Normstahl

USER MANUAL
NORMSTAHL OSP42DD

P1452109

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The Normstahl brand has been a reliable partner and producer of premium entrance systems for the private and industrial sector since 1946. In collaboration with its network of distribution partners, Normstahl has become a leading provider of entrance solutions within Europe.

About this Manual

All users and owners of the door operated by a chain hoist or a must read, understand and obey the information and instructions in this manual. Failure to do so may result in damage to, or failure of the equipment, and possible injury to persons. Save these instructions.

This manual contains information and user instructions for a door that is operated by the .

When information or instructions are applicable to all the methods of operation or models, there are no operation types or model numbers in the title.

When information or instructions are applicable to specific methods of operation or models, the applicable operation type or model numbers appear in the title.

To identify the model installed with the door , see section 2. Introduction on page 5and the cover of the installed with the door.

Maintenance of your door

To make sure your Normstahl door continues to operate with maximum reliability, safety and performance, it is necessary to do regular maintenance as specified in this user manual and in the logbook supplied with your Normstahl door. This maintenance must be done by qualified service engineers trained to recognise possible problems, and to replace parts that have a defined life expectancy.

Dismantling and disposal of the door

Dismantling of the door or parts thereof may only be carried out by qualified personnel. These tasks are complicated and potentially dangerous. Please make a contribution to protecting the environment when disposing of the door at the end of its functional life. Contact your local Service Centre for appropriate means of disposal.

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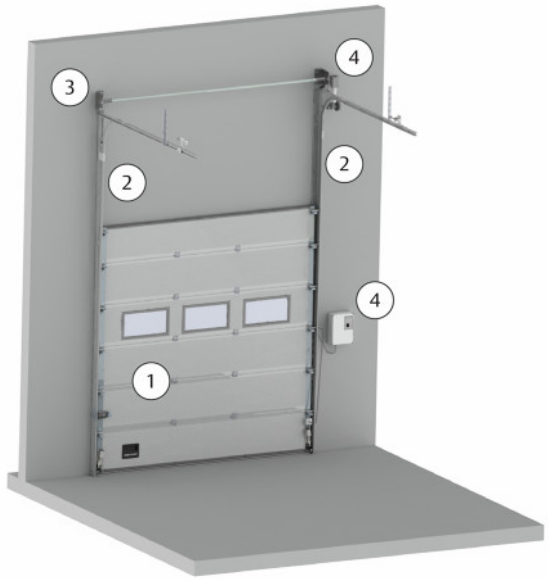
1 Introduction

The overhead sectional direct drive door is designed to enable a fast and easy access to and from buildings.

The door leaf is made of insulated panels, or a combination of insulated panels and acrylic windows. The door leaf moves along tracks installed at each side of the door leaf. It is operated by an electrical door control system.



The door has 4 primary parts:

1. Door leaf
2. Track set
3. Lifting mechanism
4. Operating system

1.1 Door leaf

The door leafs are an assembly of horizontal sections connected together via hinges. The outer hinges of each section have rollers that engage in the tracks to enable easy opening and closing of the door.

There are two types of door leaf; one is made of sandwich panels, the other is made of framed window panels. Glazed sections can be installed in the sandwich panels if required.

Seals installed on the sides, top and bottom of the door leafs improve the insulation of the working environment. The bottom seal also acts as a shock absorber when the door closes.

A handle is installed on the door leaf to enable easy opening and closing of the door.
A door lock is also installed on the door for extra security of the working environment.

1.2 Track set

The track set supports the door leaf. The rollers on the door leaf move along the track set when the door is opened and closed. Different track sets can be installed dependent on the structure of the building and the space available.

1.3 Lifting mechanism

The system is installed on the top of the track set and consists of a shaft that has a cable drum at each end. Cables on the cable drums are connected to the bottom corners of the door leaf.

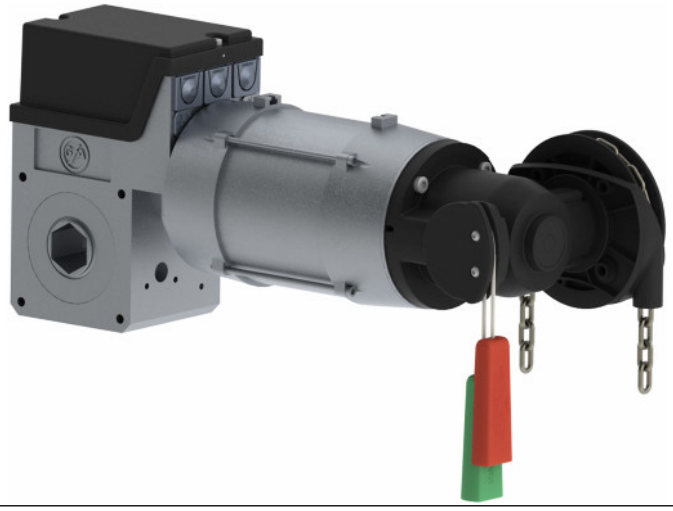
A slack cable switch is installed in the corner-bracket, stopping the door immediately when the cable becomes slack or breaks.

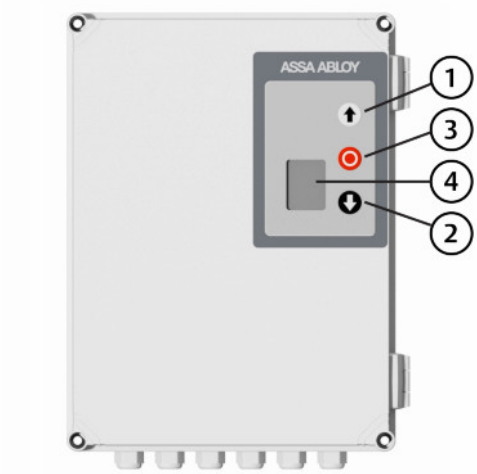
1.4 Operating system

1.4.1 SI 16.20-SW32,1 with TS 971XL

The SI 16.20-SW32,1 permits opening and closing of the door via a push-button control unit. It is also possible to enable use of Access and Automation functions.

The primary parts of the SI 16.20-SW32,1 are the operator (electric motor) that is installed on the shaft, and the door control system.





1. Up button
2. Down button
3. (Emergency) stop button
4. Digital display for troubleshooting and maintenance

1.4.2 Technical specifications

Classification	IP65
Supply voltage Operator	400V AC, +/- 10% 50 Hz 10 A
Temperature working range	-10°C to +60°C
Operating factor Operator	ED = 30%, S3 10 min., non-continuous operation (≈ 30 cycles/hour)
Atmospheric humidity	0-80% relative, not condensing

2 Safety instructions

2.1 General safety statements

The door has been designed to meet all operational and safety requirements in the European Directives and the standards issued by the European Standardization Committee, CEN.

Important safety instructions.

- *It is important for the safety of persons to follow these instructions. Save these instructions.*
- *Only authorized persons are permitted to operate the door.*
- *Make sure there are no persons or equipment in the working area of the door before you operate the door.*
- *This door is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the door by a person responsible for their safety.*
- *Children should be supervised to ensure that they do not play with the door or controls. Keep remote controls away from children.*
- *Frequently examine the installation for signs of wear or damage to cables and mounting. Do not use the door if repair or adjustment is necessary. Report defects immediately.*
- *When the door cannot be opened, with the operator and/or manually, do not try to open the door with a forklift, jack or similar. Report defects immediately.*
- *Electrically disconnect and immobilize the door before you do maintenance on the door.*
- *Do not use the door leaf or track set to support a ladder when you do maintenance on a door. Always use ladders as specified in local health and safety instructions.*
- *Do not operate the door after the date of the next scheduled maintenance. The date of the next scheduled maintenance is shown in the logbook.*
- *If one of the safety devices has been activated, take the door out of operation and contact the service center immediately.*
- *If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service center.*
- *Do not remove or immobilize safety equipment installed on or near the door.*
- *Do not modify, adjust or disassemble any part of the overhead sectional door, including the door cables and cable attachments. Unauthorized modification can cause danger to people and affect the function and safety of the door.*

- *Always obey local health and safety regulations when you operate or do maintenance on the door.*

2.2 Safety symbols used in this manual

The following safety symbol is used in this manual:

Indicates a general warning

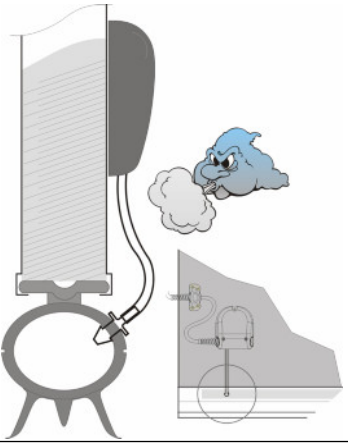
2.3 Safety Information

2.3.1 Pneumatic edge

The bottom sealing is connected to a pneumatic switch via a hose. If the sealing is compressed while the door is on its way downward, the circuit in the control unit reacts by reversing the door. The safety edge is supervised. This means that the safety edge is tested each time the door is closed. If the door leaf has passed the lower limit without detection of a pulse from the pneumatic switch, the control unit goes into hold -to-run function. The door can now only be closed by pressing the close-button continuously.

To avoid injury during operation of the excitation unit, monitor the door's closing movement until the door is closed.

The safety edge can be reset automatically if the safety edge is working and issues a signal at the lowest position (< 50 mm from the floor) during hold-to-run operation downwards.

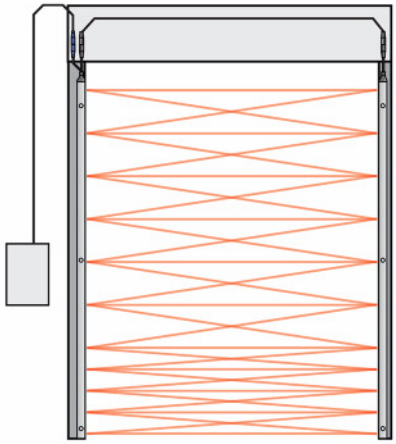


2.3.2 Light curtain

To avoid injury during operation of the excitation unit, monitor the door's closing movement until the door is closed.
Avoid damage to the optical elements.

The light curtain (LG) operates according to the following principle:

- The light curtain blanks out the infra red beams without de-energizing its output when the door leaf is descending.
- When the door leaf obstructs the final beam, the light curtain de-energizes its output in order to simulate safety edge signal.
- If any beam is obstructed out of this sequence the light curtain output de-energizes and the operator reverses the door leaf immediately.
- The light curtain is supervised. If there is a failure, the operation goes over to hold-to-run down.



The light curtain optics are located in the door guiding frame.

Although the light curtain does not need regular maintenance, a periodic functional check is strongly recommended:

- Make sure the optical elements are clear of dirt and dust. If necessary, clean the front surface with a soft towell.
- Make sure the edges are securely fastened.
- Perform a check of the mounting position, cable routing and connection of the sensor.
- Never use any solvents, cleaners or mechanically abrasive towels or high-pressure water to clean the sensor.
- Avoid scratching the optical elements while cleaning.

2.3.3 Pull-in protection

The door is equipped with slack rope switches and a door blade designed for pull-in avoidance, in order to meet EN12453.

2.4 Open/Close Door at Electrical Supply Failure

Make sure no persons or equipment are below the door before you engage the chain hoist.

1. Disconnect the electrical supply from the door.
2. Engage the chain hoist by pulling in the rope with the red handle.
3. When the electrical supply is available:
    1. Disengage the chain hoist by pulling in the rope with the green handle.
    2. Connect the electrical supply to the door.

3 Operating Instructions

3.1 Daily Start Procedure

1. Make sure there are no obstructions or obstacles in the vicinity of the door so that the door can move freely.
2. Examine the door for damage on the door leaf, lifting cables and tracks.
3. If damage is found:
   - Put suitable warning signs around the door.
   - Contact the applicable person.
4. Electrical operation:
   - Switch on the electrical supply to the door.
   - Reset the emergency stop button (if applicable) and enable normal operation of the door.
   - Check that the 'stop'/'emergency stop' is working: press and hold the 'stop'/ 'emergency stop' button and try to open the door. The door should not open.

3.2 Daily Stop Procedure

1. Examine the door for damage on the door leaf, lifting cables and tracks.
2. If damage is found:
   - Put suitable warning signs around the door.
   - Contact the person responsible.

3.3 Open the door

Make sure there are no persons or equipment in the working area of the door before operating the door.

1. Make sure the Daily Start Procedure has been done.
2. Make sure the pass door is closed correctly.
3. Release the door lock.
4. Press and release the  button and make sure the door moves to the fully open position.
5. Check if the additional safety features such as photocell, magnetic loop, radar, etc are working

3.4 Close the door

Make sure there are no persons or equipment in the working area of the door before operating the door.

1. Press and release the button and make sure the door moves to the fully closed position.
2. Fasten the door lock.

4 Maintenance

In this chapter you find the maintenance tasks that you as a user must perform. With the exception of inspections and maintenance tasks explicitly described in this manual as being performable by the user, all other maintenance tasks, as described in the Logbook are rated advanced and can only be carried out safely by a competent person. Contact your local Service Centre.

4.1 Preventive maintenance schedule

Frequency	Part	Tasks
Daily	Door complete	Do the Daily Start Procedure.
		Do the Daily Stop Procedure.
Monthly	Door complete	If necessary, clean the door leaf
		Do the monthly examination of the door
Every two months	Door complete	If necessary, clean the door leaf
		Do the monthly examination of the door
Every six months	Door complete	Clean the door leaf

4.2 Preventive maintenance procedures

4.2.1 Clean the door leaf

Do not use the door leaf or the track set to support a ladder when you do maintenance on a door. Always use ladders as specified in local health and safety instructions.

1. Do the Daily Stop Procedure.
2. Use a soft clean brush and mild detergent to clean the inside and outside of the door leaf.
3. Examine the painted surfaces of the door leaf for damage to the paint.
4. If damage is found, contact the local service centre for repairs.

4.2.2 Monthly examination of the door

Do not use the door leaf or the track set to support a ladder when you do maintenance on a door. Always use ladders as specified in local health and safety instructions.

1. Use a soft brush and a mild detergent to clean the track set and the door seals.
2. Make sure there are no loose screws, bolts or nuts on the door leaf or the track set.
3. If necessary tighten all loose screws, bolts and nuts.
4. Examine all door leaf hinges, door seals, rollers and roller holders for damage.
5. If damage is found, contact the local service centre for advice.
6. Examine the door cables for damage and corrosion.
7. If damage or corrosion is found, contact the local service centre for advice.
8. Lubricate the metal door-leaf hinges with oil (SAE 20).
9. Remove all tools and equipment from the area.
10. Do the Daily Start Procedure.

5 Troubleshooting

Check for an error code on the controller. Consult the manual for the controller.

5.1 Introduction

This chapter contains troubleshooting information for users of this door. If a fault is not described in this chapter contact your local Service Centre for assistance.

5.2 Door does not go up or down correctly

Possible Cause	Solution
Damage to door or track set	Do the monthly examination of the door
No main electrical supply	Switch on electrical supply
Emergency stop button pressed in	Make sure the Daily Start Procedure has been done.
Error code displayed on control unit	Refer to the error codes list and do the applicable action.
Chain hoist engaged	1. Disengage the chain hoist by pulling in the rope with the red handle 2. Press and release the (image of up button) button and make sire the door moves to the fully open position.

5.3 Error codes list

On the OSP42DD door control system error codes appear on the digital display. The following errors can be solved by the user. For any other codes, please contact your local Service Centre for assistance.

Error Code	Cause of error	Solution
F 1.4	Emergency Stop/ Slack rope switch activated	Check Emergency Stop. Check door safety switch. Check the connection cable is properly fitted.
F 2.2	Maximum number of consecutive safety edge activations. (Parameter 2.5) (Only with automatic closing)	Obstacles in the door travel path. Check the safety edge system is functioning.
F2.7	Safety edge 1k2 defective	Check whether the safety edge system is correctly functioning. Check whether the connection cable is connected.
F 4.6	Light curtain obstructed.	Check light curtain. Check the connection cable is in order.

Error Code	Cause of error	Solution
F 6.5	Temperature limit exceeded.	Drive unit overload. Cool down the drive unit and reduce number of cycles.

Error Code	Cause of error	Solution
F 5.0	Controller fault.	Switch control off and on. Replace control if necessary.
F 5.1	ROM error.	Switch control off and on. Replace control if necessary.
F 5.2	CPU error.	Switch control off and on. Replace control if necessary.
F 5.3	RAM error.	Switch control off and on. Replace control if necessary.
F 5.4	Internal control error.	Switch control off and on. Replace control if necessary.

Display Code	Reason	Solution
CS	Maintenance interval reached Factory setting	Please contact your local Service centre.

6 Recycling the Operator

The power has to be switched off before any work at the product.

The product should be returned for recycling at your local recycling depot. N.B. Upon disposal, the material components of the product such as metal, plastic, wiring, circuit boards and battery should be separated before it is deposited for recycling.

1. Metal
2. Plastic
3. Wiring
4. Circuit boards
5. Battery

The battery must be removed from the appliance before it is scrapped. The appliance must be disconnected from the supply mains when removing the battery. The battery has to be disposed safely.

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