ENGINEERING PRODUCT CATALOG

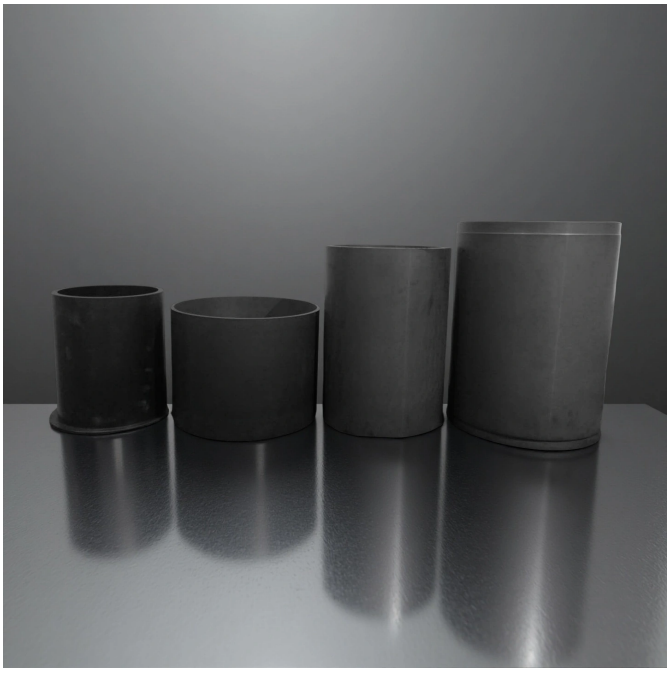
Silicon Carbide Liner Tube

Drawing based ceramic liners for industrial flow paths

Use this catalog to define a replacement liner or a new ceramic lining component for slurry, solids and process-media handling. Start with the part geometry, installation position and wear problem.

AT-SIC-TT1001 | Custom dimensions

A catalog reference for a custom liner inquiry. The drawing defines bore, outside diameter, wall, length and ends; the reference does not define a fixed size or an equipment replacement.



Cylindrical form illustration from the product page. Appearance does not establish material route, dimensions, model identity or availability.

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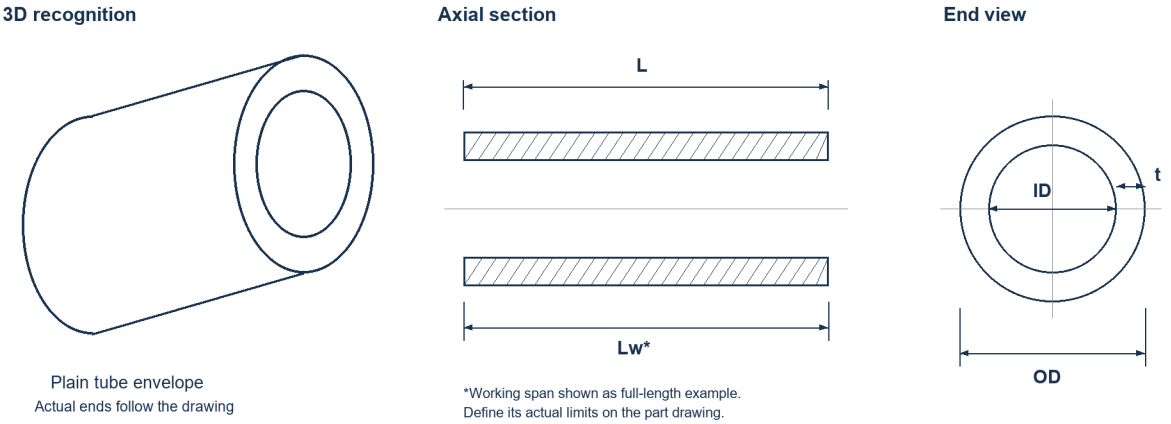
ADCERAX | Custom precision ceramic components
HUNAN ATCERA CO.,LTD

01 ENGINEERING SELECTION

Define the Liner Geometry

The approved drawing controls the finished part

AT-SIC-TT1001 uses custom dimensions. Define the ceramic component separately from its housing, joining layer and equipment assembly. Supply all dimensions in mm, or state the original drawing units.



Dimension key | Not to scale | Straight-tube envelope only; not a manufacturing or inspection drawing.

Drawing field	Definition and information to provide
ID	Finished internal bore; tolerance, roundness and flow-path transitions.
OD	Finished outside diameter; tolerance, concentricity and mating interface.
t	Wall thickness and minimum local wall; define any local wear allowance.
L	Overall axial length and end-face tolerance.
Lw	Working length with its start and end datums; do not assume it equals L.
Ends and interfaces	End profile, joint detail, insertion depth, receiving bore and locating surfaces.
Surface and geometry	Bore, end and outer-surface finish; straightness, cylindricity and edge condition.

Control the complete interface

Attach the receiving-equipment drawing or relevant dimensions. Identify the flow direction, support locations, segment sequence, joints and thermal-movement allowance. Detailed end features require their own drawing views.

Sizes, tolerances, route, quantities and delivery are confirmed for the quoted drawing. A ceramic liner reference does not establish pressure containment, assembly sealing or stock.

02 ENGINEERING SELECTION

Compare SiC Material Routes

Material selection values retain their test conditions

RBSiC/SiSiC is a reaction-bonded route with residual free silicon. SSiC is a pressureless-sintered route. Select the route against chemistry, temperature, wear exposure and the component drawing.

Material-level property	RBSiC / SiSiC	SSiC
SiC content | wt%	85 nominal	≥99
Residual free silicon	15 wt% nominal	No silicon-infiltration phase
Bulk density | g/cm³	≥3.02	3.10 typical
Apparent open porosity | vol%	≤0.1	<0.1
Flexural strength | MPa	250 at 20°C	380; temperature not stated
Young's modulus | GPa	330 at 20°C	420; temperature not stated
Thermal conductivity | W/(m·K)	45 at 1200°C	100–120; ambient selection
Initial material-selection ceiling | °C	1380	1600

Material-level initial selection values. Nominal and typical status is retained where specified; inequalities are source-reported selection bounds, not finished-liner acceptance guarantees.

Specify the component duty separately

The temperature ceilings do not establish continuous loaded service. Define atmosphere, load, dwell, thermal gradients, cycling and retained-property requirements. The SSiC conductivity range is not a temperature-dependent design curve.

Apparent open porosity does not establish assembly leak rate. Material specimen strength does not establish allowable pipeline pressure. Chemical compatibility depends on the exact medium, concentration, temperature and exposure time.

Keep the routes separate

These dense-route values do not apply to porous nitride-bonded or recrystallized SiC. The selected route and final purchase acceptance requirements belong on the agreed drawing and order.

03 ENGINEERING SELECTION

Review the Operating Conditions

Locate the wear mechanism and installation constraints

Process context	Variables for liner review
Mineral slurry and solids transport	Solids loading; particle size, hardness and shape; velocity; impact location and existing wear pattern.
Chemical-process flow paths	Medium composition, concentration, contaminants, temperature and cleaning exposure.
Pulp and related streams	Actual liquor or suspension chemistry, entrained solids, temperature and installation position.

These are review contexts rather than blanket suitability statements. Define the actual medium and duty before selecting the route or agreeing a sample trial.

Separate the ceramic part from the assembly

Responsibility boundary	Information to agree
Ceramic liner	Drawing, route, dimensions, ends, wear-facing surface and component acceptance.
Housing and joining layer	Receiving bore, substrate, locating or bonding layer, clearance, support and thermal movement.
Equipment assembly	Joints, seals, pressure boundary, leakage criteria, assembly responsibility and return-to-service checks.

A request for a steel housing or a complete lined-pipe assembly requires a separate scope review. The catalog reference alone does not include those elements.

Plan installation and maintenance

Qualified personnel should isolate equipment, check part identity and compare the liner with the current drawing before fitting. Follow the equipment owner’s approved assembly and operating procedures.

Monitor local wear, chipped edges, joint erosion, detachment and leakage. Record the inspection position, service time or throughput and operating conditions so that replacement trials remain comparable.

04 ENGINEERING SELECTION

Agree Acceptance and Supply

Turn the selected liner into a repeatable order definition

Agree the following requirements during drawing review and quotation. They are purchase-definition inputs, rather than a statement that every listed inspection is included in every order.

Control point	Agree for the liner order
Drawing and identity	Part reference and revision; selected SiC route; quantities and segment or set sequence.
Dimensional acceptance	ID, OD, local wall, length and end details; datum scheme, tolerances, method and sampling.
Surface and visual acceptance	Flow surface, outer locating surface and ends; agreed limits for chips, cracks, edges and cleanliness.
Material evidence	Required composition, density or porosity documentation; specimen basis, method and acceptance limits where relevant.
Application trial	Wear locations; operating window; inspection interval expressed as time or throughput; thickness-loss and other agreed criteria.
Assembly checks	Fit, alignment, joints, attachment and any pressure or leakage checks against the actual assembly design.
Packing and receipt	Protection for bores, ends and edges; separation and support; quantity identification, route and arrival inspection.
Repeat supply	Accepted drawing and material requirements; inspection records and change notification agreed for repeat orders.

Compare samples under matched conditions

For a replacement trial, record the existing failure mode and baseline wear locations. Compare candidate liners using agreed media, solids, velocity, temperature and exposure. Set acceptance and replacement criteria before interpreting the results.

Keep commercial terms with the quotation

Confirm sample and repeat quantities, inspection documents, packaging, destination and requested schedule. Price, minimum order quantity, lead time and final supply scope are quotation-controlled.

05 ENGINEERING SELECTION

Request a Custom Liner Quote

Send the information already available

Cite AT-SIC-TT1001 and catalog ADC-CAT-SIC-LIN-001 Rev01, or attach your own part drawing. An old-part photograph or sketch can start the review when the full drawing is not yet available.

Inquiry route	Send first
Existing catalog reference	AT-SIC-TT1001; current drawing or old-part photos; installation position; quantity and current wear problem. Dimensions remain custom.
New drawing or replacement	Drawing, sketch or sample details and revision; known material requirement; critical dimensions and interfaces; quantity and application.

Include the known operating conditions

State the medium and cleaning exposure, solids or particle information, flow or velocity, temperature, pressure and impact zones. Explain the present failure mode and whether the request is for the ceramic component or a broader assembly review.

Resolve the detailed specification together

Review topic	Follow-up details
Geometry and fit	ID, OD, wall, overall and working length, ends, receiving bore, tolerances and surface requirements.
Material and acceptance	Proposed SiC route, inspection documents, trial conditions, test methods, sampling and acceptance criteria.
Delivery definition	Sample or repeat need, set sequence, packaging, destination and requested timing.

Share what is available. ADCERAX will organize the drawing and application review, identify information needed next and confirm the proposed scope before quotation.

Send your drawing for review

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View the silicon carbide liner tube product page

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