



**SANDVIK**  
Coromant

# CoroDrill® 860 with -GM geometry

Optimized multi-material drilling solution

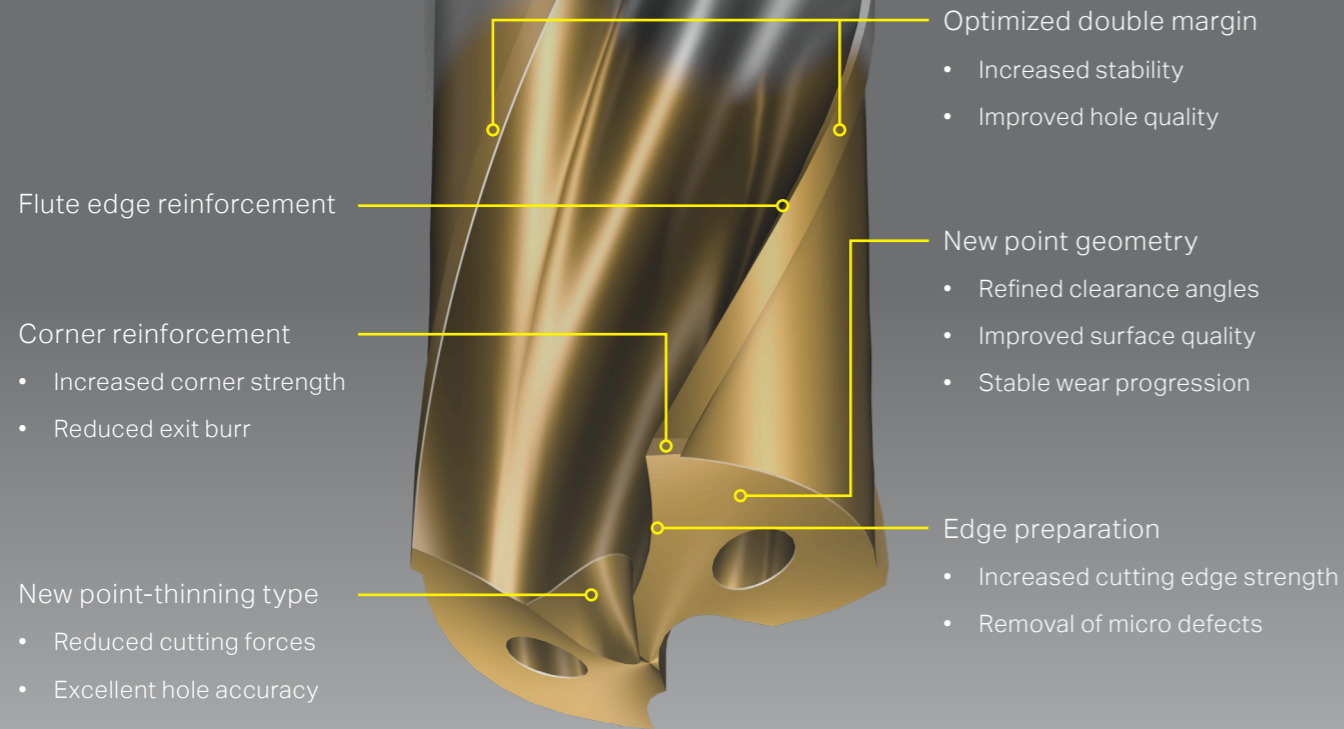
## A high-performance short-hole drill

CoroDrill® 860 with -GM geometry is a high-performance drilling solution for short holes primarily in steel, stainless steel, cast iron and hardened materials. It also performs competitively in HRSA and non-ferrous materials.

The drill offers robust process security, high hole integrity and excellent tool life, making it ideal for automotive and general engineering applications. The performance of the drill also makes it suitable in applications within aerospace and oil and gas industries where hole quality and process security are critical.



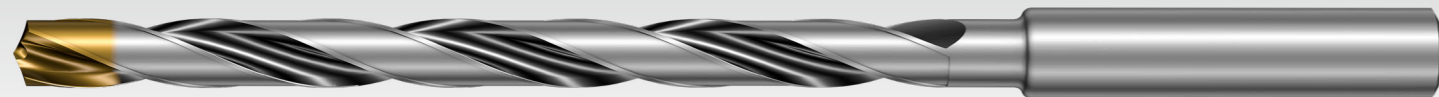
## Innovations that excite



### Unique grade

CoroDrill® 860 with -GM geometry features a new unique grade with a fine-grained carbide substrate that yields high performance.

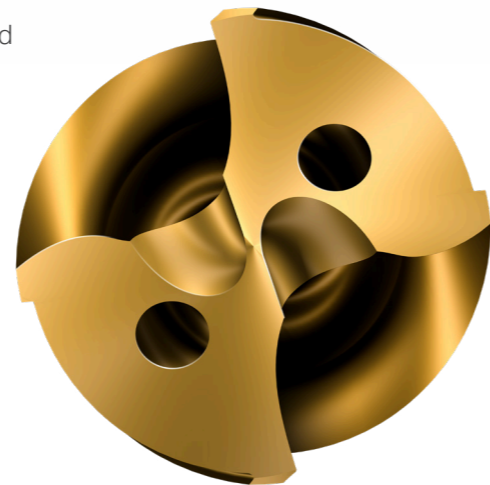
The drill tip has a multi-layer PVD coating that provides improved productivity and consistent tool life in multiple materials.



### Innovative flute form

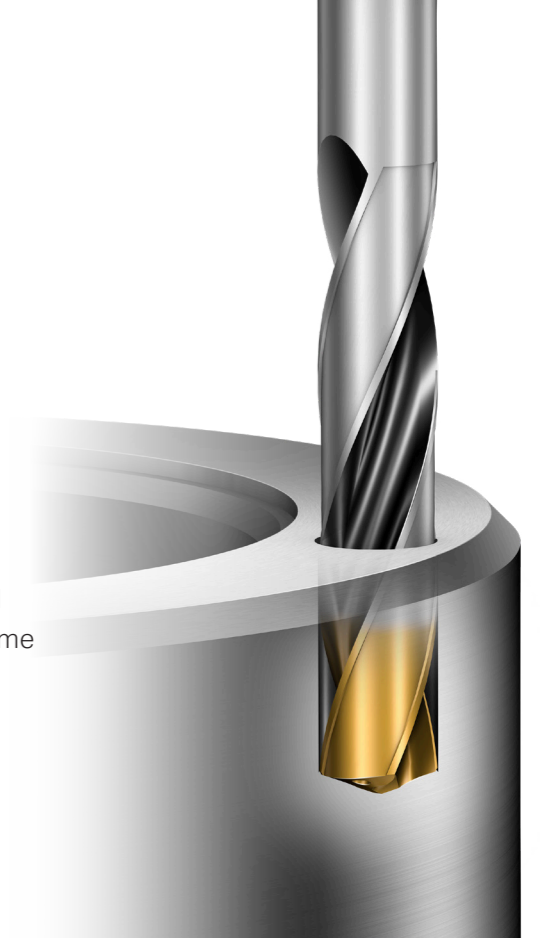
The drill is equipped with a new flute form, offering high core strength and reduced cutting forces.

Polished flutes ensure excellent chip evacuation and superior hole quality.

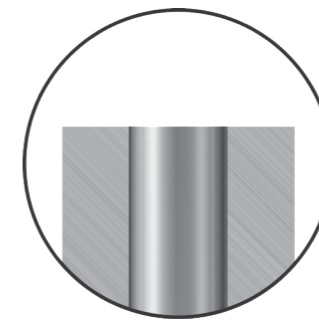


### Why CoroDrill®860 with -GM geometry?

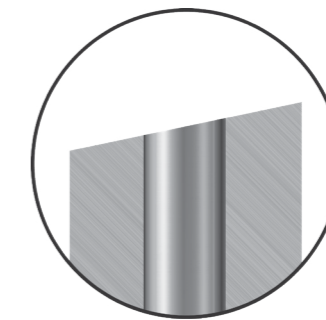
- Optimized for usage across a wide range of materials and applications
- Offers excellent stability, machining security and tool life
- Repeatable and reliable lights-out hole making
- Robust design and excellent dimensional accuracy significantly improve finished hole tolerance and quality
- With one drill for all materials, stock holding can be reduced and greater machine flexibility is offered leading to reduced set-up time
- Recondition your tool for major cost savings with our reconditioning service



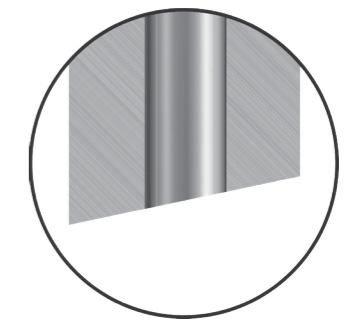
### Application



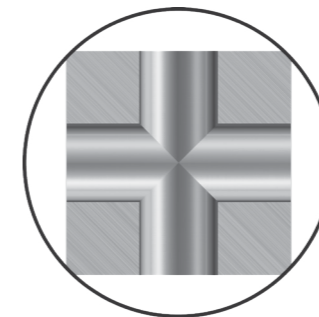
Conventional drilling



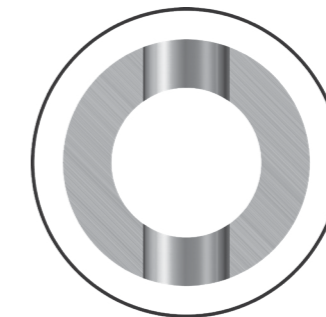
Inclined entry



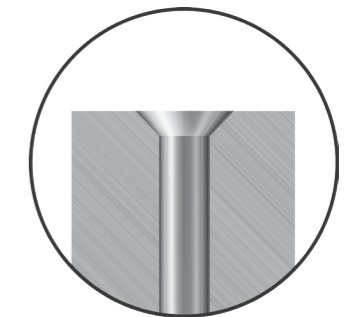
Inclined exit



Cross holes



Convex/concave surfaces



Chamfered hole



ISO application areas

# Performance

## Automotive customer in India

<b>Component:</b>	Rear axle
<b>Material:</b>	Bi-metal K3.2.C.UT / P5.0.Z.PH
<b>Operation:</b>	52 mm (2.04 inch) through hole
<b>Hole diameter:</b>	9.80 mm (0.38 inch)
<b>Machine:</b>	Horizontal machining centre/ BT50 spindle

**+66%**  
Tool life

	<b>Competitor</b>	<b>Sandvik Coromant</b>
<b>Tool</b>	-	860.1- 0980-044A1-GM X1BM
<i>n</i> , rpm	1460	1460
<i>v<sub>c</sub></i> , m/min (ft/min)	45 (147.64)	45 (147.64)
<i>v<sub>f</sub></i> , mm/min (in/min)	146 (5.74)	146 (5.74)
<i>f<sub>z</sub></i> , mm (inch)	0.10 (0.0039)	0.10 (0.0039)
<b>No. of holes</b>	<b>900</b>	<b>1500</b>
<b>Tool life, m (ft)</b>	<b>48.6 (159.45)</b>	<b>78 (255.90)</b>

## Automotive customer in China

<b>Component:</b>	Steering knuckle
<b>Material:</b>	P2.2.Z.AN
<b>Operation:</b>	Hole 1, 13.50 mm (0.53 inch) through hole Hole 2 and 3, 6.75 mm (0.26 inch) blind hole
<b>Hole diameter:</b>	5.50 mm (0.21 inch)
<b>Machine:</b>	Hyundai-Wia L420MA

**+60%**  
Tool life

	<b>Competitor</b>	<b>Sandvik Coromant</b>
<b>Tool</b>	-	860.1- 0980-044A1-GM X1BM
<i>n</i> , rpm	1792	4625
<i>v<sub>c</sub></i> , m/min (ft/min)	31 (101.70)	80 (262.46)
<i>v<sub>f</sub></i> , mm/min (in/min)	197 (7.76)	508 (20.02)
<i>f<sub>z</sub></i> , mm (inch)	0.11 (0.004)	0.11 (0.004)
<b>No. of holes</b>	<b>250</b>	<b>400</b>
<b>Tool life, m (ft)</b>	<b>6.75 (22.14)</b>	<b>10.80 (35.43)</b>

For more information, contact your local Sandvik Coromant representative or visit [www.sandvik.coromant.com](http://www.sandvik.coromant.com)

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