

**DRILL 300**

# DRILL 300

## At a glance

The solution for machining cooling holes  
in aerospace and aeronautics



### A winning solution for various applications

A powerful generator and CNC, high flexibility in production and Automation, ease of use, and compact design make GF AgieCharmilles' new DRILL 300 hole-drilling EDM machine a winning solution for a variety of applications such as cooling holes in aerospace and aeronautics and starting holes for wire-cutting EDM in mold and die.

The DRILL 300 has a compact fixed table design with the generator and dielectric unit integrated into the machine. Various Automation and additional axis options are available.

### Powerful generator for outstanding performance

The DRILL 300 is equipped with GF AgieCharmilles' ISPG generator. The current pulse is optimized for EDM drilling. The highly efficient pulses significantly increase drilling speed to allow maximum productivity. Low wear technology can reduce electrode wear, and a low affected layer is obtained.

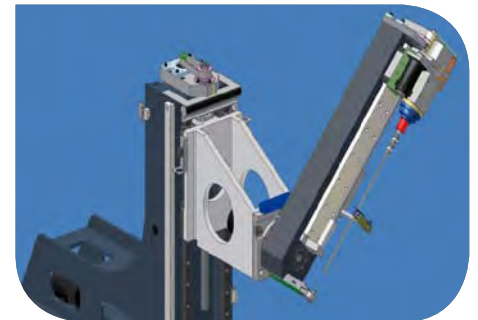
The ISPG generator's process control strategies include:

- First spark detection
- Electrode wear compensation
- Breakthrough detection
- Cylindricity control

### High flexibility for production

The DRILL 300 is designed for machining a variety of holes in various diameters and workpiece materials in mass production. It has a wide range of technologies for materials like Inconel, titanium, steel and carbide.

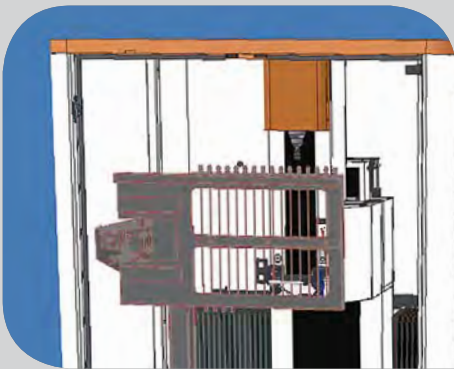
- Longer Z axis travel maximizes autonomy
- Tilting head  $\pm 45^\circ$ : drill holes that are not vertical to X, Y plane
- With six-axis configuration: drill cooling holes on blades, vanes
- Indexing table for holes in a circular pattern





Technical Data		DRILL 300
X, Y travel	mm (in)	600 x 400 (23.62 x 15.75)
Z travel	mm (in)	450, 650 optional (17.72, 25.59 optional)
W travel	mm (in)	450 (17.72)
Max. workpiece dimensions	mm (in)	1000 x 700 x 500 (39.37 x 27.56 x 19.68)
Max. workpiece weight	kg (lbs)	1000 (2205)
Electrode diameter	mm	0.3–3.0, optional down to 0.1 and up to 6.0
	in	0.012–0.12, optional down to 0.004 and up to 0.24
Dielectric type		Deionized water
Automatic electrode/guide changer		16/4 or 50/8
Machine dimensions *	mm	1400 (1900 with tilting head) x 2320 x 2180
	in	55.12 (74.8 with tilting head) x 91.34 x 85.83
Machine weight	kg (lbs)	2500 (5512)
Max. power consumption	kVA	4.5
Main power supply	V, Hz	3 x 380 or 400 ±10% , 50/60Hz

\* Width x depth x height



### Various levels of Automation

Dielectric water temperature and conductivity are controlled automatically, and the filtration system is in the standard configuration — important factors for stable machining.

The DRILL 300 can be configured with the Automatic Electrode/Guide Changer:

- The AEC/AGC 16/4 is an affordable solution for standard use
- The AEC/AGC 50/8 is a solution with long time autonomy and for maximum productivity

The machine can be connected to an external handling device.

### Designed for ease of use

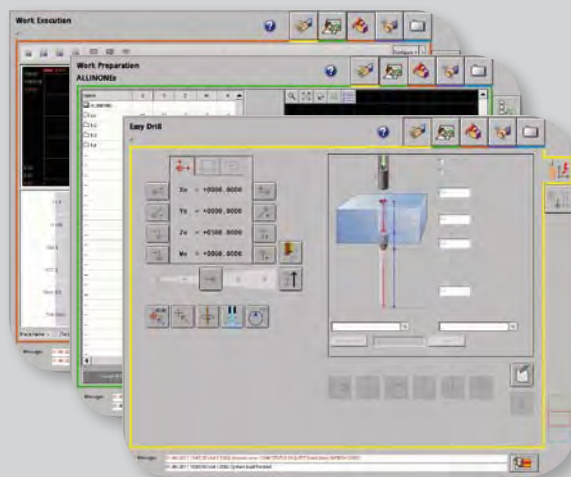
The DRILL 300 features remote control with all setup cycles, axes movement for alignment, and tool changer control for preparation of electrodes/guides. The axes' movement speed reaches max. 4 m/min.

- Easy programming of single holes, multi-pieces, multi-holes with various technologies and electrodes/guides
- AC CAM DRILL imports DXF/DWG/TXT files from CAD/CAM as well as ISO files from GF AgieCharmilles wire-cut EDM and adapts to the drilling operations.

### Floor space saving

The DRILL 300's compact design, with generator, dielectric unit and electrode changer integrated into the machine, and the fixed table design make the mechanical compact.

The machine's external dimensions (width x depth x height) are only 1400 (1900 with tilting head) x 2320 x 2180 mm.



## DRILL 300

High machining quality, productivity and flexibility

## At a glance

### Achieve more

We commit to a promise.  
That promise is "Achieve more".  
It's a commitment to create the  
right conditions for our customers  
to obtain competitive results.  
When our customers win, we win.

### GF AgieCharmilles

We enable our customers to run their  
businesses efficiently and effectively  
by offering innovative Milling, EDM,  
Laser and Automation solutions.  
A comprehensive package of Customer  
Services completes our proposition.

[www.gfac.com](http://www.gfac.com)

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