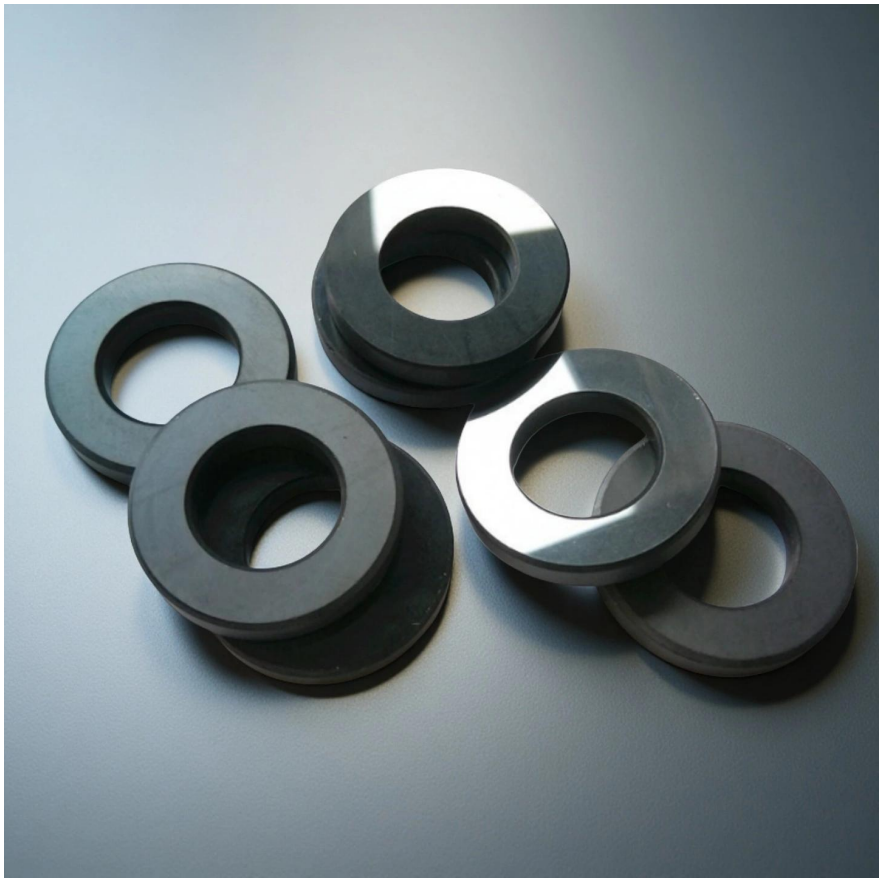
ADCERAX
ADVANCED CERAMICS

ENGINEERING PRODUCT CATALOG

Silicon Carbide Seal Rings

Flat and stepped profiles for mechanical seal OEM and repair projects



Product-form reference image. Visible profiles and surfaces support recognition; the selected drawing defines the ordered component.

Catalog references and drawing-based custom supply

Find the ring profile, compare paired dimensions, then define the material, working face and assembly interfaces for quotation.

Document reference ADC-CAT-SIC-R106-001 · Revision 01

Product page and engineering inquiry

01 FIND YOUR ROUTE

Choose the ring before the material

A SiC seal ring is a hard-face component at the sealing interface of rotating equipment. Identify its flat or stepped profile and rotating or stationary role before matching dimensions.



Representative product-form images. They do not identify individual H/J references, material grades, rotating roles or installed assemblies.

Your starting point	Use this section	Page
Flat ring reference	AT-SC-H001 to AT-SC-H031	3–4
Stepped ring reference	AT-THG-J10002 to AT-THG-J10030	5–6
New or modified geometry	Custom inquiry and drawing definition	7
Material and service conditions	SSiC / RBSiC selection	8
Sample, inspection and repeat supply	Acceptance and supply definition	9–10
Ready to send a drawing or reference	Engineering quotation request	11

Catalog-reference route Cite the complete item number and its paired dimensions. The quotation confirms the selected material, drawing, inspection and current supply terms.

Drawing-based route Submit a drawing, model or old-part photographs when the profile differs or the reference is unknown. Define each ring, holder or mating part separately.

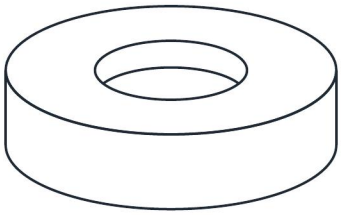
Replacement boundary Equipment model, seal assembly and ring component are different identification levels. A matching OD/ID does not establish interchangeability.

02 FLAT RING REFERENCES

Type 1 flat rings 01 to 16

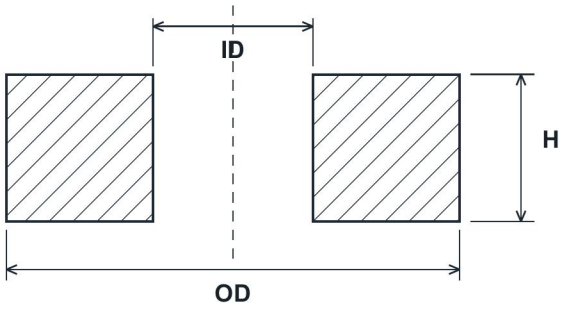
Catalog dimension references in millimeters. Select one complete row; define the working-face band, edges, seating and drive features on the order drawing.

3D PROFILE RECOGNITION



Profile example · not to scale

AXIAL SECTION



Not to scale. OD = outer diameter; ID = bore diameter; H = axial height. The selected part drawing controls the working-face band, interfaces and tolerances.

Catalog reference	OD (mm)	ID (mm)	H (mm)	Listed Purity (%)
AT-SC-H001	10.0	5.0	2.1	99
AT-SC-H002	10.0	6.0	3.5	99
AT-SC-H003	11.0	6.0	3.0	99
AT-SC-H004	11.5	4.0	3.5	99
AT-SC-H005	11.9	6.0	4.5	99
AT-SC-H006	12.0	6.0	4.0	99
AT-SC-H007	12.9	8.5	3.0	99
AT-SC-H008	14.5	8.5	3.5	99
AT-SC-H009	14.5	8.0	4.0	99
AT-SC-H010	14.5	9.0	3.5	99
AT-SC-H011	14.5	9.0	4.0	99
AT-SC-H012	14.5	10.0	4.0	99
AT-SC-H013	14.5	8.5	3.5	99
AT-SC-H014	18.0	12.0	4.0	99
AT-SC-H015	20.0	6.0	4.0	99
AT-SC-H016	22.3	15.2	11.0	99

Material definition Listed Purity (%) is a catalog descriptor, not an assigned SiC wt% value from page 8. Specify SSiC/RBSiC, grade, composition basis and material documentation separately; it is not a lot acceptance specification.

Same dimensions, distinct references AT-SC-H008 and AT-SC-H013 both list 14.5 × 8.5 × 3.5 mm. Keep the original reference and compare the full component profile; do not assume interchangeability.

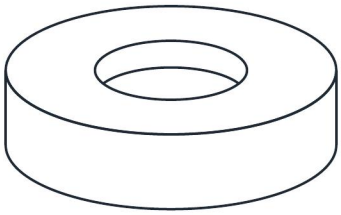
Order control Displayed decimal places do not define tolerance. Drawing revision, measuring datums, face finish, inspection and availability are agreed in the quotation.

02 FLAT RING REFERENCES

Type 1 flat rings 17 to 31

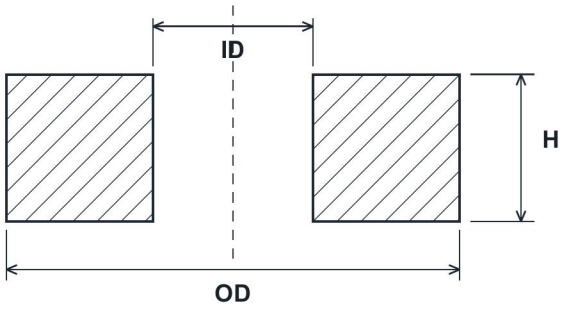
Catalog dimension references in millimeters. Select one complete row; define the working-face band, edges, seating and drive features on the order drawing.

3D PROFILE RECOGNITION



Profile example · not to scale

AXIAL SECTION



Not to scale. OD = outer diameter; ID = bore diameter; H = axial height. The selected part drawing controls the working-face band, interfaces and tolerances.

Catalog reference	OD (mm)	ID (mm)	H (mm)	Listed Purity (%)
AT-SC-H017	25.0	16.0	6.0	99
AT-SC-H018	25.0	18.0	6.0	99
AT-SC-H019	26.0	14.0	4.0	99
AT-SC-H020	26.0	20.0	5.0	99
AT-SC-H021	28.0	12.0	4.0	99
AT-SC-H022	28.0	22.0	7.0	99
AT-SC-H023	28.0	21.0	4.0	99
AT-SC-H024	31.0	18.0	10.0	99
AT-SC-H025	32.0	20.0	3.0	99
AT-SC-H026	32.8	22.6	11.0	99
AT-SC-H027	34.0	23.0	4.5	99
AT-SC-H028	34.5	28.0	5.0	99
AT-SC-H029	36.0	20.0	10.0	99
AT-SC-H030	36.0	26.0	14.0	99
AT-SC-H031	37.0	30.0	7.0	99

Material definition Listed Purity (%) is a catalog descriptor, not an assigned SiC wt% value from page 8. Specify SSiC/RBSiC, grade, composition basis and material documentation separately; it is not a lot acceptance specification.

Same dimensions, distinct references AT-SC-H008 and AT-SC-H013 both list 14.5 × 8.5 × 3.5 mm. Keep the original reference and compare the full component profile; do not assume interchangeability.

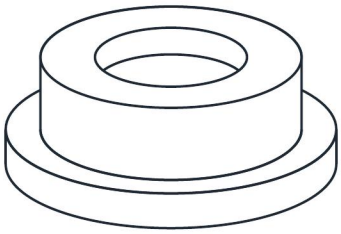
Order control Displayed decimal places do not define tolerance. Drawing revision, measuring datums, face finish, inspection and availability are agreed in the quotation.

03 STEPPED RING REFERENCES

Type 2 stepped rings 02 to 16

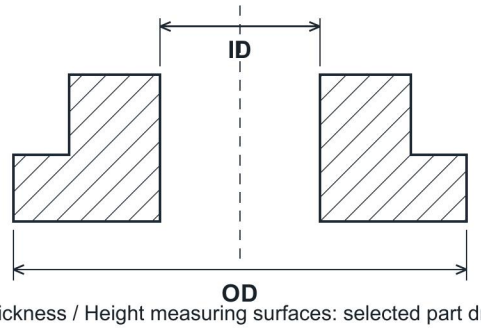
Catalog dimension references in millimeters. The example profile below is not an item drawing and does not define a specific shoulder, groove or drive notch.

3D PROFILE RECOGNITION



Profile example · not to scale

AXIAL SECTION



Thickness / Height measuring surfaces: selected part drawing

Not to scale. Example stepped profile only; OD and ID show diameter conventions. Catalog Thickness and Height require measuring surfaces on the selected part drawing. No step dimensions are inferred.

Catalog reference	OD (mm)	ID (mm)	Thickness (mm)	Height (mm)	Listed Purity*
AT-THG-J10002	25	15	5	15	98.5
AT-THG-J10003	26	12	2	4	98.5
AT-THG-J10004	31.60	20.49	5.56	11.11	98.5
AT-THG-J10005	34.77	23.66	5.56	11.11	98.5
AT-THG-J10006	37.95	26.95	5.50	12.70	98.5
AT-THG-J10007	41.12	29.92	5.60	12.70	98.5
AT-THG-J10008	47.47	33.30	7.09	12.70	98.5
AT-THG-J10009	50.65	36.40	7.13	12.70	98.5
AT-THG-J10010	53.82	39.57	7.13	12.70	98.5
AT-THG-J10011	57.00	42.66	7.17	12.70	98.5
AT-THG-J10012	60.17	46.03	7.07	12.70	98.5
AT-THG-J10013	63.35	49.20	7.08	12.70	98.5
AT-THG-J10014	66.52	52.38	7.07	12.70	98.5
AT-THG-J10015	69.70	55.86	6.92	14.90	98.5
AT-THG-J10016	72.87	59.03	6.92	14.90	98.5

Before confirming fit Request the item drawing for the complete J reference. It must identify Thickness/Height measuring surfaces. Do not infer step height by subtraction or assume Thickness is radial wall thickness.

*** Purity descriptor** The source lists 98.5 without a unit or composition basis. This is not the SiC wt% value on page 8 or a lot acceptance criterion. Specify the actual grade, composition basis and documents in the order.

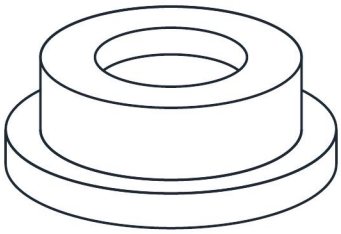
Order control Rows above are fixed catalog references, not stock or fit guarantees. The original decimal notation is retained; drawing tolerances and current supply terms are separately agreed. J10001 is the custom inquiry entry on page 7.

03 STEPPED RING REFERENCES

Type 2 stepped rings 17 to 30

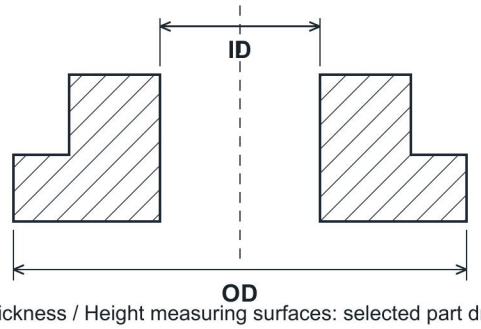
Catalog dimension references in millimeters. The example profile below is not an item drawing and does not define a specific shoulder, groove or drive notch.

3D PROFILE RECOGNITION



Profile example · not to scale

AXIAL SECTION



Thickness / Height measuring surfaces: selected part drawing

Not to scale. Example stepped profile only; OD and ID show diameter conventions. Catalog Thickness and Height require measuring surfaces on the selected part drawing. No step dimensions are inferred.

Catalog reference	OD (mm)	ID (mm)	Thickness (mm)	Height (mm)	Listed Purity*
AT-THG-J10017	76.05	62.21	6.92	14.90	98.5
AT-THG-J10018	79.22	65.38	6.92	15.88	98.5
AT-THG-J10019	82.40	68.63	6.89	15.88	98.5
AT-THG-J10020	85.57	71.81	6.88	15.88	98.5
AT-THG-J10021	88.75	74.98	6.89	15.88	98.5
AT-THG-J10022	91.92	78.16	6.88	15.88	98.5
AT-THG-J10023	95.10	81.30	6.90	15.88	98.5
AT-THG-J10024	98.27	84.51	6.88	15.88	98.5
AT-THG-J10025	101.45	87.68	6.89	15.88	98.5
AT-THG-J10026	104.62	90.86	6.88	17.46	98.5
AT-THG-J10027	107.80	94.16	6.82	17.46	98.5
AT-THG-J10028	114.15	97.33	8.41	17.46	98.5
AT-THG-J10029	117.32	100.21	8.56	17.46	98.5
AT-THG-J10030	120.20	103.68	8.26	17.46	98.5

Before confirming fit Request the item drawing for the complete J reference. It must identify Thickness/Height measuring surfaces. Do not infer step height by subtraction or assume Thickness is radial wall thickness.

*** Purity descriptor** The source lists 98.5 without a unit or composition basis. This is not the SiC wt% value on page 8 or a lot acceptance criterion. Specify the actual grade, composition basis and documents in the order.

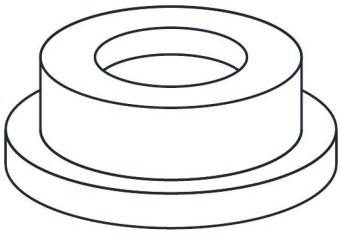
Order control Rows above are fixed catalog references, not stock or fit guarantees. The original decimal notation is retained; drawing tolerances and current supply terms are separately agreed. J10001 is the custom inquiry entry on page 7.

04 DRAWING BASED CUSTOM SUPPLY

Define the complete ring geometry

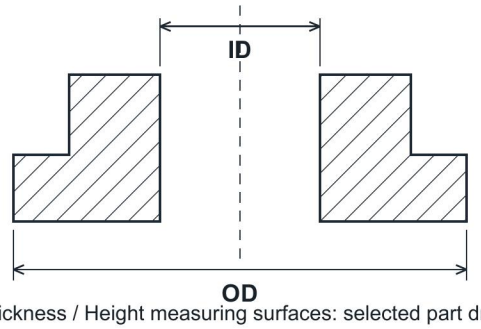
AT-THG-J10001 is the stepped-ring custom inquiry entry. Its four ranges describe separate catalog fields; they do not represent freely combinable dimensions or a fixed-size part.

3D PROFILE RECOGNITION



Profile example · not to scale

AXIAL SECTION



Thickness / Height measuring surfaces: selected part drawing

Not to scale. Example stepped profile only; OD and ID show diameter conventions. Catalog Thickness and Height require measuring surfaces on the selected part drawing. No step dimensions are inferred.

Custom reference	OD (mm)	ID (mm)	Thickness (mm)	Height (mm)
AT-THG-J10001	1-150	0.5-140	0.25-50	1-50

Source descriptor J10001 also lists Purity 98.5 without a unit or composition basis; this is not the SiC wt% value on page 8. Agree the grade and paired geometry on a drawing with defined Thickness/Height measuring surfaces.

Include these details on the component drawing

Drawing area	Required definition
Envelope and section	Paired OD/ID; total height and local thickness with measuring surfaces; step and shoulder diameters, heights and orientation.
Working face	Face-band inner/outer diameters; face location; flatness, parallelism, runout, roughness and finishing state.
Seating and drive	Seat, groove, hole, slot and notch geometry; anti-rotation features; secondary-seal interfaces; fit and assembly direction.
Edges and acceptance	Chamfers/radii, critical tolerances, datum scheme, edge-condition limits and inspection locations.
Part identity	Drawing/model revision; rotating or stationary role; material route/grade; each component and its quantity.

If a drawing is unavailable Send front, back and side photographs of the old part with measured features and the complete seal maker/model/version. Measured worn dimensions are identification inputs, not the final manufacturing specification.

05 MATERIAL AND DUTY

Select SSiC or RBSiC for the actual service

Material route, ring geometry and mating-face conditions must be considered together. Use the values below for material-route selection; the selected ring grade and inspection basis are defined in the order.

Selection characteristic	SSiC	RBSiC
Route	Pressureless-sintered SiC	Reaction-bonded / silicon-infiltrated SiC
Structure	Dense sintered SiC	Dense SiC with residual free silicon
SiC content (wt%)	≥99	85 nominal
Bulk density (g/cm³)	3.10 typical	≥3.02
Selection focus	Actual chemical exposure, working-face precision and mating surfaces	Residual-phase exposure, ring geometry and machining requirements

Material values only These route-level references are not assigned to individual H/J items. Request the selected grade data sheet and test basis with the quotation. They do not establish a seal rating for temperature, pressure, speed, leakage, dry running or life.

Describe the duty as a complete system

Input	Information that affects the selection
Process and cleaning fluids	Chemical identity, concentration, phase, temperature range and cleaning/flushing fluids.
Particles	Particle material, size distribution, concentration and observed deposits or wear.
Mating face	Opposing material and grade, face-band geometry, lubrication and flushing arrangement.
Mechanical conditions	Seal-chamber pressure and pressure changes, shaft speed, start-stop cycles, seating and drive arrangement.
Thermal conditions	Fluid/component temperatures, start-up transitions, cycling and any loss-of-flush event.

A route name or catalog Purity field alone does not establish chemical compatibility. Review the actual medium and all exposed materials in the mating assembly.

06 DRAWING AND SAMPLE ACCEPTANCE

Agree what will be measured

Define the ring, its working face and the assembled seal at separate acceptance levels. This makes quotations comparable and gives sample approval a repeatable basis.

Acceptance layer	Define on the order	Record to agree
Material	Route/grade, composition basis, residual phases and required material tests	Material document; applicable method, specimen/condition and sampling basis
Ring body	OD/ID, height/local thickness, steps, datums, fits and edge condition	Drawing revision; dimensional results and measuring locations
Working face	Face-band dimensions, flatness, parallelism, runout, Ra/Rz and finishing state	Agreed method, support/datum setup, limits and report format
Mating components	Opposing materials; seating, drive, secondary-seal and any joining/fit requirements	Assembly drawing and component scope; agreed interface checks
Operating trial	Medium, temperature, pressure, speed, flushing and defined leakage/wear endpoints	Agreed test of the complete mating assembly under stated conditions

From component definition to repeat supply

1 Drawing and ring review Identify the profile, paired dimensions, revision and critical interfaces.

2 Material and duty review Connect route and grade selection with the fluid, opposing face and operating conditions.

3 Manufacturing requirements Specify machining, grinding, lapping or polishing by surface and confirm the proposed process in the quotation.

4 Sample acceptance Agree sample quantity, inspection items, limits and records before using the approved specification for repeat orders.

ADCERAX coordinates drawing review, production and inspection with manufacturing partners against agreed specifications. Inspection methods and documents above are items to agree, not a statement that every ring receives every test.

07 SUPPLY AND SERVICE RECORDS

Protect the working face and part identity

Make the supplied component scope, face protection and identification part of the order. A bare ring, a ring in a holder, a mating pair and a complete seal assembly require different definitions.

Supply item	Agree before ordering
Component scope	List every ring, holder or mating component, drawing revision, material and quantity; state any agreed assembly work.
Face and edge protection	Define separation of working faces, edge protection, cleanliness requirements and pack quantities for the selected geometry.
Identification	Agree item/drawing revision, material/lot identification and linkage between components, labels and inspection records.
Commercial terms	Confirm sample/batch quantities, current availability, price, delivery destination and target schedule in the quotation.
Repeat orders	Quote the approved drawing revision, previous order/lot reference and any changes to material, face finish or service conditions.

When investigating a replacement

Describe what was observed before choosing a cause or changing the material. Ring appearance alone is insufficient to diagnose a seal-system failure.

Observation to record	Useful information for the inquiry
Face wear, scoring or deposits	Front/back/side views, mating-face material, particles, service duration and flushing conditions.
Cracks or chipped edges	Damage location, handling/installation history, start-up sequence and thermal or loss-of-flush events.
Pitting or surface changes	Process and cleaning chemistry, concentration, temperature and the specified material route/grade.
Leakage or seating/drive damage	Complete seal identification, pressure/speed history, mating surfaces, fit and assembly procedure.

Handling and installation Keep working faces clean and separated from hard contact. Follow the seal maker’s procedures for assembly, fit, lubrication and flushing; agree compatible cleaning methods for the selected materials.

08 ENGINEERING QUOTATION

Send the ring reference or drawing

Start with the ring identification, application and quantity. Share the information already available; the drawing, material and sample requirements can then be organized for engineering review.

Route A Existing catalog reference

Cite ADC-CAT-SIC-R106-001, Rev 01; give the complete H/J item number, paired dimensions, quantity and any requested deviations. For H008/H013, keep the original reference and attach the complete component profile.

Route B New or modified ring

Attach the drawing/model and revision, or front/back/side photographs and measurements of the old part. For J10001, provide the complete paired geometry and section drawing rather than selecting independent range endpoints.

Prepare the engineering brief

Requirement	Include with the inquiry
Ring identification	Catalog reference or drawing/sample; flat/stepped profile; rotating/stationary role; supplied components.
Geometry and interfaces	OD/ID; Thickness/Height measuring surfaces; steps, face band, grooves, seats, drive details, datums and tolerances.
Material and mating face	SSiC/RBSiC route and grade, composition basis, opposing material and required documents.
Actual service	Medium/concentration, particles, temperatures, pressure, speed, lubrication/flushing and cycles.
Replacement details	Equipment nameplate, complete seal maker/model/version, component number and old-part photographs if available.
Acceptance and delivery	Face finish/flatness, inspection needs, sample/batch quantities, repeat demand, packaging, destination and target schedule.

Request an engineering quotation

info@adcerax.com

Submit drawing or part details | View the product page

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Order basis The quotation identifies the supplied components, agreed drawing/material specification, inspection, price and delivery. Catalog references help identify a requirement; they do not establish equipment compatibility or current stock.