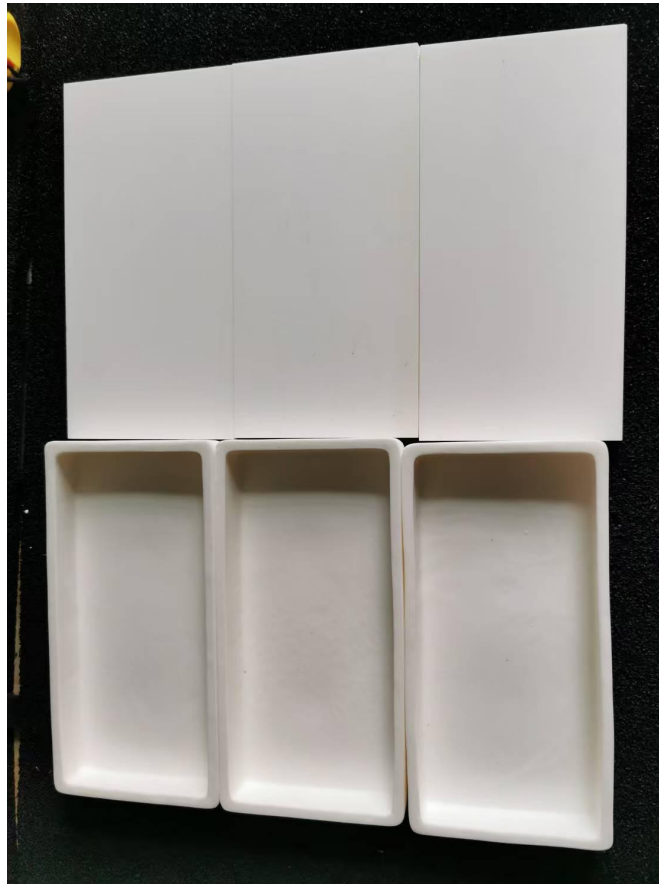


Alumina Combustion Boats

Catalog dimensions and custom supply

For combustion analysis and laboratory furnace review



ADCERAX product photograph: rectangular lidded alumina boats, shown as a custom example. The photograph does not identify a TE item, grade or dimension.

39 catalog references. Four non-perforated boat forms, covered variants, six alumina grades and drawing-based specification inputs.

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

adcerax.com

HUNAN ATCERA CO.,LTD

01 FIND YOUR ROUTE

Select by form and method

Use this catalog to shortlist a non-perforated alumina boat, then define the cavity, equipment interface and acceptance method. A similar outer size alone does not establish interchangeability.

Route	What to identify	Page
Type 1 curved boats	Curved transverse body; cover status by catalog row	3-4
Type 2 combustion boats	Narrow body with rounded ends	5
Type 3 compact narrow boats	Cavity with an extended end region	6
Type 4 boat-shaped crucible	Slender oval body	6
Material selection	Exact grade, sample chemistry and furnace cycle	7
Custom geometry	Drawing, usable cavity and critical features	8
Validation and supply	Fit, analytical blank, acceptance and repeat orders	9
Quotation request	Existing reference or new drawing route	10



ADCERAX product photograph: representative rectangular lidded custom boats. This shows product form, not the four catalog types, material grade, stock or production capacity.

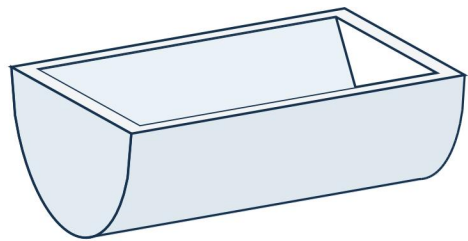
Keep product routes separate. Perforated boats, dedicated ash vessels, induction-furnace crucibles and DSC/TGA accessories require their own specification and method review.

Catalog references support initial selection. Custom geometry is drawing-defined; price, quantity, lead time and packaging are quotation-controlled.

Curved alumina boats

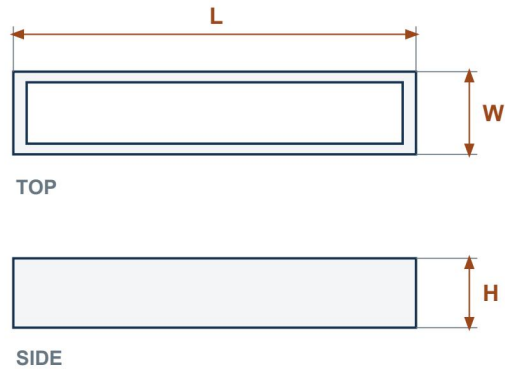
Curved / boat-shaped alumina crucible references. Select the outer envelope, then confirm the usable cavity, support points and loading clearance.

3D RECOGNITION



Representative form

GOVERNING VIEWS



Dimension key - not to scale. Representative geometry; the approved drawing controls the actual profile and order dimensions.

Catalog reference	L (mm)	W (mm)	H (mm)	Cover note
TE-AS-086-1	150	40	20	/
TE-AS-087	100	65	30	/
TE-AS-089	100	40	25	/
TE-AS-093	100	20	15	/
TE-AS-093-1	100	20	20	/
TE-AS-093-4	100	30	20	/
TE-AS-093-5	100	40	20	/
TE-AS-094	60	54	24	/
TE-AS-095	65	25	16	/
TE-AS-096	55	35	22	/
TE-AS-097	40	35	25	/
TE-AS-098	40	25	17	/
TE-AS-099	38	34	18	/
TE-AS-099-1	50	40	20	/

Catalog reference dimensions, not tolerance limits. L, W and H are external dimensions in mm. Final geometry, material, tolerances and current availability are confirmed with the quotation and approved drawing.

"/" reproduces the source catalog's unspecified cover remark; it does not confirm cover inclusion. For covered items, confirm the lid fit and assembled clearance separately.

Read the shape as well as the size

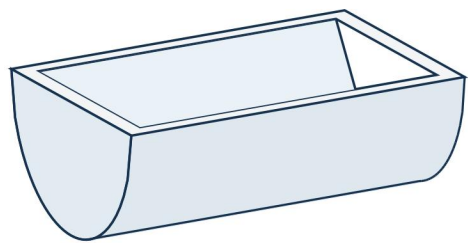
The recognition view shows the curved body used for this catalog group. Curvature, wall and base thickness, inner volume and end details are drawing- or sample-defined. Do not derive them from L × W × H.

Rows continue on page 4. Catalog source order is retained so existing item references remain easy to trace.

Curved alumina boats

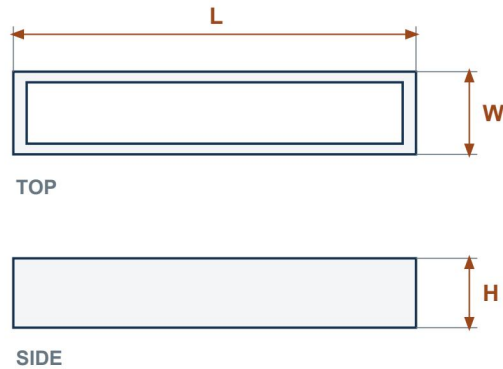
Curved / boat-shaped alumina crucible references. Select the outer envelope, then confirm the usable cavity, support points and loading clearance.

3D RECOGNITION



Representative form

GOVERNING VIEWS



Dimension key - not to scale. Representative geometry; the approved drawing controls the actual profile and order dimensions.

Catalog reference	L (mm)	W (mm)	H (mm)	Cover note
TE-AS-099-12	60	30	15	with cover
TE-AS-099-13	160	75	40	/
TE-AS-099-14	103	55	30	/
TE-AS-099-2	80	40	17	/
TE-AS-099-3	245	40	20	/
TE-AS-099-4	290	40	22	/
TE-AS-099-8	100	50	30	/
TE-AS-099-9	250	40	18	/
TE-AS-119	100	40	25	with cover
TE-AS-120	100	40	20	with cover
TE-AS-123	100	20	15	with cover
TE-AS-124	60	54	24	with cover
TE-AS-124-2	100	20	20	with cover
TE-AS-124-3	100	30	20	with cover
TE-AS-124-4	100	50	30	with cover

Catalog reference dimensions, not tolerance limits. L, W and H are external dimensions in mm. Final geometry, material, tolerances and current availability are confirmed with the quotation and approved drawing.

"/" reproduces the source catalog's unspecified cover remark; it does not confirm cover inclusion. For covered items, confirm the lid fit and assembled clearance separately.

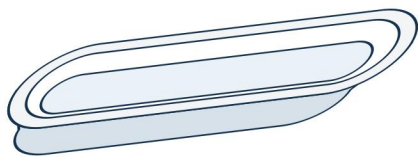
Eight references are marked with cover. Confirm the ordered supply unit, lid fit and total assembly envelope. Rows sharing L × W × H remain separate items; cover status and other drawing details can differ.

02 CATALOG DIMENSIONS | TYPE 2

Narrow combustion boats

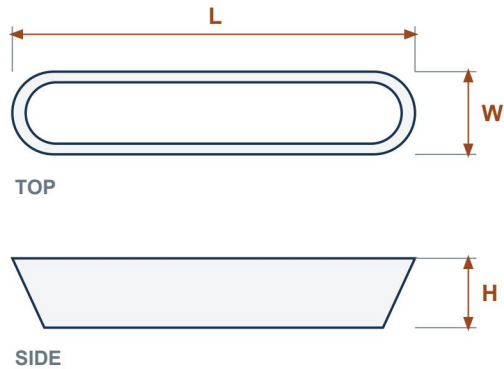
Rounded-end, open-cavity references for geometry screening. For analyzer use, compare the boat with the actual combustion tube, push rod, carrier and approved method.

3D RECOGNITION



Representative form

GOVERNING VIEWS



Dimension key - not to scale. Representative geometry; the approved drawing controls the actual profile and order dimensions.

Catalog reference	L (mm)	W (mm)	H (mm)	Catalog alumina note
TE-AS-082-3	77	13	8	99%
TE-AS-080	88	15	9	99%
TE-AS-079-6	97	17	12	99%
TE-AS-079-3	115	30	20	99%
TE-AS-079-2	100	18	12	99%
TE-AS-079-1	85	15	9	99%
TE-AS-079	43	11	11	99%

Catalog reference dimensions, not tolerance limits. L, W and H are external dimensions in mm. Final geometry, material, tolerances and current availability are confirmed with the quotation and approved drawing.

99% is the source catalog's alumina note, not a guaranteed batch composition. Agree the ordered grade, composition requirement and inspection basis.

Shortlist with the loading path

Check	Information to send
Tube and carrier fit	Tube bore, minimum passage, supports, loading direction and contact points.
Usable cavity	Inner length, width and depth; sample and flux amount; permitted fill height.
End profile and handling	Old-part views, push-rod or tong contact, clearance through the complete loading path.
Material and method	Grade requirement, target elements, relevant impurities, atmosphere and thermal cycle.

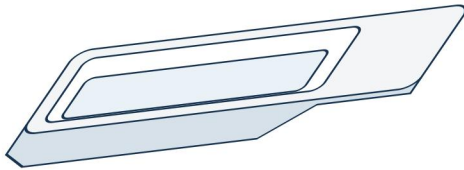
An original part number is an identification aid. Send it with the full instrument model and a drawing or old-part photographs. No OEM compatibility or replacement relationship is established by these catalog rows.

02 CATALOG DIMENSIONS | TYPES 3 AND 4

Compact and oval boat forms

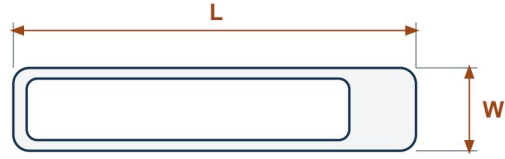
Type 3 compact narrow boats

3D RECOGNITION



Representative form

GOVERNING VIEWS



TOP



SIDE

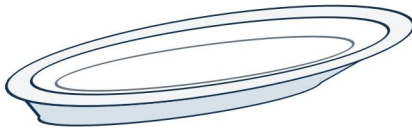
Dimension key - not to scale. Representative geometry; the approved drawing controls the actual profile and order dimensions.

Catalog reference	L (mm)	W (mm)	H (mm)	Catalog alumina note
TE-AS-085-1	27	7	6	99%
TE-AS-078-1	40	9	9	99%

The representative Type 3 outline has an extended end region. Confirm its profile, cavity termination and contact with the loading tool on the drawing.

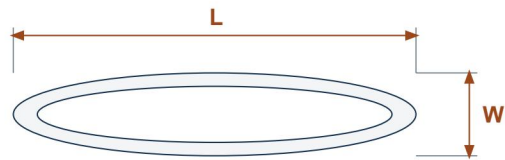
Type 4 boat-shaped crucible

3D RECOGNITION



Representative form

GOVERNING VIEWS



TOP



SIDE

Dimension key - not to scale. Representative geometry; the approved drawing controls the actual profile and order dimensions.

Catalog reference	L (mm)	W (mm)	H (mm)	Catalog alumina note
TE-AS-078-2	60	11	8	99%

External L × W × H in mm; catalog reference values. 99% is a catalog alumina note. The approved drawing and quotation define the actual profile, ordered material, tolerances and availability.

03 MATERIAL SELECTION

Select the grade with the process

The following data describe dense sintered alumina materials. Select a grade with the boat geometry, sample and flux chemistry, atmosphere, loading and complete heating and cooling cycle.

Material grade	Nominal Al ₂ O ₃ (wt%)	Typical density (g/cm ³)	Material temperature guide (°C; application-dependent)
AD-ALU-999	99.90	3.94	1750
AD-ALU-997	99.70	3.94	1700
AD-ALU-995	99.50	3.90-3.92	1650
AD-ALU-990	99.00	3.80-3.91	1600
AD-ALU-960	96	3.70	1600 maximum in air
AD-ALU-950	95	3.75	1400

Application-dependent material guidance, not a continuous-duty, loaded-life or finished-boat operating rating. Catalog rows marked 99% do not authorize substitution with another grade.

Thermal and absorption references

Grade suffix ¹	Thermal conductivity ² W/(m·K), typical	Mean expansion ³ 10 ⁻⁶ /K	Water absorption %
999	35-42	7.6	≤0.01
997	35-40	7.6	≤0.05
995	30-38	7.6	≤0.10
990	24	7.2	≤0.10
960	25 at 20 °C	8.2; 25-1000 °C	≈0 typical, rounded
950	18-25	7.6	≤0.20

¹ All suffixes refer to AD-ALU grades above. ² At 25 °C except AD-ALU-960 at 20 °C. ³ Mean linear expansion over 25-800 °C except AD-ALU-960 over 25-1000 °C. Absorption inequalities are selection limits; the 96% value is rounded typical data.

Specify the analytical requirement

Higher nominal purity alone does not guarantee a lower analytical blank. Define target elements, relevant impurities, preconditioning, blank drift, sample/flux interaction and cleaning acceptance under the intended method.

Near-zero water absorption is not proof of gas tightness or analytical performance. Typical values and ranges are not manufacturing tolerances; material testing and purchase acceptance must be specified separately.

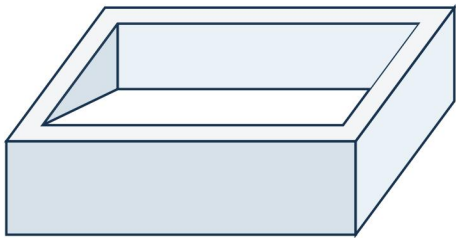
Material data: ADCERAX Alumina Grade Comparison, Rev 16, pages 1-2.

04 DRAWING-DEFINED GEOMETRY

Define the complete boat

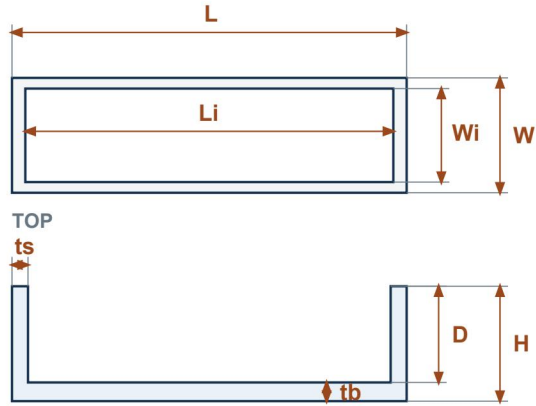
Use a drawing, dimensioned sketch or existing sample for custom review. The rectangular example below explains inputs; it is not a TE catalog item or a manufacturing drawing.

3D RECOGNITION



Rectangular open body example
Cover defined separately on drawing

GOVERNING VIEWS



LONGITUDINAL SECTION

Dimension key - not to scale. Representative geometry; the approved drawing controls the actual profile and order dimensions.

Field	Dimension or specification to define
L, W, H (mm)	External body length, width and height; include tolerances and datums.
Li, Wi, D (mm)	Usable internal length, width and depth; define the measurement plane and fill height.
ts, tb (mm)	Local wall/end thickness ts and base thickness tb. Specify each wall independently if unequal.
Profile and edges	Flat or curved base, end shape, taper, rim, corner transitions and critical edges.
Cover, if required	Separate lid drawing, fit and assembly envelope; define recesses or vents explicitly.
Surface and cleanliness	As-sintered or finished surfaces, critical finish, residue and contamination criteria.
Inspection basis	Critical dimensions, gauges/supports, sampling, visual limits and required records.

All fields are RFQ inputs. Feasibility, tolerances and supply configuration are confirmed through drawing review; no universal wall-thickness tolerance applies. A close-fitting cover does not imply a gas-tight seal.

If a part has a hole, identify its location, size and purpose through the separate perforated-boat route. Do not add a hole to a non-perforated catalog reference by assumption.

[Perforated alumina boat enquiry route](#)

05 ACCEPTANCE AND REPEAT SUPPLY

Approve the method before repeat orders

For an analyzer consumable, dimensional fit and analytical acceptance are separate decisions. For general furnace work, define the sample, reaction, atmosphere and thermal cycle for that process.

1 Identify and approve the geometry

Match the reference, drawing revision or old part to the instrument or furnace. Check the full loading path, supports, push rod, end region, lid and handling tools. Agree sample quantity and fit-test criteria before trial.

2 Validate the actual sample method

Validation area	Acceptance inputs to agree
Analytical blank	Target elements, blank limits and drift, preconditioning, instrument state and number of samples.
Sample and flux	Composition, particle size, charge, residue, reaction or penetration and contamination limits.
Thermal cycle	Continuous/peak temperature, dwell, ramp, gas composition and flow, insertion and removal conditions.
Handling and reuse	Cracks, chips, distortion, adhered residue, cleaning method and discard criteria. No universal reuse count.

3 Freeze the batch supply definition

Order control	Specify with the approved drawing or purchase order
Material and inspection	Grade/chemistry, critical dimensions, wall/base thickness, visual limits, sampling and report requirements.
Identification and change control	Item, drawing revision and batch identification; define approval before geometry, material or process changes.
Packing and receiving	Unit separation, rim protection, support direction, box quantity, cleanliness, labels and incoming-damage criteria.
Repeat supply	Trial and batch quantities, expected usage, destination and target date; agree availability and lead time in the quotation.

These are project acceptance and supply requirements to agree. A checklist is not a claim that a particular inspection, report, packing configuration or service life is already included.

06 ENGINEERING RFQ

Send a reference or drawing for review

Start with the identification and quantity you have. ADCERAX can review the geometry, material and information needed for a quotation or sample evaluation.

Path A Existing catalog reference

Quote ADC-CAT-ACB-001 Rev 01, the TE item and required quantity. Confirm cover requirements, material/inspection basis and any dimensional or configuration change. Include the equipment and intended method.

Path B Custom or existing-part development

Send a drawing and revision, dimensioned sketch or clear top, side and end photographs of the old part. Add the instrument/furnace model, original part number and distributor SKU when available. If the model is unknown, provide the tube, fixture and loading-path details.

Include in the enquiry	Required information
Geometry	Reference or drawing; outer and usable inner dimensions; wall/base thickness, end profile, cover, critical tolerances and surface requirements.
Material	Requested alumina grade, target impurities, any glaze or coating and material-document requirements.
Application	Sample and flux, target elements, blank/contamination limits, furnace cycle, atmosphere, loading and handling.
Validation	Trial quantity, fit and method checks, inspection sampling, acceptance limits, cleaning and reuse/discard criteria.
Supply	Batch quantity, repeat demand, packing and labeling, delivery destination and requested schedule.

Final order definition. The approved drawing, material specification, acceptance criteria and quotation govern the supplied boat. Catalog geometry and an OEM number alone do not establish compatibility.

Send the technical brief

info@adcerax.com

[View the alumina combustion boat product page](#)

ADCERAX | HUNAN ATCERA CO.,LTD

China-based advanced ceramics manufacturer

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