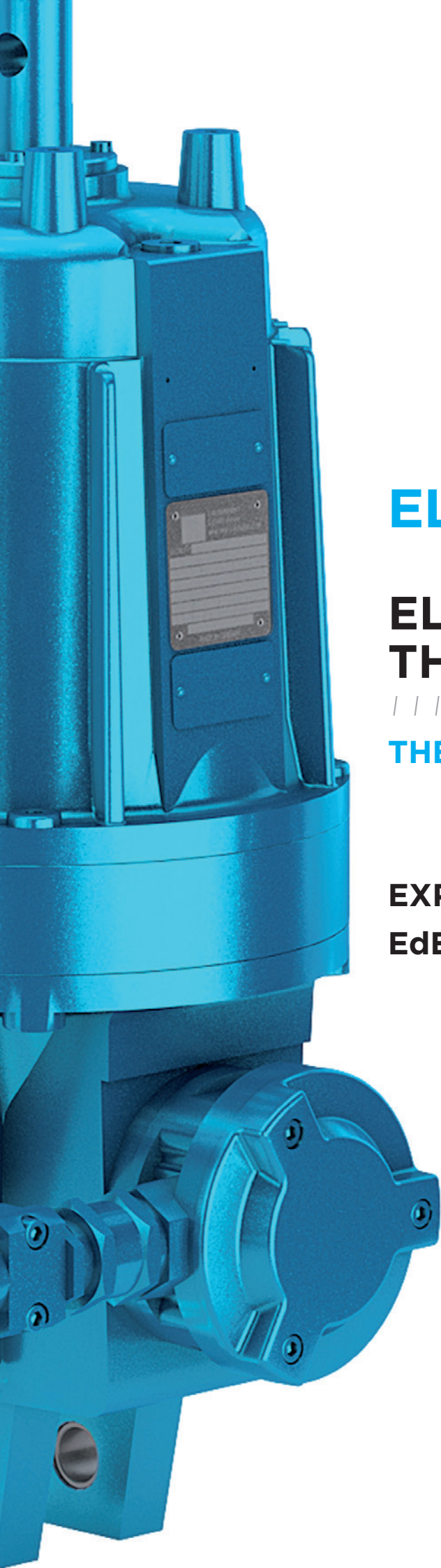




**EMC**

**ELDRO<sup>®</sup>** classic

## **ELECTRO HYDRAULIC THRUSTERS**

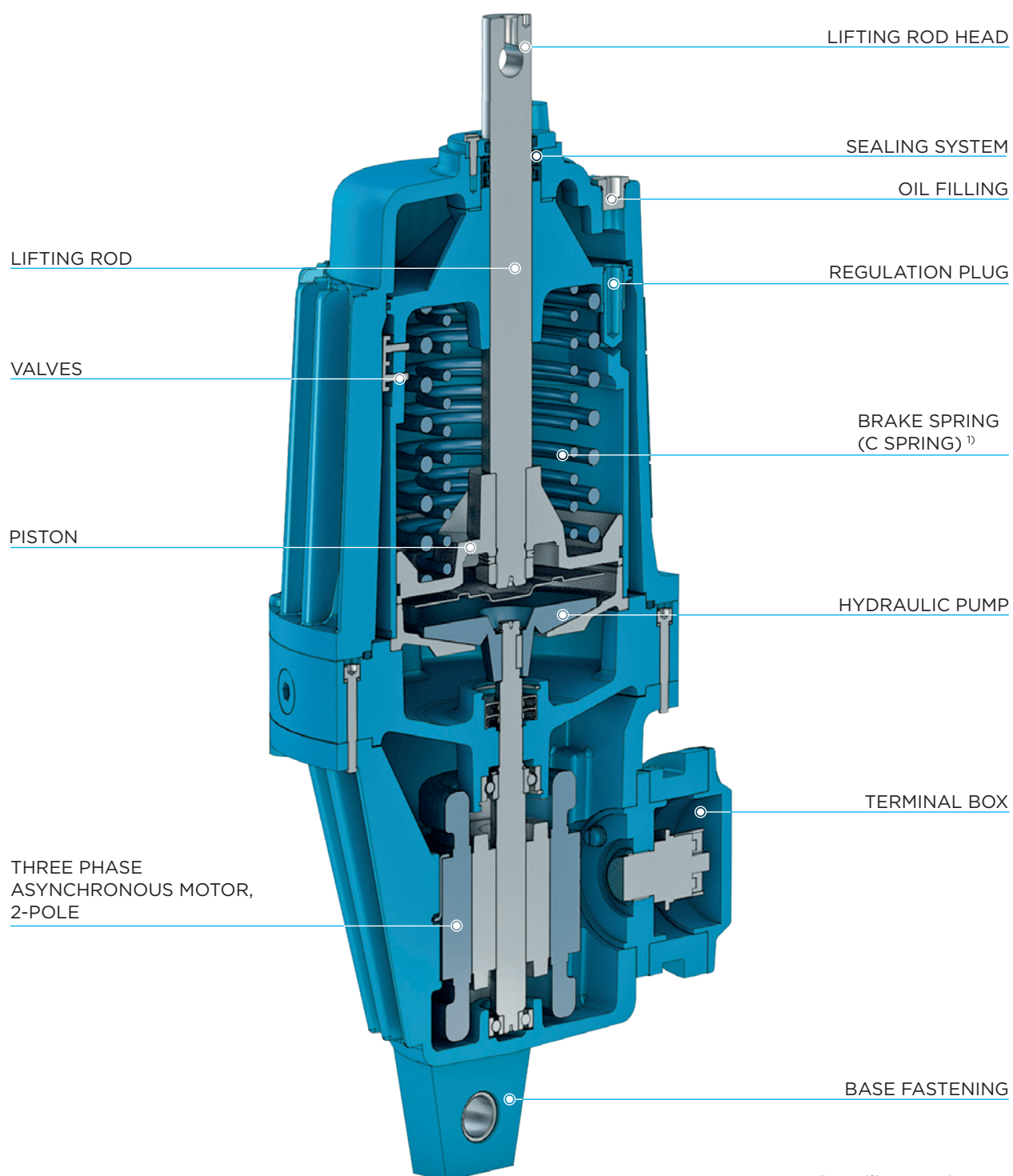
|||||  
**THE ORIGINAL. BE SAFE.**

**EXPLOSION-PROTECTED SERIES**  
**EdEx**



**EMC**.moving ahead.

## DESIGN, FUNCTION AND ADVANTAGES



<sup>1)</sup> auxiliary equipment

## DESIGN, FUNCTION AND ADVANTAGES

### 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<sup>classic</sup>® devices are ideal for these areas of application. They comply with current regulations and standards and can be used in a variety of ways.

### TEMPERATURE RANGE

- Broad standard temperature range from - 25 °C to + 40 °C
- Deep temperature range from - 40 °C to + 40 °C with use of special operating media
- High temperature range from -10 °C to +60 °C with special sealings
- Deviating temperature on request

### HAZARDOUS AREA

- I M2 (Mining)
- II 2G for zone 1 and 2 (above ground)
- II 2D for zone 21 and 22 (above ground)

### CERTIFICATE OF CONFORMITY

- ATEX - BVS 05 ATEX E 074 X
- IECEx - IECEx BVS 12.0014X
- TP TC - RU C-DE.ГБ04.B.00477

### TECHNICAL VALUES

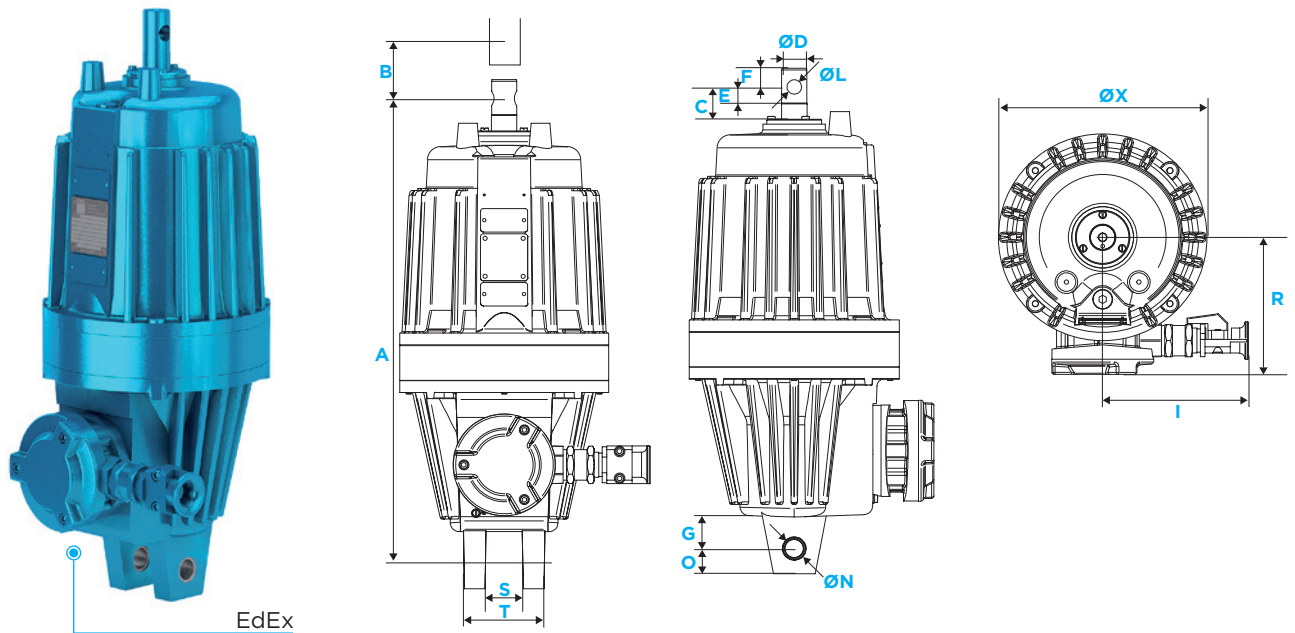
| Type         | Lifting force [N] | Stroke path [mm]** | Power consumption [W] | Current consumption [A] at 400 V 50 Hz | Switching frequency with S3 operation [c/h] | Weight [kg] |
|--------------|-------------------|--------------------|-----------------------|----------------------------------------|---------------------------------------------|-------------|
| EdEx 32/...  | 320               | 50                 | 150                   | 0.30                                   | 240                                         | 32          |
| EdEx 50/...  | 500               | 60 - 160           | 180                   | 0.38                                   | 240                                         | 32          |
| EdEx 80/...  | 800               | 60 - 160           | 220                   | 0.48                                   | 240                                         | 45 - 54*    |
| EdEx 125/... | 1250              | 60 - 160           | 250                   | 0.52                                   | 240                                         | 45 - 54*    |
| EdEx 150/... | 1500              | 60 - 160           | 360                   | 0.63                                   | 240                                         | 45 - 54*    |
| EdEx 200/... | 2500              | 60 - 160           | 320                   | 0.64                                   | 240                                         | 71 - 80*    |
| EdEx 250/... | 2500              | 60 - 160           | 360                   | 0.69                                   | 240                                         | 71 - 80*    |
| EdEx 320/... | 3200              | 100                | 550                   | 0.9                                    | 240                                         | 75          |

\* depending on stroke path

\*\* further on request

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

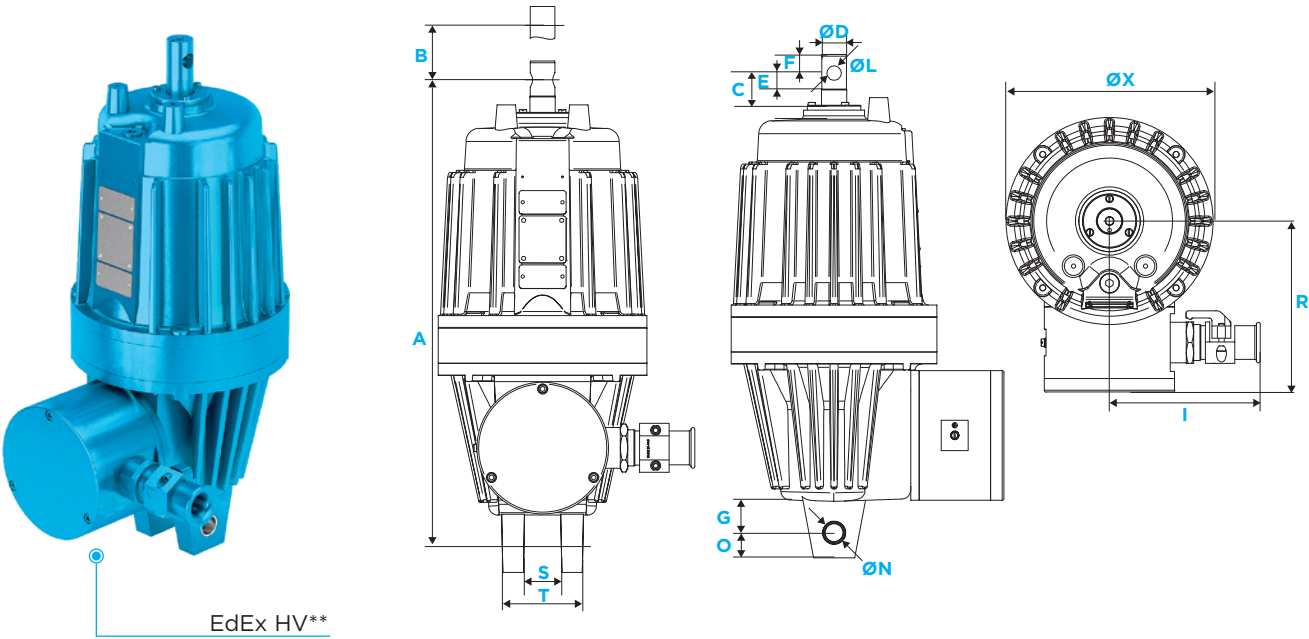
## EdEx



| Type                                        | A   | B   | C  | ØD   | E  | F  | G  | I*  | ØL | ØN | O  | R   | S  | T  | ØX  |
|---------------------------------------------|-----|-----|----|------|----|----|----|-----|----|----|----|-----|----|----|-----|
| EdEx 32/50<br>EdEx 50/50                    | 445 | 50  | 25 | 21,5 | 16 | 17 | 26 | 161 | 12 | 20 | 21 | 143 | 40 | 90 | 200 |
| EdEx 80/60<br>EdEx 125/60<br>EdEx 150/60    | 514 | 60  | 30 | 27,5 | 18 | 21 | 35 | 161 | 16 | 20 | 28 | 153 | 40 | 90 | 230 |
| EdEx 80/160<br>EdEx 125/160<br>EdEx 150/160 | 630 | 160 | 32 | 27,5 | 18 | 21 | 35 | 161 | 16 | 20 | 28 | 153 | 40 | 90 | 230 |
| EdEx 200/60<br>EdEx 250/60                  | 620 | 60  | 34 | 35,5 | 24 | 25 | 35 | 161 | 20 | 20 | 30 | 161 | 40 | 90 | 275 |
| EdEx 200/160<br>EdEx 250/160                | 720 | 160 | 34 | 35,5 | 24 | 25 | 35 | 161 | 20 | 20 | 30 | 161 | 40 | 90 | 275 |

All dimensions in mm / \* depending on cable gland

EdEx HV



| Type                                        | A   | B   | C  | ØD   | E  | F  | G  | I*  | ØL | ØN | O  | R   | S  | T  | ØX  |
|---------------------------------------------|-----|-----|----|------|----|----|----|-----|----|----|----|-----|----|----|-----|
| EdEx 80/60<br>EdEx 125/60<br>EdEx 150/60    | 514 | 60  | 30 | 27.5 | 18 | 21 | 35 | 168 | 16 | 20 | 28 | 190 | 40 | 90 | 230 |
| EdEx 80/160<br>EdEx 125/160<br>EdEx 150/160 | 630 | 160 | 32 | 27.5 | 18 | 21 | 35 | 168 | 16 | 20 | 28 | 190 | 40 | 90 | 230 |
| EdEx 200/60<br>EdEx 250/60                  | 620 | 60  | 34 | 35.5 | 24 | 25 | 35 | 168 | 20 | 20 | 30 | 198 | 40 | 90 | 275 |
| EdEx 200/160<br>EdEx 250/160                | 720 | 160 | 34 | 35.5 | 24 | 25 | 35 | 168 | 20 | 20 | 30 | 198 | 40 | 90 | 275 |

All dimensions in mm / \* depending on cable gland

\*\* For direct connection to the medium- and high voltage grid up to 1140 V

## 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

### CABLE INLET

- Threaded cable gland M 28 x 1.5 for cable cross-sections to 4 x 2.5 mm<sup>2</sup> (Ø 15 - 18 mm)
- HV device cable gland M 40 x 1.5 for cable cross-section to 7 x 2,5 mm<sup>2</sup> (Ø 18 - 21 mm)

### 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

## 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

### 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

### VERSIONS WITH BRAKE SPRING

| Type              | Brake spring force (c-spring) [N] |
|-------------------|-----------------------------------|
| EdEx 32/50 C32    | 370 - 450                         |
| EdEx 50/50 C50    | 540 - 680                         |
| EdEx 80/60 C80    | 740 - 1060                        |
| EdEx 125/60 C125  | 1200 - 1630                       |
| EdEx 150/60 C125  | 1200 - 1630                       |
| EdEx 200/60 C200  | 1900 - 2500                       |
| EdEx 250/60 C200  | 1900 - 2500                       |
| EdEx 320/100 C320 | 2510 - 3690                       |

### INCREASED CORROSION PROTECTION

- Increased corrosion protection is necessary with the use of ELDRO<sup>classic</sup>® thrusters 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"

### LIMIT SWITCH (LI AND LM)

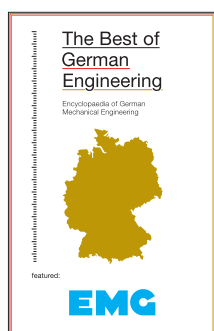
- For the electrical display of the ventilation and braking positions, mechanical or inductive limit switches can be installed on all ELDRO<sup>classic</sup>® thrusters
- Detailed information available in the data sheet of the limit switches

### REPLACEMENT DEVICES

- On request



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eLEXIS Group

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