Flaking Mill.

OLFB.
State-of-the-art technology.
The flaking mill for all kinds of oilseeds.

Various applications
This modern and sturdy flaking mill is designed for the flaking of cracked soybeans and soft seeds such as sunflower kernels, rapeseed and corn (maize) germ. Other seeds and a wide range of different raw materials can also be processed.

Mode of operation
The raw material is homogenized in the integrated mixer and – with the assistance of a variable-frequency drive (VFD) controlled feed roll – equally distributed into the roll nip. Large size rolls (diameter 800 mm) guarantee an optimal product intake. Ideal flake thickness is achieved by hydraulic cylinders operating with up to max. 180 bar pressure and powered by the integrated hydraulic system. An optional central hydraulic set-up is available for use with multiple flakers. Easily accessible from the outside, the roll gap – and consequently the flake thickness – can be adjusted manually during operation.

Innovative design
Maximum throughput and optimal flake quality with minimized space and power consumption requirements are not the only innovative characteristics of the OLFB. A sophisticated damping concept ensures low vibrations and perfectly quiet running. The premium grade rolls using newly designed roll end seals, with “zero cracks” leakage, eliminate leftover oil in the extraction meal.

Integrated seed processing
The flaking mill OLFB can be operated in a stand-alone mode or it can be part of an integrated solution. Best seed processing results are achieved with the following Bühler products or processes:
- Oilseed Cleaners
- Cracking Mills
- Conditioners
- Fluid Beds
- Dehulling (front end, hot, warm)

Customer benefits of the OLFB
- High throughputs with excellent flaking quality
- Flake thickness adjustable during operation
- Easy maintenance
- Space and energy reducing design
- Quiet, clean and safe operation
- Control unit (PLC) mounted on door
- Low energy consumption (kWh/t)
- Worldwide references
Excellent flaking quality and throughputs.
Maximized results – minimized operating costs.

High throughputs and convincing economic efficiency
The flaking mill OLFB has been designed for high capacities – 500 t/24 h for the larger version OLFB 821 and 380 t/24 h for the smaller OLFB 816*. Higher capacities are possible depending on product characteristics and process settings.

A single overhead drive (132, 110 or 90 kW) allows a flexible and space saving design requiring only 8.5 m² plant space (OLFB 821) – 25 % less than conventional flaking mills. The friction-optimized main and serpentine drive system reduces power consumption and therefore is economically and environmentally friendly.

In addition, this drive system (including the drive differential) ensures excellent flaking quality due to optimal flake shear forces:
- Main motor: 980 rpm at 50 Hz
- Peripheral speed: 8.7 to 11 m/s
- Roll differentials: 0 %, 3 %, 5 %, 8 %

Intelligent feeder solution
A proven and patented mixing and feeding system (made of stainless steel) leads to an uniform and efficient product distribution over the full length of the roll nip.
A frequency converter ensures optimal feeding speed.

Excellent flaking quality & low operating costs
Manual and hydraulic adjustment of flake thickness can be performed without shutting down the flaking mill. This results in excellent flake thickness as well as increased plant uptime for better production capacity utilization and hence lower operating costs.

PLC control unit mounted on door
A convenient and easy-to-operate control panel is installed on the flaker’s door. Easy viewing of hydraulic pressures, motor amps, percentage of full load amps, operating hours and alarms along with local control of motor starting / stopping and roll engagement is readily available. Connection to the plant’s control room via Profibus is standard.

Technical Data

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimensions in mm</th>
<th>Roll dimensions</th>
<th>Motor kW</th>
<th>Footprint</th>
<th>Aspiration air</th>
<th>approx. weights in kg</th>
<th>Volume by m³</th>
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<td>Length Width Height</td>
<td>Diameter Length Roll pressure Main drive Feeding Feeding Mixing drive drive drive in mm in mm in kN in m² in m³/min in m³/min</td>
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<td>8.5</td>
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</tbody>
</table>

* Throughputs for Soybean, 0.32 mm flake thickness
** Throughputs may vary depending on product characteristics and process settings
Easy maintenance.  
Fast access to all major parts saves you time.

**Quick access to ensure high productivity**  
Large hinged swinging doors allow quick access to every important part of the machine. So cleaning or adjusting of mixer, feeder, magnet, product guide plate and scraper knives is easily accomplished. In addition the high-quality roll bearings and the integrated hydraulic unit reduce maintenance time.

**Roll quality and maintenance**  
Rolls are the centerpiece of a flaking mill. Bühler will support you in choosing the highest quality roll type for your application – from softer but tougher rolls up to harder and longer-lived rolls. Bühler also offers tools to help you reach the maximum lifespan of your valuable flaking rolls; permanent magnets protect the rolls from metal objects, pneumatically operated scraper knives keep the rolls clean and an optional automatic roll grinding machine maintains roll surface quality.

**Accessories and options**  
- Roll-grinding machine  
- Roll removal device  
- Power cabinet  
- Connection to central hydraulic unit

**Global service**  
Reliable replacement of wear parts is key to ensuring that the flaking mill runs at maximum performance. Thanks to Bühler's worldwide service network, spare parts and service engineers are always available quickly when you need them – anywhere in the world.
High performance flaking mill OLFB.  
Three convincing arguments for efficient oil mills.

The high performance flaking mill OLFB incorporates latest state-of-the-art technology and an innovative design that results in several unique characteristics:

- A single overhead drive results in efficient space usage and power consumption.
- Integrated mixer, feeder and hydraulic unit as well as a door mounted control unit contribute to a compact design.
- Manual adjustment of the roll gap is possible during operation and ensures optimal flake thickness at all times – a true extra-value for your operations.

Due to this innovative design, a maximized throughput with an excellent flaking quality can be reached with minimized space and power consumption.

**OLFB 821**
- Roll length: 2,100 mm
- Roll diameter: 800 mm
- Space requirement: 8.5 m²
- Capacity*: more than 500 t / 24 h

**OLFB 816**
- Roll length: 1,600 mm
- Roll diameter: 800 mm
- Space requirement: 7.4 m²
- Capacity*: more than 380 t / 24 h

**General specifications**
- Roll hardness: 400 to 610 HV available
- Noise level: approx. 84 dB(A)

*depends on oilseed type, flake thickness and temperature