

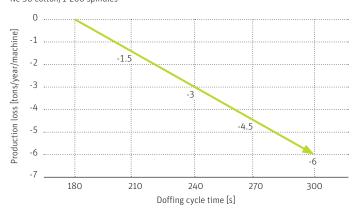
Increasing Profit with the Doffer Maintenance Kit

The importance of the doffing cycle time

Frequent and repeated maintenance of the doffer as well as checking and resetting the system has a significant impact on the machine efficiency, especially in the mid and long-term. If the doffing cycle is delayed, for instance due to an elongated servo disc belt the productivity of the spinning machine will drop and impact costs.

It can become expensive to replace single parts, like profiles or traction strips, while worn SERVOguiding profiles or carriers can interrupt the doffing cycle.

Productivity loss due to the increased doffing cycle time Ne 30 cotton/1 200 spindles



Furthermore, proper doffing has a big impact on the runnability of the winding machine. Bobbins that are not wound correctly can contain a lot of yarn. This has to be cut out at the winding machine. Hence, it increases the amount of waste and reduces the speed and performance of the winding machine.

Higher machine efficiency, yield and profitability

Productivity and performance of ring spinning machines highly depend on the auto doffer function. A quick and reliable doffing operation results in a better spinning mill performance.

The doffing cycle involves several steps. It starts with the preparation of the empty bobbin tubes and completes with the transportation of full cops to a trolley or to the winding machine. Grippers, profiles and SERVOdisc drive bells need to work sequentially with a set time to doff perfectly.

The auto doffer works at a standard doffing cycle time of around 180 seconds. Being on time will make

the spinning process more viable and optimizes costs. In addition, it leads to a smooth restarting of the machine with a higher starting spindle speed.

If the doffing cycle is delayed due to any reason such as setting disturbance, wear of parts and other broken components, it will result in significant production loss. Frequent machine downtimes during the doffing cycle may cause poor restarting performance of the machine. If the doffing cycle time can be kept on its original level, it will positively impact the profitability as well as increase the production by several tons per year. Concisely: To achieve the desired production in ring spinning, maintenance of the auto doffer is key.

Improving Key Areas with High-Quality Components

The doffer maintenance kit offers various benefits. First, the doffing cycle time remains consistent. Due to the fast and reliable doffing, the machine runs sustainably and efficiently. Second, the doffer maintenance kit enhances the machine lifetime and increases productivity due to a regular and proactive maintenance approach. It also reduces installation time thanks to the pre-assembled parts. Furthermore, it minimizes doffing time from air leakages and reduces energy. The doffer maintenance kit consists of the following main components:



1. Wheel complete 2. Traction strip 3. Guiding profile 4. Guiding profile head 5. Covering profile SERVOdisc* 6. Profile support 7. Slide ring 8. Seal 9. Tappet 10. Carrier 11. Fasteners 12. Pressure spring 13. Clamping 14. Pressure switch fix 15. Gripper complete

Maintenance helps increasing machine lifetime

Rieter field data has shown that a complete doffer maintenance every eight years can extend machine lifetime by several years. To extend machine lifetime and safe money in the end, Rieter recommends to conduct regularly and repeatedly all the necessary maintenance activities such as lubricating, cleaning, re-setting and checking of parts. All tasks and time intervalls can be found in the instruction manual. The doffer maintenance kit was designed to deliver highest performance levels for ring and compact spinning machines.

It impacts the gripper zone, the SERVOdisc zone and the ROBOload or link zone:

In the gripper zone, economical doffing ensures high efficiency. New grippers are enabling error-free operational speed during the inflating and deflating cycle. Compressed air is

supplied via new seals for a reliable doffing cycle time. In the servo disc zone, the cop transport system SERVOdisc works using peg trays that are clipped into a conveyor belt. This allows the tubes and cops to be precisely positioned. The SERVOdisc belt, the SERVOguiding profiles, bottom carriers and tappets are replaced to enable the SERVOdisc to work more efficiently. In the ROBOload or link zone, the SERVOdisc reliably transfers the full cops via the tube loader ROBOload to a trolley or to the winding machine. The SERVOguiding profiles, the SERVOdrive belt pulleys and other auxiliary parts are replaced to support the winding process.

Rieter's service and manufacturing spans across the world and responds quickly to customer needs and request.

^{*} Covering profile SERVOdisc will be offered only for specific machine model

