SECOND DESK

INTERNATIONAL ADVISORY

Greenhouse utility systems

Site utilities supporting controlled-environment operations

GREENHOUSE & AGRI-TECH



AI-generated illustration | not an actual project reference

Product scope and commercial role

TECHNICAL SCOPE

- Water storage
- Pumps
- Distribution and drainage
- Power and service interfaces

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

- Peak demand
- Available utilities
- Site elevations
- Distribution and drainage routes
- Expansion allowances

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

Engineering and component selection

DESIGN REVIEW POINTS

- System zoning
- Pump duty and NPSH
- Tank volume
- Pipe pressure and service access
- Isolation

Selection trade-off

Estimate peak coincident demand, not average consumption alone. Verify pressure at the most remote consumer.

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

- System zoning
- Pump duty and NPSH
- Tank volume
- Pipe pressure and service access

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

Representative functional arrangement

Conceptual sequence for technical discussion. Actual layout and interfaces depend on the approved specification.



Input boundary

Peak demand / Available utilities

Operating and output boundary

Pressure and flow at critical zones / Drainage

Fabrication and assembly sequence



AI-generated manufacturing scene, illustrative only

TYPICAL CONTROLLED WORKFLOW

01 Tank and skid assembly

02 Pipe prefabrication

03 Electrical controls

04 Identification

Inspection and quality control

TYPICAL QUALITY CONTROL POINTS

01 Material checks

02 Leak/pressure tests

03 Electrical and I/O tests

04 Valve sequence



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

- Material checks
- Leak/pressure tests
- Electrical and I/O tests
- Valve sequence

SAT / performance verification

- Pressure and flow at critical zones
- Drainage
- Electrical and interlock checks

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 Civil readiness

02 Pipe supports

03 Utility connection

04 Flushing

05 Coordination of contractors

Packing, logistics and delivery

PRODUCT-SPECIFIC PACKING CHECKS

01 Cap openings

02 Protect base frames

03 Separate site spools

04 Clearly identify packing groups

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

Agree drainage route, valve isolation and future expansion. Distinguish civil works from equipment supply.

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 • FAO: good agricultural practices for greenhouse vegetables • ICC Incoterms® guidance

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