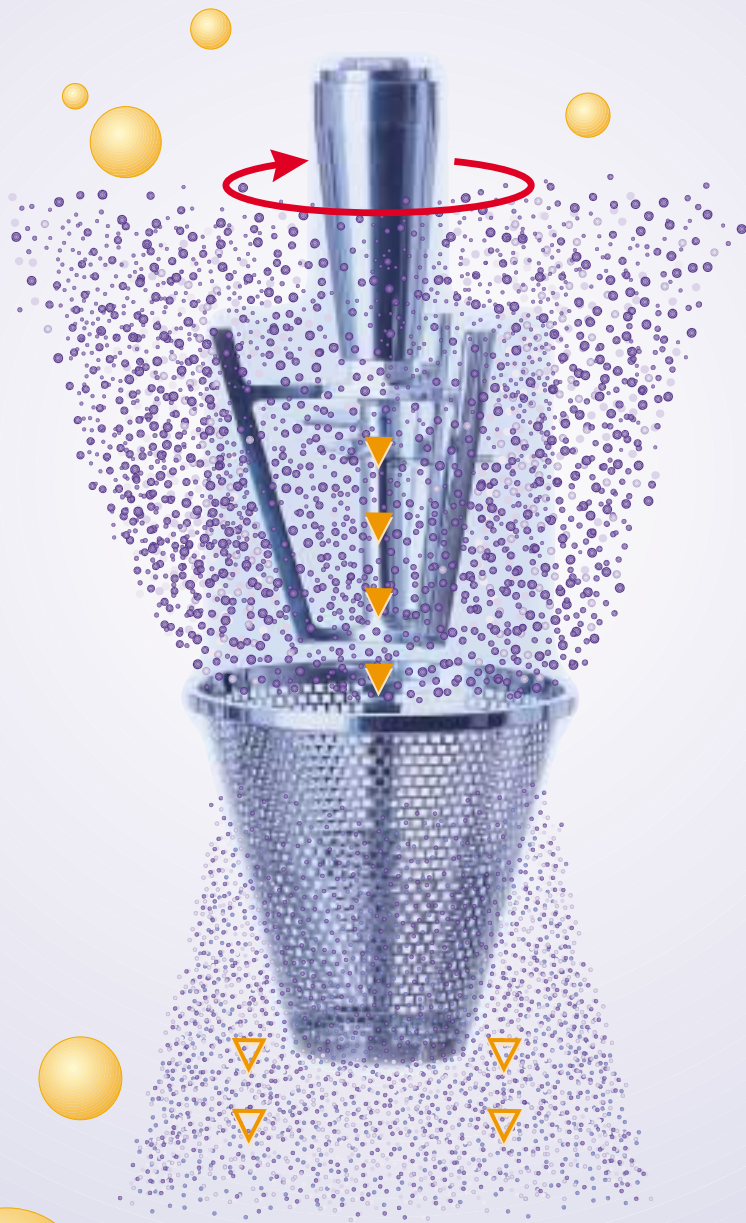


# Sieving & Milling Technology



**GS**  
**GSF**  
**OR**  
**VDS**



**We set the standards**

# Innovative Sieving & Milling Technology

**Equipment in modern design. Compact. Robust and maintenance-free.**

Sieves and mills play a key role in the areas of pharmaceutical industry, food, feed and fine chemicals.

Glatt offers the know-how for a wide range of different requirements:

- **Sizing** of products after fluid bed processing or after wet granulation
- **Crushing/milling** of agglomerates, lumps and compacted products to a desired maximum particle size
- Additional for some types **Dosage, classification and separation modes**

All Glatt sieves and mills are basically made of high-grade stainless steel with a ground surface finish.



*Sizing of granulates after fluid bed processing using the rotor mill GS 180*

## Content

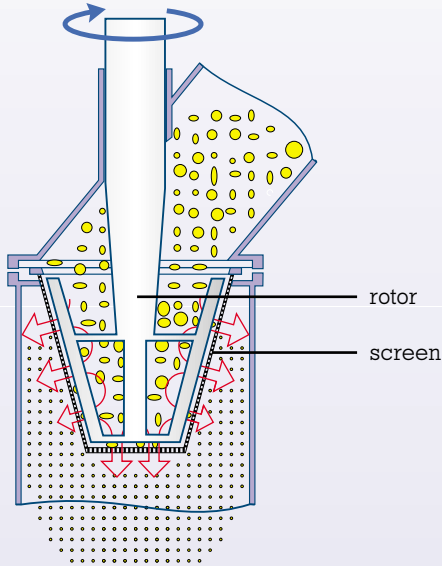
Innovative Sieving & Milling Technology	2
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Field of Application	Rotor Mills		Oscillating Reducer OR	Vibratory-Dosage Sieve VDS
	GS	GSF		
Sizing of dry powders and granulates	✓	○	✓	∅
Sizing of wet powders and granulates	○	✓	○	∅
Sizing of sensitive powders and granulates	○	○	✓	∅
Crushing/milling of compressed products	✓	✓	○	∅
Separation of undesired materials	∅	∅	∅	✓
Classifying	∅	∅	∅	✓
Dosage of powdery products	∅	∅	○	✓

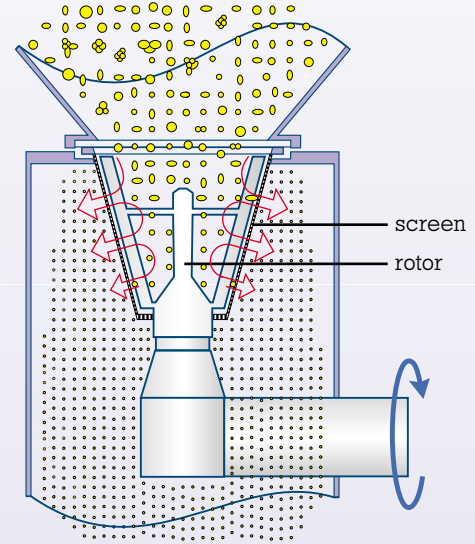
✓ - very suitable, ○ - partially suitable, ∅ - unsuitable

# Principles of Operation

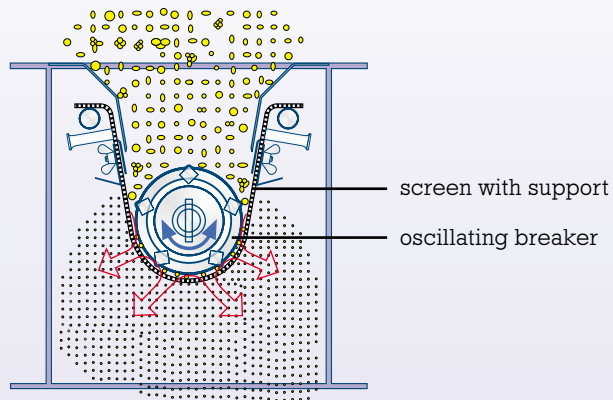
**Rotor mill type GS**



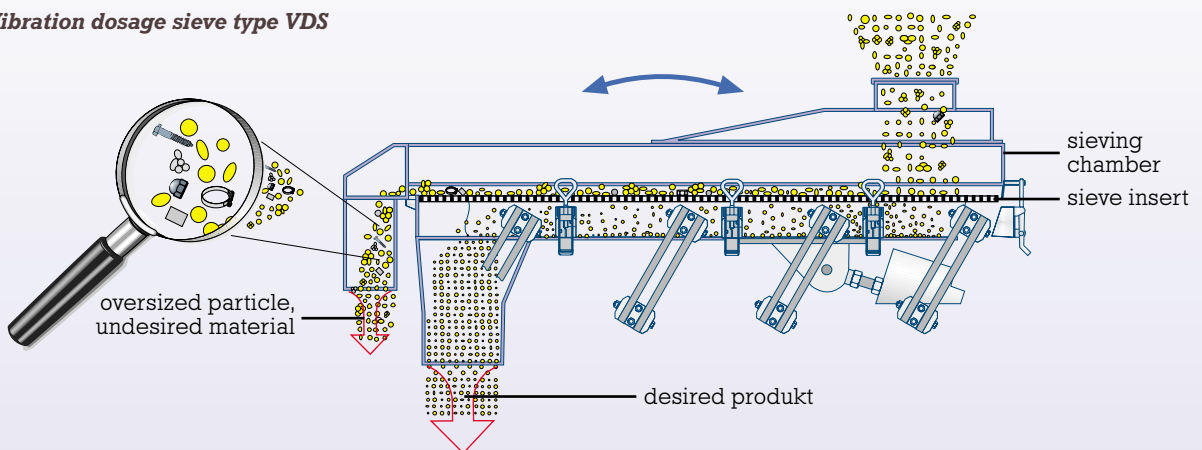
**Rotor mill type GSF**



**Oscillating reducer type OR**



**Vibration dosage sieve type VDS**



# Rotor Mill GS

**High milling performance.  
For dry powders and granulates.**

The Glatt Rotor mill GS - for sizing of raw materials and products during the dispensing and after the discharge of granulation units.

## Operation

Rotor drive above the screen  
(see principle of operation on p. 3).

## Optimum adaptation on product and process:

- 6 different sizes
- stand-alone, hitched up, mobile, height-adjustable or hinged design
- selection among 8 different rotor profiles
- 3 types of screens with more than 30 hole configurations
- variable rotor speed adjustment
- optimum adjustment of the gap between rotor and screen
- friction inserts for the crushing of tablets and lumps

Troughputs from 20 to 5.000 kg per hour are possible, depending on unit size, process and product parameters.

All GS mills are optionally available in SC-SuperClean® (Clean In Place) and PRO (12 bar pressure-shock-resistant) design.



*GS 100 (laboratory table top)*



*GS 180 on a manually driven mobile lifter*



*Hitched up GS 180-SC in total containment system*



*GS 180, bin-to-bin milling after blending*



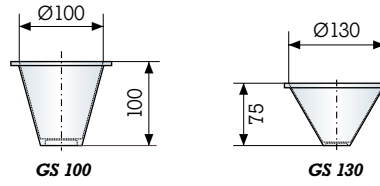


# Rotor Mill GS



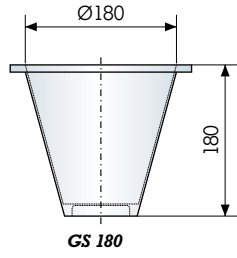
GS screens of different types and sizes

## Screens - types and sizes

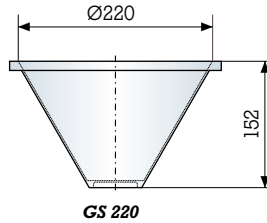


GS 100

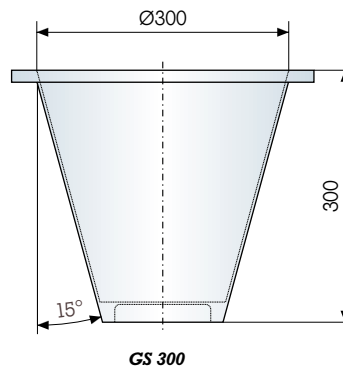
GS 130



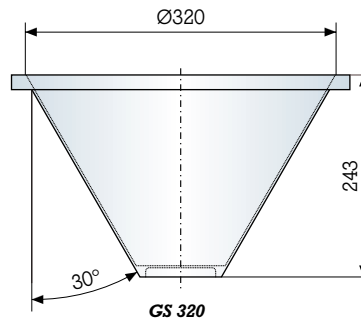
GS 180



GS 220

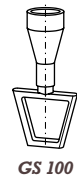


GS 300

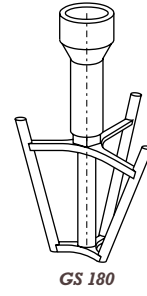


GS 320

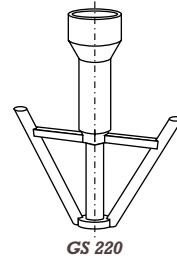
## Rotor design - Examples



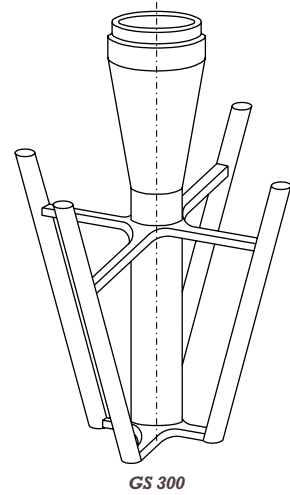
GS 100



GS 180



GS 220



GS 300

## Screen types



Round hole screen

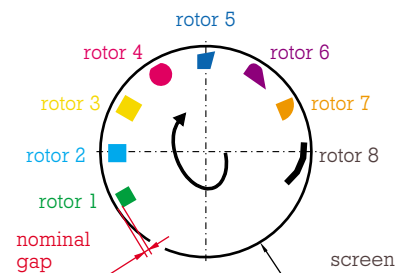


Square hole screen



Friction hole screen

## Available rotor types



# Rotor Mill GSF

**High throughputs.  
For wet granulates  
and agglomerates.**

The Glatt rotor mill GSF - for sizing of wet products after high shear granulation.

## Operation

Underdriven rotor  
(see principle of operation on p. 3).

## Optimum adaptation on product and process:

- 6 different sizes
- mobile, height-adjustable, hinged or rail-mounted design
- selection among 5 different rotor profiles
- 3 types of screens with hole sizes from 1 mm up to 20 mm
- variable rotor speed adjustment
- optimum adjustment of the gap between rotor and screen
- friction inserts for the crushing of lumps

Throughputs up to 5.000 kg per hour are possible, depending on unit size, process and product parameters.

All GSF mills are optionally available in SC-SuperClean® (Clean In Place) and PRO (12 bar pressure-shock-resistant) design.



*GSF 180 on hinge*



*GSF 180-SC in-line unit on hinge, undocked*



*GSF 300-SC in-line unit on rail system, docked*



*GSF 180 stand alone on height adjustable trolley*



# Rotor Mill GSF

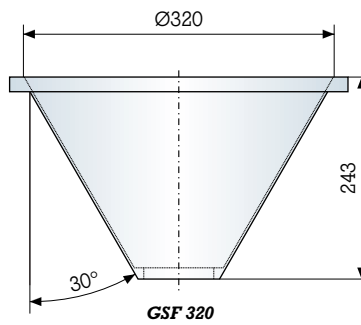
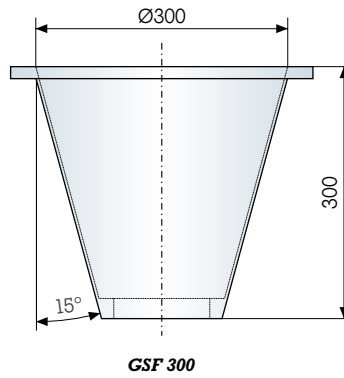
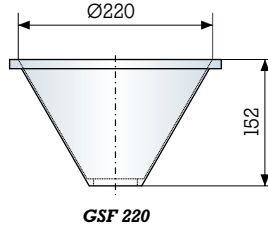
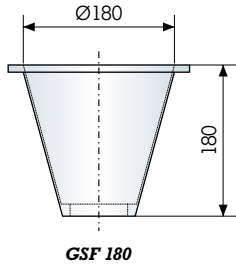
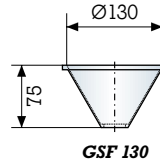
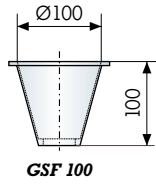


GSF screens with different holes

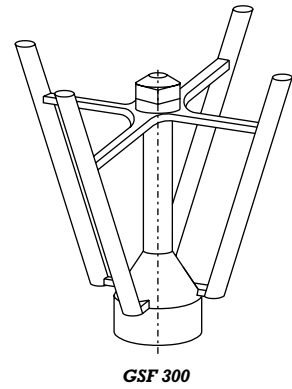
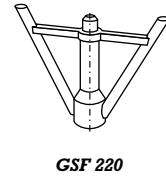
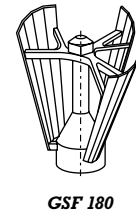


Different GSF rotors

### Screens - types and sizes



### Rotor design - Examples



### Screen types



Round hole screen

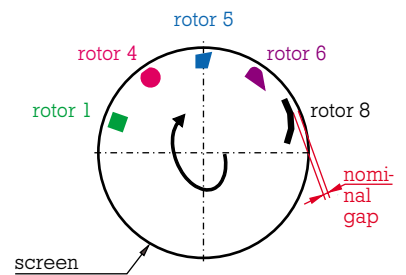


Square hole screen



Friction hole screen

### Available rotor types



# Oscillating Reducer OR

**Gentle to  
the Product.  
High Performance.  
Many Applications.**

The Glatt Oscillating Reducer - universal and usable for various product features, especially for sensitive sizing of powders and granulates

## Operation

Oscillating rotor

(see principle of operation on p. 3).



*Oscillating reducer OR 5030, milling chamber open*



*Inline unit OR 5030 with star feeder  
on a mobile lifter*



*Inline unit OR 5040 fed by a star feeder*

## Optimum adaptation on product and process:

- 3 different sizes
- stationary, mobile or in hinged version
- selection among screens with approx. 20 different mesh sizes and wire diameter
- variable adjustment of the rotor oscillation frequency
- optimum adjustment of the gap between rotor and mesh screen
- dosage operation in connection with a downstream dosage unit (e.g. star feeder)

Throughputs up to 2.000 kg per hour are possible, depending on unit size, operation mode and product characteristics.



*Excenter tensioning spindles, rotor and mesh screen*





# Vibratory Dosage Sieve VDS

**Product sensitive.  
Additional dosage modes.  
Ideal for dispensing.**

The Glatt Vibratory Dosage Sieve for

- classifying of dry powders and granulates
- separating of oversized and foreign particles
- dosing application into downstream processes with an accuracy of approx.  $\pm 200$  g

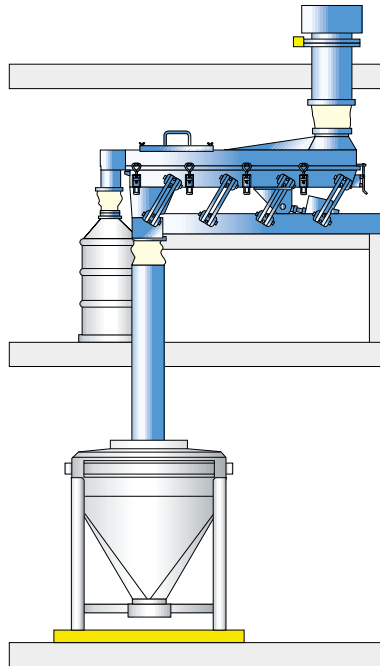
## Operation

A screen deck driven by a vibration motor generates high-frequent horizontally motions

(see principle of operation on p. 3).

## Optimum adaptation on product and process:

- selection among screens with almost any mesh sizes
- variable adjustment of the vibration frequency and oscillation amplitude



*Dispensing into an IBC*



*VDS, open design*



*VDS, installed in a discharge station for super sacks*

Throughputs up to 12 m<sup>3</sup> per hour are possible, depending on unit size, operation mode and product characteristics.



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the standards**