Guhring single-fluted gun drills with interchangeable inserts and supporting strips are also produced as special tools according to customer requirements. They are suitable for nearly every material and available from diameter 12.0 to 52.0 mm up to a maximum total length of 3000 mm.

Your special advantages are:

- The interchangeable component technology for inserts and supporting strips makes any combination of carbide grade and coating possible.
- The precision interchangeable inserts and supporting strips eliminate complicated adjustments.
- The precision supporting strips are produced in a special carbide for your individual deep drilling task. They can be reverse-fitted, providing double tool life. In addition, they can be provided with any of the Guhring coatings.
- Thanks to the precision insert seatings and the interchangeable inserts there is only a small number of interchangeable components. The tool is therefore extremely rigid.
- Expensive stoppages are eliminated because the worn components can be replaced without removing the tool from the machine.
- The expensive re-grinding process is eliminated thanks to the interchangeable insert technology.
- The application orientated selection of the most suitable interchangeable insert always ensures optimal chip breaking – even in problematic materials.
- Specifically optimised to your individual deep drilling task, the precision inter-changeable inserts are also produced in a special carbide. In addition, all GUHRING coatings are available.
- Within the diameter range it is possible to modify the nominal diameter at any time by simply interchanging the individual components.
- The driver is produced in heat-treatable steel acc. to:
  - DIN 6535 HA
  - DIN 6535 HE
  - DIN 6535 HB
  - DIN 1835 E

Also, all the forms generally required for deep drilling machines are possible to be manufactured.

Stock program from Ø 12.0 to 24.0 mm suitable for almost every material

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Availability:

- ●
- ●
- ●
- ●
- ●
Attention: - shortest flute length 15 x D
- possible diameter tolerance IT9/IT10

Drawing, all Guhring nos. and specifications included with every quote.

GUHRING oHG
Herderstrasse 50-54
D-72458 Albstadt
Tel. +49 74 31 170
Fax +49 74 43 17-21 279

Gun drills
with interchangeable insert and supporting strip, internal cooling
Diameter range: 12.00 mm - 52.00 mm
**Fax Enquiry / Order**

simply photo-copy, complete and fax ...

<table>
<thead>
<tr>
<th>Enquiry</th>
<th>Order</th>
<th>Repeat order, no. of initial order</th>
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</table>

**Gun drill:**
- EB 800
- Quantity required: 
  - tools
  - interchangeable inserts
  - guide pads

* Ø 12.0 - 52.0 mm
- Flute length min. 15 x D
- Total length max. 3000 mm
- Total length and driver length are dependent on the driver selected, see page 66.

![Drawing of lay-out]

**Driver:**
- no
- code no. ___________
- to enclosed drawing

**Coating:**
- TiN
- Fire
- Signum
- TiAIN nanoA

**Workpiece:**
- Drilling depth: _________
- Hole tolerance: __________
- Material/designation: _______________

- Surface finish: _________
- Projecting edges: no
- yes __________

**Machine type:**
- Deep hole drilling machine
- Conventional machine tool
- Pilot hole
- Drilling bush

**Coolant:**
- Deep hole drilling oil
- Pressure __________ bar
- Soluble oil
- Quantity __________ I/min

**Company:**
- ______________________
- Company stamp:

**Telephone/fax:**
- ______________________

**Contact:**
- ______________________
- Signature: ________________
The sequence of operations for deep hole drilling
- production of pilot hole (L = 1.5 x D, tolerance HB)
- enter at low revolutions, approx. 200 rev./min, feed rate approx. 500 mm/min. With tools for drilling depths in excess of 60 x D, enter the pilot hole revolving in left hand direction.
- setting of coolant pressure and revolutions
- uninterrupted drilling to required drilling depth without pecking. When applying deep drills with increased length-diameter ratio, we recommend machining with reduced cutting parameters (approx. 75% of the optimal cutting speed) up to a drilling depth of approx. 25 mm.
- switching off coolant supply after reaching the required hole depth
- withdrawal in top gear with stationary spindle

Material dependent coolants
- air
- neat oil
- soluble oil

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<th>Cool-</th>
<th>recom</th>
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<th>Feed col.</th>
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</table>

All deep hole drills must have support for the pilot hole. Deep hole drills must never operate at full speed without support in the machine shop.

Application advice
- For drilling depths in excess of 40 x D we recommend the use of two or more gun drills, e.g., Ø 10 x 400 mm and Ø 9.5 x 800 mm.
- Gun drills for drilling depths of more than 40 x D should enter the pilot hole revolving in the left hand direction.
- When changing for drilling depths of more than 40 x D, the tool can be damped by switching on coolant supply for just one second.
- For machining of long-chipping materials we recommend the use of gun drills with polished flutes.
- For interrupted cuts we recommend the use of soluble oil with a minimum oil content of 10%.
- Single-fluted gun drills for long-chipping aluminium should be provided with point grind 180° and coolant chamber.
- When spotting in aluminium with an Si-content of less than 1%, i.e. with recommended cutting rates v, > 160 m/min we recommend to advance to the final speed in several steps. In addition, a deeper pilot hole of approximately 3 x D should be produced.