



SNAP BALL VALVE

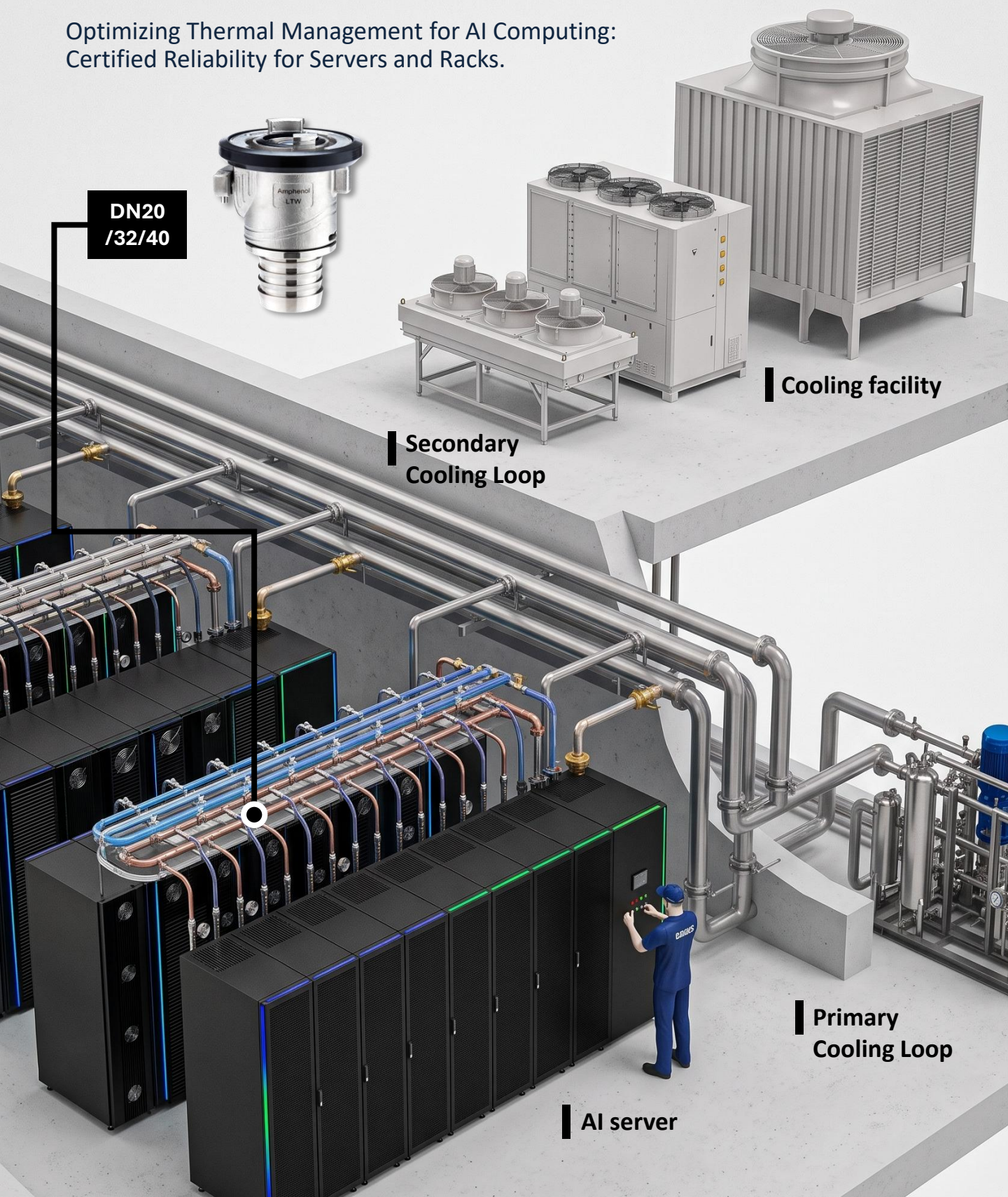
Solution for CDU output distribution

Amphenol LTW

Unrivalled InterConnects for Harsh Environments

Application of High-Performance Quick Disconnect Couplings

Optimizing Thermal Management for AI Computing:
Certified Reliability for Servers and Racks.



Product Description

Amphenol LTW's **Snap Ball Valve (SBV)** is a key component specifically designed for coolant management systems and is primarily used in Coolant Distribution Units (CDUs).

Key Features

- 99% usage on data center
- DI water, PG25 or others
- DN20, DN32, DN40 water flow size
- Stainless Steel 304 material

General Specification

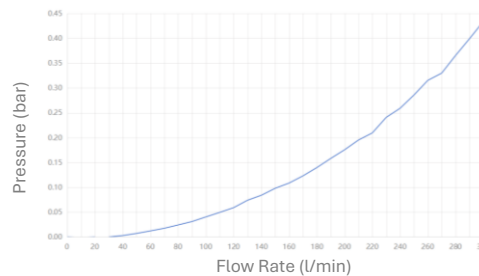
Connection Type	Hose barb / Thread / Sanitary Flange	Operating Temperature	-40°C ~ +120°C
Durability Requirements	5000 times	Shipping Temperature	-40°C ~ +150°C
Material	Body / Spring / Steel Ball: Stainless Steel	Maximum Operating Pressure	16bar
Seal	EPDM	Minimum Burst Pressure	64bar
Fluid Type	DI water, Ultrapure water, Ethylene glycol, Polypropylene glycol, and PFPE	Salt Spray	96hrs

Coolant Compatibility

Seal material	Pure water	EG25	PG25	DI Water	Oil	PFS
NBR	✓				✓	
FKM					✓	
EPDM	✓	✓	✓	✓		✓
FVMQ	✓	✓	✓	✓	✓	

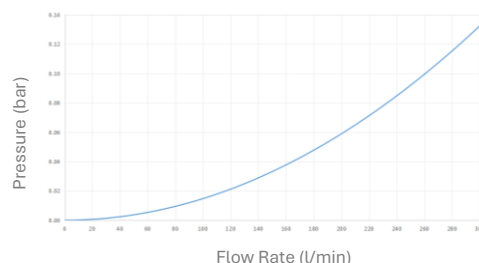
DN20 Fluid Loss Requirement <5ml

Nominal diameter DN (mm): DN20
Connection Force without Pressure: 5N
Minimum Cv: 34
Flow Rating: 210 LPM



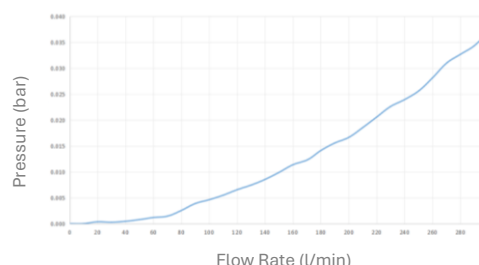
DN32 Fluid Loss Requirement <7ml

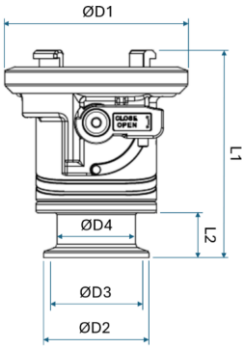
Nominal diameter DN (mm): DN32
Connection Force without Pressure: 10N
Minimum Cv: 71
Flow Rating (0.2bar pressure): 445 LPM



DN40 Fluid Loss Requirement <12ml

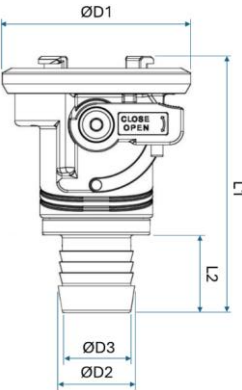
Nominal diameter DN (mm): DN40
Connection Force without Pressure: 18N
Minimum Cv: 132
Flow Rating (0.2bar pressure): 810 LPM





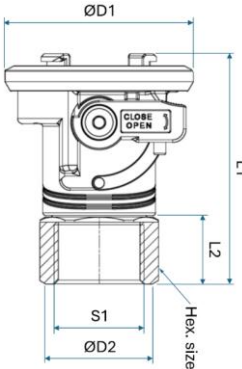
Sanitary Flange

Product	Part Number	L1	L2	ØD1	ØD2	ØD3	ØD4
DN20	SBV20-SESTA-NA001	88.1mm	21.5mm	Ø69.9mm	Ø50.5mm	Ø43.5mm	Ø25.6mm
DN32	SBV32-SESTB-NA001	99.0mm	21.5mm	Ø88.0mm	Ø50.5mm	Ø43.5mm	Ø38.0mm
DN40	SBV40-SESTC-NA001	109.9mm	21.5mm	Ø103.0mm	Ø64.0mm	Ø56.5mm	Ø51.6mm



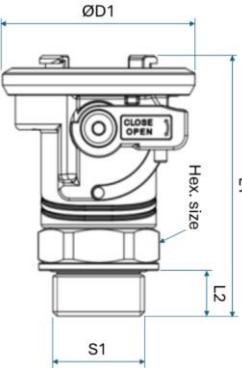
Hose Barb type

Product	Part Number	L1	L2	ØD1	ØD2	ØD3
DN20	SBV20-SEPPA-NA001	95.6mm	29.0mm	Ø69.9mm	Ø28.5mm	Ø25.4mm
DN32	SBV32-SEPPB-NA001	115.2mm	37.5mm	Ø88.0mm	Ø42.0mm	Ø38.8mm
DN40	SBV40-SEPPC-NA001	129.0mm	40.0mm	Ø103.0mm	Ø55.2mm	Ø51.7mm



Female Thread type

Product	Part Number	L1	L2	ØD1	ØD2	S1	Hex.
DN20	SBV20-SEFGA-NA001	85.6mm	25.0mm	Ø69.9mm	Ø39.6mm	G1"	40mm
DN32	SBV32-SEFGB-NA001	106.7mm	34.2mm	Ø88.0mm	Ø54.5mm	G1-1/2"	55mm
DN40	SBV40-SEFGC-NA001	119.5mm	36.4mm	Ø103.0mm	Ø69.0mm	G2"	70mm



Male Thread Type

Product	Part Number	L1	L2	ØD1	S1	Hex.
DN20	SBV20-SEMGA-NA001	91.1mm	16.0mm	Ø69.9mm	G1"	40mm

Rack



DN20/32/40



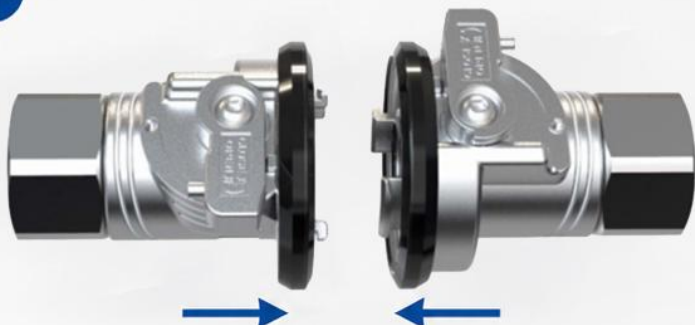
Sidecar



DN20/32/40

| SBV Disconnecting Instructions

1



Step 1

Align both bodies using their keyways and mate them together.

2



Step 2

Rotate both sides into position and lock them.

3



Step 3

Press down on the pins located on the body.

4



Step 4

Engage the latch on both sides. The assembly is now completed.

Reverse the above 4 Steps for disconnecting/to open the lock.



What kind of product is the SBV ball valve?

SBV (Snap Ball Valve) is a quick-connect ball valve developed by Amphenol LTW for liquid cooling systems in AI data centers. Commonly referred to on the market as DN series ball valves, ALTW is known as the "SBV" ball valve



Where are SBVs mainly applied?

AI data centers, liquid cooling systems, CDUs, rack cooling, secondary cooling water circuits



What diameter specifications are available for SBVs?

There are SBV20 (DN20), SBV32 (DN32), and SBV40 (DN40), corresponding to different requirements.



What interface connection methods does the SBV ball valve provide?

Four standard interface options are available:

Hose barbs, female threads, male threads, and sanitary flanges facilitate adaptation to different CDUs and piping designs.



Can the four interface connection methods be cross-matched and interconnected?

For the same type, such as the SBV20 (DN20), different pipe connections can be made according to different pipe requirements, such as a "female thread" on one end and a hose barb on the other end.



What are the main materials and sealing materials for SBV ball valves?

The main body is made of stainless steel 304 material; The seal is made of EPDM (ethylene propylene diene diem rubber), which offers excellent temperature resistance, chemical resistance, and long-term durability.



How much pressure can the SBV withstand?

According to IEC 60529, immerse in water at least 1 meter depth for 24 hours without internal water ingress, and insulation resistance: >100MΩ



Which coolant types are SBV ball valves compatible with?

Compatible with deionized water (DI Water), ultrapure water, ethylene glycol (EG25), propylene glycol (PG25), oil, PFS, etc., selected according to different sealing ring materials.



What is the plug-in lifespan and corrosion resistance of SBV ball valves?

Durability requirement reaches 5,000 plug-in and unplug cycles; Salt spray testing passes 96 hours, allowing us to adapt to complex machine room environments.



Is the SBV ball valve suitable for immersion liquid cooling or two-phase cooling?

Depends on the coolant type and operating temperature are within the specified range (-40~120°C).



Amphenol LTW

Contact Us

Luc Kan | Sales & Marketing | luc@ltw-tech.com

Customer Service | sales@ltw-tech.com

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