



Screw Sampler Mixing Tank (SMX)

Contact us directly.

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What does it do?



The Screw Sampler Mixing Tank (SMX) is designed to create an average composite sample from continuous or intermittent increment extraction of dry non-sticky powdered free-falling material from a chute or in a silo. The SMX is the standard in many cement plants where extraction and integrated mixing is required. The mixing function of the SMX provides for more well-mixed samples compared to the SCR.

What's the benefit?

- The SMX is compact in size and is therefore easy to install.
- The SMX can prepare samples automatically or manually.
- Compared to a manual mixing, the SMX provides automatic, continuous mixing at the sampling location.
- The control system ensures that the SMX continuously collects samples with correct timestamps and that samples are mixed continuously.
- This mixer tank design ensures that the sampled material represents an optimal average of the material captured by the screw intersect of the primary falling flow.
- As opposed to manual grab sampling, the SMX provides an automated sample that eliminates tedious and hazardous work.
- Can be used in vertical or inclined chutes (up to 30°).
- Can be used both in rectangular and circular chutes.
- It can be used in various positions and can be adjusted to the most optimal position.
- The mixing tank is provided with an observation window and has an overflow to safeguard against overfilling.

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How does it do it?

The SMX is driven by a geared motor coupled to a transport screw that is placed inside a fixed tube with a opening that allows the free falling material to enter. The SMX can be mounted in chutes (rectangular or circular) with maximum inclination of 30°. The screw continuously transports the extracted material into a mixing tank, where it is mixed by impellers attached to an extension of the screw conveyor shaft. The mixed sample is extracted manually from the mixing tank into a sample container (volume app. 1.4 l).

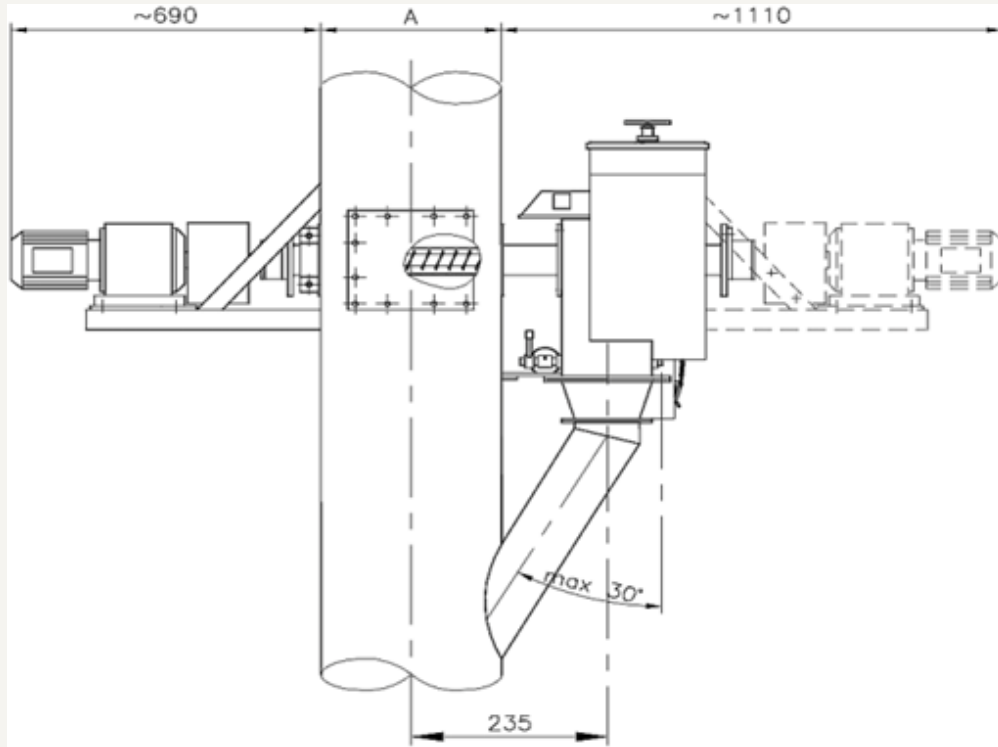
This mixer tank design ensures that the sampled material at all times represent an optimal average of the material captured by the screw intersect of the primary falling flow. The mixing tank is provided with an observation window and has an overflow to safeguard against overfilling. Excess sample material is returned to the main material stream by gravity.

Specifications:

The sampler is made from mild steel and painted according to M&W standard colour RAL 5010, topcoat. Polyester Powder brightness 30.

Total Length:	1110 mm.
Screw Diameter:	Ø 50 mm.
Mixing Tank Volume:	~ 25 litre (effective)
Weight:	App. 90 kg
Drive Unit:	Geared Motor
Main Voltage:	As required. Double acting cylinder (automatic sampling and discharge)
Pneumatics:	5-10 bar
Signal:	REED-switch

Drawing.



What is the standard?

M&W JAWO Sampling equipment and sampling systems operate in accordance with approved international material standards such as ISO, ASME, GOST, EN as well as DS3077 (2013). All sampling equipment and solutions aim for compliance with the principles laid down in the Theory of Sampling (TOS) and gives our customers reliable knowledge of the material properties such as moisture content, particle size distribution, mineral proportions, and content grade essential for commercial, operational, and technical characterization.

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Variants/Options.

Option 1:

The SMX can be supplied with local control.

Option 2:

The SMX is also available with approval for working with ATEX.

Option 3:

The motor can be equipped with a frequency converter to enable adjustable speed.

Option 4:

As an option the SMX can be supplied in stainless steel AISI304.

Option 5:

The mixed test sample can as an option be automatically discharge by use of two air piston cylinders.

Nota Bene 1

The quotation does not include a local control panel and reject pipe.

Nota Bene 2

The SMX operates under the assumption that the cross-section of the falling material is of uniform composition, allowing it to be sampled by a linear transect only. The degree to which a screw sampler can obtain a fit-for-purpose representativity status is dependent upon the specific heterogeneity characteristics of the material sampled. M&W offers customers a facility for quantitative assessment of the performance following one or several types of analyses such as variographic or replicate analysis based on the customer's material.

About M&W.



Mark & Wedell A/S (M&W) is a global mechanical/electrical engineering and manufacturing company. M&W serves a solid and growing international customer base within the global mining-, minerals-, metals-, power generation- and big science markets.

We develop, engineer, and produce high quality mechanical and electrical machines, instruments, and solutions. Our brand JAWO and unique know-how is well recognized in our markets and among our customers due to more than 40 years of experience.

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