

Silicon Carbide Ceramic Column Membrane Modules

Selection for water and wastewater filtration



Column module appearance reference from ADCERAX product imagery. Family form only; no model, shipment or installation is identified.

Compare ten AT-SICZ model references and a separate 200 mm housing configuration. Define the feed, interfaces and acceptance basis before selecting the complete assembly.

AT-SICZ area	AT-SICZ overall length	AT-SICZ housing diameter
11–25.6 m ²	1702–2195 mm	245 or 250 mm

Listed dimensions support initial selection. The selected configuration, drawing and quotation define the supply.

01 PRODUCT AND DUTY

Identify the assembly you need

The purchasing unit combines a SiC membrane core, housing, fluid connections and seals. A bare membrane tube, replacement core, empty housing and complete treatment skid are different supply scopes.



Assembly form reference. The image does not establish the internal element count or a specific AT-SICZ model.

Assembly element	Define for the selected configuration
Membrane core	Material and layer specification, pore designation, effective area and arrangement.
Housing and seals	Housing, end-seal and gasket materials for the feed and cleaning exposure.
Connections and installation	Feed, concentrate and permeate routes; connection standards, support and service space.

Choose the route by the feed

Project duty	Information that determines selection
RO or NF pretreatment	Raw-water variation, target turbidity or SDI, and the downstream supplier's requirements.
Wastewater or water reuse	Solids, oil, chemistry, outlet target and available cleaning time.
Produced water or brine	Oil, salinity, scaling tendency, wet-end materials and representative-feed evaluation.
Process-liquid clarification	Target particles, liquid composition, contact-material and hygiene requirements.

RO = reverse osmosis; NF = nanofiltration; SDI = silt density index. These are project review routes, not installation case studies or certification claims.

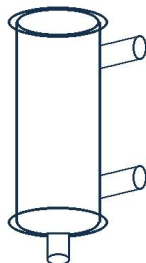
Read next [Model table 3](#) | [200 mm configuration 4](#) | [RFQ 8](#)

02 MODEL REFERENCES

AT SICZ model dimensions

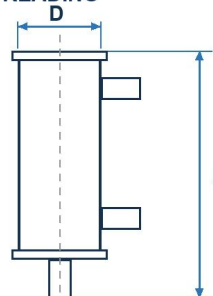
Compare each complete row. The area is a listed selection reference; final effective area, membrane grade, interfaces and supply version are recorded with the quotation.

3D FORM REFERENCE



Family outline only
Connections are defined by the selected drawing

DIMENSION READING



L overall length
D housing diameter

Not to scale. No interface or fit approval.

Dimension key - not to scale. L is overall length and D is housing diameter. Reference form only; the selected drawing controls connection geometry.

Module model	Area (m ²)	L (mm)	D (mm)	Housing designation	Pore designation (μm)
AT-SICZ-1	11	1702	250	UPVC	0.1/0.04
AT-SICZ-2	13.5	1702	250	UPVC	0.1/0.04
AT-SICZ-3	14.5	2102	250	UPVC	0.1/0.04
AT-SICZ-4	17.5	2102	250	UPVC	0.1/0.04
AT-SICZ-5	21.0	2102	250	UPVC / stainless steel / fiberglass	0.1/0.04
AT-SICZ-6	25	1885	245	Fiberglass	0.1/0.04
AT-SICZ-7	11	2195	250	UPVC	0.02/0.04
AT-SICZ-8	11.5	1960	250	UPVC	0.02/0.04
AT-SICZ-9	25.6	1885	245	Fiberglass	0.02/0.04
AT-SICZ-10	21	1885	245	Fiberglass	0.02/0.04

Common listed fields: silicon carbide membrane core; vertical installation. UPVC = unplasticized polyvinyl chloride. Housing designations describe the listed choices; the actual version is selected at quotation.

Read the designations correctly

The slash in 0.1/0.04 or 0.02/0.04 retains the listed notation. It does not define a dual-layer structure or an absolute retention rating. Specify the selected membrane and test basis with the separation target.

AT-SICZ-7 remains 11 m² / 2195 mm / 250 mm. It is separate from the 200 mm housing configuration on page 4. Matching external dimensions do not establish interchangeability or stock availability.

03 SEPARATE CONFIGURATION

200 mm housing configuration

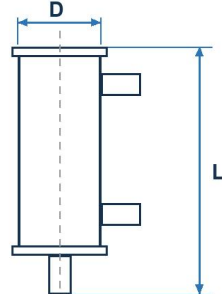
This separately listed configuration is not an additional AT-SICZ model and is not a substitute designation for AT-SICZ-7. Keep the complete configuration together during selection.

3D FORM REFERENCE



Family outline only
Connections are defined by the selected drawing

DIMENSION READING



L overall length
D housing diameter

Not to scale. No interface or fit approval.

Outline reading reference - not to scale. L and D only. The configuration drawing must define the center-distance datums, channel detail and all connection interfaces.

Configuration field	Listed specification
Filtration area	11 m²
Overall length L	2195 mm
Housing diameter D	200 mm
Center distance	1613 mm; datum pair defined by the configuration drawing
Flow channel diameter	4.5 mm; internal detail defined by the configuration drawing
Feed and concentrate connections	DN150
Permeate connection	DN50
Housing material	UPVC
Membrane core material	Silicon carbide
Pore designation	0.02/0.04 µm
Installation	Vertical
Filtration arrangement	Dead-end / cross-flow, inside-out; selected mode to be specified

DN is a nominal connection-size designation, not a measured bore diameter. Connection standard, sealing face, port location, supports and removal clearance are defined by the selected drawing.

The pore designation retains its source notation. It is not an absolute retention guarantee. No general pressure, temperature, pH or permeate-flow rating is established by this dimensional table.

04 ENGINEERING SELECTION

Size the duty before the module count

Start with the liquid and the required result. A listed area or pore designation cannot, by itself, define the production rate, outlet quality or cleaning interval.

1 Describe the feed

Provide the liquid source and variation, suspended solids, turbidity, oil, salinity, temperature, pH and relevant chemicals. A description can start the discussion; a representative analysis supports the next selection.

2 Set the separation target

Identify the particles or water-quality criteria, the downstream process and the sampling method. Define the selected pore specification and verify performance against the actual project target.

3 Establish the sizing basis

Agree a design flux from representative-feed evaluation and a defined effective membrane area. Include operating hours, cleaning downtime and standby needs when determining installed module quantity.

$$Q_p = J \times A / 1000$$

Q_p : permeate flow, m³/h · J : design flux, L/(m²·h) · A : effective membrane area, m². This is a unit relationship, not a product flow guarantee. Confirm A rather than automatically substituting the listed area.

4 Match the complete wet end

Review the membrane, housing, seals and end sealing against operating pressure, transmembrane pressure, temperature and cleaning exposure. Transmembrane pressure (TMP) and housing pressure are separate requirements. CIP means cleaning in place.

5 Agree measurable acceptance

Performance item	Define before an order
Separation result	Feed or challenge liquid, target result, sampling method and acceptance limit.
Flux and cleaning recovery	Area definition, TMP, temperature, test duration, baseline and cleaning sequence.
Assembly integrity	Configuration, pressure/leak or integrity method, conditions and acceptance criteria.

A clean-water result does not establish wastewater design flux. Requirements for food contact, drinking water or other regulated duties need a project-specific review.

05 INSTALLATION AND USE

Control the interfaces and operating sequence

Use the accepted assembly drawing and operating instructions for the selected module. Carry the same configuration reference through installation, start-up and maintenance.

Confirm the interface drawing

Match overall length and housing diameter, all fluid routes, connection sizes and standards, sealing faces, supports, orientation and removal space. For replacement work, include the old supplier reference, nameplate, photographs and drawing. Similar appearance or area does not establish a direct replacement.

Prepare and support the installation

Flush the connected pipeline as specified. Protect ceramic components from impact. Support the housing and pipework so that connection loads remain within the agreed design. Provide access for air release, drainage and service; follow the specified tightening method.

Start gradually and record a baseline

Increase feed pressure and flow gradually under the selected procedure. Check seals, air release, pressure balance and permeate response. Record feed conditions and the start-up response for later comparison.

Review changes in operation

Follow the agreed assembly pressure, TMP and temperature conditions. Review the operating cycle when feed composition, fouling or pressure loss changes. Do not respond to reduced flow by increasing pressure beyond the confirmed assembly limits.

Qualify the cleaning sequence

Choose the cleaning approach for the foulant and verify compatibility with the entire wet end. Record chemical identity, concentration, temperature, exposure time, backwash and flushing. A membrane material designation alone does not approve a cleaning chemical.

Protect during shutdown and restart

Follow the selected storage procedure, including controls for residual solids, chemicals, drying, freezing and biological growth. Before restart, inspect, flush as specified, check seals and restore pressure gradually. Compare the response with the accepted baseline.

These selection and planning notes do not replace configuration-specific installation, operating or safety instructions.

06 ACCEPTANCE AND SUPPLY

Define what the delivered assembly must meet

Link the selected module, drawing revision and acceptance requirements in the order record. The items below are requirements to agree; they do not represent a test certificate or a claim that every test is included.

Control point	Agree for this order	Record to request
Configuration	AT-SICZ reference or separate configuration; membrane, housing, seals and included items.	Accepted configuration and drawing revision.
Dimensions and interfaces	Critical dimensions, tolerances, connection standards, sealing faces and support locations.	Agreed dimensional and visual inspection record.
Pressure and integrity	Selected-assembly test method, medium, conditions, sampling and acceptance limits.	Results against the agreed method.
Functional evaluation	Representative feed, effective area, TMP, temperature, separation target and cleaning recovery.	Trial or test record with stated conditions.
Identification and documents	Item reference, revision and lot/serial identification where required; requested documents.	Identification and document list agreed for shipment.

Protect the housing and connections in transit

Agree supports and cushioning for the actual module outline, protection for ports and sealing faces, cleanliness and moisture protection, packing identification and destination requirements. Specify any inspection required before packing and keep the arrangement with the order reference.

Make repeat orders traceable

Quote the accepted configuration and drawing revision when reordering. Review changes to membrane grade, housing, seals, connections, duty or cleaning chemistry before treating the new requirement as identical to the earlier supply.

Commercial definition

Confirm trial or project quantity, requested documents, destination and target schedule with the quotation. Price, minimum quantity, availability, delivery and packing scope are quotation-controlled.

ADCERAX coordinates module configuration, production and inspection with manufacturing partners against agreed specifications. The quotation defines the deliverable scope and responsibilities.

07 REQUEST FOR QUOTATION

Send a model reference or a drawing

Start with what you have. A listed model, old-module photograph or installation sketch can open the engineering review. A request for quotation (RFQ) should identify the module and the result your process needs.

Path A A listed module

Quote this catalog revision and the complete AT-SICZ model number, or identify the separate 200 mm housing configuration. Add the required quantity, intended duty and any requested changes. For AT-SICZ-5, identify the housing material to be reviewed.

Path B A new or replacement configuration

Send the drawing and revision, or photographs and a sketch of the existing module and installation. Include the old supplier model or nameplate when available, the connection details and the operating or failure information that prompted the request.

First message essentials

Send now	Useful information
Project and assembly	New installation or replacement; model/configuration reference or drawing/photos.
Feed and target	Liquid source and available analysis; target outlet quality and permeate flow.
Order requirement	Quantity, destination, target timing and any required trial or inspection documents.

Complete during engineering review

Effective area and pore specification; operating hours and mode; assembly pressure and TMP; temperature; feed variation; cleaning chemistry and exposure; all wet-end materials; interfaces and tolerances; supports and service clearance; acceptance method and limits.

Request an engineering review and quotation

info@adcerax.com

[View the SiC column membrane module product page](#)

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Reference: ADC-CAT-SIC-COL-001, Rev 01. Include this reference with the model number or drawing so the inquiry follows the same configuration basis.