



SUPRATOR® INLINE HOMOGENISERS FOR EMULSIONS

Suprator® inline homogenisers are based on the rotor/stator principle. More than 60 years, they are in use in many different and challenging applications in emulsion technology.

Among others, the Suprator® machine is in use for the production of high-quality emulsions in the food industry (e. g. tomato soups), in the chemical industry (epoxy/resin-emulsions) and in the bitumen industry (e. g. polymer modified bitumen/water-emulsions)

A quality criteria of emulsions is the droplet-size distribution in the disperse phase. The required energy density is deployed very efficiently in the process by Suprator® inline homogenisers.

The product passing through the Suprator® machine is subject to several physical mechanisms:

- ▶ Multistage hydrodynamic high-shear
- ▶ High-frequency oscillating forces
- ▶ Intensive micro-volume mixing
- ▶ Pressure increase up to 11.5 bar
- ▶ Shear-rate above $200,000 \text{ s}^{-1}$ at circumferential speed of the rotor up to 57 m/s

High performance in a large number of different product applications is considered by deploying a variety of toolsets.



Nozzle tool



Tooth and Chamber tool

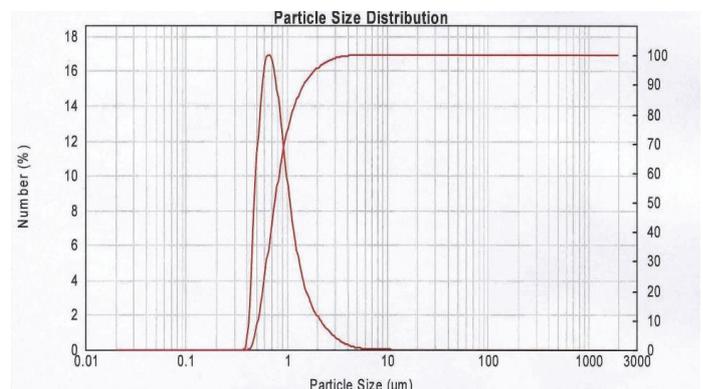


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			S200	S300	S400	S450
Volume flow*	m ³ /h	Tooth and chamber tool	< 10	< 24	< 35	< 55
		Nozzle tool	< 12	< 25	< 50	< 70
Flange connection (DIN 2635)		Suction side	DN 40	DN 65	DN 100	DN 125
		Pressure side	DN 32	DN 50	DN 80	DN 100
Rotor speed	rpm	< 7.500	< 5.400	< 3.600	< 3.000	
Motor throughput rate (DIN 42673)	kw	8-30	15-50	30-160	75-160	

*based on water at 0.35 bar feed pressure

As an example for the performance of Suprator® inline homogenisers the droplet-size distribution of a resin-emulsion-system is presented.



Additionally we offer the Suprator® S100 with tooth and chamber tool, for laboratory and small production. The motor is driven by a frequency converter. The throughput rate covers the range of 50–500 l/h.