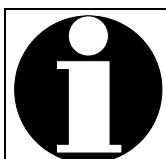


Operating Manual (Translation)

Wiga Star Roller Shutter



This operating manual contains important safety instructions.
For the safety of people it is important to follow these instructions.
Please save these instructions.





Schanz Rollladensysteme GmbH
Forchenbusch 9
D- 72226 Simmersfeld
Tel.: +49 (0)7484/9291-0
Fax: +49 (0)7484/9291-36
E-Mail: info@schanz.de
Internet: www.schanz.com

Commission No.	Date Installation and Instruction	Signature

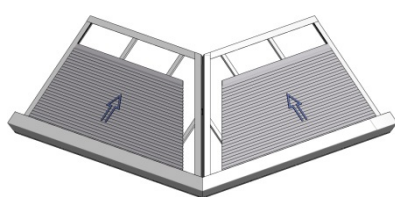
1. Content

1.	Content	2
2.	Symbol explanation	2
3.	Design and Description of Schanz Roller Shutter Systems	3
4.	Correct use	4
5.	Transport / Packaging / Unpacking	4
6.	Assembling / Installation / Working on the facade	5
7.	Connecting the shutter	5
8.	Operation	6
9.	Cleaning	8
10.	Inspection/ Fault clearance/ Maintenance/ Repair	8
11.	Technical Data – Range	9
12.	Disposal	9
13.	Product surveillance	9
14.	CE- Conformity	9
15.	Warranty	10
16.	Manufacturer	10
17.	Included Documents	10
18.	Table Wind Resistance Classes	10
19.	Declaration of performance	11
20.	EC Declaration of Conformity	11
21.	Copyright/ References to this documentation	12

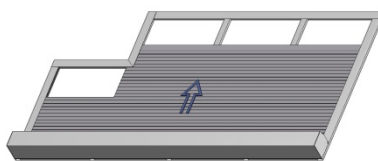
2. Symbol explanation

	<p>Imminent danger for body, life and property. A failure to observe these warnings may have noxious effects and lead to severe injuries as well as damages to furniture and properties.</p>
	<p>Important advice for the proper usage of the system. A failure to observe these warnings may damage furniture and properties and contains the risk of injury.</p>
	<p>Warning against electric energy. A failure to observe these warnings may have noxious effects and lead to severe injuries through electric energy as well as damages to furniture and properties.</p>
	<p>Reference to enclosed documents, useful hints and practical information. These advices contain information for a better handling.</p>

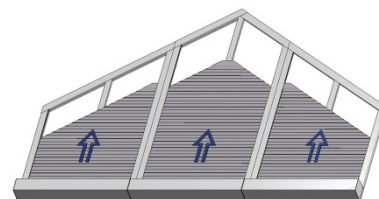
3. Design and Description of Schanz Roller Shutter Systems



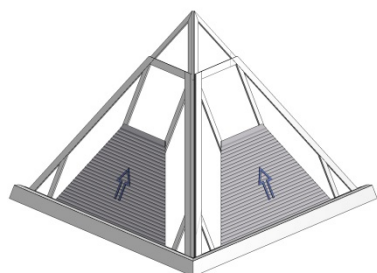
Type DGS



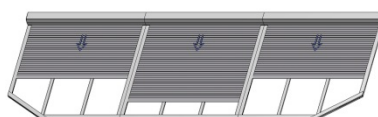
Type DGH



Type DS – Type DSI – Type DS



Type DSIG



Type DGSU – Type DGU – Type DGSU



Type DGSU – Type DSIGU – Type DGSU

The Schanz Roller Shutter System offers various basic models which can be combined as a system.

Thereby the type designations stand for the following items:

D	„Roof“
S	„Angular“
I	„Spiky“
G	„Straight“
U	„Inverse“

Basically the roller shutter is being shut from bottom to top and the roller shutter housing is being fixed to the bottom of the conservatory roof onto the construction of the conservatory, or to a special sub construction made of high quality aluminium profiles.

For the installation as a hanging system with a closing direction from top to bottom the roller shutter types with an additional U have to be used. Depending on the installation position modifications of the drive are necessary.



Do never change the installation position of the roller shutter!
A change of the installation position which is not approved by us can lead to malfunction and danger

For the systems DGS – DGSU – DSIG – DSIGU – DSI – DSIU a tension cord is visible on the window face, if it is due to technical reasons not possible to guide it behind a window profile. The tension cord channels run via needle-, slide- or ball bearing rollers.

The end slat is functionally not entirely running in the roller shutter jacket.
 The roller shutter jacket can be slightly angular to the shutter box if the construction is not centered. This is not affecting the functionality at all.

The Schanz roller shutters are made of high quality aluminium and therefore provide a long durability and resistance in the rough every day usage. According to your wishes and needs the surfaces can be anodized, powder-coated or varnished.

Schanz roller shutters are being delivered with an electric drive and control unit.

The electric drive with the control unit provides a high level of ease of use and a torque regulation of the drive which automatically cuts off the drive at a preset value, for example if the shutter is blocked by objects.


4. Correct use

Schanz roller shutters of the type **Wiga Star** are sun protection devices for the installation on conservatory roofs and they serve as light protection, visual cover and weather protection. Any rebuilding or misuse is not allowed.

The roller shutter must only be used within the technical limit (also see technical data). Therefore the usual climatical and topographical conditions (temperature range, wind load zone, wind resistance class areas with high snow occurrence, any expected pollution through dust, greenery etc., any aggressive media e.g sea air, torrential rain etc.) at the installation site have to be considered by the operator/ customer.

Installation, disassembling, maintenance and repair work must only be done by qualified people of Schanz Rollladensysteme GmbH or through authorised people by Schanz Rollladensysteme GmbH.


For usage under certain circumstances e.g. for usage in nurseries or institutes for disabled it may be necessary to implement specific actions (definition of the installation height of the control units, additional safety measures etc.) by Schanz Rollladensysteme GmbH or by specifically authorised people.

	<p>The roller shutters, the roller shutter housings, the guide rails may not be accessed or otherwise loaded! Please use appropriate gantries, lifting platforms etc.</p>
---	--

Further requirements for a correct usage are:

- The compliance with the information given, in particular the instructions for safety and accident prevention stated in this operating manual and any additional documents provided for the components, e.g. the control units.
- The compliance with the guidelines as stated in section "technical data"
- An appropriate operation of the roller shutter
- A professional maintenance and inspection in a timely manner

Any other or further use is considered as not being correct and is at the own risk of the operator.

	<p>For any emerged damage resulting of incorrect use Schanz Rollladensysteme GmbH or their specifically authorised people declines any liability and warranty.</p>
--	---

5. Transport / Packaging / Unpacking

Depending on the route of transport and the expected conditions the roller shutter will be packed and the roller shutter jacket will be fixed in the roller shutter box.

Depending on the type and size of the roller shutters they might be so heavy that a suitable load-carrying equipment and lifting tool has to be utilized.

Only use sufficiently dimensioned, safe and correctly fixated load-carrying equipment and lifting tools and avoid damages and injuries.

Check immediately if the product has been delivered without damage. Immediately complain about damaged roller shutters.

Removing the transportation safety devices:

- Unscrew and open the cover of the roller shutter box
- Remove the foam sheets
- Remove the 4 slats which are connected to the jacket
- Put back the cover and screw it back

6. Assembling / Installation / Working on the facade

Each roller shutter is individually manufactured according to your window shape and size and must only be installed by Schanz Rolladensysteme GmbH or specifically authorised people.



The installation of the roller shutter has to be conducted following the information given in the assembly and safety instructions.

The installation of the roller shutters should only be conducted on ready-made rainproof facades!

The plastering of the roller shutter could lead to severe damages due to damp and furthermore make essential reparation difficult or even impossible.

The roller shutter has to be fixed sufficiently and safe attuned to the ground!

The roller shutters of the type Wiga Star are individually attuned to the roof pitch of your conservatory and have to be fixed to a sub construction which is solid enough. Furthermore the guide base and the sliding profiles of Schanz Rolladensysteme GmbH have to be fixed to the construction of the conservatory, which ensure an immaculate running of the roller shutters. Depending on the size and the local conditions the usage of stabilisers could be necessary to secure a higher stability of the system. The Stabilizers are mounted self-supporting and can therefore, depending on the mounting situation and length, sag itself due to their own weight. The function of the roller shutter system is not affected by this.



The water drain holes on the bottom of the roller shutter box have to be clear at all times so that ingressed water can drain off!

7. Connecting the shutter

Our technicians are in principle not authorised to connect any electrical devices to the in-house network. The connection has to be completed by a licensed electrical company.









The electrical connection of the roller shutter and the control unit must only be completed by skilled electricians in compliance with the enclosed connecting diagram and the national and international legal regulations, e.g. DIN EN 60335-1 (VDE 0700-1), DIN EN 60335-2-97, DIN EN 60204-1 (VDE 0113-1) etc. Furthermore the regulations of the local electric utility, the Employer's Liability Insurance Association and the Accident Prevention Regulation have to be strictly followed.

The roller shutter and the control unit can only be connected to an in-house network which is equipped with a ground fault circuit interrupter.

8. Operation

General operation and safety instructions

	Mind the following instructions! Instruct all persons who might operate with the roller shutter	
Children Risk of injuries caused by the roller shutter		Keep children away from the roller shutter and its operation elements. Also in a retracted position of the shutter there is the risk of injury on the inlet of the roller shutter box and on the slats Let children not play with the operation elements, e.g. the switch of the control unit or the wireless control and shut those away.
Traversing range of the roller shutter		Always keep the traversing range of the roller shutter clear. Never put your hand into the moving zone if it is not secured that the roller shutter does not run up. If necessary switch off the self-winding and make sure that another person cannot activate the control. There is the risk of injury!
Operation during wind and storm		Close the window and the shutter so that there is no low-pressure emerging between window and shutter. In case of an open window the hangings could be pulled out off the guide rails. Only if the window is closed and the roller shutter is completely shut down the shutter resists the wind and storm according to the stated wind resistance classes.
Operation during heat		Schanz roller shutter stand out for their resistance and full functionality also during strong heat. During extreme temperatures we recommend not to shut the shutter completely so that rear ventilation can be achieved and the risk of deformation and malfunction is being avoided.
Operation during winter and cold		During frost there is the risk that the roller shutter could freeze on. In this case please avoid using the roller shutter and if necessary switch off an existing automatic control unit. The integrated torque regulation does not offer sufficient protection for the slat hinge. Manual Operation should be done carefully. In case of resistance, stop immediately, Do not force hinges to open or close. Any forcible operation could lead to damages and malfunction.
Snow		The roller shutter may not be used in case of snow load. That way you avoid any damages of the roller shutter. In order to clear the snow load the roller shutters, the roller shutter housings or the guide rails may not be accessed! Please use appropriate gantries, lifting platforms etc.
Misuse		Wait at least 0,5 seconds between switching directions (from up to down or from down to up) Never push the roller shutter up or down! Never block the moving zone of the roller shutter! Never load the roller shutter with any additional weight! There is a risk of damage and malfunction!
Strong pollution Water inside the roller shutter box	 	Through strong pollution, greenery etc. the mechanical elements in the roller shutter box could be blocked as well as the water drain hole on the bottom of the roller shutter box. Furthermore the pollution reduces the life cycle of your roller shutter. Water entering the roller shutter box is normal and not a default. Therefore please check through a sight check regularly if the water drain holes are clear, in particular after strong fall of leaves, pollution or strong rain. The inserted tubular drives are according to IP44 water proof and should never be set under water! There is the risk of danger through electricity! Should the water drain holes not be clear disconnect the roller shutter from power. Open the roller shutter case and clear the water drain holes with an appropriate tool so that any ingressed water can drain off. Never put your hands in the roller shutter box. There is the risk of injury! If the roller shutter box is dry inside we recommend to vacuum-clean it regularly.
Disengage the shutter movement in an emergency		Depending on the control unit: - OFF via key press the self-winding can be switched off - To relieve press direction key for counter movement Please read about this function in the enclosed operating manual for the control unit
Damage of the tension cord		Avoid any damage to the tension cord! Only use the roller shutter when the tension cord is immaculate! A damaged or broken tension cord should be replaced by our customer service! A wrong procedure and assembly could lead to damage and malfunction!


General information for the operation and usage of roller shutters with an electric motor:

- Design of control units/ Change of control units
Control units have to be designed and built in a safe and functionable manner and so that no dangerous situation can occur. In particular they have to be designed and built in a manner which is in accordance with the expected working stress and stands the external effects, and mistakes in the logic do not lead to dangerous situations. When choosing the control units it has to be considered that they are in accordance with the regulations EN 60335-1 and EN 60335-2-97.
The roller shutter gear and the control unit are being harmonized by Schanz Rollladensysteme GmbH so that the whole system works reliably.
If you want to change your control unit, for example if you want to replace new control units with a different functionality or any defect control units please contact our customer service.
For the automatic drive please mind the running direction of the roller shutter.
- Arrangement of the equipment
The equipment has to be positioned in a manner that the movement of the roller shutter can be watched.
From the operating switch the operator has to make sure that there are no people or objects within the moving zone of the roller shutter.
For roller shutters that can be operated out of sight the operator has to take appropriate actions to avoid any movement of the roller shutter during maintenance works, i.e. window or wall cleaning
- Cut out Switch to prevent overheating
The cut out switch to prevent overheating is to avoid that the motor overheats and catches fire, for example by operating a blocked roller shutter or a frequently repeated roller shutter movement
In case of overheating the motor switches off and can only be switched on again after a certain cooling period and if the operating switch has been put on "0" for at least 60 seconds.

Setting options for the electric motor

During the production and assembly of the roller shutter Schanz Rollladensysteme GmbH and their authorised people have angled the position of the upper and lower end position and the torque of the bed stop so that no changes have to be conducted.

In case your roller shutter has to be readjusted please do not do it yourself but contact our customer service.

	<p>A misapplication and wrong setting could lead to malfunction, damage and danger!</p>
---	--

9. Cleaning

Due to the construction method of the roller shutter any contaminant (dust, greenery etc.) could enter into the roller shutter box and potentially lead to increased abrasion, operation noises or blocked water drain holes. Furthermore any foreign object on the roller shutter (greenery, small branches etc.) could be winded up or enter inside the roller shutter housing. Therefore the roller shutter box has to be checked regularly, if there are any contaminants, and if this is the case it should be cleaned. In areas with a higher appearance of dust an early abrasion of assembly parts could be possible. We recommend to clean the roller shutters regularly.


Cleaning of the roller shutter box – procedure:

- Disconnect the drive and secure against unwanted resetting.
- Unscrew the case of the roller shutter box, if necessary dismantle stabilizer and take it off.
- If the roller shutter box is dry inside you can vacuum clean it.
- If there is water inside the box clear the water drain holes with an appropriate tool, let the water drain off and let it dry before any further cleaning.
If cleaning is not possible because of construction or accessibility please assign our customer service.
- Put back the case and screw it tight

Cleaning of the hanging:


To clean the hanging no aggressive detergents and methods should be used which could damage the shutter, its surface or the electrical components.

The drive is according to IP44 waterproof but nevertheless it has to be avoided that any water enters into the drive.

	Do not use any steam-jet or high-pressure blaster, as the water could enter in the drive unit. This can lead to a lower life cycle and to danger through electric current!
---	---

We recommend cleaning with gentle detergents, a soft spoon and clear water.

10. Inspection/ Fault clearance/ Maintenance/ Repair

	<p>Maintenance/ Repair work and working to the electric may only be conducted by authorised and specialised staff. In any case while working on the electric and on the shutter system it has to be disconnected from the network and secured against unwanted resetting.</p> <p>While working on the open roller shutter appropriate tools are to be used and it has to be minded that no components are being damaged. There is a risk of injury through mechanical components.</p>
---	---

Inspection

To ensure the functional capability of your roller shutter we recommend a regular inspection, you can do by yourself.

The following inspections should be done:

Component	Interval	Criteria/ Remark
Tension cord	Minimum once p.a.	In good condition; Damaged tension cord should be replaced by customer service
Water drain holes	Minimum once p.a.	Water drain holes have to be clear; see under Cleaning

Fault clearance


Disorders can particular occur through foreign objects inside the roller shutter box or the guide rails. Please check at first if the roller shutter box or the guide rails have to be cleaned (→ see chapter cleaning).

In case of disorders which cannot be traced back to foreign objects and cannot be eliminated by cleaning please contact our customer service.

Maintenance


The roller shutter does not require any specific maintenance.

Service / Repair

	<p>Maintenance and Repair work may only be conducted by specialized staff of Schanz Rollladensysteme GmbH or authorized people.</p> <p>Use only original spare parts of Schanz Rollladensysteme GmbH. This is the only way to guarantee a secure and faultless function of the shutter-system.</p> <p>The warranty and liability of Schanz Rollladensysteme GmbH is not applicable in case of arbitrary repair works.</p>
---	---

The supply of spare parts does not enable to service or repair

11. Technical Data – Range

	Please note the enclosed documents off he component suppliers.
---	---

Environmental conditions	
Permissible ambient temperature for operation	+5°C to + 50 °C
Limited operations	-20°C to +5°C (see chapter 8 „Operation during winter and cold“)
Permissible ambient temperature for storing	- 10 °C to + 30 °C
Permissible humidity	No restriction
Ambience	No aggressive air or air with high dust exposure For the use in areas close to the sea or under specific climate conditions please contact us The roller shutter is not being designed for the use in conflagrative or potentially explosive ambience
Dimensions/ Weight	
Customized production	-
Connection Value Gear	
EL4-Tubular drive / ABS-Tubular drive	60/55
Turning moment	55 Nm
Rotation speed	13 min ⁻¹
Type of current	1 phase alternating current
Voltage	220V / 50Hz
Current consumption	1,10 A
Capacity	253 W
Duty rating	Ca. 5 min.
Accuracy of end position - optional	Class 2; ± 5 %
Warning! A parallel connection of ABS-Tubular drive is not possible.	

12. Disposal

Dispose any no longer required roller shutters in an environmentally suitable manner considering the national regulations.

13. Product surveillance

Please inform us about any extraordinary problems or incidents within our product surveillance

14. CE- Conformity

CE
Schanz Rollladensysteme GmbH Forchenbusch 9 - D-72226 Simmersfeld 17 LE-W-01/2017 DIN EN 13659: 2015 Wiga Star Abschluss - Verwendung im Außenbereich Windwiderstand: Siehe Tabelle in Betriebsanleitung Zusätzl. Wärmedurchlassgrad ΔR: 0,22 m ² · K/W Gesamtenergiedurchlassgrad: g _{tot} : 0,01

The CE-mark is inside the case of the roller shutter box.

15. Warranty

The warranty is not applicable in case of:

- Failure to follow the regulations and information given in this operating manual and the enclosed documents of the component suppliers
- Disregarding the specifications in the assembly instructions as far as the assembly has not been fulfilled by employees of Schanz Rollladensysteme GmbH or their authorized people
- In any case of improper usage
- Disregarding the capacity of the roller shutter (see chapter "Technical Data")
- Rebuilding the roller shutter or the control unit without authority
- Damage caused by clogged or blocked water drain holes
- Wilful damage
- Unprofessional interferences
- Violent operation of the roller shutter if it is frozen
- Unprofessional electrical connection
- Damage due to an act of God like storm, flood, lightning stroke, hail and fire

16. Manufacturer

Schanz Rollladensysteme GmbH
 Forchenbusch 9
 D- 72226 Simmersfeld
 Tel.: +49 (0)7484/9291-0
 Fax: +49 (0)7484/9291-36
 E-Mail: info@schanz.de
 Internet: www.schanz.com

17. Included Documents

Please save the following documents which are provided together with the Operating Manual. They should be available for any customer service action.

Pos.	Document	Remark	Received
1	Operating Manual		
2	Operating Manual for operation elements/ control unit		
3	Connecting Diagram	Only for information – does not enable to connect the roller shutter	

18. Table Wind Resistance Classes

Roller shutter profile	Guide rail	Section height	Section width																																																																																												
			1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	3100	3200	3300	3400	3500																																																																			
SZ 34	(62 mm)	≤ 2800	0 stabilizer																																																																																												
			6						5						4						3						2						1						0																																																								
			0 stabilizer												1 stabilizer												2 stabilizer												3 stabilizer																																																								
			6						5						4						3						2						1						0																																																								
			0 stabilizer												1 stabilizer												2 stabilizer												3 stabilizer																																																								
			6												5												4												3												2												1												0																				
		≥ 2800	Section width																																																																																												
			3600				3700				3800				3900				4000				4100				4200				4300				4400				4500																																																								
			4				3				2				1				0				-1				-2				-3				-4																																																												
			2 stabilizer												3 stabilizer												4 stabilizer												5 stabilizer																																																								
			4												3												2												1												0												-1												-2																				
			5												4												3												2												1												0												-1												-2								
4 stabilizer												5 stabilizer												6 stabilizer												7 stabilizer																																																											
Section width																																																																																															
1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500																																																																																															
6						5						4						3						2						1						0																																																											
0 stabilizer												1 stabilizer												2 stabilizer												3 stabilizer																																																											
6						5						4						3						2						1						0																																																											
0 stabilizer												1 stabilizer												2 stabilizer												3 stabilizer																																																											
6												5												4												3												2												1												0																							
0 stabilizer												1 stabilizer												2 stabilizer												3 stabilizer																																																											
Section width																																																																																															
3600				3700				3800				3900				4000				4100				4200				4300				4400				4500																																																											
2				3				4				5				6				7				8				9																																																																			
2 stabilizer												3 stabilizer												4 stabilizer												5 stabilizer																																																											
3												4												5												6												7												8																																			
3 stabilizer												4 stabilizer												5 stabilizer												6 stabilizer																																																											
4												5												6												7												8																																															
4 stabilizer												5 stabilizer												6 stabilizer												7 stabilizer																																																											

DIN EN 13659:2015

Snow Load Wiga Star

Resistance against snow load			
Track width [mm]	1000	1200	1400
Load [N/m²]	480	330	200

Note: Tables valid only if actual sizes follow all technical parameter and restrictions.

19. Declaration of performance

LE-W-01/2017

1. Product type	Sun room shutters
2. Type designation	Wiga Star
3. Usage	Shutter – utilization for the outside
4. Manufacturer	Schanz Rollladensysteme GmbH Forchenbusch 9 D-72226 Simmersfeld
5. System for assessment of performance	4
6. Harmonized standard	DIN EN 13659:2015

7. Provided performance:

Main features	Performance	Harmonized technical specification
Wind resistance	See table in operating manual	DIN EN 13659:2015
Snow load resistance	See table in operating manual	
Additional heat transmission ΔR	0,22 m ² · K/W	
Total energy transmission g_{tot}	0,01	
Corrosion resistance	≥ class 3	
Mechanical life cycle	≥ class 2; 7000 cycles	
Noise emission (Distance 1 m)	Lp(A) ≤ 70 db(A)	

The manufacturer is responsible for the preparation of this declaration of performance.
Signed for the manufacturer and on behalf of the manufacturer.

Date	01.01.2017	Schanz Rollladensysteme GmbH Forchenbusch 9 D- 72226 Simmersfeld Tel.: +49 (0)7484/9291-0 Fax: +49 (0)7484/9291-36 E-Mail: info@schanz.de Internet: www.schanz.com
Rainer Schächinger Authorized person for documentation		

20. EC Declaration of Conformity

according to the EC Machinery Directive 2006/42/EC, Annex II A

We herewith declare that the following product with its design and construction as well as the version introduced by us, is in compliance with the respective and fundamental safety and health requirements of the EC Machinery Directive.
This declaration loses its validity if the product is being changed without our agreement.


Description of the product	Roller Shutter Type Wiga Star with electric gear drive
-----------------------------------	---

Applied EC Directive:

Directive/ Standard	Remark / Reference
2006/42/EC	EC Machinery Directive
EUV 305/2011	Construction Material Directive
2014/30/EEC	EMC Directive

Applied harmonised standards, in particular:

DIN EN ISO 12100:2011	Safety of Machines – Technical Guidelines
DIN EN 13659:2015	Legal Closings – Capacity and Safety requirements
DIN EN 60335-1:2012	Safety of household and similar electrical appliances – General requirements
DIN EN 60335-2-97:2017	Safety of household and similar electrical appliances - Particular requirements for drives for rolling shutters, awnings, blinds and similar equipment
DIN EN 55014-1:2012	EMC – Requirements for household and electrical appliances and similar electrical appliances Part 1: transient emissions
DIN EN 55014-2:2016	EMC – Requirements for household and electrical appliances and similar electrical appliances Part 2: interference resistance

Date	01.08.2018	Schanz Rollladensysteme GmbH Forchenbusch 9 D- 72226 Simmersfeld Tel.: +49 (0)7484/9291-0 Fax: +49 (0)7484/9291-36 E-Mail: info@schanz.de Internet: www.schanz.com
Signature		
Holger Schanz Managing Director	Rainer Schächinger Authorized Person for Documentation	

21. Copyright/ References to this documentation

The copyright (copyright ©) for the present documentation is being kept by Schanz Rollladensysteme GmbH as well as partially by the suppliers of the sub vendor documentation.

The containing information is solely designed for the operating companies of our roller shutters. It may not be changed, extended, duplicated, saved on data linked institutions and spread without our written agreement nor should it be used for other purposes.

The containing information in this document makes no claim to be complete. We have done everything to reflect the content concerning our products to be correctly and up to date. However a warranty for the correctness of the documentation cannot be given. Especially photographs and other images can contain components which do not belong to the standard scope of delivery (options), or which have been changed in the meantime.

Changes in connection with a further development as well as the „state of technology“ are subject to alteration.

Copyright © Schanz Rollladensysteme GmbH, 2018