



Scoring system/Type: G-S-K(20-10)

Razor-sharp Cuts, Exact Solid Contours,
High-precision Scoring

HG 6-axis Scoring System G-S-K

Invisible weakening lines, visible accuracy

Top technology for top results

Industrial customers demand maximum feasible accuracy from their suppliers. The HG 6-axis scoring system G-S-K allows you to score and cut skin made of plastics, composites or organic materials, such as leather, in top quality. You will meet demanding quality standards, produce clean cuts and exact solid contours and you are able to guarantee accuracy in absolute values up to 30 µm with invisible weakening lines.

Performance characteristics

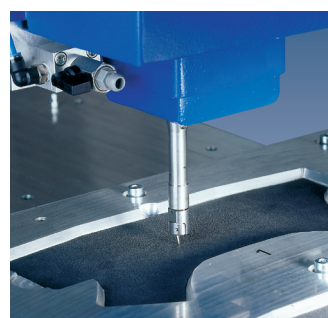
The impressive performance of this machining centre is based on HG gantry designs with their excellent low-vibration constructions as well as on the big variety of individual equipment possibilities. By installing a separation panel in the working space, tandem operation is possible. The G-S-K system can be equipped with a fixed blade (draw knife), an oscillating tangential knife, an ultrasonic cutting device or an oscillating cutting head.

Applications

The 6-axis technology allows complex components to be machined intelligently and with particular accuracy. The high production accuracy is a winning factor in industry sectors such as the automotive supply industry. Application possibilities are for example synthetic and leather airbags or hard panel.



Scoring head with sensor for skin thickness



Fixed blade

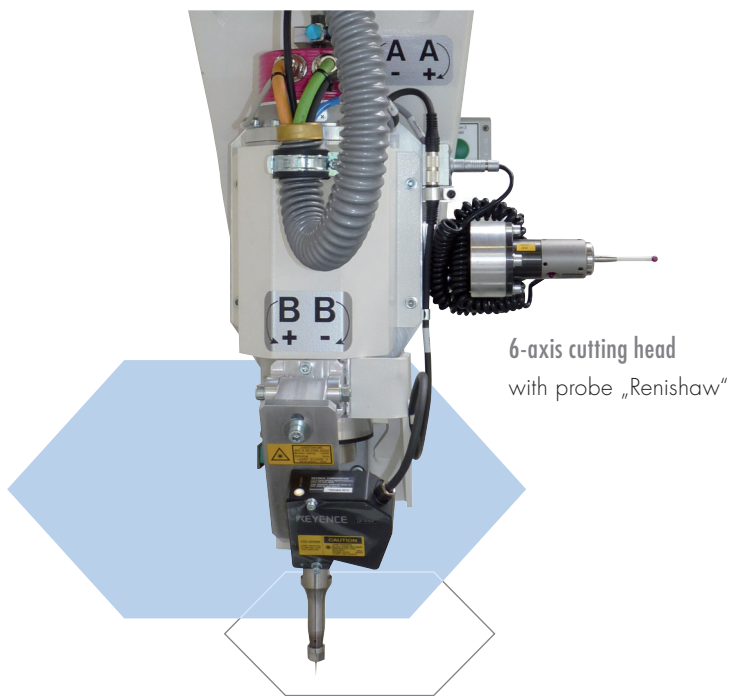


Ultrasonic cutting device



Scoring system/Type: G-S-K(24-10) with deviding wall
for airbag weakening production e.g. in instrument panels





6-axis cutting head
with probe „Renishaw“

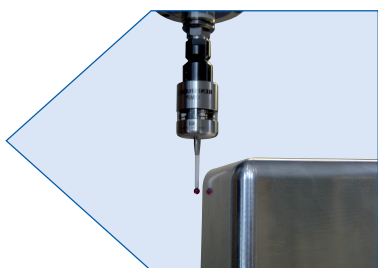
Product benefits

- ▶ 6-axis technology in gantry design
- ▶ Tandem operation possible by installing a separation panel
- ▶ Big variety of individual equipment possibilities such as fixed blade or ultrasonic cutting device
- ▶ Maximum accuracy for production of weakening with close tolerance
- ▶ Clean cuts, exact solid contours, accuracy in absolute values up to 30 µm of produced predetermined breaking lines in airbag wall weakening
- ▶ Excellent acceleration and feed values
- ▶ Documentation of process parameters
- ▶ High-precision linear distance measurement systems (glass scales), optional
- ▶ High performance CNC control Siemens Sinumerik 840D/SL
- ▶ Safety cabin (optionally: air conditioned)
- ▶ In-house design and production of fixtures

Options

3D tactile measuring system

Scaling software for machine calibration and measuring of parts

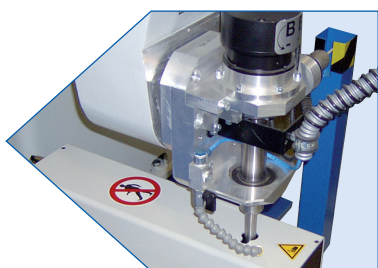


Wear-free linear drive

increases as direct drive the axis positioning speed many times over

Camera measuring system

High-resolution camera system: recognizes set and actual geometries, dirt, tool wear



HG 6-axis Scoring System G-S-K

The HG 6-axis scoring system offers maximum process safety and productivity. Its performance characteristics can be optimized in line with your specific needs and requirements through extensive options, enhancement and customization.

Machining range in 6-axis mode

X-axis	2,000/2,400/3,000 mm
Y-axis	1,000 mm
Z-axis	600 mm

Travel ranges

X-axis	2,600 mm to 3,600 mm
Y-axis	1,500 mm
Z-axis	900 mm
Rotation axis C	540°
Swivelling axis A	365°

Speed of travel

Rapid traverse linear axes X/Y	60 m/min (110 m/min with linear drive option)
Rapid traverse linear axis Z	30 m/min
Rapid traverse rotary axes A/C	9,000°/min / 12,000°/min (15,000°/min / 25,000°/min with linear drive option)
Positioning accuracy	± 0.05 mm (± 0.03 mm with glass scale option)
Repeatability	± 0.05 mm (± 0.03 mm with glass scale option)

Cutting device: blade

clamping for cutting blade with additional CNC axis for blade tracking

Ultrasonic cutting device

ultrasonic cutting blade with additional CNC axis for blade tracking, depending on the application, with 20 kHz or 35 kHz ultrasonic generator

CNC control

Siemens Sinumerik 840D/SL

Drive, electrical

digital AC servo drives/multiturn system; optional: linear drives in X/Y

Drive, mechanical

rack (X/Y) with ground helical teeth, ball screw (Z), induction-hardened and ground guides

General data

Machine weight	approx. 8,000 kg
Construction	rigid, vibration dampening design
Central lubrication	manual, optional: automatic
Vacuum pump	60 m³/h, optional 100 m³/h with scrap filter and pressure control
Referencing	not required because of digital multiturn drives

Technical training

optional, on your choice whether in the HG technology training centre or on site at the customer's

We reserve the right to make changes due to technical improvements. Please note: This information refers to the standard version of the machine. **Of course, we specify our systems in accordance with your specific requirements.**

Options, enhancement, customization

The system is designed within a modular concept. Our flexible, compatible interfaces ensure we can always meet your specific requirements. With our cost-efficient construction customizations, we offer perfect value for money and real added value for your company: You will get a machine that suits exactly your specific requirements.

Your system partner HG GRIMME SysTech

Founded in 1987, we established ourselves globally as highly regarded machine manufacturer with an excellent track record. As your proficient system partner, we are able to offer complete one-stop solutions. Design and engineering in line with specific requirements and application-specific configuration of the machine with reliable equipment.

Our own customer support organization with domestic and worldwide support centres offers customer support by local service. On demand, we can provide a remote diagnostic link to your HG system. Our hotline service and quick response of our service teams ensure maximum system availability and close customer contact wherever you are.

Please contact us if you need any advice!



Technical training/Application technology



On-line diagnostics via internet



Project management/
Engineering department



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