SAFE BLADE CHANGE IN THE CHOPPER SERVICE
ALKITRONIC® CASE STUDY

INTRODUCTION

The chopping blades must be replaced or readjusted regularly, which is often done under time pressure and involves numerous bolt connections per machine. As the rotor is both expensive and sensitive, it is crucial that the bolting process is precise and reliable, and does not require operator adjustments.

THE STARTING POINT

The blades of mobile shredders must be serviced and resharpened after approximately 8 - 10 hours of operation. These blades are mounted in a rotor and secured with two or three M27/M30 bolts, depending on the manufacturer.

Figure 1: Blade bolts on the rotor that need to be loosened

During maintenance, the bolts must first be loosened slightly, before being realigned precisely with the cutting edge. The operating principle is similar to that of scissors, where the precise interaction of the blades is crucial. To prevent operating errors, the torque multipliers must be set to the torque value specified by the manufacturer.

Figure 2: EB-S 350 with special support arm

IMPLEMENTATION

The optimal solution for this application was developed based on the manufacturer's specified parameters and supporting test runs on the shredder. Each of the battery-powered EB-S 350 and electric EC-S 65 models was used with a defined fixed torque of 1,800 Nm.

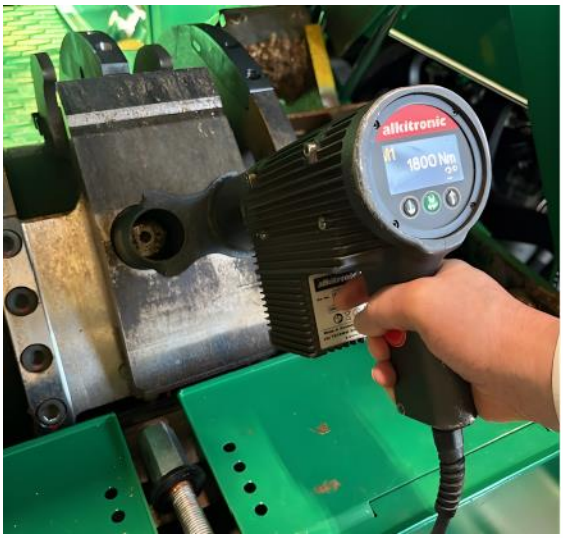

Figure 3: EC-S 65 in use on the rotor

A specially adapted support arm was developed in close collaboration with the manufacturer. This ensures reliable support, even in confined spaces.

Figure 4: EB-S 350 in use on the rotor

This solution has been successfully implemented at several of the manufacturer's end customers. Thanks to high user satisfaction, it quickly gained a clear advantage over competing solutions used previously within a year.

TECHNICAL SPECIFICATIONS FOR THE EB-S

- ✓ **Health and safety first:** Extreme reduction of radial forces on the wrist to 1 Nm.
- ✓ **Brushless synchronous motor:** Amazing increased productivity and low running costs.
- ✓ **Unique 1-finger trigger**: Unbeatable efficiency through fast, simple change of direction of rotation.
- ✓ **Outstanding battery concept**: Powerful and durable battery for precise, consistent bolting quality**.**
- ✓ **Worldwide shipping** thanks to the patented battery concept based on SV 188/SP 188.
- ✓ **Simple Navigation**: Intuitive interface drastically reduces operating errors and misadjustments.

TECHNICAL SPECIFICATIONS FOR THE EC-S

- ✓ **Safe interruption-free work** in any weather (moisture, rain) - thanks to protection class IP54.
- ✓ **Low operating costs:** Maintenance-free, low-wear, brushless synchronous motor with excellent efficiency.
- ✓ **Permanent higher joint quality** by continuous rotation of the square drive.
- ✓ **OLED display** with anti-glare and high contrast - for perfect reading under all weather conditions.