Original WIRTGEN
CUTTING TOOLS FOR COLD RECYCLERS AND SOIL STABILIZERS

CLOSE TO OUR CUSTOMERS
ORIGINAL WIRTGEN CUTTING TOOLS FOR COLD RECYCLERS AND SOIL STABILIZERS

EXTREME IMPACT STRESS RESISTANCE, HIGH RESISTANCE TO SHANK BREAKAGE, MAXIMUM TOOLHOLDER PROTECTION WHEN USED WITH ABRASIVE MATERIALS
CUTTING TECHNOLOGY HAS ALWAYS TAKEN A TOP PRIORITY IN THE WIRTGEN GROUP. THAT’S WHY WE ALSO PAY SPECIAL ATTENTION TO CONSTANT FURTHER DEVELOPMENT OF THIS KEY TECHNOLOGY IN THE FIELD OF COLD RECYCLING MACHINES AND SOIL STABILIZERS.

> GENERATION Z IS THE ALL-ROUNDER AMONG PICKS FOR COLD RECYCLING AND SOIL STABILIZATION AND IMPRESSES THANKS TO ITS PRODUCT CHARACTERISTICS, SUCH AS HIGH FRACTURE RESISTANCE IN THE CARBIDE TIP.

> THE WCC MILLING TOOL IS USED FOR STABILIZING COMPACT SOILS AND IS THE IDEAL TOOL WHEREVER LARGE PIECES OF ROCK CAUSE ENORMOUS IMPACT STRESS.

MORE INFO?
SEE OUR ANIMATION CLIPS ON CUTTING TECHNOLOGY

> www.wirtgen.de/cuttingtechnology
WIDE RANGE OF REQUIREMENTS OF COLD RECYCLING AND SOIL STABILIZATION

ENVIRONMENTALLY FRIENDLY COLD RECYCLING

Cold recycling and pulverizing are internationally established processes. Defective asphalt structures made of widely different stone types and the gravel layer beneath are milled out and then generally uniformly mixed with binder before being re-installed on site.

REQUIREMENTS FOR MILLING TOOLS:

- Uniform milling process to produce high-grade results and prevent oversized grains
- High cutting performance with low wear, even when faced with hard, abrasive rocks, for optimum cost-effectiveness
- Compliance with the required grain-size distribution curve to ensure permanent stability in the new base layer
- Homogeneous mixing of the binder to ensure high adhesion between the individual grains, thus providing optimal load bearing capacity
HIGH-PERFORMANCE SOIL STABILIZATION

Used worldwide, soil stabilization is the ideal solution to produce ready-to-use compressible soil from an insufficiently stable sub-base. A wide variety of soil types need to be worked during this process, ranging from "highly compact" through to "interspersed with coarse rocks" and "abrasive".

REQUIREMENTS FOR MILLING TOOLS:

- Effective soil material splitting and grinding to ensure binder has optimal effect
- Uniform distribution and homogeneous mixing of binders and, if necessary, water to ensure the mix is highly stable
- Maximum cutting performance, even with tough, hard ground, to ensure high productivity and low diesel consumption
- High impact resistance to ground containing large stones to ensure long productivity times
- High wear resistance for abrasive, compact ground to ensure optimum cost-effectiveness
> GREATER FRACTURE RESISTANCE IN THE CARBIDE TIP
> GREATER WEAR VOLUME IN THE STEEL BODY
> GREATER HARDNESS IN THE WEAR PLATE
> TIME-TESTED WIRTGEN CLAMPING SLEEVE IN REINFORCED DESIGN
> IMPROVED TENSILE STRENGTH IN THE PICK SHANK
All-rounder for cold recycling and soil stabilization

**GENERATION Z PICK**

**GENERATION Z** picks excel due to unique product features, which, most importantly, reduce operating costs. Thanks to their adapted shank design and optimized carbide tip geometry with a reinforced carbide base, the picks in this product line are designed to withstand high impact loads and are thus the ideal solution for recycling and stabilizing applications. The relatively large steel body volume compared to conventional picks and the reinforced wear plate deliver the longest possible service life for tools and optimum protection for the upper part of the toolholders in applications involving abrasive materials.

---

<table>
<thead>
<tr>
<th>Optimized carbide mix dimensionally correct for applications where high impact loads are expected.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carbide tip on a conventional pick with a tungsten-cobalt mix of 94% to 6%</strong></td>
</tr>
<tr>
<td><img src="image1" alt="Carbide tip on a conventional pick" /></td>
</tr>
<tr>
<td><strong>Carbide base 1.25 mm thick</strong></td>
</tr>
</tbody>
</table>

---

> The carbide mix with a high cobalt content of 7% and the reinforced carbide base deliver high stability in the carbide, even under extremely high impact loads. The **GENERATION Z** all-rounders thus offer the optimal solution for all cold recycling and soil stabilizing applications.

---

**MORE INFO?**

SEE OUR ANIMATION CLIPS ON CUTTING TECHNOLOGY

> www.wirtgen.de/cuttingtechnology
Good arguments for 
RESILIENT AND RELIABLE

**IMPRESSIONIVE**

- **High operational reliability** thanks to exceptional impact stress resistance
- **Greater productivity**, particularly when mixing abrasive materials
- **Maximum machine advance rate** thanks to flow-optimized pick geometry

**GREATER FRACTURE RESISTANCE IN THE CARBIDE TIP**
An optimized carbide composition and adapted tip geometry achieve a greater fracture resistance in the carbide tip.

**GREATER WEAR VOLUME IN THE STEEL BODY**
The steel body can be a factor in limiting full utilisation of a pick when it comes to abrasive materials. The carbide can be virtually fully exploited thanks to the increased wear volume in GENERATION Z.
> IMPROVED TENSILE STRENGTH IN THE PICK SHANK
The repositioning of the clamping sleeve bearing on the lower end of the pick shank has improved the tensile strength in GENERATION Z pick shanks compared to conventional cutting tools.

> GREATER HARDNESS IN THE WEAR PLATE
The greater degree of hardness in the wear plate ensures maximum toolholder protection.

> TIME-TESTED WIRTGEN CLAMPING SLEEVE IN REINFORCED DESIGN
The reinforced clamping sleeve ensures that the pick is permanently and dependably secured in the toolholder bore.
WCC MILLING TOOLS

IDEAL FOR STONY GROUND
MORE INFO?
SEE OUR ANIMATION CLIPS ON CUTTING TECHNOLOGY

> www.wirtgen.de/cuttingtechnology
MAXIMUM FRACTURE RESISTANCE IN THE CARBIDE TIP

WEAR-RESISTANT CARBIDE PROTECTIVE ELEMENT

GREAT WEAR VOLUME IN THE SHOULDER SECTION

SOLID CHIP BREAKING WEB

RELIABLE HT22 INTERFACE
WCC milling tools are eminently suitable for mixing compact soils with large pieces of rock thanks to their tool geometry and materials. They feature a highly wear-resistant carbide cutting edge, which is extremely fracture-resistant and impact-proof. Depending on their use, WCC milling tools make a useful addition to the existing pick range with conventional carbide tips.

Properties of carbide tips: GENERATION Z and WCC milling tool

- Carbide weight: 47 g
- Weight of carbide tip: 182 g
- Weight of protective element: 47 g
- Total carbide weight: 229 g

WIRTGEN Compact Carbide (WCC) milling tools with an extremely robust carbide tip are particularly suitable for stabilizing compact soils which contain large pieces of rock. This makes the WCC tools a useful alternative to conventional picks for these requirements.
Good arguments for
PRODUCTIVITY AND DURABILITY

IMPRESSIVE

> Maximum machine productivity thanks to fewer or no tool exchanges

> Low operating costs thanks to lower maintenance requirements

> Maximum impact stress resistance even for large pieces of rock

> Maximum fracture resistance in the carbide tip
The high fracture resistance in the carbide tips is particularly advantageous for large pieces of rock. This is thanks to the enormous strength of cutting edges and tips that are even able to withstand extremely high impact loads.

> Wear-resistant carbide protective element
The wear-resistant carbide protective element ensures that milled material is deflected in a guided manner, thus reducing wear significantly on the HT22 tool carrier.
> GREAT WEAR VOLUME IN THE SHOULDER SECTION
The comparatively high wear volume in the shoulder section on the WCC milling tool increases the HT22 tool carrier’s service life, thus making maximum use of the carbide.

> SOLID CHIP-BREAKING WEB
The potential service life is extended thanks to the solid chip-breaking web, which protects the carbide tip from washout for considerably longer.

> RELIABLE HT22 INTERFACE
The dependable HT22 interface ensures reliable, low-maintenance use of WIRTGEN WCC milling tools.

> You can achieve savings on tool costs of up to 34% per milled m³ if you take into account all variables and, above all, the specific application concerned. This analysis only includes tool costs and maintenance requirements. Other potential cost savings are not included in the graph.
RECOMMENDATION FOR APPLICATION

WCC MILLING TOOLS AS OPTIMUM ADDITION TO GENERATION Z

<table>
<thead>
<tr>
<th>Application</th>
<th>Machine type*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold recycling and pulverizing</td>
<td>WR 2000, WR 200, WR 200 XLI, WR 2400, WR 240, WR 2500 S, WR 250</td>
</tr>
<tr>
<td>Soil stabilizing</td>
<td>WR 2000, WR 200, WR 200 XLI, WR 2400, WR 240, WR 2500 S, WR 250, WS 220, WS 250</td>
</tr>
</tbody>
</table>

---

** Application Machine type**

<table>
<thead>
<tr>
<th>Application</th>
<th>Machine type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold recycling and pulverizing</td>
<td>WR 2000, WR 200, WR 200 XLI, WR 2400, WR 240, WR 2500 S, WR 250</td>
</tr>
<tr>
<td>Soil stabilizing</td>
<td>WR 2000, WR 200, WR 200 XLI, WR 2400, WR 240, WR 2500 S, WR 250, WS 220, WS 250</td>
</tr>
</tbody>
</table>

---

**Abrasive Materials**

- **Impact stress (Rock size / rock component increases)**
  - W6/22Z # 2493524
  - W6C/22Z # 2493527
  - W1-13/22Z # 2493532
  - W6C/25Z # 2493541
  - W1-13/25Z # 2493547
  - WCC-33/HT22 #2527901

- **Abrasiveness**
  - W8/22Z** # 2493530
  - W8/25Z # 2493545

**For use in quick-change toolholder system**

- HT22 D22, HT11 D22, HT3 D22
- HT22 D25, HT11 D25, HT3 D25
- HT22

---

* Specifications also valid for all machines in “i” version

** WIRTGEN ground stabilizers and cold recycling machines are fitted at the factory with this pick type.
USE IN COLD RECYCLING AND PULVERIZING

On road works, the picks penetrate under the base layer, and sometimes even deeper into the ground. Depending on the road surface structure and the materials/additives used, it must be assumed that there will be abrasive (grinding) rocks with low grain size and, to some extent, tough binding elements. High cutting forces are applied when cutting these layers, which can be favoured by using a carbide tip with a higher cutting performance (e.g. W6). With increased abrasiveness, the size of the carbide tip should also be adjusted. A cylindrical carbide variant is recommended if larger pieces of rock or clods of soil are involved.

USE IN SOIL STABILIZING

Compact soil/milled material usually contains abrasive (grinding) materials that flow around the carbide tip and the pick head during the cutting process. In this application case, the wear to the steel body dominates, thereby limiting the service life of the tool. Here, the carbide tip needs to deflect the material away from the steel body (pick head), reducing its wear.

For ground that contains pieces of rock, use of a pick with a cylindrical tip (or with a W6C tip) is recommended. In this case, the resistance to carbide breakage is the decisive factor because sudden impact stresses have to be deflected. When massive rock sizes apply extreme shaft stress on the pick, a pick with a 25 mm shank diameter can be used by replacing the top section in the quick-change toolholder system. Another useful alternative for this application example is the WCC milling tool, which particularly shows its advantages or enormous impact resistance in handling large pieces of rock.

> Asphalt layers with gravel layer beneath

> Highly compact ground interspersed with stones

> Extremely abrasive supplementary gravel

> Very gravelly soil with abrasive rocks
HT22 QUICK-CHANGE TOOLHOLDER SYSTEMS

HT22 D22 UPPER PART / HT22 D25 UPPER PART

Greater wear volume in the shoulder section to provide unsurpassed protection for the lower part of the toolholder.

Long upper part service life thanks to high steel volume, including in the front section of the toolholder.

Reduced maintenance requirements thanks to greater intervals for checking torques of the quick-change toolholder screws (every 500 hours).

IMPRESSIVE

> Maximum possible impact load and also shear load in extreme cases thanks to a reworked toolholder shank geometry and optimised heat treatment.

> Fewer maintenance requirements since the pressure screw in the HT22 quick-change toolholder system needs to be re-tightened only every 500 machine operating hours.

> Better lower part protection thanks to a greater wear volume in the shoulder section in the upper part of the toolholder to ensure a longer service life for individual lower parts and the entire milling drum.
MILLING AND MIX ROTORS WITH HT22
QUICK-CHANGE TOOLHOLDER SYSTEM

> WCC milling tools
> HT22 D22 (Ø 22 mm)
  > W8/22Z
  > W1-17/22Z
  etc.

> HT22 D25 (Ø 25 mm)
  > W8/25Z
  > W1-13/25Z
  etc.

MORE INFO?
SEE OUR ANIMATION CLIPS ON CUTTING TECHNOLOGY
> www.wirtgen.de/cuttingtechnology
INNOVATIVE, ERGONOMIC TOOLBOX

- Ergonomic handle for improved carrying comfort
- QR code safety instructions are available at any time and can be accessed online
- Ergonomic opening tab to open the toolbox more easily
- Label with item identification, part number and the number of tools contained
The modern toolbox impresses due to its considerably enhanced carrying comfort. Thanks to its ergonomic handle, it can be comfortably carried over longer distances. Furthermore, the side inspection window provides an optimal view of the content.
Tailored precisely to the requirements of our powerful machines, they optimally support maximum machine performance.

With WIRTGEN GROUP original parts, you can feel secure in the knowledge that you are doing the best thing for your machine fleet. Even a short machine breakdown costs time and money. That’s why you should trust in the benefits that can only be delivered by original parts, manufactured using the very latest production methods: the best quality for maximum reliability and long life.

PROMPT DELIVERY

Our local service specialists will give you comprehensive advice on your purchase and ensure that your order proceeds swiftly and smoothly. Our globally well organised spare parts store and our cleverly conceived logistics system enable us to ship the required original part promptly and reliably to anywhere in the world, even to countries with lengthy import procedures. The reliable WIRTGEN GROUP spare parts service will reach even the remotest of job sites.

WIRTGEN GROUP original parts - maximum reliability, long life and rapid availability.
WIRTGEN GROUP original parts

ONLY ORIGINAL PARTS WILL MEET YOUR REQUIREMENTS

HOW YOU BENEFIT

> HIGHEST QUALITY: For a long machine life

> IDEAL AVAILABILITY: Rapid delivery thanks to high storage capacities and the very latest logistics

> EXPERT ADVICE: Service specialists with sound technical knowledge

> FIRST-CLASS SUPPORT: Fast, reliable order processing

> IDEALLY SORTED: Extensive, thematically coordinated service and maintenance packages