

# Elka presents new sliding gate drive with frequency converter

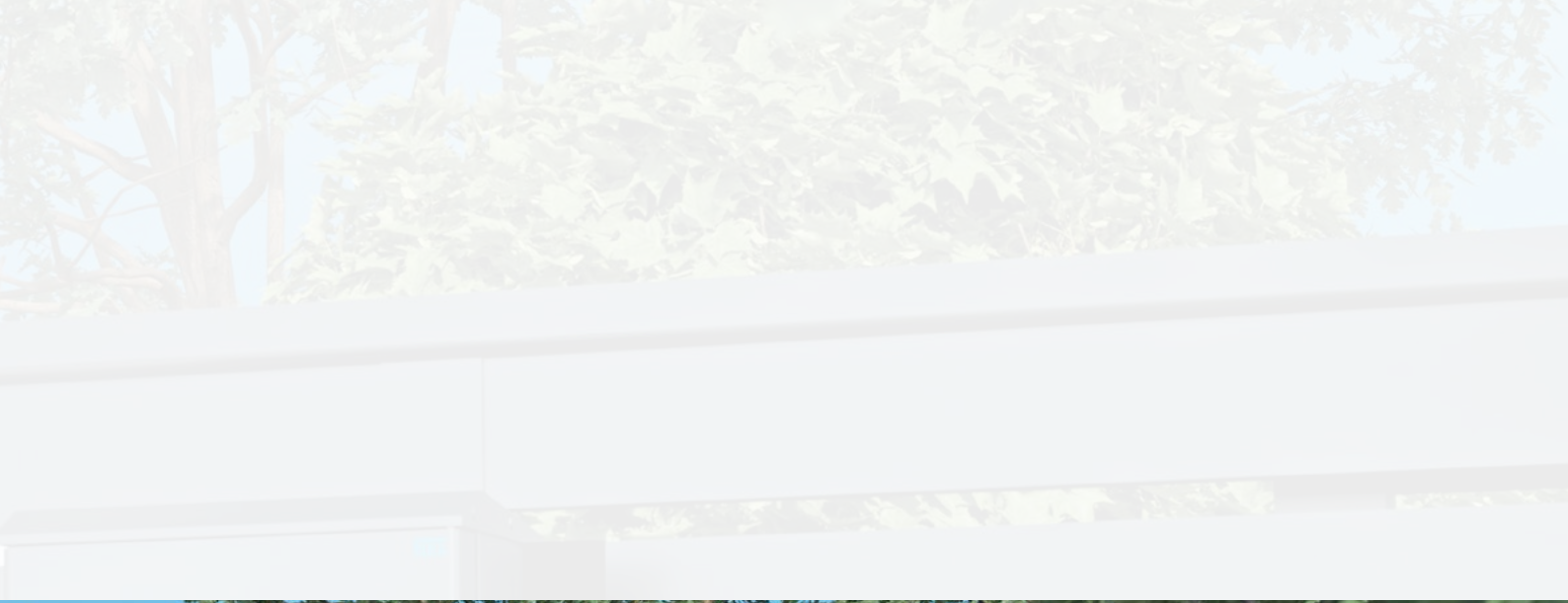
North German drive manufacturer Elka is adding two new sliding gate drives to its range. The new EST-FU 1500 and EST-FU 3000 have a frequency converter for smooth and even operation, can move gate leaves of up to 1500 or 3000 kilos, and are designed for industrial applications.

**“W**e wanted to create a high-end drive that not only looks chic, but combines the best features as well,” R&D chief Oliver Nave says. “We’ve put all of our 40 years of experience into it, using the latest and best technology. The result is two drives that are unequalled on the market.”

## FREQUENCY CONVERTER

“The frequency converter played an important role in development,” Nave goes on. “By adjusting the frequency, we can control the motor’s speed on a continuous scale. It means that the gate operates perfectly smoothly, and at the same time conserves energy. We help the gate to get going at startup with the built-in boost function, which briefly allows the motor to produce more power.” Elka has built in a so-called Power Factor Correction to compensate for any voltage lost due to long cable lengths. “In the frequency converter this is done by powering a separate circuit with active power-factor correction. From a mains voltage of 200 volts, the intermediate voltage is ‘pumped up’, so to speak, to make the maximum power available to the drive.”







## GEAR

"We also came up with something special to simplify adjusting the gear during installation," Nave says. "As you manually push the gate along its entire path, so-called limit indicators indicate the height differences. This is enabled by built-in gas springs, which press the gear against the gear rack during this step. You're then able to directly read off the optimum height setting for the gear rack. You can also see at a glance whether the gear teeth and the gear rack are properly engaged throughout the entire movement. This avoids unnecessary wear due to a lack of grip. The height of the gear rack can be adjusted by 100 millimetres, and you can add another 90 millimetres to this with an optional fixing."

## POSITION

With the new EST-FU drives, the gate's exact position is saved in the event of power failure, manual operation or emergency release. In order to do this, an absolute encoder learns the position during the first run over the entire distance, including the end positions and any part-openings that may occur. "There's no need for limit switches," Nave says, "but they can be built in as an extra option."

Oliver  
Nave



## CONTROLS

The drive control with frequency converter was built especially for this range and is optimised for the drives. "All settings can easily be adjusted using the backlit graphic display with a four-language text menu," Nave goes on. "The contact strip resistance values, evaluations of the safety features and status changes are clearly displayed." The control system includes an integrated loop detector, six programmable multi relays (two changeover contacts, four Normally Open contacts) and safety-related inputs (PLC) for safety devices. "Monitoring is made easier thanks to four separate contact profile evaluations for the main and secondary closing edges' OPEN and CLOSED movement directions. The resistance values for each range are displayed separately, so you have a rapid overview of the existing signals. In combination with appropriate safety contact strips, the forces are maintained in line with EN 12453 using electronic speed control and adjustable braking curves. For the photocells, the control system includes a test function for monitoring the front and back chambers so there's no need for the six-monthly photocell check. A fire alarm system can be connected via a separate input (Normally Closed contact)."



## HOUSING

The powder-coated aluminium housing for the new drives features integrated holders for safety contact strips. "We've made the housing as comfortable as possible," Nave says. "It has enough space inside for additional features, such as a network connection or customer-specific devices or accessories." The door of the housing is secured with a pivoting lever lock, into which the customer can install their own profile half cylinder.



## PREPARED FOR THE FUTURE

"We've built up a lot of experience in the company's 40-plus years," Nave concludes, "and it's been put to good use in developing this sliding gate drive. The result is a product that meets Elka's strict quality standards, and provides the customer with added value in terms of durability and reliability. It's also future-proof, particularly with regard to connectivity. We're working to integrate the controls into our Econ app in the coming months. This will make installation even easier." For customers who want to build the new drives into their own guide or drive pillars, the EST-FU drives can also be purchased as separate units (without housing). For standards-compliant gates from the range, Elka assists with certification. The new drives are suitable for gates with passage widths of up to 30 metres. ■