



*For the flexible production of shaped products and preconditioning for subsequent pelleting*

**CROWN EXPANDER OEK**

- ▶ Two in one: expanding and pelleting
- ▶ Significant improvement of the flexibility of expansion (SME control with hydraulically adjustable cone)
- ▶ Coarse particles remain coarse, contrary to traditional pelleting
- ▶ Existing expanders can be modified to crown expanders
- ▶ Low energy consumption
- ▶ High throughputs
- ▶ Different product diameters
- ▶ Production of pellets for all animal species

**THE CROWN EXPANDER TECHNOLOGY IMPROVES THE PRODUCT QUALITY AND THE EFFICIENCY OF COMPOUND FEED PRODUCTION**

The expander technology is one of the best and most comprehensive conditioning methods for compound feed and individual components.

**PROCESS TECHNOLOGY OF THE CROWN EXPANDER**

The crown expander consists of a thick-walled mixing tube with replaceable liners and cantilevered shaft which is provided with proportioning, mixing and kneading elements.

During operation, pressure, intensity of kneading, product heating and energy intake can be controlled and programmed continuously without delay. The typical pressure is about 40 bar; the operating temperatures at the expander outlet are between 90 and 140°C. At the outlet, the pressure drops spontaneously, the product expands, and a part of the added water evaporates (flash evaporation). Post-drying is often not required. The size of the expanded product can be determined with knife/die.



# KAHL CROWN EXPANDER

## EFFECTS ON SUBSEQUENT PELLETING

Expanded mixtures increase the press capacity. Pellet hardness and fines can be influenced by changing the parameters.

## STARCH MODIFICATION

The treatment of grain components under pressure at a high temperature and moisture content modifies starch.

## HYGIENIC TREATMENT

Pathogenic germs, such as salmonellae or moulds, are eliminated by the treatment in the crown expander.

## ADDITION OF LARGE QUANTITIES OF LIQUIDS

Liquids, such as fat, molasses and vinasse, can be added in larger quantities prior to the crown expander.

## ADVANTAGES

- *Expanding and shaping in one step*
- *Use of components which are difficult to process*
- *Addition of large quantities of liquids*
- *Inactivation of harmful substances*
- *Elimination of salmonellae*
- *Improvement of the feed value*
- *Reduction of the production costs*

