

Transport, Storage & Handling Instructions

AUMA India products are high-value electro-mechanical devices. This should be taken into account during transport, storage and handling. In order to avoid possible damages, inconvenience and costs for you and us, please observe following points.

1. Transport

NOTICE

- For transport to the place of installation, use sturdy packaging.
- Avoid packages from exposing to open atmospheres during transit.
- Protect packages against rain during transit.
- Do not hit with hand wheel against wall, floor or machine parts.



DANGER

Hovering Load!

Risk of death or serious injury.

- Do NOT stand below hovering load.
- Attach ropes or hooks for the purpose of lifting by hoist only to housing and NOT to hand wheel
- **Actuators mounted on valves:** Attach ropes or hooks for the purpose of lifting by hoist to valve and NOT to the actuator / actuator hand wheel.
- **Actuators mounted to gearboxes:** Attach ropes or hooks for the purpose of lifting by hoist only to the gearbox using eyebolts and NOT to the actuator.
- **Actuators mounted to controls:** Attach ropes or hooks for the purpose of lifting by hoist only to the actuator and NOT to the controls.

2. Storage

NOTICE

Even in watertight enclosed products condensed water collects due to temperature fluctuations. This may damage sensitive internal parts. Damages can be avoided by observing the following points.


- Store in a well-ventilated, dry room.
- Protect against floor dampness by storage on shelves, cage boxes or on wooden pallets.
- Cover with plastic foils to protect against dust and dirt etc.
- Protect suitably against mechanical damages.
- Apply suitable corrosion protection agent to uncoated surfaces.
- **For actuators:** Check or at least random checks after approx. every 3 months. In case of condensed water inside the switch compartment, it has to be dried out.

Long-term storage

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

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

3. Handling

NOTICE	<p>For actuators:</p> <ul style="list-style-type: none"> ➤ Refer figure 3.1 and 3.2 for handling of AUMA actuators.
	<ul style="list-style-type: none"> ➤ Put ropes on both side of the housing as shown in the figure 3.1 and lift gently with the help of a hook. ➤ Care should be taken so that rope does not slip-off.
 CAUTION	<ul style="list-style-type: none"> ➤ Do not lift the actuator by using hand wheel or the thread provided in the adapter.
NOTICE	<p>For flange mounted worm gearboxes (GS):</p>
	<ul style="list-style-type: none"> ➤ Flange mounted worm gearboxes from GS 40.2 to GS 125.2 can be handled manually. ➤ Refer figure 3.3 for handling flange mounted worm gearboxes GS 160 and above.
	<ul style="list-style-type: none"> ➤ Refer Figure 3.4 for handling flange mounted worm gearboxes with secondary spur gearbox (GS with GZ). ➤ Put 2 nos. suitable eyebolts on both side of the assembly as shown in the figure 3.3 and lift gently by putting the rope in the hook to eyebolt. ➤ Handle carefully so that the gearbox does not tilt in the opposite direction or slip-off.
NOTICE	<p>For foot mounted worm gearboxes (GF):</p>
	<ul style="list-style-type: none"> ➤ Foot mounted worm gearboxes from GF 63.2 to GF 100.2 can be handled manually. ➤ Refer figure 3.5 for handling foot mounted worm gearboxes GF 125.2 and above.
	<ul style="list-style-type: none"> ➤ Put ropes on two sides of worm shaft side housing ends and lift gently with the help of hook. ➤ Handle carefully so that the gearbox does not slip-off.
NOTICE	<p>For bevel gearboxes (GK):</p>
	<ul style="list-style-type: none"> ➤ Bevel gearboxes from GK 10.1 to GK 16.1 can be handled manually. ➤ Refer figure 3.6 for handling bevel gearboxes GK 25.1 and above. One number suitable eyebolt is provided on one side as shown in the figure. Lift gently by putting the rope in the hook to eyebolt.
NOTICE	<p>For spur gearboxes (GST):</p>
	<ul style="list-style-type: none"> ➤ Spur gearboxes from GST 12 to GST 100 can be handled manually. ➤ Refer figure 3.7 for handling spur gearboxes GST 200 and above. ➤ Put the suitable eyebolt in the space provided. Put the rope with the hook to the eyebolt. Put the other end of the rope around the housing at the input side and lift gently as shown in the figure 3.7.
NOTICE	<p>For flange mounted worm gearboxes with actuators (SA + GS): For GS 40.2 to GS 400 with the corresponding actuator the following handling procedures may be adapted:</p>
	<ul style="list-style-type: none"> ➤ Refer figure 3.8 for general arrangement of the flange mounted worm gearbox with actuator. ➤ A suitable eyebolt is provided on the gearbox side as shown in the figure 3.8.

- Put suitable rope around the actuator and to the eyebolt by using 'S' hook as shown.
 - Lift gently so that the output drive of gearbox faces the valve flange which will be easier for mounting.

NOTICE

For foot mounted worm gearboxes with actuators (SA + GF): For GF 63.2 to GF 250 with the corresponding actuator the following handling procedures may be adapted:

- Refer figure 3.9 for general arrangement of the foot mounted worm gearbox with actuator.
- Lift gently by putting rope around the actuator and other end of worm shaft housing with the help of hook as shown in figure 3.9
- Handle carefully so that the gearbox with actuator does not slip-off.

NOTICE

For bevel gearboxes with actuators (SA + GK): For GK 10.1 to GK 35.1 with the corresponding actuator the following handling procedures may be adapted:

- Refer figure 4.0 for general arrangement of the bevel gearbox with actuator.
- One no. suitable eyebolt is provided on one side of the gearbox. Put the rope around the actuator and the eyebolt by using 'S' hook as shown in the figure 4.0. Lift gently so that the combination does not tilt in opposite direction.

NOTICE

For spur gearboxes with actuators (SA + GST): For GST 12 to GST 1600 with the corresponding actuator the following handling procedures may be adapted:

- Refer figure 4.1 for general arrangement of the spur gearbox with actuator.
- One no. suitable eyebolt is provided on the gearbox.
- Lift gently by putting the rope around the actuator and to the eyebolt with the help of hook as shown in the figure 4.1.
- Care should be taken so that the gearbox with actuator does not slip-off.

Pictorial handling instructions

For actuators

For AUMA Norm Actuators

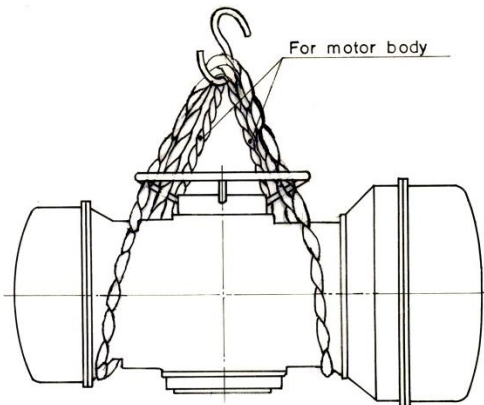


Figure 3.1

For AUMA Epac / Compact Actuators

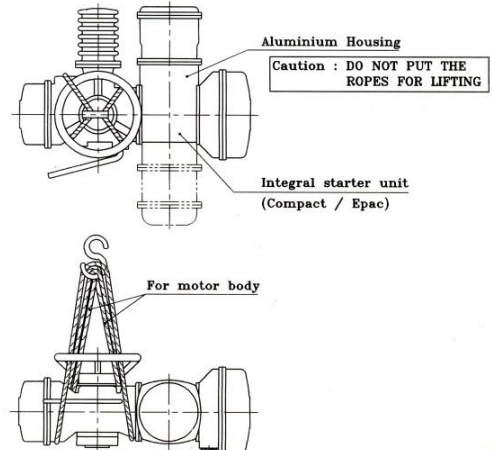


Figure 3.2

For flange mounted worm gearboxes (GS)

For Flange mounted worm gearboxes (GS series)

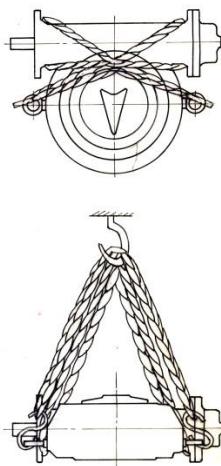


Figure 3.3

For Flange mounted worm gearboxes with secondary spur gearbox (GS with GZ)

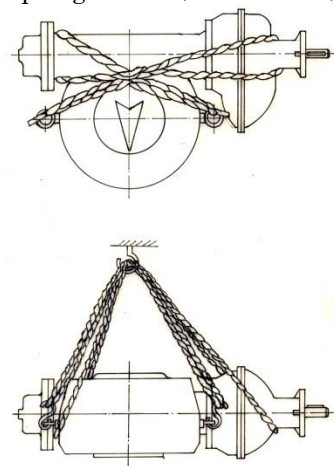


Figure 3.4

For foot mounted worm gearboxes (GF)

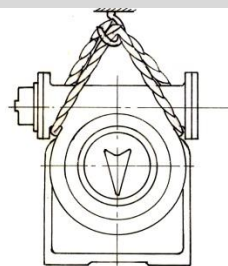


Figure 3.5

For bevel gearboxes (GK)

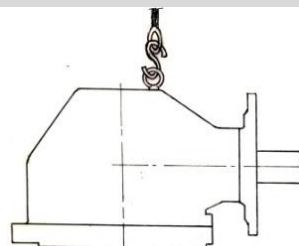


Figure 3.6

For spur gearboxes (GST)

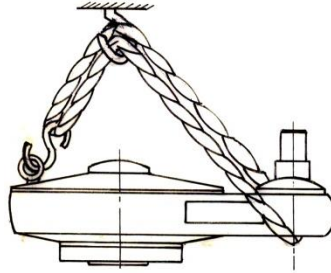


Figure 3.7

For flange mounted worm gearboxes with actuators (SA + GS)

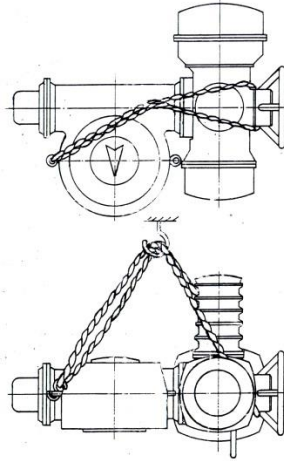


Figure 3.8

For foot mounted worm gearboxes with actuators (SA + GF)

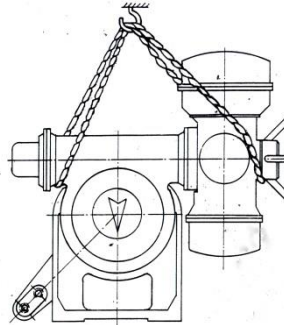


Figure 3.9

For bevel gearboxes with actuators (SA + GK)

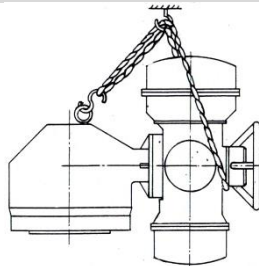


Figure 4.0

For spur gearboxes with actuators (SA + GST)

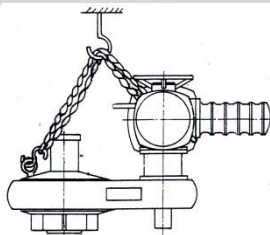


Figure 4.1