

MADE IN GERMANY

K KRAIBURG

Rubber covers for floors in cattle houses



K KRAIBURG ▶ legt die Weide in den Stall



► Cow comfort - the key to your success!



Less

- - *slipping & fall injuries*
- - *claw damages*
- - *lameness*
- - *lying damages & joint injuries*
- - *noise & stress*
- - *veterinarian- / claw treatment costs*
- - *stock replacement costs*
- - *effort for cubicle maintenance*

If flooring in cattle houses was as soft as in nature, conditions for cows would be more comfortable and healthier. After all, the cows use the floor in the cattle house 24 hours a day for lying, standing and walking.

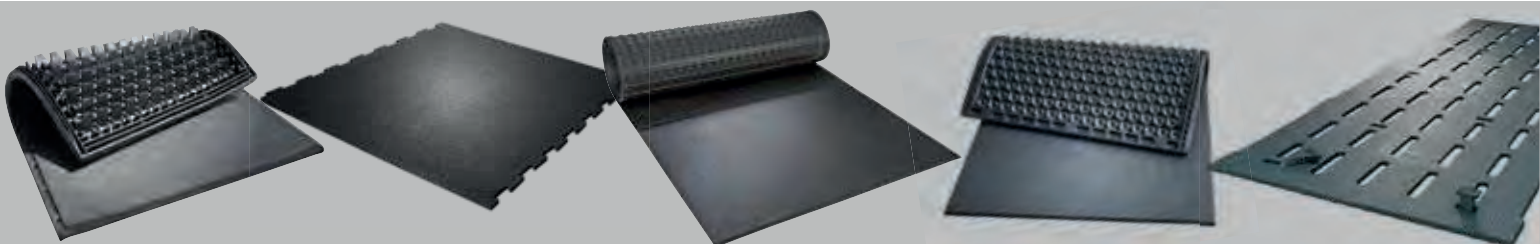
The cow needs animal-friendly lying and walking areas:

- permanently soft
- hygienic
- slip-resistant

= prerequisite for high productivity and longevity

Our solution:

Rubber coverings for every application in the cow house, especially developed for and optimally adapted to the particular requirements of each area.



- easy installation
- long-lasting ideal softness
- sophisticated details
- dimensionally stable
- slip-resistant

More

- ++ comfort*
- ++ mobility*
- ++ milk yield*
- ++ fertility*
- ++ natural animal behaviour*
- ++ hygiene*
- ++ thermal balance*
- ++ healthy & happy cows*



Higher milk yield due to animal-friendly lying and walking areas



Source: Eelkema, Heikamp, Hopster, 2004



► Our experience is your gain

KRAIBURG - predominant in the rubber industry

KRAIBURG has established itself as a competent specialist in the rubber business since 1947. The KRAIBURG Holding GmbH & Co. KG has a staff of more than 2,000 employees worldwide.



50 years of quality made in Germany

Since 1968 we have been developing and manufacturing rubber mats for animal husbandry in Tittmoning/Germany. Today about 200 employees exclusively concentrate on that. Our goal is to achieve more than just fulfilling general legal requirements, but furthermore apply environmentally friendly manufacturing processes.



Premium quality rubber from resource-saving production

Rubber mats are subject to very high stress in animal husbandry. We have been manufacturing high-quality rubber mixtures with a unique process for 50 years. Experience will tell you that not all rubber mats are the same.



External certification

To ensure our quality consistently, we are certified with the worldwide ISO 9001 standard. Our effective energy management system is specifically certified with ISO 50001.



Pioneer in transparency

We keep our doors wide open, and we are continuously monitored and tested by the DLG for product and production quality. These controls cover the entire manufacturing process from raw material to finished product. Both the quality measures from the DLG tests, and our environmental compatibility (here we have achieved PAH test certification), are inspected during ongoing production. The process audit is repeated every year, and is therefore higher-ranking than any one-off test conducted by the DLG. We are the first manufacturer to be awarded the quality seal!



Innovative products for better animal welfare

We operate an in-house laboratory and test the properties of our products here.

For independent attestation we also have them tested by the DLG (results at www.dlg.org).



Moreover, the products have been licensed by the Austrian specialist department for animal-friendly husbandry and animal protection.



Lying areas in cubicle houses

page

Overview of cubicle coverings			▶	6
Dairy cattle	TARSA	★★★★★	▶	8
	KEW Plus	★★★★★	▶	10
	WINGFLEX	★★★★★	▶	11
Dairy cattle / young cattle	WELA / WELA Puzzle / WELA LongLine	★★★★	▶	12
	KKM / KKM Puzzle / KKM LongLine	★★★	▶	13
	KIM / KIM Puzzle / KIM LongLine	★★★☆	▶	14
Young cattle	CALMA	★★	▶	15
Brisket boards	ergoBOARD / maxiBOARD		▶	16
Research results cubicle coverings			▶	17
Elevated deep litter cubicle	maxiBOX		▶	18
Deep litter cubicle	POLSTA		▶	19

Walking & milking area

Overview of walking area coverings			▶	20
	profikURA / KURA options			
Paved / concrete floor with scraper	P		▶	24
Paved / concrete floor without scraper	Flex / Form		▶	25
Special areas	Rotary / CowWalk / Flush / SUN		▶	26
Slatted floor	S		▶	27
Paved / concrete floor	KARERA P		▶	28
Workplace milking pit	ergoMILK		▶	29
Research results walking area coverings			▶	30
Emission reduction: potential solutions			▶	32

Special areas

Pens – young cattle	LOSPA swiss / LOSPA SB / KURA SB		▶	34
Calving pen / selection area	VITA / SIESTA		▶	36
Steep passages	MONTA		▶	38
Soil stabilisation	LOMAX		▶	38
Tying stalls / elevated feed stalls	LENTA / KEN		▶	39

General

Dimensions / general product data (warranty, installation, maintenance)			▶	40
---	--	--	---	----

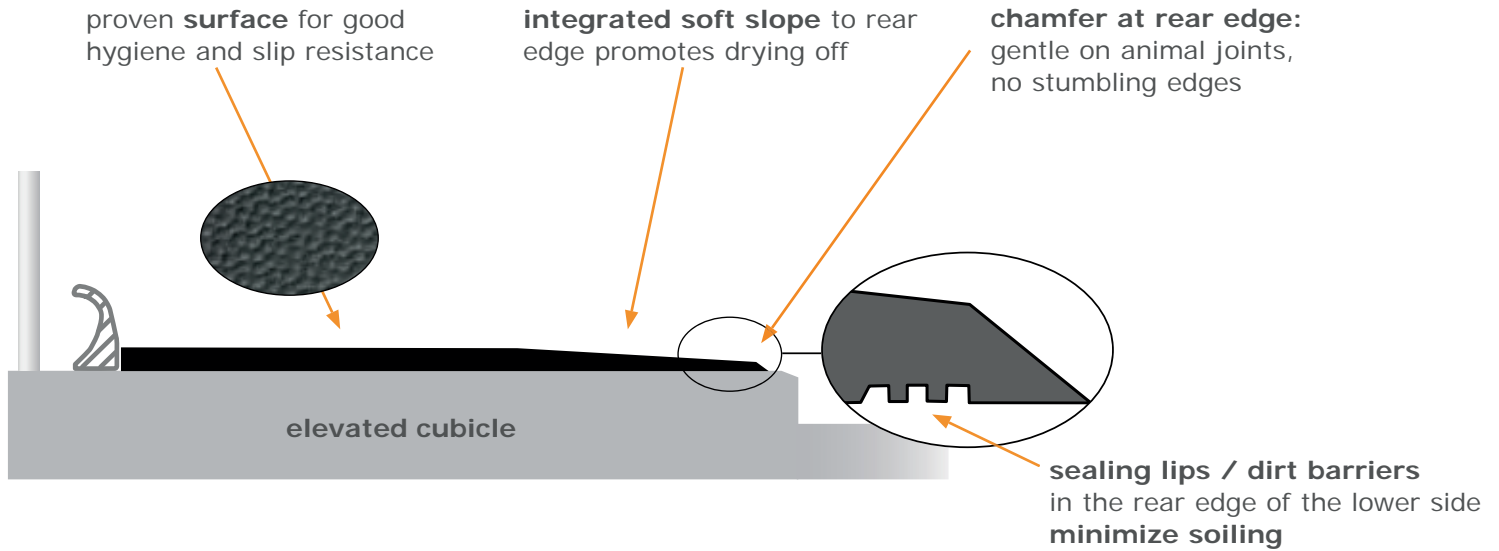


product		application	special features	thickness	page
TARSA ★★★★★		elevated cubicle dairy cattle	comfort zones	60 mm	8
KEW Plus ★★★★★		elevated cubicle dairy cattle	3-functional layers	60 mm	10
WINGFLEX ★★★★★		elevated cubicle dairy cattle	wing profile	60 mm	11
WELA ★★★★		elevated cubicle dairy cattle / young cattle	blade profile	50 mm	12
KKM ★★★		elevated cubicle dairy cattle / young cattle	honeycomb profile	30 mm	13
KIM ★★★		elevated cubicle dairy cattle / young cattle	air cushion profile	30 mm	14
CALMA ★★		elevated cubicle young cattle	air-cushion-like profile	30 mm	15
ergoBOARD / maxiBOARD		brisket boards		18.5 cm / 11 cm	16
maxiBOX		elevated deep litter cubicle	4-component system	30 mm	18
POLSTA NEW		deep litter cubicle	deep litter cubicle cushion	100 mm	19



KRAIBURG comfort lying mats – advantages at a glance

■ many additional functions:



- Significant litter savings compared to deep litter cubicles. However, some litter is necessary to absorb moisture and increase animal welfare (see tips for maintenance on page 43).

■ optimal resilience

- ▶ sinking in of the claw enhances **slip resistance**

■ outstanding rubber mixture

- ▶ ideal quality – rugged and permanently soft

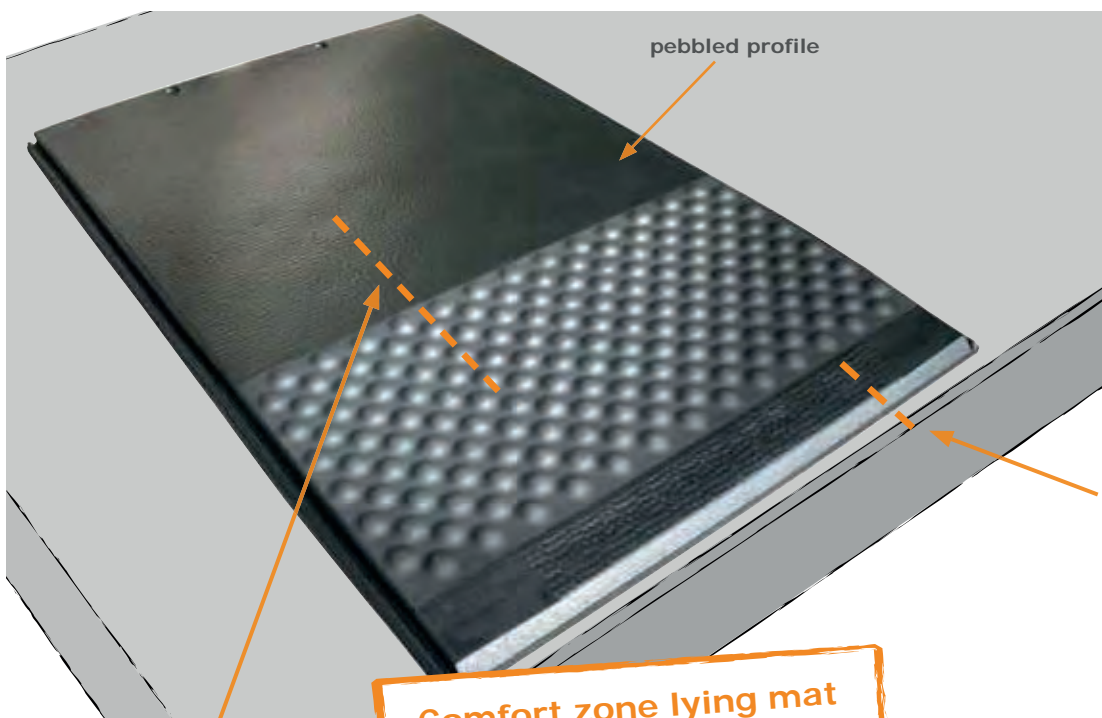
■ minimum effort for maintenance

▶ **The best places are always occupied.**





TARSA



pebbled profile

Comfort zone lying mat with pliant tarsal zone spoils your cow!



sealing lips completely enclose the sub-construction



Cross section:

air cushioned structure made of ball shaped segments



air buffer profile

front end

rear end



Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



- optimal and permanent softness for every load condition
- the soft lying area within the mat edges supports the correct resting position of the cow
- proven 3-layer structure in the front section is gentle on carpal joints
- **specially designed tarsal zone in the rear third of the mat:**
 - ▶ pressure relief for sensitive tarsal joints when lying down
 - ▶ better air circulation keeps the skin drier
 - ▶ even small amounts of litter are held in place and it can still be cleaned easily
 - ▶ improved sure-footedness, especially when getting up and when leaving the cubicle
 - ▶ integrated soft slope to rear edge promotes drying off
 - ▶ the functional undulation of the lower mat, which is reproduced on the top layer over time, additionally supports the hygiene in the udder area

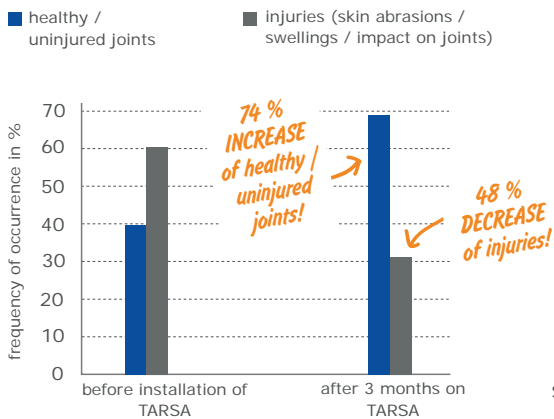
Significant litter savings compared to deep-litter cubicles. However, some litter is necessary to absorb moisture and increase animal welfare.



connecting bar engages flush with the surface and facilitates professional installation

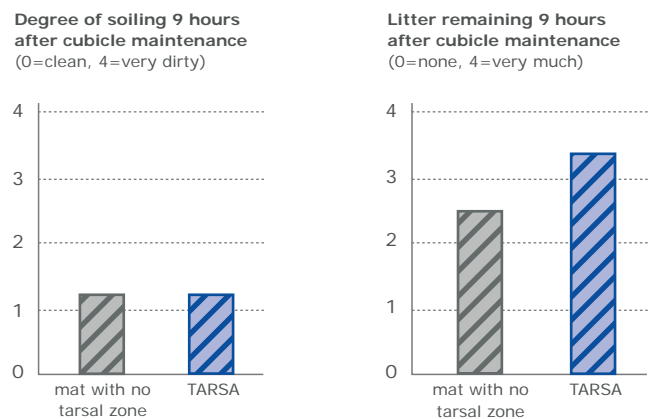
Research results

Caring for tarsal joints



positive effect on tarsal joints even after a short period of time: steady improvement in joint health

Cleanness and amount of litter in comparison



litter is held better on TARSAs with the same cleanness

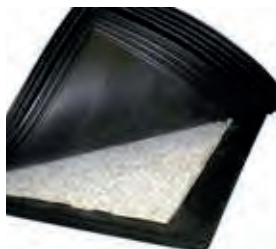
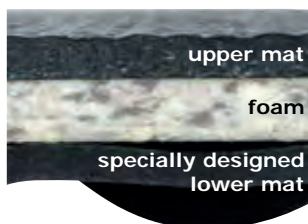


KEW Plus



the benchmark for excellent lying comfort for 15 years

- the three functional layers ensure optimal and permanent softness for every load condition
- the soft lying area within the mat edges supports the correct resting position of the cow and improves slip resistance
- integrated soft slope to rear edge promotes drying off
- proven pebbled surface
- sealing lips completely surround the foam inlay and the lower mat
 - ▶ the foam is protected



3 functional layers:
6 cm highest lying comfort

connecting bar engages flush with the surface and facilitates professional installation

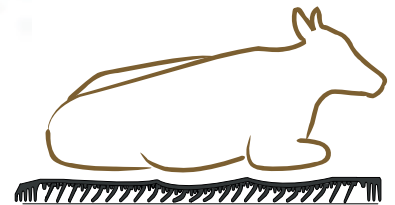
Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



WINGFLEX

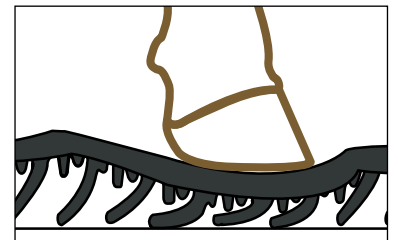


excellent
cost-comfort ratio
for 10 years



mat adapts to the lying cow

- stable wing profile creates high permanent softness and durability
 - ▶ adapts optimally to body shape
- the soft lying area within the mat edges supports the correct resting position of the cow and improves slip resistance
- integrated soft slope to rear edge promotes drying off
- proven pebbled surface



supporting studs have a cushioning effect under concentrated loads (when the cow gets up or lies down)



a profile element (wing + supporting studs): extremely stable, wear resistant and flexible simultaneously



sealing lips on lower side



indented connecting bar engages in the countersinks on the mat's edge and facilitates professional installation



Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



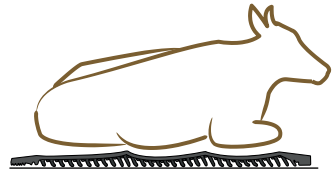
WELA / WELA Puzzle / WELA LongLine



WELA now available as single / puzzle mat or continuous system



- stable blade profile creates high permanent softness and durability
 - ▶ adapts to body shape
- integrated soft slope to rear edge promotes drying off
- proven pebbled surface
- WELA LongLine: special profiles for the "neat" closure at the side edges of the cubicle row reduce soiling

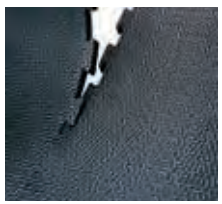


lower side profile with blades and supporting studs: stable and flexible simultaneously

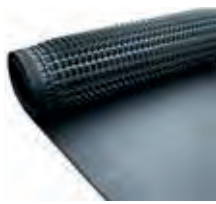
options:



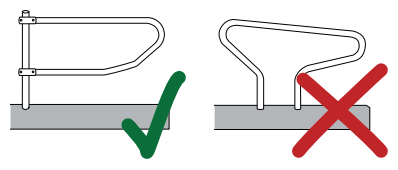
with straight edges



with puzzle shaped edges



as continuous system WELA LongLine



lower side construction allows no slitting or cutting-out for pockets (e.g. for pillars, etc) ▶ suitable for cantilever dividers only

Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



KKM / KKM Puzzle / KKM LongLine



the cosy mat classic since 2002

- the highly wear resistant honeycomb profile creates excellent and permanent lying comfort
- integrated soft slope to rear edge promotes drying off
- proven pebbled surface
- KKM LongLine: installation independent of divider arrangement



the **sealing lips** have proven themselves in practice



sealing lips on lower side

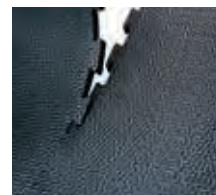
options:



with straight edges



with KK-Poly-T-Bar e.g. for stall equipment with mushroom dividers or especially when using very fine litter



with puzzle shaped edges



as continuous system KKM LongLine

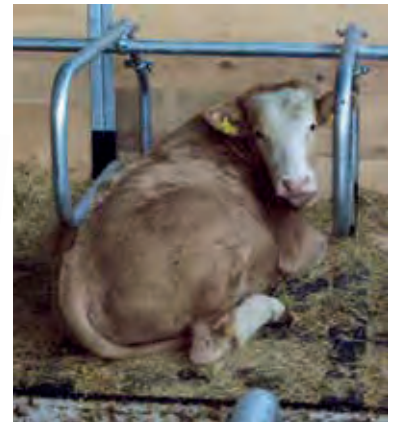
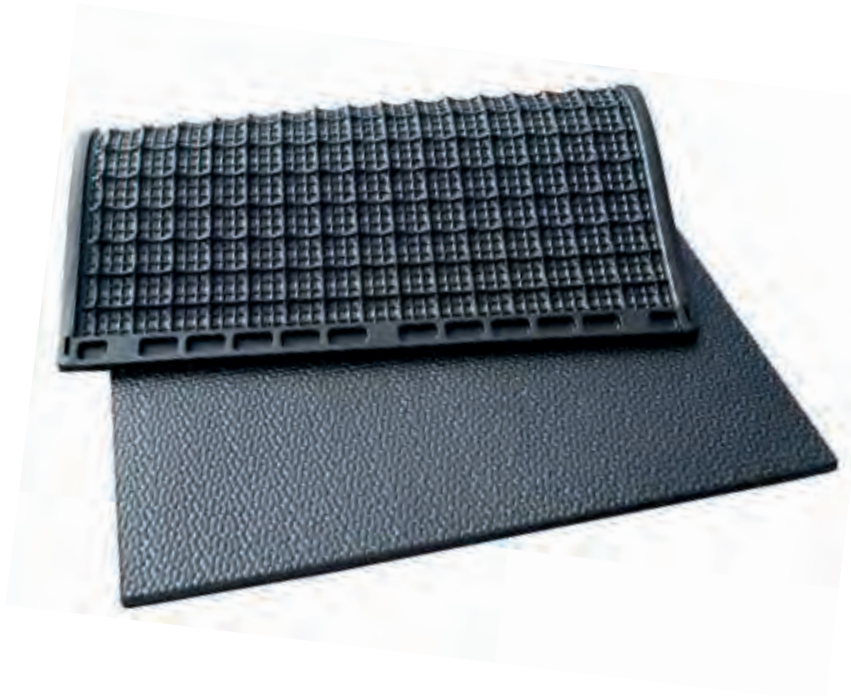
Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



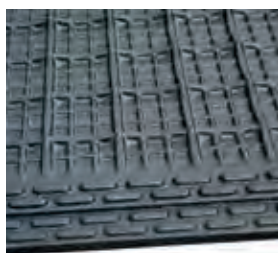
KIM / KIM Puzzle / KIM LongLine



KIM LongLine



- the supple, highly wear resistant air cushion profile creates pleasant and permanent lying comfort
- integrated soft slope to rear edge promotes drying off
- proven pebbled surface
- KIM LongLine: installation independent of divider arrangement



sealing lips on lower side

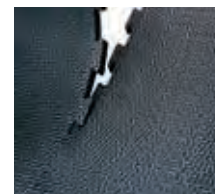
options:



with straight edges



with KK-Poly-T-Bar e.g. for stall equipment with mushroom dividers or especially when using very fine litter



with puzzle shaped edges

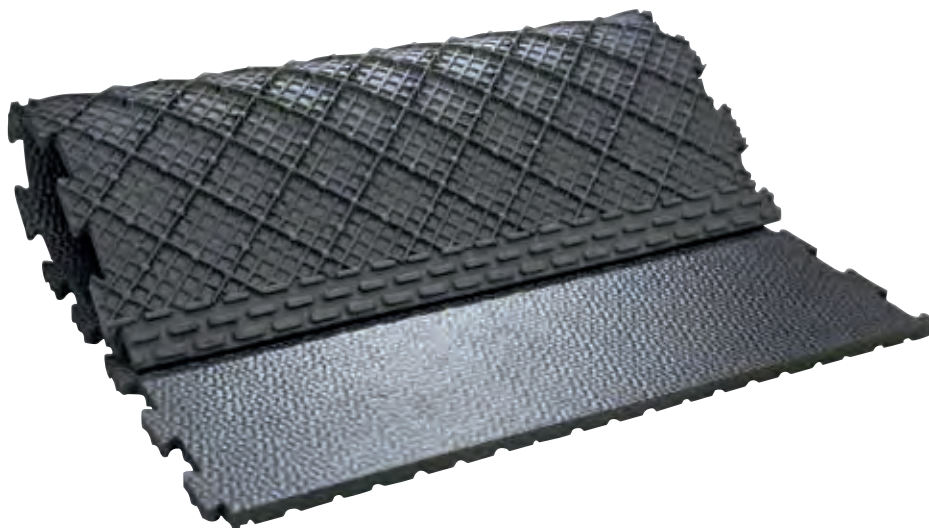


as continuous system KIM LongLine

Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.

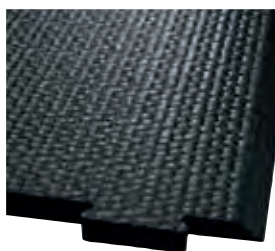
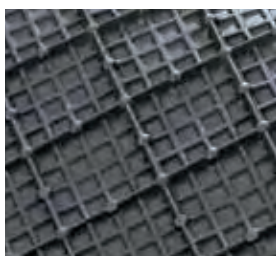
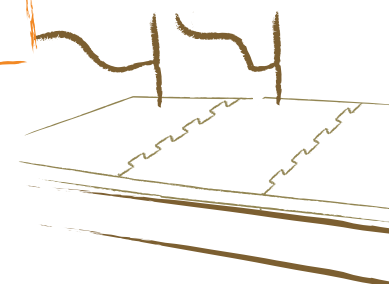


CALMA



- pleasant and permanent softness through air-cushion-like lower side profile, also in the area of the puzzle connection
- puzzle connection ensures a practically seamless floor area
- proven pebbled surface

Installation as a continuous system – independent of divider arrangement!



air-cushion-like lower side profile: soft and sturdy

chamfer at rear edge

Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



ergoBOARD / maxiBOARD

ergoBOARD:



back side

maxiBOARD:



plastic board as shim for maxiBOARD on the 6 cm thick mats

research findings: **20 % of the animals stretch out their foreleg in the pasture.** (Pelzer et al., 2007)

- ▶ Cows like to lie in this natural position in the cow house, too. The brisket board should make this possible with no hindrances.

▶ Brisket boards made of rubber

- animal-friendly, flexible and robust
- **complement** ideally the cubicle's control devices
- combination with various lying mat systems possible
- easy retrofitting possible
- **ergoBOARD:**
 - ▶ easily applicable for every mat thickness
 - ▶ very elastic

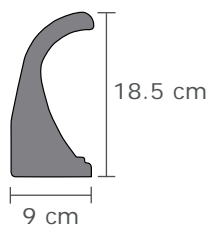


pleasantly soft contact area allows natural lying positions with foreleg stretched out

■ maxiBOARD:

- ▶ easy to put in litter from the head space
- ▶ fits every cubicle width

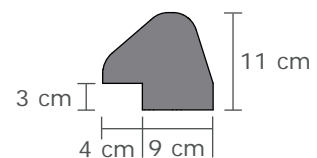
Cross section ergoBOARD:



Attention: The installation of ergoBOARD is possible at a lying place width of at least 115 cm, as you need one ergoBOARD per cubicle.

Suitable for elevated cubicles only.

Cross section maxiBOARD:



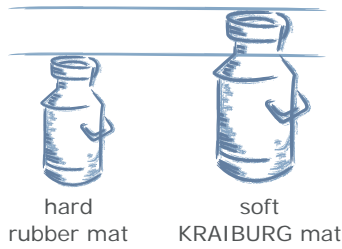
Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



Economic efficiency

Higher milk yield on a soft KRAIBURG lying mat

Comparing lying areas:



↑ about 1.5 kg per cow per day MORE MILK

Source: LfL Sachsen, 1999

Low litter requirements and minimal labour input for maintenance

Straw requirements per cow per year

Elevated cubicle with KRAIBURG mat: Ø 40 kg
 Deep-litter cubicle with straw: Ø 260 kg

Labour requirements per cow per year

Elevated cubicle with KRAIBURG mat: Ø 95 minutes
 Deep-litter cubicle with straw: Ø 265 minutes

Source: Heidenreich, 2007

Health

Interrelation between higher milk yield and health status with different housing systems

Risk for...	concrete	soft covers
udder diseases	↑	↓
teat lesions	↑	↓
early culling	↑	↓

soft lying covers result in higher milk yields and reduce the risk of udder diseases, teat lesions and early culling

Source: Ruud et al., 2010

Anatomical background

hock joint on hard lying surface: the weight burden on one spot
 ▶ disturbed blood flow, damage to the roots of the hair and to the skin

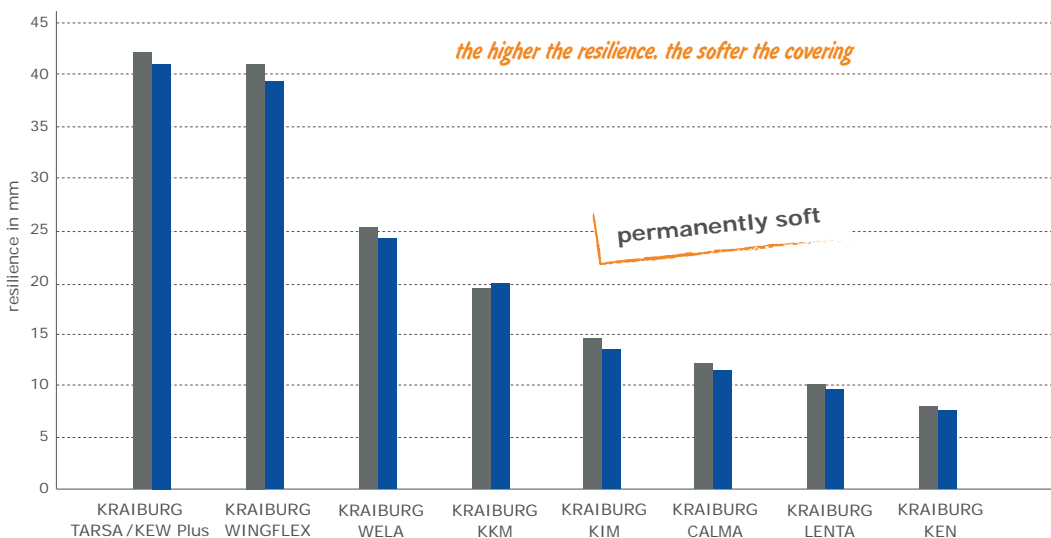


hock joint on soft lying surface: the weight is distributed to a larger surface
 ▶ caring for joints



Softness & durability

Softness before and after long-term test



the higher the resilience, the softer the covering

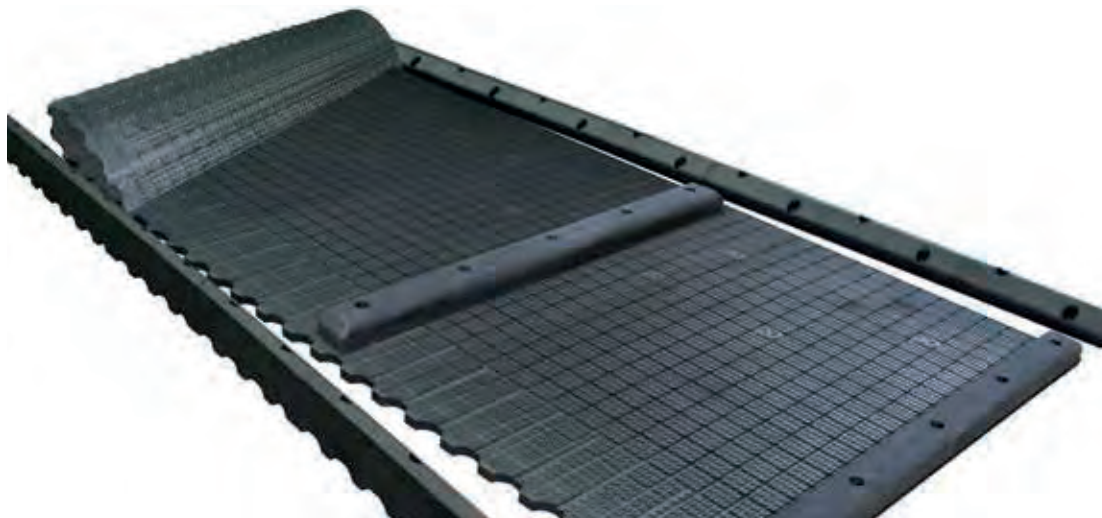
permanently soft

even the softest lying systems are permanently robust and almost equally as soft after permanent load

Source: KRAIBURG laboratory (measure taken in the middle of the mat), compare it with DLG test reports - www.dlg.org



maxiBOX



4-component system

- rubber cover (roll) + rubber profile with drainage at rear curb + rubber brisket board + profile at side as side lying area boundary
- ensures year-round functional safety ▶ consistent comfort
- recommended littering depth: 3 - 5 cm

Prerequisites for the concrete surface (lying area):

- ▶ at least a 3 % slope
- ▶ about 10 cm high



pliant **air cushion profile** on lower side

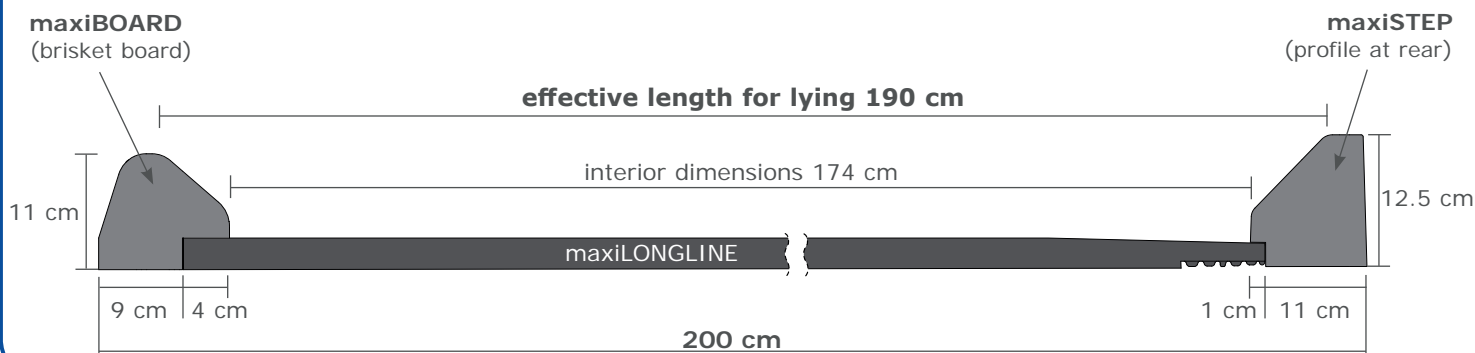


intelligent **surface profile** retains litter especially well



integrated slope, drainage grooves and openings at the rear

Cross section:



Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



NEW

POLSTA



The ideal complement for the deep litter cubicle!



after installation, the deep litter cubicle should be filled as usual

► **The deep litter cubicle cushion**

- 10 cm thick “cushion” made of **2 functional layers**:
 - **lower mat with blade profile**
 - ▶ ideal shock absorption of the concentrated load when the cow gets up or lies down
 - **upper mat with big air cushions**
 - ▶ retains the upper layer of litter especially well and is pliable soft
- replaces the thick lower layer of litter in the difficult to be maintained head space of the deep litter cubicle
 - ▶ provides a consistently stable and comfortable sub-construction
 - ▶ is gentle on the carpal joints
- offers easy management and saves litter
- deep litter cubicle system remains unchanged at the rear



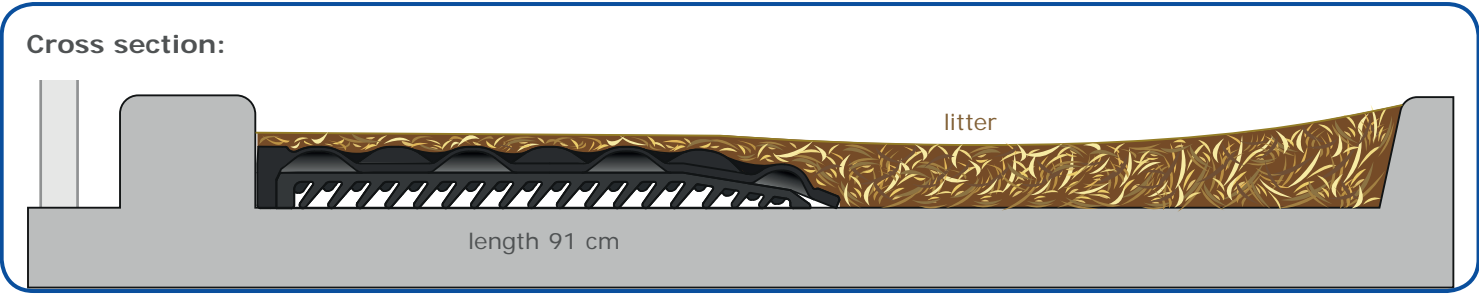
lower side profile with **blades and supporting studs**: stable and flexible simultaneously



fixings are countersunk in the stable surrounding edge



smooth transition from the rubber cushion to the litter with animal-friendly “neat” edge

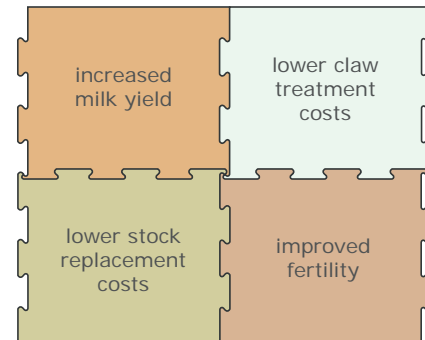


Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



KRAIBURG walking area coverings

- ensure softness and improved slip resistance in the cattle house
- increase walking comfort
 - ▶ support claw health, well being and mobility
 - ▶ promote feed intake and high yield
 - ▶ improve heat detection and increase reproduction rate
 - ▶ support longevity and reduce the stock replacement rate
- good hygiene
- can contribute to emission reduction (see p. 32 f.)
- ice layers loosen themselves easier from the elastic cover
- help to reduce noise and stress
- faster milking through improved parlour entrance and exit and relaxed cows
- suitable for both new construction and renovation



the investment in animal-friendly walking areas pays off

KRAIBURG quality

- sturdy mats, permanently stable in position and form
- puzzle compensates for natural thermal expansion, practically a seamless floor area
- simple and fast installation
 - ▶ easy-to-handle single mats
 - ▶ prefabricated fixing points ease installation
 - ▶ floor renovation in the parlour possible between milking times
- The walking area coverings can be driven on with standard equipment such as farm yard loader or tractor with authorized pneumatic tyres at the recommended inflation pressure up to max. 4 bar. (Notice: drive with due care and steer in large radius!)*

▶ Walking comfort like on pasture.



Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



profiKURA – with abrasive surface

Abrasive rubber floorings create optimized claw abrasion, very similar to conditions in nature, where sandy constituents in the elastic soil ensure that horn formation and abrasion are kept balanced.

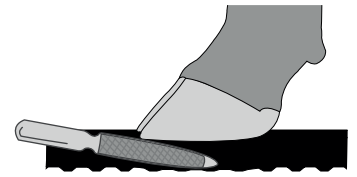
With profiKURA the abrasive agent corundum and the special profiling integrated into the surface provide for gentle claw abrasion.



natural ground is soft, sufficiently non-slippery and maintains the claws

Abrasive corundum

- the **second hardest mineral** after diamonds
- does not react with acids and bases: best precondition for use in slurry environments
- patented technology which has been well-proven in the KRAIBURG-group for many years
- in practice, an exceptionally high level of sure-footedness has been demonstrated



Advice on claw trimming

profiKURA maintains the claw form, but claw trimming is still necessary!

- ▶ Claws must still be trimmed regularly, but only for the purpose of claw care and less for position correction or complex treatment.

We recommend functional claw trimming **4 to 6 weeks before the mats are installed.**

Important: do not install the mats **at the same time you trim claws**, because the claw has to become accustomed to the abrasion.

ideal claw form





product

special features

profiKURA



All in one product – on all walking areas in the cattle house:

- animal-friendly softness and **improved grip**
 - ▶ especially recommended if there is a risk that manure removal systems only achieve a moderate cleaning result (smear layer of drying dung), e.g. open cow housings, wide walking alleys, housings that are not fully occupied, ...
 - ▶ for slopes up to max. 6 %
- **optimized claw abrasion**
- installation: full coverage on all walking areas in the cattle house
 - ▶ **balanced content of abrasive agent** in the surface

KURA



KURA P/S



The proven "all-round solution":

- animal-friendly softness and **certified grip**
- the benchmark for excellent walking comfort for more than 15 years
- for slopes up to max. 3 %
- optional with pediKURA® abrasion zones (20 %) for **selective claw abrasion**
 - ▶ **concentrated content of abrasive agent** in the surface

KARERA

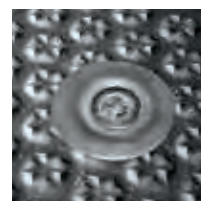


Basic product: simple and solid mat

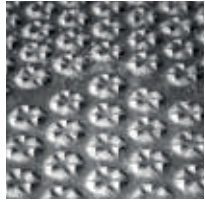

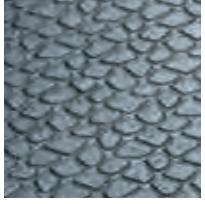


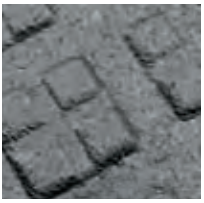
- suitable for various areas (walking alley, milking parlour, collecting yard, travel lane, ...)
- for slopes up to max. 3 %
- meets the fundamental requirements for an animal-friendly walking alley mat
- quad-surface: slip-proof and easy to clean
- lower side with multisquare profile: robust and pleasantly soft

KRAIBURG fastening system on paved / concrete floors:

- ▶ extremely sturdy and safe
- ▶ rounded off and flush with the mat





surface	lower side	thickness	options	page												
 <p>optiGrip-surface</p>	 <p>stud profile</p>	24 mm	<table border="1"> <tr> <td>paved / concrete floor with scraper</td> <td>profiKURA P</td> <td>24</td> </tr> <tr> <td>paved / concrete floor without scraper</td> <td>profiKURA Flex / Form</td> <td>25</td> </tr> <tr> <td>special areas</td> <td>profiKURA Rotary / CowWalk / Flush / SUN</td> <td>26</td> </tr> <tr> <td>slatted floor</td> <td>profiKURA S</td> <td>27</td> </tr> </table>	paved / concrete floor with scraper	profiKURA P	24	paved / concrete floor without scraper	profiKURA Flex / Form	25	special areas	profiKURA Rotary / CowWalk / Flush / SUN	26	slatted floor	profiKURA S	27	
			paved / concrete floor with scraper	profiKURA P	24											
			paved / concrete floor without scraper	profiKURA Flex / Form	25											
			special areas	profiKURA Rotary / CowWalk / Flush / SUN	26											
slatted floor	profiKURA S	27														
 <p>grip-surface</p>	 <p>stud profile</p>	24 mm	<table border="1"> <tr> <td>paved / concrete floor with scraper</td> <td>KURA P</td> <td>24</td> </tr> <tr> <td>paved / concrete floor without scraper</td> <td>KURA Flex / Form</td> <td>25</td> </tr> <tr> <td>special areas</td> <td>KURA Rotary / CowWalk / Flush / SUN</td> <td>26</td> </tr> <tr> <td>slatted floor</td> <td>KURA S</td> <td>27</td> </tr> </table>	paved / concrete floor with scraper	KURA P	24	paved / concrete floor without scraper	KURA Flex / Form	25	special areas	KURA Rotary / CowWalk / Flush / SUN	26	slatted floor	KURA S	27	
			paved / concrete floor with scraper	KURA P	24											
			paved / concrete floor without scraper	KURA Flex / Form	25											
			special areas	KURA Rotary / CowWalk / Flush / SUN	26											
slatted floor	KURA S	27														
 <p>quad-surface</p>	 <p>multisquare profile</p>	21 mm	<table border="1"> <tr> <td>paved / concrete floor</td> <td>KARERA P</td> <td>28</td> </tr> </table>	paved / concrete floor	KARERA P	28										
paved / concrete floor	KARERA P	28														

KRAIBURG fastening system on slatted floors:

▶ patented rubber peg to prevent lateral slipping





For paved / concrete floors with stationary scraper or mobile manure removal

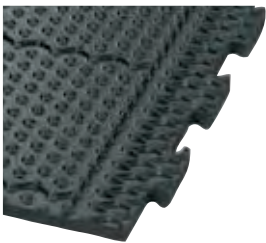
profIKURA P / KURA P

19 mm  24 mm

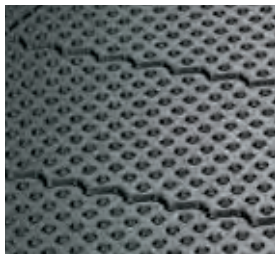
- available for every walking alley width, custom-fit in 2 cm increments
- the puzzle section parallel to the cleaning flaps is especially reinforced, so that the scraper can slide safely across it
- dirt barriers reduce soiling underneath the mats
- Scraper manure removal on rubber flooring has been proven in practice: In principal we recommend the use of **scrapers specifically developed for rubber floors**. For **structural alterations** it is necessary to adapt the **scraper facilities in coordination with the scraper manufacturer**, according to the **KRAIBURG guidelines for manure scrapers**.



! Important: check the scraper at least once a year and grind off the sharp edges!



reinforced puzzle-shaped edges



dirt barriers



Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



For areas like milking parlours, collecting yards, travel lanes, crossing passages, ... without scraper or mobile manure removal

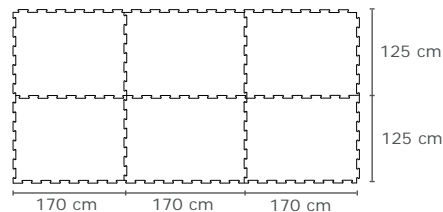
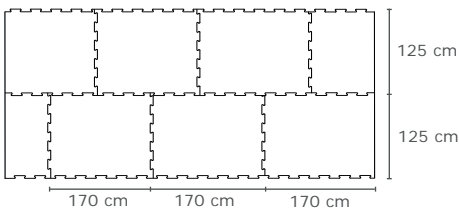
profiKURA Flex / KURA Flex



► The flexible one

- through the versatile dimensions and combination possibilities, the most unusually shaped areas can be covered; the mats might only have to be cut to shape on the edges of the surface

Covering examples:

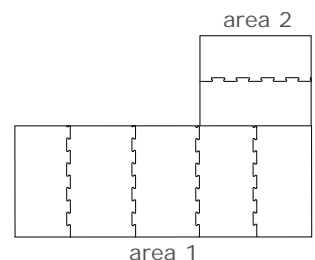


profiKURA Form / KURA Form

► The tailor-made one

- dimensionally accurate projected solutions for surfaces with one or more adjoining rectangular areas
- exactly fitting mats with an easily understandable installation plan
 - easy installation – practically no cutting work – no cut-off

Fits perfectly!



(for technical reasons the adjoining areas do not have puzzle-shaped sides as standard)

Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.

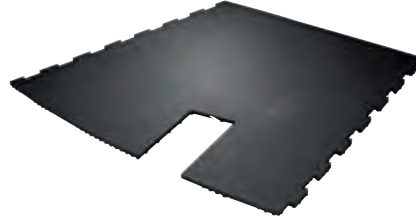


Fits perfectly!

In the rotary parlour carousel

profiKURA Rotary / KURA Rotary

- tailor-made for each rotary parlour carousel
- can be installed piece by piece between milking times



For long travel lanes (purposive locomotion)

profiKURA CowWalk / KURA CowWalk

- cows prefer the soft, claw-friendly "KURA-tracks" and walk more confidently
- ideal softness for high stress on travel lanes



Floor prerequisites:

- ▶ recessed concrete area: 625 mm wide (+/- 5 mm) and at least 27 mm deep (or 22 mm with type E – for flushing manure removal with sand lying areas)



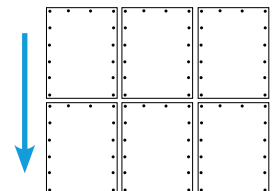
IMPORTANT: With mobile manure removal or stationary scraper, a rubber lip is necessary which ensures a satisfactory cleaning result. Please keep in mind that the surface of the mat could be several mm below the level of the concrete floor.

For areas with flushing manure removal

profiKURA Flush / KURA Flush

- with straight edges
- with U-shaped fastening

water running direction



For areas with extreme solar radiation

profiKURA SUN / KURA SUN options

- expansion slits in the mat balance out larger thermal expansion
- reduces bulges due to temperature-induced expansion



Tailor-made for every slatted floor geometry

Fits perfectly!

profIKURA S / KURA S

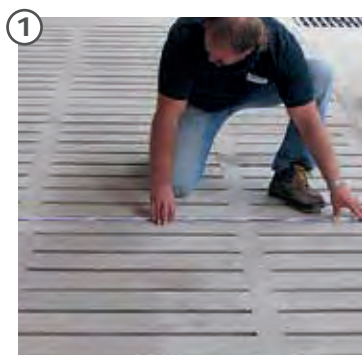


- dimensional stability and long durability through large-scale mats extending over several slatted floor elements
- compatible with use of manure scraper, robot scraper and wheeled traffic
- The mats are generally dimensioned according to the guidelines established by our specialists. The slatted floor must be suitable for covering with KRAIBURG mats.

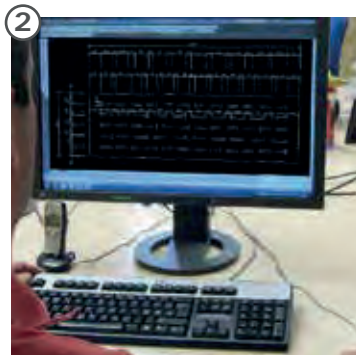
Prerequisites for slatted floors:

- ▶ slit width: starting at 24 mm
- ▶ slat width within concrete element: starting at 80 mm

Customisation:



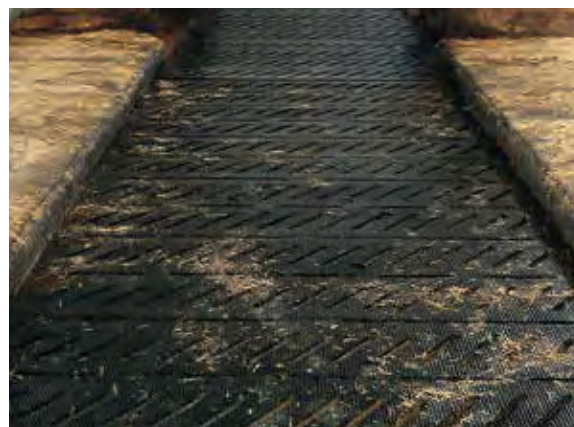
slatted floor is measured



with modern CAD software the mats are individually dimensioned



based on the CAD created drawing, the slits are cut exactly into the mats with innovative water jet technology



Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



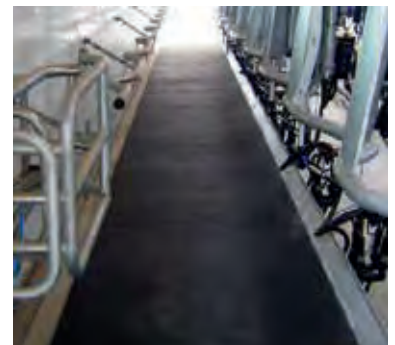
Basic product: simple and solid mat for paved / concrete floor

KARERA P

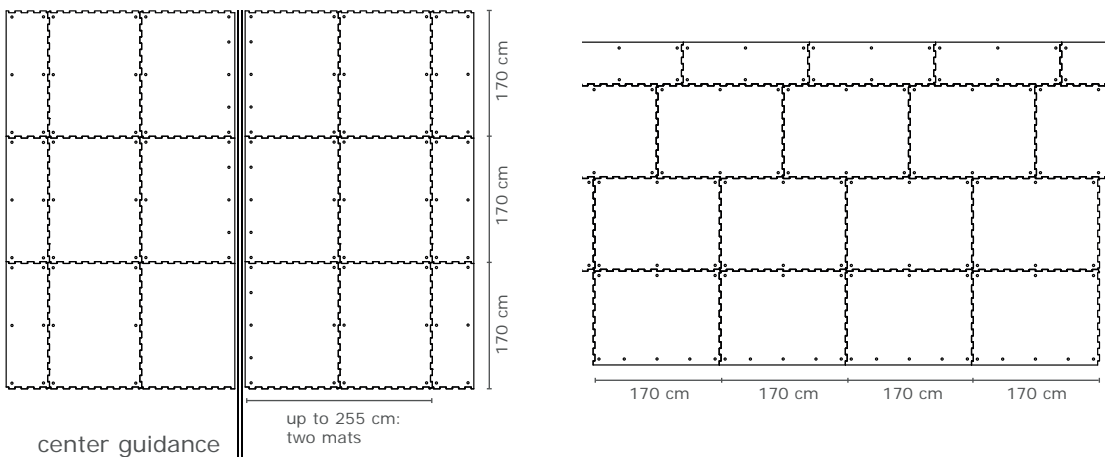
18 mm 21 mm

- width custom-fit in 5-cm increments
- through the versatile dimensions and combination possibilities, the most unusually shaped areas can be covered
- **Scraper manure removal on rubber flooring has been proven in practice:**
In principal we recommend the use of **scrapers specifically developed for rubber floors.** For structural alterations it is necessary to adapt the **scraper facilities in coordination with the scraper manufacturer,** according to the **KRAIBURG guidelines for manure scrapers.**

! Important: check the scraper at least once a year and grind off the sharp edges!



Covering examples:



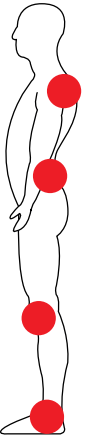
Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



ergoMILK

12 mm  17 mm

Cow comfort – naturally!
And what about man?



► The ergonomic mat for the milking pit

- feels pleasantly soft underfoot
- slip resistant diamond surface ► elastic and secure underfoot
- heat insulating
- easy to clean and disinfect



lower side profile: 5 mm high, deformable studs



diamond surface



puzzle: the clean seam



Prerequisites / tips on installation:

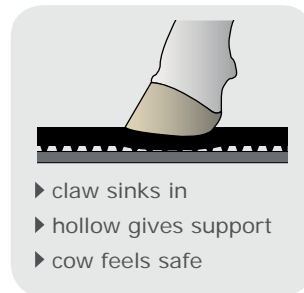
- subsurface must be even and clean
- lay out using floating method (no plugging and further fastening)
- lay out mats, do not press them together (join loosely)
- lay out completely to avoid stumbling edges!
- maintain a 2 to 15 cm distance to the edge (side wall) ► cleaning gutter
- for adjustments at site, the mats can easily be cut with a sharp knife
tip: moisten the knife and cut along a guide batten laid against the mat

not available for USA/CAN



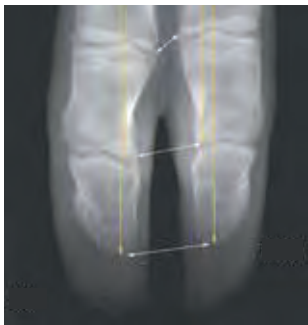
The right softness makes all the difference!

Problem: On hard floors claw damages often occur, more than 80 % of them on the outer claws of the hind legs.



Background:

The outer toe is approx. 3 mm longer by nature.



Source: Muggli, 2007

Natural ground contact of cattle:



The hind outer claw steps down first and therefore absorbs the peak load.



The inner claw takes the secondary impact – faster on a soft surface than on a hard surface.

Source: Schmid, Weishaupt, Meyer, Waldern, Peinen, Nuss, 2008
Figures: Nuss

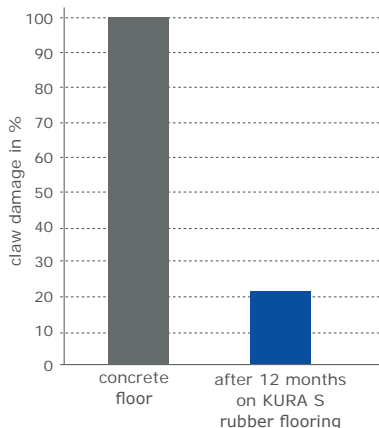
▶ **Floor requirements:**

the claw sinks approx. 3 mm into the ground for optimal protection against overload

The soft KURA covering is especially adapted to the natural requirements of the cow!

Claw health

Claw damages: comparing concrete slatted floor – KURA rubber cover



positive effect on claw health: drastic reduction of claw damage

Source: Benz, 2002

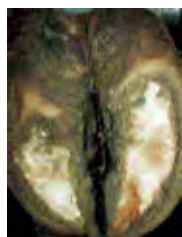
Pressure distribution on soft KURA rubber covering



measures show correct bearing pressure on the intact claw wall

pressure distribution of claws after 6 months exposure to walkways with soft rubber

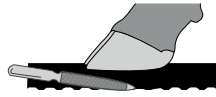
Source: Telezhenko, Bergsten, Magnusson, Ventorp, Nilsson, 2008



ideal shaping of the bearing rim

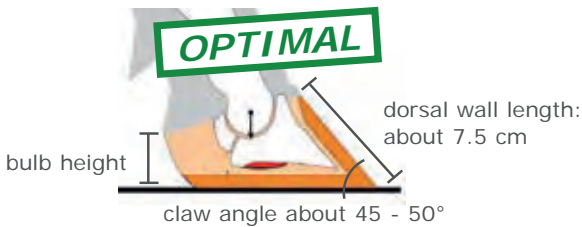


Claw health on soft-abrasive floors



- constant claw angle of about 50°
- less dermatitis digitalis
- less Rusterholz sole ulcer incl. primary stages
- less laminitis
- tendency to less sole wall ulcers
- tendency to less chronic hyperplasia (corns in the interdigital cleft)
- less clinically lame animals

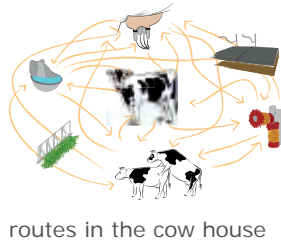
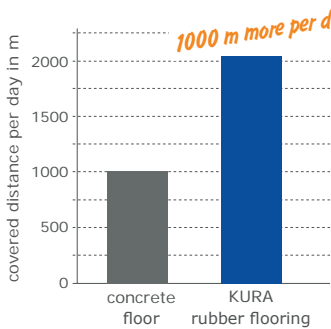
Soft-abrasive floors make it possible to maintain the physiologically correct claw form. The claws are considerably healthier!



Source: Günther, 2015

Better mobility

Covered walking distance



considerably higher activity on walking areas after installing rubber covers

Source: Benz, 2002

Economic efficiency

Costs for a claw ulcer treatment:

- Costs for treatment
- Less milk

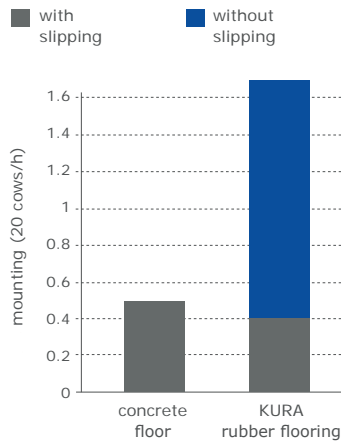
At least 300 EURO for one claw ulcer

- ▶ 1.6 bn EURO damage through claw diseases / 10 - 15 % culling (EU)

Source: Herrmann, 2006

Natural animal behaviour – well-being

Mounting



mounting considerably more often on KURA

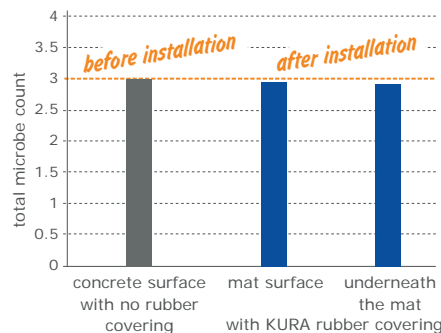
slipping on rubber flooring does not affect the animals

the cows feel safe and have confidence in the KURA floor

Source: Benz, 2002

Hygiene

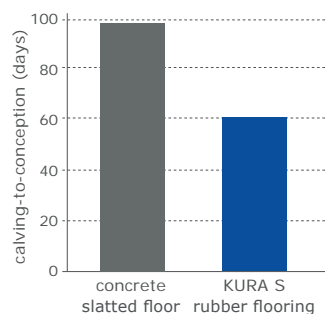
Microbe climate in animal housing: comparing concrete slatted floor – KURA rubber cover



slightly lower microbe formation on rubber mat surface and underneath the mat

Source: Reiter, Partes, Koßmann, 2006

Calving-to-conception intervals



considerably shorter calving intervals

Source: Kremer et al., 2007



Reduction of ammonia emissions

Many countries have committed themselves to reduce ammonia emissions. These are mainly caused by agriculture. Cattle husbandry accounts for the largest share of this. Apart from slurry storage and application, **housing construction measures** are coming into focus more and more.


However, there are currently no concrete guidelines for implementation. Moreover, animal welfare should not be ignored. Possible solutions often contain several components. The success of a system also depends heavily on housing management. Measures combining **both environmental protection and animal welfare** will become interesting in the near future.

How does ammonia develop in the cow house?

The urea in the urine is split into ammonia and carbon dioxide by the enzyme urease within a short time. Important factors besides the house climate are the floor condition and its cleanliness.

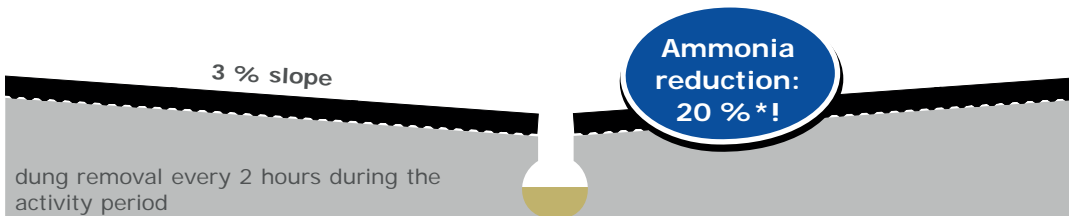
How can ammonia emissions be reduced?

- ▶ **rapid urine drainage**, associated with frequent cleaning
- ▶ **minimized soiled surfaces**, e.g. elevated feed stalls (see page 39)

 We will be pleased to advise you!

Results from the experimental dairy housing Agroscope, Tänikon, CH

Ammonia reduction with KRAIBURG walking area coverings



Animal and environmental protection hand in hand!



*Sources: Zähler, Poteko, Zeyer, Schrade, 2017
Schrade, Steiner, 2012
Picture: Agroscope, 2016



For paved / concrete floor with a slope

profIKURA P

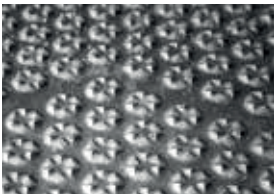
19 mm 24 mm

- animal-friendly softness, optimized claw abrasion and improved grip
- Scraper manure removal on rubber flooring has been proven in practice: In principal we recommend the use of **scrapers specifically developed for rubber floors**. Please consult us.



Floor prerequisites:

- ▶ 3 % slope towards urine-collecting gutter



optiGrip-surface



stud profile for ideal softness



KRAIBURG fastening system: extremely sturdy and safe, rounded off and flush with the mat



For common longitudinal and transverse slats

KURA SB

23 mm 28 mm

- curved surface with approx. 5 % slope towards the slit
 - ▶ facilitates the draining of liquids and dries faster
 - ▶ increases cleanliness
 - ▶ therefore reduces the release of ammonia
- even better surefootedness



curved surface with square imprinting



stud profile for ideal softness



KRAIBURG fastening system: patented rubber peg to prevent lateral slipping – flush with the mat





Individually tailor-made rubber covers for slatted floors

Fits perfectly!

- increased lying comfort
- The mats are generally dimensioned according to the guidelines established by our specialists. The slatted floor must be suitable for covering with KRAIBURG mats.
- For young cattle up to 250 kg animal weight (or up to 350 kg, if the animals are kept in the same pen for the whole breeding period) KURA S (see page 27) / KURA SB can be used. With higher weights we recommend LOSPA swiss / LOSPA SB for higher stress.

IMPORTANT:
Balanced feeding is a requirement for clean animals.

For every slatted floor geometry

LOSPA swiss

20 mm

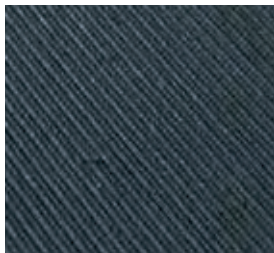


Prerequisites for slatted floors:

- ▶ slit width: starting at 30 mm
- ▶ Slat widths up to 140 mm are recommended to keep the animals satisfactorily clean.



reinforced **grip-surface** for high stress



stable groove profile on lower side for high stress



optimized KRAIBURG fastening system: reinforced rubber peg with surrounding rim – flush with the mat



Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



For common longitudinal and transverse slats



- curved surface with approx. 5 % slope towards the slit
 - ▶ facilitates the draining of liquids and dries faster
 - ▶ increases cleanliness
 - ▶ therefore reduces the release of ammonia
- even better surefootedness

LOSPA SB

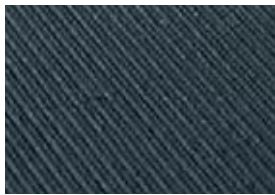
23 mm

Prerequisites for slatted floors:

- ▶ slit width: starting at 30 mm
- ▶ The slats have to be the same width.



reinforced, curved surface with square imprinting improves surefootedness



stable groove profile on lower side for high stress



optimized KRAIBURG fastening system: reinforced rubber peg with surrounding rim – flush with the mat

KURA SB

23 mm 28 mm

- ▶ For young cattle up to 250 kg resp. 350 kg animal weight

Prerequisites for slatted floors:

- ▶ slit width: starting at 24 mm
Slit widths starting at 30 mm are recommended to keep the animals satisfactorily clean.
- ▶ The slats have to be the same width.



curved surface with square imprinting



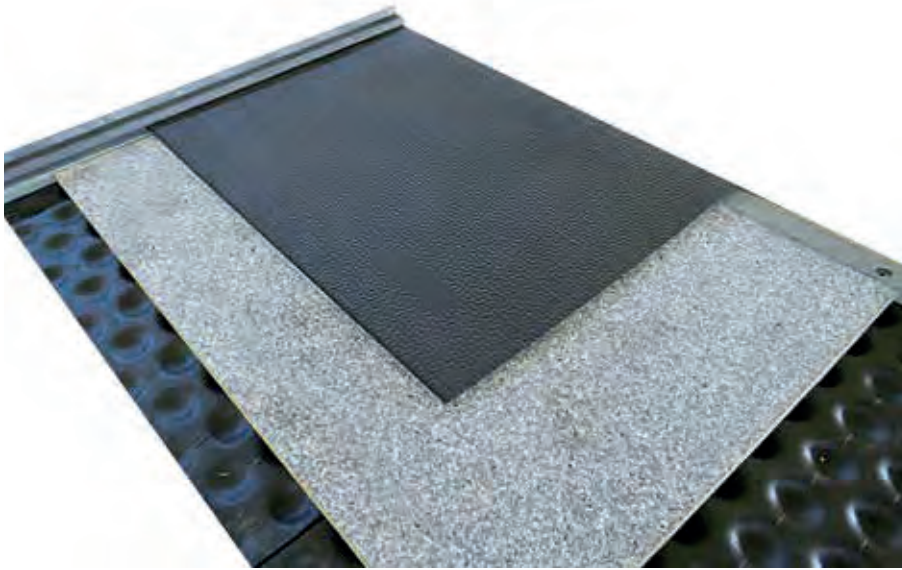
stud profile for ideal softness



KRAIBURG fastening system: patented rubber peg to prevent lateral slipping – flush with the mat



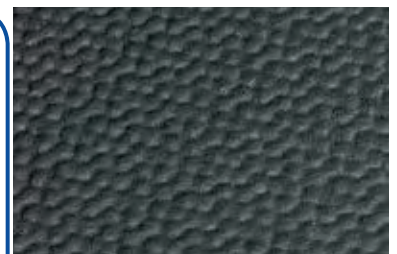
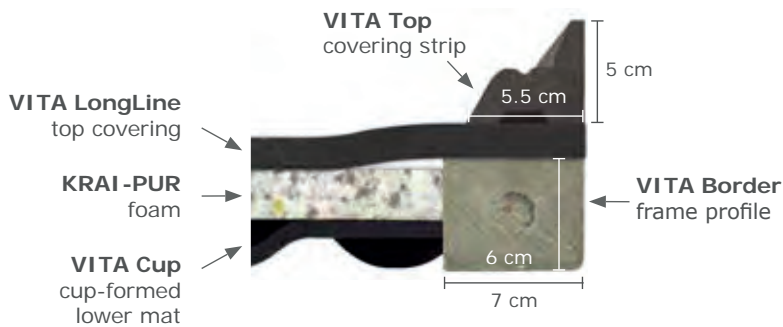
VITA



- the three functional layers (rubber-foam-rubber) ensure optimal and permanent softness for every load condition
- softness enhances slip resistance – also for the calf
- heat insulating
- seamless top covering
 - ▶ easy to clean and disinfect
 - ▶ optimal hygiene
- frame profile surrounds the system
- covering strip for “neat” closure towards the wall
 - ▶ reduced soiling
- significantly reduced need for bedding



Cross section:



proven **pebbled profile** on upper and lower side

Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.

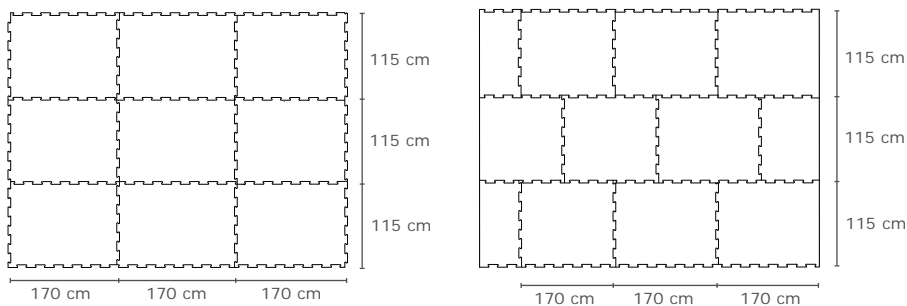


SIESTA



- comfortable softness through air-cushion-like lower side profile
- dimensionally stable, durable and slip resistant
- easy to clean and disinfect
- 4 sides with puzzle shaped edges ▶ very simple and flexible installation
- driving-over possible*

Covering examples:



 in small pens up to approx. 15 m² SIESTA can be laid out using the floating method (i.e. without fastening)

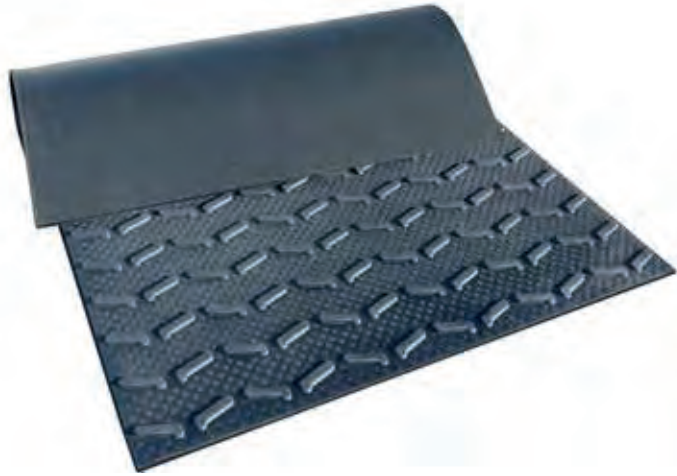
Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.



MONTA

16 mm  24 mm

► For steep passages with a slope of more than 6 %



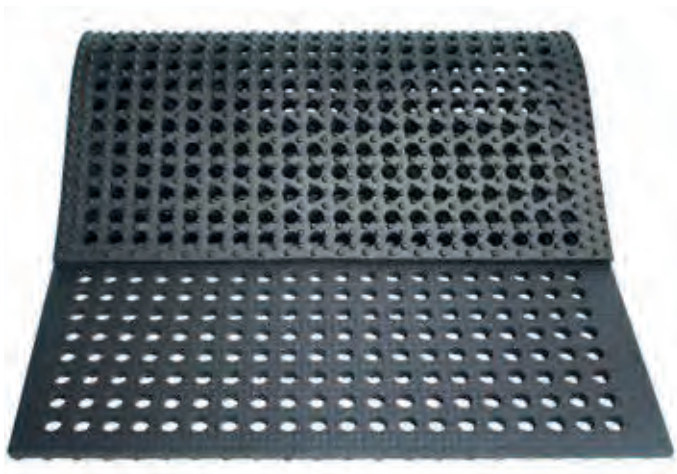
rib profile on the surface

- V-shaped, raised rib profile
 - gives the claw foothold
 - facilitates the drainage of liquids
- square imprinting between the ribs improves the grip
- walkable in both directions
- tested in practice on up to 15 % slope so far

LOMAX


19 mm  24 mm

► The simple soil stabilisation



hole size: Ø about 30 mm

- specially developed for muddy soil
- adapts to the ground
- simple installation with no substructure
- can also be used as a temporary solution
 - mats can easily be removed and laid out again

 Installation:
lay out mats and attach them to each other with sturdy cable zip ties.



LENTA



19 mm  30 mm



- softness through double structured stud profile
- high dimensional stability
- integrated soft slope to rear edge promotes drying off
- dirt barriers minimize soiling underneath the mat



elevated feed stalls

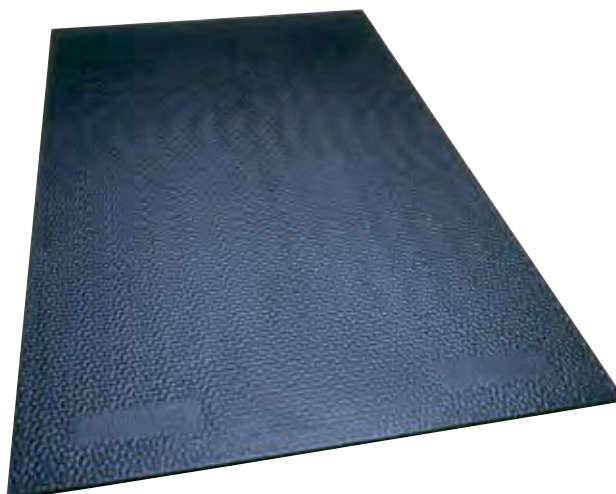


lower side

KEN / KEN Puzzle



15 mm  20 mm



- lower side with simple studs gives softness
- dimensionally stable and durable



lower side

Please take notice of the corresponding KRAIBURG specifications and installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at www.kraiburg-elastik.com.

Thickness/height: **Width:** **Length:**

Lying areas:

TARSA:	approx. 60 mm	adjustable with connecting bar			183 cm
		mat:	profile:	cubicle:	
		112 cm	8 cm	120 cm	
		112 cm	13 cm	125 cm	
		112 cm	18 cm	130 cm	

Accessory: **end-profile** for closure at side edges of the cubicle row, width: 63 mm, length: 183 cm

KEW Plus:	approx. 60 mm	adjustable with connecting bar			183 cm/192 cm (from 120 cm width)
		mat:	profile:	cubicle:	
		107 cm	8 cm	115 cm	
		112 cm	8 cm	120 cm	
		112 cm	13 cm	125 cm	
		112 cm	18 cm	130 cm	

Accessory: **end-profile** for closure at side edges of the cubicle row, width: 63 mm, length: 183 cm

WINGFLEX:	approx. 60 mm	adjustable with connecting bar			183 cm
		mat:	profile:	cubicle:	
		102 cm	8 cm	110 cm	
		102 cm	13 cm	115 cm	
		112 cm	8 cm	120 cm	
		112 cm	13 cm	125 cm	
		112 cm	18 cm	130 cm	

Accessory: **end-profile** for closure at side edges of the cubicle row, width: 63 mm, length: 183 cm

WELA: 50 mm 110/115/120/125 cm 183 cm

WELA Puzzle: 110/120 cm 183 cm

WELA LongLine: 165/170/183 cm 2.5 - 20 m in 10 cm increments

WELA LongLine: lateral closure profiles right **WELA-R** and left **WELA-L**, width: 9 cm, length: 165/170/183 cm

Accessory WELA LongLine: middle profile **WELA-M** for connecting two rolls, width: 13 cm, length: 165/170/183 cm

KKM: 30 mm 110/115/120/125/130 cm 170/183 cm

KKM Puzzle: 110/120/125 cm 170/183 cm

KKM LongLine: 170/183/200 cm 2.5 - 50 m in 10 cm increments

Accessory: **KK-Poly-T-Bar** for covering joint widths of 4 - 8 cm or closure at side edges, width: 13 cm, length: 120/165/180 cm

KIM: 30 mm 110/115/120/125 cm 170 cm

110/115/120/125/130 cm 183 cm

KIM Puzzle: 110/120 cm 170 cm

110/120/125 cm 183 cm

KIM LongLine: 160/170/180 cm 2.5 - 50 m in 10 cm increments

Accessory: **KK-Poly-T-Bar** for covering joint widths of 4 - 8 cm or closure at side edges, width: 13 cm, length: 120/165/180 cm

CALMA: 30 mm 115 cm 140/150/160/170/180 cm

ergoBOARD: 18.5 cm 9 cm 115/120 cm

maxiBOARD: 11 cm 13 cm 175 cm

Accessory: plastic board as shim when installing on TARSA, KEW Plus and WINGFLEX, height: 3 cm, width: 10 cm, length: 200 cm – is fastened with maxiBOARD at the same time

maxiBOX:

consists of:

maxiLONGLINE	30 mm	180 cm (special dimensions on request)	2.5 - 50 m in 10 cm increments
maxiBOARD	11 cm	13 cm	175 cm
maxiSTEP	12.5 cm	12 cm	175 cm
maxiPROFIL XL	8 cm	13 cm	173 cm

POLSTA: 100 mm 110 cm 91 cm

Thickness/height: Width: Length:

Walking & milking area:

profiKURA / KURA options:	24 mm		
P / P SUN:		96 - 500 cm in 2 cm increments (possibly several mat pieces are puzzled together)	125 cm
Flex:	puzzle on 2 sides:	87.5/92/96/100/104.5/109/113/117/ 121.5/126/130/134/138.5/143/147/ 151/155.5/160/164 cm (puzzle seam on wide sides)	125 cm
	puzzle on 3 sides:	82/99/116/133/150/167 cm (puzzle seam on wide sides and on one long side)	125 cm
Flex / Flex SUN:	puzzle on 4 sides:	125 cm	170 cm
Form / Form SUN / Rotary / S:		tailor-made	
CowWalk:	puzzle on 2 sides:	61 cm	170 cm
Flush / Flush SUN:		125 cm	170 cm

KARERA P:	21 mm		
	puzzle on 2 sides:	95/100/105/110/115/120/125/130 cm (puzzle seam on wide sides)	170 cm
	puzzle on 3 sides:	37.5/47.5/52.5/57.5/62.5/92.5/97.5/ 102.5/107.5/117.5/122.5/127.5 cm (puzzle seam on wide sides and on one long side)	170 cm
	puzzle on 4 sides:	125 cm	170 cm

ergoMILK:	17 mm		
	puzzle on 2 sides:	95 cm	173/350 cm (puzzle seam on long sides)
	puzzle on 4 sides:	95 cm	170 cm

Special areas:

LOSPA swiss:	20 mm	tailor-made	
LOSPA SB:	23 mm	tailor-made	
KURA SB:	28 mm	tailor-made	
VITA:	approx. 65 mm	max. 525 cm	max. 600 cm
consists of:			
VITA LongLine	15 mm	262/348/440/525 cm	250 - 600 cm in 10 cm increments
KRAI-PUR	25 mm	120 cm	155 cm
VITA Cup	25 mm	120 cm	135 cm
VITA Top	5 cm	5.5 cm	200 cm
VITA Border	6 cm	7 cm	240 cm
SIESTA:	30 mm		
	puzzle on 4 sides:	115 cm	170 cm
MONTA:	24 mm	65/130 cm	200 cm
LOMAX:	24 mm	110 cm	175 cm
special dimensions on request			



Thickness/height:

Width:

Length:

Special areas:

LENTA:	30 mm	100 cm	150/157/165/175/185 cm
		110 cm	150/157/165/175/185/200 cm
		120/130 cm	150/157/165/175/185/200/220 cm

Accessory: **KK-Poly-T-Bar** for covering joint widths of 4 - 8 cm or closure at side edges, width: 13 cm, length: 120/165/180 cm

KEN:	20 mm	90 cm	130/140/150/165 cm
		100 cm	130/140/150/165/175/185/200/220/350 cm
		110 cm	140/150/165/175/185/200/220/350 cm
		120 cm	150/165/170/175/180/185/200/220/350 cm
		130 cm	150/165/175/185/200/220/350 cm

KEN Puzzle:	105 cm	140/150/165/175/185 cm
	115 cm	140/150/165/175/185/200 cm
	125 cm	150/165/175/185/200 cm

Tolerances for KRAIBURG mats

thickness: +3/-2 mm **length + width:** +/- 1.5 % (DIN ISO 3302-1 tolerance class M4)

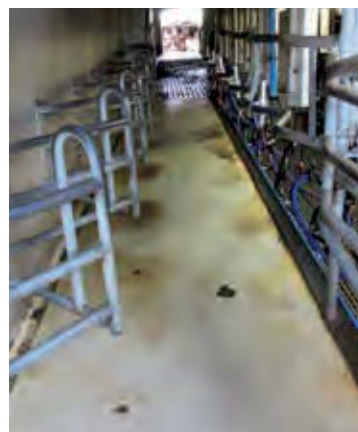
The tolerances also apply within the mat and when installed.

More technical details on request. The products presented here should only be used for the mentioned applications. Technical specifications are subject to alterations. All sales are subject to our General Terms and Conditions. Legal basis is the German version of the document.

► **Our rubber mats are highly suitable for both new construction ...**



... and renovation



KRAIBURG warranty

Our name stands for quality. We guarantee as a German manufacturer that our products will function reliably for many years.

Products	KRAIBURG warranty
TARSA / KEW Plus	rubber: 10 years* foam: 5 years*
WINGFLEX / WELA / KKM / KIM / CALMA / maxiBOX / POLSTA	10 years*
profiKURA / KURA / KARERA / LOSPA	5 years
VITA / SIESTA	5 years
LENTA / KEN	10 years

* Only for exclusive use as cubicle covering, no combinations, e.g. feeding + lying.

More detailed information is available on request. Please pay attention to the information on the respective product pages.

Installation – easy and fast

■ Important: pay attention to our installation instructions and guidelines!

- ▶ they are available in many languages
- ▶ you will obtain these with the delivery, at your local KRAIBURG dealer or at www.kraiburg-elastik.com
- ▶ there are also installation videos of many products available (see website)

simply scan
code and
download
**installation
instructions** or
view **installation
videos**



installation instructions



installation videos

Tips for maintenance

- spread a small amount of litter on the lying mats, e.g. soft milled straw or mineral material
 - ▶ Moisture in the lying area, among other things, plays a major role in the development of skin diseases and infections!
- for cleaning the walking area floorings in combination with scraper manure removal:
 - ▶ adapt scraper facilities according to our specifications
 - ▶ check scraper at least once a year and grind off the sharp edges
- keep the walking and milking areas as clean as possible
 - ▶ Important for claw health and slip resistance!
- treatment with a high-pressure cleaner, as well as with standard cleaning agents is possible



English

Your KRAIBURG dealer:

**Gummiwerk KRAIBURG
Elastik GmbH & Co. KG**

Göllstraße 8
84529 Tittmoning
GERMANY
Tel: +49/86 83/701-303
e-mail: info@kraiburg-elastik.de
www.kraiburg-elastik.com

09/2018



 **KRAIBURG** ▶ legt die Weide in den Stall

www.kraiburg-elastik.com

