



## Linear thrust unit

LEN 12.1 – LEN 200.1

qualified for use in nuclear power plants



**Read operation instructions first.**

- Observe safety instructions.
- These operation instructions are part of the product.
- Preserve operation instructions during product life.
- Pass on instructions to any subsequent user or owner of the product.

**Purpose of the document:**

This document contains information for installation, commissioning, operation and maintenance staff. It is intended to support device installation and commissioning.

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## 1. Safety instructions

### 1.1 Basic information on safety

**Standards/directives** Our products are designed and manufactured in compliance with recognised standards and directives. This is certified in a Declaration of Incorporation and an EC Declaration of Conformity.

The end user or the contractor must ensure that all legal requirements, directives, guidelines, national regulations and recommendations with respect to assembly, electrical connection, commissioning and operation are met at the place of installation.

They include among others standards, directives and regulations on radiation protection in nuclear power plants.

**Safety instructions/warnings** All personnel working with this device must be familiar with the safety and warning instructions in this manual and observe the instructions given. Safety instructions and warning signs on the device must be observed to avoid personal injury or property damage.

**Qualification of staff** Assembly, electrical connection, commissioning, operation, and maintenance must be carried out exclusively by suitably qualified personnel having been authorised by the end user or contractor of the plant only.

Prior to working on this product, the staff must have thoroughly read and understood these instructions and, furthermore, know and observe officially recognised rules regarding occupational health and safety.

Work performed in radiation exposed areas is subject to special regulations which have to be observed. The end user or contractor of the plant are responsible for respect and control of these regulations, standards, and laws.

**Commissioning** Prior to commissioning, it is important to check that all settings meet the requirements of the application. Incorrect settings might present a danger to the application, e.g. cause damage to the valve or the installation. The manufacturer will not be held liable for any consequential damage. Such risk lies entirely with the user.

**Operation** Prerequisites for safe and smooth operation:

- Correct transport, proper storage, mounting and installation, as well as careful commissioning.
- Only operate the device if it is in perfect condition while observing these instructions.
- Immediately report any faults and damage and allow for corrective measures.
- Observe recognised rules for occupational health and safety.
- Observe the national regulations.
- During operation, the device warms up and increased surface temperature may occur. To prevent possible burns, we recommend checking the surface temperature using an appropriate thermometer and wearing protective gloves, if required, prior to working on the device.

**Protective measures** The end user or the contractor are responsible for implementing required protective measures on site, such as enclosures, barriers, or personal protective equipment for the staff.

**Maintenance** To ensure safe device operation, the maintenance instructions included in this manual must be observed.

Any device modification requires prior consent of the manufacturer.

### 1.2 Range of application

AUMA linear thrust units are designed for the operation of industrial valves, e.g. globe valves.

They are qualified for use in nuclear power plants and for DBE conditions outside containment.

Other applications require explicit (written) confirmation by the manufacturer.

The following applications are not permitted, e.g.:

- Industrial trucks according to EN ISO 3691
- Lifting appliances according to EN 14502
- Passenger lifts according to DIN 15306 and 15309
- Service lifts according to EN 81-1/A1
- Escalators
- Continuous duty

No liability can be assumed for inappropriate or unintended use.

Observance of these operation instructions is considered as part of the device's designated use.

**1.3 Warnings and notes**

The following warnings draw special attention to safety-relevant procedures in these operation instructions, each marked by the appropriate signal word (DANGER, WARNING, CAUTION, NOTICE).



**Indicates an imminently hazardous situation with a high level of risk. Failure to observe this warning could result in death or serious injury.**



**Indicates a potentially hazardous situation with a medium level of risk. Failure to observe this warning could result in death or serious injury.**



**Indicates a potentially hazardous situation with a low level of risk. Failure to observe this warning may result in minor or moderate injury. May also be used with property damage.**



**Potentially hazardous situation. Failure to observe this warning may result in property damage. Is not used for personal injury.**


**Arrangement and typographic structure of the warnings**



**Type of hazard and respective source!**

*Potential consequence(s) in case of non-observance (option)*

- Measures to avoid the danger
- Further measure(s)

Safety alert symbol  warns of a potential personal injury hazard.

The signal word (here: DANGER) indicates the level of hazard.


**1.4 References and symbols**

The following references and symbols are used in these instructions:

**Information** The term **Information** preceding the text indicates important notes and information.

 Symbol for CLOSED (valve closed)

 Symbol for OPEN (valve open)

 Important information before the next step. This symbol indicates what is required for the next step or what has to be prepared or observed.

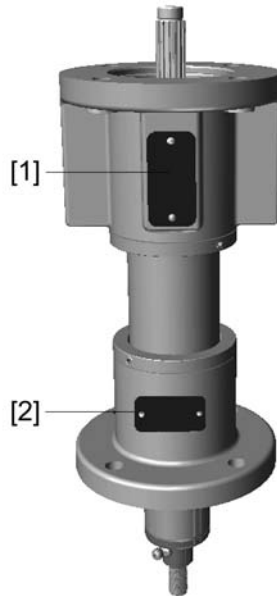
**< > Reference to other sections**

Terms in brackets shown above refer to other sections of the document which provide further information on this topic. These terms are either listed in the index, a heading or in the table of contents and may quickly be found.

**2. Identification**

**2.1 Name plate**

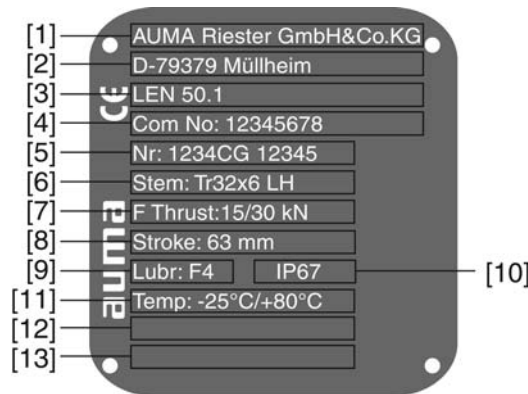
Figure 1: Arrangement of name plates



- [1] Linear thrust unit name plate
- [2] Additional plate, e.g. KKS (Power Plant Classification System) plate or approval plate

**Description of linear thrust unit name plate**

Figure 2: Linear thrust unit name plate (example)



- [1] Name of manufacturer
- [2] Address of manufacturer
- [3] **Type and size** (see explanation below)
- [4] **Commission number** (see explanation below)
- [5] Serial number
- [6] **Stem** (see explanation below)
- [7] Thrust (for modulating duty/open-close duty)
- [8] Stroke
- [9] Lubricant
- [10] Enclosure protection
- [11] Ambient temperature
- [12] (option)
- [13] Customer information (option)

<b>Type and size</b>	These instructions apply to the following devices types and sizes: Linear thrust unit: LEN 12.1 – LEN 200.1
<b>Stem</b>	Thread diameter, flank lead and version of stem. <ul style="list-style-type: none"> <li>• LH = Descending for clockwise rotation, i.e. actuator closes the valve in a clockwise rotation</li> <li>• RH = Ascending for clockwise rotation, i.e. actuator closes the valve in a counterclockwise rotation</li> </ul>
<b>Commission number</b>	An order-relevant commission number (order number) is assigned to each device. This commission number can be used to directly download inspection records and further information regarding the device from the Internet: <a href="http://www.auma.com">http://www.auma.com</a> . For some details, the customer number might be required.

## 2.2 Short description

AUMA linear thrust units of types LEN 12.1 – LEN 200.1 are designed for the operation of industrial valves, e.g. globe valves.

They are used in combination with multi-turn actuators on valves which require linear travel. The linear thrust units convert the output torque of the multi-turn actuator into an axial thrust. As an option, AUMA linear thrust units are available with damping device to compensate for changes in lengths caused by varying temperatures, for example.



### 3. Transport, storage and packaging

#### 3.1 Transport

For transport to place of installation, use sturdy packaging.



**Hovering load!**

*Death or serious injury possible.*

- Do NOT stand below hovering load.
- Linear thrust units mounted to a valve in combination with an actuator: Attach ropes or hooks for the purpose of lifting by hoist to valve and NOT to actuator.
- Respect total weight of combination (gearbox, linear thrust unit, actuator, ...).

Table 1: Weights linear thrust units

Type <sup>1)</sup>	Stroke <sup>1)</sup>	Weight [kg] <sup>2)</sup>	Base weight [kg]
LEN 12.1	50	8	11
	100 <sup>3)</sup>	9	
LEN 25.1	50	8	40
LEN 50.1	63	10	
LEN 70.1	80	23	
	160 <sup>3)</sup>	26	
LEN 100.1	80	23	
LEN 200.1	100	45	

- 1) Refer to name plate
- 2) Without actuator and base
- 3) Not qualified

#### 3.2 Storage



**Danger of corrosion due to inappropriate storage!**

- Store in a well-ventilated, dry room (maximum humidity 70 %).
- Protect against floor dampness by storage on a shelf or on a wooden pallet.
- Cover to protect against dust and dirt.
- Apply suitable corrosion protection agent to uncoated surfaces.

**Long-term storage**

If the device must be stored for a long period (more than 6 months), the following points must be observed in addition:

1. Prior to storage:  
Protect uncoated surfaces, in particular the output drive parts and mounting surface, with long-term corrosion protection agent.
2. At an interval of approx. 6 months:  
Check for corrosion. If first signs of corrosion show, apply new corrosion protection.

#### 3.3 Packaging

Our products are protected by special packaging for transport when leaving the factory. The packaging consists of environmentally friendly materials which can easily be separated and recycled. We use the following packaging materials: wood, cardboard, paper, and PE foil. For the disposal of the packaging material, we recommend recycling and collection centres.

**4. Assembly**

**4.1 Mounting position**

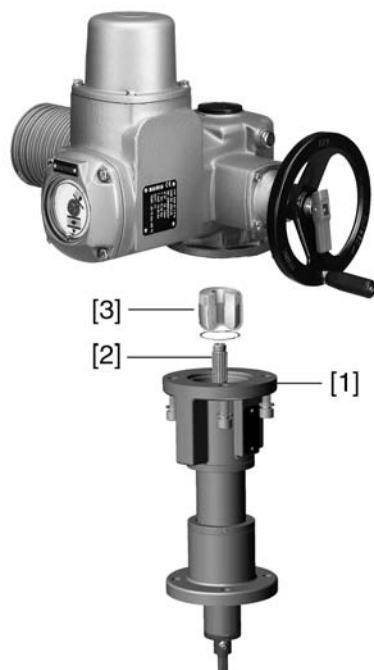
The gearboxes described here can operated without restriction in any mounting position.

**4.2 Actuators for linear thrust units**

Assembly is performed in compliance with actuator operation instructions. This section provides information and indications regarding suitable actuators, flanges, and screws.

**State of delivery** When AUMA actuators and linear thrust units up to size LEN 50.1 and a stroke of max. 200 mm are supplied together, assembly is performed in the factory. For larger strokes and when exceeding size LEN 70.1, assembly must be performed by the customer. The suitable output drive sleeve and the screws for assembly are generally part of the scope of delivery.

Figure 3: Example AUMA multi-turn actuator with LEN 25.1



- [1] Actuator mounting flange
- [2] Stem
- [3] Output drive sleeve with circlip

Table 2: Suitable AUMA actuators, flanges, and screws

Type	Suitable AUMA actuator	Actuator mounting flange	Screws		Lock washer	Tightening torque T <sub>A</sub> [Nm]
		EN ISO 5210	Size	Quantity	Size	Strength class A2-70
LEN 12.1	SAN 07.1/SARN 07.1	F10	M 10 x 30	4	10	36
LEN 25.1	SAN 07.5/SARN 07.5	F10	M 10 x 30	4	10	36
LEN 50.1	SAN 10.1/SARN 10.1	F10	M 10 x 30	4	10	36
LEN 70.1	SAN 14.1/SARN 14.1	F14	M 16 x 40	4	16	150
LEN 100.1	SAN 14.5/SARN 14.5	F14	M 16 x 40	4	16	150
LEN 200.1	SAN 16.1/SARN 16.1	F16	M 20 x 50	4	20	294

**4.3 Linear thrust unit: mount to valve**

**Mounting position** Mounting is most easily done with the valve shaft pointing vertically upward. But mounting is also possible in any other position.

The linear thrust unit leaves the factory with retracted thrust rod (stem).

**4.3.1 Attachment dimensions for mounting to valve**

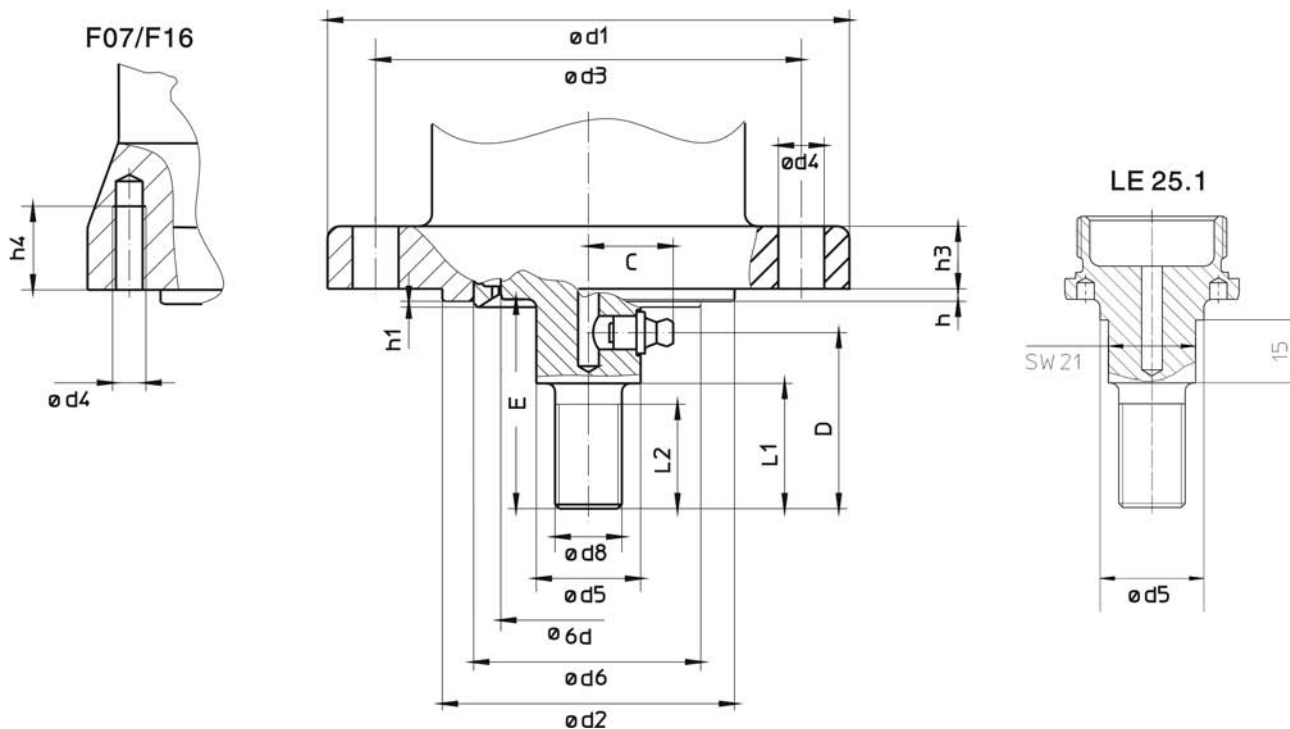


Table 3: Attachment dimensions to valve

Dimensions EN ISO 5210 (DIN 3210)	LEN 12.1		LEN 25.1		LEN 50.1	LEN 70.1	LEN 100.1	LEN 200.1
	F07 (G0)	F10 (G0)	F07 (G0)	F10 (G0)	F10 (-)	F14 (G1/2)	F14 (G1/2)	F16 (G3)
C	18		21		24	26	26	29
D	37		42		43	63	63	76
E ±0.2	45		50		55	75	75	90
L1	25		30		35	-	-	-
L2	20		25		30	55	55	65
∅ d1	□75	□125	□75	□125	125	175	175	210
∅ d2	(55 g7 = d6)	70 f8	(55 g7 = d6)	70 f8	70 g7	100 f8	100 f8	130 f8
∅ d3	70	102	70	102	102	140	140	165
∅ d4 (4x)	M8	11	M8	11	11	18	18	M20
∅ d5	20		25		32	36	36	42
∅ d6 g7	-	55 <sup>1)</sup>	-	55 <sup>1)</sup>	-	-	-	120
∅ d8	M12 x 1.25		M16 x 1.5		M20 x 1.5	M36 x 3	M36 x 3	M42 x 3
∅ d9 -0.1	42		42		55	70	70	100
h	3.4	3	3.4	3	3.4	4	4	4
h1	-	0.5	-	0.5	-	-	-	0.5
h3	-	15	-	15	15	18	18	-
h4	20	-	20	-	-	-	-	32

Grease nipple A-D8 according to DIN 71412

1) Spigot for F07

### 4.3.2 Linear thrust unit: mount to valve

1. Check whether attachment of linear thrust unit suit the valve.
2. Push thrust rod of linear thrust unit to desired position (e.g. OPEN) using the handwheel.
  - ➔ Assemble valve and actuator in the same end position.
  - ➔ For **globe valves**, the conventional assembly position is end position CLOSED (thrust rod is retracted).
3. Clean mounting surfaces (mounting flanges at linear thrust unit and valve). Thoroughly degrease uncoated mounting surfaces.
4. Place linear thrust unit onto valve as to ensure that bores or thread align with the mounting flanges.
 

**Information:** Ensure that the spigot fits uniformly in the recess and that the mounting faces are in complete contact.
5. Fasten linear thrust unit with screws and lock washers according to table.
 

**Information:** We recommend applying liquid thread sealing material to the screws to avoid contact corrosion.
6. Fasten screws crosswise to a torque according to table.

Table 4: Tightening torques for screws

Screws	Tightening torque $T_A$ [Nm]		
Threads	Strength class		
	8.8	A2-70/A4-70	A2-80/A4-80
M8	25	18	24
M10	51	36	48
M12	87	61	82
M16	214	150	200
M20	431	294	392

7. Connect coupling stud ( $\varnothing$  d8) of linear thrust unit with valve stem.
 

**Information:** The type of connection depends on the valve and is determined by the valve manufacturer.
8. In case of risk of jamming due to moving parts: Provide protective equipment.

**5. Commissioning**

**5.1 Stroke**

The stroke of linear thrust units is limited by end stops.

**NOTICE**

**Approaching the end stops in motor operation!**

*Risk of damage at linear thrust unit.*

- DO NOT use end stops as stroke limitation in motor operation.
- Prior to performing motor operation: Limit stroke via limit switching in multi-turn actuator (setting).
- Observe overrun when performing the setting.

**Stroke setting**

The stroke per turn depends on the thread pitch of the stem (refer to name plate). The setting of end positions OPEN and CLOSED within the possible stroke of the linear thrust unit is done via the mounted multi-turn actuator. Refer to <Limit switching: set> chapter in operation instructions of suitable AUMA multi-turn actuators.

**5.2 Thrust limitation**

Thrust limitation is made via mounted actuator.

Refer to <Limit switching: set> chapter in operation instructions of suitable AUMA multi-turn actuators.

**NOTICE**

**Valve damage due to excessive tripping torque limit setting!**

- The tripping torque must suit the valve.
- Only change the setting with the consent of the valve manufacturer.

**Calculation of thrust limitation (tripping torque)**

The maximum required or permissible thrust [F in kN] for a globe valve must be converted to torque [T in Nm] when setting the actuator torque switching:

Formula: **T = F x f**

Type	LEN 12.1	LEN 25.1	LEN 50.1	LEN 70.1	LEN 100.1	LEN 200.1
Factor f	2.6	2.6	3.2	3.9	3.9	4.6

The thrust limitation is then performed indirectly using the calculated value through the setting of the torque switching at the mounted multi-turn actuator.

**Example:**

Max. permissible thrust of globe valve: F = 30 kN

Linear thrust unit type LEN 50.1 (factor f = 3.2)

T = 30 kN x 3.2 m/k = **96 Nm**

Multi-turn actuator type SAN 10.1; torque range 40 – 120 Nm

**5.3 Test run**

**WARNING**

**Moving parts!**

*Danger of jamming.*

- Keep hands clear from stroke range of combination.
- If necessary, fit protective cover.

**Verify stroke direction**

**Information:** AUMA linear thrust units LEN 12.1 – LEN 200.1 leave the factory with retracted thrust rods (end position OPEN)

1. Move actuator manually to intermediate position or to sufficient distance from end position.
2. Switch on actuator in direction OPEN and observe the direction of stroke.  
→ Switch off before reaching the end position.
3. In case of incorrect direction of stroke, reverse rotary direction at actuator.
4. Then: Approach end position CLOSED and end position OPEN and check seating.

## 6. Servicing and maintenance



### Damage caused by inappropriate maintenance!

- Servicing and maintenance must be carried out exclusively by suitably qualified personnel having been authorised by the end user or the contractor of the plant.
- Only perform servicing and maintenance tasks when the device is switched off.

### Service

AUMA offer extensive service such as servicing and maintenance as well as customer product training. For the relevant contact addresses, please refer to <Addresses> in this document or to the Internet ([www.auma.com](http://www.auma.com)) .

### 6.1 Preventive measures for servicing and safe operation

The following actions are required to ensure safe device operation:

#### Every 6 months after commissioning and then once a year

- Perform visual inspection for grease leakage.
- Check fastening screws between actuator, linear thrust unit and valve for tightness. If required, fasten screws while applying the tightening torques as indicated in chapter <Assembly>.
- Perform test run.

### 6.2 Maintenance intervals

#### Recommendation for grease change and seal replacement:

- Generally after 4 to 6 years for modulating duty.
- Generally after 6 to 8 years if operated frequently (open-close duty).
- Generally after 10 to 12 years if operated rarely (open-close duty).

The flange for actuator with integral spring-loaded damping device (option) is lubricated for life.

### NOTICE

#### Gearing damage due to inappropriate grease!

- Only use original lubricants.
- The lubricant type is marked on the name plate.
- Do not mix lubricants.

Table 5: Grease quantities LEN 12.1 – LEN 50.1

LEN– Stroke	12.1-50 25.1-50	12.1-100 25.1-100	12.1-200 25.1-200	12.1-400 25.1-400	12.1-500 25.1-500	50.1-63	50.1-125	50.1-250	50.1-400
Quantity [dm <sup>3</sup> ] <sup>1)</sup>	0.05	0.07	0.12	0.24	0.3	0.1	0.15	0.3	0.48
Weight [kg] <sup>2)</sup>	0.04	0.06	0.11	0.22	0.27	0.09	0.14	0.27	0.44

1) for  $r = \text{approx. } 0.87 \text{ kg/dm}^3$

2) for  $r = \text{approx. } 0.9 \text{ kg/dm}^3$

Table 6: Grease quantities LEN 70.1 – LEN 200.1

LEN– Stroke	70.1-80 100.1-80	70.1-160 100.1-160	70.1-320 100.1-320	70.1-400 100.1-400	200.1-100	200.1-200	200.1-400	200.1-500	
Quantity [dm <sup>3</sup> ] <sup>1)</sup>	0.25	0.35	0.7	0.85	0.7	1.1	2.2	2.6	
Weight [kg] <sup>2)</sup>	0.23	0.32	0.64	0.77	0.64	1	2	2.35	

1) for  $r = \text{approx. } 0.87 \text{ kg/dm}^3$

2) for  $r = \text{approx. } 0.9 \text{ kg/dm}^3$

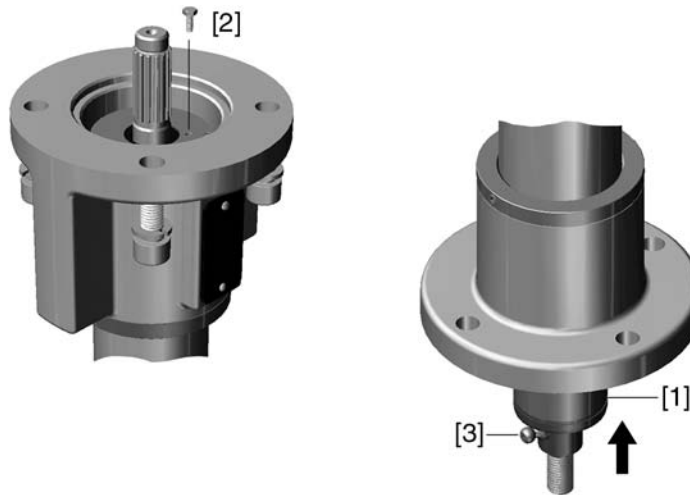
### Instructions for use in potentially explosive atmospheres of categories M2, 2G, 3G, 2D and 3D according to EU directive 94/9/EC

- The technical data as well as the ambient temperatures, type of duty and running times indicated on the name plate must imperatively be observed.
- In hazardous areas where combustible dust is present in particular, perform visual inspection for deposit of dirt or dust on a regular basis. Clean devices if required.

## 6.3 Re-lubrication

Re-lubrication is only necessary if grease has been visibly leaking and can be performed through the grease nipple while mounted.

Figure 5: Grease nipple and vent



- [1] Inner tube
- [2] Hexagonal screw for venting
- [3] Grease nipple

1. Move inner tube [1] to upper position (retracted).
2. Remove multi-turn actuator from linear thrust unit.
3. Open vent hole by removing the hexagon screw [2].
4. Press grease into the grease nipple [3] with grease gun until grease emerges from the vent hole of the hexagon screw [2].
5. Close vent hole again using hexagon screw [2].
6. Mount multi-turn actuator again to linear thrust unit.

## 6.4 Disposal and recycling

Our devices have a long lifetime. However, they have to be replaced at one point in time. The devices have a modular design and may, therefore, easily be separated and sorted according to materials used, i.e.:

- electronic scrap
- various metals
- plastics
- greases and oils

The following generally applies:

- Greases and oils are hazardous to water and must not be released into the environment.
- Arrange for controlled waste disposal of the disassembled material or for separate recycling according to materials.
- Observe the national regulations for waste disposal.



## 7. Technical data

**Information** The following technical data includes standard and optional features. For detailed information on the customer-specific version, refer to the order-relevant data sheet. This data sheet can be downloaded from the Internet at <http://www.auma.com> in German and English (indication of commission number required).

### 7.1 Features and functions

Version	Standard: LH = Descending for clockwise rotation, i.e. multi-turn actuator closes valve in clockwise rotation Option: RH = Ascending for clockwise rotation, i.e. multi-turn actuator closes valve in counterclockwise rotation					
Type of duty	Short-time duty S2 - 15 min (open-close duty) Intermittent duty S4 – 25 % (modulating duty); based on maximum thrust for modulating torque 100 % load may only be applied for a short time during opening and closing.					
Self-locking	Yes					
Valve attachment	Dimensions according to DIN 3358					
Output drive type	Standard thread of valve stem (for actual version, refer to actuator name plate).					
	<b>LEN 12.1</b>	<b>LEN 25.1</b>	<b>LEN 50.1</b>	<b>LEN 70.1</b>	<b>LEN 100.1</b>	<b>LEN 200.1</b>
	26 x 5 LH	26 x 5 LH	32 x 6 LH	40 x 7 LH	40 x 7 LH	48 x 8 LH

### 7.2 Service conditions

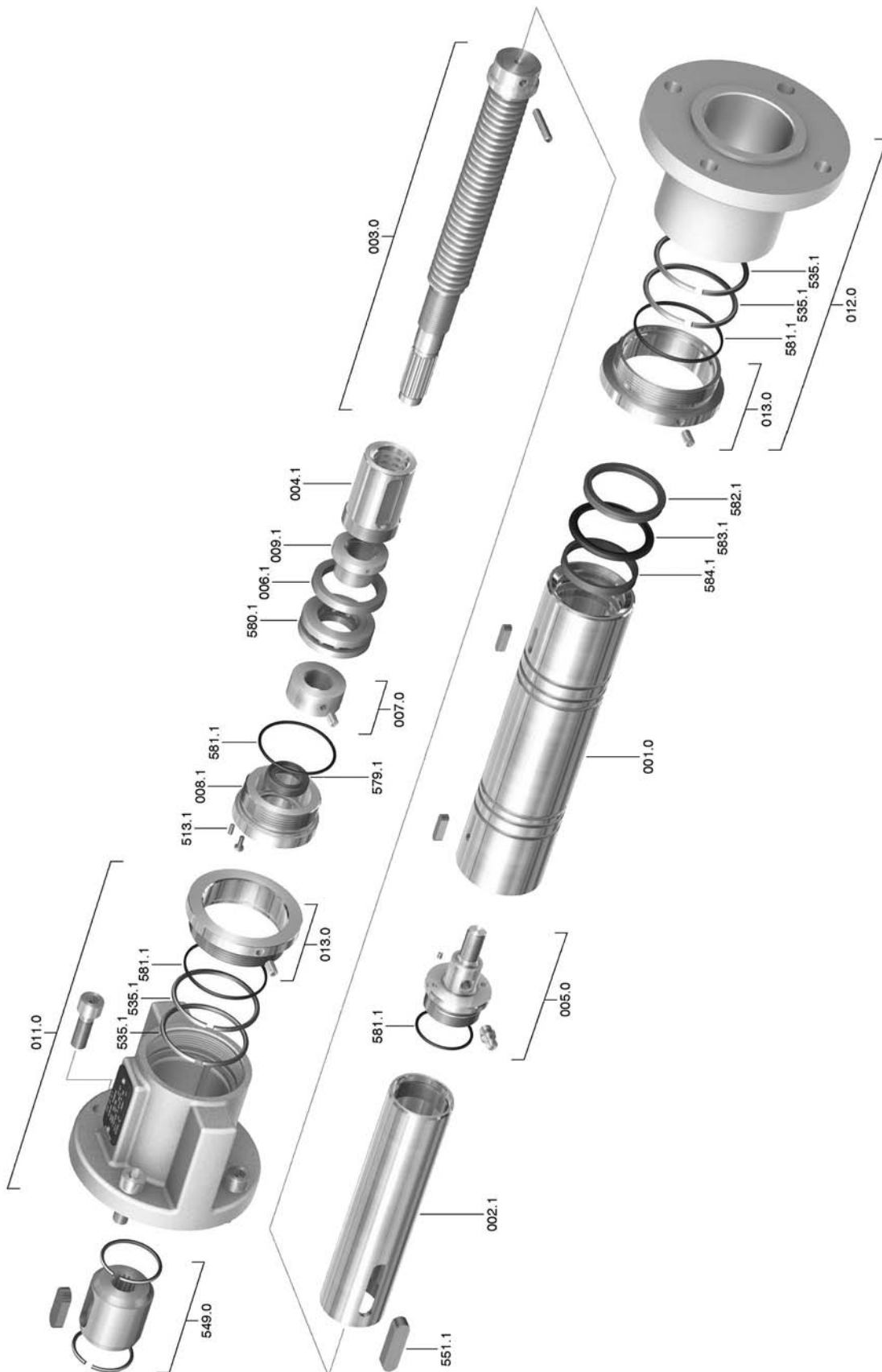
Mounting position	Any position
Enclosure protection according to EN 60529	Standard: IP 67 For actual version, refer to actuator name plate.
Corrosion protection	Standard: KS : Suitable for installation in industrial units, in water or power plants with a low pollutant concentration as well as for installation in occasionally or permanently aggressive atmosphere with a moderate pollutant concentration (e.g. wastewater treatments plants, chemical industry) Options: KX : Suitable for installation in extremely aggressive atmospheres with high humidity and high pollutant concentration For actual version, refer to actuator name plate.
Finish coating base	Standard: Paint based on polyurethane (powder coating)
Colour base	Standard: AUMA silver-grey (similar to RAL 7037)
Ambient temperature	Standard: –20 °C to +80 °C Under DBE conditions up to + 120°C for a short period For actual version, refer to actuator name plate.

### 7.3 Further information

EU Directives	<ul style="list-style-type: none"> <li>Machinery Directive: (2006/42/EC)</li> </ul>
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**8. Spare parts**

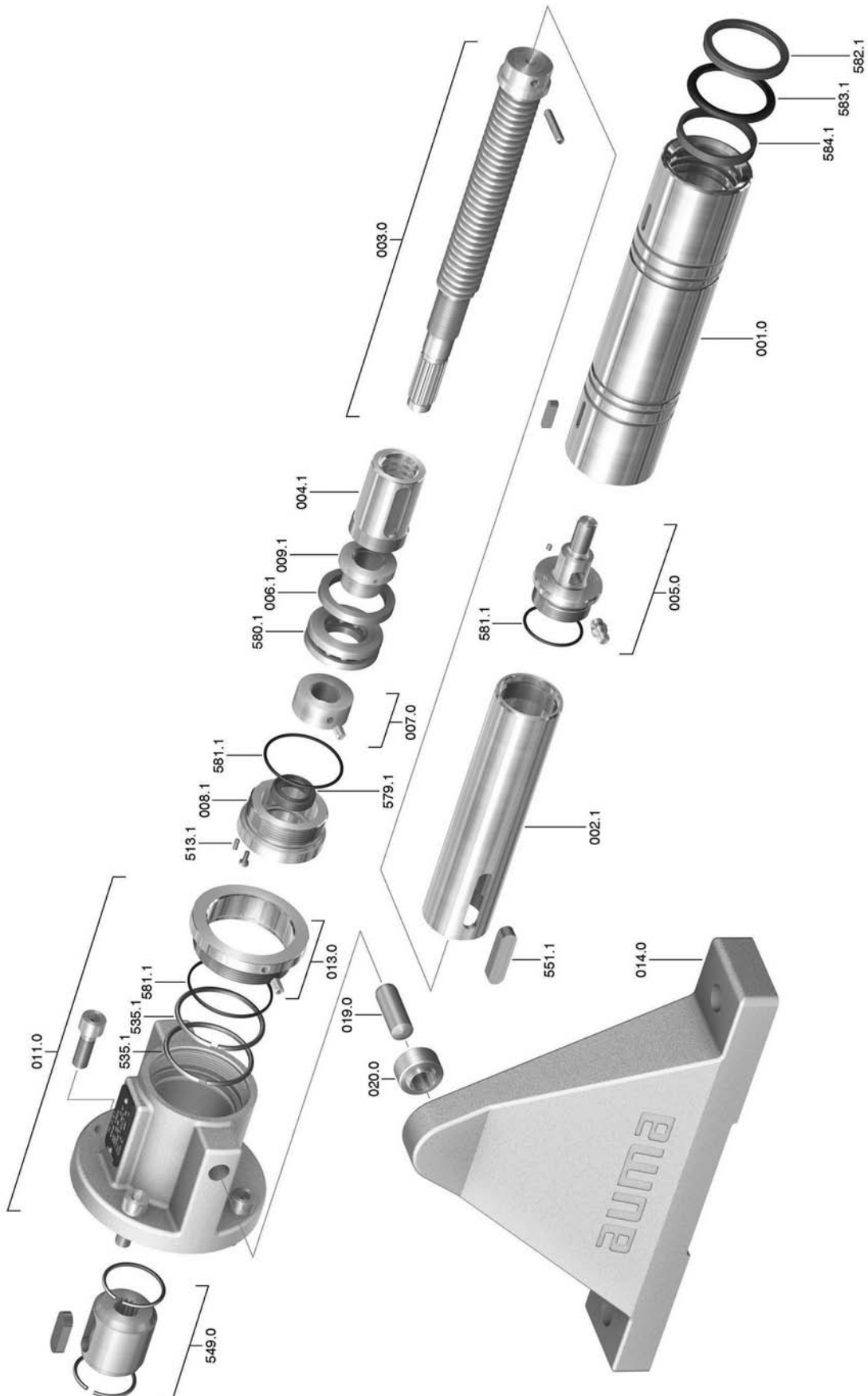
**8.1 Linear thrust unit LEN 12.1 – LEN 200.1**



**Information:** Please state type and commission no. of the device (see name plate) when ordering spare parts. Only original AUMA spare parts should be used. Failure to use original spare parts voids the warranty and exempts from any liability. Delivered spare parts may slightly vary from the representation.

No.	Designation	Type
001.0	Outer tube	
002.1	Inner tube	
003.0	Stem	Sub-assembly
004.1	Nut	
005.0	Coupling stud	Sub-assembly
006.1	Support washer	
007.0	Ring nut	Sub-assembly
008.1	Retainer	
009.1	Bearing bush	
011.0	Actuator mounting flange	Sub-assembly
012.0	Mounting flange	Sub-assembly
013.0	Locking nut	Sub-assembly
513.1	Grub screw	
535.1	Snap ring	
549.0	Output drive type B3/B4/E	Sub-assembly
551.1	Parallel key	
579.1	Radial seal	
580.1	Axial deep groove ball bearing	
581.1	O-ring	
582.1	Dust retainer ring	
583.1	Sealing ring	
584.1	Guide ring	

**8.2 Linear thrust unit LEN 12.1 – LEN 200.1 with base**



**Information:** Please state type and commission no. of the device (see name plate) when ordering spare parts. Only original AUMA spare parts should be used. Failure to use original spare parts voids the warranty and exempts from any liability. Delivered spare parts may slightly vary from the representation.

No	Designation	Type
001.0	Outer tube	
002.1	Inner tube	
003.0	Stem	Sub-assembly
004.1	Nut	
005.0	Coupling stud	Sub-assembly
006.1	Support washer	
007.0	Ring nut	Sub-assembly
008.1	Retainer	
009.1	Bearing bush	
011.0	Actuator mounting flange	Sub-assembly
013.0	Locking nut	Sub-assembly
014.0	Base assy	Sub-assembly
019.0	Dowel pin	
020.0	Self-aligning bearings	
513.1	Grub screw	
535.1	Snap ring	
549.0	Output drive type B3/B4/E	Sub-assembly
551.1	Parallel key	
579.1	Radial seal	
580.1	Axial deep groove ball bearing	
581.1	O-ring	
582.1	Dust retainer ring	
583.1	Sealing ring	
584.1	Guide ring	

## 9. Certificates

### 9.1 Declaration of Incorporation and EC Declaration of Conformity

AUMA Riester GmbH & Co. KG    Tel +49 7631 809-0  
 Aumastr. 1    Fax +49 7631 809-1250  
 79379 Müllheim, Germany    Riester@auma.com  
 www.auma.com



#### Original Declaration of Incorporation of Partly Completed Machinery (EC Directive 2006/42/EC) and EC Declaration of Conformity in compliance with the Directive on Explosion Protection

for AUMA linear thrust units of type ranges

##### LEN 12.1 – LEN 200.1

AUMA Riester GmbH & Co. KG as manufacturer declares herewith, that the above mentioned linear thrust units meet the following basic requirements of the EC Machinery Directive 2006/42/EC: Annex I, articles 1.1.2, 1.1.3, 1.1.5, 1.3.1, 1.3.7, 1.7.1, 1.7.3, 1.7.4

The following harmonised standards within the meaning of the Machinery Directive have been applied:

EN 12100-1: 2003    ISO 5210: 1996

EN 12100-2: 2003

With regard to the partly completed machinery, the manufacturer commits to submitting the documents to the competent national authority via electronic transmission upon request. The relevant technical documentation pertaining to the machinery described in Annex VII, part B has been prepared.

AUMA linear thrust units are designed to be installed on industrial valves. AUMA linear thrust units must not be put service until the final machinery into which they are to be incorporated has been declared in conformity with the provisions of the EC Directive 2006/42/EC.

Authorised person for documentation: Peter Malus, Aumastrasse 1, D-79379 Müllheim

Müllheim, 2010-06-01

H. Newerla, General Management

This declaration does not contain any guarantees. The safety instructions in product documentation supplied with the devices must be observed. Non-concerted modification of the devices voids this declaration.

Y005.075/002/en







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## Europe

**AUMA Riester GmbH & Co. KG**

Plant Müllheim  
**DE 79373 Müllheim**  
 Tel +49 7631 809 - 0  
 Fax +49 7631 809 - 1250  
 riester@auma.com  
 www.auma.com

Plant Ostfildern - Nellingen  
**DE 73747 Ostfildern**  
 Tel +49 711 34803 - 0  
 Fax +49 711 34803 - 3034  
 riester@wof.auma.com

Service-Center Köln  
**DE 50858 Köln**  
 Tel +49 2234 2037 - 900  
 Fax +49 2234 2037 - 9099  
 service@sck.auma.com

Service-Center Magdeburg  
**DE 39167 Niederndodeleben**  
 Tel +49 39204 759 - 0  
 Fax +49 39204 759 - 9429  
 Service@scm.auma.com

Service-Center Bayern  
**DE 85386 Eching**  
 Tel +49 81 65 9017- 0  
 Fax +49 81 65 9017- 2018  
 Riester@scb.auma.com

AUMA Armaturentriebe GmbH  
**AT 2512 Tribuswinkel**  
 Tel +43 2252 82540  
 Fax +43 2252 8254050  
 office@auma.at  
 www.auma.at

AUMA (Schweiz) AG  
**CH 8965 Berikon**  
 Tel +41 566 400945  
 Fax +41 566 400948  
 RettichP.ch@auma.com

AUMA Servopohony spol. s.r.o.  
**CZ 250 01 Brandýs n.L.-St.Boleslav**  
 Tel +420 326 396 993  
 Fax +420 326 303 251  
 auma-s@auma.cz  
 www.auma.cz

OY AUMATOR AB  
**FI 02230 Espoo**  
 Tel +358 9 5840 22  
 Fax +358 9 5840 2300  
 auma@aumator.fi  
 www.aumator.fi

AUMA France S.A.R.L.  
**FR 95157 Taverny Cedex**  
 Tel +33 1 39327272  
 Fax +33 1 39321755  
 info@auma.fr  
 www.auma.fr

AUMA ACTUATORS Ltd.  
**UK Clevedon, North Somerset BS21 6TH**  
 Tel +44 1275 871141  
 Fax +44 1275 875492  
 mail@auma.co.uk  
 www.auma.co.uk

AUMA ITALIANA S.r.l. a socio unico  
**IT 20023 Cerro Maggiore (MI)**  
 Tel +39 0331 51351  
 Fax +39 0331 517606  
 info@auma.it  
 www.auma.it

AUMA BENELUX B.V.  
**NL 2314 XT Leiden**  
 Tel +31 71 581 40 40  
 Fax +31 71 581 40 49  
 office@benelux.auma.com  
 www.auma.nl

AUMA Polska Sp. z o.o.  
**PL 41-219 Sosnowiec**  
 Tel +48 32 783 52 00  
 Fax +48 32 783 52 08  
 biuro@auma.com.pl  
 www.auma.com.pl

OOO Priwody AUMA  
**RU 124365 Moscow a/ya 11**  
 Tel +7 495 221 64 28  
 Fax +7 495 221 64 38  
 aumarussia@auma.ru  
 www.auma.ru

ERICH'S ARMATUR AB  
**SE 20039 Malmö**  
 Tel +46 40 311550  
 Fax +46 40 945515  
 info@erichsarmatur.se  
 www.erichsarmatur.se

GRØNBECH & SØNNER A/S  
**DK 2450 København SV**  
 Tel+45 33 26 63 00  
 Fax+45 33 26 63 21  
 GS@g-s.dk  
 www.g-s.dk

IBEROPLAN S.A.  
**ES 28027 Madrid**  
 Tel+34 91 3717130  
 Fax+34 91 7427126  
 iberoplan@iberoplan.com

D. G. Bellos & Co. O.E.  
**GR 13671 Acharnai Athens**  
 Tel+30 210 2409485  
 Fax+30 210 2409486  
 info@dgbellos.gr

SIGURD SØRUM AS  
**NO 1300 Sandvika**  
 Tel+47 67572600  
 Fax+47 67572610  
 post@sigum.no

INDUSTRA  
**PT 2710-297 Sintra**  
 Tel+351 2 1910 95 00  
 Fax+351 2 1910 95 99  
 industria@talis-group.com

Auma Endüstri Kontrol Sistemleri Limited  
 irketi  
**TR 06810 Ankara**  
 Tel+90 312 217 32 88  
 Fax+90 312 217 33 88  
 Servis@auma.com.tr  
 www.megaendustri.com.tr

AUMA Technology utomations Ltd.  
**UA 02099 Kiyiv**  
 Tel+38 044 586-53-03  
 Fax+38 044 586-53-03  
 auma-tech@amumatech.com.ua

## Africa

AUMA South Africa (Pty) Ltd.  
**ZA 1560 Springs**  
 Tel +27 11 3632880  
 Fax +27 11 8185248  
 aumasa@mweb.co.za

A.T.E.C.  
**EG Cairo**  
 Tel +20 2 23599680 - 23590861  
 Fax +20 2 23586621  
 atec@intouch.com

CMR Contrôle Maintenance Régulation  
**TN 1002 Tunis**  
 Tel +216 71 903 577  
 Fax +216 71 903 575  
 instrum@cmr.com.tn  
 www.cmr-tunisie.net

MANZ INCORPORATED LTD.  
**NG Port Harcourt**  
 Tel +234-84-462741  
 Fax +234-84-462741  
 mail@manzincorporated.com  
 www.manzincorporated.com

## America

AUMA ACTUATORS INC.  
**US PA 15317 Canonsburg**  
 Tel +1 724-743-AUMA (2862)  
 Fax +1 724-743-4711  
 mailbox@auma-usa.com  
 www.auma-usa.com

AUMA Argentina Representative Office  
**AR 1609 Boulogne**  
 Tel/Fax +54 232 246 2283  
 contacto@aumaargentina.com.ar

AUMA Automação do Brasil Ltda.  
**BR São Paulo**  
 Tel +55 11 8114-6463  
 bitzco@uol.com.br

AUMA Chile Representative Office  
**CL 9500414 Buin**  
 Tel +56 2 821 4108  
 Fax +56 2 281 9252  
 aumachile@adsl.tie.cl

TROY-ONTOR Inc.  
**CA L4N 8X1 Barrie Ontario**  
 Tel +1 705 721-8246  
 Fax +1 705 721-5851  
 troy-ontor@troy-ontor.ca

Ferrostaal de Colombia Ltda.  
**CO Bogotá D.C.**  
 Tel +57 1 401 1300  
 Fax+57 1 416 5489  
 dorian.hernandez@ferrostaal.com  
 www.ferrostaal.com

PROCONTIC Procesos y Control  
 Automático  
**EC Quito**  
 Tel +593 2 292 0431  
 Fax +593 2 292 2343  
 info@procontic.com.ec

Corsusa International S.A.C.  
**PE Miraflores - Lima**  
 Tel +511444-1200 / 0044 / 2321  
 Fax +511444-3664  
 corsusa@corsusa.com  
 www.corsusa.com

PASSCO Inc.  
**PR 00936-4153 San Juan**  
 Tel +18 09 78 77 20 87 85  
 Fax +18 09 78 77 31 72 77  
 Passco@prtc.net

Suplibarca  
**VE Maracaibo Estado, Zulia**  
 Tel +58 261 7 555 667  
 Fax +58 261 7 532 259  
 suplibarca@intercable.net.ve

## Asia

AUMA Actuators (Tianjin) Co., Ltd.  
**CN 300457 Tianjin**  
 Tel +86 22 6625 1310  
 Fax +86 22 6625 1320  
 mailbox@auma-china.com  
 www.auma-china.com

AUMA INDIA PRIVATE LIMITED  
**IN 560 058 Bangalore**  
 Tel +91 80 2839 4656  
 Fax +91 80 2839 2809  
 info@auma.co.in  
 www.auma.co.in

AUMA JAPAN Co., Ltd.  
**JP 211-0016 Nakaharaku, Kawasaki-shi  
 Kanagawa**  
 Tel +81 44 863 8371  
 Fax +81 44 863 8372  
 mailbox@auma.co.jp  
 www.auma.co.jp

AUMA ACTUATORS (Singapore) Pte Ltd.  
**SG 569551 Singapore**  
 Tel +65 6 4818750  
 Fax +65 6 4818269  
 sales@auma.com.sg  
 www.auma.com.sg

AUMA Actuators Middle East W.L.L.  
**AE 15268 Salmabad 704**  
 Tel +973 17877377  
 Fax +973 17877355  
 Naveen.Shetty@auma.com

PERFECT CONTROLS Ltd.  
**HK Tsuen Wan, Kowloon**  
 Tel +852 2493 7726  
 Fax +852 2416 3763  
 joeip@perfectcontrols.com.hk

DW Controls Co., Ltd.  
**KR 153-702 Seoul**  
 Tel +82 2 2624 3400  
 Fax +82 2 2624 3401  
 sichoi@actuatorbank.com  
 www.actuatorbank.com

Sunny Valves and Intertrade Corp. Ltd.  
**TH 10120 Yannawa Bangkok**  
 Tel +66 2 2400656  
 Fax +66 2 2401095  
 sunnyvalves@inet.co.th  
 www.sunnyvalves.co.th/

Top Advance Enterprises Ltd.  
**TW Jhonghe City Taipei Hsien (235)**  
 Tel +886 2 2225 1718  
 Fax +886 2 8228 1975  
 support@auma-taiwan.com.tw  
 www.auma-taiwan.com.tw

## Australia

BARRON GJM Pty. Ltd.  
**AU NSW 1570 Artarmon**  
 Tel +61 294361088  
 Fax +61 294393413  
 info@barron.com.au  
 www.barron.com.au

# auma®

*Solutions for a world in motion*

AUMA Riester GmbH & Co. KG

P.O.Box 1362

**D 79373 Muellheim**

Tel +49 7631 809 - 0

Fax +49 7631 809 - 1250

riester@auma.com

www.auma.com



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