

# Fluid Bed Dryer TG 200

Rapid and gentle



TG 200 with drying container of glass

## Fluidized bed drying in the laboratory

The dryer TG 200 is used in quality control, sample preparation and R&D departments. It permits the gentle drying of organic, inorganic, chemical or pharmaceutical bulk materials **without localized overheating**. Suitable materials can be coarse, fine, crystalline, fibrous or leafy. The powerful fan ensures optimal air throughput so that the products to be dried are loosened up and thoroughly mixed. With the interval operation the fluidized bed is mixed even better. Temperature, drying time and air volume can be set digitally and adjusted continuously.

In comparison to conventional drying ovens or microwaves, the fluidized bed drying of the TG 200 results in a considerably better performance. The fan produces an air volume of 185 m<sup>3</sup>/h in idle speed. **The average drying time lies between 5 and 20 minutes**, depending on the type, amount and moisture content of the material. This represents a substantial saving in time and is also favorable for the product which is exposed to less thermal stress.

### The TG 200 is suitable for the following applications:

- × Drying of sample materials such as coal, fertilizer, plant parts, plastics, recycling wood, sawdust, secondary fuels, soils and waste. As the motor is located outside the filtered air flow, the TG 200 can also be used for drying more sensitive materials, like e.g. **pharmaceutical products, without the risk of sample contamination**
- × Drying of test sieves

The delivery scope of the fluid bed dryer includes a clamping device "comfort" with filter bag. It is used for attaching the 6 l drying container. Test sieves with 200 mm diameter are mounted directly on the TG 200 without using the drying container. (Adapter for 8" /203 mm sieves available on request).



Drying test sieves with the TG 200

### Benefits at a glance

- × Gentle drying, dispersing and mixing also of temperature-sensitive materials
- × Very short drying times
- × Digital parameter setting
- × 9 SOPs can be defined and stored for routine applications
- × Interval operation
- × Versatile with a choice of drying containers and exhaust air filters
- × Easy handling with clamping device "comfort"
- × Motor without brushes allows for long service life
- × Conforming to CE requirements
- × 2-year warranty

Performance data		TG 200
		<a href="http://www.retsch.com/tg200">www.retsch.com/tg200</a>
Applications	drying	
Feed material	bulk materials and solids, >63 µm	
Temperature control	continuously adj., 40 - 150 °C (dependent on air throughput rate)	
Time setting	continuously adjustable, 0 - 99 min, continuous operation	
Drying time	5 - 20 min, depending on product, quantity, moisture content	
SOPs	9, programmable	
Container volume	1 x 6 liters or 3 x 0.3 liters	
Technical data		TG 200
W x H x D	400 x up to 1000 x 480 mm	
Net weight	approx. 21 kg	
Noise values (Noise measurement according to DIN 45635-31-01-KL3)		
Measuring conditions: Dried product: clay; max. heating power; max. air volume		
Emission value with regard to workplace	L <sub>pAeq</sub> 75 dB(A)	

## Accessories for the TG 200

**6 l drying container, glass or stainless steel**, with base made from Conidur stainless steel perforated plate with 63 µm holes. The glass container allows for the visual control of the dispersion degree of the sample, during the drying process. Thus, the operator can directly adjust the air flow if necessary.

### Clamping device "comfort" with replaceable filter fleece insert

The filter fleece is mainly used for samples with a particle size below 100 µm. It allows for sample recovery with minimal loss. The filter can be quickly and easily replaced after each application to avoid cross contamination.

*Drying container of stainless steel*



*Clamping cover with replaceable filter fleece insert*

*TG 200 with attachment with 3 glass containers à 0.3 liters*



### Attachment with 3 removable glass containers (each 0.3 l)

It permits the simultaneous drying of three samples, also of different materials, under the same conditions. This helps to avoid cross contamination. The glass containers can be easily locked and released with a single turn. The perforated plate is made from stainless steel. Container lids with filter fleece inserts are available as optional accessories.

**Order data on page 15**

## TG 200 technology

Drying in the fluid bed dryer makes use of the fluidized bed process, a technique similar to the one used in large industrial dryers. Ambient air is drawn in through a filter. A blower moves the air across the heating elements, and ultimately forces it through the perforated plate and into the detachable drying container. The solid particles are blown upward and agitated and thus kept separate one from another. This helps to avoid a caking and sticking of the particles as it often occurs when other drying methods are used.

The air stream extracts moisture from the particles and then exits through the filter bag in the cover. Using the quick-clamp cover with the filter fleece insert is advisable when dealing with products finer than 100 µm in diameter. The 1000 watt blower provides an air volume of 185 m<sup>3</sup>/h at idle speed; heater output is 2000 watts. The air volume, heating power and temperature are infinitely adjustable. Temperature control is effected using the display gauge.



<b>Fluid Bed Dryer TG 200</b>	<b>Item-No.</b>
Fluid Bed Dryer TG 200, incl. clamping lid "comfort" with filter bag (Please order drying container separately)	
TG 200 for 200-240 V, 50/60 Hz	70.760.0001
<b>Drying container TG 200</b>	
Drying container of glass, 6 liters	72.783.0001
Drying container of stainless steel, 6 liters	72.783.0002
Drying container of glass, 3 x 0.3 liters (incl. holder)	72.002.0005
<b>Accessories TG 200</b>	
Clamping lid "comfort" with filter insert (exchangeable), incl. 10 replacement filters	72.643.0001
Filter insert for clamping lid "comfort", 10 pieces	72.143.0001
Clamping lid "comfort" with filter bag	72.107.0002
Filter bag for clamping lid "comfort"	02.186.0015
Cover with filter insert for 0.3 liters drying containers, 3 pieces	72.107.0001
Filter insert for 0.3 liters drying container, 1 piece	03.186.0024
Spare drying container of glass, 0.3 liters, 1 piece	02.045.0020
Filter bag for drying container 0.3 liters, 1 piece	02.186.0004
Adapter for drying sieves 203 mm Ø	72.001.0005
Dust filter for blower, 10 pieces	72.143.0003
Quick-clamping elements for TG 200, 1 pair	72.737.0003
Rods, smooth, 1 pair	72.742.0001