

VELZENER

MASCHINEN GMBH



ESTROMAT 850

Mixing and conveying unit
for LC- and ULC-refractory masses
e.g. permanent lining in ladles, converters,
runners, tundishs and others



ESTROMAT 850

The ESTROMAT 850 is designed for mixing and conveying of refractory material with aggregates up to 16 mm. The mixing unit is used to produce permanent linings for ladles, tundish, torpedos, blast furnace runners, on industrial- and melting furnaces for the glass and aluminium industry.

Description of the system

Refractory material with high specific density and low content of water of only 4-6% usually cannot be conveyed with customary pump systems like piston- or screw pump systems.

The mixing and conveying system ESTROMAT 850 is especially designed for the processing of LC- and ULC-refractory materials. It is successfully working in screed machines since many years.

The ESTROMAT 850 is able to mix earth moist, thixotropic and dry materials and to convey them with compressed air up to a distances of 30m, depending on material consistency, hose diameter and quantity of compressed air. In this conveying system compressed air is added to the material through the air armature and at the same time at the vessel outlet for acceleration and the mixture is conveyed in bulks to the of the conveying hose.

Standard equipment

- Mixing vessel with big service opening, safety quick lock and pressure relief valve, cleansing opening ID100-4"
- Wear plates mounted in the pressure vessel
- Solid machine frame with 4 crane eyes and fork lift bags
- Lubricable, wear resistant bearing of mixing shaft, threefold sealed
- Exchangeable vessel outlet ID100-4" with sleeve coupling
- 4 wear resistant mixing paddles (wear resisting cast iron) mounted on the mixing shaft
- Rigid 2-stage standard gear motor with PTC-resistor control
- Electric control box with all necessary control and report devices, fuses, Ampère-meter and automatic S/D-starter
- Guard frame for electric control box
- Air armature with ball valves für vessel air, accelerator air, booster
- Safety valve
- Water armature with electronically programmable dosage system *alternatively*: water armature with mechanical water dosage system
- Water tank with optical level indicator
- Charging funnel for charging with big bags, support for vibrator
- Dust filter with connection hose to feeding funnel

Advantages

- Rigid and compact mixing and conveying unit
- Exact electronically water dosage system; alternatively mechanically
- Mixture of consistently homogenous mixing quality
- Wear resistant mixing and conveying system
- Easy to handle system regarding installation, conveying and cleansing
- Big-Bag-charging
- Saving of man power
- Cost-saving working method
- Quickly ready for use
- High reliability
- Conveying of masses which are not or only difficult to pump



Safety lock for dome



Safety screen in the vessel dome



Electric control box



Compressed air control armatures

ESTROMAT 850



Ergonomic work place with electric control, switch and monitoring systems as well as water dosage and air armature



Blow-back device, hose connection



Central lubrication



Cleansing connection



ESTROMAT 850 – short version

Operation of the ESTROMAT 850

- The dry material from bags or big-bags is filled through the feeding funnel into the pressure vessel.
- At the same time the required quantity of water from the water tank is added by the dosage system
- The compulsory mixer mixes the material within shortest time, depending on the material.
- Thereafter the vessel is closed and the compressed air added
- The batch is conveyed until the conveying pressure sinks to 1bar
- Then the air relief valve on top of the vessel has to be opened
- The next batch can be processed in the same way

Technical Data

Motor power	: 30 kW
Voltage **	: 400V/50Hz three phase
Mixer speed	: 34 Rpm
Total vessel volume	: 850 l
Working volume of vessel	: 550 l
Operating temperature	: 20 C
Conveying capacity *	: up to 8m ³ /h
Conveying distance *	: 30 m
Operating pressure	: 5 bar
max. vessel pressure	: 8 bar
Required air volume	: 5-10 m ³ /min
Standard vessel outlet	: ID00, sleeve coupling 100-4"

* depending on air consumption, Diam., conveying hose and material

** different voltages on request

Dimensions

Total length	: 2550 mm
Total height	: 1880 mm
Charging height	: below funnel 1750 mm
Transport height	: 1880 mm
Total width	: 1400 mm
Weight	: approx. 2250 kg

Recommended Accessories

- Boom transport system
- conveying hoses with different diameters
- Blow-back device for different diameters
- Automatic lubrication system for mixer bearing
- dust filter for feeding funnel
- vibrator for feeding funnel
- Re-mixer unit E402NM
- heavy-duty wear resistant mixing tools

ESTROMAT 850 - short version

Recommended for companies with many different sites.
Version with angular gear motor, to shorten the machine frame.
Dimensions: L x W x H: 2030 x 1240 x 1960 mm
Anything else in regard to equipment and performance as described above.

ESTROMAT 850

Boom transport for ESTROMAT 850

The boom transport system is designed for optimal positioning the end of the transport hose for lining works of ladles and similar vessels, as well as runners of blast furnaces. The system supports the manual distribution and facilitate build in of the refractory material.

By means of a tooth and pinion jack the boom transport system can be adjusted into the best positioning height. The vertical shaft, hold by ball bearings, supports a swivelling range of " 90°. The belt of ports at the swivelling shaft enables the fixation by bolt at every 15°. By this a large working area of the unit can be reached without displacement of the ESTROMAT.

The boom transport system can be delivered for the mixing and placing unit ESTROMAT 260-600 or ESTROMAT 850. It can be mounted subsequently to previously delivered units at every time. It is to be used for transport hoses with ID 50 up to ID 100, as well as in combination with the equivalent blow back devices.

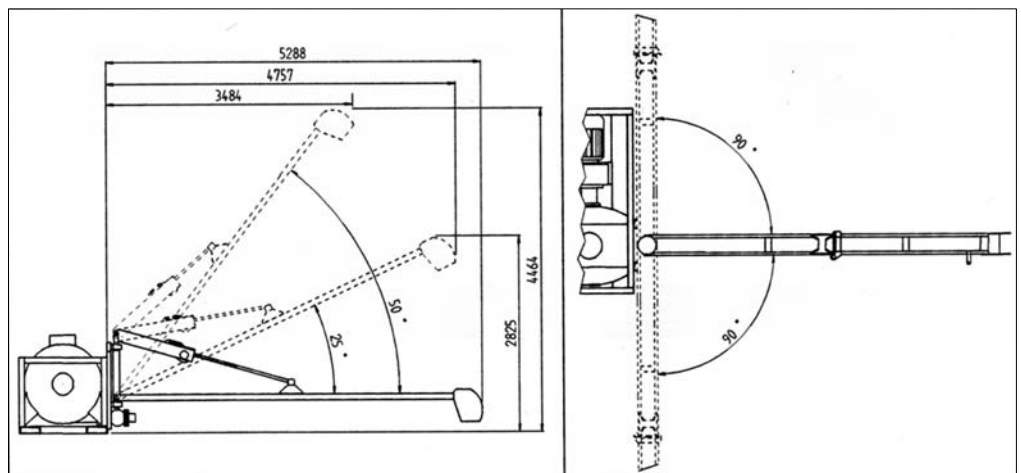
Technical Data:

Maximum height of head	: 4460 mm
maximum width of boom	: 5290 mm
Swivelling area	: " 90°
Weight without hose	: approx. 220 kg

The vertical bearing application of the boom is effected by means of a vertical shaft with ball bearings, which supports the coping at the lower end of the shaft. The boom support is fixed by means of a separate rigid steel frame onto machine frame. The blow back device is free accessible. The boom can be fixed in 15° steps by using the segment-disc in every position.



Working radius of the boom transport system



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