



TOQUARTZ

Tech Specifications

Quartz Crucible

Integrated Engineering & Agile Production
for Demanded Specifications



TOQUARTZ®

TRANSPARENT QUARTZ CRUCIBLES

Product Overview



High-purity transparent quartz crucibles manufactured with SiO_2 content of 99.98% minimum. These crucibles offer exceptional thermal stability, excellent optical transparency, and superior electrical insulation properties. Highly resistant to acids, bases, and corrosive environments, making them ideal for laboratory instruments, optical instruments, and material analysis tests.

TRANSPARENT QUARTZ CRUCIBLES

Key Features

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- **High Temperature Resistance:** Operating temperature exceeds 1100°C with minimal thermal expansion
 - **Chemical Resistance:** Resistant to most acids, bases, and corrosive environments
 - **Optical Transparency:** 92-93% transparency in the visible spectrum (450-780nm)
 - **Electrical Insulation:** Outstanding electrical insulation properties
 - **Customization Available:** Wall thickness, dimensions, and special features can be tailored to your requirements

TRANSPARENT QUARTZ CRUCIBLES

Applications

- **Laboratory Instrument Manufacturing:** Integrated components for analytical equipment
- **Optical Instrument Production:** Components requiring high optical clarity
- **Material Analysis Testing:** High-temperature sample containment and processing
- **Research & Development:** Controlled environment chemical reactions
- **Academic Research:** Sample preparation and experimental procedures



SIZE CHART

ARC-SHAPED QUARTZ CRUCIBLES

Model	Capacity (ml)	Outer Dia. (mm)	Bottom Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-B001	5	25	18	31	1.5	99%-99.99%
AT-QTZ-B002	5	25	18	40	1.5	99%-99.99%
AT-QTZ-B003	10	30	23	42	2	99%-99.99%
AT-QTZ-B004	10	30	23	53	2	99%-99.99%
AT-QTZ-B005	20	35	25	45	2	99%-99.99%



SIZE CHART

ARC-SHAPED QUARTZ CRUCIBLES

Model	Capacity (ml)	Outer Dia. (mm)	Bottom Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-B006	20	35	25	59	2	99%-99.99%
AT-QTZ-B007	30	40	30	54	2	99%-99.99%
AT-QTZ-B008	30	40	30	68	2	99%-99.99%
AT-QTZ-B009	50	45	33	63	2	99%-99.99%
AT-QTZ-B010	50	45	33	75	2	99%-99.99%



SIZE CHART

ARC-SHAPED QUARTZ CRUCIBLES

Model	Capacity (ml)	Outer Dia. (mm)	Bottom Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-B011	100	54	39	84	2	99%-99.99%
AT-QTZ-B012	100	54	39	100	2	99%-99.99%
AT-QTZ-B013	150	60	43	90	2	99%-99.99%
AT-QTZ-B014	150	60	43	105	2	99%-99.99%
AT-QTZ-B015	200	69	46	91	2.5	99%-99.99%



SIZE CHART

ARC-SHAPED QUARTZ CRUCIBLES

Model	Capacity (ml)	Outer Dia. (mm)	Bottom Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-B016	200	69	46	110	2.5	99%-99.99%
AT-QTZ-B017	250	75	50	110	2.5	99%-99.99%
AT-QTZ-B018	250	75	50	130	2.5	99%-99.99%
AT-QTZ-B019	300	80	51	111	2.5	99%-99.99%
AT-QTZ-B020	300	80	51	130	2.5	99%-99.99%



SIZE CHART

ARC-SHAPED QUARTZ CRUCIBLES

Model	Capacity (ml)	Outer Dia. (mm)	Bottom Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-B021	500	88	67	137	2.5	99%-99.99%
AT-QTZ-B022	500	88	67	160	2.5	99%-99.99%



SIZE CHART

CYLINDRICAL QUARTZ CRUCIBLES

Model	Capacity (ml)	Outer Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-A001	0.7	20	4	1.5	99%-99.99%
AT-QTZ-A002	0.6	12	8	1.5	99%-99.99%
AT-QTZ-A003	0.9	12	12	1.5	99%-99.99%
AT-QTZ-A004	0.8	12	10	1.5	99%-99.99%
AT-QTZ-A005	0.9	20	5	1.5	99%-99.99%
AT-QTZ-A006	0.7	12	10	1.5	99%-99.99%
AT-QTZ-A007	1.4	18	8	1.5	99%-99.99%



SIZE CHART

CYLINDRICAL QUARTZ CRUCIBLES



Model	Capacity (ml)	Outer Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-A008	1.3	11	20	1.5	99%-99.99%
AT-QTZ-A009	1.6	12	20	1.5	99%-99.99%
AT-QTZ-A010	1.7	9	40	1.5	99%-99.99%
AT-QTZ-A011	1.5	13	25	1.5	99%-99.99%
AT-QTZ-A012	1.3	10	25	1.5	99%-99.99%
AT-QTZ-A013	5	20	20	1.5	99%-99.99%
AT-QTZ-A014	2	30	5	1.5	99%-99.99%



SIZE CHART

CYLINDRICAL QUARTZ CRUCIBLES

Model	Capacity (ml)	Outer Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-A015	6	22	20	1.5	99%-99.99%
AT-QTZ-A016	3.5	18	18	1.5	99%-99.99%
AT-QTZ-A017	4	16	28	1.5	99%-99.99%
AT-QTZ-A018	0.5	15	5	1.5	99%-99.99%
AT-QTZ-A019	1.2	15	10	1.5	99%-99.99%
AT-QTZ-A020	2.6	15	20	1.5	99%-99.99%
AT-QTZ-A021	3.7	17	21	1.5	99%-99.99%



SIZE CHART

CYLINDRICAL QUARTZ CRUCIBLES

Model	Capacity (ml)	Outer Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-A022	5.2	14	44	1.5	99%-99.99%
AT-QTZ-A023	6	32	10	2	99%-99.99%
AT-QTZ-A024	2	10	40	2	99%-99.99%
AT-QTZ-A025	6	15	50	2	99%-99.99%
AT-QTZ-A026	8	28	17	2	99%-99.99%
AT-QTZ-A027	6	35	8.5	2	99%-99.99%
AT-QTZ-A028	7	16	50	2	99%-99.99%



SIZE CHART

CYLINDRICAL QUARTZ CRUCIBLES

Model	Capacity (ml)	Outer Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-A029	12	54	8	2	99%-99.99%
AT-QTZ-A030	6	17	37	2	99%-99.99%
AT-QTZ-A031	9	16	60	2	99%-99.99%
AT-QTZ-A032	7.5	20	30	2	99%-99.99%
AT-QTZ-A033	7	22	25	2	99%-99.99%
AT-QTZ-A034	10	25	25	2	99%-99.99%
AT-QTZ-A035	9	20	40	2	99%-99.99%



SIZE CHART

CYLINDRICAL QUARTZ CRUCIBLES



Model	Capacity (ml)	Outer Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-A036	12	19	58	2	99%-99.99%
AT-QTZ-A037	16	30	28	2	99%-99.99%
AT-QTZ-A038	17	47	13	2	99%-99.99%
AT-QTZ-A039	20	23	60	2	99%-99.99%
AT-QTZ-A040	17	30	30	2	99%-99.99%
AT-QTZ-A041	24.5	25	60	2	99%-99.99%
AT-QTZ-A042	23	35	30	2	99%-99.99%



SIZE CHART

CYLINDRICAL QUARTZ CRUCIBLES

Model	Capacity (ml)	Outer Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-A043	24	28	58	2	99%-99.99%
AT-QTZ-A044	28	35	35	2	99%-99.99%
AT-QTZ-A045	30	28	58	2	99%-99.99%
AT-QTZ-A046	35	30	60	2	99%-99.99%
AT-QTZ-A047	39	36	45	2	99%-99.99%
AT-QTZ-A048	37	40	35	2	99%-99.99%
AT-QTZ-A049	36	26	82	2	99%-99.99%



SIZE CHART

CYLINDRICAL QUARTZ CRUCIBLES

Model	Capacity (ml)	Outer Dia. (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-A050	43	40	40	2	99%-99.99%
AT-QTZ-A051	41	40	40	2.5	99%-99.99%
AT-QTZ-A052	54	40	50	2	99%-99.99%
AT-QTZ-A053	52	40	50	2.5	99%-99.99%
AT-QTZ-A054	63	40	60	2.5	99%-99.99%
AT-QTZ-A055	130	40	120	2.5	99%-99.99%
AT-QTZ-A056	150	60	60	2.5	99%-99.99%



SIZE CHART

SQUARE QUARTZ CRUCIBLES

Model	Length (mm)	Width (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-C001	50	10	10	2-3	99%-99.99%
AT-QTZ-C002	100	10	10	2-3	99%-99.99%
AT-QTZ-C003	50	15	10	2-3	99%-99.99%
AT-QTZ-C004	100	15	10	2-3	99%-99.99%
AT-QTZ-C005	50	20	15	2-3	99%-99.99%
AT-QTZ-C006	100	20	15	2-3	99%-99.99%
AT-QTZ-C007	50	30	20	2-3	99%-99.99%



SIZE CHART

SQUARE QUARTZ CRUCIBLES

Model	Length (mm)	Width (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-C008	100	30	20	2-3	99%-99.99%
AT-QTZ-C009	50	40	25	2-3	99%-99.99%
AT-QTZ-C010	100	40	25	2-3	99%-99.99%
AT-QTZ-C011	50	50	30	2-3	99%-99.99%
AT-QTZ-C012	100	50	30	2-3	99%-99.99%



SIZE CHART

SQUARE QUARTZ CRUCIBLES

Model	Length (mm)	Width (mm)	Height (mm)	Wall Thickness (mm)	Purity
AT-QTZ-C013	50	50	50	2-3	99%-99.99%
AT-QTZ-C014	100	100	30	2-3	99%-99.99%
AT-QTZ-C015	100	100	50	2-3	99%-99.99%
AT-QTZ-C016	100	100	100	2-3	99%-99.99%
AT-QTZ-C017	200	100	50	2-3	99%-99.99%



MATERIAL PROPERTIES

Chemical Composition & OH Content (ppm)

Cr	Ge	Fe	Mg	Ti	Ca	Al	Na	Li	K	OH
20	0.4	1.5	0.4	10 0	1	16	2.3	0.5	2	<2 5

Spectral Transmission at 1.0mm Thickness (%)

<220 nm	230- 280nm	290- 330nm	350nm	450nm	550nm	590nm	780nm
0	<15	0	15	88	92	93	93



MATERIAL PROPERTIES

Physical Properties

Property	Value
Density (20°C)	$2.2 \times 10^3 \text{ kg}\cdot\text{m}^{-3}$
Coefficient of expansion (25-300°C)	$0.56 \times 10^{-6} \text{ }^\circ\text{C}^{-1}$
Softening point	1630°C
Annealing point	1180°C
Strain point	1100°C
Young's modulus	$7.3 \times 10^5 \text{ Pa}$





CUSTOMIZATION SERVICES

TOQUARTZ offers comprehensive customization services for transparent quartz crucibles:

- Dimensional Customization: Custom diameters, wall thickness, and specialized shapes
- Material Modifications: Grade selection (JGS-1, JGS-2, JGS-3) and specific OH content
- Special Features: Added spouts, custom lids, surface treatments, and specialized markings

USAGE GUIDELINES

- Handle with clean gloves to prevent contamination
- Avoid rapid temperature changes exceeding 200°C/minute
- Compatible with most acids except hydrofluoric acid
- Clean with dilute acids followed by deionized water rinse
- Store in clean, dust-free environment



QUALITY ASSURANCE

All TOQUARTZ® transparent quartz crucibles undergo rigorous quality control to ensure consistent performance in demanding applications.:

- Dimensional verification
- Optical transparency testing
- Surface quality inspection
- Material composition analysis

Contact Information

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Website: www.toquartz.com

TOQUARTZ® - Precision Quartz Solutions for Industry and Research

For technical specifications, custom requirements, or pricing information, please contact our sales team.