VARIOTEC

Recommendation for the maintenance and care of exterior doors

Handbook

VARIOTEC

No. 93-2

VARIOTEC GmbH & Co. KG | Weißmarterstr. 3-5 | D-92318 Neumarkt i.d.OPf. | Phone: +49 9181 6946-0 | Fax: +49 9181 6946-50 | info@variotec.de | www.variotec.de

Maintenance and care of external doors

	Functional check	Visual inspection	Regreasing / oiling	Retighten screws	Check	All right	Not in order (description)
Wooden frame, lining, Frame	●	●		●	Tape mounting		
		●			Sealing to the building structure		
		●			Fastening to the building structure		
		●			Surface (weathering/damage)		
		●			Other defects		
Metal frame	●	●		●	Tape mounting		
		●			Sealing to the building structure		
		●			Fastening to the building structure		
		●			Surface (weathering/damage)		
		●			Other defects		
Door leaf		●			Surface (weathering/damage)		
	●	●			Gasket pressure		
		●			Other defects		
Glass / Filling		●			Mounting Retaining rails		
		●			Sealing		
		●			Other defects		
Tapes	●	●		●	Mounting		
		●			Corrosion		
		●			Correct pin fit in band (readjust if necessary)		
	●	●	●		Smooth running (possibly cleaning, greasing, oiling)		
Door lock	●	●		●	Mounting		
		●			Corrosion		
	●	●	●		Clean latch / bolt, grease if necessary		
	●				Spring tension latch		
	●				Latch in strike plate extended		
	●	●			Locking one/two speed possible		
	●	●			Door can be opened under load		
	●	●			Function Lock		
	●	●			Function Cylinder		

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Wartung - Unterhalt - Pflege von Außentüren

	Functional check	Visual inspection	Regreasing / oiling	Retighten screws	Check	All right	Not in order (description)
Door nameplate / door handle	●	●		●	Mounting		
		●			Corrosion		
	●	●		●	Seat Locking pin/screw		
	●	●			Clean guidance Door handle		
					Other defects		
Striker plate, E-opener	●	●		●	Mounting		
		●			Corrosion		
	●	●			Movement, latch/bolt engagement		
	●				Overall function test		
			●		E-opener mostly maintenance-free, possibly grease		
Door closers	●	●		●	Mounting door closer / arm / rail		
		●			Corrosion		
		●			Oil leakage		
	●	●			Overall function test		
	●				Closing the door from any opening angle		
	●				Check closing speed (approx.5 sec/90°)		
	●				Check end stop ("no slam")		
Locking system	●	●		●	Mounting		
		●			Corrosion		
	●				Overall function test		
	●				Correct smooth release		
Seals, Floor seal	●	●			Check seal pressure		
		●			Seal must not be painted over		
		●			Dirt / damage		
		●			sufficient length, seal seat		
		●			Embrittlement		

- Damaged fire protection strips must be replaced partially or completely (observe material specifications)
- Maintenance or repairs, inspections by specialist companies for electrical installations, geared motors, controls and regulation systems, doors in escape routes, security doors

Recommendation for installation

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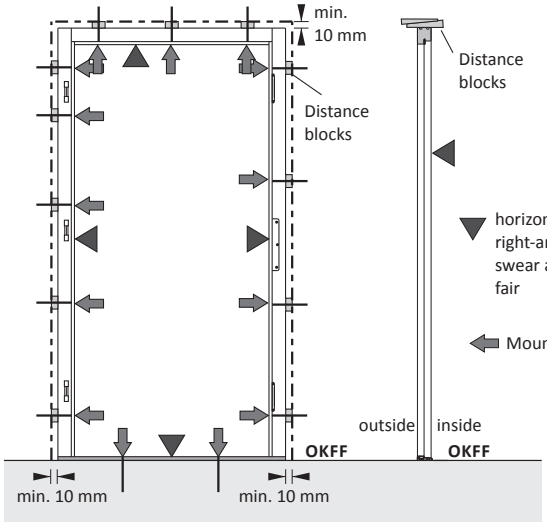
The function of a VARIOTEC front door is only guaranteed if the installation is carried out properly. This applies not only to the opening and closing, but also to the thermal insulation, tightness and safety of the front door. The proper execution of the building connection joint is of decisive importance within the scope of the energy saving regulations and for the sound insulation. Important: the front door must be able to be transported and stored in the position and position in which it will later be installed!

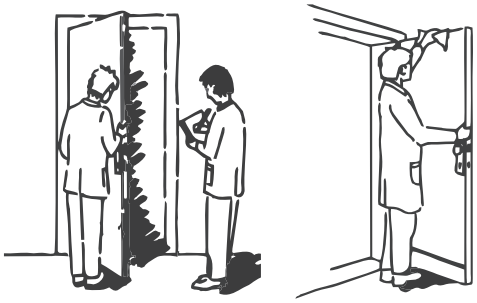
1. Unloading, inspection, transport and storage:

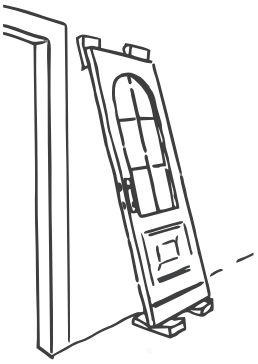
- Check front door on truck for visual damage
- Take the front door off the truck
- Follow the instructions on the STOP sticker
- Check door leaf and frame for damage and correct execution according to the order (do not install damaged or faulty doors; contact customer service immediately)
- Store upright and protected from wind and weather

3. Not ready coated entrance doors:

- the application of primer and two intermediate coats of paint must be carried out before installation
- Then the wooden surfaces must be provided with a final coating within 3 days
- the paintwork should be carried out by a specialist painter







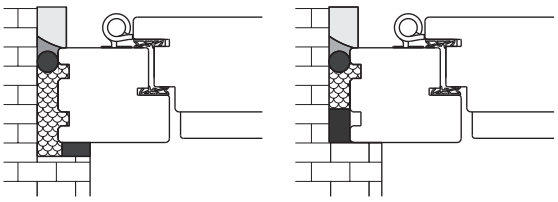
2. unpacking, unhinging the door leaf:

- Lean the front door against the outside, e.g. against a wall
- Loosen and store any boxes with accessories and additional key
- Carefully remove the protective packaging on the inside and on the top
- Remove cover caps from the belts (optional)
- Unlock the front door with the key
- Before unhooking, always check for existing cable connections and switch them off before disconnecting the sash (the plug is connected to Screw secured)!
- Unhook the door leaf and place it upright, protected against damage. lean (e.g. protect against pressure points with foam strips)
- never use the handle set to lift the door or door leaf
- Use carrying straps or roller trolleys for transport
- Loosen the vertical protective edges of the frame
- The front door is ready for installation

4. assembly instructions:

The installation must be carried out by qualified personnel in accordance with the "Guidelines for Installation" of the RAL Quality Association for Windows and Entrance Doors:

- The installation must be carried out by qualified personnel in accordance with the "Guidelines for Installation" of the RAL Quality Association for Windows and Entrance Doors:
- if the inner floor is not yet finished, the metre markings (1 m height from OFF) should be taken into account
- It is essential to observe the depth of the frame according to the specific construction plan (Attention: segmental and arched doors must be set as far inwards as possible to prevent the door from opening guarantee)
- Prepare 2 to 3 spacer battens of exact length for later use in the rebate to prevent bulging of the frame parts (very important if PUR expanding foam is used)
- Back-block the frame to the wall in at least eleven places (four times left and right, two to three times on top) Distance blocks at approx. 20 cm from the top and bottom edge of the frame and insert further blocks evenly at a distance of approx. 50-60 cm
- Check the vertical/aligned position of the frame parts and adjust if necessary
- hang the door leaf carefully and carry out a function test (if necessary, align the frame part on the lock side with the door leaf and block or wedge it again)
- the rebate clearance to the stop rail should run parallel!
- carefully unhinge the door leaf
- if necessary, insert outgoing electric cables (ETÖ, motor lock...) into the prepared electric cable tube
- mark the drill hole positions (the holes for 210 mm frame anchors should be drilled through the spacer blocks) Practical tip: 7.5 x 180 mm window screws with small Torx head have proven to be suitable instead of frame plugs - Drill hole can be drilled e.g. concealed in seal groove
- now insert the 2 to 3 spacer battens (always at the bottom of the floor rail and in the middle at 1 m height)
- mask the frame parts with Tesa tape 4438 or 4838 to protect PUR foam
- insert the pre-compressed tapes on one side and carefully foam the construction joint from the other side
- after the foam has dried out, cut off the remains, carefully remove the tape after 24 hours at the latest and still apply the sealing foil tapes
- Hook in the door leaf and adjust it so that perfect function is achieved - for exact procedure see below: "The following points are to be checked"



Execution of the construction connection joint according to the state of the art!

Rule:
Windproof on the inside, driving rain on the outside, tighter on the inside than on the outside - is achieved by means of sealing foils, pre-compressed tapes and sprayable sealants.achieved by means of sealing foils, pre-compressed tapes and sprayable sealants.

The following points should be checked:

- Rebate clearance between door leaf and frame should be the same on left, right and top
- Check that the lock engages securely behind the frame locking parts
- check that the door leaf runs contact-free over the floor
- Pushes Schallex down punctually and safely
- Opens and closes door smoothly
- Firm seating of outside handle and inside lever
- Easy locking and unlocking via the profile cylinder
- Check the function of the door catcher. Does door catcher open by opening the front door from the outside in the locked state?
- Clean the door leaf (also rebates, especially at the top, so that no dirt can get into the leaf or frame. can damage)

5) Assembly of handle sets and profile cylinders:

If possible, have handle sets and profile cylinders fitted or predrilled at the factory to minimise the amount of work and risk on site. Complete assembly of the handle set and profile cylinder at the factory ensures that the fixing has been carried out professionally and properly. If handle set and profile cylinder are mounted on site, please observe the manufacturer's recommendations.

In any case please pay attention to the following points:

- The front door leaf lock must be removed for handle installation, as the front door leaf must not be drilled through in the lock area when the lock is installed.
- Ensure that the profile cylinder and handle sets are installed without tension!
- Make sure to keep the security card of the profile cylinder. Only with this card can you obtain further required front door keys if required.

Recommendations for maintenance and care

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No. 93-5

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Timely and professional maintenance of the front door is a prerequisite for permanently ensuring functionality and safety. The following instructions provide information on "how", "when" and "by whom" the maintenance can be carried out. The hinges and door catches used are basically maintenance-free. The same applies to the aluminium surface of the wood-aluminium front doors. Timely and regular maintenance not only gives your front door a shiny appearance, but also contributes to its longevity as the "calling card of your house".

Functionality

The following points should be ensured when testing for functionality:

- Door leaf must not drag across the floor
- door wing must not creak
- The latch can easily fall into the strike plate
- Easy locking and unlocking via the profile cylinder
- door catcher with M2-W locking (optional) can be easily unlocked, also check from the outside with the front door locked!
- Tight fit of handle set and inside lever handle, functionality of the cold enemy
- E-opener function (electric door opener)

Surface outside

Wood

House door surfaces must be checked regularly. Please ask your specialist dealer for this. Attention: Hail can destroy the surface of your front door in such a way that a complete new coat of paint is necessary. Your specialist dealer will be happy to help you assess the surface. Carry out basic cleaning of the glazed surfaces with a soft wet cloth. The glazed wood surface must NOT come into contact with any liquid chemical!

Aluminium

Powder-coated surfaces of external aluminium components require regular care in the form of cleaning once or twice a year in order to maintain their decorative appearance for decades. The surfaces must not be cleaned in direct sunlight, the surface temperature should not exceed 25°C. Only use pH-neutral cleaning agents that do not scratch or chafe. Use special cleaning agents for heavy soiling.

Glass surfaces

With plenty of water and glass cleaner: Caution: Do not rub the sealant.

Seam area

Please wipe off the top in the direction of the belts so that dirt cannot get behind the locking mechanism and thus block the mechanism.

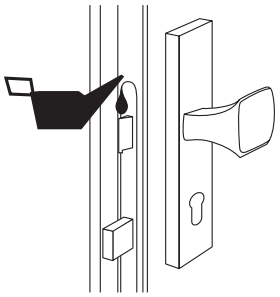
Stainless steel applications

The stainless steel/stainless steel surfaces (applications and handles) should be cleaned regularly. Dirt and oxide residues on stainless steel are not rust! Stainless steel cleaner should only be used on metallic stainless steel/stainless steel surfaces!

Interlock

Oil the moving parts of the fittings once a year. Please do not use oil containing acid or resin.

Attention: the electric strike must not be oiled



Seal / Sealing

Seal between sash and frame

-- Check tightness

- Must not be / will not be crushed

Sealing on glass/fillings outside and inside

- Check that it is firmly seated, sealing joints must not be torn.

In case of defects, immediate replacement / repair so that the construction is not damaged. Rub seals with sealant.

Front doors opening to the outside

The instructions in this recommendation also apply analogously to front doors opening to the outside. The most important change is that constructive weather protection must be used, i.e. at least a sufficiently large canopy. The hinges of this front door are equipped with a safety screw which must be loosened before adjustment (safety screw is only visible when the door leaf is opened at 90 degrees).

Renovation intervals for wood coatings

Renovation intervals depend on the degree of load, orientation/ cardinal point, type of wood, etc. weathering and colour tones. In order to extend the renovation interval as much as possible, it is important to visually check the condition of the paint layer for damage several times a year. Any cracks or minor flaking should be repaired immediately with repair varnish. As a rule, the renovation intervals for normally used entrance doors with N/NO orientation are at least ten to fifteen years and for doors with S/SW orientation approx. five to seven years.

To avoid the most common errors

Avoid stains from plastering work

Before plastering the surfaces must be masked with Tesa-Tape 4438 or 4838! Insufficient covering of the surfaces can lead to staining of the unprotected painted wood surface during plastering work (lime plaster, mortar, screed). The result is discoloration (dark spots caused by the alkalinity of the plaster). Adhesive tape should be carefully removed as quickly as possible (late. after 24 hours).

Lock the front door daily

Daily locking by turning the key twice not only protects against burglary (otherwise no effective protection against burglary is guaranteed), but also contributes to the longevity of the construction, because locking counteracts the wood's tendency to warp.

Avoid uncontrolled slamming

Ensure that the door leaf never falls into the lock uncontrollably (e.g. due to a draft) (risk of destruction, risk of injury).

Do not close the door leaf when the lock is open (also applies if parts are located between sash and frame)

Never turn the bolt out of the lock when the door is open. If the leaf slams uncontrollably when the bolt is open, your door can be seriously damaged (applies analogously if parts are between the door leaf and the frame).

Avoid hand contact with glazed wooden surfaces

Make sure that you only use the handle or lever handle set when operating the door leaf. Glazed surfaces can be destroyed earlier by continuous contact with dirty or damp hands!

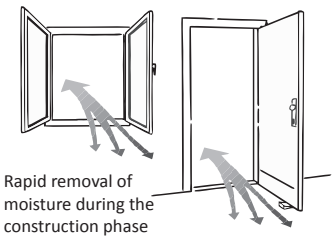
Quickly remove moisture during the construction phase

During the construction phase, hundreds of litres of water are brought into the building (screed, plaster, etc.). This moisture must be removed as quickly as possible without penetrating the wood. Therefore, always ventilate, ventilate, ventilate...

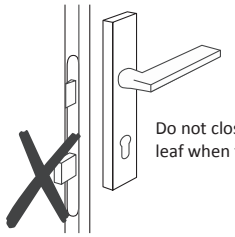
Entrance doors that consist of a load-bearing wooden construction (also wood-aluminium entrance doors) can warp.

Basic rules:

1. warping is allowed, if the function is not affected by it
2. **warping in new buildings is normal due to the high air humidity (IS NOT a reason for complaint!) and will disappear after 1 to 1.5 years.**



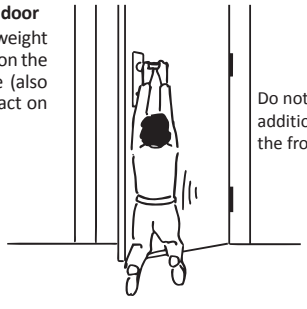
Rapid removal of moisture during the construction phase



Do not close the door leaf when the lock is open

Do not allow any additional loads to act on the front door

The hinges are sufficiently dimensioned to bear the weight of the front door leaf. Additional weights put a strain on the construction and can lead to considerable damage (also risk of injury). Please never allow other weights to act on the sash, e.g. hanging from the sash.



Do not apply any additional loads to the front door

Adjustment recommendations for bands

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No. 93-6

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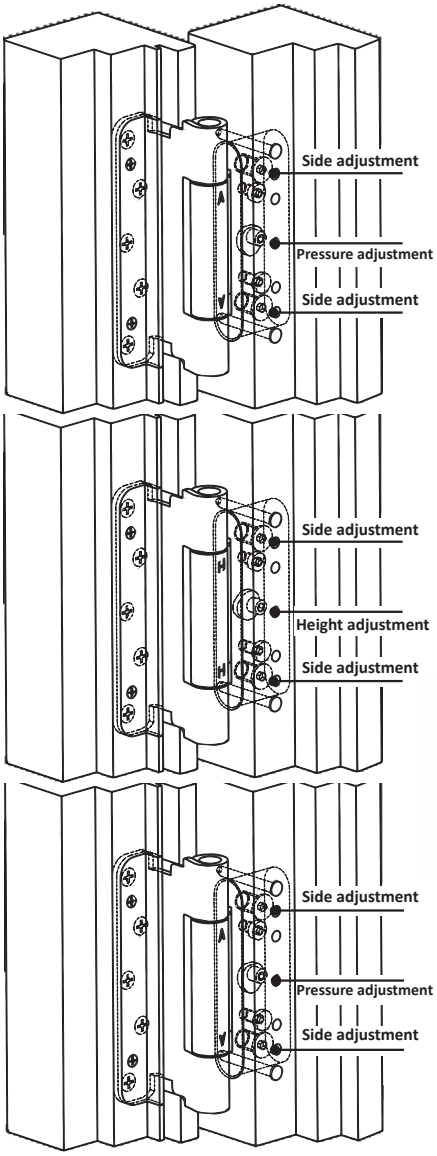
BANDS **BAKA Protect 4010 3D FD**

SIMONSWERK



The infinitely variable 3D adjustment (Allen key SW 4 mm)

ATTENTION: With outward opening doors, first loosen the pin safety catch!!

Lateral adjustment +/- 3,0 mm
Turn both adjusting screws evenly (max. one turn each) in the corresponding direction. Avoid inclination of the frame part and tension on the axis of all hinges.

Height adjustmen +/- 3,0 mm
Slightly loosen the clamping screws on all frame parts. By actuating the adjustment eccentric with the H-band, in the middle frame- part, adjust the height of the door leaf. Retighten the clamping screws on all frame parts.

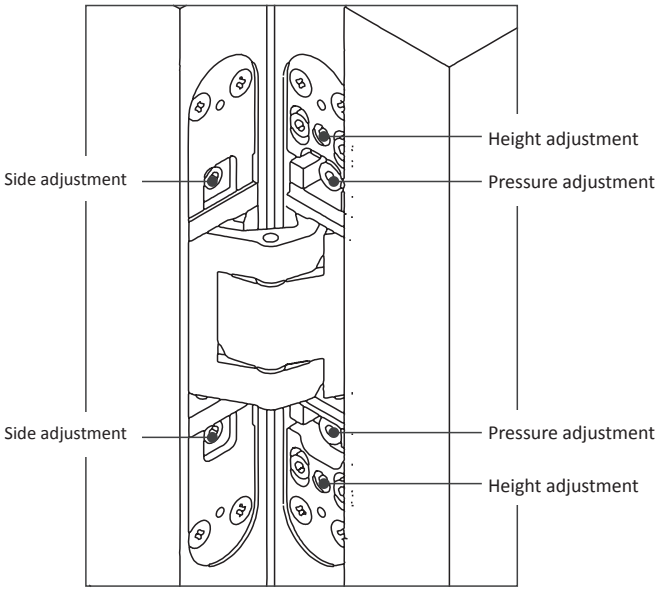
Important:
When adjusting the height of the door leaf, the door leaf must be fitted with air cushions or
Lift the lifting device and connect it with Secure the wedge!

Pressure adjustment +/- 3,0 mm
Slightly loosen the clamping screws on all frame parts. Vary the sealing pressure by turning the adjusting eccentric for the A-tapes in the upper and lower frame parts. Retighten the clamping screws on all frame parts.

BANDS **TECTUS 540-640 3D**

SIMONSWERK

The infinitely variable 3D adjustment (Allen key 4 mm)



Height adjustment +/- 3,0 mm
Loosen the clamping screws slightly. Use the lower height adjustment screw to bring the door into the correct position (if necessary turn back the upper screw), tighten the clamping screws.
ATTENTION:
When adjusting the height, lift the door leaf with a lifting device (or with a wedge)!!!!

Lateral adjustment +/- 3,0 mm
Adjusting spindle with hexagon socket adjust the key:
turn right - to the hinge side (max. 3 mm).
Turn left - to the lock side (max. 3 mm, wing part must not protrude to the housing).

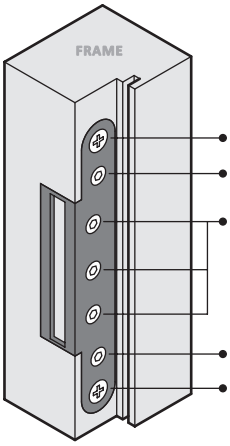
Pressure adjustment +/- 1,0 mm
Loosen the clamping screws slightly. Apply the appropriate pressure to the door. Tighten the clamping screws.

ATTENTION:
FLUSH DESIGN
In the case of flush front doors, differences in flush can occur due to manufacturing and climatic conditions. Due to the need for an optimal closing and sealing function by correct adjustment of the door leaf, the visible gap inside and outside between door frame and door leaf can deviate from the specified 4-4.5 mm value by up to ±2 mm, the gap can also be uneven. All these characteristics represent the state of the art for flush front doors and therefore do not justify any claims for complaints!

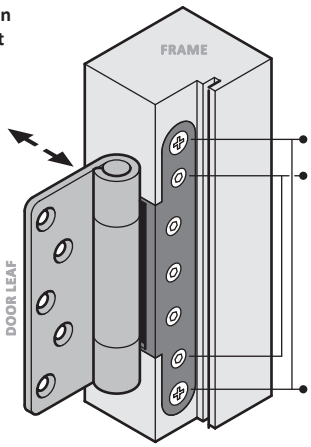
BANDS **OBJEKT - VX 3D** The infinitely variable 3D adjustment (Allen key SW 5 mm)

SIMONSWERK

The adjusting screws in the mounting element

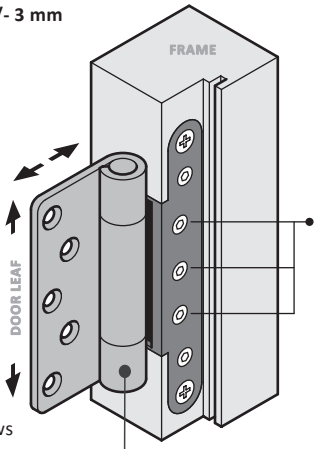


The side adjustment +/- 3 mm



1. Slightly loosen the fixing screws
2. Turn the lateral adjustment screws evenly at the top and bottom in the desired directioin. Avoid tension on the axle.
3. Tighten the fixing screws

The height adjustment and pressure adjustment +/- 3 mm



1. Open door and secure with wedges
2. Loosen the clamping screws slightly and bring the door into the correct position
3. Tighten the clamping screws, remove the wedges

Important:
When adjusting the height, lift the door leaf on the lock side with an air cushion or lifting device and secure with a wedge!

ATTENTION: When the doors open to the outside, first loosen the pin lock!!

Setting recommendations for interlock

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No. 93-7

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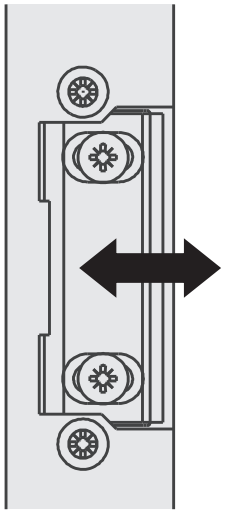
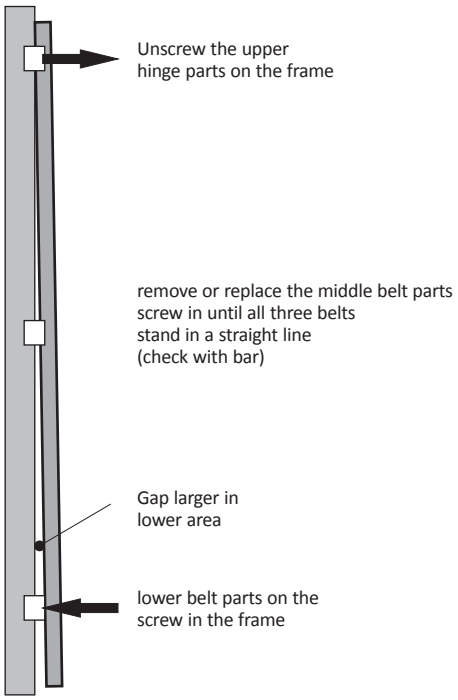
Notes on contact pressure regulation and adjustment possibilities



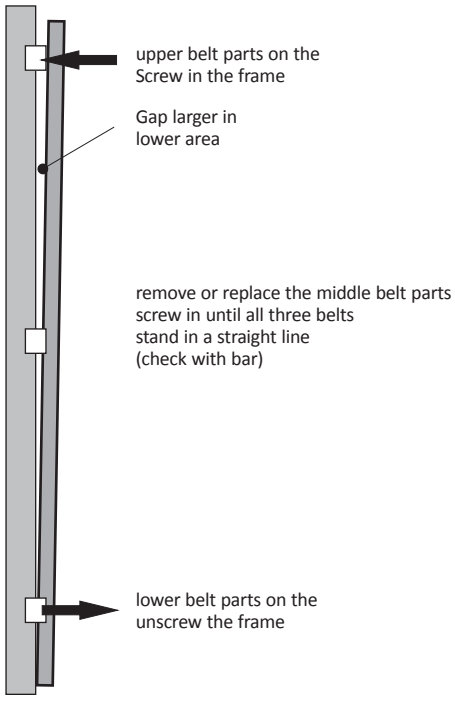
In order to ensure correct closing and sealing, the latch catch on the middle striking plate must be precisely adjusted. Slightly loosen the two screws with a cross-head screwdriver, adjust the latching piece to fit and retighten the screws.

Door leaf adjustment by means of hinge regulation
Allowed door leaf deflection of up to 4 mm on the longitudinal axis - Use a straight strip to check

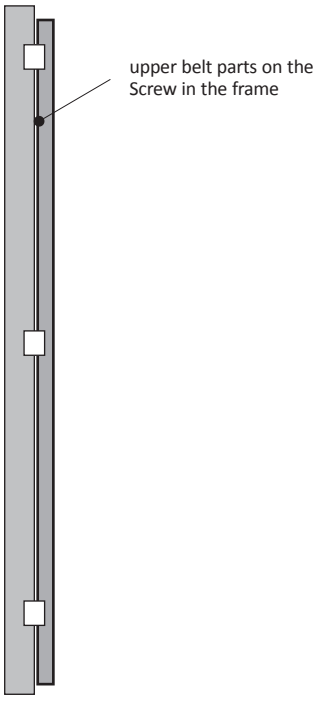
1. POOR SEALING FUNCTION IN THE LOWER AREA



2. POOR SEALING FUNCTION IN THE UPPER AREA

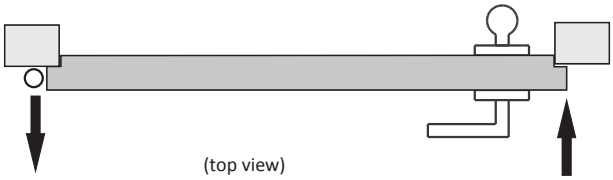


3. CORRECT SEALING FUNCTION OF THE DOOR SHEET



(lateral view on the frame and door leaf)

Attention:
First set the contact pressure on the hinge side correctly - if set too high, the sealing profile cannot contact the lock side and the latch cannot engage properly in the strike plate on the lock side!



(top view)

Important:
Lock-side adjustment - see above:
Notes on press-in pressure adjustment

By adjusting fittings (locks and hinges), it is possible to compensate for unevenness of distortion between the door leaf and the frame in the corner areas, which are not larger than 6 mm. It is also possible to bend the door leaf or frame in the area of the handle height, which is not greater than 4 mm, so that the sealing and closing function is secured. Difficulties due to non-optimal sealing function can be avoided in advance by correctly installing the door. By wedging the frame on the hinge side and only a temporary fixation on the lock side, the frame can be adjusted to the door leaf and only then wedged.

Adjustment recommendations - Wiring diagram VARIOTEC

No. 93-8

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Recommendation of use

The front door is designed to fulfil the usual functions of tightness, security and warmth. It is therefore important to consider the environmental factors carefully and so that the construction is not overloaded.

Exposure to moisture and solar radiation

The level of the load depends mainly on the orientation of the front door (cardinal direction) as well as on the additional protective measures against rain and solar radiation, such as a canopy or vestibule. The load on the front door when oriented according to NW, W or SW is particularly extreme. Here, the minimum protection required is a sufficiently deep canopy, or even better, complete protection of the front door, e.g. by a vestibule.

Attention: darker colours are not suitable for doors oriented to S or SW - danger of heating up to 75° Celsius - high temperature leads to drying out of wood layers, possible door warping and earlier destruction of the lacquer layer. The manufacturer can accept NO liability for any defects caused by disregarding the above recommendations!

with canopy

WITHOUT a canopy, no protection against Weathering and Solar radiation! Such an operation is for the wooden door NOT suitable! Danger of delay! Frequent renovation-intervals of the Glaze coating required!

Interior use

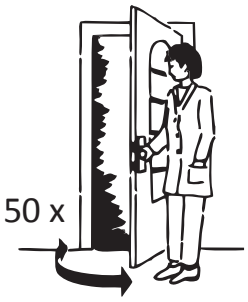
The interior use and the heating of the room, directly in front of the door system, determine the the climatic load of the door on the room side. A rough distinction can be made:

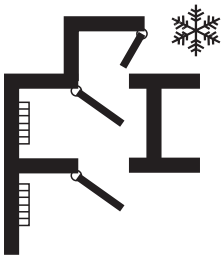
Frequency of use

The frequency of use mainly influences the mechanical strength.

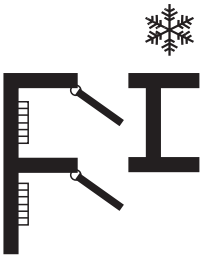
Frequency of use in opening and closing operations per day:

Normal: up to 50 x
Increased: more than 50 x, the wear of the parts is greater, frequent checks and possible replacement are necessary





Normal Stress
No heating of the anteroom, Protection by a vestibule



Increased stress:
Heated living space, radiators or underfloor heating directly next to the door

Special climatic influences

Entrance doors are designed to withstand the usual climatic influences of Central Europe or comparable climate zones. If the place of use is subject to special climatic influences, e.g. high altitudes, sea climate, this can lead to an acceleration of the maintenance and care intervals.

Interaction of stress / Summary

The effects of the listed influences on the design must be considered in interaction with each other. If several increased or even extreme loads act on the front door, there is a risk of overstressing. This affects the functionality of your front door. Therefore, try to plan the loads on your front door within the normal range.

Important points:

1. have the builder-owner check all details of the front door immediately after installation and have your proper performance confirmed on the building acceptance certificate.
2. point out to the owner that the front door should be locked twice as often as possible (at least during absence and at night). This is the only way to ensure that the locking system is protected against burglary. Possible signs of warping can thus be avoided.
3. front doors which consist of a supporting wooden construction (also wood-aluminium front doors) can warp. Basic rules:

a) Warping is permissible if this does not impair the function.
b) Warpage in new buildings is normal due to the high humidity (IS NOT a reason for complaint!) and usually disappears after 1 - 1.5 years after installation.