

## K 24

Cutter knife system



# Maximum simplicity

Innovative production technology makes it possible



■ Profile sleeve



■ Balancing filling piece

During the cutting process, high loads act on the cutting system. Centrifugal forces occur due to the rotation of the knives. In addition, the feed of the cutter bowl and the resistance of the chopped product exert strong lateral forces on the knives.

Each time the knives enter the mass and leave the bowl, they are subjected to enormous alternating loads. Depending on the speed of the knives, several thousand times per minute.

In addition, galvanic currents occur which, in conjunction with chemical reactions caused by salt, spices and meat juice, can lead to corrosion at the clamping points of the cutter knives.



## ■ Profile sleeve

For the purpose of simplicity and safety, the K24 cutter knife system completely dispenses with moving parts such as bolts or screws. Instead, an innovative profile sleeve is used.

## ■ High flexibility

The profile sleeve allows the knives to be installed in 24 different positions (15° offset). This allows many different knife configurations. Depending on the operational requirements, the K24 cutter knife system can always be operated with the optimum knife grouping.

## ■ Reduction of operating costs

Due to the high lateral forces during the cutting process, the clamping rings of every knife system wear out. With the K24 cutter knife system, the simple spacer rings can be replaced at low cost when worn.

# Standardized production

Sophisticated marking system and easy handling



■ Installation of the knives in pairs



■ The right knife configuration for every requirement

**In food production, high and consistent quality is required.**

**The K24 cutter knife system can be used on any bowl cutter types. This means that the same production conditions are available on every bowl cutter.**

## ■ Handling

The profile sleeve is pushed directly onto the knife shaft of the bowl cutter. It is made of high-quality steel and is nearly wear-free. Then the knives follow. Each knife is pushed individually onto the profile sleeve. A simple marking system ensures that each knife is in place where it belongs.

Knives 1 and 2 can be set as infeed level. This ensures optimal material intake, both for frozen and for particularly low viscosity media (e.g. liver sausage).

Two cutter knives each form one knife level. The centrifugal forces cancel each other out. This is one of the reasons why the K24 cutter knife system is so quiet in operation.

## ■ Balancing

The K24 cutter knives are dynamically balanced on the knife shaft. Precisely calculated balancing elements guarantee maximum running smoothness of the cutting system. Re-balancing, for example after grinding, is not necessary.

## ■ High level of safety

The tothing of the profile sleeve prevents the knives from tilting or unintentional loosening during assembly. This minimizes the risk of injury when handling the cutting system.

The installation time for an 8-knife set is less than 5 minutes (500–750l. cutter).



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#### ■ K24 Boiled sausage knife

The cutting process in boiled sausage production takes place at up to 580 km/h (160m/s). Extremely fast bowl cutters reach up to 650 km/h (180 m/s). At these speeds, the knives must chop, emulsify and mix the raw material.

- The K24 boiled sausage knife has very balanced cutting properties.
- The pulling cutting part ensures high emulsification, best mixing properties and high breakage resistance.
- The stretched cutting part ensures a high degree of fineness and very good opening of the meat protein.

#### ■ K24 Dry sausage knife

The dry sausage granulate is cut very gently at approx. 180 km/h (50 m/s). K24 dry sausage knives have a cutting geometry that meets the highest demands in dry sausage production.

- No excessive protein opening, therefore best water release during maturing.
- The granulation is very uniform.
- Fat, lean meat and spices are mixed uniformly and quickly.
- The flat cutting profile ensures a very low kneading effect.
- The cutting time is very short.
- Thanks to the low friction, the K24 dry sausage knives work very cold.

#### ■ K24 Ultrafine knife

The K24 ultrafine knife is used to produce sausage meat of highest fineness.

- The completely stretched shape of the K24 ultrafine knife offers the fastest possible chopping.
- This enables an extremely high degree of fineness.
- The meat protein is opened maximally.

# Maximum safety

Optimally matched components



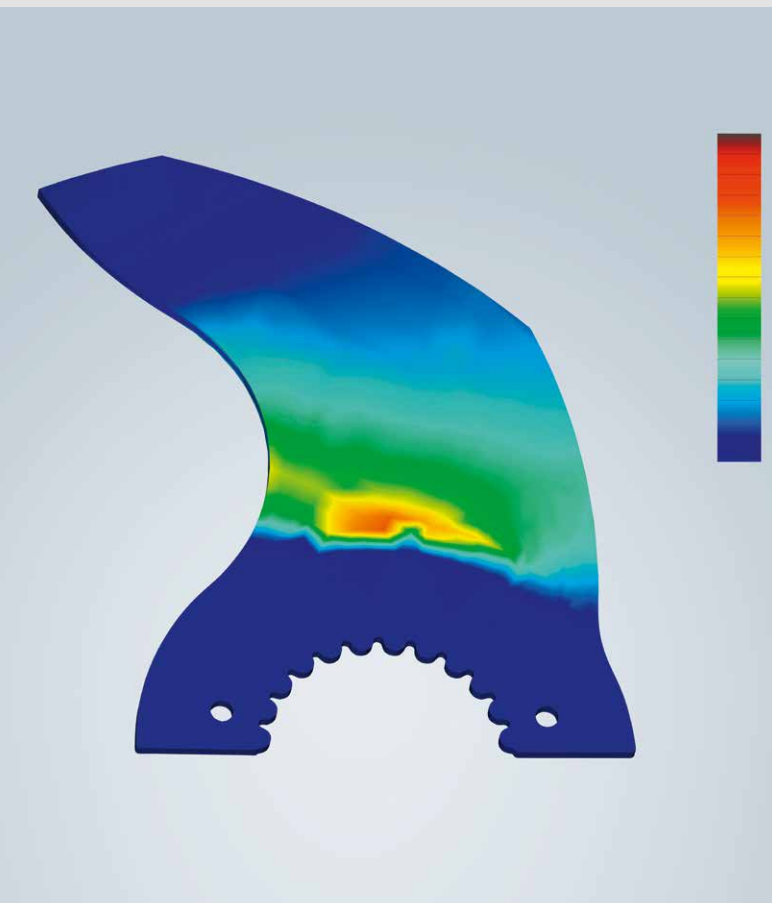
■ Hydromechanical clamping nut HSM



■ Hydraulic connection

The complete cutting system, consisting of knives, clamping and balancing elements, comes from one source.

The individual components of the system are produced with state-of-the-art manufacturing processes and perfectly matched to each other. This is the reason why the K24 cutting system runs so smoothly.



## ■ Significantly increased breakage resistance

Simple spacer rings are used between the knife pairs. Since they no longer have any holding function, they can be made completely out of soft materials such as synthetics or light metal. They effectively dampen the vibrations of the cutter knives. Abrupt loads are reduced, and breakage resistance is significantly increased. In addition, there is no longer steel on steel at the clamping points of the knives. Contact corrosion is thus minimized.

## ■ Hydromechanical clamping nut HSM

The hydromechanical clamping nut does not require any clamping wrench. With a small hydraulic hand pump the cutter knives are clamped quickly, easily and reliably with approx. 90 kN (9 tons).

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Clamping with hydraulic pump



Manometer

**KNECHT clamping nuts compensate for linear expansions of the cutting system caused by temperature changes, e.g. in cooking cutters. Bending of clamping elements due to excessive clamping force is therefore impossible. This increases the breakage resistance of the cutter knives. No matter in which operating condition, the knives are always clamped with the same force.**

**There is no friction between the clamping nut and the last ring of the clamping system and thus no wear and tear.**

As at 2022.04 | Subject to technical modifications