CONTENT
INNOVATIONS 2019/2020

PRODUCTS

Ratio drill RT 100 XF

RF 100 Speed
The new GTC power: 5- and 7-flute cutters

SpyroTec
New 60° countersink and 90° countersink now up to Ø 40 mm

Helical drill thread milling cutter
Core hole and thread up to 66 HRC

E-Mobility
How Gühring is preparing for the future

Turning and grooving tools
Gühring’s product range is growing rapidly

GTMS (Gühring Tool Management Software)
Process optimisation in a whole new dimension

SERVICES

Gühring E-LEARNING Academy
Becoming a machining professional with the interactive training units

Gühring Digital Services
Optimising machining processes through data management
120 years of manufacturing expertise, innovative capacity and synergy are the pillars that have allowed Gühring – once a pioneer of drilling solutions – to develop into an industry-leading full-service provider. This was made possible by our own R&D departments in geometry, production and coating, the production of proprietary cutting materials, as well as grinding and coating systems. The new RT 100 XF is the crown jewel of this advanced knowledge – for extreme performance and enormous metal removal rates.
NEW.
EXTREME.
POWERFUL.

- **OUTSTANDING FEED RATES** AND **EXCEPTIONAL METAL REMOVAL RATES**

- **IN-HOUSE HIGH-END FINISHING** FOR MAXIMUM PERFORMANCE UTILISATION

- **REDUCED CYCLE TIMES** FOR DIFFICULT-TO-MACHINE MATERIALS AND SPECIAL APPLICATIONS IN SERIES PRODUCTION

Further information can be found in the product brochure.
Further information can be found in the product brochure.

RF 100 SPEED
5- AND 7-FLUTED

The new GTC force from the RF 100 Speed family

Especially when performing milling operations with very tough materials, it is only possible to increase the cutting speed to a limited extent while taking process reliability into account. Due to the increased number of teeth of the RF 100 Speed 5-fluted and 7-fluted, high metal removal rates can be achieved with stable process reliability, even with these difficult-to-machine materials.

// high-performance roughing even at high cutting depths
// maximum feed rates for large metal removal rates
// highly dynamic GTC milling in tough stainless steels, special alloys and a wide variety of steel and cast iron grades
Convex cutting edges reduce radial and axial forces

The axial and radial forces that occur during countersinking operations are strongly reduced due to the newly developed geometry of the SpyroTec cutting edges. Therefore even with hand drills an easy and convenient countersinking is guaranteed. Due to convex different radii of the cutting edges with variable helical pitch provide a stable and low-vibration countersinking process. Round, precise and chatter-free countersinking is guaranteed. The specially designed TiAIN coating also increases the wear resistance and high-temperature hardness, which makes it possible to achieve long tool lives.

Further information can be found in the product brochure.
NEW

- standard programme
- 90° countersink according to DIN 335 form C
- 60° countersink according to DIN 334 form C
- parallel shank version
- version with 3-flats on shank
- overlong parallel shank version

**Eg. 90° version**

<table>
<thead>
<tr>
<th>Feed force in N</th>
<th>Radial force in N</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2.25</td>
<td>25</td>
</tr>
<tr>
<td>4.25</td>
<td>50</td>
</tr>
<tr>
<td>6.25</td>
<td>75</td>
</tr>
<tr>
<td>8.25</td>
<td>100</td>
</tr>
<tr>
<td>10.25</td>
<td>125</td>
</tr>
<tr>
<td>12.25</td>
<td>150</td>
</tr>
</tbody>
</table>

**REDUCTION OF FEED FORCE BY 60 %**
**COMPARED TO STANDARD COUNTERSINKS**

**REDUCTION OF RADIAL FORCE BY 50 %**
**COMPARED TO STANDARD COUNTERSINKS**

Convex cutting edges

Three different convex cutting edges in combination with three unequal helix angles enable extremely stable and low-vibration cutting processes without any chatter marks.
MTMH3-Z

HELICAL DRILL THREAD MILLING INTO SOLID MATERIAL UP TO 66 HRC

The new helical drill thread milling cutter for high-strength and hardened steels up to 66 HRC combines core hole and thread production in one tool. This results in significantly shorter cycle and setting times. The MTMH3-Z guarantees process reliability and true to gauge threads.

- core hole and thread in one step: significantly shorter processing times
- reliable machining process in hardened and unhardened materials up to 66 HRC
- excellent machining results in dry and wet machining

Further information can be found in the product brochure.
E-MOBILITY
PIONEERING. SUSTAINABLE. MOBILE.

Sustainability, emission-free engines and less dependence on fossil fuels: the mobility of the future is changing. E-mobility is a central theme of the energy revolution and electric vehicles are a key component of the transport revolution. As a traditional supplier to the automotive industry, Gühring deals with the topic of e-mobility holistically, from a single source and globally. With our strategy of a diversified product range and our ability to handle all the manufacturing processes for electric motors, we are fully prepared for dynamic, technological change in the automotive drivetrain.

The automotive industry is changing: alternative drive concepts such as the electric motor are putting brand new machining tasks on every supplier’s agenda. Tool manufacturers have a duty to reliably manufacture e-components. Gühring is already able to process all of the components of an e-vehicle that require machining. In addition to electric motor housings and associated gearbox covers, auxiliary units such as battery trays or electric refrigerant compressors are also machined.
Gühring cooperates with major partners to support the automotive industry worldwide as an expert partner in the series production of electric drives. For example with Grob-Werke in Mindelheim – a specialist for production and automation systems. Read more about this in the flyer on e-mobility.
Further information about System 222 can be found in the product brochure.
GÜHRING A COMPLETE SUPPLIER
THE PROGRAMME OF BORING TOOLS CONTINUES TO GROW RAPIDLY

**SYSTEM 104**
New cutting inserts; new items with a corner radius R 0.1 mm with Dmin 4 mm for boring out and profiling; new clamping holders for Star long turning machines

**SYSTEM 106**
New GV type for pre-cutting; new clamping holders for Star long turning machines

**SYSTEM 108**
New QA cutting inserts, axial grooving; GG, thread turning; GN, slot grooving; new clamping holders for Star and Citizen machines; holders with polygon and HSK-T shank; new holders for slot grooving

**SYSTEM 110**
Additional clamping holders as standard; new holders with square shank and for slotting

**SYSTEM 305**
Extended selection of type GE grooving inserts with additional grooving widths and corner radii; new type GG cutting inserts for thread cutting for small helix angles < 1 mm as well as for UNC/UNF and Whitworth threads; new clamping holder with square shank of size ½ inch

**SYSTEM 222**
New program with two usable cutting edges and an insert length from 22 mm for cutting off with a width of 3 mm; application in steel materials; extensive range of clamping holders with and without IC
New developments and functions of Industry 4.0 are moving into focus. Gühring is taking a decisive step towards the future and creating the optimal basis for future-oriented digitalised solutions through intelligent networking and the further development of GTMS (Gühring Tool Management Software). It is not important whether it is a holistic solution or a tailor-made application: GTMS can be easily integrated into all existing structures. With the current version GTMS_V6, Gühring supplies various modules for designing all processes of the manufacturing company in a cost-efficient manner. In particular, the area of transparency and data evaluation is being continuously expanded.
As a leading tool manufacturer with decades of know-how and of expertise in machining Gühring offers a digital world for learning with a comprehensive range of training units.

Interesting and interactive training units provide basic knowledge and inform about latest trends in metal machining. High-quality video content, illustrations and animations make even complex subjects perfectly presented and comprehensible. Practical examples and varied interactive exercises complete the offered services.

The Academy is available around the clock. You decide where and when you learn improving step by step your competence.

Become a machining professional with the Gühring Online Academy!

Winning project of eLearning-Award 2018:
"The basics of machining in practice-relevant interactive e-learning format."
Imagine an online shop that not only saves you time and effort, but can also transfer all order details between the supplier’s shop and your ERP system – without you having to enter the data twice.

System interruptions that occur while processing orders cost time, effort and money. This is why Gühring has implemented the ESIS® (Easy Supplier Integration Services) data interface to transfer order details between customer and supplier systems – without any system interruptions.

An initiative by:
LIVE CHAT WITH AN EXPERT

Technical advice and support

Do you need technical advice regarding tools, cutting data and troubleshooting or are you looking for 3D drawings or CAD data? Then get in touch directly with our machining professionals. Our support team will be happy to answer any administrative questions about the shop or your user account. You will find expert answers to all your questions during a personal chat at www.guehring.com and https://webshop.guehring.de/.