SECOND DESK

INTERNATIONAL ADVISORY

Softening & demineralisation

Control hardness and ionic impurities

WATER & ENVIRONMENTAL TECHNOLOGIES



AI-generated illustration | not an actual project reference

Product scope and commercial role

TECHNICAL SCOPE

- Single and duplex softeners
- SAC resin
- Mixed beds
- Regeneration systems

SECOND DESK ROLE

Technical-commercial qualification, market development and manufacturer or partner coordination.



Source: Second Desk website | sector image, not project evidence

Design basis and operating envelope

INPUTS REQUIRED BEFORE A COMPARABLE QUOTATION

- Hardness and ion balance
- Flow variation
- Required leakage
- Service cycle
- Regenerant and waste availability

The owner and qualified manufacturer confirm operating conditions and applicable design basis before engineering release.

Engineering and component selection

DESIGN REVIEW POINTS

- Resin working capacity
- Contact time
- Vessel distribution
- Brine or regenerant system
- Regeneration logic

Selection trade-off

Compare simplex versus duplex operation and required service continuity. Resin capacity depends on feed chemistry and leakage criteria.

Project drawings, tolerances and design details remain subject to the responsible supplier or engineer.

Representative technical section



AI-generated technical concept | not to scale or for fabrication

DETAILS TO CONFIRM WITH QUALIFIED SUPPLIER

- Resin working capacity
- Contact time
- Vessel distribution
- Brine or regenerant system

Confirm the actual construction and dimensions from controlled supplier drawings or approved samples.

Representative functional arrangement

Representative service path and separate regeneration-waste mode. Actual valve logic depends on the system.



Input boundary

Hardness and ion balance / Flow variation

Operating and output boundary

Hardness or conductivity / Regeneration completeness

Fabrication and assembly sequence



AI-generated manufacturing scene; illustrative only

TYPICAL CONTROLLED WORKFLOW

01 Vessel and distributor assembly

02 Resin specification review

03 Chemical-resistant pipework

04 Valve matrix

Inspection and quality control

TYPICAL QUALITY CONTROL POINTS

01 Resin batch traceability

02 Pressure containment test

03 Sequence check

04 Instrument calibration



AI-generated sector inspection scene; illustrative only

Inspection methods, sampling, hold points and sign-off depend on the order and approved quality plan.

Factory acceptance and site acceptance

FAT / manufacturing release

- Resin batch traceability
- Pressure containment test
- Sequence check
- Instrument calibration

SAT / performance verification

- Hardness or conductivity
- Regeneration completeness
- Service-to-standby changeover

Agree test conditions, tolerances, witness authority and punch-list closeout before testing. SAT is distinct from factory release.

Site integration and commissioning readiness



AI-generated application scene; illustrative only

SITE PREREQUISITES

01 Flush and condition resin

02 Connect brine and waste

03 Verify level and flow instrumentation

Packing, logistics and delivery

PRODUCT-SPECIFIC PACKING CHECKS

01 Resin preservation per OEM

02 Sealed media packaging

03 Protect distribution internals

Define the Incoterms® rule, named place, export documents, insurance responsibilities and site receipt process in the commercial agreement.



AI-generated logistics scene; illustrative only

Technical and commercial risk review

Assess regeneration consumption and discharge restrictions. Verify distribution and resin retention internals.

Design compliance

Compare the same data sheets, duty and explicitly agreed exclusions.

Technical evidence

Request relevant engineering documents, inspection plan and test records.

Execution risk

Check site access, spares, service scope and the manufacturer's support plan.

Responsibilities across the supply chain

OWNER / EPC	SECOND DESK	MANUFACTURER / CONTRACTOR
Defines duty, project constraints, site interfaces and acceptance authority.	Clarifies the opportunity, identifies suitable suppliers and coordinates technical-commercial communication.	Owns engineering, production, testing, guarantees, site execution and contractual obligations as agreed.

Supplier names, manufacturing capability, certificates, references and country-specific approvals are verified for each enquiry; no standing partner or factory is implied.

RFQ and evidence package

01	**Technical definition**	Duty and design basis, data sheets, scope boundaries and tie-in information.
02	**Supplier evidence**	Capability, drawings, applicable compliance, inspection plan and relevant references.
03	**Commercial offer**	Scope and exclusions, lead time, payment, Incoterms® rule, optional services.
04	**Handover plan**	FAT/SAT where applicable, documentation, spares, training and after-sales.

SECOND DESK

INTERNATIONAL ADVISORY

Discuss your next requirement

Share the application, target market or project, technical specification and expected delivery scope.

seconddeskinternational.com

Contact form: seconddeskinternational.com/#contact | Denizli, Türkiye | Meetings by appointment

SOURCE AND EVIDENCE NOTES

Second Desk sector page • US EPA: drinking-water treatment technologies • ICC Incoterms® guidance

Visuals: generated sector illustrations and Second Desk website imagery. Project provenance, supplier capabilities and certification remain unverified unless separately confirmed.