

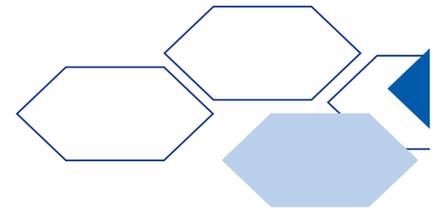


Type: G-S-W(30-12) with 2 tables

Leading-edge Technology for Cutting  
with Highest Precision

# HG 5-axis Water Jet System G-S-W

# Innovative production engineering with excellent accuracy



Type: G-S-W(30-12)  
with 2 tables



Type: G-S-W(20-10)  
with tub

## Perfect cut

The HG 5-axis water jet system G-S-W reduces the finishing of synthetics and composites. The cutting kerfs are generated by high pressure up to 3,800 bar. This environmentally friendly cold cutting procedure uses an energy-rich pure-water jet to cut even complex geometries from GFRP with high precision.

## Performance characteristics

With its high-rigidity basic steel construction the gantry series is ideally suited to the water jet procedure. In its basic concept, the G-S-W is provided as single-table version. Dividing the workspace into two cutting zones with one table each (tandem or shuttle table concept) is likewise possible. As cuts are made alternately in the left or right half of the machine, the other area can be simultaneously loaded or unloaded. This reduces additional costs and labour costs and boosts productivity.

In this modular system, optional configuration in shuttle table technology is also possible. Depending on part geometry, large components can be processed using just one cutting head, and small parts can be processed using simultaneously several heads.

## Materials

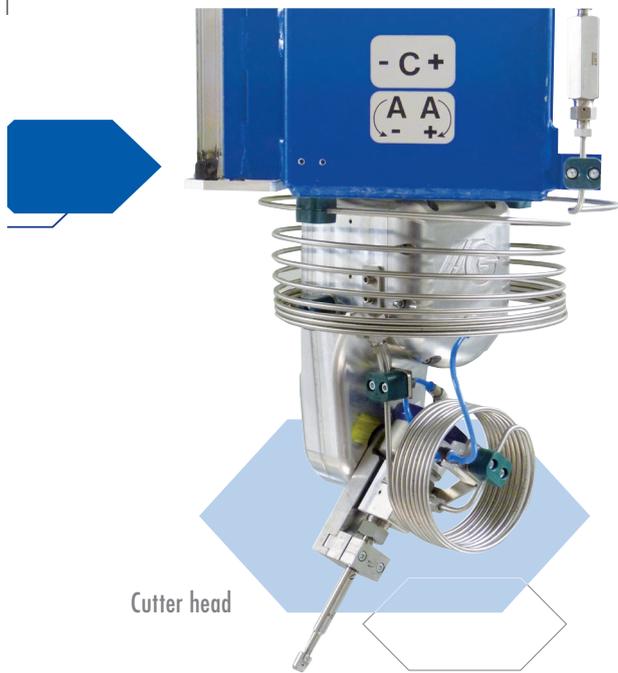
The HG 5-axis water jet system G-S-W enables realization of extremely complex cutting forms and contours on work pieces in synthetic or composite (CFC, GFRP). Because the system can be customized and configured perfectly for all materials, there is no need for touch-ups of products. This guarantees an excellent surface finish on all materials.

## Applications

Water jet cutting in 5-axis technology undertakes exacting work on spatial bodies perfectly and particularly efficiently. This technology of production is a winning factor in industry sectors such as aeronautical and aerospace technology, automobile manufacture, automotive supply, plastics industry, contract production.



Type: G-S-W(30-10)  
with shuttle table on both sides

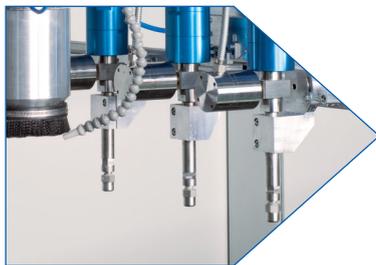


Cutter head

## Product benefits

- ▶ 5-axis water jet cutting unit for simple to highly complex 3D contours for excellent cutting quality
- ▶ Emission-free, cold cutting process with pure-water jet
- ▶ Excellent profitability through maximum production output with precision and at high speed
- ▶ Extremely rigid, torsion-resistant steel construction in gantry design with overhead x-axis; all drives and guides in the protected segment outside the workspace
- ▶ High performance CNC control NUM Flexium
- ▶ Possibility of easy program creation by using CAD/CAM
- ▶ Safety cabin in sound-proof design

## Options



**Efficiency and flexibility**  
via triple water jet cutting head with integrated milling head

## Teachbox

for setting up the cutting program by scanning the contour or the zero points on the work piece



## HG 5-axis Water Jet System G-S-W

The HG 5-axis water jet 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 5-axis mode

X-axis	2,000 mm to 3,000 mm
Y-axis	1,000 mm to 1,350 mm
Z-axis	600 mm to 1,000 mm

### Travel ranges

X-axis	2,600 mm to 3,600 mm
Y-axis	1,500 mm to 1,800 mm
Z-axis	900 mm to 1,200 mm
Rotation axis C	540°
Swivelling axis A	± 135°

### 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	± 0.1 mm
Repeatability	± 0.1 mm

### Pump, KMT

Operating pressure	high pressure pump with hydraulic drive 520 – 3,800 bar
Pressure ratio	20:1; pressure relief valve for high pressure, sound-proof case
Max. flow rate	3.5 l/min
Optimal utilization coefficient	at approx. 90%, this means less maintenance intervals

### Nozzle

with pneumatic nozzle valve  
0.17 mm – 0.20 mm,  
coupling pump to cutter head by high pressure tube ¼". Feeder to the pivoting head by means of a flexible winding tube

### CNC control

NUM Flexium

### 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 and vibration dampening design
Central lubrication	manual, option: automatic
Vacuum pump	60 m <sup>3</sup> /h, optional 100 m <sup>3</sup> /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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