

# Instructions for using retaining straps with vacuum lifting systems for rotor blade installation

Please read this user guide carefully, together with the safety instructions, before using the lashing straps for the first time!  
 These instructions provide you with brief information on the correct use of the retaining straps. You can find more detailed information at <http://www.spanset.de>.  
 Please contact your specialist SpanSet dealer if you have any questions.

## 1. Intended use:

The retaining straps may not be used solely and permanently for the purpose of lifting loads!  
 They serve solely to retain rotor blades and their components in the event of failure of the vacuum.

## 2. Operation:

Place the end loops over the dedicated hooks on the vacuum lifting system such that they cannot fall out independently. Position the retaining straps around the rotor blades, feed them into the slotted shaft of the tensioning ratchet and lightly tension them. There must be at least 1.5 windings on the slotted shaft. The retaining straps must not be twisted and must be positively locked in the tensioning ratchet (12).

Caution: The straps will only safely retain the rotor blades or their components in the event of failure of the vacuum system when a positive-lock is ensured.

Components of the retaining strap:

Tensioning element (1), fixed end (3), loose end (4), loop (5)

## Operation of the tensioning ratchet:

- (6) Initial position
- (7) Length adjustment
- (8) Tension
- (9) Lock the tensioning device
- (10) Release
- (11) Special features of the ABS system: The pretensioning force can be released in small steps.

## 4. Important notes:

Caution! If these especially important notes are not observed, the function of the retaining strap is no longer ensured. Serious accidents with the attendant risk of injury or even death may result.

- No persons may be beneath the load during the lifting procedure.
- Before releasing the ratchet you must ensure that the rotor blade and/or its components are stable.
- Be aware that the dynamic forces acting when a load falls can be many times the weight of the load itself.
- Avoid using the retaining straps where they may be exposed to the effects of chemicals such as acids or alkalis!
- Use of the retaining straps is only permitted in specific temperature ranges: PES/PA -40°C to +100°C
- Retaining straps with illegible or missing labels must be withdrawn from use.
- Tensioning devices must be regularly cleaned and lightly lubricated in the area of the toothed disks only.
- Retaining straps must not be tensioned or pulled around sharp edges. The strap may otherwise become severed. A sharp edge is deemed to exist if the edge radius "r" is less than the thickness of the strap "t". (16)
- The textile material of the strap may leave marks on the goods. Delicate goods must therefore be correspondingly protected.

## 5. Inspection and maintenance:

Retaining straps must be inspected during and before each use for visible defects. Should you identify any defects that could compromise safety you must withdraw the strap from further use.

Retaining straps must be withdrawn from further use if e.g.:

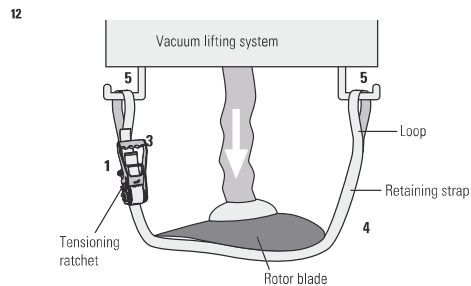
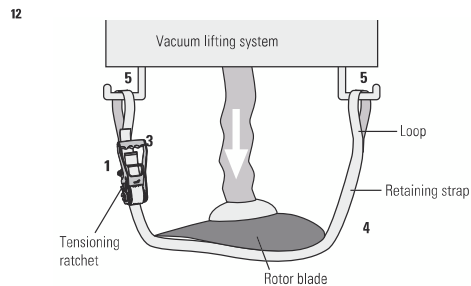
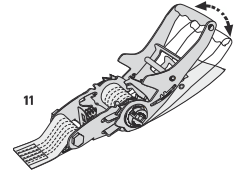
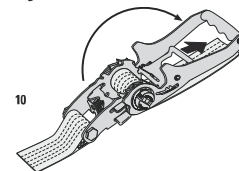
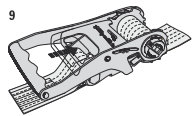
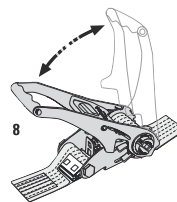
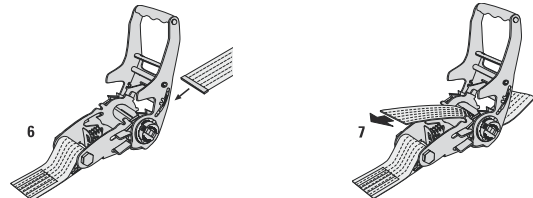
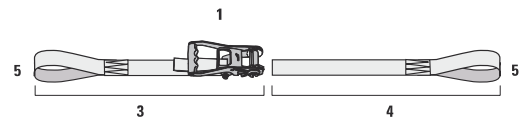
- The label is missing and the manufacturer is unknown
- The strap is torn (13)
- The textile is damaged by acids/alkalis or the effect of heat (14)
- The connecting or tensioning element exhibits cracks, notches, breaks or corrosion (15)
- The ratchet tensioner or its components are deformed

Retaining straps must be inspected by a specialist (authorised person) in accordance with the inspection periods defined by the operator, but at least once a year.

## 6. Storage

The high quality and functionality of the SpanSet product will be maintained for a long period, provided the retaining straps are well cared for and properly stored.

Store your retaining straps in a clean, dry and well-ventilated place. Avoid exposing them to direct sunlight or chemical influences.



# STOP

