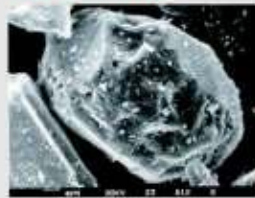


Nano Grinding in Stirred Media Mills

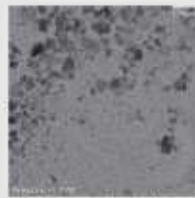
NETZSCH

Real Grinding

Fused corundum



SEM image before grinding



TEM image after grinding

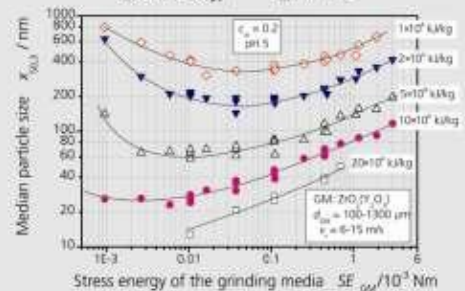
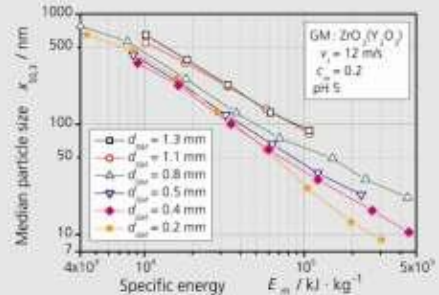


$$E_m \propto SN \cdot SE_{GM}$$

$$SE_{GM} \propto d_{GM}^3 \cdot \rho_{GM} \cdot v_t^2$$



Influence of the grinding media size and the stirrer tip speed



ZETA® RS

This mill is specially designed for real grinding and mild dispersion down to the nanometer size range.

Type	Zeta® RS 2	Zeta® RS 4	Zeta® RS 10	Zeta® RS 25
Drive power [kW]	7.5	15	25	45
Speed [min⁻¹]	400 - 3300	250 - 2500	300 - 2000	250 - 1500
Batch sizes [l]	10 - 50	20 - 200	100 - 1000	500 - 2000
Grinding chamber volume [l]	2	4	10	25
Grinding media diameter [μm]	50 - 300			

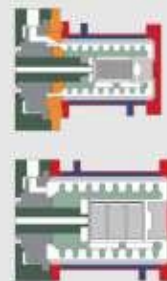


PE agitator shaft

- The Zeta® RS can alternatively be driven with rotating screen or ODC (Open Dynamic Classifier) system.
- The Zeta® RS is available in steel, ZrO₂, SiC / Si₃N₄, PU.



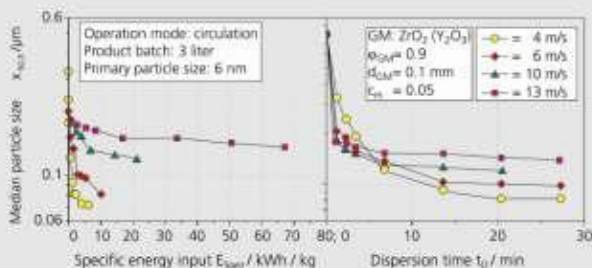
Zeta® RS 2



ZrO₂ agitator shaft



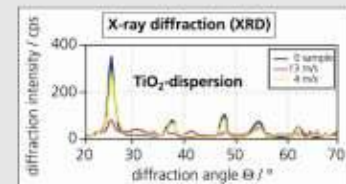
Easy handling by swiveling grinding tank.



Mild Dispersion

Dispersion of TiO₂ particles for photo catalysts with very good dispersion progress

Change from a crystalline to an amorphous structure
Therefore, smooth conditions are necessary



High stirrer tip speed



Small stirrer tip speed

