

DYNO[®]-MILL UBM

NEW

The universal agitator bead mill

Dispersion and ultra-fine grinding
at best cost of ownership



WAB

The next generation of agitator bead mills – **DYNO[®]-MILL UBM**



DYNO[®]-MILL UBM

With its world famous **DYNO[®]-MILL**, WAB is the undisputed specialist in dispersion and grinding technology. The agitator bead mills fulfil the most stringent requirements with regard to the quality and abrasion resistance of the mill components. With our comprehensive range of mills, you can be sure to find the right model for your product and your process.

The new **DYNO[®]-MILL UBM**

The name DYNO[®]-MILL UBM speaks for itself: **U**niversal **B**ead **M**ill. It was developed for universal use.

The new generation of WAB agitator bead mills covers the entire range from ultra-fine grinding of small product quantities to the production of large volumes. It is suitable for grinding bead diameters from 0.3 to 2.5 mm.

The newly developed grinding system with its large screens allows processing with high throughputs and of high-viscosity products. One of the strong points of the DYNO[®]-MILL UBM is the extremely even distribution of the grinding beads in the active grinding chamber. This allows stable and effective process parameters to be determined quickly and easily for the pass and circulation modes.

The DYNO[®]-MILL UBM is user-friendly, simple and economical to operate. The grinding chamber is at an ideal height for operation as well as for quick and convenient cleaning. When the chamber is opened, the grinding beads are drained into a robust stainless steel collecting vessel that is permanently integrated into the machine housing. They can then be easily transferred to other containers. With the DYNO[®]-MILL UBM production mills, it is not necessary to open the grinding chamber in order to replace the screen.

The high wear resistance of the DYNO[®]-MILL UBM extends the maintenance intervals and, thereby, reduces maintenance costs. Backed by WAB's unsurpassed after-sales service, this mill generation guarantees optimal machine availability.



The key advantages

- Unique grinding principle based on the innovative DYNO[®]-DISC BC agitator discs (patent pending)
- Suitable for high throughputs
- Ideal for the dispersion and grinding of highly viscous products
- Long screen service life
- Suitable for pass mode and circulation mode
- Wide range of materials for selection of the optimal machine equipment
- Use of grinding beads between 0.3 and 2.5 mm
- Grinding chamber volumes from 0.5 to 100 litres
- Ideal grinding chamber height enables ergonomic working

Unique milling principle for universal use in wet-milling technology

The DYNO®-MILL UBM milling principle

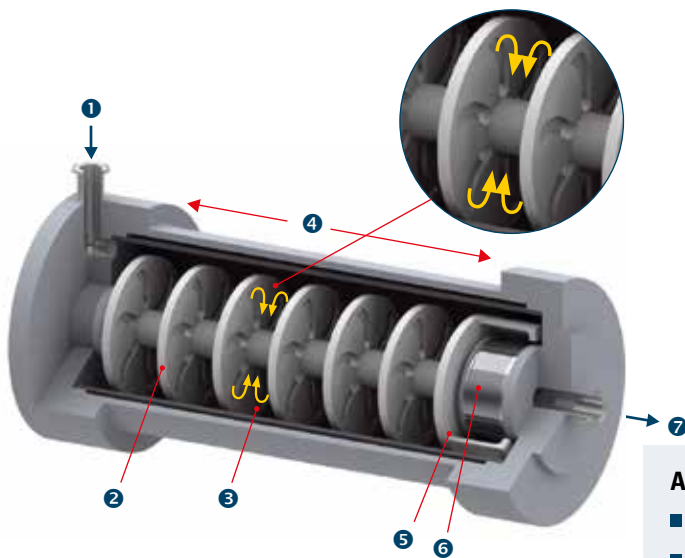
The new generation of **DYNO®-DISC BC** agitator discs was specially developed for this series. These feature unique **Bead Channels** in combination with a closed outer contour.

The bead channels ensure the efficient acceleration of the grinding beads along a precisely defined path. During operation, each of the bead channels creates two efficient grinding circuits between the DYNO®-DISC BC agitator discs that work in opposite directions.

In the area of the agitated bed of grinding beads, the outer contour of the new DYNO®-DISC BC is completely closed. As a result, the grinding beads remain between the agitator discs and are distributed evenly in the active grinding chamber. This ensures the efficient utilisation of the bed of grinding beads in the DYNO®-MILL UBM.

The DYNO®-DISC BC agitator discs are designed for excellent wear resistance, which guarantees constantly high performance and reduces the maintenance costs of the DYNO®-MILL UBM.

DYNO®-DISC BC



New grinding chamber system

- 1 Product inlet
- 2 DYNO®-DISC BC (Bead Channel)
- 3 Grinding circuits operating in opposite directions
- 4 Even distribution of the grinding beads in the active grinding chamber
- 5 DYNO®-ROTOR BS (Bead Separation)
- 6 Large screen for high throughputs
- 7 Product outlet

DYNO®-MILL UBM slot screen and product outlet



Additional features of the DYNO®-MILL UBM

- Low-maintenance, double mechanical seal for the most exacting requirements
- Variety of materials thanks to the ability to use hardened and stainless steel, including hardened stainless steel. Other materials such as polyurethane and ceramics on request
- Use of grinding beads made of steel, glass and ceramics
- Robust, stainless steel collecting vessel for the grinding beads permanently integrated into the machine housing
- Closed machine housing

The new laboratory mill DYNO®-MILL UNI LAB

The DYNO®-MILL UNI LAB supports two WAB milling technologies:

DYNO®-DISC BC agitator discs (scale-up for DYNO®-MILL UBM)

DYNO®-ACCELERATOR agitator units (scale-up for DYNO®-MILL ECM-AP)

Reproducibility and top product quality with WAB control systems and validation concept

WAB control systems

The three control systems **WAB BASIC**, **WAB CONTROL** and **WAB VIEW** enable manual, semi-automated or fully automated control of the DYNOMILL agitator bead mills.

WAB BASIC

The economical, tried-and-trusted machine control system for harsh production environments.



WAB CONTROL

WAB CONTROL (IP 65-compliant) not only allows the operation of the mill, but also enables the monitoring, acquisition and logging of all relevant process-related parameters.

- Tip Speed (agitator shaft speed (rpm) for laboratory mills)
- Product temperature
- Product pressure
- Energy input
- Active power (torque for laboratory mills)
- Current consumption
- Operating time
- Error message



WAB VIEW

In addition to the straightforward and simple operation of the mill, WAB VIEW also enables the monitoring and logging of all the relevant process-related parameters.

- Data collection
- Process control by means of product temperature or energy input
- Visualisation systems with comprehensive recipe management

WAB validation concept

The **FDS**, **DQ**, **IQ** and **OQ** qualification documents required for validation plus the certificates for process-relevant machine components such as calibration and material certificates are available for all **DYNOMILL** types. On request, we will also conduct the **Factory Acceptance Tests** at WAB or the **Site Acceptance Tests** together with you on your premises.



WAB VIEW with touch screen

The most convenient user interface.





DYNO®-MILL UBM and DYNO®-MILL UNI LAB

- for aqueous,
- solvent-based
- and contamination-sensitive products

in laboratories and production facilities of countless industrial sectors

Fields of application

- Paints
- Printing inks
- Cosmetics
- Coatings
- Pigments and dyes
- Automotive coatings
- Food industry
- Fillers
- Agrochemicals
- Paper industry
- Life sciences
- Biotechnology
- Battery materials
- Ceramics and hard alloys

Services offered by WAB

WAB has its own Process Technology Centre with various mills of different sizes, ranging from laboratory up to volume production scale. Close working relationships with our customers are of central importance to WAB. We therefore offer you the opportunity to conduct trials in our Process Technology Centre with your own products. This guarantees that the selected machine fulfils your requirements before you make a purchase decision.

At WAB, you not only purchase a mill, but also receive professional advice about the mill, your product and your process – both before and after your purchase.



The DYNO®-MILL UBM Series

Type	DYNO®-MILL UNI LAB	DYNO®-MILL UBM 20	DYNO®-MILL UBM 100
Grinding Chamber Volume (l)	0.54	19.6	94.6
Active Grinding Chamber Volume (l)	0.42	17.4	86.6
Mill Drive (kW)	4	22–37	55–90
Required Cooling Water Supply (l/h)	250–400	800–2000	2500–4500
Weight (kg)	120–140	1150–1250	2700–3000
Dimensions L x W x H (mm)	900 x 720 x 730	1775 x 1025 x 1840	2700 x 1285 x 2270

Changes in design reserved. The performance data quoted is intended solely as a guide and depends on the product to be processed.

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