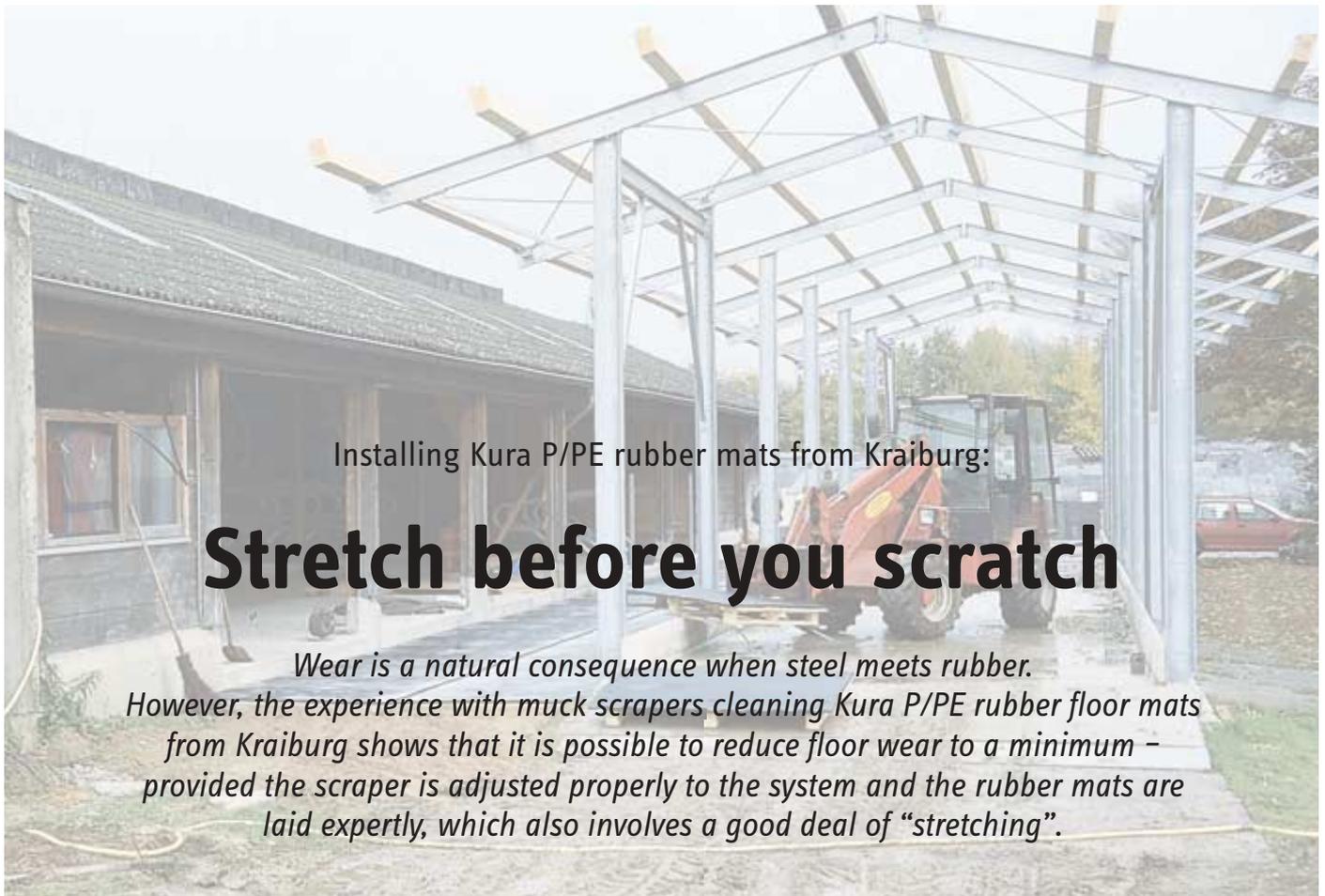


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Installing Kura P/PE rubber mats from Kraiburg:

Stretch before you scratch

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Gummiwerk **KRAIBURG**
Elastik GmbH

Göllstraße 8
D-84529 Tittmoning
Tel: (08683) 701-0
Fax: (08683) 701-126
e-mail: info@kraiburg-elastik.de
internet: www.kraiburg-agri.com

Installing Kura P/PE rubber mats from Kraiburg:

Stretch before you scratch

The moment rubber floor mats are laid in animal buildings, slippery concrete and asphalt walkways turn into soft and non-slip surfaces. While the benefits for animal health and welfare are not disputed, there is some doubt about the longevity of the system.

After all, a heavy steel scraper will cover quite a number of kilometres over the years. Another concern centres on the question as to how the costly mats (approx. Euro 41/m², excl. VAT) will

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cope with tractors and mixer feeders running on them.

After interviewing owners and inspecting some systems in situ we can confirm that rough edges and cuts are not an issue, at least not with the Kura P/PE mats, provided that they are

installed correctly. Such a high level of customer satisfaction is a direct result of the development work, for which Kraiburg teamed up with several scraper manufacturers to explore and develop their specific scraper systems. Buyers of Kraiburg mats are given the go-ahead only after all doubts concerning mat compatibility with their existing scraper systems are eliminated.

Once the manufacturer gives its OK, customers receive a 5-year warranty on their rubber floor. The panel headed “No big deal” lists the scraper systems



Preparing the base

Kraiburg rubber mats are laid on concrete floor that is at least 10cm thick. This thickness is critical for fixing the dowels and covering the concrete with mastic asphalt. Any asphalt layer must not exceed 3cm.

Before you start laying the mats, level out holes, hollows or rough areas, because even 5mm depressions will be noticeable after the mats are laid.

The walkway should not slope more than 6%. On the other hand, if it does not slope, ensure that water and dirt can be continuously washed away to prevent the mats from starting to float, if water collects underneath.

Scraper requirements

No big deal

The following manufacturers offer scraper systems that are approved by Kraiburg for use on its rubber floor mats:

Bayernstall, Betebe, Bräuer Stalltechnik, Felder System-Stalltechnik, Duräumat, Hartmann, Hörmann Stallbau, JOZ, Kolb Stallbau, Krieger, Prinzing, Stockinger, SueviaHaiges and Wölfleder Stalltechnik.

Livestock farmers who use a scraper system and want to install these Kraiburg mats can convert their existing scraper system fairly easily.

It is not a big job that takes great skill. The scraper that is to be used on the rubber floor should meet the following requirements:

that are approved by Kraiburg, along with the parameters a scraper must meet, if it is to operate on these rubber floors. Further on, the panel “Slowly please” points out those aspects that must be considered when operating machinery on the rubber floor.

Let’s now take a look at the installation process. Standard mat height is 24mm, 5mm of which are accounted for by the nubs on the underside. Although the top is made from recycled material to 90%, the mats look tough and elastic and feature a profiled surface. Maximum width of each mat is 3.50m; depth is 1.25m.

The long sides of each Kura P/PE mat are cut like jigsaw pieces for a snug fit and to create a durable system. The undersides of the edges are stronger now on the most recent designs.

As an aside, the relatively new Kura F/FE mats are now available with up to four jigsaw sides for installation on crossways to make transitions “seamless”. The following pictures show what needs to be taken into account when installing the mats.

Martin Zäh



Stretch the mats

As a first step, place all mats on the floor and make the jigsaw edges fit snugly. Give each mat a good pull until there is a 2mm clearance between two sides to allow for expansion on hot summer days and to avoid the mats folding up. This applies in particular if the mats are laid in winter. By the way - it is best to store the mats under cover to ensure their temperature is 5°-30° as recommended by the manufacturer.



*Follow our assembly tips and watch your cows taking large strides.
Photos: M. Zäh*

■ All parts on the scraper must be free of burrs to avoid damage to the floor. Kraiburg recommends lining the scraper’s bottom edge with rubber/plastic lips. Although these are not an absolute must, they usually enhance the cleaning effect.

■ The bottom edge, including its rubber/plastic lip (if fitted), should form a 90° angle to the floor.

■ The skids on the bottom edge should look like skids and be at least 6cm wide.

■ The skids on the central guide must be at least 4cm wide.

■ Central guide contact pressure should be less than 0.3kg/cm².

■ Kraiburg is currently developing a general approval for chain systems without central guide and track.

■ It is important that the chain link size is 13/39mm or 13/36mm and that guide rollers are adjusted to suit the raised walkway.

■ Although Kraiburg has not (yet) generally approved its floor mats for rope systems without a central guide, it says that it may approve individual systems in situ after raising the guide roller to optimise the point of draft.

■ The skid on a tracked system must still track positively after mat assembly.

■ If required, weld a steel band on to the track to increase the clearance between guide and mat and ensure this is 5mm in all places. Alternatively, weld a 3cm round steel bar to the guide skid.

■ Guide rollers on the central guide should be at least 5cm wide and 7cm high. At the same time, it is important that the rollers are at least 3cm away from the edge of the mat.

Good clearance

As for mat layout, ensure there is sufficient clearance between two mats. For example, the minimum clearance to the pens should be 1cm, ideally 2cm and 4cm as a maximum.

The clearance to a track that cuts through a mat must be 1cm-1.5cm, which means you have to cut the mat to tailor it to conditions..



Drill the mats

After all mats are placed in a row and arranged in their final positions, start drilling the 10mm holes. There are pre-manufactured recesses in the rubber to mark the locations of these holes.

If you need to cut one mat in half, ensure it will still be fixed in at least four evenly spaced locations. If you need to drill new holes, countersink them to accommodate the washers and prevent the nail heads from sticking out.



Operating machinery on rubber floors

Slowly please!

On principle, it is possible to operate a tractor, mixer feeder or skid-steer loader on the rubber floor, provided you observe a set of rules.

- The maximum tyre pressure for radial ply tyres is 4bar and 3bar for diagonal tyres. The mat load rating is also down to tyre size. For example, the load on each wheel on a mixer feeder with 505/50 R 17 tyres inflated to 4bar can amount to 2,760kg, whereas the load on each skid-steer loader wheel with 11.5/80-15.3 tyres inflated to 3bar is only 1,750kg.

- Kraiburg says maximum forward speed must not exceed 2km/hr (half walking speed).

- Operators should avoid spinning the steering wheel too quickly and must not turn the wheels on a stationary machine.

- All acceleration and braking must be slow and progressive while the slope gradient must not exceed 2%.

- The beginning and end of a laid walkway is protected with a bar.

Do it softly

The mats are fixed with stainless steel nail dowels (10 x 80mm for concrete floors, 10 x 120mm for mastic asphalt). As a first step, hammer the dowel into the mat until it is flush with the mat surface. Then drive in the nail and washer. Do not drive the nail in so deep that the washer sinks into the rubber and stresses it. If you get carried away because the installation is so quick (two people can cover a 15m length in one hour) and hammer a nail down in deep – don't panic, a nail puller will put things right again.

