ADCERAX
ADVANCED CERAMICS

ENGINEERING PRODUCT CATALOG | CUSTOM BY DRAWING

Alumina Ceramic Ring Slices

Flat annular parts for electrical isolation, axial spacing and contact support



Representative flat alumina ring slices. The photograph shows product-family form; individual dimensions and material grade are defined by the project drawing.

Part definition	Selection reference
Custom thickness t	0.5–50 mm; review with paired OD/ID, features and target tolerance
Material grades	Six nominal alumina grades from 95.0 to 99.9 wt% Al_2O_3
Order specification	Drawing-defined dimensions, faces, edges and acceptance criteria

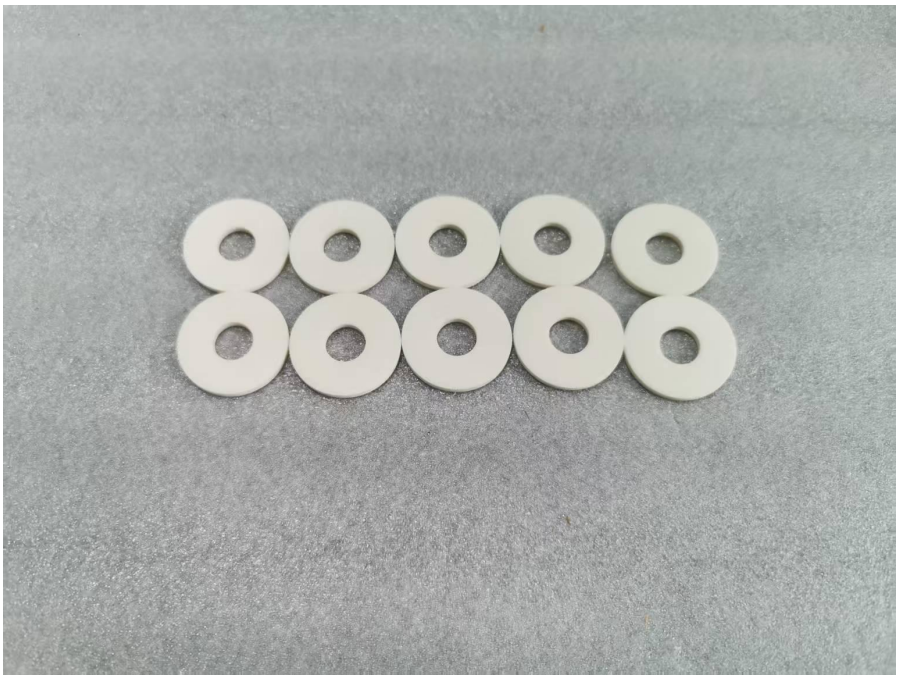
ADCERAX coordinates drawing review, production and inspection against the agreed ring-slice specification. Start with your drawing, sketch or old-part photos and the dimensions you know.

Product page | HUNAN ATCERA CO.,LTD

01 / PRODUCT AND APPLICATION

Choose the ring by its assembly role

A ring slice is a flat annular ceramic part with a central through-hole. Match the hole, finished thickness and seating faces to the mating assembly before selecting the material grade.



A second view of representative ring slices shows the annular faces and thin edges. The photograph is for form recognition; the drawing defines the finished geometry.

Part role	Review with the assembly
Electrical isolation	Hole and thickness; creepage and clearance; working/test voltage; electrodes and environment.
Spacing and alignment	Axial stack dimension; face flatness and parallelism; mating materials and clamp load.
Contact and support	Annular contact area; contact medium and temperature; edge condition and finished-face acceptance.

Follow the selection route

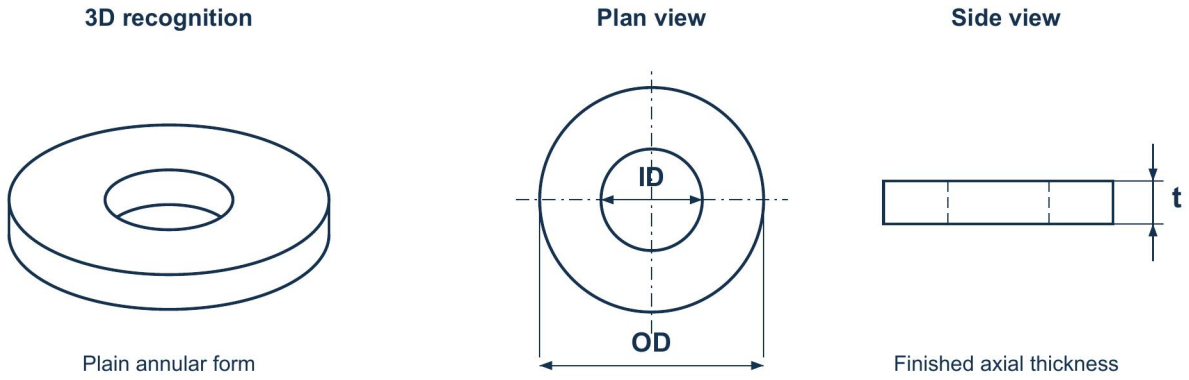
Define the ring envelope → select the alumina grade → agree finished-part acceptance. A photograph or matching OD alone does not establish assembly fit. Parts are specified by drawing; this catalog is a custom selection guide.

Find what you need	Page
Geometry and custom dimension inputs	3
Six-grade material comparison	4
Inspection, care and supply definition	5
Drawing-based quotation and repeat-order brief	6

02 / GEOMETRY AND SPECIFICATION

Define OD ID and finished thickness together

The paired diameters define the annular envelope. Finished thickness sets the axial stack dimension. Review all three dimensions with local features and the specified tolerances.



Technical illustration | Not to scale | Governing dimensions in plan and side views

OD = outer diameter; ID = center-hole diameter; t = finished axial thickness. Dimensions in mm. The approved drawing controls the actual part and inspection.

Drawing field	Required definition
OD (mm)	Outer diameter, upper/lower deviation and dimensional reference.
ID (mm)	Center-hole diameter, fit requirement, upper/lower deviation and relationship to OD.
t (mm)	Finished axial thickness. Custom range: 0.5–50 mm. Review with paired OD/ID, features and target tolerance.
Radial wall width	For a concentric plain annulus: (OD − ID) / 2. Check the minimum remaining wall separately at local features and for permitted eccentricity.
Faces and edges	Identify contact face, flatness and parallelism targets, ID/OD chamfer or radius, and allowed edge defects.
Additional features	If required, define slots, holes, steps or orientation marks with location, edge distance and drawing details.
Inspection basis	State datums, dimensional reference temperature, measurement method, support condition and acceptance limits.

Thickness is one dimension of the specification

The 0.5–50 mm range supports an initial custom thickness check. The complete OD/ID/t combination, features, finish and inspection requirements are reviewed together for quotation. Specify individual tolerances on the drawing.

03 / MATERIAL SELECTION

Compare six alumina grades

Select the alumina grade for the service conditions, then define the finished ring on the drawing. Composition and density below are material-selection values, separate from part tolerances and assembly acceptance.

ADCERAX grade	Al_2O_3 (wt%) Nominal	Bulk density (g/cm³) Typical
AD-ALU-950	95.0	3.75
AD-ALU-960	96.0	3.70
AD-ALU-990	99.0	3.80–3.91
AD-ALU-995	99.5	3.90–3.92
AD-ALU-997	99.7	3.94
AD-ALU-999	99.9	3.94

Material reference: ADCERAX Alumina Ceramic Grade Comparison, Rev 16, page 1. Nominal composition identifies the grade; typical density values and ranges are not manufacturing tolerances or guaranteed finished-part values.

Electrical service

Provide working and test voltage, AC or DC condition, frequency, temperature, humidity or atmosphere, and electrode arrangement. Review creepage, clearance and the actual insulation path in the assembly. Material dielectric strength is not the working-voltage rating of a ring slice.

Thermal service and contact

State steady and peak temperatures, heating/cooling sequence, gradients, dwell time and cycles. Include the mating material, clamp load and contact medium. Material temperature guidance does not establish continuous-duty or loaded-life limits for the assembled ring.

Mechanical contact and cleanliness

Define the contact faces, support, clamp or contact load, vibration and impact conditions. For clean or vacuum assemblies, specify cleaning, bake-out and applicable acceptance tests. Material purity or water absorption alone does not establish cleanliness, leak rate or service life.

Link the material to the order

Identify the selected grade and the requested material documentation on the quotation and order. Agree any purchase-critical composition or property limits, test conditions and sampling separately from these selection values.

04 / ACCEPTANCE AND SUPPLY

Agree how the finished ring will be checked

ADCERAX coordinates drawing review, production and inspection against the agreed specification. Focus the acceptance plan on the dimensions, faces and edges that affect the ring in your assembly.

Acceptance area	Define before order
Dimensions and seating	OD/ID/t tolerances, reference datums, roundness or concentric relationship, flatness, parallelism and measurement support.
Surface and edges	Required face and bore condition; roughness parameters and method if critical; permitted chips, cracks, scratches and defect locations.
Functional validation	Applicable assembled electrical, thermal, contact or sealing tests; fixture, conditions, sampling and acceptance criteria.
Identity and documents	Drawing number/revision, material grade, lot identification, agreed inspection report and sample approval reference.
Transport and receiving	Required face/edge protection, separation, cleanliness, packing identification and receiving checks against the drawing.

Thickness flatness and parallelism

Thickness controls the axial stack dimension. Flatness describes each seating face; parallelism describes the relationship between faces. State the applicable requirements and inspection method separately where the assembly needs them.

Handle and maintain the ceramic faces

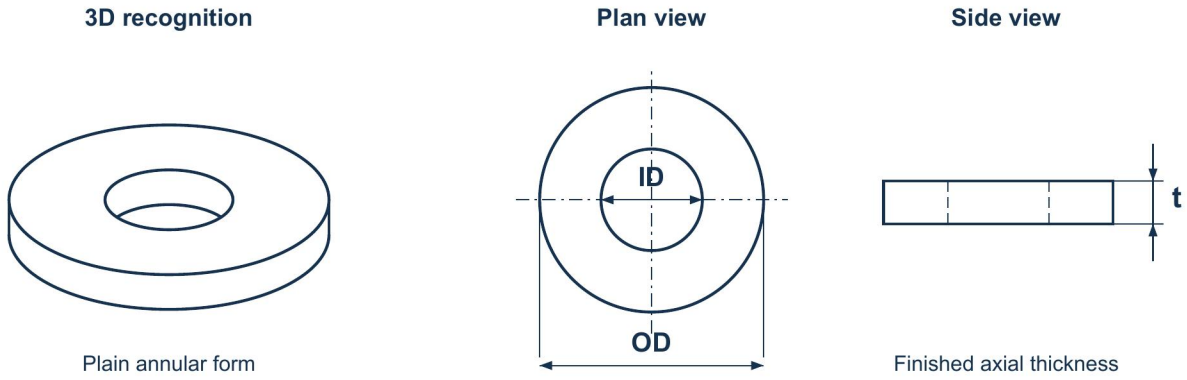
Stage	Practical focus
Assembly	Keep mating surfaces clean and dry. Support the ring with clean lint-free gloves, align the part and protect it from drops or sudden impact. Follow the approved fit and clamping procedure.
Service	Follow the agreed operating duty and heating/cooling sequence. Inspect the specified points for wear, cracks or changing edge condition.
Cleaning and storage	Use the approved cleaning agent, rinsing and drying method. Keep rings clean, dry and separated with non-abrasive protection.

For repeat supply, retain the accepted drawing revision and inspection criteria. Confirm quantity, required documents, packing, destination and delivery schedule in the quotation.

05 / REQUEST FOR QUOTATION

Send the ring definition you have today

Start with a drawing, sketch or old-part photographs, known dimensions, quantity and the intended function. Add the remaining fit and acceptance details as the project is defined.



Technical illustration | Not to scale | Governing dimensions in plan and side views

OD = outer diameter; ID = center-hole diameter; t = finished axial thickness. Dimensions in mm. The approved drawing controls the actual part and inspection.

RFQ field	Useful information
Part reference	New design: drawing/sketch and revision. Repeat order: accepted drawing, part or order reference and any changes.
Geometry	OD, ID and finished t in mm; target tolerances; contact face; edge details; any slots, holes or steps.
Material and duty	Preferred grade or functional requirement; mating materials; loads; temperature history; media; electrical or vacuum conditions as applicable.
Acceptance	Critical face/surface and edge criteria; inspection method and sampling; required reports and functional tests.
Supply	Sample and production quantities, repeat demand, destination and target schedule; packing and identification needs.

Send a Ring Slice RFQ

info@adcerax.com | Online enquiry

Quote catalog reference ADC-CAT-ALRS-001, Rev 01. ADCERAX reviews the available information to align the part definition, material and inspection requirements for a drawing-based quotation.

ADCERAX | HUNAN ATCERA CO.,LTD

China-based advanced ceramics manufacturer for custom precision ceramic components.

adcerax.com | Alumina ring-slice product page