

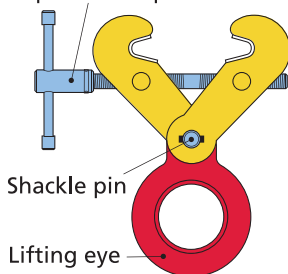
FSV(S)(U) TBS/TSRC/TSCC

All spare parts are available either separately or as repair sets. It is recommended when any parts are damaged to replace them straight away and not to take any risk.

When ordering spare parts always give:

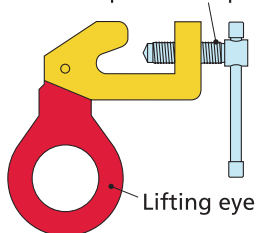
- model
- lifting capacity
- jaw opening and serial number
- the needed spare parts.

Spindel compl.

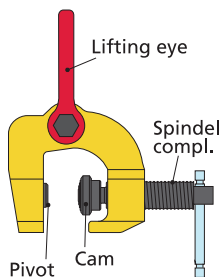


Model	Lifting Eye	Shackle Pin	Spindel compl.
1 FSV	551550	551558	251530
2 FSV	551550	551558	251530
3 FSV	551650	551658	251530
4 FSV	551750	551758	251730
5 FSV	551850	551858	251730
10 FSV	551950	551958	251930
2 FSVS	551550	551558	561010
3 FSVS	551650	551658	561010
4 FSVS	551750	551758	564010
5 FSVS	551850	551858	564010
3 FSVSU	551655	551658	561010
4 FSVSU	551755	551758	564010
5 FSVSU	551855	551858	564010
1.5 TBS	550850		562424
3 TBS	550150		562424
5 TSRC	551855	551858	251730

Spindel compl.



Lifting eye



Model	Lifting Eye	Cam	Spindel compl.	Pivot
0.5 TSCC	500550	515011	515021	550019
1 TSCC	501550	515121	562717	562116
1.5 TSCC	501550	515121	562717	562116
3 TSCC	503550	515321	562817	550219
6 TSCC	506050	515621	562917	550219

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1 GENERAL

Congratulations on buying your new Terrier safety sheet lifting clamp.

With the company's vast experience, Terrier Lifting Clamps B.V. can guarantee optimum quality and safety. Terrier lifting clamps are made from quality steel, and comply fully with the European requirements and norms given in the Machine Guideline 2006/42/EC: Australian Norm 4991, US norm ASME B30.20-2003, European Norm NEN 13155.

2 OPERATING PRINCIPLE

The Terrier safety TSCC lifting clamps are named after the safety mechanism which is made up of a spindle pivot and a cam. On tightening the spindle, there will be constant pressure on the pivot and cam. The clamp therefore cannot slip upon taking up the load. When lifting the load, the clamping strength of the clamp is increased by the weight of the load and the angle of the cam.

Also when depositing a load, the clamp cannot spontaneously let go.

3 AUTHORIZED APPLICATIONS

- The TSCC screw clamp is suitable for lifting and transporting steel objects.
- **Authorized use positions of the clamp are:**
 - 1 lifting and transporting of TSCC from a horizontal and vertical position.

4 SAFETY REGULATIONS

Always pay attention to your own safety and to that of direct bystanders! Read the following safety regulations before using your new lifting clamp!

For your own safety and in order to claim product liability, the clamp must be inspected and tested at least once (1x) annually, and revised by Terrier Lifting Clamps B.V. or another authorized revision company, if necessary.

See also Section 8 - Revision. Contact Terrier Lifting Clamps B.V. for more information.

AVOID LIFE THREATENING SITUATIONS

- Avoid life threatening situations at work by complying with the following recommendations.
- Never work with a clamp which has not been approved.
- Keep a safe distance during lifting work and never walk or stand under the load.
- Do not use the clamp if it is damaged or has been damaged.
- Always have a damaged clamp immediately repaired by Terrier Lifting Clamps B.V. or another authorized revision company.
- Never lift more than one sheet simultaneously.
- Never lift sheeting which is heavier than the safe working load (WLL) given on the clamp, in the certificate and in the table.
- Never lift sheeting which is thicker or thinner than the jaw opening (as given on the clamp and in the certificate).
- When using a number of lifting clamps opposite each other, make sure the hoisting belts or chains are long enough.
- Clean the area where the clamp is to be attached, removing any grease, oil, dirt, corrosion and mill scale.
- Make sure the clamp (or clamps) is (are) attached in such a way that the load is balanced during lifting.
- The sheeting surface must not be harder than 37 Hrc (345 Hb, 1166 N/mm²).
- All clamps may only be used under normal atmospheric conditions.

WARNING

- A free fall or uncontrolled swinging on the crane hook whereby there is contact with objects can damage the clamp. Should this occur, the clamp must first be thoroughly inspected before further use.
- Lifting clamps are not suitable as a form of permanent link.
- The clamp must be inspected monthly, see Section 6 - Maintenance.
- Do not make any constructional modifications to the clamp (welding, grinding, etc.), as such modifications may negatively affect its operation and safety. If any such modifications are made, all forms of warranty and product liability become invalid.
- The warranty and liability conditions also only apply when original Terrier components are used.

5 HOISTING

- Check whether the safe working load (WLL) of the clamp is sufficient for the force exerted in the hoisting situation.
- Attach the lifting clamp to the hoisting equipment:
 - 1 directly on a crane hook with safety securing device,
 - 2 by means of a chain shackle or D shackle,
 - 3 by means of a belt or chain possibly in combination with a chain shackle or D shackle.
- Make sure all attachment devices are approved and are of the correct tonnage. All the attachment links and securing devices must be sufficiently large, so that the clamp can move freely in the hook.
- Check that the clamp has no visible damage.
- Check that the clamp opens and closes easily.
- Clean the object where the lifting clamp will be fitted, removing grease, dirt and mill scale.

- Open the clamp by means of the spindle
Position the jaw fully on the object and make sure the clamp is attached in such a way that the load is balanced during hoisting.
- Secure the clamp by completely tightening the spindle.
Use at least 40 Nm for the 1.0 TSCC t/m 6.0 TSCC and at least 10 Nm for the 0.5 TSCC.
This force can possibly be increased further when hoisting heavier or thicker materials.
- Hoist steadily to allow effective gripping of the load.
- If the load slips, work through the "hoisting" section (5) again.
- Make sure the load is stably positioned before the clamp is removed from the object.

6 MAINTENANCE

- Check the general condition of the clamp at least once monthly, see the "removal/installation" section (7).
- Do not use the clamp if:
 - the housing is damaged or deformed, especially the corners of the jaw,
 - the fastening is visibly deformed,
 - the pivot is stretched or broken,
 - the spindle mechanism no longer works (properly),
 - the split pin is missing.
- the marking on the clamp is no longer legible.

Depending on the extent of damage discovered:

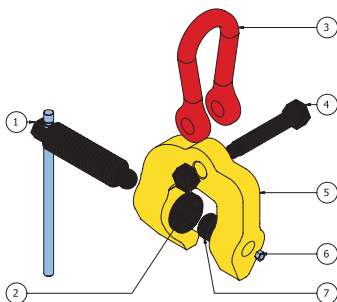
- remove and clean the clamp (see "removal/installation" section (7) or
- have the clamp revised by Terrier Lifting Clamps B.V. or another authorized revision company (see "revision" chapter (8)).

If in doubt, contact your supplier.

7 REMOVAL/INSTALLATION

- Open the clamp completely.
- Carefully remove the spindle from the housing. (1)
- The cam can now be removed from the spindle (2)
- Remove the securing device. (3)
- Remove the pivot by removing the nut and bolt (6 & 7)
- Clean all parts using a standard degreasing agent.
- Grease the spindle and the inside of the cam.
- Put everything back in the reverse order.
- Always install new split pins.
- When replacing parts, always use original Terrier parts.
- Remove any burrs with a file.

If in doubt, contact your supplier.





8 REVISION

At least once (1x) per year, or if the clamp becomes damaged, it must be inspected, tested and revised by Terrier Lifting Clamps B.V. or other authorized revision company, if necessary.

9 DESTRUCTION

At the end of its working life, the clamp can be treated as scrap iron, as long as it is rendered unusable first.

10 CHECKLIST FOR MALFUNCTIONS AND PROBLEMS

Malfunction/problem	Possible Cause	Action
Fastening hinge is too stiff	Clamp overloaded	Reject clamp
Housing bent	Clamp overloaded	Reject clamp
Fastening is oval	Clamp overloaded	Reject clamp
Spindle turns stiffly	Clamp overloaded	Reject clamp
Spindle bent	Clamp overloaded	Reject clamp
Split pin missing	Incorrect installation	Fit a new split pin
Clamp opens/closely stiffly	Clamp overloaded	Reject clamp

11 5 YEAR WARRANTY

Terrier Lifting Clamps offers end users a 5 year warranty on the lifting clamps. This warranty is limited to the original end user of the hoisting equipment and is subject to the equipment being inspected, controlled and maintained according to the producer and dealer instructions throughout the warranty period. The warranty period is 5 years from the purchase date and is subject to the conditions and measures given here.

11a CONDITIONS

The warranty only covers defects in the hoisting equipment resulting from manufacturing errors arising during normal use. The warranty does not cover wear to components such as pivots, cams, tensioning springs, etc. If a defect occurs within this warranty period, the lifting equipment will be replaced or repaired as the producer thinks fit.

No warranty is given for clamps in which defects occur due to:

- Regular wear and tear.
- Overloading.
- Incorrect and/or rough use.
- Damage.
- Non-compliance with procedures and measures.
- Lifting materials other than those shown on the clamp or in the user manual.
- Modification/adaptation of the Terrier clamp.
- Improper use of the clamp, and non-compliance with any instructions given in the user manual in question.
- Maintenance and/or revision work not being carried out by an authorized Terrier dealer.

The manufacturer cannot be held responsible for incidental damage or damage resulting from use of the lifting equipment or from violation of these warranty terms.

11b PROCEDURE FOR SAFETY INSPECTION

All inspection and repair work must be noted in the inspection schedule. This applies not only to your own inspection work but also to inspection work carried out by your authorized Terrier dealer. When the equipment is submitted for maintenance and inspection, the maintenance report must always be provided.

Defective Lifting Clamp

On discovering any form of wear or damage, the following measures must be taken.

- 1 Take the lifting clamp out of operation. (Note down the date of decommissioning the lifting clamp)
- 2 Try to find the cause of the defect, for example (see full list under point a):
 - Overloading
 - Improper use (the clamp is not suitable for dragging and securing materials)
 - Non-sensible use
 - Rough use

Any such damage is not covered by the warranty! Please follow this procedure in order to guarantee your safety and that of your colleagues/personnel.

- 3 Hand in your lifting clamp with maintenance history to your authorized Terrier repair shop.

- 4 Once the clamp has been revised/repared by your repair shop, it can be used again. Note down the date of re-commissioning in the maintenance table.

11c INSPECTION SCHEDULE

Months	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
Years	1			2			3			4			5		
Safety inspections by your own inspector															
Maintenance by an authorized Terrier repair shop															
Revision by an official Terrier distributor															