



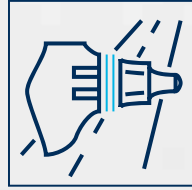
MADE IN GERMANY



SURFACE TECHNOLOGIES

CRUSHING & MIXING





**SURFACE
TECHNOLOGIES**

- ROAD MILLING
- SURFACE MINING
- STABILISING
- RAIL TRACK CONSTRUCTION
- CRUSHING & MIXING



IN USE WORLDWIDE

TUNGSTEN CARBIDE AND STEEL

Steel and carbide are two materials with totally different expansion coefficients when subjected to heat. Nevertheless, it is of steel and tungsten carbide that our tools are made, with tungsten carbide for the wear-resistant tip, and steel for the tool shank. Since tools reach high temperatures during use, extreme tensile stresses are generated. These stresses are absorbed by a special brazing material that joins the tungsten carbide tip to the steel section.

We have developed our own methods and systems for this brazing process, which is carried out on fully automated machines with the process covered in an inert protective gas. Manufacturing parameters are fully monitored and documented to ensure consistent quality. Afterwards, brazing shear strengths are checked to ensure that our "Masters of the construction site" lose no time due to broken tools!



BETEK HIGH-TECH TOOLS



1

CUSTOMER SERVICE

- Efficient, customised solutions based on flexible structures
- Personalised, quick response to customer requirements



2

DEVELOPMENT & CONSTRUCTION

- Quick creation of samples and prototypes
- Competitive pricing thanks to close cooperation with all production units



3

TUNGSTEN CARBIDE MANUFACTURING

- High-purity raw materials are used for high strength
- Consistently high, pore-free tungsten carbide quality through precise process control thanks to years of experience and know-how



4

SOLDERING PRODUCTION UNIT

Production facilities and processes specially developed to perfection by experts in the combination of tungsten carbide and steel



5

AUTOMATION

Maintaining a competitive edge on the global market thanks to a high degree of automation and flexible manufacturing facilities



6

QUALITY ASSURANCE

Continuous quality testing of the entire manufacturing chain all the way up to the installation site, in conformity with DIN ISO 9001:2000 and DIN EN ISO 14001



7

TRAINING

User training courses at BETEK or on-site for sustainable, long-term commercial success and customer satisfaction



8

LOGISTICS

Quick responses thanks to:

- the use of the very latest IT and enhanced logistics networking
- Standard products kept in stock

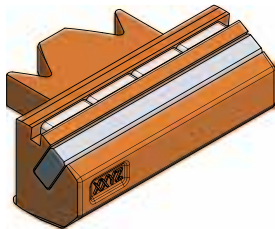
OUR KNOW-HOW COMBINED WITH STATE-OF-THE-ART PRODUCTION TECHNOLOGIES GUARANTEES THE FINEST QUALITY, MADE IN GERMANY



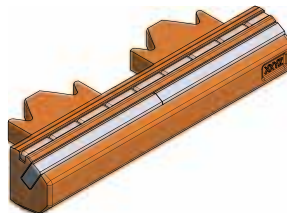
VSI CRUSHER WEAR PARTS

> SANDVIK

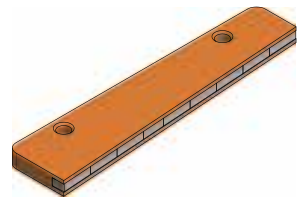
BETEK's tungsten carbide wear parts have been specifically developed for your VSI crusher. Optimized design techniques, together with brazed bonds between our tungsten carbide and the steel body result in a tremendous productivity gain as the parts last much longer than conventional ones.



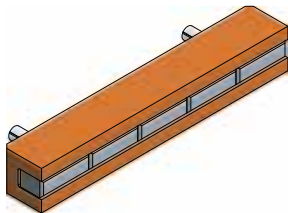
■ **BBM95**
BBM 110x70x55
ROTOR TIP 110 MM



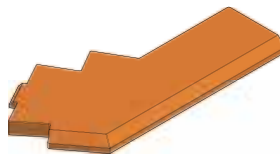
■ **BBM282**
BBM 220x70x49
ROTOR TIP 220 MM



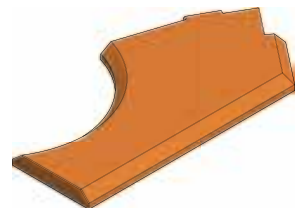
■ **BBM250**
BBM 220x50x12
TRAIL PLATE 220 MM



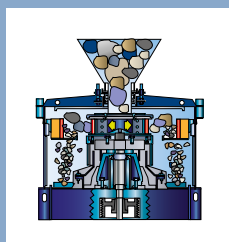
■ **BBM251**
BBM 128x20x20
BACK-UP TIP



■ **BBM278**
BBM 350x171x20
WEAR PLATE LOWER



■ **BBM279**
BBM 360x181x20
WEAR PLATE UPPER

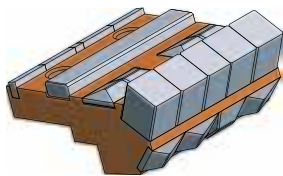


ROTOR TIPS

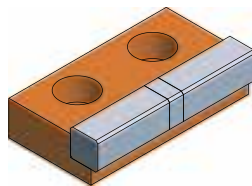
Betek tungsten carbide rotor tips are engineered specifically for each type of VSI-crusher and protect the rotor edges against wear.

VSI CRUSHER WEAR PARTS

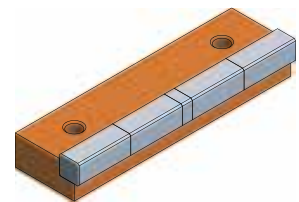
> SBM | MFL



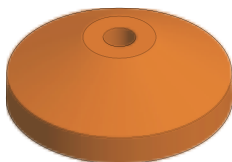
■ **BBM248**
BBM 130x107x59
ROTOR TIP



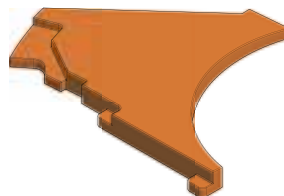
■ **BBM314**
BBM 115x65x30
BACK-UP TIP



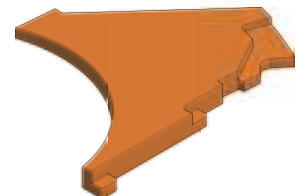
■ **BBM315**
BBM 220x65x35
TRAIL PLATE



■ **BBM259**
BBM 429x143
DISTRIBUTOR CONE



■ **BBM260**
BBM 434x343x35
WEAR PLATE UPPER

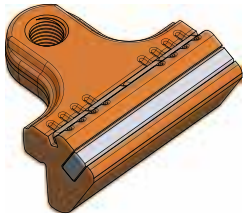


■ **BBM261**
BBM 434x343x35
WEAR PLATE LOWER

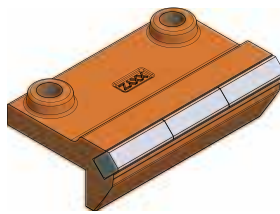


VSI CRUSHER WEAR PARTS

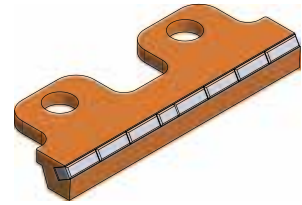
> METSO | BARMAC



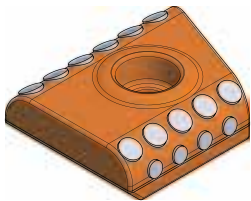
■ **BBM160**
BBM 105x103x55A
ROTOR TIP



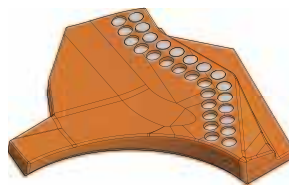
■ **BFZ123**
BFZ 155x102x17
ROTOR TIP



■ **BBM176**
BBM 192x70x23
BACK-UP TIPS LONG AND SHORT



■ **BBM183**
BBM 104x97x37
CAVITY WEAR PLATES
OUTER AND MIDDLE

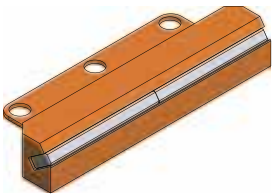


■ **BBM253**
BBM 303x273x36
WEAR PLATES UPPER
AND LOWER

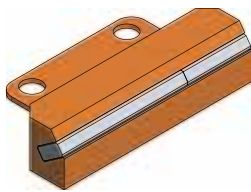


■ **BBM275**
BBM 300x98
DISTRIBUTOR PLATE
HEAVY CONE

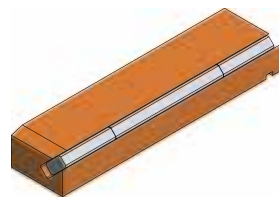
► OTHERS



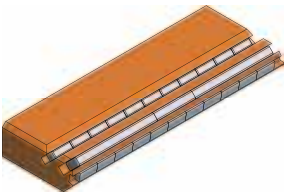
■ **BBM99**
BBM 224x78x38
KPI-JCI



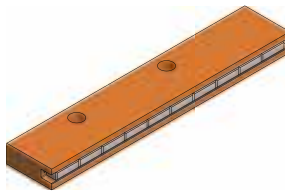
■ **BBM150**
BBM 157x78x38
KPI-JCI



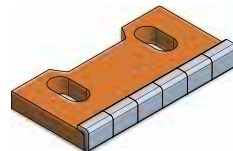
■ **BBM221**
BBM 214x50x30
TEREX CEDARAPIDS



■ **BBM305**
BBM 300x100x40
AUSPACTOR AND ORESIZER



■ **BBM215**
BBM265x50x20
AUSPACTOR

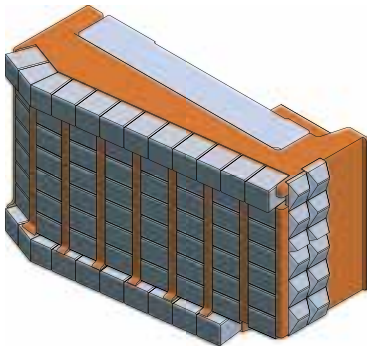


■ **BBM64**
BBM 102x53x13
JÄCKERING

VSI CRUSHER WEAR PARTS

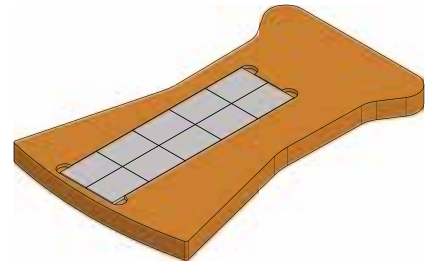
► OPEN ROTORS

BETEK's impeller shoes for open VSI rotors equipped with tungsten carbide are a premium alternative to standard high-chrome or ceramic steel impellers.



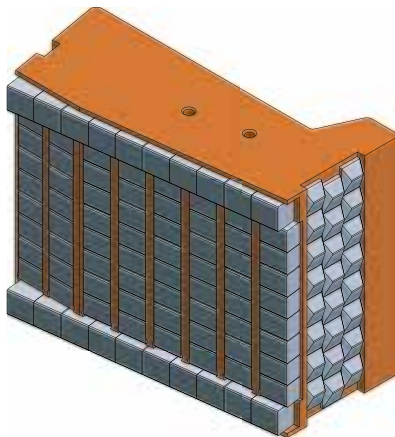
■ **BBM172**

BBM 300x180x200
MAGOTTEAUX



■ **E3622**

BBM 253x162x15
MAGOTTEAUX



■ **BBM239**

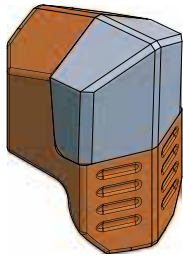
BBM309x240x176
ISC



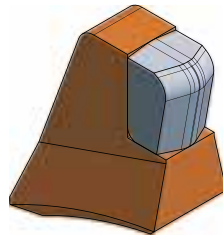
WEAR PARTS FOR ROLL CRUSHERS AND SIZERS

► WELDING TEETH

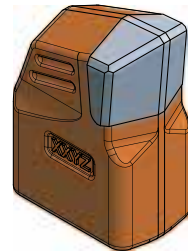
BETEK's tungsten carbide weld-on teeth for roll crushers are used to crush various minerals. The long-lasting, sharp cutting edges guarantee consistently high productivity for your crushing needs.



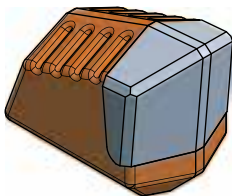
■ **BBM79**
BBM 88x50x62



■ **BBM292**
BBM 116x97x45



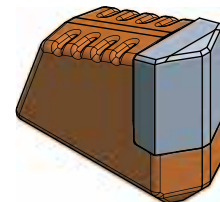
■ **BBM50**
BBM 85x60x38



■ **BFZ326**
BBM 60x50x36



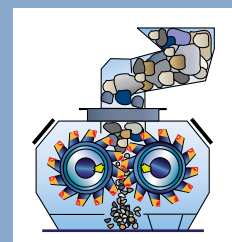
■ **BBM177**
BBM 101x60x50



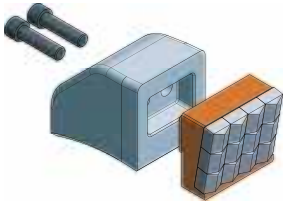
■ **BBM75**
BBM 25x50

CRUSHER TEETH

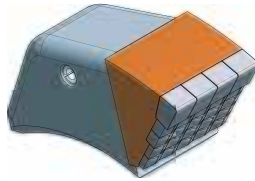
Betek's crushing tooth has proven itself to be very efficient in various applications, including the crushing of limestone, coal and various types of ore. In order to ensure optimum results, the teeth can be fitted to suit any particular application and machine.



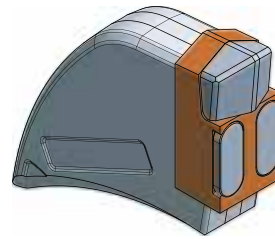
› QUICK-CHANGE SYSTEMS



▪ **E2699**
BBM 203x108x150



▪ **E2622**
BBM 345x140x130



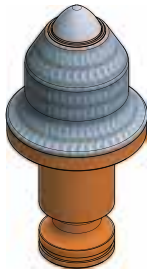
▪ **BHS62 + BFS142**
BBM 150x40x110



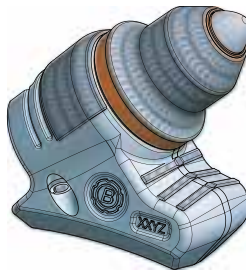
WEAR PARTS FOR ROLL CRUSHERS AND SIZERS

► ROUND SHANK CUTTER BITS

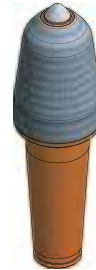
BETEK's round shank cutter bits come with additional tungsten carbide (WCS) hard facing. In highly abrasive applications, our premium hardfacing of the steel body guarantees much better performance over ferrochromium (FeCr) hardfacing.



■ **BSR331**
BG38SW-25.7077
WITH HARD FACING



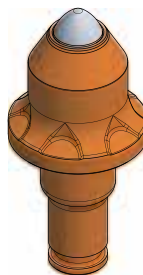
■ **BSR331 + BHR257**
BG38SW-25.7077 + B38.7845
HOLDER SYSTEM



■ **BSR218**
BG52W-22.70122P
WITH HARD FACING



■ **BGB66**
B47GK100LK71/2



■ **BKF10**
BS38F-25.7077



■ **BSR435**
BG38S-22.8358P
WITH HARD FACING

► ROUND SHANK CUTTER BITS



▪ **E2046**
BSRHLK166/S76x60
WITH HARD FACING



▪ **BSR367**
BS76X-D70.160150

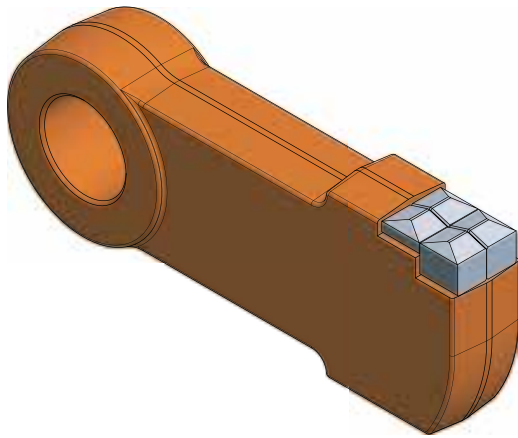


QUELLE: TerraSource Global

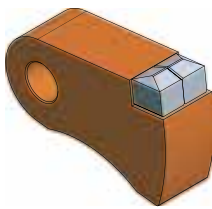
WEAR PARTS FOR HAMMER CRUSHERS

► TUNGSTEN CARBIDE HAMMERS

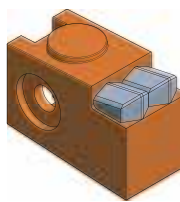
BETEK's tungsten carbide hammer heads are the perfect solution for your hammer crusher. Middle hard rock, as well as different kind of ores can be crushed without any wear problems



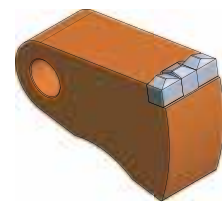
■ **E3677**
BBM 335x125x59



■ **E3417**
BBM 157x101x48



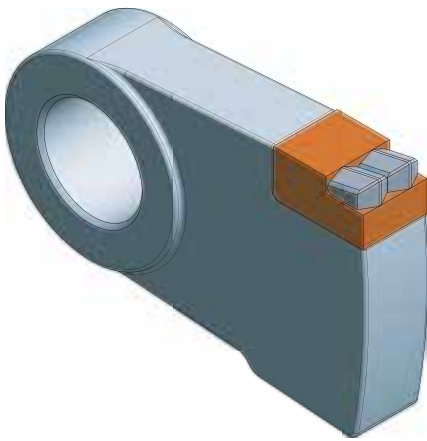
■ **E3967**
BBM 120x87x172



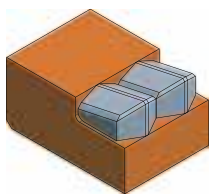
■ **E3418**
BBM 221x142x78

› QUICK-CHANGE SYSTEMS

Tungsten carbide keeps the cutting edges in original condition and is prevents the hammer head from rounding off. The result is improved crushing productivity and profitability.



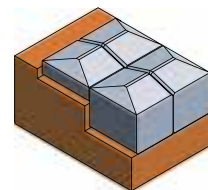
■ **E3821 + E3822**
BBM 475x297x103



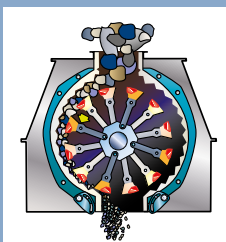
■ **E3822**
BBM 120x85x88



■ **E3636 + E3637**
BBM 335x125x59



■ **E3637**
BBM 75x50x47



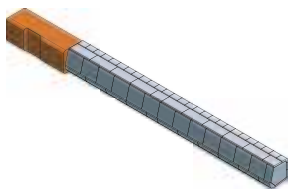
HAMMER HEADS

Tungsten carbide gives our hammer heads the ability to keep their original edge for an extended period of time, therefore improving crushing capacity.

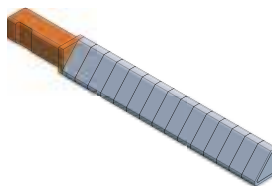


WEAR PARTS FOR MIXERS AND VIBRATING TABLES

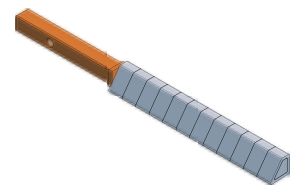
> MIXERS



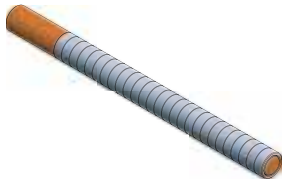
■ **BBM44**
BBM585x44x44/OL
MIXING ARMS



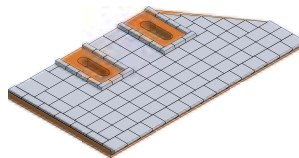
■ **BBM73**
BBM585x54x54
MIXING ARMS



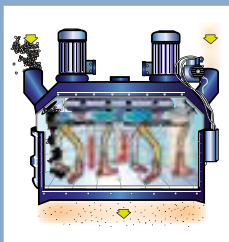
■ **BBM51**
BBM577x43x39/CL
MIXING ARMS



■ **BBM45**
BBM d=40x585
MIXING ARMS



■ **E2454**
BBM 450x252x22
WALL SCRAPERS

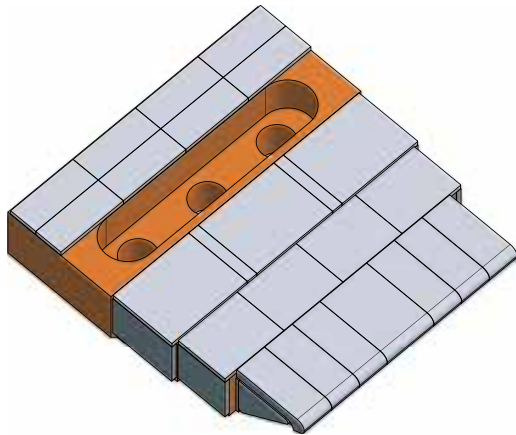


MIXING ARMS

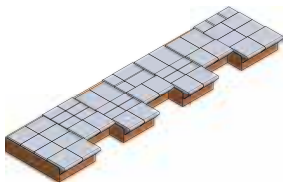
This tool is used as a blunger in batch mixing units and is protected against wear by Betek tungsten carbide.

WEAR PARTS FOR MIXERS AND VIBRATING TABLES

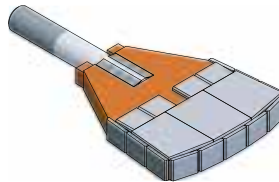
> MIXERS



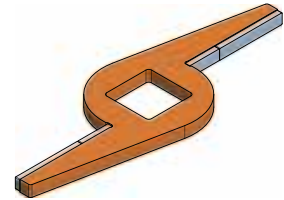
■ **BFS435**
BFS160x140x40
WEAR PADDLE



■ **E3520**
BBM375x100x24
MIXER BLADE



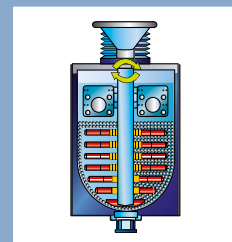
■ **BFS415**
197-15 / S-C-H
MIXER BLADE



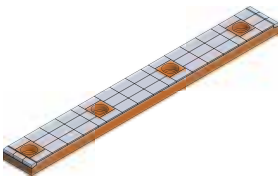
■ **BBM30**
BBM150x50x6
MIXER PADDLE

MIXER PADDLE

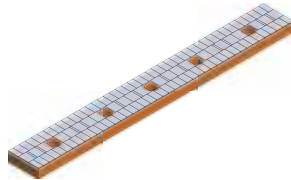
Betek's mixer paddles are successfully used in mobile asphalt mixing plants.



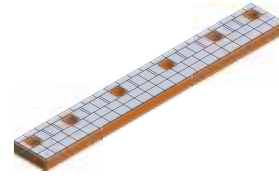
► VIBRATION BARS



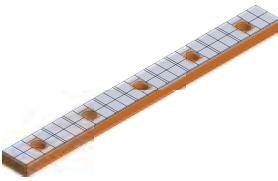
■ **BBM70**
BBM525x60x20



■ **BBM111**
BBM 850x100x30



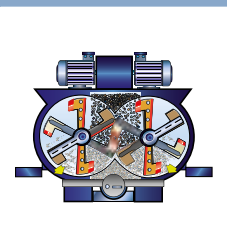
■ **BBM112**
BBM 740x100x30



■ **BBM113**
BBM 740x70x30

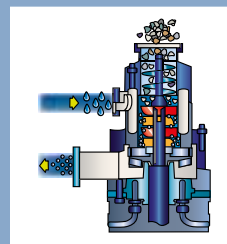


■ **BBM80**
BBM1378x112x30



MIXER BLADE

Our tungsten carbide equipped mixer blade is ideally suited for mixing and crushing very abrasive materials, such as quartz sand or ceramic raw materials.



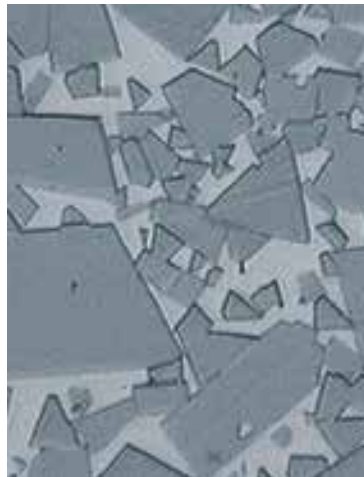
WEAR PADDLE

Betek tungsten carbide protects the paddle against wear caused by abrasive material.

TUNGSTEN CARBIDE IS NOT JUST TUNGSTEN CARBIDE

High levels of hardness in combination with optimum durability and aligned to the specific purpose ensure the tools have exceptional life time.

Since best quality comes first at BETEK, we only use the highest quality and purest raw materials.



BETEK PLASMA TUNGSTEN PROTECTION

PHYSICAL CHARACTERISTICS

- Powder mixture: 60% WSC in NiCr Matrix
- Grain size WSC: 30 – 150 µm
- Hardness of Matrix: 780 – 850 HV (60 HRC)
- Hardness of W2C: 1900 HV

APPLICATION AND BENEFIT

- Welded protection – highly resistant against wear and corrosion.
- WSC inbedded in a NiCr Matrix
- Reduced risk for spark creation when cutting rock
- Thickness of protection: 1 up to 6 mm

WEAR FACTOR

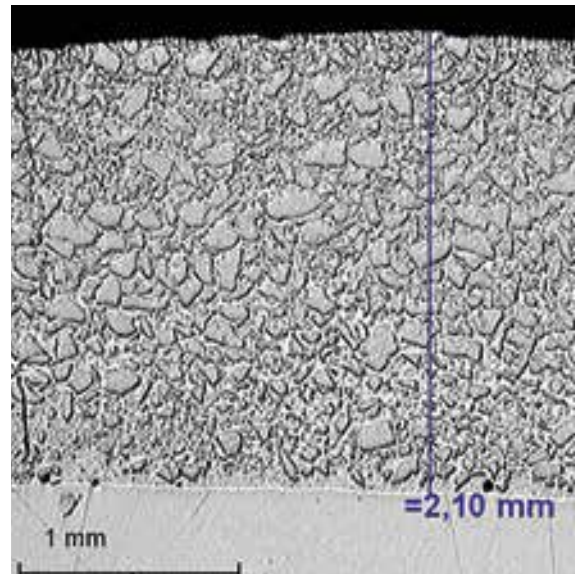
(Source: ISAF, Technical University Clausthal, wear test ASTM G65-00)

The higher the figure the higher the wear protection level:

- Construction steel S235: 1
- Hardox 400: 2
- Casting: 2,3
- Betek Plasma Tungsten protection: 40



Typical welding joint



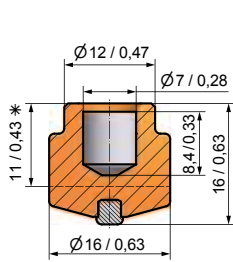
Welding joint cross-section

EXTENSIVE WEAR PROTECTION

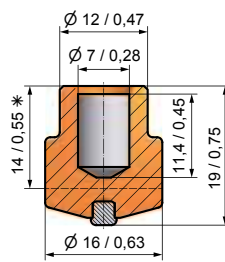


► OVERVIEW

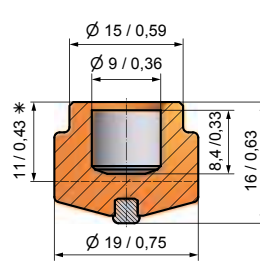
Betek can provide the appropriate stud welding machine for the TungStuds wear protection system.



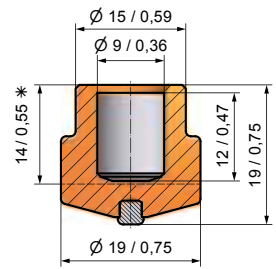
■ **BTS01** BTSD16/16 



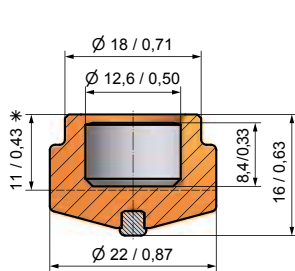
■ **BTS02** BTSD16/19 



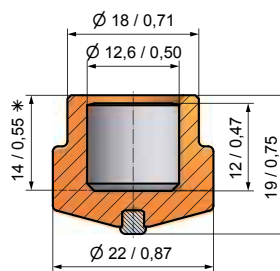
■ **BTS03** BTSD19/16 



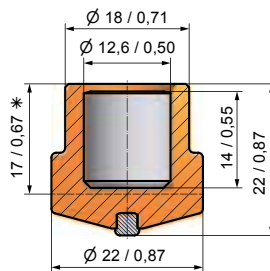
■ **BTS04** BTSD19/19 



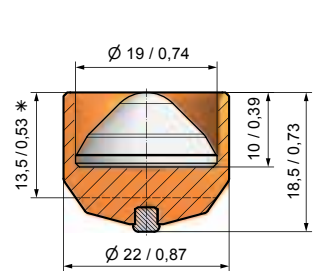
■ **BTS05** BTSD22/16 



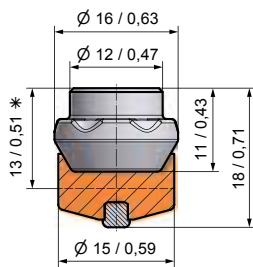
■ **BTS06** BTSD22/19 



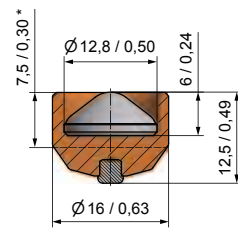
■ **BTS07** BTSD22/22 



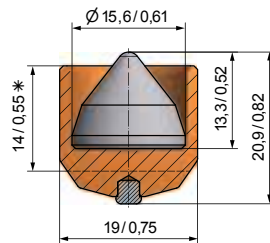
■ **BTS08** BTSD22/18,5SG 



■ **BTS10B** BTSD16/18B 



■ **BTS20** BTSD16/12,5SG 

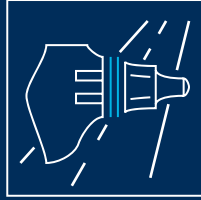


■ **BTS100** BTSD19/15,6SG 

*Height after welding



➤ BETEK



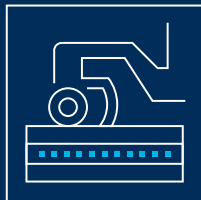
SURFACE TECHNOLOGIES

- ROAD MILLING
- SURFACE MINING
- STABILISING
- RAIL TRACK CONSTRUCTION
- CRUSHING & MIXING



UNDERGROUND TECHNOLOGIES

- FOUNDATION DRILLING
- MINING
- TRENCHLESS
- TRENCHING
- TUNGSTUDS
- DRUM CUTTERS



ENVIRONMENTAL TECHNOLOGIES

- AGRICULTURE
- GRADER TOOLS
- TUNGSTEN CARBIDE
- FORESTRY & RECYCLING

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