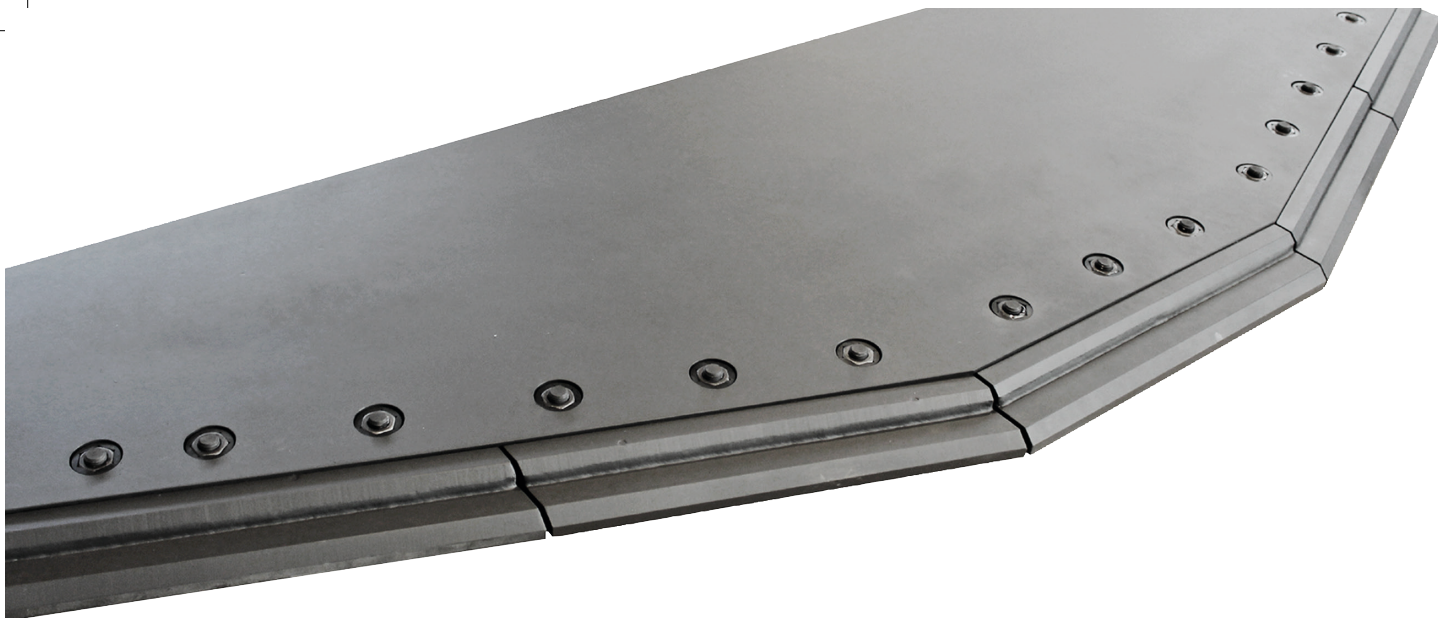


BOLT-ON CUTTING EDGE SYSTEMS

Miilux[®]oy



REDUCE DOWNTIME AND SERVICE COST BY INCREASING SERVICE LIFE

Miilux has developed a bolt-on cutting edge concept for wheel loaders with options ranging from small light material buckets to large heavy duty buckets.

Replacing conventional cutting edges with a bolt-on system saves big on bucket and machine costs, as edge repairs will no longer be needed and the bucket's capacity will stay consistent. The greatest savings will come from the consistent bucket capacity.

The exceptional durability of the bolt-on cutting edge system is based on its materials and manufacturing technology. All parts are made using high-strength abrasion-resistant steel manufactured by Miilux.

Miilux harden their steels in the final stage, meaning flame cutting and machining will not reduce their hardness. The components are hard from edge to edge, guaranteeing a long service life.

BOLT-ON CUTTING EDGE SYSTEMS SAVE TIME AND MONEY

BOLT-ON CUTTING EDGE PARTS ARE QUICK AND EASY TO REPLACE

The benefits of a bolt-on cutting edge system come from several factors. The first immediate benefit is removing the need for traditional bucket repairs, as the bolt-on wear segments can be replaced during normal maintenance using pneumatic, power and hand tools. Flame cutting, welding and other heat treatments are avoided completely. This allows the wear parts to be made from harder abrasion-resistant steels, and repairs can take place in the field with no risk of breakage resulting from heat treatment.

Repairs are much easier to organise with bolt-on wear parts that can be replaced in one or two hours. Replacement results in minimal downtime. Time and money are also saved when there is no need to remove the bucket or transport a spare bucket or machine.

BOLT-ON CUTTING EDGE PARTS

The greatest financial benefit are the lowered machine costs, as the bolt-on cutting edge system's operating principle prevents the loss of bucket capacity. According to data from the field, loader buckets lose two to four tonnes of effective capacity between repairs, depending on the bucket's size and model.

From our customers:

"OVERALL, WE'RE VERY SATISFIED. THE BEST PART IS THAT WE'RE ALSO SAVING THOUSANDS IN COLD HARD CASH"

SUOMEN KIVISORA OY, MARKO SEPPÄLÄ

(2 x HD bolt-on cutting edge system)

"We found the bolt-on cutting edge system concept and the promised benefits interesting, and installed the first bolt-on cutting edge system on a CAT 980 wheel loader in the spring of 2014. Our first impression was so good that we installed another system on a second 980 in the autumn.

These machines have gone through a number of tonnes now, and we have experience with wear segment replacement as well. Overall, we are very satisfied. The product has been exactly as promised with positive experiences racking up along the way.

Previously, we used conventional V tips on our buckets that had to be replaced at machine shops. This avoided some inconvenience in field repair, but it meant extra costs and organisation. Now we can get the replacement parts on site and swap them when we please – after a shift, for example.

Previously we always wore out the tips, but this reduced effective loads by up to four tonnes compared to buckets with full tips. Thinking back, that is a staggering amount. We had to work more and faster to make up the difference in capacity, which was a direct cost. The biggest single cost was probably the increased fuel consumption, as the daily driving time increased by a whole lot.

Now our bucket capacities stay consistent and just right. The buckets have better penetration, we need to rush less, and the number of things to manage has been reduced considerably. The best part is that we are also saving thousands in cold hard cash."



Marko Seppälä
Suomen Kivisora Oy



BOLT-ON CUTTING EDGE SYSTEMS FOR DIFFERENT SIZES AND USES

HD BOLT-ON CUTTING EDGE SYSTEM

The original HD bolt-on cutting edge system is intended for rock material and other highly abrasive materials. The primary applications are **loader buckets in crushing and screening plants**. The shape and dimensions of the edge are tailored for each customer. The edge can be **a sharp V, a blunt V or straight**.

Wear segments protect the bottom, which significantly reduces the need for bottom repairs.

All bolt-on cutting edge system parts are made with abrasion-resistant steels manufactured by Miilux using hard from edge to edge method. Replacements are fast and easy.

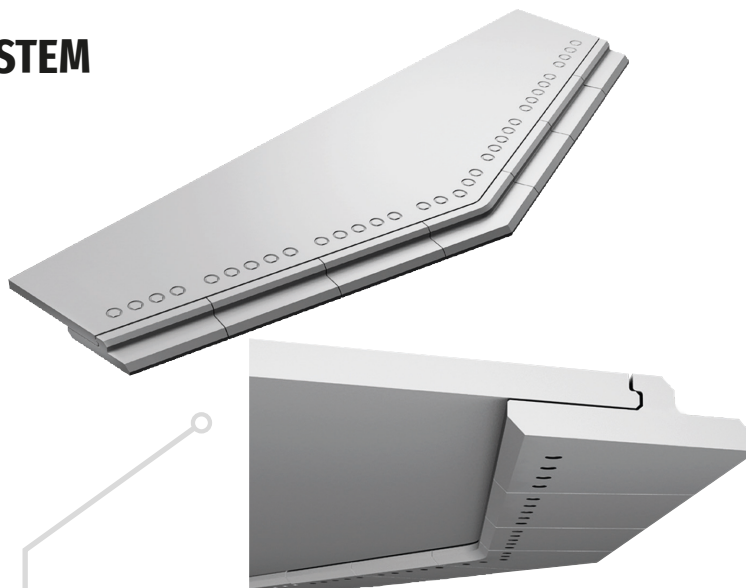


The XHD bolt-on cutting edge system protects the fixings from external forces with protective segments that transfer digging forces to the base plate. The segments also protect the base plate and the bucket's bottom against wear, making this an extremely long-life system.

XHD BOLT-ON CUTTING EDGE SYSTEM

Patented XHD bolt-on cutting edge system is intended for **quarry buckets in large machines and underground machines**. Its design enhances the transfer of forces from large machines through the base plate to the bucket, preventing damage.

Wear segments are used to protect the bucket's bottom, further reducing the need for repairs. All bolt-on cutting edge system parts are made with abrasion-resistant steels manufactured by Miilux using final-stage hardening, guaranteeing a product that is hard from edge to edge. Replacement only takes pneumatic and hand tools.



The patented design of the XHD bolt-on cutting edge system prevents impact forces from affecting the bolts. Forces are distributed evenly along the whole edge, reducing the load on individual wear segments and making the system more robust.

BOLT-ON CUTTING EDGE SYSTEM M

The M system is intended for **light material handling**. The issue in conventional bolt-on cutting edges is that the bolts may bend and break, which our system avoids by protecting the bolts from impact forces. Our countersunk bolts are protected against bending and breakage, and will not push the load ahead of the bucket, making for more effective filling.

All bolt-on cutting edge system parts are made with abrasion-resistant steels manufactured by Miilux using the unique hard from edge to edge method.

The design of the size M bolt-on cutting edge system protects the fixings from external forces, as the receiving surfaces will transfer the forces. This avoids bending and breaking the bolts. The countersunk bolts do not interfere with material, making the bucket smooth to fill and empty.





BIG SAVINGS

The development of the bolt-on system started from customers' needs. This is also the reason why it is so functional: it was developed for user needs and the related challenges. We have performed numerous calculations over the years of development based on figures provided by our customers.

These calculations have been used to define bucket costs and the impact of bucket function on machine costs and productivity. Practice has shown our calculations to be correct – there is huge potential for savings that can be achieved quickly and effortlessly.

We at Miilux are happy to answer your questions and help you find the solution that is right for you. Let us check your numbers and see how much you could save!

OUR SERVICES

- Modelling and design (2D and 3D)
- Strength calculations
- Flame cutting
- Plasma cutting
- Laser cutting
- Chamfering
- Rolling
- Milling
- Welding
- Surface treatment



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