



OPERATING MANUAL

English

INDUSTRIAL SECTIONAL DOORS

Series ProPlus, ProTrend,
AluPro, AluTherm, AluTrend

2017

OPERATING MANUAL

INDUSTRIAL SECTIONAL DOORS SERIES PROPLUS, PROTREND, ALUPRO, ALUTHERM, ALUTREND

Dear customer,
Thank you for placing confidence in us and choosing ALUTECH doors.

CONTENTS

1.	PRODUCT DESCRIPTION	2
1.1.	PRODUCT FUNCTION AND SERVICE CONDITIONS	2
1.2.	MOUNTING TYPES.....	3
1.3.	DOOR DESIGN	4
2.	PRODUCT OPERATION	6
2.1.	OPERATION METHOD FOR DOORS WITH MANUAL CONTROL	6
2.2.	OPERATION METHOD FOR DOORS WITH AN ELECTRIC MOTOR	6
3.	SAFETY REQUIREMENTS	6
4.	PRODUCT CARE	7
5.	SERVICE MAINTENANCE	8
6.	WARRANTY	8
6.1.	WARRANTY PERIOD	8
6.2.	MANUFACTURER'S WARRANTY	9
6.3.	TERMS OF WARRANTY AND WARRANTY MAINTENANCE	9
6.4.	WARRANTY REQUESTS REVIEW	10

Because of constant improvement to the sectional door's design the Manufacturer reserves the right to make changes to this document without giving preliminary notice to its clients.

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1. PRODUCT DESCRIPTION

1.1 PRODUCT FUNCTION AND SERVICE CONDITIONS

This Operating manual applies to ProPlus, ProTrend, AluPro, AluTherm, AluTrend sectional doors designed to be installed in industrial, public and office buildings in order to prevent the unauthorised access into the premises and to ensure good thermal and sound insulation.

The doors are not designed to be installed in explosive and fire-hazardous buildings, or to act as fire barriers closing off openings.

The doors are designed for operation in following temperature conditions:

- upper operating temperature +40 °C;
- lower operating temperature –45 °C;
- upper limit operating temperature +45 °C;
- lower limit operating temperature –50 °C.

Notes.

1. The operating temperatures are temperatures needed to ensure the maintenance of required properties and economically expedient service life of the product.
2. The limit operating temperatures are acceptable temperatures (for limited exposure and not for more than 6 hours, and for lower temperatures less than 12 hours) during door operation. If the doors are used in limit operating temperatures, they must:
 - keep functionality, but will not correspond obligatorily to nominal characteristics;
 - renew all nominal characteristics after the temperatures turn to normal.

When operating the doors under conditions, leading to significant temperature difference of outer and inner surfaces of the door leaf (mounting of dark-colored doors, which have low reflectivity, on the sunny side of buildings and constructions; door operating in the heated premises at low outdoor temperatures etc.) the bending of sandwich panels, caused by the thermal expansion/contraction of the steel sheets, is possible. That can lead to door damage when opening and closing. In case of bending, exceeding the value of 1/150 of opening width, due to the conditions described above, the operation of the door is to be stopped until the temperature difference between the outer and inner surfaces of the leaf is reduced.

The doors are designed for operating under the following relative air humidity conditions:

- up to 90% indoors;
- up to 100% outdoors.

The doors are manufactured with manual or automatic control systems.

The electric motors are designed to be plugged into electric networks with a frequency of 50 Hz and nominal voltage of 230 V or 400 V. The usage of electric motors is possible while the ambient temperatures are from –20 °C up to +50 °C.

The doors are installed behind the opening inside the premises on a substrate such as concrete, brickwork, metalwork or a combination of these materials.

1.2 MOUNTING TYPES

Depending on the characteristics of the premises where the doors are installed, the tracks and springs can be manufactured in different mounting types. Different mounting types are presented in the *figs. 1–10*.

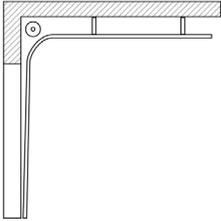


Fig. 1. Standard mounting

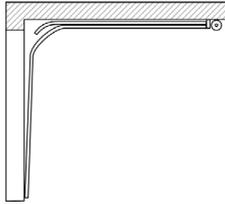


Fig. 2. Low mounting

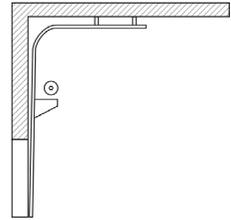


Fig. 3. High mounting with bottom shaft positioning

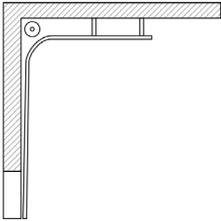


Fig. 4. High mounting with top shaft positioning

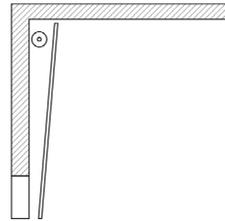


Fig. 5. Vertical mounting with top shaft positioning

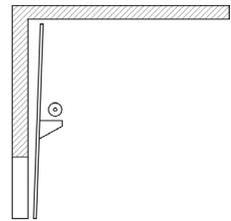


Fig. 6. Vertical mounting with bottom shaft positioning

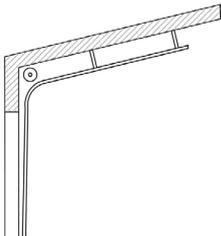


Fig. 7. Inclined mounting

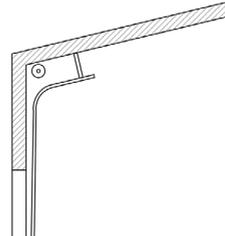


Fig. 8. Inclined high mounting with top shaft positioning

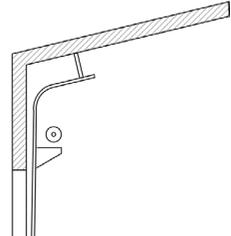


Fig. 9. Inclined high mounting with bottom shaft positioning

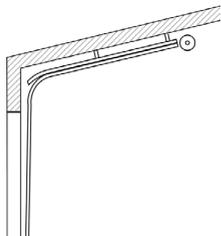


Fig. 10. Inclined low mounting

1.3 DOOR DESIGN

Doors consist of a bearing structure, door leaf, torsion shaft and springs, control elements. The typical design of a door of standard mounting is shown in *fig. 11*.

The door bearing structure is an assembly of vertical angle bars with profile tracks and horizontal profile tracks.

The door leaf is made from sections, connected with side roller brackets and intermediate hinges. The sections are made of steel two-wall sandwich-panels with polyurethane foam filling the inner space or aluminium frames with infill panels.

The door leaf movement is performed along the tracks on adjustable rollers made from wear-resistant plastic fixed in roller supports of the side hinges.

The door leaf is hung on two steel cables fixed to bottom brackets with cable break protection.

The cables are wound on drums mounted on the torsion shaft.

Effort produced by the springs balances the weight of the door leaf and keeps cables constantly tight.

Note: If it's not possible to produce the doors with a single shaft balancing system, the doors can be supplied with a double shaft balancing system. The double shaft balancing system includes two shaft blocks connected by two chain gears. Each shaft block includes two shafts with an adjustable coupler, springs with fittings, brackets with spring break device.

Special set for sectional doors installed in damp premises, increases the corrosion resistance of the product, but does not exclude rust stains. Opening/closing of the door leaf is performed either manually or with the help of an electric motor.

Manual control can be performed with the help of handles fixed on the door leaf, by using a rope or a chain hoist operated by chain (when chain hoist is ordered as an optional extra to a standard set).

The following safety elements are used in the door construction:

- bottom brackets with cable break protection (*pos. 1 fig. 11*);
- spring break devices (*pos. 16 fig. 11*), which are activated when a spring is broken.

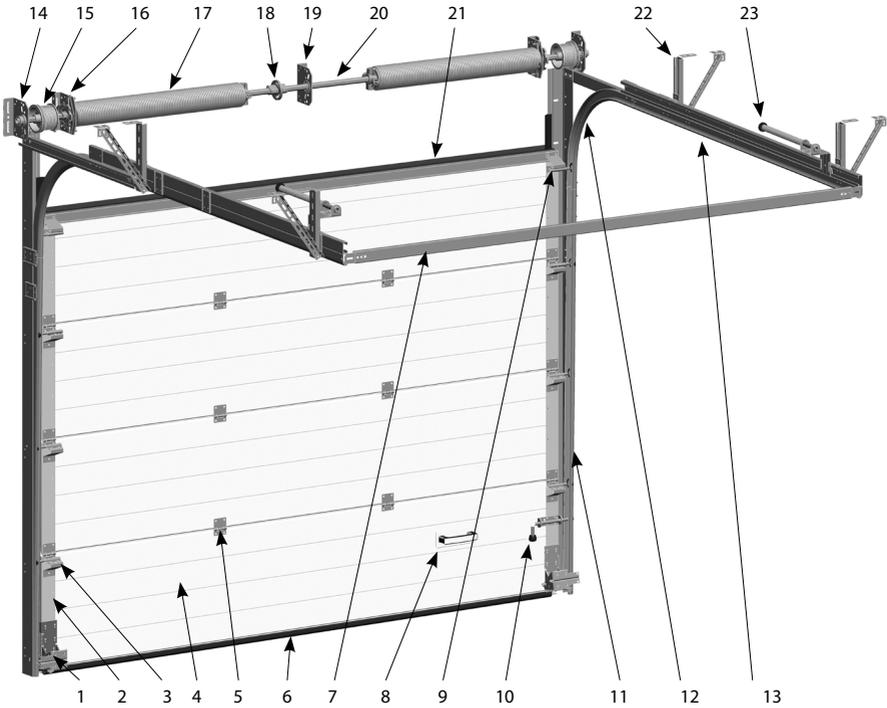
Doors with an electric drive can be equipped with the following protection and automation elements:

- micro switches, which switch off the electric motor in the case of spring break;
- micro switches, which switch off the electric motor in the case of a cable break;
- wicket sensor for blocking door opening in case when a wicket is not fully closed.

The opening of the wicket at an angle of more than 100° is not allowed.

For protection of door leaf bottom edge in case, in the process of closing, it touches any obstacle optical sensors should be used. Optical sensors are activated at the moment when the door leaf touches an obstacle. The sensors are installed in the bottom seal and by its deformation during touching an obstacle this gives a signal for the electric motor control system to stop. After the stop the motor lifts the door leaf a small distance and stops again. If there is no sensor or in case of a fault in sensor door closing is possible in 'presence of operator' mode only, i.e. by holding the corresponding button on the control panel pressed. For door leaf opening there is no need to hold the corresponding button pressed.

The door locking is done by a spring locking bar or key lock. The key lock allows locking of the doors both from inside and outside. The locking by a spring locking bar can be done only from the inside of the premises.



1	Bottom roller bracket
2	Side cap
3	Side roller bracket
4	Door panel
5	Intermediate hinge
6	Bottom end profile with seal
7	Spacer bar
8	Handle
9	Top roller bracket
10	Locking bar
11	Angle bar with vertical track profile and seal
12	Radius profile

13	Horizontal track profile
14	Side bracket
15	Cable drum
16	Bracket with safety ratchet jaw clutch
17	Spring with fittings
18	Adjustable coupler
19	Intermediate bracket
20	Shaft
21	Top end profile with seal
22	Telescopic adjustable hanger
23	Damping device

Fig. 11. Industrial doors. Standard mounting

2. PRODUCT OPERATION

2.1 OPERATION METHOD FOR DOORS WITH MANUAL CONTROL

a) opening from inside:

- if there is a spring locking bar for opening the doors from inside you should open the bar and fix it in the open position.
- If there is a key lock for opening the doors from inside you should unlock it by pressing on the button-handle and turning it in the required direction.
- lift the door until it stops in its upper position, using the rope, chain hoist or handle fixed to the inner side of the door leaf (depending on ordered door set).

b) opening from outside:

- turning the key opens the key lock (if there is one);
- lift the door leaf using the handle.

c) closing from inside:

- pull down the door leaf using the handle, rope or chain hoist (depending on ordered door set);
- close the doors with the spring locking bar or key lock.

d) closing from outside:

- pull down the door leaf using the handle;
- close the lock by turning the key (if there is one)

2.2 OPERATION METHOD FOR DOORS WITH AN ELECTRIC MOTOR

When the doors are equipped with an electric motor, remote control devices, electric key locks and other control devices, it is necessary to refer to and use the operating manuals for the electric drive and additional devices.

Attention! Switch on the electric drive only if the door is not locked by spring locking bar or key lock bolt to prevent breakage of the parts and mechanisms of the door and/or electric drive.

3. SAFETY REQUIREMENTS

The elements used in sectional door construction provide complete safety during use of the product, if all the safety requirements are followed.

While operating sectional doors it is necessary to conduct visual control of the door leaf during the open-close process to prevent people and unwanted objects entering into or obstructing the working area.

During sectional doors operation **it is prohibited:**

- to impede the door leaf movement (open-close);
- to be in the area of its movement during door leaf closing;
- to lift the door leaf when a wicket is open. in the case of doors supplied with an electric motor—to operate the door when the sensor for wicket positioning is switched off;
- in case of door that is supplied with an electric motor—to open the door leaf manually, without releasing the motor in advance;
- to lift the doors by an electric motor when a spring locking bar or key lock is closed;

- to disengage the door closer on the wicket;
- to use the doors when panels and components are dirty, which can lead doors to operating badly and possibly failing;
- to give the remote control to children;
- to use sectional doors when obvious damage to pull ropes, springs, brackets and other elements of construction, electric power cables and control devices is evident;
- to use the doors when one or more component parts are out of order;
- to repair the doors yourself or using unqualified persons.

It is only safe to enter and exit after the doors have stopped in the top edge position. At the same time you have to be sure that there is no chance that a vehicle can touch the lower edge of the door leaf or other construction elements of the door.

Attention! It is prohibited to change the construction of the doors independently, including installation of additional elements to the construction. It can lead to damage or fast deterioration of the construction elements.

If and when violations and faults in your sectional door operation become evident, in particular, in the case of any abnormal noise, smell or something similar, giving reason for concern, immediately stop using the doors and contact the service department of the company, which performed installation of the doors or another special service agency (company).

4. PRODUCT CARE

In order to maintain the product in constant technically correct order and readiness to operate, it is necessary to keep all the door's elements clean. Use rags and non-aggressive cleaning liquids for cleaning.

When aggressive chemicals get on to the door's surface, clean them away using a suitable non-aggressive liquid.

Condensation and misting on the inner surfaces of glazing is acceptable.

For stable and durable sectional door operation it is necessary to meet the following requirements:

- it is permitted to use only correctly adjusted doors;
- there should be no hindrance and obstacles within the door's walkway;
- the rollers and hinges should be periodically lubricated using a consistent grease (Lithol24 or similar);

Attention! It is prohibited to lubricate the tracks using consistent greases.

- to ensure smooth running of the door leaf during manual operation. When using an electric motor do not accelerate or slow down the running of the door leaf;
- do not leave the door slightly open or half-open for long periods;
- before using the door during winter or after it being closed for long periods, it is necessary to clean away snow, ice or dirt before operating;
- to prevent sagging of the bottom end profile it is recommended not to step on or apply downward pressure in some other way to the threshold of the wicket.

To clean door glazing it is recommended to wash off the dirt with clean water and then to wipe the surface with a clean cloth or a soft bristle brush. It is allowed to use neutral non-abrasive household detergents or specialized organic glass cleaners. Improper cleaning may result in scratches on the surface and loss of transparency.

Recommendations for door operation in premises with high humidity (for example, in automatic car washes or railway carriage washes).

After door installation it's recommended:

- to install a safety curtain* at 600–700 mm distance from the door leaf;
- if a torsion shaft is positioned behind the horizontal tracks and is situated above the car washing area, it should be covered with a protective casing;
- to decrease the amount of cleaning liquid evaporation on the door construction elements it is recommended to install an exhaust system*;
- if cleaning liquids get on to the door construction elements, they should be cleaned using clean water immediately after the car-wash is used and the door leaf should be wiped with dry rags;
- brackets, roller spindles and springs should be lubricated using a consistent grease (Lithol24 or similar) at least once a month (we recommend—once a week).

Follow the above mentioned recommendations will increase the corrosion resistance of the product, but it does not prevent corrosion traces.

5. SERVICE MAINTENANCE

Sectional doors are a device consisting of movable parts and mechanisms. For stable operation and safe usage the doors should be periodically checked and examined according to the routine maintenance list.

Sectional doors service maintenance should be conducted only by specialists from a special service agency (company) or specialists from the company, which performed door installation. While providing service maintenance it is necessary to use original parts/units of the Manufacturer. Industrial doors should be checked at least once a year. The first service maintenance has to be done within the first 3 months after installing the door.

Door service maintenance in special conditions of use should be done at least once in every 3 months.

Special conditions of use cover the following examples:

- premises with high humidity and/or corrosive environment;
- premises with intense door use more than 5 cycles per day;
- severe climatic conditions (high wind load, areas with continuous (over 6 months) period of negative temperatures).

It is also recommended to conduct door service maintenance after repairs (painting and other construction works) inside the premises, where the doors are installed.

6. WARRANTY

6.1 WARRANTY PERIOD

Advanced materials, compliance with quality standards and production control at all stages allow us to offer the extended warranty for ALUTECH sectional doors.

While adhering to all the recommendations of the Manufacturer and the requirements set out in the technical documentation, the Customer is guaranteed the reliability of the doors during the entire product life.

* not delivered in the door kit.

The Manufacturer provides:

- a 10 year warranty for lack of perforating corrosion of metal sheets of sandwich-panels, and steel profiles track and hanger systems, door elements of stainless steel and galvanised steel;
- a 2 year warranty for doors in general and their separate elements, such as cables, roller brackets and rollers, torsion shaft assemblies, sealing inserts and other elements of doors.

If the door is supplied with the electric drive, the warranty period for the drive is specified by the manufacturer of the said electric drive.

The warranty period of parts (components) installed instead of defected ones is equal to the warranty period of original parts (components), but is not less than 6 months from the date of their replacement.

The warranty period for the product starts from the date of delivery. If it is impossible to determine the date of delivery the warranty period starts from the date of production.

6.2 MANUFACTURER'S WARRANTY

During a warranty period the Manufacturer guarantees faultless operation of the product and ensures the elimination of all revealed hidden manufacturing faults. 'Hidden manufacturing faults' refers to: the faults initiated by material defects or breach of technological process of parts manufacturing (components). The detection of the fault must be confirmed by corresponding bilateral Report (claim, fault, or other), which is issued in the obligatory presence of a representative from a special service agency (company) or organisation, which performed product installation. The elimination of the hidden manufacturing faults is to be conducted by a special service agency (company) or organisation that performed the installation of the product.

In the case of detecting hidden manufacturing faults in the product before the end of warranty period, confirmed by the corresponding bilateral Report, and if manufacturer does not prove that this fault appeared after handing over the product to the Customer because of breach of regulations set by the present Manual or the actions of the Customer or the third parties, or force-majeure, the Manufacturer is bound considering technically the most appropriate method:

- to change defective parts (components) free-of-charge for the parts (components) of acceptable quality;
- to repair defective parts (components) free-of-charge;
- to fulfill its warranty obligations under the Agreement with the Customer by other means. The Manufacturer does not compensate for the expenses related to installation and removal of parts (components), also including transport and other costs. These costs are borne by the organization performing service maintenance.

Changed parts (components) become the property of the Manufacturer.

6.3 TERMS OF WARRANTY AND WARRANTY MAINTENANCE

The warranty applies to the doors, operated at normal load maximum of 5 door cycles (open/close) per day.

The warranty period for the doors, operated in special conditions, is 2 years. The special operating conditions are as follows:

- operating in the areas with high humidity and/or corrosive environment;
- operating at intense load greater than 5 cycles per day;
- operating in the tough environmental conditions (areas with strong wind, long periods (more than 6 months) of exposure to subfreezing temperatures.

The Manufacturer provides the warranty under the following conditions:

- The installation is to be performed by qualified personnel authorized by the Manufacturer or an official representative of the Manufacturer in compliance with the 'Installation Guide'. Information about the organization, that performed the installation, is to be specified in the Product Certificate;
- the rules of operation and maintenance of the product specified in the 'Operating Manual' are to be observed;
- service maintenance is to be scheduled according to the 'Maintenance regulation' and conducted respectively. For each planned service (technical) maintenance activity there should be a mark in the door Registration Certificate (section 'Service Maintenance'). Warranty repairs are carried out only when the original Registration Certificate is available.

The Manufacturer's warranty is not provided:

- when the mechanical damage occurs due to improper transportation or in the process of the door installation (scratches, scuffs, dents, chipped paint and others);
- when the faults or defects are caused by external influence on the product (fire, water, salts, acids, alkalis, mortars and sealants, force majeure, abnormal weather conditions, etc.);
- when the changes in the product design are made by the Customer (unauthorized modernization, change of design features, etc.);
- when non-original (not recommended by the Manufacturer) parts/components are used for the repair service;
- if the product number has been removed/changed;
- if the original Registration Certificate is not available or in case of its improper filling;
- if the faults occur due to repair, carried out not by specialized (authorized) customer service agency (organization);
- if the occurred faults are the result of:
 - in case of failing to comply with the 'Installation Manual' and the requirements presupposed by the work of this kind;
 - in case of failing to operate the product in accordance with its intended purpose (e.g., when installing the doors in the explosion and fire hazardous zones of the buildings; installing doors of basic construction in the premises with high humidity and/or corrosive environment);
 - in case of continuing the operation of the defective product;
 - in case of failing to comply with the Operation Manuals and safety labels on the product;
 - in case of failing to comply with the Service Maintenance and delays in scheduled service work;
 - in other cases of improper operation of the product and neglect.

6.4 Warranty requests review

ALUTECH sectional doors are produced according to strict quality standards and in full compliance with European safety standards.

If you still have a basis for reclamation, please provide the most detailed information, including pictures of the defect in details. This will help us to determine the causes of failure and answer you as soon as possible offering a solution to fix it.

NB! You must specify the product number and a copy of the Registration Certificate with previous service maintenance records must be included in the reclamation letter.



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