



Figure 1

Item No.	Designation	pcs.
1	Lifting body	1
2	Outer body	1
3	Back plate	1
4	Cover	1
5	Sector plate	3
6	Guide bushing	1
7	Thrust bearing	1
8	Key	2
9	Pin	6
11	Cylinder tap	2
12	Spring	1
14	Screw	3
15	Screw	1
16	Screw	1
17	Thrust ring	1
18	Sensor ring	1
19	Retaining screw	3

Parts list

**Safety instructions:**

- Do not place your feet under the reeling head when mounting or removing reeling heads.*
- When assembling the reel to the reel bracket, ensure that the reeling heads are intact and the reel will fit between the reeling heads.*
- Check that the reeling heads are inside the core. However, do not press the reeling heads against the core using too much force, but rather leave a gap of 2 mm between the core end and thrust ring.*
- Do not place your hands between the reeling head and core when pushing the core or reel in place.*
- Do not place your hands between the reeling head and sensor ring when pushing the core or reel in place.*
- Do not place your feet under the reeling head when mounting or removing the reel.*
- General safety regulations of the plant must always be observed.*

**Functional Description**

Before starting the reel-up operation the reeling head is pushed horizontally into the openings of the core ends, when the core tensions the ejector ring into rear position. By the action of rotational moment, the reeling head clamps to the core end. The clamping force depends on the tightness of the web and ends as the pull ceases. Upon completion of the reel-up operation the reeling heads are pulled out of the core ends and the ejector ring pushes the core out of the reeling head. To ensure good operational reliability, the reeling heads must be kept in good condition by regular maintenance during use.

## Product Description

KILL 150 Kicker ejects the core out of the reeling head with the help of a spring-tensioned ejector ring (item 17), when the reeling arms are pulling the reeling heads out of the core. After the unwinding is completed and the core is empty, the reeling head arms are opened for changing a new paper roll.

The KILL reeling head is composed of parts described in Fig. 1. In this construction a guided pin and key assembly, by the action of rotational moment, pushes the sector plates (item 5) outwards against the wall the core opening, clamping the reeling head to the core. The reeling head is made of tempered high quality alloy steel and protected by black finishing.

## Mounting and Putting into Use

The reeling head is delivered from the manufacturer completely assembled and protected against corrosion.

Before using the reeling head the first time, the protective agents should be removed by wiping the surfaces with a clean cloth or a paper towel. If necessary, some solvent can be used.

The reeling head is pre-lubricated for the first use.

## Mounting the KILL Reeling Head to the Reeling Station

The reeling head is mounted to the reeling station by fitting the back plate (item 3) of the reeling head to the mounting flange fitted to the reeling station shaft. The guide and mounting surfaces must be cleaned before mounting the reeling head.

Lift the reeling head locating it into the guide in the reeling station mounting flange and install the mounting screws.

The tightening torques of the mounting screws are:

M12	135 Nm
M14	250 Nm
M16	330 Nm

Push the ejector ring manually backwards about 20 mm, in order to expose the outer body (item 2) and sector plate (item 5). The outer ring and sector plates must turn without resistance when they are rotated back and forth by hand. The reeling head is now ready for use.

## Cleaning During Operation

In connection with each core change, the reeling head should be cleaned by blowing air. Blow compressed air through the air hole in the cover (item 4) to remove e.g. fibre dust released from the core from inside the reeling head.

When air is blown into the head, the sector plates (item 5) are pushed outwards and the air comes out between the edges of the sector plates (item 5). After cleaning, the outer body (item 2) and the sector plates (item 5) must turn without resistance when they are rotated back and forth by hand. Repeat the blowing operation, if necessary.

## Maintenance

After approx. 3 months of use the following cleaning and maintenance operations shall be carried out.

Unscrew the mounting screws and bring the reeling head with its parts to the maintenance location.

Fit the reeling head in vertical position e.g. under a hydraulic press for service.

Load the ejector ring (item 17) by about 5-10 mm with a tool shown in the picture (not included in the standard delivery).



**NOTE!** Dismantling the reeling head without loading the ejector ring may cause danger to the serviceman and persons near the service location.

First unscrew the cover (item 4) mounting screws (item 14) and lift the cover out of its place. If the cover will not detach, wedge carefully between the cover and the outer body. Release the ejector ring (item 17) carefully, until all the spring force has been released. Lift off the outer body (item 2) with the ejector ring (item 17) and sector plates (item 5) while supporting the pins (item 9). Remove the spring (item 12). Remove the pins (item 9) and lift off the guide bushing (item 6) and the thrust bearing (item 7).

Wash the parts and clean the air holes.

Inspect the lifting and bearing surfaces of the sector plates (item 5) and the lifting body (item 1). Check the condition of the pins (item 9). Inspect the bearing and guide surfaces of the guide bushing (item 6) and the outer body (item 2).

The minimum thickness of the thrust bearing (item 7) = 2.5 mm.

If other parts are worn more than 0.2 mm, such parts may have to be changed.

If any cracks are found in the parts, such parts must absolutely be changed.

The assembly is done primarily in reverse order.

Ensure that the sector plates (item 5) are aligned with the openings in the guide bushing (item 6).

Please make sure that the spring (item 12) is in correct position. There are guide pins in the back plate (item 3) and in the ejector ring (item 17) for locating the spring.

The following points must be lubricated before assembly

- Thrust bearing (item 7) and its counter surfaces
- Guide bushing (item 6) sliding surfaces
- Pin (item 9) rolling surfaces
- Sector plate (item 5) rolling surfaces
- Lifting body (item 1) rolling surfaces
- Outer body (item 2) sliding surfaces

It is recommended to use synthetic lubricants (grease) with the following properties:

- high corrosion resistance, adherence and lubricating capacity
- heat resistance exceeding 230 °C
- high pressure and shock resistance

After mounting check that the parts are moving without resistance.

#### Malfunctions:

The reeling head cannot be inserted into the core

- Check that the head fits the core. The diameter of the outer body (item 2) must be at least 0.3 mm smaller than the inner diameter of the core opening.
- Remove the possible damages from the edges of the core end.
- Check the operation of the reeling head. If the sector plates (item 5) do not move loosely and are not flush with the outer surface of the outer body, tap on the reeling head with a soft hammer and blow it clean. Repeat this procedure, if necessary.

The reeling head slips inside the core

- The core end is damaged. Change the core.
- The core is soft and gives in (one of the sector plates (item 5) is pressed into the core wall).
- Check the tightness of the web.
- Check that the head fits the core.
- The reeling head is dirty or worn. Check the operation of the reeling head and as necessary, carry out maintenance operations according to instructions.
- Poor grip. Replace the sector plates (item 5) with grooved plates. *NOTE! Grooved sector plates (item 5) are not included in the standard delivery*
- For soft, worn or slippery cores, so-called extended reeling heads are available.

The reeling head does not come off the core.

- Tap the core lightly in order to remove pulp from the grooves and the ejector ring (item 17) pushes the core out of the reeling head.
- A sector plate (item 5) has been pressed into the core wall (the core is soft). Check the condition of the cores before using them and check the tightness of the web.
- The reeling head is dirty or worn. Carry out maintenance operations according to instructions.

Abnormal noise from the reeling head

- Inspect the reeling head. Carry out maintenance operations according to instructions.

If you're unable to remedy a malfunction, please call Oy **Klim-ko Ltd**'s service.

#### Contact information

**Oy Klim-ko Ltd, Lohja    Tel. +358 19 315 575    Fax. +358 19 315 577**