

FrymaKoruma CoBall®-Mill

Annular gap bead mill for fine milling



Annular gap bead mill

The CoBall®-Mill is used for fine milling of suspensions and high-viscosity products. An intelligent concept and knowledge with the latest scientific developments form the basis for first-class results.

This mill is supremely versatile, satisfying the most demanding quality requirements efficiently and cost-effectively. The milling action is created in the gap between the conical working vessel – the stator – and a conical rotor.

The gap is in the range 6.5 to 17 mm depending on the model selected. The movement of the rotor creates radial movement of the grinding media (metal, glass or ceramic beads). Momentum amplifies the outward motion so that the product shear force increases steadily during the milling operation.

The product is fed to the milling chamber by an external variable-flow pump. Milling beads and product are separated at the end of the cycle by a sieve located at the outfeed. The beads then rejoin the product flow via a channel and re-enter the milling chamber, thus, continuous circulation is achieved.

The following parameters can be adapted to ensure the perfect grinding result for your individual product:

- Peripheral rotor speed
- Material and diameter of grinding media
- Bead load



- | | |
|------------------|----------------------|
| 1 Product infeed | 4 Grinding gap |
| 2 Product outlet | 5 Heating/Cooling |
| 3 Rotor | 6 Bead recirculation |

Applications

Paints and varnishes

Peanuts and hazelnuts

Agro and fine chemicals

Sesame

High-pigment pastes,
lipstick masses

Precision milling of chocolate coatings and
crude cacao pulp

Gel capsules

Precision filler milling,
e.g. titanium oxide

Almonds

High-tech and sanitary ceramics

Pharmaceutical
actives

Semiconductor coatings



Options

Thanks to modular upgrade the FrymaKoruma CoBall®-Mill can be customized to meet your specific needs:

- CIP cleaning system for most simple cleaning
- Explosion-proof design (ATEX)
- Double acting mechanical seal with fluid flush
- Temperature control
- Product flow control
- Pressurization of milling space (up to 5 bar)
- Sterile version available
- Pharmaceutical finish with unit certification
- Frequency converter for speed control
- Feed pumps
- Different executions of milling chambers
- Choice of milling media
- Further options upon request



Key benefits

Significant short batch times due to

- extremely high energy inputs (6-8 MV/m³)
- fast product changeover

Consistently high product quality through

- uniform level of fineness in the final product with very narrow particle size distribution
- tightest grinding space

High reproducibility through

- gentle and efficient heat transfer
- Sterilisation in Place (SIP)

Cost savings thanks to

- low product loss in the mill
- minimum wear of the grinding beads
- low consumption of detergents

High flexibility due to

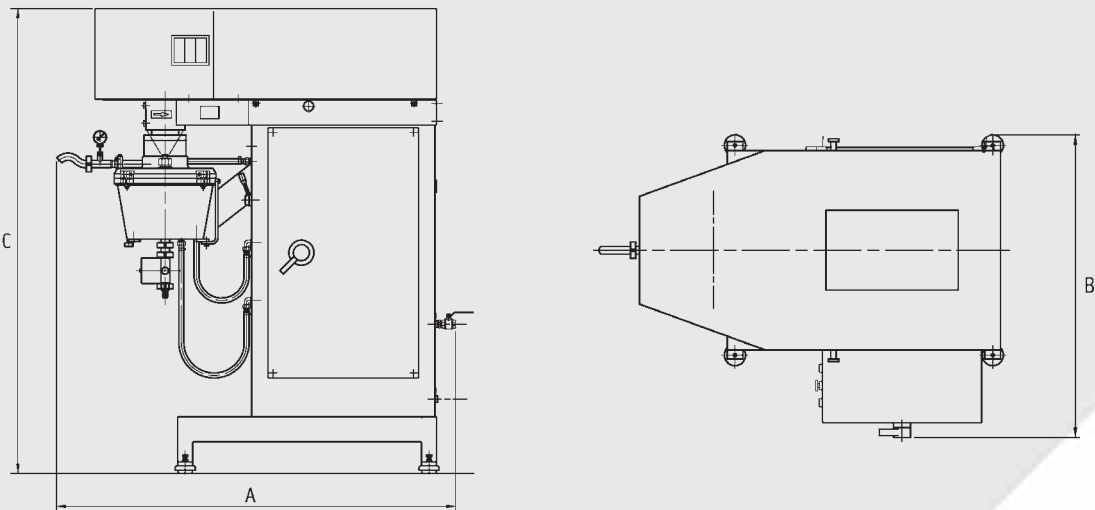
- extensive options
- individual adjustment to the product

Optimal cleaning

- fully CIP-compatible
- cleaning without removing milling beads

Simple operation

- modular automation concept
- user-friendly control system



	Throughput (l/h), ca.	Grinding chamber volume (l)	Installed power (kW), approx.	Dimensions (mm)			Weight (kg), approx.
				Length A	Width B	Height C	
MS 12	5-40	0,5	3-4	1020	800	1150	160
MS 18	10-80	1	7,5-11	1160	1060	1630	400
MS 32	40-300	3	22-37	1590	1210	1860	800
MS 50	150-1000	8	45-55	2010	1290	2280	1750



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- Reduce time to market
- Lower your break even point
- Fulfil your customer demands
- Increase your profitability
- Remain competitive

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- Consulting / Analysis / Research
- Speed / Quality / Compliance / Precision
- Efficiency / Safety / Hygiene / Automation
- Productivity / Sustainability
- Troubleshooting / Emergency / Used Machines
- Knowledge / Education

Let's aim for your targets, together!

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