

Company Profile

SingTao® - Precision Aseptic Fluid Control for Life Sciences & High-Purity Manufacturing

Built on over 30 years of fluid control expertise, SingTao is the flagship brand of ROCK Industrial Group. Headquartered in Singapore, we operate two ISO 9001-certified manufacturing facilities in Malaysia and China.

SingTao offers a complete range of aseptic diaphragm valves, hygienic valve assemblies, thermostatic steam traps, and custom manifold blocks. All products are designed to meet FDA CFR 21, 3-A, ASME BPE, and EU GMP Annex 1.

Valve bodies in contact with process media are preferentially manufactured from 316L stainless steel with electropolished internal surfaces ($R_a \leq 0.4 \mu\text{m}$). Our valves are CIP/SIP capable and available with EPDM, PTFE, or FKM seals. Actuation options include electric, pneumatic, and manual.

SingTao provides end-to-end traceability, a 36-month warranty, and full validation documentation. Three regional service centers provide 24/7 support, including valve sizing and on-site assistance. Routine orders are delivered within 21 working days with a 95% on-time delivery rate.

Trusted by more than 150 pharmaceutical, food, and biotech manufacturers worldwide, SingTao delivers aseptic certainty for your most demanding processes.



Singapore's Trusted Partner. Aseptic Valves for the World.



Bottom Sampling - The True Test of Mixing Uniformity

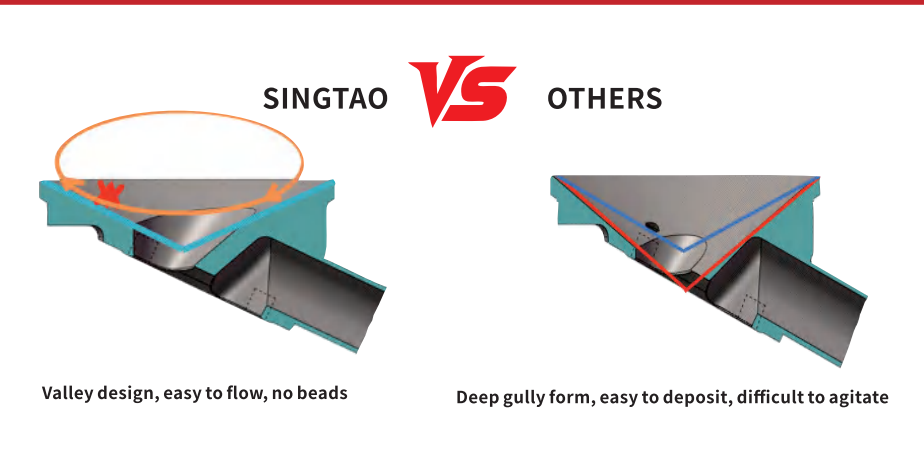
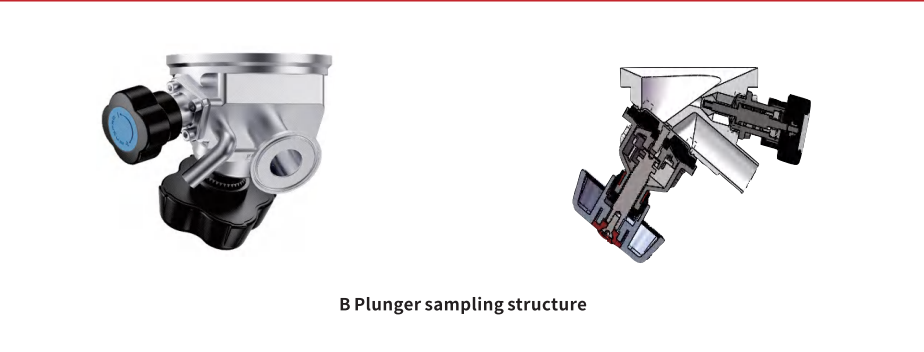
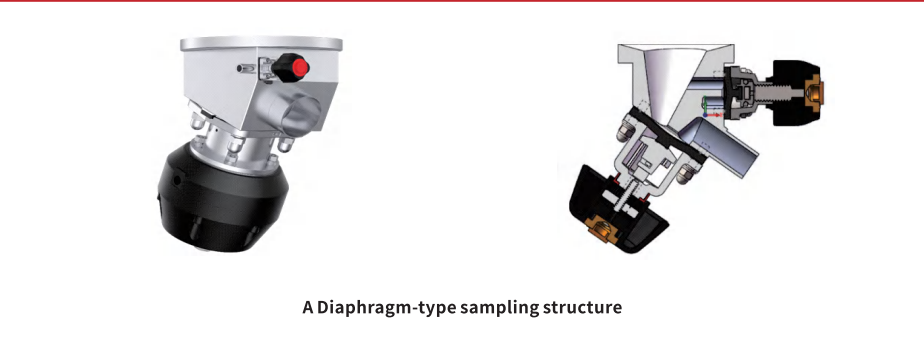
In sterile blending or biopharma fermentation, a stagnant zone always exists between vessel bottom and outlet - regardless of impeller design. Sampling from this zone is the most reliable indicator of process consistency.

✓ **SingTao® Innovation - Reliable Sampling at the Hardest Location**

Engineered for:

- Vessel bottom discharge control
- In-situ sampling
- Cleaning

No additional dead - leg risk. Tailored to bioprocess applications - solving the bottom sampling challenge safely.



T-Type Valve Body - Near Zero-Dead-Leg

Flow path with near zero dead leg drastically reduces microbial adhesion and biofilm risk. Sampling port geometry optimized for hard-piped use points.

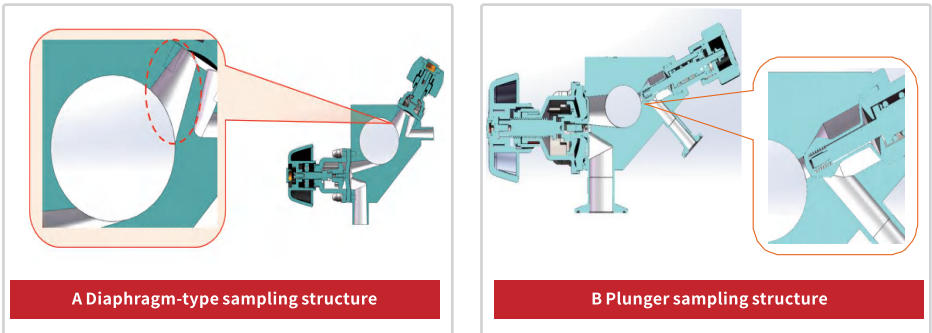
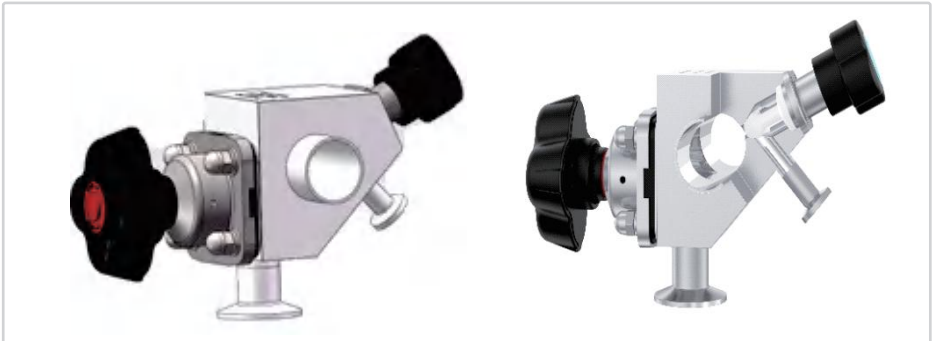
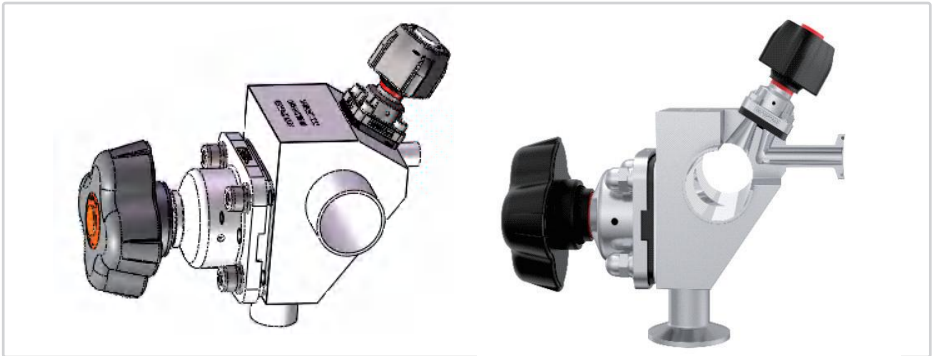
Two designs. One clear recommendation.

- Diaphragm-type
- **Plunger-type** ← Strongly recommended for high-aseptic applications

Why Plunger-type?

- ✓ True zero dead leg cavity
- ✓ No sealing elements exposed to process flow
- ✓ Eliminates residue entrapment and cross-contamination

Ideal for - Purified Water / Water for Injection (PW/WFI) systems and high-aseptic biopharmaceutical batch preparation.



DustLocks & αβ - Enclosed Transfer System

⚠ **Hormonal Drug Risks**

Fully enclosed, zero-leakage transfer essential to prevent osteoporosis, hypertension, diabetes risks from hormone exposure.

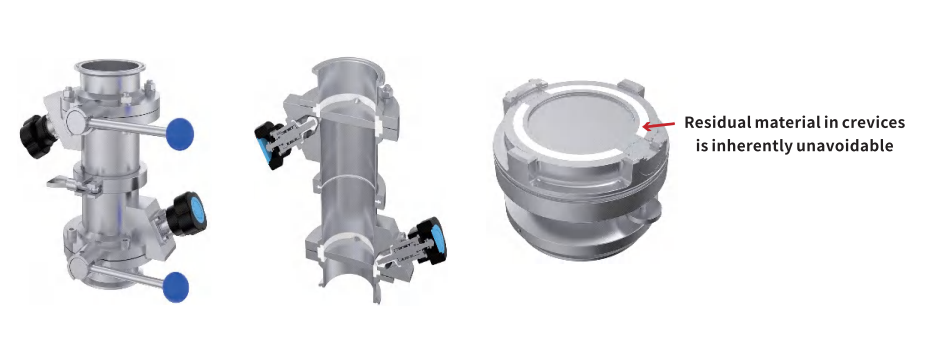
⚠ **Sterile Powder Transfer Challenges**

Dust leakage causes environmental contamination and loss of sterility assurance.

✓ **SingTao® DustLocks** - Twin-disc valve assembly creates a sealed hollow cavity between valves.

· **For hormonal powders** - Bypass valve purges residual powder after transfer, eliminating cross-contamination.

· **For sterile powders** - Bypass valve enables online CIP/SIP to maintain sterility.



Smart Sanitary Breather Valve

❓ **Problem** - In high-temperature pharmaceutical water tanks, condensate wets the breather filter, causing pressure imbalance and inaccurate level readings.

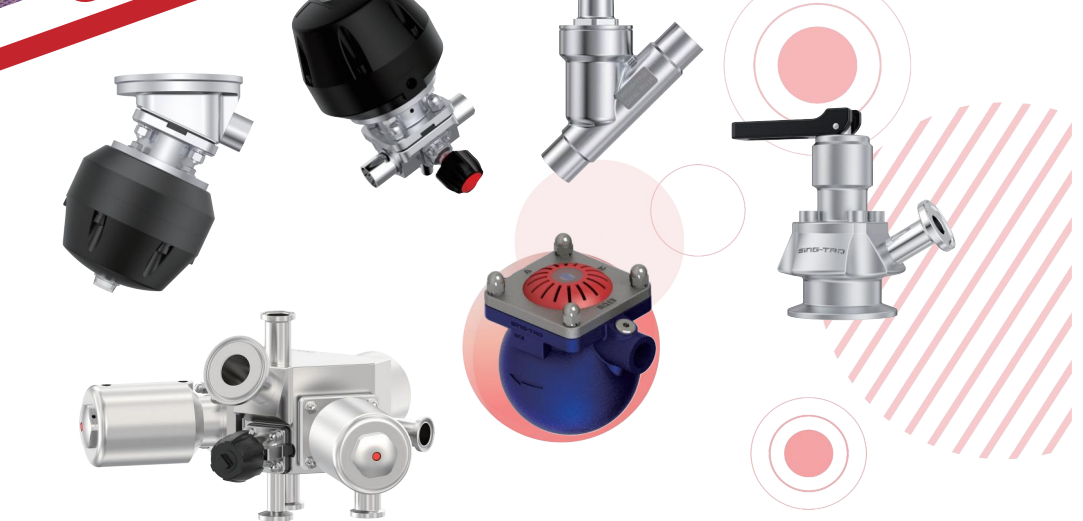
✓ **Solution** - Harnesses liquid level pressure differential.

- Rising steam pressure → Exhausts via bypass port
- Falling liquid / negative pressure → Automatically opens air inlet

Result - Filter stays dry. Pressure stable. Level reading precise.



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Angle Seat Valve



Applications – Shut-off and control of steam and hot water, particularly in water hammer-prone areas.

- Water hammer mitigation protects piping
- High flow capacity with low resistance
- Smart control ready

Technical Data –DN20 to DN65(¾"-2½")· max 16 bar / -10 to 150°C· MP Ra ≤0.6µm· cast 304/316L

Compliance – ASME BPE · EHEDG (as applicable) · FDA CFR 21

Smart Valve Control System

Applications – CIP/SIP, dosing, and sterilization requiring precise automation and remote monitoring.

- Integrated valve position feedback and diagnostics
- High repeatability with built-in parameter settings
- Adapts to complex control logic and CIP/SIP cycles

Technical Data – Interfaces: PROFIBUS, IO-Link, 4–20 mA · Protection: IP67 (explosion-proof optional) · Power: 24V DC / compressed air



Sanitary Ball Valve

Applications – Shut-off for high-purity gases (N₂, O₂) and liquids.

- Full port design minimizes pressure drop
- Three-piece construction for inline maintenance
- Pneumatic or electric actuation available

Technical Data – DN15 to DN80(½"-3")·max 16 bar / -10 to 150°C· MP Ra ≤0.5 µm (EP Ra ≤0.375µm optional)· cast 304/316L

Compliance – ASME BPE · FDA CFR 21



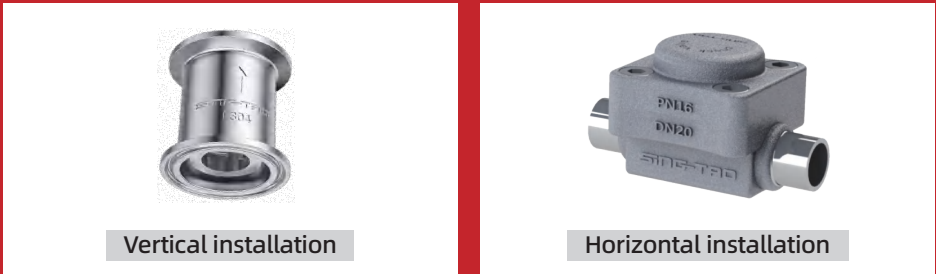
Sanitary Check Valve

Applications – Prevents backflow, protects pumps and filters in sanitary piping systems.

- Suitable for vertical or horizontal installation
- No exposed spring elements
- Low cracking pressure

Technical Data – DN15 to DN65(½"-2½")· max 10 bar / -10 to 150°C· 304/316L

Compliance – ASME BPE · FDA CFR 21



Tank Bottom Plunger Valve



Applications – Sterile draining, harvesting, and cleaning of bioreactors and mixing vessels.

- True zero dead leg
- Maximum drainability supports antigen recovery
- No cross-batch contamination

Technical Data –DN20 to DN50(¾"-2")·max 16 bar / -10 to 150°C·forged 316L · MP Ra ≤0.5µm (EP Ra ≤0.375µm optional)

Compliance – ASME BPE flush-mounted interface· FDA CFR 21

Aseptic Sampling Valve

Applications – Designed for online QC/QA sampling in aseptic processing.

- Ultra-low dead leg cavity minimizes residue entrapment
- Dual-port version supports CIP/SIP cleaning cycles without disassembly
- Low sample volume reduces product waste

Technical Data – inlet/outlet DN25/DN15(1"/½") · sample port (Tri-Clamp or Ø8 mm tube) · max 10 bar / -10 to 150°C · forged 316L/ Hastelloy / duplex stainless steel · MP Ra ≤0.5µm (EP Ra ≤0.375µm optional.)

Compliance – FDA CFR 21 (diaphragm material) · FDA DMF Type II (diaphragm)



Thermostatic Steam Trap



CST2 Type

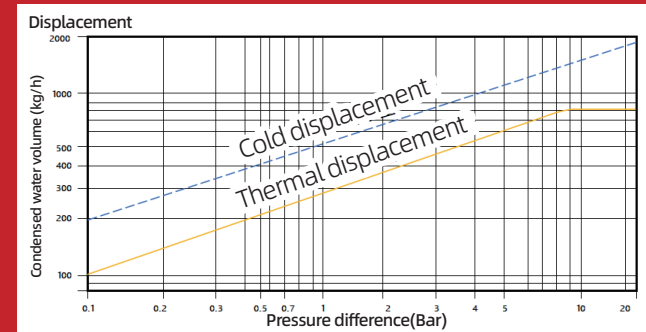
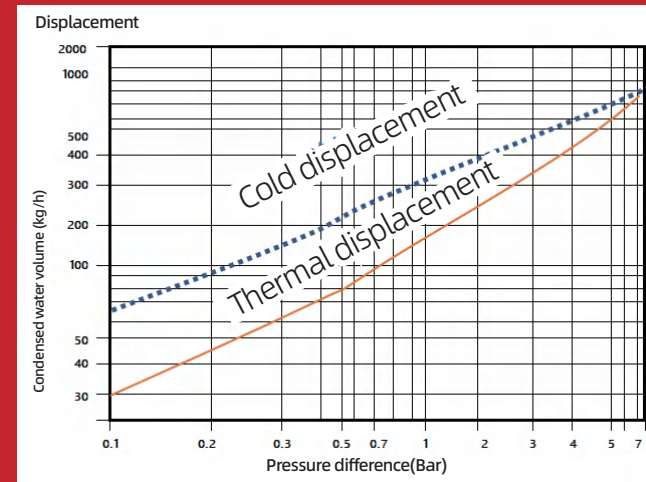


Cylindrical

Applications – Automatic removal of condensate and non-condensable gases from pure steam lines, sterilizers, and heat exchangers.

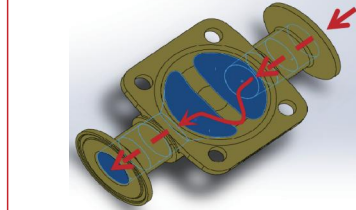
- Minimizes live steam loss
- Fast condensate discharge prevents cold spots
- Selectable by condensate load (CST2 or cylindrical)

Technical Data – DN15 to DN25 (½"-1")· 0-170°C (CST2) / 0-250°C (cylindrical). max 16 bar / 25 bar· 2°C (CST2) / 5, 10, 20°C (cylindrical)· 304/316L · EP Ra ≤ 0.375µm on wetted surfaces



Compliance – ASME BPE · PED (EU Pressure Equipment Directive)

Aseptic Diaphragm Valve



Applications – On/off and modulating control of WFI, purified water, high-purity fluids, and sterile preparations.

- Unibody design lowers dead leg
- CIP/SIP capable
- Multi-port and custom options available

Technical Data – DN10 to DN100 (¾"-4") · max 10 bar / -10 to 150°C· MP Ra ≤0.5µm (EP Ra ≤0.375µm optional)· cast or forged 316L /1.4404 or 1.4435

Compliance – FDA CFR 21, USP Class VI, 3-A, ASME BPE

Customized Diaphragm Valve

Applications – Custom fluid control for specific process layouts; replaces complex tubing assemblies.

- Unibody design minimizes residue entrapment
- Tailored to customer piping and vessel interfaces
- Reduces dead volume and optimizes flow path.

Compliance – ASME BPE · FDA CFR 21 · EHEDG (where applicable)

