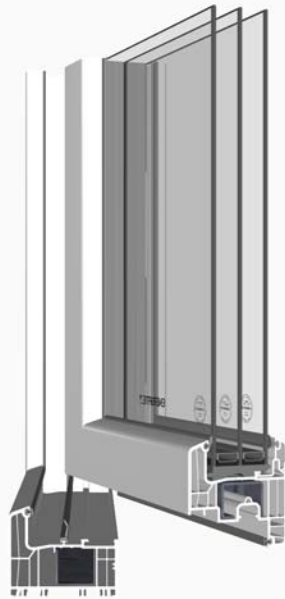


ENERGATE 843 uPVC

ENERGATE 893 uPVC with aluminium cladding



ENERGATE 843



ENERGATE 843

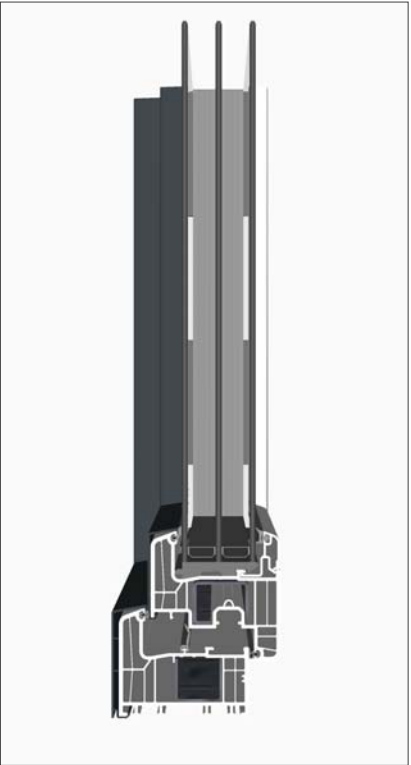
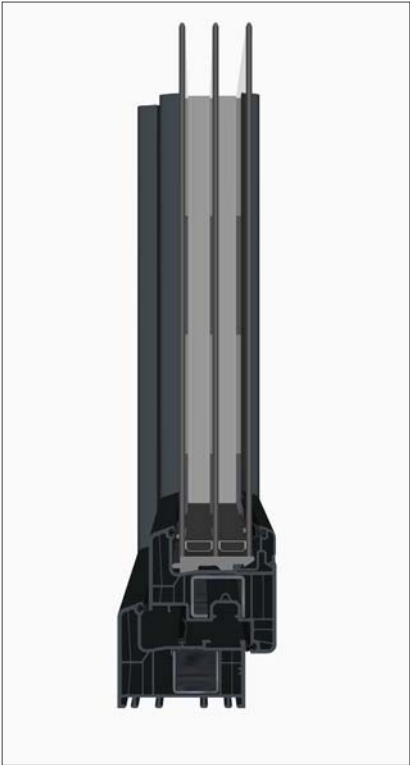
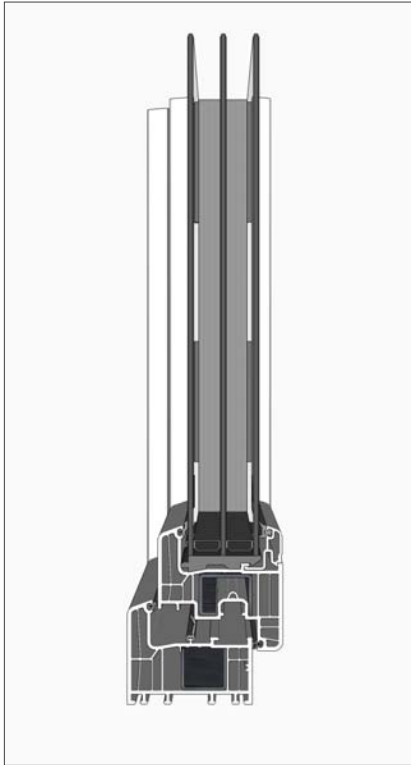
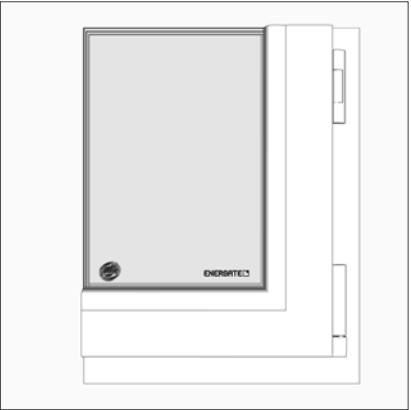
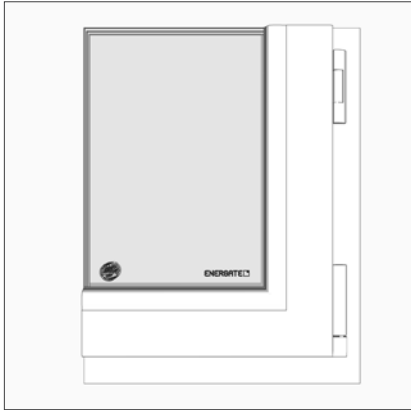


ENERGATE 893

HIGH QUALITY ENERGY-EFFICIENT WINDOWS & DOORS

ENERGATE 843 & 893

uPVC or uPVC with aluminium cladding



ENERGATE 843

INSIDE & OUTSIDE:
white

ENERGATE 843

ARCHITECTURAL COLOR
INSIDE & OUTSIDE:
DEC.921 graphite black
High UV-resistant FX membrane

ENERGATE 893

ALUMINIUM CLADDING
INSIDE: white
OUTSIDE: ALUMINIUM
RAL 7021 black grey
High weatherproof
UV-resistant coating (QUALICOAT class 2)



OUR PRODUCT ADVANTAGES

- Superior thermal performance
- Increased stability with a steel core
- High resistance to UV radiation: UV resistance up to 180 kLy / year radiation level
- Triple airtight continious gaskets
- 3-dimensional adjustable window hinges up to 130 kg, tested on 20.000 opening and closing cycles
- Thermal bridge free floor connection
- Flat wheel chair accessable threshold for all doors (patio, entry, sliding)
- All types of glass available:
Sun protection • Sound insulation • Safety toughened or laminated glass • P5A glass • Security glass
- Standard triple glass: $U_g = 0,50 \text{ W/m}^2\text{K}$ or standard double glazing: $U_g = 1,10 \text{ W/m}^2\text{K}$
- Execution always with warm edge spacer $\Psi \sim 0,040 \text{ W/mK}$
- Make your choice: Standard exposed or fully concealed window hinges
- All products are CE-certified

MORE PERFORMANCE - BEST EUROPEAN WINDOWS

	THERMAL INSULATION:	
		W/m²K
FRAME	U_f <small>IFT 402 42057/1 (Nr.263)</small>	0,95*
GLASS	U_g	0,50*
WINDOW	U_w	0,74*

* specified values are calculated for tested window:
1.001 tilt & turn window - Size: 1,23 x 1,48 m
Spacer: $\Psi \sim 0,040 \text{ W/mK}$
Norm: EN ISO 10077- 1:2000-11

Serviceability deflection	DIN EN 12210 ± 1800Pa, 2400 Pa and 3000 Pa
Operating force of opening sashes	DIN EN12217 75N (tilt & turn sashes) and 100 N (sliding doors)
Air infiltration	DIN EN12007 Class 4 · 0.027L/s=0,13m³/h@600Pa
Water penetration	DIN EN12208 ± 600 Pa
Ultimate strength	DIN EN 12210 ± 1800Pa, 2400 Pa and 3000 Pa
Permanent function	DIN EN 1191 Class 3 · up to 20.000 opening & closing cycles

➤ **Optional upgrade $U_w = 0,72 \text{ W/m}^2\text{K}$** with ENERGATE glass fiber spacer $\Psi \sim 0,030 \text{ W/mK}$
Test results for a 1.001 tilt & turn unit, for other products see test data sheet in the end of this brochure

GREAT CHOICE OF HIGH PERFORMANCE MEMBRANE

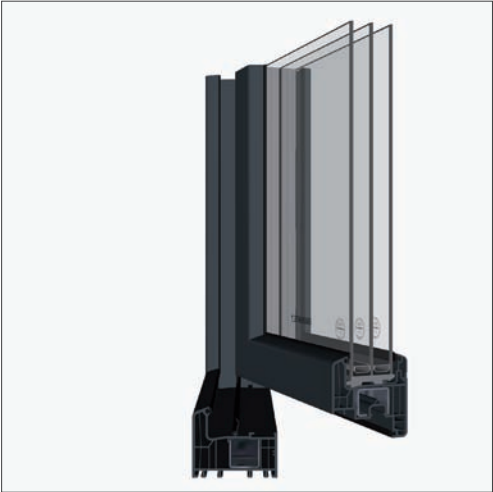
Standard white uPVC windows are available with:

- Aluminium cladding - highly weatherproof - HWF superior weathering category 3 (QUALICOAT class 2 and/or GSB premium)
- and/or
- High quality multi-layer FX membrane with extreme weather, temperature and UV radiation resistance on outside surface or FX membrane both sides (grey profile body)

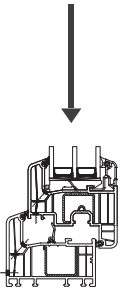
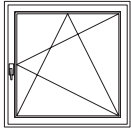
Unique features:

- Significant increasement in weathering resistance in terms of color stability and gloss retention
- High color stability with a long life-duration
- Dirt-repellent FX membranes with extremely easy maintance
- Pigments with metallic effects (aluminium-optic)

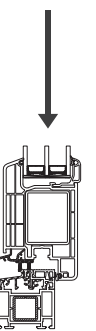
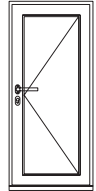
We reserve the right for technical changes.



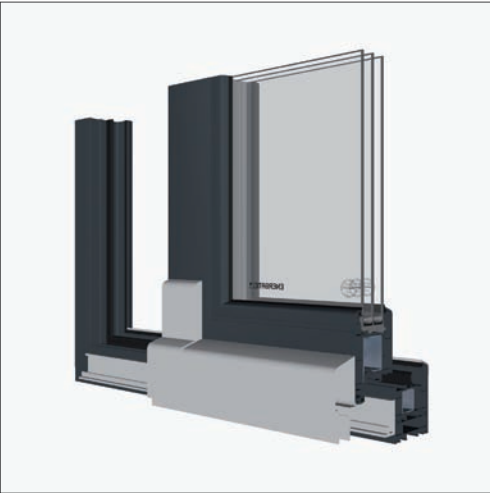
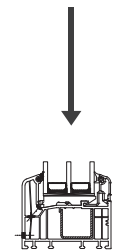
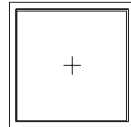
1.001.1 WINDOWS



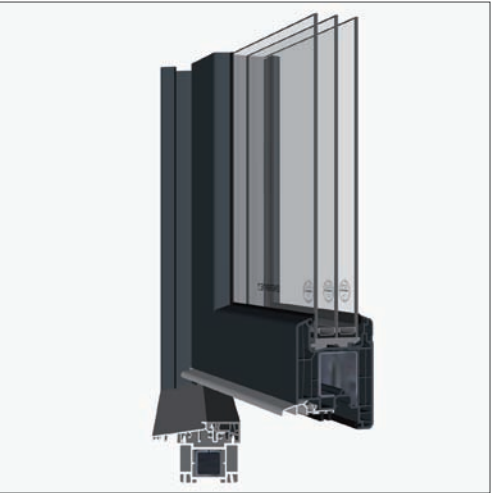
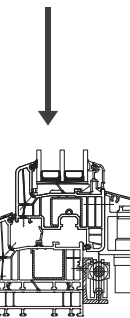
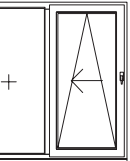
2.001.1 & 3.001.1 DOORS



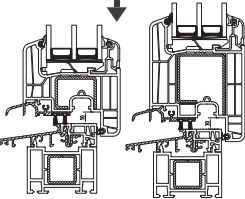
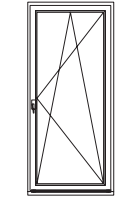
1.021 FIXED FRAMES



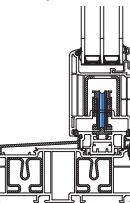
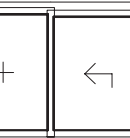
6.001.1 PARALLEL SLIDE & TILT WINDOWS



1.101.1 PATIO DOORS



8.001.1 LIFT & SLIDING DOORS



Product types ENERGATE 843 & 893



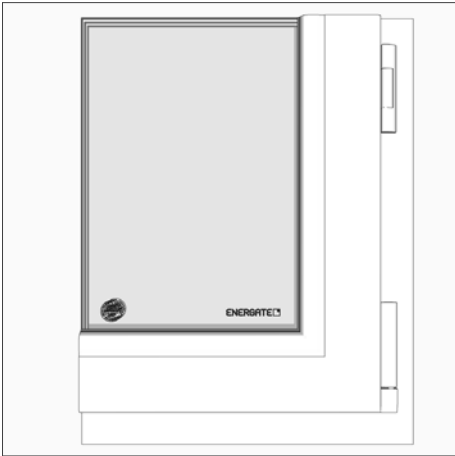
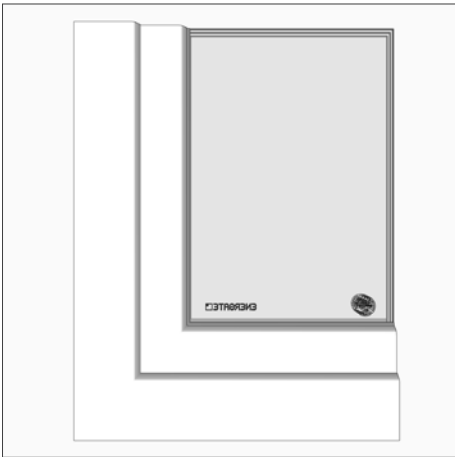
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High-quality windows & doors

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ADVANTAGES

- Very good cost-benefit ratio
- Efficient and cost-effective
- Easy to care for, requires minimal maintenance
- uPVC granule is extremely resistant to weather conditions and lightfast
- uPVC windows are 100 % recyclable and therefore resource-saving



PROFILE COLOR WHITE APPROX. RAL 9016

- **High resistance to UV radiation: UV resistance up to 180 kLy / year radiation level**

If your local IR radiation is higher, we recommend our aluminium claddings with SUPER DURABLE powder coating

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

ENERGATE 843

uPVC Steel with high performance membrane

ADVANTAGES

High quality multi-layer FX membrane with extreme weather, temperature and UV radiation resistance on outside surface or FX membrane both sides (grey profile body)

High color stability ensures a long life duration

The films are dirt-repellent and extremely easy to care for - even graffiti can be cleaned or easily removed

Pigments with metallic effects produce an aluminium-optic

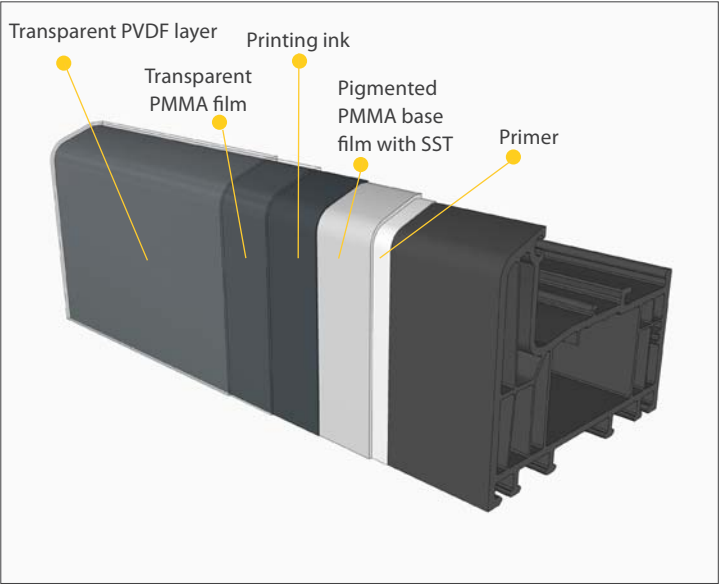
The exceptional fine structure guarantees a natural appearance



PROTECTION FOR EVERY CLIMATE

Even in the most UV intensive climates, films virtually maintain their color quality throughout the product life due to its multi-layered structure. The top layer consists of a polyvinylidene fluoride (PVDF) film, the middle layer of transparent polymethyl methacrylate (PMMA) and the base film PMMA is colored with infrared-reflecting pigments. Thanks to its Solar Shield Technology (SST), EXOFOL FX also protects window profiles from strong solar radiation.

Weather exposure tests in accordance with RAL-GZ 716 and DIN EN 513 demonstrate that EXOFOL FX by far exceeds the requirements of RAL quality standards.



FX membrane can be used worldwide.

MX and PX for moderate climates are available on request.

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ENERGATE 893

uPVC Steel with aluminium cladding

ADVANTAGES

SUPER DURABLE powder coating for aluminium cladding - highly weatherproof HWF superior weathering category 3 (QUALICOAT class 2 and/or GSB premium)

Polyester TGIC-free super durable powder coating with excellent weather resistance properties for high performance architectural exterior applications

High color stability ensures a long life duration

Sparkling metallic and anodized effects available

Wide selection of colors - see ENERGATE color chart for aluminium colors



SUPER DURABLE powder coatings can be used worldwide.

Durable powder coating for moderate climates available on request.

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

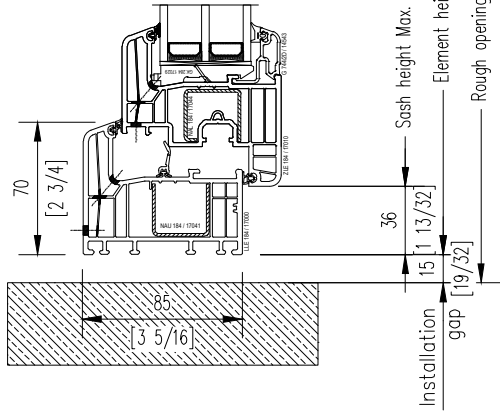
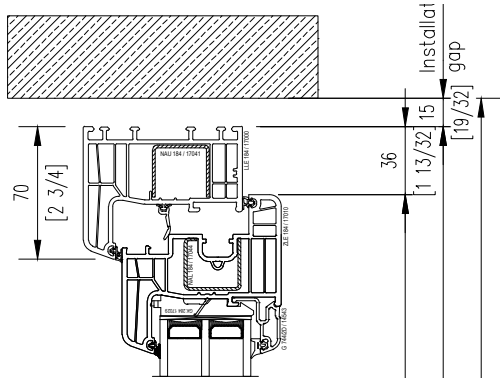


1.001.1 WINDOW



Single opening window

1.001
WINDOWS
single opening window



Vertical section drawing

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.



1.001.1 WINDOW



Inside view



Outside view



Tilt



Turn - inward



Installation pattern example



Inside view



Outside view

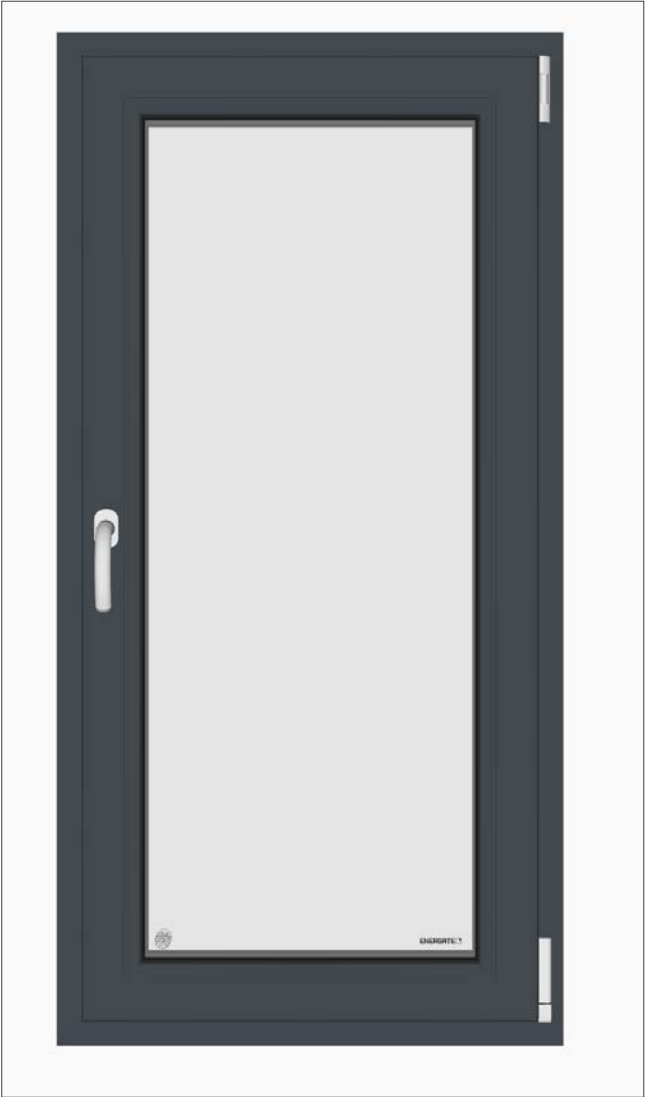


Outside view

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.



1.001.1 WINDOW I STANDARD - visible hinges



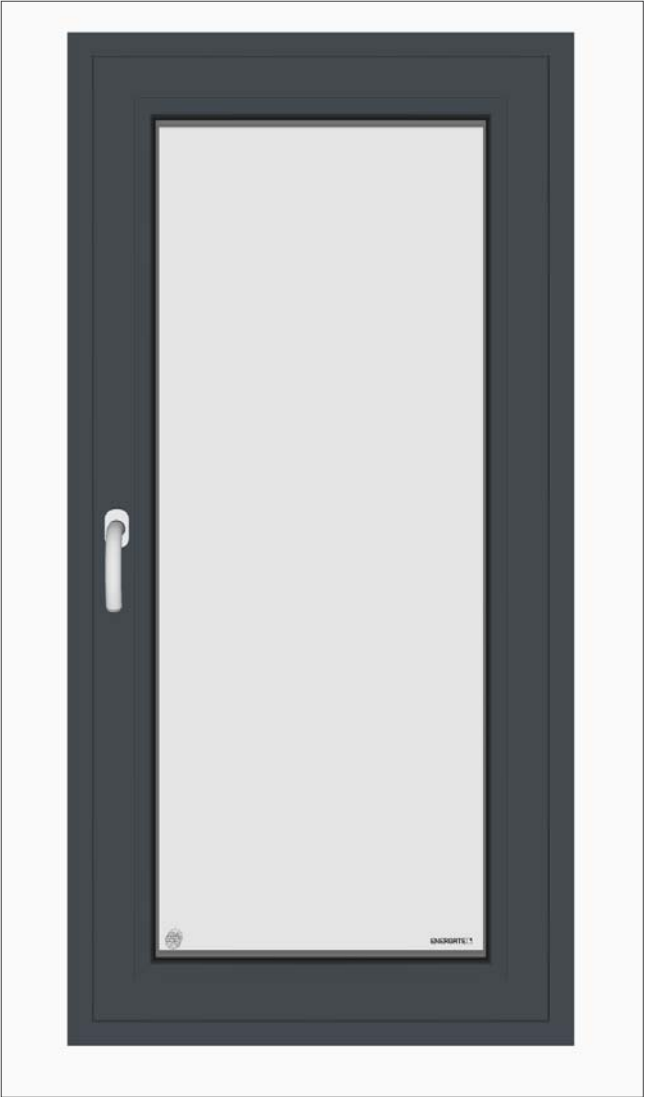
Inside view - STANDARD - visible hinges



Color choice - cover caps for window hinges



1.001.1 WINDOW I OPTIONAL- concealed hinges

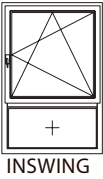


Inside view - OPTIONAL- concealed hinges



Concealed hinges

► Attention: **Only possible with 1.000 WINDOW elements,**
cannot be combined with a flat threshold element
1.100 PATIO DOORS with concealed hinges is not possible



1.009.1 WINDOW single opening window with fixed light below



Inside view



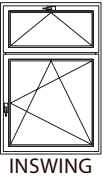
Tilt



Open



Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.



1.010.1 WINDOW single opening window with tilt window above

Opening types for tilt windows:



with window handle



with rod



with motorized opening

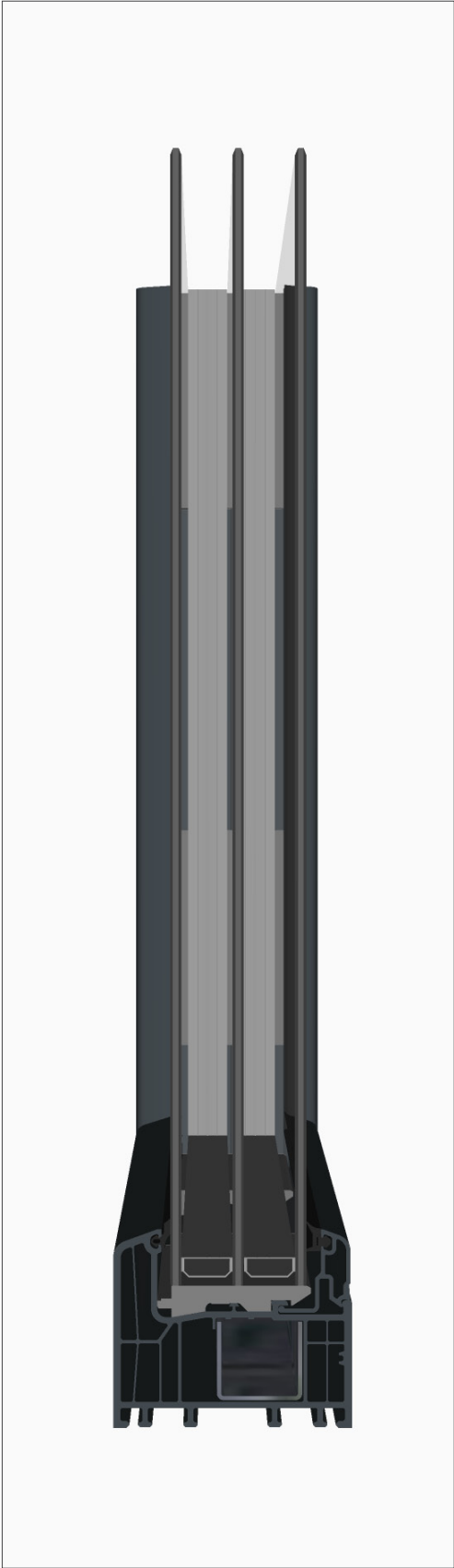


© Harvard Center for Green Buildings and Cities

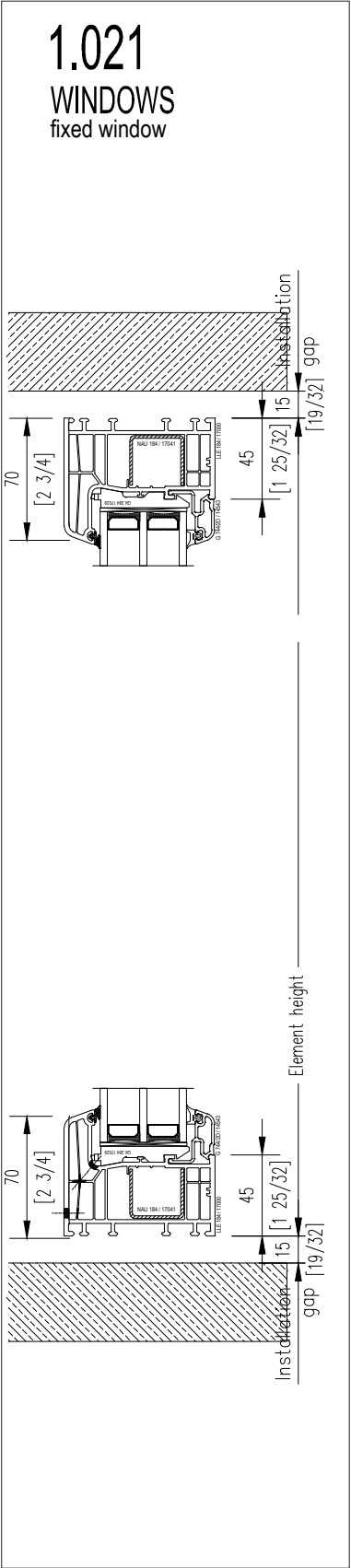
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1.021 FIXED FRAME



Fixed frame



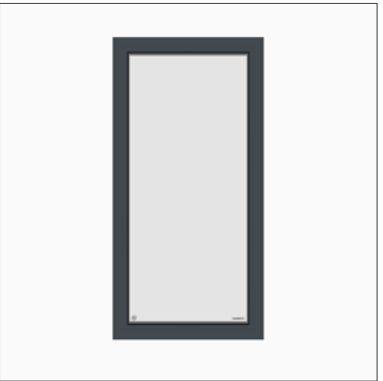
Vertical section drawing



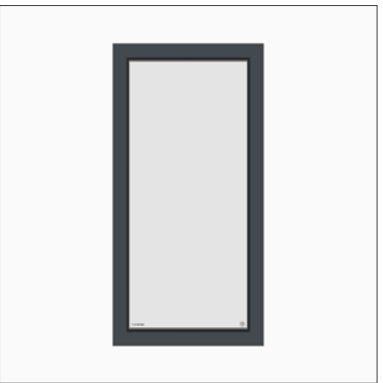
Inside view



Outside view



Inside view



Outside view

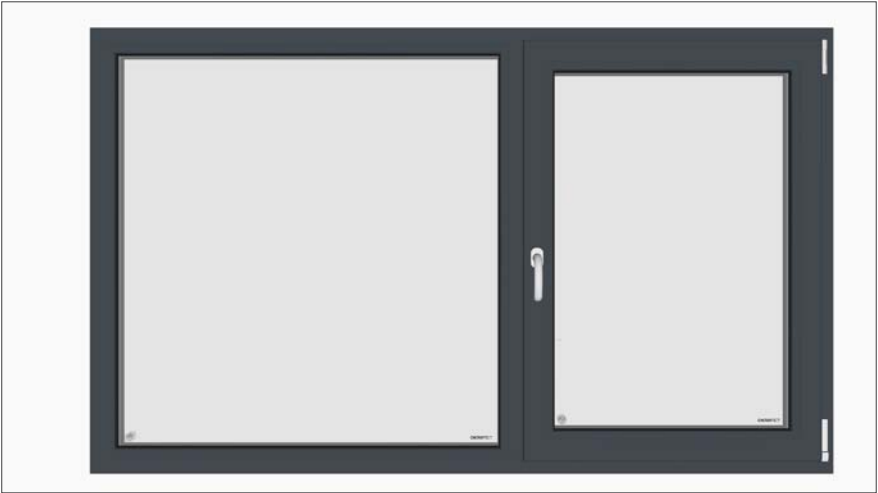


Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

Window with side light as one unit OR window and fixed frame as coupled elements

1.002.1 Window single opening window with fixed side light

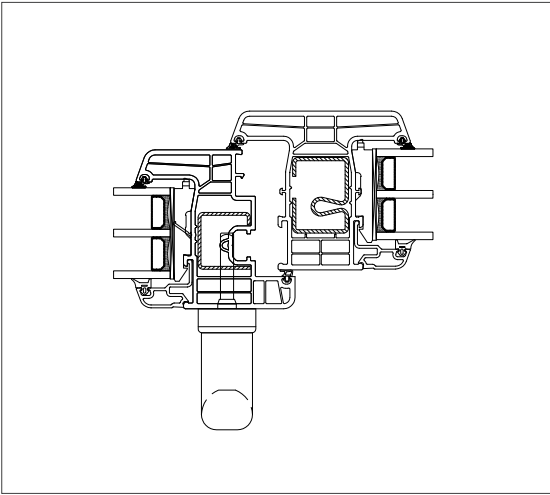
Inside view



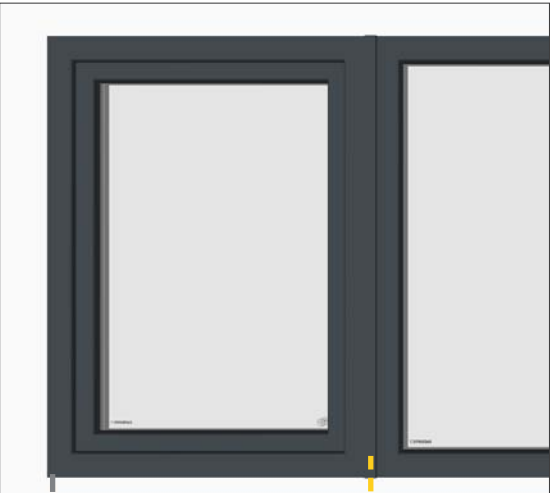
Outside view



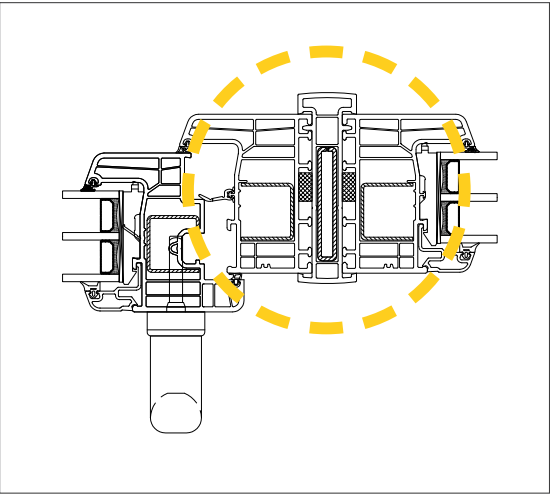
Maximum width 3 m as one unit



1.021 Fixed frame & 1.001.1 Window coupled elements



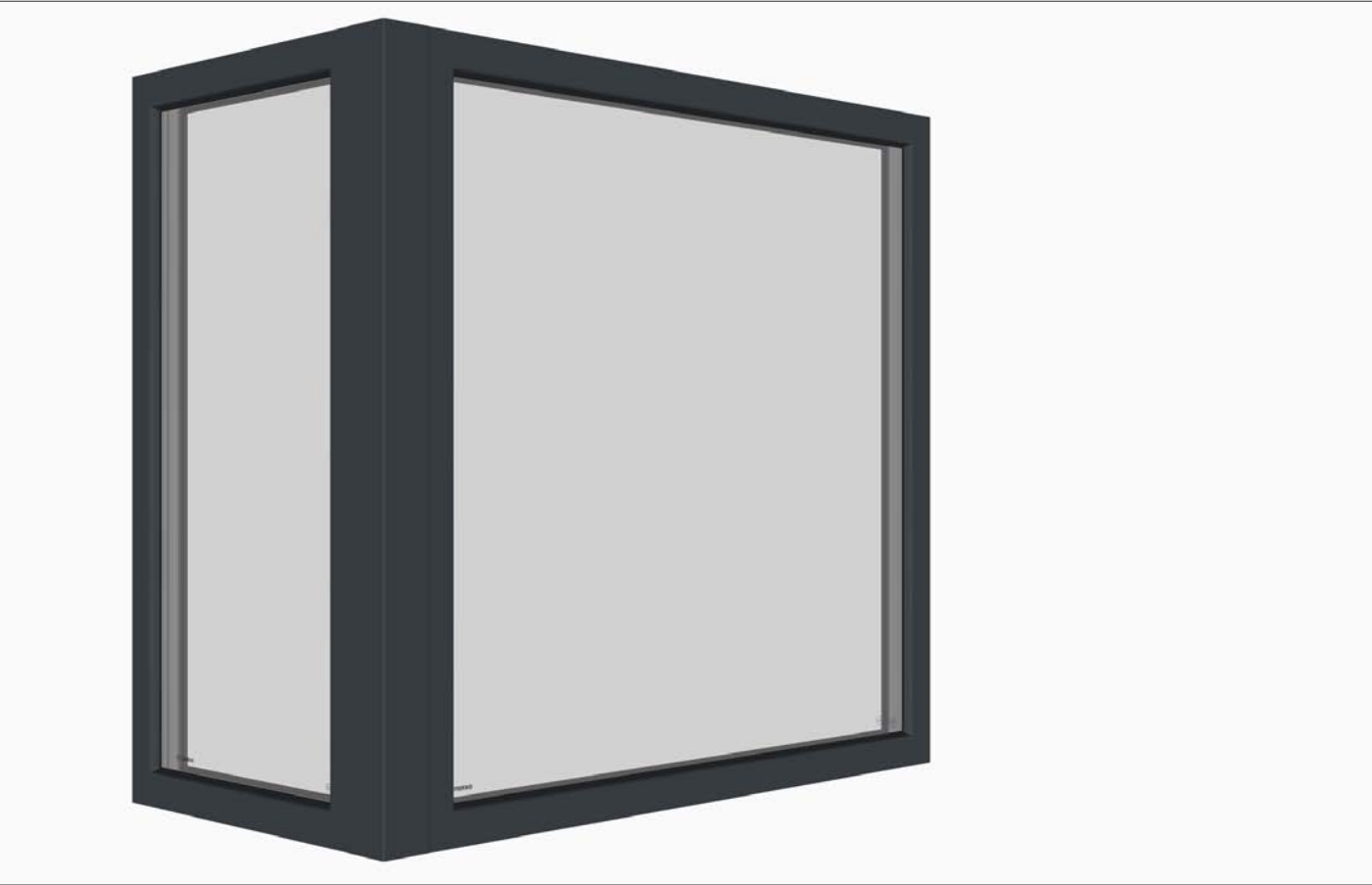
Element over 3 m must be coupled.
Two elements



Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.



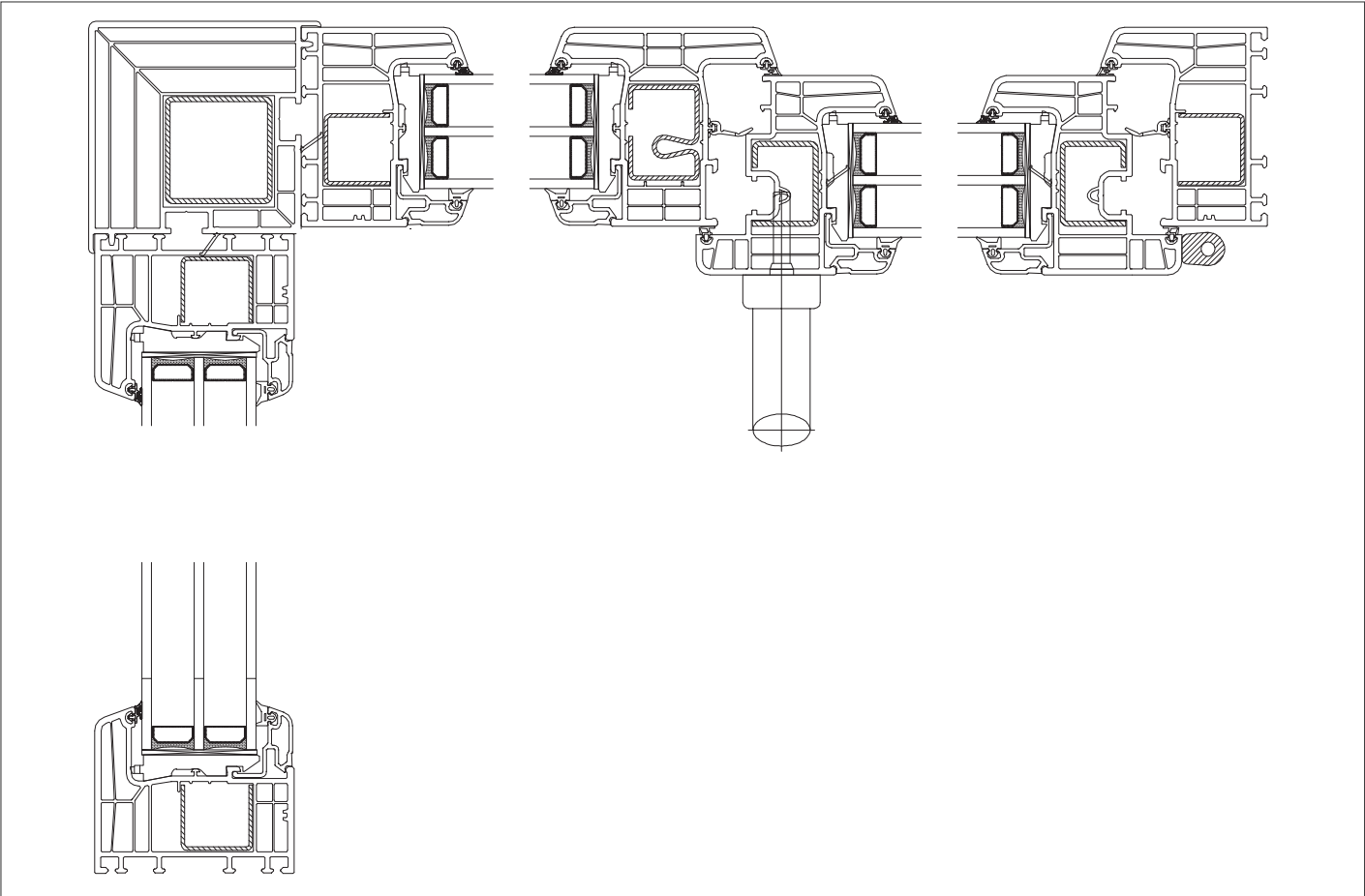
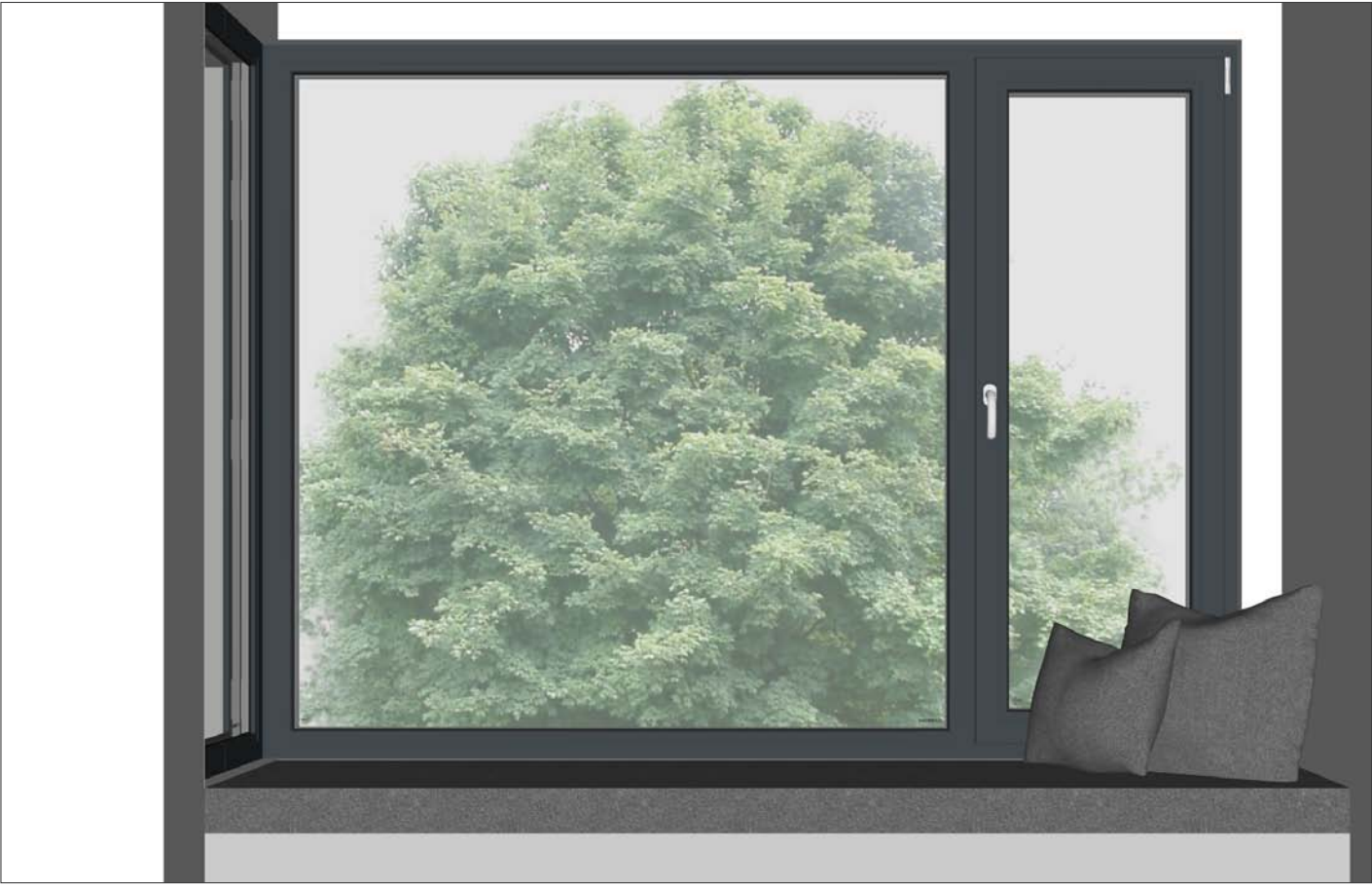
1.054 two fixed windows connected with a 90° post



1.054 Corner window



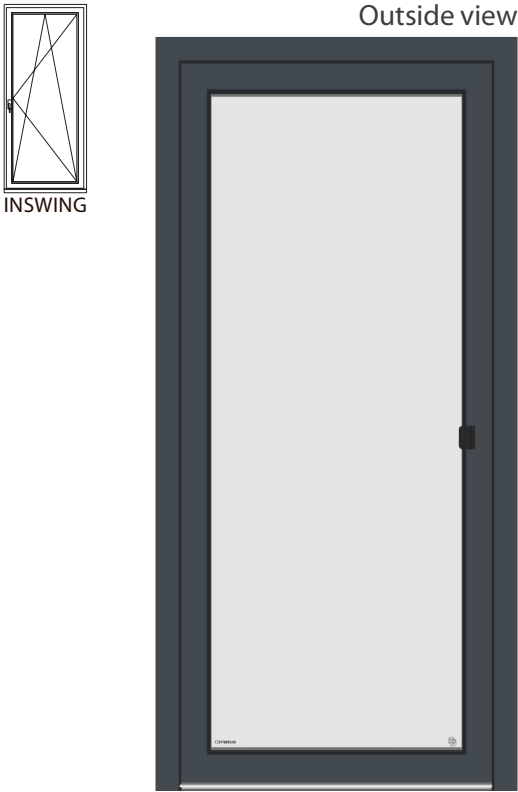
Top view



Horizontal section drawing: Combination 1.002.2 & 90 ° corner & 1.021

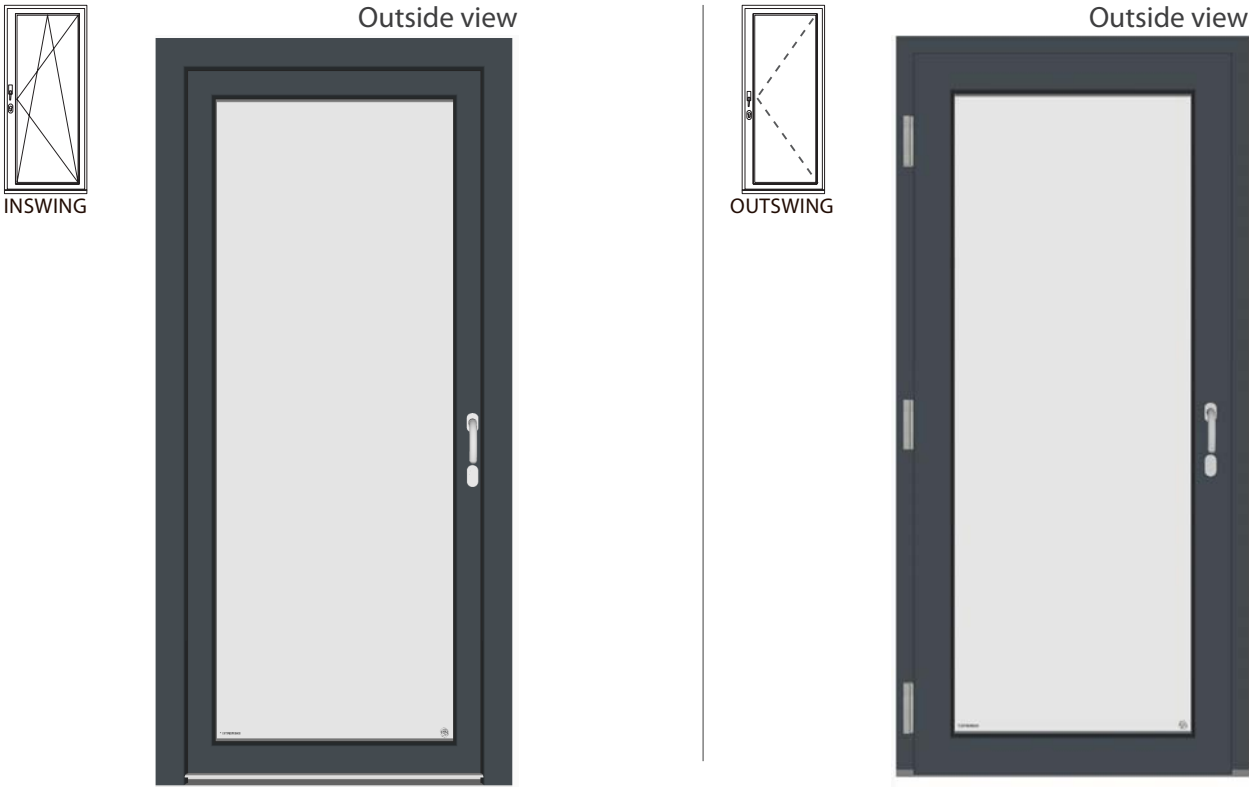
DOOR TYPES comparison overview

1.101 PATIO DOORS with flat threshold - inside: window handle - not lockable - outside: pull grip



1.101.1

5.001 LOCKABLE PATIO DOOR with flat threshold - exterior key cylinder - window handle - window hardware



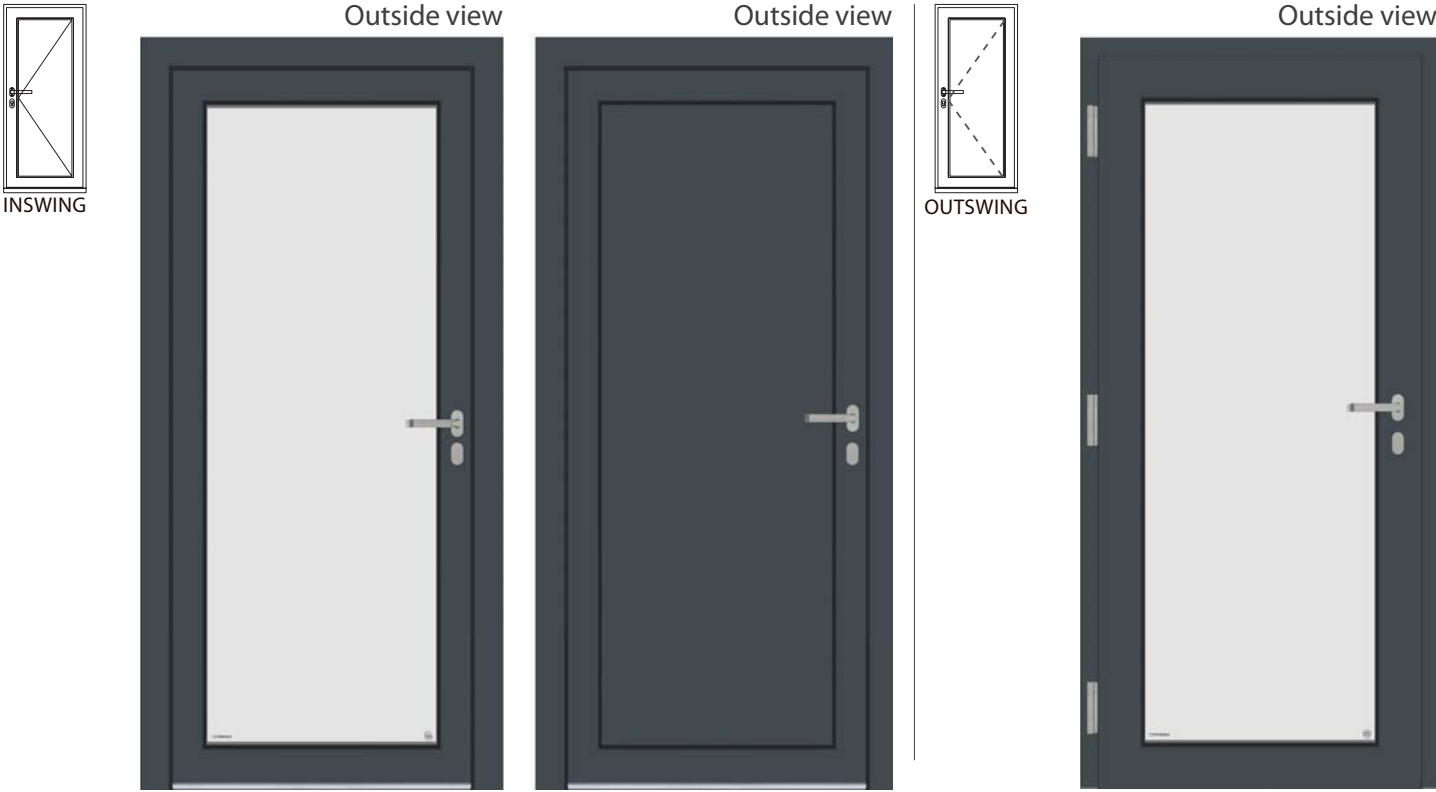
5.001.1

5.001.4 outswing

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

DOOR TYPES comparison overview

2.001 ENTRANCE DOORS - framed doors with flat threshold - door rosette fitting - multipoint locking system

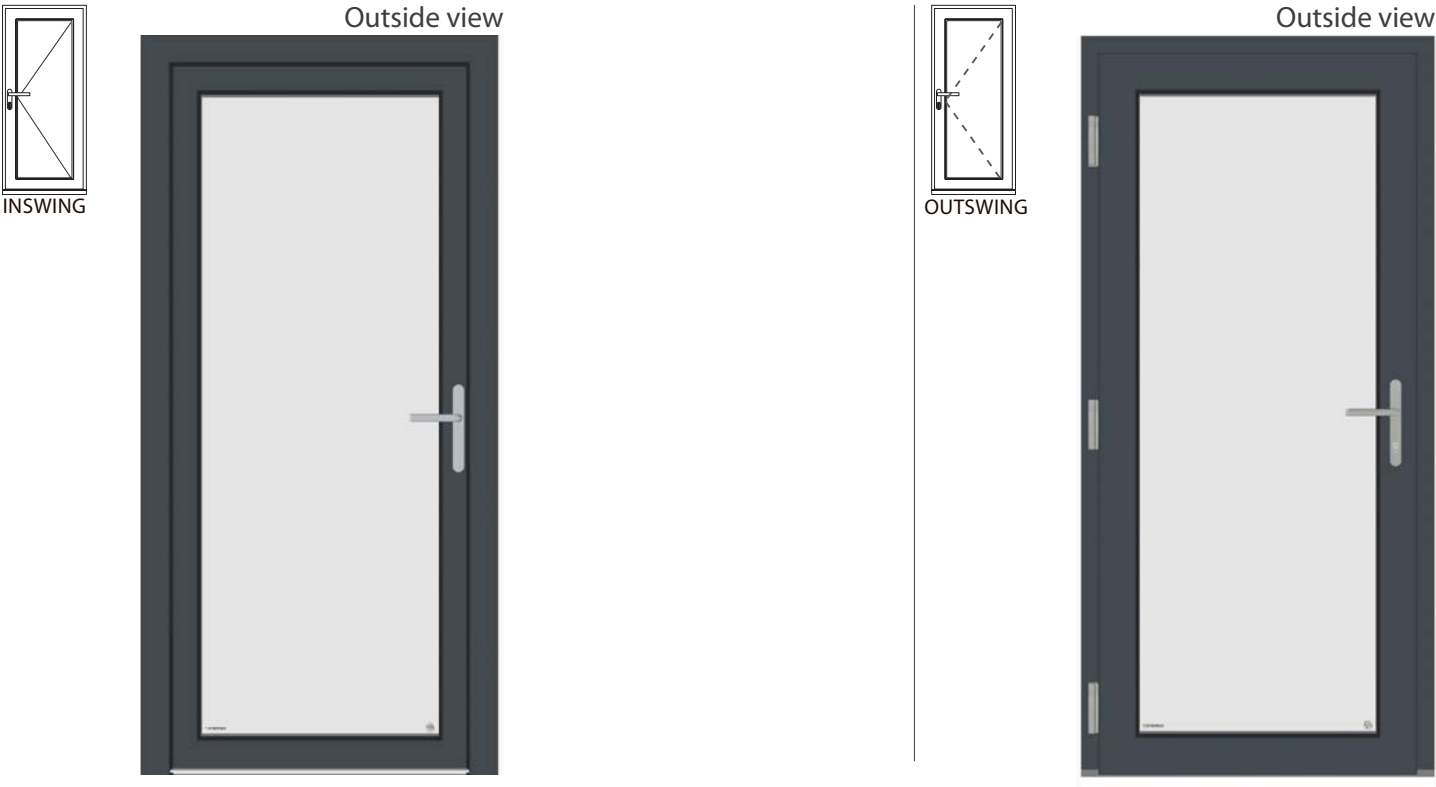


2.001.1 fully glazed

2.401.1 with panel

2.001.4 outswing

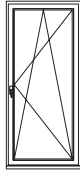
3.001 SIDE ENTRANCE DOORS - framed doors with flat threshold - lever handle set - simple locking system



3.001.1

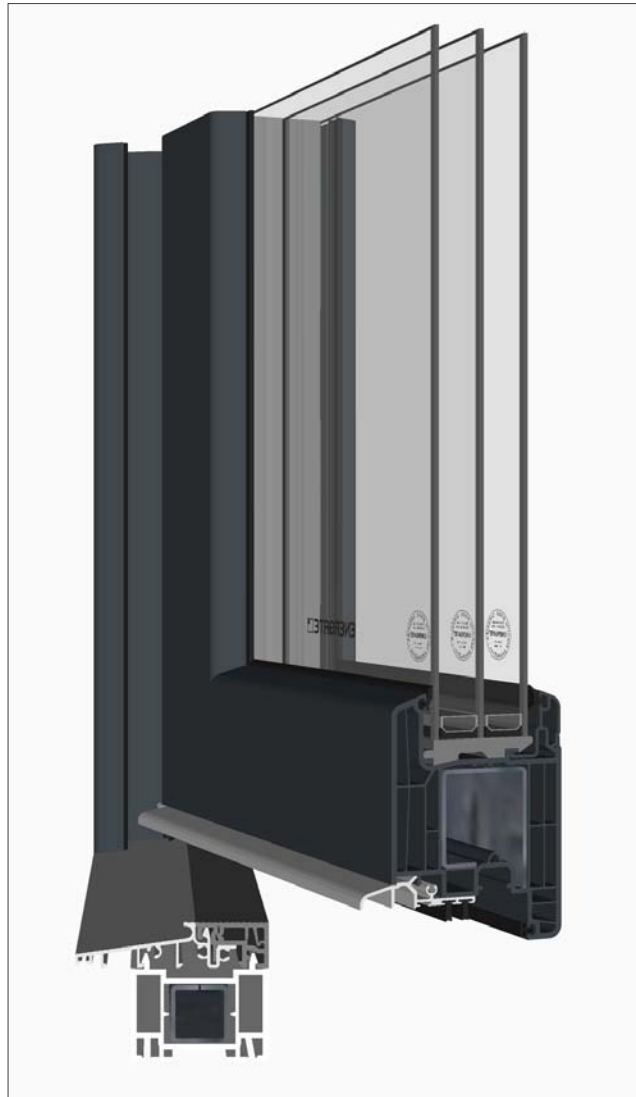
3.001.4 outswing

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

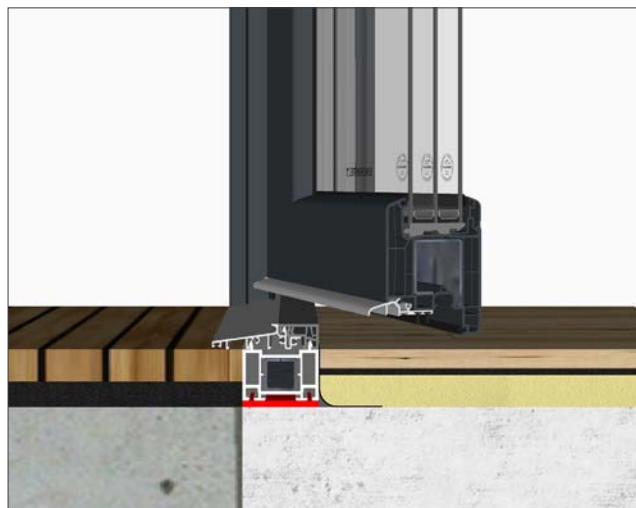


INSWING

1.101 PATIO DOORS with flat threshold



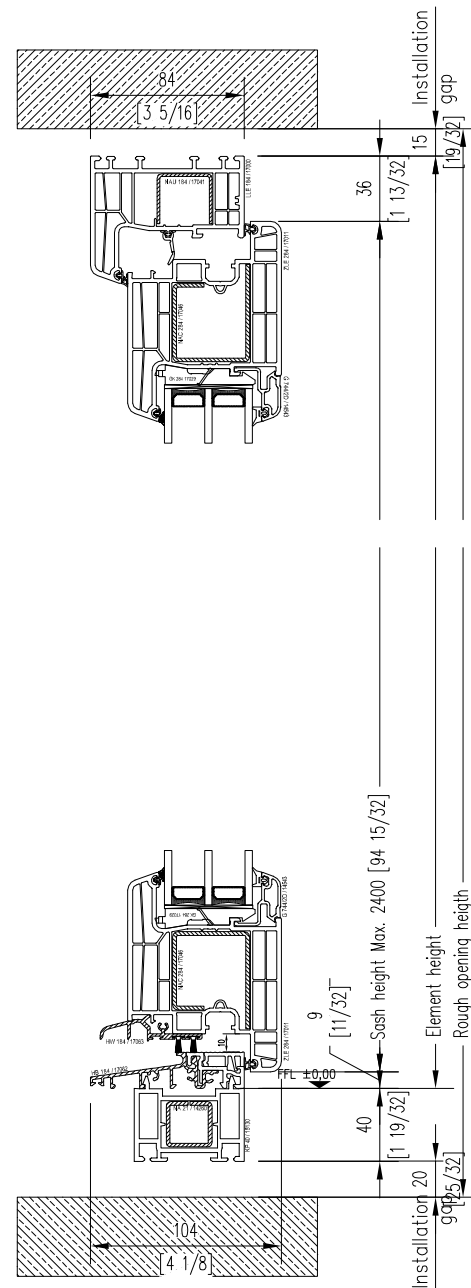
Turn - inward



Level threshold detail pattern

1.101

PATIO DOORS with flat threshold
single opening swinging door



Section drawing

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.



INSWING

1.101 PATIO DOORS with flat threshold



Inside view



Outside view



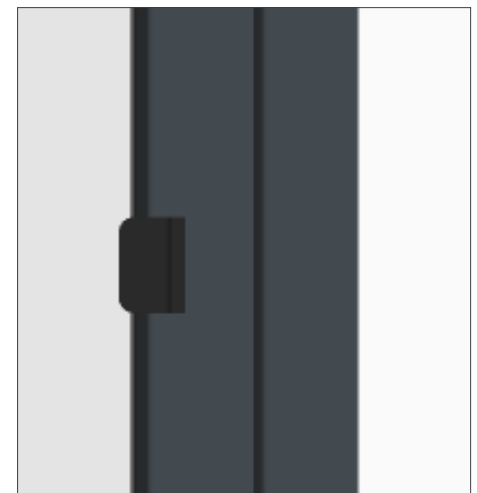
Inside: Window handle - not lockable



Tilt



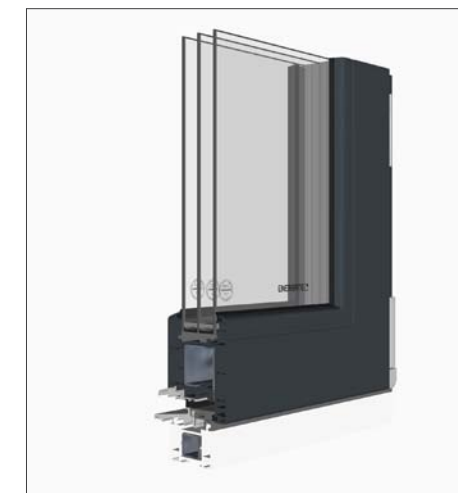
Turn - inward



Outside: Pull grip



Inside view

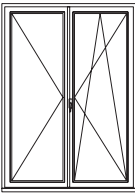


Outside view



Outside view

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.



INSWING

1.104.5 PATIO DOORS with flat threshold - double french opening



Inside view



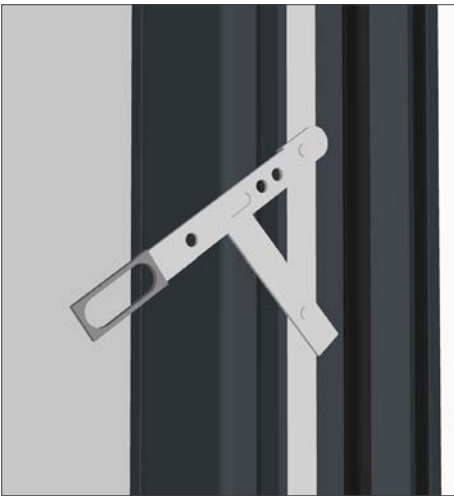
Outside view



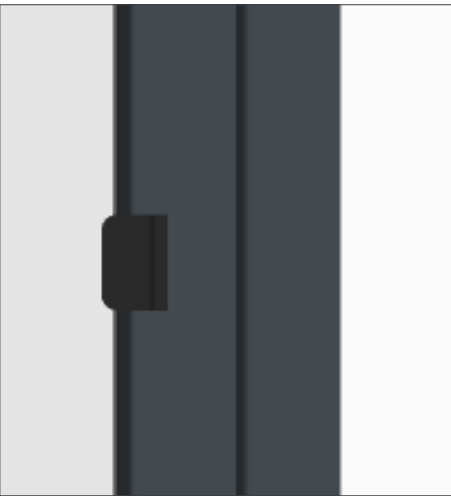
Inside: Window handle - not lockable



Opening lever - closed



Opening lever - open



Outside: Pull grip
only on main operable sash



Tilt



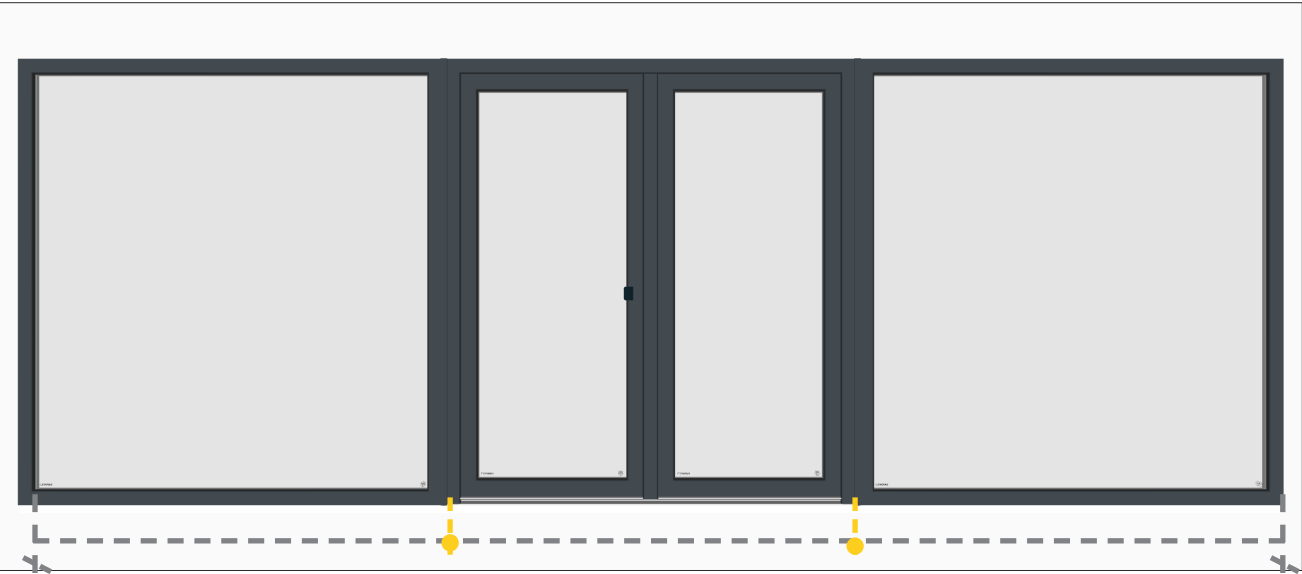
Turn - inward



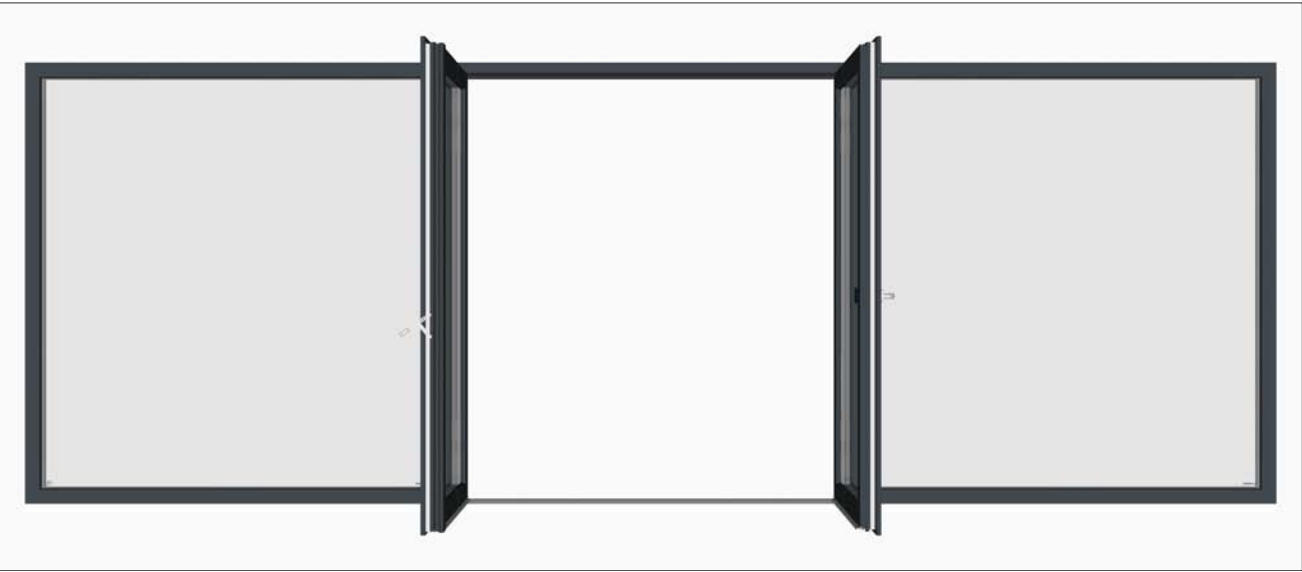
Turn - inward

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

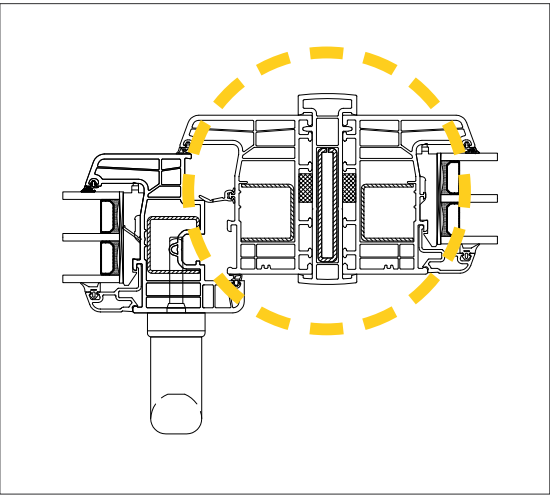
1.121 FIXED FRAME & 1.104.5 PATIO DOOR & 1.121 FIXED FRAME - coupled elements



Outside view -2 couplings - element over 3 m must be coupled - three elements



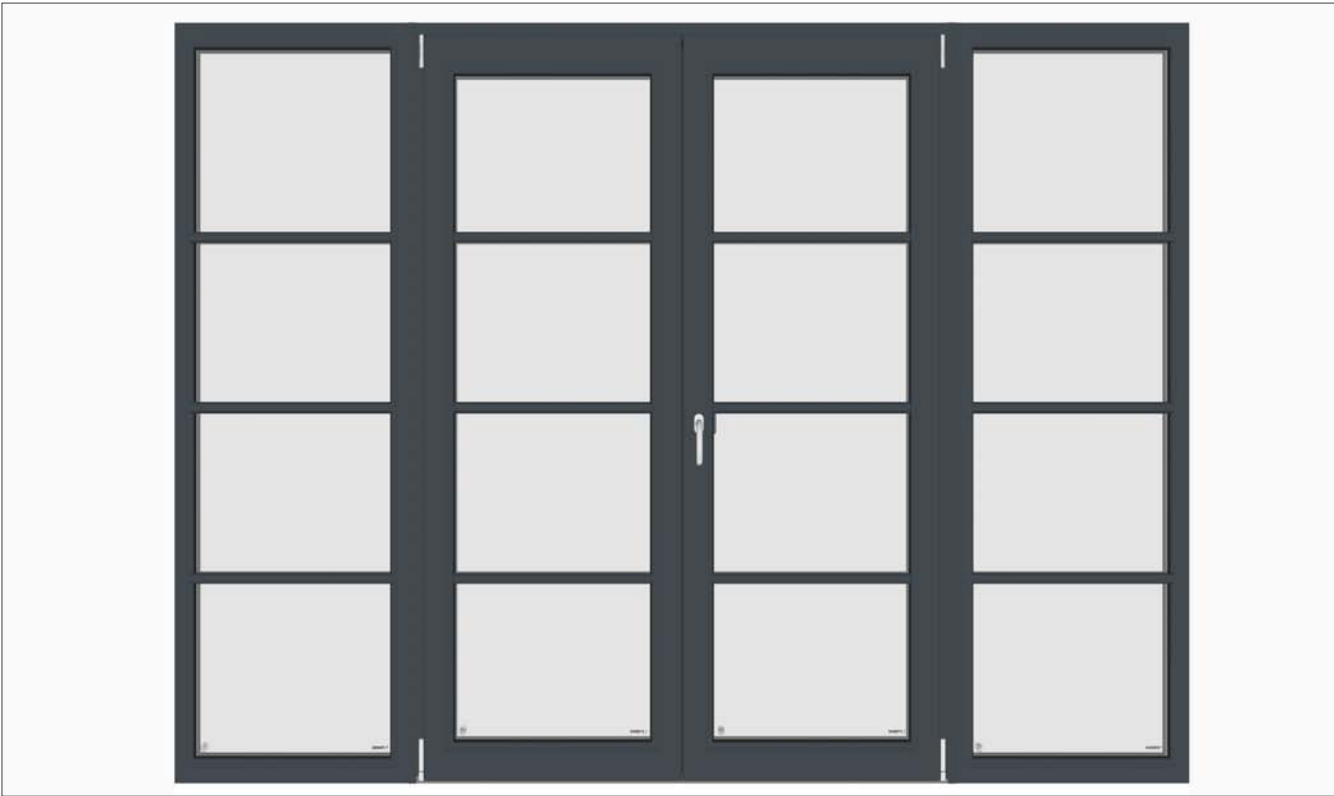
Inside view - open



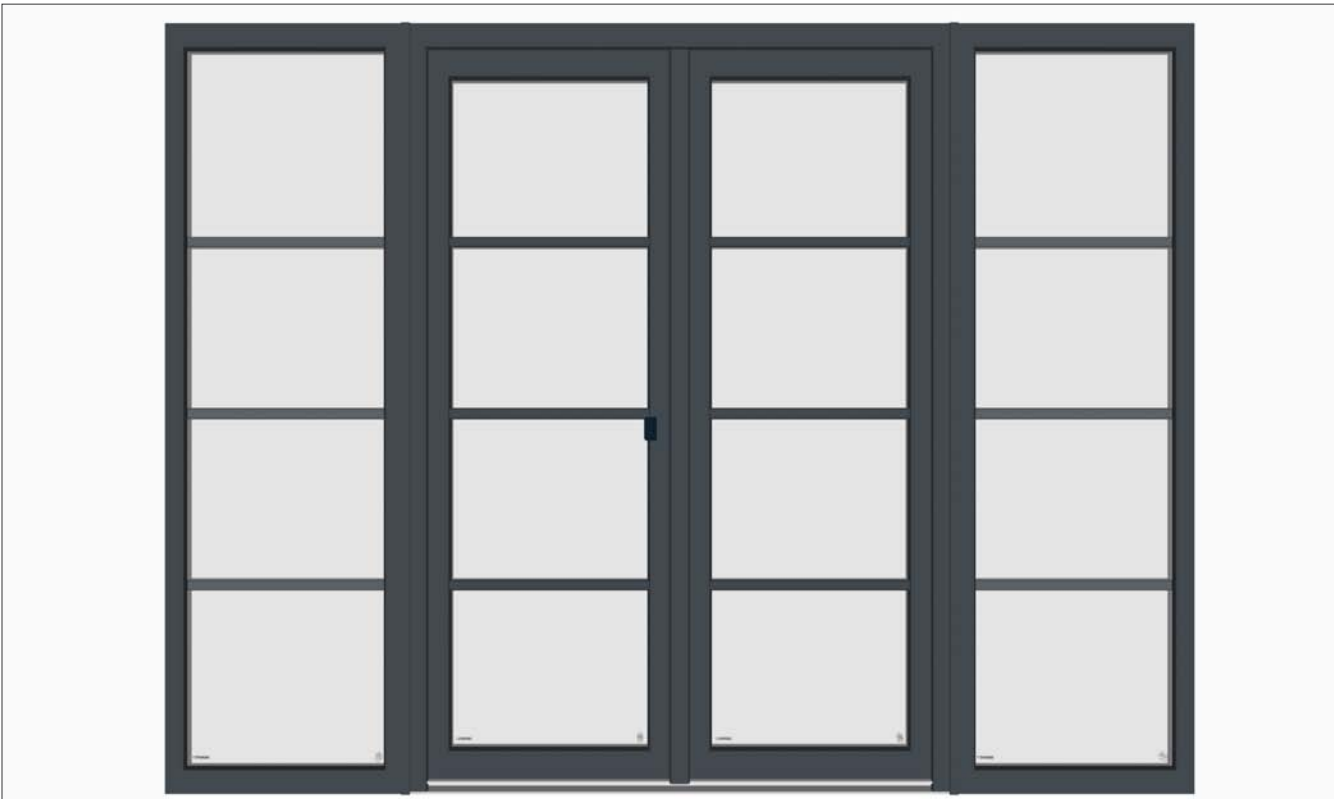
Element over 3 m must be coupled

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

1.121 FIXED FRAME & 1.104.5 PATIO DOOR & 1.121 FIXED FRAME - coupled elements - with glass dividing mullions



Inside view - design example glass-dividing mullions



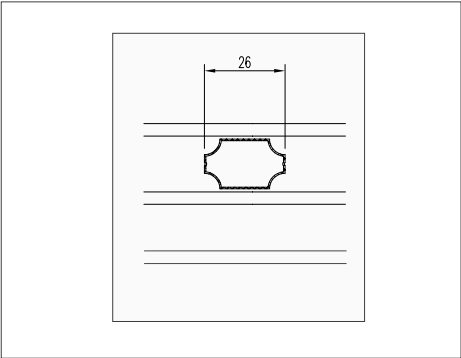
Outside view design example glass-dividing mullions

► This is a design example.
All other types and designs of mullioms available

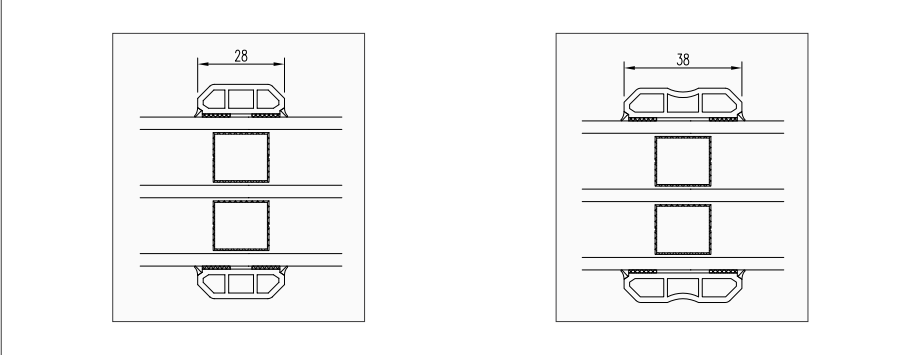
Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

VARIANTS FOR MULLIONS

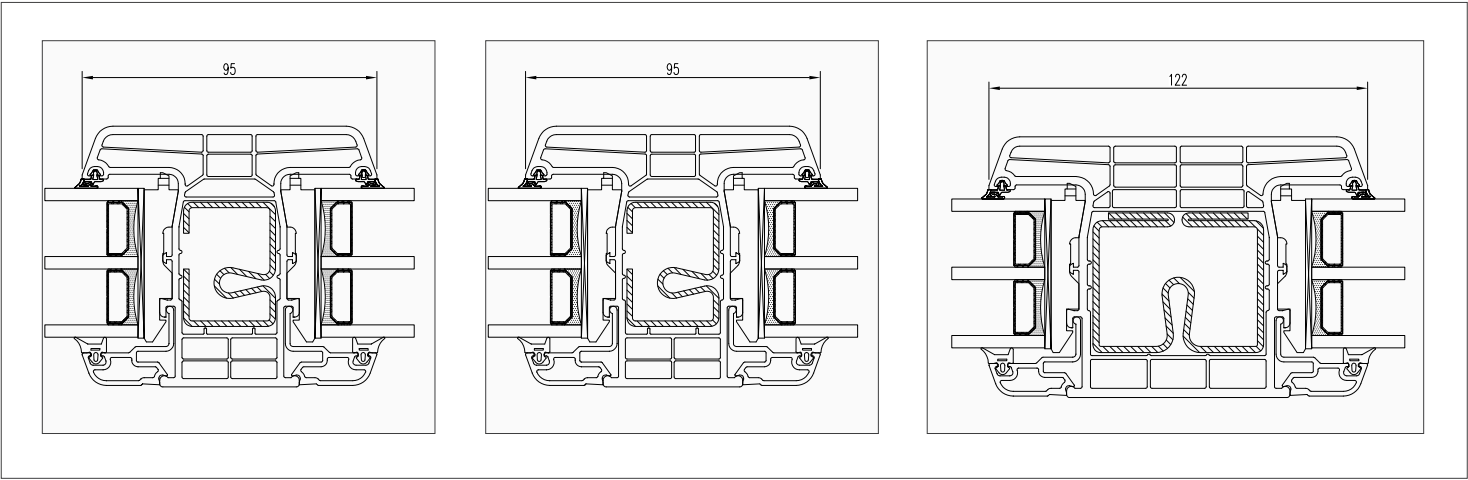
Simulated mullions in the glass



From the outside attached mullions



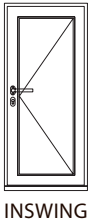
Glass-dividing mullions



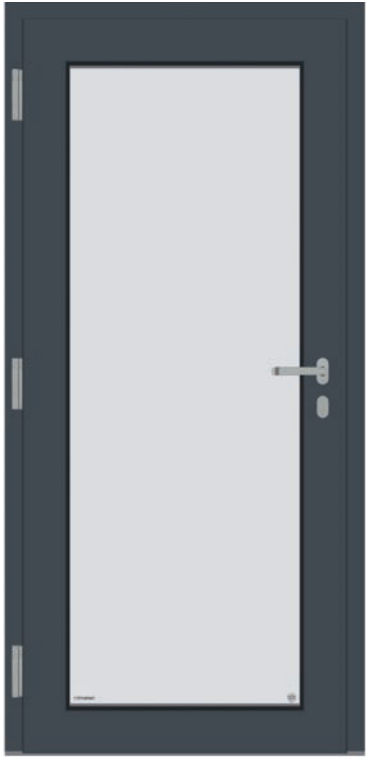
Vertical section drawings

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

2.001 ENTRANCE DOORS - framed doors with flat threshold - rosette fitting handle - multipoint door locking system



2.001.1



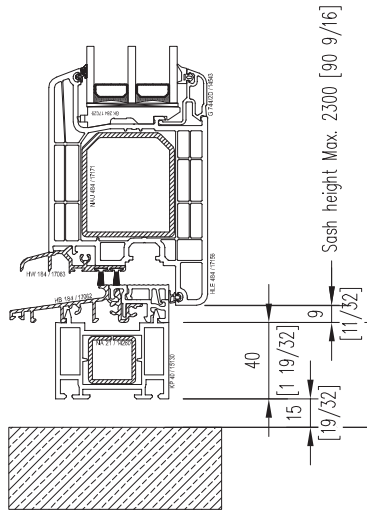
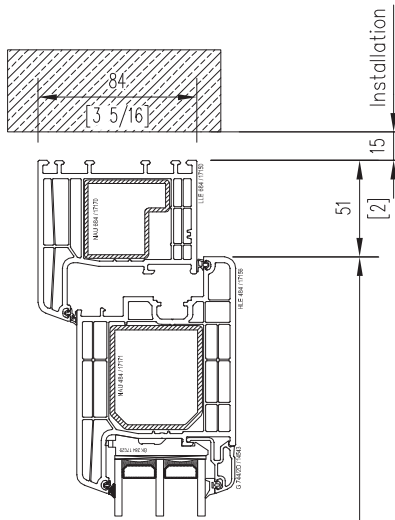
2.001.4 outswing



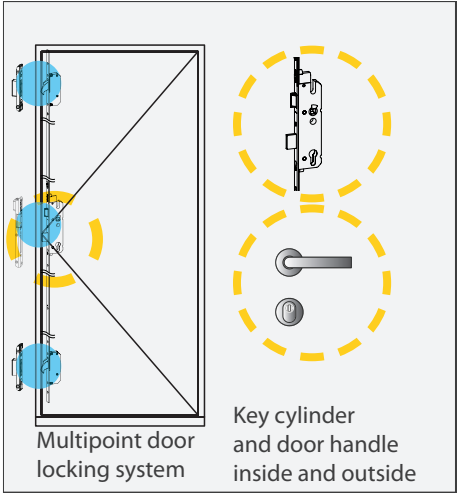
Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

2.001 ENTRANCE DOORS - framed doors with flat threshold - rosette fitting handle - multipoint door locking system

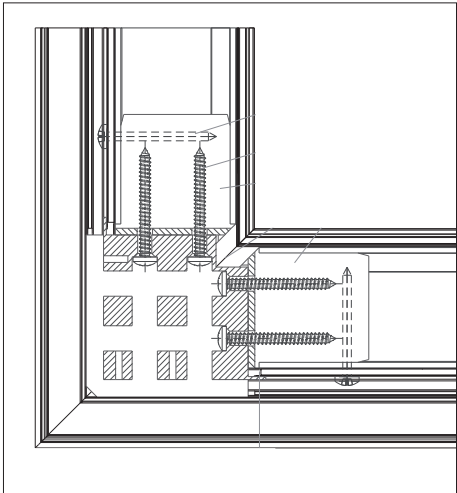
2.001
DOORS
fully glazed main entrance swinging door



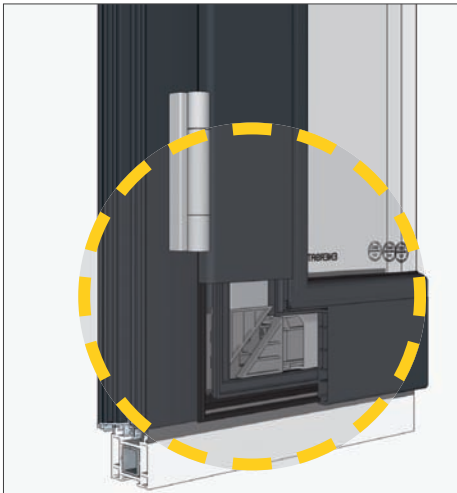
Vertical section drawing



Inside view



Door sash: steel corner connector



Door sash: steel corner connector

Automatic locking system

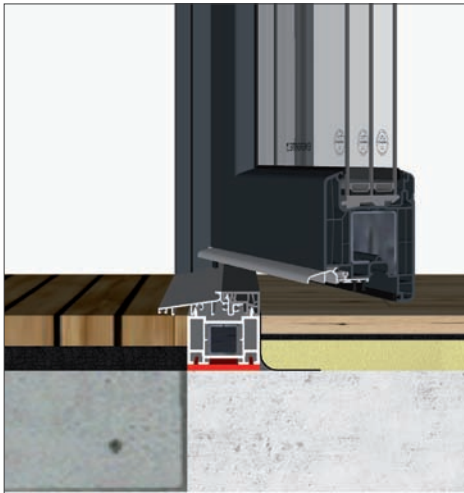
Automatic bolts are push-back safeguarded without using the key.

The locking components extend automatically as soon as the door engages in the lock.

Automatic locking system



Turn - inward



Installation pattern example

► Optional available: Electric opener and day unlocking - not standard

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.



SELECTION DOORS TYPES - framed entrance doors fully glazed

Inside view

2.002.2
framed door fully glazed with fixed side light

Inside view

2.006.2
framed door fully glazed with two fixed side lights

Inside view

2.004.5
framed door double french opening fully glazed

Inside view

2.006.2 & 2.021
framed door fully glazed with two fixed side lights combined with top light

Inside view

2.008.5
framed door fully glazed with fixed light above

Outside view

ENERGATE standard door handle - stainless steel
rosette fitting: cranked handle inside & outside
outside security rose

This page shows a selection of ENERGATE framed fully glazed entrance doors. Further models are available.

SELECTION - FRAMED ENTRANCE DOORS with panel

All drawings on this page are showing the outside views



2.401.1
Panel: 2/3 glass - 1/3 panel
narrow plate door handle set:
Prio - handle / handle
black



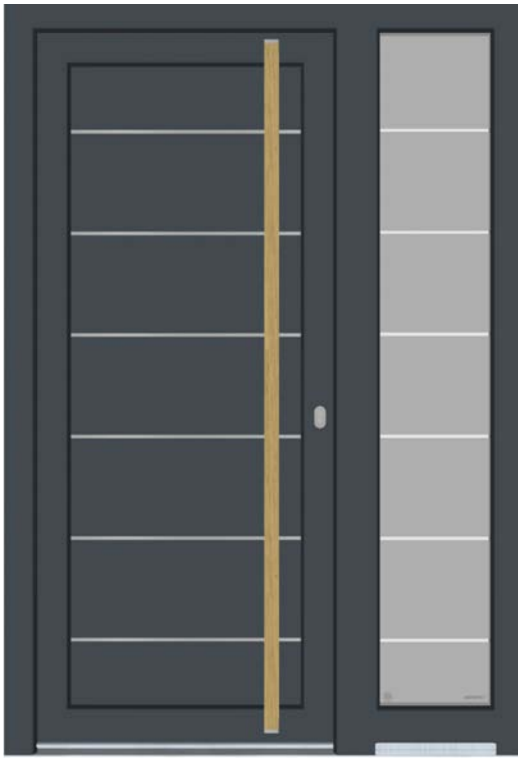
2.401.1
Panel: 1/3 glass - 2/3 panel
narrow plate door handle set:
Prio - knob / handle
back



2.401.1
Panel: BL 26
offset handle bar: Round 45°
black - L: 400 mm



2.401.1
Panel: EK 42 (A)
handle bar: Square WE 26
stainless steel - L: sash length

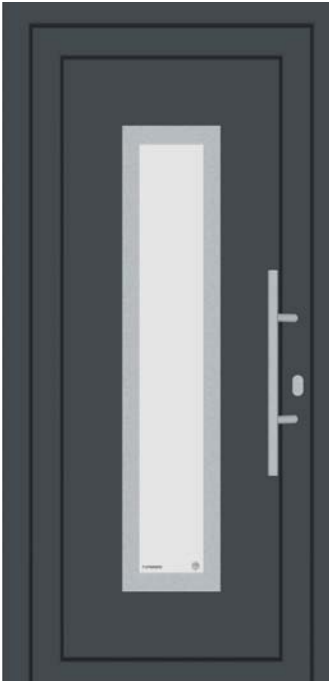


2.402.1
Panel: EK 42 (A)
side field with model glass
handle bar: Square - SG181
oak - L: sash length

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

SELECTION - FRAMED ENTRANCE DOORS with panel

All drawings on this page showing the outside views



2.401.1
Panel: EK2 (A)
offset handle bar: Round 45°
stainless steel - L: 600 mm



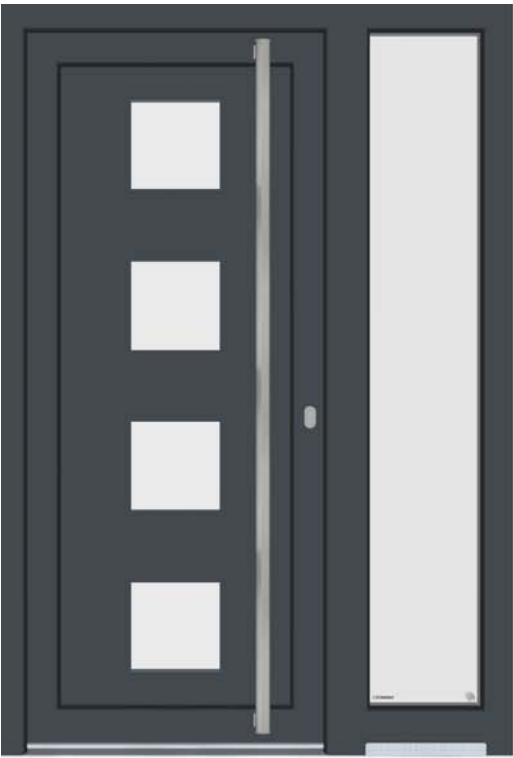
2.401.1
Panel: EK 47(A)
offset handle bar: Round 45°
stainless steel - L: 800 mm



2.401.1
Panel: NL EK 6
offset handle bar: Round 45° - SG134
oak & stainless steel - L:1200 mm



2.401.1
Panel: NL - EK 15
handle: standard - cranked handle
stainless steel

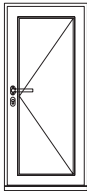


2.402.1
Panel: EK 53
handle bar: Round WE 25
stainless steel - L: sash length

This page shows a selection of ENERGATE door panels and handles. Further models are available.

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

2.001 ENTRANCE DOORS - framed doors with flat threshold - with electronic locking system



INSWING



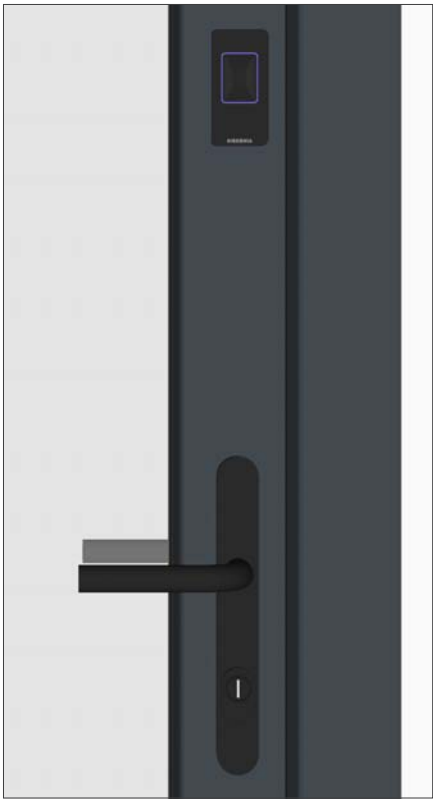
Key pad - silver



Fingerprint scanner black

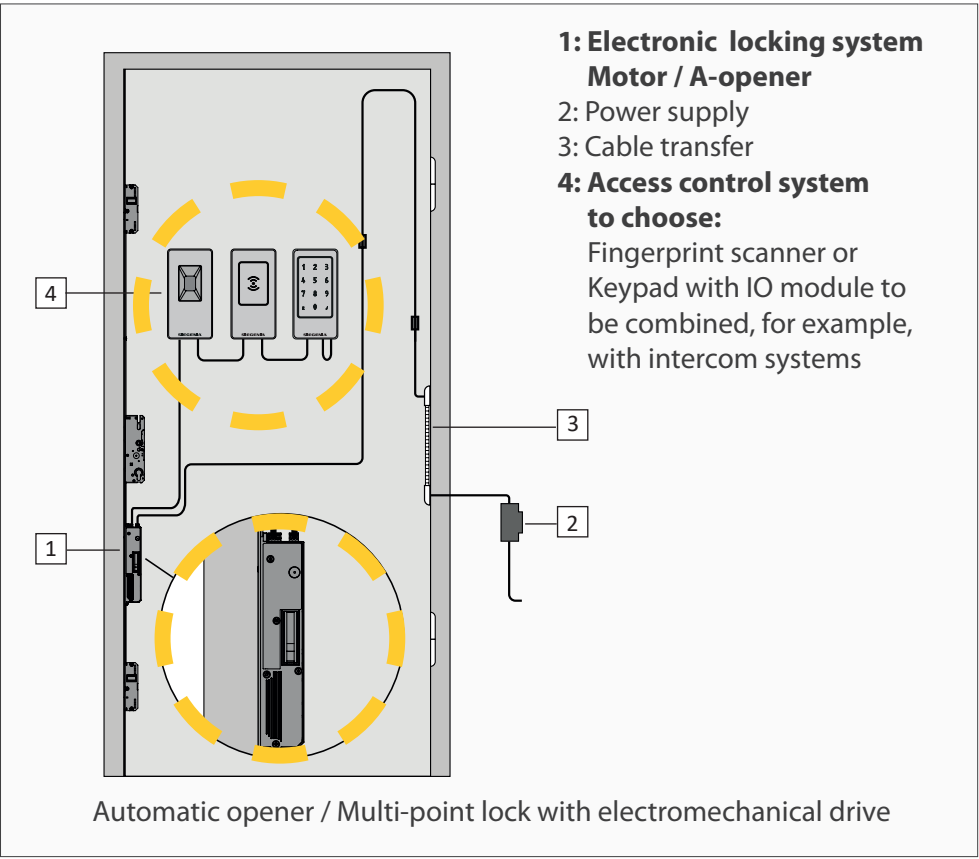


Key pad- silver
handle: standard - cranked handle - stainless steel

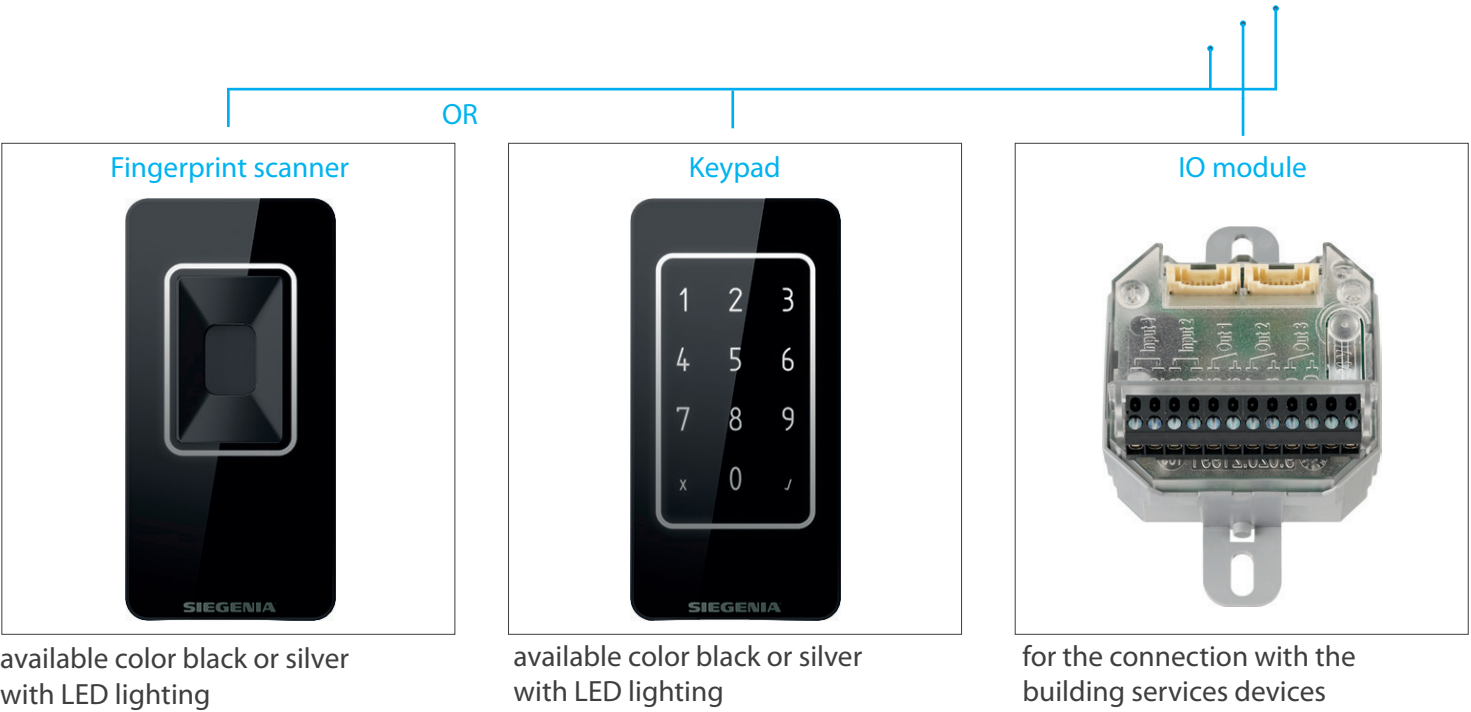


Fingerprint scanner- black
narrow plate door handle set:
Prio - handle / handle - black

ELECTRONIC LOCKING SYSTEM



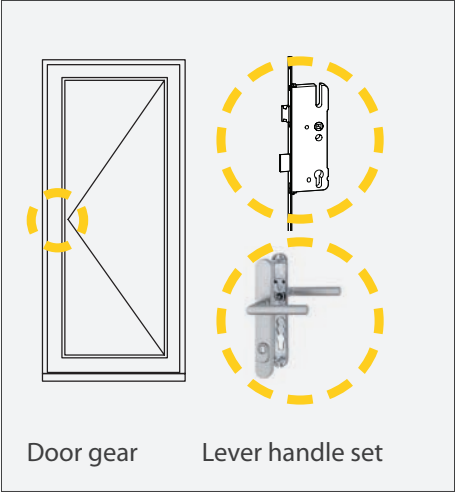
ACCESS CONTROL SYSTEM to choose:



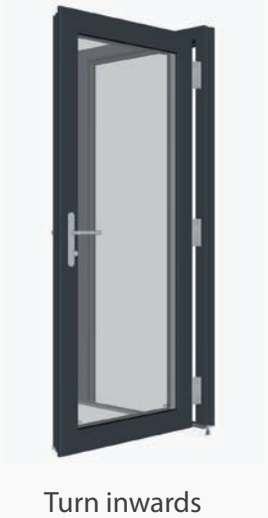
Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

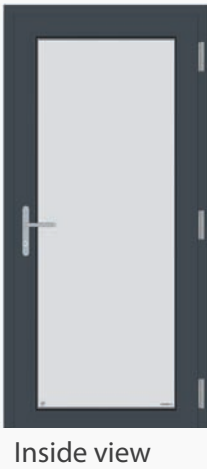
3.001 SIDE ENTRANCE DOORS with flat threshold - lever handle set - simple locking system



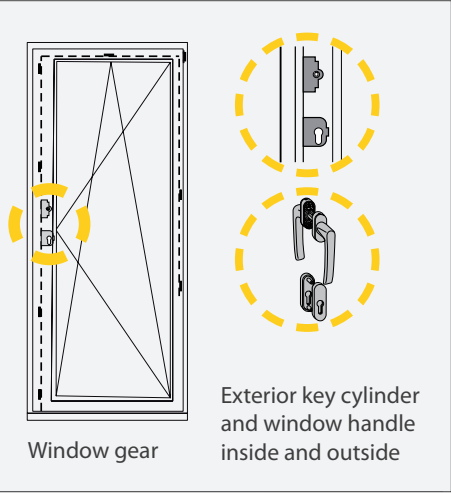
INSWING
3.001.1



OUTSWING
3.001.3



5.001 LOCKABLE PATIO DOORS with flat threshold - exterior key cylinder - window handle - window hardware



INSWING
5.001.1

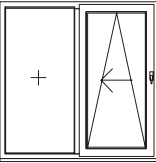


OUTSWING
5.001.3

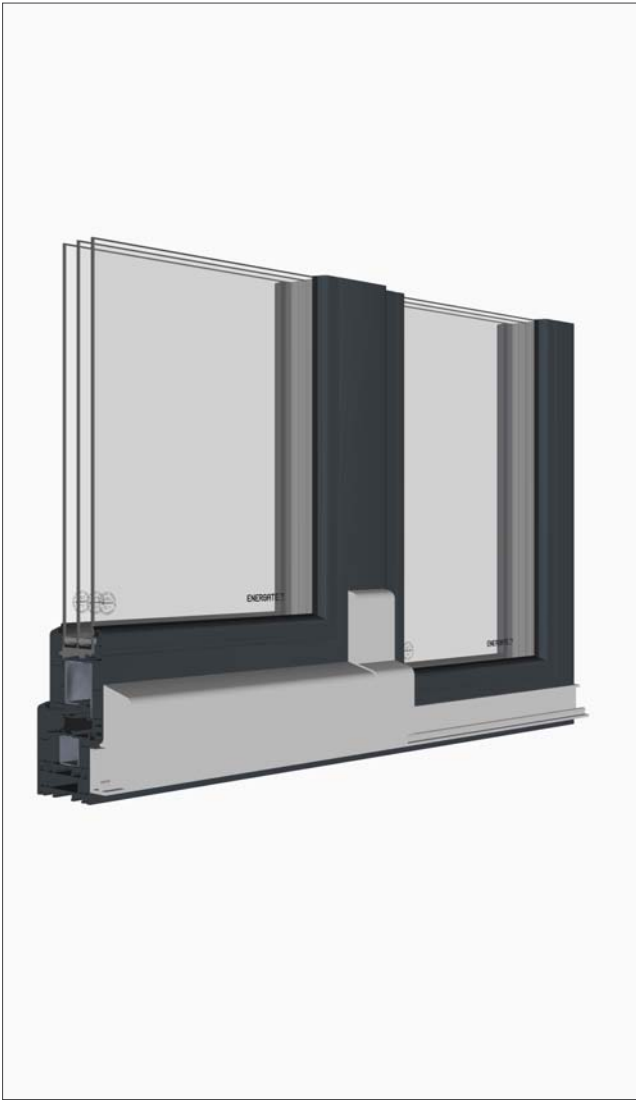


Tilt not possible



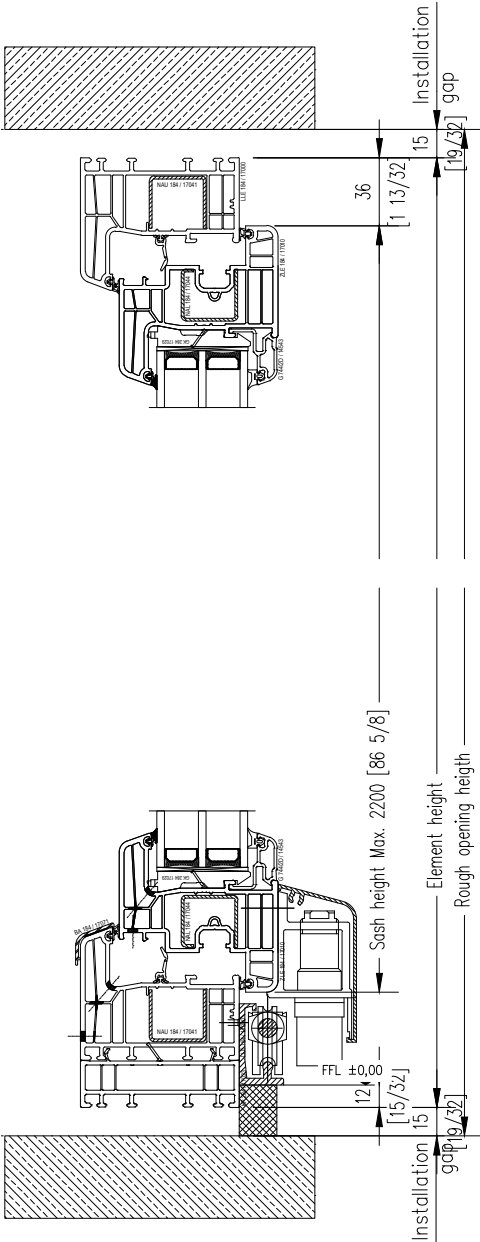


6.001 PARALLEL SLIDE & TILT WINDOWS



Single opening slide window

6.001
PARALLEL SILDE & TILT DOORS
slide & tilt door right opening to the left, fixed field left



Vertical section drawing
Attention: not a flat threshold element

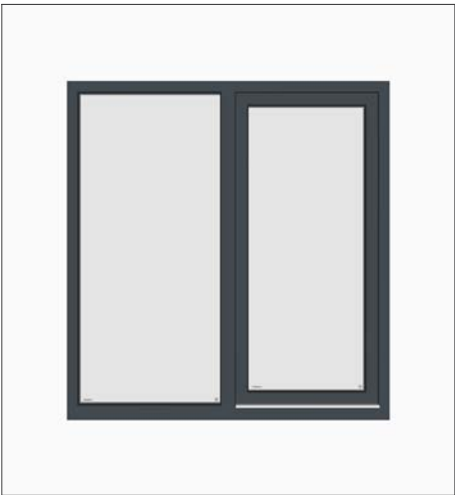
Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.



6.001 PARALLEL SLIDE & TILT WINDOWS



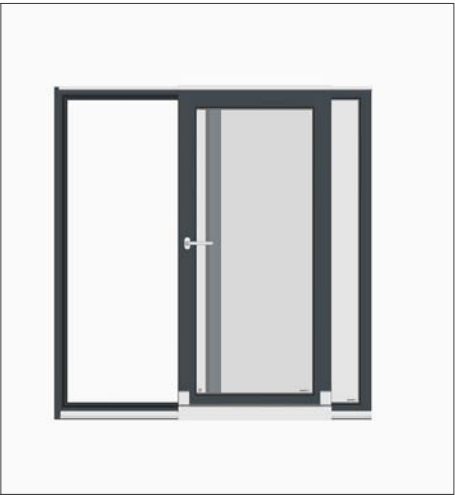
Inside view



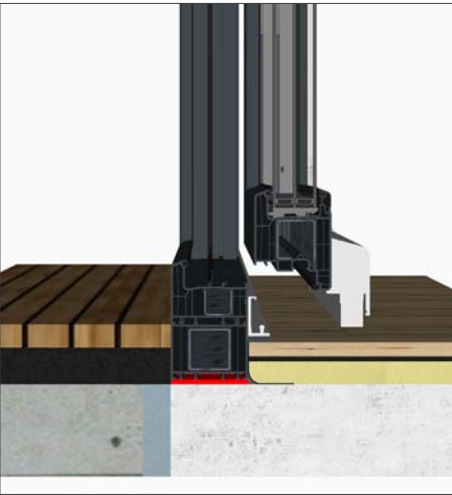
Outside view



Tilt



Slide - inward



Installation pattern example



Inside view

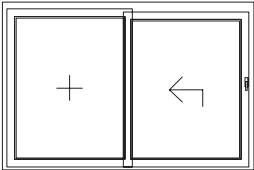


Inside view - rail

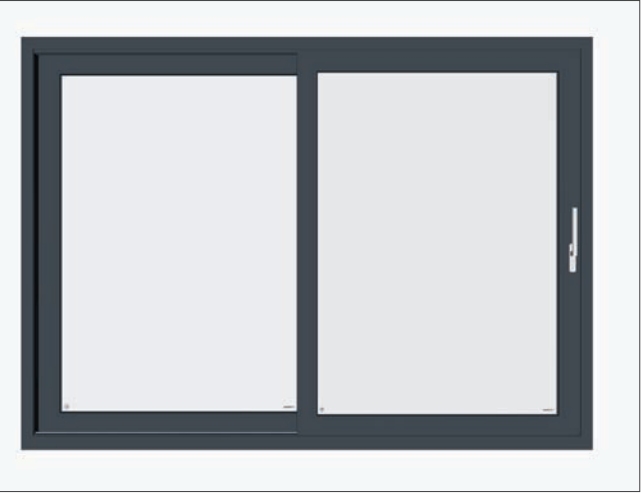


Outside view

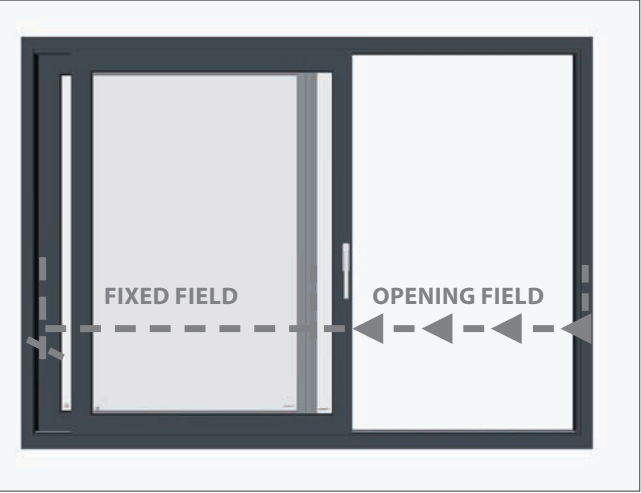
Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.



8.001 LIFT & SLIDING DOORS with flat threshold



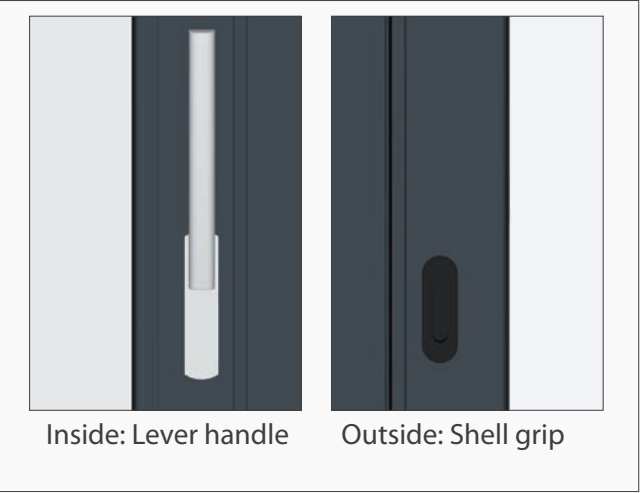
Inside view - closed



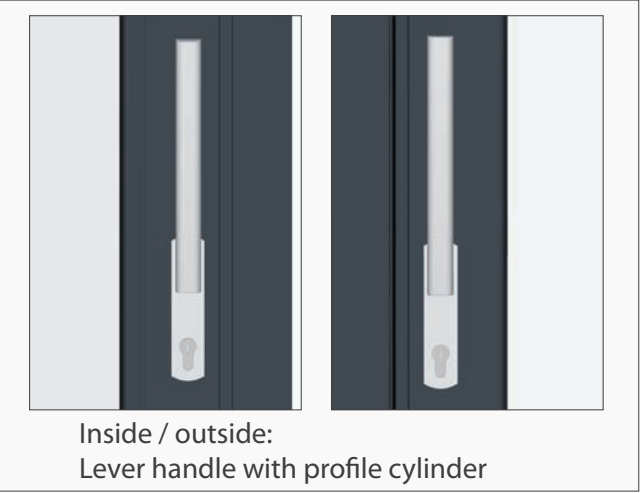
Inside view - open



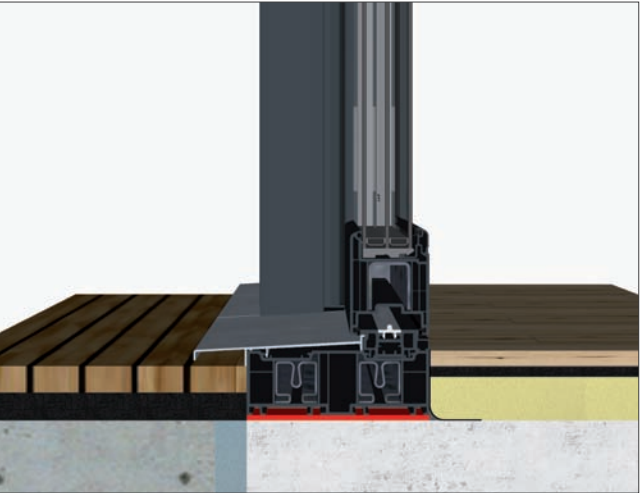
Outside view



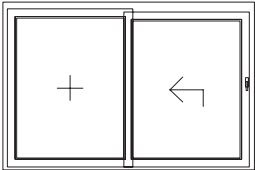
Standard - not lockable



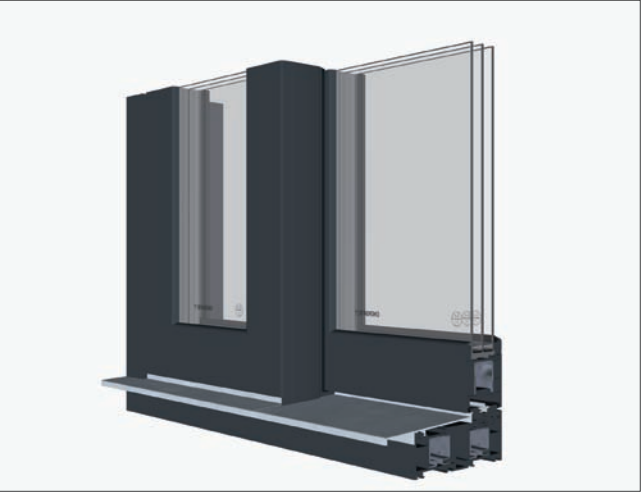
Optional- lockable



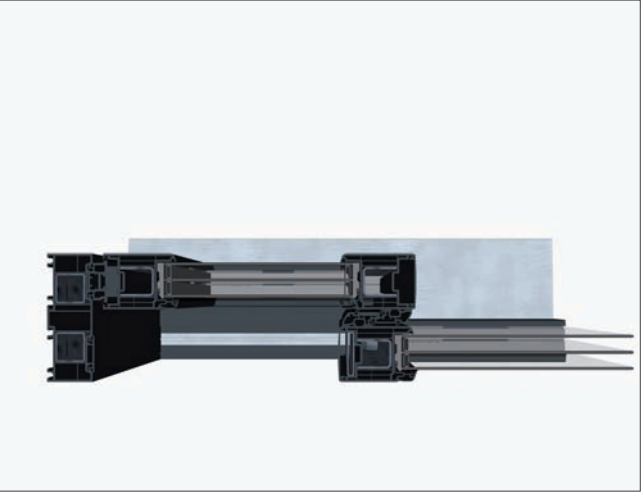
Installation pattern example



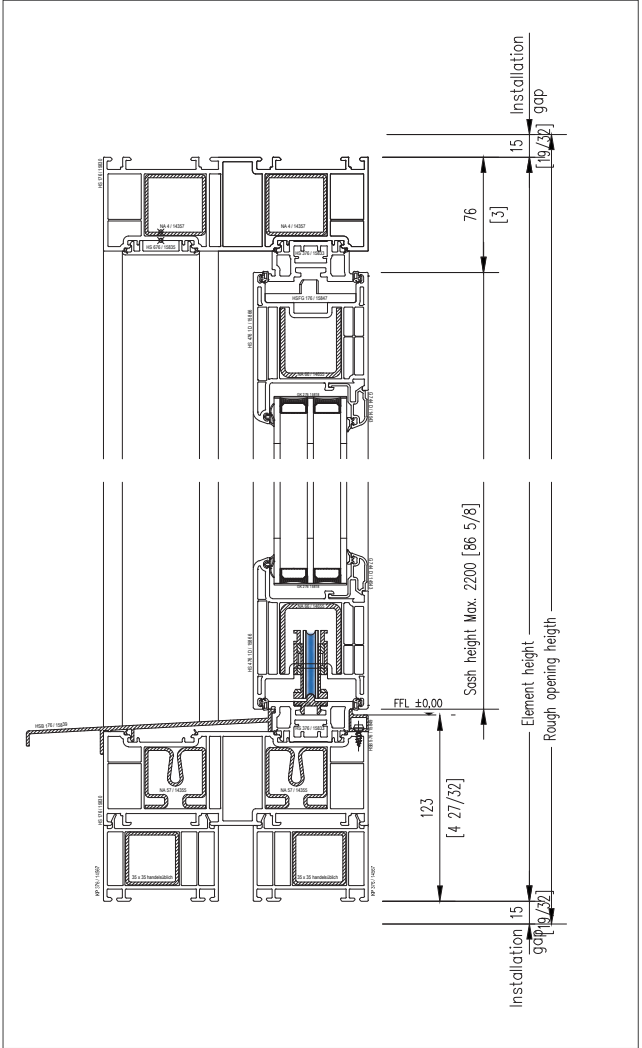
8.001 LIFT & SLIDING DOOR



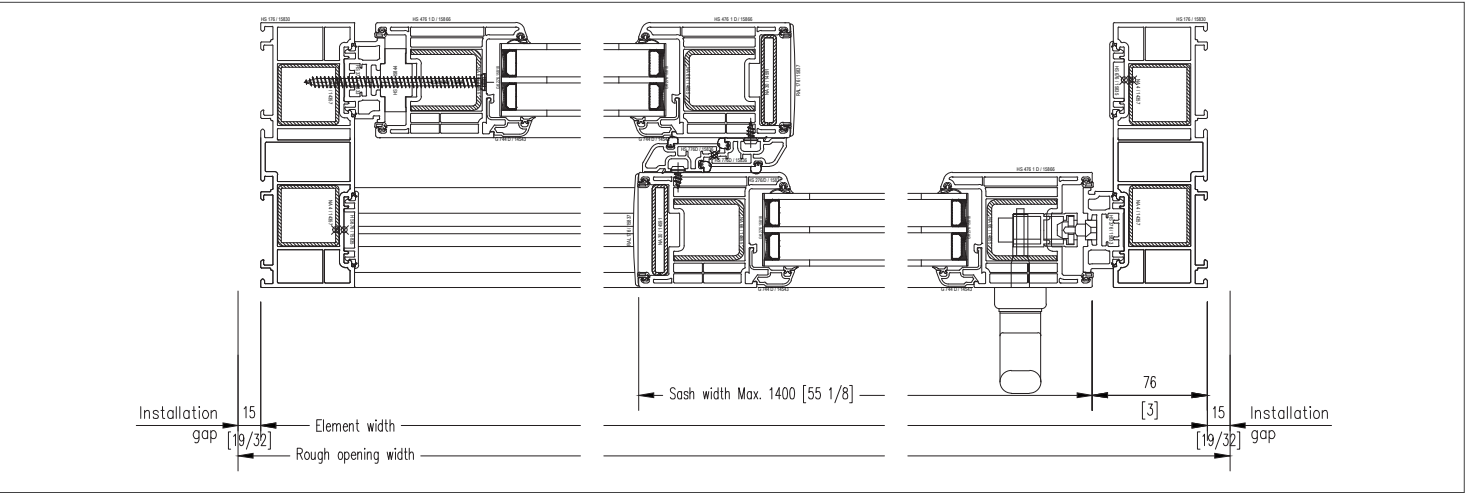
Outside view



Top view



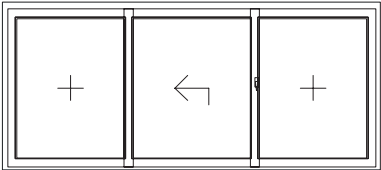
Vertical section drawing



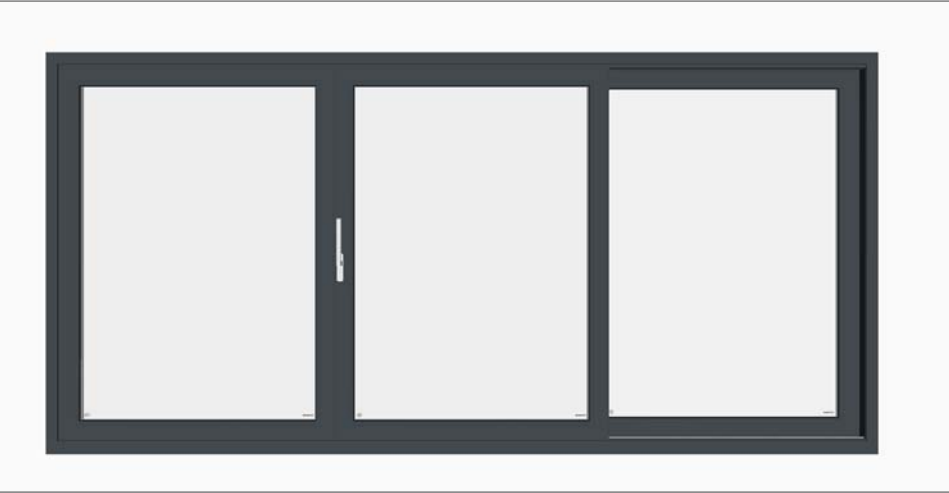
Horizontal section drawing

Attention: The color illustration is not binding and may vary from original.
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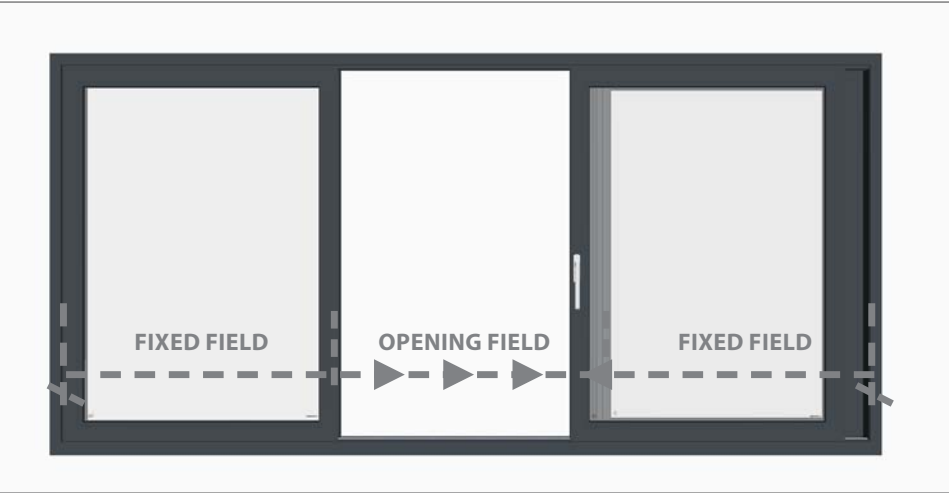
Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.



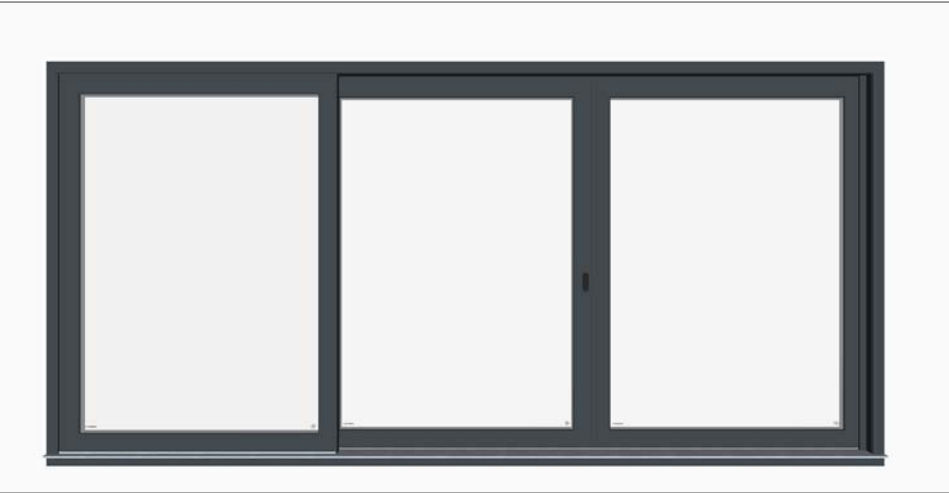
8.004.1 LIFT & SLIDING DOORS with flat threshold



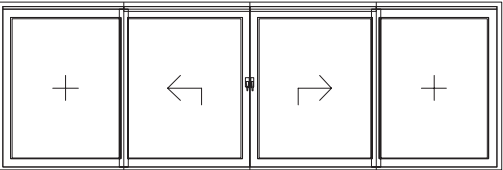
Inside view - closed



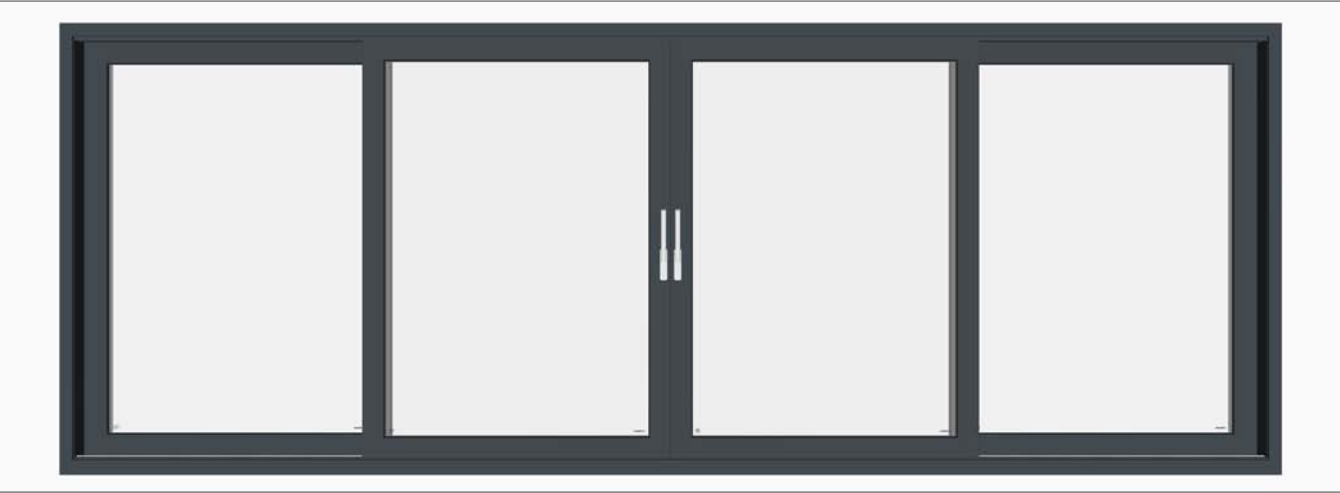
Inside view - open



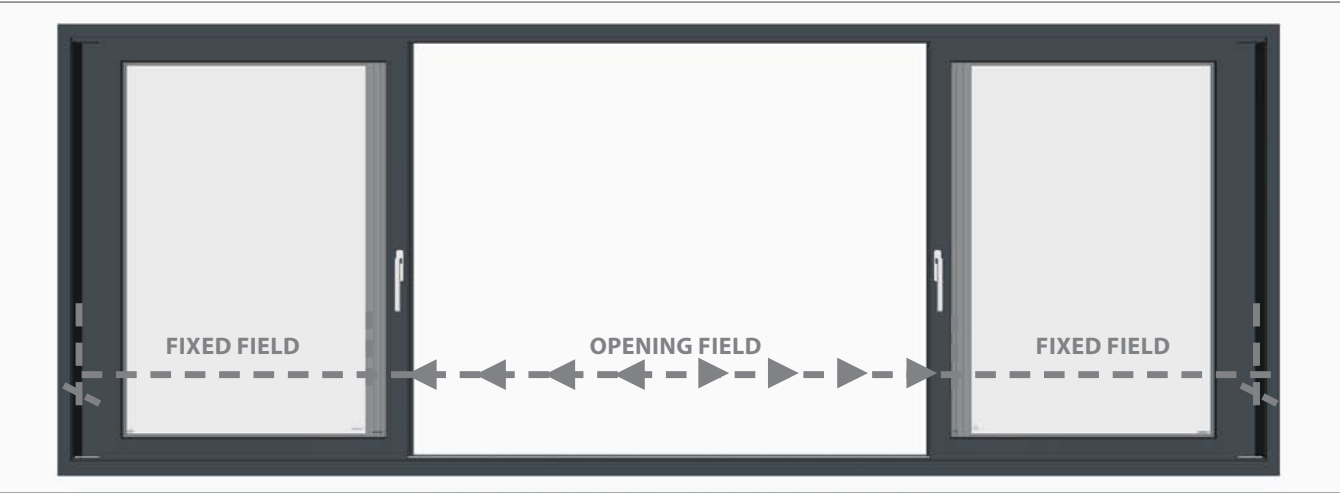
Outside view - closed



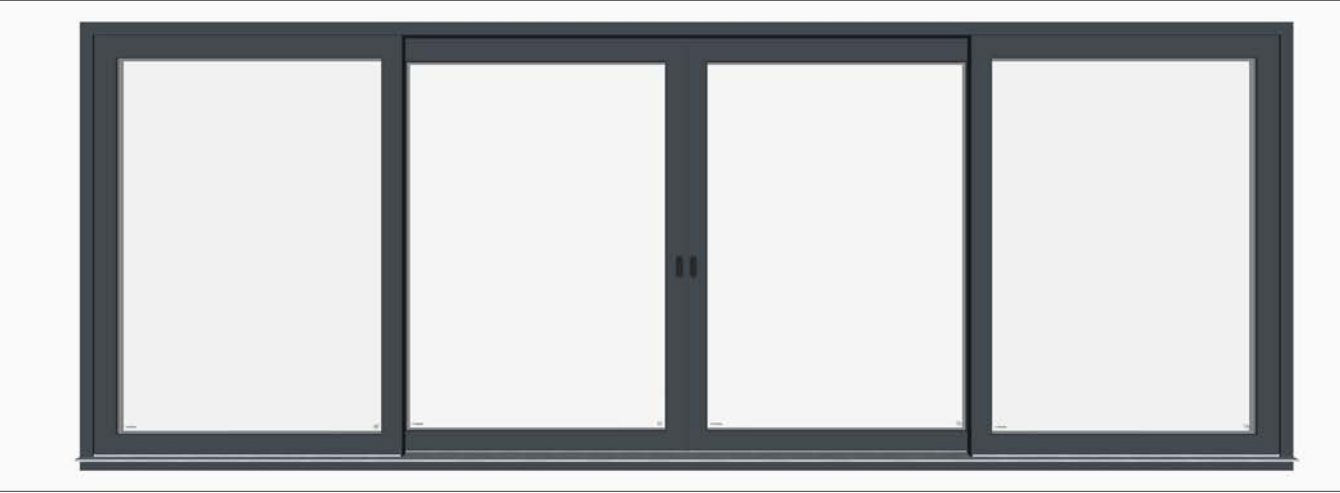
8.009 LIFT & SLIDING DOORS with flat threshold



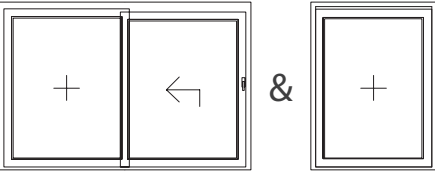
Inside view - closed



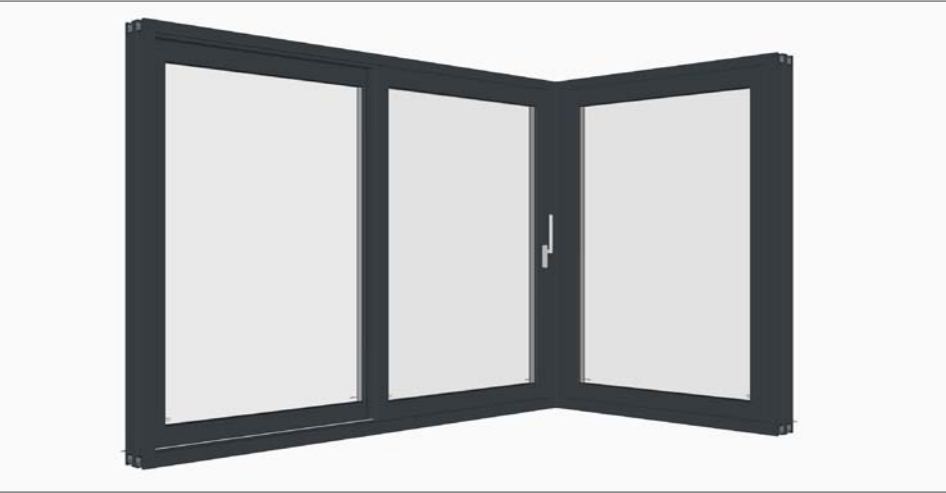
Inside view - open



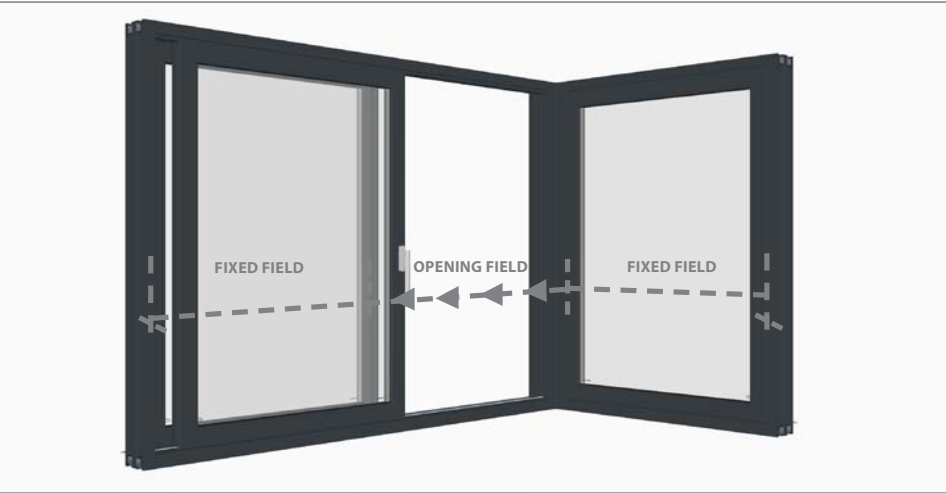
Outside view - closed



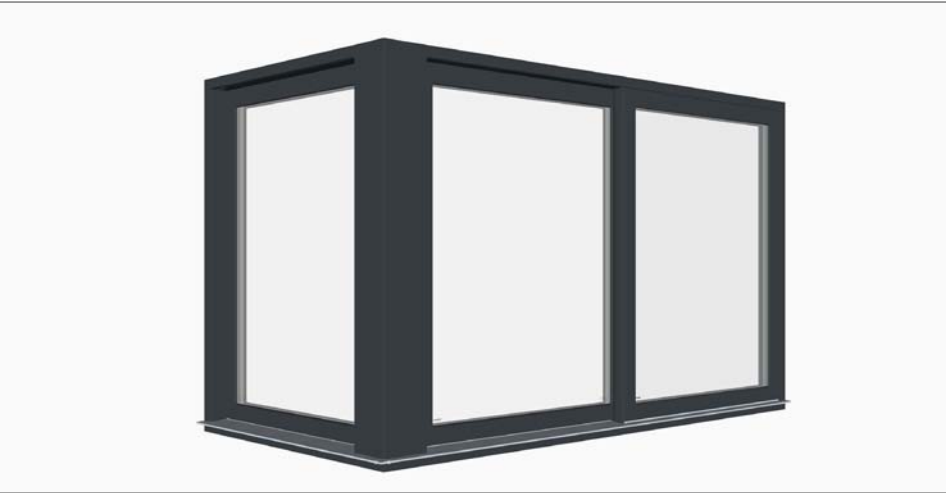
8.001.1 LIFT & SLIDING DOOR and FIXED WINDOW connected with a 90° post



Inside view - closed



Inside view - open



Outside view - closed

Attention: The color illustration is not binding and may vary from original.
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Ludwig International GmbH · Fenestration Products & Building Envelope Solutions · Cologne · Germany · WWW.ENERGATE.COM

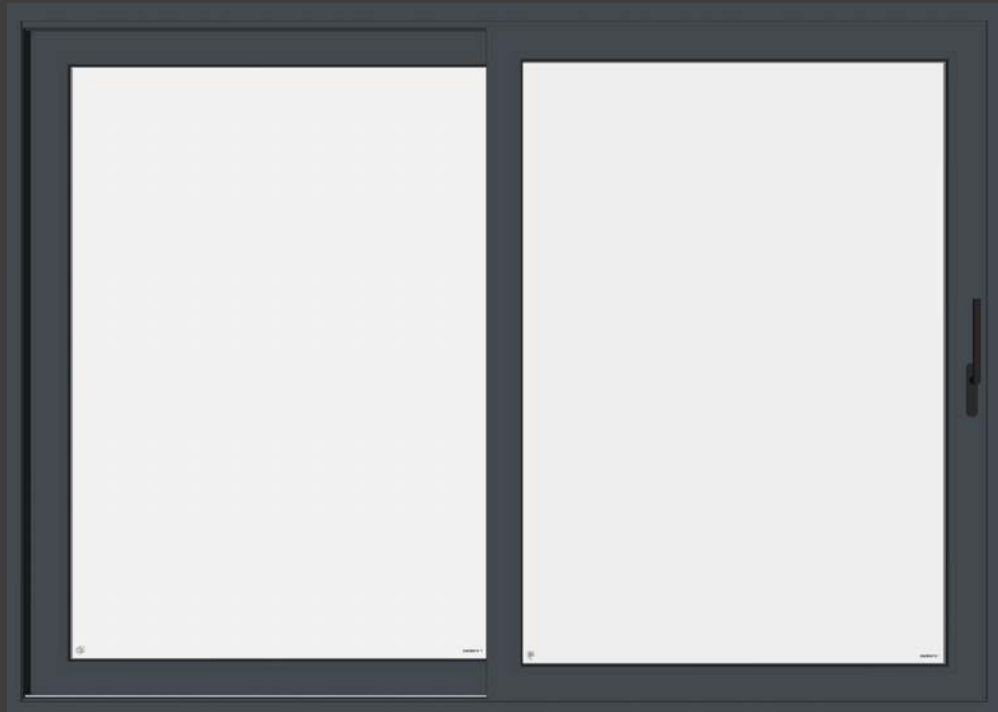
03| 2021 · All details subject to modification



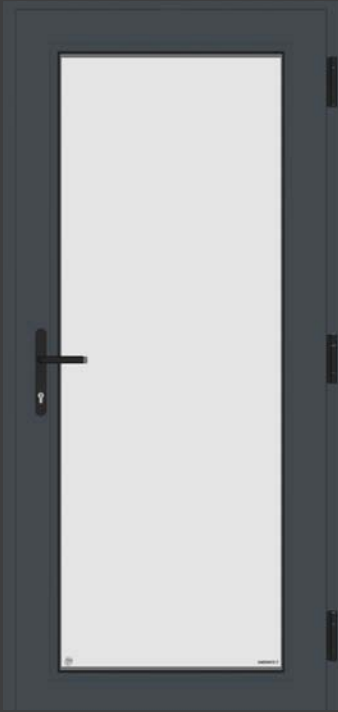


FOR WINDOWS + DOORS + LIFT & SLIDING DOORS
Handles, hardware caps & hinges are available in black

WINDOWS



LIFT & SLIDING DOORS



DOORS



Attention: The color illustration is not binding and may vary from original.
The color must be confirmed always from original ENERGATE material sample or be approved according to RAL color chart.

ACCESSORIES



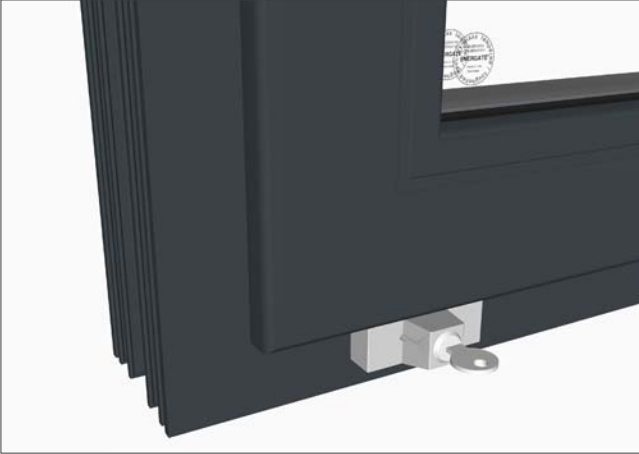
Reed contact / Magnetic control

A reed contact is a magnetic sensor which sends a signal about the opening status of your window or door to your building technology. The reed contact needs to be connected for example with your building management system, heating system or smart home system.



Standard position of a reed contact

You will get a signal when the reed contact is not connected. This means you know when the window is opened. No matter if it is tilt or turned open.



Available color white or silver

Child safety lock:

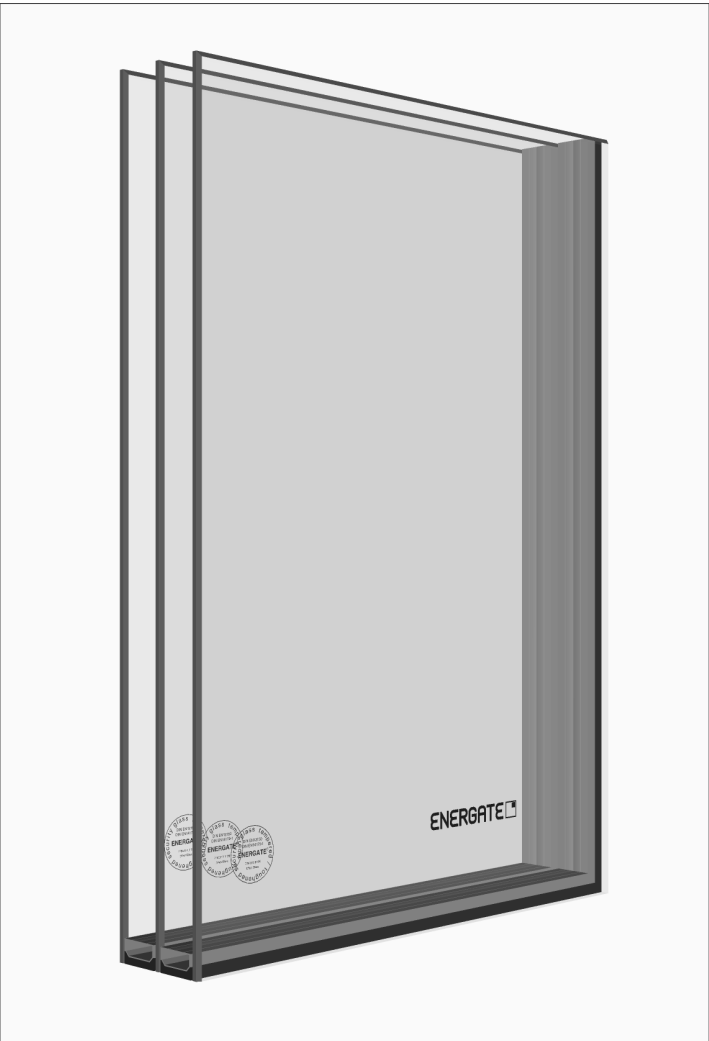
The window safety lock blocks the turn opening function of the window sash and allows the window to tilt for ventilation. Compared to a window handle with a lock, the tilt function is possible without a key for ventilation only. For cleaning purposes it can be opened with the key, cleaned and closed again.



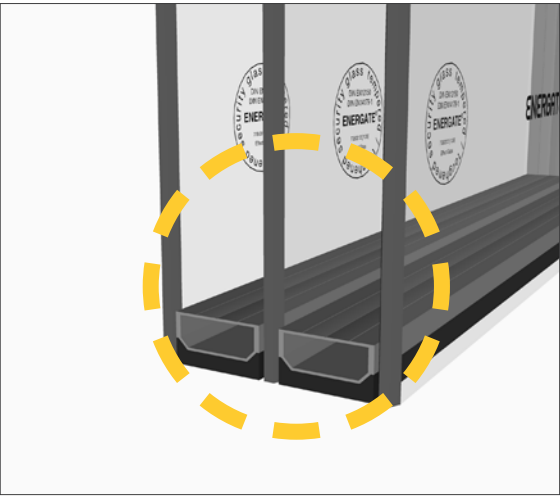
silver

Opening restrictor

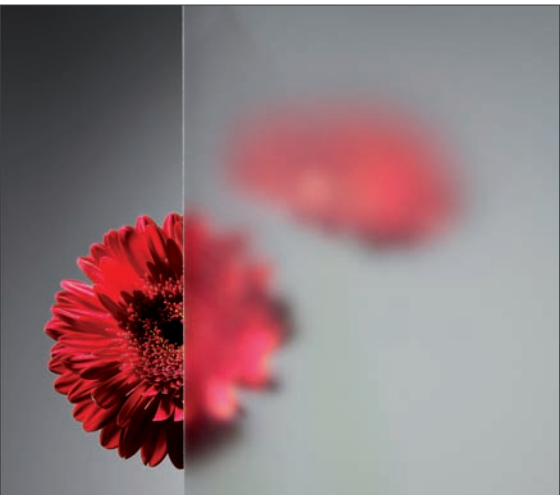
The opening restrictor fixes the opening of the window sash and prevents it from closing by itself. This makes it easier to ventilate, because the window cannot close even with strong drafts. In addition, this prevents the sash from hitting the reveal.



Triple glazing



Highly efficient warm edge ENERGATE spacer



Satinato - ornamental glass

INSULATING GLASS UNIT:

Glass types

- All types of glass are available and will be specified according to your projects needs.
 - Safety glass: Toughened glass, laminated safety glass
 - * For overseas container shipments we always equip our windows with all panes toughened glass.*
 - Insulated double glass is possible upon request
 - Sun protection: Glass with low g-value and high selectivity high value
 - Sound insulation
 - Safety glass; P5A glass ,Bullet-proof glass
 - Various type of patterned glasses are available

Spacer

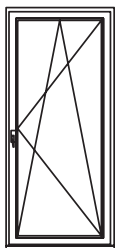
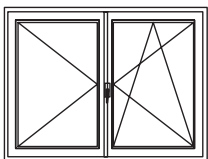
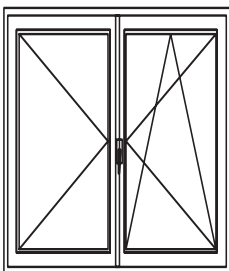
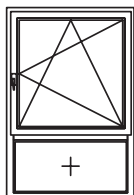

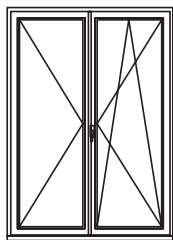
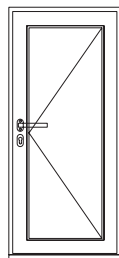
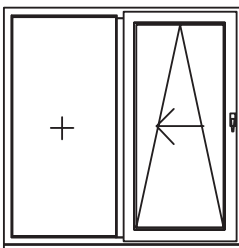
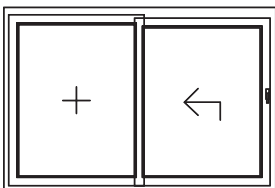





Execution always with highly efficient warm edge spacers with a special insulating effect on the edge of the glass unit. In comparison with normal aluminium spacers, thermal bridges and heat loss are considerably reduced.

Gas filling

For ecological reasons our glass is only argon filled. We avoid using krypton filled glass as it causes much poorer energy balance.

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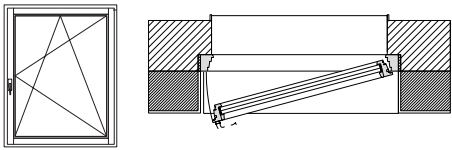
SYSTEM PASS										
ENERGATE 843 & 893										
uPVC System & uPVC System with aluminium cladding Stand: 19.02.2013										
SYSTEM		ENERGATE 843	ENERGATE 843	ENERGATE 843	ENERGATE 843	ENERGATE 843	ENERGATE 843	ENERGATE 763	ENERGATE 843	ENERGATE 843
Produkttyp Product types >>>		1.001 WINDOW	1.004 WINDOW	1.004 WINDOW	1.009 WINDOW	1.101 PATIO DOORS with flat threshold	1.104 PATIO DOORS with flat threshold	2.001 DOORS main entrance door with flat threshold	6.001 PARALLEL SLIDE & TILT DOORS	8.001.1 LIFT & SLIDING DOOR
Elementabmessung B x H Element dimension width x height >>>		1000 * 2300 mm 39.37 * 90.55 inch	2976 * 1620 mm 117.17 * 63.78 inch	1900 * 2200 mm 74.8 * 86.61 inch	1500 * 2300 mm 59.06 * 90.55 inch	1000 * 2250 mm 39.37 * 88.58 inch	1850 * 2250 mm 72.83 * 88.58 inch	1000 * 2200 mm 39.37 * 86.61 inch	2000 * 2300 mm 78.74 * 90.55 inch	3000 * 2200 mm 118.11 * 86.61 inch
Wärmedurchgangskoeffizient Heat transfer coefficient		$U_f = 0,95 \text{ W/m}^2\text{K}$ $U_f = 0.167 \text{ Btu ft}^2\text{f}$ IFT 402 42057/1 (Nr.263)	$U_f = 0,95 \text{ W/m}^2\text{K}$ $U_f = 0.167 \text{ Btu ft}^2\text{f}$ IFT 402 42057/1 (Nr.263)	$U_f = 0,95 \text{ W/m}^2\text{K}$ $U_f = 0.167 \text{ Btu ft}^2\text{f}$ IFT 402 42057/1 (Nr.263)	$U_f = 0,95 \text{ W/m}^2\text{K}$ $U_f = 0.167 \text{ Btu ft}^2\text{f}$ IFT 402 42057/1 (Nr.263)	$U_f = 0,95 \text{ W/m}^2\text{K}$ $U_f = 0.167 \text{ Btu ft}^2\text{f}$ IFT 402 42057/1 (Nr.263) Side and top profile	$U_f = 0,95 \text{ W/m}^2\text{K}$ $U_f = 0.167 \text{ Btu ft}^2\text{f}$ IFT 402 42057/1 (Nr.263) Side and top profile	$U_f = 1,5 \text{ W/m}^2\text{K}$ $U_f = 0.265 \text{ Btu/ft}^2 \text{ hr}^\circ\text{F}$ IFT 442 36009/3(Nr.220) Side and top profile	$U_f = 0,95 \text{ W/m}^2\text{K}$ $U_f = 0.167 \text{ Btu ft}^2\text{f}$ IFT 402 42057/1 (Nr.263)	$U_f = 1,3 \text{ W/m}^2\text{K}$ $U_f = 0.228 \text{ Btu ft}^2\text{f}$ IFT 402 37227/1 (Nr.245) Side and top profile
						$U_f = 1,8 \text{ W/m}^2\text{K}$ $U_f = 0.315 \text{ Btu ft}^2\text{f}$ (IC_HB184) Bottom profile flat threshold	$U_f = 1,8 \text{ W/m}^2\text{K}$ $U_f = 0.315 \text{ Btu ft}^2\text{f}$ (IC_HB184) Bottom profile flat threshold	$U_f = 1,9 \text{ W/m}^2\text{K}$ $U_f = 0.333 \text{ Btu/ft}^2 \text{ hr}^\circ\text{F}$ IFT 12-002118-PR02 (Nr.311) Bottom profile flat threshold		
Luftdurchlässigkeit Air permeability		Class 4 IFT 102 41859/1 (Nr. 268)	Class 4 IFT11-001922-PR06	Class 4 IFT 102 41859/3 (Nr. 266)	Class 4 IFT 102 41859/2 (Nr. 265)	Class 4 PFB 10/03-A102 (Nr. 277)	Class 4 PFB 10/03-A102 (Nr. 277)	Class 2 IFT 12-002532-PR01 (Nr.219)	Class 4 IFT 102 41859/4 (Nr. 267)	Class 4 pfb 08/12-A373-B3 (Nr.250)
Widerstandsfähigkeit gegen Windlast Resistance to wind loads		Class B4/C4 IFT 102 41859/1 (Nr. 268)	Class B3/C3 IFT 11-001922-PR06	Class B4/C4 IFT 102 41859/3 (Nr. 266)	Class B4/C4 IFT 102 41859/2 (Nr. 265)	Class B5/C5 PFB 10/03-A102 (Nr. 277)	Class B3/C2 PFB 10/03-A102 (Nr. 277)	Class C1 IFT 12-002532-PR01 (Nr. 219) ± 600 Pa	Class B4/C4 IFT 102 41859/4 (Nr. 267)	Class B4/C4 pfb 08/12-A373-B3 (Nr.250)
Schlagregendichtheit Water tightness		Class 9A IFT 102 41859/1 (Nr. 268)	Class 9A IFT 11-001922-PR06	Class 9A IFT 102 41859/3 (Nr. 266)	Class 9A IFT 102 41859/2 (Nr. 265)	Class 9A PFB 10/03-A102 (Nr. 277)	Class 9A PFB 10/03-A102 (Nr. 277)	Class 5A IFT 12-002532-PR01 (Nr. 219) ± 200 Pa	Class 9A IFT 102 41859/4 (Nr. 267)	Class 9A pfb 08/12-A373-B3 (Nr.250)
Schallschutz Sound insulation		$R_{WP} = 40 / 45 / 47 \text{ dB}$ LSW 161 43106/3-5 (Nr.156 - 158)	$R_{WP} = 40 / 45 / 47 \text{ dB}$ LSW 161 43106/3-5 (Nr.156 - 158)	$R_{WP} = 40 / 45 / 47 \text{ dB}$ LSW 161 43106/3-5 (Nr.156 - 158)	$R_{WP} = 40 / 45 / 47 \text{ dB}$ LSW 161 43106/3-5 (Nr.156 - 158)	npd	npd	ndp	$R_{WP} = 40 / 45 / 47 \text{ dB}$ LSW 161 43106/3-5 (Nr.156 - 158)	npd

OPENING DIRECTIONS

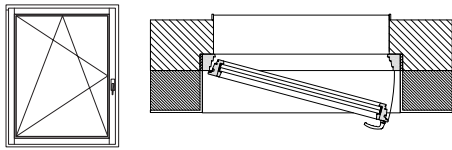
All drawings are showing the inside views

OPENING INWARDS
single opening

X.XXX.1 =
Hinges right, handle left

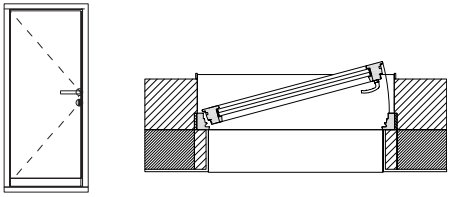


X.XXX.2 =
Hinges left, handle right

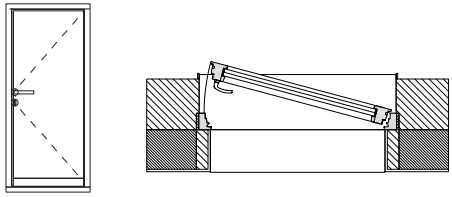


OPENING OUTWARDS
single opening

X.XXX.3 =
Hinges left, handle right

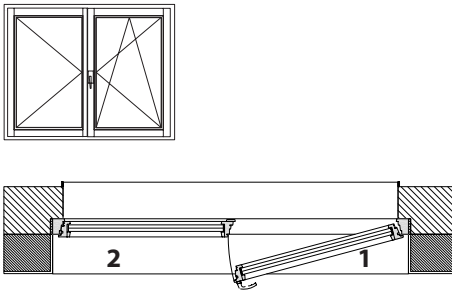


X.XXX.4 =
Hinges right, handle left

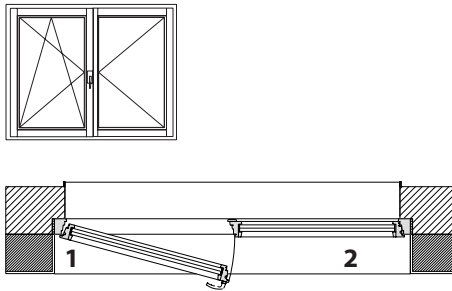


OPENING INWARDS
double french opening

X.XXX.5 =
Right leaf opening first

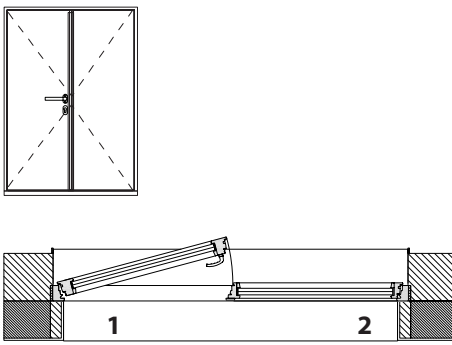


X.XXX.6 =
Left leaf opening first

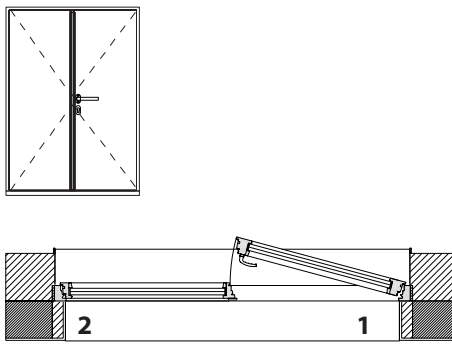


OPENING OUTWARDS
double french opening

X.XXX.7 =
Left leaf opening first



X.XXX.8 =
Right leaf opening first



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SIZES - MINIMUM & MAXIMUM MEASUREMENTS

All drawings are showing the inside views

TYPE	1.021	1.001	1.004	1.005	1.010
TYPE	FIXED WINDOW	WINDOW	WINDOW double french opening	WINDOW double opening window with post	WINDOW single opening with tilt window above
Width - Min	350	530	950	1020	530
Width - Max	2100	1400	2200	2700	1400
Height - Min	400	625	625	625	1400
Height - Max	2510	1950	2010	1950	2260

TYPE	1.101 & 5.000	1.104	6.000	8.000	2.000
	PATIO DOOR single opening & lockable patio door	PATIO DOOR double french opening	SLIDE & TILT DOOR	LIFT & SLIDING DOOR	ENTRANCE DOOR
Width - Min	530	950	1630	1750	700
Width - Max	1100	1900	3600	4500	1250
Height - Min	1950	1950	1070	1000	1800
Height - Max	2510	2510	2385	2385	2500

Maximum transportable in 40' high cube container measurements of elements:
max width 2300 mm - height adjustable or width adjustable - max height 2300 mm
Measurements over max sizes to be divided.

We reserve the right for technical changes. Technical examination of the individual elemtents reserved.
The size regulations are depending on the type of combination of the product types.

Special types and sizes available upon request. In case of very large sizes only turn wings possible.

All customer demands for sizes and function will be checked and confirmed technically.

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Ludwig International GmbH

Fenestration Products & Building Envelope Solutions
Cologne · Germany

sales@energate.com

WWW.ENERGATE.COM