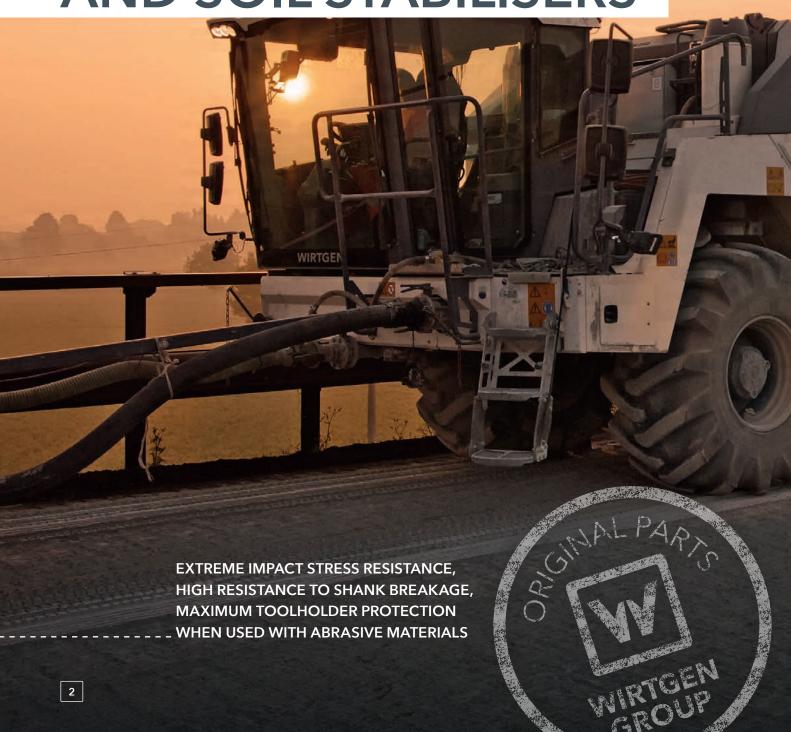


ORIGINAL WIRTGEN CUTTING TOOLS FOR COLD RECYCLERS AND SOIL STABILISERS



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 STABILISERS.

- > GENERATION Z IS THE ALL-ROUNDER AMONG PICKS FOR COLD RECYCLING AND SOIL STABILISATION AND IMPRESSES THANKS TO ITS PRODUCT CHARACTERISTICS, SUCH AS HIGH FRACTURE RESISTANCE IN THE CARBIDE TIP.
- > THE WCC MILLING TOOL IS USED FOR STABILISING COMPACT SOILS AND IS THE IDEAL TOOL WHEREVER LARGE PIECES OF ROCK CAUSE ENORMOUS IMPACT STRESS.





WIDE RANGE OF REQUIREMENTS OF COLD RECYCLING AND SOIL STABILISATION

ENVIRONMENTALLY FRIENDLY COLD RECYCLING

Cold recycling and pulverising 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

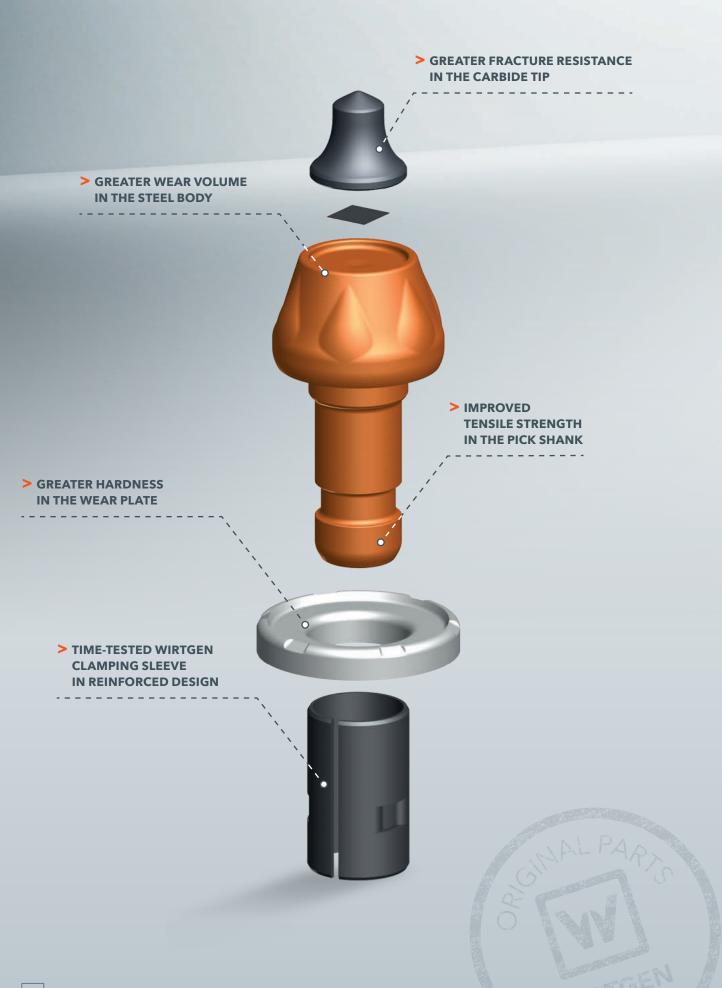


HIGH-PERFORMANCE SOIL STABILISATION

Used worldwide, soil stabilisation 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



All-rounder for cold recycling and soil stabilisation

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 optimised 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 recy-

cling and stabilising 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.

Optimised carbide mix dimensionally correct for applications where high impact loads are expected.

> Carbide tip on a conventional pick with a tungsten-cobalt mix of 94% to 6%



> Carbide base 1.25 mm thick

> Carbide tip on a **GENERATION Z** pick with a tungsten-cobalt mix of 93% to 7%



 Carbide base 1.75 mm thick - 40% thicker than in conventional picks

Tungsten

> 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 stabilising applications.

MORE INFO?
SEE OUR ANIMATION CLIPS ON
CUTTING TECHNOLOGY



www.wirtgen.de/cuttingtechnology



Good arguments for

RESILIENT AND RELIABLE

IMPRESSIVE

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

> GREATER FRACTURE RESISTANCE IN THE CARBIDE TIP

An optimised 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.







Specialist in stony ground

WCC MILLING TOOLS

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 due to the enormous material thickness.

Depending on their use, WCC milling tools make a useful addition to the existing pick range with conventional carbide tips.



> WIRTGEN Compact Carbide (WCC) milling tools with an extremely robust carbide edge are particularly suitable for stabilising compact soils which contain large pieces of rock. This makes the WCC tools a useful alternative to conventional picks for these requirements.

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Good arguments for

PRODUCTIVITY AND DURABILITY

IMPRESSIVE

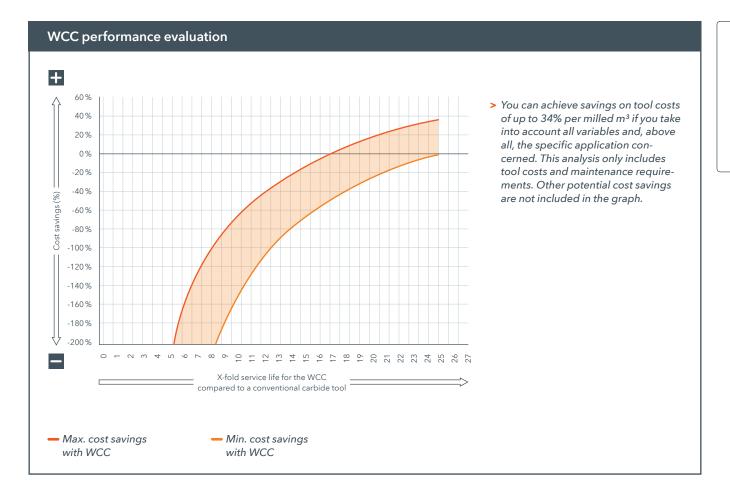
- > Maximum machine productivity thanks to fewer or no tool exchanges
- > Low operating costs thanks to lower maintenance requirements
- > Maximum impact stress resistance even for large pieces of rock

> MAXIMUM FRACTURE RESISTANCE IN THE CARBIDE EDGE

The high fracture resistance in the carbide edges is particularly advantageous for large pieces of rock. This is thanks to the enormous strength of cutting edges 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 edge from washout for considerably longer.

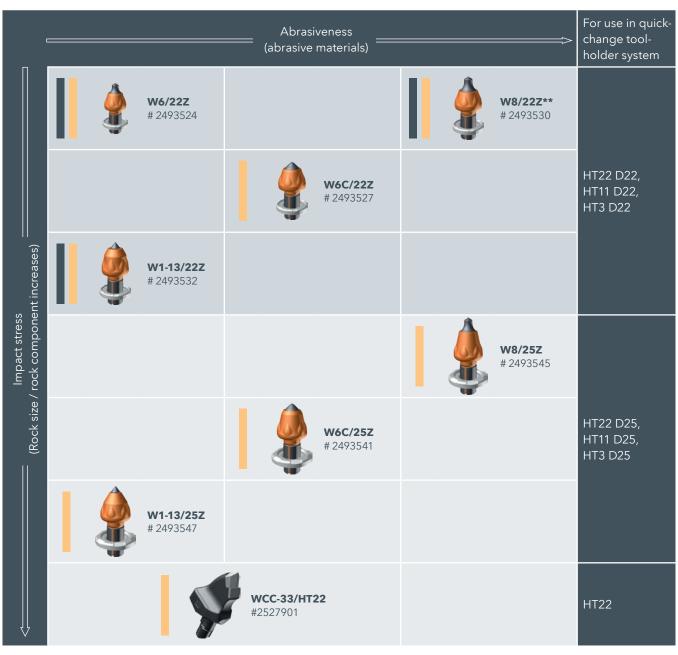
> RELIABLE HT22 INTERFACE

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

RECOMMENDATION FOR APPLICATION

WCC MILLING TOOLS AS OPTIMUM ADDITION TO GENERATION Z _ _ _ _ _

| A | oplication | Machine type* |
|---|---|---|
| | Cold recycling and pulverising Example photos 1 and 2 | WR 2000, WR 200, WR 200 XLi, WR 2400, WR 240, WR 2500 S, WR 250 |
| | Soil stabilising Example photos 3 and 4 | WR 2000, WR 200, WR 200 XLi, WR 2400, WR 240, WR 2500 S, WR 250, WS 220, WS 250 |



CUTTING TOOLS FOR A VARIETY OF APPLICATIONS _ _ _ _ _

USE IN COLD RECYCLING AND PULVERISING

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 STABILISING

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.

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

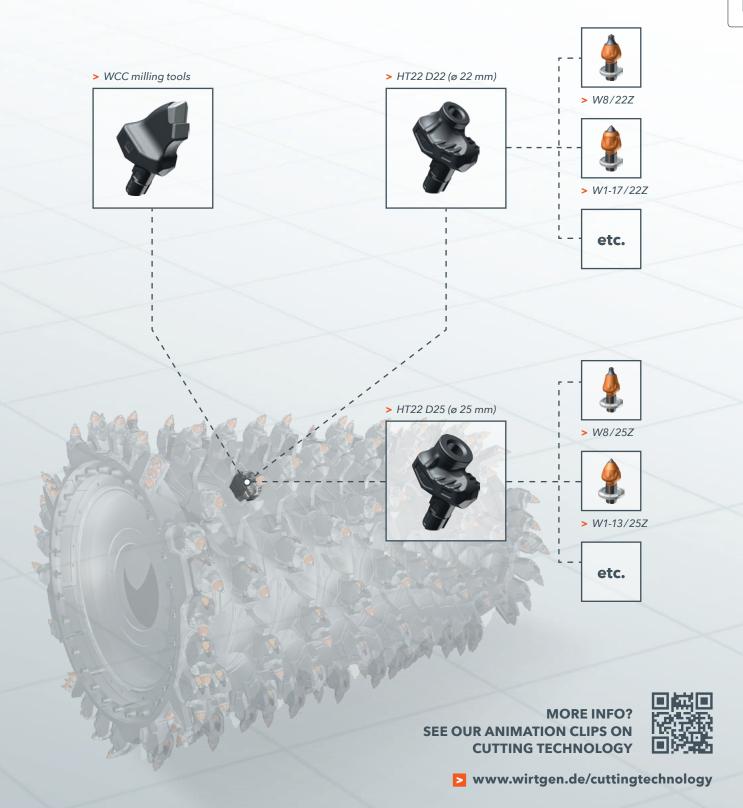


Long upper part service life thanks to high steel volume, including in the front section of the toolholder.

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.





INNOVATIVE, ERGONOMIC TOOLBOX



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.



THE MANY YEARS OF PRACTICAL EXPERIENCE WE HAVE ACCUMULATED ON JOB SITES ACROSS THE WORLD ARE CHANNELED INTO THE DEVELOPMENT OF OUR WIRTGEN GROUP ORIGINAL SPARE PARTS.

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

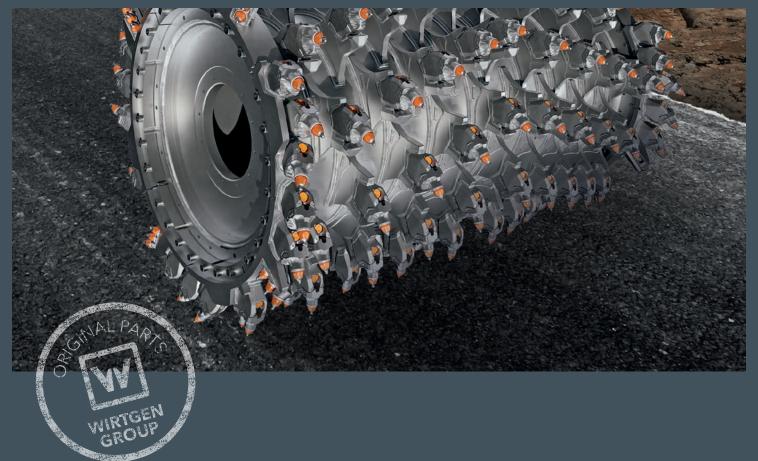
Our local service specialists will give you comprehensive advice on your purchase and ensure that your order proceeds swiftly and smoothly. Our globally well organised spare parts store and our cleverly conceived logistics system enable us to ship the required original part promptly and reliably to anywhere 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 GmbH

Reinhard-Wirtgen-Str. 2 53578 Windhagen Germany T: +49 26 45 / 13 10 F: +49 26 45 / 13 13 97

customersupport@wirtgen.de

> www.wirtgen.de