

RECKMANN

Instructions for use

Top swivel for staysail and code 0

TS + TTS

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1 Packing list

Date:

Dealer:

Reckmann order number:

Customer order number:

Customer:

Type	Type
<input type="checkbox"/> TTS-2/EYE	<input type="checkbox"/> TS-2.5/DS
<input type="checkbox"/> TTS-2/B	<input type="checkbox"/> TS-2.5/2:1FS
<input type="checkbox"/> TTS-2/2:1	<input type="checkbox"/> TS-5/DS
	<input type="checkbox"/> TS-5/2:1FS
<input type="checkbox"/> TTS-3/EYE	<input type="checkbox"/> TS-5/2:1FB
<input type="checkbox"/> TTS-3/B	<input type="checkbox"/> TS-8/DS
<input type="checkbox"/> TTS-3/2:1	<input type="checkbox"/> TS-8/2:1FB
	<input type="checkbox"/> _____
<input type="checkbox"/> TTS-4/EYE	<input type="checkbox"/> _____
<input type="checkbox"/> TTS-4/B	
<input type="checkbox"/> TTS-4/2:1	
<input type="checkbox"/> TTS-5/EYE	
<input type="checkbox"/> TTS-5/B	
<input type="checkbox"/> TTS-6/EYE	
<input type="checkbox"/> TTS-6/B	

complied by:
on:

signature

2 About this manual

2.1 Introduction

These instructions are intended for owners and users of a top swivel listed on the packing list.

Sailing skills are required for use. Inexperienced persons on board must be trained and supervised by an experienced person on board.

2.2 Display conventions

Warnings are specially indicated:

Warning

'Warning' is used to indicate information which may lead to serious injury or death if not followed.

Caution

'Caution' is used to indicate information which may lead to minor or moderate injury if not followed.

Notice

'Notice' is used to indicate the possibility of material damage.

3 Safety

⚠ Warning

Disregarding the safety regulations may lead to serious injury or death if not followed!

3.1 Intended use

The top swivel is used to attach the upper end of the stay and the sail. It serves as a freely rotating counter bearing for the drive at the lower end of the stay. The top swivel is designed for use with textile stays (PBO, carbon). When rolling, the safe working load may not be exceeded. See Technical Data.

Repairs or changes to the top swivel must not be carried out.

Do not use the top swivel:

- for lifting people
- for attaching objects other than the stay with a fore sail

3.2 Information for safe use

- Read these instructions before using the top swivel.
- Keep these instructions in a safe place so that they are always available when required.
- In addition to these instructions for use, the owner's manual and manuals for other on-board equipment must be observed.

3.3 Dangers of improper use

Overloading of the top swivel can lead to breakage. Persons may be seriously injured or killed.

- Observe the maximum loads in the technical data.
- Check the top swivel for damage before each use. Do not use the top swivel if it is damaged.

Incorrect connection or inadequate securing of the connection may lead to serious injury. When hoisting, the top swivel may start to swing. This may also lead to injury.

- Sailing skills are required for use. Inexperienced individuals on board must be trained and supervised by a trained individual.
- Always check the pin lock or Velcro tape carefully.
- Always exercise prudence on board.

Fingers may be sheared off in the pin holes.

- Never insert a finger into a pin hole when connecting the top swivel.

3.4 Safety instructions for maintenance

Improper maintenance may result in serious injury, including death.

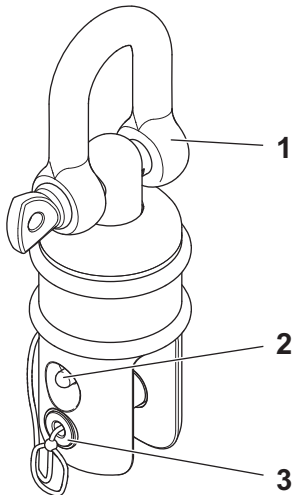
- Perform all inspections at the intervals specified in these instructions. Do not use the top swivel if it is damaged.
- The top swivel does not require any maintenance by the end user. It may not be disassembled.
- Repair work may only be carried out by the manufacturer or an authorised workshop.

⚠ Warning

Disregarding the safety regulations may lead to serious injury or death if not followed!

4 Design and function

4.1 TS-x/DS



Top: Lashing connection for the halyard

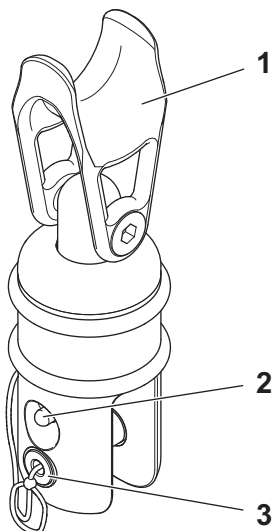
Bottom: Pin/fork connection to the upper eye of the stay

1 D-shackle

2 Quick-release device

3 Pin

4.2 TS-x/2:1FS



Top: Connection to halyard, translated 2:1 with halyard shackle

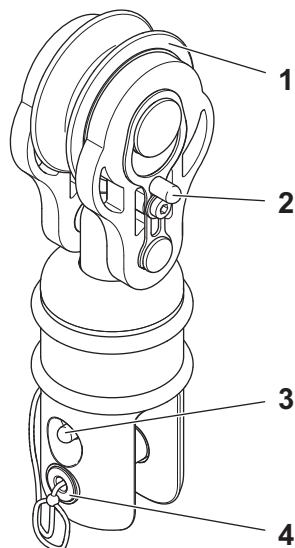
Bottom: Pin/fork connection to the upper eye of the stay

1 Halyard shackle

2 Quick-release device

3 Pin

4.3 TS-x/2:1FB

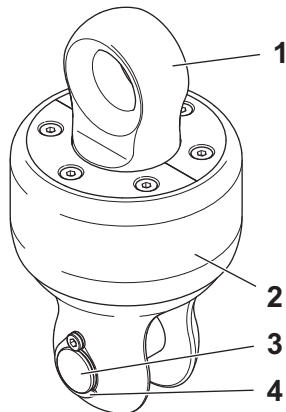


Top: Connection to halyard, translated 2:1 with halyard block

Bottom: Pin/fork connection to the upper eye of the stay

- 1 Halyard block
- 2 Quick-release device of the halyard block
- 3 Quick-release device of the pin
- 4 Pin

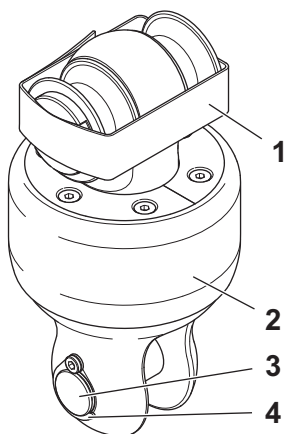
4.4 TTS-x/EYE



Top: Lashing connection to the mast fitting
Bottom: Pin/fork connection to the upper eye of the stay

- 1 Rounded eye
- 2 Protective sleeve made of hard rubber
- 3 Pin
- 4 Quick-release bracket

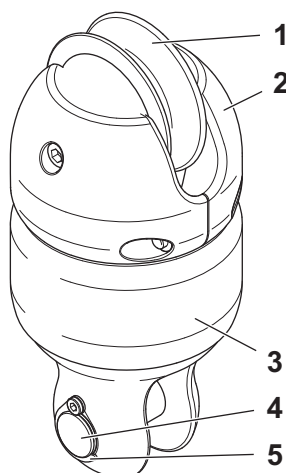
4.5 TTS-x/B



Top: Lashing connection to the mast fitting
Bottom: Pin/fork connection to the upper eye of the stay

- 1 Velcro strap
- 2 Protective sleeve made of hard rubber
- 3 Pin
- 4 Quick-release bracket

4.6 TTS-x/2:1



Top: Connection to halyard, translated 2:1 with roller

Bottom: Pin/fork connection to the upper eye of the stay

- 1 Halyard block
- 2 Protective jaws made of hard rubber
- 3 Protective sleeve made of hard rubber
- 4 Pin
- 5 Quick-release bracket

5 Inspection and service

5.1 Service and repair

There is no maintenance to be performed by the end user. With the exception of replacing of the Velcro strap, there are also no repairs that can be carried out by the end user. If defects are found during inspection, send the top swivel to the manufacturer or to an authorised service partner. Do not use the top swivel any longer.

5.2 Monthly inspection

- Check the shaft sealing ring (top) and the sealing screw at the bottom of the fork (if present) for tightness.
- TTS-x/B: Check the function and visual appearance of the Velcro tape.
- Check the fasteners and securing devices for correct seating and wear (screws, pins, quick-release devices, strops, toggle).
- Check the condition of visible plastic parts for ageing due to UV radiation.

5.3 Half-yearly functional test

Also carry out functional tests before longer trips and regattas.

5.3.1 Functional test without load

- Release the stay as far as possible and turn the top swivel back and forth by hand with the sail rolled up and the sheet separated.

Especially when cold, medium to high resistance is acceptable. No rattling or snagging of the bearing should be felt.

5.3.2 Functional test under load

Record the result of the functional test in the table at the end of these instructions.

1. Pretension the stay. Do not exceed the safe working load of the top swivel. For information on the safe working load, see Technical Data.
2. With the sail rolled up and the sheet separated, actuate the drive unit until the top swivel begins to rotate.
3. Actuate the drive unit in the opposite direction. Observe how many times the drive unit turns before the top swivel begins to rotate. Enter the result in the table at the end of these instructions.
4. Actuate the drive unit again in the opposite direction. Observe how many times the drive unit turns before the top swivel begins to rotate. Enter the result in the table.

If the number of turns increases under similar conditions, send the top swivel to the manufacturer or an authorised service partner.

Notice

The number of turns also depends on other factors.

- The stay may twist more due to ageing. Therefore, if the number of turns increases, always check the condition of the stay.
- At low temperatures, the stay may twist more before the top swivel begins to rotate.

5.4 Five-yearly service

Send the top swivel to the manufacturer or an authorised service partner. As part of the service, sealing elements, grease and Velcro strap (if present) are replaced. In addition, the bearing is checked and replaced if necessary.

5.5 Storage

If not used for an extended period of time, store the top swivel in a dry room. Protect from direct sunlight.

6 Disposal

Notice

Risk of damage to the environment

The top swivel contains lubricants that may cause serious environmental damage. Dispose of lubricants in an environmentally sound manner in accordance with local regulations.

The top swivel contains parts made of

- Titanium (TTS) or aluminium (TS)
- Stainless steel
- Steel
- Plastic

Dispose of the parts of the top swivel separately by material in accordance with local regulations.

7 Technical data

7.1 Aluminium top swivel TS

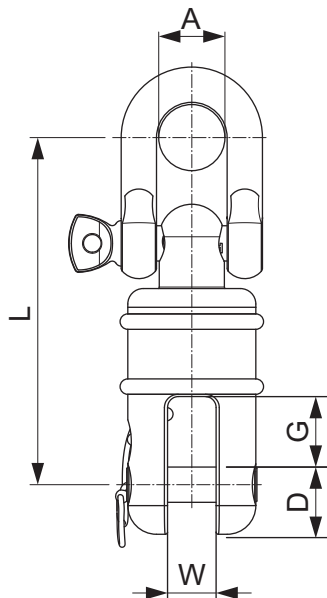


Fig. 1: TS-x/DS

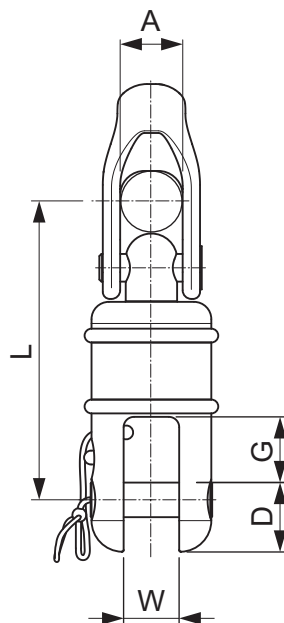


Fig. 2: TS-x/2:1FS

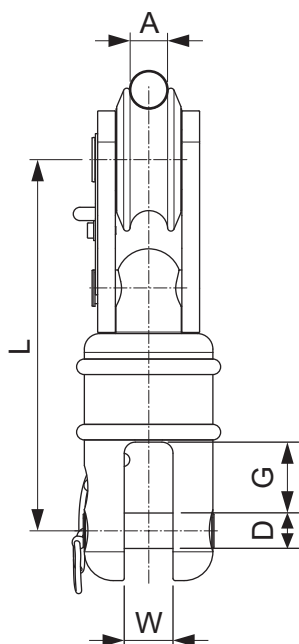


Fig. 3: TS-x/2:1FB

Aluminium Top Swivel TS-x								
model	[-]	TS-2.5		TS-5			TS-8	
connection	[-]	/DS	/2:1FS	/DS	/2:1FS	/2:1FB	/DS	/2:1FB
break load (bl)	[t]	5		10			16	
max. work load without furling (mwl)	[t]	2.5		5			8	
safe work load with furling (swl)	[t]	1.2		2.5			3.6	
weight	[kg]	0.27	0.3	0.5	0.6	1	1.4	1.7
L	[mm]	69		87.5		136	109.5	167
D	[mm]	10		12			16	
G	[mm]	19		25			32	
W	[mm]	16		19			22	
A (max rope size)	[mm]	17	10	24	14	14	30	16
article code	[-]	38751	32757	32778	56058	56058	32835	55354

7.2 Titanium top swivel TTS

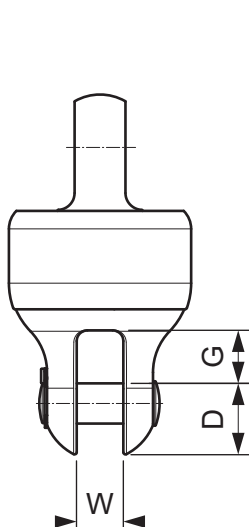


Fig. 1: TTS-x/EYE

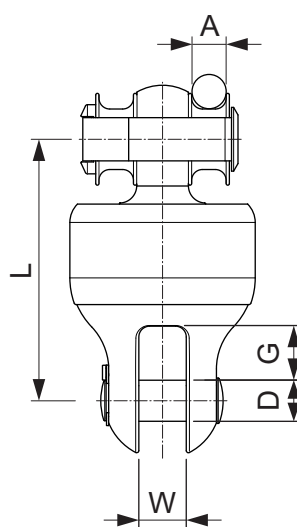
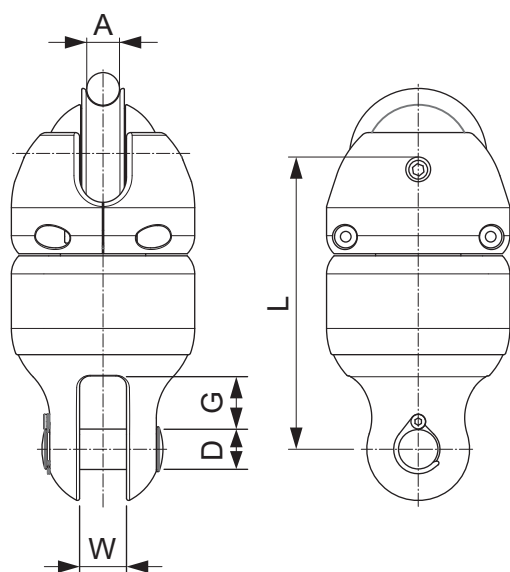


Fig. 2: TTS-x/B



Titanium Top Swivel TTS-X																
model	[-]	TTS-2			TTS-3			TTS-4			TTS-5		TTS-6		TTS-7	
connection	[-]	/EYE	/B	/2:1	/EYE	/B	/2:1	/EYE	/B	/2:1	/EYE	/B	/EYE	/B	/EYE	/B
break load (bl)	[t]	28			45			90			130		180		210	
max. work load (mw) SAILING	[t]	12			20			40			60		75		100	
safe work load (swl) (UN)FURLING	[t]	6			11			19			29		35		48	
weight	[kg]	1,4	1,8	2,1	3	3,9	4,4	7,2	9,2	10,5	15	19	22	32	40	55
L	[mm]	121		147	162		183	203		234	264		294	313	353	371
D	[mm]	19			25			38			45		57		70	
G	[mm]	25			35			44			51,5		59		66	
W	[mm]	22			30,5			40,5			45		60		71	
A	[mm]	25,5	16	16	35	22	25	45	25	32	60	36	70	46	80	58
B	[mm]	24	-	-	30	-	-	45	-	-	60	-	70	-	80	-
R	[mm]	8	8	-	10	10	-	12,5	12,5	-	17,5	17,5	20	20	25	25
article code	[-]	57409	58550	57439	57395	57393	57375	56716	56719	52765	59296	59299	23492	23490	55367	32172

8 Test log

[illegible]



