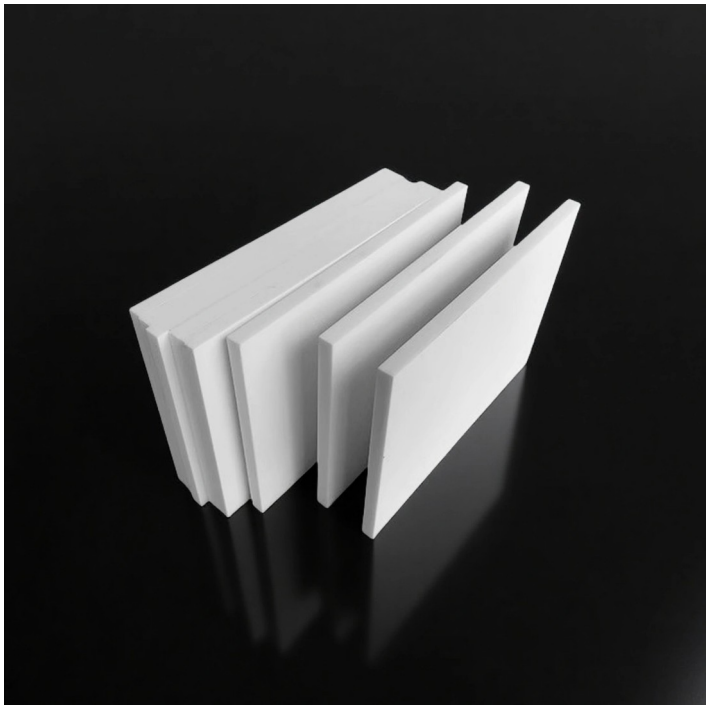
ADCERAX
ADVANCED CERAMICS

ENGINEERING PRODUCT CATALOG | REVIEW EDITION

ZTA Ceramic Plates

Catalog dimensions • Custom geometry • Application review

Zirconia-toughened alumina plates for wear-contact parts, support components and precision inserts. Select the geometry, define the working faces and review the operating duty together.



Rectangular plate appearance reference. The photograph does not identify a catalog code, material grade or measured surface finish.

From a size reference to a drawing-defined part

SIZE REFERENCES	MATERIAL REFERENCE	CUSTOM INPUTS
19 catalog codes AT-ZR-CB001–019	AD-ZTA-20-P Plate-grade typical data	Profile, faces, features Support and acceptance

ADCERAX | HUNAN ATCERA CO.,LTD.

adcerax.com/product/zta-plates/

02 / ENGINEERING PRODUCT CATALOG

Start with the duty and supply unit

A rectangular outline alone does not define a working plate. State what it contacts, how it is supported and which surfaces control the assembly.

Application route	Inputs that drive selection
Wear-contact plate	Contact medium, particle size, impact direction, sliding action, speed, cleaning and replacement method.
Support or thermal-duty plate	Supported load, contact area, support points, temperature cycle, atmosphere and heating/cooling sequence.
Precision insert	Mating parts, datums, fit, working-face finish, flatness/parallelism and inspection setup.

Define the supplied item

Specify a bare ceramic plate, a plate prepared for bonding, or a separately defined backed/assembled item. Catalog T is ceramic thickness; it does not include adhesive, a metal backing or mounting hardware. Confirm the assembly scope in the quotation and drawing.



Appearance reference for rectangular plate form. Photographs are not dimensional or acceptance evidence.

Find the information you need

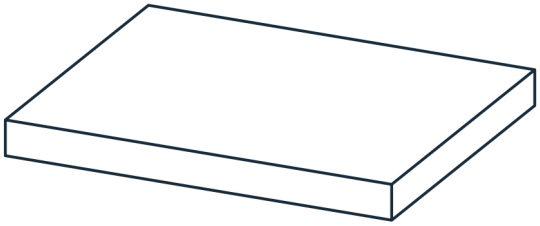
Catalog dimensions: AT-ZR-CB001–010 3
Catalog dimensions: AT-ZR-CB011–019 4
Plate-grade material reference 5
Custom dimensions and feature definition 6
Working faces, edges and mounting 7
Application review and failure prevention 8
Inspection and order checkpoints 9
Installation, handling and repeat orders 10
RFQ checklist and contact 11

03 / ENGINEERING PRODUCT CATALOG

Catalog dimensions | AT-ZR-CB001–010

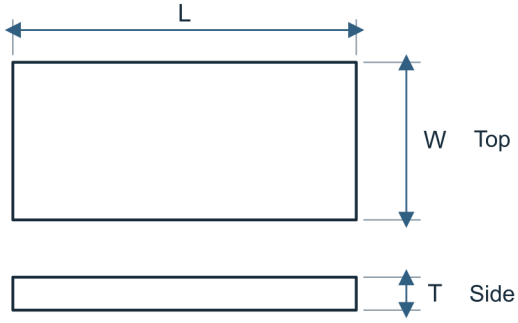
Nominal rectangular plate references. All dimensions are in millimetres. Select a target thickness within the listed option range for quotation.

3D RECOGNITION



Bare rectangular ceramic plate

GOVERNING DIMENSIONS



Dimension key — not to scale. L = length; W = width; T = ceramic thickness. No hole, slot or backing is included by this outline.

Catalog reference	L, nominal (mm)	W, nominal (mm)	T options (mm)
AT-ZR-CB001	50	25	5–12
AT-ZR-CB002	50	50	5–20
AT-ZR-CB003	100	100	6–30
AT-ZR-CB004	120	80	8–30
AT-ZR-CB005	150	100	6–50
AT-ZR-CB006	100	25	5–15
AT-ZR-CB007	100	50	6–30
AT-ZR-CB008	100	75	12–50
AT-ZR-CB009	150	50	6–50
AT-ZR-CB010	70	70	10–25

Ordering interpretation

A thickness range is an option range, not a manufacturing tolerance. Send the exact T, quantity and application. Final tolerances, face finish, edge treatment and features belong on the agreed drawing.

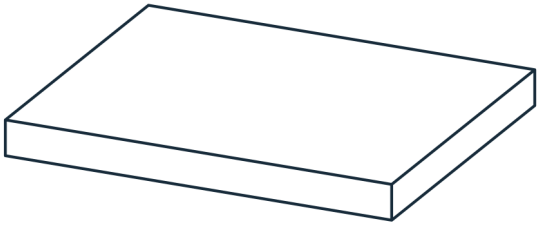
Catalog references do not establish stock, lead time, a material-grade assignment or suitability for a particular installation. These are confirmed for the order.

04 / ENGINEERING PRODUCT CATALOG

Catalog dimensions | AT-ZR-CB011–019

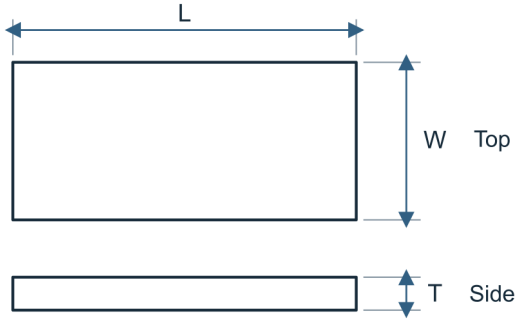
Nominal rectangular plate references. All dimensions are in millimetres. Select a target thickness within the listed option range for quotation.

3D RECOGNITION



Bare rectangular ceramic plate

GOVERNING DIMENSIONS



Dimension key — not to scale. L = length; W = width; T = ceramic thickness. No hole, slot or backing is included by this outline.

Catalog reference	L, nominal (mm)	W, nominal (mm)	T options (mm)
AT-ZR-CB011	75	50	6–15
AT-ZR-CB012	120	100	6–25
AT-ZR-CB013	120	50	6–25
AT-ZR-CB014	100	80	6–25
AT-ZR-CB015	150	75	6–50
AT-ZR-CB016	27	27	5–18
AT-ZR-CB017	37.5	37.5	5–18
AT-ZR-CB018	39.2	39.2	6–18
AT-ZR-CB019	50	30	5–15

Ordering interpretation

Keep the full catalog reference with the requested dimensions. Match any existing component against the current drawing before substitution; matching dimensions alone do not establish interchangeability.

T options are thickness ranges, not tolerances. Confirm exact T, tolerances, finish and grade on the agreed drawing. Stock, lead time and application suitability are order-specific.

AT-ZRG001 is a separate enquiry reference. It is not a parent code or an automatic substitute for the 19 AT-ZR-CB references listed here.

05 / ENGINEERING PRODUCT CATALOG

Plate-grade material reference

ZTA combines an alumina matrix with a dispersed zirconia phase. Material selection must be tied to the actual grade, process, geometry and service conditions.

Reference grade: AD-ZTA-20-P, plate form; dry pressing / cold isostatic pressing (CIP). The table below is a selection reference from the ADCERAX ZTA technical data sheet, Rev 06.

Property	Reference value	How to use it
Density	4.20 g/cm³	Typical material value.
Flexural strength	500 MPa	Typical test-specimen value; not an allowable plate bending stress.
Compressive strength	2100 MPa	Typical material value; not an assembly load rating.
Young’s modulus	310 GPa	Typical elastic-property reference.
Vickers hardness	1650 HV	State test force and dwell when agreeing a hardness requirement.
Water absorption	0%	Rounded nominal report; does not establish zero porosity or hermeticity.
Surface roughness	Ra < 0.6 µm	Specified plate face only; identify face, method and measurement conditions.
Colour	White / off-white	Visual reference; agree an appearance sample if colour is critical.

For a like-for-like comparison, request the controlled Rev 06 data sheet and a grade-specific test report: specimen geometry, loading mode, surface condition, temperature and, for HV, force and dwell. The Rev 06 method list is a test-planning guide; it does not establish the test conditions behind these typical values.

Keep material data separate from part acceptance

These entries do not assign AD-ZTA-20-P to every catalog code, guarantee each delivered batch or define the mechanical capacity of a finished plate. Confirm grade and inspection requirements in the order documents.

A surface finish applies to an identified face. Specify the roughness parameter, measurement direction, filter/cut-off and evaluation length where relevant. “Polished” alone is not a measurable acceptance limit.

Temperature and service life need a duty review

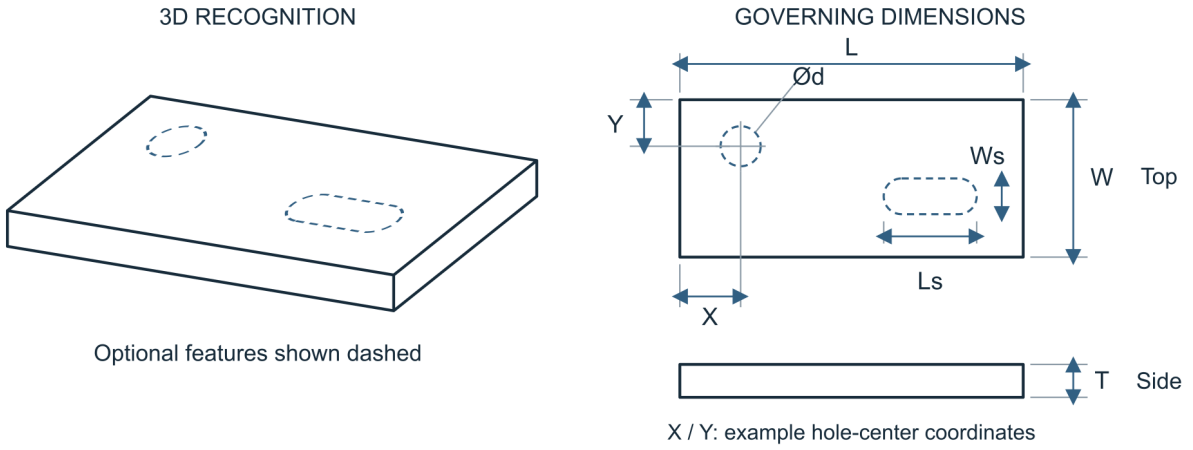
This catalog does not assign a universal working-temperature limit, wear-life multiplier or thermal-shock rating. Provide temperature extremes and cycles, atmosphere, loading, contact conditions and the intended support arrangement.

Material source: ADCERAX Zirconia-Toughened Alumina (ZTA) Ceramic Technical Data Sheet, Rev 06, plate-grade data. Other forming routes and product forms require their own applicable data.

06 / ENGINEERING PRODUCT CATALOG

Custom dimensions and feature definition

Send a dimensioned drawing or CAD file with its revision. Use the symbols below to establish the quotation inputs; the approved drawing governs the finished part.



Custom RFQ schematic — not to scale. Dashed shapes are optional feature examples, not standard features. Feature depth and slot location are not defined by this schematic.

Drawing input	Required definition
L / W / T	Overall length, width and ceramic thickness; target values and tolerances. For a non-rectangular profile, attach the controlled outline.
Ød	Hole diameter, quantity, location and through/blind condition; define countersinks or recesses separately.
Ls / Ws	Overall slot length and width, end shape, depth and through/blind condition.
X / Y	Example hole-centre coordinates from the illustrated top/left edges. Establish actual datums and all hole/slot positions on the drawing.
Edges and faces	Chamfers/radii, edge relief, working face, reverse face and any unmachined areas.
Geometry acceptance	Flatness, parallelism, profile and positional requirements with datums and measurement setup.

Include units, drawing revision and any critical-to-fit dimensions. Review thin sections, feature-to-edge distances and support near holes before the part design is frozen.

07 / ENGINEERING PRODUCT CATALOG

Working faces, edges and mounting

Define each functional surface separately. A working face, a bonded reverse face and a supported face may require different preparation and acceptance criteria.

Area or option	Purpose	Specify for review
Ground or polished face	Controlled contact and fit	Face ID; finish parameter; flatness; lay/measurement direction; single- or double-face requirement.
Matte / blasted finish	A defined surface texture	Location, texture requirement and whether it is functional or visual.
Reverse / bonding face	Contact with the selected adhesive or backing	Preparation, cleanliness, uncoated areas and the bonding system selected for the duty.
Chamfer, radius or edge relief	Define exposed edges and assembly clearances	Location, size and tolerance; critical contact edges; permitted edge condition.
Holes, slots and recesses	Locate or clear mating components	Datums, position, depth, corner/end form, fastener clearance and load transfer.
Backing or assembled supply	Define more than the ceramic component	Backing material, adhesive, total thickness, joints, hardware and assembly acceptance.

Support and clamping checklist

Contact: Show the actual support footprint and any unsupported span. Identify point contacts, hard debris or local steps that could concentrate bending load.

Fastening: Define the mounting sequence and approved hardware. Review the load path near holes and slots; do not derive tightening torque from ceramic strength data.

Bonding: Name the substrate and adhesive system, operating atmosphere and temperature cycle. Agree surface preparation, cure conditions and bond-line control for that system.

Clearance: Account for mating-part movement and assembly fit. The ceramic drawing and assembly drawing should use consistent datums.

08 / ENGINEERING PRODUCT CATALOG

Application review and failure prevention

Assess the plate as part of the installation. A harder or thicker part does not by itself resolve an unsuitable support condition or impact location.

Observed issue / exposure	Review before changing the plate
Edge chipping	Handling damage, edge contact, impact direction, edge protection and local support. Mark the location on a photograph or sketch.
Cracks near holes or slots	Feature location, thin ligaments, fastener contact, clamping sequence and nearby supports.
Cracking across the plate	Unsupported spans, point loading, uneven backing, trapped debris and assembly-induced bending.
Uneven wear or local grooves	Material flow, particle loading, contact alignment, working-face orientation and replacement position.
Cracking after temperature changes	Heating/cooling cycle, temperature gradients, atmosphere, constraints and movement of the mating structure.

Supply the operating context

Wear-contact duty	Support / thermal duty	Precision-fit duty
Medium and particle details Sliding / impact direction Speed or flow conditions Wet / dry operation	Load and contact area Support-point layout Temperature cycle Atmosphere and constraints	Mating-part drawing Assembly datums Fit and clearance Face and geometry limits

Compare alternatives on the same basis

When comparing ZTA with an existing ceramic or metal part, keep the contact conditions, installation and acceptance criteria consistent. Share the existing material designation and failure history. Use a representative sample trial when the duty is new or the failure mechanism is uncertain.

Useful trial records include the part revision, installation location, operating conditions, inspection intervals, wear locations and the reason for removal. These support a meaningful repeat-order decision.

09 / ENGINEERING PRODUCT CATALOG

Inspection and order checkpoints

Agree the acceptance plan before production. The drawing should identify what is measured, where it is measured and how the results are judged.

Check	Define in the order / drawing
Identity and traceability	Catalog or drawing reference, revision, material designation and required lot / inspection-document identification.
L / W / T and features	Target dimensions and tolerances, measuring locations, feature definitions, datums and agreed sampling.
Flatness and parallelism	Applicable face(s), datum references, support arrangement, measurement method and acceptance limit.
Surface roughness	Face ID and area; parameter; instrument/method; direction; filter/cut-off and evaluation length.
Visual and edge condition	Working-face zones, chip/crack criteria, edge treatment and any approved appearance reference.
Material-property evidence	Applicable grade, test method and conditions, specimen/lot relationship and required report scope.
Assembly, if supplied	Backing, adhesive, total thickness, joint condition and assembly-specific acceptance requirements.

A practical sequence for a new part

1. Requirement review Resolve drawing revision, material, interfaces, operating duty and requested quantity.

2. Quotation agreement Confirm supply scope, tolerances, finish, inspection documents, packing and commercial terms.

3. Sample or first-article review Where required, inspect against the agreed plan and assess fit in the intended installation.

4. Production and repeat-order control Use the accepted revision and retain changes to material, geometry, inspection or assembly requirements in the order record.

Inspection scope and document availability are order-specific. A listed inspection topic is not a claim of certification or a statement that every property is tested on every plate.

10 / ENGINEERING PRODUCT CATALOG

Installation, handling and repeat orders

Protect the edges and functional faces from receipt through installation. Review the assembly instructions with the person responsible for the equipment.

Before installation

Step	Action
Receive and identify	Check the reference, drawing revision, quantity and visible condition. Keep the package and part identifiers together.
Handle and store	Use clean separators and supported storage. Avoid ceramic-to-ceramic impact, sliding stacks and loading on exposed edges.
Prepare the seat	Remove hard debris and check for uneven contact. Confirm the support footprint against the assembly drawing.
Orient and fit	Identify the working face and datum orientation. Check clearances without forcing the plate into a mismatched seat.
Secure or bond	Follow the agreed installation procedure for the hardware or adhesive system. Apply only the specified sequence and conditions.
Check initial operation	Recheck contact, movement and visible condition after the initial operating interval defined for the equipment.

Cleaning and replacement

Choose cleaning methods compatible with the ceramic, backing and bonding system. Avoid scraping that damages a critical edge or working face. Record the location and pattern of wear or damage before replacement, where it is safe to do so.

Packing and repeat-order information

Agree face protection, edge separation, part identification and package quantity for the actual size and transport route. Describe any orientation, cleanliness or handling requirement in the RFQ.

For repeat orders, reference the previously accepted drawing revision and material designation. List any changed operating conditions, fit, finish, inspection documents or packing needs; a matching catalog code alone does not describe all of these requirements.

11 / ENGINEERING PRODUCT CATALOG

Send a clear RFQ

Start with an existing catalog reference or a custom drawing. Include the application and quantity so geometry, material and supply scope can be reviewed together.

Route A — catalog reference	Route B — custom drawing
Send the full AT-ZR-CB code, nominal L × W, exact target T, required tolerances and quantity. Identify changes to finish, edges or features.	Send the dimensioned PDF / CAD file with units and revision. Mark critical dimensions, datums, working faces and custom features.

Minimum information for the first review

RFQ field	Your input
Part reference	Catalog code or drawing number and revision
Geometry	L × W × target T and tolerances; outline; holes/slots; edges
Material	Required grade, or current material and selection question
Working faces	Finish, flatness/parallelism and functional face IDs
Installation	Support footprint, clamping/bonding and mating-part details
Operating duty	Contact medium, load/impact, temperature cycle and atmosphere
Quantity and supply scope	Sample / production quantity; bare plate or defined assembly
Acceptance and delivery	Inspection documents, packing, destination and target delivery date

Contact ADCERAX

Email: info@adcerax.com

Send your drawing and RFQ by email

Tel: +86-0731-84428843 | WhatsApp: +86 19311583352

Product page: ZTA Ceramic Plates

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Catalog selection is the starting point. The accepted quotation, controlled drawing and order-specific acceptance requirements define the supplied part.