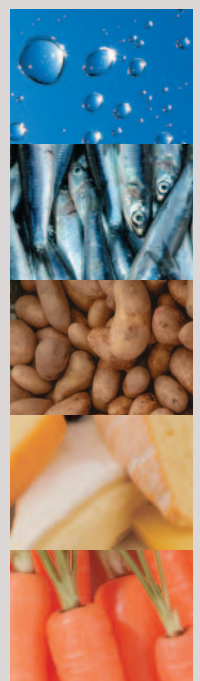


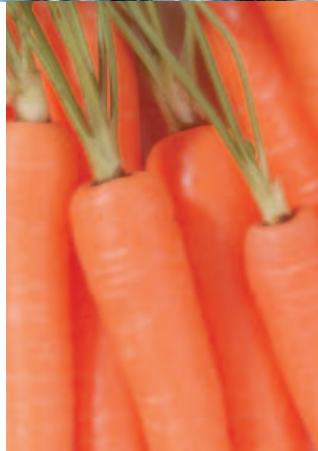


Nr.1 der Technik
Simply the best
from Germany

**Breaking, cutting,
mixing and
emulsifying for the
food stuff industry**



Machinery for processes in the food industry



Cutter Breaker Grinder Mixer Emulsifier

Machinery for breaking, cutting, mixing and emulsifying processes in the food industry

The manifold use of emulsifiers, bowl cutters, mincers, mixers and breakers in the meat processing industry is world wide well known. However, the cutting, mixing and emulsifying possibilities offered by these machines, are very useful in other food processing industries as well. Thus, with the help of its sales daughter KILIA Wertstoff-Technik, the ISO 9001 certified machine manufacturer KILIA Fleischerei-und-Spezial-Maschinen-Fabrik GmbH from Neumünster, Germany, does frequently sell its cutting and emulsifying machinery to food processors outside the meat industry.

Fish processing industry:

The gentle breaking of fish blocks into approx. double-fist sized pieces, using breakers or breaker-grinders (e.g. from the KILIA SP or TP series) commonly is the first step in fish processing, often followed by cutting and emulsifying in bowl cutters respectively vacuum bowl cutters. KILIA high capacity bowl cutters of model 5000 Express frequently are used for the production of fish spread, mousse, surimi or fishballs and crabstick. Bowl cutters with vacuum facility are preferred for those products, that should have an especially high density (e. g fish balls Chinese style). Producing basic Surimi by cutting different pieces of fish meat together with phosphate, can successfully be done in a bowl cutter already at low speed. However, for further processing under addition of ice / water and spices / additives, a high cutting speed is required.

The bowl cutter as "all-rounder": cutting, mixing and emulsifying



Cutting cheese, vegetables and other components for "pizza topping".

Ergonomically designed operation panel with key pad and joysticks

The round design corresponds to the highest hygiene standards.

An alternative way to produce Surimi can be the use of KILIA Vacuum-Mixer followed by a KILIA Emulsifier Fine CUT and a cooling tank. Such machine line can centrally be steered with a special software.

Dairy industry:

In the course of producing spreadable cheese (e.g. melting cheese or cold spread), mixers and automatic angle mincers (the latter as special cheese model) as well as bowl cutters respectively vacuum-cooking bowl cutters are used. The KILIA "Cheese-Mincer" is able to process half cheese wheels as well as full butter blocks of 25 kg each, which are gently pre-cut in the machine hopper with the help of a pre-cutting arm. The frequency controlled variable drive system allows to process a wide variety

of raw materials. The conveyor worm speed is steered from the main worm according to strain, which always leads to optimal filling and maximum capacity. The special, contact reduced cutting system allows an especially gentle cutting with at the same time long operational life for the cutting set. With the help of KILIA Vacuum-Cooking-Bowl Cutters it is possible, starting from slightly pre-cut raw material, to conduct the whole production process in a single machine, no matter, whether it is melting cheese or cold spread. For producing melting cheese, it is especially important, that the bowl cutter has good heating properties, both regarding the heating-up phase as well as the heat-keeping phase. Likewise it should show good cooling properties. Besides, to reach an optimal process, it is important, to pay attention to the selection of the correct

mixing without heating



The Fine CUT system offers best results for all kinds of emulsions, pastes and sauces.



The Mixer guarantees best results with the combined paddles and worm mixing system.



unloading disc. For the production of special melting cheese recipes, e.g. incl. pieces of salami or mushrooms, a bowl cutter with mixing speeds (especially with reverse running blades) should be selected. When producing cold spread, a product, that does not undergo any thermal treatment neither during nor after the bowl cutter process, hygienic questions are of utmost importance. Special attention should be paid to the fineness of machine surface polish as well as to the hygienic standard of sealing systems.

Ready-meal industry:

The market for frozen ready-meals has markedly increased over the last years. A wide variety of products is available, for which cutting and mixing technologies are frequently required. The process most commonly found, is the cutting of so

called "pizza topping", where cheese, vegetables and other components are cut into a doseable size and mixed, usually with the help of a bowl cutter. Another important segment is the so-called "office-food", which can easily be transported and made ready for consumption. Examples are salads of all kind, for which gentle mixers are required, that quickly reach a homogenous result. Fresh pasta with ready made sauces or finger food with ready made dips are more modern examples, for which the KILIA emulsifiers from model Fine CUT frequently are used.

Candy industry:

Automatic angle mincers as well as bowl cutters are widely used in the production of different sweets. Broken chocolate, can for example, be easily minced and then

cutting, mixing grinding and emulsifying



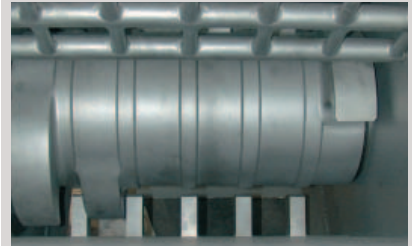
efficient work flow



gentle breaking and mincing systems



Combination of the Frozen Meat Breaker SP150 and the Automatic Angle Mincer WAW300: breaking, mixing and mincing gentle production



The breaker cylinder breaks the frozen components into fist sized pieces.



used for the production of chocolate chip cookies. Another good example is the production of high quality marzipan, which can in a time saving way be processed in Vacuum-Cooking Bowl Cutters. Some cake manufacturers do use the mincer "cheese models", which are not only strong but gentle as well, for better portioning the standard 25 kg (30x30x30 cm) butter blocks.

Baby food:

All kind of different baby food meals are frequently produced in bowl cutters, respectively vacuum-cooking bowl cutters. When doing so, the otherwise typical unloading disk, is often replaced by a pump system for unloading. Alternatively, an KILIA Emulsifier Fine CUT can be used, especially in cases, where a product has to be produced, that does not require a composition of different textures.

Fruit juice concentrate:

For breaking down deep frozen blocks of fruit juice concentrate, KILIA breakers from series SP are often used, as they guarantee a gentle processing with hardly any temperature increase and have an exceptionally low noise emission.

Delicatessen:

All kinds of creamy or pasty delicatessen, like jam, compotes, sauces, condiment pastes, etc. can quickly be produced in large amounts in the KILIA emulsifiers from series Fine CUT. Due to the specially designed, contact-free cutting set with very small cutting slots (down to 0.3 mm), especially fine products are the result.



Industrial Vacuum Bowl Cutter 5000 Express

Bowl capacity Ltr.	200	250	325	500	750
Knife shaft speeds					
cutting (rpm)	1900/3800	1800/3600	1700/3400	1400/2800	1200/2400
mixing (rpm)	50/100	50/100	50/100	50/100	50/100
Machine weight ca. kg	3600	4600	4700	6700	8700
Knife shaft drive capacity kW	60	75	90	160	200

Frozen Meat Breaker

	SP 50	SP 100	SP 150
Filling quantity ca. kg	30	30	30
Max. capacity ca. kg/h	4000*	8000*	12000*
Machine weight ca. kg	2500	2600	2700
kW	18,5	22	30

* with conveyor belt

Industrial Automatic Angle Mincer 2000S

Type	G160	U200	W300
Hopper volume ca. Ltr.	400	400	600
Machine weight ca. kg	1700	2050	2300
Hole plates Ø in mm	160	200	300
Max. capacity ca. kg/h	4500	9000	15000
Main worm drive capacity kW	28/35	40/50	110

Mixer

	500	1000	1500	2000
Hopper volumen ca. Ltr.	500	1000	1500	2000
Mixing Capacity ca. kg	300	600	900	1200
Machine weight ca. kg	4000	4300	4600	4900
Drive capacity mixing system kW	9	9	9	11

Emulsifier Fine CUT

	1000	2000	4000	6000
Capacity kg/h	1.000	2.000	4.000	6.000
Cutting head speed (rpm)	3.000	3.000	up to 6.000	up to 6.000
Capacity drive system kW	18,5	30	90	110