

Turning of cast iron materials

With the new Blackstar™ CTCK110 grade and the proven Blackstar™ CTCK120, all applications of cast iron machining can be covered. The two grades, with three negative and one positive geometry, offer a consistent programme for all applications.

The wear-resistant turning grades can be used in the automotive and power engineering sectors, in mechanical engineering or in the railway industry in, for example, the machining of brake disks, brake drums, turbocharger housings, flywheels or bearing cases.

Blackstar™ CTCK110

The grade for a continuous cut under stable conditions: it provides maximum wear resistance for high cutting speeds, and thanks to its high temperature resistance, is also suitable for dry machining.

Blackstar™ CTCK120

The grade for unstable and difficult conditions: its tough substrate ensures process security also with interrupted cut. Being a universal grade, it can be used for all cast iron materials.



Your advantages

- ▲ Two grades covering all applications in cast iron machining
- ▲ Consistent and well-structured programme
- ▲ Blackstar™ CTCK110: highly wear-resistant grade for dry machining and high cutting data
- ▲ Blackstar™ CTCK120: universal grade for all applications, also interrupted cuts
- ▲ Ground contact face

Your benefits

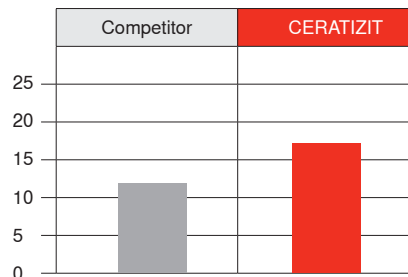
- ▲ Reduced stock inventory, resulting in lower costs
- ▲ Easy selection of the insert
- ▲ High cutting data and tool life increase productivity
- ▲ For maximum process security and less non-conforming material
- ▲ More stability of the tool holder enhances process security also in difficult machining situations

A practical example

Component: bearing pillow block / GGG40

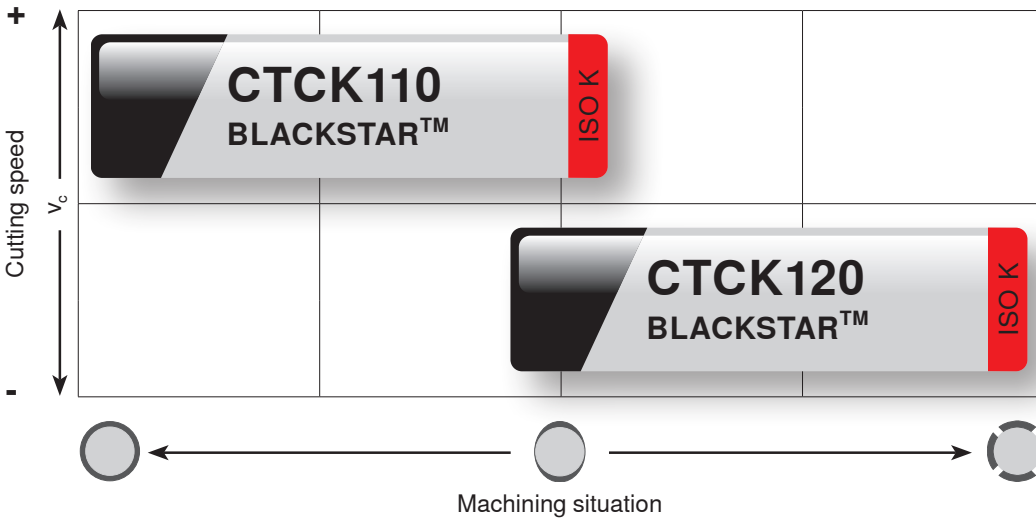
| Cutting data | Competitor | CERATIZIT |
|------------------------|------------|-----------|
| Grade | K10 | CTCK110 |
| V _c (m/min) | 240 | 240 |
| f (mm/rev) | 0,2 | 0,2 |
| a _p (mm) | 2,0 | 2,0 |
| Quantity | 12 | 17 |

Quantity



+42%

Application field

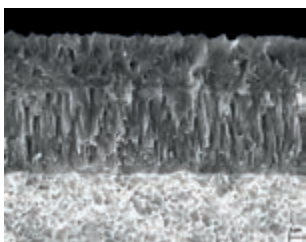


Chip grooves

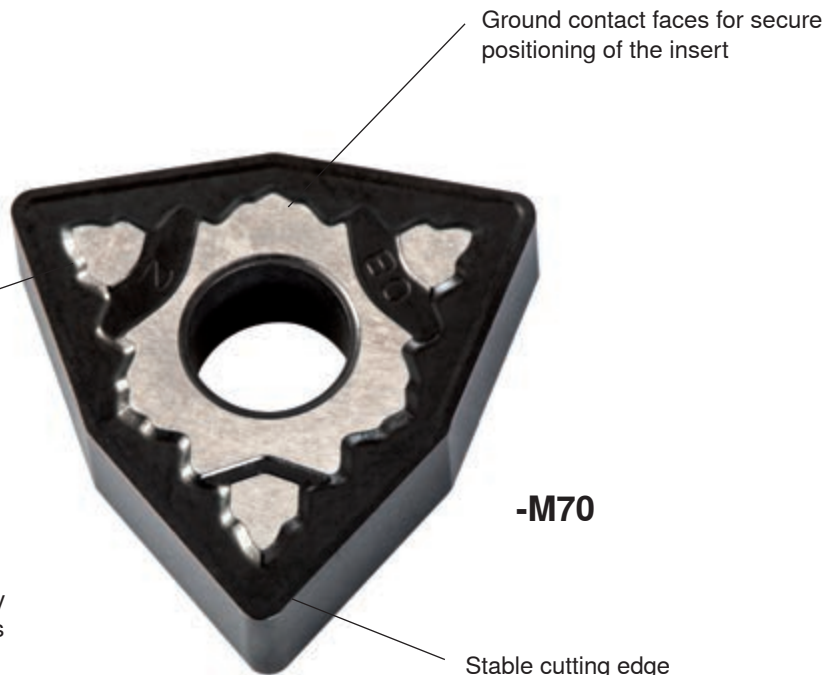
Four geometries cover the entire field of cast iron machining: proven chip grooves such as -M50 and -M70 are available as a consistent programme. These geometries are particularly suitable for turning spheroidal cast iron (GJS). The smooth standard geometries (.NMA) represent the first choice for the machining of grey cast iron (GJL) and are suitable for universal

application from finishing to roughing. Last but not least, the positive -SM geometry can be used for all types of machining from finishing to medium machining and is characterised by low cutting forces and very good chip control.

▲ BLACKSTAR™



The latest MT CVD coating and up-to-the-minute finishing processes generate an extremely hard aluminium oxide layer over a columnar TiCN coating which guarantees both the necessary toughness and cutting edge stability. Result: grades with high process security and maximum temperature resistance as well as reduced cratering ensures lower tool costs while increasing productivity.



Turning

Extended product range

Negative inserts

-M50



- ▲ Medium machining
- ▲ Unstable machining situations
- ▲ Low cutting forces
- ▲ Spheroidal cast iron

-M70



- ▲ Light to medium-rough machining
- ▲ Interrupted cut
- ▲ Cast skin and forging skin
- ▲ Blanks and forged parts
- ▲ Spheroidal cast iron, grey cast iron

(.NMA)



- ▲ Universal machining
- ▲ Very stable
- ▲ For short chipping materials
- ▲ First choice for grey cast iron

Positive inserts

-SM



- ▲ Finishing to medium machining
- ▲ Universal application
- ▲ Unstable machining situations
- ▲ Good chip control
- ▲ Spheroidal cast iron, grey cast iron



| Grade designation | Standard designation | | *Type of cutting material | Application range | | | | | | | | | | | P | M | K | N | S | H |
|------------------------------|----------------------|------|---------------------------|-------------------|----|----|----|----|----|----|----|----|----|----|-------|----------------------|-----------|--------------------|----------------|----------------|
| | ISO | ANSI | | 01 | 05 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | Steel | Stainless | Cast iron | Non-ferrous metals | Heat-resistant | Hard materials |
| CTCK110 BLACKSTAR™ | HC-K10 | C3 | C | | | | | | | | | | | | | | | | | |
| | HC-P05 | C8 | C | | | | | | | | | | | | | | | | | |
| CTCK120 BLACKSTAR™ | HC-K20 | C2 | C | | | | | | | | | | | | | | | | | |
| | HC-P10 | C8 | C | | | | | | | | | | | | | | | | | |
| | | | | 01 | 05 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | ● | Main application | | | | |
| | | | | | | | | | | | | | | | ○ | Extended application | | | | |