KEG SPEARS

S-SYSTEM

Mounting & Dismounting Manual

Keg Spear with Safety Latch

Type S · JM-SX-02



Zhejiang Aobaosi Intelligent Manufacturing Co., Ltd.

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AOBAOSI

ABOUT THIS MANUAL

Contents

Read this manual completely before working on a keg.

1	**Safety & Warranty** Intended use, safety instructions, warranty	03
2	**Product Overview** Components, materials, Safety Latch	04
3	**Tools** Aobaosi tools and references	05
4	**Mounting** Fitting the spear into the keg, step by step	06
5	**Dismounting** Removing the spear from the keg, step by step	07
6	**Technical Data** Dimensions, torque, materials, compliance	08
7	**Care, Troubleshooting & Service** Cleaning, common issues, contact details	09
A	**Appendix · Technical Drawing** JM-SX-02 (Type S)	10

Safety symbols in this manual

DANGER	Will cause serious injury if not avoided.
WARNING	Could cause serious injury if not avoided.
CAUTION	Could cause minor injury or damage to the spear or keg.
NOTE	Useful information for correct use.

Document information

Document	AOB-MAN-03-EN
Version	1.1 · November 2026
Applies to	Keg Spear Type S (JM-SX-02)
Intended for	Keg manufacturers, breweries and keg/spear refurbishment companies
Language	English (original instructions)
Service manual	Disassembly and assembly of the spear: see the Aobaosi Keg Spear S Service Manual.

CHAPTER 1

1. Safety & Warranty

Read this chapter before you start.

Aobaosi keg spears are built for years of daily use in demanding brewery environments. Mounting and dismounting them correctly protects the people doing the work, the spear and the keg. Incorrect handling can damage the fitting and cause injury.

DANGER

Pressurised keg. Never loosen or remove a spear from a keg that is still under pressure. The spear can be ejected with great force. Always depressurise the keg completely first (chapter 5, step 2).

WARNING

Safety Latch. Never bend, block or remove the Safety Latch. It prevents the spear from being ejected if someone tries to unscrew it with standard tools. Only the Aobaosi Removal Tool may release it.

Intended use

The spear is the valve and extraction tube of a beverage keg. It is mounted in the keg neck and connected to a matching S-System coupler. Use it only for beer and other beverages, within the limits given in chapter 6.

Safety instructions

- Wear safety glasses and protective gloves.
- Work only on a completely depressurised keg.
- Use suitable tools in good condition (chapter 3).
- Check the body seal before every mounting.
- Tighten to **80 ± 5 Nm**, never more.
- We recommend genuine Aobaosi spare parts.
- Never modify the spear or the Safety Latch.

2 years
WARRANTY

Aobaosi warrants its keg spears against defects in materials and workmanship for two years from the date of delivery.

The warranty does not cover normal wear, or damage caused by incorrect storage, mounting, dismounting, assembly, cleaning or use, by unsuitable cleaning agents, or by repairs and modifications made without Aobaosi's written approval. Full conditions: Aobaosi General Terms and Conditions of Sale, article 5.

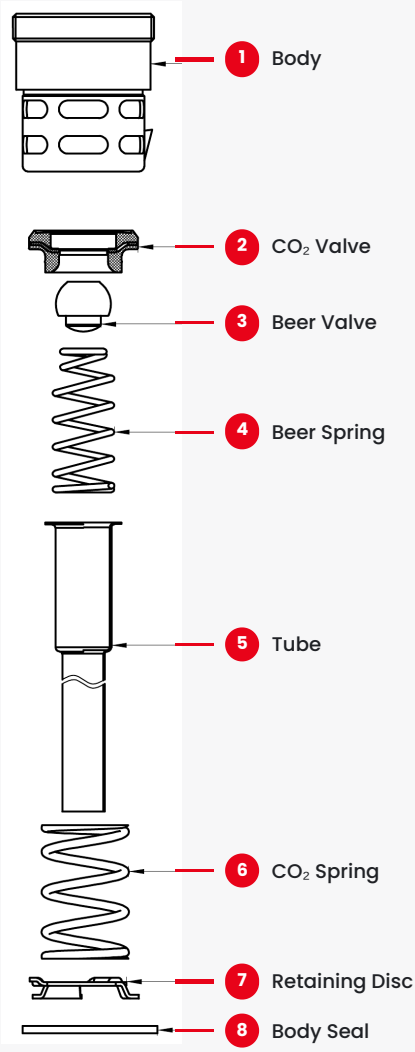
NOTE

Keep this manual at the workplace and pass it on to everyone who mounts or dismounts spears.

CHAPTER 2

2. Product Overview

Components and materials of the Aobaosi S-Type keg spear.



The Aobaosi S-Type spear is a basket-type spear with two valves: the **CO_2 valve** and the **beer valve**. The body is screwed into the keg neck with a 2"–14 TPI BS 84 thread. A spring-loaded **Safety Latch** on the side of the body clicks in under the keg neck during mounting. It blocks the spear in the neck and can only be released with the Aobaosi Removal Tool.

	COMPONENT	MATERIAL	ARTICLE NO.
1	Body with Safety Latch	AISI 304	JM-SX-02-1
2	CO_2 Valve	EPDM	JM-SX-01-2
3	Beer Valve	AISI 304	JM-SX-01-3
4	Beer Spring	AISI 304	JM-SX-01-4
5	Tube	AISI 304	JM-SX-01-7
6	CO_2 Spring	AISI 304	JM-SX-01-5
7	Retaining Disc	AISI 304	JM-SX-01-6
8	Body Seal	EPDM	JM-AX-01-7

AISI 304 = stainless steel (SUS304). EPDM seals comply with EC 1935/2004 and FDA 21 CFR 177.2600 for food contact.

Type S

Thread	2"–14 TPI BS 84
Coupler	S-System
Safety	Safety Latch, released only with the Removal Tool
Drawing	JM-SX-02

CHAPTER 3

3. Tools

Have these ready before you start.

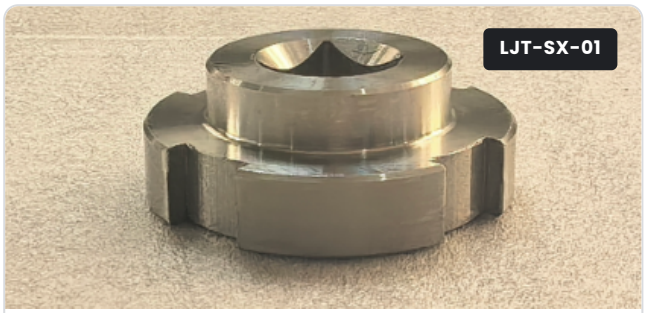
We recommend Aobaosi tools: they are designed for Aobaosi spears and make mounting and dismounting quick, safe and damage-free. Each tool reference is repeated in the steps where the tool is used.



Removal Tool · S-Type

T-handle tool with a movable tongue, aligned with the “S” stamped in the lug of the spear. Its internal plunger opens the CO_2 valve to depressurise the keg; the tool then releases the Safety Latch to unscrew and lift out the spear.

Dismounting · Decompression



Torque Adapter · S-Type

To be used in combination with a torque wrench. Engages the top of the spear to screw it into the keg neck and sets and verifies the tightening torque.

80 ± 5 Nm · 60 Nm

NOTE

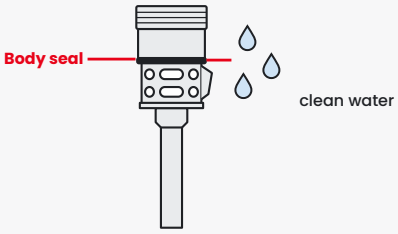
Also have **clean water** ready to moisten the body seal. Clean and dry all tools after use. The Assembling/Disassembling Tool is described in the Keg Spear S Service Manual.

CHAPTER 4

4. Mounting

Steps 1 – 6 · Fit the spear into the keg

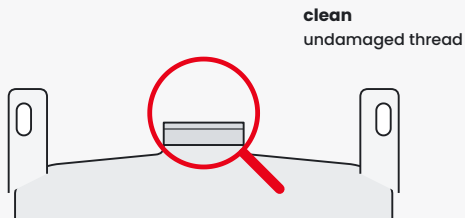
1



Moisten the body seal

Wet the body seal with clean water. A moist seal slides into the neck without damage.

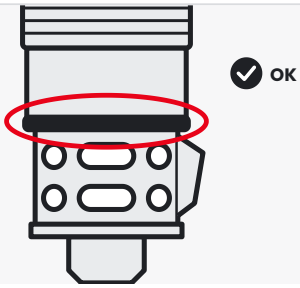
2



Check the keg neck

The keg neck and its thread must be clean and undamaged. Clean the neck if necessary.

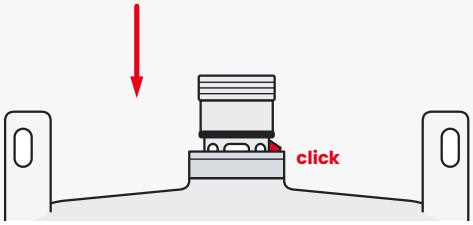
3



Check the body seal

The body seal must be undamaged and correctly seated on the designated sealing surface or in the designated groove, as applicable. Replace a damaged seal.

4

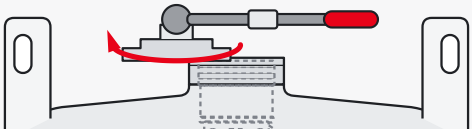


Push the spear in

Push the spear straight into the keg neck by hand. The Safety Latch springs in while it passes the neck and **clicks back out** once it is through.

5

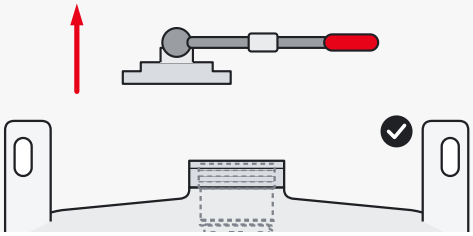
80 ± 5 Nm



Tighten the spear

Place the Torque Adapter LJT-SX-01 on the spear and connect a torque wrench. Turn the spear **clockwise** into the neck with a continuous, steady movement to **80 ± 5 Nm**.

6



Remove the tools

Lift the torque wrench and the Torque Adapter LJT-SX-01 off the spear. The keg is ready for filling.

TIP

Check returning kegs. After several trips to the market and back, the spear can gradually lose torque. Check **empty kegs returning from the market** before refilling, and re-tighten the spear to **60 Nm** with the Torque Adapter LJT-SX-01 and a torque wrench.

CHAPTER 5

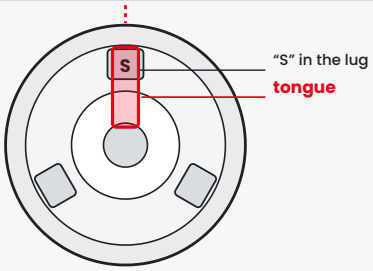
5. Dismounting

Steps 1 – 6 · Remove the spear from the keg

DANGER

Depressurise first. Never start unscrewing before step 2 is complete and the keg is free of pressure.

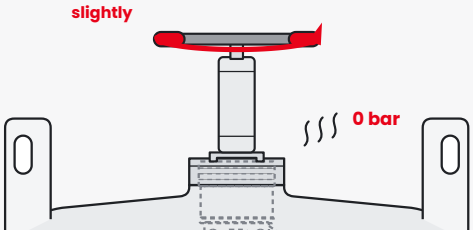
1



Align the Removal Tool

Place the Removal Tool **KSQ-SX-01** on the spear. The **movable tongue** of the tool lowers as the tool is turned out; it has to sit exactly on the side with the stamped **"S"** in the lug of the spear.

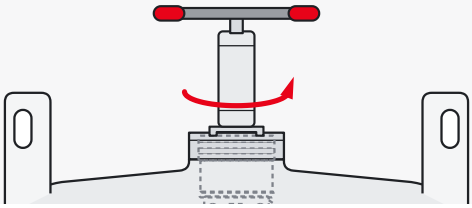
2



Depressurise the keg

With the tool correctly seated, turn the handle **slightly** until you feel resistance, then a little further until you hear the CO_2 escaping. A plunger inside the tool presses the CO_2 valve open. Wait until the hissing stops and the keg is at **0 bar**. Only then continue with steps 3 and 4.

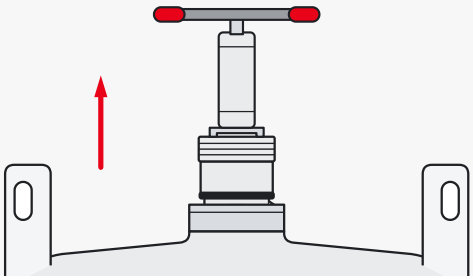
3



Unscrew the spear

Turn the tool further **anticlockwise**. Engaged in the lugs of the spear, the tool releases the Safety Latch and unscrews the spear until the thread is free.

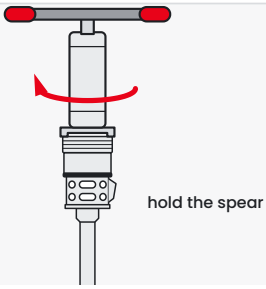
4



Lift the spear out

Lift the spear and the tool together **vertically** out of the keg neck.

5



Release the tool

Hold the spear firmly and turn the tool **clockwise** until it separates from the spear.

6



Replace the body seal

Fit a new body seal before the spear is mounted again. Send worn spears for servicing (Service Manual).

CHAPTER 6

6. Technical Data

Dimensions, torque, materials and compliance.

	TYPE S · JM-SX-02
GENERAL	
Spear type	Basket-type keg spear, two valves, with Safety Latch
Coupler	S-System
DIMENSIONS	
Thread	2"–14 TPI BS 84
Tube	Ø 19 mm · length according to keg height (TL / SL, see drawing)
Distance tube – keg bottom	14 mm
Valve stroke	9 – 12 mm
MOUNTING	
Tightening torque	80 ± 5 Nm, continuous
Re-tightening (empty returned kegs)	60 Nm
MATERIALS & COMPLIANCE	
Metal parts	Stainless steel AISI 304 (SUS304)
Seals (CO_2 valve, body seal)	EPDM · hardness 81 ± 3 Shore A
FOOD CONTACT COMPLIANCE	
European Union	Reg. (EC) 1935/2004 · EDQM Technical Guide on metals and alloys · migration tests ref. Reg. (EU) 10/2011
Germany · France	LFGB § 30/31 · French DGCCRF metals guidance and BPA law (BPA not detected)
United States	FDA 21 CFR 177.2600 (EPDM) · California Prop 65 (lead, PFAS not detected)
Japan	Food Sanitation Law, MHW Notice No. 370 (EPDM CO_2 valve)
OPERATING LIMITS	
Max. working pressure	3 bar
Max. temperature	135 °C

Test reports (SGS, Intertek) available on request. Full tolerances: see appendix. Specifications may change without notice.

CHAPTER 7

7. Care, Troubleshooting & Service

Keep spears in top condition.

Care

- Clean spears with the regular keg washing cycle, using caustic and acid detergents according to the brewery's cleaning procedure.
- Rinse with clean water after chemical cleaning.
- Replace the body seal every time the spear is dismounted.

- Store spears dry, dust-free and out of direct sunlight.
- Replace worn rubber parts; we recommend genuine Aobaosi spare parts.
- Clean and dry the tools after use.

Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
Leak at the keg neck	Body seal damaged or not seated. Torque too low.	Replace the body seal and moisten it. Mount again and tighten to 80 ± 5 Nm.
Spear difficult to screw in	Dirt or damage on the keg neck thread.	Clean and inspect the thread. Never force the spear.
No click when pushing in	Safety Latch dirty, bent or damaged.	Do not use the spear. Have it serviced or replaced.
Spear cannot be unscrewed	Tongue of the Removal Tool not aligned with the “S” in the lug of the spear, so the latch is not released.	Realign the tongue with the “S” in the lug of the spear and check that the tool is correctly seated and engaged.
Gas or beer leak at the valves	CO_2 valve or beer valve worn or damaged.	Dismount the spear and have it serviced (Service Manual).

Service & contact

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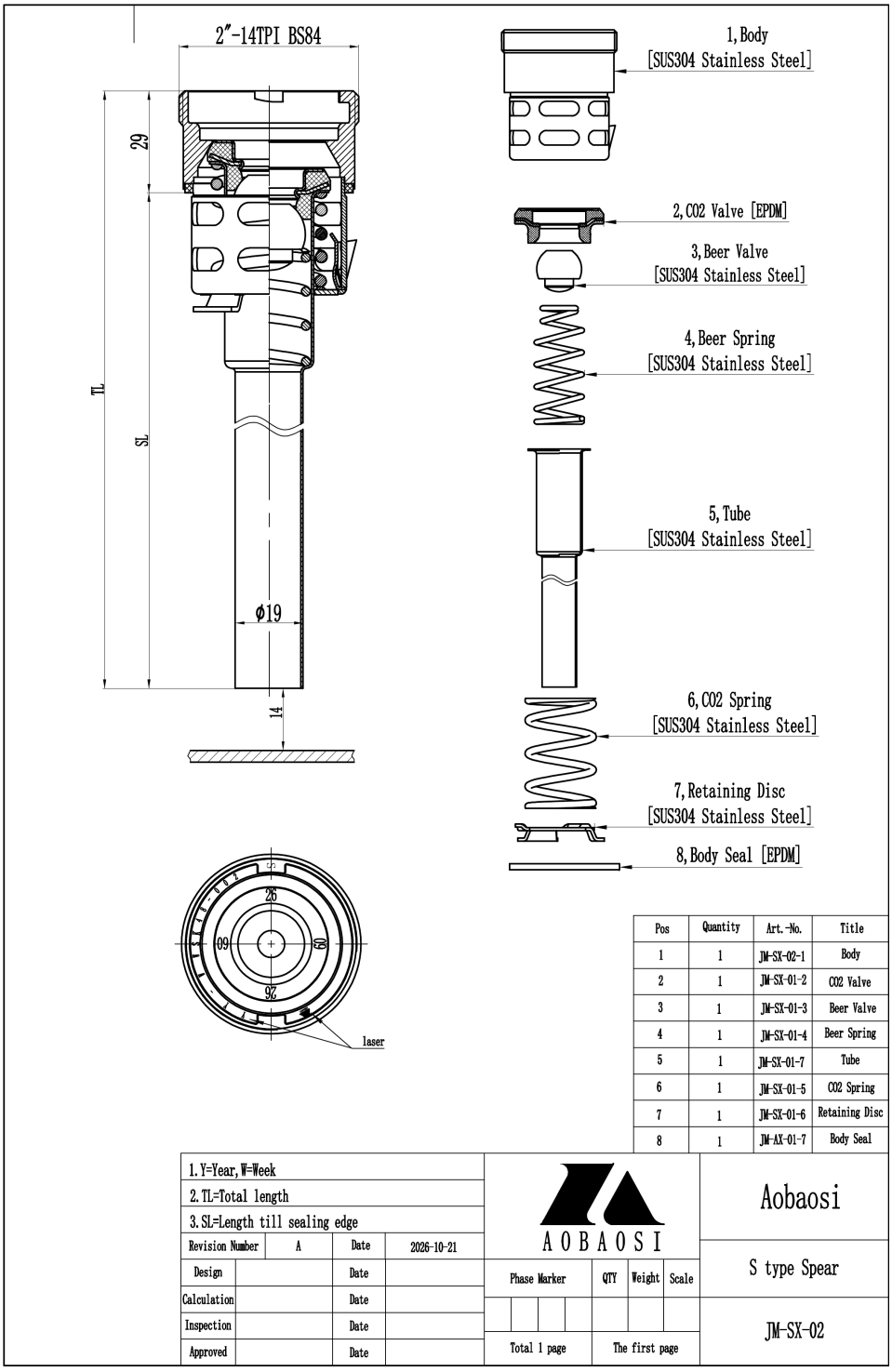
NOTE

For service, spare parts or warranty claims, always mention the spear type (S), the drawing number and the code engraved on the spear.

APPENDIX

A. Technical Drawing

Assembly drawing JM-SX-02 · Keg Spear Type S with Safety Latch



Pos	Quantity	Art.-No.	Title
1	1	JM-SX-02-1	Body
2	1	JM-SX-01-2	CO2 Valve
3	1	JM-SX-01-3	Beer Valve
4	1	JM-SX-01-4	Beer Spring
5	1	JM-SX-01-7	Tube
6	1	JM-SX-01-5	CO2 Spring
7	1	JM-SX-01-6	Retaining Disc
8	1	JM-AX-01-7	Body Seal

1. Y=Year, W=Week
2. TL=Total length
3. SL=Length till sealing edge

Revision Number	A	Date	2026-10-21
Design		Date	
Calculation		Date	
Inspection		Date	
Approved		Date	

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Phase Marker	QTY	Weight	Scale

Total 1 page | The first page

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S type Spear

JM-SX-02

Reference drawing. For controlled copies, contact Aobaosi quoting drawing number JM-SX-02.

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Keg necks · Keg spears · Keg couplers

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