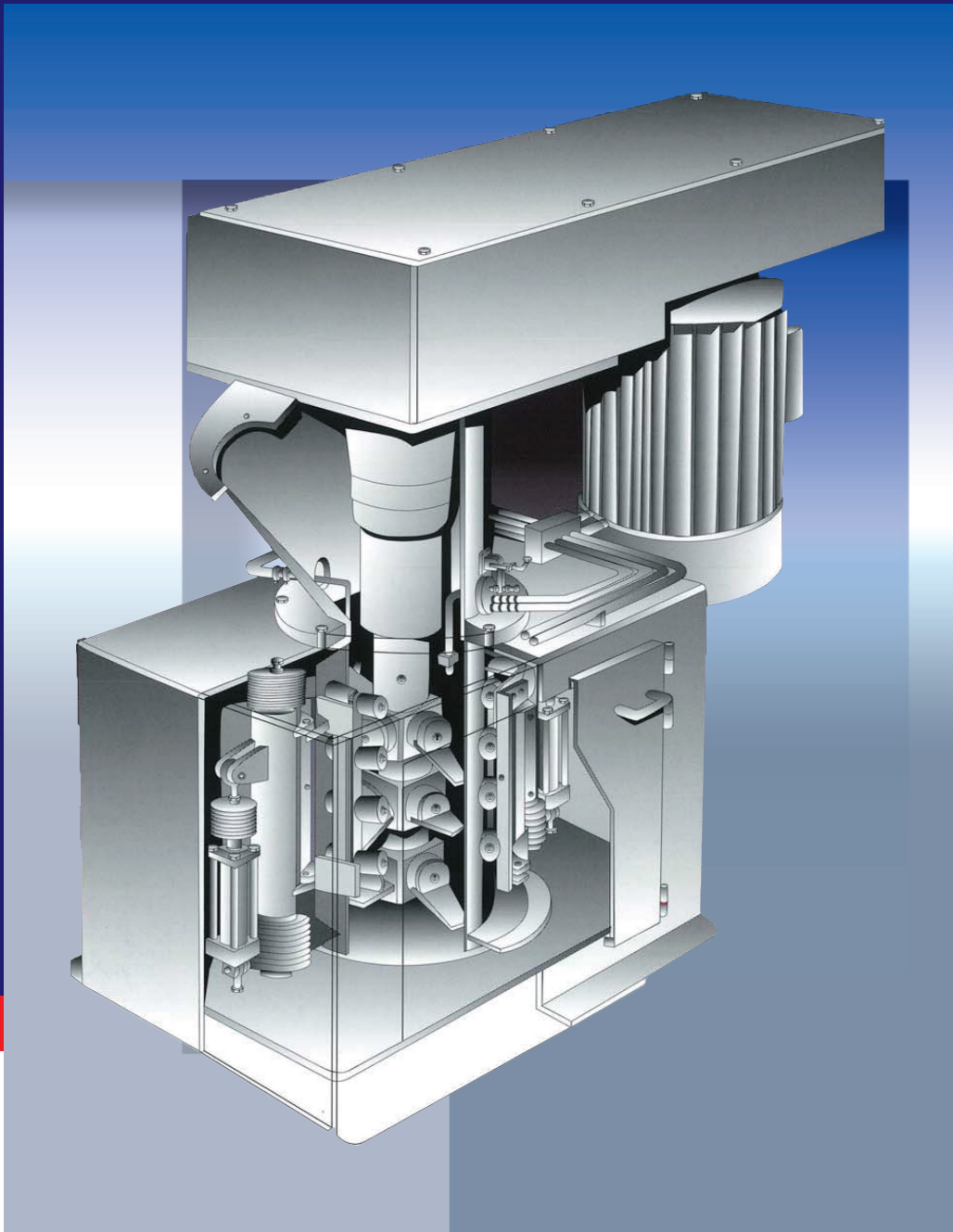


HOSOKAWA/SCHUGI Flexomix® FX



Process Technologies for Tomorrow

HOSOKAWA MICRON CORPORATION

"the art of" **AGGLOMERATION**

SCHUGI FLEXOMIX **A UNIQUE CONTINUOUS MIXER/AGGLOMERATOR**

ADVANTAGES

CONTINUOUS PROCESSING

The Schugi Flexomix is a vertical, inline gravity flow mixer/agglomerator. Processing is continuous. Productivity is high. Manpower requirements are low. The process is operator-insensitive.

HOMOGENEOUS PRODUCT

Schugi end products are homogeneous from sample to sample. Because of the instantaneous mixing of all ingredients, demixing of powders cannot occur. Each sample will have a uniform dispersion of liquid(s) and solids that is beyond the capability of conventional mixers or batch-type mixers. Accuracy of granule content, of course, is governed by the accuracy of feed metering equipment.

SELF-CLEANING

The external rollers flexing the mixing chamber prevent build-up of product on the inside. This ensures constant operating conditions within the mixing/agglomerating chamber.

A MACHINE OF SIMPLE CONSTRUCTION

One rotating shaft with blades, plus a set of pneumatically operated external rollers around a flexible chamber. Maintenance is minimal. Power requirements are low: 1-3 kW/t/hr. Can be disassembled for cleaning in less than 2 minutes. Liquid injectors are easily removed. Minimum space requirements. G.S.-approval.

APPLICATIONS

POLLUTION CONTROL

The Schugi mixer-agglomerator is particularly suited to processing ultra-fine, low bulk density materials. Industries confronted with meeting new environmental protection standards can use Schugi units economically to convert these dusts into manageable, dust-free products, that can often be recycled.

IMPROVEMENT OF FLOW PROPERTIES

Fine materials with low bulk densities frequently cause serious feeding problems in tableting, extruding, packaging and rotary briquetting/compaction, etc. Schugi granulated products resist fluidization and segregation and have improved flow- and feedability.

REDUCE SEGREGATION OF MIXES

Frequently, there is a need to mix two or more powders in exacting proportions. This generally is an expensive, slow, batch operation. The various components must have similar particle size distributions to limit segregation during packaging. Consequently, operations pay a premium for imposing strict particle size specifications on suppliers. The Schugi Flexomix mixer-agglomerator offers an alternative by combining the mixed components and agglomerating them into granules in their proper ratios.

INCREASE DISPERSION RATES

Consumer demand for 'instant' products - from detergents to food - has increased dramatically in recent years. In addition to fast solution rates, the product must be dust-free and free flowing.

The Schugi mixer-agglomerator produces porous, sponge-like granules from spray dried foods, such as milk powder, cocoa blends, dry soups, etc., and also detergent formulations. These larger clusters have a significantly faster dispersion rate compared to the ungranulated spray dried products.

OUTPUTS

Five machine sizes are available for outputs ranging from 0.05 - 100 m³/h. Turn-down ratio for all models is at least 4:1.

AUTOMATION

The Schugi mixer agglomerator readily lends itself to automation and/or remote control. Its continuous flow design and ancillary dosing equipment are inherently compatible with automated processing.

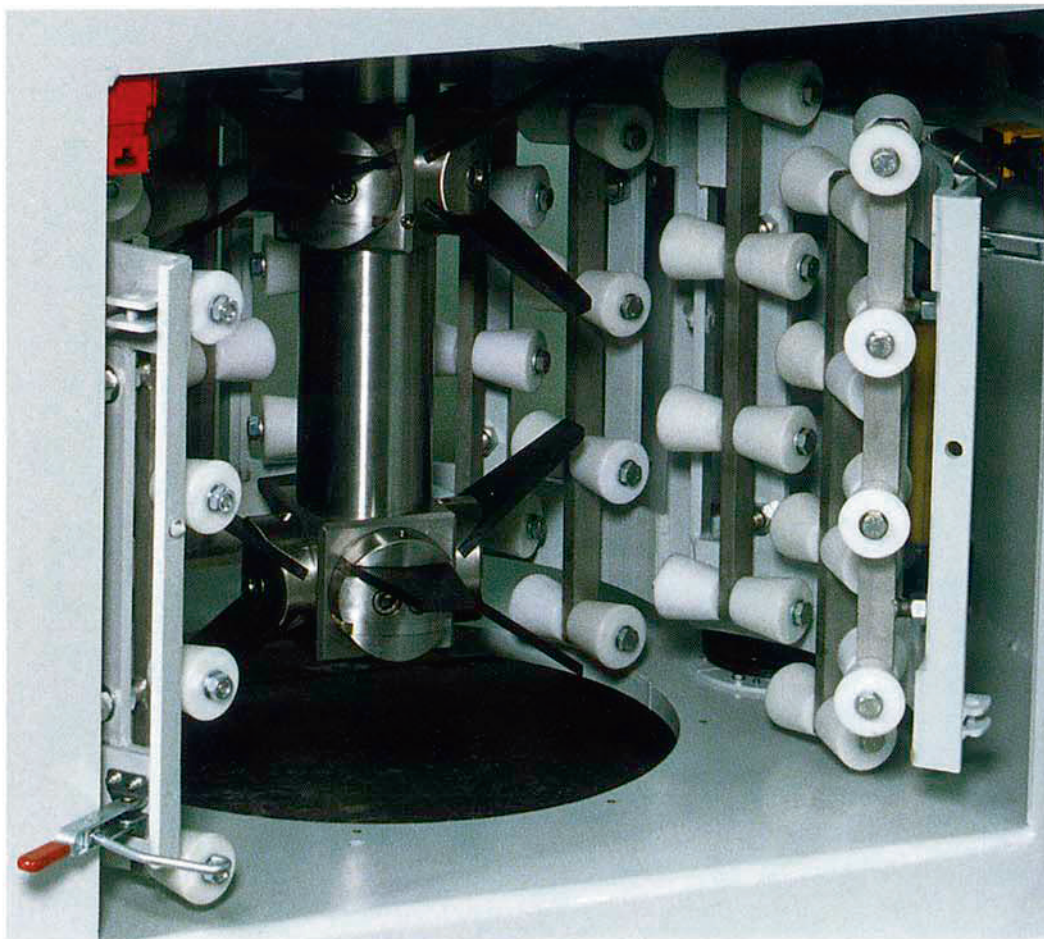
Schugi combines mixing-agglomeration with drying and cooling.

The Schugi fluidbed dryer/cooler is specially designed with the Schugi-agglomerates in mind, taking into account the process conditions established during trials in our pilot plant and client's requirements with regard to process and product. The dried product can be cooled using ambient air or, if required, conditioned air.



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OTHERS

The Flexomix is also ideally suitable for bringing materials together which react quickly. Due to the short retention time the reaction virtually takes place outside the Flexomix. Because of the very fine dispersion of the liquids throughout the powder, a certain coating effect will be achieved. Also molten liquids can be incorporated into powders.

PRINCIPAL INSTALLATIONS

Installations include complete plants or equipment to process:
Chemicals such as water-soluble polymers

and agricultural chemicals, detergents, animal feeds veterinary pharmaceuticals and milk replacers; Food, such as drink and soup mixes, food colourings, gelatines; Bulk pharmaceuticals; Minerals and ores such as ceramics, gypsum.

BACKUP

There are hundreds of machines currently in operation throughout the world. Thus, a wealth of application data and experience has been accumulated. Schugi can evaluate your product or process quickly and provide answers to your specific blending and agglomerating/granulating problem.

For evaluation, test and demonstration purposes, Schugi has application test centres in Doetinchem - the Netherlands, at Hosokawa Bepex Corporation in Minneapolis - U.S.A. and at Powrex Corporation in Osaka - Japan. All Schugi systems are sold with single-source responsibility. For a customer this translates into: Schugi's assurance of machine quality and performance. A product and process guarantee on the basis of our tests. Optimum selection of the individual components and control of the complete plant. A trained service organisation.



HOSOKAWA MICRON BV



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HOSOKAWA MICRON CORPORATION

URL <http://www.hosokawamicron.com/>

1-9, Shodaitajika, Hirakata-shi, Osaka 573-1132, Japan
TEL : +81-72-855-2224 FAX : +81-72-855-2679

Hosokawa Micron (Korea) Ltd.

Phone : 82-2-420-5691, Fax : 82-2-420-5693
URL : <http://www.hosokawakorea.co.kr/>

Hosokawa Micron (Shanghai) Powder Machinery Co. Ltd.

Phone : 86-21-5306-8031, Fax : 86-21-6404-7579
URL : <http://www.hosokawa.com.cn/>

Hosokawa Micron (Malaysia) Sdn. Bhd.

Phone : 60-3-7725-7433, Fax : 60-3-7725-6433
URL : <http://hosokawa.com.my/>



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