

# HOSOKAWAMICRON XERBIS AGITATING MEDIA DRYER



Process Technologies for Tomorrow

**HOSOKAWA MICRON CORPORATION**

# POWDER AND PARTICLE PROCESSING

**Xerbis**

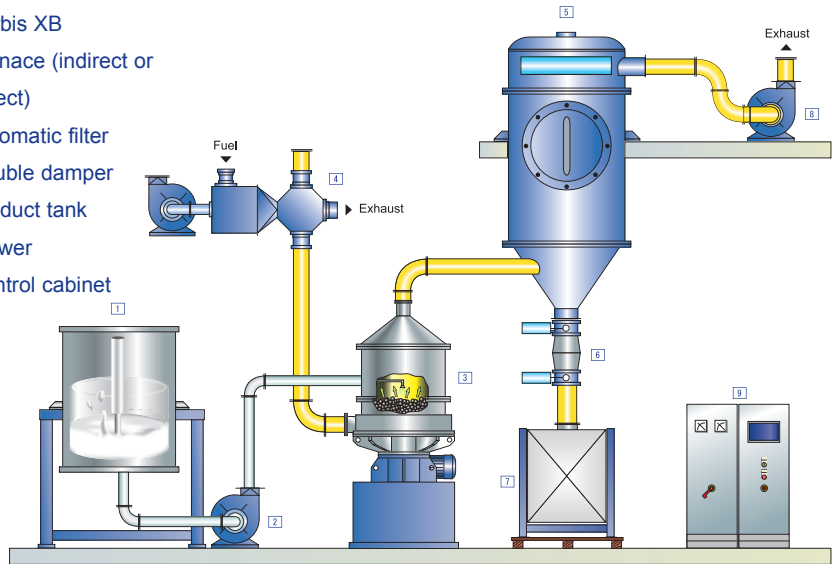
## FOR SLURRY DRYING



The XERBIS was developed as an energy-efficient flash dryer. This high-efficiency dryer dries liquid or slurry material.

The XERBIS is a media agitation-type flash dryer. It applies the dispersion mechanism of agitated ball media, suitable for drying liquid or slurry materials. The XERBIS can dry slurries which encounter difficulties with conventional dryers and produce high quality products consistently in a continuous operation.

- 1 Feed tank
- 2 Pump
- 3 Xerbis XB
- 4 Furnace (indirect or direct)
- 5 Automatic filter
- 6 Double damper
- 7 Product tank
- 8 Blower
- 9 Control cabinet



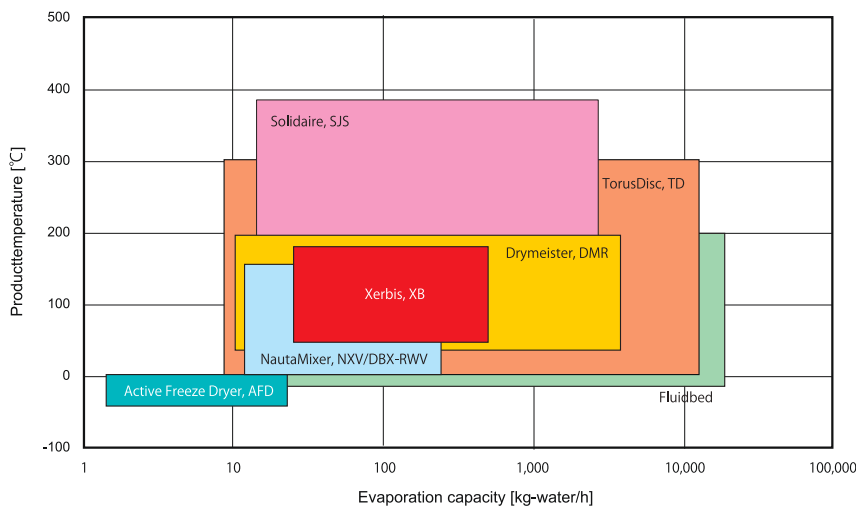
### OPERATING PRINCIPLE

The XERBIS has a dispersion zone at its bottom section. The slurry is fed to this section and receives a very strong dispersing effect from the agitating rotor and ball media. The dispersed slurry forms a thin layer on the surfaces of the ball media. The thin layer is then dried, peeled off, and conveyed to a product collector outside the XERBIS along

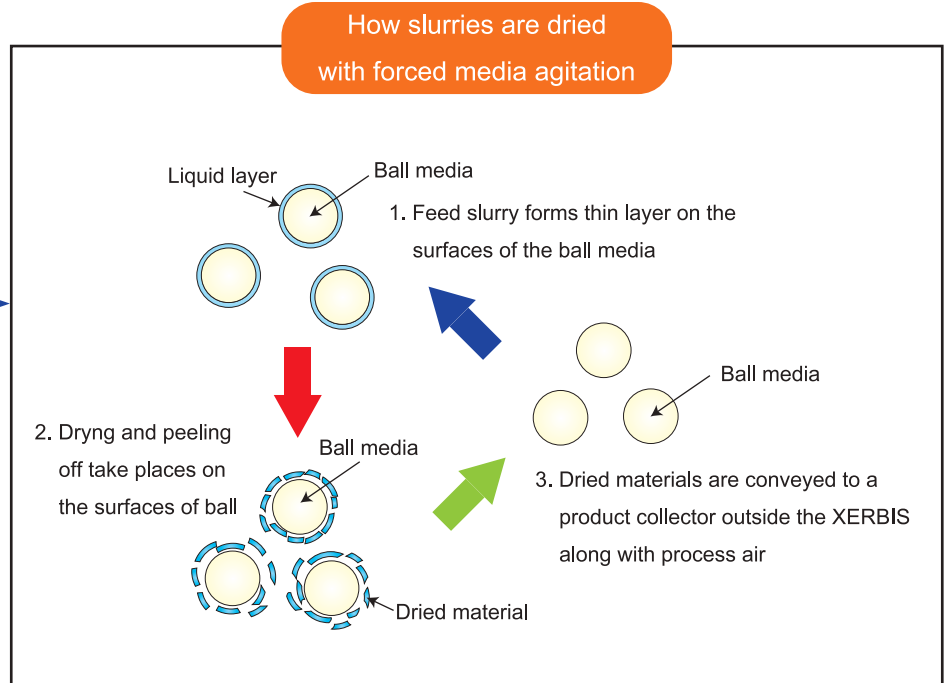
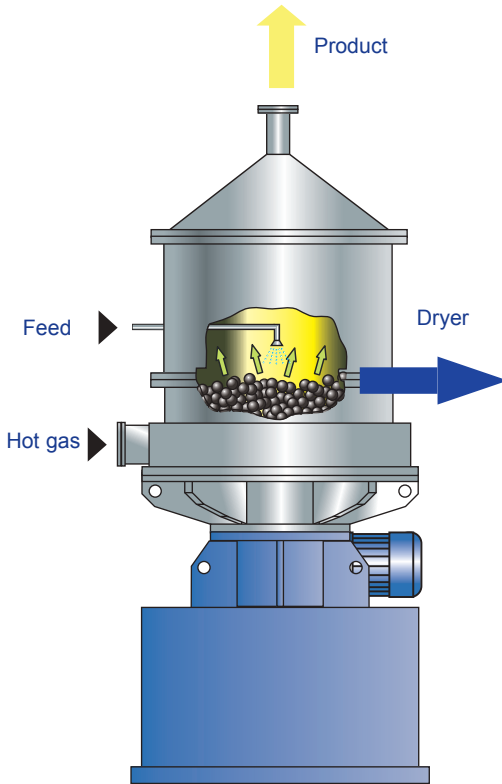
with process air. In addition, fineness of the product can be controlled by integrating a high speed classifier on the top of the XERBIS.

### FEATURES

- Slurries/Solutions can be dried
- Slurries that have high viscosity and are cohesive in nature can be dried by the XERBIS.
- Energy saving  
With a closed circuit system, energy cost for material drying can be drastically reduced.
- Wear protection  
Various ceramic internal components are available.
- Compact  
A strong dispersion mechanism enhances energy transfer efficiency and reduces space requirements.



**Hosokawa's Dryer Series**



## APPLICATIONS

The XERBIS is the right choice for the drying of slurry of inorganic or organic materials and liquid of organic materials. Typical applications for the XERBIS are for example:

- Battery materials (cathode precursor, process with inertgas)
- Capacitor materials
- Glass
- Hydride materials
- Low-molecular-weight carbohydrates
- Ceramic materials
- Inorganic materials

Material	Moisture content of feed % W.B.	Moisture content of end product %W.B.	End product finess $\mu\text{m}$	Inlet gas temp. degC	Outlet gas temp. degC
Precipitated Calcium Carbonate (PCC)	67	0.5	1.8	400	70
Cathode material for Li-ion battery	65	4.0	50	300	150
Dextrin	60	1.0	300	250	110
Cellulose	80	2.5	250	250	90
Barium sulfate	70	1.0	2.0	300	110
Aluminium hydroxide	80	0.7	50	300	150
Silica	60	0.6	6.0	300	120

Product line		XB-LAB	XB-450	XB-600	XB-900	XB-1200
XERBIS XB Type						
Drive	kW	2.2	5.5	11	22	45
Media	liter	8	25	50	100	200
Max. Air flow rate	m <sup>3</sup> /min	8	25	50	100	200
Max. Air inlet temperature	degC	400	400	400	400	400
Water evaporation rate	kg/h	26	85	170	340	680



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