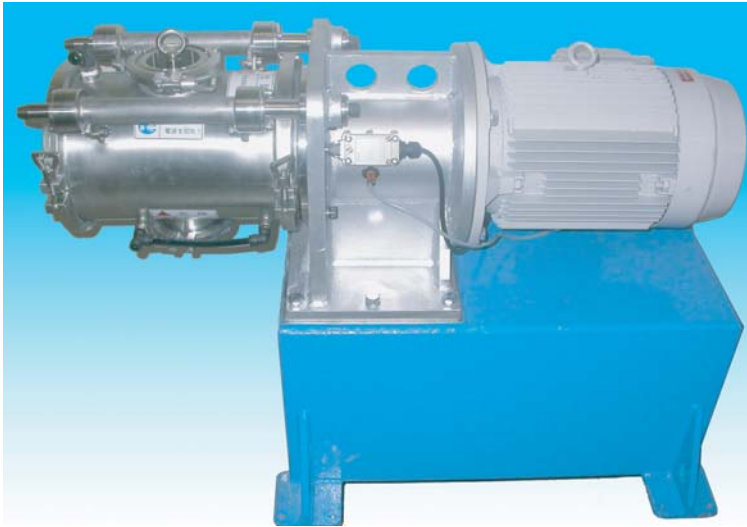


HOSOKAWA MICRON

NOBILTA™



Description

The Nobilta is the New-Generation of Powder Processor designed to perform, fast powder mixing of Macro to Micro precision mixing, creating and treating composite materials such as surface-modification and sphericalizing particles in accordance with specific design conditions in one processor.

Design

The Nobilta is structured with a horizontally positioned cylindrical chamber having specially designed; high-speed agitating paddles which are arranged to generate compressive, shearing and impact forces working uniformly on each particle in the chamber.

The degree of precision mixing and the quality of treatment such as development of composites, surface-modification, and sphericalization of particles are accomplished by simply adjusting the rotational speed and the processing time.

The main body is equipped with a water cooled jacket to control temperature rise during the operation when treating heat sensitive materials.

As an option, when processing abrasive materials, material contact parts constructed of wear resistant materials are available.

The Nobilta is available in various models satisfying customers' laboratory scale to mass production requirements.

Features

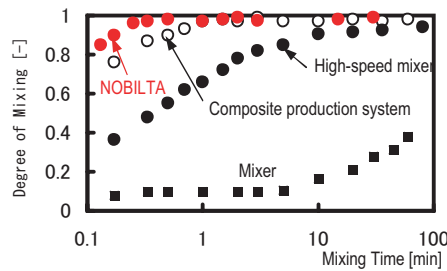
- Precision mixing and product treatment such as development of composites, surface-modification, and sphericalization of particles are achieved in one process.
- A wide range of precision mixing from Micro to Macro.
- Particle treatment with Energy efficient operation.
- Creation of custom-made particles using nano-scale design and processing technique.
- Space saving compact design, low energy consumption, thus economical to operate.
- Easy to dismantle, clean, and carry out maintenance.
- Suitable to process temperature sensitive, abrasive and sticky materials.



Examples and Data

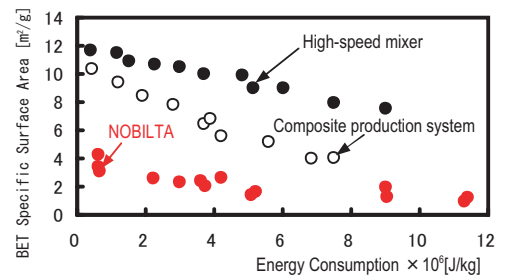
Mixing Performance

The chart below shows the degree of mixing achieved by the Nobilta as compared with other Hosokawa machines on mixing white calcium carbonate and red iron oxide, as measured with a photometer (PM-III). The degree of mixing reaches to 1 as the mixing process advances.

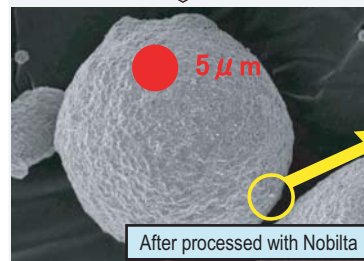
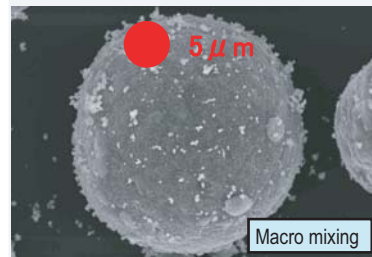


Nano-Particle Layer Formation

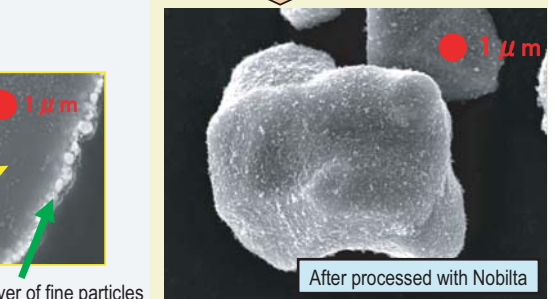
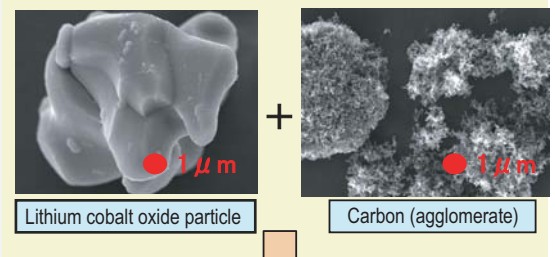
The chart below shows comparison of BET value when forming layer of TiO₂ (15 nm diameter average) on the surface of a silica sand particle (28 μm diameter average), using the Nobilta and other equipment. The BET value decreases during the process indicative of layer formation.



Metal Oxide particle layer formation



Carbon layer Formation



Specification

Mode		NOB-130	NOB-300	NOB-450	NOB-600	NOB-1000
Max. Motor Rotor	[kW]	5.5	30	55	110	200
Max. Rotor Speed	[rpm]	6000	2600	1700	1100	780
Max. Effective Capacity	[L]	0.5	10	30	100	300
Overall Width	[mm]	450	800	1700	2000	2800
Overall Length	[mm]	750	2270	2400	2500	3500
Overall Height	[mm]	1100	1260	1600	1700	2300

Specifications are subject to change with or without notice due to ongoing product improvement.



Process Technologies for Tomorrow

HOSOKAWA MICRON CORPORATION



POWDER PROCESSING SYSTEM COMPANY

No.9, 1-chome, Shoudai Tajika, Hirakata-shi,
Osaka 573-1132 Japan
TEL +81-72-855-2224 FAX +81-72-855-2679
e-mail : info@hmc.hosokawa.com

URL <http://www.hosokawamicron.co.jp>
2004 HMC All Rights Reserved. Printed in Japan