

Volution: Ring Shear Tester for Measurement of Powder Flow under Load



Flowability of Powder under Load: measurement in ring shear cells is used to determine flowability data according to the Mohr-Coulomb model. The resulting values can be used for designing silos or to predict powder flow under load.

Advantages of Volution Powder Flow Testers: measurement cells can be easily removed from the instrument for cleaning, filling or time consolidation in a climate chamber while the instrument is free for other runs. Completely automated measurement. All forces and travel are controlled and measured by the instrument. Thus the whole course of the measurement is registered. The software calculates all results automatically.

ION charge module: this optional module measures the charge that is built up on the powder surface after a flat plate of any material has moved over the powder surface for a defined time at defined pressure and speed. Charge of the powder has an important influence on flow behavior and adhesion to surfaces.



Measurement Results:

- Cohesion
- Angle of Internal Friction
- Yield Locus, Flow Function
- Absolute and Relative Flowindex
- Compressibility
- Time Consolidation
- Temperature, Humidity
- Wall Friction
- Electrostatic Powder Charge

Technical Data:

- Instrument Size 22 x 15 x 50 cm
- Weight 12kg
- Sample Size: 30 ccm or 180 ccm
- Stress Range: 0.1 – 250 kPa
- Shear Speed: 0.1 – 30 mm/min

