ADCERAX
ADVANCED CERAMICS

ENGINEERING PRODUCT CATALOG

Black Zirconia Ceramic Pin

Drawing based selection for locating guiding and support fixtures

REVIEW EDITION | CUSTOM REFERENCE AT-HG-X1001



Website artwork for form discussion only. Not verified product photography;
no dimensions, material performance or model mapping are established by this image.

Start with the contact, the mating seat and the operating duty. Use this catalog to prepare a drawing-based enquiry and define what needs to be agreed for the finished pin.

Selection route	Where to go
Product identity and fixture task	Page 2
Geometry and dimension inputs	Page 3
Material, duty and acceptance	Pages 4-5
Drawing or existing-reference enquiry	Page 6

ADCERAX | HUNAN ATCERA CO.,LTD

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

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01 ENGINEERING SELECTION

Identify the pin and the fixture task

ADCERAX supplies black zirconia ceramic pins for drawing-defined locating, guiding and support projects. Review the working end, shank and shoulder together with the mating assembly.

Product reference	Size basis	Order definition
AT-HG-X1001	Customized	Project drawing and agreed quotation

This reference identifies the custom supply enquiry. It does not define a fixed dimension set, stock item or verified OEM replacement.



Website artwork showing repeated pin-like forms. Shape discussion only; not verified samples or an exact AT-HG-X1001 configuration.

Choose by the contact and assembly

Your task	Send first	Review focus
Locating or guiding	Datum scheme, bore and insertion direction	Working contact, engagement and repeated motion
Support or alignment	Seat material, support points and load direction	Side load, restraint and access for assembly
Replacing an existing pin	Original part drawing or unworn dimensions; equipment reference	Pin and seat condition; fit and validation
Welding or vision duty	Current and heat path, or lighting and optical target	Application-specific material and functional tests

Define the purchase unit

State whether the enquiry covers the ceramic pin alone or also a bush, seat, holder or fasteners. A matching diameter or black appearance does not establish an equivalent assembly.

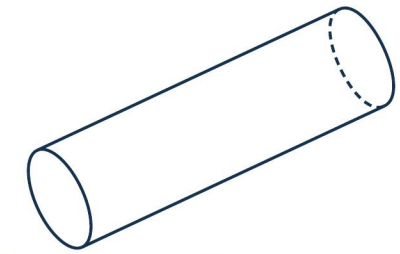
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02 ENGINEERING SELECTION

Define the geometry before quotation

Use a revision-controlled drawing to locate each functional contact and mounting surface. The simple example below explains dimension notation only; it is not an offered pin design.

3D RECOGNITION EXAMPLE



Illustrative plain cylindrical pin

GOVERNING DIMENSION EXAMPLE



Technical notation example - not to scale. Not a manufacturing or inspection drawing.
Actual shape, all features and tolerances must be defined by the project drawing.

Drawing input	What to specify	Unit or basis
L Overall length	Distance between the end planes in the example; add all segment and engagement lengths for the actual pin.	mm, with tolerance
D Cylindrical diameter	Outside diameter in the example; identify every diameter on a stepped or tapered pin separately.	mm, with tolerance
Working end and contact	Tip profile, contact position and length; chamfer, radius or taper where required.	Dimensioned detail
Shoulders and axial stops	Shoulder position, end faces, root transitions and load-bearing surfaces.	Project drawing
Additional features	Any holes, slots, flats or threads, including positions and complete feature definitions.	Project drawing
Datums and geometry	Datum references, orientation, and relevant roundness, straightness, coaxiality or runout requirements.	Drawing symbols and units
Functional surfaces	Surface roughness, texture direction, contact zones, edges and acceptable defects.	Ra or Rz with unit and method
Mating assembly	Bore or seat dimensions and material, fit, engagement and mounting method.	Assembly drawing

All entries above are RFQ inputs, not published manufacturing limits. No standard dimensions or general tolerance are assigned to AT-HG-X1001.

For a worn or damaged part

Use the original drawing or a verified record of unworn dimensions as the design baseline. Send the worn part for identification and failure context; check the mating bore and seat separately.

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03 ENGINEERING SELECTION

Match material acceptance to the duty

The black zirconia formulation includes a carbon additive. Define the actual material specification and batch acceptance for the application; ordinary white or ivory zirconia data do not establish this black pin's properties.

Decision area	Information needed for evaluation
Material identity	Specified formulation, stabilizer system, carbon addition or residual carbon requirements, colour acceptance and requested material documentation.
Mechanical duty	Load direction and magnitude, bending or side load, impact, unsupported length, vibration, contact pair and repeated-motion duty.
Thermal duty	Steady and peak temperatures, holding time, heating and cooling cycle, atmosphere and the mating-seat material.
Medium and ageing	Liquid or gas, concentration, pH where relevant, pressure, humidity, cleaning agents and exposure time.
Electrical function	Insulating, dissipative or conducting target; volume or surface resistance criteria, test voltage, temperature, humidity and assembly current path.
Optical function	Light source and wavelength, viewing angle, surface condition, reflectance or detection target and the acceptance setup.
Wear and service endpoint	Contact load, motion, speed, lubrication, particles, inspection points and the permitted change that defines replacement.

Keep three acceptance levels separate

Material evidence describes the specified formulation and test specimen. Finished-pin acceptance covers the actual drawing, surfaces and defects. Assembly validation checks fit, location and function in the intended equipment.

Define the functional test

Black colour alone establishes neither electrical insulation nor conductivity, electrostatic discharge performance or low reflectance. If a function matters, include its measured target, test method and service conditions in the enquiry.

For welding or heated fixtures, provide the electrical path and local heat exposure before material selection. No universal temperature limit, allowable load or service-life figure is specified in this catalog.

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04 ENGINEERING SELECTION

Agree inspection and supply requirements

Set the acceptance basis before comparing quotations. The items below are purchase and inspection requirements to agree for the specific pin; they are not claims that a particular test or document is already included.

Stage	Agree for this pin	Record or deliverable
Drawing review	Part and assembly revisions; functional contacts, datums and critical dimensions.	Controlled drawing and agreed scope
Material acceptance	Actual black formulation and any required batch, mechanical, electrical or environmental evidence.	Agreed material documentation and test basis
Finished-pin inspection	Dimension and form checks, surface finish, edge condition, colour and defect acceptance.	Methods, measurement locations and sampling
Assembly validation	Mating bore, supported insertion, verified fit, installed location and functional duty.	First-article and assembly acceptance plan
Identification and packing	Part reference, revision and lot identification; protect tips, shoulders and mating surfaces from contact damage.	Agreed labels, separation and packing method
Repeat supply	Approved revision, accepted sample reference if used, quantities and any changes to the duty.	Reorder reference and change confirmation

Assembly and service checks

Before assembly, inspect and clean the pin and mating bore using compatible methods. Review the fit and thermal expansion of the assembly across the intended service cycle.

Use press fitting only within validated interference and installation conditions. Apply aligned force with support at agreed load-bearing surfaces; protect the ceramic edges from hammering and impact.

Set inspection intervals and replacement criteria for the actual duty. Record fit changes, surface damage, cracks and abnormal events. Protect separated pins during handling and storage.

Compare the same scope

Use the same drawing revision, material requirement, functional surfaces, edge criteria and inspection documents across quotations. Agree quantity, price, minimum order, lead time, packing and destination in the project quotation.

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05 ENGINEERING SELECTION

Send a useful black zirconia pin enquiry

Start with a drawing, sketch, sample details or reference photos, the pin's function and the required quantity. Add the mating assembly and duty information you already have.

Existing reference or repeat enquiry	New drawing or replacement project
Quote AT-HG-X1001 and the previous approved drawing or order reference. Include the current revision, quantity and all changes.	Attach the drawing and revision or the original part information. Identify the working contact, mounting arrangement and intended function.
The catalog reference alone does not specify a geometry or confirm stock.	An equipment or OEM number helps identification; it does not establish replacement compatibility.

Technical brief to include

RFQ field	Useful information
Part identity	AT-HG-X1001 or your reference; pin alone or assembly; drawing revision.
Geometry and fit	Complete dimensioned drawing, units, datums, critical tolerances, tip and shoulder; mating-bore size and material.
Material and appearance	Black zirconia formulation or material requirement; colour and any electrical or optical function.
Surface and edges	Functional zones, roughness, edge condition, cleanliness and defect acceptance.
Operating duty	Load and impact, motion, temperature cycle, medium and exposure; installation method.
Acceptance and documents	Inspection methods, sampling, required reports and first-article approval criteria.
Supply	Sample and batch quantities, repeat demand, packing, destination and target schedule.

Send your drawing for engineering review and quotation

info@adcerax.com

Suggested subject: Black zirconia pin enquiry | AT-HG-X1001 | Your drawing reference

Product page: black zirconia ceramic pin

Reference this catalog: ADC-CAT-BZP-001 | Review Rev01

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