

## Data Sheet

### PLANETRON® HKV 1600



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IKA heavy-duty PLANETRON® HKV kneading machines are vertical kneading machines with two DUPLEX kneading blades. The design of the PLANETRON® kneading machine allows the kneading shafts to be supported on bearings and to be sealed outside the product container. This enables the production of absolutely pure compounds.

The excellent kneading and dispersion achieved with these kneading machines is based on the principle of intermeshing kneading blades, with one blade rotating in a planetary motion around the other and the two blades having a reciprocal stripping action. The strong increasing and decreasing pressure and shear forces thus created lead to thorough kneading and fine dispersion of the product within a very short timeframe. The kneading blades are supported overhung on stable roller bearings, positioned well above contact with the product. The machine is powered by a geared motor with a frequency converter allowing infinitely variable speed adjustment.

All bowls in the HKV series are designed for cooling / heating and for vacuum operation. The machine is entirely controlled from a switchboard panel installed near the machine.

The advantages compared with horizontally arranged kneading blades include low-maintenance seals on the kneading shafts, the option of processing minimum quantities and the possibility of using a number of kneading bowls.

#### Options:

- Kneading bowl with bottom discharge valve
- Interchangeable kneading bowls
- Vacuum emptying system (press discharge)
- Vacuum system
- Temperature control system
- Sensors for temperature measurement in the product and in the double jacket
- Wear-resistant coatings
- 3000 Series machine: additional drive for the central kneading blade for a variable speed ratio of approx. 1,2 to 10
- Ex-protected design in accordance with ATEX regulations
- Upstream and downstream systems, e.g. dosage, temperature control and filling systems

Advantages of vertical kneading machines at a glance:

#### Technical Data

Total volume	1600 l
Useful volume	800 l
Min. useful volume	160 l
Drive power	45 kW
Speed of central kneading blade	0.9 - 9 rpm
Speed of rotating kneading blade	4.2 - 42 rpm
Kneading bowl heatable/coolable	yes
Vacuum operation possible	yes
<b>Ident. No.</b>	<b>000HKV1600ST</b>

- Intensive kneading and dispersion of high viscosity products
- Shorter processing times with improved product quality
- No seals in contact with the product
- Minimum processing capacity of 10% of the total container volume
- Infinitely variable speed adjustment of the kneading blades via a frequency converter
- Automation possible in accordance with customer requirements
- Low-maintenance seals made from high quality materials
- Operation with a number of kneading bowls possible (available on request)

Applications for vertical kneading machines:

- Dental compounds (plastic or ceramic)
- Technical ceramics
- MIM (Metal Injection Molding)
- CIM (Ceramic Injection Molding)
- Pharmaceuticals and cosmetics
- Lubricants
- Color concentrates (printing inks)
- Battery compounds

Technical data of vertical kneading machines: