



ROSENMUND

Universal Dryer

The innovation: agitator and chopper in one system.

The horizontal construction with an integrated agitator/chopper system and full-area heating allows an unequalled application spectrum and extremely short drying times with the highest possible fill volume.

The better the mixing, the more efficient the drying. To achieve a maximum drying performance, Rosenmund has integrated a high-speed rotating chopper in one of the two agitator arms of the horizontal dryer. This chopper moves through the product with the agitator, efficiently breaking up lumps of agglomerates (wet or dry) but also providing additional mixing capability.



Fast drying through full-area heating.

Maximum heat transfer input to the product is achieved by heating the total vessel area and the agitator. A further advantage is the formation of an especially fine product powder in the dryer, which accelerates the heat transfer and thus the drying. The particle size of the product can be decreased further by the addition of a fixed stator to the agitator system.

Wet or dry chopping.

Wet or dry chopping with the chopper/stator combination can make further milling or sieving steps unnecessary. The wet milling reduces the thermal strain on the product. In addition, a good milling effect is often achieved with an appropriate grain size distribution. For products that are sensitive to high-shear agitation, the chopper can be removed quickly and easily.

Huge flexible degree of filling due to a high torque and a very good mixing effect of the agitator/chopper system.

Hydraulic drives for the agitator and chopper ensure a consistently high torque, even with low rotational speeds. Therefore the dryer can be filled between 20-90% of total capacity whilst retaining optimal agitation, mixing and drying performance. This huge degree of flexibility makes it possible to dry batch sizes that have greatly varying volumes and products that have greatly varying physical characteristics. Regardless of whether you have suspensions, solutions or filter-moist products – lumpy transition phases in which the agitator and chopper require more power can be easily overcome.



Rosenmund
Universal Dryer 8000 l



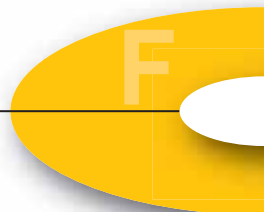
Assembly:
Rosenmund Standard Dryer 4000 l



Agitator with chopper



Agitator with chopper





Agitator to wall clearance prevents crust formation and product overheating.

The special construction of the agitator (results in a typical wall clearance of 2-5 mm) therefore the entire interior surface of the dryer is evenly coated. Crust formation is therefore absolutely minimised and heat is applied evenly to the product during the entire drying process. Since the agitator is supported at both ends of the shaft, it results smaller wall clearances than those in spherical and pan dryers can be achieved whilst maintaining the very high agitator torque!

Special version.

Standard Dryer with three-arm agitator instead of chopper.

Easy inspection through the front door.

The hinged front door, which can be quickly and easily opened for inspection, provides access to the entire diameter of the cylinder. The agitator is held in place by the main bearing.



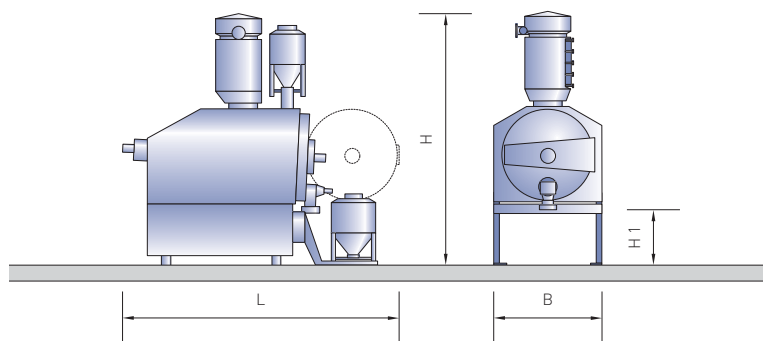
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Important advantages summarised:

- Chopper integrated in the agitator arm.
- Reliable lumpbreaking.
- Small particle / grain size.
- Wet and dry milling.
- Drying independent of the initial product consistency.
- Small agitator to wall clearance.
- Hinged door for easy inspection.
- Full-surface heating of the agitator and vessel.
- High torque means maximum filling volume.
- Complete encasing of the drive system.
- Single-nozzle device on the agitator for applying nitrogen (N₂) or liquids for granulation.
- Pilot scale trials can be conducted in the Rosenmund technical centre.



Chopper



Nominal volume l	Used volume l	Drive power kW	Empty weight approx. kg	H mm	L mm	B mm	H1 mm
50	50	11	1400	3450	2000	750	950
100	100	11	2700	3650	2300	950	950
200	200	15	3500	3850	2700	1100	950
400	400	30	4000	4250	2800	1300	950
600	600	37	4800	4600	2900	1450	950
800	800	37	5500	4600	3100	1450	950
1000	1000	45	7200	5500	3400	1700	1400
1500	1500	75	8000	5800	3800	1950	1400
2000	2000	75	8500	5800	4100	1950	1400
3000	3000	75	10000	5900	4100	2400	1400
4000	4000	75	11000	6000	5000	2400	1400
6000	6000	90	12000	7100	5400	2600	1400
8000	8000	110	14000	7300	5700	2800	1400