



SepaFlash™ Rotary Evaporation Solutions

Engineered for consistent performance in every evaporation



Simplify your purification, maximize your efficiency!

Santai Science Inc.

About Santai

Discover Santai Technologies

Founded in 2004, Santai Technologies is a leading technology company dedicated to advancing separation and purification tools. With over 20 years of expertise, we have become a trusted partner for professionals and scientists across the pharmaceutical, biotechnology, fine chemicals, natural products, and petrochemical industries.

Santai is renowned worldwide for its outstanding flash chromatography instruments and consumables, setting new benchmarks for efficiency, precision, and reliability in the global market.

Building on this foundation, we are proud to announce the launch of the 2nd Generation SepaBean™ machine and the Rotary Evaporator Product Line, further expanding our portfolio of innovative solutions designed to simplify and accelerate laboratory workflows.



Rotary Evaporation Solutions

Core Advantages

- **Integrated Efficiency:** Rotary evaporator, chiller, and vacuum pump operate seamlessly together, ensuring rapid solvent evaporation for both high-boiling and volatile compounds.
- **Precise Digital Control:** Rotation speed, temperature, and vacuum can be precisely set and stably to ensure accurate experimental results.
- **Safety and Reliability:** Multi-level protection systems (overcurrent, delay, dry-run safeguards) guarantee secure and stable operation.
- **User-friendly Operation:** Designed for straightforward setup and intuitive operation, ensuring efficiency in daily laboratory use.
- **Durability and Low Maintenance:** High-quality materials with corrosion-resistant construction deliver long-term performance while minimizing maintenance costs.

Santai: Over 20 Years of Chromatography Excellence

Santai Technologies was founded to develop separation and chromatography solutions.



2004

2005

The SepaFlash™ HP Series has been launched, offering enhanced pressure resistance.



2009

2013

The SepaFlash™ Standard Size 3 kg and SepaFlash™ Bonded Series have been launched.



2015

2016

Santai Science was founded in Canada, alongside the iLOK™-SL flash column with 15 % free space for solid loading.



2018

2021

The iLOK™ Large Size empty columns (800 g to 7 kg) were launched, together with new product lines like bulk silica gels and TLC plates.



2022

2024-2025

The SepaFlash™ Standard Series was launched, leveraging proprietary packing technology for enhanced performance.



The SepaFlash™ iLOK™ has been launched, providing the convenience of manual assembly and flexible sample loading options.



Santai was recognized as "High-tech Enterprise".
The SepaBean™ machine was launched as a unique flash chromatography system with networking capabilities and built-in intelligence.



The SepaBean™ machine L was launched, featuring large 5 kg and 10 kg flash columns designed for the pilot-scale market.



Launch of the 2nd generation SepaBean™ machine and Rotary Evaporator Product Line

Rotary Evaporator

The Rotary Evaporator Series provides reliable solutions for solvent evaporation, concentration, and purification. With multiple models, it combines robust construction, precise digital control, and flexible condensers to suit varied applications. Each unit ensures stability, ease of use, and consistent performance, making it an essential tool for scalable and efficient rotary evaporation.

Key Features

- **Robust Main Frame:** Constructed from high-grade aluminum alloy, providing excellent stability and long-lasting durability.
- **Adjustable Rotation Speed:** Continuously variable speed control up to 150 / 200 rpm, ensuring optimal performance for various applications.
- **Motorized Lift:** Smooth lifting mechanism with 150 mm stroke powered by a 15 W motor for convenient operation.
- **Flexible Condenser Options:** Vertical space-saving design, available as a double-pipe condenser for inorganic solvents or a single-pipe jacketed version with ice/dry ice container for organic solvents.
- **Precise Heating Bath:** Temperature range from ambient to 99°C with intelligent digital control ensuring accurate and stable performance.



Technical Specifications

Parameters	Identical specifications for all models
Bath Temperature Control	Room temperature to 99°C, ± 1 °C stability
Condenser	Vertical with dual-spiral glass tubing, with feed valve (19# joint, equivalent to NS 19/26)
Frame Material	Aluminum Alloy
Glass Material	Borosilicate Glass GG-17 (equivalent to Pyrex / Duran 3.3)
Lifting Mode	Motorized lift, 150 mm stroke (15 W motor)
Power Supply	220 V, 50 Hz
Sealing Method	Dual PTFE and fluororubber (FKM) sealing
Temperature Control	Pt100 RTD sensor with intelligent temperature control

Parameters / Model	RE-C2LA	RE-C2LB	RE-C2LE	RE-C3LA	RE-C3LB	RE-C3LE	RE-C5LE
Speed Regulation	No display	Digital display	LCD display	No display	Digital display	LCD display	LCD display
Display Mode							
Evaporating Flask Capacity	Standard: 1 L Optional sizes: 200 mL to 2 L			3 L		5 L	
Evaporating Flask Joint	24# joint, equivalent to NS 24/40			Ø 50 flange joint			
Receiving Flask Capacity	1 L			2 L		3 L	
Receiving Flask Joint	35# joint, equivalent to NS 35/20						
Bath Material	Composite with PTFE coating			Aluminum alloy with PTFE coating			
Bath Size (Ø x depth)	230 x 120 mm			200 x 130 mm		275 x 160 mm	
Condenser Size	85 x 430 mm			100 x 510 mm		100 x 530 mm	
Speed Range	0 - 200 rpm			0 - 150 rpm			
Power	40 W			40 W			
Heating Power	1,500 W			2,000 W			
Dimensions (L x W x H)	660 x 420 x 830 mm			690 x 440 x 915 mm			
Weight	26 kg / ~57 lbs			30 kg / ~66 lbs		48 kg / ~106 lbs	
Accessories Compatibility							
• Low-temperature Chiller	CP-C3/15			CP-C5/20		CP-C10/30	
• 15 L Vacuum Pumps	VP-WA & VP-WB						
• Diaphragm Pump	VP-DA						

Low-Temperature Recirculating Chiller

Our low-temperature recirculating chillers are available in three models, designed to provide stable, precise, and energy-efficient cooling for a wide range of laboratory and industrial applications. Combining compressor-based refrigeration, a stainless steel circulation system, and intelligent microcomputer control, they deliver reliable performance and long service life even under demanding conditions.

Key Features

- **Wide Temperature Range:** Cooling down up to -30°C to ambient, ensuring flexibility for standard and low-temperature applications.
- **Efficient Cooling Power:** Strong refrigeration capacity ensures stable performance at different temperature levels.
- **Durable Stainless Steel Reservoir:** Corrosion-resistant tanks (up to 16 L capacity) prevent contamination and extend lifetime.
- **Stable Circulation Pump:** Provides flow rates up to 20 L/min with reliable pressure for external constant temperature fields and laboratory instruments.
- **Precise Control:** User-friendly LCD interface with high-accuracy sensor ensures reliable temperature management, while optional parameter locking safeguards settings against unintended changes.
- **Safety and Sustainability:** Equipped with multiple protections (overheating, overcurrent, compressor delay) and using an eco-friendly refrigerant with low environmental impact.
- **Compact and User-Friendly:** Space-saving design, quiet operation, and continuous performance make it ideal for long-term use in laboratories or production environments.



Technical Specifications

Parameters / Model	CP-C3/15	CP-C5/20	CP-C10/30
General Data			
Power / Current	610 W / 2.7 A	635 W / 3.0 A	1,100 W / 3.0 A
Power Supply	220 V ± 10 %, 50 Hz		
Reservoir Material	Stainless steel 1Cr18Ni9Ti (like AISI 321)		
Reservoir Volume / Total Tank	3 L / 6 L	5 L / 13 L	10 L / 16 L
Operating Temperature Range	From -15°C to room temperature	From -20°C to room temperature	From -30°C to room temperature
External Loop Interface	Robust 1/2" stainless steel (304) threaded connection		
Insulation Pipe	3,600 mm length, 1 piece		
Safety Features	Built-in overcurrent, overheating, and compressor delay protections		
Temperature Control	LCD Display, ± 2°C Stability, Pt100 RTD Sensor		
Dimensions (L x W x H)	415 x 223 x 497 mm	478 x 328 x 590 mm	510 x 365 x 800 mm
Weight	30 kg / ~66 lbs	38 kg / ~84 lbs	50 kg / ~110 lbs
Refrigeration Unit			
Refrigerant	Environmentally friendly R290		
Cooling Capacity			
• At 10°C	1,000 W / ~3,412 BTU/h	1,150 W / ~3,924 BTU/h	1,700 W / ~5,800 BTU/h
• At 0°C	970 W / ~3,312 BTU/h	880 W / ~3,003 BTU/h	1,200 W / ~4,095 BTU/h
• At -10°C	620 W / ~2,116 BTU/h	660 W / ~2,252 BTU/h	700 W / ~2,389 BTU/h
• At -15°C	300 W / ~1,024 BTU/h	-	-
• At -20°C	-	340 W / ~1,160 BTU/h	370 W / ~1,262 BTU/h
• At -30°C	-	-	50 W / ~171 BTU/h
Circulation Pump			
Power	50 W	100 W	150 W
Flow Rate / Lift	12 L/min / 2.2 m	20 L/min / From 5 to 7 m	

Water Circulating, Oil-Free Vacuum Pump (15 L)

This oil-free circulating water vacuum pump delivers powerful vacuum performance while recycling cooling water, reducing overall water consumption and maintenance costs. Designed with corrosion-resistant copper and reinforced ABS, it is both durable and lightweight (11 kg / ~24 lbs), perfect for everyday use on the laboratory bench.

Key Features

- **Oil-Free Operation:** No oil changes, no contamination risk, and minimal maintenance required, for a clean and eco-friendly choice.
- **Strong Vacuum Performance:** Reach up to 0.098 MPa (20 mbar) with a single-tap suction rate of 10 L/min and total flow up to 80 L/min.
- **Dual Suction Taps:** Allows simultaneous use of one or two taps for greater efficiency.
- **Large 15 L Tank:** Made of corrosion-resistant copper and durable ABS, easy to refill with water or ice for long-lasting, stable performance.
- **Quiet and Stable:** Low-noise oil-free operation with integrated fluid muffler, check valve to prevent vacuum loss, and a safety backflow prevention valve for reliable protection during operation.
- **Water-Saving Design:** Closed-loop circulation drastically reduces water consumption compared to traditional aspirators.
- **Wide Application:** Ideal for rotary evaporators, condensers, vacuum filtration, crystallization, drying, sublimation, distillation, degassing, and more.



With its combination of strong vacuum performance, eco-friendly water savings, and durable anti-corrosion design, this 15 L oil-free circulating vacuum pump is the perfect balance of reliability, efficiency, and sustainability, an essential addition to any modern laboratory.

Technical Specifications

Parameters / Model	VP-WA	VP-WB
Power	180 W	
Power Supply	200 V, 50 Hz	
Flow Rate	80 L/min	
Lift	10 m	
Maximum Vacuum	0.098 MPa / 20 mbar	
Suction Capacity per Port	10 L/min	
Number of Suction Ports	2	
Safety Features	Backflow prevention valve	
Tank Capacity	15 L	
Pump Housing Material	304 Stainless Steel (SS)	Polypropylene (PP)
Tank Material	Polypropylene (PP)	
Dimensions (L x W x H)	385 x 280 x 420 mm	
Weight	11 kg / ~24 lbs	

Anti-Corrosion Oil-Free Diaphragm Vacuum Pump

Upgrade your lab with our anti-corrosion oil-free diaphragm vacuum pump, built to deliver reliable vacuum performance while resisting the harshest solvents and chemicals. Designed for laboratories and industries seeking both durability and efficiency, this pump replaces traditional water circulation systems with a compact, powerful, and maintenance-free solution.

Key Features

- **Anti-corrosion Design:** All fluid-contact parts are constructed from PTFE, FFKM, and other advanced materials for superior chemical resistance and long service life.
- **High Performance:** Achieve an ultimate vacuum of 600 Pa (6 mbar) with a pumping speed of 33 L/min (~1.2 CFM) powered by a strong 200 W motor.
- **Safe and Stable Operation:** Optimized cooling system keeps the pump's surface temperature $\leq 50^{\circ}\text{C}$, providing safer use and longer continuous runs.
- **Compact and Portable:** Lightweight (9.5 kg / ~21 lbs) space-saving design fits easily on lab benches or in fume hoods.
- **Maintenance-free:** No oil, no water, no contamination, simply plug in and rely on consistent vacuum performance.
- **Versatile Applications:** Ideal for rotary evaporators, filtration, drying, and distillation processes in modern laboratories.



Perfect for rotary evaporators, filtration, drying, and distillation, this pump combines anti-corrosion protection, strong suction, and worry-free operation, making it the smart investment for modern laboratories.

Technical Specifications

Parameters	VP-DA
Maximum Pumping Speed	33 L/min / ~1.2 CFM
Ultimate Pressure	600 Pa / 6 mbar
Motor Power	200 W
Power Supply	200 V, 50 Hz
Number of Pumping Heads	1 or 2
Ambient Temperature	5 - 35°C
Anti-pollution Level	Class 2
Gas Ballast Function	Yes
Suction Ports Diameter	7 mm
Diaphragm Material	PTFE + FKM
Gas Ballast Material	PTFE + C
Pipeline Material	PTFE
Suction Port Material	PTFE + C
Valve Plate Material	FFKM
Dimensions (W x D x H)	270 x 250 x 210 mm
Weight	9.5 kg / ~ 21 lbs

SepaBean™ Family

machine U

(entry-level)



machine T

(best-seller)



machine

(standard version)



machine 2

(medium pressure)



machine L

(scale-up)



SepaFlash™ Columns

Standard Series



Large Size Series



HP, Bio & Bonded Series



iLOK™ Series

(empty & pre-packed)



iLOK™ - SL Series

(Solid-load cartridges)



Ultra-Pure Bare Silica Gels



Ultra-Pure Bonded Silica Gels



TLC Plates



Other SepaFlash™ Products



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