

passion
for precision

fraisa

Supradrill[®] spiral flute drill – the **universal**
high-performance drill for **maximum**
productivity



Supradrill® – a new performance dimension for demanding applications and materials

The new generation of our **Supradrill®** sets new standards in universal, reliable machining. Its advanced micro and macro geometry has been specifically designed to reliably master demanding drilling processes – from unstable components to difficult application situations and challenging process conditions.

The new cutting edge rounding process significantly reduces micro chipping, while the perfectly designed smoothing of the flute ensures a stable, controlled chip flow, even in tough materials, at great depths or for complex requirements.

With the plug-and-play cutting data in the **FRAISA ToolExpert®**, the process runs reliably from the very first millimeter. All parameters have been empirically tested, validated and can be used immediately – ideal for efficient processes, regardless of whether production is partially or fully autonomous.

Whether you have tough materials with resulting built-up edges, solidifying materials or long bores with critical chip removal, the new generation of the **Supradrill®** brings noticeable process relief. And the results are impressive across the board: stable, reliable processes, high-quality drilling, clean and dimensionally accurate holes with sustainable economic performance across a wide range of applications.

The advantages

▶ **Lower tool costs** thanks to a wide range of applications and significantly fewer tool changes

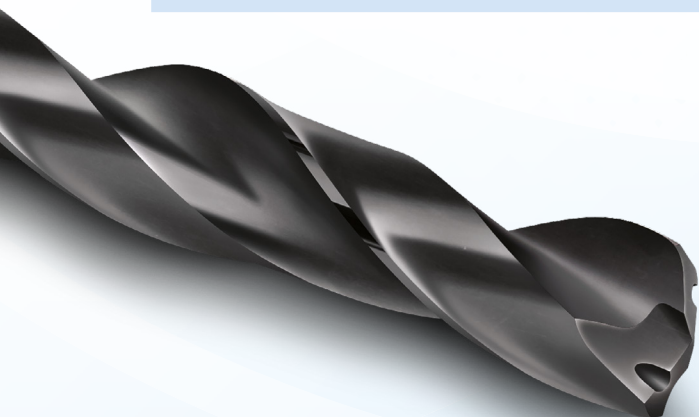
▶ **High drilling quality** with precise, dimensionally accurate results

▶ **High universality** – reliable in steel to rust and acid-resistant materials

▶ **Extensive program:** 5xd, Ø 3-20 mm, in practical 0.1 mm increments

▶ All core hole diameters covered: assortment with **183 dimensions**

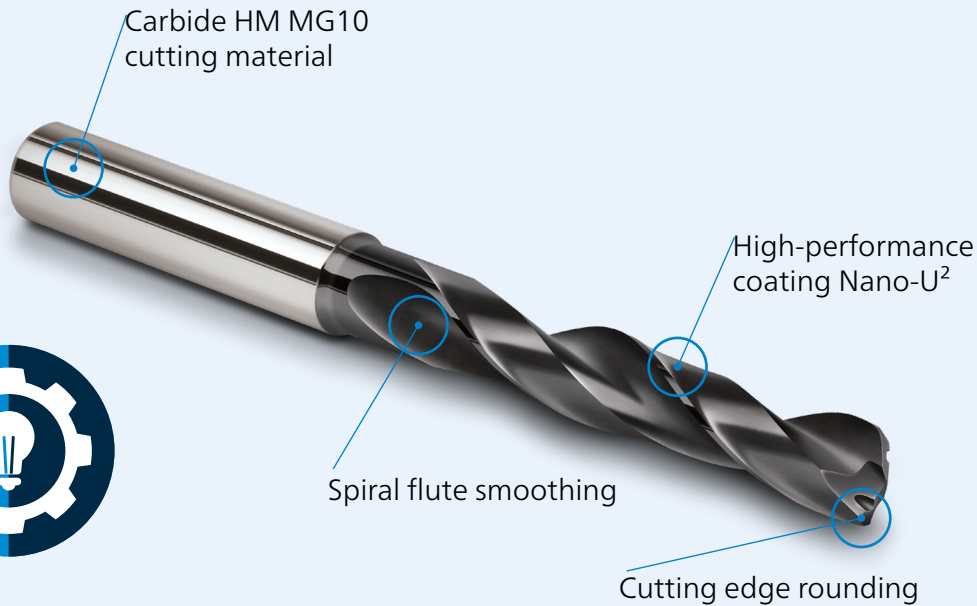
▶ Optimal for **automated production** thanks to stable process and validated plug-and-play cutting data



Experience our new **Supradrill®** in action.



Technologies



✓ Up to 30 % more productivity thanks to increased performance

✓ Reliable chip flow – even with tough materials

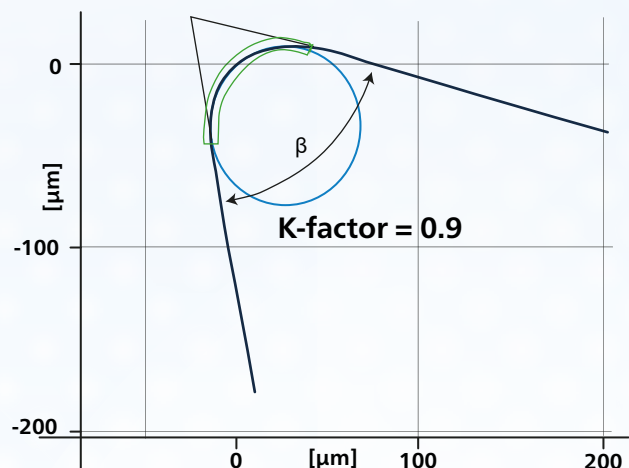
✓ Less micro chipping thanks to stable cutting edge

✓ Plug-and-play start with validated cutting data in FRAISA ToolExpert®

✓ Consistent quality under changing conditions

✓ Sustainable service offers with FRAISA ReTool® Services

Newly designed cutting edge rounding: the specially developed process enables a precisely defined and customized rounding of the cutting edge.



More productive, more efficient drilling processes, thanks to precisely optimized tool geometry

With the new generation of our **Supradrill®**, FRAISA has developed an innovative process that enables precisely defined, dimension-dependent cutting edge rounding and a perfectly smoothed flute.

The newly defined cutting edge rounding reinforces the cutting wedge precisely in the highest load zone, distributes the forces optimally and significantly reduces micro chipping. The result is robust and reliable cutting behavior with an expanded, universal field of application.

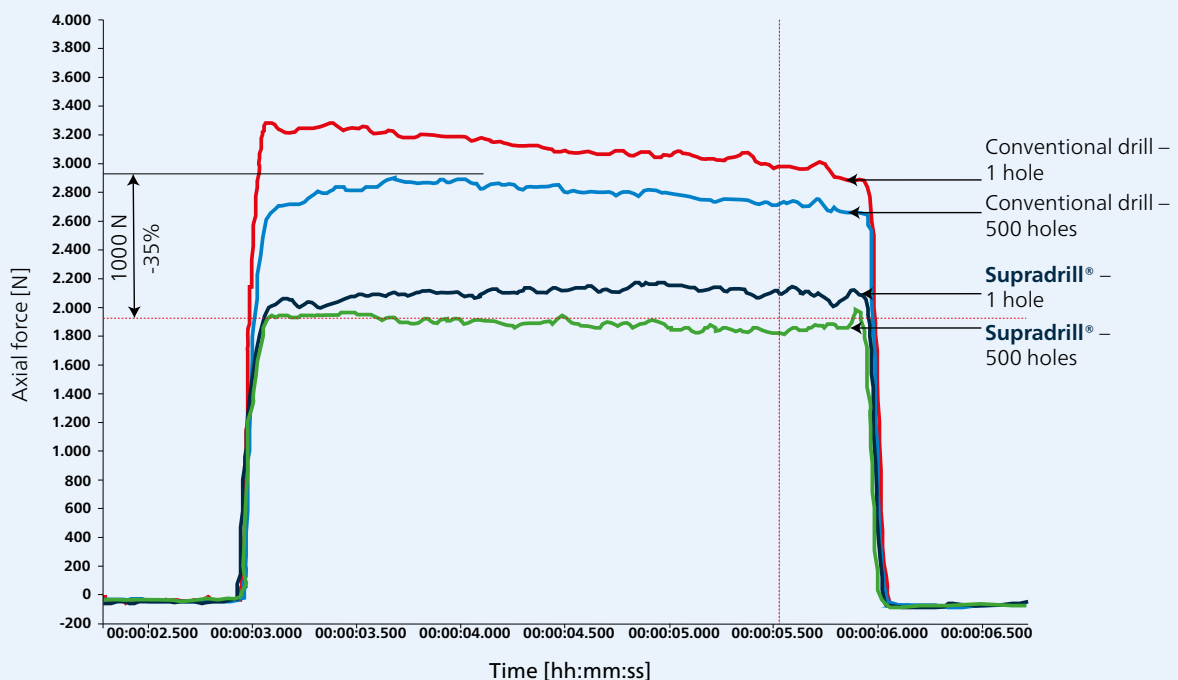
The perfectly polished flute minimizes friction and ensures a stable, controlled chip flow – even in tough materials with changing chip conditions or large drilling depths.

Together, cutting edge rounding and flute smoothing significantly reduce the cutting forces in the drilling process. This allows significantly higher cutting data to be selected, which leads directly to higher productivity and noticeably better energy efficiency.

The FRAISA Nano-U² coating further expands this potential. The high-performance coating developed in-house offers a wide speed and load window and impresses with its high thermal load capacity and uniform, predictable wear behavior. In combination with the ultra-fine grain carbide HM MG10, the result is an exceptionally robust drilling tool, perfectly balanced between hardness and toughness.

[4]

Thanks to the newly developed cutting edge rounding and the ideally smoothed flute, axial forces are significantly reduced, for maximum performance



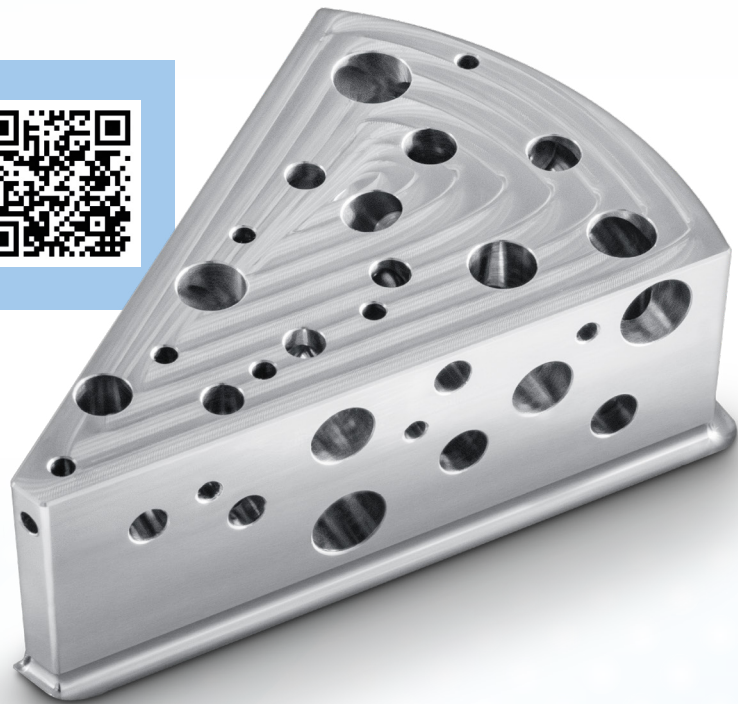
Reliable and precise results – even in complex drilling situations

Here the **Supradrill**[®] shows what it's made of: it combines innovation with precisely tested cutting data from the **FRAISA ToolExpert**[®]. The result is a drilling quality that impresses even in demanding situations – clean, stable and impressively reproducible, even with cross holes, breakthroughs in existing holes, angled holes or complex penetration points.

Discover valuable application tips, exciting articles and our extensive FAQs about the **FRAISA ToolExpert**[®].



Discover more exciting details about our new **Supradrill**[®] on our website [fraisa.com](https://www.fraisa.com).



[5]



Drilling angled entry/exit points –

when drilling into inclined workpiece surfaces, it is recommended to mill a flat surface first.



Noticeably better energy efficiency –

the spindle is less stressed and requires less power.



Safe, reproducible process –

the robust cutting edge offers leeway for process variations and ensures consistent results from the very first millimeter.

FRAISA ToolExpert® – optimum cutting data for maximum process reliability

Optimally coordinated cutting data is available in **FRAISA ToolExpert®** for all 183 diameters of the **Supradrill®**. Each recommendation is based on extensive test series in a wide range of materials – developed, validated, and precisely fine-tuned so you can get started safely right away.

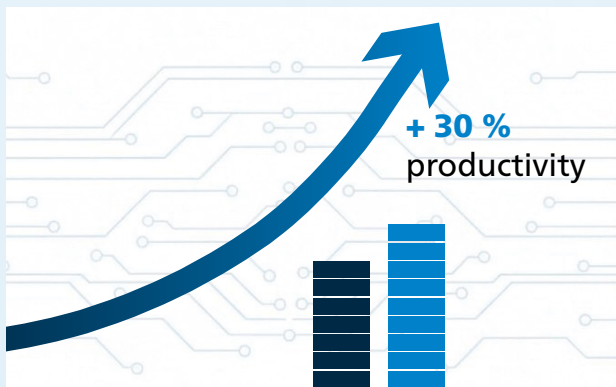
This results in stable, reliable processes and efficient, reliable machining. Our application engineers provide additional support in selecting the right strategy to ensure that each tool develops its full potential.

Increase your productivity

- Up to **30 % higher productivity**, thanks to significantly reduced cutting forces and higher selectable parameters
- Measurably **lower energy consumption** – more efficient machining thanks to optimized geometries and validated cutting data

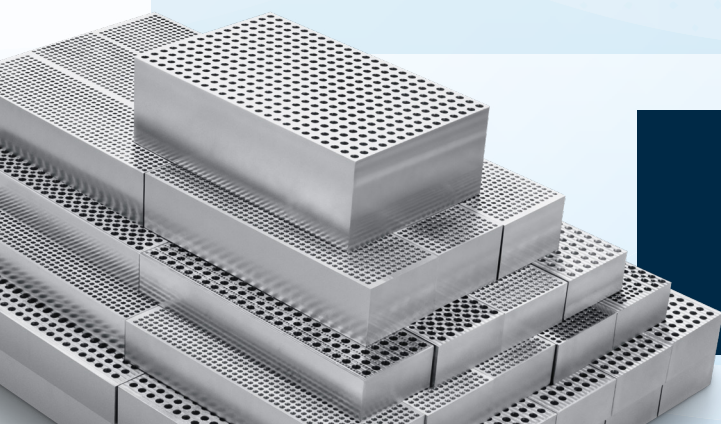
	v_c [m/min]	f [mm]	n [mm ⁻¹]	v_f [mm/min]	Depth [mm]	Time/ drilling [s]	Q [cm ³ /min]	Standing distance [m]
Conventional drill bit, Ø 7 mm	51	0.105	2319	243	35	8.64	9	17.5
Supradrill® , Ø 7 mm	70	0.105	3183	334	35	6.29	13	21

Example: Holes in material 1.2379/ X153CrMoV12 (850 N/mm²).
Parameters vary depending on the material – please use ToolExpert.



FRAISA ToolExpert® – get started and test right away:

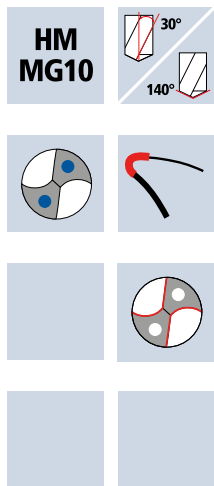
select material, application and tool and obtain optimum cutting data.



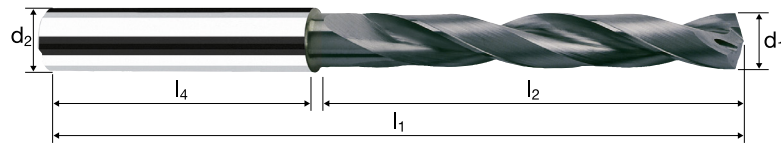
The right cutting data for machining everything from steel to rust and acid-resistant materials has been developed in numerous tests and is available in the **FRAISA ToolExpert®** ready for you.

Spiral flute drills Supradrill®

5xd



new!



ReTool®

Rm < 850 HRC < 24	Rm 850-1100 HRC 24-34	Rm 1100-1300 HRC 34-42	Rm 1300-1500 HRC 42-48				Inox Stainless	Ti Titanium	GG(G) Aluminium Tool Steel
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Example: Order-N°.		Article-N°		ø-Code				NANO-U ²	
		B82005		0300				B82005	
Ø Code	d ₁ m7	d ₂ h5	l ₁	l ₂	l ₄	L _{max}			
0300	3.00	6.0	66.0	24.7	36	20.2			●
0305	3.05	6.0	66.0	24.8	36	20.2			●
0310	3.10	6.0	66.0	24.8	36	20.2			●
0315	3.15	6.0	66.0	24.8	36	20.1			●
0320	3.20	6.0	66.0	24.8	36	20.0			●
0330	3.30	6.0	66.0	24.9	36	20.0			●
0340	3.40	6.0	66.0	24.9	36	19.8			●
0350	3.50	6.0	66.0	25.0	36	19.8			●
0360	3.60	6.0	66.0	25.0	36	19.6			●
0370	3.70	6.0	66.0	25.1	36	19.6			●
0375	3.75	6.0	66.0	25.1	36	19.5			●
0380	3.80	6.0	74.0	33.1	36	27.4			●
0385	3.85	6.0	74.0	33.1	36	27.3			●
0390	3.90	6.0	74.0	33.2	36	27.4			●
0400	4.00	6.0	74.0	32.9	36	26.9			●
0410	4.10	6.0	74.0	33.0	36	26.9			●
0420	4.20	6.0	74.0	33.1	36	26.8			●
0430	4.30	6.0	74.0	33.2	36	26.8			●
0440	4.40	6.0	74.0	33.2	36	26.6			●



More choice, more options in the FRAISA webshop

Discover all diameters and machining suitability in our webshop with a direct link to the **FRAISA ToolExpert®**.

The complete catalog is also available at fraisa.com.



Optimized User Experience: The advantages of the FRAISA webshop

- ✓ A modern design and attractive features at the cutting edge of technology
- ✓ Individualized and simple handling thanks to intuitive user navigation and extensive **filter options**
- ✓ Responsive design for an **optimal website view** on all kinds of end devices
- ✓ Direct link to the **FRAISA ToolExpert®** to retrieve the perfect cutting data
- ✓ Download of relevant **CAD data** as well as information about new **promotions, stock levels** and **availabilities**

Discover the
FRAISA Webshop:



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passion
for precision

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