



Architectural hardware for sliding shutters

Hawa Frontslide
Hawa Frontslide Matic
Hawa Frontego
Hawa Aperto

Quality, Support and Service

About Hawa Sliding Solutions

Our metier since 1965 has been pivoting, sliding and folding hardware systems – along with the fascinating applications they have opened for our customers. Thus, we have grown into a name of international repute within our specialist areas of glass/metal/wood architectural hardware, and hardware for furniture.

We – and hence our customers – are totally committed to Swiss quality. Despite the fact that we now export over 80 % of our output, production is located at home in Mettmensstetten. This is not least because our business philosophy is still based on characteristically Swiss values like precision, reliability, and durability.

About this catalogue

Designing façades, screening from view and the sun, solving problems, saving time – our hardware carries an impact that reaches far beyond its essential sliding, stacking and folding functionality. This catalogue provides you with detailed ordering information and technical data for our entire range of sliding shutters folding and sliding hardware systems. And should you have a specific requirement in the pipeline, please contact us – we are happy to be of help.

Find out about the rest of the Hawa range:

Architectural hardware glass/metal

- Glass sliding doors with patch suspension
- Glass sliding doors with suspension/retainer profiles
- Glass sliding walls
- Metal sliding doors

Catalogue order no: 15752

Architectural hardware wood

- Sliding doors
- Folding/Centre fold «Accordion» wall
- Wood sliding partitions
- Windows

Catalogue order no: 15625

Furniture hardware wood

- Sliding cabinet/wardrobe doors
- Side stacking cabinet/wardrobe doors
- Pivot sliding furniture doors
- Folding cabinet/wardrobe doors, panels can be moved freely to and fro
- Folding cabinet/wardrobe doors

Catalogue order no: 15282

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Overview of the hardware for folding and sliding shutters

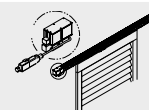
Pages 8–21

Manual sliding shutters



Pages 22–41

Automatic sliding shutters



Pages 42–45

Sliding shutters – Bottom guides/Locking mechanisms



Pages 46–51

Automatic folding sliding shutters



Pages 52–53

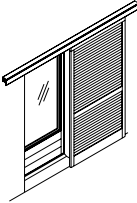
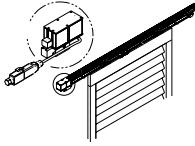
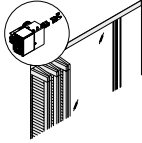
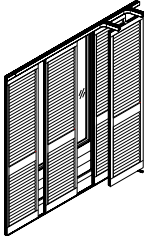
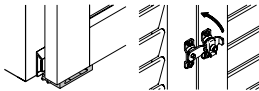
Stacking sliding shutters



Pages 54–56

General Terms and Conditions (GTC)

Product index

| | Recommended applications in | | | For external use | | Curved installations | Mode of fixing | |
|---|-----------------------------|------------------|----------------------|-------------------|---------------|----------------------------|----------------|-----------------|
| | Residential buildings | Public buildings | Industrial buildings | Non coastal areas | Coastal areas | Minimum radius mm /inch | Wall fitting | Ceiling fitting |
| Manual sliding shutters  | ● | ● | ● | ● | ① | | ● | ● |
| | ● | ● | ● | ● | ① | | ● | ● |
| | ● | ● | ● | ● | ① | | ● | ● |
| | ● | ● | ● | ● | ① | | ● | ● |
| | | | | | | | | |
| | | | | | | | | |
| Sliding shutters  | ● | ● | ● | ● | ① | | ● | ● |
| | ● | ● | ● | ● | ① | | ● | ● |
| | ● | ● | ● | ● | ① | | ● | ● |
| | | | | | | | | |
| | | | | | | | | |
| Automatic folding sliding shutters  | ● | ● | ● | ● | ● | | | ● |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Stacking sliding shutters  | ● | ● | ● | ● | ① | 2000 (6'6 $\frac{3}{4}$ ") | | ● |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Accessories  | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Miscellaneous | | | | | | | | |
| | | | | | | | | |

① possible under certain conditions

| Mode of system | | www.hawa.ch | | | | | |
|----------------|-----------|--|--|---|---------------------|------------------|-------|
| manual | automatic | Hawa Productfinder → full information | Hawa Systemplanner → planning and quoting | Hardware systems | Maximum door weight | | Pages |
| | | | | Overview of the hardware for folding and sliding shutters | | | 6 |
| ● | | ● | ● | Hawa Frontslide 60/100/140 A | 60/100/140 kg | 132/220/308 lbs. | 8 |
| ● | | ● | ● | Hawa Frontslide 60/100/140 A Symmetric | 60/100/140 kg | 132/220/308 lbs. | 10 |
| ● | | ● | ● | Hawa Frontslide 60/100/140 A Telescopic | 60/100/140 kg | 132/220/308 lbs. | 14 |
| ● | | ● | ● | Hawa Frontslide 60 B | 60 kg | 132 lbs. | 20 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | ● | ● | ● | Hawa Frontslide 60/100/140 Matic | 60/100/140 kg | 132/220/308 lbs. | 22 |
| | ● | ● | ● | Hawa Frontslide 60/100/140 Matic Symmetric | 60/100/140 kg | 132/220/308 lbs. | 26 |
| | ● | ● | ● | Hawa Frontslide 60/100/140 Matic Telescopic | 60/100/140 kg | 132/220/308 lbs. | 32 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | ● | | | Hawa Frontego 30 Matic | 30 kg | 66 lbs. | 46 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| ● | | | | Hawa Aperto 60 H – Bespoke solutions | 60 kg | 132 lbs. | 52 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
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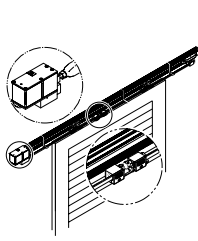
Summary

| | Max. weight per sliding shutter | Lower top track | Sliding shutter thickness | Min. sliding shutter width | Max. sliding shutter width | Max. sliding shutter height | Max. installation width | Max. area per sliding shutter |
|---------------------------------------|------------------------------------|-----------------|------------------------------|-------------------------------|-------------------------------|--------------------------------|----------------------------|----------------------------------|
| Manual | kg | mm | mm | mm | mm | mm | mm | m ² |
| Hawa Frontslide 60 A | 60 | | 28–45 | 400 | – | 3200 | – | |
| Hawa Frontslide 100 A | 100 | | 28–50 | 500 | – | 3200 | – | – |
| Hawa Frontslide 140 A | 140 | | 28–60 | 700 | – | 3200 | – | – |
| Hawa Frontslide 60 A Lower top track | 60 | 37 | min. 28 | 400 | – | 3200 | – | |
| Hawa Frontslide 100 A Lower top track | 100 | 47 | min. 28 | 500 | – | 3200 | – | – |
| Hawa Frontslide 60 A Symmetric 2 | 60 | | 28–45 | 500 | – | 3200 | 6000 | |
| Hawa Frontslide 100 A Symmetric 2 | 100 | | 28–50 | 550 | – | 3200 | 6000 | – |
| Hawa Frontslide 140 A Symmetric 2 | 140 | | 28–60 | 700 | – | 3200 | 6000 | – |
| Hawa Frontslide 60 A Symmetric 2+2 | 40 | | 28–40 | 550 | 1000 | 3200 | 6000 | |
| Hawa Frontslide 100 A Symmetric 2+2 | 70 | | 28–40 | 600 | 1000 | 3200 | 6000 | – |
| Hawa Frontslide 60 A Telescopic 2 | 60 | | 28–40 | 550 | 1200 | 3200 | – | |
| Hawa Frontslide 100 A Telescopic 2 | 100 | | 28–40 | 600 | 1200 | 3200 | – | – |
| Hawa Frontslide 140 A Telescopic 2 | 140 | | 28–40 | 700 | 1200 | 3200 | – | – |
| Hawa Frontslide 60 A Telescopic 3 | 60 | | 28–40 | 550 | 1200 | 3200 | – | |
| Hawa Frontslide 100 A Telescopic 3 | 100 | | 28–40 | 600 | 1200 | 3200 | – | – |
| Hawa Frontslide 60 A Telescopic 4 | 60 | | 28–40 | 550 | 1200 | 3200 | – | |
| Hawa Frontslide 100 A Telescopic 4 | 100 | | 28–40 | 600 | 1200 | 3200 | – | – |
| Hawa Frontslide 60 B | 60 | 37 | 28–40 | 400 | – | 3200 | | |
| Hawa Aperto 60 H | 60 | | 35–50 | 550 | 950 | 2600 | | |

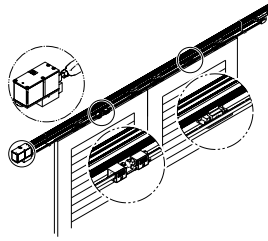
| Automatic | kg | mm | mm | mm | mm | mm | mm | m ² |
|---|-----|----|-------|-----|------|------|------|----------------|
| Hawa Frontslide 60 Matic | 60 | | 28–45 | 600 | – | 3200 | 7500 | 6.24 |
| Hawa Frontslide 100 Matic | 100 | | 28–50 | 650 | – | 3200 | 7500 | 6.24 |
| Hawa Frontslide 140 Matic | 140 | | 28–60 | 750 | – | 3200 | 7500 | 6.24 |
| Hawa Frontslide 60 Matic Symmetric 2 | 60 | | 28–45 | 550 | – | 3200 | 7500 | 6.24 |
| Hawa Frontslide 100 Matic Symmetric 2 | 80 | | 28–50 | 600 | – | 3200 | 7500 | 6.24 |
| Hawa Frontslide 140 Matic Symmetric 2 | 100 | | 28–60 | 750 | – | 3200 | 7500 | 6.24 |
| Hawa Frontslide 60 Matic Symmetric 2+2 | 40 | | 28–40 | 650 | 1200 | 3200 | – | – |
| Hawa Frontslide 100 Matic Symmetric 2+2 | 70 | | 28–40 | 650 | 1200 | 3200 | – | – |
| Hawa Frontslide 60 Matic Telescopic 2 | 60 | | 28–40 | 650 | 1200 | 3200 | – | – |
| Hawa Frontslide 100 Matic Telescopic 2 | 90 | | 28–40 | 650 | 1200 | 3200 | – | – |
| Hawa Frontslide 140 Matic Telescopic 2 | 140 | | 28–40 | 750 | 1200 | 3200 | – | – |
| Hawa Frontslide 60 Matic Telescopic 3 | 50 | | 28–40 | 650 | 1200 | 3200 | – | – |
| Hawa Frontslide 100 Matic Telescopic 3 | 80 | | 28–40 | 650 | 1200 | 3200 | – | – |
| Hawa Frontslide 60 Matic Telescopic 4 | 40 | | 28–40 | 650 | 1200 | 3200 | – | – |
| Hawa Frontslide 100 Matic Telescopic 4 | 70 | | 28–40 | 650 | 1200 | 3200 | – | – |
| Hawa Frontego 30 Matic | 30 | | 28–32 | 300 | 600 | 3200 | – | – |

Metric measurements apply – those in inches are for information only and can be found on the corresponding pages.

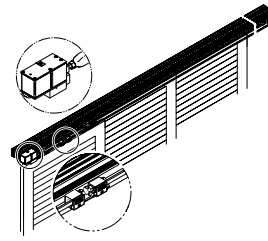
Shutters with drive unit



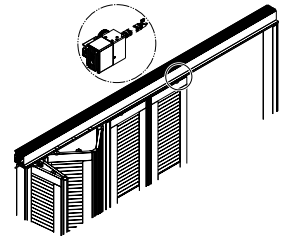
Hawa Frontslide Matic



Hawa Frontslide Matic Symmetric



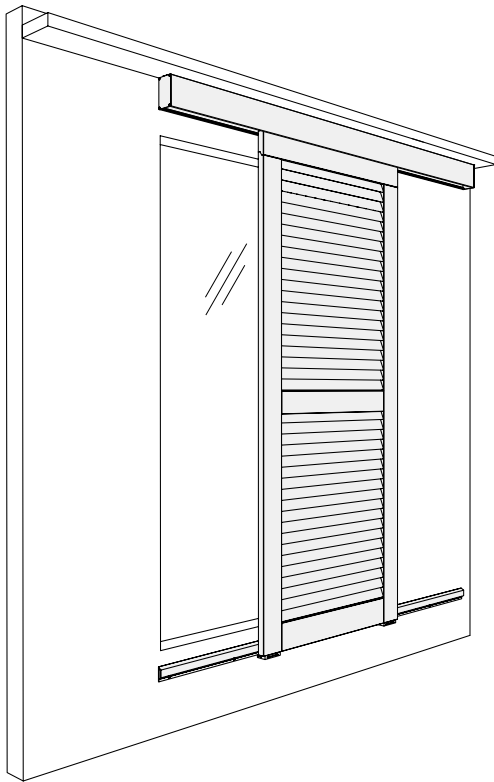
Hawa Frontslide Matic Telescopic



Hawa Frontego 30 Matic

Possible positions for the drive unit

| | Maximum number and weight of the sliding shutters | Installation instructions | Drive unit |
|--|---|------------------------------|------------|
| <p>Hawa Frontslide 60/100/140 Matic</p> | 1 at 60 kg (1 at 132 lbs.) 1 at 100 kg (1 at 220 lbs.) 1 at 140 kg (1 at 308 lbs.) | 24991 | |
| <p>Hawa Frontslide 60/100/140 Matic Symmetric 2</p> | 2 at 60 kg (2 at 132 lbs.) 2 at 80 kg (2 at 176 lbs.) 2 at 100 kg (2 at 220 lbs.) | 24992 | |
| <p>Hawa Frontslide 60/100/140 Matic Telescopic 2</p> | 2 at 60 kg (2 at 132 lbs.) 2 at 90 kg (2 at 198 lbs.) 2 at 140 kg (2 at 308 lbs.) | 24994 | |
| <p>Hawa Frontslide 60/100 Matic Telescopic 3 and 4</p> | 3 at 50 kg (3 at 110 lbs.) 3 at 80 kg (3 at 176 lbs.) 4 at 40 kg (4 at 88 lbs.) 4 at 70 kg (4 at 154 lbs.) | 24995 24996 | |
| <p>Hawa Frontslide 60/100 Matic Symmetric 2+2</p> | 4 at 40 kg (4 at 88 lbs.) 4 at 70 kg (4 at 154 lbs.) | 24993 | |
| <p>Hawa Frontego 30 Matic</p> | 6 à 30 kg (6 at 66 lbs.) | available on special request | |



Sliding shutters for a functional façade finish.

Hardware system for wood, metal or aluminium sliding shutters with a panel weight up to 60 kg (132 lbs.)

Zum Produkt

Hawa Frontslide 60 A is a dependable hardware system for manually-operated sliding shutters, with different fitting options. Attached to the ceiling or window lintel, the top track screws directly to the load-bearing surface. An angled profile support is available for wall fitting, whereby the top track secures to the support profile using special assembly screws supplied by Hawa. On the aesthetic side, aluminium covering screens in natural anodized or plain finishes for custom painting simply clip-on to the inside or outside edges of the top track. In buildings with an air gap behind the façade, open window shutters can slide out of sight into the void between the building wall and the façade.

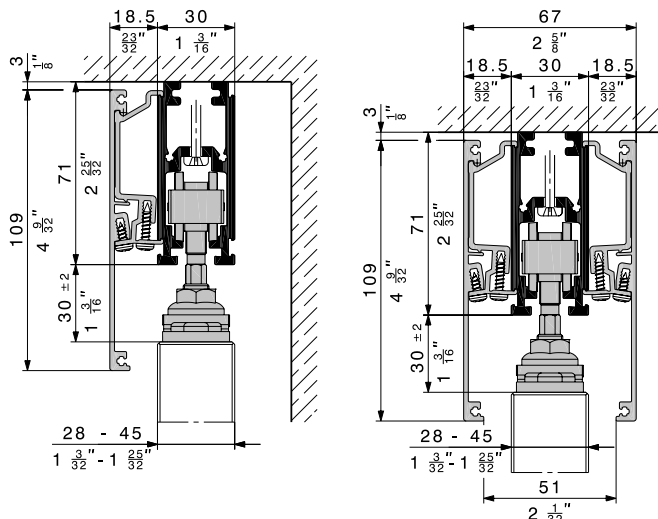
Applications

Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

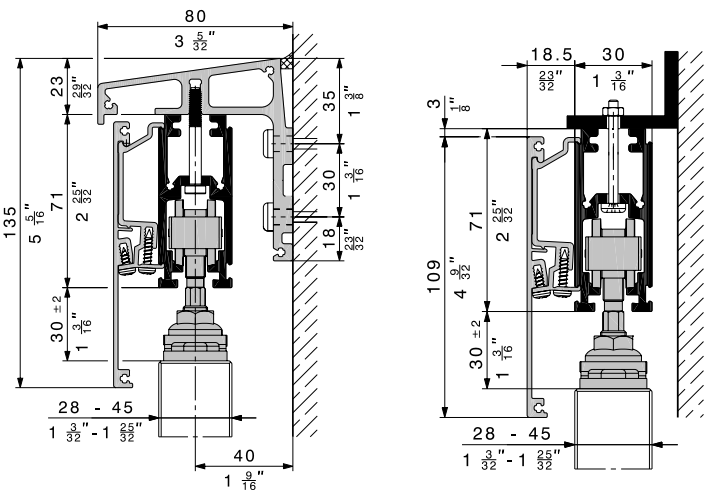
Features of the Hawa Frontslide 60 A

- Maximum sliding shutter weight: 60 kg (132 lbs.)
- Sliding shutter thickness: 28–45 mm ($1\frac{1}{8}$ "– $1\frac{25}{32}$ ")
- Minimum sliding shutter width: 400 mm ($15\frac{3}{4}$ ")
- Maximum sliding shutter height: 3200 mm ($10'6\frac{3}{4}$ ")
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)
- Corrosion-resistant materials
- Fast and efficient assembly from below and from the façade side
- Clip-on covers for inside or outside attachment
- The sliding shutters can be moved into any position
- For wood, metal or aluminium sliding shutters
- Different design options of bottom guides
- External tests certify the highest wind resistance (Class 6 in accordance with EN 13659)

Ceiling or window lintel fitting



Wall fitting



Angled profile support for one sliding level


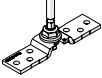

Fixing bracket provided by customer

Subject to modification. Metric specifications are exact. Inches are approximate.

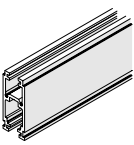

Set without top tracks and bottom guide channels

| | code |
|---|-------|
| Hawa Frontslide 60 A, partial set for 1 sliding shutter | 25117 |

Set comprising

| Caution: Hole positions vary. | | piece | code |
|---|--|-------|-------|
|  | Two-wheeled trolley, M8, with plastic wheels | 2 | 17119 |
|  | Top fixing plate, stainless steel, with hanger bolt M8 | 2 | 24562 |
|  | Track stop with adjustable retainer | 2 | 17027 |

Top tracks for installations with or without covering screens

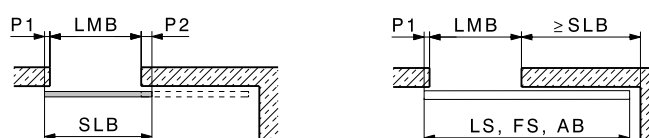
| Caution: Hole positions vary. | | mm | code |
|---|---|--|-------|
|  | Top track, alu plain anodized, predrilled | 3500 (11'5 ¹³ / ₁₆ ") | 24839 |
| | | 6000 (19'8 ⁷ / ₃₂ ") | 24795 |
| | | cut to size | 24796 |
|  | Connecting bolts, set of 6 pieces | | 17221 |

Calculation for suspension points



| 60 A | M1 | M2 |
|------|--|--|
| | 110 mm (4 ¹¹ / ₃₂ ") | 110 mm (4 ¹¹ / ₃₂ ") |

Calculation for sliding shutter width



$$SLB = LMB + P1 + P2$$

$$LS = (2 \times SLB) - P2$$

$$FS = LS$$

| | |
|-----|-------------------------|
| AB | Installation width |
| LMB | Entire opening width |
| FS | Bottom guide channel |
| SLB | Sliding shutter width |
| P | Sliding shutter overlap |
| LS | Top track |

Order specifications

- Number of sets
- Number and length of top tracks
- For wall fittings:
 - Number, length and type of angled profile support
 - Number of **special fixing screw sets**
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

Optional order specifications

- Number, length and type of spacer profiles for angled profile support
- Number and type of front cover plates
- Number of connecting bolt sets to profiles and covering screens
- Number and type of sliding shutter locking mechanisms

Top tracks, covering screens and brackets

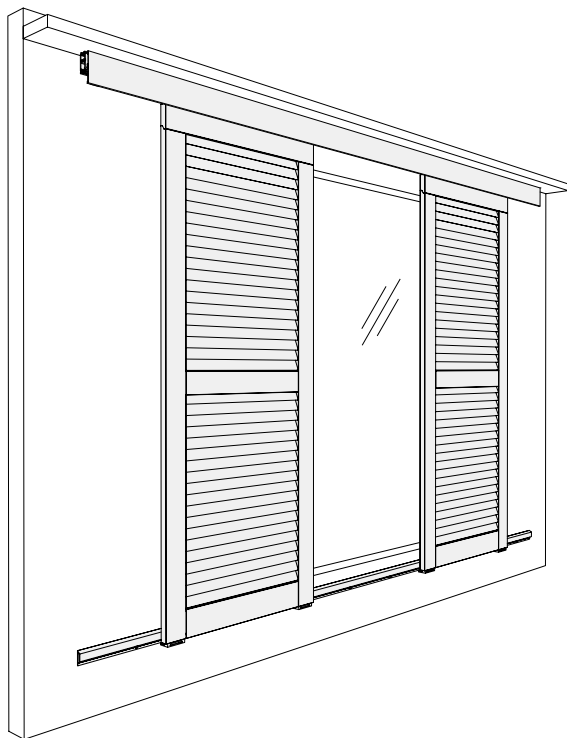
Top tracks and covering screens: → pages 36–37

Guides and locking mechanisms

Bottom guides and locking mechanisms: → pages 42–44

Planning/installation

For planning and installation purposes, please use the installation drawing code 24984. (→ www.hawa.ch → Hawa Productfinder)



Sliding shutters moved symmetrically.

Hardware for 2 sliding wood, metal or aluminium shutters of up to 60 kg (132 lbs.), opening simultaneously left and right.

Description

Hawa Frontslide 60 A Symmetric 2 is a dependable hardware system for manually-operated sliding shutters, with different fitting options. Attached to the ceiling or window lintel, the top track screws directly to the load-bearing surface. An angled profile support is available for wall fitting, whereby the top track secures to the support profile using special assembly screws supplied by Hawa. On the aesthetic side, aluminium covering screens in natural anodized or plain finishes for custom painting simply clip-on to the inside or outside edges of the top track. The system offers a further plus-point with the toothed belt, where a single movement can operate a pair of shutters in symmetry. In buildings with an air gap behind the façade, open window shutters can slide out of sight into the void between the building wall and the façade.

Applications

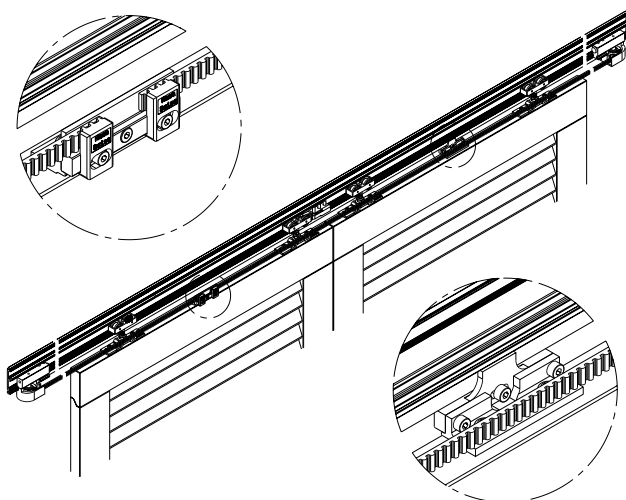
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Features of the Hawa Frontslide 60 A Symmetric 2

- Maximum sliding shutter weight: 60 kg (132 lbs.)/shutter
- Sliding shutter thickness: 28–45 mm ($1\frac{1}{8}$ "– $1\frac{25}{32}$ ")
- Minimum sliding shutter width: 500 mm ($19\frac{11}{16}$ ")
- Maximum sliding shutter height: 3200 mm ($10'6\frac{3}{4}$ ")
- Maximum installation width: 6000 mm ($19'8\frac{7}{32}$ ")
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)
- Fibreglass-reinforced toothed belts guarantee high tensile strength and a low level of expansion
- Shutters can be removed without loosening the toothed belt
- Fast and efficient assembly from below and from the façade side
- Clip-on covers for inside or outside attachment
- The sliding shutters can be moved symmetrically into any position
- For wood, metal or aluminium sliding shutters
- Different design options of bottom guides
- External tests certify the highest wind resistance (Class 6 in accordance with EN 13659)



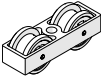
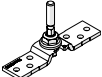
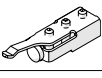
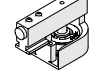
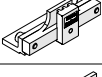
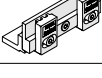
Toothed belt lock and driver



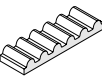
Set without top tracks and bottom guide channels

| | code |
|--|-------|
| Hawa Frontslide 60 A Symmetric 2, partial set for 2 sliding shutters | 25118 |

Set comprising

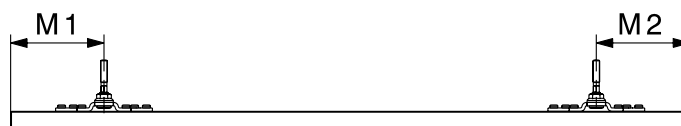
| | | pieces | code |
|---|---|--------|-------|
|  | Two-wheeled trolley, M8, with plastic wheels | 4 | 17119 |
|  | Top fixing plate, stainless steel, with hanger bolt M8 | 4 | 24562 |
|  | Track stop with adjustable retainer | 1 | 17027 |
|  | Guide pulley wheel matching with top track Hawa Frontslide 60/100/140 | 2 | 24793 |
|  | Driver, laterally adjustable for manual systems | 1 | 20353 |
|  | Toothed belt lock for manual systems | 1 | 20352 |

Toothed belt

| | | length | code |
|---|---|---|-------|
|  | Toothed belt, black, fibre glass reinforced | 5 m (16'4 ⁵⁷ / ₃₂ ") | 19667 |
| | | 8 m (26'2 ³¹ / ₃₂ ") | 19682 |
| | | 10 m (32'9 ²³ / ₃₂ ") | 19668 |
| | | 15 m (49'2 ⁹ / ₁₆ ") | 20370 |
| | | 50 m (164'1 ¹ / ₂ ") | 19669 |

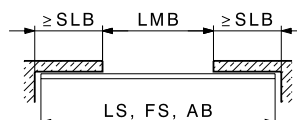
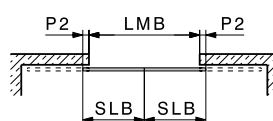
Length of toothed belt = 2 x top track

Calculation for suspension points



| 60 A | M1 | M2 |
|------|--|--|
| SL1 | 150 mm (5 ²⁹ / ₃₂ ") | 100 mm (3 ¹⁵ / ₁₆ ") |
| SL2 | 100 mm (3 ¹⁵ / ₁₆ ") | 150 mm (5 ²⁹ / ₃₂ ") |

Calculation for sliding shutter width



$$SLB = \frac{LMB}{2} + P2$$

$$LS = LMB + (2 \times SLB)$$

| | |
|-----|-------------------------|
| AB | Installation width |
| LMB | Entire opening width |
| SLB | Sliding shutter width |
| P | Sliding shutter overlap |
| FS | Bottom guide channel |
| LS | Top track |

Order specifications

- Number of sets
- Number and length of top tracks
- For wall fittings:
 - Number, length and type of angled profile support
 - Number of special fixing screw sets
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

Optional order specifications

- Number and length of spacer profiles for angled profile support
- Number and type of front cover plates
- Number of connecting bolt sets to profiles and covering screens
- Number and type of sliding shutter locking mechanisms

Top tracks, covering screens and brackets

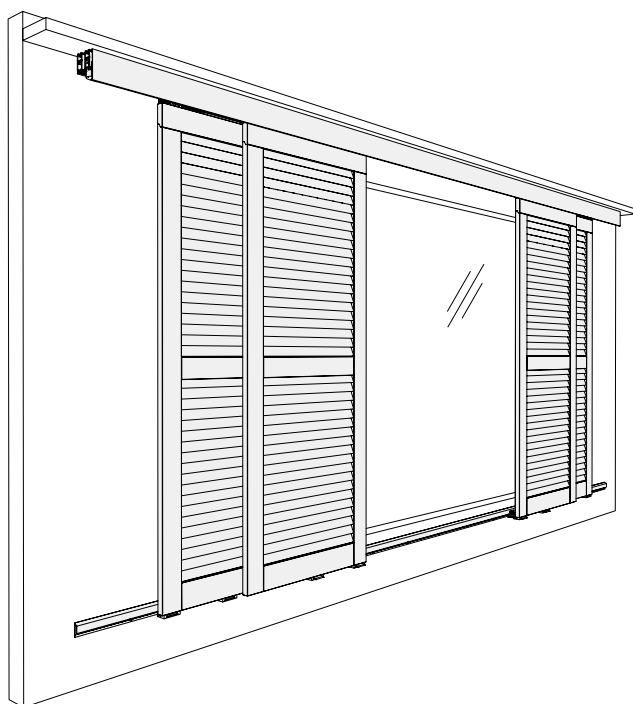
Top tracks and covering screens: → pages 36–37

Guides and locking mechanisms

Bottom guides and locking mechanisms: → pages 42–44

Planning/installation

For planning and installation purposes, please use the installation drawing code 24986. (→ www.hawa.ch → Hawa Productfinder)



4 Sliding shutters moved symmetrically.

Hardware for 4 sliding wood, metal or aluminium shutters of up to 40 kg (88 lbs.), opening simultaneously left and right.

Description

Hawa Frontslide 60 A Symmetric 2+2 is a dependable hardware system for manually-operated sliding shutters, with different fitting options. Attached to the ceiling or window lintel, the top track screws directly to the load-bearing surface. An angled profile support is available for wall fitting, whereby the top track secures to the support profile using special assembly screws supplied by Hawa. On the aesthetic side, aluminium covering screens in natural anodized or plain finishes for custom painting simply clip-on to the inside or outside edges of the top track. The system offers a further plus-point with the toothed belt, where a single movement can operate four shutters in symmetry. In buildings with an air gap behind the façade, open window shutters can slide out of sight into the void between the building wall and the façade.

Applications

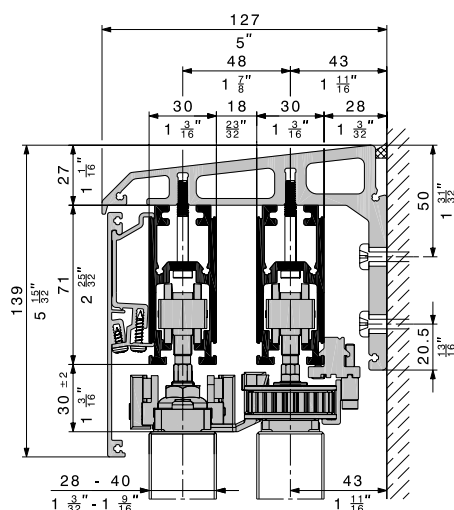
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Features of the Hawa Frontslide 60 A Symmetric 2+2

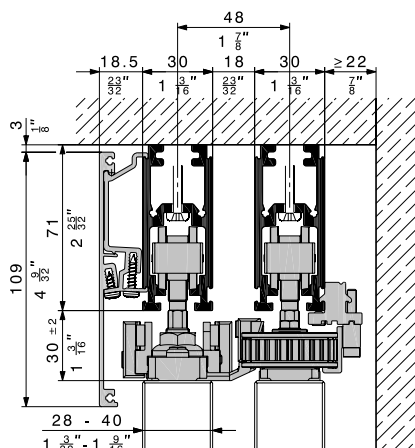
- Maximum sliding shutter weight: 40 kg (88 lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ "– $1\frac{19}{32}$ ")
- Minimum sliding shutter width: 500–1000 mm ($1'9\frac{21}{32}$ "– $3'3\frac{3}{8}$ ")
- Maximum sliding shutter height: 3200 mm ($10'6\frac{3}{4}$ ")
- Maximum installation width: 6000 mm ($19'8\frac{7}{32}$ ")
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)
- Fibreglass-reinforced toothed belts guarantee high tensile strength and a low level of expansion
- Shutters can be removed without loosening the toothed belt
- Fast and efficient assembly from below and from the façade side
- Clip-on covers for inside or outside attachment
- The sliding shutters can be moved symmetrically into any position
- For wood, metal or aluminium sliding shutters
- Different design options of bottom guides
- External tests certify the highest wind resistance (Class 6 in accordance with EN 13659)



Wall fitting



Ceiling or window lintel fitting

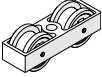
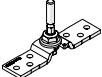

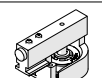
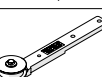
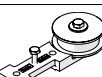
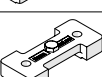
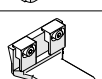
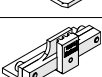
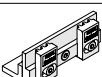
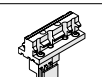
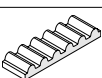


Subject to modification. Metric specifications are exact. Inches are approximate.

Set without top tracks and bottom guide channels

| | code |
|---|-------|
| Hawa Frontslide 60 A Symmetric 2+2, partial set for 4 sliding shutters | 25119 |

Set comprising

| | | pieces | code |
|---|---|--------|-------|
|  | Two-wheeled trolley, M8, with plastic wheels | 8 | 17119 |
|  | Top fixing plate, stainless steel, with hanger bolt M8 | 8 | 24562 |
|  | Track stop with adjustable retainer | 3 | 17027 |
|  | Guide pulley wheel matching with top track Hawa Frontslide 60/100/140 | 2 | 24793 |
|  | Guide pulley wheel, with fixing plate, long | 2 | 20139 |
|  | Guide pulley wheel, with fixing plate, short | 2 | 20140 |
|  | Driver counter-plate, wide | 2 | 20246 |
|  | Driver, wide | 2 | 20141 |
|  | Driver, laterally adjustable for manual systems | 1 | 20353 |
|  | Toothed belt lock for manual systems | 1 | 20352 |
|  | Toothed belt clamp for manual and automatic systems | 1 | 24777 |
|  | Toothed belt, black, 2,7 m (8'10 ⁵ / ₁₆ "), fibreglass reinforced | 2 | |

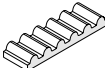
Order specifications

- Number of sets
- Number and length of top tracks
- Number and length of toothed belt
- For wall fittings:
 - Number, length and type of angled profile support
 - Number of **special fixing screw sets**
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

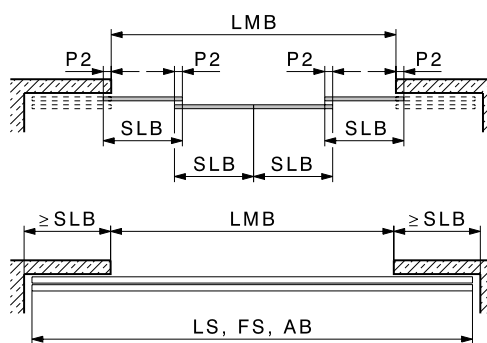
Optional order specifications

- Number and type of front cover plates
- Number of connecting bolt sets to profiles and covering screens
- Number and type of sliding shutter locking mechanisms

Toothed belt

| | length | code |
|---|---|-------|
|  | 5 m (16'4 ²⁷ / ₃₂ ") | 19667 |
| | 8 m (26'2 ³¹ / ₃₂ ") | 19682 |
| | 10 m (32'9 ²³ / ₃₂ ") | 19668 |
| | 15 m (49'2 ¹ / ₁₆ ") | 20370 |
| | 50 m (164'1 ¹ / ₂ ") | 19669 |

Toothed belt length, outer sliding level = 2 x top track

Calculation for sliding shutter width

$$SLB = \frac{LMB}{4} + P2$$

$$P2 \geq 50 \text{ mm (1'31'')}$$

$$LS = LMB + (2 \times SLB)$$

| | |
|-----|-------------------------|
| AB | Installation width |
| LMB | Entire opening width |
| SLB | Sliding shutter width |
| P | Sliding shutter overlap |
| FS | Bottom guide channel |
| LS | Top track |

Calculation for suspension points

| 60 A | M1 | M2 |
|------|--|--|
| SL1 | 160 mm (6 ⁵ / ₁₆ ") | 160 mm (6 ⁵ / ₁₆ ") |
| SL2 | 180 mm (7 ³ / ₃₂ ") | 100 mm (3 ¹⁵ / ₁₆ ") |
| SL3 | 100 mm (3 ¹⁵ / ₁₆ ") | 180 mm (7 ³ / ₃₂ ") |
| SL4 | 160 mm (6 ⁵ / ₁₆ ") | 160 mm (6 ⁵ / ₁₆ ") |

Top tracks, covering screens and brackets

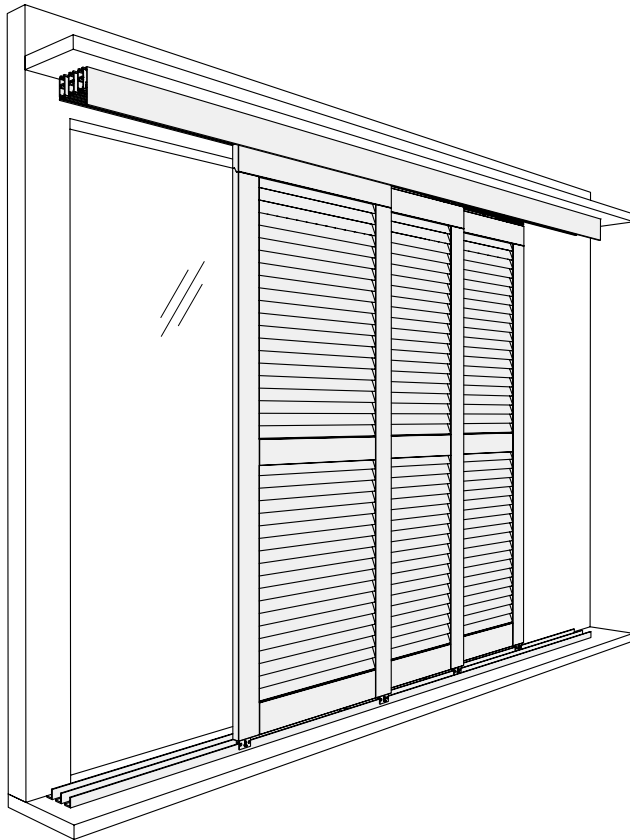
Top tracks and covering screens: → pages 36–37

Guides and locking mechanisms

Bottom guides and locking mechanisms: → pages 42–44

Planning/installation

For planning and installation purposes, please use the installation drawing code 24987. (→ www.hawa.ch → Hawa Productfinder)



A lot of motion with a single slide.

Hardware for simultaneously sliding up to 4 wood, metal or aluminium shutters of up to 60 kg (132 lbs.).

Description

Hawa Frontslide 60 A Telescopic is a reliable hardware system with modest space requirements for screening large window areas with manually operated sliding shutters. The shutters slide simultaneously into the open and closed position thanks to a toothed belt. And without any banging noises caused by colliding catches.

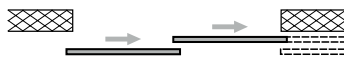
An angled profile support is available for mounting two-panelled Hawa Telescopic systems to the wall. In this case, the top track is fastened to the angled profile support using special mounting screws from Hawa. Aluminium covering screens in either natural anodized or plain finishes ready for custom painting provide aesthetic appeal and are easily clipped on to the inside or outside of the top track. In buildings with ventilated cladding, open windows shutters can slide out of sight into the space between the building wall and the cladding.

Applications

Ideal for façades with a high proportion of glass, wherever screening and shade form part of the façade design, and where space is at a premium, e.g. schools, hotels, public buildings, office and administration premises, apartment buildings, low-energy houses, etc.

Features of the Hawa Frontslide 60 A Telescopic

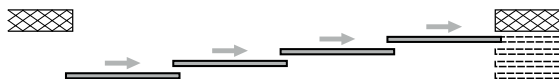
- Max. sliding shutter weight with 2 shutters: 60 kg (132 lbs.)/shutter
- Max. sliding shutter weight with 3 shutters: 60 kg (132 lbs.)/shutter
- Max. sliding shutter weight with 4 shutters: 60 kg (132 lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ "– $1\frac{19}{32}$ ")
- Sliding shutter width: 500–1200 mm ($1'9\frac{21}{32}$ "– $3'11\frac{1}{4}$ "
- Maximum sliding shutter height: 3200 mm (10'6")
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)
- Fibreglass-reinforced toothed belts guarantee high tensile strength and a low level of expansion
- Shutters can be removed without loosening the toothed belt
- The sliding shutters can be moved telescopically into any position
- Fast and efficient assembly from below and from the façade side
- Clip-on covers for inside or outside attachment
- For wood, metal or aluminium sliding shutters
- Different design options of bottom guides
- External tests certify the highest wind resistance (Class 6 in accordance with EN 13659)



Hawa Frontslide 60 A Telescopic 2



Hawa Frontslide 60 A Telescopic 3

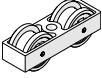
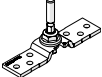
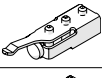
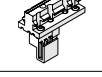
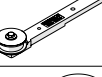
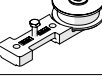
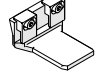
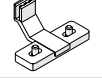
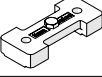
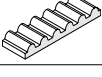


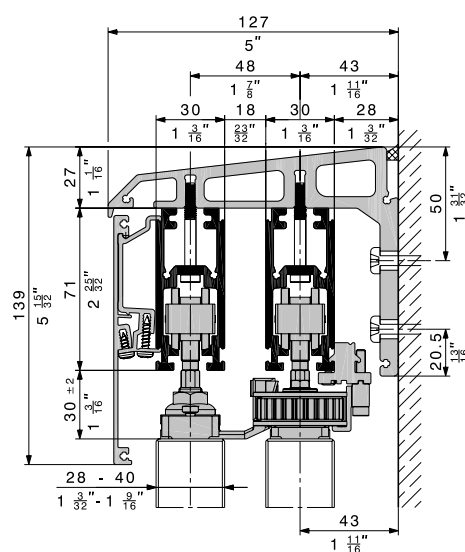
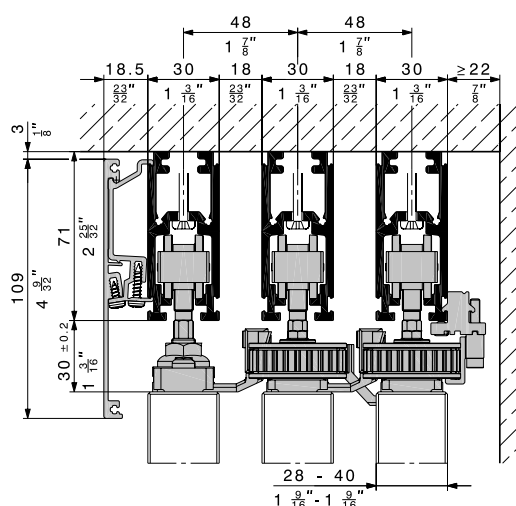
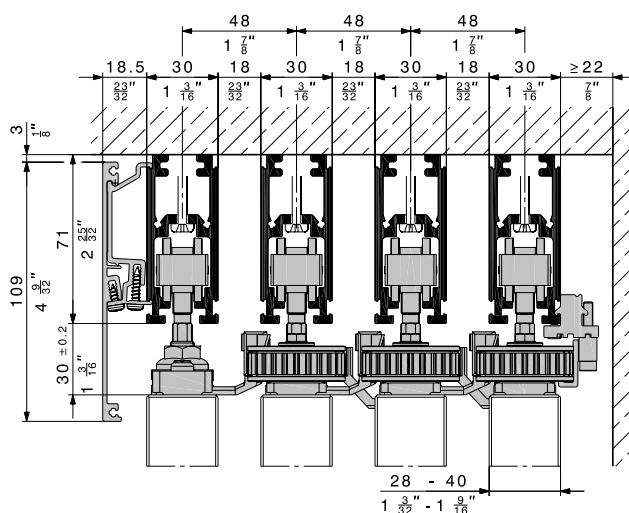
Hawa Frontslide 60 A Telescopic 4

Sets without top tracks and bottom guide channels

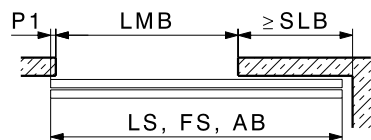
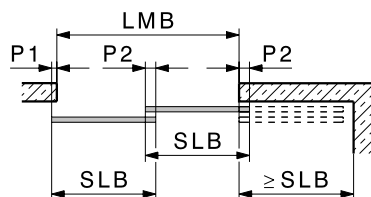
| | code |
|---|-------|
| Hawa Frontslide 60 A Telescopic 2, set for 2 sliding shutters, 550–1200 mm (1'9 ³¹ / ₃₂ " – 3'11 ¹ / ₄ ") | 25120 |
| Hawa Frontslide 60 A Telescopic 3, set for 3 sliding shutters, 550–1200 mm (1'9 ³¹ / ₃₂ " – 3'11 ¹ / ₄ ") | 25121 |
| Hawa Frontslide 60 A Telescopic 4, set for 4 sliding shutters, 550–1200 mm (1'9 ³¹ / ₃₂ " – 3'11 ¹ / ₄ ") | 25122 |

Sets comprising

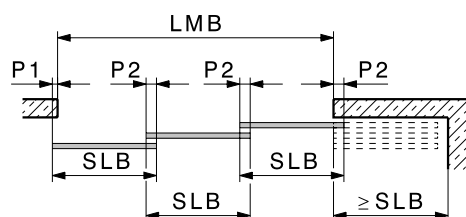
| | | 25120 | 25121 | 25122 | code |
|--|--|-------|-------|-------|-------|
|  | Two-wheeled trolley, M8, with plastic wheels | 4 | 6 | 8 | 17119 |
|  | Top fixing plate, stainless steel, with hanger bolt M8 | 4 | 6 | 8 | 24562 |
|  | Track stop with adjustable retainer | 2 | 2 | 2 | 17027 |
|  | Toothed belt clamp for manual and automatic systems | 1 | 1 | 1 | 24777 |
|  | Guide pulley wheel, with fixing plate, long | 1 | 2 | 3 | 20139 |
|  | Guide pulley wheel, with fixing plate, short | 1 | 2 | 3 | 20140 |
|  | Driver, wide | 1 | 2 | 3 | 20141 |
|  | Driver, narrow | – | 1 | 2 | 20142 |
|  | Driver counter-plate, wide | 1 | 1 | 1 | 20246 |
|  | Toothed belt, black, 2,7 m (8'10 ⁵ / ₁₆ "), fibreglass reinforced | 1 | 2 | 3 | 20208 |

Two sliding shutters of up to 60 kg max. per panel

Three sliding shutters of up to 60 kg max. per panel

Four sliding shutters of up to 60 kg max. per panel


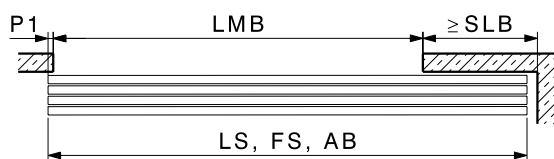
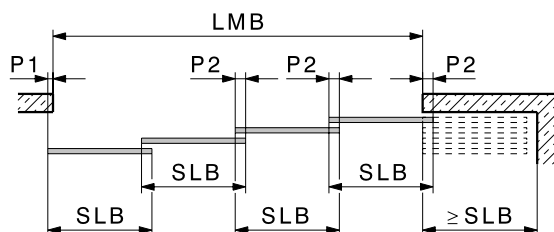
Calculation for sliding shutter width



Hawa Frontslide 60 A Telescopic 2



Hawa Frontslide 60 A Telescopic 3



Hawa Frontslide 60 A Telescopic 4

$$SLB = \frac{LMB + P1}{AL} + P2$$

$$P2 \geq 50 \text{ mm (1\frac{31}{32})}$$

$$LS = LMB + P1 + SLB$$

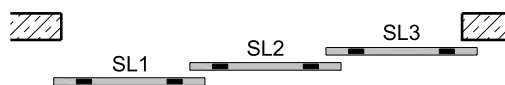
| | |
|-----|----------------------------|
| AB | Installation width |
| LMB | Entire opening width |
| AL | Number of sliding shutters |
| SLB | Sliding shutter width |
| P | Sliding shutter overlap |
| LS | Top track |
| FS | Bottom guide channel |

Calculation for suspension points



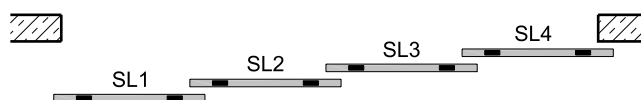
Hawa Frontslide 60 A Telescopic 2

| | | |
|-------|------------------------------|------------------------------|
| 60 A | M1 | M2 |
| SL1-2 | 160 mm (6 $\frac{5}{16}$ ") | 160 mm (6 $\frac{5}{16}$ ") |



Hawa Frontslide 60 A Telescopic 3

| | | |
|-------|------------------------------|------------------------------|
| 60 A | M1 | M2 |
| SL1-3 | 160 mm (6 $\frac{5}{16}$ ") | 160 mm (6 $\frac{5}{16}$ ") |



Hawa Frontslide 60 A Telescopic 4

| | | |
|-------|------------------------------|------------------------------|
| 60 A | M1 | M2 |
| SL1-4 | 160 mm (6 $\frac{5}{16}$ ") | 160 mm (6 $\frac{5}{16}$ ") |

Top tracks, covering screens and brackets

Top tracks and covering screens: → pages 36–37

Guides and locking mechanisms

Bottom guides and locking mechanisms: → pages 42–44

Order specifications

- Number and type of sets
- Number and length of top tracks
- For wall fittings:
 - Number, length and type of angled profile support
 - Number of **special fixing screw sets**
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

Optional order specifications

- Number of connecting bolt sets to profiles and covering screens
- Number and type of front cover plates
- Number and type of sliding shutter locking mechanisms

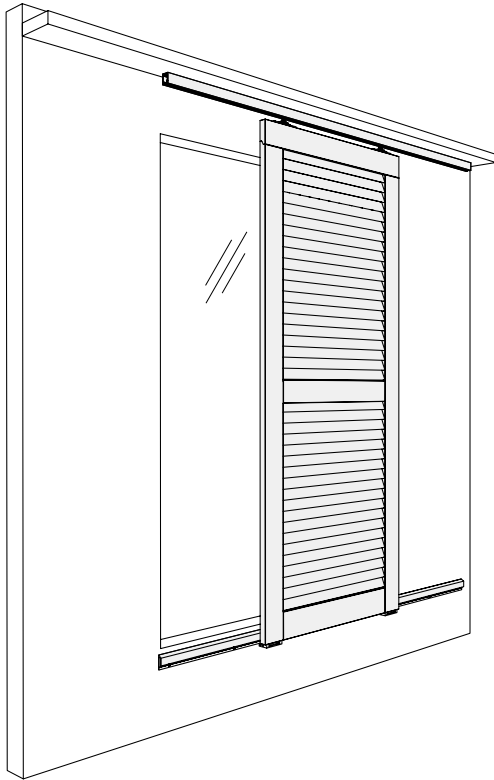
Planning/installation

For planning and installation purposes, please use the installation drawings:

- Hawa Frontslide 60 A Telescopic 2 code 24988
- Hawa Frontslide 60 A Telescopic 3 code 24989
- Hawa Frontslide 60 A Telescopic 4 code 24990

Subject to modification. Metric specifications are exact. Inches are approximate.





Sliding shutters for a functional façade finish.

Hardware system with lower top track for wood, metal or aluminium sliding shutters with a panel weight up to 60 kg (132 lbs.).

Description

Hawa Frontslide 60 A with lower top track, is a dependable hardware system for manually-operated sliding shutters, with different fitting options. Attached to the ceiling or window lintel, the top track screws directly to the load-bearing surface. A commercially available bracket may be used for wall mounting. In buildings with an air gap behind the façade, open window shutters can slide out of sight into the void between the building wall and the façade.

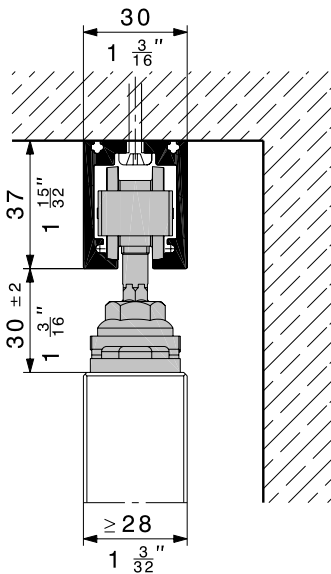
Applications

Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

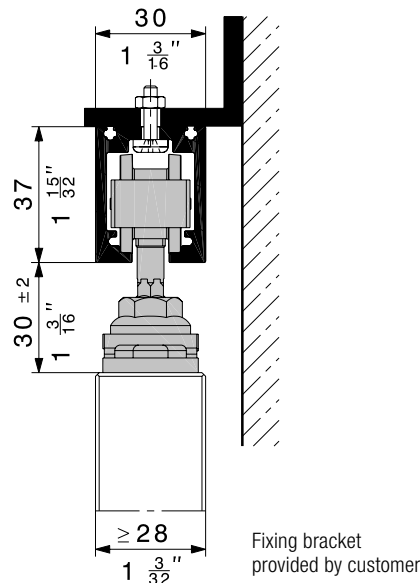
Features of the Hawa Frontslide 60 A with lower top track

- Maximum sliding shutter weight: 60 kg (132 lbs.)
- Lower top track height: 37 mm ($1\frac{15}{32}$ "
- Minimum sliding shutter thickness: 28 mm ($1\frac{1}{8}$ "
- Minimum sliding shutter width: 400 mm ($15\frac{3}{4}$ "
- Maximum sliding shutter height: 3200 mm (10'6)
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)
- Corrosion-resistant materials
- Fast and efficient assembly from below and from the façade side
- The sliding shutters can be moved into any position
- For wood, metal or aluminium sliding shutters
- Different design options of bottom guides
- External tests certify the highest wind resistance (Class 6 in accordance with EN 13659)

Ceiling or window lintel fitting



Wall fitting – solution provided by customer


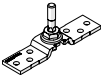
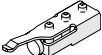


Subject to modification. Metric specifications are exact. Inches are approximate.

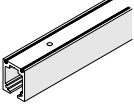

Set without top tracks and bottom guide channels

| | code |
|---|-------|
| Hawa Frontslide 60 A, partial set for 1 sliding shutter with lower top track | 25217 |

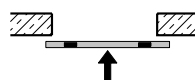
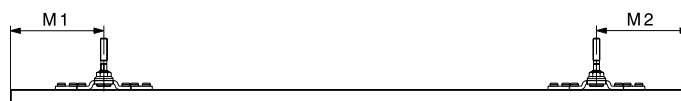
Set comprising

| | | pieces | code |
|---|--|--------|-------|
|  | Two-wheeled trolley, M8, with plastic wheels | 2 | 17119 |
|  | Top fixing plate, stainless steel, with hanger bolt M8 for lower top track | 2 | 25196 |
|  | Track stop with adjustable retainer | 2 | 17027 |

Lower top track

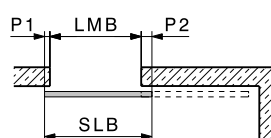
| Caution: Hole positions vary. | | mm/inch | code |
|---|---|--|-------|
|  | Lower top track, alu plain anodized, predrilled | 2500 (8'2 ⁷ / ₁₆ ") | 24842 |
| | | 6000 (19'8 ⁷ / ₃₂ ") | 24802 |
| | | cut to size | 24803 |
|  | Connecting bolts, set of 6 pieces | | 17221 |

Calculation for suspension points

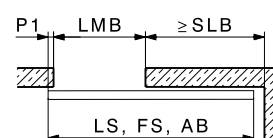


| 60 A | M1 | M2 |
|------|--|--|
| | 110 mm (4 ¹¹ / ₃₂ ") | 110 mm (4 ¹¹ / ₃₂ ") |

Calculation for sliding shutter width



$$SLB = LMB + P1 + P2$$



$$LS = (2 \times SLB) - P2$$

$$FS = LS$$

| | |
|-----|-------------------------|
| AB | Installation width |
| LMB | Entire opening width |
| FS | Bottom guide channel |
| SLB | Sliding shutter width |
| P | Sliding shutter overlap |
| LS | Top track |

Order specifications

- Number of sets
- Number and length of top tracks
- Number and type of guides

Optional order specifications

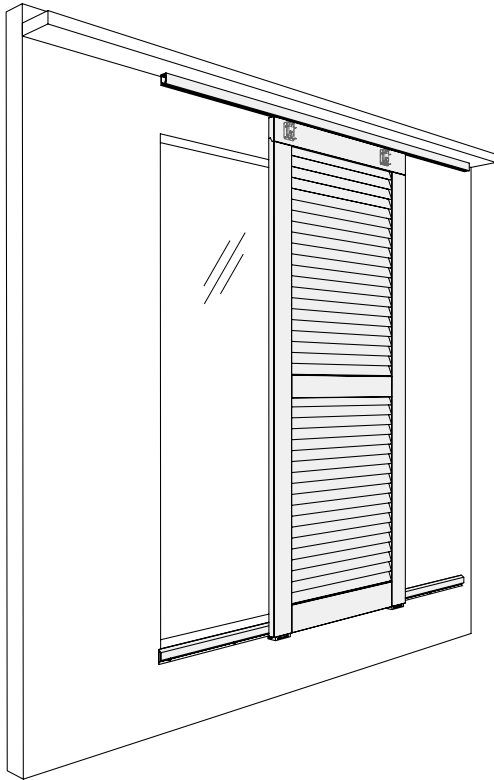
- Number of connecting bolt sets to top tracks
- Number and type of sliding shutter locking mechanisms

Guides and locking mechanisms

Bottom guides and locking mechanisms: → pages 42–44

Planning/installation

For planning and installation purposes, please use the installation drawing code 24984. (→ www.hawa.ch → Hawa Productfinder)



Sliding shutters made easy.

Hardware system with minimal installation height for wood or aluminium sliding shutters with a panel weight up to 60 kg (132 lbs.).

Description

Hawa Frontslide 60 B is a straightforward solution for manually operated sliding shutters. Covering screens are unnecessary, whether the hardware is fixed directly to the ceiling or to the fixing bracket support, provided by customer.

A patented suspension results in minimal installation height and allows shutters to be fitted, removed and height-adjusted from inside the room. Sliding shutters can be moved to any position, for privacy and shade. In buildings with an air gap behind the façade, open window shutters can slide out of sight into the void between the building wall and the façade.

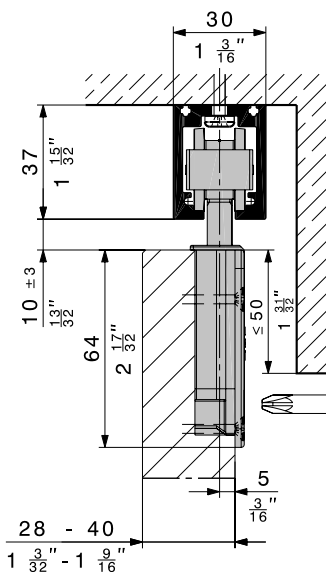
Applications

Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Features of the Hawa Frontslide 60 B

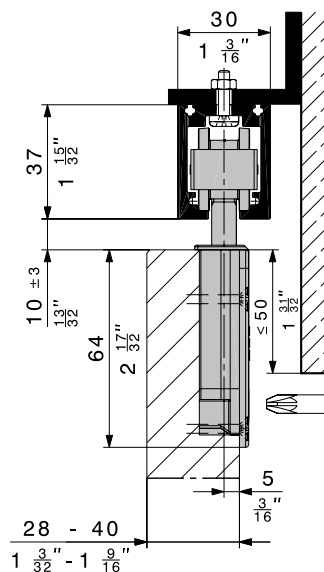
- Minimal installation height thanks to patented suspension cups
- Maximum sliding shutter weight: 60 kg (132 lbs.)
- Lower top track height: 37 mm ($1\frac{15}{32}$ "
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ "– $1\frac{19}{32}$ "
- Minimum sliding shutter width: 400 mm ($15\frac{3}{4}$ "
- Maximum sliding shutter height: 3200 mm (10'6")
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)
- Corrosion-resistant materials
- Height adjustment and shutter removal from inside the room
- The sliding shutters can be moved into any position
- For wood or aluminium sliding shutters
- Different design options of bottom guides
- External tests certify the highest wind resistance (Class 6 in accordance with EN 13659)

Ceiling or window lintel fitting



Sliding shutters can be fitted, removed and height-adjusted from inside the room.

Wall fitting – solution provided by customer






Fixing bracket provided by customer

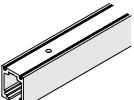

**Set for minimal installation height,
without top tracks and bottom guide channels**

| | code |
|---|-------|
| Hawa Frontslide 60 B, partial set for 1 sliding shutter | 19871 |

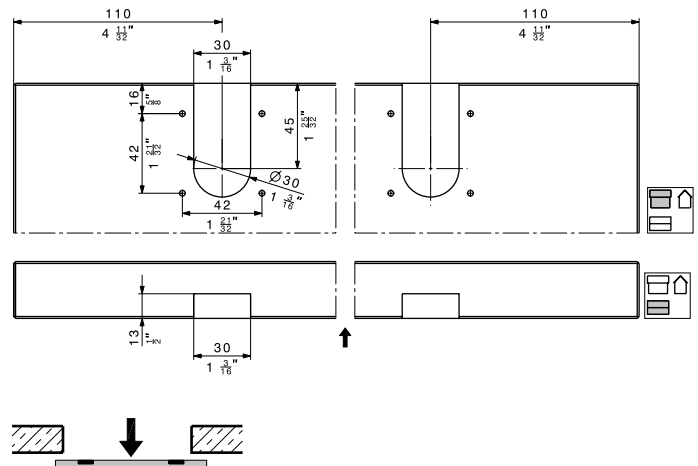
Set comprising

| | | pieces | code |
|---|---|--------|-------|
|  | Two-wheeled trolley, M8, with plastic wheels | 2 | 17119 |
|  | Concealed press-fit cup, alu, with hanger bolt M8 | 2 | 19900 |
|  | Track stop with adjustable retainer | 2 | 17027 |

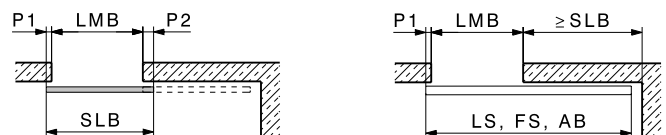
Lower top track

| | | | |
|---|---|------------------------------|-------|
| Caution: Hole positions vary. | | mm/inch | code |
|  | Lower top track, alu plain anodized, predrilled | 2500 (8'2 $\frac{7}{16}$ ") | 24842 |
| | | 6000 (19'8 $\frac{7}{32}$ ") | 24802 |
| | | cut to size | 24803 |
|  | Connecting bolts, set of 6 pieces | | 17221 |

Calculation for suspension points



Calculation for sliding shutter width



$$SLB = LMB + P1 + P2$$

$$LS = (2 \times SLB) - P2$$

$$FS = LS$$

| | |
|-----|-------------------------|
| AB | Installation width |
| LMB | Entire opening width |
| FS | Bottom guide channel |
| SLB | Sliding shutter width |
| P | Sliding shutter overlap |
| LS | Top track |

Order specifications

- Number of sets
- Number and length of top tracks
- Number and type of guides

Optional order specifications

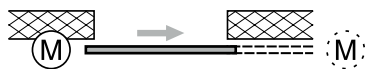
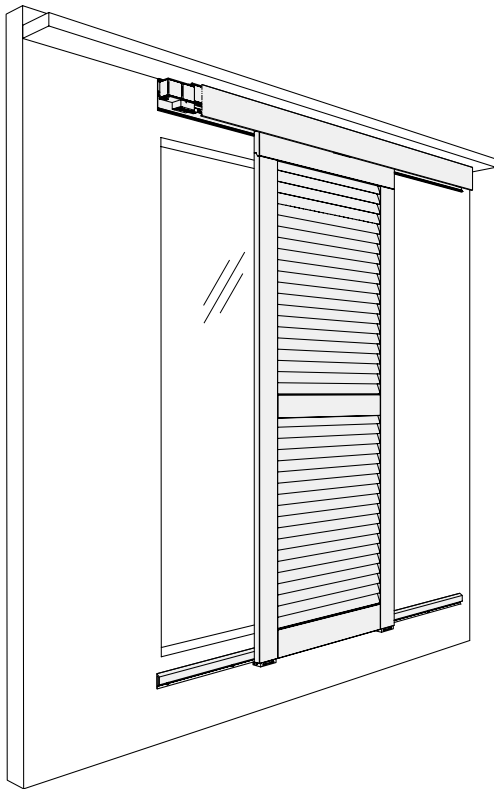
- Number of connecting bolt sets to top tracks
- Number and type of sliding shutter locking mechanisms

Guides and locking mechanisms

Bottom guides and locking mechanisms: → pages 42–44

Planning/installation

For planning and installation purposes, please use the installation drawing code 24985. (→ www.hawa.ch → Hawa Productfinder)



Sliding shutters – for automated convenience.

Hardware system for wood, metal or aluminium automatic sliding shutters with a panel weight up to 60 kg (132 lbs.).

Description

Hawa Frontslide 60 Matic is an electrically powered hardware system for sliding shutters. Its brushless electric motor, a Hawa Motronic 60 with a high-quality transmission system and drive belt, guarantees a stable, maintenance-free system with a long life. No special connection cables or control box required thanks to controls integrated in the drive unit. Electrical installation therefore corresponds to the usual standard for shutter designs and enables the use of commercially available operating elements.

Hawa Frontslide 60 Matic allows maximum flexibility in façade design: various fixing and covering screen options cover virtually all needs.

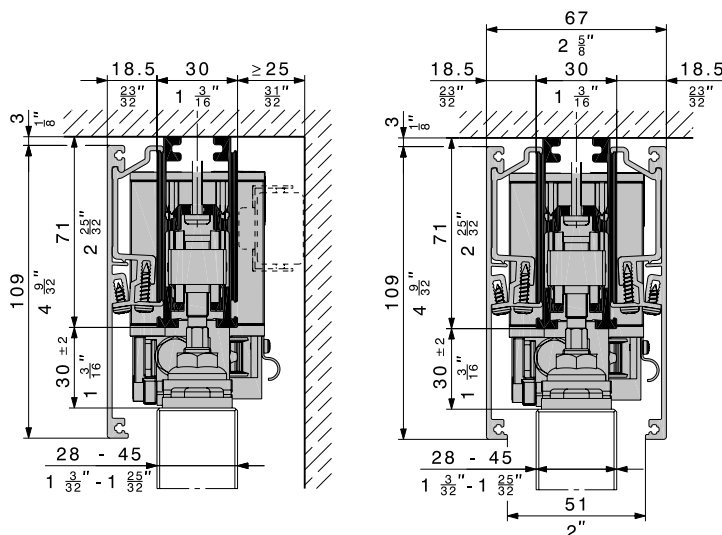
Applications

Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, or creative frontage designs in residential settings.

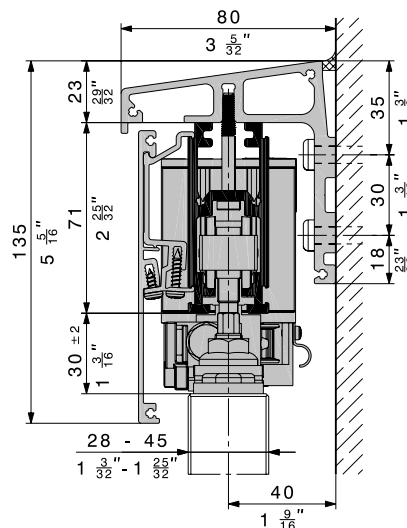
Features of the Hawa Frontslide 60 Matic

- Maximum sliding shutter weight: 60 kg (132 lbs.)
- Sliding shutter thickness: 28–45 mm ($1\frac{1}{8}$ "– $1\frac{25}{32}$ ")
- Minimum sliding shutter width: 600 mm ($1'11\frac{5}{16}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Maximum sliding shutter surface: 6.24 m² (67.167 ft²)
- Maximum installation width: 7500 mm ($24'7\frac{9}{32}$ ")
- Fibreglass-reinforced toothed belts guarantee high tensile strength and a low level of expansion
- High operating safety of the drive unit in outdoor areas thanks to splash water resistance
- The sliding shutters can be moved into any position for privacy or shade, etc.
- Shutters can be removed without loosening the toothed belt
- Straightforward wall or ceiling installation
- For wood, metal or aluminium sliding shutters
- Clip-on covers for attachment to inside and/or outside of track
- Different design options of bottom guides
- Drive unit: CE tested, technical details: → page 23
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)

Ceiling or window lintel fitting



Wall fitting



Subject to modification. Metric specifications are exact. Inches are approximate.

Drive unit Hawa Motronic 60

Hawa Motronic 60 is a drive unit with integrated control for automating sliding hardware with a speed of 100 mm ($3\frac{5}{16}$ "/s) and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires.

The Hawa Motronic 60 drive automatically detects the end position of the sliding shutter during the teach-in process. The drive stops and reverses (2x) when it encounters an obstacle.

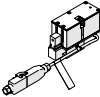

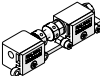

Start-up box

Start-up box Art. No. 23789 is recommended for start-up.

Hawa Motronic 60, set for sliding shutter drive

| | code |
|---|-------|
| Hawa Motronic 60 for Hawa Frontslide 60 Matic, incl. control unit, toothed belt lock and pulley wheel | 25146 |

Set comprising

| | | piece | code |
|---|---|-------|-------|
|  | Hawa Motronic 60 with integrated control and connecting cable with a premounted Hirschmann plug | 1 | 25061 |
|  | Pulley wheel for automatic mechanism | 1 | 24792 |
|  | Toothed belt lock | 1 | 19654 |
|  | End stop alu | 2 | 24786 |

Supplementary part for start-up

| | code |
|--------------|-------|
| Start-up box | 23789 |

Toothed belt

Fibreglass-reinforced toothed belts guarantee high tensile strength and a low level of expansion and high impact load resistance when subjected to heavy flexing.

Toothed belt

| | | length | code |
|---|---|------------------------------|-------|
|  | Toothed belt, black, fibre glass reinforced | 2.7 m ($8'10\frac{5}{16}$ " | 20208 |
| | | 5 m ($16'4\frac{27}{32}$ " | 19667 |
| | | 8 m ($26'2\frac{31}{32}$ " | 19682 |
| | | 10 m ($32'9\frac{23}{32}$ " | 19668 |
| | | 15 m ($49'2\frac{9}{16}$ " | 20370 |
| | | 50 m ($164'1\frac{1}{2}$ " | 19669 |

Calculation for length of toothed belt:

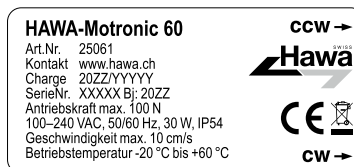
Hawa Frontslide 60 Matic: 2 x installation width (The toothed belt lock is included with the Hawa Motronic set 25146)

Technical details Hawa Motronic 60

- The control is integrated in the drive unit
- Power supply: 100–240 VAC, 50/60 Hz, 30 W
- Max. pre-fuse: 16 A
- Overvoltage category: II
- Protection class: I Ⓢ
- Operational temperature range: -20 °C bis + 60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 100 mm ($3\frac{5}{16}$ "/s)
- Max. drive force: 100 N
(protected internally against overload)
- Drive unit: CE tested
- Switch elements: provided by customer
- Mains electrical isolation: provided by customer

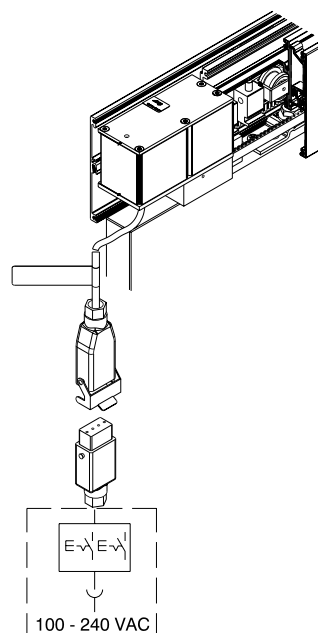
Type label

Every drive unit carries a type lable.



Control and operation of the system

The systems are operated with commercially available electrical switches.

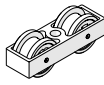
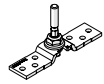


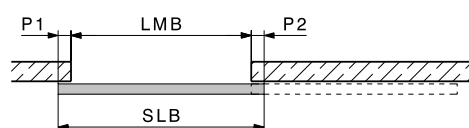
provided by customer

Set without top tracks and bottom guide channels

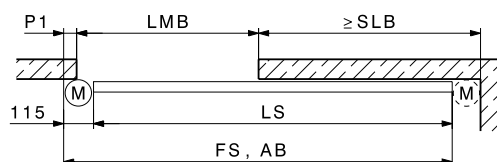
| | code |
|---|-------|
| Hawa Frontslide 60 Matic, partial set for 1 sliding shutter | 25132 |

Set comprising

| | | pieces | code |
|---|--|--------|-------|
|  | Two-wheeled trolley, M8, with plastic wheels | 2 | 17119 |
|  | Top fixing plate, stainless steel, with hanger bolt M8 | 2 | 24562 |

Calculation for sliding shutter width


$$SLB = LMB + P1 + P2$$



$$LS = (2 \times SLB) - P2 - 155 \text{ mm } (6 \frac{1}{8} \text{")}$$

$$FS = LS + 155 \text{ mm } (6 \frac{1}{8} \text{")}$$

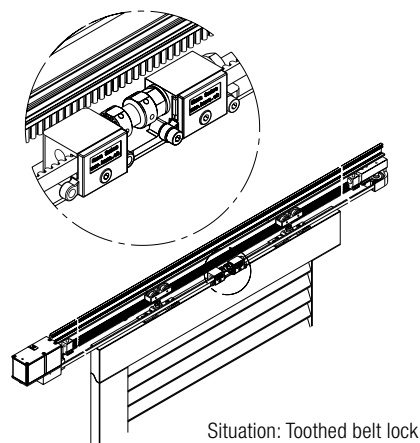
| | |
|-----|-------------------------|
| AB | Installation width |
| LMB | Entire opening width |
| FS | Bottom guide channel |
| SLB | Sliding shutter width |
| P | Sliding shutter overlap |
| LS | Top track |

Order specifications

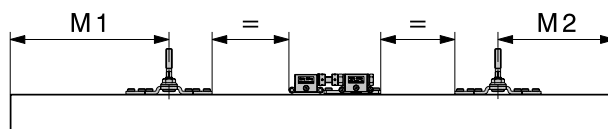
- Number of sets Hawa Motronic 60
- Number of partial sets Hawa Frontslide 60 Matic
- Number and length of toothed belt
- Number and length of top tracks
- For wall fittings:
 - Number, length and type of angled profile support
 - Number of special fixing screw sets
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

Optional order specifications

- Number, length and type of spacer profiles for angled profile support
- Number and type of front cover plates
- Number of connecting bolt sets to profiles and covering screens

Hawa Frontslide 60 Matic


Situation: Toothed belt lock

Calculation for suspension points


| | | |
|------|-----------------------------|----------------------------|
| 60 A | M1 | M2 |
| SL1 | 210 mm (8 $\frac{9}{32}$ ") | 155 mm (6 $\frac{1}{8}$ ") |

Top tracks, covering screens and brackets

Top tracks and covering screens: → pages 36–37

Bottom guides

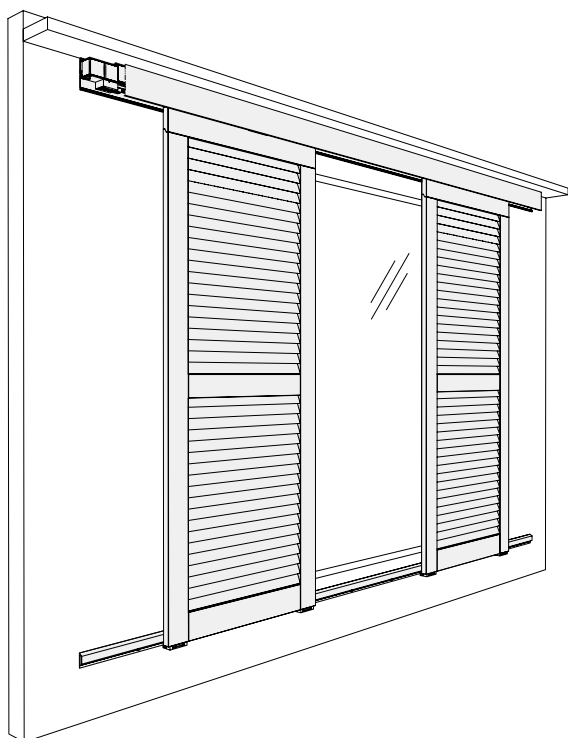
Bottom guides: → pages 42–43

Planning/installation

 For planning and installation purposes, please use the installation drawing code 24991. (→ www.hawa.ch → Hawa Productfinder)

Special regulations apply to automated installations; please refer to operating instructions code 24675.
 (→ www.hawa.ch → Hawa Productfinder)





Sliding shutters – moved automatically and symmetrically.

Hardware system for 2 wood, metal or aluminium automatic sliding shutters with a panel weight up to 60 kg (132 lbs.), opening simultaneously left and right.

Description

Hawa Frontslide 60 Matic Symmetric 2 is an electrically powered hardware system for sliding shutters. 2 sliding shutters can be moved simultaneously with just one drive unit and one driver. Its brushless electric motor, a Hawa Motronic 60 with a high-quality transmission system and drive belt, guarantees a stable, maintenance-free system with a long life. No special connection cables or control box required thanks to controls integrated in the drive unit. Electrical installation therefore corresponds to the usual standard for shutter designs and enables the use of commercially available operating elements Hawa Frontslide 60 Matic Symmetric 2 allows maximum flexibility in façade design: various fixing and covering screen options cover virtually all needs.

Applications

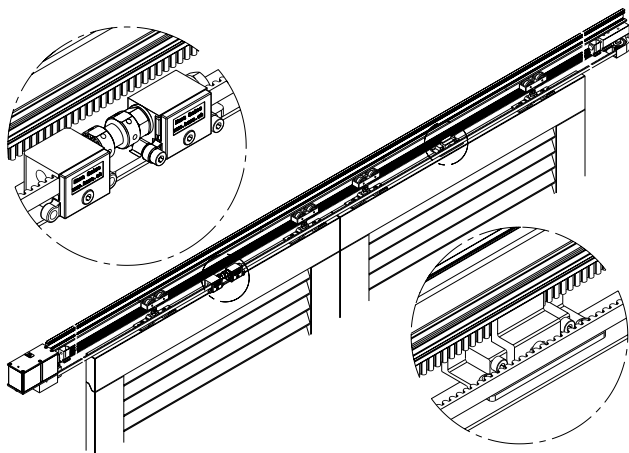
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, or creative frontage designs in residential settings.

Features of the Hawa Frontslide 60 Matic Symmetric 2

- Maximum sliding shutter weight: 60 kg (132 lbs.)/shutter
- Sliding shutter thickness: 28–45 mm ($1\frac{1}{8}$ "– $1\frac{25}{32}$ ")
- Minimum sliding shutter width: 550 mm ($1'9\frac{21}{32}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Maximum sliding shutter surface: 6.24 m² (67.1668 ft²)
- Maximum installation width: 7500 mm ($24'7\frac{9}{32}$ ")
- Fibreglass-reinforced toothed belts guarantee high tensile strength and a low level of expansion
- High operating safety of the drive unit in outdoor areas thanks to splash water resistance
- Sliding shutters can be brought into any position
- Shutters can be removed without loosening the toothed belt
- Straightforward wall or ceiling installation
- For wood, metal or aluminium sliding shutters
- Clip-on covers for attachment to inside and/or outside of track
- Different design options of bottom guides
- Drive unit: CE tested, technical details: → page 23
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)



Hawa Frontslide 60 Matic Symmetric 2




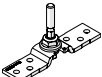
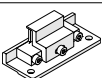
Situation: Toothed belt lock and driver

Subject to modification. Metric specifications are exact. Inches are approximate.

Set without top tracks and bottom guide channels

| | code |
|--|-------|
| Hawa Frontslide 60 Matic Symmetric 2, partial set for 2 sliding shutters | 25133 |

Set comprising

| | | pieces | code |
|---|--|--------|-------|
|  | Two-wheeled trolley, M8, with plastic wheels | 4 | 17119 |
|  | Top fixing plate, stainless steel, with hanger bolt M8 | 4 | 24562 |
|  | Driver for Symmetric installations | 1 | 19655 |

Hawa Motronic 60, set for sliding shutter drive

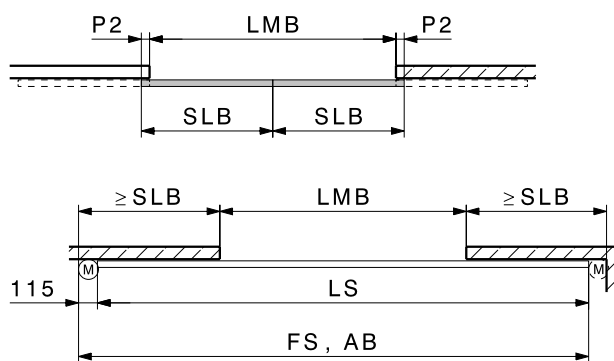
| | code |
|---|-------|
| Hawa Motronic 60 for Hawa Frontslide 60 Matic, incl. control unit, toothed belt lock and pulley wheel | 25146 |

Toothed belt

| | length | code |
|--|---|-------|
|  | 5 m (16'4 ⁵⁷ / ₃₂ ") | 19667 |
| | 8 m (26'2 ³¹ / ₃₂ ") | 19682 |
| | 10 m (32'9 ²³ / ₃₂ ") | 19668 |
| | 15 m (49'2 ⁹ / ₁₆ ") | 20370 |
| | 50 m (164'1 ¹ / ₂ ") | 19669 |

Calculation for length of toothed belt:

Hawa Frontslide 60 Matic: 2 x installation width (The toothed belt lock is included with the Hawa Motronic set 25146)

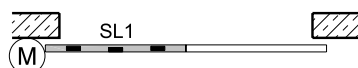
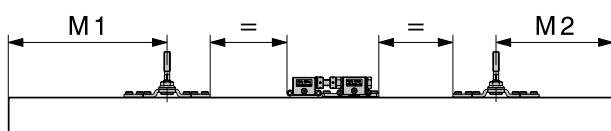
Calculation for sliding shutter width

$$SLB = \frac{LMB}{2} + P2$$

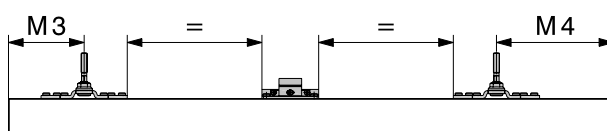
$$LS = LMB + (2 \times SLB) - 115$$

$$FS = LS + 155 \text{ mm (6 } \frac{1}{8} \text{")}$$

| | |
|-----|------------------------------|
| AB | Installation width |
| LMB | Entire opening width |
| FS | Bottom guide channel |
| SLB | Sliding shutter width |
| M | Minimum space for drive unit |
| P | Sliding shutter overlap |
| LS | Top track |

Calculation for suspension points

| | | |
|----------|--|--|
| 60 Matic | M1 | M2 |
| SL1 | 210 mm (8 ³ / ₈ ") | 100 mm (3 ¹⁵ / ₁₆ ") |



| | | |
|----------|--|--|
| 60 Matic | M3 | M4 |
| SL2 | 100 mm (3 ¹⁵ / ₁₆ ") | 155 mm (6 ¹ / ₈ ") |

Order specifications

- Number of sets Hawa Motronic 60
- Number of partial sets Hawa Frontslide 60 Matic Symmetric 2
- Number and length of toothed belt
- Number and length of top tracks
- For wall fittings:
 - Number, length and type of angled profile support
 - Number of **special fixing screw sets**
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

Optional order specifications

- Number, length and type of spacer profiles for angled profile support
- Number and type of front cover plates
- Number of connecting bolt sets to profiles and covering screens

Top tracks, covering screens and brackets

Top tracks and covering screens: → pages 36–37

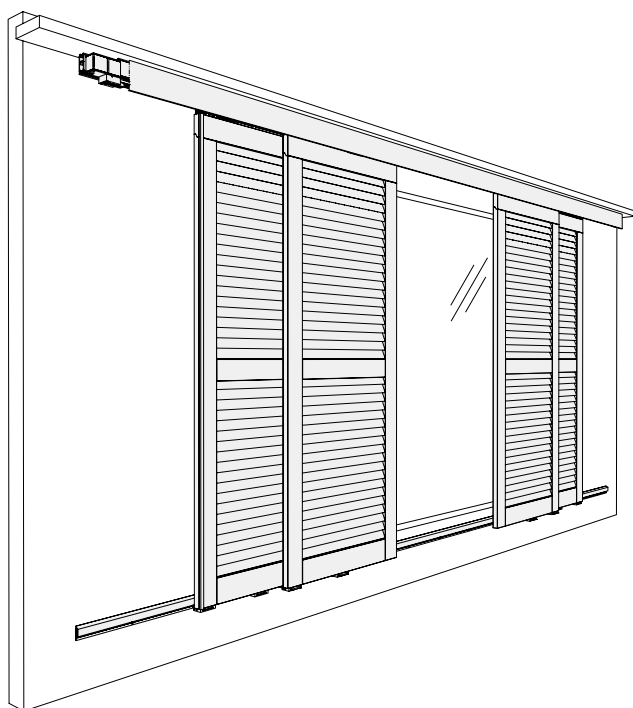
Bottom guides

Bottom guides: → pages 42–43

Planning/installation

For planning and installation purposes, please use the installation drawing code 24992. (→ www.hawa.ch → Hawa Productfinder)

Special regulations apply to automated installations; please refer to operating instructions code 24675.
(→ www.hawa.ch → Hawa Productfinder)



Sliding shutters – moved automatically and symmetrically.

Hardware system for 4 wood, metal or aluminium automatic sliding shutters with a panel weight up to 40 kg (88 lbs.), opening simultaneously left and right.

Description

Hawa Frontslide 60 Matic Symmetric 2+2 is an electrically powered hardware system for sliding shutters. 4 sliding shutters can be moved simultaneously with just one drive unit and one driver. Its brushless electric motor, a Hawa Motronic 60 with a high-quality transmission system and drive belt, guarantees a stable, maintenance-free system with a long life. No special connection cables or control box required thanks to controls integrated in the drive unit. Electrical installation therefore corresponds to the usual standard for shutter designs and enables the use of commercially available operating elements. Hawa Frontslide 60 Matic Symmetric 2+2 allows maximum flexibility in façade design: various fixing and covering screen options cover virtually all needs.

Applications

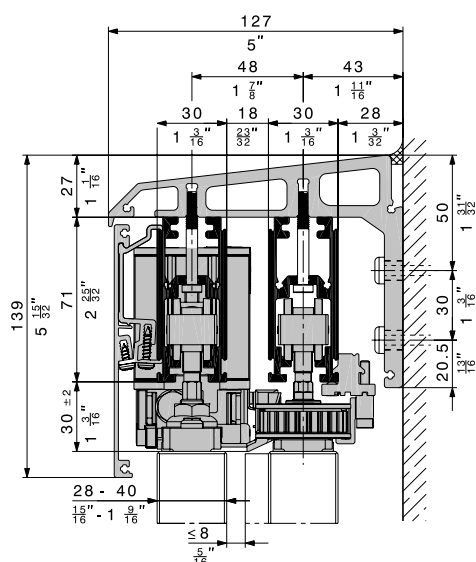
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, or creative frontage designs in residential settings.

Features of the Hawa Frontslide 60 Matic Symmetric 2+2

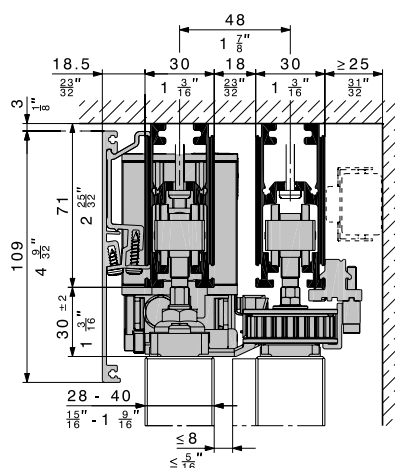
- Maximum sliding shutter weight: 40 kg (88 lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ "– $1\frac{15}{32}$ ")
- Sliding shutter width: 650–1200 mm ($2'1\frac{19}{32}$ "– $3'11\frac{1}{4}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Fibreglass-reinforced toothed belts guarantee high tensile strength and a low level of expansion
- High operating safety of the drive unit in outdoor areas thanks to splash water resistance
- Sliding shutters can be brought into any position
- Shutters can be removed without loosening the toothed belt
- Straightforward wall or ceiling installation
- For wood, metal or aluminium sliding shutters
- Clip-on covers for attachment to inside and/or outside of track
- Different design options of bottom guides
- Drive unit: CE tested, technical details: → page 23
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)



Wall fitting



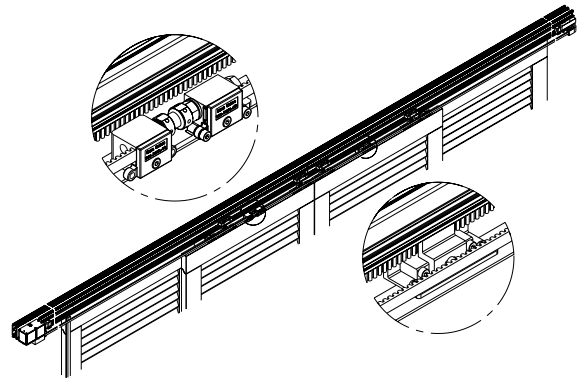
Ceiling or window lintel fitting



Subject to modification. Metric specifications are exact. Inches are approximate.

Set without top tracks and bottom guide channels

| | code |
|---|-------|
| Hawa Frontslide 60 Matic Symmetric 2+2, partial set for 4 sliding shutters | 25134 |

Hawa Frontslide 60 Matic Symmetric 2+2


Situation: Toothed belt lock and driver

Set comprising

| | | pieces | code |
|--|---|--------|-------|
| | Two-wheeled trolley, M8, with plastic wheels | 8 | 17119 |
| | Top fixing plate, stainless steel, with hanger bolt M8 | 8 | 24562 |
| | Guide pulley wheel, with fixing plate, long | 1 | 20139 |
| | Guide pulley wheel, with fixing plate, extra long for Hawa Frontslide 60–140 Matic Symmetric 2+2 | 1 | 25314 |
| | Guide pulley wheel, with fixing plate, short | 2 | 20140 |
| | Driver counter-plate, wide | 2 | 20246 |
| | Driver for Symmetric installations | 1 | 19655 |
| | Driver, wide | 2 | 20141 |
| | Toothed belt clamp for manual and automatic systems | 2 | 24777 |
| | Toothed belt, black, 2,7 m (8'10 ⁵ / ₁₆ "), fibreglass reinforced | 1 | 20208 |
| | Toothed belt, black, 5 m (16'4 ²⁷ / ₃₂ "), fibreglass reinforced | 1 | 19667 |

Hawa Motronic 60, set for sliding shutter drive

| | code |
|--|-------|
| Hawa Motronic 60 for Hawa Frontslide 60 Matic, incl. control unit, toothed belt lock and pulley wheel | 25146 |

Toothed belt

| | | length | code |
|--|--|---|-------|
| | Toothed belt, black, fibre glass reinforced | 2.7 m (8'10 ⁵ / ₁₆ ") | 20208 |
| | | 5 m (16'4 ²⁷ / ₃₂ ") | 19667 |
| | | 8 m (26'2 ³¹ / ₃₂ ") | 19682 |
| | | 10 m (32'9 ²³ / ₃₂ ") | 19668 |
| | | 15 m (49'2 ⁹ / ₁₆ ") | 20370 |
| | | 50 m (164'1 ¹ / ₂ ") | 19669 |

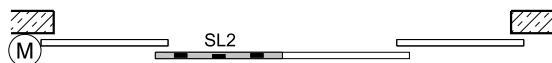
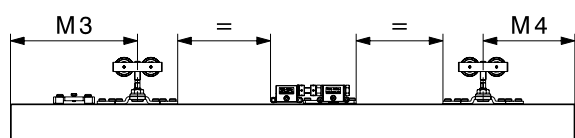
Calculation for length of toothed belt:

Toothed belt length, outer sliding level: 2 x installation width
(The toothed belt lock is included with the Hawa Motronic set 25146)

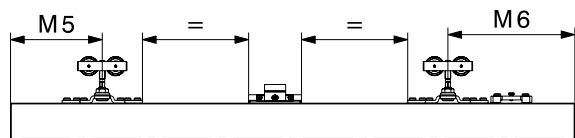
Calculation for suspension points



| | | |
|----------|------------------------------|------------------------------|
| 60 Matic | M1 | M2 |
| SL1 | 160 mm (6 $\frac{5}{16}$ ") | 160 mm (6 $\frac{5}{16}$ ") |



| | | |
|----------|------------------------------|-------------------------------|
| 60 Matic | M3 | M4 |
| SL2 | 260 mm (10 $\frac{1}{4}$ ") | 100 mm (3 $\frac{15}{16}$ ") |

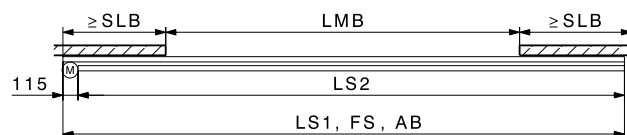
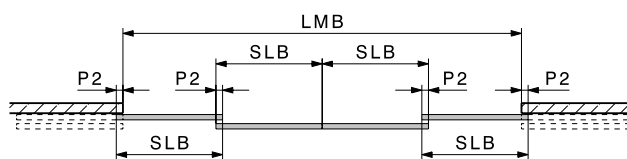


| | | |
|----------|-------------------------------|-----------------------------|
| 60 Matic | M5 | M6 |
| SL3 | 100 mm (3 $\frac{15}{16}$ ") | 180 mm (7 $\frac{3}{8}$ ") |



| | | |
|----------|------------------------------|------------------------------|
| 60 Matic | M7 | M8 |
| SL4 | 160 mm (6 $\frac{5}{16}$ ") | 160 mm (6 $\frac{5}{16}$ ") |

Calculation for sliding shutter width



$$SLB = \frac{LMB}{4} + P2$$

$$P2 \geq 50 \text{ mm (1 } \frac{31}{32} \text{")}$$

$$LS1 = LMB + (2 \times SLB)$$

$$LS2 = LS1 - 155 \text{ mm (6 } \frac{1}{8} \text{")}$$

| | |
|-----|------------------------------|
| AB | Installation width |
| LMB | Entire opening width |
| SLB | Sliding shutter width |
| M | Minimum space for drive unit |
| P | Sliding shutter overlap |
| FS | Bottom guide channel |
| LS1 | Inner top track |
| LS2 | Outer top track |

Top tracks, covering screens and brackets

Top tracks and covering screens: → pages 36–37

Bottom guides

Bottom guides: → pages 42–43

Order specifications

- Number of sets Hawa Motronic 60
- Number of partial sets Hawa Frontslide 60 Matic Symmetric 2+2
- Number and length of toothed belt
- Number and length of top tracks
- For wall fittings:
 - Number, length and type of angled profile support
 - Number of **special fixing screw sets**
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

Optional order specifications

- Number and type of front cover plates
- Number of connecting bolt sets to profiles and covering screens

Planning/installation

For planning and installation purposes, please use the installation drawing code 24993. (→ www.hawa.ch → Hawa Productfinder)

Special regulations apply to automated installations; please refer to operating instructions code 24675.
(→ www.hawa.ch → Hawa Productfinder)





Sliding shutters – automation in motion.

Hardware for simultaneously automatic sliding up to 4 wood, metal or aluminium sliding shutters up to 60 kg (132 lbs.).

Description

The Hawa Frontslide 60 Matic Telescopic can automatically move up to 4 sliding shutters simultaneously when combined with Hawa Frontslide 60 Matic drive components.

Its brushless electric motor, a Hawa Motronic 60 with a high-quality transmission system and drive belt, guarantees a stable, maintenance-free system with a long life. No special connection cables or control box are required as the controls are integrated in the drive unit. Electrical installation therefore corresponds to the usual standard for shutter designs and enables the use of commercially available operating elements.

An angled profile support is available for mounting two-panelled Hawa Telescopic systems to the wall. In this case, the top track is fastened to the angled profile support using special mounting screws from Hawa. The Hawa Frontslide 60 Matic Telescopic allows maximum flexibility in façade design. Aluminium covering screens in either natural anodized or plain finishes ready for custom painting provide aesthetic appeal and are easily clipped on to the inside and/or outside of the top track. Top track and drive units are covered with one aluminium covering screen only.

Applications

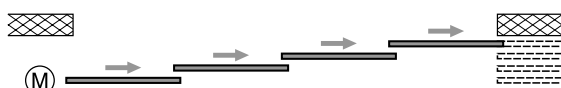
Ideal for façades with a high proportion of glass, wherever screening and shade form part of the façade design, and where space is at a premium, e.g. schools, hotels, public buildings, office and administration premises, apartment buildings, low-energy houses, etc.



Hawa Frontslide 60 Matic Telescopic



Hawa Frontslide 60 Matic Telescopic 3



Hawa Frontslide 60 Matic Telescopic 4

For dimensioning reasons the drive unit (M) must be positioned opposite the stacking space.

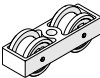
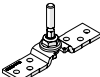

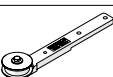
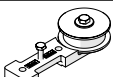


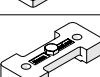
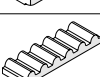
Features of the Hawa Frontslide 60 Matic Telescopic

- Max. sliding shutter weight with 2 shutters: 60 kg (132 lbs.)/shutter
- Max. sliding shutter weight with 3 shutters: 60 kg (132 lbs.)/shutter
- Max. sliding shutter weight with 4 shutters: 60 kg (132 lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ "– $1\frac{19}{32}$ ")
- Sliding shutter width: 650–1200 mm ($2'1\frac{19}{32}$ "– $3'11\frac{1}{4}$ "
- Maximum sliding shutter height: 3200 mm (10'6")
- Corrosion-resistant materials
- Fibreglass-reinforced toothed belts guarantee high tensile strength and a low level of expansion
- Sliding shutters can be brought into any position
- Fast and efficient assembly from below and from the façade side
- Shutters can be removed without loosening the toothed belt
- Clip-on covers for attachment to inside and/or outside of track
- Different design options of bottom guides
- Drive unit: CE tested, technical details: → page 23
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)

Sets without top tracks and bottom guide channels

| | code |
|---|-------|
| Hawa Frontslide 60 Matic Telescopic, set for 2 sliding shutters, 650–1200 mm (2'1 $\frac{19}{32}$ "–3'11 $\frac{1}{4}$ ") | 25135 |
| Hawa Frontslide 60 Matic Telescopic 3, set for 3 sliding shutters, 650–1200 mm (2'1 $\frac{19}{32}$ "–3'11 $\frac{1}{4}$ ") | 25136 |
| Hawa Frontslide 60 Matic Telescopic 4, set for 4 sliding shutters, 650–1200 mm (2'1 $\frac{19}{32}$ "–3'11 $\frac{1}{4}$ ") | 25137 |

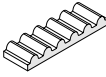
Set comprising

| | | 25135 | 25136 | 25137 | code |
|---|--|-------|-------|-------|-------|
|  | Two-wheeled trolley, M8, with plastic wheels | 4 | 6 | 8 | 17119 |
|  | Top fixing plate, stainless steel, with hanger bolt M8 | 4 | 6 | 8 | 24562 |
|  | Toothed belt clamp for manual and automatic systems | 1 | 1 | 1 | 24777 |
|  | Guide pulley wheel, with fixing plate, long | 1 | 2 | 3 | 20139 |
|  | Guide pulley wheel, with fixing plate, short | 1 | 2 | 3 | 20140 |
|  | Driver, wide | 1 | 2 | 3 | 20141 |
|  | Driver, narrow | – | 1 | 2 | 20142 |
|  | Driver counter-plate, wide | 1 | 1 | 1 | 20246 |
|  | Toothed belt, black, 2,7 m (8'10 $\frac{5}{16}$ "), fibreglass reinforced | 1 | 2 | 3 | 20208 |

Hawa Motronic 60, set for sliding shutter drive

| | code |
|--|-------|
| Hawa Motronic 60 for Hawa Frontslide 60 Matic, incl. control unit, toothed belt lock and pulley wheel | 25146 |

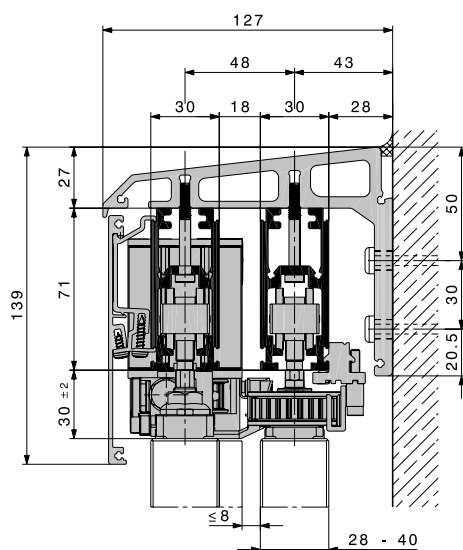
Toothed belt

| | | length | code |
|---|--|--------------------------------|-------|
|  | Toothed belt, black, fibre glass reinforced | 2.7 m (8'10 $\frac{5}{16}$ ") | 20208 |
| | | 5 m (16'4 $\frac{27}{32}$ ") | 19667 |
| | | 8 m (26'2 $\frac{31}{32}$ ") | 19682 |
| | | 10 m (32'9 $\frac{23}{32}$ ") | 19668 |
| | | 15 m (49'2 $\frac{9}{16}$ ") | 20370 |
| | | 50 m (164' $\frac{1}{2}$ ") | 19669 |

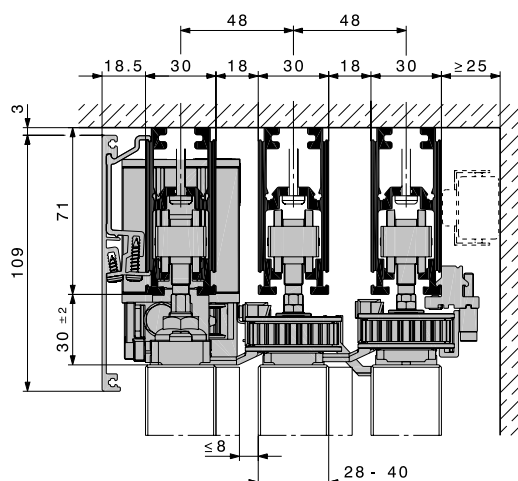
Calculation for length of toothed belt:

Hawa Frontslide 60 Matic: 2 x installation width (The toothed belt lock is included with the Hawa Motronic set 25146)

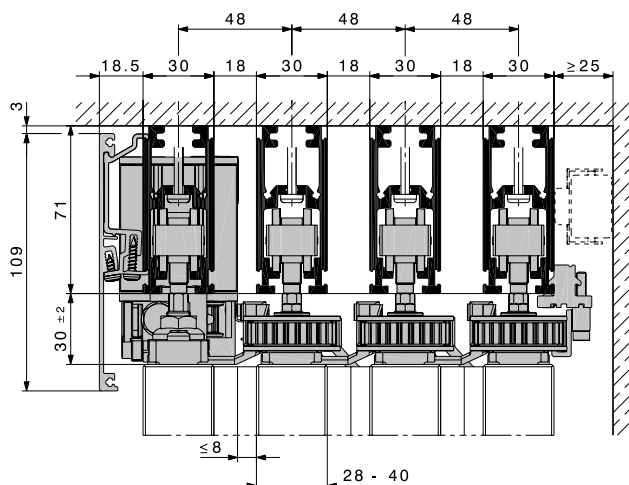
Two sliding shutters of up to 60 kg max. per panel



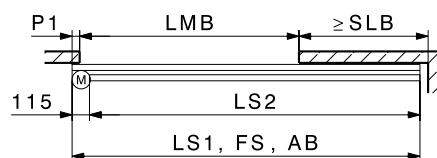
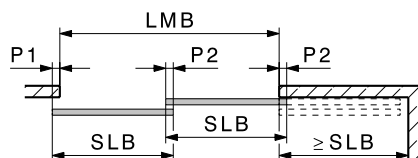
Three sliding shutters of up to 50 kg max. per panel



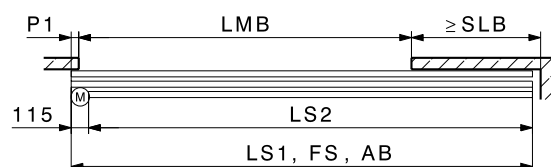
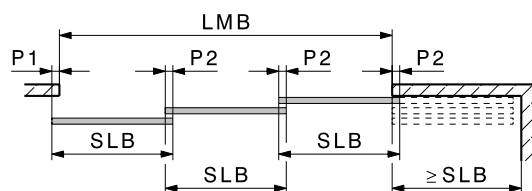
Four sliding shutters of up to 40 kg max. per panel



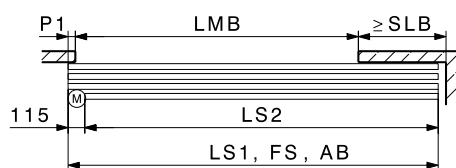
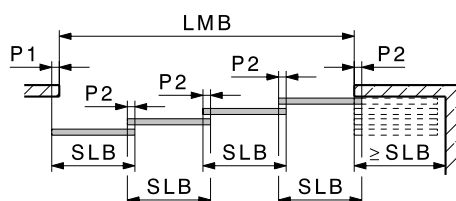
Calculation for sliding shutter width



Hawa Frontslide 60 Matic Telescopic 2



Hawa Frontslide 60 Matic Telescopic 3



Hawa Frontslide 60 Matic Telescopic 4

$$SLB = \frac{LMB + P1}{AL} + P2$$

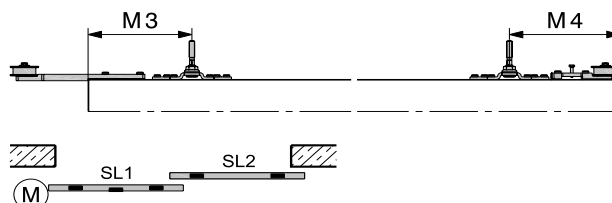
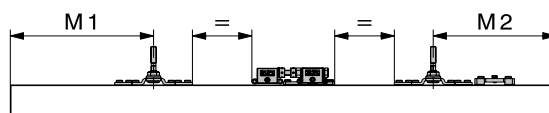
$$P2 \geq 50 \text{ mm (1\frac{31}{32}'')}$$

$$LS1 = LMB + P1 + SLB$$

$$LS2 = LS1 - 155 \text{ mm (6\frac{1}{8}'')}$$

| | |
|-----|----------------------------|
| AB | Installation width |
| LMB | Entire opening width |
| AL | Number of sliding shutters |
| FS | Bottom guide channel |
| SLB | Sliding shutter width |
| P | Sliding shutter overlap |
| LS1 | Inner top track |
| LS2 | Outer top track |

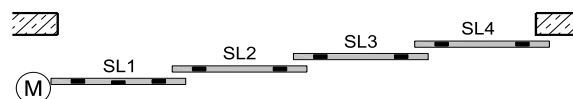
Calculation for suspension points



Hawa Frontslide 60 Matic Telescopic 2



Hawa Frontslide 60 Matic Telescopic 3



Hawa Frontslide 60 Matic Telescopic 4

| 60 Matic | M1 | M2 | M3 | M4 |
|-----------|---|---|---|---|
| SL1 | 210 mm (8 ⁹ / ₃₂ '') | 180 mm (7 ³ / ₃₂ '') | | |
| SL2, 3, 4 | | | 160 mm (6 ⁵ / ₁₆ '') | 160 mm (6 ⁵ / ₁₆ '') |

Top tracks, covering screens and brackets

Top tracks and covering screens: → pages 36–37

Bottom guides

Bottom guides: → pages 42–43

Order specifications

- Number of sets Hawa Motronic 60
- Number and type of sets Hawa Frontslide 60 Matic Telescopic
- Number and length of toothed belt
- Number and length of top tracks
- For wall fittings:
 - Number, length and type of angled profile support
 - Number of **special fixing screw sets**
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

Optional order specifications

- Number of connecting bolt sets to profiles and covering screens
- Number and type of front cover plates

Planning/installation

For planning and installation purposes, please use the installation drawings:

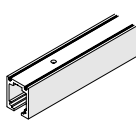

- Hawa Frontslide 60 Matic Telescopic 2 Nr. 24994
- Hawa Frontslide 60 Matic Telescopic 3 Nr. 24995
- Hawa Frontslide 60 Matic Telescopic 4 Nr. 24996

Special regulations apply to automated installations; please refer to operating instructions code 24675.
(→ www.hawa.ch → Hawa Productfinder)

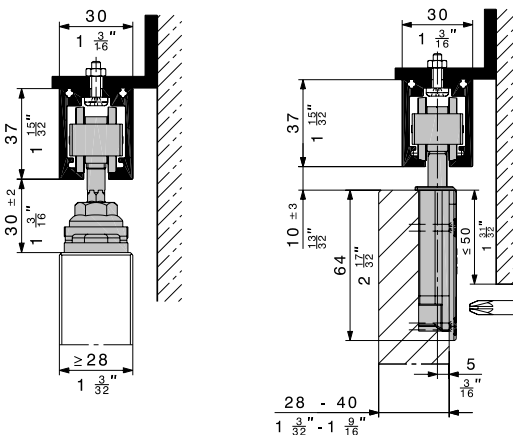
Subject to modification. Metric specifications are exact. Inches are approximate.



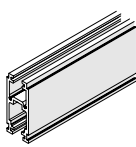

Lower top track

| Caution: Hole positions vary. | | mm/inch | code |
|---|---|-----------------------------|-------|
|  | Lower top track, alu plain anodized, predrilled | 2500 (8'2 $\frac{7}{16}$ " | 24842 |
| | | 6000 (19'8 $\frac{7}{32}$ " | 24802 |
| | | cut to size | 24803 |
|  | Connecting bolts, set of 6 pieces | | 17221 |
| Can only be used for manual systems Hawa Frontslide 60 A and B. | | | |

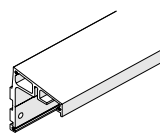
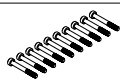

Lower top track and Hawa Frontslide 60 B



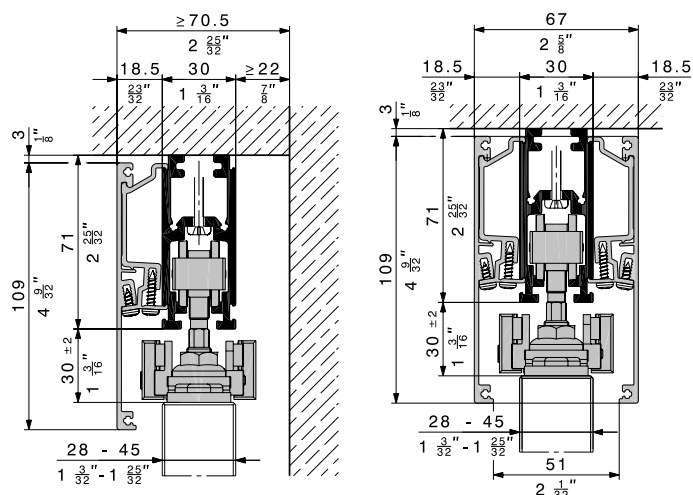
Top tracks for installations with or without covering screens

| Caution: Hole positions vary. | | mm/inch | code |
|---|---|------------------------------|-------|
|  | Top track, alu plain anodized, predrilled | 3500 (11'5 $\frac{13}{16}$ " | 24839 |
| | | 6000 (19'8 $\frac{7}{32}$ " | 24795 |
| | | cut to size | 24796 |
|  | Connecting bolts, set of 6 pieces | | 17221 |

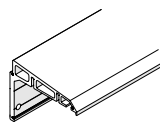


Angled profile support

| Caution: Hole positions vary | | mm/inch | code |
|--|---|-----------------------------|-------|
|  | Angled profile support for one sliding level, alu plain anodized, predrilled | 6000 (19'8 $\frac{7}{32}$ " | 21378 |
| | | cut to size | 21379 |
| | Angled profile support for one sliding level, alu unanodized, predrilled | 6000 (19'8 $\frac{7}{32}$ " | 21380 |
| | | cut to size | 21381 |
|  | Special fixing screws for securing top track to angled profile support, set of 10 pieces (3 pieces per meter) | | 19774 |
|  | Connecting bolts, set of 6 pieces | | 17221 |
| Special screws (code 19774) must be used for best results when fixing the track to the angled profile support. | | | |

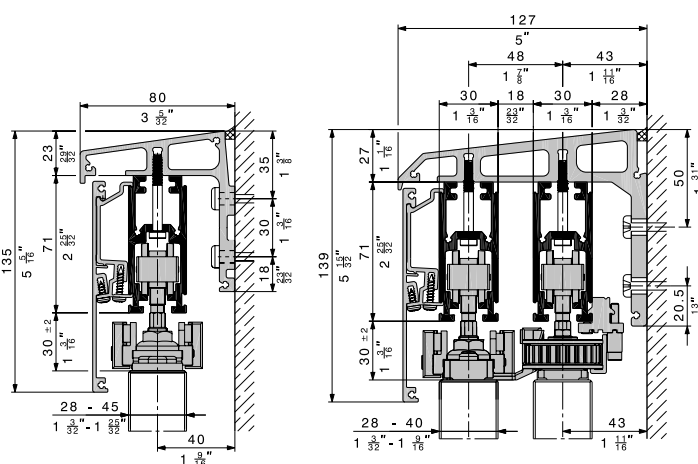
Ceiling or window lintel fitting



Angled profile support

| Caution: Hole positions vary | | mm/inch | code |
|--|---|-----------------------------|-------|
|  | Angled profile support for two sliding levels, alu plain anodized, predrilled | 6000 (19'8 $\frac{7}{32}$ " | 21384 |
| | | cut to size | 21385 |
| | Angled profile support for two sliding levels, alu unanodized, predrilled | 6000 (19'8 $\frac{7}{32}$ " | 21386 |
| | | cut to size | 21387 |
|  | Special fixing screws for securing top track to angled profile support, set of 10 pieces (3 pieces per meter) | | 19774 |
|  | Connecting bolts, set of 6 pieces | | 17221 |
| Special screws (code 19774) must be used for best results when fixing the track to the angled profile support. | | | |

Wall fitting



Subject to modification. Metric specifications are exact. Inches are approximate.

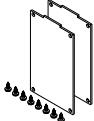
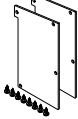
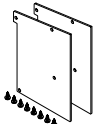
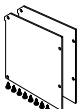
Wall fitting with increased clearance (weatherboard)

Technical drawing of a mechanical assembly, likely a valve or actuator, showing dimensions in inches and fractions. The drawing includes a side view and a cross-sectional view.

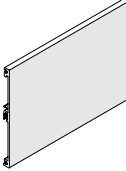


Dimensions (inches):

- Overall width: 105
- Top width segments: 75, 30
- Top width segments (fractions): $4 \frac{1}{8}$, $2 \frac{15}{16}$, $1 \frac{3}{16}$
- Left side height: 138
- Left side height segments: $5 \frac{7}{16}$, 26, 71, $30 \pm .2$
- Left side height segments (fractions): $1 \frac{1}{32}$, $2 \frac{25}{32}$, $1 \frac{3}{16}$
- Right side height segments: 38, 30, 6.5, 1
- Bottom width segments: 28 - 45, 65
- Bottom width segments (fractions): $1 \frac{3}{32}$, $1 \frac{25}{32}$, $2 \frac{9}{16}$

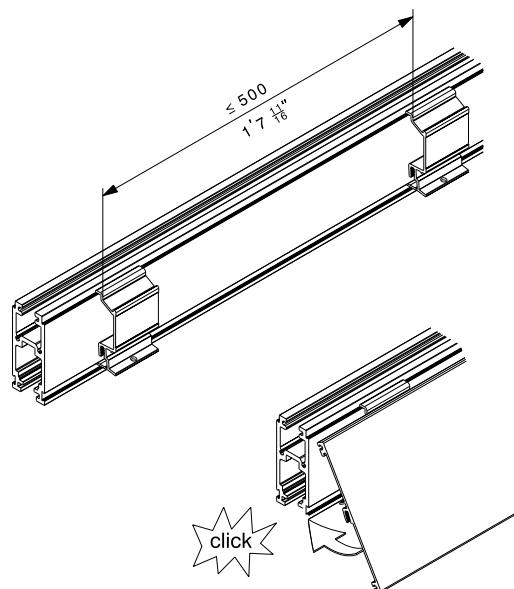
Spacer profile for angled profile support for one sliding level

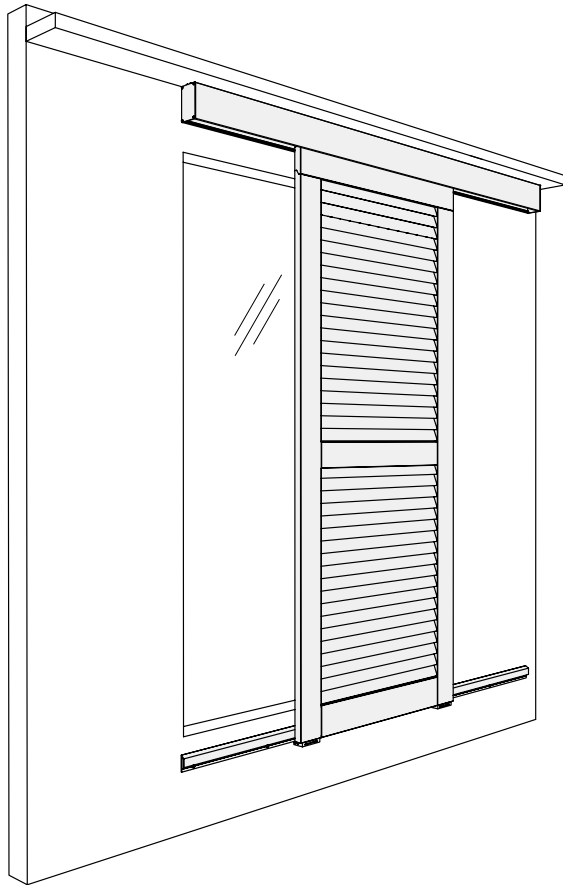
| | | aluminium | code |
|--|--|----------------|-------|
|  | Front cover plates for Hawa Frontslide 60, for ceiling fitting, 1 pair | plain anodized | 24573 |
| | | unanodized | 24575 |
|  | Front cover plates, for wall fitting without spacer profile, 1 pair | plain anodized | 24577 |
| | | unanodized | 24580 |
|  | Front cover plates, for wall fitting with one spacer profile, 1 pair | plain anodized | 24583 |
| | | unanodized | 24586 |
|  | Front cover plates, for wall fitting with two spacer profiles, 1 pair | plain anodized | 24821 |
| | | unanodized | 24824 |

Fitting the covering screens

| | | mm/inch | code |
|---|---|---|-------|
|  | Covering screens, alu plain anodized | 3500 (11'5 ¹³ / ₁₆ ") | 24845 |
| | | 6000 (19'8 ⁷ / ₃₂ ") | 24808 |
| | | cut to size | 24809 |
| | Covering screens, alu unanodized | 6000 (19'8 ⁷ / ₃₂ ") | 24810 |
| | | cut to size | 24811 |
|  | Parts for fitting top track cover, set of 5 pieces | | 24767 |
|  | Connecting bolts, set of 6 pieces | | 17221 |

Cover fixings (code 24767) are required for attaching the covering screens.





Sliding shutters for a functional façade finish.

Hardware system for wood, metal or aluminium sliding shutters with a panel weight up to 100 kg (220 lbs.)

Description

Hawa Frontslide 100 A is a dependable hardware system for manually operated and motorised sliding shutters, with different fitting options. Attached to the ceiling or window lintel, the top track screws directly to the load-bearing surface. On the aesthetic side, aluminium covering screens in natural anodized or plain finishes for custom painting simply clip-on to the inside or outside edges of the top track. In buildings with an air gap behind the façade, open window shutters can slide out of sight into the void between the building wall and the façade.

Applications

Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Typisch Hawa Frontslide 100 A

- Maximum sliding shutter weight: 100 kg (220 lbs.)
- Sliding shutter thickness: 28–50 mm ($1\frac{1}{8}$ "– $1\frac{31}{32}$ ")
- Minimum sliding shutter width: 500 mm ($19\frac{11}{16}$ ")
- Maximum sliding shutter height: 3200 mm ($10'6\frac{3}{4}$ ")
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)
- Corrosion-resistant materials
- Fast and efficient assembly from below and from the façade side
- Clip-on covers for inside or outside attachment
- The sliding shutters can be moved into any position
- For wood, metal or aluminium sliding shutters
- Different design options of bottom guides
- External tests certify the highest wind resistance (Class 6)



Hawa Frontslide 100 A



Hawa Frontslide 100 A Telescopic 2



Hawa Frontslide 100 A Telescopic 3



Hawa Frontslide 100 A Telescopic 4



Hawa Frontslide 100 A Symmetric



Hawa Frontslide 100 A Symmetric 2+2

Subject to modification. Metric specifications are exact. Inches are approximate.

Technical drawing of a mechanical assembly, likely a valve or actuator, showing dimensions in inches. The drawing includes a cross-section of the assembly mounted on a base. Key dimensions are labeled:

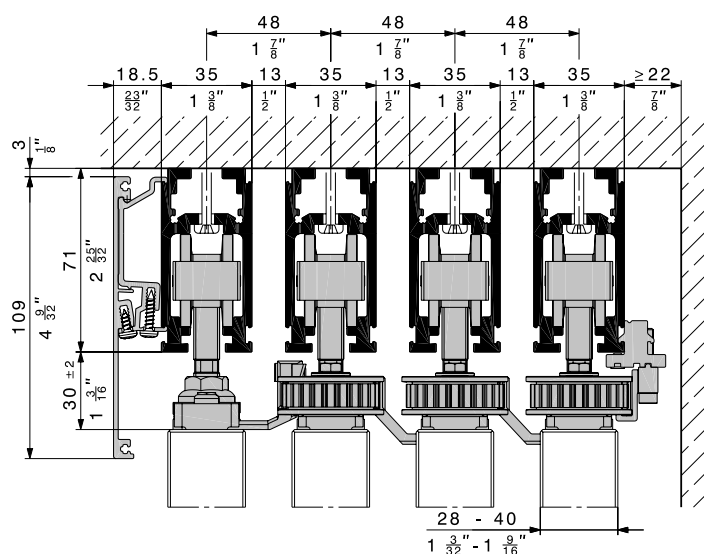
- Overall width: 35
- Top flange width: $1 \frac{3}{8}$
- Height from base to top flange: $1 \frac{27}{32}$
- Height from base to the main body: 30 ± 2
- Height from base to the main body (with tolerance): $1 \frac{3}{16}$
- Bottom flange width: ≥ 28
- Bottom flange thickness: $1 \frac{3}{32}$

Technical drawing of a mechanical assembly. The drawing shows a cross-section of a component with a central shaft and a flange. Dimensions are indicated on the left side:

- A vertical dimension of 30 ± 2 is shown for the main body.
- A horizontal dimension of $1 \frac{3}{16}$ is shown for the flange thickness.
- A vertical dimension of 47 is shown for the total height of the assembly.
- A horizontal dimension of $1 \frac{3}{32}$ is shown for the width of the central shaft.

Technical drawing of a door assembly. The drawing shows a cross-section of a door with a handle and a lock mechanism. The door is shown in a closed position, with the handle and lock mechanism visible. The drawing includes dimensions: a vertical dimension of 109" and a horizontal dimension of 4 9/32". A small detail of the handle and lock mechanism is shown in the upper right corner, with dimensions 3 1/16" and 3/16".

Ceiling or window lintel fitting for several sliding levels

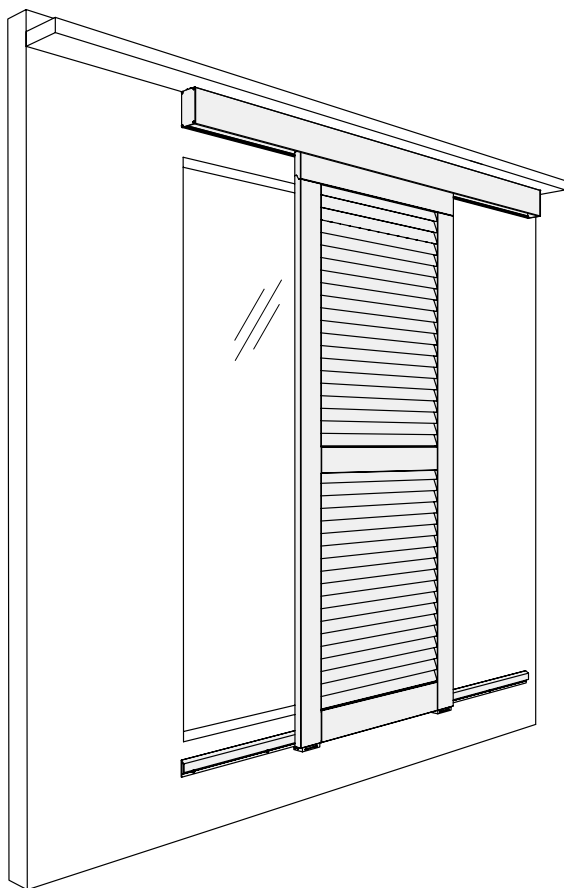


Technical drawing of a double-acting hydraulic cylinder, view A-A. The drawing shows the internal components, including the piston, piston rod, and valves. Dimensions are provided in inches and fractions of an inch.

Key dimensions and features:

- Overall Length:** 109" (Total length, including mounting brackets).
- Stroke Length:** 71" (Distance between the two end positions).
- Mounting Bracket Length:** 4 3/32" (Length of the mounting bracket on the left side).
- End Position Dimensions:**
 - Left end position: 30 ± 2" (Distance from the mounting bracket to the end position).
 - Right end position: 30 ± 2" (Distance from the mounting bracket to the end position).
- Internal Components:**
 - Piston Rod:** 1 3/16" (Diameter of the piston rod).
 - Piston:** 2 25/32" (Diameter of the piston).
 - Valves:** 1 3/8" (Diameter of the valves).
 - End Position Dimensions:** 1 3/32" (Distance from the mounting bracket to the end position).
- Mounting Bracket Dimensions:**
 - Left mounting bracket: 18.5" (Length of the mounting bracket).
 - Right mounting bracket: 13" (Length of the mounting bracket).
 - End position dimensions: 1 3/8" (Distance from the mounting bracket to the end position).
- Overall Dimensions:**
 - Overall length: 109" (Total length, including mounting brackets).
 - Overall width: 48" (Total width of the cylinder).
 - Overall height: 71" (Total height of the cylinder).

Hawa Sliding Solutions AG 8932 Mettmenstetten Switzerland www.hawa.ch Tel. +41 44 787 17 17 Fax +41 44 787 17 18 39



Sliding shutters for a functional façade finish.

Hardware system for wood, metal or aluminium sliding shutters with a panel weight up to 140 kg (308 lbs.)

Description

Hawa Frontslide 140 A is a dependable hardware system for manually operated and motorised sliding shutters, with different fitting options. Attached to the ceiling or window lintel, the top track screws directly to the load-bearing surface. On the aesthetic side, aluminium covering screens in natural anodized or plain finishes for custom painting simply clip-on to the inside or outside edges of the top track. In buildings with an air gap behind the façade, open window shutters can slide out of sight into the void between the building wall and the façade.

Applications

Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Features of the Hawa Frontslide 140 A

- Maximum sliding shutter weight: 140 kg (308 lbs.)
- Sliding shutter thickness: 28–60 mm ($1\frac{1}{8}$ "– $2\frac{3}{4}$ ")
- Minimum sliding shutter width: 700 mm ($2'3\frac{9}{16}$ ")
- Maximum sliding shutter height: 3200 mm ($10'6\frac{3}{4}$ ")
- Class 4 corrosion resistance in accordance with EN 1670 (extremely high resistance)
- Fast and efficient assembly from below and from the façade side
- Clip-on covers for inside or outside attachment
- The sliding shutters can be moved into any position
- For wood, metal or aluminium sliding shutters
- Different design options of bottom guides
- External tests certify the highest wind resistance (Class 6 in accordance with EN 13659)



Hawa Frontslide 140 A

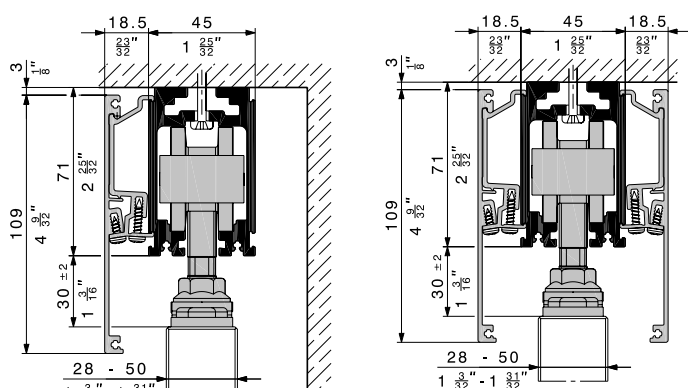


Hawa Frontslide 140 A Telescopic 2

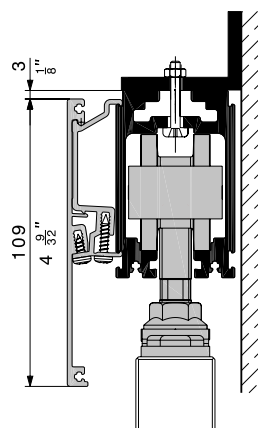


Hawa Frontslide 140 A Symmetric

Ceiling or window lintel fitting

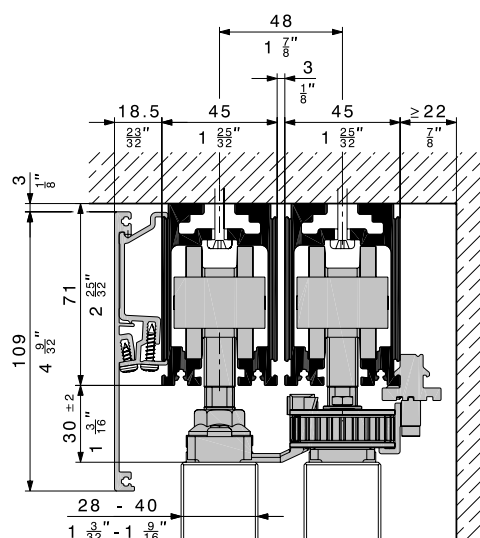


Wall fitting – solution provided by customer

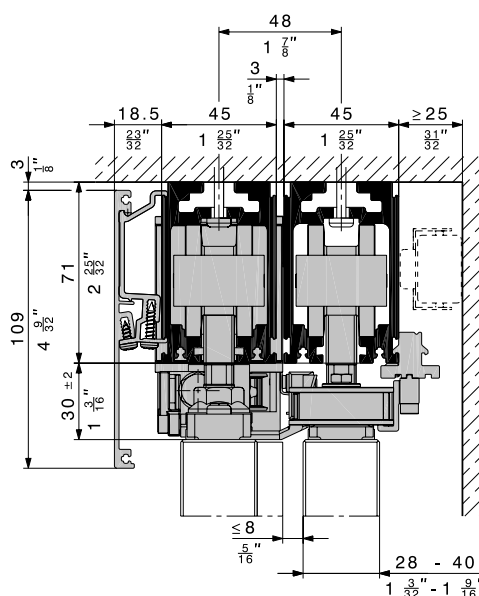


solution provided by customer

Ceiling or window lintel fitting for several sliding levels



Hawa Frontslide 140 A Telescopic 2



Hawa Frontslide 140 Matic Telescopic 2

Planning/installation

All details of Hawa Frontslide 140 can be found in the Hawa productfinder (→ www.hawa.ch → Hawa Productfinder) or at www.hawa.ch/frontslide

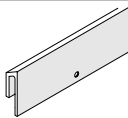



Guides for sliding shutters up to 3200 mm (10'6) in height and 140 kg (308 lbs.) maximum weight.

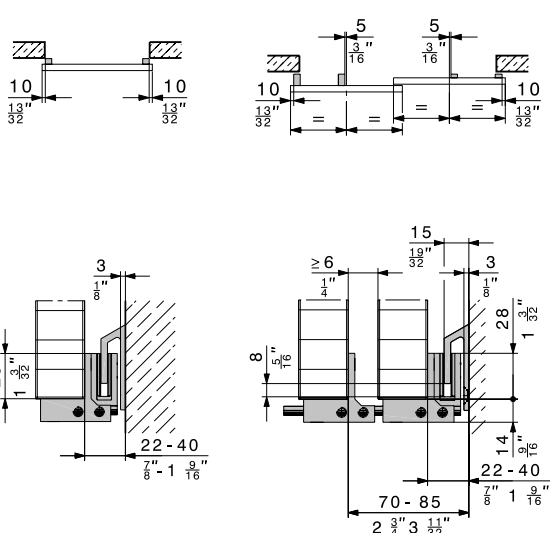
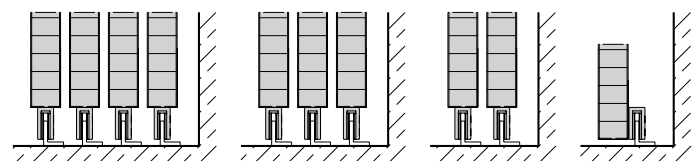
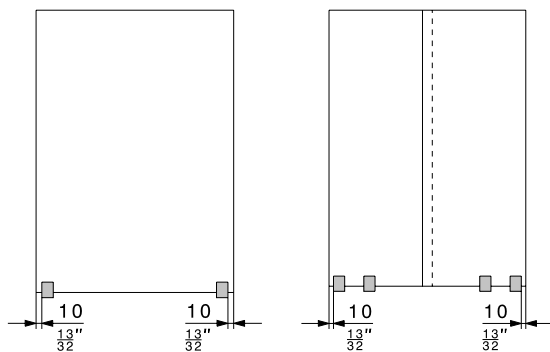
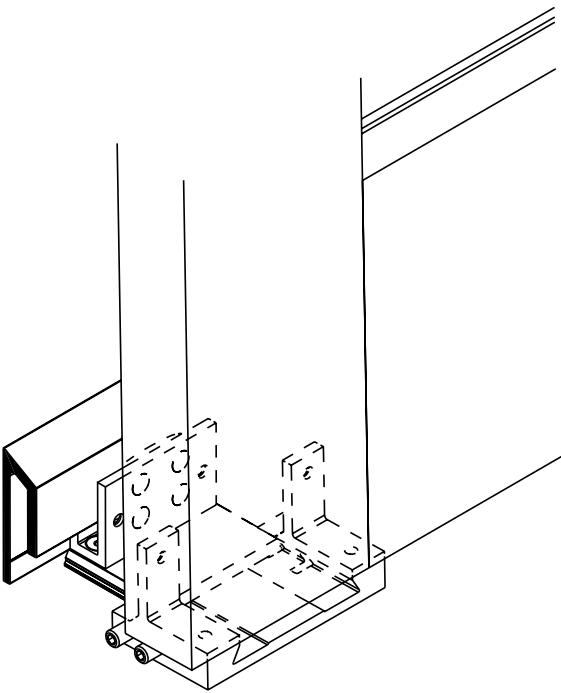
Description

These guides are certified in accordance with the appropriate EU standard (wind resistance class 6) and can be used for a wide variety of applications. They are designed for sliding shutters up to 3200 mm (10'6) in height and a maximum weight of 140 kg (308 lbs.). Sliding shutter installations with 1 to 4 leaves, telescopic and symmetrical, manual or with a drive, can be easily realized with a minimal number of parts.

Commercially available, anodized aluminum bottom guide profiles can be used in combination with guide slider 24542.

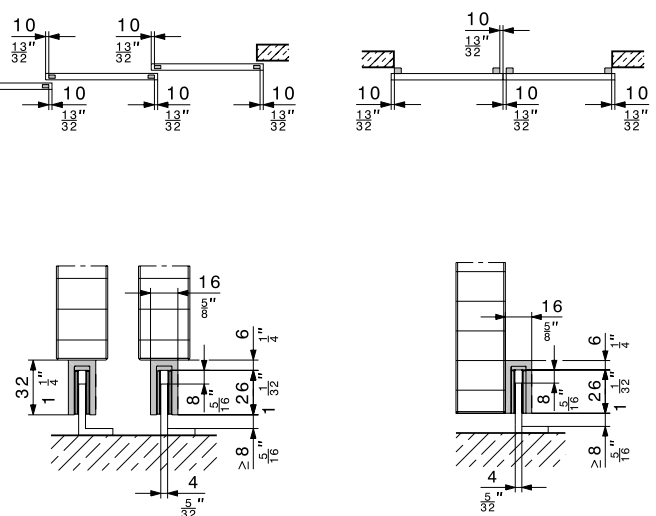
Guides for Hawa Frontslide

| | mm/inch | code |
|--|---|-------|
|  | 6000 (19'8 $\frac{3}{8}$ ") | 24460 |
| | cut to size | 24462 |
|  | Floor guide unit, short, for bottom guide channel | 24543 |
|  | Floor guide unit, long, for bottom guide channel | 24544 |
|  | Screw-on guide slider | 24542 |



Floor guide 24543, bottom guide channels 24460/24462

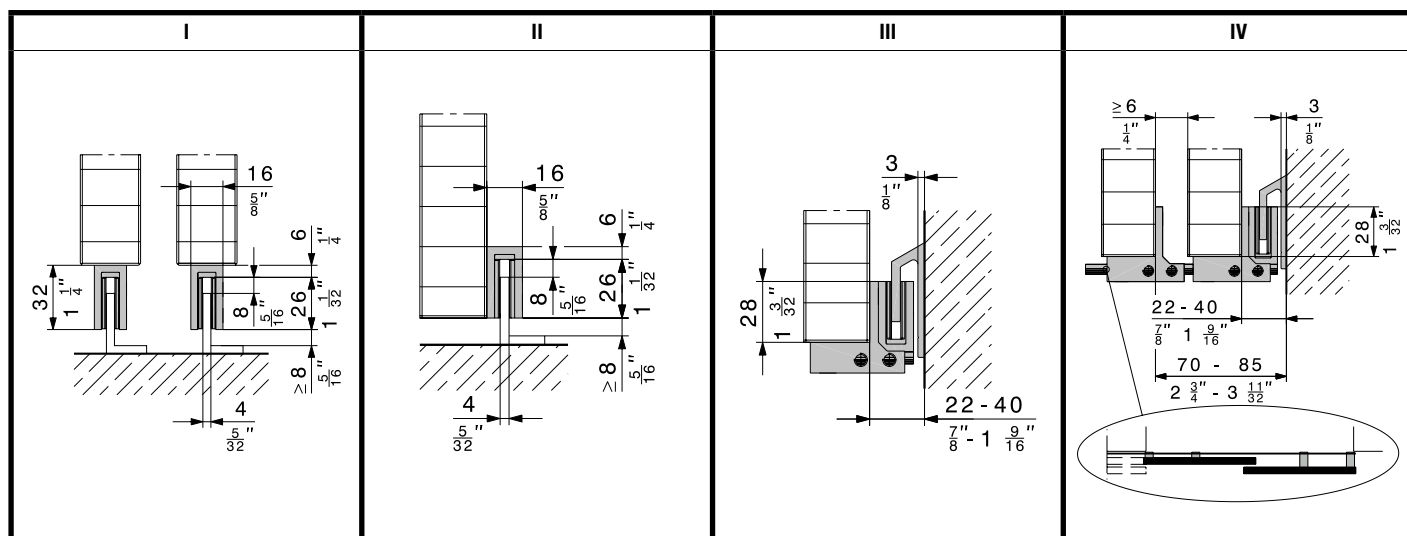
Floor guides 24543/24544, bottom guide channels 24460/24462



Guide slider 24542 from Hawa and commercially available, anodized aluminum bottom guide profile.

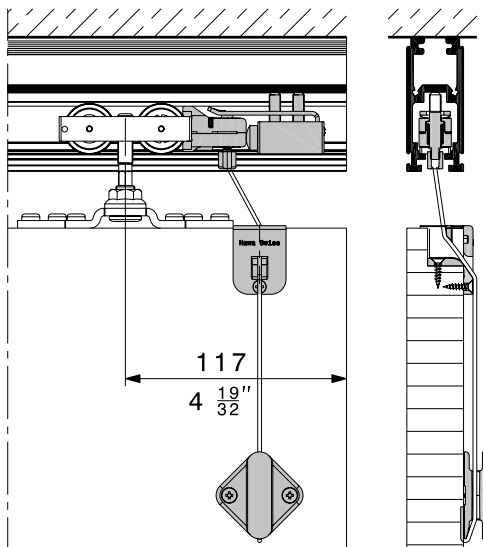
Subject to modification. Metric specifications are exact. Inches are approximate.

Overview of the guides for Hawa Frontslide

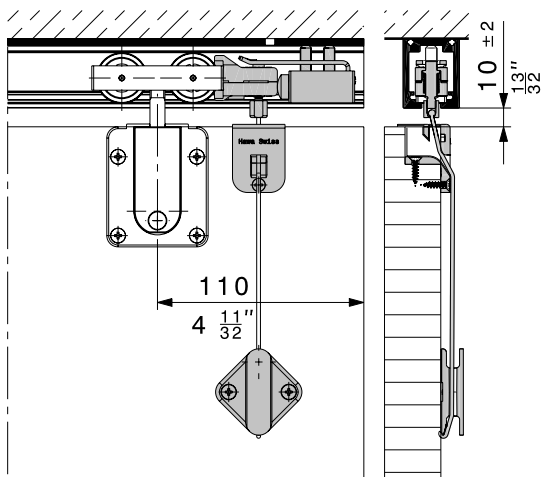


| | I | II | III | IV |
|--|---|---|-----------------|-----------------|
| | ✓ | ✓ | ✓ | - |
| | ✓ | - | - | ✓ |
| | ✓ | - | - | - |
| | ✓ | - | - | - |
| | ✓ | ✓ | ✓ | - |
| | ✓ | - | - | ✓ |
| Guide arrangements: Certain guide options are freely adjustable. Further guide options available on request. | 24542 | 24542 | 24543 | 24543/24544 |
| | Alu profile anodized provided by others | Alu profile anodized provided by others | 24460/24462 | 24460/24462 |

Sliding shutter locking



In combination with Hawa Frontslide 60 A



In combination with Hawa Frontslide 60 B

The sliding shutter lock prevents manually operated shutters weighing up to 60 kg (132 lbs.) from opening of their own accord.

Description

The sliding shutter lock for Hawa Frontslide 60 automatically engages as the shutters close and can be released from the room interior side only using a pull-cord. This sophisticated system prevents shutters from opening by themselves, even under the most adverse wind conditions.

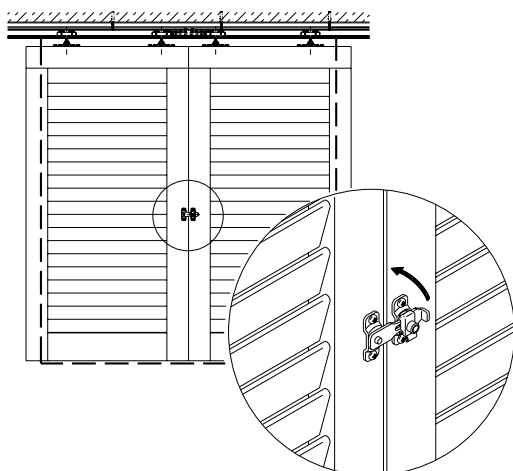
Suitable for:

- Hawa Frontslide 60 A
- Hawa Frontslide 60 A Symmetric 2
- Hawa Frontslide 60 A Symmetric 2+2
- Hawa Frontslide 60 A Telescopic 2
- Hawa Frontslide 60 A Telescopic 3
- Hawa Frontslide 60 A Telescopic 4
- Hawa Frontslide 60 A with lower top track
- Hawa Frontslide 60 B

Sliding shutter locking

| | code |
|--|-------|
| <p>Sliding shutter locking complete, for Hawa Frontslide 60 A and 60/B</p> | 19319 |

Catch for sliding shutters



The sliding shutter catch keeps manually operated sliding shutters weighing up to 140 kg (308 lbs.) closed.

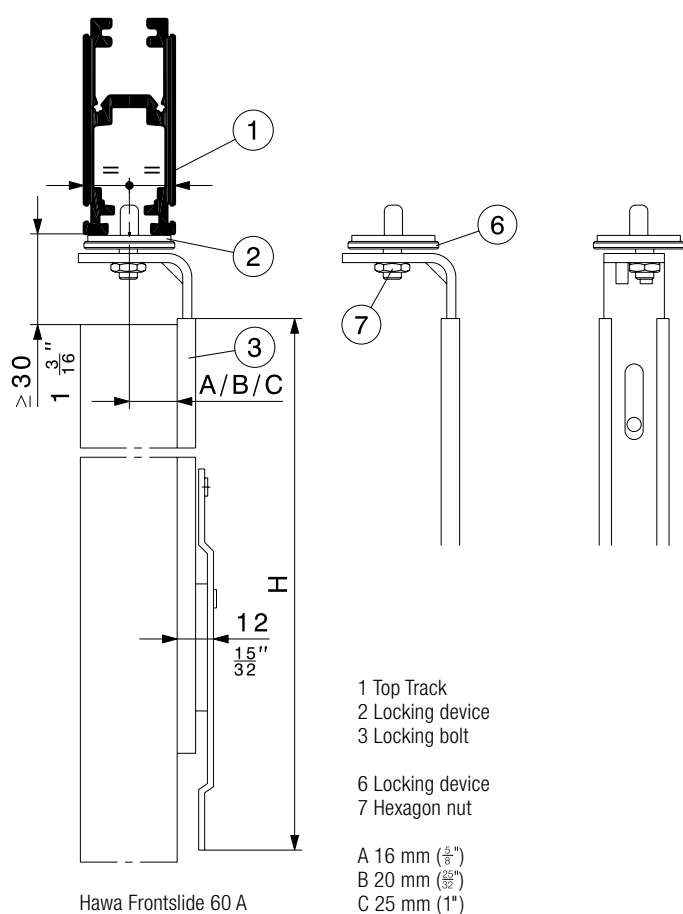
Description

The sliding shutter catch holds together adjacent shutter pairs, which is a further means to prevent shutters from opening by themselves.

Catch for sliding shutters

| | code |
|--|-------|
| <p>Catch for sliding shutters, stainless steel, with fixing screws</p> | 17155 |

Sliding shutter locking device



Sliding shutter locking device for securing manually operated sliding shutters weighing up to 140 kg (308 lbs.)

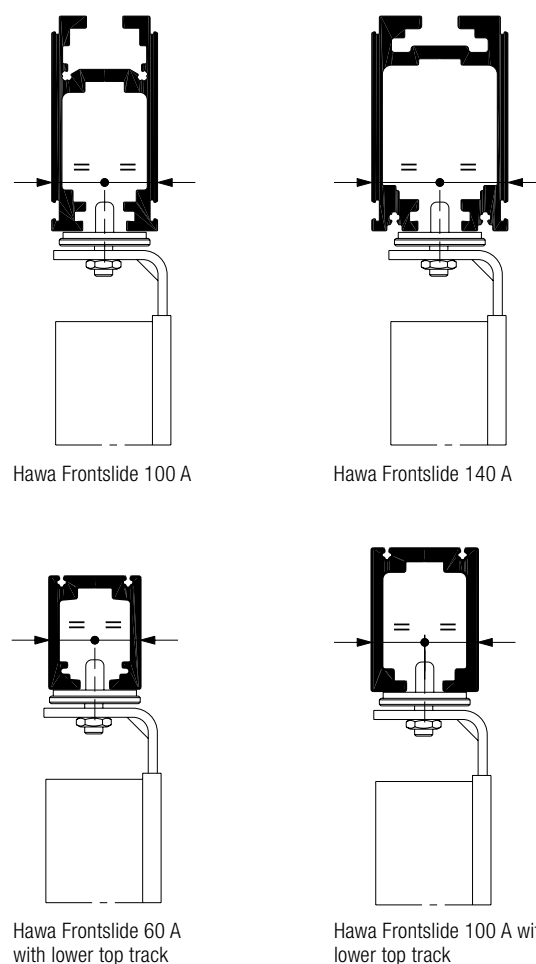
Description

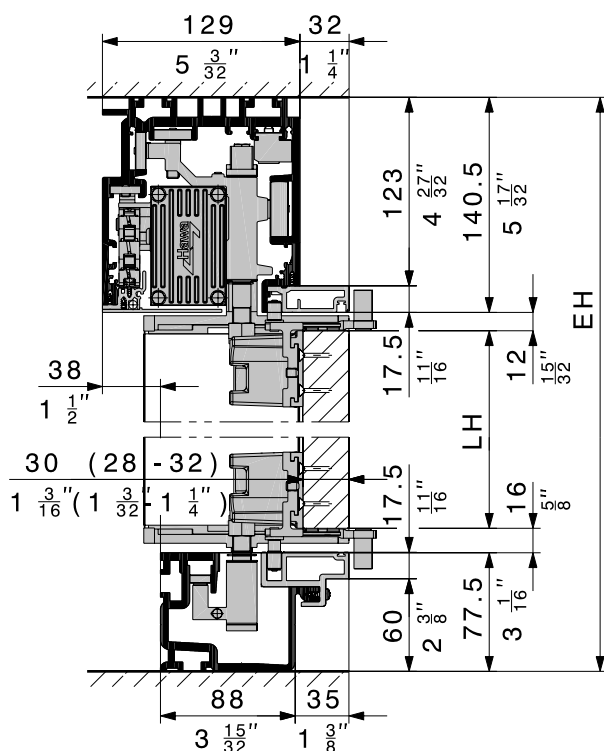
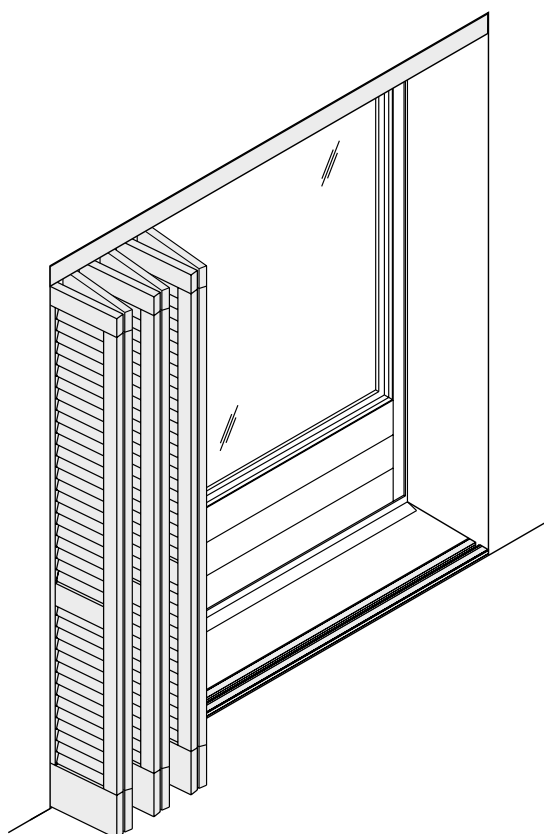
The sliding shutter locking device is designed to lock sliding shutters in any position on the track. The locking device has an installation height of just 12 mm (15 screws on to any type of shutter with no need for milling work; the device is also suitable for retrospective fitting. Two different lengths are available for an ideal gripping position.

Sliding shutter locking device

| | mm/inch | code |
|--|---------------------|-------|
| | 800 (2'7 1/2") | 23714 |
| | 1200 (3'11 1/4") | 23715 |

Further application examples





Folding sliding shutters – automatic flush front.

Automated hardware system for flush-front folding sliding shutters weighing up to 30 kg (66 lbs.).

Description

Hawa Frontego 30 Matic is a motorised hardware system for folding sliding shutters. A well-thought-out suspension system enables a flush-front construction and extensive freedom of design for the façade. A variety of mounting options leave virtually no wish unfulfilled. The automatic hardware system folds up to six sliding shutters and parks the package to one side at 90° to the slide axis. The drive system is powered by a brushless electric motor with a high-quality gear system and a proven drive belt; it is both wear-resistant and durable. The power supply unit (to be connected on site by others) with integrated feed and distribution and the Hirschmann plug do not need any additional connection cables. The electrical installation therefore corresponds to the usual standard for sunblind designs incorporating commercially available operating elements.

Applications

Wherever sun and privacy screen are an integral aspect of façade design, including façades with a high proportion of glass, even when space is at a premium, for instance in schools, hotels, public buildings, office and administration buildings, low-energy houses and for creative and impressive façades on private homes.

Features of the Hawa Frontego 30 Matic

- Drive unit: CE tested
- Hardware system developed in accordance with DIN EN 13659, which regulates performance and safety requirements as well as wind load resistance (certified for Class 6, tested for Class 8), durability (20,000 cycles, tested for Class 3)
- Protection and safety measures on the basis of DIN EN 12453
- The hardware system for automatic folding sliding shutters is suitable for purposes up to protection class 3 in accordance with VFF pamphlet KB.01
- Very high corrosion resistance; suitable for coastal areas; materials and coatings tested during a 1,000-hour salt spray test in accordance with DIN EN 9227
- Folding sliding shutter weight: max. 30 kg (66 lbs.)
- Folding sliding shutter width: 300–600 mm ($11\frac{13}{16}$ "– $1'11\frac{5}{8}"$) (uniform for each installation)
- Folding sliding shutter thickness: 28–32 mm ($1\frac{1}{8}"$ – $1\frac{9}{32}"$)
- Designs: 2, 4 and 6 leaves, left or right hand application
- Symmetrical and asymmetrical installations are freely combinable
- Ceiling, window lintel, wall and façade mounting
- Folding sliding shutters and the top tracks and bottom guide channels can be installed from the inside or outside
- For folding sliding shutters made of wood, metal or fabric
- Folding sliding shutters can be locked top and bottom in any position
- Robust, burglar-deterrent engineering and self-locking drive
- Folding sliding shutters form a flush front when closed

Drive unit technical details: → page 32

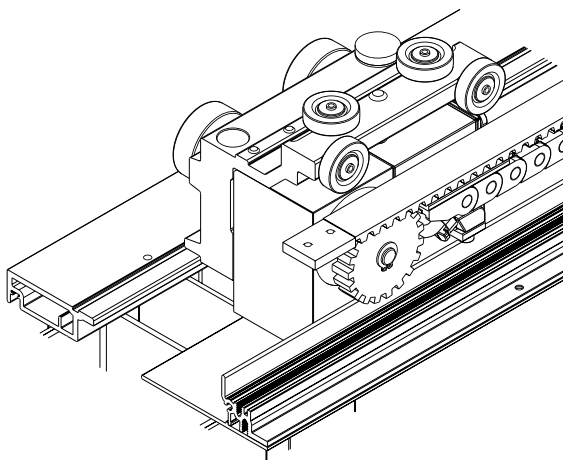
Hawa Frontego 30 Matic drive system

Hawa Frontego 30 Matic moves folding sliding shutters at an average speed of 55 mm/s.

The intelligent control system was designed specifically for folding sliding shutters and enables them to be slowly accelerated up to an ideal speed and then gently decelerated and stopped. This keeps noise levels down and puts less strain on drive components. Commissioning is as convenient as it is simple: manual addressing is unnecessary thanks to the automatic detection of components such as the number of leaf pairs and left or right hand installation. Manual configuration using the diagnosis box is also possible.

Caution: Not permitted for escape routes

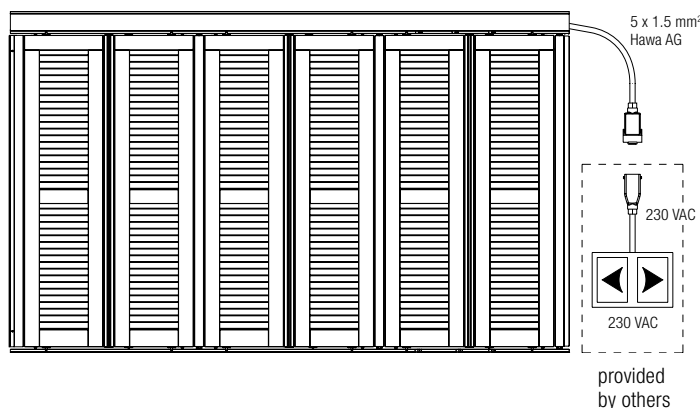
Escape route will be blocked if power supply fails when shutters are closed.



The drive and trolley form a compact unit

Addressing and controlling the system

The systems are addressed in the same way as rolling shutter systems and operated via commercially available sunblind switches. Push-button operation is also possible for walk-in systems.



Technical details Hawa Frontego 30 Matic

- Drive unit: CE tested
- Power supply: 100 VAC to 240 VAC
- Rated voltage: 28 V
- Pre-fuse (max.): 16 A
- Overvoltage category: II
- Temperature range for storage: -25 °C to 60 °C
- Temperature range for operation: -20 °C to 60 °C
- Relative humidity: 20 % to 98 %
- Degree of contamination: 1
- Protection class: IP54
- Speed (max.): 70 mm/s
- Average speed: 55 mm/s
- Static continuous drive force (max.): 150 N
- Static peak drive force (max.): 250 N (Anfahren bei Wind)
- Average drive power consumption: 20 W
- Power consumption in standby mode: < 5 W
- Parameterisation: automatic during hardware commissioning or manual using the diagnosis box

Type label

Every drive and power supply unit has a type label.

HAWA-Frontego 30/matic



Art.Nr. 23363
Kontakt www.hawa.ch
SerieNr. XXXXX Bj: 20ZZ
Charge 20ZZ/YYYYY
100–240 VAC, 50/60 Hz, 60 W, IP54
Betriebstemperatur -20 °C bis +60 °C



HAWA-Frontego 30/matic



Art.Nr. 23364
Kontakt www.hawa.ch
SerieNr. XXXXX Bj: 20ZZ
Charge 20ZZ/YYYYY
Antriebskraft max. 250 N
28 VDC, 50 W, IP54
Betriebstemperatur -20 °C bis +60 °C



Commissioning box

The commissioning box for the Hawa Frontego 30 Matic is available as an option and enables simple commissioning via the main cable and Hirschmann plug.

Diagnosis box

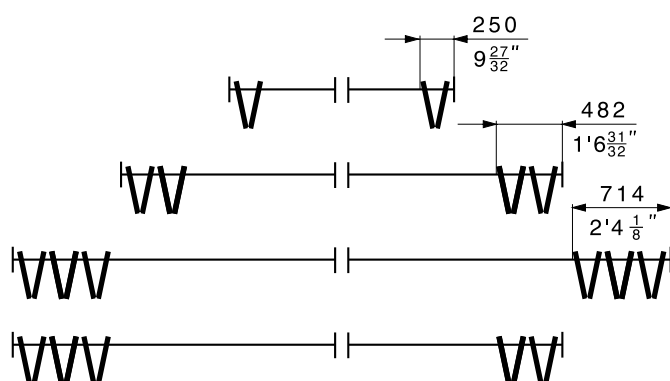
The diagnosis box for the Hawa Frontego 30 Matic is an option and offers the following benefits:

- Read out of important operating data such as operation and run-time, firmware version, error messages, etc.
- Firmware updates
- System operation

Folding sliding shutters

The Hawa Frontego 30 Matic stands for freedom of design in façade construction. The folding sliding shutters form a flush front with the façade when closed to conceal the top tracks and bottom guide channels. Shutters can be made of different materials such as metal, wood or fabric.

The number of shutters per system is limited to six leaves, or three pairs. The option to design left or right hand installations allows for any combination of symmetrical and asymmetrical systems. Every sub-system can be designed with a different folding sliding shutter width.



Open folding sliding shutters

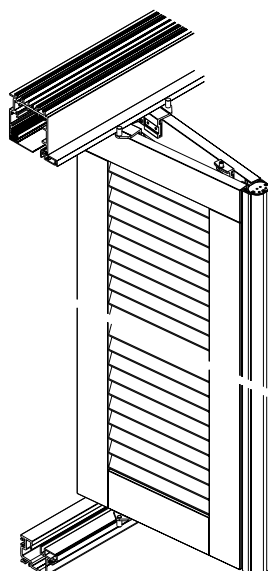
The folding package stands sideways, slightly opened, at 90° to the sliding axis. Guide width of folding packages (including wall connection) for left-hand or right-hand systems with a maximum shutter thickness of 32 mm (1 17/64 inches):

- 2 panels: 176 mm (6 15/16 inches) (+74 mm (2 29/32 inches))
- 4 panels: 408 mm (1'4 1/16 inches) (+74 mm (2 29/32 inches))
- 6 panels: 640 mm (2'1 7/32 inches) (+74 mm (2 29/32 inches))

57 mm (2 1/4 inches) need to be added for right-hand partial systems that are a component of an overall symmetrical or asymmetrical system. (The driver is the protection profile actuator).

Folding sliding shutters in the wind

Wind is an unavoidable element of façade construction and worthy of special attention, especially in connection with folding sliding shutters. Hawa Frontego 30 Matic is able to resist strong wind pressure both when open and closed thanks to integrated wind supports.

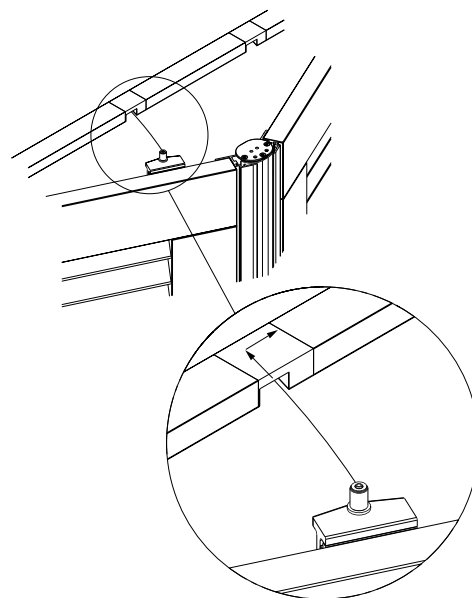


The slightly open folding packet resists even the most adverse wind conditions.

Security and locking

Hawa Frontego 30 Matic is a tried and tested, reliable system offering the greatest possible security.

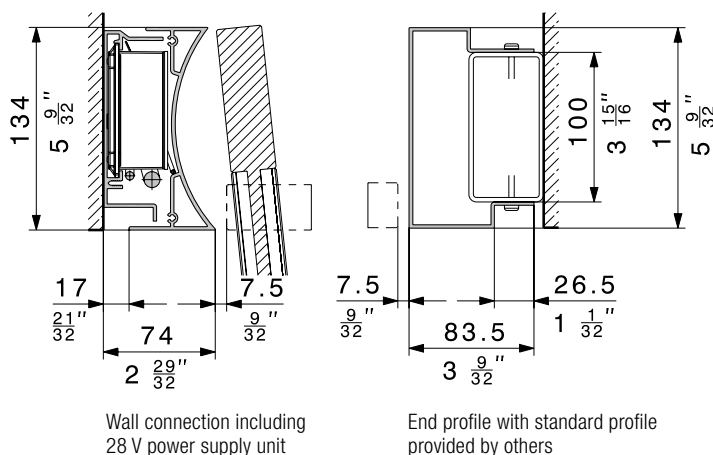
- The system stops and reverses when it encounters an obstacle
- Robust, burglar-deterrent engineering and self-locking drive
- Optional integration of sun and wind detectors
- Shutters can be blocked in any position top and bottom
- The system is automatically locked when in the closed position



The entry pieces lock the system firmly when it is closed

Wall connection and opposite side

The wall connection profile has room for the 28 V power supply unit; together with the one-sided screen profile it provides for a high degree of security as well as protection against crushing and light intrusion. An optional end profile for the opposite side in combination with a standard profile (provided by others) compensates structural differences in dimensions to achieve a uniform façade appearance.

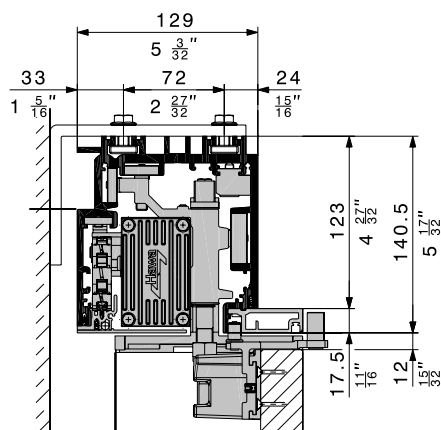


Wall connection including 28 V power supply unit

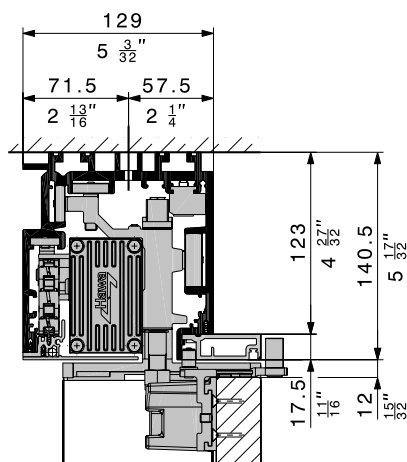
End profile with standard profile provided by others

Top track

The top track for the Hawa Frontego 30 Matic is designed for ceiling and wall mounting. Attachment points are required at least every two metres. The top track is easily installed with hammer head bolts (28/15) thanks to integrated T-grooves. Drilling the top tracks to anchor sleeves is also a convenient fastening method.



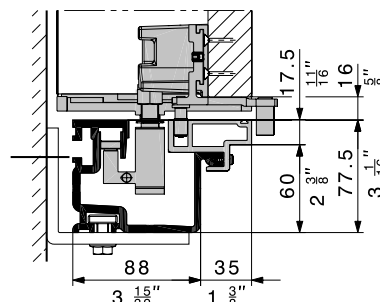
Wall mounting with brackets and hammer head bolts provided by others



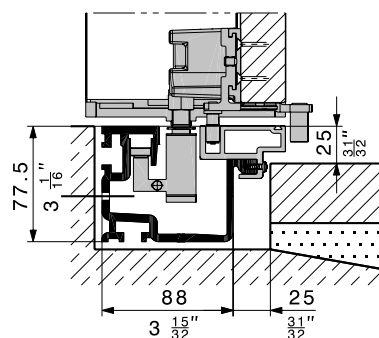
Ceiling mounting with anchors

Bottom guide

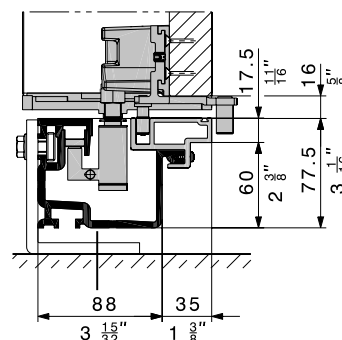
The bottom guide is designed for either wall mounting or countersinking in the floor. A removable floor plate can be used to reduce the distance between floor and guide channel. Attachment points are required at least every two metres. The guide channel is easily installed with hammer head bolts (28/15) thanks to integrated T-grooves. Drilling the guide channels to anchor sleeves is also a convenient fastening method. The guide channel is crush-resistant and therefore safe and stable to stand on.



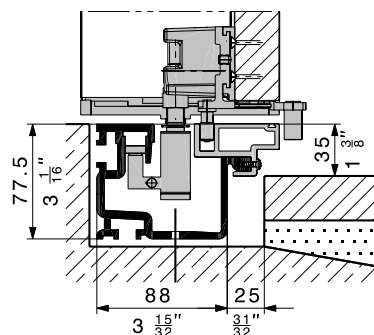
Wall mounting with brackets and hammer head bolts provided by others



Wall mounting with anchor, removable floor plate



Floor mounting with brackets and hammer head bolts provided by others

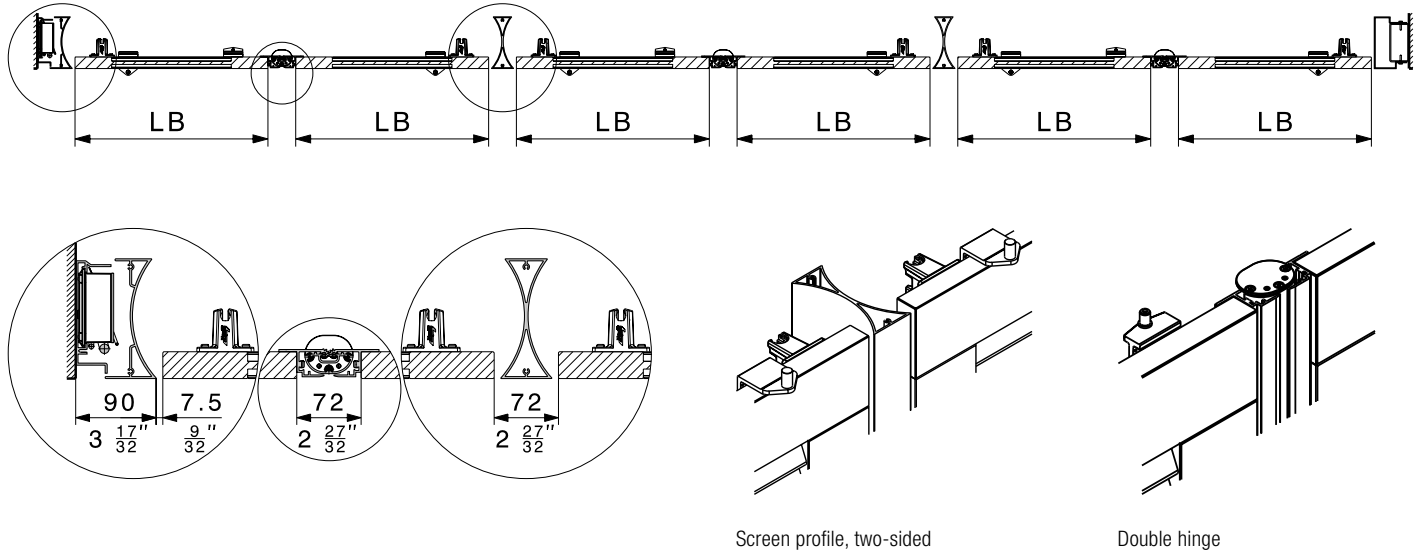


Floor mounting with anchor, fixed floor plate

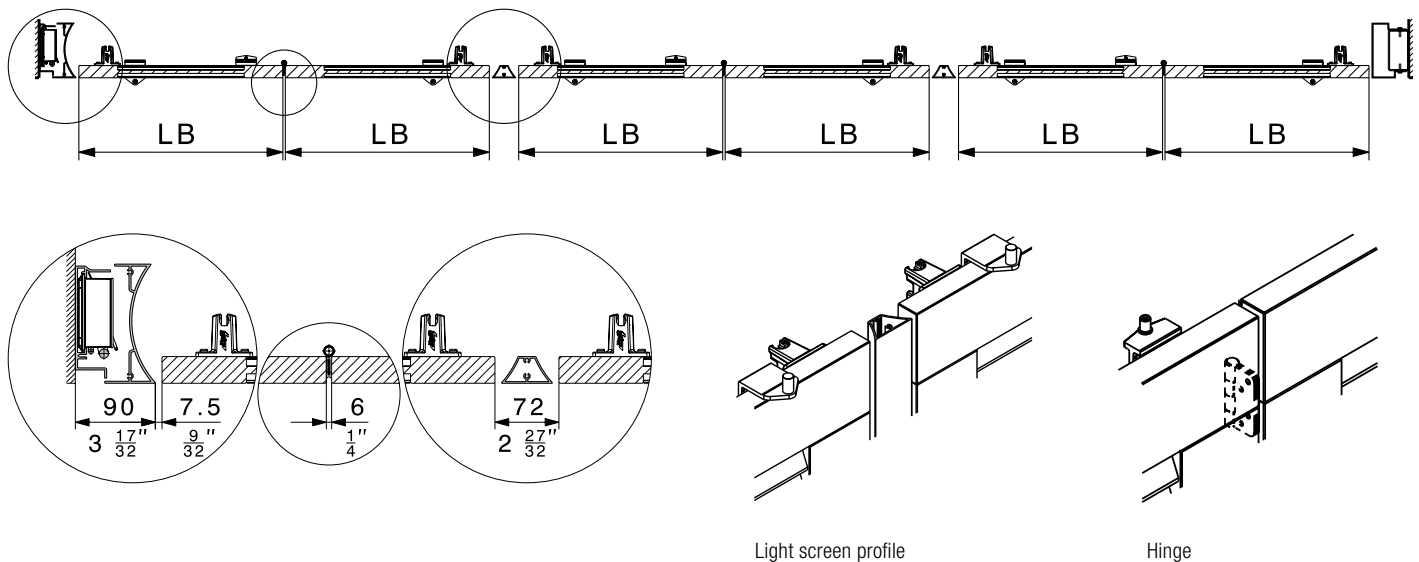
Screen profile, double hinge and hinge

The screen profile not only optimises shading but also provides the best possible crush protection in conjunction with the double hinge for the greatest possible crush protection for walk-in systems. The economically favourable hinges and light screen profiles can be used for non-walk-in systems. In the interest of a uniform façade appearance, however, walk-in and non-walk-in systems should not be combined.

Walk-in system



Non-walk-in system



Proof of resistance to wind/climatic impact

Hawa Frontego 30 Matic was tested and certified by ift Rosenheim/ Germany as follows:

- System: 6 panel, guided
- Folding sliding shutter weight: 30 kg (66 lbs.)
- Folding sliding shutter dimensions: 550 mm x 2322 mm*
- System dimensions: 3620 mm x 2610 mm

* The test was carried out with corrected wind loads for a maximum folding sliding shutter size of 600 mm x 3200 mm.

Resistance to wind loads

- Test report 11-002875-PR01
- Class 6*
- ift Rosenheim, 17 January 2013

* Tested for Wind Class 8; not a wind resistance class as per product standard.

Resistance to dynamic wind loads

- Test report 11-002875-PR01
- Angle of incidence 90°, shutters closed: 35 m/s (approx. 126 km/h = approx. 78 miles/h)*
- Angle of incidence 0°, shutters open: 35 m/s (approx. 126 km/h = approx. 78 miles/h)*
- ift Rosenheim, 17 January 2013

* Maximum wind speed at the test institute.

Wind classes

| Wind class | 1 | 2 | 3 | 4 | 5 | 6 | [8] ⁽¹⁾ |
|---|------|------|------|------|------|------|--------------------|
| Wind speed in m/s | 9.0 | 10.7 | 12.8 | 16.7 | 21.0 | 25.6 | 35.0 |
| Wind speed in km/h | 32.5 | 38.5 | 46.0 | 60.0 | 76.0 | 92.0 | 126.0 |
| Rated test pressure in accordance with SN EN 13659 N/m ² | 50 | 70 | 100 | 170 | 270 | 400 | 750 |
| Safety test pressure in N/m ² | 75 | 100 | 150 | 250 | 400 | 600 | 1125 |
| Wind strength in accordance with Beaufort | 5 | 6 | 7 | 8 | 9 | 10 | 12 |

⁽¹⁾ Not a wind resistance class as per product standard.
Certified by ift Rosenheim..

Functionality test under climatic impact

- Test report 11-002875-PR01
- Stress test 1: 5 cycles -20 °C / +60 °C
- Stress test 2: 5 cycles room temperature / +70 °C (irradiation)
- ift Rosenheim, 17 January 2013

Test in accordance with VFF pamphlet KB.01

Hardware system for power-operated folding sliding shutters in accordance with VFF pamphlet KB.01.

- Test report 13-001578-PR02
- Protection class 3 suitable for uses in accordance with VFF pamphlet KB.01
- ift Rosenheim, 7 October 2013

Planning/installation

Advice and installation through authorised installers.
Please contact Hawa for further information.



New design options for façades:

Hawa Aperto 60 H for stackable wooden sliding shutters up to 60 kg (132 lbs.).

The principle

No matter how beautiful sliding hardware may be, it can at times be desirable to see slightly less of it. This is where Hawa Aperto 60 H fits in perfectly. The system closes flush to provide a smooth cover over large glazed areas, allowing the shutters to be stacked away with ease and elegance. They offer no working surface for the wind when stacked parallel to the façade. However, they can also be stacked at a space-saving 90° to the running direction, for instance in a balcony alcove. Hawa Aperto 60 H is tremendously flexible and thus virtually predestined for individual designs and special solutions. Please feel welcome to contact us – we will be pleased to help you to implement your ideas.

The benefits

- The first system on the market of parallel or 90° stacking wooden sliding shutters
- Provides shade for even the broadest window frontages
- Installations present a flush front when closed
- Excellent running characteristics, shutters can be moved individually and positioned anywhere
- Flexible, individual and durable design using corrosion-resistant materials



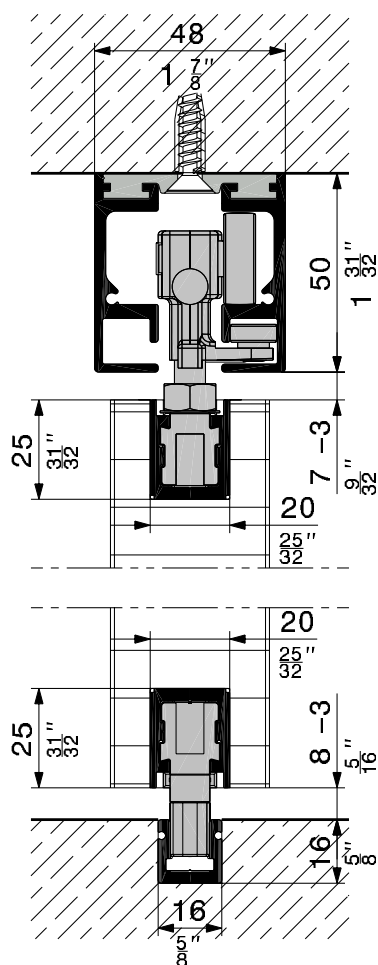
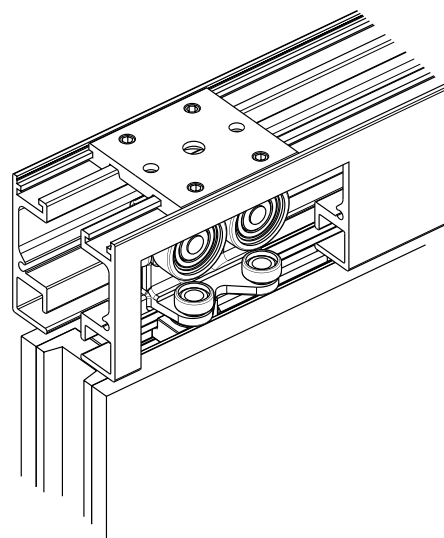
Example stacking parallel to the slide axis:
Optimal space utilisation.



Example stacking 90° to the slide axis:
The shutters run in front of the parapet and provide shade on the balcony.



Subject to modification. Metric specifications are exact. Inches are approximate.



Subject to modification. Metric specifications are exact. Inches are approximate.



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