Tas Bearing & Chain

Authorized distributor of: SANDVIK Coromant

Sandvik Coromant's Tapping tools

O C

CoroTap™ 100

- Taps with straight flutes
- Mainly used for short chipping materials like cast iron
- Suitable for both through and blind holes

V O C

CoroTap™ 300

- Taps with spiral flute grinding
- The spiral flute transports the chips out of the hole
- Best option for blind holes

V O C

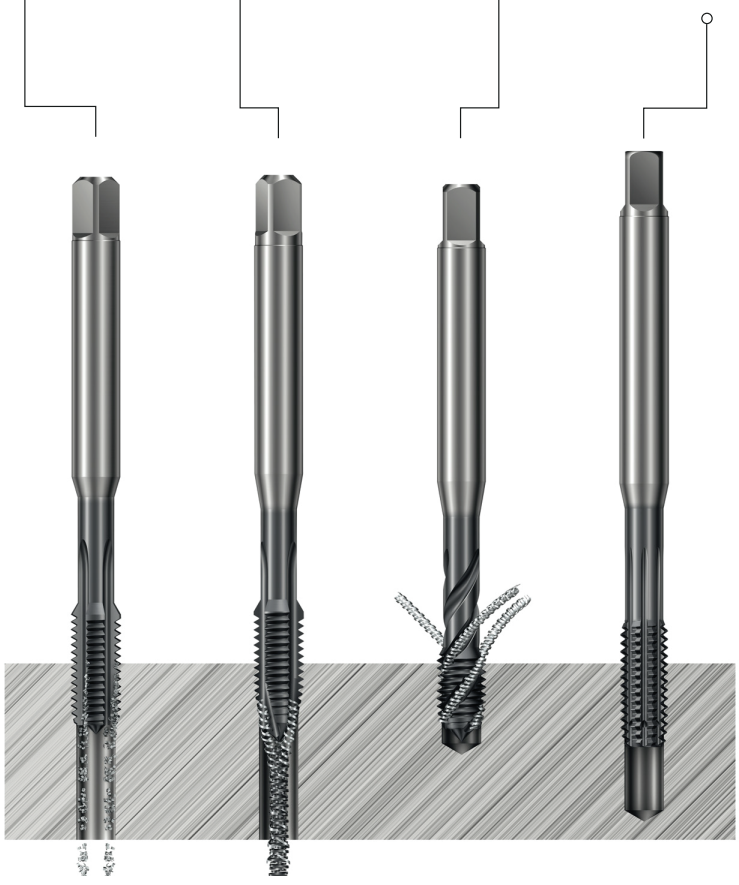
CoroTap™ 200

- Taps with spiral point grinding
- Pushes the chips forward
- Used for through holes

V O C

CoroTap™ 400

- Taps that form the thread instead of cutting
- For both through and blind holes
- Available with and without oil grooves

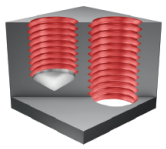


V Versatlie

O Optimized

C Customized

CoroTap™ 100



O C

About the tap

- Taps with straight flutes
- Mainly used for short chipping materials like cast iron
- Suitable for both through and blind holes
- Flute mainly used for cutting fluid but with internal coolant, chip evacuation is also possible

Applications

- Taps optimized for specific materials
- For both through- and blind holes
- Depths up to 2.5 × diameter
- **Tolerances ISO K:** 6H, 6HX, 2B, 2BX, 3B
- **Tolerances ISO N:** 6H
- **Tolerances ISO H:** 6H, 6HX

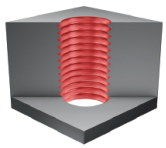
ISO application area

K N H

Benefits and features

- Three coolant holes for optimized strength
- Five flutes to reduce load on cutting edges and to reduce wear
- Unique grade with higher hardness to reduce wear on coating and substrate
- For ISO N materials: taps with interrupted threads for reduced torque

CoroTap™ 200



V C

About the tap

- Taps with spiral point grinding
- Pushes the chips forward
- Used for through holes

Applications

- Only for through holes
- Available in many thread forms and standards
- Up to 3xD depending on materials

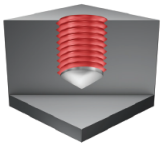
ISO application area

P M K N S

Benefits and features

- Chamfer B (3.5-5 threads) for high process security
- Edge treatment for reduced axial force and torque makes the tool run more smoothly, reduces risk of cutting-edge chipping and improves surface quality, tool life and chip formation
- High speed powder steel taps for improved strength, wear resistance and tool life
- Different coatings and grades are available

CoroTap™ 300



O C

About the tap

- Taps with spiral flute grinding
- The spiral flute transports the chips out of the hole
- Best option for blind holes
- Different helix angle for different applications
- Flute used for both cutting fluid and chip evacuation
- Different threading depths due to application and geometry

Applications

- Suitable for blind holes
- Available in many thread forms and standards
- Depths up to 3 × diameter

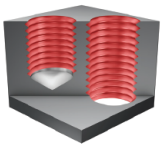
ISO application area

P M K N S

Benefits and features

- The design of the spiral flute secures a constant rake angle and gives a constant cutting process
- Back chamfer, used on taps with high helix angle, reduces torque & chipping
- Taps with high spiral angle give excellent chip evacuation and possibilities to thread up to 3 × diameter in blind holes
- Taps with low spiral angle give strong edges and are suitable for tapping tough materials, generating short chips in blind holes
- High speed powder steel taps for improved strength, wear resistance & tool life
- Solid carbide taps for long tool life and high productivity

CoroTap™ 400



O C

About the tap

- Taps that form the thread instead of cutting
- A chip-free solution
- All materials not suitable since there is need of certain ductility. Recommended tensile strength limit is 1200 N/mm2
- For both through and blind holes
- Available with and without oil grooves

Applications

- Suitable for both through holes and blind holes
- Available in many thread forms and standards
- Depths up to 3.5 × diameter

ISO application area

P M K N S

Benefits and features

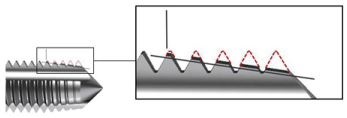
- Chamfer C (2-3 threads) and chamfer E (1.5-2 threads). Chamfer E mainly used in blind holes with low clearance
- High speed steel with cobolt taps for improved wear resistance
- High speed powder steel taps for improved strength, wear resistance and tool life

General tips on tapping

The success of any tapping operation depends on a number of factors that affect the quality of the finished product. For success of your operation, keep the following tips in mind:

1. Select the correct design of tap for the component material and type of hole, i.e. through- or blind.
2. Ensure that the component is securely clamped - lateral movement may cause tap breakage or poor quality threads.
3. Select the correct size of drill. Wrong choice or bad drilling conditions can cause work hardening of the work piece material that reduces the performance of the tap.
4. Select the correct cutting speed.
5. Use appropriate cutting fluid for correct application.
6. Ensure smooth entry of the tap into the hole, as an uneven feed may cause `bell mouthing´.

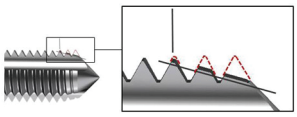
Threading chamfer type



Chamfer type B=3.5 – 5 × threads

Long chamfer:

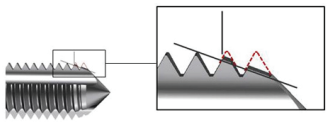
- High torque
- Thin chips
- Best surface quality
- Low pressure at the chamfer
- Longer tool life
- Most common for spiral point tap



Chamfer type C=2 – 3 × threads

Medium chamfer:

- Low torque
- Good surface quality
- Normal thick chips
- Normal pressure at the chamfer
- Normal tool life
- Most common design
- Standard chamfer for blind holes
- Most common for spiral-flute tap



Chamfer type E=1.5 – 2 × threads

Short chamfer:

- Low torque
- Good surface quality
- Thick chips
- High pressure at the chamfer
- Shorter tool life
- Extreme design
- To use when there is not much clearance in the bottom of the hole

For more info, please visit www.sandvik.coromant.com