



# DURABLE WEARING PARTS FOR BIOENERGY AND WASTE MANAGEMENT

Miilux® OY

# WEARING PARTS FOR CRUSHERS

Miilux Oy designs, manufactures, and sells wearing parts for wood shredders, chippers, and recycling crushers. We have a wide selection of products, including different screens, grates, cutters, hammers, and wear plates. Our products are made with Miilux wear-resistant steels and production technology. Our unique hard from edge to edge method makes for outstanding wear resistance.

## OUR WEARING PARTS ARE HARD FROM EDGE TO EDGE

Miilux wearing parts are manufactured differently from ordinary wearing parts and have a longer service life.

In typical manufacturing, wear-resistant steel parts are cut from hardened steel plate. The heat from the cutting will reduce the hardness of the steel pieces across the cut surfaces, bringing them close to regular steel. The cut surfaces are also usually the ones exposed to wear and tear. These wearing sections should be the most durable, but their hardness is compromised – the result is a shorter service life.

Conventionally manufactured grinder screens with a lower hardness will see their holes enlarge immediately after use. Similarly, the edges of cutters and counter blades will wear heavily, even though the strength

of the first few millimetres is key for the product's functioning and production efficiency.

For Miilux wearing parts, the order of manufacturing is reversed – hardening is the final step in the process. Parts that are only hardened after flame cutting and other processing will not have softer sections. Miilux wearing parts are hard from edge to edge.

The holes in Miilux grinder screens will hold their size and shape for a long time. Likewise, the cutting edges of cutters and counter blades will stay sharp for much longer than those cut from hardened plate. Pieces made with hard from edge to edge method will hold their shape and have the maximum durability possible.

● = weakened section

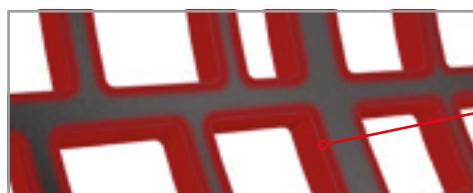
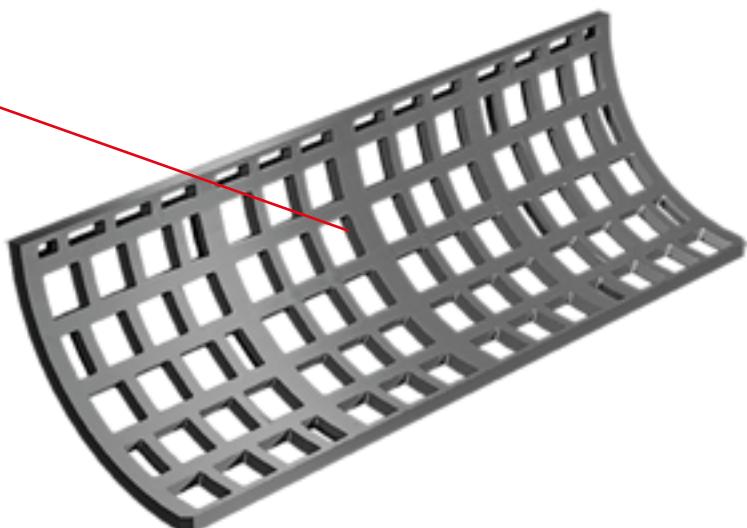


Figure 1. Ordinary grinder screen.



Figure 2. Millux hard from edge to edge -grinder screen.



# HIGHER HARDNESS, HIGHER DURABILITY

The use of hard from edge to edge method allows us to manufacture a wider selection of parts, as their hardness does not limit our options. We carry out all machining and work on soft steel before hardening the piece.

This allows us to increase the hardness from the conventional 400 HB up to 600 HB. This is also a highly cost-effective processing method for wear-resistant steels, as no special machinery or long turnaround times are required for machining.

Hardness is a major factor in wear resistance. Studies show that harder steels can achieve many times the durability of softer steels. In other words, hardness should be maximised, because it saves costs, some of which are due to part replacement.

Our grinder screens are typically made with 450 HB wear-resistant steel. Most cutters, hammers, and wear plates have a hardness of 500 HB or even 600 HB, if it is suitable for the application. Miilux personnel can help you select the correct hardness for different applications.

## Ordinary wear-resistant steel

1. Hardening
2. Cutting, bevelling, machining, bending, etc.

### Effects of the processing order:

- Significant loss of hardness on flame-cut surfaces.
- Compromised sections wear faster.
- Machined pieces can only have a hardness of 400 HB in practice.
- Hardened pieces are expensive to machine.

## Miilux hard from edge to edge - wear resistant steel

1. Cutting, bevelling, machining, bending, etc.
2. Hardening

### Effects of the processing order:

- The piece is hard from edge to edge, top to bottom.
- Superior wear resistance.
- Machined pieces can be hardened up to **600 HB**.
- Cost-effective machining.

# WE CAN TAKE CARE OF THE PRODUCT DESIGN AND MODELLING FOR YOU

Our customers do not need to provide fully detailed drawings of the parts they want manufactured. We can take care of the design and modelling on their behalf.

Precise 3D models made of the desired products allow for easy modification and further product development.



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PURPOSE OF DESCRIPTION ONLY.