Technology

CoroDrill® 870 New Tips, New Possibilities

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What You Need To Know

The exchangeable-tip drill provides a number of benefits and has established a niche position for itself among advanced applications.
Depending upon the application, exchangeable-tip drills need to guarantee holes within the given tolerance and a surface finish of Ra 2.5 microns.
New drill concepts feature an application range that has, up until now, been dominated by outdated exchangeable-tip drills, various twist-drills and spade-drills, among others.

Exchangeable tips provide new drilling possibilities

The exchangeable-tip drill provides a number of benefits and has established a niche position for itself among advanced applications. Generally, these drills cover a middle-range of uses, as defined by the combination of hole-diameter and tolerance. The use of the exchangeable-tip drill overlaps operational ranges covered by both solid carbide and indexable insert drills.

Advanced solution

The advanced technology of the exchangeable tip concept can better satisfy greater application demands. Hole-types with diameters of 0.375 to 1.260 inches (9.5 to 32 mm) and depth-capability of three to 12 times diameter is one instance where an advanced solution is needed. This is especially true with regard to consistency in performance, process security, tool-life and hole-quality. Typical applications include tapping holes, holes for reaming, tube-sheet holes in heat exchanger plates and other high precision holes – all generally deeper holes. These holes require a tolerance that falls into the IT9 to IT10 ISO area, which requires high drill-precision. For the right intermediate area in terms of a hole's diameter, tolerances, depth, quality, and application, exchangeable-tip drills can be an excellent solution.

Guaranteeing hole tolerances

Depending upon the application, exchangeable-tip drills need to guarantee holes within the given tolerance and a surface finish of Ra 2.5 microns. Hole-depth requirements may need to be greater in some cases, but the drill should still be able to handle shorter and intermediate lengths. Exchangeable-tip drills also provide higher stability, radius options, point angle options, as well as step and chamfer solutions. And in today's machining environment, a drill must have the potential for higher penetration-rates with longer and more consistent tip life. And to remain efficient, tips need to be changed quickly and easily.

A new generation of exchangeable-tip drills have been developed to provide improved machining economy to this growing intermediate area of hole-making. This new generation drill positions itself as an advantageous alternative to the modern solid carbide and indexable insert drills.

New drilling concepts

New drill concepts feature an application range that has, up until now, been dominated by outdated

exchangeable-tip drills, various twist-drills and spade-drills, among others. The CoroDrill® 870 line offers a much more improved combination of penetration rates, finishing capability, reliability and tool handling – not to mention a new micro-grain, PVD-coated cemented carbide tip-grade. Both macro- and micro-geometries of the cutting edge on the CoroDrill® 870 exchangeable tip drill have been developed to provide new levels of capability and performance. An important advantage with this new concept is that it can be tailored not only to suit, but to *optimize* applications. This is possible through a new secure, high-precision interface between drill and tip, a unique flute-design, and new design in the cutting edge geometry. And with the wide variety of choices in the new line, there's an ideal solution for any application.

Critical chip evacuation

Specifically designed to facility chip flow among the flutes, the CoroDrill® 870 minimizes chip congestion. The patented flutes come in a variety of shapes and sizes, as well as varying helix angles throughout the drill-body. They are designed to guide and evacuate chips while offering interface strength and stability for the tip in the drill.

These drills are developed for process security, predictable tool life and productivity right from the start.

Key benefits of the CoroDrill® 870 include:

- Less machining time, faster through-put, longer tool-life
- Lower cost per hole
- Fast and easy tip-changing time
- Enhanced operational and process security
- Less scrap, broken tools and machine downtime
- Withstands demands of different hole features, set-ups and materials
- No tool reconditioning
- Broad drill-assortment

Key Takeaways

- The advanced technology of the exchangeable tip concept can better satisfy greater application demands.
- The new generation drill positions itself as an advantageous alternative to the modern solid carbide and indexable insert drills.
- CoroDrill® 870 line offers a much more improved combination of penetration rates, finishing capability, reliability and tool handling – not to mention a new micro-grain, PVD-coated cemented carbide tip-grade.

Shop the CoroDrill 870 ***here***.

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