



Multi-turn gearboxes
Bevel gearboxes
GK 10.2 – GK 40.2



Scope of these instructions:	These instructions apply to multi-turn gearboxes of type range: GK 10.2 – GK 40.2.
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Table of contents	Page
1. Safety instructions	3
1.1 Range of application	3
1.2 Maintenance	3
1.3 Warnings and notes	3
2. Technical data	4
3. Transport, storage and packaging.	6
3.1 Transport	6
3.2 Storage	6
3.3 Packaging	6
4. Fitting the handwheel	6
5. Mounting multi-turn actuators SA/SAR	7
6. Mounting to valve.	9
7. Operation of valves	11
8. Enclosure protection IP 68	12
9. Maintenance	13
9.1 General references	13
9.2 Change of grease	14
10. Disposal and recycling	15
11. Service	15
12. Spare parts list bevel gearboxes GK 10.2 – GK 25.2	16
13. Spare parts list bevel gearboxes GK 30.2 – GK 40.2	18
14. Declaration of Conformity and Declaration of Incorporation.	20
Index	21
Addresses	22

1. Safety instructions

1.1 Range of application

AUMA bevel gearboxes GK 10.2 – GK 40.2 are used for the operation of valves (e.g. gate valves and globe valves). They are designed for manual operation as well as motor operation in conjunction with electric actuators. For other applications, please consult AUMA. The manufacturer is not liable for any possible damage resulting from use in other than the designated applications. Such risk lies entirely with the user. Observance of these operation instructions is considered as part of the designated use. Explosion-proof products are specially marked. The service conditions mentioned in these operation instructions and in the technical data sheet have to be respected during use. Other service conditions require explicit and written confirmation by the manufacturer.

1.2 Maintenance

The maintenance instructions (refer to page 13) must be observed, otherwise a safe operation of the bevel gearbox is no longer guaranteed.

1.3 Warnings and notes

Failure to observe the warnings and notes may lead to serious injuries or damage. Qualified personnel must be thoroughly familiar with all warnings and notes in these operation instructions. Correct transport, proper storage, mounting and installation, as well as careful commissioning are essential to ensure a trouble-free and safe operation. The following references draw special attention to safety-relevant procedures in these operation instructions. Each is marked by the appropriate pictograph.



This pictograph means: Note!

“Note” marks activities or procedures which have major influence on the correct operation. Non-observance of these notes may lead to consequential damage.



This pictograph means: Warning!

“Warning” marks activities or procedures which, if not carried out correctly can affect the safety of persons or material.

2. Technical data

Features and functions																																																																																																									
Type of duty	Short-time duty S2 - 15 min (open-close duty) Intermittent duty S4 - 25 % (modulating duty) with the following maximum input speeds: GK 10.2 – GK 16.2 ≤ 45 rpm for 50 Hz GK 25.2 – GK 30.2 ≤ 11 rpm for 50 Hz																																																																																																								
Direction of rotation	Standard: Clockwise rotation at input shaft results in clockwise rotation at output shaft Option: GK 10.2 – GK 25.2 Reversal of rotational direction using a reversing gearbox GW 14.1 GK 30.2 – GK 40.2 Alternatively, counterclockwise rotation of direction possible																																																																																																								
Stages	One stage: GK 10.2 – GK 25.2 Double stage: GK 30.2 – GK 40.2																																																																																																								
Input shaft	GK 10.2 – GK 25.2: For standard reduction ratios, the input shaft is made of stainless steel. Standard: Cylindrical with parallel key according to DIN 6885.1 Option ¹⁾ : Square: -tapered (DIN 3233) -cylindrical																																																																																																								
Output torques	<table border="1"> <thead> <tr> <th rowspan="2">Type</th> <th colspan="2">Output torque</th> <th rowspan="2">Reduction ratio</th> <th colspan="2">Input torque²⁾</th> <th rowspan="2">Factor³⁾</th> </tr> <tr> <th>Nominal torque max. Nm</th> <th>Modulating torque max. Nm</th> <th>Nominal torque Nm</th> <th>Modulating torque Nm</th> </tr> </thead> <tbody> <tr> <td rowspan="2">GK 10.2</td> <td rowspan="2">120</td> <td rowspan="2">60</td> <td>1 : 1</td> <td>135</td> <td>66</td> <td>0.9</td> </tr> <tr> <td>2 : 1</td> <td>67</td> <td>33</td> <td>1.8</td> </tr> <tr> <td rowspan="2">GK 14.2</td> <td rowspan="2">250</td> <td rowspan="2">120</td> <td>2 : 1</td> <td>139</td> <td>66</td> <td>1.8</td> </tr> <tr> <td>2.8 : 1</td> <td>100</td> <td>48</td> <td>2.5</td> </tr> <tr> <td rowspan="2">GK 14.6</td> <td rowspan="2">500</td> <td rowspan="2">200</td> <td>2.8 : 1</td> <td>198</td> <td>80</td> <td>2.5</td> </tr> <tr> <td>4 : 1</td> <td>139</td> <td>55</td> <td>3.6</td> </tr> <tr> <td rowspan="2">GK 16.2</td> <td rowspan="2">1 000</td> <td rowspan="2">400</td> <td>4 : 1</td> <td>278</td> <td>111</td> <td>3.6</td> </tr> <tr> <td>5.6 : 1</td> <td>198</td> <td>80</td> <td>5.0</td> </tr> <tr> <td rowspan="2">GK 25.2</td> <td rowspan="2">2 000</td> <td rowspan="2">800</td> <td>5.6 : 1</td> <td>397</td> <td>160</td> <td>5.0</td> </tr> <tr> <td>8 : 1</td> <td>278</td> <td>111</td> <td>7.2</td> </tr> <tr> <td rowspan="2">GK 30.2</td> <td rowspan="2">4 000</td> <td rowspan="2">1 600</td> <td>8 : 1</td> <td>556</td> <td>222</td> <td>7.2</td> </tr> <tr> <td>11 : 1</td> <td>404</td> <td>162</td> <td>9.9</td> </tr> <tr> <td rowspan="2">GK 35.2</td> <td rowspan="2">8 000</td> <td rowspan="2">–</td> <td>11 : 1</td> <td>808</td> <td>–</td> <td>9.9</td> </tr> <tr> <td>16 : 1</td> <td>556</td> <td>–</td> <td>14.4</td> </tr> <tr> <td rowspan="2">GK 40.2</td> <td rowspan="2">16 000</td> <td rowspan="2">–</td> <td>16 : 1</td> <td>1,111</td> <td>–</td> <td>14.4</td> </tr> <tr> <td>22 : 1</td> <td>808</td> <td>–</td> <td>19.8</td> </tr> </tbody> </table>						Type	Output torque		Reduction ratio	Input torque ²⁾		Factor ³⁾	Nominal torque max. Nm	Modulating torque max. Nm	Nominal torque Nm	Modulating torque Nm	GK 10.2	120	60	1 : 1	135	66	0.9	2 : 1	67	33	1.8	GK 14.2	250	120	2 : 1	139	66	1.8	2.8 : 1	100	48	2.5	GK 14.6	500	200	2.8 : 1	198	80	2.5	4 : 1	139	55	3.6	GK 16.2	1 000	400	4 : 1	278	111	3.6	5.6 : 1	198	80	5.0	GK 25.2	2 000	800	5.6 : 1	397	160	5.0	8 : 1	278	111	7.2	GK 30.2	4 000	1 600	8 : 1	556	222	7.2	11 : 1	404	162	9.9	GK 35.2	8 000	–	11 : 1	808	–	9.9	16 : 1	556	–	14.4	GK 40.2	16 000	–	16 : 1	1,111	–	14.4	22 : 1	808	–	19.8
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Operation																																																																																																									
Motor operation	With electric multi-turn actuator, directly Flanges for mounting the multi-turn actuator, refer to separate technical data sheets.																																																																																																								
Manual operation	Standard: Via handwheel, directly <table border="1"> <thead> <tr> <th>Type</th> <th>GK 10.2</th> <th>GK 14.2</th> <th>GK 14.6</th> <th>GK 16.2</th> <th>GK 25.2</th> <th>GK 30.2</th> <th>GK 35.2</th> <th>GK 40.2</th> </tr> </thead> <tbody> <tr> <td>Handwheel mm</td> <td>315/ 200</td> <td>315/ 250</td> <td>400/ 315</td> <td>500/ 400</td> <td>630/ 500</td> <td>800</td> <td>800</td> <td>800</td> </tr> </tbody> </table> Option: Remote lever arrangement (not included within the AUMA product range)						Type	GK 10.2	GK 14.2	GK 14.6	GK 16.2	GK 25.2	GK 30.2	GK 35.2	GK 40.2	Handwheel mm	315/ 200	315/ 250	400/ 315	500/ 400	630/ 500	800	800	800																																																																																	
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Valve attachment																																																																																																									
Output drive types	A, B1, B2, B3, B4 according to EN ISO 5210 A, B, D, E according to DIN 3210 C according to DIN 3338 Special output drive types: AF, AK, AG, IB1, IB3, IB4																																																																																																								
<p>1) For size, please contact AUMA</p> <p>2) At max. output torque</p> <p>3) Conversion factor for output torque to input torque</p>																																																																																																									

Service conditions	
Mounting position	Any position
Enclosure protection according to EN 60 529	Standard: IP 67 Options: IP 68 (also refer to page 12)
Corrosion protection	Standard: KN Suitable for installation in industrial units, in water or power plants with a low pollutant concentration Options: KS Suitable for installation in occasionally or permanently aggressive atmosphere with a moderate pollutant concentration (e.g. wastewater treatment plants, chemical industry) KX Suitable for installation in extremely aggressive atmosphere with high humidity and high pollutant concentration
Finish coating	Standard: Two-component iron-mica combination
Colour	Standard: AUMA silver-grey (similar to RAL 7037) Option: Other colours on request
Ambient temperature	Standard: -25 °C to + 80 °C Options: -40 °C to + 60 °C (low temperature), version L -60 °C to + 60 °C (extreme low temperature), version EL - 0 °C to +120 °C (high temperature), version H
Lifetime	Open-close duty: Operation (OPEN - CLOSE - OPEN) with 30 turns per stroke GK 10.2: 20,000 operations GK 14.2 – 16.2: 15,000 operations GK 25.2 – 30.2: 10,000 operations GK 35.2 – 40.2: 5,000 operations Modulating duty ⁴⁾ : GK 10.2: 5.0 million modulating steps GK 14.2 – 16.2: 3.5 million modulating steps GK 25.2 – 30.2: 2.5 million modulating steps
Accessories	
Limit switching	Limit switching WSH for manually operated valves. For the signalisation of intermediate and end positions (refer to separate data sheet).
Reversing gearboxes	Reversing gearbox GW for reversing the rotation direction for manual and motor operation
Special features for use in potentially explosive atmospheres	
Explosion protection	II2G c IIC T4 in compliance with ATEX 94/9/EC
Type of duty ⁵⁾	During open-close duty: Short-time duty S2 - 15 min. at 50 % of maximum nominal output torque up to GK 14.6 and at 35 % of maximum nominal output torque from GK 16.2 During modulating duty: Intermittent duty S4 - 25 % at maximum modulating torque
Ambient temperature	Standard: -20 °C to +40 °C Options: -40 °C to +40 °C (low temperature) -20 °C to +60 °C -40 °C to +60 °C (low temperature) -60 °C to +60 °C (extreme low temperature) Combinations with actuators SAExC at ambient temperatures > 40 °C with special sizing.
Further information	
Reference documents	Product description Bevel gearboxes GK 10.2 – GK 40.2 Dimension sheet GK 10.2 – GK 40.2 Technical data GK 10.2 – GK 40.2 Technical data SA/SAR Technical data GW Technical data WSH

4) The lifetime for modulating duty depends on the load and the number of starts. A high starting frequency will rarely improve the modulating accuracy. To reach the longest possible maintenance and fault-free operation time, the number of starts per hour chosen should be as low as permissible for the process

5) The type of duty must not be exceeded.

3. Transport, storage and packaging

3.1 Transport

- Transport to place of installation in sturdy packing.
- If mounted together with actuator:
Attach ropes or hooks for the purpose of lifting by hoist only to the gearbox and not to the actuator.

3.2 Storage

- Store in well-ventilated, dry room.
- 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 bare surfaces.

In case gearboxes are to be stored for a long period (more than 6 months), the following points must be observed additionally:

- Prior to storage: Protect bare surfaces, in particular the output drive parts and mounting surface, with long-term corrosion protection agent.
- Check for corrosion approximately every 6 months. If first signs of corrosion show, apply new corrosion protection.

3.3 Packaging

Our products are protected by special packaging for the transport ex works. The packaging consists of environmentally friendly materials which can easily be separated and recycled.

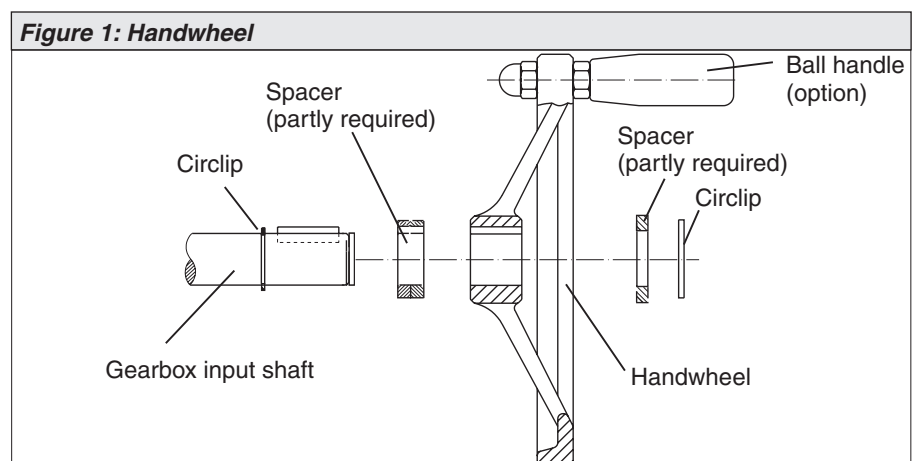
For the disposal of the packaging material, we recommend recycling and collection centres.

We use the following packaging materials:

Wooden material boards (OSB)/cardboard/paper/PE film

4. Fitting the handwheel

For gearboxes designed for manual operation, the handwheel is supplied separately. Fitting is done on site according to figure 1.



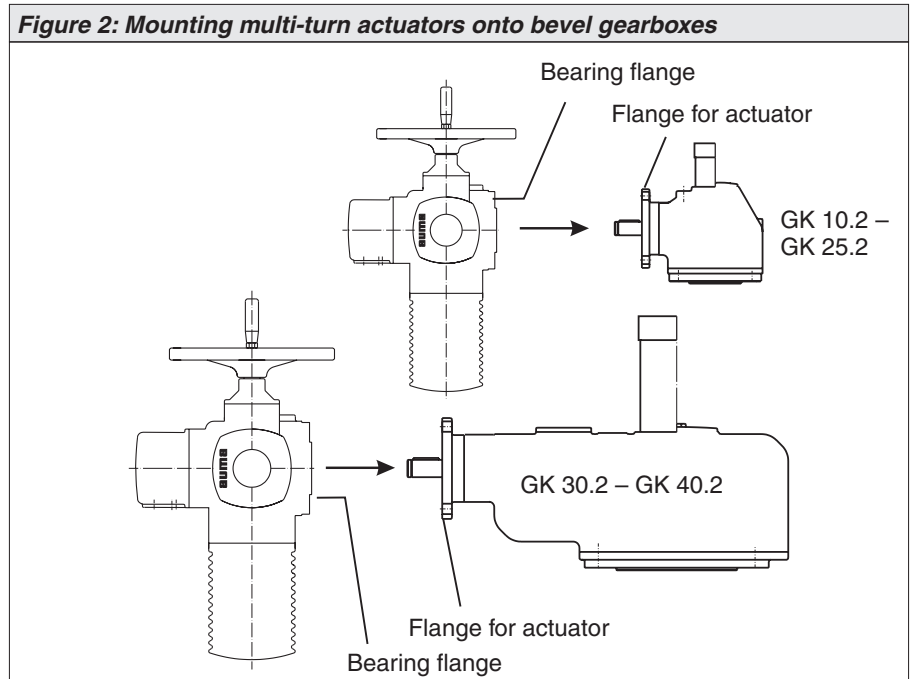
5. Mounting multi-turn actuators SA/SAR

When bevel gearboxes and multi-turn actuators are supplied together, the mounting can be done in the factory up to gearbox size GK 16.2, if desired. For sizes GK 25.2 and larger, the mounting of gearboxes is performed as follows.

In case flange for actuator is not attached to gearbox:

- Thoroughly degrease the mounting faces of the gearbox and flange for actuator.
- Fit flange for actuator and fasten with bolts and lock washers.
- Fasten bolts crosswise to the appropriate torque according to table 2.

Figure 2: Mounting multi-turn actuators onto bevel gearboxes



Mounting the multi-turn actuator:

- Thoroughly degrease the faces of the bearing flange at actuator and of the input flange at bevel gearbox..
- Place the multi-turn actuator on bevel gearbox.
The multi-turn actuator can be positioned on the valve at every 90°.
- Ensure that the spigot mates uniformly in the recess and that the mounting faces are in complete contact.
- Fasten actuator with bolts and lock washers (see table 1) at the flange of the bevel gearbox.
- Fasten bolts crosswise with a torque according to table 2.



Do not attach ropes or hooks for the purpose of lifting the actuator by hoist to the handwheel. If multi-turn actuator is mounted on gearbox, attach ropes or hooks for the purpose of lifting by hoist to gearbox and not to multi-turn actuator.

Table 1: Bolts for mounting AUMA multi-turn actuators on bevel gearboxes									
Gearbox	SA/SAR 07.5-F10/G0			SA/SAR 10.1-F10/G0			SA/SAR 14.1-F14/G½		
	Bolt	Lock washer	Pcs.	Bolt	Lock washer	Pcs.	Bolt	Lock washer	Pcs.
GK 10.2	M10 x 25	B 10	4	M10 x 25	B 10	4	M16 x 40	B 16	4
GK 14.2				M10 x 25	B 10	4	M16 x 40	B 16	4
GK 14.6				M10 x 25	B 10	4	M16 x 40	B 16	4
GK 16.2							M16 x 40	B 16	4
GK 25.2							M16 x 40	B 16	4
Gearbox	SA/SAR 14.5-F14/G½			SA/SAR 16.1-F16/G3			SA/SAR 25.1-F25/G4		
	Bolt	Lock washer	Pcs.	Bolt	Lock washer	Pcs.	Bolt	Lock washer	Pcs.
GK 16.2	M16 x 40	B 16	4						
GK 25.2	M16 x 40	B 16	4						
GK 30.2	M16 x 40	B 16	4	M20 x 50	B 20	4			
GK 35.2	M16 x 40	B 16	4	M20 x 50	B 20	4			
GK 40.2				M20 x 50	B 20	4	M16 x 50	B 16	8

6. Mounting to valve

The gearboxes can be operated in any mounting position.



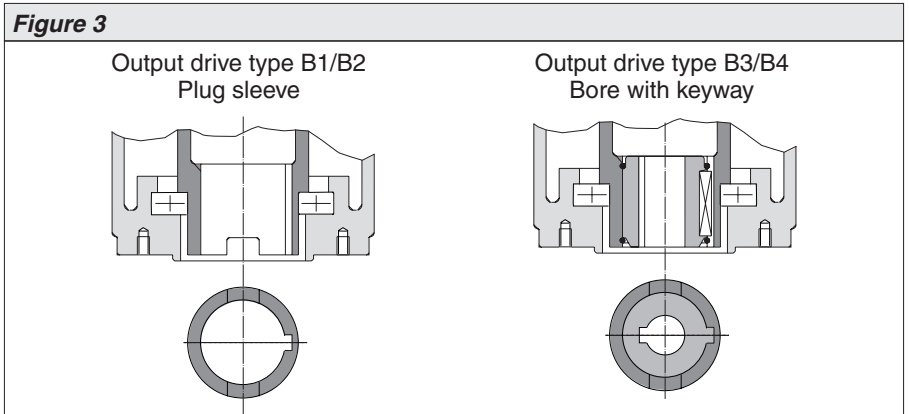
- Prior to mounting, the gearbox must be checked for damage. Damaged parts must be replaced by original spare parts.
- After mounting to valve, touch up any possible damage to paint finish.

- Check if mounting flange fits the gearbox.



Spigot at flanges should be loose fit!

The output drive types B1, B2, B3, or B4 (figure 3) are delivered with bore and keyway (usually according to ISO 5210).

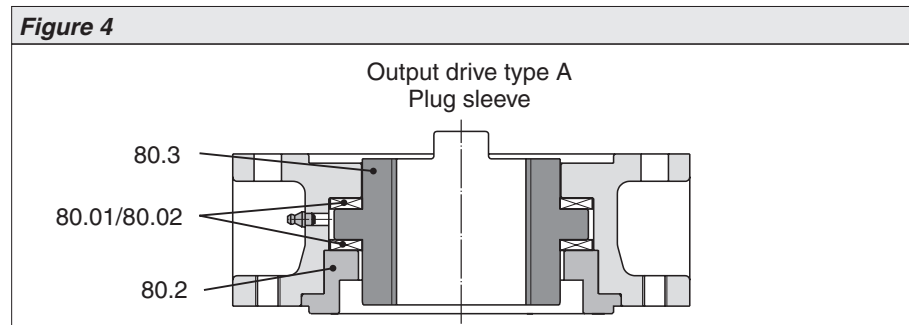


For output drive type A (figure 4), the internal thread of the stem nut must match the thread of the valve stem. If not ordered explicitly with thread, the stem nut is unbored or with pilot bore when delivered. For finish machining of stem nut, refer to next page.

- Check whether bore and keyway match the input shaft of valve.
- Thoroughly degrease mounting faces of gearbox and valve.
- Apply a small quantity of grease to input shaft of valve.
- Place gearbox on valve and fasten. Fasten bolts (quality min. 8.8, refer to table 2) evenly crosswise.

Table 2: Fastening torques for bolts

Thread	Fastening torque T_A [Nm]		
	Strength class		
	8.8	A2-70/A4-70	A2-80/A4-80
M	25	8 18	24
M10	50	36	48
M12	87	61	82
M16	214	150	200
M20	431	294	392
M30	1 489	564	–
M36	2 594	–	–

Finish machining of stem nut (output drive type A):

The output drive flange does not have to be removed from the gearbox.

- Remove spigot ring (80.2, figure 4) from mounting flange.
- Take off stem nut (80.3) together with thrust bearing (80.01) and thrust bearing races (80.02).
- Remove thrust bearing and thrust bearing races from stem nut.
- Drill and bore stem nut and cut thread.
When fixing in the chuck, make sure stem nut runs true!
- Clean the machined stem nut.
- Apply Lithium soap EP multi-purpose grease to thrust bearing and races, then place them on stem nut.
- Re-insert stem nut with thrust bearings into the mounting flange. Ensure that dogs are placed correctly in the slots of the hollow shaft.
- Screw in spigot ring until it is firm against the shoulder.
- Press Lithium soap EP multi-purpose grease on mineral oil base into the grease nipple with a grease gun (for quantities, please refer to table):

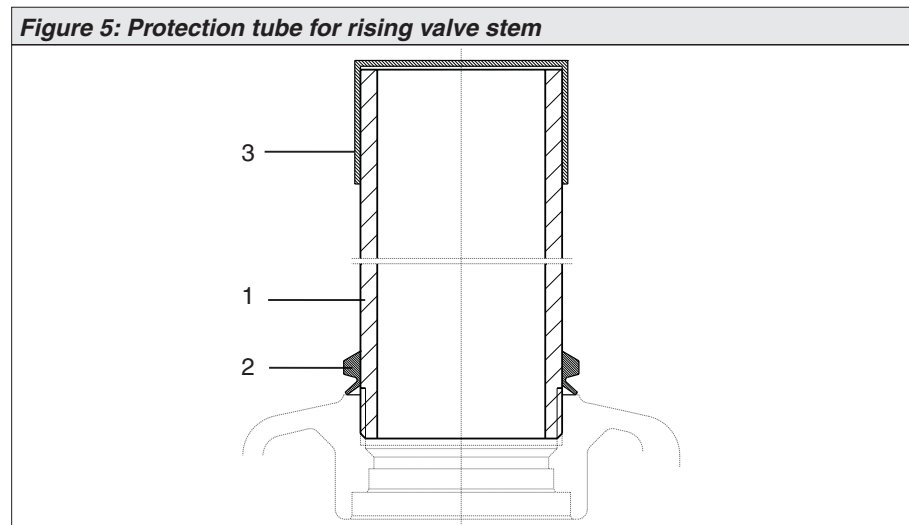
Table 3: Grease quantities bearings output drive type A

Output drive	A 07.2	A 10.2	A 14.2	A 16.2	A 25.2	A 30.2	A 35.2	A 40.2
Qty ¹⁾	1.5 g	2 g	3 g	5 g	10 g	14 g	20 g	25 g

1) For grease with density $\rho = 0.9 \text{ kg/dm}^3$

Protection tube for rising valve stem

- Seal thread of protection tube with hemp, Teflon tape, or thread sealing material.
- Screw protection tube (1) into thread (figure 5) and tighten it firmly.
- Push down the sealing (2) to the housing.
- Check whether cap (3) is available and without damage.



7. Operation of valves

The max. output torque (refer to technical data, page 4 or name plate) refers to the peak values and should not be applied over the whole travel.

Clockwise rotation at input shaft results in clockwise rotation at output drive

For motor operation:

- Observe operation instructions pertaining to multi-turn actuator.
- The setting of the torque switching within the multi-turn actuator may not exceed the max. permissible input torque for both directions (refer to technical data, page 4, or name plate).
- Set the torque switching within the multi-turn actuator to the following value to prevent any damage to the valve:

$$T_{\text{Torque switch}} = \frac{T_{\text{Valve}}}{\text{Factor}}$$

Factor = Conversion factor from output torque to input torque.
Refer to values in technical data, page 4.

8. Enclosure protection IP 68

Definition

According to EN 60 529, the conditions for meeting the requirements of enclosure protection IP 68 are to be agreed between manufacturer and user.

AUMA gearboxes in enclosure protection IP 68 fulfil the following requirements in compliance with AUMA definitions:

- Head of water max. 6 m.

If submersed in other media, additional measures for corrosion protection may be necessary; please consult AUMA. Submersion in aggressive media, e.g. acids or alkaline solutions, is not permitted.

Inspection

AUMA gearboxes in enclosure protection IP 68 undergo a routine testing for tightness in the factory.

After submersion

- Check gearbox.
- In case of ingress of water, dry actuator correctly and check for proper function.

Notes

- The enclosure protection IP 68 refers to the interior of the gearbox.
- If the gearboxes are likely to be repeatedly submersed, a higher corrosion protection KS or KX is required.
- We strongly recommend to select the higher corrosion protection KS or KX for gearboxes for buried service.
- Use suitable sealing material between valve flange and gearbox.
- Stem protection tubes and telescopic protection tubes should not be used during submersion, instead use a screw plug made of aluminium.
- When using output drive types A and AF (stem nut), it cannot be prevented that during submersion water enters the bore of the hollow shaft along the thread of the valve stem. This leads to corrosion. The water also enters the thrust bearings of output drive type A, causing corrosion and damage of the bearings. The output drive types A and AF should therefore not be used for gearboxes in enclosure protection IP 68.
- For submersion in water, AUMA recommends to use grease suitable for use in drinking water.
- For continuous submersion, the seals should be changed at shorter intervals.

9. Maintenance

9.1 General references

After commissioning, check gearbox for damage to paint finish. Do a thorough touch-up to prevent corrosion. Original paint in small quantities can be supplied by AUMA.

AUMA gearboxes require only very little maintenance. To ensure that the gearbox is always ready to operate, we recommend – provided that on an average not more than 10 operations are performed per year – the following measures:

- Approximately six months after commissioning and then every year check bolts between multi-turn actuator, gearbox, and valve for tightness. If required, tighten applying the torques given in table 2, (page 9).
- Perform a test run as well as a visual inspection for grease leakage every six months.
- Carry out a detailed functional test for each gearbox every 5 years. Record the results for future reference.
- For gearboxes permanently exposed to ambient temperatures above 40 °C, maintenance must be performed at shorter intervals.
- For gearboxes with output drive type A: At intervals of approx. six months from commissioning, press in Lithium soap EP multi-purpose grease on mineral oil base at the grease nipple with grease gun (for quantity, refer to table 3, page 10).

Seals:

The seals must be changed when changing the grease. Seal kits may be obtained from AUMA.

Grease:

A grease and seal change is recommended after the following operation times:

- if operated seldom, after 10 – 12 years
- if operated frequently, after 6 – 8 years



- Only original AUMA grease must be used.
- For the grease type, refer to name plate.
- Lubricants should not be mixed.

Table 4: Grease quantities for bevel gearboxes

GK		10.2	14.2	14.6	16.2	25.2	30.2	35.2	40.2
Qty	dm ³	0.33	0.66	0.66	1.1	4.1	14.1	20.0	22.2
Weight ¹⁾	kg	0.3	0.6	0.6	1.0	3.7	12.	18.2	20.2

1) for ρ = approx. 0.9 kg/dm³



The removed lubricant and the cleaning agent used must be disposed of according to the relevant regulations.



For safe operation of explosion-proof products, the gear housing has to be lubricated in compliance with the manufacturer specifications. In the event of lubricant loss, repair measures have to be initiated without delay.

9.2 Change of grease

- For gearboxes with multi-turn actuator: Remove multi-turn actuator.
- Remove gearbox from valve:



During this time, the valve/pipeline must not be under pressure!

- Mark position of the gearbox on the valve, loosen connecting bolts to the valve and remove the gearbox.

Remove old grease:

Grease type, see name plate; grease quantities see page 13, table 4. The numbers used in the following text refer to the spare parts list(s) of these operation instructions.

- Remove bolts at bearing flange (002.1).
- Remove bearing flange with hollow shaft (002.2) from housing.
- Remove old grease completely from the housing and the individual parts and clean gear housing. For this purpose, kerosene or a similar cleaning agent may be used.
- Replace seals S1(008, 009, 012, 016 or 007, 008, 010, 013) by new ones.
- Clean mounting faces at housing and bearing flange and apply a small quantity of grease.
- Mount bearing flange (002.1) with hollow shaft (002.2) into housing, whilst paying attention to the O-ring S1(008 or 009) at bearing flange and O-ring S1(012 or 013) in the housing.
Screw in bolts with lock washers and fasten them evenly crosswise to the appropriate torque according to table 2, page 9.

Fill with new grease f:

- Remove screw plug (539.0) at housing.
- Fill with new grease.
- Clean mounting faces at housing and insert screw plug (539.0) with new sealing S1(014) and fasten them to the appropriate torque according to table 2, page 9.

After maintenance:

- Fasten gearbox to valve again.
- If applicable, mount multi-turn actuator.
- For gearboxes with multi-turn actuator, check the setting of the limit switching according to the operation instructions for multi-turn actuators; if required, re-set.
- Perform test run to ensure proper function.
- Check the gearbox for damage to paint finish. Do a thorough touch-up to prevent corrosion. Original paint in small quantities can be supplied by AUMA.

10. Disposal and recycling

AUMA gearboxes have an extremely long lifetime. However, they have to be replaced at one point in time.

Our gearboxes have a modular design and may therefore easily be disassembled, separated and sorted according to materials, i.e.:

- various metals
- plastics
- greases and oils

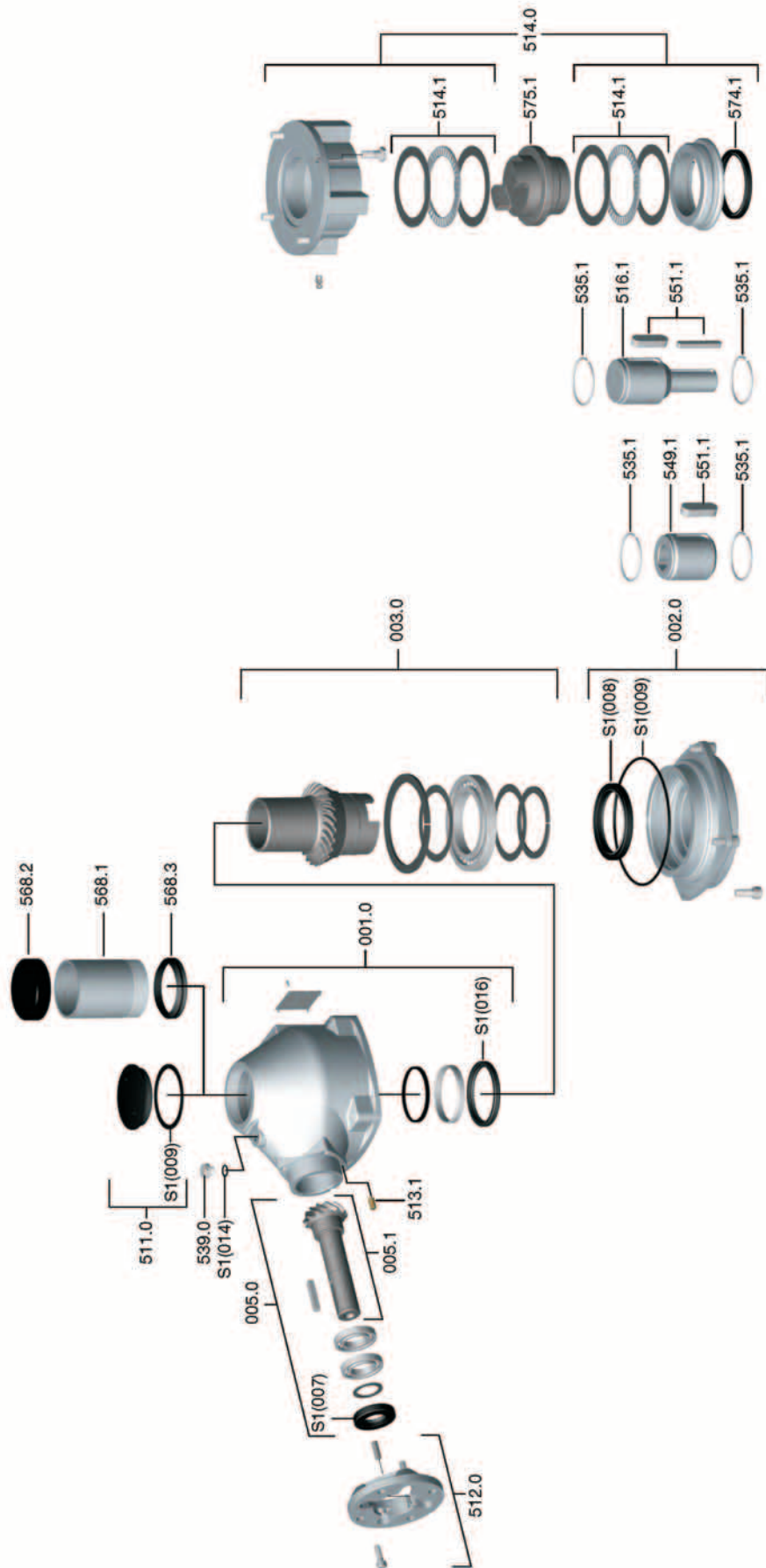
The following generally applies:

- Collect greases and oils during disassembly. As a rule, these substances 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.

11. Service

AUMA offers extensive services such as maintenance and inspection for gearboxes. Addresses can be found on page 22 et seqq. and on the Internet (www.auma.com).

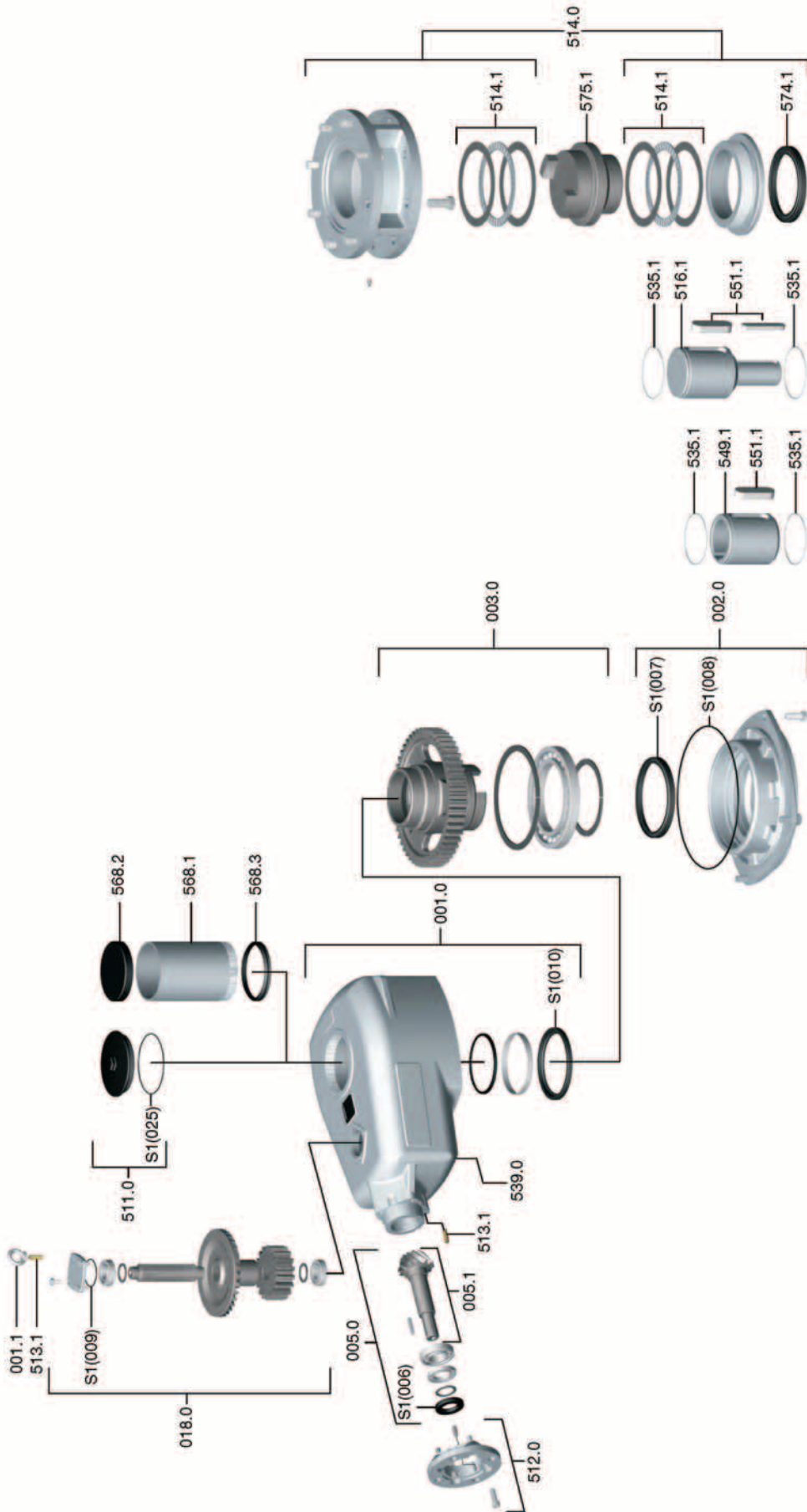
12. Spare parts list bevel gearboxes GK 10.2 – GK 25.2



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

No.	Designation	Type
001.0	Housing	Sub-assembly
002.0	Bearing flange	Sub-assembly
003.0	Hollow shaft	Sub-assembly
005.0	Input shaft	Sub-assembly
005.1	Pinion shaft	Sub-assembly
511.0	Screw plug	Sub-assembly
512.0	Flange for actuator	Sub-assembly
513.1	Grub screw	
514.0	Output drive form A (without stem nut)	Sub-assembly
514.1	Axial needle roller bearing	Sub-assembly
516.1	Output drive shaft D	
535.1	Snap ring	
539.0	Screw plug	Sub-assembly
549.1	Output socket B3/B4/E	Sub-assembly
551.1	Parallel key	
568.1	Stem protection tube (without cap)	
568.2	Cap for stem protection tube	
568.3	V-seal	
574.1	Radial seal output drive A for ISO flange	
575.1	Stem nut type A	
S1	Seal kit	Set

13. Spare parts list bevel gearboxes GK 30.2 – GK 40.2



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

No.	Designation	Type
001.0	Housing	Sub-assembly
001.1	Ring nut	
002.0	Bearing flange	Sub-assembly
003.0	Hollow shaft	Sub-assembly
005.0	Input shaft	Sub-assembly
005.1	Pinion shaft	Sub-assembly
018.0	Intermediate stage	Sub-assembly
511.0	Screw plug	Sub-assembly
512.0	Flange for actuator	Sub-assembly
513.1	Grub screw	
514.0	Output drive form A (without stem nut)	Sub-assembly
514.1	Axial needle roller bearing, from GK 35.2: axial cylinder roller bearing	Sub-assembly
516.1	Output drive shaft D	
535.1	Snap ring	
539.1	Screw plug	Sub-assembly
549.1	Output socket B3/B4/E	
551.1	Parallel key	
568.1	Stem protection tube (without cap)	
568.2	Cap for stem protection tube	
568.3	V-seal	
574.1	Radial seal output drive A for ISO flange	
575.1	Stem nut type A	
S1	Seal kit	Set

14. Declaration of Conformity and Declaration of Incorporation

AUMA Riester GmbH & Co. KG
 Aumastr. 1
 79379 Müllheim, Germany
 www.auma.com

Tel +49 7631 809-0
 Fax +49 7631 809-1250
 Riester@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 gearboxes of the type ranges

Worm gearboxes	GS 50.3 – GS 125.3 with reduction gearing VZ 2.3 – VZ 4.3 GS 160.3 – GS 250.3 with reduction gearing GZ 160.3 – GZ 250.3 GS 630.3 with reduction gearing GZ 630.3 GS 315 – GS 500 with reduction gearing GZ 16.1 – GZ 40.1
Lever gearboxes	GF 50.3 – GF 125.3 with reduction gearing VZ 2.3 – VZ 4.3 GF 160.3 – GF 250.3 with reduction gearing GZ 160.3 – GZ 250.3
Bevel gearboxes	GK 10.2 – GK 40.2
Spur gearboxes	GST 10.1 – GST 40.1

AUMA Riester GmbH & Co. KG as manufacturer declares herewith, that the above mentioned gearboxes 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	ISO 5211: 2001

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 gearboxes are designed to be installed on industrial valves. AUMA gearboxes 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

As partly completed machinery, the gearboxes further comply with the requirements of the following directives and the respective approximation of national laws as well as the respective harmonised standards as listed below:

(1) Equipment and protective systems intended for use in potentially explosive atmospheres (94/9/EC)

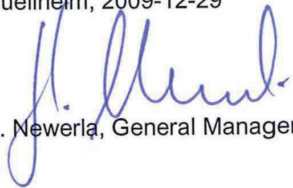
EN 1127-1: 2007
 EN 13463-1: 2009
 EN 13463-5: 2003

The above mentioned AUMA gearboxes in "ATEX" version are marked as follows:

II2G c IIC T4 or T3
II2D IP6X T130°C or T190°C

In order to meet the requirements for use of AUMA gearboxes in potentially explosive atmospheres, the relevant information in the operation instructions must imperatively be observed.

Müllheim, 2009-12-29


 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. Y004.932/002/en

Index

B		M		T	
Bolts for mounting multi-turn actuator	8	Maintenance	3,13	Technical data	4
C		Motor operation	11	Transport	6
Corrosion protection	6	Mounting multi-turn actuators	7	Type of duty	4
D		Mounting to valve	9		
Declaration of Conformity	22	O			
Declaration of Incorporation	22	Output drive types	4,9		
Direction of rotation	4	Output torques	4		
Disposal and recycling	15	P			
E		Packaging	6		
Enclosure protection IP 68	12	Protection tube	10		
F		S			
Finish machining of stem nut	10	Safety instructions	3		
Fitting the handwheel	6	Service	15		
H		Spare parts lists			
Handwheel	6	GK 10.2 – GK 25.2	18		
L		GK 30.2 – GK 40.2	20		
Lubricant	14	Storage	6		

Europe

AUMA Riester GmbH & Co. KG

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

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

Service Centre Cologne
DE-50858 Köln
Tel +49 2234 2037 - 9000
Tax +49 2234 2037 - 9099
Service@sck.auma.com

Service Centre Magdeburg
DE-39167 Niederndodeleben
Tel +49 39204 759 - 0
Tax +49 39204 759 - 9429
Service@scm.auma.com

Service Centre Bavaria
DE-85386 Eching
Tel +49 81 65 9017 - 0
Tax +49 81 65 9017 - 2018
Riester@scb.auma.com

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

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

AUMA Servopohony spol. s.r.o.
CZ-10200 Praha 10
Tel +420 272 700056
Tax +420 272 704125
auma-s@auma.cz
www.auma.cz

OY AUMATOR AB
FI-02270 Espoo
Tel +35 895 84022
Tax +35 895 8402300
auma@aumator.fi

AUMA France S.A.R.L.
FR-95157 Taverny Cédex
Tel +33 1 39327272
Tax +33 1 39321755
info@auma.fr
www.auma.fr

AUMA ACTUATORS Ltd.
GB- Clevedon North Somerset BS21 6QH
Tel +44 1275 871141
Tax +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
Tax +39 0331 517606
info@auma.it
www.auma.it

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

AUMA Polska Sp. z o.o.
PL-41-310 Dabrowa Górnicza
Tel +48 32 26156 68
Tax +48 32 26148 23
R.Ludzien@auma.com.pl
www.auma.com.pl

OOO Priwody AUMA
**RU-141400 Moscow region for mail:
124365 Moscow a/ya 11**
Tel +7 495 221 64 28
Tax +7 495 221 64 38
aumarussia@auma.ru
www.auma.ru

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

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

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

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

SIGURD SØRUM A. S.
NO-1301 Sandvika
Tel +47 67572600
Tax +47 67572610
post@sigurd-sorum.no

INDUSTRA
PT-2710-297 Sintra
Tel +351 2 1910 95 00
Tax +351 2 1910 95 99
industria@tyco-valves.com

MEGA Endüstri Kontrol Sistemleri Tic. Ltd.
Sti.
TR-06810 Ankara
Tel +90 312 242 18 88 pbx
Tax +90 312 242 18 00
megaendustri@megaendustri.com.tr

CTS Control Limited Liability Company
UA-02099 Kiyiv
Tel +38 044 566-9971, -8427
Tax +38 044 566-9384
v_polyakov@cts.com.ua

Africa

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

A.T.E.C.
EG- Cairo
Tel +20 2 3599680 - 3590861
Tax +20 2 3586621
atec@intouch.com

America

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

AUMA Automação do Brasil Ltda.
BR-Sao Paulo
Tel +55 11 8114-6463
bitzco@uao.com.br

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

LOOP S. A.
AR-C1140ABP Buenos Aires
Tel +54 11 4307 2141
Tax +54 11 4307 8612
contacto@loopsa.com.ar

TROY-ONTOR Inc.
CA-L4N 5E9 Barrie Ontario
Tel +1 705 721-8246
Tax +1 705 721-5851
troy-ontor@troy-ontor.ca

MAN Ferrostaal de Colombia Ltda.
CO- Bogotá D.C.
Tel +57 1 401 1300
Tax +57 1 416 5489
dorian.hernandez@manferrostaal.com
www.manferrostaal.com

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

IESS DE MEXICO S. A. de C. V.
MX-C.P. 02900 Mexico D.F.
Tel +52 55 55 561 701
Tax +52 55 53 563 337
informes@iess.com.mx

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

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

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

Asia

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

AUMA (INDIA) PRIVATE LIMITED
IN-560 058 Bangalore
Tel +91 80 2839 4655
Tax +91 80 2839 2809
info@auma.co.in
www.auma.co.in

AUMA JAPAN Co., Ltd.
**JP-210-0848 Kawasaki-ku, Kawasaki-shi
Kanagawa**
Tel +81 44 329 1061
Tax +81 44 366 2472
mailbox@auma.co.jp

AUMA ACTUATORS (Singapore) Pte Ltd.

SG-569551 Singapore

Tel +65 6 4818750
Tax +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
Naveen.Shetty@auma.com

PERFECT CONTROLS Ltd.

HK- Tsuen Wan, Kowloon

Tel +852 2493 7726
Tax +852 2416 3763
joeip@perfectcontrols.com.hk

DW Controls Co., Ltd.

KR-153-803 Seoul Korea

Tel +82 2 2113 1100
Tax +82 2 2113 1088/1089
sichoi@actuatorbank.com
www.actuatorbank.com

Sunny Valves and Intertrade Corp. Ltd.

TH-10120 Yannawa Bangkok

Tel +66 2 2400656
Tax +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
Tax +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
Tax +61 294393413
info@barron.com.au
www.barron.com.au

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auma®

Solutions for a world in motion

AUMA Riester GmbH & Co. KG

P.O.Box 1362

D-79373 Müllheim

Tel +49 7631 809 - 0

Fax+49 7631 809 - 1250

riester@auma.com

www.auma.com



Certificate Registration No.
12 100 104 4269