Batch measuring equipment

A particular equipment class manufactured by “Stromizmeritel” is: strain-measuring weighing dosing units of step-by-step action with; continuous-running; volumetric proportioners operating on liquid flow measurement principle and differential dosing units.

The specialists of the company successfully settle questions of dosing of liquid and free-flowing materials, caking ingredients of glass mixture as well as poorly flowing and water-absorbing coherent materials and small additives for preparing of premixes.

“Stromizmeritel” manufactures a wide range of the strain-measuring weighing dosing units equipped with the gravity, vibrating, screw and double-screw loading and unloading feeders:

- small-scale dosing units for partial doses (dosing according to load);
- small-scale dosing units for full doses (dosing according to both loading and unloading);
- one-component dosing units for full doses with a weight receiving device based on one or three strain sensors (dosing according to both loading and unloading);
- multi-component dosing units with weight receiving device based on three strain sensors (dosing according to load);
- continuous-running strain-measuring proportioners for glass mixture and cullet (are integrated into the belt conveyors);
- continuous-running weighing dosing devices/flowmeters based on the belt feeders;
- mobile strain-measuring weighing dosing devices – carts, operating in manual, semiautomatic and fully automatic control mode;
- strain-measuring scale platforms;
- weighing hopper devices for measuring of material level and consumption;
- dosing and mixing units for dosing of small components (glass mass dyes and decolorizers) and preparing premixes etc.

A variety of the dosing units manufactured by “Stromizmeritel” expands technological capabilities and allows unifying the design process of the dosing-mixing lines.
Stationary and mobile belt conveyors, screw conveyors, shuttle conveyors, swinging conveyors

The stationary and mobile belt conveyors manufactured by “Stromizmeritel” are intended not only for transporting of free-flowing and small lump materials, but also for switching of transportation flows and redistribution of raw material into the hoppers. The configuration of the stationary conveyors includes a full-scale sealing of the whole materials passing channel, cages for moving parts and emergency cord switches, securing the required operation safety. “Stromizmeritel” manufactures open-type or semi-closed conveyors, horizontal, inclined conveyors or conveyors with a changing inclination angle, as well as conveyors with a screw or vertical gravity take-up.

The main technical data of the stationary conveyors:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity, m³/hour</td>
<td>50-350</td>
</tr>
<tr>
<td>Belt width, mm</td>
<td>500-1000</td>
</tr>
<tr>
<td>Transportation distance, m</td>
<td>4-200</td>
</tr>
<tr>
<td>Belt motion speed, m/sec</td>
<td>0.5-2</td>
</tr>
<tr>
<td>Installed capacity of the electric drive, kW</td>
<td>1.5-45</td>
</tr>
</tbody>
</table>

Apart from the stationary belt conveyors we manufacture shuttle conveyors, which are shuttles distributing the glass mixture into the hoppers of the glass mixture chargers of the glass furnace, and swinging conveyors for feeding of the conveyed material into the group of four or six silos.

Screw feeders and screw conveyors manufactured by “Stromizmeritel” are used for moving free-flowing, poorly flowing and caking materials with different physical and chemical properties.

The screw conveyors usually have a channeled case and differ from the feeders by a strengthened screw structure. They are equipped with a high-powered drive with increased load capacity, what allows operating such conveyors with full interturn rooms and big angles.

Manufacturing of the reversible and turning screw conveyors distributing the conveyed material among several feed bins or silos is possible.

Apart from manufacturing the conveyors of usual industrial configuration we produce screw conveyors of stainless steel as well as abrasion-resistant and heat-resistant conveyors.
Belt Elevators

The vertical belt-type bucket elevators are used for lifting of various free-flowing and bulk materials from the loading point to the unloading point.

At the present time “Stromizmeritel” manufactures elevators with the bucket width of 160, 250, 320, 400, 650 mm, capacity of 13 up to 165 m³/hour and lift of 8 up to 50 m. The buckets discharge is various.

The elevators are equipped with gear motors, bearing assemblies and belts manufactured by the leading world producers. The tension of the elevator traction part is maintained at the power-drive station, which guarantees minimal “dead areas” when the buckets turn the driven pulley and reduces overall dimensions of the lower station. The structure of the driven pulley, which is made akin to a squirrel wheel, prevents the belt from damage when abrasive material falls between the internal surface and the pulley. Conic form of the drive pulley in combination with the rubber covering secures increased adherence and stability of the belt position at a motion rate of 1,2-2 m/sec.

Depending on properties of the material conveyed in the elevators (light, heavy, abrasive, poorly loadable and poorly unloadable materials), different types of buckets are used:

- carbon steel buckets;
- deep or fine buckets;
- buckets of special form;
- abrasion-resistant and chemically resistant buckets;
- lightweight plastic buckets for conveying of water-absorbing materials, which are prone to adhering.

Apart from the hatches and detachable panels at the upper and lower stations an access to the working body from each side from any height of the elevator well is provided for repair and maintenance of the elevators. Increased structural stability of the well allows putting a platform for the drive service on it.

On the whole the elevators as well as the belt conveyors manufactured by “Stromizmeritel” Closed JSC are noted for quick assembly, reliable and dust-free operation and are of high quality and good design.
Vibrating classifiers,
vibrating sieves, crushers

“Stromizmeritel” manufactures the following equipment for crushing, sieving, pulping and grading (sorting) of glass mixture and different multi-component mixtures raw materials:

- pulping devices, material agitators and lump rippers;
- double-roll crushers with a productivity rate of 5 to 15 tonnes/hour;
- rotary crushers with a productivity rate of 10 to 20 tonnes/hour;
- hammer-type crushers with a productivity rate of 25 to 40 tonnes/hour;
- jaw crushers with a productivity rate of up to 20 tonnes/hour;
- vibrating sieves N 20 and N 10 with a productivity rate of 10 to 40 tonnes/hour for materials of small and medium abrasive power (soda, dolomite, sand etc.);
- classifiers A 10 with a productivity rate of 5 to 12 tonnes/hour for materials of medium and high abrasive power (glass cullet, refractory materials etc.).

Hammer-type, rotary, double-roll and jaw crushers manufactured by “Stromizmeritel” are mainly designed for crushing of sheet and bagged glass and are used in the foreign and own cullet processing lines, as well as for utilization of the automotive and building triplex glass.

Vibrating sieves N 20 and N 10 and classifiers A 10 are intended for raw materials sieving and sorting. The produced models of the sieving machines have either two outlets (one-sieve) or three outlets (double-sieve) and are equipped with the unbalanced mass electric vibration generators. A modern frameless mesh mounting and straining system is used in the structures of sieves and classifiers.
Batch feeders  
Glass mass granulators  
Equipment for waste gas flues

Batch feeders are designed for supplying the mixture into glass furnaces equipped with the loading pockets. Design of the batch feeders depends on the requirements to the design of the loading pocket, batch melting nature, glass making method and other factors. For different furnace structures and application conditions different types of the feeders are used: vibrating fan feeders, table feeders, rotatory plunger feeders and others. Batch and glass scrap feeders produced in Stromizmeritel can be used in production of sheet glass, glassware and other products.

The glass mass scraper granulator produced by “Stromizmeritel” consists of a metal case, made of several sections attached together, inside of which is a chain conveyor, consisting of two plate chains of roller-type with scrapers attached to them. The granulator is designed for granulation and horizontal and inclined conveying of glass mass coming from the glass-forming machines. The granulator is a two-level scraper conveyor located in the bath with water on special guides, where the granulated glass mass arrives.

Product range includes a big number of different versions which differ in dimensions (length, width, lift height, angle of inclination, drive type etc.), as well as in additional options for operation in non-standard conditions.

“Stromizmeritel” also manufactures the following types of the equipment for waste gas flues of glass furnaces:
- shifting air-smoke dampers;
- shut-off and swinging gate valves;
- cradles and support brackets for the glass furnaces.
**Big bag unloading and loading stations**

Stormizmeritel manufactures several modifications of big bags unloading stations and loading stations.

Big bags unloading stations SRB manufactured by ‘Stormizmeritel’ are used for agitating and uniform emptying flowing materials from big bags to storage bins or conveying equipment. Bags unloading stations SRM manufactured by ‘Stormizmeritel’ are used for agitating and uniform emptying flowing and small lumps materials (up to 6 mm) in different industries.

Louvre-type grates of different structure with movable (bending) and fixed flaps manufactured by ‘Stormizmeritel’ are used to reduce dust emission when unloading dusty materials from big bags and hopper wagons into receiving hoppers. It is possible to use louvre-type grates for overloading of small lumps materials.

In the process of filling bags the big bag loading stations UZB manufactured by ‘Stormizmeritel’ allow to control the weight of the materials filled as per digital display of the control block. The stations are equipped with air supply nozzles for blowing bags and aspiration pipe-bends for dust-loaded air.