

# SBV - Series – Design Updates

## Technical Bulletin – 241023



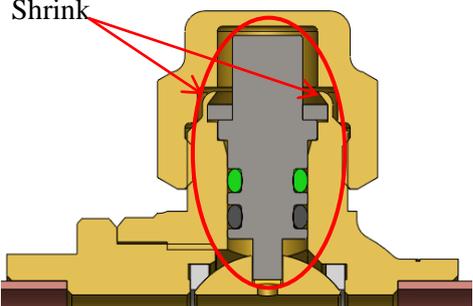
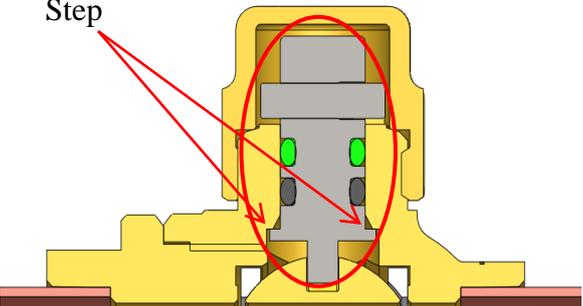
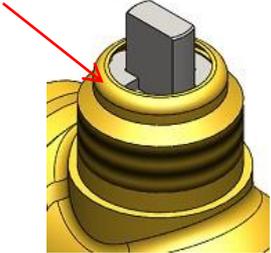
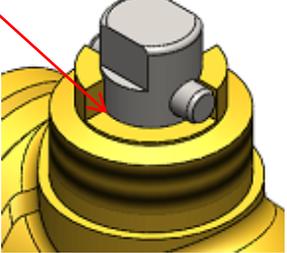
By the present technical bulletin, we inform you that we introduce an upgrade of ball valve design for smaller valve types and simplifying the product range of Sanhua ball valves by increasing the design pressure of SBV.

**1.) For the smaller valve sizes (from 1/4" to 1/2"), the fixed structure of the valve stem will be upgraded.**

As shown in the following table, the stem of our SBV ball valve with 1/4" to 1/2" connection is fixed by riveting process (shrink). The recommended torque for turning the valve stem is no more than 5N·m in routine maintenance. During actual maintenance, if manual operation is improper (for example, the torque is greater than 6N·m), the upper riveted part (shrink) of the SBV\*\*.\* ball valve stem will be damaged. At this time, if the pressure inside the pipe is too high, the valve stem may eject, which will lead to refrigerant leakage. We plan to upgrade the fixed structure of the valve stem, and the new generation structure is named SBV\*\*.\*T.

As shown on next page, the original external riveted (shrink) fixed valve stem is changed to internal step fixed valve stem to avoid the risk of valve stem ejection.

Find in the following old and new stem fix design of SBV:

Items	Current SBV**_***	Upgraded SBV**_***T
<p><b>Valve stem fixed structure changes</b></p>		
<p><b>Appearance change</b></p>		
<p><b>Torque operation instruction</b></p>	<p>Recommended operating torque is not more than 5N·m;                      Breaking torque 6N·m;                      If the torque is greater than the breaking torque, the shrinking structure is damaged and the valve stem is at risk of ejection.</p>	<p>Recommended operating torque is not more than 5N·m;                      Breaking torque 10N·m;                      If the torque is greater than the breaking torque, the stem will not eject, but the convex step will be deformed. Then the spool ball Angle of the closed valve state is offset, which affects the leakage value of the ball valve.</p>
<p><b>Others</b></p>	<p>In addition to the changes in the structure of the above valve stem, the rest of the valve body does not change, and the product performance does not change.</p>	

**2.) The design pressure (PS) of SBV series ball valves has been upgraded from 4.5MPa to 4.9MPa,** the content of PED label of valves that no less than 1 1/8” has been changed from PS=4.5MPa to PS=4.9MPa.

Since Sanhua SBV series ball valve were exported to the European and US markets, UL certification (4.83MPa) and PED Self-declaration (4.5 MPa) have been provided in accordance with market requirements. Due to market request in Europe 2018 (4.9MPa) , SBV-R was introduced with design pressure 4.9MPa. As SBV-R and SBV are 100% same in performance and dimensions the standard SBV range will be updated to design pressure PS 4.9MPa so that SBV-R becomes obsolete.

**First production date of SBV with 4.9Mpa label will be from 1<sup>st</sup> November 2024.**

**Please respect the delay to EU stock!**

We are going to delist SBV-R in the next 3~6 months.

Please inform your customers according to the customer list sent with this bulletin.

The current SBV-R will be exchanged automatically with the SBV after change process done. Which new U11 codes need to be ordered you will find in Cross Reference sent with the bulletin.

Find in the following old and new labels of SBV:

Old label - PS: 45bar[653psi]		New label - PS: 49bar[711psi]	
1	No CE –Laser printing (3 lines content)  23 08 25 X SANHUA SBV (M) –JAXX	1	Label w/o UL All valves are change to laser printing content.   SANHUA 2021 04 01 B PS:49 bar [711psi] TS:-40°C/+150°C UK CA CE Fluid group 1 SBV(M)-A33YHSY-2-SA 0035
2	CE-Paper label(size 1 5/8”-4 1/4”) 		
3	CE-Laser printing content  SANHUA 2021 04 01 B PS:45 bar [653psi] TS:-40°C/+120°C UK CA CE Fluid group 2 SBV(M)-JA17YHCRF-1-S		

4	<p><b>No CE, only with UL mark</b></p> <p>2021 04 01 B                    700psig                  120°C                  833psig</p>	<p>Label with UL                  All valves are change to laser printing content.</p>
5	<p><b>Both CE+UL</b>                  CE-Laser printing content                  UL-Laser printing content</p> <p>2021 04 01 B SANHUA   PS:45 bar [653psi]                  700psig TS:-40°C/+120°C                  120°C Fluid group 2                  833psig SBV(M)-JA11YHSY-1-S</p> 	<p>2</p> <p>SANHUA 2024 09 01 B                  PS:49 bar [711psi]                  TS:-40°C/+150°C                  Fluid group 1                  SBV(M)-JA11YHSY-1-S</p>    0035
6	<p><b>Both CE+UL</b>                  CE- Paper label                  UL-Laser printing content</p> <p>2021 04 01 B                    700psig                  120°C                  833psig</p> <div data-bbox="438 929 715 1108" style="border: 1px solid black; padding: 5px;"> <p> <b>SANHUA</b>                      www.zjshc.com                      SBV ( M ) -A25YHSY-9-SA                      PS:45 bar [653psi]                      TS:-40°C/+120°C                      -40°F/+248°F                      Fluid group 2                      Category1 2018 08 01</p>  </div>	

Please check the above label change. The valves with UL label on the current valves will have UL label on the new valves. The current valves without UL will not have the UL on the new label. On customer list sent with this bulletin you will find which label type is on.

**Conclusion: Both product changes above will be implemented in parallel:**

Please check the cross reference list which will be sent with this bulletin.

According to the size of SBV series products, the above two product upgrades are summarized:

Valve Size	PS	Label or Printing Content		Valve Stem Fixed Structure	
		Change or Not	Change Time	Change or Not	Change Time
1/4''-1/2''& 6mm-12mm	Update from 4.5MPa to 4.9MPa	Not necessary as PED Art.4.3	/	Promote new generation SBV**_***T, the fixed stem structure is consistent with the large SBV sizes	After obtaining customer approval
5/8''-7/8''& 15mm-22mm				No change	
1 1/8''-4 1/4''& 28mm-108mm		Laser printing with PS change to 4.9MPa	1 <sup>st</sup> Nov. 2024 (production start)	No change	/

*For questions do not hesitate to contact your technical support.*