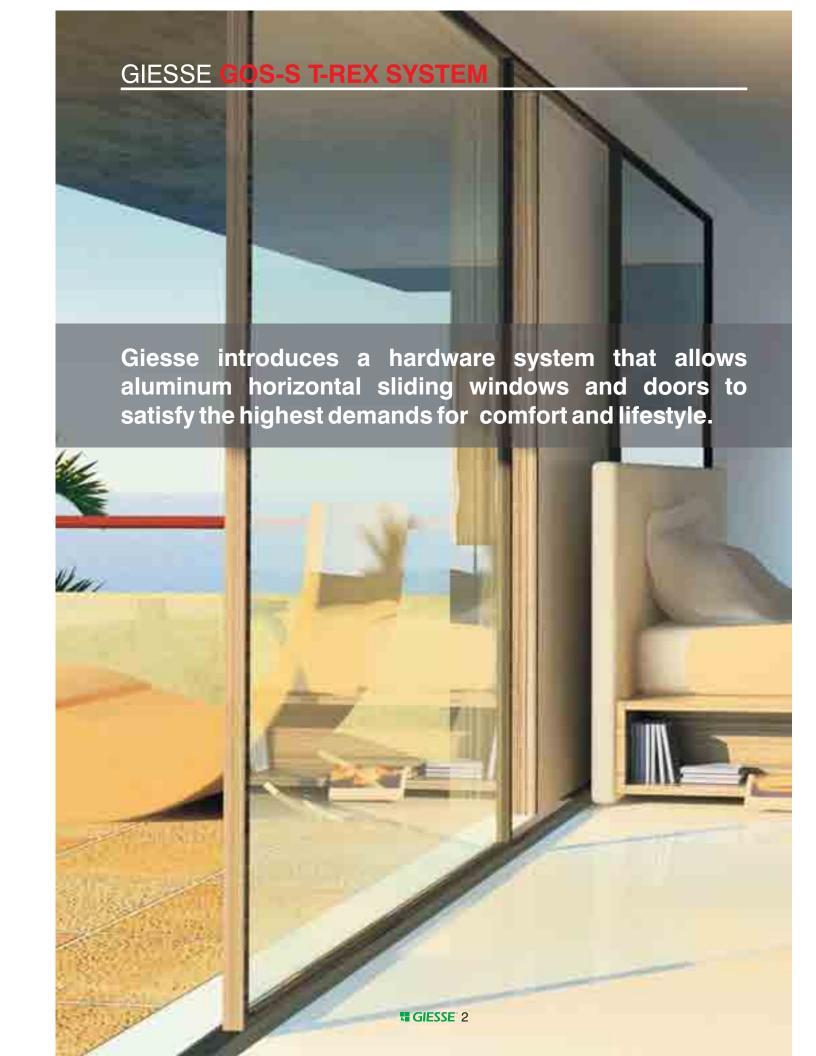


Hardware that will revolutionize the way you look at horizontal sliding windows and doors.





GOS<sup>®</sup>S is a hardware system designed by Giesse. When combined with extrusions from

an aluminum producer, it offers a sliding window and door system that

provides excellent air, water, and structural performance, world-class

thermal efficiency,

outstanding acoustical properties, and assurance against forced entry. Performance

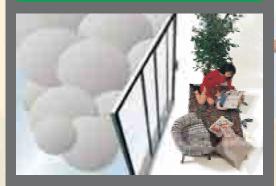
like a terrace door, but with the convenience of a slider.







#### Air infiltration: Class A4



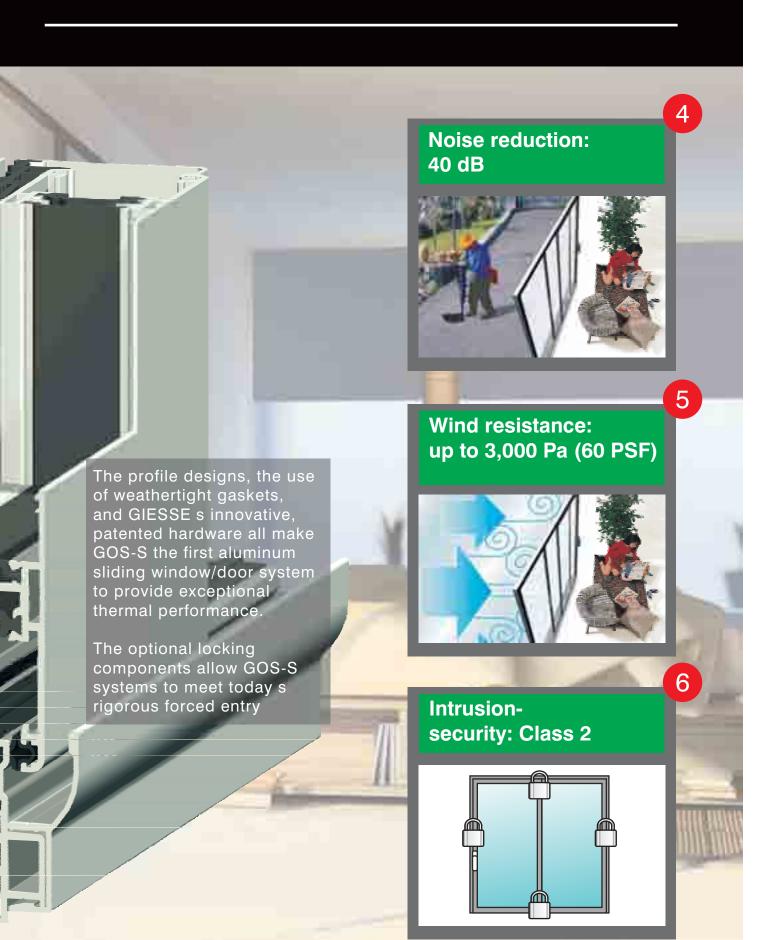
Water resistance: 1,050 Pa (15 PSF)



At a time when lifestyles and building codes both demand the highest possible performance from window and doors, GIESSE introduces GOS-S - a system that overcomes the traditional limitations of horizontal sliding doors and windows.

The thermal transmittance, air and water resistance and acoustic performance, tested according to EN standards, are similar to those of the best

3



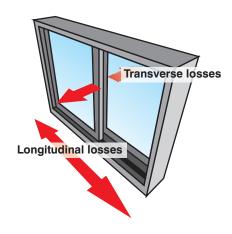
### Thermal transmission



Uw<1.8 W/mqK (0.32 Btu/h ft2 F) as per EN 10077-1/2

In traditional aluminum sliders,

transverse heat losses through the surface combine with significant longitudinal losses, resulting in thermal properties that are less desirable than those in other product designs (e.g. projected windows or terrace doors).





The GOS-S system substantially reduces **transverse losses** by increasing the thermal separation between the interior and exterior metal.

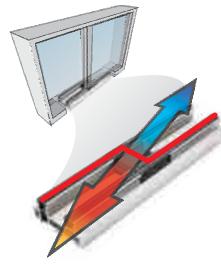
**Longitudinal losses** can account for up to **25%** of total energy losses.

GOS-S uses a completely unique **system** to reduce longitudinal losses: **the T-REX frame joint.** 

T-REX is covered by a Giesse international patent.



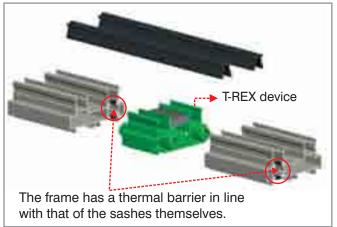


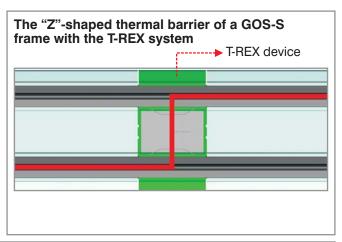


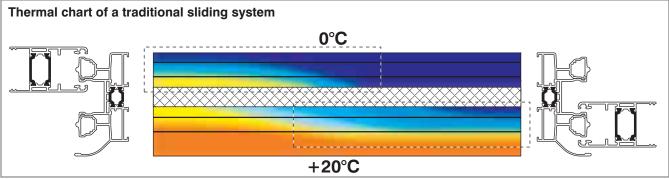
# The T-REX joint is installed centrally on the frame s head and sill extrusions at the meeting rail.

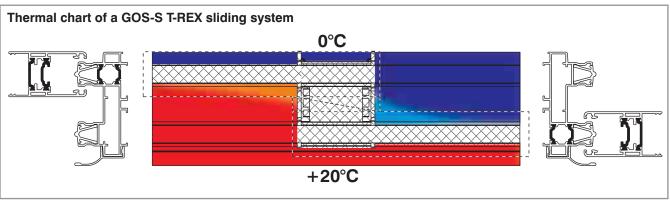
The frame has a thermal barrier in line with that in the sashes. The T-REX, which is comprised of thermally efficient polyamide, meets the thermal barrier of the frame **and thus shuts off longitudinal thermal losses.** 

Because the line of the thermal barrier in the frame changes planes to match the sashes, there is no thermal short circuit. The resulting thermal break resembles a Z in plane at the head and sill of the frame.









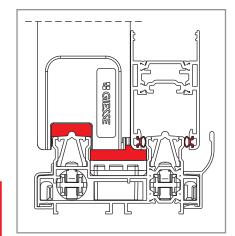
### Air and water resistance

GOS-S provides air and water resistance equivalent to that of a high performance projected or swing system but with a **very low sill height**.

Using compression gaskets, innovative seals on the central extrusions and high drainage

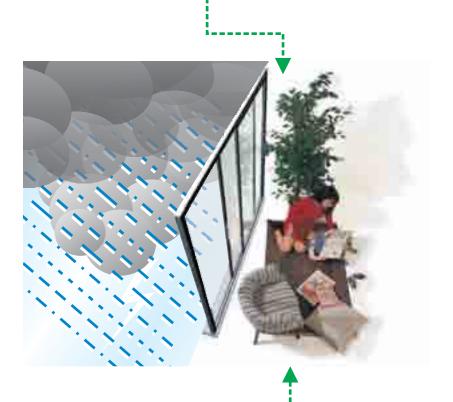
**capacity** due to the T-REX device, the performance of the system is absolutely outstanding.

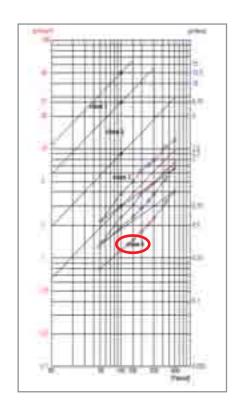
Air infiltration is minimized by the same components that provides the water resistance.



### Air Infiltration: Class A4

under EN1026





Water Resistance: 1,050

Pa (15 PSF)



### **Noise reduction**

### -40 dB

under EN140/3 and EN717/1

In recent years, noise pollution has reached levels that made it necessary to issue standards and legislation governing building works to reduce the disturbance it causes.

Not only public buildings (schools, hospitals, etc.) but private residences are increasingly required to meet accoustic standards for STC and OITC.

The GOS-S T-REX system uses extremely effective air tight components and allows for special acoustic glass to satisfy the most stringent demands for sound attenuation.



### Wind resistance

3 kPa (60 PSF) under En12211

Standard extrusions have been tested to provide structural resistance up to 3,000 Pa (over 60 PSF). Additional designs are available to withstand loadings up to and including typical hurricane and blast loads.



### **Security against forced entry**

Statistics regarding burglaries indicate that over 70% of break-ins occur through windows and side-entry doors (such as terrace and patio doors) and not via building s main entrance. This emphasizes the importance of providing windows and doors built with resistance to forced entry, using hardware specifically designed for

this purpose. In its standard configuration, GOS-S T-REX provides excellent security with locking points capable of resisting up to 1320 lbs (600 kg) of force each.

To satisfy **Class 2** requirements, GOS-S T-REX extrusions can be reinforced. In addition, special standard hardware should be used.







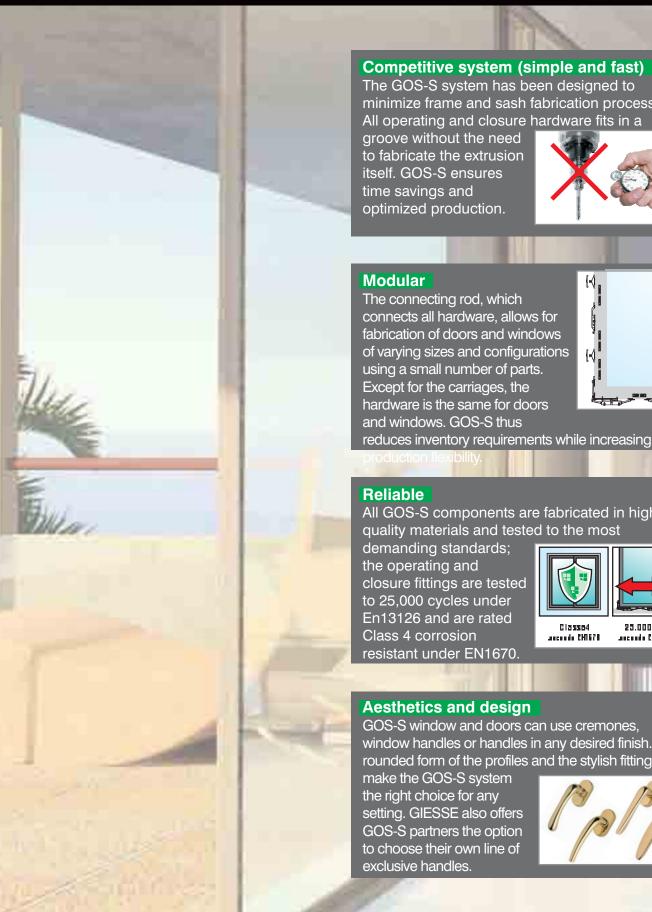


The Istituto Giordano has tested the GOS-S system under the terms of ENV 1627:2000, and certified it to satisfy the requirements of a Class 2 system.



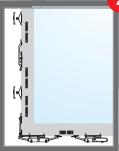


# GIESSE GOS-S T-REX SYSTEM Other advantages



minimize frame and sash fabrication processes.





3

All GOS-S components are fabricated in high



ancondo CHIS126

window handles or handles in any desired finish. The rounded form of the profiles and the stylish fittings



### **Competitive**

The GOS-S T-REX system does not require fabrication of the sash (except for that required for cremones and window handles) when installing the hardware. This enormously simplifies door and window production and speeds up the work of the fabricator.

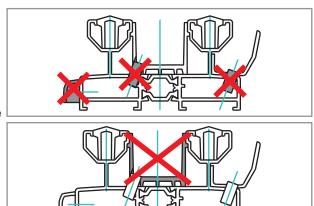
channel in the sash - with obvious benefits for the production process. **The entire hardware** for a single sash (kit of carriages, corner mechanism, 3 locking and operating points) can be mounted in under 3 minutes.

All hardware, whether operating or locking, are mounted in the 15/20

#### Reduced fabrication and installation time

Along with its excellent drainage properties, T-REX considerably reduces the time required to fabricate the window or door. The water which builds up in the frame is drained off by the T-REX system and there is consequently no need to machine the sill for drain caps or tubes - a significant time saving.

Another cost saving (installation time and costs) provided by the T-REX system involves the elimination of the plastic U profile which must normally be inside the frames of traditional slider designs.

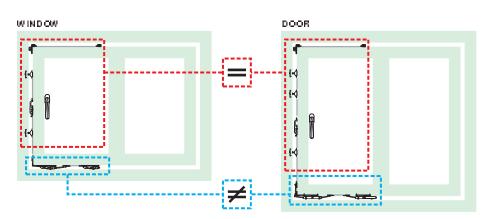


### Modular

The polyamide connecting rod is used to connect the hardware, whether operating (carriages) or locking points (closure points, operation, lock, etc.).

This results in a very modular system which allows for the fabrication of windows and doors in a wide range of sizes and configurations using a small number of components.

To further simplify the purchasing agent s job, almost all parts can be used for both windows and doors. Only the carriages are specifically designed for either windows or doors - the system thus reduces inventory requirements and increases production flexibility.





### Reliable

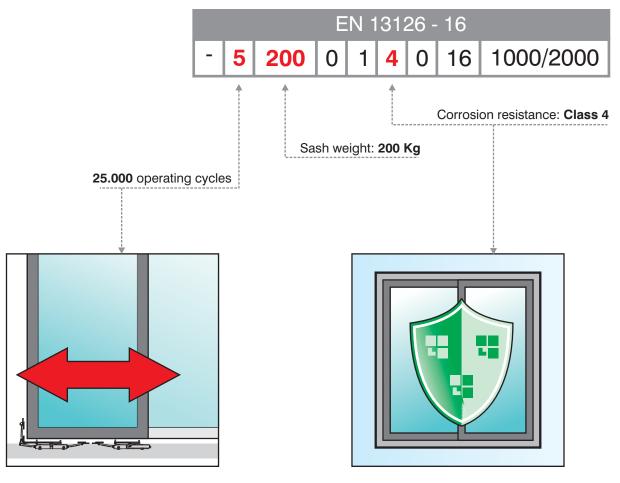
The reliability of GOS-S T-REX fittings is due to the use of **high quality materials** and **rigorous testing** of all parts.

The lift and slide (L&S) carriages are tested under the terms of the highest specifications of EN 13126-16/2008 - 25,000 operating cycles for:

- Kit of L&S carriages for sashes up to 176 lbs (80 kg).
- Kit of L&S carriages for sashes up to 440 lbs (200 kg).

All GOS-S hardware is treated to be corrosion resistant using a special treatment which classifies them as **Class 4** (highly resistant).





**25.000 cycles** under EN13126

Class 4 under EN1670



# System Components

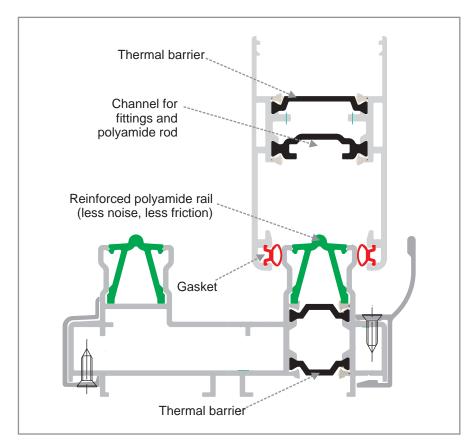
**EXTRUSIONS:** a limited number of extrusions (the same as a traditional sliding system) is used to make a variety of window and door types (2, 3 and 4 sashes). **POLYAMIDE COMPONENTS:** the

thermal barrier for the sash and frame, the rail track and the connecting rod are all made of this material, which considerably reduces carriage friction and completely eliminates running noise.

GASKETING SYSTEMS: the gasketing system employed on the GOS-S system is a compression gasket, which not only provides an excellent seal against air and water, but also provides sound attenuation.

GOS-S is also compatible with traditional weatherstripping, which can used for all non-critical applications.

HARDWARE: a new generation of hardware has been specially designed to get the best possible performance out of the system. The range is complete and enables fabrication of windows and doors of all sizes with 2, 3 and 4 sashes.



### **Extrusion specifications**

#### Reference dimensions

GOS-S T-REX systems must adhere to certain size and specification tolerances in order to use the standard hardware and ensure excellent performance.

A polyamide bar 15/20 (Euro groove) is required for mounting the operating and locking hardware, and certain dimensional specifications for the sash, frame and mating surfaces (a sort of Eurogroove for sliding installations).

#### **Extrusion fabrication**

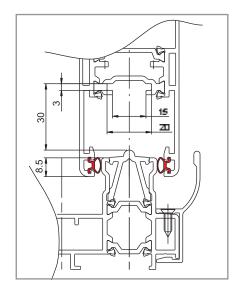
**SASH:** The sash extrusion must be cut at **45°** to use the 15/20 channel and enable installation around the perimeter of all available hardware

Other dimensions, on the other hand, are flexible and can be varied based on the requirements of the market itself.
For example:

Sash cross-section: a minimum of 40 mm (1 5/8) thickness, although 45 mm (1 3/4) has been found to provide the best combination of extrusion costs and thermal/acoustic performance).

Frame cross-section: a minimum of 85 mm (3 3/8) thick. Ideally 106 mm (4 1/8) provides the best combination of extrusion costs and air/water performance.

**FRAME:** the frame, depending on production and style requirements, can be cut at either **45° or 90°**. This is at the discretion of the system designer and does not affect the hardware components.



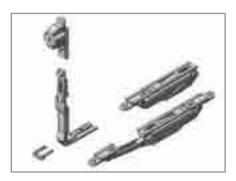
### **Hardware components**



#### **Kit L&S Door carriage (patented)**

Kit composed of a pair of 2-wheel carriages for doors with a total weight of up to 200 kg (440 lbs) tested to 25,000 cycles (per EN13126) and a corner mechanism with snap-in mounting for faster installation.

The connection between the two carriages is provided by a polyamide rod. The carriages are equipped with a micrometer vertical adjuster (+/- 2 mm).



#### **Kit L&S Window carriage (patented)**

Kit composed of a pair of 1-wheel carriages for windows with a total weight of up to 80 kg (176 lbs) tested to 25,000 cycles (per EN13126) and a Tilt/turn Futura corner cleat.

The connection between the two carriages is provided by a polyamide rod. The carriages are equipped with a vertical adjuster (+1/-2 mm).



#### **Locking kit**

Kit composed of nib holder, nib and counterplate. The nib holder fits into the 15/20 channel and is actuated by the polyamide rod. The counterplate applies to the frame without the need for any fabrication.

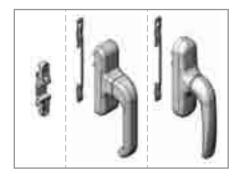
The locking kit has been tested under traction with loads in excess of 500 kg (1100 lbs) per the forced entry standard (ENV1630:2000).



#### **Window handle operation**

Internal mechanism, channel mounting and window handle control. The locking and carriage components are operated by a connecting rod. No machining of the profile is required to fit the mechanism (except for that required to mount the handle itself).

Thanks to a mechanism on the carriages, sashes of up to 200 kg (440 lbs) can be raised using a standard window handle.



#### Rapid and pull cremones (patented)

The RAPID cremones (Prima or Euro) are best suited for use with the GOS-S system. Their ease of installation makes extrusion assembly a snap - even in an area which is hard to access with tools such as screwdrivers and wrenches.

A rod pull has been specially developed for use with the GOS-S system. Thanks to a mechanism on the carriages, sashes of up to 200 kg (440 lbs) can be raised using the window handle with a standard cremone.



#### L&S lever handle (patented)

Built-in handle (same as Brio), with lever action, for use on sashes up to 80 kg (220 lbs). The unit connects to the rod with a snap-in pin. Its reduced thickness enables it to be used on windows where it is necessary to overlap the sashes to clean the external panes.



#### **Security lock (patented)**

Security device used with operating hardware to either prevent opening from the inside or enable access from the outside (i.e. double window handle and double cylinder).

The lock is compatible with European profile cylinders and is essential for Class 2 forced entry configurations.



#### **Anti-intrusion components (patented)**

In order to obtain Class 2 forced entry certification, the lock and the Class 2 rise-proof kit and intrusion boss are needed.

The rise-proof kit, which is controlled by a corner cleat and connecting rod, prevents the sash from being raised for entry, while the external boss protects the cylinder against similar attack.



#### **Central and T-REX cap kits (patented)**

These are required to obtaining very high air and water resistance. The pair of T-REX caps not only increases thermal efficiency, but also drains water and helps to seal the meeting rail along with the other components in the kit.

The kit also includes sheaths, air baffles (lower and upper), labyrinth plugs and covers.



#### Rise-proof and shock absorber plugs (patented)

These mount to the sash to prevent potentially damaging collisions with the frame when closing the sash. They also provide the rise-proof function. An innovative solution enables the plugs to be mounted near the middle of the extrusion and not only at the corners.

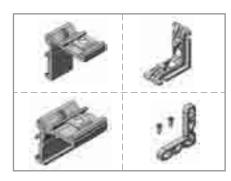
Special fittings are available for operable and fixed sashes.

### **Hardware Components**



#### Fixed sash kit

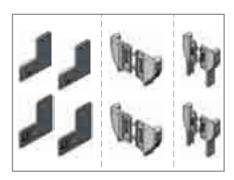
Components for securing the fixed sash to the frame. No fabrication required; the sash can be removed for inspection and maintenance as desired.



#### **Corner joints**

GIESSE has developed a special sash corner joint for the GOS-S system, using an innovating mounting system which gives the corner great strength and stiffness.

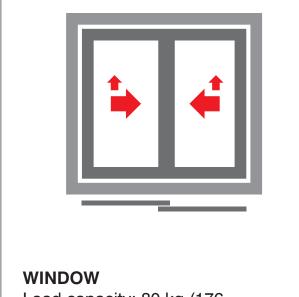
A variety of corner joints are also available for mounting the frame corner.

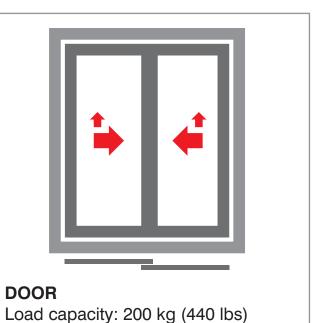


#### **Plastic fittings**

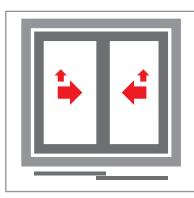
GIESSE's GOS-S system includes a range of components like sash alignment corner joints and condensation caps.

### **Possible configurations**





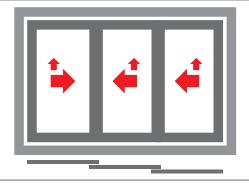
# Load capacity: 80 kg (176 lbs)per sash



#### **2 SASHES**

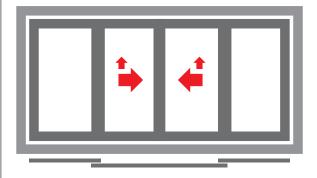
per sash

- 2 mobile sashes (XX)
- 1 mobile, 1 fixed (OX, XO)



#### **3 SASHES**

- 3 mobile sashes (XXX)
- 2 mobile, 1 fixed (XOX, XXO, OXX)



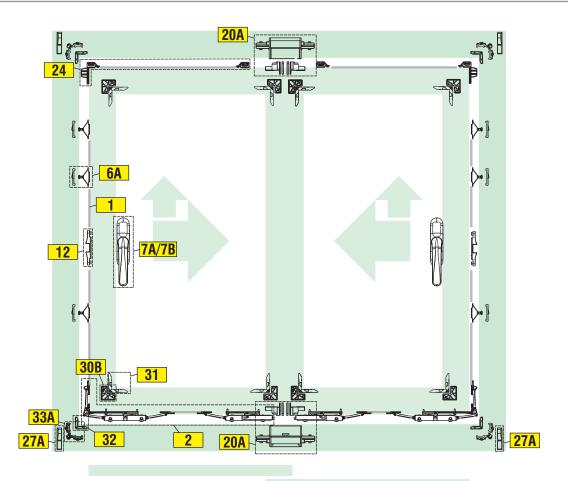
#### **4 SASHES**

- 4 mobile sashes (XXXX)
- 2 mobile, 2 fixed (OXXO, XOOX)

### Configurations

#### **GOS-S T-REX L&S DOOR WITH CREMONE**

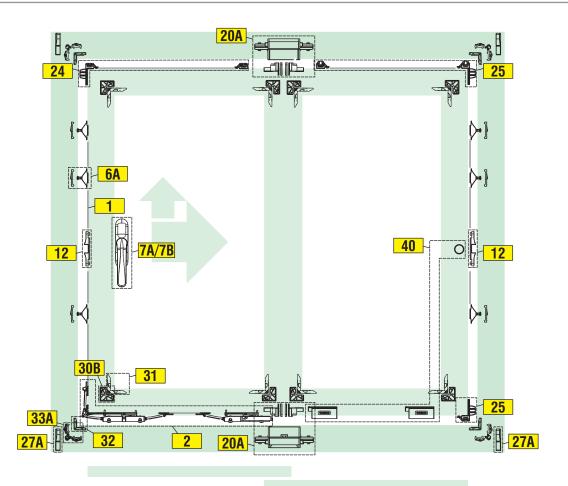
SASH 45 mm - TWO MOBILE SASHES (XX)



Number	Code	Description	Quantity
1	03524590	CONNECTION ROD	
6A	02929000	KIT FOR MOUNTING FRAME TO OPEN RAIL GOS-S	6
12	02940000	CREMONE DRIVE ROD	2
7A-7B	01058R	PRIMA RAPID/EURO RAPID	2
2	02913000	KIT CREMONE GOS-S L&S 2-WHEEL CARRIAGES + MECHANISM	2
24	02939000	KIT OF SHOCK ABSORBER AND RISE-PROOF PLUGS GOS-S L&S	2
20A	02936000	KIT OF CENTRAL PLUGS GOS-S T-REX L&S	1
27A	02938000	PAIR OF DRIP PROFILE CAPS RH/LH GOS-S T-REX	2
30B	02921000	SASH ALIGNMENT CORNER JOINTS GOS-S 45 mm WITH PROVISION FOR ARMOUR PLATING	16
31	02923000N	SASH CORNER JOINT GOS-S	8
32	02922000	CORNER JOINT 1 FRAME GOS-S T-REX	4
33A	00336000	CORNER JOINT 2 FRAME GOS-S TREX	4

#### GOS-S T-REX L&S DOOR WITH CREMONE

SASH 45 mm - 1 FIXED, 1 MOBILE (XO, OX)

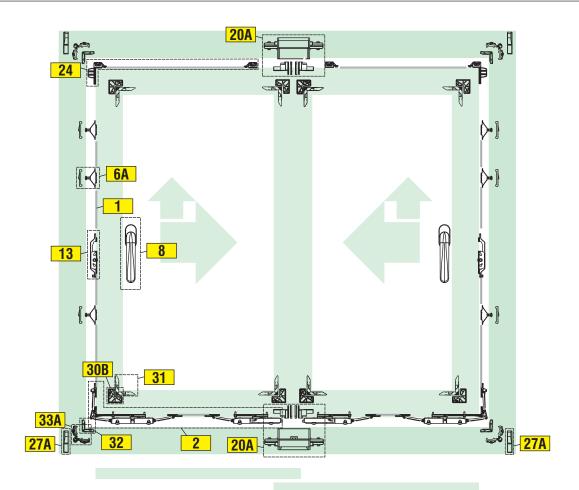


Number	Code	Description	Quantity
1	03524590	CONNECTION ROD	
6A	02929000	KIT FOR MOUNTING FRAME TO OPEN RAIL GOS-S	6
12	02940000	CREMONE DRIVE ROD	2
7A-7B	01058R	PRIMA RAPID/EURO RAPID	1
2	02913000	KIT CREMONE GOS-S L&S 2-WHEEL CARRIAGES + MECHANISM	1
24	02939000	KIT OF SHOCK ABSORBER AND RISE-PROOF PLUGS GOS-S L&S	1
20A	02936000	KIT OF CENTRAL PLUGS GOS-S T-REX L&S	1
27A	02938000	PAIR OF DRIP PROFILE CAPS RH/LH GOS-S T-REX	2
30B	02921000	SASH ALIGNMENT CORNER JOINTS GOS-S 45 mm WITH PROVISION FOR ARMOUR PLATING	16
31	02923000N	SASH CORNER JOINT GOS-S	8
32	02922000	CORNER JOINT 1 FRAME GOS-S T-REX	4
33A	00336000	CORNER JOINT 2 FRAME GOS-S T-REX	4
40	02954000	FIXED SASH	1
25	02933000	KIT OF SHOCK ABSORBER AND RISE-PROOF PLUGS GOS-S SLIDE	1

## Configurations

#### GOS-S T-REX L&S DOOR WITH WINDOW HANDLE

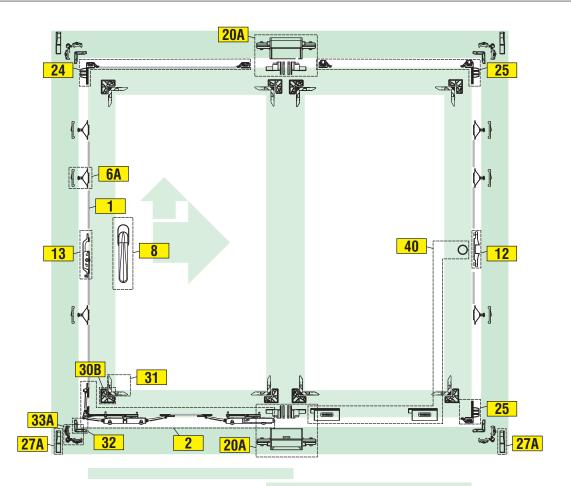
SASH 45 mm - TWO MOBILE SASHES (XX)



Number	Code	Description	Quantity
1	03524590	CONNECTION ROD	
6A	02929000	KIT FOR MOUNTING FRAME TO OPEN RAIL GOS-S	6
13	02951000	WINDOW HANDLE MECHANISM	2
8	VARI	WINDOW HANDLE	2
2	02913000	KIT CARRIAGES GOS-S L&S 2-WHEEL + MECHANISM	2
24	02939000	KIT OF SHOCK ABSORBER AND RISE-PROOF PLUGS GOS-S L&S	2
20A	02936000	KIT OF CENTRAL PLUGS GOS-S T-REX L&S	1
27A	02938000	PAIR OF DRIP PROFILE CAPS RH/LH GOS-S T-REX	2
30B	02921000	SASH ALIGNMENT CORNER JOINTS GOS-S 45 mm WITH PROVISION FOR ARMOUR PLATING	16
31	02923000N	SASH CORNER JOINT GOS-S	8
32	02922000	CORNER JOINT 1 FRAME GOS-S T-REX	4
33A	00336000	CORNER JOINT 2 FRAME GOS-S T-REX	4

#### GOS-S T-REX L&S DOOR WITH WINDOW HANDLE

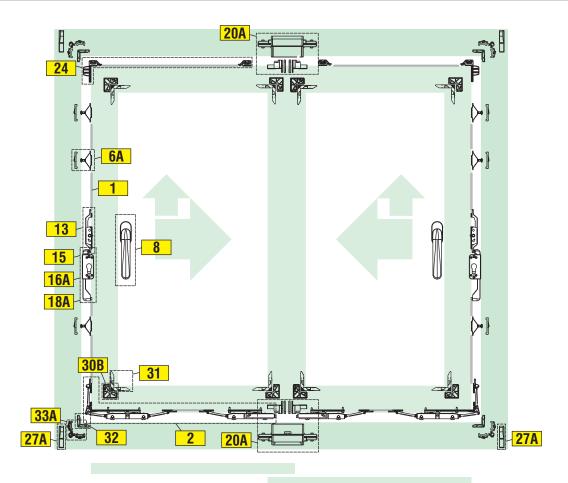
SASH 45 mm - 1 FIXED, 1 MOBILE (XO, OX)



Number	Code	Description	Quantity
1	03524590	CONNECTION ROD	
6A	02929000	KIT FOR MOUNTING FRAME TO OPEN RAIL GOS-S	6
13	02951000	WINDOW HANDLE MECHANISM	1
8	VARIOUS	WINDOW HANDLE	1
2	02913000	KIT CARRIAGES GOS-S L&S 2-WHEEL + MECHANISM	1
24	02939000	KIT OF SHOCK ABSORBER AND RISE-PROOF PLUGS GOS-S L&S	1
20A	02936000	KIT OF CENTRAL PLUGS GOS-S T-REX L&S	1
27A	02938000	PAIR OF DRIP PROFILE CAPS RH/LH GOS-S T-REX	2
30B	02921000	SASH ALIGNMENT CORNER JOINTS GOS-S 45 mm WITH PROVISION FOR ARMOUR PLATING	16
31	02923000N	SASH CORNER JOINT GOS-S	8
32	02922000	CORNER JOINT 1 FRAME GOS-S T-REX	4
33A	00336000	CORNER JOINT 2 FRAME GOS-S T-REX	4
40	02954	FIXED SASH KIT	1
25	02933000	KIT OF SHOCK ABSORBER AND RISE-PROOF PLUGS GOS-S SLIDE	1
12	02940000	CREMONE DRIVE ROD	1

# GIESSE GOS-S T-REX SYSTEM Configurations

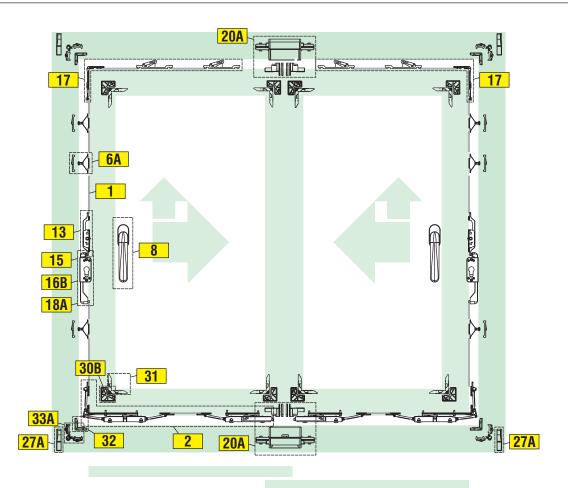
#### GOS-S T-REX L&S DOOR WITH WINDOW HANDLE AND LOCK with double cylinder SASH 45 mm - TWO MOBILE SASHES (XX)



Number	Code	Description	Quantity
1	03524590	CONNECTION ROD	
6A	02929000	KIT FOR MOUNTING FRAME TO OPEN RAIL GOS-S	6
13	02951000	WINDOW HANDLE MECHANISM	2
8	VARI	WINDOW HANDLE	4
15	02952	SECURITY LOCK WITH KEY AND COVER BOSS	2
16A	02957	EXTERNAL BOSS AND GUARD FOR LOCK CYLINDER	2
18A	07680000	CENTRAL SYMMETRICAL DOUBLE CYLINDER (EUROPE PROFILE) FOR GOS-S	2
104	07000000	WINDOW/DOOR	
2	02913000	KIT CARRIAGES GOS-S L&S 2-WHEEL + MECHANISM	2
24	02939000	KIT OF SHOCK ABSORBER AND RISE-PROOF PLUGS GOS-S L&S	2
20A	02936000	KIT OF CENTRAL PLUGS GOS-S T-REX L&S	1
27A	02938000	PAIR OF DRIP PROFILE CAPS RH/LH GOS-S T-REX	2
30B	02921000	SASH ALIGNMENT CORNER JOINTS GOS-S 45 mm WITH PROVISION FOR	16
005	02321000	ARMOUR PLATING	10
31	02923000N	SASH CORNER JOINT GOS-S	8
32	02922000	CORNER JOINT 1 FRAME GOS-S T-REX	4
33A	00336000	CORNER JOINT 2 FRAME GOS-S T-REX	4

### GOS-S T-REX L&S DOOR WITH WINDOW HANDLE CLASS 2 with double cylinder

SASH 45 mm - 2 MOBILE SASHES (XX)

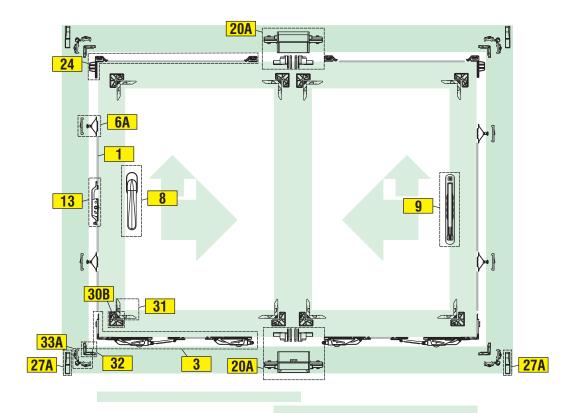


Number	Code	Description	Quantity
1	03524590	CONNECTION ROD	
6A	02929000	KIT FOR MOUNTING FRAME TO OPEN RAIL GOS-S	6
13	02951000	WINDOW HANDLE MECHANISM	2
8	VARI	WINDOW HANDLE	4
15	02952	SECURITY LOCK WITH KEY AND COVER BOSS	2
16B	02955	CYLINDER GUARD FOR CLASS 2 ANTI-INTRUSION LOCK	2
18A	07680000	CENTRAL SYMMETRICAL DOUBLE CYLINDER (EUROPE PROFILE) FOR GOS-S WINDOW/DOOR	2
17	02953000	CLASS 2 RISE-PROOF KIT FOR GOS-S L&S	2
2	02913000	KIT CARRIAGES GOS-S L&S 2-WHEEL + MECHANISM	2
24	02939000	KIT OF SHOCK ABSORBER AND RISE-PROOF PLUGS GOS-S L&S	2
20A	02936000	KIT OF CENTRAL PLUGS GOS-S T-REX L&S	1
27A	02938000	PAIR OF DRIP PROFILE CAPS RH/LH GOS-S T-REX	2
30B	02921000	SASH ALIGNMENT CORNER JOINTS GOS-S 45 mm	16
31	02923000N	SASH CORNER JOINT GOS-S	8
32	02922000	CORNER JOINT 1 FRAME GOS S TREX	4
33A	00336000	CONTRACTOR OF THE WILL GOOD THEAT	4

### Configurations

#### WINDOW GOS-S T-REX L&S WITH WINDOW HANDLE and LEVER HANDLE

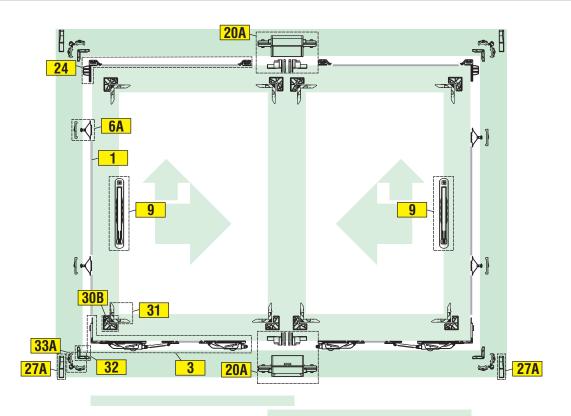
SASH 45 mm (XX)



Number	Code	Description	Quantity
1	03524590	CONNECTION ROD	
6A	02929000	KIT FOR MOUNTING FRAME TO OPEN RAIL GOS-S	4
13	02951000	WINDOW HANDLE MECHANISM	1
8	VARI	WINDOW HANDLE	1
9	02942	BUILT-IN HANDLE WITH 180° LEVER GOS-S L&S	1
3	02912000	KIT CARRIAGES GOS-S L&S 1-WHEEL + CORNER	2
24	02939000	KIT OF SHOCK ABSORBER AND RISE-PROOF PLUGS GOS-S L&S	2
20A	02936000	KIT OF CENTRAL PLUGS GOS-S T-REX L&S	1
27A	02938000	PAIR OF DRIP PROFILE CAPS RH/LH GOS-S T-REX	2
30B	02921000	SASH ALIGNMENT CORNER JOINTS GOS-S 45 mm WITH PROVISION FOR ARMOUR PLATING	16
31	02923000N	SASH COBNER JOINT GOS-S	8
32	02922000	CORNER JOINT 1 FRAME GOS-S T-REX	4
33A	00336000	CORNER JOINT 2 FRAME GOS-S T-REX	4

#### WINDOW GOS-S T-REX L&S WITH DOUBLE LEVER HANDLE

SASH 45 mm (XX)



Number	Code	Description	Quantity
1	03524590	CONNECTION ROD	
6A	02929000	KIT FOR MOUNTING FRAME TO OPEN RAIL GOS-S	4
9	02942	BUILT-IN HANDLE WITH 180° LEVER GOS-S L&S	2
3	02912000	KIT CARRIAGES GOS-S L&S 1-WHEEL + CORNER	2
24	02939000	KIT OF SHOCK ABSORBER AND RISE-PROOF PLUGS GOS-S L&S	2
20A	02936000	KIT OF CENTRAL PLUGS GOS-S T-REX L&S	1
27A	02938000	PAIR OF DRIP PROFILE CAPS RH/LH GOS-S T-REX	2
30B	02921000	SASH ALIGNMENT CORNER JOINTS GOS-S 45 mm WITH PROVISION FOR ARMOUR PLATING	16
31	02923000N	SASH CORNER JOINT GOS-S	8
32	02922000	CORNER JOINT 1 FRAME GOS-S T-REX	4
33A	00336000	CORNER JOINT 2 FRAME GOS-S T-REX	4





