

econ[®]

Electric actuators | for ball and butterfly valves



ERIKS

Econ[®] actuators have a rugged and reliable design and are therefore widely used in demanding industrial and ship building applications. These quarter-turn actuators are made to operate ball valves, butterfly valves, damper valves and plug valves in the below mentioned markets:

- Shipbuilding / Maritime
- Pulp & Paper
- Chemical Industries
- Oil & Gas
- Power Gen
- Water & waste water treatment
- Mining
- Steel production
- Desalination
- Building services / HVAC
- Pulp & Paper

Double acting actuators



Fig. 7907 | ELA40

An extreme compact, light weight multi-voltage actuator for small ball valves up to a maximum torque of 40Nm.



Specification

Power supply | 24VDC and 95 - 245VAC, 50/60Hz, ±5%
Limit switches | Open/close, SPDT, 250VAC 5A
Auxiliary limit switches | Open/close, SPDT, 250VAC 5A
Valve connection | According to ISO 5211
Ambient temperature | -20°C (-4°F) up to + 80°C (176°F)
Duty cycle (IEC 60034-1) | S4 - 50%

Fig. 7907 | ELA60

A compact actuator for ball and butterfly valves up to a maximum torque of 60Nm.



Specification

Power supply | 24VDC, 24VAC, 115VAC-50/60Hz or 230VAC-50/60Hz, ±5%
Limit switches | Open/close, SPDT, 250VAC 5A
Auxiliary limit switches | Open/close, SPDT, 250VAC 5A
Valve connection | According to ISO 5211
Ambient temperature | -20° (-4°F) up to + 80°C (176°F) - Ex-versions: -20° (-4°F) up to + 60°C (140°F)
Duty cycle (IEC 60034-1) | S4 – 50%
Ex-versions | Suitable for potentially explosive atmospheres according to 2014/34EU (ATEX)



II 2G Ex db IIB T4 Gb

Fig. 7907 | ELA80 up to 3000

A series of robust actuators for all quarter turn valves with a torque between 80 and 3.000Nm.



Specification

Power supply | 24VDC and 24VAC - 1 Phase 50/60Hz: 115VAC and 230VAC, ±5%
 3 Phase 50/60Hz: 230VAC, 380VAC, 440VAC and 460VAC
Limit switches | Open/close, SPDT, 250VAC 16A
Auxiliary limit switches | Open/close, SPDT, 250VAC 16A
Torque switches ¹ | Open/close, SPDT, 250VAC 16A
Valve connection | According to ISO 5211
Ambient temperature | -20° (-4°F) up to +80°C (176°F) - Ex-versions: -20° (-4°F) up to +60°C (140°F)
Duty cycle | ELA80-ELA1200 ²: S4-70% - ELA2000-ELA3000: S4-50%
Ex-versions | Suitable for potentially explosive atmospheres according to 2014/34EU (ATEX)

¹ Except for ELA80 and ELA100

² Duty cycle: ELA80 and ELA100 in 440 VAC/3Ph: S4-40%

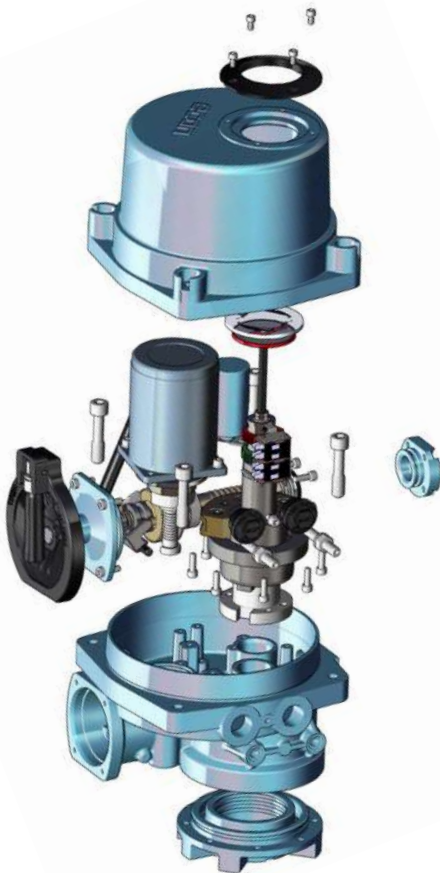
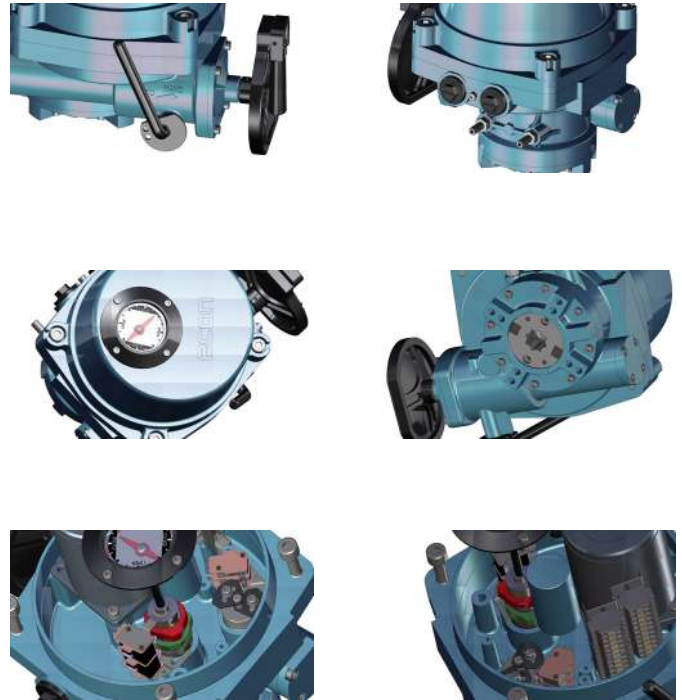


II 2G Ex db IIB T4 Gb
 II 2D Ex tb IIIC T135 °C Db

ELA2000 up to ELA3000

Features

- Design according to EN 15714-2
- Equipped with visual position indicator
- Weather proof IP67 enclosure, NEMA 4X and 6
- Actuator can be direct mounted on the valve
- Low current consumption
- Light weight aluminium enclosure
- Noiseless
- Thermal protection of the electric motor
- Corrosion proof by a aluminium anodised and Polyester coated enclosure
- Double square stem connection. Fits both a parallel and diagonal square valve stem
- Equipped with a manual override.
- Limit switches and auxiliary limit switches can be set stepless and very precise by a reliable clamping system
- Self-locking robust worm gear for ELA80 and above
- Equipped with a space heater for anti-condensation
- Captive cover bolts cannot be lost during maintenance
- Equipped with an electrical grounding point
- Terminal block with spring loaded clamps (no screws)



Options

- Water tight enclosure according to IP68 - 10m/72h | ELA 60 up to 3000
- Potentiometer unit (0~1kΩ) | ELA 60 up to 3000
- Proportional control unit for modulating applications (input, output 4~20mA DC, 1~5V DC, 2~10V DC, 0~5V DC, 0~10V DC) | ELA 60 up to 3000
- Fieldbus solutions: ASi-bus Modbus, Profibus and CAN-open | ELA 60 up to 3000
- Auxiliary torque switches (SPDT 2x 250VAC - 16A) | ELA150 up to 3000
- Position transmitter (output 4~20mA) | ELA 60 up to 3000
- Rotation extender up to 120°, 180° or 270° of the rotating angle | ELA 80 up to 1200
- Fail safe battery pack | ELA 80 up to 300
- Local control unit | ELA 80 up to 3000



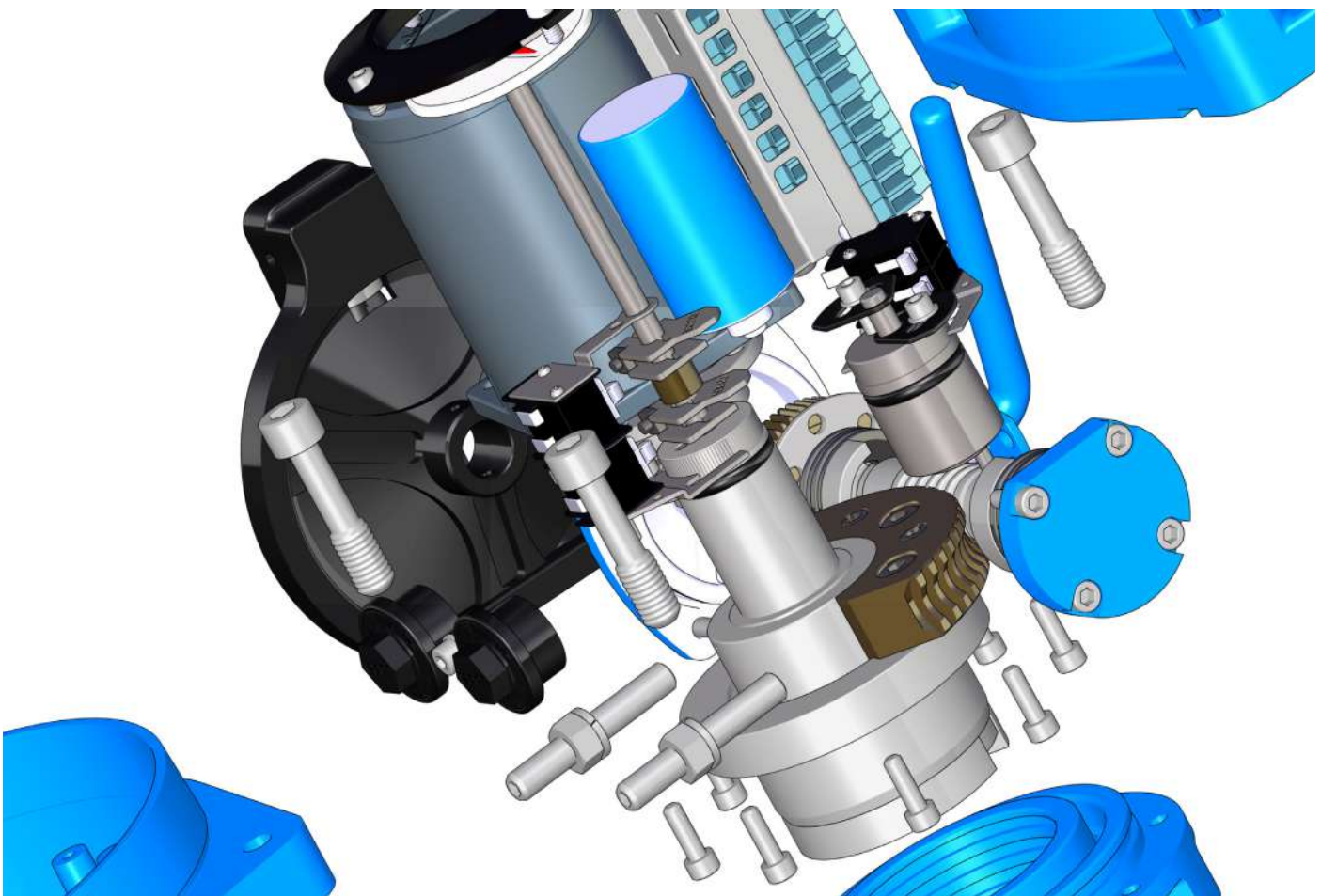
Technical information

Fig. 7907 type	Maximum torque	Operating time ¹	Valve top flange connection according to ISO 5211		Maximum Power	Weight
	Nm (in-lb)	s/90° (50/60Hz)	Top flange drilling	Double square dimensions (mm)	W	kg (lbs)
ELA40	39 (347)	10/10	F03 and F04 and F05	9 or 11	23	1,2 (2.7)
ELA60	58 (521)	14/12	F03 and F05 and F07	9, 11 or 14	37	3 (6.6)
ELA80	78 (694)	16/13	F07	9, 11, 14 or 17	107 ³	7,5 (16.5)
ELA100	98 (868)	20/17	F07	9, 11, 14 or 17	107 ³	7,5 (16.5)
ELA150	147 (1,302)	25/21	F07 and F10	11, 14, 17 , 19 or 22	216	16,5 (36.4)
ELA200	196 (1,736)	25/21	F07 and F10	11, 14, 17 , 19 or 22	216	16,5 (36.4)
ELA300	294 (2,604)	31/26	F10 and F12	14, 17, 19, 22 or 27	187	22 (48.5)
ELA500	490 (4,340)	31/26	F10 and F12	14, 17, 19, 22 or 27	410	23 (50.7)
ELA600	588 (5,208)	31/26	F10 and F12	14, 17, 19, 22 or 27	410	23 (50.7)
ELA800	785 (6,944)	37/31	F12 and F14	22 or 27	483	29 (63.9)
ELA1200	1,177 (10,416)	37/31	F12 and F14	22 or 27	483	29 (63.9)
ELA2000	1,961 (17,359)	37/31 ²	F16	27, 36 or 46	483	75 (165.3)
ELA2700	2,678 (23,435)	56/47 ²	F16	27, 36 or 46	483	75 (165.3)
ELA3000	2,942 (26,039)	112/93	F16	27, 36 or 46	483	75 (165.3)

* ¹ Actuators with a shorter operation time on request. * ² Operation time of 115V 1Ph actuators is 112/93 s/90°. * ³ Maximum power at 3 Phase: S4-70%: 164 W and S4-40%: 348 W.

* ELA80 up to ELA3000: 1200 starts per hour at 50% of the rated torque load.

* For more technical details, like actuator dimensions and wiring diagrams, please ask your Econ[®] distributor for the Installation and Operation Manual (IOM).



Fail-Safe Actuators



In critical applications valves must return to their fail-safe (open or closed) position in case of a power failure. The Econ® Fig. 7917 type ELSA spring return actuators and Fig. 7907 ELA actuators with battery pack can provide this function. The battery pack can operate a valve for at least 5 times after power failure. Econ® ELSA spring return actuators can only perform one stroke during power failure by utilizing a mechanical spring set. The spring action is damped in order to protect your system against water hammering.

Fig. 7917 | ELSA50 up to 260 - spring return actuators

Robust actuators for all quarter-turn valves with a torque up to 260Nm



Specification

Power supply | 24VDC and 24VAC - 1 Phase 50/60Hz: 115VAC and 230VAC, ±5%

3 Phase 50/60Hz: 230VAC, 380VAC and 440VAC

Limit switches | Open/close, SPDT, 250VAC 16A

Auxiliary limit switches | Open/close, SPDT, 250VAC 16A

Valve connection | According to ISO 5211

Ambient temperature | -30° (-22F) up to +70°C (158°F)

Duty cycle (IEC 60034-1) | S4 – 50%

Ex-versions | Suitable for potentially explosive atmospheres according to 2014/34EU (ATEX)



II 2G Ex db IIB T4 Gb
II 2D Ex tb IIIC T130°C Db

Fig. 7907 | ELA80 up to 300 - with rechargeable battery pack

Robust actuators for all quarter-turn valves with a torque up to 300Nm



Specification

Power supply | 1 Phase 50/60Hz: 115VAC and 230VAC, ±5%

Limit switches | Open/close, SPDT, 250VAC 16A

Auxiliary limit switches | Open/close, SPDT, 250VAC 16A

Valve connection | According to ISO 5211

Ambient temperature | -20° (-4°F) up to +70°C (158°F)

Duty cycle (IEC 60034-1) | S4 – 70%



Features

- Design according to EN 15714-2
- Equipped with visual position indicator
- Fail safe position: Closed is the standard position. However a fail safe Open position is also available.
- Weather proof IP67 enclosure, NEMA 4X and 6
- Weather proof IP68, 7m / 72h for ELSA Ex-versions
- Actuator can be direct mounted on the valve
- Low current consumption
- Light weight aluminium enclosure
- Thermal protection of the electric motor
- Corrosion proof by a aluminium anodised and Polyester coated enclosure
- Double square stem connection. Fits both a parallel and diagonal square valve stem
- Equipped with a manual override.
- Limit switches and auxiliary limit switches can be set stepless and very precise by a reliable clamping system
- Self-locking robust worm gear
- Equipped with a space heater for anti-condensation
- Captive cover bolts cannot be lost during maintenance
- Equipped with an electrical grounding point



*Optional:
ELSA without
manual override*



*Fail safe spring return electro-hydraulic actuators
up to 250.000Nm (2.2 million in-lb)*

Options

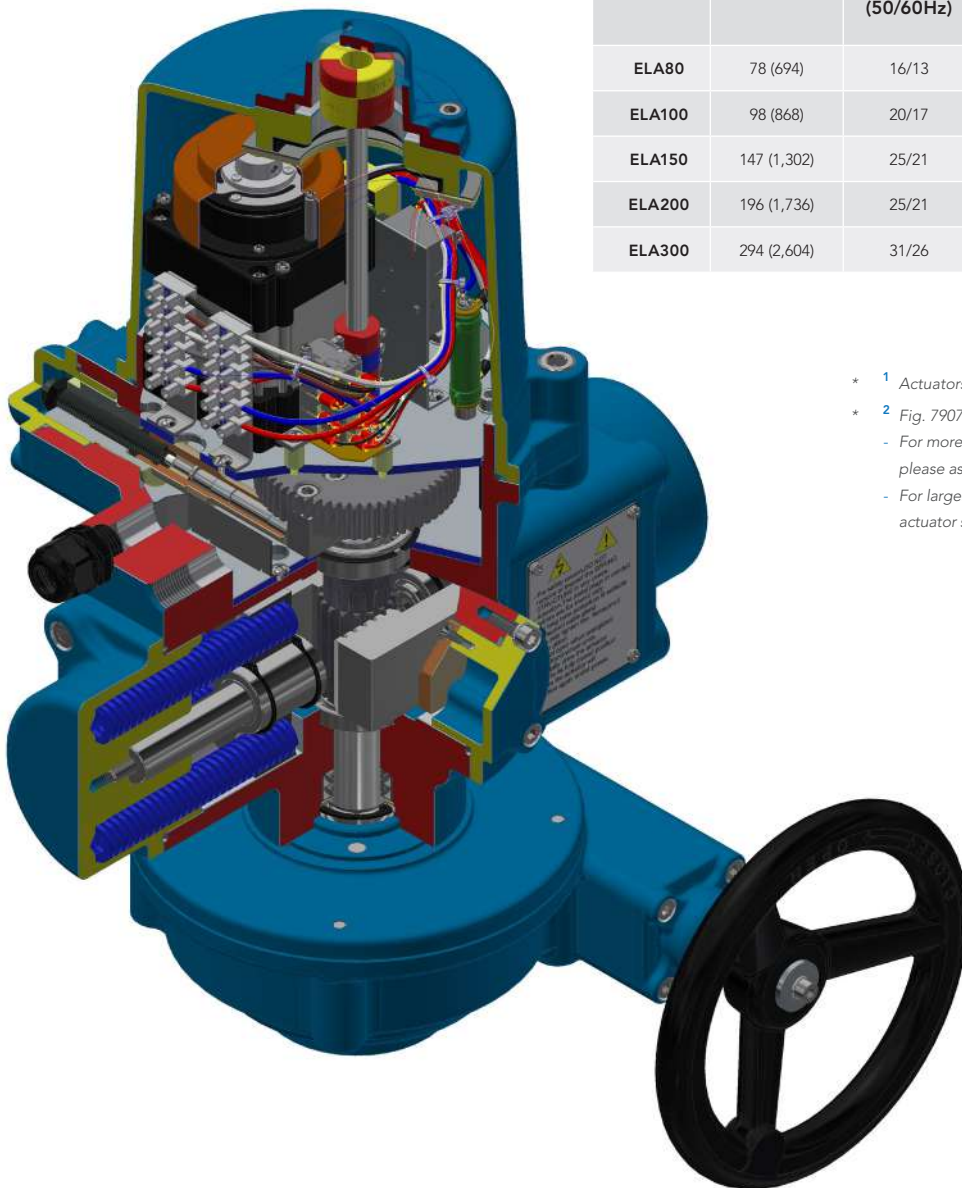
- Without manual override | ELSA 50 up to 260
- Potentiometer unit (0~1k Ω) | ELA 60 up to 3000
- Potentiometer unit (0~1k Ω or 0~5k Ω) | ELSA 50 up to 260
- Proportional control unit for modulating applications
 - Input and output ELA: 4~20mA DC, 1~5V DC, 2~10V DC, 0~5V DC, 0~10V DC
 - Input and output ELSA: 2~10V DC, 4~20mA
- Position transmitter (output 4~20mA) | ELA 60 up to 3000
- Floating controller: The actuator can be stopped in any intermediate position (0° to 90°) | ELSA 50 up to 260
- Rotating extender up to 120°, 180° or 270° of the rotating angle | ELA 80 up to 300
- For larger fail safe spring return actuators Econ[®] can offer electro-hydraulic actuator solutions up to 16,000Nm (141,612 in-lb).



Technical information

Fig. 7917 type	Maximum torque	Operating time ¹				Valve top flange connection according to ISO 5211		Max. Power	Weight
	Nm (in-lb)	115/230V 1 Phase (50/60Hz)	230/380/440V 3 Phase (50/60Hz)	24V (DC/50Hz/60Hz)	s/90° Spring	Top flange drilling	Double square dimensions (mm)	W	kg (lbs)
ELSA50	50 (442)	9/7	9/7	7/9/7	3	F07	17	50	37 (82)
ELSA130	130 (1,150)	8/7	8/7	8/8/7	8	F10	22	130	74 (163)
ELSA200	200 (1,770)	13/11	13/11	11/13/11	12	F12	27	130	135 (298)
ELSA260	260 (2,300)	17/14	17/14	17/17/14	12	F12	27	130	135 (298)

Fig. 7907 type	Maximum torque	Operating time	Valve top flange connection according to ISO 5211		Max. Power	Weight
	Nm (in-lb)	115/230V ² 1 Phase (50/60Hz)	Top flange drilling	Double square dimensions (mm)	W	kg (lbs)
ELA80	78 (694)	16/13	F07	9, 11, 14 or 17	89	12 (26.5)
ELA100	98 (868)	20/17	F07	9, 11, 14 or 17	96	12 (26.5)
ELA150	147 (1,302)	25/21	F07 and F10	11, 14, 17 , 19 or 22	128	22 (48.5)
ELA200	196 (1,736)	25/21	F07 and F10	11, 14, 17 , 19 or 22	156	22 (48.5)
ELA300	294 (2,604)	31/26	F10 and F12	14, 17, 19, 22 or 27	206	27 (59.5)



- * ¹ Actuators with a shorter operation time on request.
- * ² Fig. 7907 115V and 230V actuators with battery pack have a 24VDC motor.
 - For more technical details, like actuator dimensions and wiring diagrams, please ask your Econ® distributor for the Installation and Operation Manual (IOM).
 - For larger fail safe spring return actuators Econ® can offer electro-hydraulic actuator solutions up to 250.000Nm (2.2 million in-lb).

Valve Automation Centre

The Valve Automation Centre has a state of the art workshop in which well trained technicians mount pneumatic, hydraulic and electric actuators on valves. Valves and actuators can be modified according to customer specifications and be equipped with options such as valve positioners, limit switches, pilot valves and more. Five pressure test benches allow testing of valves upto DN1200/48". The applicable standards are API598 and EN12266 and any other customer specified protocols can additionally be performed.

Engineering

- Working out customer-specific requirements.
- Product engineering and design.
- Product development support.
- Providing 2D and 3D assembly drawings.
- Supplying 3D CAD models.

Workshops

- Modern workshops of more than 5000 m².
- Facilitating of large and complex projects.
- Automating and modifying of valves.
- Mounting, adjusting and modifying according to customer-specific requirements.

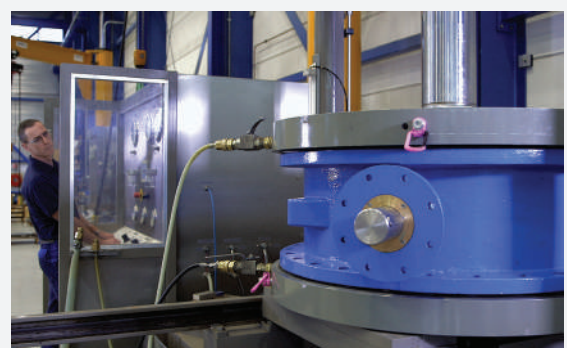
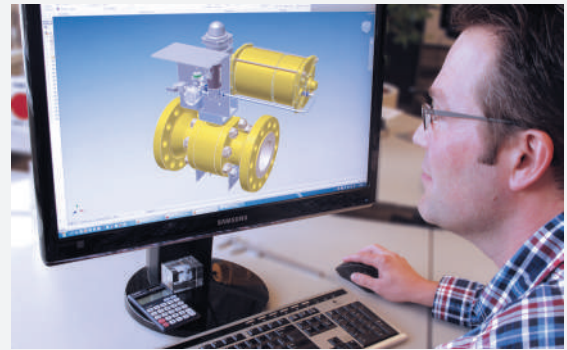
Logistics

- More than 2 million products from stock.
- Automated delivery of products.
- International presence in 24 countries.

Testing

- Large test facilities.
- Pressure testing of valves up to DN1200/48".
- Maximum test pressure 1200 bar.

Largest stockist of valves and actuators in Europe.



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