

Production of soft gelatine capsules

The production of soft gelatine capsules requires a gelatine solution, which is used to form the capsule shell. This solution is produced by mixing gelatine granules, water and a plasticiser in a melter.

After mixing, air bubbles must be removed from the gelatine solution, as these can cause weak spots in the gelatine shell - such weak spots can cause the capsules to break.

The air bubbles are removed by creating a vacuum in the melter, which not only removes the air but also water from the solution as a side effect. To ensure the correct balance between the removal of water and air bubbles, the MARIMEX VA-100B-LT viscometer is used. It enables operators to recognise the exact moment when the deaeration process is complete. As a rule, a viscosity value between 12,000 and 18,000 cP (at 60°C) is expected when the melter is emptied.

Without measuring the viscosity, the results in the production of gelatine solutions would fluctuate considerably due to different formulations and varying properties of the raw materials (e.g. varying viscosity of the gelatine granules). Such fluctuations must be avoided in the pharmaceutical industry.

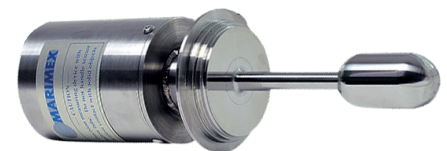
The MARIMEX viscometer ensures the consistency and quality of the gelatine solutions, which makes a significant contribution to the safety and efficacy of the soft gelatine capsules produced.

ViscoScope® Viskosimeter configuration

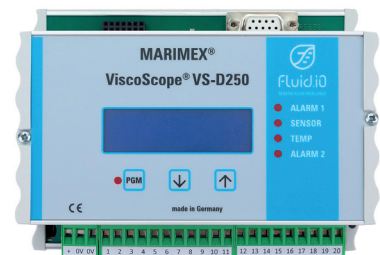
- ✓ Sensor: VA-100B-LT with Varivent® fitting 50 - 1.4404/316L
- ✓ Calibration range: 0 - 25,000 mPa.s x g/cm³
- ✓ Varivent flange type T for dead space-free tank installation
- ✓ Transmitter: VS-D250 with 2 analogue outputs (viscosity + process temperature), in control cabinet

Installation

The sensor is installed in the base of the melter.



VA-100B-LT with Varivent®
Fitting 50 – 1.4404/316L



VS-D250 mit 2 analogue outputs

Benefits

- ✓ Consistently high product quality despite fluctuations in pipe material
- ✓ optimal balance in the separation of air bubbles and water



DESIGN
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