process materials with uneven surfaces or variable thicknesses. A unique surface-mapping system always ensures optimum depth adjustments for precise engraving, routing, and drilling. The material is precisely mapped to achieve this. Any identifiable unevenness is registered and automatically taken into account during subsequent processing.

Details & requirements:

- Suitable for hard materials. Surface compensation cannot be used with soft, pressure-sensitive materials.
- Grid size for mapping: from 30 mm
- Max. identifiable height differential in an area: ± 4 mm

Effective removal of dust and debris

Reliable removal of dust, chips, and other routing debris from working

area through vacuum extraction. Any industrial dust extractor can be used for this.

The user can adjust the level of suction to suit the job at hand. This keeps small, delicate parts from getting sucked into the dust collector. The dust-extraction system is switched on/off automatically to reduce power consumption.

Details & requirements:

- Industrial dust extractor air flow: min. 3,800 l/min
- Choice of extractor according to the dust class of the material to be processed
- Minimal clean-up requirements
- Several vacuum extraction options are possible depending on ceiling height (ceiling-mounted guide rails, free-standing support)

Active air cooling

The air flow from the dust extraction is also used for cooling, effectively dissipating the heat produced by the router spindle. This increases both router performance and durability.

Details & requirements:

- Industrial extractor air flow: min. 3,800 l/min

Revolutionary vacuum system

Zünd vacuum systems are the key to optimum material hold-down. For routing applications, Zünd recommends using a vacuum turbine in combination with Sealgrip™ underlay.

The negative pressure of the turbine has nine different settings, and the vacuum generator automatically adjusts its power to the required setting. Optimum results are therefore achieved with minimum power consumption.

The optional Sealgrip™ underlay consists of a highly porous material with an extremely high friction coefficient. This means even very small components can be routed without sideways movement or loss of accuracy.