

# Rubber covers for floors in pig keeping

## ► KRAIBURG rubber covers for

### Lying areas for sows in group housing



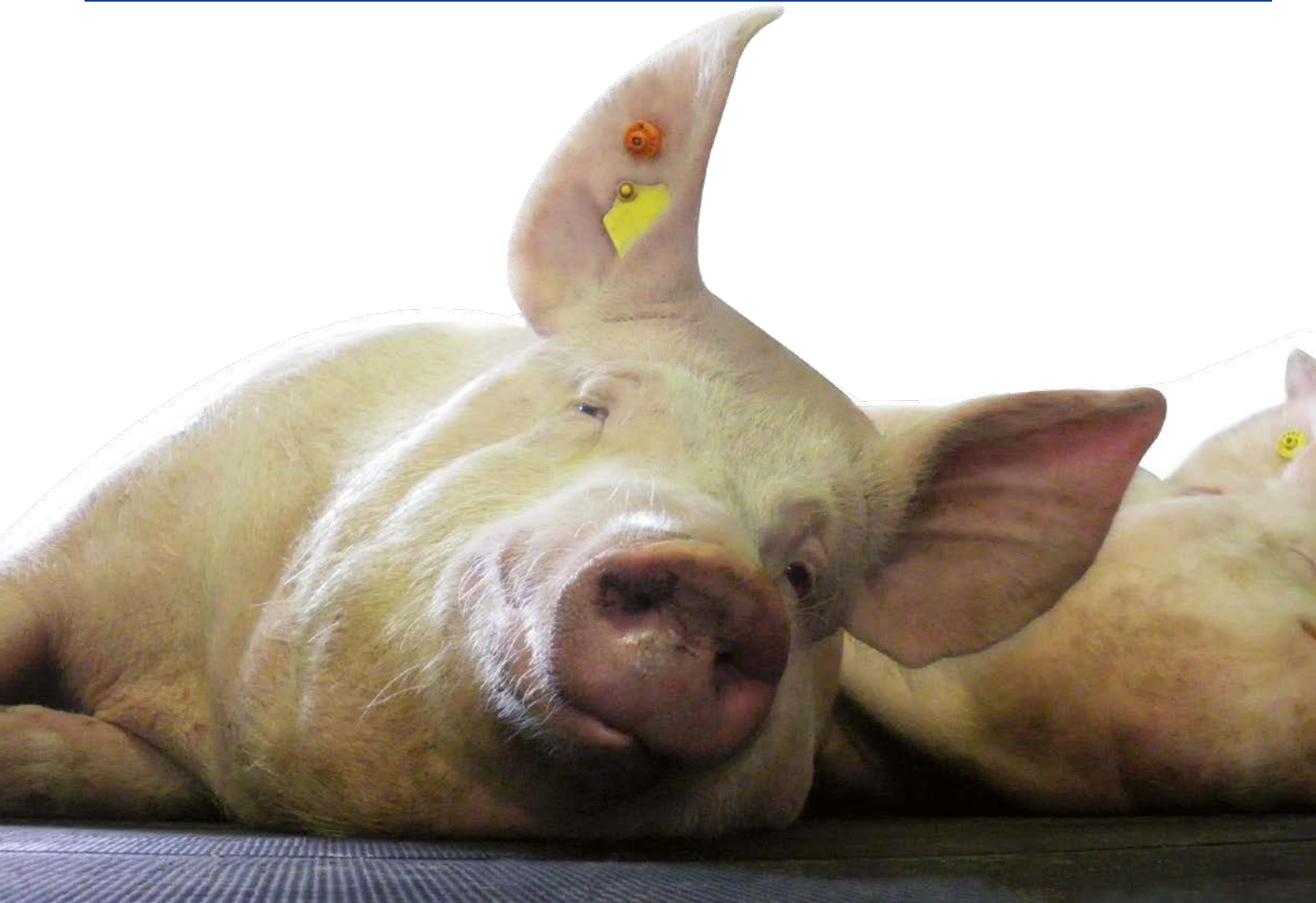
paved/concrete floor

**PORCA relax**  
U / F ▶ 4



slatted floor

**PORCA relax S** ▶ 6



## Our Experience is Your Gain

### KRAIBURG group

KRAIBURG has established itself as a competent specialist in the rubber business. The KRAIBURG Holding GmbH & Co. KG has a staff of more than 1,800 employees worldwide, concentrated in Germany, Austria and Switzerland. It holds branches in further European countries, as well as in Asia and North America.



### High quality rubber

Rubber mats are subjected to extremely high stress in agriculture, especially in pig keeping. For over 40 years now we have been manufacturing high quality rubber mixtures through a highly specialized process. Especially for pig keeping we use an innovative, bite-optimized rubber mixture in the surface of our mats.



### KRAIBURG housing floor covers

Since 1968 we have been active in developing and manufacturing rubber floor mats for animal housing at our site in Tittmoning, Germany. Currently 180 employees concentrate only on this.

### Tested quality

Our goal is more than only to fulfil the standard legal requirements. We went a step further by additionally being certified with the worldwide ISO 9001 standard. We have our own laboratory and there we continuously test the characteristics of our products.



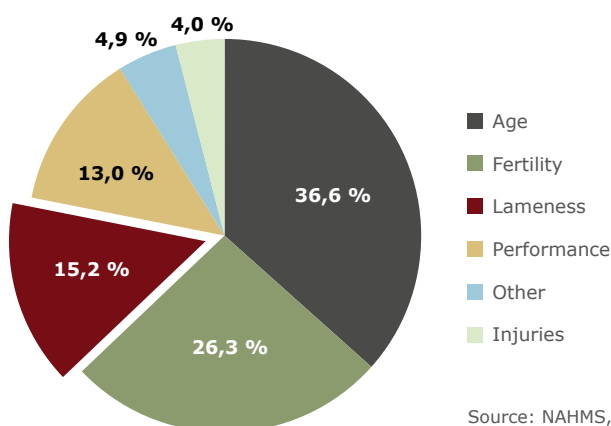
Have you got any questions?  
We look forward to hearing from you!



You can call us at: +49/8683/701-303  
(We speak English, German, Russian)

## Why rubber mats in sow houses?

### Causes for culling sows



### Financial losses from lameness

- *increased replacement costs*
- *fewer piglets*
- *higher crushing losses*
- *etc.*

**40 EUR per sow in the herd and year**

Source: Grandjot, 2008

**diseases are often more expensive than estimated at first**

**lameness is the third most frequent culling reason and affects fertility and performance negatively**

**Rubber mats in the lying area contribute to sow well-being and health and are decisive in the economic efficiency of sow keeping.**

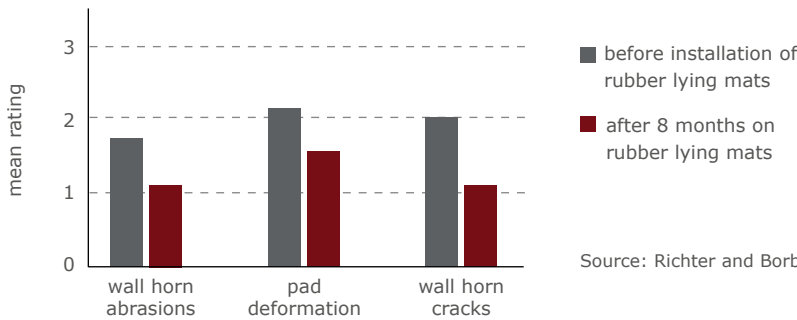
## Group housing

Extremity problems like claw and limb diseases, as well as lameness, are increasingly among the reasons for culling sows in group housing. For group housing to function with high performance animals, sow agility and freedom of movement, together with joint and claw health, are the paramount factors. Conventional concrete floors are too hard and abrasive, especially in the lying area.

### Consequences:

- lying down and getting up on hard floors takes effort and negatively affects lying behaviour
- joint swelling
- joint and wall horn abrasion during lying
- mechanical weakening of the claw
- injuries are entryways for pathogens, on the joints as well as the coronal edge (paronchia)
- severe lameness to some extent

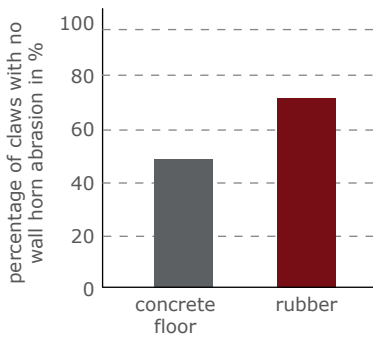
## Claw health – concrete and rubber in comparison



Source: Richter and Borberg, 2012



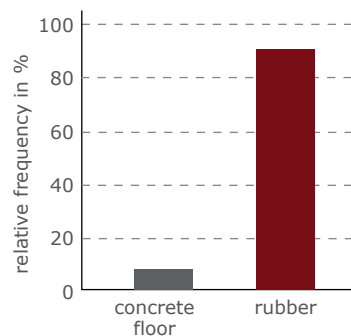
abrasions on joints and claw wall



Source: Jais, 2013

significant improvement in extremity health on rubber

## Preference behaviour – concrete and rubber in comparison

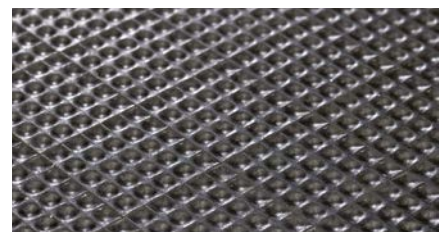


Source: Baumann, 2013

sows prefer lying on rubber

## PORCA relax ▶ the rubber mat for the lying area of sows

- comfortable lying
  - ▶ the sows like to lie down on the mats
  - ▶ helps to structure the pen
- significantly reduces claw and joint injuries, therefore
  - ▶ less lameness
  - ▶ improved agility for the unrestricted fulfilment of basic needs in loose housing
- high durability through an innovative bite-optimized Protect-surface from a special rubber mixture
- available as:
  - ▶ **PORCA relax U/F:** for paved lying areas with a slope
  - ▶ **PORCA relax S:** for lying cubicles on slatted floors or paved lying areas with no slope



bite-optimized Protect-surface

## PORCA relax U/F ▶ for paved lying areas with a slope



bite-optimized Protect-surface and rigid edge



smooth lower side

- framed rigid edge
  - ▶ integrated ridge protection
  - ▶ optimal positional stability
  - ▶ easy installation

### Dimensions:

<b>thickness:</b>	<b>width:</b>	<b>length:</b>
2 cm	120 cm	200 cm

**Installation:** generally 6 fastenings per mat  
+ additional 3 fastenings per linear meter of exposed edge\*



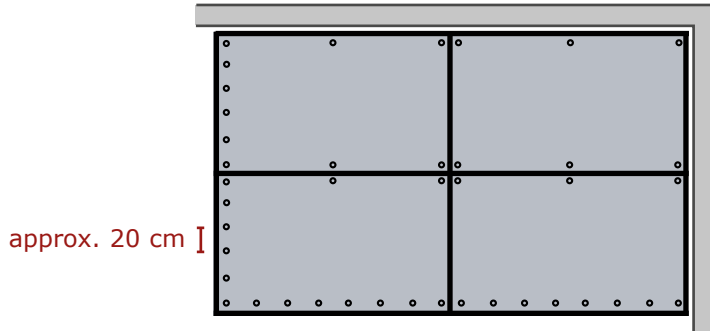
**KRAIBURG fastening system for paved/concrete floors:**  
rounded off and flush countersunk

**a) PORCA relax U (universal)**

- standard dimensions for laying out on all different kinds of areas
- some mats might have to be cut to fit at the edges of the area (please note: the cut edges should be laid by the wall)



**Installation example:**



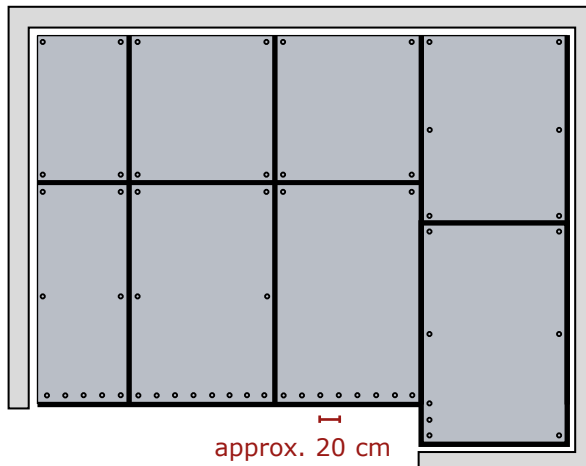
**b) PORCA relax F (form)**

**Fits perfectly!**

- tailor-made projected solutions for areas with one or more connected rectangular areas
- we will custom make the mats for you and include simple directions for installation
  - easy installation – practically no cutting – no waste



**Installation example:**



\* Please take notice of the corresponding KRAIBURG installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at [www.kraiburg-elastik.com](http://www.kraiburg-elastik.com).

**PORCA relax S** ▶ for lying cubicles on slatted floors

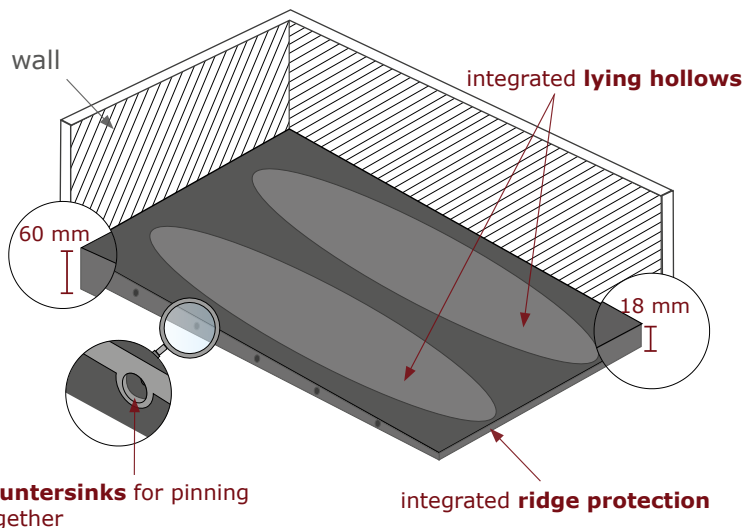
**NEW**



- diagonally gridded base-frame ideally covers slatted floors
- comfortable lying with a soft air cushion base frame
- various slope zones with up to 3.5 % slope for better cleanness
- integrated lying hollows for comfortable lying
- prerequisite: there are walls on three sides of mat row
- also possible on paved floors



**gridded base-frame**



**KRAIBURG connection pins:**  
for simple attaching/pushing together



**KRAIBURG fastening system for slatted floors:**  
special slat anchor for fast and secure installation and detaching (slit width: 15 - 17 mm or 18 - 21 mm)

### Dimensions:

<b>thickness:</b>	<b>width:</b>	<b>length:</b>
18 mm – 60 mm	110 cm	185 cm

**Installation:** standardly the mats are connected on the long side with 5 connection pins, fasten mat on the open edge with about 5 slat anchors / mat\*

\* Please take notice of the corresponding KRAIBURG installation instructions with useful advice and tips. You will obtain these at your local KRAIBURG dealer or at [www.kraiburg-elastik.com](http://www.kraiburg-elastik.com).

„My animals had massive claw problems. A substantial number of animals were more or less lame. In June 2010, first I installed one row of **PORCA relax in my dynamically occupied gestation house**. After I saw that the **sows really liked the mats** and that their **extremity health improved enormously in a short period of time**, I installed a second row of **PORCA relax**. Now all sows have room on the mats. **There is virtually no more severe lameness**. I was really impressed by how **simply and fast the mats could be installed**. Due to their insulating properties **the animal house requires considerably less heat in winter**.



Contrary to my expectations, the sows readily used **the lying area in midsummer and kept it clean.**”

*W. Daiber, Uhingen, Germany*

“Contrary to our expectations, the KRAIBURG **PORCA relax mats** with a bite-optimized protect surface, installed **in our gestation house more than three years ago**, are still **completely intact**. In preliminary tests customary rubber mats quickly showed bite marks and were destroyed by our sows within a short period of time.”

*Ch. Meyer,  
LVZ Futterkamp, Germany*



Landwirtschafts-  
kammer  
Schleswig-Holstein



“In my new gestation house constructed in 2012 with responder feeding, **about half of my lying cubicles were equipped with PORCA relax S mats**. First, I was very skeptical, but now I am convinced: **my sows feel “bloody good”, they clearly prefer the rubber mats**. These lying areas are always occupied first. **The PORCA relax S really remains very clean, because of the integrated slope – even in summer.**”

*Johannes Ertl, Fraunberg, Germany*



„The PORCA relax mats in the gestation house with their novel Protect-surface installed 4 years ago still don't show any bite marks.

Rubber mats for cattle housing used in previous tests were not durable enough and the sows bit them to pieces within a short period of time. The sows visibly lie down in a relaxed manner. Comfortable lying can be expected.“

R. Schulte-Sutrum,  
LWK NRW Haus Düsse, Germany



“Our tests in the gestation house till now show that sows **prefer rubber mats**, in comparison to concrete, and have **improved claw health** in the sections with mats!“

Dr. W. Pflanz,  
LSZ Boxberg,  
Germany



## Installation – easy and fast

The guidelines to correct installation can be found in the installation instructions!  
You will obtain these at your local KRAIBURG dealer or at [www.kraiburg-elastik.com](http://www.kraiburg-elastik.com).

## KRAIBURG manufacturer guarantee

PORCA relax: 2 years

More detailed information is available on request.

## Tolerances

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

The tolerances also apply within the mat.

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.



Questions? - We look forward to hearing from you!  
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(We speak English, German, Russian)

## Your KRAIBURG dealer:

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