

Distillation oven, transparent, B-585 Kugelrohr

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- Single convertible platform for distillation, drying, freeze drying and sublimation
- Ideal for small sample quantities
- Glass oven allows visibility of the entire drying/distillation process
- No contamination of samples
- Inert gas venting port
- Rapid, precise heating cycles
- Programmable and can control a vacuum pump.



The B-585 platform is the basis for the Kugelrohr ball-tube distillation oven and the drying oven and variants. All instruments utilise the specially designed oven assembly which allows the user to observe a sample during the distillation/drying procedure. The oven comprises two borosilicate glass tubes, the inner of which is coated with a completely transparent, electrically conductive layer which allows the inside of the oven to be heated directly in a fast and controllable manner. A safety circuit monitors the internal oven temperature to prevent over-heating and a protective wire screen prevents any accidental contact with the outside of the oven. Heating rates are rapid, the oven temperature being measured by an integral probe and indicated on the display. In programmable mode a 3 step temperature/time profile can be created and up to 10 programs can be stored. Additionally, the B-585 can also communicate with the Büchi V-500 vacuum pump series and can turn the pump on or off as desired. For distillation applications a continuously adjustable external rotating drive unit is employed. This allows samples to undergo gentle agitation. For drying applications the drive unit may be removed and replaced with the drying, sublimation or freeze drying accessories.

B-585 Kugelrohr distillation

The very short distillation path makes this technique particularly suitable for distillation of low liquid volumes (up to 30mL depending on flask size). The high vacuum makes the oven ideal for use with high boiling point heat-sensitive samples. For fractionation, the boiling points should ideally be about 20°C to 30°C apart. When multi-bulb tubes are used, the distillation can be repeatedly carried out in the same tube to increase purity. The Kugelrohr (ball) tubes comprise a series of bulbs connected by ground glass joints with a jointed tube at one end. As many balls as there are components in the sample to be distilled are required.

The B-585 Kugelrohr comprises base unit with oven, rotating drive unit, ball tube with three bulbs, cooling device and a rotation drying flask.

Technical Specification

Volume, mL	5 to 30 (60mL with rotating drying flask)
Rotational speed, rpm	0 to 50 (continuously variable)
Temperature range, °C	40 to 300
Heating time, min	10min from 40°C to 300°C (differs for under-voltage)
Program memory	10 programmes each comprising up to 3 time and temperature segments
Operating conditions, °C	5 to 40
Vacuum, mbar [torr]	>1
Dimensions [w x d x h], mm	650 x 300 x 300
Mass, kg	11.5
Electrical supply	100-230V 50/60Hz

Catalogue No	
DPM-585-010W	

Accessories and spares

Catalogue No	Description
DPM-312-510Q	Rotation drying flask, 60mL
DPM-312-512M	Ball tube with 2 bulbs, NS 14.5/23 joints, 40mL capacity
DPM-312-514Y	Ball tube with 3 bulbs, NS 14.5/23 joints, 20mL capacity
DPM-312-516E	Ball tube with 4 bulbs, NS 14.5/23 joints, 10mL capacity

Conversion accessories

Catalogue No	Description
DPM-312-500T	Drying accessory
DPM-312-502P	Sublimation accessory
DTF-585-505V	Freeze drying accessory. Requires either DTF-585-510F or DTF-585-515S
DTF-585-510F	Condenser with receiving flask for freeze drying accessory
DTF-585-515S	Cold trap with receiving flask for freeze drying accessory