

PRECISION IN EVERY DETAIL

SIM-Q

Laboratory deionised water system

Integrated dual water outputs for routine laboratory analysis.

**17 MΩ·cm**

DI water resistivity · 25°C

10 / 20 / 30

L/hr · 25°C

RO + DI

Dual-stream water-quality monitoring

From specialist instruments to complete laboratory solutions.

Product brochure · V0.0.7

01

DESIGNED FOR DAILY WORK

From separated water and electrical systems to maintainable modules.



Water/electrical separation and convenient maintenance

Electrical components and water circuits occupy separate spaces to reduce faults caused by moisture or leaks. Magnetic closures on the front, rear and sides provide access for consumable replacement and troubleshooting.

01

Automatic protective shutdown

The system shuts down automatically when tap-water pressure is too low, the supply is interrupted or the pressure tank is full.



Ion-exchange resin and purification cartridges

The original series literature specifies Rohm and Haas ion-exchange resin, with paired 15-inch purification cartridges and paired 15-inch ultrapure-water cartridges for a substantial resin fill.

Structural and consumable illustrations are from the original SIM series brochure. Standard equipment is defined by the specification page and supplied configuration.

02

Online water-quality visibility

Microcomputer control and a true-colour LCD show product-water quality and system operating data online.



RO membrane and cleaning

The original series literature specifies Dow RO membranes with anti-scaling cleaning, automatic startup flushing and manual cleaning.

02

STRUCTURE & MAINTENANCE

Separate compartments for a maintainable cabinet.



SIM series cabinet illustration

Structural illustration from the original series literature. Magnetic closures on the front, rear and sides facilitate cabinet access, consumable replacement and troubleshooting.

This image illustrates the series cabinet structure. Check the appearance and configuration of a specific model against its product image and specifications.



Separated water and electrical compartments

Water circuits and electrical components are organised in separate spaces without cross-contact, reducing electrical faults and safety risks caused by moisture or leaks.

Safety protection

The machine shuts down automatically when tap-water pressure is too low, tap water is interrupted or the pressure tank is full.

03

APPLICATIONS & WATER ROUTES

Two water outputs for different laboratory needs.

SIM-Q integrates RO reverse-osmosis water and DI deionised water in one system for laboratories requiring basic purified-water production.

01 / RO

Reverse-osmosis water

2–10 $\mu\text{S}/\text{cm}$

RO water conductivity ($\leq$ feed-water conductivity $\times 2\%$); online monitoring supports selection according to method requirements.

02 / DI

Deionised water

17 $\text{M}\Omega\cdot\text{cm}$

DI water resistivity (25°C), with online resistivity monitoring to support laboratory water use.

01

Basic laboratory water supply

Configure the system for purified-water production, routine quality observation and water-use management, first defining the required water grade.

02

Match water quality to the method

For solution preparation, laboratory glassware cleaning and other uses, check the method's water-quality requirements before selecting RO or DI water.

03

Match capacity to demand

Select Q10, Q20 or Q30 according to daily consumption, peak draw-off demand and storage arrangements.

04

Configure for feed-water conditions

For tap-water TDS above 200 ppm, the original literature recommends an optional external softener. Also check temperature, pressure and environmental conditions.

This water-selection guidance is based on the original literature. Confirm compatibility with each experiment, instrument or method against its water-quality requirements.

04

FULL SPECIFICATIONS

Water quality and configuration, item by item.

Item	Specifications and conditions
Product model	SIM-Q10 / SIM-Q20 / SIM-Q30
Production rate (25°C)	Q10: 10 L/hr; Q20: 20 L/hr; Q30: 30 L/hr
Feed-water requirements	Municipal tap water; TDS<200 ppm; 5–45°C; pressure 1.0–6.0 kg/cm ²
DI water resistivity	17 MΩ·cm (25°C)
Total organic carbon (TOC)	30 ppb
Heavy-metal ions	<0.1 ppb
Absorbance (254 nm, 1 cm optical path)	≤0.001
Dissolved silica (as SiO ₂)	≤0.01 mg/L
Particles (>0.22 μm)	<1/ml; requires an optional 0.22 μm point-of-use filter
Microorganisms	<1 cfu/ml; requires an optional 0.22 μm point-of-use filter
RO water conductivity	2–10 μS/cm (≤feed-water conductivity × 2%)
Inorganic-ion rejection	95%–99%
Organic-compound rejection	>99% (when MW>200 D)
Particle and microorganism rejection	>99%
Instantaneous dispensing rate	1.5–2.0 L/min
Water outlets	2 outlets: RO reverse-osmosis water and DI deionised water
Power supply / consumption	220±10% V; 50 Hz; 70 W
Operating environment	5–45°C; 20%–80% RH
Water-quality monitoring	Online RO conductivity meter and DI resistivity meter
Standard configuration	Main unit (including purification and ultrapure-water cartridges) + storage tank + accessory kit

Production-performance conditions: municipal tap water, room temperature 25°C and TDS<200 ppm. Feed quality affects product-water quality and consumable life. An external softener is recommended when TDS>200 ppm.

05

QUALIFICATIONS & PATENTS

Manufacturer credentials and patents.

The original brochure states that Beijing Fly Science Technology Co., Ltd. has researched, manufactured and sold ultrapure-water systems since its establishment in 2014, obtaining technical patents and software copyright certificates.



Certificate images are retained from the source. Refer to the originals and supply documents for the holder, title, date and scope.

06

PROJECT PLANNING

Bring water quality, demand and maintenance into one selection checklist.



Beijing Fly Science Technology Co., Ltd. · Factory photograph from the original brochure

Selection item	Information to verify
Water use	Method-specific water quality and RO/DI dispensing requirements
Demand and configuration	Daily demand, peak dispensing, Q10/Q20/Q30 and storage tank
Site conditions	TDS, water temperature, pressure, power supply, installation and maintenance space
Operation and maintenance	Consumables, replacement intervals, water-quality monitoring and protective-shutdown tests

From selection discussions to routine maintenance

Discuss laboratory water-quality targets, feed conditions, demand and consumables. Use the manufacturer's literature to prepare site checks, operating guidance and pre-sales/after-sales service arrangements.

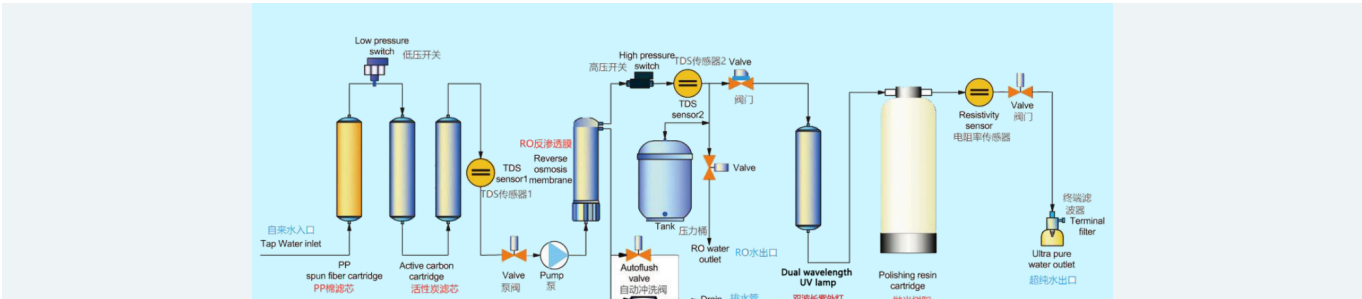
07

SERIES SELECTION

Select the series for your feed water and product-water needs.

Model and series	Capacity / flow	Type and output
SIM-T10 / T20 / T30	10 / 20 / 30 L/hr	Standard type; UP ultrapure water and RO reverse-osmosis water
SIM-T10UV / T20UV / T30UV	10 / 20 / 30 L/hr	Low-organic type; UP ultrapure water and RO reverse-osmosis water
SIM-Q10 / Q20 / Q30	10 / 20 / 30 L/hr	Standard type; DI deionised water and RO reverse-osmosis water
SIM-RO10 / RO20 / RO30	10 / 20 / 30 L/hr	Standard type; RO reverse-osmosis water
SIM-P	1.5–2.0 L/min	Standard type; purified-water feed, producing UP ultrapure water
SIM-PUV	1.5–2.0 L/min	Low-organic type; purified/distilled-water feed, producing UP ultrapure water

SIM series flow diagram



The original flow diagram includes branches for different series configurations. SIM-Q provides RO and DI outputs with dual-stream monitoring. Select each model according to its specifications and standard equipment.

Feed water, environment and water-quality information

Municipal feed-water quality affects purified-water quality and consumable life. SIM-P uses purified-water feed; select other series according to the tap-water conditions on their respective pages.

The manufacturer's literature states that SIM-Q product water meets or exceeds Grade 1 requirements in GB/T 6682-2008 and relevant ASTM, CAP, USP and CLSI standards. This brochure retains that source statement; verify method suitability against specifications and project requirements.