The production and handling of dough requires not only the know-how and sure touch of an experienced baker, but also machines with intelligent functions.

For best results, your processes must be better from the very beginning. König assists its customers in three different ways to reach this target:

- We offer a wide range of equipment for the production of dough, baking and cooling, including everything from kneaders to ovens and vacuum chambers. König customer thus benefit from advanced solutions from start to finish!
- The kneaders and bowl hoists ensure the ideal start of the production process, as mistakes made in the dough mixing and kneading cannot be rectified at a later stage.
- With our spiral and double twist kneaders, we offer two distinct systems that meet all requirements of our customers.

We know that earning your trust is hard work. This also applies to the sales of machines, plants and ovens. We therefore offer you the opportunity to test our products before purchasing them. Simply visit one of our two test and demonstration centres in Graz and Dinkelsbühl to find out for yourself what we can offer you!

If you should need assistance with your König equipment, simply contact our spare parts and after-sales department. We are available twenty-four hours a day everywhere in the world.
THE KÖNIG MULTI-TALENT: ONE FOR ALL.

THE SPIRAL KNEADING MACHINE

Key features of all König kneaders

- Removable dough bowl.
- Optimised tool shape and geometry adjusted to suit dough bowl.
- Excellent dough stretching and shear performance ratio, ensuring optimum gluten development.
- Two spiral and bowl speeds as standard.
- Kneader head hydraulically movable in vertical direction.
- Two spiral and bowl speeds as standard.
- Bowls speed at 50 hertz:
  - 1st speed (mixing): 12.2 rpm, 10.2 rpm, 11.2 rpm, 8.2 rpm
  - 2nd speed (kneading): 162.3 rpm, 135.3 rpm, 236.4 rpm, 229.3 rpm
- Optional tool shape and geometry adjusted to suit dough bowl.
- Removable dough bowl.
- Bowl cleaning.
- Bowl wall cleaning.
- Minimum maintenance: the gear and hydraulic oil must only be changed every 20,000 operating hours.

Additional features of twin twist kneaders:

- Scraper for continuous shearing.
- Optimised tool geometry for working the dough, more air and oxygen are mixed in.
- Washing the dough, more air and oxygen are mixed in.
- Fully movable dough bowl.
- Minimum maintenance: the gear and hydraulic oil must only be changed every 20,000 operating hours.
- Double output for excellent quality.

KÖNIG TWIN TWIST KNEADERS.

Two tools with specially adapted profiles that are at an optimum working angle to each other enhance the mechanical energy input and thus reduce the kneading time. As, in the process, ample air is worked into the dough, the machine is particularly suitable for the preparation of wheat and pastry doughs.

The perfected geometry caters for intensive kneading in the inlet zone, while the bowl is reduced in the outlet zone of the kneading tools. This ensures properly kneaded, fluffy and light doughs, even when processing rye and rye mixture doughs from TA 180 (% water : flour weight).

The greater distances along the tool, the less the tool will contact the dough in the peripheral zones of the kneading process. This ensures an equal pressure distribution and perfect kneading results.

Temperatures between 29 and 34 °C are achieved at the dough bowl surface, which is considerably lower than the temperature of the dough. This is controlled cooling of the kneading process.

The inner filled oil tank provides additional kneading energy, ensuring optimum gluten development.

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The inner filled oil tank provides additional kneading energy, ensuring optimum gluten development.

The name of our bowl lift is derived from the Greek god Heracles, who stands for superhuman strength. The Herkules hoist can lift weights of up to 1,000 kg.

The large tilting angle ensures that the bowl can be completely emptied. Available in right- and left-hand models. Available in four models: stationa-

Options for König kneaders

- Temperature sensor in the scraper.
- Programmable control system with Siemens TP 177 touch panel.
- Automatic timer for start time.
- Interface for ingredient control or batch tracing data.
- Double output for excellent quality.
- KÖNIG TWIN TWIST KNEADERS.

Temperature-controlled kneader bowl (wall and base) in double-wall design.

Connections for dry and liquid ingredients (dosing systems).

Multi-speed design for kneader bowls and tool, suitable for special products (twin twist kneaders).

Automatic timer for night start.

Freely programmable control system with Siemens TP 177 touch panel.

Measuring devices and mixer control.

Optical measurement.

Inlet and outlet temperatures.

Diameter at bowl top edge (D) 878 mm, 900 mm, 880 mm, 1,000 mm

Inside bowl diameter 840 mm, 960 mm, 740 mm, 940 mm

Bowl capacity 225 litres, 360 litres, 190 litres, 370 litres

Dough capacity max. approx. 160 kg, max. approx. 240 kg, max. approx. 125 kg, max. approx. 240 kg

Flour capacity max. approx. 100 kg, max. approx. 150 kg, max. approx. 75 kg, max. approx. 150 kg

Technical data

<table>
<thead>
<tr>
<th>Model</th>
<th>SP 160</th>
<th>SP 240</th>
<th>SP 310</th>
<th>SP 400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>HK</td>
<td>HK</td>
<td>HK</td>
<td>HK</td>
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<tr>
<td>Weight incl. bowl max.</td>
<td>1,490 kg</td>
<td>1,810 kg</td>
<td>1,825 kg</td>
<td>2,060 kg</td>
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<tr>
<td>Dimensions</td>
<td>2,349 mm</td>
<td>2,068 mm</td>
<td>1,983 mm</td>
<td>1,953 mm</td>
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<tr>
<td>Power</td>
<td>14 kW, 17 kW, 18 kW, 26 kW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st speed (mixing)</td>
<td>82.6 rpm, 68.1 rpm, 119 rpm, 114.3 rpm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd speed (kneading)</td>
<td>162.3 rpm, 135.3 rpm, 236.4 rpm, 229.3 rpm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bowl cap.</td>
<td>225 litres, 360 litres, 190 litres, 370 litres</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Dough cap. max.</td>
<td>160 kg, 240 kg, 125 kg, 240 kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flour cap. max.</td>
<td>100 kg, 150 kg, 75 kg, 150 kg</td>
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</tbody>
</table>

The large tilting angle ensures that the bowl can be completely emptied. Available in right- and left-hand models. Available in four models: stationa-

Optional features for bowl hoists

- Stainless steel base.
- Tilting at various preset heights.
- Scraper device.
- Scarping device mounted on kneader bowl receptacle.

Connections for dry and liquid ingredients (dosing systems).

Temperature-controlled kneader bowl (wall and base) in double-wall design.

Options for König kneaders

- Temperature sensor in the scraper.
- Programmable control system with Siemens TP 177 touch panel.
- Automatic timer for start time.
- Interface for ingredient control or batch tracing data.
- Automatic timer for night start.
- Freely programmable control system with Siemens TP 177 touch panel.
- Measuring devices and mixer control.
- Optical measurement.
- Inlet and outlet temperatures.

Large tilting angle ensures that the kneader bowl can be completely emptied. The scraper is particularly useful for the removal of dough and sticky ends of dough products.

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