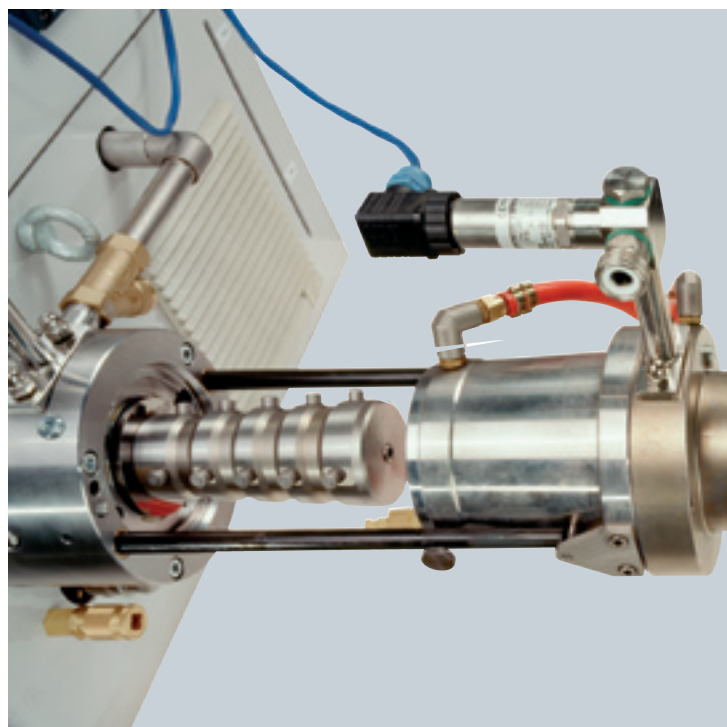


Laboratory bead mill K8.

Universal conical bead mill for laboratory and
research applications and small-scale production.



Proven technology on a small scale. Progress through experience.

K8 – the flexible and rugged bead mill for laboratories or small-scale production. The tried and trusted K Series enjoys an outstanding reputation in a wide variety of industries where wet grinding and dispersing processes are of central importance.

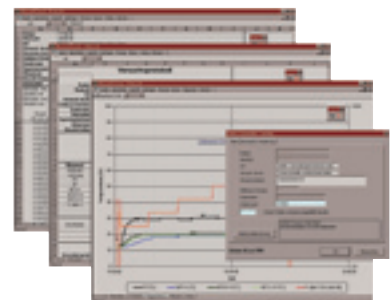
The steady increase in requirements for existing and new technologies has propelled the further development of the K8 and the entire K Series. Knowledge gained from intensive research and productive applications at the sites of our demanding customers has been continuously and systematically transformed into practical innovations and has been incorporated into the machine design.

The heart of the K8 is its conical slot agitator with the dynamic grinding gap relief feature and intensive stator and rotor cooling system. It allows the processing of products across a wide viscosity range and offers high flexibility in terms of grinding formulation quality. The processing zone and the separation slot of stainless steel and ceramic materials maximize life cycles while minimizing the maintenance requirements. Process data registration ensures perfect documentation.



The advantages of the K8.

- Short start-up time
- Compact desk-top design
- Reproducible results allowing scale-up
- Wide viscosity range
- Ceramic materials for processes free of contamination
- Low cross-contamination volume
- High grinding formulation flexibility
- Rugged and low-maintenance machine
- Self-cleaning grinding slot separator for grinding media with a diameter of 0.3 mm and larger



Powerful process data recording

Flexible – from development to small-scale production.



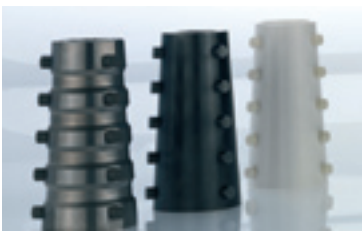
Visualized control:

- Very easy operation
- Adjustable process parameters:
 - Rotor rpm (continuously variable)
 - Conveying speed
 - Cooling water temperature
- Process variables measured:
 - Product pressure
 - Product temperature

- Agitator power
- Agitator torque
- Cooling water temperatures
- Frequency converter for agitator drive and product conveying
- Graphic overview of the process variables
- Serial data interfaces

Explosion-proofed design:

- For processing solvent-based, low-viscosity products
- For applications in zones with potentially explosive atmospheres by appropriate control and drive components
- ATEX II2G EEx c T3

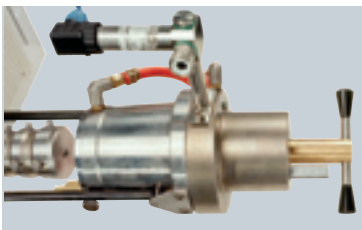


Engineering materials for the agitator:

- Steel
- Standard
 - Wear-optimized pin geometry

- SiC
- Processes free of contamination
 - Excellent cooling characteristics

- ZrO₂
- Processes free of contamination
 - Minimized product graying



Pressure unit (option):

- For manual variation of the grinding chamber volume and bead charge in the steel agitator
- Allows fine-tuning of the bead charge in the course of testing
- Can easily replace lid

- Displacement 0.32 dm³ with a stroke of 50 mm
- Scale for selecting the stroke/grinding chamber volume

Gear pump (option):

- Suitable for conveying medium- to high-viscosity products
- Conveying capacity up to approx. 30 l/h
- Easy dismantling for cleaning



Hose pump (option):

- Suitable for conveying low- and medium-viscosity products and products sensitive to shearing
- Ideal also in combination with ceramic grinding media and ceramic agitator, because of metal-free conveying element
- Conveying capacity up to approx. 30 l/h
- Easy dismantling for cleaning
- Solvent-resistant hoses (option)



Press-out unit (option):

- Suitable for conveying products of all viscosities
- For batches up to a volume of 6 liters
- Constant and pulsation-free product conveying
- Particularly suited to the conveying of shear- and temperature-sensitive products
- Dimensions: 252 mm wide × 313 mm deep × 511 mm high



Temperature control unit (option):

- For controlling the temperature of the cooling water
- Allows controlled inlet temperatures up to 80 °C
- Electric connection to the K8 through a rugged plug-in connection
- Selection of the target temperature directly through the operator terminal of the K8 control system
- Emptying function for servicing the machine
- Recommended application also in case of poor quality of water supplies
- Dimensions: 200 mm wide × 750 mm deep × 450 mm high



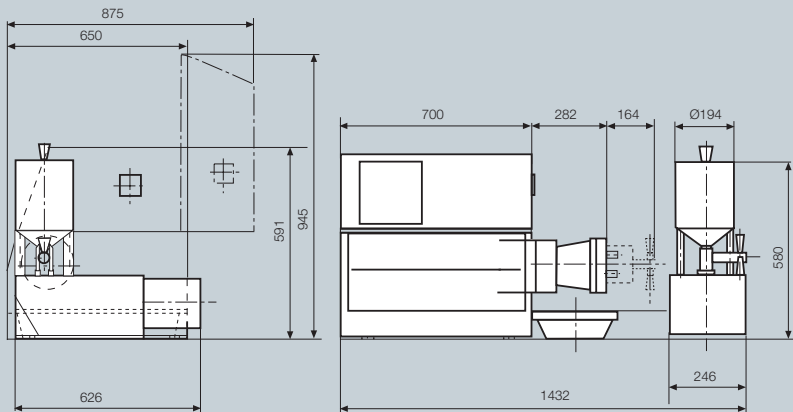
Technical data.

Possible applications

	Pasty printing inks	Liquid printing inks	Wet grinding	Materials for the electronics industry	Cosmetics
K8 basic machine	x	x	x	x	x
Gear pump	x	x	(x)	-	-
Hose pump	-	(x)	x	x	x
Press-out unit	x	(x)	-	(x)	x
Recommended grinding media type	Steel	Ceramics	Ceramics	Ceramics	Ceramics
Recommended grinding media size	1.6 – 2.5 mm	0.3 – 1 mm	0.3 – 1 mm	0.3 – 2.5 mm	0.5 – 2.5 mm
Slot separator	0.4 mm	0.1 mm 0.2 mm	0.1 mm 0.2 mm	0.1 mm 0.4 mm	0.1 mm 0.4 mm
Temp. control unit	x	recommended		x	x
Pressure unit		recommended		-	-
Process data registration		recommended			
Recommended agitator material	Steel	Steel	Steel SiC ZrO ₂	SiC ZrO ₂	SiC

Equipment concept

	● = Basic machine ○ = Accessory
Conical slot agitator with high power density	●
Parts in contact with the product of corrosion-resistant material	●
Fully ceramic slot agitator (SiC/ZrO ₂)	○
Rotor cooling system	●
Self-cleaning grinding slot separator	●
Separator rings can be used on both sides	●
Low-maintenance mechanical seal	●
Easy-to-use PLC control system with membrane keypad and LC display	●
Monitoring of the product pressure	●
Monitoring of the product temperature	●
Rotor speed can be varied through integrated frequency converter	●
Gear pump, hose pump, or press-out unit for product conveying	○
Variable conveying speed through integrated frequency converter	●
Electronic control of the cooling water temperature	●
Closed heating and cooling circuits (temperature control unit)	○
Pressure unit for variation of the bead charge	○
Process data registration	○
Serial interface for data transmission	●
Explosion control: ATEX II2G EEx c T3	○



Technical data, weights, etc.

Type	Active grinding chamber volume dm ³	Drive power kW	Torque Nm	Rotor speed min ⁻¹	Product flow rate dm ³ /h	Grinding media Ø in mm	Weight in kg			Volume of seaworthy packing m ³
							packed	rail-packed	sea-packed	
Standard version	0.52	to 4	to 25	100 – 2000	0.5 – 30	0.65 – 2.3	200	220	250	1.5
Explosion-proofed version	0.52	to 4	to 25	300 – 2500	0.5 – 30	0.3 – 2.3	200	220	250	1.5

For a wide viscosity range. Application examples.



Cosmetics: lipstick, mascara



Concentrates and pastes



Artist's colors



Offset printing: newspapers, books, magazines



Intaglio printing: banknotes



Materials for the electronics industry



Screen printing: fabrics, posters, advertising panels



Sealing compounds, putty



Fine chemicals

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