

# Drummills / dry operation

5.000 liter, S50TSzkh

## Application

The application of drum mills, in dependence on the adjusted parameters, covers mixing, dispersing, de-agglomeration, of course particle size reduction and even the influence on structural constitution of materials, possibly coming along with chemical and solid solution reactions, what may lead to Mechanical Alloying (MA). Due to the comparably low kinetic in a drum mill as well as the restriction to the critical velocity of rotating vessels, the application in MA is limited and should better be undertaken by high kinetic processing systems (HKP). Drum mills mainly are used at industrial scale and applications. Applied are drum mills with porcelain or ceramic liners for the chemical, pharmaceutical and ceramic industry, particularly for paint pigments and enamel manufacturing. Steel-drum are utilized for the processing of hard-phase materials, often lined with hard-phase coatings or rubber linings.



## Charging & Process

- Drum/vessel is turned into starting/handling position;
- hood-flap is opened, grinding-lid removed, product, grinding-media and possibly additives (charge-bearing may be applied) are loaded;
- grinding-lid is locked, hood-flap closed and locked;
- Drummill is then set into operation for an adjusted processing time.



## Discharging

- Drum/vessel is turned into starting/handling position;
- hood-flap is opened, grinding-lid removed & replaced by the draingrating, flap is closed and locked;
- Drummill is set into operation for discharging;
- product is collected in the dust-hood, if the plate-valve at the lower end is opened, product is transferred.

## Features

- Drummill welded construction ST52-3/ST37 and/or stainless steel;
- Drum/vessel with main-port and ventilation port on opposite side;
- strong drive-belt wreath on locating bearing side, self-aligning/spherical roller bearings in block housings with tension-bushes (acc. to unit-size);
- main-port/grinding lid with tension-clamps and dismantle-screws;
- gear-motor with break, easily adjustable belt-tension-unit;
- complete encapsulation of rotating units (UVV), sound adsorption;
- Electrical unit at drive-support; time-control; tip-operation for setting charging position, converter drive and automatic positioning upon inquiry, emergency stop, control-lights and limit switches;
- removable vessel wall at non-locating bearing side (not types T/S or < 5.000l).



## Types

- Type AxxNx: ceramic lining, e.g. alumina 92%, 30/46mm thickness;
- Type TxxNx: cemented porcelain-pan, max. unit size 10 (1.000 l);
- Type GxxNx: rubber lining acc. dimension sheet;
- Type SxxNx: (austenitic) manganese steel.

## within the delivery volume

- draingrating and plate-valve;
- assembly cross for easy installation on foundation;
- pre-installation on timbering (sizes as of 1000 l partly installed);
- technical documentation including technical survey, operation manual, standard-part list, floor-plan and electrical schemes.



## Options & Accessories

Installed optional equipment for drum mills include charge-bearings, safety-valves and cooling-/heating-systems. Related devices are screens/vibrating screens, magnetic filters, feeding/unloading units, grinding media, grinding media classification, pump-stands and agitator tanks, thus the complete plant-operation from material-transfer to product application is covered.

