RSB system

Instruction manual

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1 Declaration of conformity

Nom et adresse du fabricant ou de son mandataire Name and adress of manufacturer or his representative Name des Herstelles oder seines Vertreters	*LIFTEUROPE S.A.* *25 Salzbaach L-9559 Wiltz Grand-Duchy of Luxembourg*
Description de la machine / Description of the machine Beschreibung der Maschine / Descripción del equipo4	*Accessoire de levage* *Lifting Equipment* *Hebezeuge*
La machine répond à la directive européenne The machine is in compliance with the european directive Die Maschine entspricht den Europäischen Normen	*2006 / 42 / CE*
Les normes européennes utilisées European standards used Gebrauchte Europäische Normen	--
Repère de fabrication Manufacturer's mark Makierung des Herstellers	***
CMU = Charge Maximale d'Utilisation WLL = Working Load Limited Höchstbelastung	***
Coefficient de sécurité Safety coefficient Sicherheitsfaktor	*4.0.*
Nombre de chargements admis Number of loadings allowed Zulässige Anzahl der Beladungen	*10,000*

La machine satisfait à l'ensemble des dispositions pertinentes de la directive 2006/42/CE.
The machinery fulfills all the relevant provisions of the Directive 2006/42/EC.
Die Maschine erfüllt alle einschlägigen Bestimmungen der Richtlinie 2006/42/EG.

Wiltz, ***/**/20***

Michèle DETAILLE
Managing Director

Responsable autorisé
Zuständige person
Authorized person in charge

CE

2 Safety instructions

2.1 About the lifting system

Before using the lifting system, it is essential for the safety and efficiency of use to read this instruction manual and to comply with all its requirements. This instruction manual must be kept at the disposal of all users.

Read and keep legible the markings on the lifting system. Make sure that the user to whom you entrust the lifting system is trained and able to assume the safety requirements involved in its use.

Respect a safety perimeter of at least 2 m for any other person in the work environment. Protect the unit from uncontrolled intervention when it is not in use. The manufacturer declines all responsibility for the consequences of disassembly of the system and modifications made beyond its control.

When the device is in an obsolete condition that could cause risks, the user is obliged to neutralize the lifting system, i.e. to put it out of operation and possibly disassemble it.

2.2 About the handling

The equipment is not designed for lifting people. It is not permitted to pass under a suspended load and/or to expose personnel in the handling area.

Do not exceed the rated load or lift loads not described in the instruction manual. Do not use a damaged or malfunctioning unit or one with missing parts.

Do not leave suspended loads unattended. Do not remove or cover warning labels. Do not operate the equipment without reading and understanding the instruction manual.

Stay away from suspended loads. Do not lift loads higher than necessary. Do not make any repairs, alterations or modifications to the lifting system.

Use authorized parts with the lifting system only. Follow the entire maintenance program described in this manual.

The operator must be adequately qualified to operate the lifting system. Check the lifting system before each use, as described in this manual.

During handling, avoid all dangerous operations: shocks, jolts, vibrations, ...

All lifting accessories in contact with the RSB system must be dimensioned in relation to it and comply with the applicable standards.

3 Description of the lifting system

3.1 Overview

4 Reception of the material

The material is delivered with an instruction manual and an EC declaration of conformity. Make sure the equipment is complete and no components are missing. To do so, refer to the description of the lifting system above.

5 Assembly and commissioning

The material is delivered assembled. It is the user's responsibility to check the suitability for the workstation.

Commissioning is the responsibility of the user company. It is therefore the user's responsibility to carry out the steps and controls according to the standards and regulations in force at the place of use.

6 Conditions of use

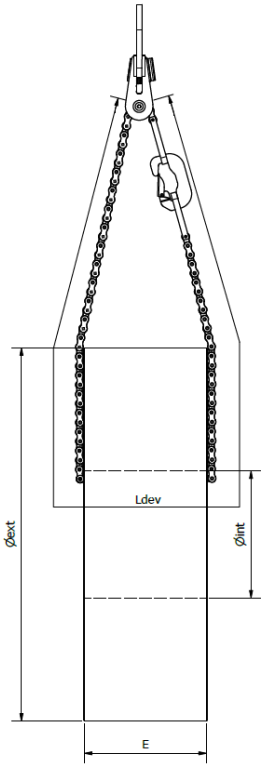
Turning over loads with slings is a dangerous operation that can cause sudden tipping and considerably overload the slings. Such an operation must be carefully planned. Do not use a hammer to fasten the strap or the hooks. Be careful not to get your hands or any other part of your body caught during tensioning. Do not make a dead turn around the coil with the sling.

Never twist the sling or use it at an angle. The load must be distributed over the width of the wire mesh sling. Avoid loading in one point. Do not use the RSB system for loads other than coils. If loads are lifted below their center of gravity, there is a risk of sudden and uncontrolled tipping.

Check the suitability of the equipment for the intended use:

- Check that the headroom of the equipment including the load allows for safe lifting.
- Identify the path that the load will follow, clear the aisles and determine the place where the load will be put down.
- Never stand between the load and a fix obstacle or a wall.

- Use the RSB system only for lifting coils whose thickness E is less than half the external diameter:
  - $E \leq \frac{ø_{ext}}{2}$
- Check that the total developed length of the sling is compatible with the dimensions of the coil. It must be greater than the perimeter of the coil section:
  - $L \geq 2(ø_{ext} + E)$
- Check that the inside diameter of the coil is greater than 400mm to be compatible with the width of the sling.
  - $ø_{int} \geq 400$



The equipment may only be used by competent and trained personnel in accordance with the standards applicable at the place of use.

The equipment is designed for use at temperatures between -20°C and +100°C. For any specific use, consult the manufacturer. Avoid use in corrosive, aggressive and/or sandy, chemical, acid, steam environment, ...

7 Operating procedure

Take into account the center of gravity during assembly.

Check that the wire mesh chain slides around the centering roller: it must slide manually and remain in position under its own weight. Adjust the chain brake with the adjusting screw if necessary.

Check that the sling is correctly buckled without twisting. Check that the safety latch is closed and that the hook mouth is pointing inward. Check the space between the spool and the floor and the correct passage of the strap and fasteners to avoid jamming the parts. All accessories must be perfectly mobile in all directions without encountering any obstacle to movement.

For handling, proceed with the following steps.

- Carry out the routine checks.
- Prepare the work area for the lifting operation.
- Take into account the center of gravity (uneven weight distribution, risk of tilting, ...).
- Move the RSB system to the right side of the coil, disengage the hook from the fastener and pass the strap through the center of the coil, positioning it so that the assembly does not remain tight on the coil after lifting.
- Re-engage the ties in the hook and make sure the safety latch is locked and the hook is facing inwards.
- Before tensioning, make sure that the hooks and fasteners will not come into contact with the coil or the head ring of the sling during the operation.
- Start the handling at slow speed in a clear area and keep the bridge hook in line with the coil.
- Disengage the material after the operation and store it on a suitable support.

It is recommended to watch the video on the manufacturer's website:

https://lifteurop.com/en/products/lifting-systems/wire-mesh-slings/rsb-system/

Avoid shocks, vibrations, and dangerous maneuvers.
Plan and secure the movement to be carried out with the load.
Do not stay in a confined space between the load and an obstacle.
Avoid unnecessary contact with joints when handling.

8 Working Load Limit

The Working Load Limit is given in the CE declaration of conformity.

Under no circumstances may the load applied to the RSB system exceed the WLL of the material.

Using the lifting system with an angle results in reducing the WLL coefficients. Refer to the lifting angle tables for the calculation of these coefficients. These are theoretical and strictly indicative. It is the user's responsibility to take into account all safety parameters before lifting. It is also the user's responsibility to ensure the dimensioning of the load. In case of doubt, a case study can be carried out by the manufacturer.

9 User training

Make sure that the users of the system have read and understood the contents of this instruction manual.

10 Transportation and storage

After use, store the RSB system on an adapted support in a clean, dry place. Take care to avoid shocks during storage and warehousing.

11 Routine checks

Perform the following checks before each use:

- Ensure the integrity of the lifting system and its components
  - Head ring and centering roller
  - Fastener
  - Chain
- Make sure that the safety devices function correctly.
  - Retaining latch
  - Chain brake
- Make sure that the markings are present and conform.
- Ensure that the system has not been subjected to impacts for which it was not intended.
- Ensure that the system has not been subjected to plastic deformation.
- Make sure there are no cracks.
- Check the mobility of the moving parts.
- Make sure there is no excessive or abnormal wear.

If any of these criteria are found to be non-compliant, the RSB system must be subjected to further checks.

12 Servicing and maintenance

12.1 Inspection

The inspection must be carried out by competent persons at least once a year for normal use, several times a year for intensive use. Routine checks should be performed first. In addition, the following checks must be carried out:

- Head ring: no deformation, bolt free to swivel normally.
- Correct operation of the chain brake: the brake must ensure the stability of the wire mesh sling. If necessary, adjust the chain tension with the adjusting screw.
- Lubrication of the load-bearing screw
- Articulation of the moving parts
- Condition and wear of the chains
  - Selvedges and rivet heads.
  - Wear of the links: remove from service any PZR type sling whose fabric thickness is lower than 15mm, and any PZK type sling whose fabric thickness is lower than 21mm.
  - Elongation: check the number of links per meter and remove from service any PZR type sling with less than 52 rows of links per meter and any PZK sling with less than 39 rows of links per meter.

- Condition of the sling: any twisted, flattened or twisted chain must be removed from service.

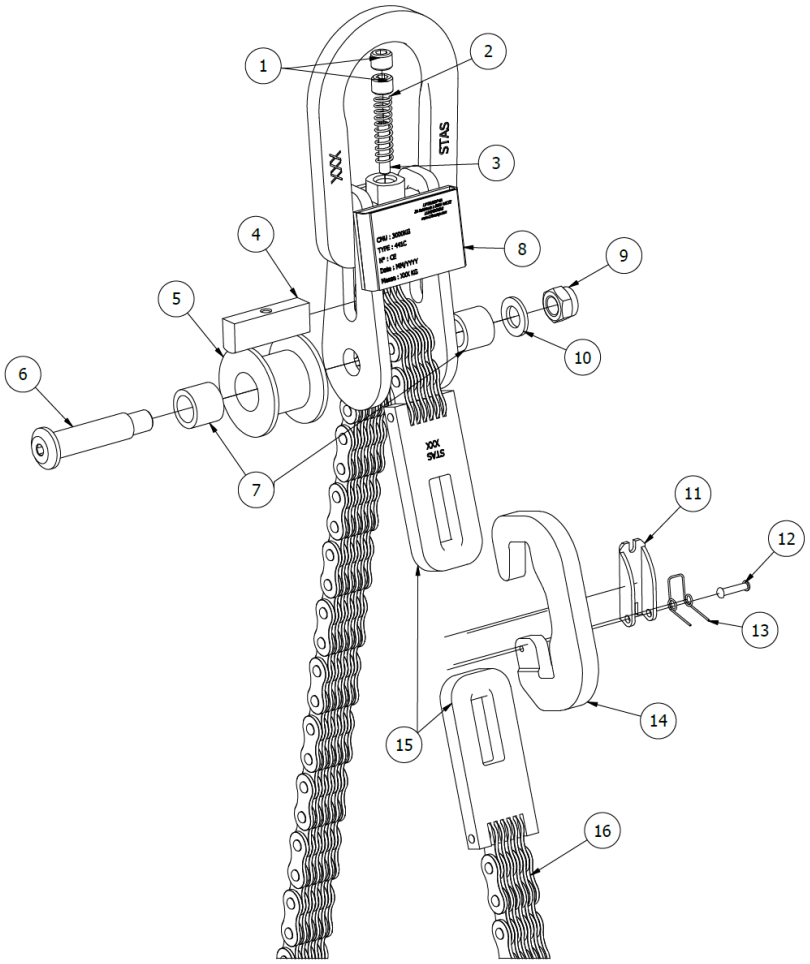
- Correct assembly of the components
- Abnormal wear and/or corrosion
- Deformation
- Markings: CE, traceability engravings, WLL

Important: The sling must be removed from service and replaced after 10,000 lifting cycles

Periodicity of RSB system checks			
	Head ring / Pulley attachment	Strap / Wire mesh chain	Simple fasteners Latch fastener
Commissioning	Visual – routine check Chain brake adjustment	Visual – routine check	Visual – routine check Safety latch operation
Every use	Visual – routine check Chain brake adjustment	Visual – routine check	Visual – routine check Safety latch operation
Annual	> Head ring: matting max. carrying capacity 5% > > deformation, wear, cracks. > Greasing of the carrier screw > Chain brake tension > Mobility of the centering roller	> Rivet wear > Link wear: thickness, elongation > Twisting and deformations > Articulation, mobility	> Deformation, wear, cracks. > Matting carrying section max. 5%

For all repairs, use original parts (see list in pt 12.2) and contact the manufacturer if necessary. The lifting system must be kept clean. Use a damp cloth for cleaning. Make sure that no particles can prevent the proper functioning of the bearing parts. Make sure that the markings remain legible. Regularly check the parts for wear and tear. All parts of the lifting system are subject to stress and wear and may need to be replaced after prolonged use. If a problem is detected during an inspection, do not use the equipment again until the problem has been solved. An unsolved problem can cause serious or lethal accidents.

12.2 Spare parts



Spare parts list of the RSB system			
Number	Description	Number	Description
1	Screw DIN 913	9	Chain brake DIN 985
2	Compression spring	10	Washer ISO 7089
3	Screw DIN 427	11	Safety latch
4	Chain brake	12	Mounting pin for latch
5	Centering roller	13	Latch spring
6	Load-bearing screw	14	Latch fastener
7	Bearing	15	Simple fasteners
8	Manufacturer's plate	16	Wire mesh chain

13 Decommissioning

If it is determined that the equipment can no longer be used under normal conditions, ensure that the equipment is no longer being used, for example by sealing it or completely destroying the lifting system.

13.1 Recycling

Most of the materials used are recyclable. Consult local regulations in terms of recycling and reuse.