

Laboratory Glass Drying Tube Desiccant Gas Purification Tube

Item Number: KT-GZG



Introduction

Engineered from premium borosilicate glass, this laboratory drying tube provides exceptional thermal stability, superior chemical inertness, and reliable moisture absorption. Safeguard sensitive chemical reactions, gas purification processes, and analytical procedures with dependable glassware built for rigorous laboratory research applications.

[Learn More](#)

Application	Description	Key Benefit
Moisture-Sensitive Organic Synthesis	Attached to condenser tops during Grignard preparations, Friedel-Crafts alkylations, and acylations to prevent atmospheric moisture ingress.	Preserves organometallic reagent activity, prevents hydrolysis of water-reactive intermediates, and maximizes chemical yields.
Analytical Reagent Storage Protection	Fitted to anhydrous solvent dispensing carboys and volumetric titrant reservoirs to equalize pressure during liquid withdrawal without admitting humidity.	Maintains standardized reagent concentrations and extends the shelf life of Karl Fischer titrants and non-aqueous electrolytes.
Carrier Gas Conditioning for Chromatography	Placed in line with carrier gas lines for gas chromatography and elemental analyzers to strip residual water vapor from inert gas supplies.	Lowers chromatographic baseline noise, protects capillary column stationary phases, and improves peak resolution.
Schlenk Line and Inert Atmosphere Manifolds	Installed as inline safety traps and secondary desiccant chambers between bubblers, inert gas manifolds, and synthesis vessels.	Prevents back-diffusion of moisture and mineral oil vapors, ensuring an oxygen- and moisture-free working environment.
Pharmaceutical Active Ingredient Crystallization	Connected to reaction vessels and crystallizers during pharmaceutical crystallization runs requiring strictly controlled anhydrous solvent media.	Prevents premature crystallization and solvate polymorphism caused by uncontrolled atmospheric humidity.
Glove Box and Antechamber Vent Filtration	Employed as disposable or replenishable gas purification cartridges to scrub purge gas entering sensitive atmosphere handling chambers.	Protects battery electrolyte formulations and air-sensitive cathode powders from moisture-induced degradation.
Environmental Gas Sampling Trains	Integrated into portable and benchtop gas scrubbing trains to desiccate atmospheric or flue gas samples prior to sensor analysis.	Eliminates condensation within downstream analytical instrumentation without scrubbing analyte gaseous components.

Model Item Number	Tube Form Factor	Standard Ground Joint Size	Desiccant Capacity (Approx.)	Total Length (mm)	Bulb Outer Diameter (mm)	Recommended Tubing I.D. (mm)
KT-GZG-S14	Straight with Single Bulb	14/20 Outer Ground Joint	20 mL	130	30	8
KT-GZG-S19	Straight with Single Bulb	19/22 Outer Ground Joint	30 mL	150	35	8
KT-GZG-S24	Straight with Single Bulb	24/40 Outer Ground Joint	50 mL	185	40	10
KT-GZG-B14	75° Bent with Single Bulb	14/20 Inner Ground Joint	20 mL	135	30	8
KT-GZG-B19	75° Bent with Single Bulb	19/22 Inner Ground Joint	30 mL	155	35	8
KT-GZG-B24	75° Bent with Single Bulb	24/40 Inner Ground Joint	50 mL	190	40	10
KT-GZG-U15	U-Shaped Dual Column	Plain End (Tubing Barbs)	60 mL	150	25	8

Model Item Number	Tube Form Factor	Standard GroundJoint Size	Desiccant Capacity (Approx.)	Total Length (mm)	Bulb Outer Diameter (mm)	Recommended Tubing I.D. (mm)
KT-GZG-U20	U-Shaped Dual Column	Plain End (Tubing Barbs)	100 mL	200	30	10
KT-GZG-D24	Double-Bulb Straight Tube	24/40 Inner Ground Joint	75 mL	220	42	10

Technical Parameter	Specification Value
Glass Classification	Type 1, Class A Borosilicate 3.3 (DIN ISO 3585)
Linear Coefficient of Thermal Expansion	$3.3 \times 10^{-6} \text{ K}^{-1}$ (20°C to 300°C)
Maximum Continuous Service Temperature	500°C
Annealing Point	560°C
Softening Point	820°C
Thermal Shock Resistance (ΔT)	150°C
Hydrolytic Resistance Class	Class 1 (ISO 719)
Acid Resistance Class	Class 1 (ISO 195)
Alkali Resistance Class	Class 2 (ISO 695)
Compatible Desiccant Media	Anhydrous CaCl_2 , Molecular Sieves (3A, 4A, 5A), Silica Gel, P_2O_5 on inert support
Retention Media Compatibility	Glass wool, quartz wool, cotton plug, sintered porous glass disc (grade 1/2)