

ToolDesign
by Schumacher

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PRECISION TOOLS SINCE 1918

CONDOR

Threading in high-strength materials

1.2767
X45NiCrMo4

1.6582
34CrNiMo6

Toolox
44

Hardox
400



The Project CONDOR

1.2767
X45NiCrMo4

The Challenge

Pre-hardened plastic mould steels generally have a hardness between 40 and 50 HRC. However, as the hardness increases, the machinability of the materials changes significantly.

The below-mentioned materials are normally long-chipping, but beginning from approx. 45 HRC they only produce short chips. In order to provide end users with a tap of high process control which covers both ranges, the 'CONDOR project' was launched.

Range of applications

- Structural steels
- Tool steels
- Cold work steels
- Hot work steels

The Development Project

Together with strong partners from the sectors of substrate, heat treatment, surface technology and edge preparation, we have developed a pioneering groundbreaking tool concept for hardened steels and plastic mould steels, which takes reliable series production to a new level.

The Key Parameters included

- Improved hardness and heat resistance
- Optimised flute shape through FEM simulation
- Micro-geometry of the cutting edge
- Innovative coating technology

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Innovative coating with
outstanding hardness
and density

1.6582
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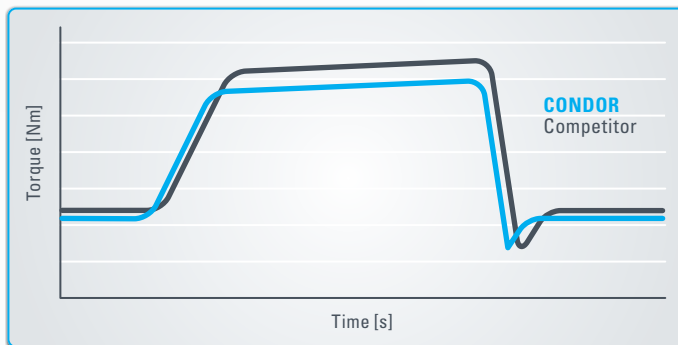
Hardox
400

Special PM substrate
composition

The Properties

- Special PM substrate composition
- High-precision cutting edge preparation
- Increased number of flutes for longer tool life
- Available with and without internal coolant

Schematic Torque Curve Competitor and **CONDOR**



The Advantages of CONDOR

- Suitable for long and short-chipping materials
- Maximum process control due to internal coolant
- Particularly suitable for mass production
- Problem solver for Toolox 44 and Hardox 400
- Part of the catalogue range (M 3 - M 16)

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