novoferm

Intelligent Door Solutions

GB

MAINTENANCE LOG

Industrial overhead door

TÜV NORD Zertifizierung

Baumuster geprüft

Contents

About this document

Purpose of this document
This document describes methods and actions for maintaining the industrial overhead door.

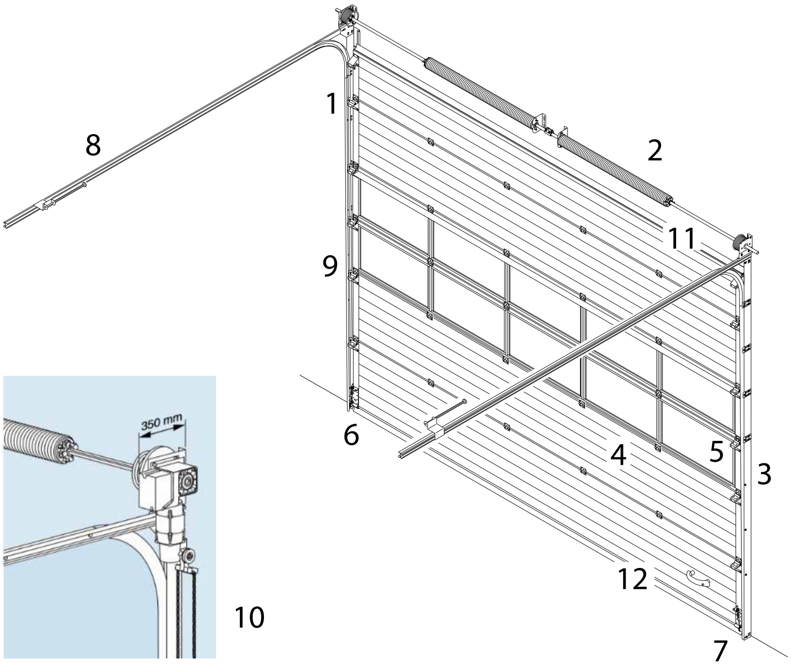
Introduction – important!
- Maintenance of the electric drive may only be carried out by authorized personnel. When commissioning the door, the qualified expert responsible for performing the work must check for potential hazards and make sure that the door is functioning properly and can be operated by hand (EN 12604 and EN 12453).
- The area of application of this sectional door is set out in EN 13241. Installation, repair, maintenance and dismantling of the door must be carried out by a qualified expert, in accordance with EN 12635.
- An inspection must be carried out at least annually to ensure the safe and proper functioning of the sectional door.

Related documents
- User Manual
- Installation Manual
- Log book

Intended use
- The drive system is intended only for opening and closing industrial doors.
- Temperature range -20 to +50°C

Safety
- Personal safety equipment must be available and used as required, like gloves, safety shoes, helmets, etc.
- Depending on the accessories ordered with the door, there may be additional manuals, for example for the door control unit.
- Please read the contents carefully, make sure you follow the safety instructions and take notice of the warnings in these manuals.
- When making electrical connections, ensure that all electrical circuits are safely insulated.
- Switch the power off before carrying out any maintenance which may involve contact with components that are normally covered.
- Put up "maintenance in progress" signs.
- Ensure that children (up to the age of 18) cannot play with the door control system.
- At the time of disassembly, the national regulations governing the disposal of materials apply.

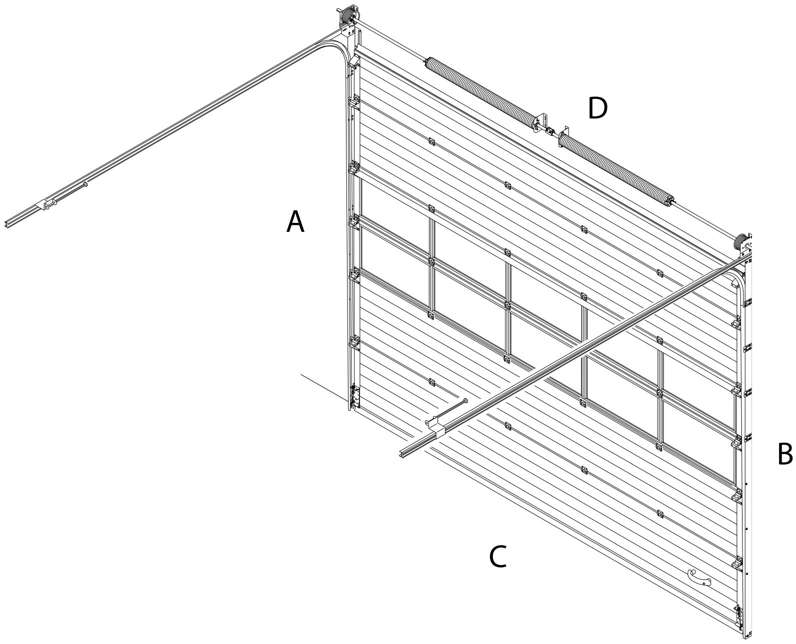
Main components (in the order of installation)



Position	Description
1	Vertical / horizontal tracks
2	Springs
3	Side seals
4	Door leaf
5	Hinges and rollers
6	Cable & spring break safety device
7	Bottom bracket
8	Suspension
9	Light curtain
10	Motor and control unit
11	Top seal
12	Bottom seal
* Note: No balancing springs are used with springless doors.	

Door orientation

The door is shown viewed from the inside:



A	Left
B	Right
C	Inside
D	Outside

Recommended replacement intervals

Please note: when used intensively, the door requires maintenance every 6 months! (1 cycle means 1 x open, 1 x closed)

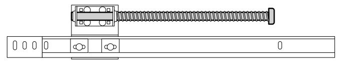
Interval			Check	Maintenance action
1 year	or	5,000 cycles	Hinges	Regularly grease (multi-purpose).
1 year	or	5,000 cycles	Hinges	When cracks, replace the hinges.
1 year	or	5,000 cycles	Springs	Check the correct tension/springs. Check the number of coils of the springs.
1 year	or	5,000 cycles	Rollers	Always grease axle and bearing (multi-purpose spray). Do not grease the outside of the rollers
1 year	or	5,000 cycles	Steel cables	Check for damage and replace if necessary
1 year	or	5,000 cycles	Motor leakage, unwanted play at the motor / bearings	Replace, check motor type and order similar motor. Replace bearings if necessary.
1 year	or	5,000 cycles	Spring break safety device	Check functionality. Replace if activated
1 year	or	5,000 cycles	Cable break safety device	Check functionality. Replace if activated
3 years			Spiral cable	Replace
5 years	or	15,000 cycles	Rollers	Replace
5 years	or	15,000 cycles	Top- and bottomseal	Check for damage and replace if necessary
5 years			Photocells	Check for damage and replace if necessary
5 years			Light curtains	Check for damage and replace if necessary
5 years			Wicket door switch	Check for damage and replace if necessary
5 years			Optosensors	Check for damage and replace if necessary
6 years	or	20,000 cycles	Steel cables	Replace. ATTENTION: On doors with a width of > 8000 mm, the steel cable must be replaced every 7500 cycles!
		50,000 cycles	Spring buffer - manually operated door	Check for damage and replace if necessary
		100,000 cycles	Spring buffer - electrically operated door	Check for damage and replace if necessary

Door maintenance guidelines

Door leaf

Step	Action	Standard
1	Disengage motor if present. **Disengage only when door is fully closed.** Move door up and down	Door must be balanced and must not fall down. If it does check and or correct spring tension.
2	Visually inspect the door sections to detect damage or deformation.	The door sections must be in good condition (no bending, deformation or damage).
3	Check hinges and rollers for abnormal noise and visible damage.	The hinges and rollers should not be noisy. Play of more than 1 mm represents excessive wear.
4	Check bottom bracket fixings.	No horizontal and vertical movement of the bracket is permitted during door operation.
5	Check that the bottom bracket fasteners are still tight.	No movement is permitted at the bottom bracket fasteners during door operation.
6	Check horizontal position of the door leaf using a laser beam.	The vertical height difference between the left-hand and right-hand side of the door leaf may not exceed 2 mm.
7	Check bottom seal.	The bottom seal must be in good condition (no sign of wear or damage).

Door tracks

Step	Action	Standard
1	Check the tracks for damages.	Tracks must be clean and undamaged. Don't use grease.
2	Check the buffers.	Buffers must move easily, use grease. When broken replace them. 
3	Check fixing to the wall or construction	No play is allowed.

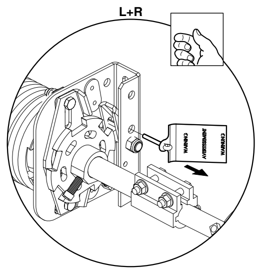
Motor

Step	Action	Standard
1	Check motor operation by opening and closing the door.	The motor may not make any abnormal noises, show unexpected movement or vibrate.
2	Check that the wiring connections are tight and the cables intact.	The wiring must be properly connected.
3	Check if there is any oil leakage from the motor.	The motor must be clean, without signs of oil or grease leaks.

Control box

Step	Action	Standard
1	Check the control box fixings.	The control box must be properly fixed.
2	Ensure that the wiring and plugs of all accessories are connected to the PCBs.	The plugs and wiring must be securely connected.
3	Check that the control box is closed.	The control box unit is closed.
4	Check if Failure or error codes are visible on the control box.	Solve the problem causing the error or failure code

Torsion springs

Step	Action	Standard
1	Check fixings of springs to construction and to bearing plates / spring break safety device	The safety pin must be removed for the safety device to function. 
2	Check the springs and bearings for play, damage and rust.	No play, rust and damage on springs or bearings allowed.
3	Check the connection and general condition of the steel cable starting at the bottom and all the way up to the cable drum.	No visible damage to the cable when inspecting the individual strands of the steel cable.

Torsion tube

Step	Action	Standard
1	Check the fixing of the brackets.	There may be no loose screws. There should be no play between the wall/tube.
2	Check the bearings for play, damage and corrosion.	The bearings/bearing plates should not have any play, rust or damage.
3	Check the shaft for cracks.	There should be no play on the drum/motor/shaft. There should be no visible cracks.
4	Check the steel cables: Start from the bottom and work up to the drum.	The individual strands should not show any visible damage.

Important:

Always check the functionality of all connected supplementary (safety) devices , like for example light curtains, photo cells, slack cable devices etc.

Test form

Contract no.: ______

Operating company's name and address: ______

Year of manufacture: ______

Site where system is installed: ______

Year of installation: ______

Manufacturer or supplier of the system: ______

Door size: ______

Telephone: ______

Serial/reference no: ______

NO = no objection **O** = objection **N/A** = not available, only tick box if the component is not present

1	Weight balancing system	NO	O	N/A
a	Shaft/bearings			
b	Shaft coupling			
c	Console attachment			
d	Steel cable attachment to cable drum/weight balancing system			
e	Steel cable attachment to door panel			
f	Steel cables			
g	Cable drum			
h	Tensioning heads/spring heads			
i	Spring functionality, check of weight balancing arrangement			
j	Slack cable safety switch			

2	Drive (test after checking weight balancing arrangement)	NO	O	N/A
a	Secure attachment of gear motor and consoles			
b	Unusual noises from gear motor and absence of leaks from the gear motor gaskets/seals			
c	Manual operation and electric locking, disconnect clutch			
d	Run-on, brake operation			

3	Chain/sprocket drive system	NO	O	N/A
a	Chain: alignment and wear			
b	Chain tension			
c	Chain: cleanliness. lubrication			
d	Chain sprockets: securely fastened, wear			
e	Chain guard			
f	Chain tensioner			

4	Limit switches and controls	NO	O	N/A
a	Door travel limit switch setting and functionality			
b	Safety limit switch functionality			
c	Motor overload switch setting			
d	Electrical and mechanical function of the push-buttons			
e	Key switch: Check profile cylinder for smooth operation			
f	Remote control with emergency stop button			
g	Wicket door switch			

5	Safety devices preventing inadvertent closing of the door panel	NO	O	N/A
A	Safeties that act on the shaft			
1	Self-locking drive/drive fitted with brake without disconnect facility			
2	Drive in combination with safety locking provision or additional components which prevent uncontrolled closing of the door panel in the event of failure of load-bearing parts in the drive			
3	Spring break safety			
B	Safeties that act on the door panel			
1	Safeties that engage with the track.			
2	Steel cable attachment with locking pawls (teeth) for slack cable and/or cable break safety			
C	Test for A or B			
1	Attachment, condition			
2	Moving parts: wear, corrosion, (partially) seized			
3	Identification plate: completeness, legibility			
4	Functional test in accordance with manufacturer's instructions			

6	Door leaf	NO	O	N/A
a	Condition and wear			
b	Attachment, fasteners			
c	Centre hinges, roller brackets with hinge, rollers, bushes and lubrication			
d	Roller setting			
e	Section offset			
f	Wind braces			
g	Door panel lock			
h	Condition of the glazing retaining arrangements			
i	Wicket door			

7	Safety edge	NO	O	N/A
	Conditional and functionality (door reversal)...........			

8	Safety guarding for areas where there is a risk of crushing and amputation	NO	O	N/A
	e.g. inner sealing faces, chain cases, etc.			

9	Additional safety devices for protecting persons/objects, e.g. photocells, etc.	NO	O	N/A
a*	Condition and functionality			
b*	Is a light grid used to safeguard the main closing edge of the door?	**yes / no**		
c*	Is this a light grid with a blanking function (blanking procedure)?	**yes / no**		
d*	Is it actually possible, due to the design of the door, to drive through the door with a lifting platform with the articulated arm raised?	**yes / no**		
e*	Is the door system set to automatic operation (automatic closing) or can the door be closed without deliberate operation?	**yes / no**		
f*	Is the door actually driven through by lifting platforms with articulated arms (must be checked with the operator, because they are responsible for safe operation)?	**yes / no**		

10	Compliance with prescribed closing forces (quick test)	
a	Average of three readings:	**.................... N**
b	Compliance with maximum prescribed closing force (400 N)	**yes / no**
c	Compliance with dynamic time value (0.75 s) .	**yes / no**
d	Compliance with static time value (5 s) and residual force < 25 N .	**yes / no**

11	Tracks/frame components	NO	O	N/A
a	Attachment, condition (deformation)			
b	Wear			
c	Plastic inserts: condition, securely seated			
d	Door frame seals			
e	Spring buffers			

12	Lockable main switch (alternative: CEE plug)	NO	O	N/A
	Present			
	Condition and functionality			

13	Identification plate present	
	CE mark displayed.	**yes / no**
	Condition and functionality.	

14	Door documentation/test logbook present	**yes / no**

15	Test result	**yes / no**
	No faults found.	
	The following faults were found	
	1. 2. 3. (In the event of further faults, please use supplementary sheet.)	

The fault identified as no...... adversely affects safety, results in	
A risk of injury to people and damage to objects and must be immediately resolved.	
Until the faults have been resolved, it is strongly recommended that the system is taken out of service.	

The test and inspection have been performed to the highest standards in terms of expertise and judgement. All due care has been exercised during testing and inspection, therefore no liability can be accepted forpossible hidden defects.

The next test and inspection must be performed no later than: ______

Carbon copy of form received: ______

Town, date, signature of operating company's representative:

______

* Only if all of the aforementioned questions can be answered 'Yes' is there a potential risk when driving through the door. If this is the case, the operator of the door system must cooperate with the manufacturer to develop a suitable solution to improve safety. As a precaution, the door system's automatic mode must be switched off (see point 3).

______

(Certified) inspector's name and signature

Maintenance log

Date	Name of the technician	Company	Analysis	Action	Notes

Maintenance log

Date	Name of the technician	Company	Analysis	Action	Notes

Maintenance log

Date	Name of the technician	Company	Analysis	Action	Notes

Maintenance log

Date	Name of the technician	Company	Analysis	Action	Notes

Novoferm Nederland B.V., Noordhoven 19, Postbus 1073, 6040 KB Roermond, the Netherlands. www.novoferm.nl