ELDRO®

ELECTRO HYDRAULIC THRUSTERS

THE ORIGINAL. BE SAFE.

EXPLOSION-PROTECTED SERIES EDEX
AREAS OF APPLICATION

Gases, vapours, fumes and dust are generated or escape during the production, processing, transport and storage of combustible substances in many industrial sectors. When combined with oxygen, an explosive atmosphere can develop. If this ignites, it can result in explosions and cause serious personal injury and material damage. The sectors concerned include, for example, the chemical and petrochemical industries, pharmaceuticals, oil and gas production, mining, as well as the food industry, the biofuel industry and the wastewater sector.

Explosion-protected ELDRO® devices are ideal for these areas of application. They comply with current regulations and standards and can be used in a variety of ways.

TECHNICAL VALUES

<table>
<thead>
<tr>
<th>Type</th>
<th>Lifting force [N]</th>
<th>Stroke path [mm]**</th>
<th>Power consumption [W]</th>
<th>Current consumption [A] at 400 V 50 Hz</th>
<th>Switching frequency with S3 operation [c/h]</th>
<th>Weight [kg]</th>
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<tbody>
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* depending on stroke path  ** further on request

Stroke work (N cm) = Lifting force x stroke path
**EDEX**

All dimensions in mm / * depending on cable gland
EDEX HV

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>ØD</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>I*</th>
<th>ØL</th>
<th>ØN</th>
<th>O</th>
<th>R</th>
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<td>28</td>
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<td>30</td>
<td>198</td>
<td>40</td>
<td>90</td>
<td>275</td>
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</tbody>
</table>

All dimensions in mm / * depending on cable gland
ELECTRICAL VERSION

MOTOR
- Three-phase asynchronous motor, 2-pole
- For power data see “Technical values”
- Standard insulation per insulation class F

VOLTAGES AND FREQUENCIES
- 400 V, 50 Hz, 3 ~
- 500 V, 50 Hz, 3 ~
- 690 V, 50 Hz, 3 ~
- HV 660/1140 V, 50 Hz, 3 ~
- All devices are star (Y) connected on delivery
- Special windings 110 V - 690 V, 3 ~, 50 Hz and 60 Hz possible
- DC and AC versions are not available

OPERATING MODES
- Continuous operation S1 and intermittent duty S3 – 60 % duty cycle standard

TERMINAL BOX
- Protection class IP65, DIN VDE 0470 T1 (IEC 529)
- Supply line connection screw
- Internal protective conductor connection: Screw, HV device M5
- External protective conductor connection: M5

CABLE INLET
- Threaded cable gland M 28 x 1.5 for cable cross-sections to 4 x 2.5 mm² (Ø 15 - 18 mm)
- HV device cable gland M 40 x 1.5 for cable cross-section to 7 x 2.5 mm² (Ø 18 - 21 mm)
MECHANICAL VERSION

INSTALLATION VARIANTS
- The base fastening cannot be mounted in 90° rotated position
- The lifting rod head at the top rotates in all types

OPERATING FLUID
- Mineral hydraulic oil or silicone oil as well as aqueous polymer liquid depending on the operating conditions, e.g. ambient temperature, factory-filled

PAINT APPLICATION STANDARD
- 2K Polyacryl paint, layer thickness 120 μm
- Special paint layer thickness up to 200 μm
- Standard colour RAL 7022 (umbra grey)

PROTECTIVE MEASURES
- Simple dust protection seal
- Redundant seal with the hydraulic chamber
- Piston rod QPQ

ELECTRICAL & MECHANICAL AUXILIARY EQUIPMENT

LIFTING, LOWERING OR THROTTLING VALVE (H, S, D)
- With a built-in lift, lowering or throttling valve, lifting or lowering times as well as both times can be infinitely increased. The adjustable minimum values attain 10 to 20-times the normal values
- Integrated valves in “open position” result in an extension of the lifting and lowering times with short stroke thrusters of up to approx. 0.4 to 1.0 seconds, and with long stroke thrusters of up to approx. 0.7 to 2.0 seconds
- The desired lifting or lowering time is set externally on the device in standing position

CONTROL SPRING (R-SPRING)
- Damping of the load change when closing and opening the brake
- The R-spring is only effective in conjunction with a C-spring
- The installation length “A” of the device does not change
- When setting the working point of the brake, the spring characteristic must be taken into account
- Main application: ELDRO® control brake
ELECTRICAL & MECHANICAL AUXILIARY EQUIPMENT

BRAKE SPRING (C-SPRING)
- Integrated c-spring for generating the brake force. The specified brake force of the C-spring is reached at 0...maximum of the nominal stroke.

INCREASED CORROSION PROTECTION
- Increased corrosion protection is necessary with the use of ELDRO® devices in environments of aggressive media and/or high relative humidity with the resultant formation of condensation.
- Increased protection in the motor: The motor compartment is additionally coated with a corrosion protection.
- Increased external protection: Through special paint application, see “Mechanical version”.

VERSIONS WITH BRAKE SPRING

<table>
<thead>
<tr>
<th>Type</th>
<th>Brake spring force (c-spring) [N]</th>
</tr>
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<tbody>
<tr>
<td>EdEx 32/50 C32</td>
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<td>EdEx 50/50 C50</td>
<td>540 - 680</td>
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<td>EdEx 80/60 C80</td>
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<td>EdEx 320/100 C320</td>
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</table>

LIMIT SWITCH (LI AND LM)
- For the electrical display of the ventilation and braking positions, mechanical or inductive limit switches can be installed on all ELDRO® units.
- Detailed information available in the data sheet of the limit switches.

REPLACEMENT DEVICES
- on request

CONFORMITY CERTIFICATE
- ATEX
- IEC Ex
- EAC