

TILTING CLIMBING WALL MAINTENANCE MANUAL

Manufacturer: FrictionWalls AS

Document No.: FW-MAN-001

Revision: 1.0

Revision History

Revision	Date	Author	Description
1.0	2026	FrictionWalls AS	Initial Release

Safety Information

Disconnect power before maintenance. Keep all personnel clear of the wall movement area. Never perform maintenance while the wall is moving.

System Description

The tilting climbing wall uses actuator-driven movement and a sickle guide mechanism. Proper lubrication and inspection are essential for safe operation.

Maintenance Schedule

Every 14 Days:

- Inspect sickle lubrication.
- Verify smooth operation.

Monthly:

- Inspect bolts and fasteners.
- Inspect actuator mounts.
- Inspect structure and wiring.

Annually:

- Clean control box.
- Complete full structural inspection.
- Verify all electrical connections.

Recommended Lubricants

Use only high-pressure EP grease (NLGI Grade 2), preferably containing molybdenum disulfide (MoS₂).

Recommended products:

- SKF LGEM 2
- Mobilgrease Special
- Shell Gadus S2 V220AD 2
- Equivalent MoS₂ EP grease

MoS₂ EP grease is recommended for all lubrication points on the tilting wall system.

Sickle Joint Lubrication

Before assembly, thoroughly lubricate the sickle and guide channel.

Apply grease:

- Along the full guide channel
- On both side surfaces
- In the bottom of the guide
- On all contact surfaces

Inspect grease condition every 14 days.

Maintenance Relubrication

1. Tilt the wall to approximately 70°.
2. Apply grease to the narrow contact surfaces of the sickle.
3. Confirm all contact areas remain coated.
4. Operate the wall through its full range of movement after lubrication.

Grease Access Hole

The sickle assembly includes a lubrication access hole.

- Inject a small amount of grease through the hole.
- A MoS₂ EP grease spray is recommended for routine relubrication through the grease access hole.
- Cycle the wall after lubrication to distribute grease.

Actuator Bolts

Lubricate actuator pivot bolts before installation and as required. Inspect for wear, corrosion, deformation and excessive play.

Electrical Inspection

- Remove dust from the control box as required and at least once per year.
- Verify all actuator cables are securely connected.
- Inspect for damaged insulation, overheating or moisture ingress.

Structural Inspection

Inspect:

- Fasteners
- Welds
- Actuator brackets
- Structural members
- Pivot points

Remove the wall from service if cracks, deformation or abnormal wear are detected.

Functional Testing

Operate the wall through its full range of motion. Verify smooth operation, even actuator movement and absence of abnormal noises.

Troubleshooting

Wall moves unevenly:

- Check actuator connections.
- Inspect actuator mounting bolts.

Excessive noise:

- Check lubrication.
- Inspect wear surfaces.

Wall does not move:

- Verify power supply.
- Check control box connections.

Annual Inspection Checklist

- ☐ Lubrication inspected
- ☐ Structural inspection completed
- ☐ Electrical inspection completed
- ☐ Fasteners inspected
- ☐ Functional test completed
- ☐ Maintenance log updated

Maintenance Records

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