

Drummills / wet operation

30-10.000 liter, types A/G/T/S

Application

The application of drummills, 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 drummill 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). Drummills mainly are used at industrial scale and applications. Applied are drummills with porcelain or ceramic liners for the chemical, pharmaceutical and ceramic industry, particularly for paint pigments and enamel manufacturing. Steel-drums 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;
- upper 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;
- upper hood-flap is opened, grinding-lid removed & replaced by the drain-strainer, flap is closed and locked;
- Drum/vessel is turned into discharging position, both hood-flaps are opened;
- open the drain-strainer valve (lower flap) & ventilation-screw (upper, not type T), product runs out, e.g. into product container or upon a vibrating screen.



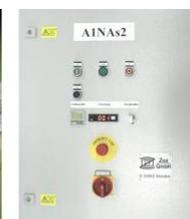
Features

- 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 and discharging 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).



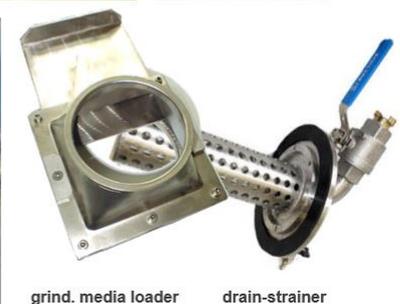
Types

- 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

- Drain-strainer with box-spanner in over-length;
- 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 drummills 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.