

New



Catalogue extract

HAWA-Frontslide 60–100–140



Contents

HAWA-Frontslide 60

HAWA-Frontslide 60/A	8
HAWA-Frontslide 60/A lower top track	12
HAWA-Frontslide 60/A-Symmetric 2	14
HAWA-Frontslide 60/A-Symmetric 2+2	18
HAWA-Frontslide 60/A-Telescopic	22
HAWA-Frontslide 60/B	26
HAWA-Frontslide 60/matic	28
HAWA-Frontslide 60/matic-Symmetric 2	32
HAWA-Frontslide 60/matic-Symmetric 2+2	38
HAWA-Frontslide 60/matic-Telescopic	44

HAWA-Frontslide 100

HAWA-Frontslide 100/A	50
HAWA-Frontslide 100/A lower top track	54
HAWA-Frontslide 100/A-Symmetric 2	56
HAWA-Frontslide 100/A-Symmetric 2+2	60
HAWA-Frontslide 100/A-Telescopic	64
HAWA-Frontslide 100/matic	68
HAWA-Frontslide 100/matic-Symmetric 2	72
HAWA-Frontslide 100/matic-Symmetric 2+2	76
HAWA-Frontslide 100/matic-Telescopic	82

HAWA-Frontslide 140

HAWA-Frontslide 140/A	88
HAWA-Frontslide 140/A-Symmetric 2	92
HAWA-Frontslide 140/A-Telescopic 2	96
HAWA-Frontslide 140/matic	100
HAWA-Frontslide 140/matic-Symmetric 2	104
HAWA-Frontslide 100/matic-Telescopic 2	108
HAWA-Frontslide - Guides	112
HAWA-Frontslide - Locking mechanisms	114

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.)

Description

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

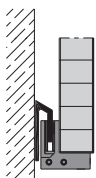
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Features of the HAWA-Frontslide 60/A

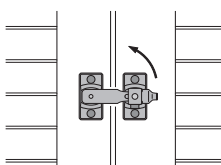
- Maximum sliding shutter weight: 60 kg (132 lbs.)
- Sliding shutter thickness: 28–45 mm ($1\frac{1}{8}$ "– $1\frac{25}{32}$ ")
- Minimum sliding shutter width: 400 mm ($1'3\frac{3}{4}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Corrosion-resistant materials
- Fast and efficient assembly 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)



Guides
→ page 112



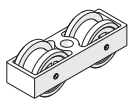
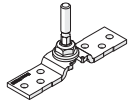
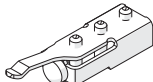
Locking mechanisms
→ page 114



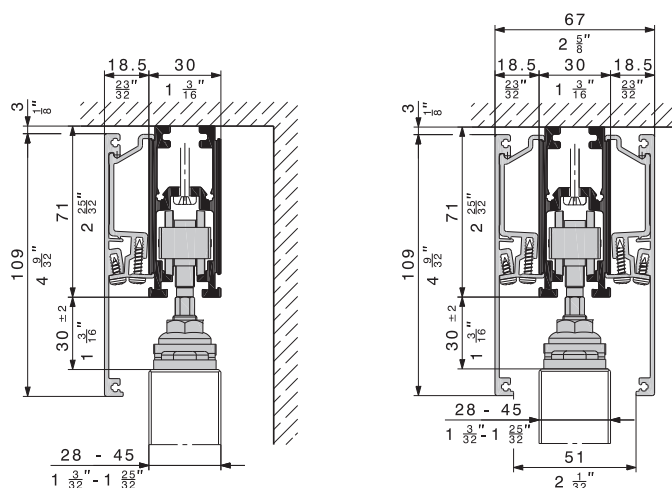
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 60/A, partial set for 1 sliding shutter	25117

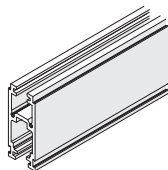

Set comprising

		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

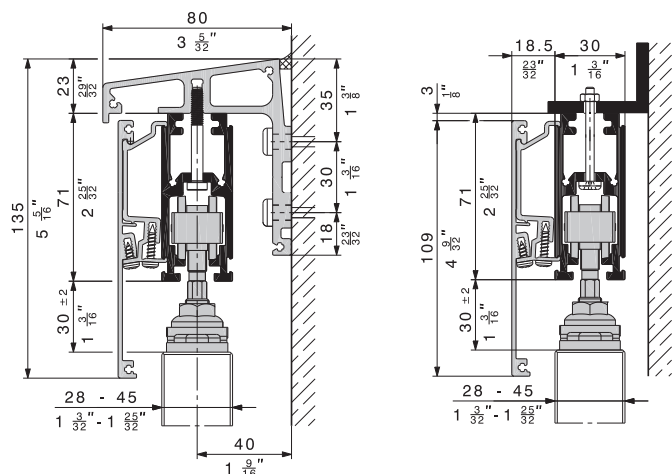
Ceiling or window lintel fitting



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 13/16")	24839
		6000 (19'8 7/32")	24795
		cut to size	24796
	Connecting bolts, set of 6 pieces		17221

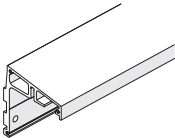


Wall fitting




Angled profile support for one sliding level

Fixing bracket provided by customer

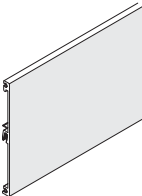


Angled profile support

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.			




Spacer profile for angled profile support for one sliding level

		mm/inch	code
	Spacer profile for angled profile support for one sliding level, alu plain anodized	6000 (19'8 $\frac{7}{32}$ ")	19724
		cut to size	19727

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

Front cover plates

		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 spacer profile, 1 pair	plain anodized	24583
		unanodized	24586

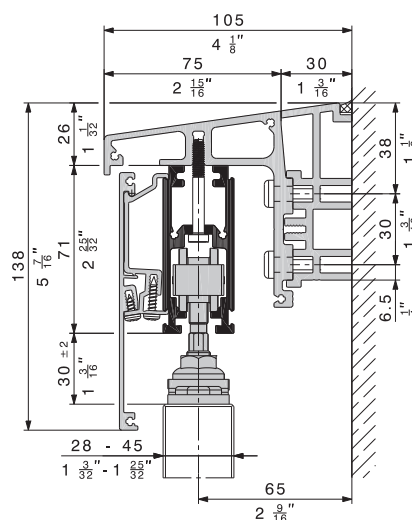
Order specifications

- 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

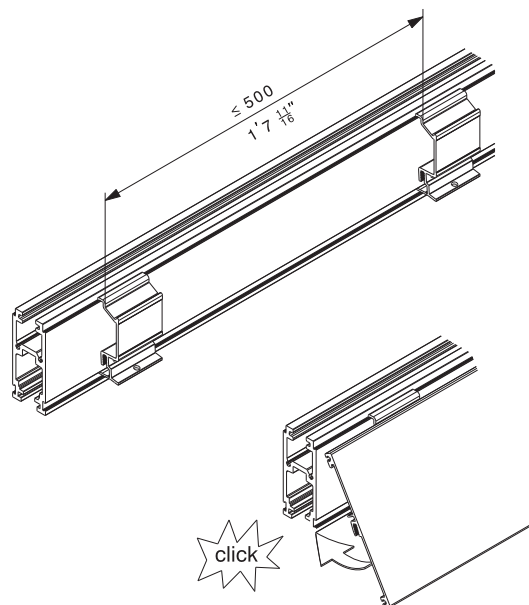
Wall fitting with increased clearance (weatherboard)



Spacer profile for angled profile support for one sliding level

Fitting the covering screens

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



Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

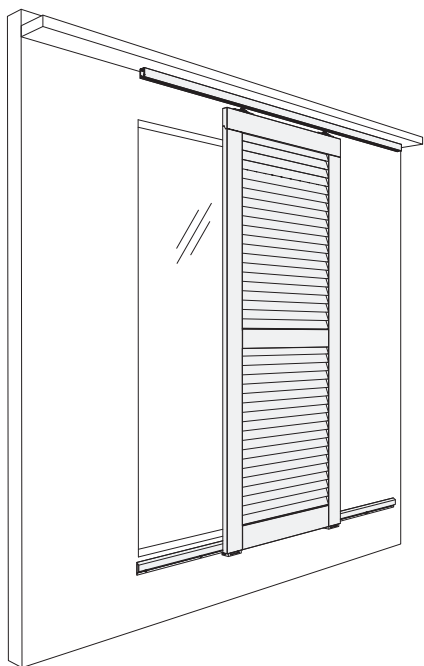
Planning/installation

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



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

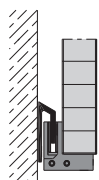
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Features of the HAWA-Frontslide 60/A with lower top track

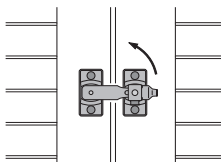
- Maximum sliding shutter weight: 60 kg (132 lbs.)
- Lower top track height: 37 mm ($1\frac{15}{32}$ "
- Minimum sliding shutter thickness: 28 mm ($1\frac{1}{8}$ "
- Minimum sliding shutter width: 400 mm ($1'3\frac{3}{4}$ "
- Maximum sliding shutter height: 3200 mm (10'6")
- Corrosion-resistant materials
- 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)



Guides
→ page 112



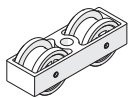
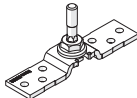
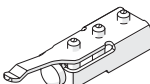
Locking mechanisms
→ page 114



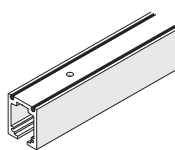

Set without top tracks and bottom guide channels

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

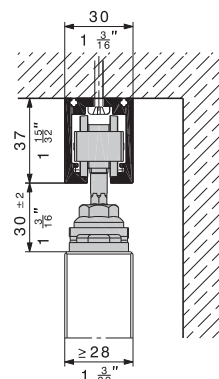
Set comprising

		piece	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

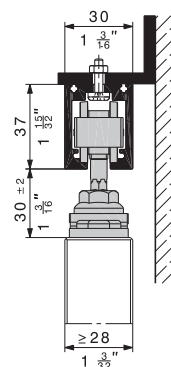
Lower top track

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

Ceiling or window lintel fitting



Wall fitting – solution provided by customer



Fixing bracket provided
by customer

Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

Order specifications

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

Optional order specifications

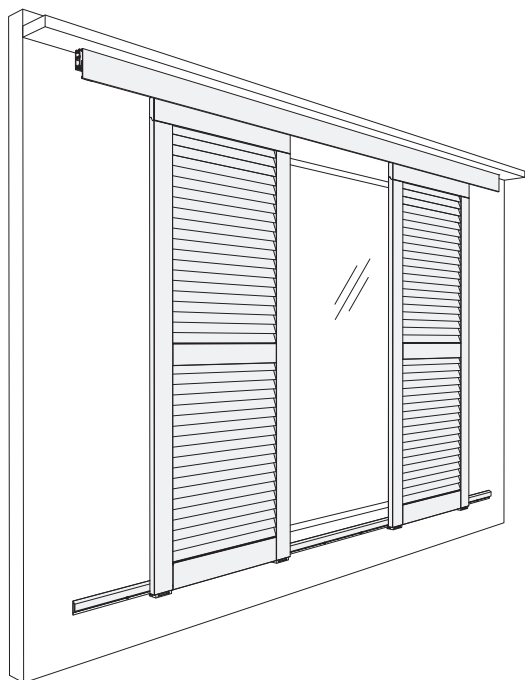
- Number of connecting bolt sets to top tracks
- Number and type of sliding shutter locking mechanisms

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.

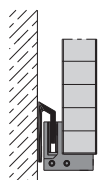
Features of the

HAWA-Frontslide 60/A-Symmetric 2

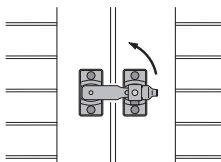
- Maximum sliding shutter weight: 60 kg (132 lbs.)/shutter
- Sliding shutter thickness: 28–45 mm ($1\frac{1}{8}$ – $1\frac{25}{32}$ ")
- Minimum sliding shutter width: 500 mm ($1'7\frac{11}{16}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Maximum installation width: 6000 mm ($19'8\frac{7}{32}$ ")
- Corrosion-resistant materials
- 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)



Guides
→ page 112




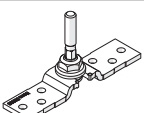
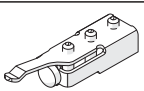
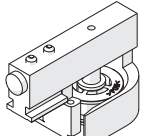
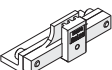
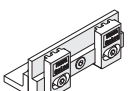
Locking mechanisms
→ page 114



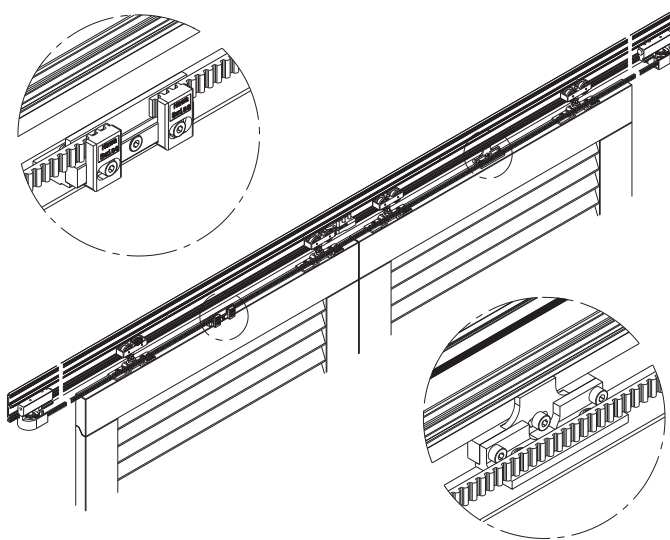
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 60/A-Symmetric 2, partial set for 2 sliding shutters	25118

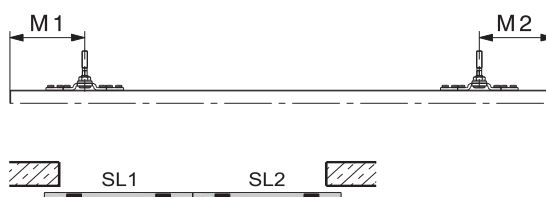
Set comprising

		piece	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 lock and driver

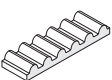


Calculation for suspension points



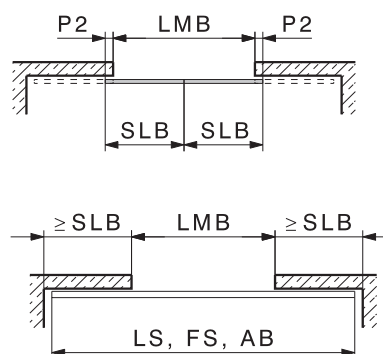
60/A	M1	M2
SL1	150 mm (5 ²⁹ / ₃₂ ")	100 mm (3 ¹⁵ / ₁₆ ")
SL2	100 mm (3 ¹⁵ / ₁₆ ")	150 mm (5 ²⁹ / ₃₂ ")

Toothed belt

		length	code
	Toothed belt, black, fibre glass reinforced	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 / ₂ ")	19669

Length of toothed belt = 2 x top track

Calculation for sliding shutter width

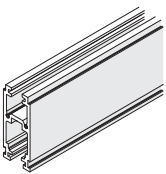



$$SLB = \frac{LMB}{2} + P2$$

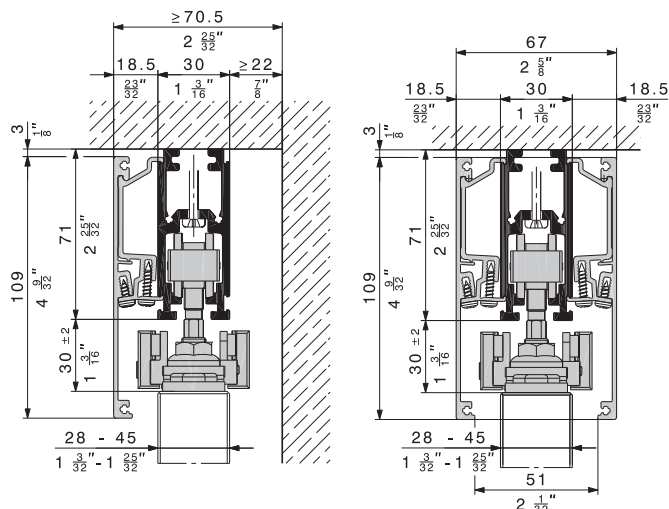
$$LS = LMB + (2 \times SLB)$$

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

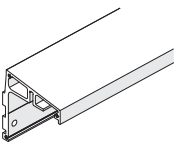


Top tracks for installations with or without covering screens

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

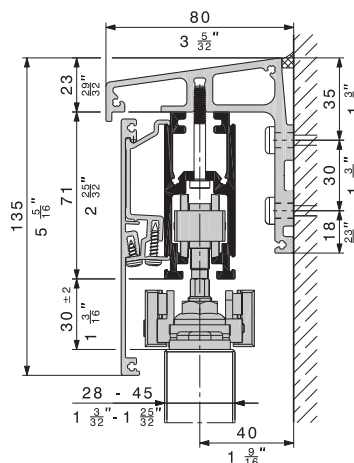
Ceiling or window lintel fitting



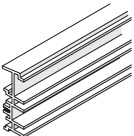
Angled profile support

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
	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.			

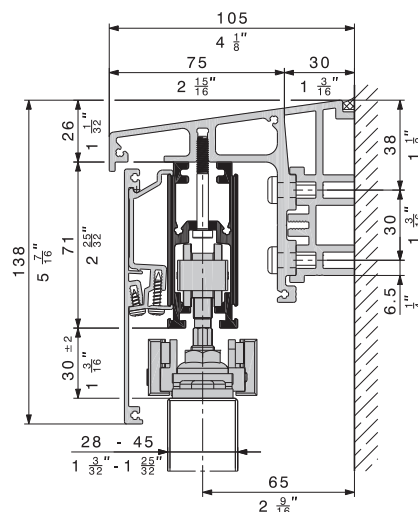
Wall fitting



Spacer profile for angled profile support for one sliding level

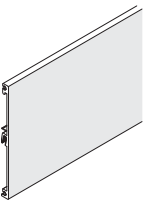
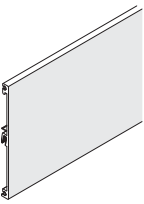


		mm/inch	code
	Spacer profile for angled profile support for one sliding level, alu plain anodized	6000 (19'8 $\frac{7}{32}$ ")	19724
		cut to size	19727

Wall fitting with increased clearance (weatherboard)



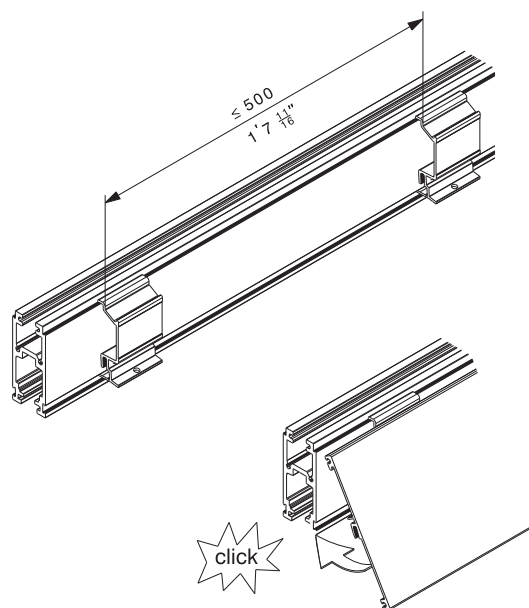
Technische Änderungen vorbehalten.

Covering screens

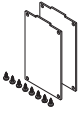
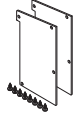

		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 ¹³ / ₁₆ ")	24845
		6000 (19'8 ⁷ / ₃₂ ")	24808
	cut to size		24809
	Covering screens, alu unanodized	6000 (19'8 ⁷ / ₃₂ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting bolts, set of 6 pieces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

Fitting the covering screens

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



Front cover plates

		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, for one sliding levels, without spacer profile, 1 pair	plain anodized	24577
		unanodized	24580
	Front cover plates, for wall fitting, for one sliding levels, with spacer profile, 1 pair	plain anodized	24583
		unanodized	24586

Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

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

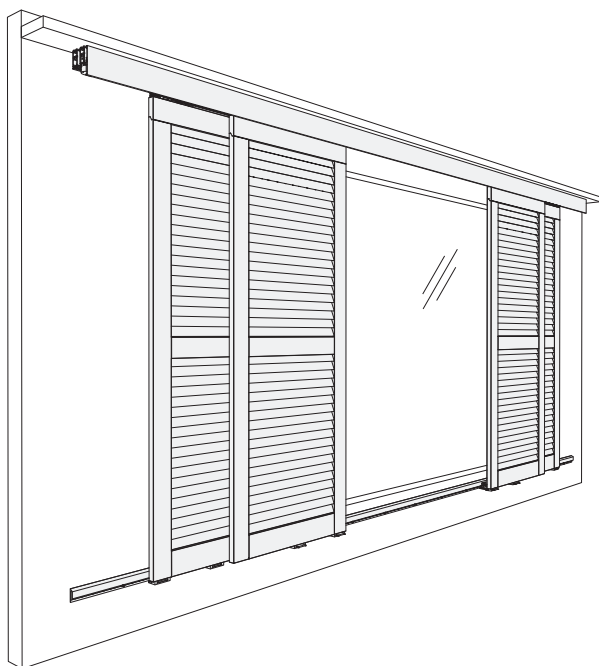
- Number, length and type of spacer profiles for angled profile support
- Number and type of front cover plates
- Number of connecting bolt sets to profiles and covering screens
- Number and type of sliding shutter locking mechanisms

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.

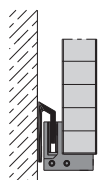
Features of the

HAWA-Frontslide 60/A-Symmetric 2+2

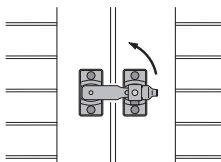
- Maximum sliding shutter weight: 40 kg (88 lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ – $1\frac{19}{32}$ ")
- Sliding shutter width: 550–1000 mm ($1'9\frac{21}{32}$ – $3'3\frac{3}{8}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Maximum installation width: 6000 mm ($19'8\frac{7}{32}$ ")
- Corrosion-resistant materials
- 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)



Guides
→ page 112




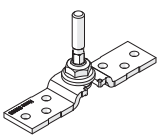
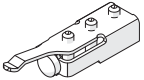
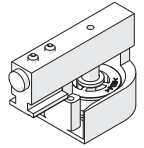
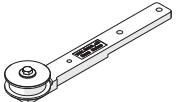
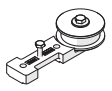
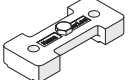
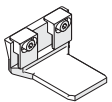
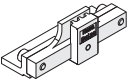
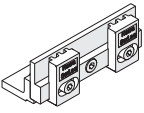
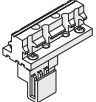
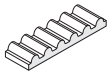
Locking mechanisms
→ page 114



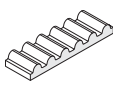
Set without top tracks and bottom guide channels

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

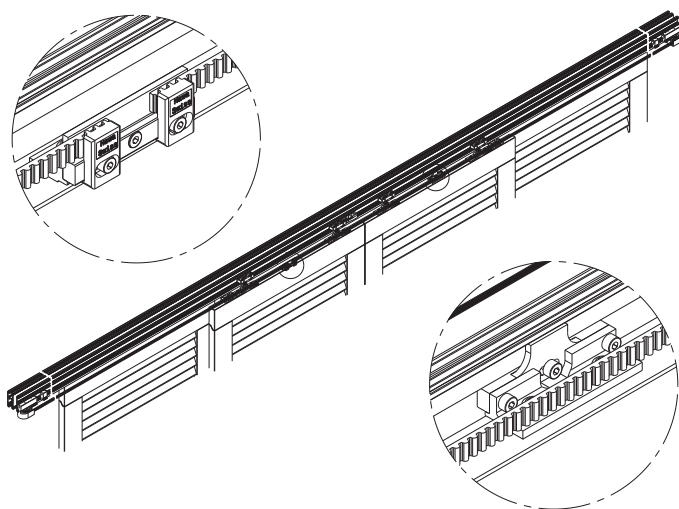
Set comprising

		piece	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	2	24777
	Toothed belt, black, 2,7 m (8'10 $\frac{5}{16}$ "), fibreglass reinforced	2	20208

Toothed belt

	length	code
	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
Length of toothed belt outer sliding level = 2 x top track		

Toothed belt lock and driver

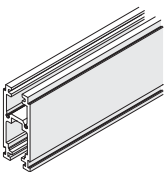



Calculation for suspension points

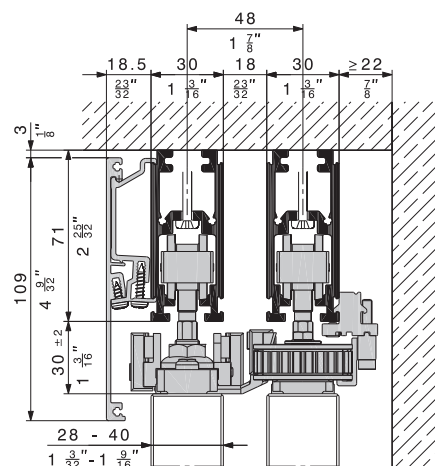


60/A	M1	M2
SL1	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")
SL2	180 mm (7 $\frac{3}{32}$ ")	100 mm (3 $\frac{15}{16}$ ")
SL3	100 mm (3 $\frac{15}{16}$ ")	180 mm (7 $\frac{3}{32}$ ")
SL4	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")

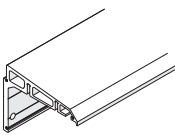
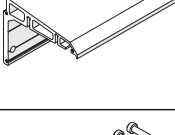


Top tracks for installations with or without covering screens

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

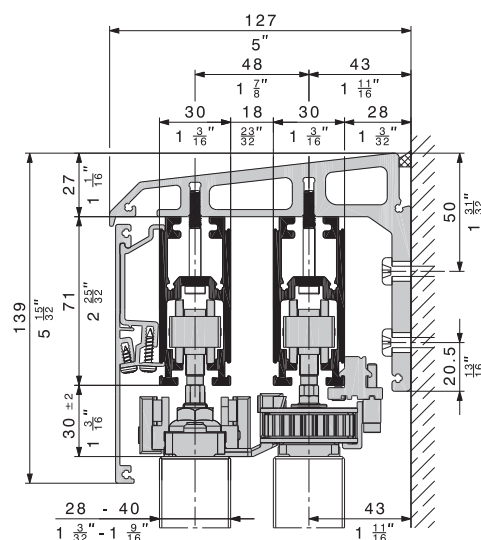
Ceiling or window lintel fitting



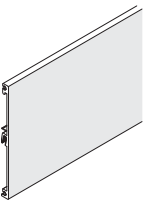
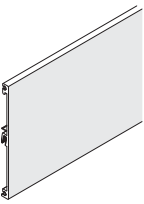


Angled profile support

Caution: Hole positions vary.		mm	code
	Angled profile support for two sliding level, alu plain anodized, predrilled	6000 (19'8 $\frac{7}{32}$ ")	21384
	cut to size		21385
	Angled profile support for two sliding level, 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.			

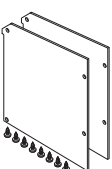
Wall fitting



Covering screens

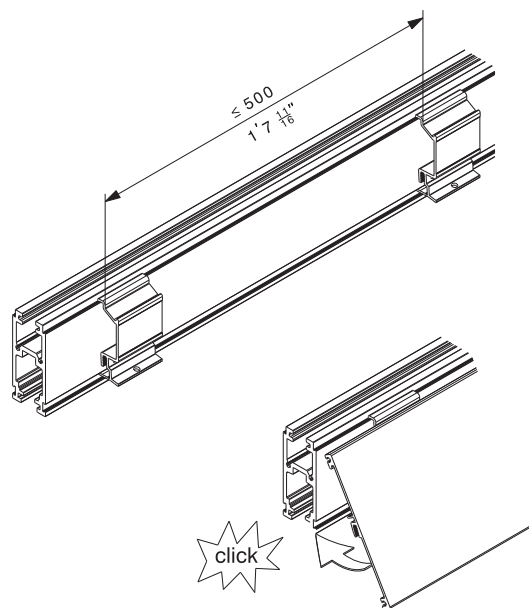
		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 ¹³ / ₁₆ ")	24845
		6000 (19'8 ⁷ / ₃₂ ")	24808
		cut to size	24809
	Covering screens, alu unanodized	6000 (19'8 ⁷ / ₃₂ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting bolts, set of 6 pieces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

Front cover plates

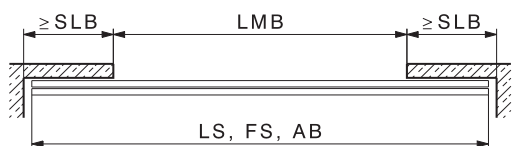
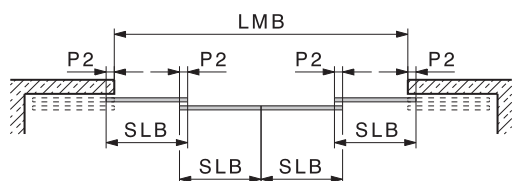
		aluminium	code
	Front cover plates, for wall fitting, for two sliding levels, without spacer profile, 1 pair	plain anodized	24821
		unanodized	24824

Fitting the covering screens

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



Calculation for sliding shutter width



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

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

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

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

Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

Order specifications

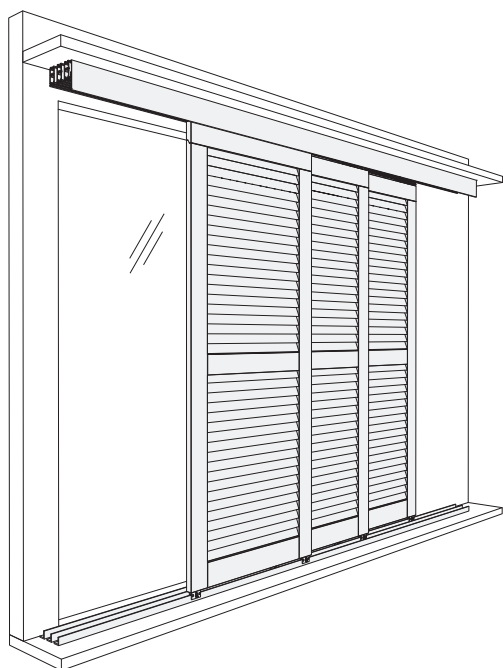
- Number of sets
- Number and length of top tracks
- Number and length of toothed belt
- For wall fittings:
 - Number, length and type of angled profile support
 - Number of **special fixing screw sets**
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number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

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

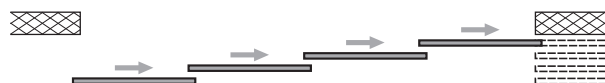
- Max. sliding shutter weight with 2 shutters: 60 kg (132 lbs.)/shutter
- Max. sliding shutter weight with 3 shutters: 60 kg (132 lbs.)/shutter
- Max. sliding shutter weight with 4 shutters: 60 kg (132 lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ – $1\frac{19}{32}$ ")
- Sliding shutter width: 550–1200 mm ($1'9\frac{21}{32}$ – $3'11\frac{1}{4}$ ")
- 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
- 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)



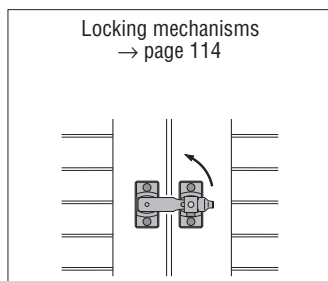
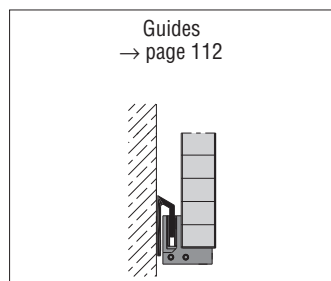
HAWA-Frontslide 60/A-Telescopic 2



HAWA-Frontslide 60/A-Telescopic 3




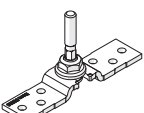
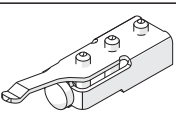
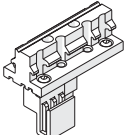
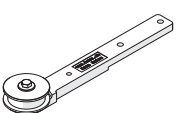
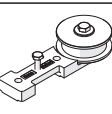
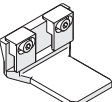
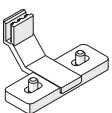
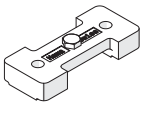
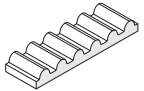
HAWA-Frontslide 60/A-Telescopic 4



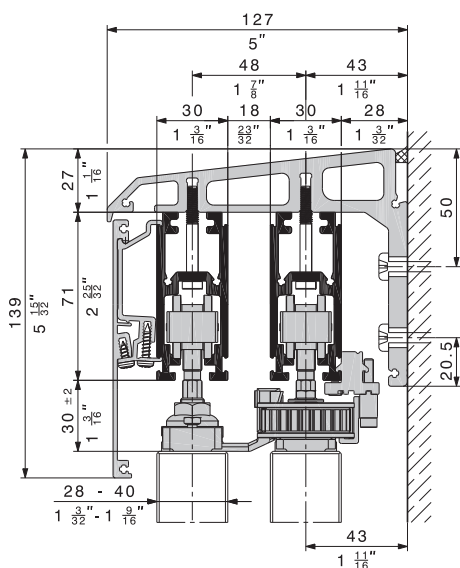
Sets without top tracks and bottom guide channels

	code
HAWA-Frontslide 60/A-Telescopic 2, set for 2 sliding shutters, 550–1200 mm (1'9 ²¹ / ₃₂ "–3'11 ¹ / ₄ ")	25120
HAWA-Frontslide 60/A-Telescopic 3, set for 3 sliding shutters, 550–1200 mm (1'9 ²¹ / ₃₂ "–3'11 ¹ / ₄ ")	25121
HAWA-Frontslide 60/A-Telescopic 4, set for 4 sliding shutters, 550–1200 mm (1'9 ²¹ / ₃₂ "–3'11 ¹ / ₄ ")	25122

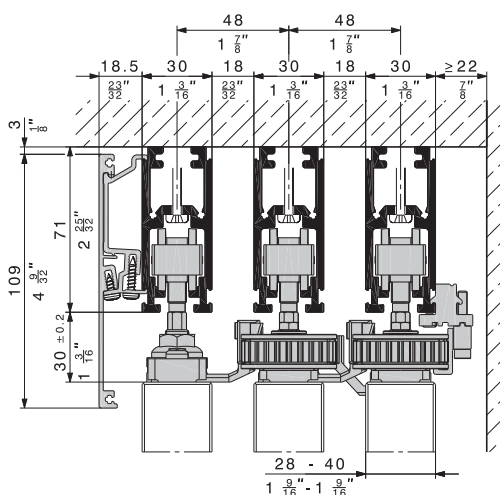
Sets comprising

	25120	25121	25122	code
	4	6	8	17119
	4	6	8	24562
	2	2	2	17027
	1	1	1	24777
	1	2	3	20139
	1	2	3	20140
	1	2	3	20141
	-	1	2	20142
	1	1	1	20246
	1	2	3	20208

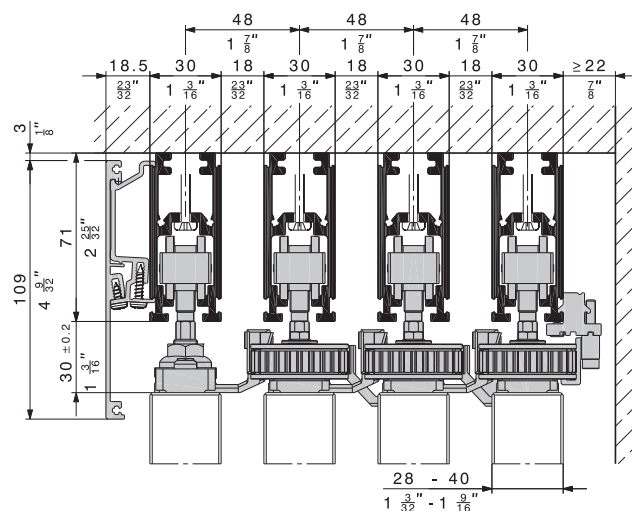
Two sliding shutters of up to 60 kg max. per panel



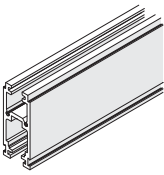

Three sliding shutters of up to 60 kg max. per panel



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

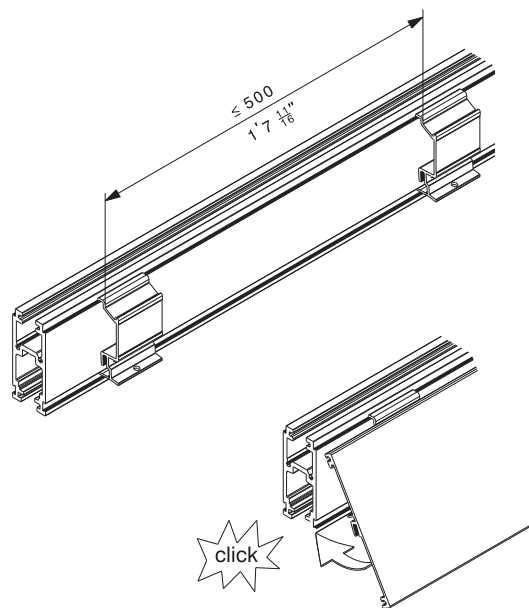


Top tracks for installations with or without covering screens

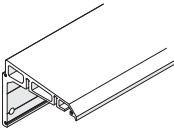
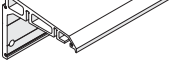


Caution: Hole positions vary.		mm/inch	code
	Top track, alu plain anodized, predrilled	3500 (11'5 ¹³ / ₁₆ ")	24839
		6000 (19'8 ⁷ / ₃₂ ")	24795
		cut to size	24796
	Connecting bolts, set of 6 pieces		17221

Fitting the covering screens

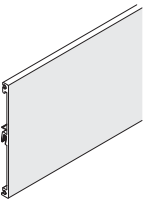



Cover fixings (code 24767) are required for attaching the covering screens.



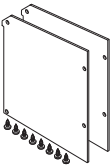
Angled profile support

Caution: Hole positions vary.		mm/inch	code
	Angled profile support for two sliding levels, alu plain anodized, predrilled	6000 (19'8 ⁷ / ₃₂ ")	21384
		cut to size	21385
	Angled profile support for two sliding levels, alu unanodized, predrilled	6000 (19'8 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 metre)		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.			

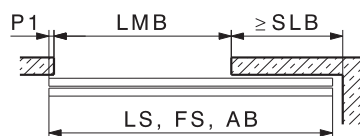
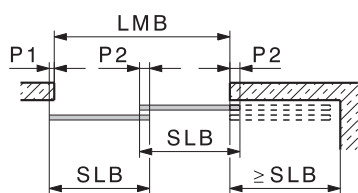
Covering screens

		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

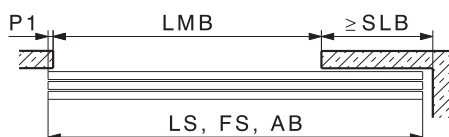
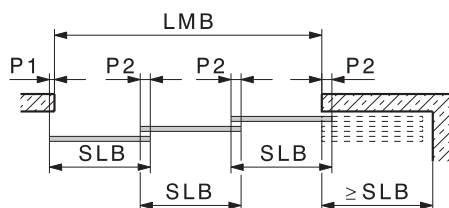
Front cover plates

		aluminium	code
	Front cover plates, for wall fitting, for two sliding levels, without spacer profile, 1 pair	plain anodized	24821
		unanodized	24824

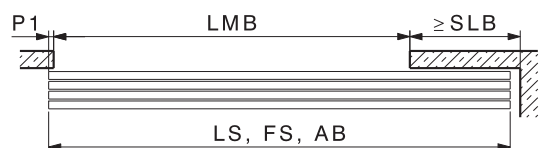
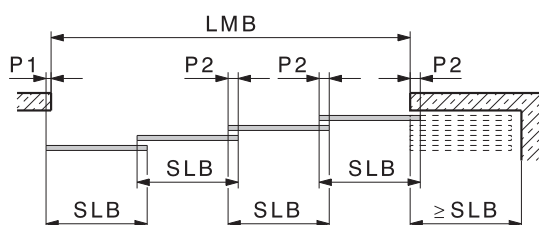
Calculation for sliding shutter width



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



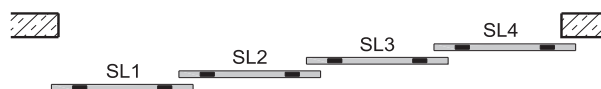
HAWA-Frontslide 60/A-Telescopic 2

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 $\frac{5}{16}$ ")

Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

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

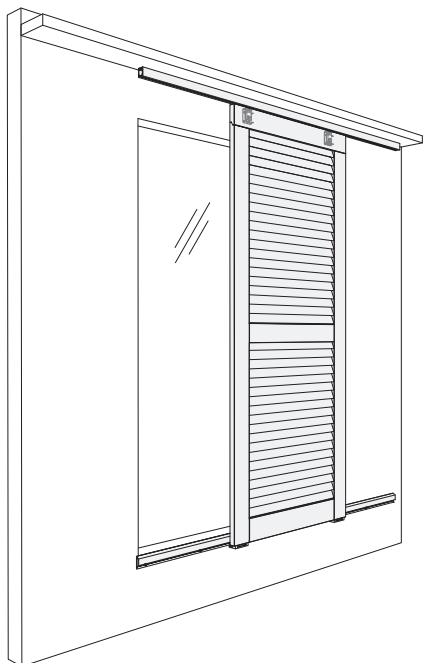
For planning and installation purposes, please use the installation drawings:

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

(→ 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

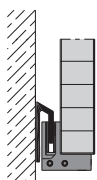
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Features of the HAWA-Frontslide 60/B

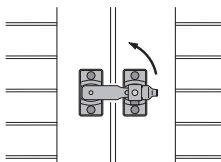
- Minimal installation height thanks to patented suspension cups
- Maximum sliding shutter weight: 60 kg (132 lbs.)
- Lower top track height: 37 mm ($1\frac{15}{32}$ ")
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ "– $1\frac{19}{32}$ ")
- Minimum sliding shutter width: 400 mm ($1'3\frac{3}{4}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- 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)



Guides
→ page 112



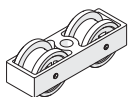

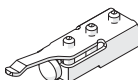
Locking mechanisms
→ page 114



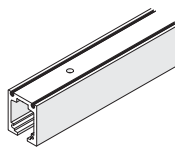

**Set for minimal installation height,
without top tracks and bottom guide channels**

	code
HAWA-Frontslide 60/B, partial set for 1 sliding shutter	19871

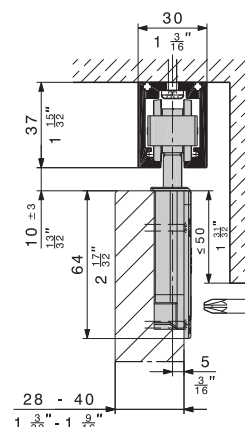
Set comprising

		piece	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

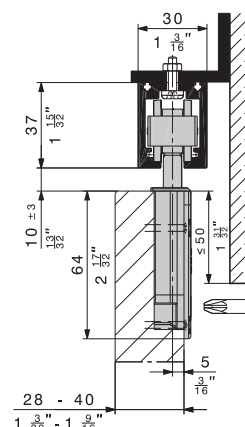
Caution: Hole positions vary.		mm/inch	code
	Lower top track, alu plain anodized, predrilled	2500 (8'2 ⁷ / ₁₆ ")	24842
		6000 (19'8 ⁷ / ₃₂ ")	24802
		cut to size	24803
	Connecting bolts, set of 6 pieces		17221

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

Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

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

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.

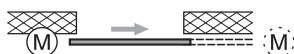
HAWA-Frontslide 60/matic allows maximum flexibility in façade design: various fixing and covering screen options cover virtually all needs.

Applications

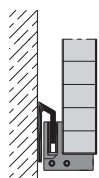
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, or creative frontage designs in residential settings.

Features of the HAWA-Frontslide 60/matic

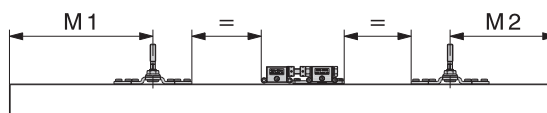
- Maximum sliding shutter weight: 60 kg (132 lbs.)
- Sliding shutter thickness: 28–45 mm ($1\frac{1}{8}$ – $1\frac{25}{32}$ ")
- Minimum sliding shutter width: 600 mm ($1'11\frac{5}{8}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Maximum sliding shutter surface: 6.24 m² (67.167 ft²)
- Maximum 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: → following page



Guides
→ page 112



Calculation for suspension points



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

Drive unit HAWA-Motronic 60

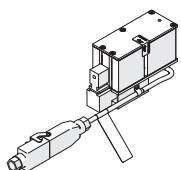
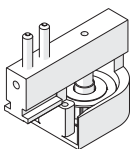
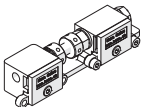

HAWA-Motronic 60 is a drive unit with integrated control for automating sliding hardware with a speed of 100 mm ($3 \frac{15}{16}$ "/s) and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires.

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.

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

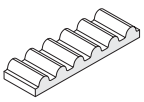
Set comprising

		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

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 ($164' \frac{1}{2}$ ")	19669

Calculation for length of toothed belt:

HAWA-Frontslide 60/matic: 2 x installation width

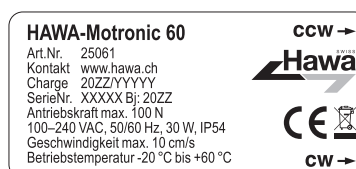
(The toothed belt lock is included with the HAWA-Motronic set 25146)

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 – +60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 100 mm ($3 \frac{15}{16}$ "/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

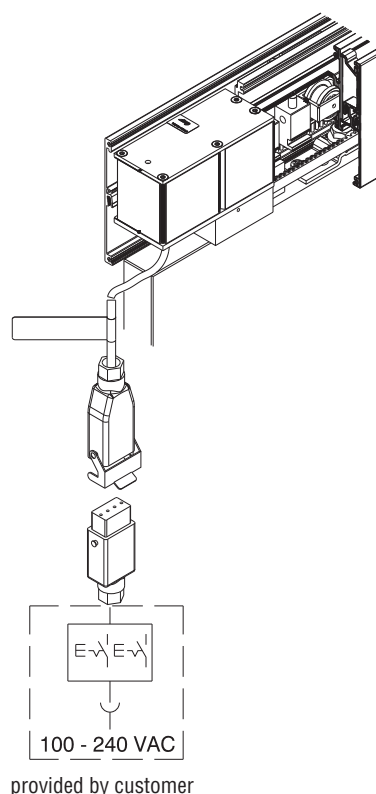
Type label

Every drive unit carries a type label.



Control and operation of the system


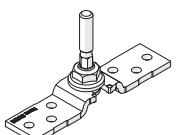
The systems are operated with commercially available electrical switches.



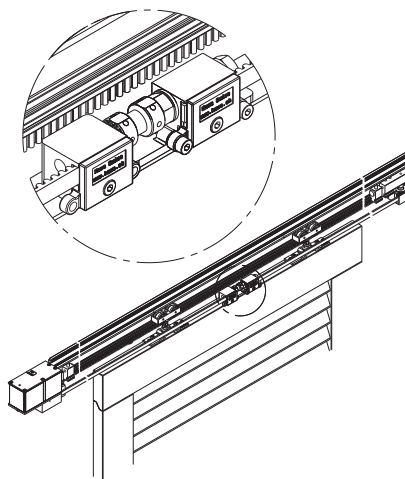
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 60/matic, partial set for 1 sliding shutter	25132

Set comprising

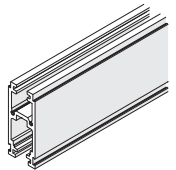

		piece	code
	Two-wheeled trolley, M8, with plastic wheels	2	17119
	Top fixing plate, stainless steel, with hanger bolt M8	2	24562

HAWA-Frontslide 60/matic

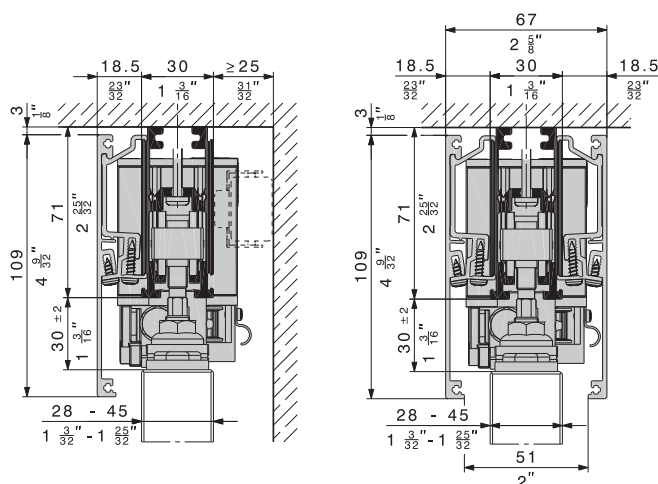


Situation: Toothed belt lock

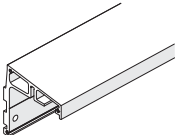


Top tracks for installations with or without covering screens

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
Calculation for length of top track: Length of top track = installation width - 115 mm (4 $\frac{17}{32}$ ") (drive unit)			

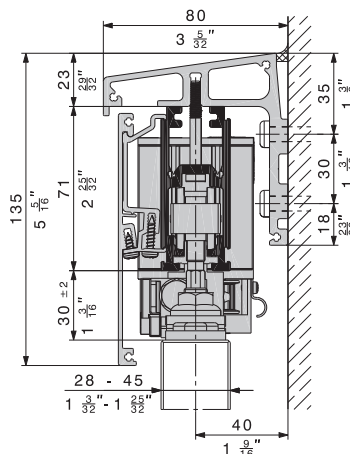
Ceiling or window lintel fitting



Angled profile support

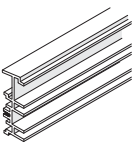
Caution: Hole positions vary.		mm/inch	code
	Angled profile support for one sliding level, alu plain anodized, predrilled	6000 (19'8 $\frac{7}{32}$ ")	21378
		cut to size	21379
	Angled support profile for one sliding level, alu unanodized, predrilled	6000 (19'8 $\frac{7}{32}$ ")	21380
		cut to size	21381
	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.			

Wall fitting

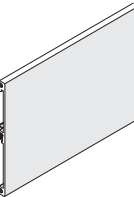





Technische Änderungen vorbehalten.


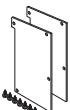

Spacer profile for angled profile support for one sliding level

		mm/inch	code
	Spacer profile for angled profile support for one sliding level, alu plain anodized	6000 (19'8 $\frac{7}{32}$ ")	19724
		cut to size	19727

Covering screens

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

Front cover plates

		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 spacer profile, 1 pair	plain anodized	24583
		unanodized	24586

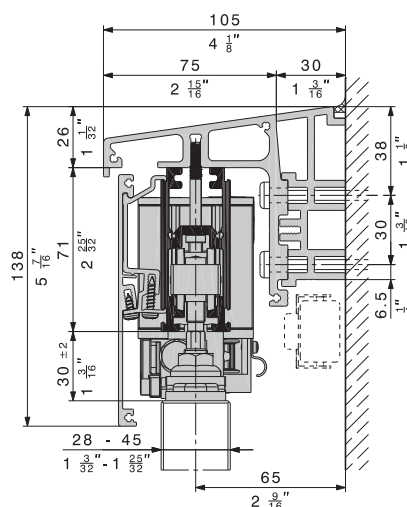
Order specifications

- 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

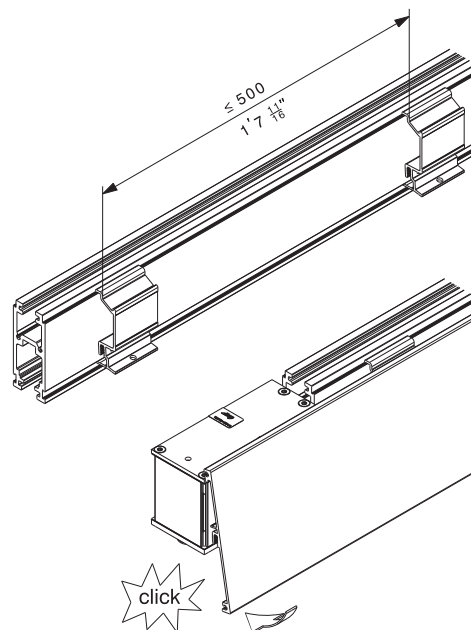
- Number, length and type of spacer profiles for angled profile support
- Number and type of front cover plates
- Number of connecting bolt sets to profiles and covering screens

Wall fitting with increased clearance (weatherboard)



Fitting the covering screens

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



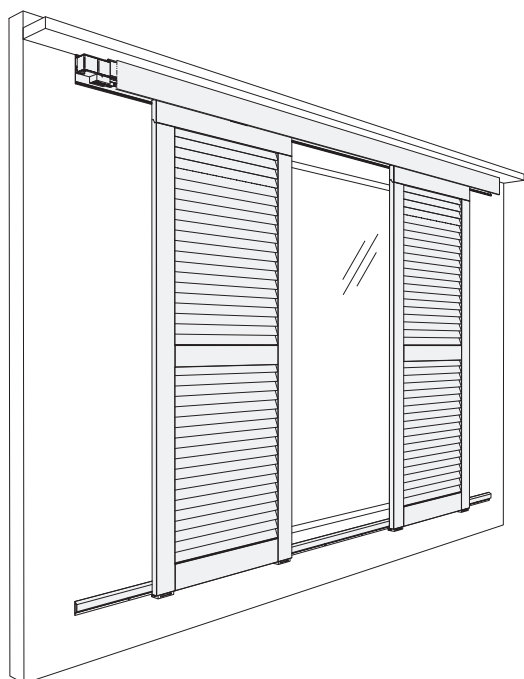
Bottom guides

Bottom guides: → page 112.

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.

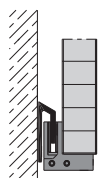
Features of the

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: → following page



Guides
→ page 112



Drive unit HAWA-Motronic 60

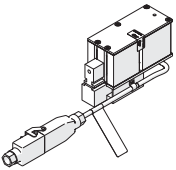
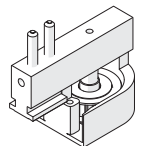
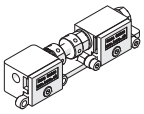

HAWA-Motronic 60 is a drive unit with integrated control for automating sliding hardware with a speed of 100 mm ($3 \frac{15}{16}$ "/s) and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires.

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.

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

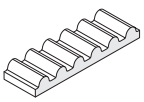
Set comprising

		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

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	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-Symmetric 2: 2 x installation width

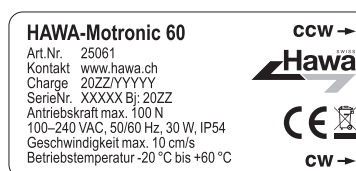
(The toothed belt lock is included with the HAWA-Motronic set 25146)

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 – +60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 100 mm ($3 \frac{15}{16}$ "/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

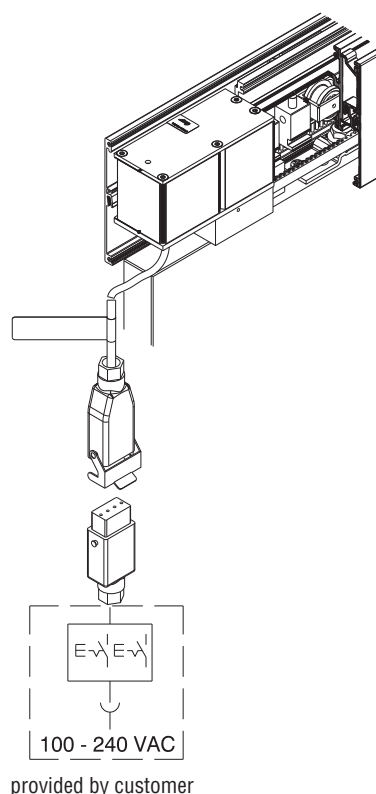
Type label

Every drive unit carries a type label.



Control and operation of the system


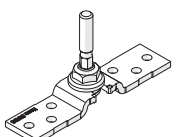
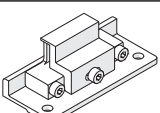
The systems are operated with commercially available electrical switches.



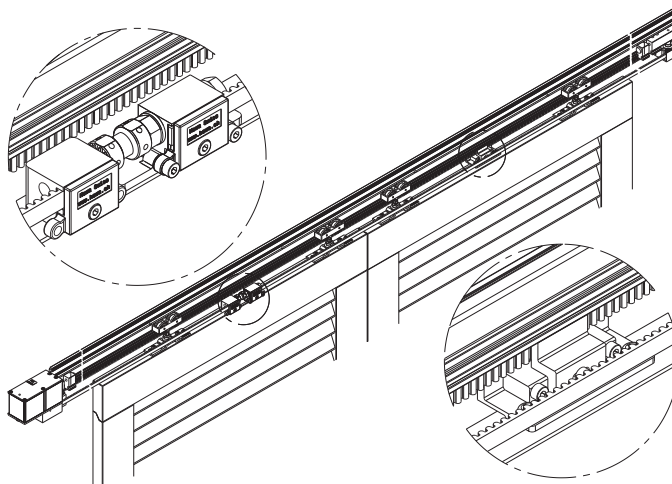
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 60/matic-Symmetric 2, partial set for 2 sliding shutters	25133

Set comprising

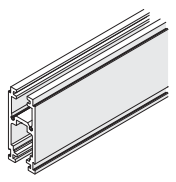

		piece	code
	Two-wheeled trolley, M8, with plastic wheels	4	17119
	Top fixing plate, stainless steel, with hanger bolt M8	4	24562
	Driver for Symmetric installations	1	19655

HAWA-Frontslide 60/matic-Symmetric 2

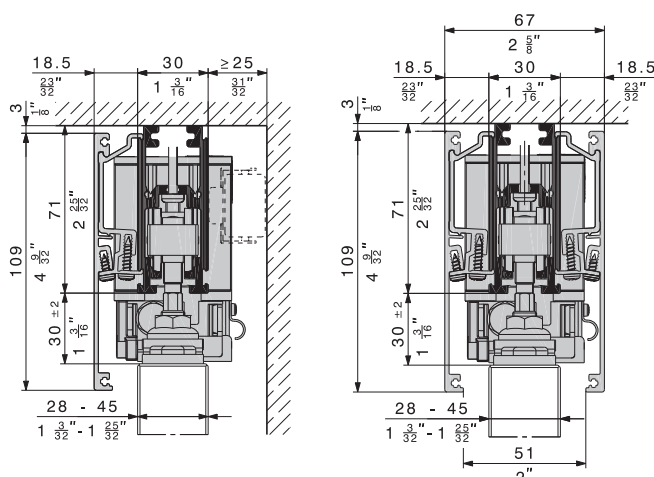


Situation: Toothed belt lock and driver

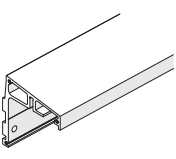
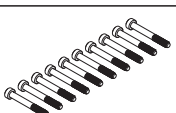

Top tracks for installations with or without covering screens

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
Calculation for length of top track: Length of top track = installation width - 115 mm (4 $\frac{17}{32}$ ") (drive unit)			

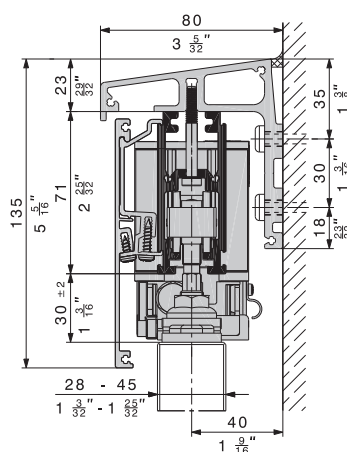
Ceiling or window lintel fitting



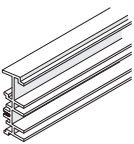
Angled profile support

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 support profile 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.			

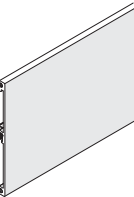



Wall fitting




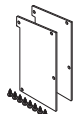

Spacer profile for angled profile support for one sliding level

		mm/inch	code
	Spacer profile for angled profile support for one sliding level, alu plain anodized	6000 (19'8 $\frac{7}{32}$ ")	19724
		cut to size	19727

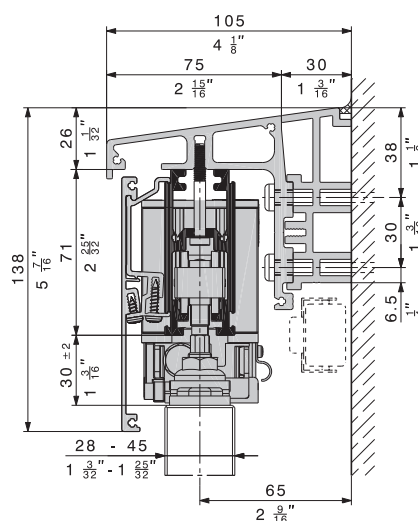
Covering screens

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

Front cover plates

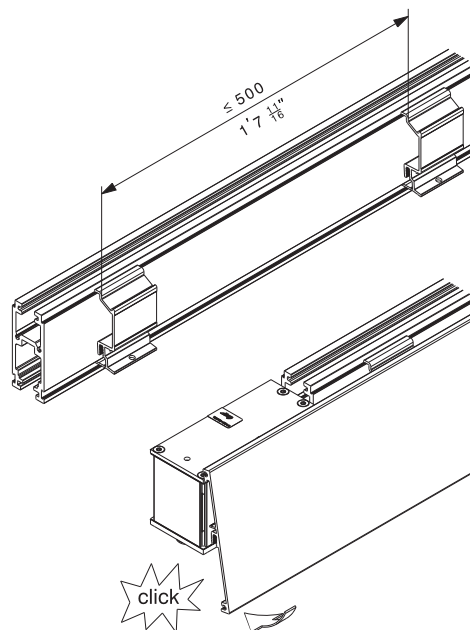
		aluminium	code
	Front cover plates for HAWA-Frontslide 60, for ceiling fitting, 1 pair	plain anodized	24573
		unanodized	24575
	Front cover plates, for wall fitting without spacer profile, 1 pair	plain anodized	24577
		unanodized	24580
	Front cover plates, for wall fitting with spacer profile, 1 pair	plain anodized	24583
		unanodized	24586

Wall fitting with increased clearance (weatherboard)

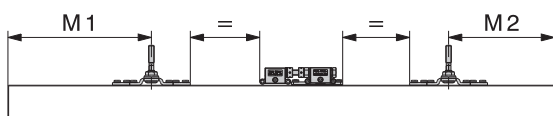


Fitting the covering screens

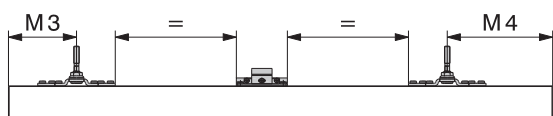
Cover fixings (code 24767) are required for attaching the covering screens.



Calculation for suspension points

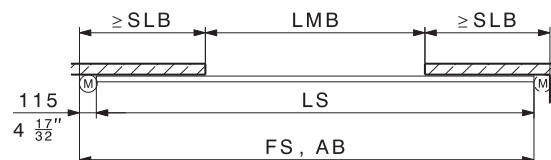
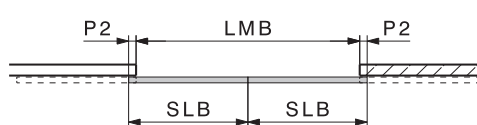


60/matic	M1	M2
SL1	210 mm (8 $\frac{9}{32}$ ")	210 mm (8 $\frac{9}{32}$ ")



60/matic	M3	M4
SL2	100 mm (3 $\frac{15}{16}$ ")	155 mm (6 $\frac{1}{8}$ ")

Calculation for sliding shutter width



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

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

$$FS = LS + 115 \text{ mm } (4 \frac{17}{32} ")$$

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

Bottom guides

Bottom guides: → page 112.

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

Planning/installation

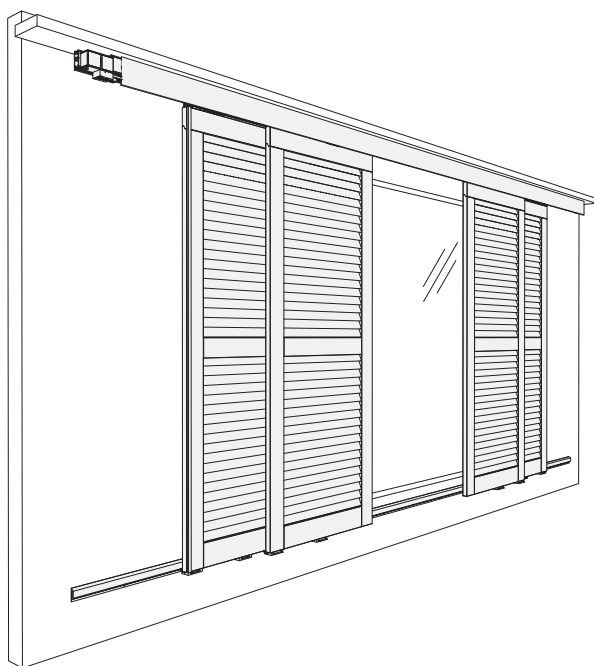
For planning and installation purposes, please use the installation drawing code 24992. (→ www.hawa.ch → HAWA-Productfinder)

Special regulations apply to automated installations; please refer to operating instructions code 24675.

(→ www.hawa.ch → HAWA-Productfinder)

Technische Änderungen vorbehalten.





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.

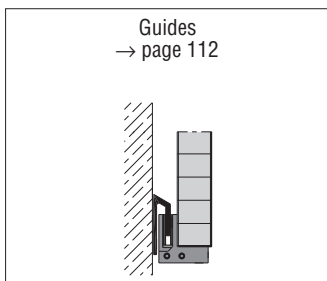
Applications

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 ($1\frac{1}{8}$ – $1\frac{19}{32}$ ")
- Sliding shutter width: 650–1200 mm ($2'1\frac{19}{32}$ – $3'11\frac{1}{4}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- 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: → following page



Drive unit HAWA-Motronic 60

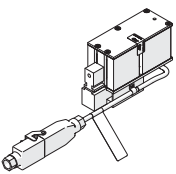
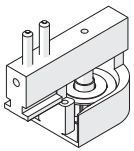
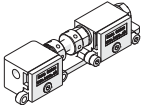

HAWA-Motronic 60 is a drive unit with integrated control for automating sliding hardware with a speed of 100 mm ($3 \frac{15}{16}$ "/s) and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires.

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.

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

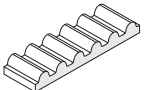
Set comprising

		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

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	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:

Length of toothed belt outer sliding level: 2 x installation width

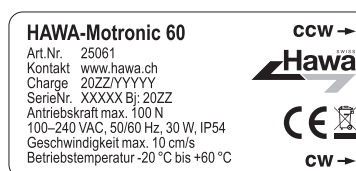
(The toothed belt lock is included with the HAWA-Motronic set 25146)

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 – +60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 100 mm ($3 \frac{15}{16}$ "/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

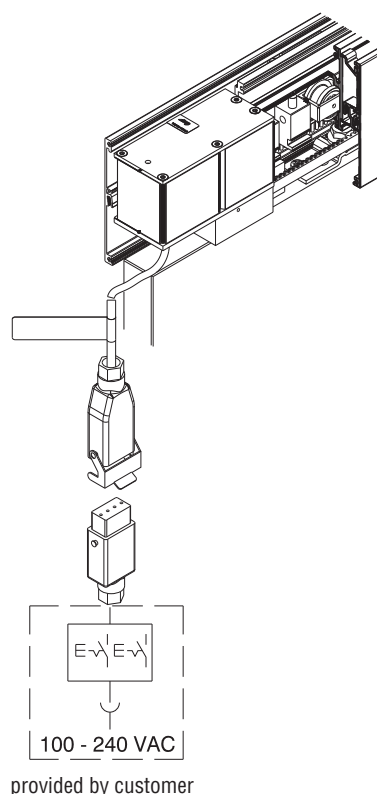
Type label

Every drive unit carries a type label.



Control and operation of the system

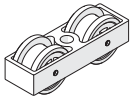
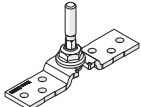
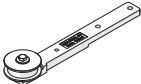
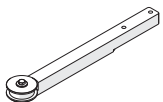

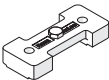
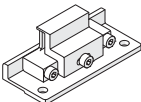



The systems are operated with commercially available electrical switches.



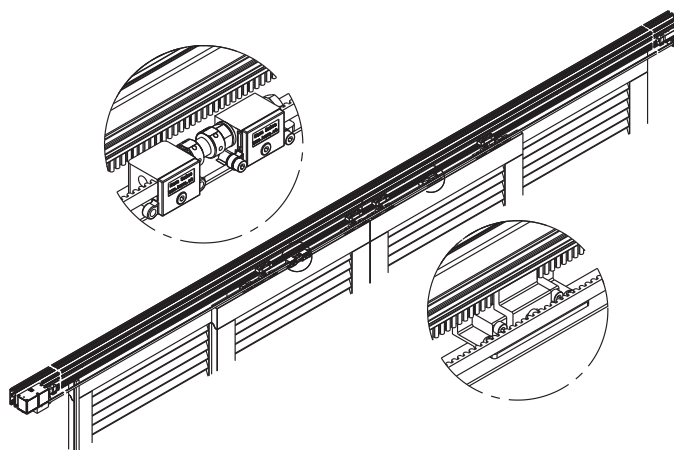
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 60/matic-Symmetric 2+2, partial set for 4 sliding shutters	25134

Set comprising

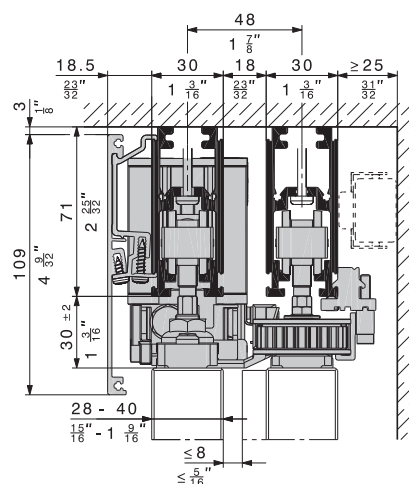
		piece	code
	Two-wheeled trolley, M8, with plastic wheels	8	17119
	Top fixing plate, stainless steel, with hanger bolt M8	8	24562
	Guide pulley wheel, with fixing plate, long	1	20139
	Guide pulley wheel, with fixing plate, extra long for HAWA-Frontslide 60-140/matic-Symmetric 2+2	1	25314
	Guide pulley 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 $\frac{5}{16}$ "), fibreglass reinforced	1	20208
	Toothed belt, black, 5 m (16'4 $\frac{27}{32}$ "), fibreglass reinforced	1	19667

HAWA-Frontslide 60/matic-Symmetric 2+2

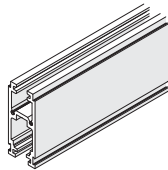



Situation: Toothed belt lock and driver

Ceiling or window lintel fitting



Top tracks for installations with or without covering screens

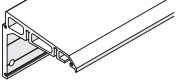



Caution: Hole positions vary.		mm/inch	code
	Top track, alu plain anodized, predrilled	3500 (11'5 $\frac{13}{16}$ ")	24839
		6000 (19'8 $\frac{7}{32}$ ")	24795
		cut to size	24796
	Connecting bolts, set of 6 pieces		17221

Calculation for length of top track:

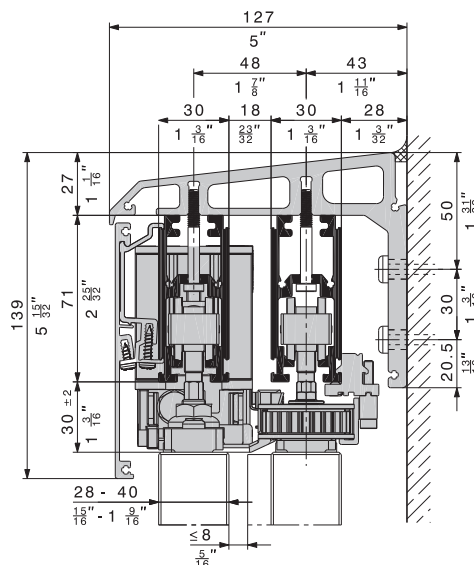
Length of top track outer sliding level = installation width - 115 mm (4 $\frac{17}{32}$ ")
(drive unit)

Length of top track inner sliding level = installation width

Angled profile support

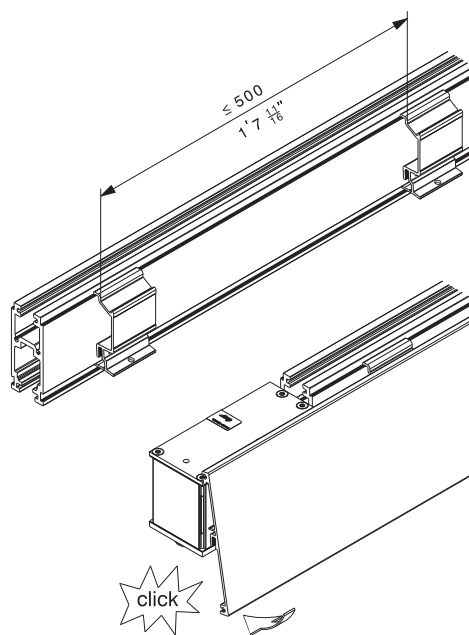
Caution: Hole positions vary.		mm/inch	code
	Angled profile support for two sliding levels, alu plain anodized, predrilled	6000 (19'8 $\frac{7}{32}$ ")	21384
		cut to size	21385
	Angled profile support for two sliding levels, alu unanodized, predrilled	6000 (19'8 $\frac{7}{32}$ ")	21386
		cut to size	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

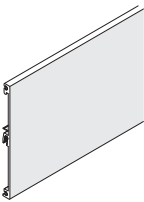
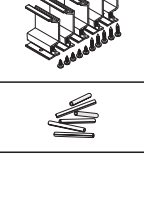

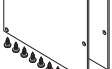


Fitting the covering screens

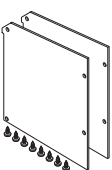
Cover fixings (code 24767) are required for attaching the covering screens.



Covering screens

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

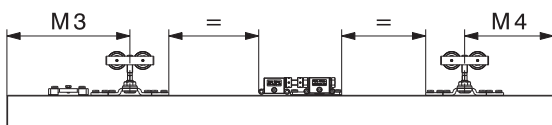
Front cover plates

		aluminium	code
	Front cover plates, for wall fitting, for two sliding levels, without spacer profile, 1 pair	plain anodized	24821
		unanodized	24824

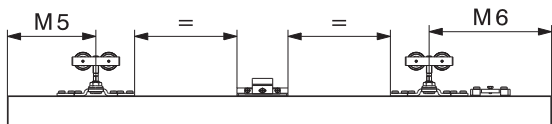
Calculation for suspension points



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 $\frac{15}{16}$ ")

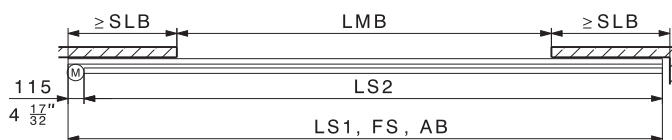
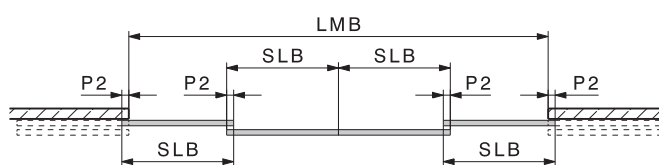


60/matic	M5	M6
SL3	100 mm (3 $\frac{15}{16}$ ")	180 mm (7 $\frac{3}{32}$ ")



60/matic	M7	M8
SL4	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")

Calculation for sliding shutter width



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

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

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

$$LS2 = LS1 - 115 \text{ mm (4 } \frac{17}{32} \text{")}$$

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

Bottom guides

Bottom guides: → page 112.

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.

Features of the

HAWA-Frontslide 60/matic-Telescopic

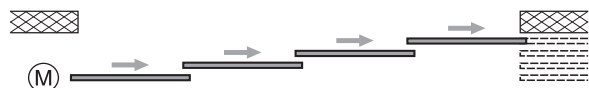
- Max. sliding shutter weight with 2 shutters: 60 kg (132 lbs.)/shutter
- Max. sliding shutter weight with 3 shutters: 50 kg (110 lbs.)/shutter
- Max. sliding shutter weight with 4 shutters: 40 kg (88 lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ – $1\frac{19}{32}$ ")
- Sliding shutter width: 650–1200 mm ($2'1\frac{19}{32}$ – $3'11\frac{1}{4}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- 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: → following page



HAWA-Frontslide 60/matic-Telescopic 2

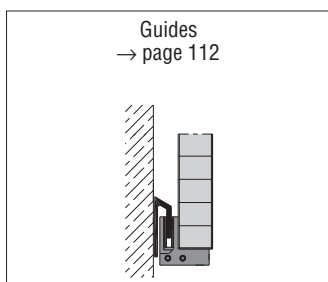


HAWA-Frontslide 60/matic-Telescopic 3



HAWA-Frontslide 60/matic-Telescopic 4

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



Drive unit HAWA-Motronic 60

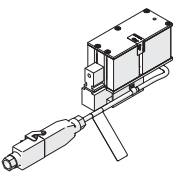
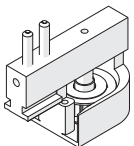
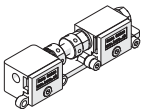

HAWA-Motronic 60 is a drive unit with integrated control for automating sliding hardware with a speed of 100 mm ($3 \frac{15}{16}$ "/s) and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires.

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.

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

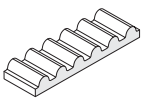
Set comprising

	piece	code
	1	25061
	1	24792
	1	19654
	2	24786

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
	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:

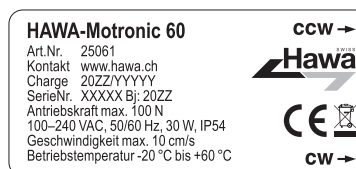
HAWA-Frontslide 60/matic-Telescopic: 2 x installation width
(The toothed belt lock is included with the HAWA-Motronic set 25146)

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 – +60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 100 mm ($3 \frac{15}{16}$ "/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

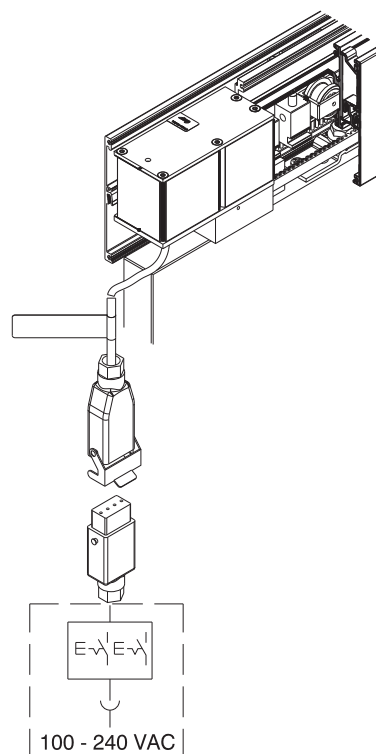
Type label

Every drive unit carries a type label.



Control and operation of the system


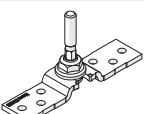
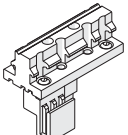
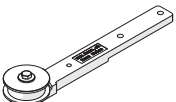
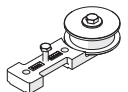
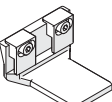
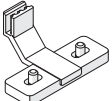
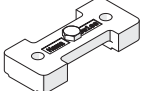
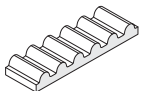
The systems are operated with commercially available electrical switches.



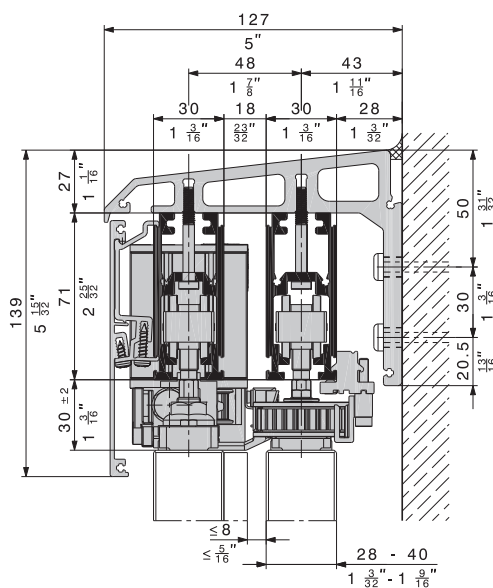
Sets without top tracks and bottom guide channels

	code
HAWA-Frontslide 60/matic-Telescopic 2, 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

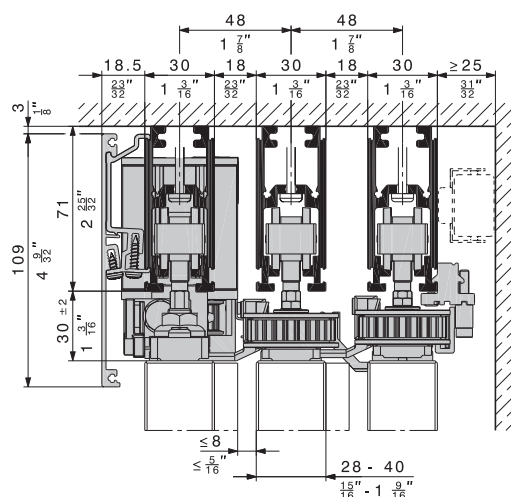
Sets comprising

		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

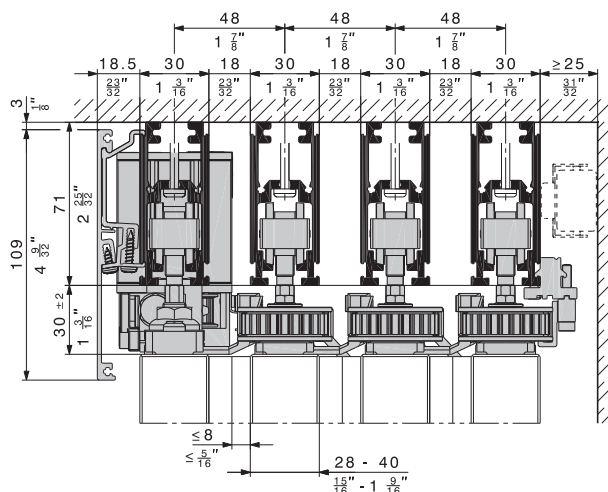
Two sliding shutters of up to 60 kg max. per panel



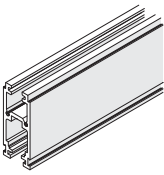

Three sliding shutters of up to 50 kg max. per panel



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

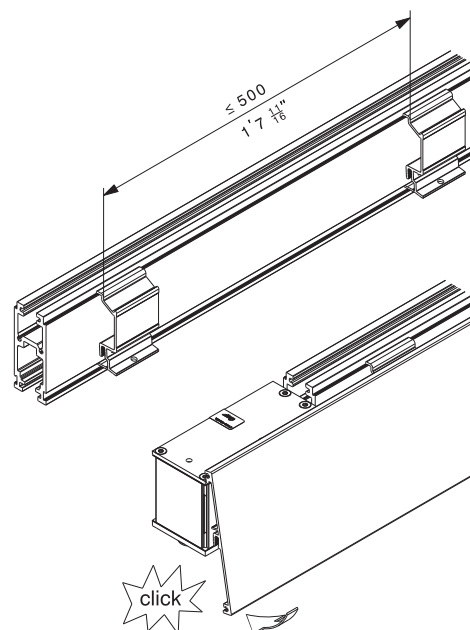


Top tracks for installations with or without covering screens

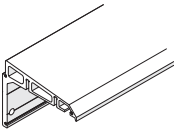
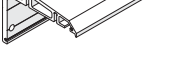


Caution: Hole positions vary.		mm/inch	code
	Top track, alu plain anodized, predrilled	3500 (11'5 ¹³ / ₁₆ ")	24839
		6000 (19'8 ⁷ / ₃₂ ")	24795
		cut to size	24796
	Connecting bolts, set of 6 pieces		17221

Fitting the covering screens

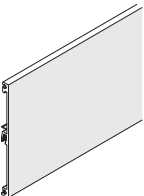



Cover fixings (code 24767) are required for attaching the covering screens.



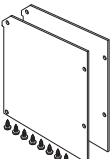
Angled profile support

Caution: Hole positions vary.		mm/inch	code
	Angled profile support for two sliding levels, alu plain anodized, predrilled	6000 (19'8 ⁷ / ₃₂ ")	21384
		cut to size	21385
	Angled profile support for two sliding levels, alu unanodized, predrilled	6000 (19'8 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 metre)		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.			

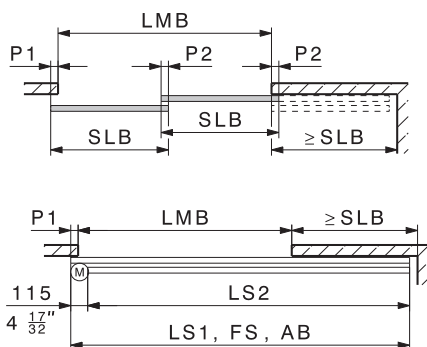
Covering screens

		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

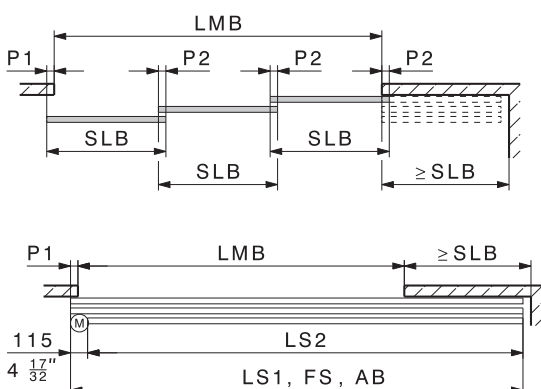
Front cover plates

		aluminium	code
	Front cover plates, for wall fitting, for two sliding levels, without spacer profile, 1 pair	plain anodized	24821
		unanodized	24824

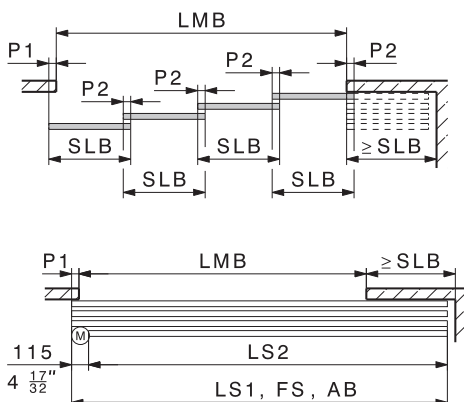
Calculation for sliding shutter width



HAWA-Frontslide 60/matic-Telescopic 2



HAWA-Frontslide 60/matic-Telescopic 3



HAWA-Frontslide 60/matic-Telescopic 4

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

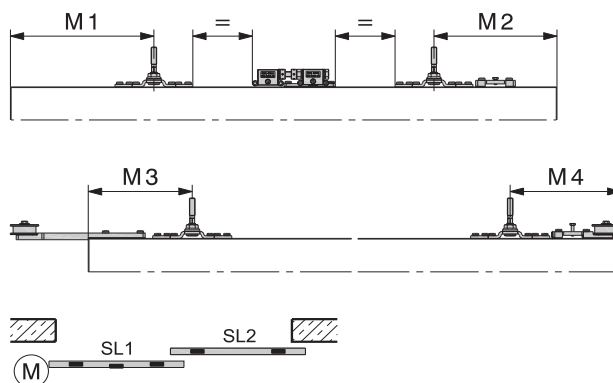
$$P2 \geq 50 \text{ mm (1 31/32)}$$

$$LS1 = LMB + P1 + SLB$$

$$LS2 = LS1 - 115 \text{ mm (4 17/32)}$$

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

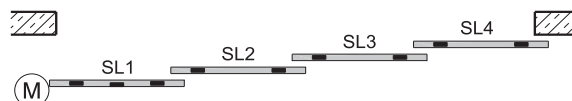
Calculation for suspension points



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)

Bottom guides

Bottom guides: → page 112.

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 code 24994
- HAWA-Frontslide 60/matic-Telescopic 3 code 24995
- HAWA-Frontslide 60/matic-Telescopic 4 code 24996

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





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 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

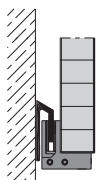
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Features of the HAWA-Frontslide 100/A

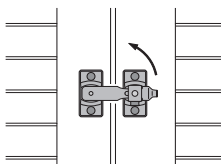
- Maximum sliding shutter weight: 100 kg (220 lbs.)
- Sliding shutter thickness: 28–50 mm ($1\frac{1}{8}$ "– $1\frac{31}{32}$ ")
- Minimum sliding shutter width: 500 mm ($1'7\frac{11}{16}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Corrosion-resistant materials
- Fast and efficient assembly 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)



Guides
→ page 112



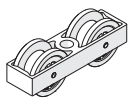
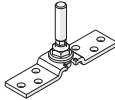
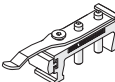
Locking mechanisms
→ page 114



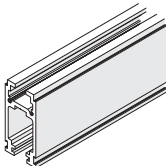

Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 100/A, partial set for 1 sliding shutter	25123

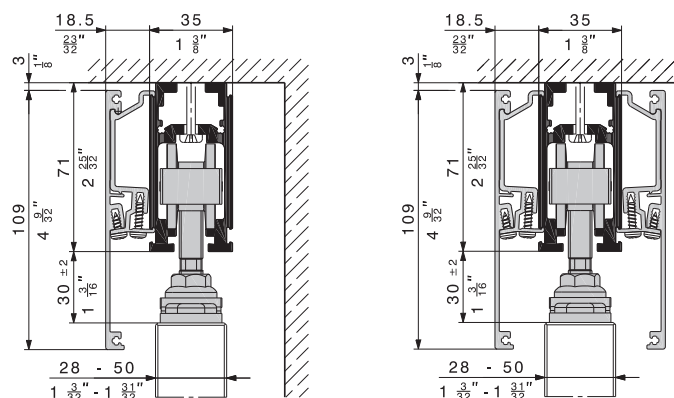
Set comprising

		piece	code
	Two-wheeled trolley, M10, with plastic wheels	2	24552
	Top fixing plate, stainless steel, with hanger bolt M10	2	24564
	Track stop with adjustable retainer	2	24834

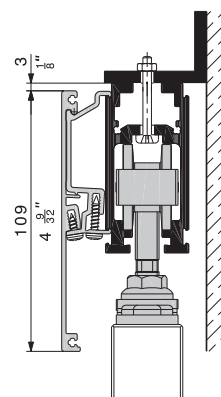
Top tracks for installations with or without covering screens

Caution: Hole positions vary.		mm/inch	code
	Top track, alu plain anodized, predrilled	3500 (11'5 ¹³ / ₁₆ ")	24840
		6000 (19'8 ⁷ / ₃₂ ")	24797
		cut to size	24798
	Connecting bolts, set of 6 pieces		17221

Ceiling or window lintel fitting

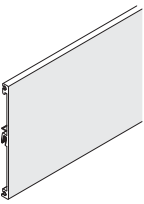
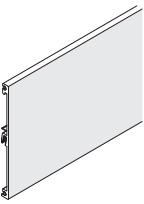




Wall fitting – solution provided by customer



Fixing bracket provided by customer

Covering screens

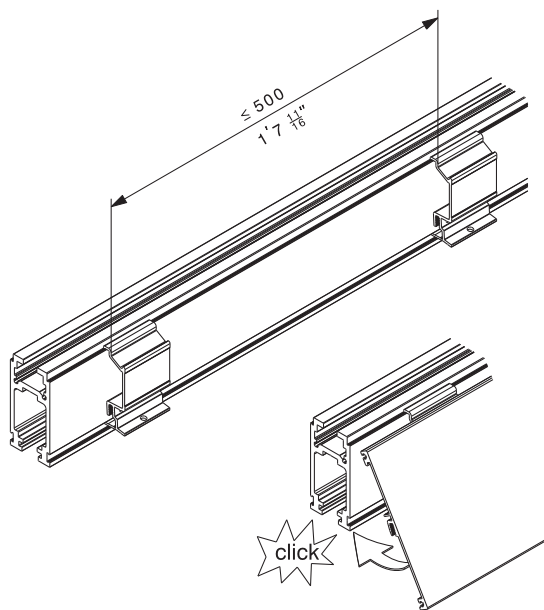
		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 ¹³ / ₁₆ ")	24845
		6000 (19'8 ⁷ / ₃₂ ")	24808
		cut to size	24809
	Covering screens, alu unanodized	6000 (19'8 ⁷ / ₃₂ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting bolts, set of 6 pieces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

Front cover plates

		aluminium	code
	Front cover plates for HAWA-Frontslide 100, for ceiling fitting, 1 pair	plain anodized	24813
		unanodized	24815

Fitting the covering screens

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



Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

Order specifications

- Number of sets
- Number and length of top tracks
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

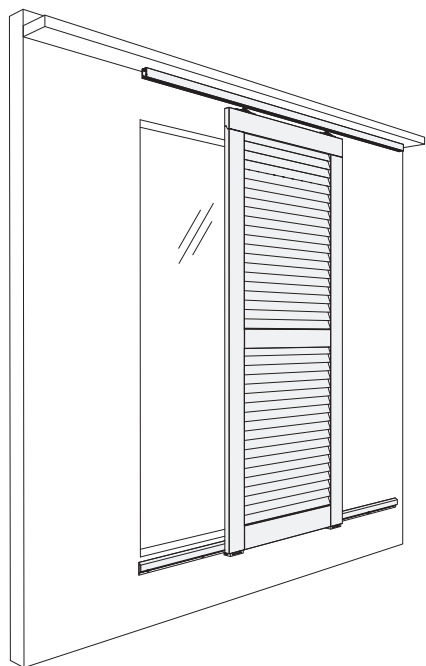
Optional order specifications

- 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

Planning/installation

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





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 100 kg (220 lbs.).

Description

HAWA-Frontslide 100/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

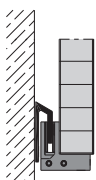
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Features of the HAWA-Frontslide 100/A mit niederer Laufschiene

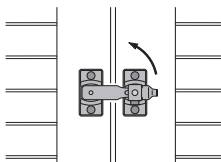
- Maximum sliding shutter weight: 100 kg (220 lbs.)
- Lower top track height: 47 mm (1 $\frac{27}{32}$ ")
- Minimum sliding shutter thickness: 28 mm (1 $\frac{1}{8}$ ")
- Minimum sliding shutter width: 500 mm (1'7 $\frac{11}{16}$ ")
- Maximum sliding shutter height: 3200 mm (10'6"
- Corrosion-resistant 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)



Guides
→ page 112



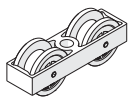
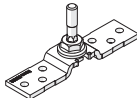
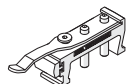
Locking mechanisms
→ page 114



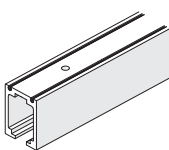

Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 100/A, partial set for 1 sliding shutter with lower top track	25124

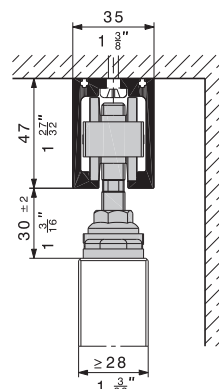
Set comprising

		piece	code
	Two-wheeled trolley, M10, with plastic wheels	2	24552
	Top fixing plate, stainless steel, with hanger bolt M10 for lower top track	2	25051
	Track stop with adjustable retainer	2	24834

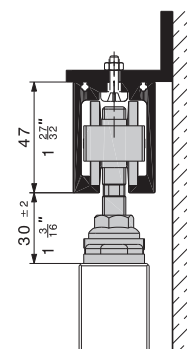
Niedere Laufschienen

Caution: Hole positions vary.		mm/inch	code
	Lower top track, alu plain anodized, predrilled	2500 (8'2 ⁷ / ₁₆ ")	24843
		6000 (19'8 ⁷ / ₃₂ ")	24804
		cut to size	24805
	Connecting bolts, set of 6 pieces		17221

Ceiling or window lintel fitting



Wall fitting – solution provided by customer



Fixing bracket provided
by customer

Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

Order specifications

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

Optional order specifications

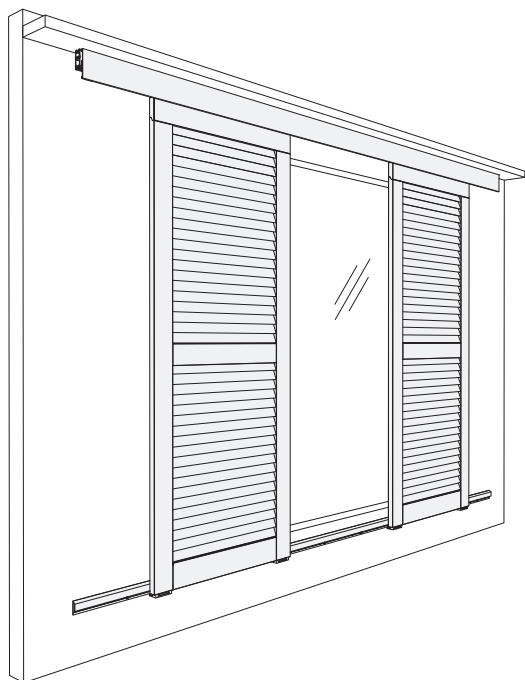
- Number of connecting bolt sets to top tracks
- Number and type of sliding shutter locking mechanisms

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 100 kg (220 lbs.), opening simultaneously left and right.

**Description**

HAWA-Frontslide 100/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. 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

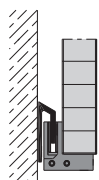
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Features of the**HAWA-Frontslide 100/A-Symmetric 2**

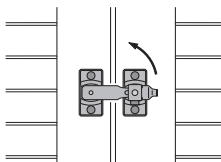
- Maximum sliding shutter weight: 100 kg (220 lbs.)/shutter
- Sliding shutter thickness: 28–50 mm ($1\frac{1}{8}$ "– $1\frac{31}{32}$ ")
- Minimum sliding shutter width: 550 mm ($1'9\frac{21}{32}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Maximum installation width: 6000 mm ($19'8\frac{7}{32}$ ")
- Corrosion-resistant materials
- 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)



Guides
→ page 112



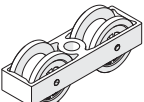
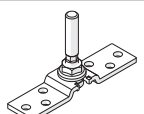
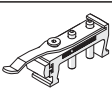
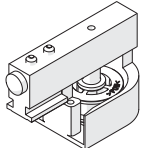
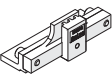
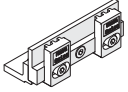
Locking mechanisms
→ page 114



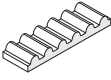
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 100/A-Symmetric 2, partial set for 2 sliding shutters	25125

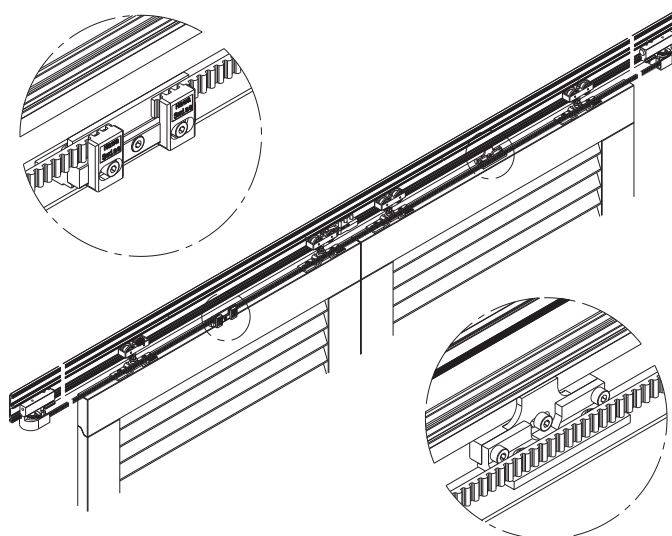
Set comprising

		piece	code
	Two-wheeled trolley, M10, with plastic wheels	4	24552
	Top fixing plate, stainless steel, with hanger bolt M10	4	24564
	Track stop with adjustable retainer	1	24834
	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 $\frac{27}{32}$ ")	19667
		5 m (16'4 $\frac{27}{32}$ ")	19682
		10 m (32'9 $\frac{23}{32}$ ")	19668
		15 m (49'2 $\frac{9}{16}$ ")	20370
		50 m (164' $\frac{1}{2}$ ")	19669
Length of toothed belt = 2 x top track			

Toothed belt lock and driver

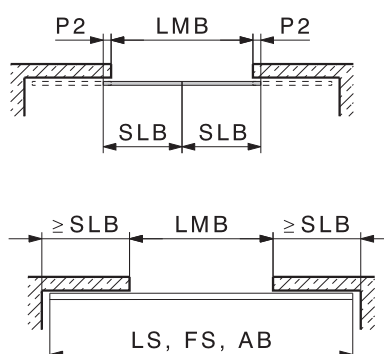


Calculation for suspension points



100/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

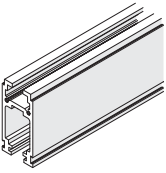



$$SLB = \frac{LMB}{2} + P2$$

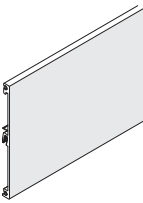
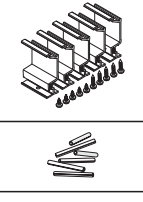


$$LS = LMB + (2 \times SLB)$$

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

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 $\frac{13}{16}$ ")	24840
		6000 (19'8 $\frac{7}{32}$ ")	24797
		cut to size	24798
	Connecting bolts, set of 6 pieces		17221

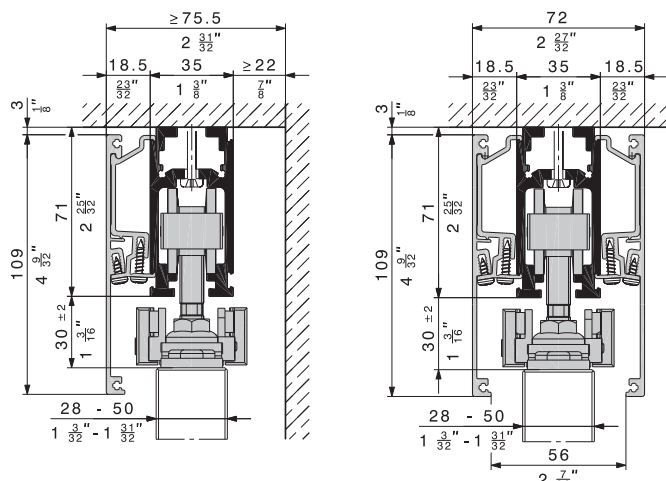
Covering screens

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

Front cover plates

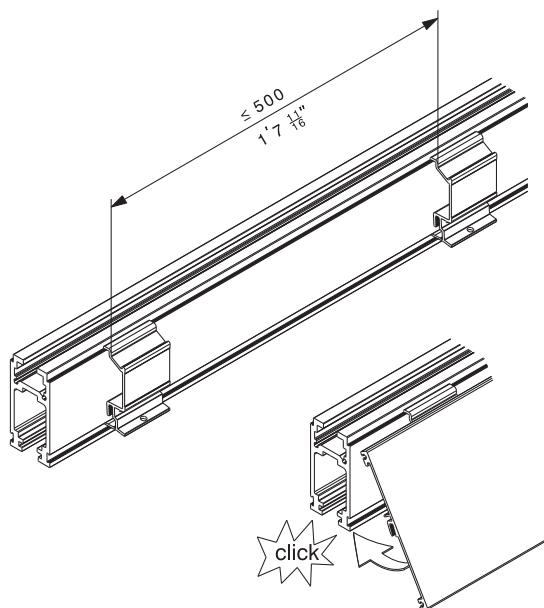
		aluminium	code
	Front cover plates for HAWA-Frontslide 100, for ceiling fitting, 1 pair	plain anodized	24813
		unanodized	24815

Ceiling or window lintel fitting



Fitting the covering screens

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



Order specifications

- Number of sets
- Number and length of top tracks
- Number and length of toothed belt
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

Optional order specifications

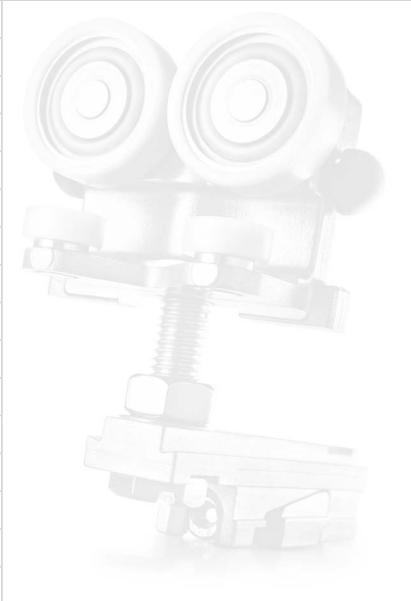
- Number and type of front cover plates
- Number of connecting bolt sets to profiles and covering screens
- Number and type of sliding shutter locking mechanisms

Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

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 70 kg (154 lbs.), opening simultaneously left and right.

Description

HAWA-Frontslide 100/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. 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.

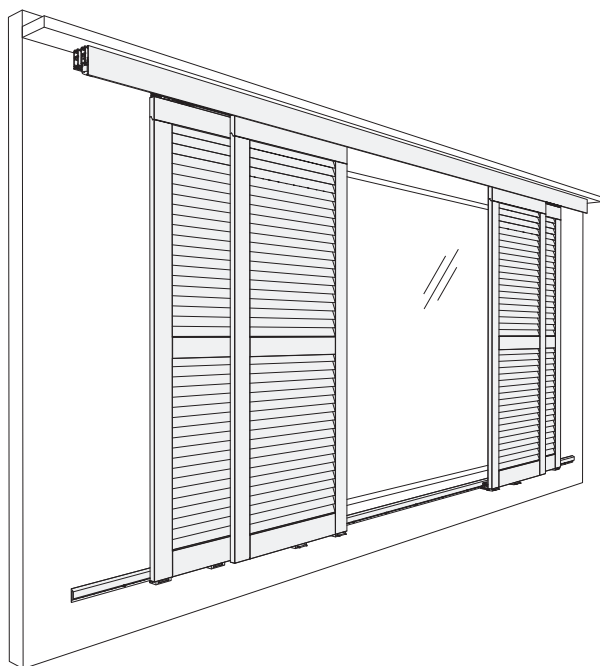
Applications

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.

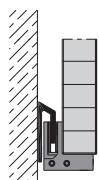
Features of the

HAWA-Frontslide 100/A-Symmetric 2+2

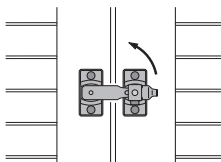
- Maximum sliding shutter weight: 70 kg (154 lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ "– $1\frac{19}{32}$ ")
- Sliding shutter width: 600–1000 mm ($1'11\frac{5}{8}$ "– $3'3\frac{3}{8}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Maximum installation width: 6000 mm (19'8 $\frac{7}{32}$ ")
- Corrosion-resistant materials
- 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)



Guides
→ page 112



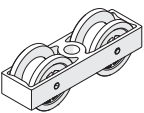
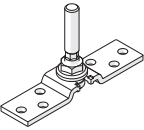
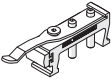
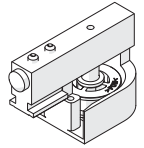
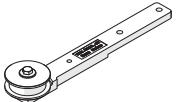
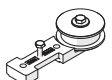
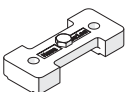
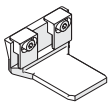
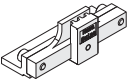
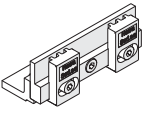
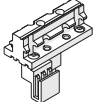
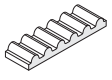
Locking mechanisms
→ page 114



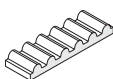
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 100/A-Symmetric 2+2, partial set for 4 sliding shutters	25126

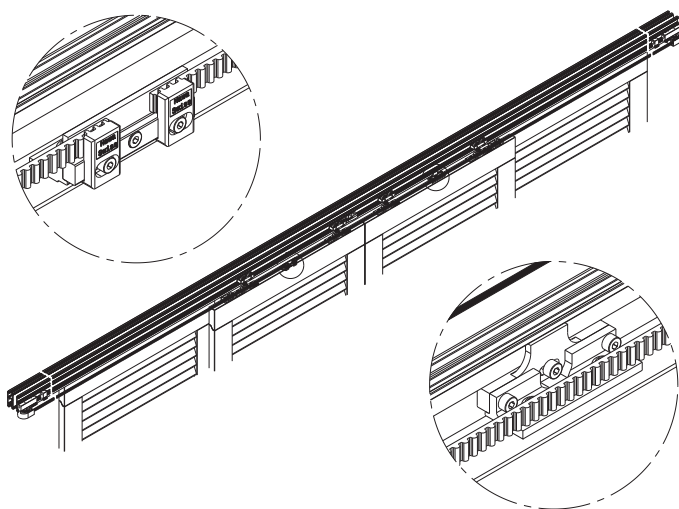
Set comprising

		piece	code
	Two-wheeled trolley, M10, with plastic wheels	8	24552
	Top fixing plate, stainless steel, with hanger bolt M10	8	24564
	Track stop with adjustable retainer	3	24834
	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	2	25059
	Toothed belt, black, 2,7 m (8'10 $\frac{5}{16}$ "), fibreglass reinforced	2	20208

Toothed belt

	length	code
	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
Length of toothed belt outer sliding level = 2 x top track		

Toothed belt lock and driver



Calculation for suspension points



100/A	M1	M2
SL1	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")
SL2	180 mm (7 $\frac{3}{32}$ ")	100 mm (3 $\frac{15}{16}$ ")
SL3	100 mm (3 $\frac{15}{16}$ ")	180 mm (7 $\frac{3}{32}$ ")
SL4	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")

Ceiling or window lintel fitting

Technical drawing of a double door assembly showing dimensions in inches and millimeters. The drawing includes a side elevation and a top view.

Side Elevation Dimensions:

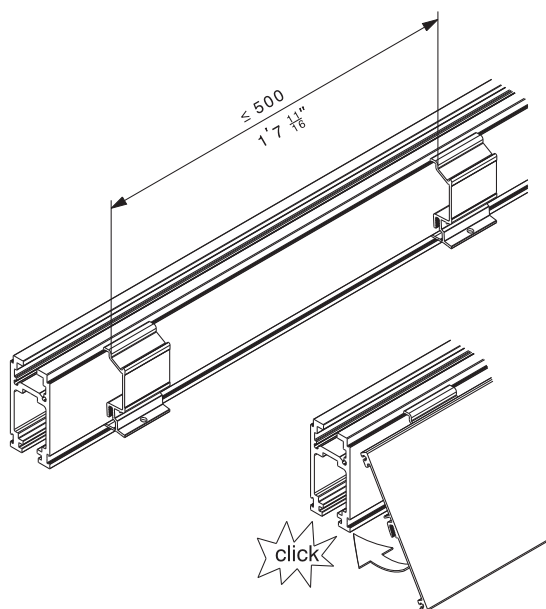
- Overall height: 109"
- Height from floor to top of door frame: 71"
- Height from floor to bottom of door frame: 30 ± 2"
- Height from floor to top of door frame (alternative): 4 3/8"
- Height from floor to top of door frame (alternative): 2 3/8"
- Height from floor to top of door frame (alternative): 1 1/8"

Top View Dimensions:

- Overall width: 48"
- Width of door frame: 18.5"
- Width of door frame: 35"
- Width of door frame: 13"
- Width of door frame: 35"
- Width of door frame: ≥ 22"
- Width of door frame: 28 - 40"
- Width of door frame: 1 3/8"
- Width of door frame: 1 3/8"

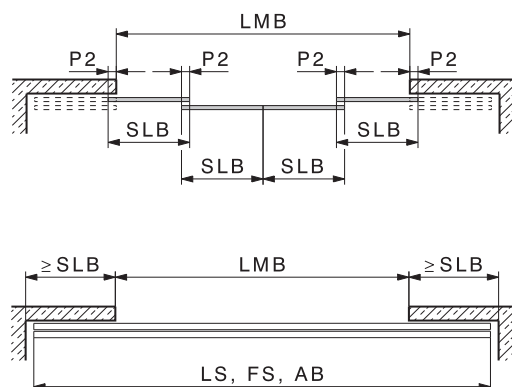
Fitting the covering screens

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



Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.



Order specifications

- Number of sets
- Number and length of top tracks
- Number and length of toothed belt
- 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 sliding shutter locking mechanisms

Planning/installation

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

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

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

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

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





A lot of motion with a single slide.

Hardware for simultaneously sliding up to 4 wood, metal or aluminium shutters of up to 100 kg (220 lbs.).

Description

HAWA-Frontslide 100/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. 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 100/A-Telescopic

- Max. sliding shutter weight with 2 shutters: 100 kg (220 lbs.)/shutter
- Max. sliding shutter weight with 3 shutters: 100 kg (220 lbs.)/shutter
- Max. sliding shutter weight with 4 shutters: 100 kg (220 lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ – $1\frac{19}{32}$ ")
- Sliding shutter width: 600–1200 mm ($1'11\frac{5}{8}$ – $3'11\frac{1}{4}$ ")
- 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
- 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)



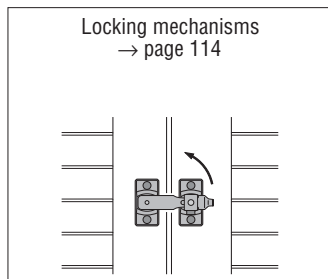
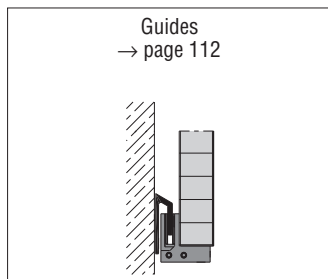
HAWA-Frontslide 100/A-Telescopic 2



HAWA-Frontslide 100/A-Telescopic 3



HAWA-Frontslide 100/A-Telescopic 4



Two sliding shutters of up to 100 kg max. per panel

Technical drawing of two hydraulic cylinders showing dimensions in inches:

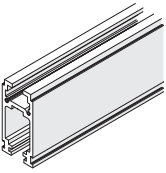

- Cylinder Dimensions:**
 - Total height: 109"
 - Stroke length: 71"
 - Mounting bracket height: 2 3/8"
 - Base mounting flange thickness: 30 ± 2"
 - Base mounting flange diameter: 1 1/16"
- Port Dimensions:**
 - Port diameter: 3/8"
 - Port center-to-center distance: 4 3/2"
- Head Dimensions:**
 - Head diameter: 48"
 - Head center-to-center distance: 1 5/8"
 - Head mounting flange thickness: 13"
 - Head mounting flange diameter: 35"
 - Head mounting flange outer diameter: 22"
- Base Dimensions:**
 - Base diameter: 28 - 40"
 - Base center-to-center distance: 1 3/8" - 1 1/2"

Three sliding shutters of up to 100 kg max. per panel

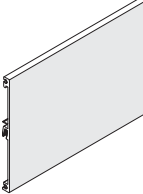



Four sliding shutters of up to 100 kg max. per panel

[illegible]

Top tracks for installations with or without covering screens

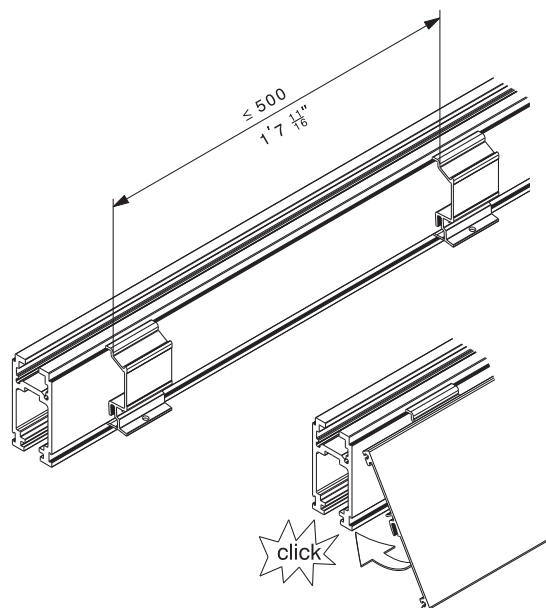
Caution: Hole positions vary.		mm/inch	code
	Top track, alu plain anodized, predrilled	3500 (11'5 ¹³ / ₁₆ ")	24840
		6000 (19'8 ⁷ / ₃₂ ")	24797
		cut to size	24798
	Connecting bolts, set of 6 pieces		17221

Covering screens

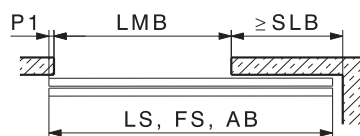
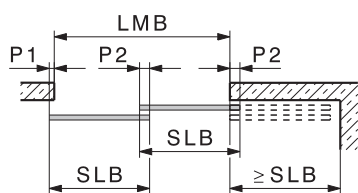
		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 ¹³ / ₁₆ ")	24845
		6000 (19'8 ⁷ / ₃₂ ")	24808
		cut to size	24809
	Covering screens, alu unanodized	6000 (19'8 ⁷ / ₃₂ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting bolts, set of 6 pieces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

Fitting the covering screens

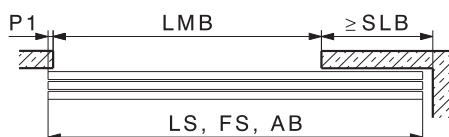
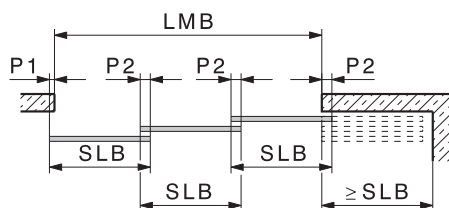
Cover fixings (code 24767) are required for attaching the covering screens.



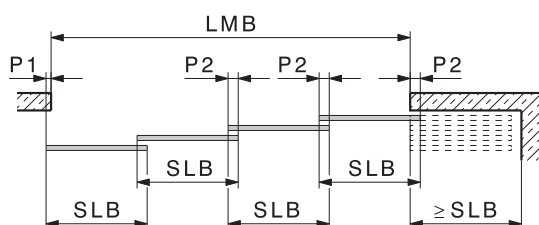
Calculation for sliding shutter width



HAWA-Frontslide 100/A-Telescopic 2



HAWA-Frontslide 100/A-Telescopic 3



HAWA-Frontslide 100/A-Telescopic 4

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

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

$$LS = LMB + P1 + SLB$$

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



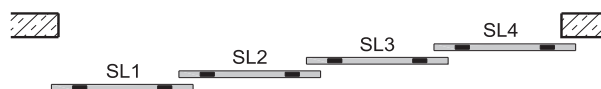
HAWA-Frontslide 100/A-Telescopic 2

100/A	M1	M2
SL1	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")
SL2	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")



HAWA-Frontslide 100/A-Telescopic 3

100/A	M1	M2
SL1	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")
SL2-3	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")



HAWA-Frontslide 100/A-Telescopic 4

100/A	M1	M2
SL1	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")
SL2-4	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")

Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

Order specifications

- Number and type of sets
- Number and length of top tracks
- 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 sliding shutter locking mechanisms

Planning/installation

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

- HAWA-Frontslide 100/A-Telescopic 2 code 24988
- HAWA-Frontslide 100/A-Telescopic 3 code 24989
- HAWA-Frontslide 100/A-Telescopic 4 code 24990

(→ 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 100 kg (220 lbs.).

Description

HAWA-Frontslide 100/matic is an electrically powered hardware system for sliding shutters. Its brushless electric motor, a HAWA-Motronic 100 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.

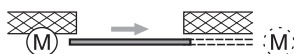
HAWA-Frontslide 100/matic allows maximum flexibility in façade design: various fixing and covering screen options cover virtually all needs.

Applications

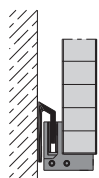
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, or creative frontage designs in residential settings.

Features of the HAWA-Frontslide 100/matic

- 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: 650 mm ($2'1\frac{19}{32}$ ")
- 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
- 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: → following page



Guides
→ page 112



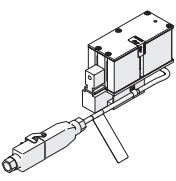
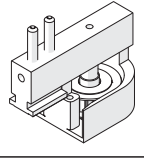
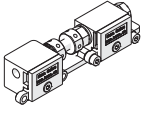

Drive unit HAWA-Motronic 100

HAWA-Motronic 100 is a drive unit with integrated control for automating sliding hardware with a speed of 70 mm ($2\frac{3}{4}$ ")/s and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires. The HAWA-Motronic 100 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.

HAWA-Motronic 100, set for sliding shutter drive

	code
HAWA-Motronic 100 for HAWA-Frontslide 100/matic, incl. control unit, toothed belt lock and pulley wheel	25147

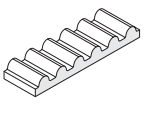
Set comprising

		piece	code
	HAWA-Motronic 100 with integrated control and connecting cable with a pre-mounted Hirschmann plug	1	25062
	Pulley wheel for automatic mechanism	1	24792
	Toothed belt lock	1	19654
	End stop alu	2	24786

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' $\frac{1}{2}$ ")	19669

Calculation for length of toothed belt:

HAWA-Frontslide 100/matic: 2 x installation width

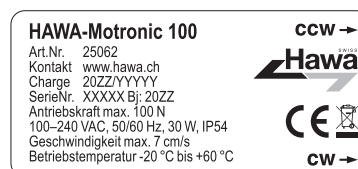
(The toothed belt lock is included with the HAWA-Motronic set 25147)

Technical details HAWA-Motronic 100

- 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 – +60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 70 mm ($2\frac{3}{4}$ ")/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

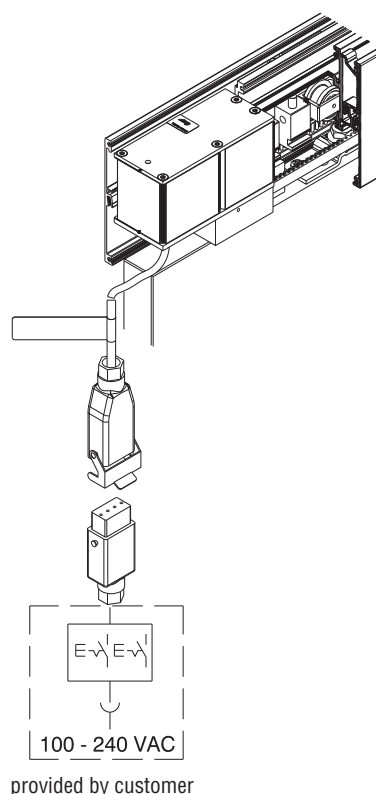
Type label

Every drive unit carries a type label.



Control and operation of the system

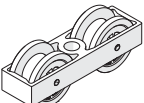
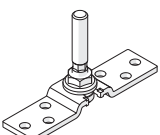
The systems are operated with commercially available electrical switches.



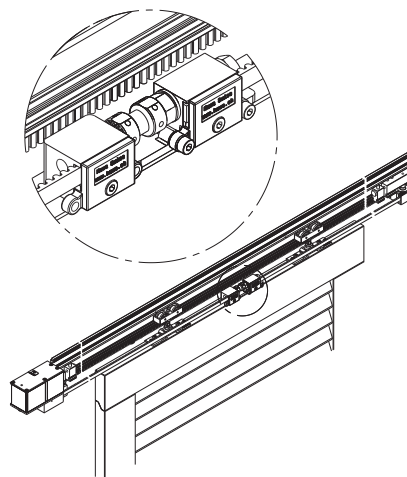
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 100/matic, partial set for 1 sliding shutter	25138

Set comprising

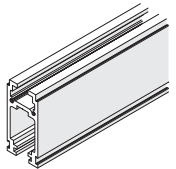

		piece	code
	Two-wheeled trolley, M10, with plastic wheels	2	24552
	Top fixing plate, stainless steel, with hanger bolt M10	2	24564

HAWA-Frontslide 100/matic

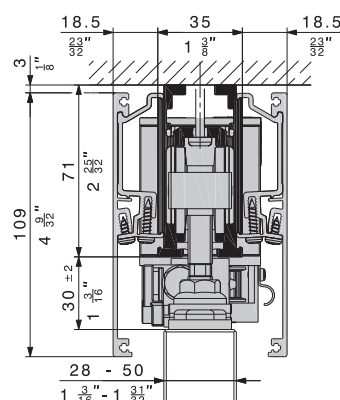
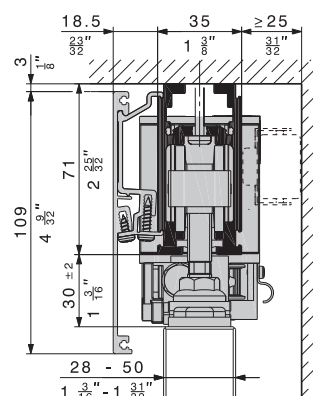


Situation: Toothed belt lock

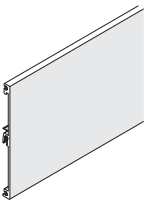
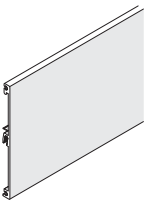


Top tracks for installations with or without covering screens

Caution: Hole positions vary.		mm/inch	code
		3500 (11'5 ¹³ / ₁₆ ")	24840
		6000 (19'8 ⁷ / ₃₂ ")	24797
		cut to size	24798
	Connecting bolts, set of 6 pieces		17221
Calculation for length of top track: Length of top track = installation width - 115 mm (4 ¹⁷ / ₃₂ ") (drive unit)			

Ceiling or window lintel fitting



Covering screens

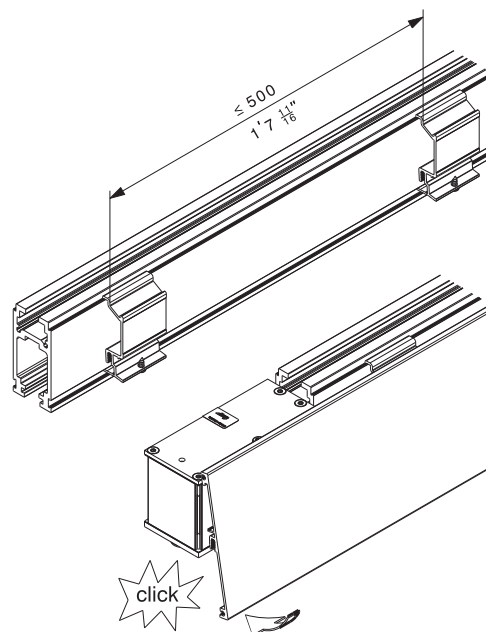
		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 $\frac{13}{16}$ ")	24845
		6000 (19'8 $\frac{7}{32}$ ")	24808
	cut to size		24809
	Covering screens, alu unanodized	6000 (19'8 $\frac{7}{32}$ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting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

Front cover plates

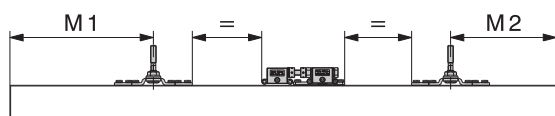
		aluminium	code
	Front cover plates for HAWA-Frontslide 100, for ceiling fitting, 1 pair	plain anodized	24813
		unanodized	24815

Fitting the covering screens

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



Calculation for suspension points



100/matic	M1	M2
SL1	220 mm (8 $\frac{21}{32}$ ")	170 mm (6 $\frac{11}{16}$ ")

Bottom guides

Bottom guides: → page 112.

Order specifications

- Number of sets HAWA-Motronic 100
- Number of partial sets HAWA-Frontslide 100/matic
- Number and length of toothed belt
- Number and length of top tracks
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

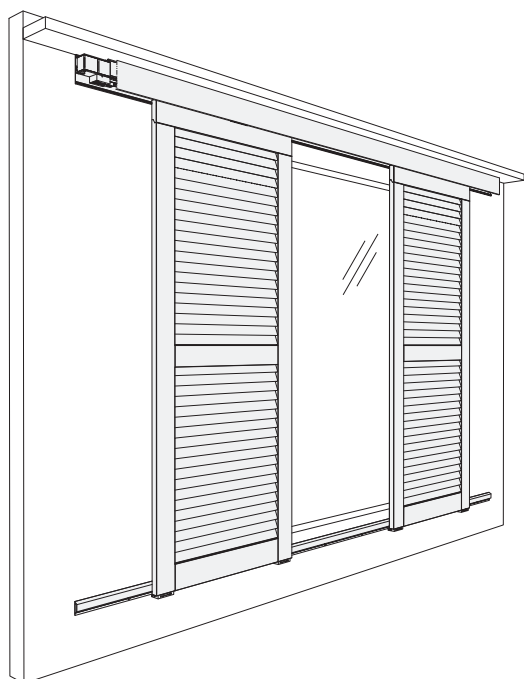
Optional order specifications

- 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 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 80 kg (176 lbs.), opening simultaneously left and right.

Description

HAWA-Frontslide 100/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 100 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 100/matic-Symmetric 2 allows maximum flexibility in façade design: various fixing and covering screen options cover virtually all needs.

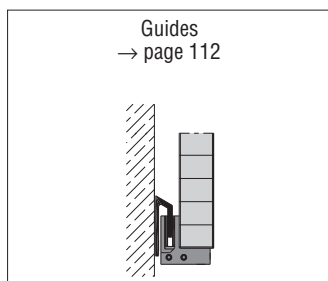
Applications

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 100/matic-Symmetric 2

- Maximum sliding shutter weight: 80 kg (176 lbs.)/shutter
- Sliding shutter thickness: 28–50 mm ($1\frac{1}{8}$ – $1\frac{31}{32}$ ")
- Minimum sliding shutter width: 600 mm ($1'11\frac{5}{8}$ ")
- 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: → following page



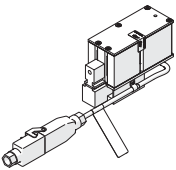
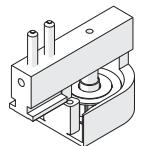
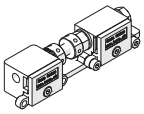

Drive unit HAWA-Motronic 100

HAWA-Motronic 100 is a drive unit with integrated control for automating sliding hardware with a speed of 70 mm ($2\frac{3}{4}$ ")/s and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires. The HAWA-Motronic 100 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.

HAWA-Motronic 100, set for sliding shutter drive

	code
HAWA-Motronic 100 for HAWA-Frontslide 100/matic, incl. control unit, toothed belt lock and pulley wheel	25147

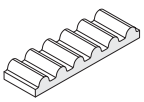
Set comprising

		piece	code
	HAWA-Motronic 100 with integrated control and connecting cable with a pre-mounted Hirschmann plug	1	25062
	Pulley wheel for automatic mechanism	1	24792
	Toothed belt lock	1	19654
	End stop alu	2	24786

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	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:

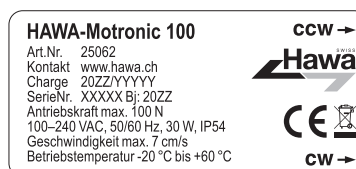
HAWA-Frontslide 100/matic-Symmetric 2: 2 x installation width
(The toothed belt lock is included with the HAWA-Motronic set 25147)

Technical details HAWA-Motronic 100

- 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 – +60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 70 mm ($2\frac{3}{4}$ ")/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

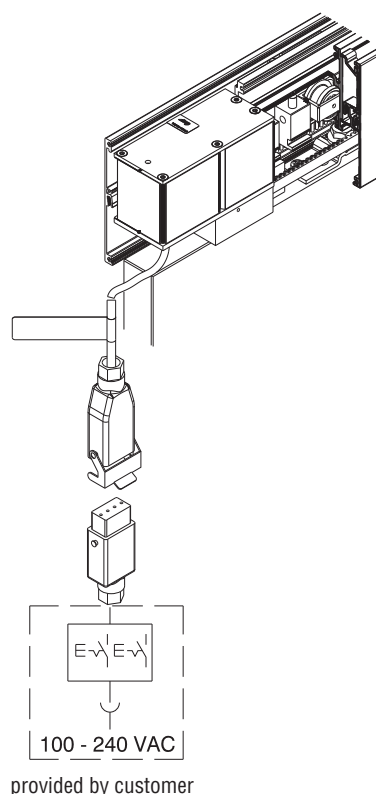
Type label

Every drive unit carries a type label.



Control and operation of the system

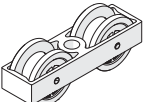
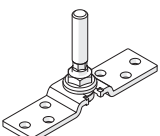
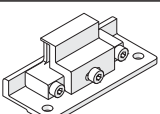
The systems are operated with commercially available electrical switches.



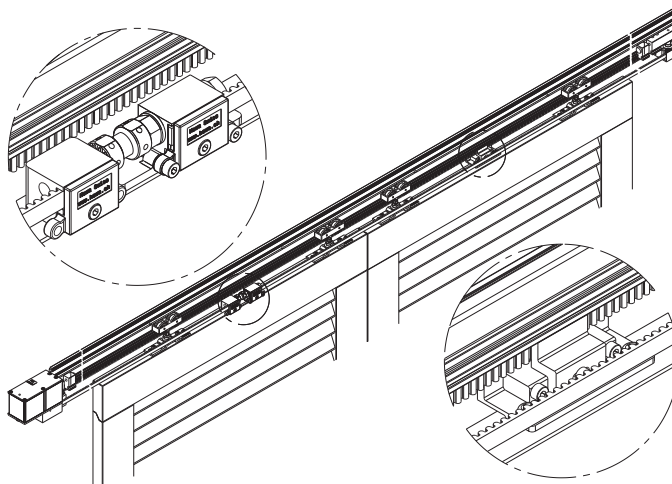
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 100/matic-Symmetric 2, partial set for 2 sliding shutters	25139

Set comprising

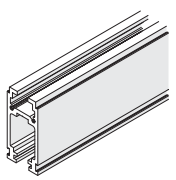

		piece	code
	Two-wheeled trolley, M10, with plastic wheels	4	24552
	Top fixing plate, stainless steel, with hanger bolt M10	4	24564
	Driver for Symmetric installations	1	19655

HAWA-Frontslide 100/matic-Symmetric 2

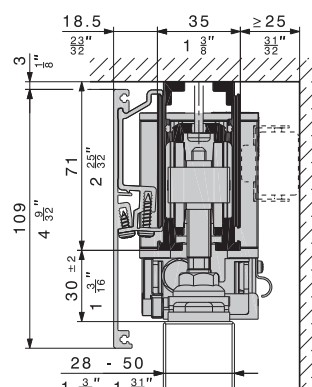


Situation: Toothed belt lock and driver

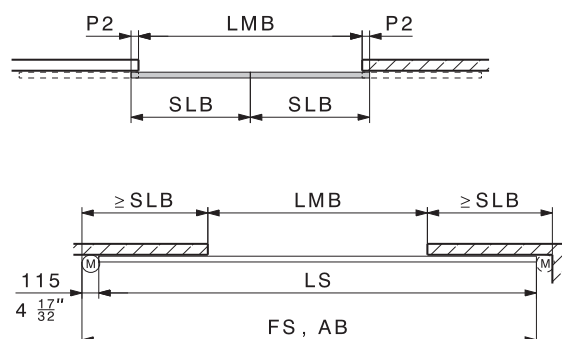
Top tracks for installations with or without covering screens

Caution: Hole positions vary.		mm/inch	code
		3500 (11'5 ¹³ / ₁₆ ")	24840
		6000 (19'8 ⁷ / ₃₂ ")	24797
		cut to size	24798
	Connecting bolts, set of 6 pieces		17221
Calculation for length of top track: Length of top track = installation width - 115 mm (4 ¹⁷ / ₃₂ ") (drive unit)			

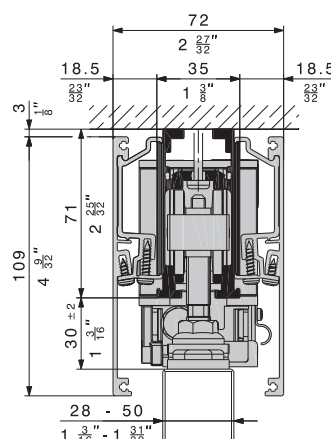
Ceiling or window lintel fitting



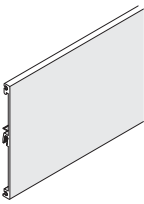
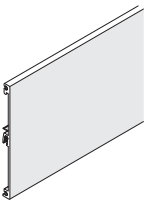


Calculation for sliding shutter width



$SLB = \frac{LMB}{2} + P2$	AB	Installation width
	LMB	Entire opening width
	SLB	Sliding shutter width
	M	Minimum space for drive unit
	P	Sliding shutter overlap
$LS = LMB + (2 \times SLB) - 115$	LS	Top track
$FS = LS + 115 \text{ mm } (4 \frac{17}{32})$	FS	Bottom guide channel



Covering screens

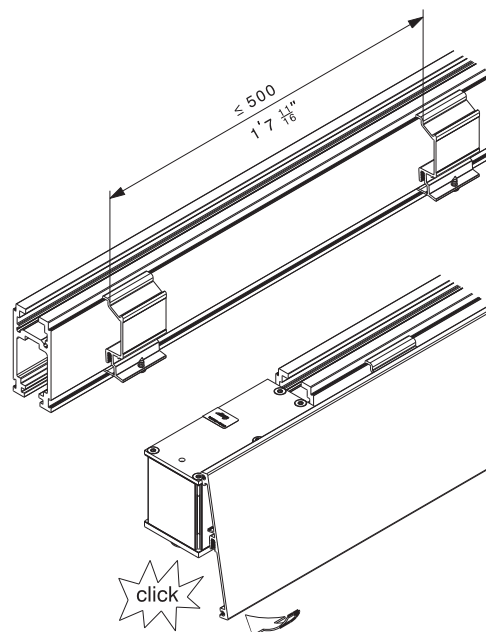
		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 $\frac{13}{16}$ ")	24845
		6000 (19'8 $\frac{7}{32}$ ")	24808
	cut to size		24809
	Covering screens, alu unanodized	6000 (19'8 $\frac{7}{32}$ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting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

Front cover plates

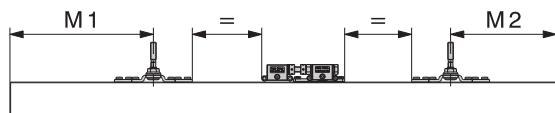
		aluminium	code
	Front cover plates for HAWA-Frontslide 100, for ceiling fitting, 1 pair	plain anodized	24813
		unanodized	24815

Fitting the covering screens

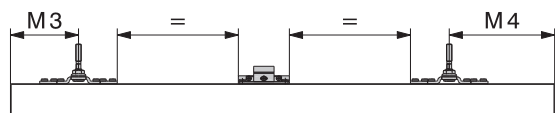
Cover fixings (code 24767) are required for attaching the covering screens.



Calculation for suspension points



100/matic	M1	M2
SL1	220 mm (8 $\frac{21}{32}$ ")	110 mm (4 $\frac{11}{32}$ ")



100/matic	M3	M4
SL2	110 mm (4 $\frac{11}{32}$ ")	170 mm (6 $\frac{11}{16}$ ")

Bottom guides

Bottom guides: → page 112.

Order specifications

- Number of sets HAWA-Motronic 100
- Number of partial sets HAWA-Frontslide 100/matic-Symmetric 2
- Number and length of toothed belt
- Number and length of top tracks
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

Optional order specifications

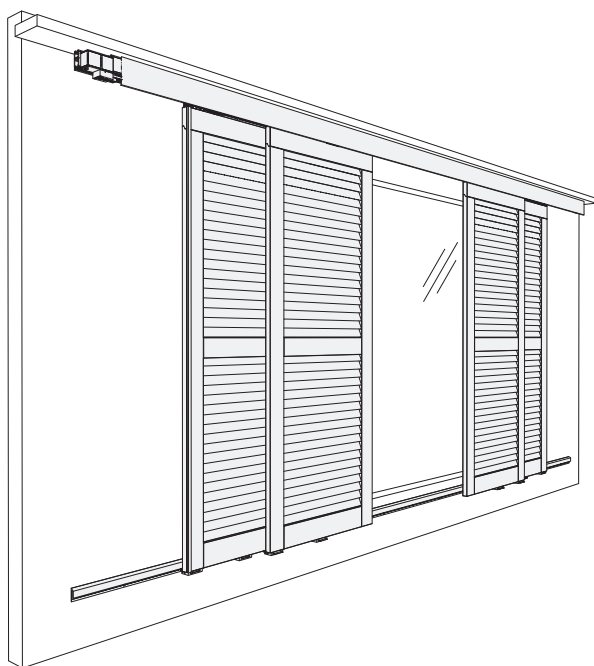
- Number and type of front cover plates
- Number of connecting bolt sets to profiles and covering screens

Planning/installation

For planning and installation purposes, please use the installation drawing code 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 70 kg (154 lbs.), opening simultaneously left and right.

Description

HAWA-Frontslide 100/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 100 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 100/matic-Symmetric 2+2 allows maximum flexibility in façade design: various fixing and covering screen options cover virtually all needs.

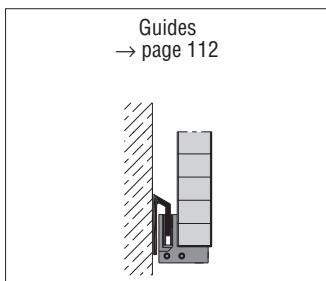
Applications

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 100/matic-Symmetric 2+2

- Maximum sliding shutter weight: 70 kg (154 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")
- 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: → following page



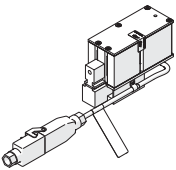
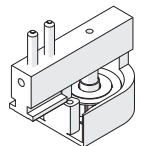
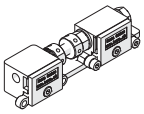

Drive unit HAWA-Motronic 100

HAWA-Motronic 100 is a drive unit with integrated control for automating sliding hardware with a speed of 70 mm ($2\frac{3}{4}$ ")/s and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires. The HAWA-Motronic 100 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.

HAWA-Motronic 100, set for sliding shutter drive

	code
HAWA-Motronic 100 for HAWA-Frontslide 100/matic, incl. control unit, toothed belt lock and pulley wheel	25147

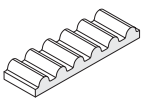
Set comprising

		piece	code
	HAWA-Motronic 100 with integrated control and connecting cable with a pre-mounted Hirschmann plug	1	25062
	Pulley wheel for automatic mechanism	1	24792
	Toothed belt lock	1	19654
	End stop alu	2	24786

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	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:

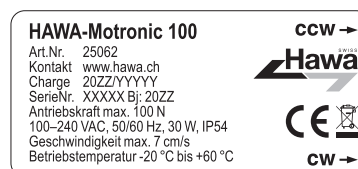
Length of toothed belt outer sliding level: 2 x installation width
(The toothed belt lock is included with the HAWA-Motronic set 25147)

Technical details HAWA-Motronic 100

- 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 – +60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 70 mm ($2\frac{3}{4}$ ")/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

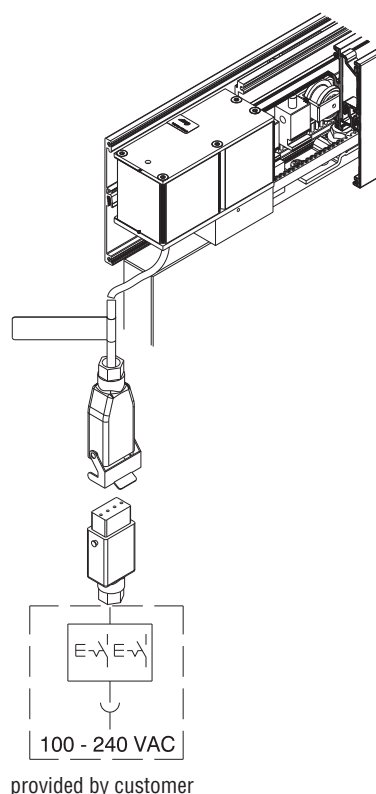
Type label

Every drive unit carries a type label.



Control and operation of the system


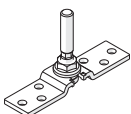
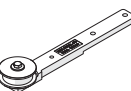
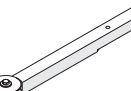
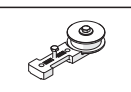
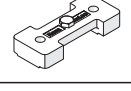
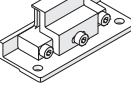
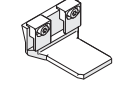
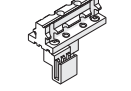
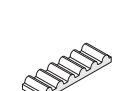
The systems are operated with commercially available electrical switches.



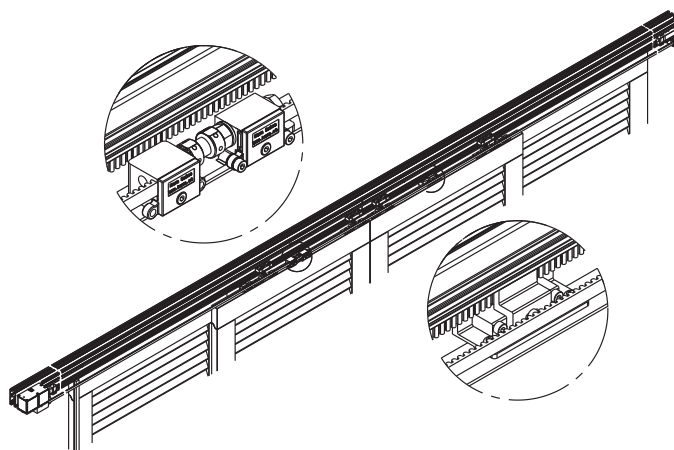
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 100/matic-Symmetric 2+2, partial set for 4 sliding shutters	25140

Set comprising

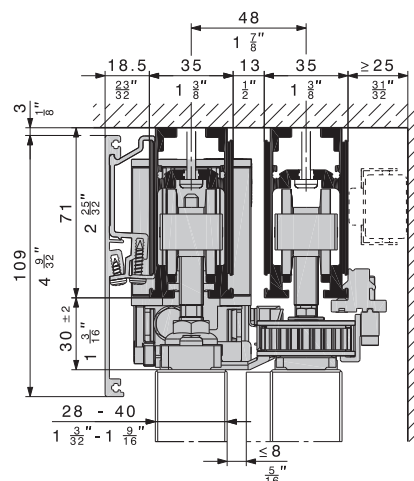
		piece	code
	Two-wheeled trolley, M10, with plastic wheels	8	24552
	Top fixing plate, stainless steel, with hanger bolt M10	8	24564
	Guide pulley wheel, with fixing plate, long	1	20139
	Guide pulley wheel, with fixing plate, extra long for HAWA-Frontslide 60-140/matic-Symmetric 2+2	1	25314
	Guide pulley 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	25059
	Toothed belt, black, 2,7 m (8'10 $\frac{5}{16}$ "), fibreglass reinforced	1	20208
	Toothed belt, black, 5 m (16'4 $\frac{27}{32}$ "), fibreglass reinforced	1	19667

HAWA-Frontslide 100/matic-Symmetric 2+2

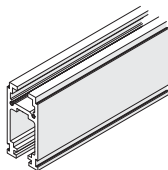



Situation: Toothed belt lock and driver

Ceiling or window lintel fitting



Top tracks for installations with or without covering screens

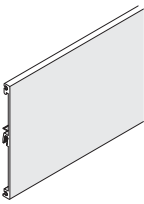
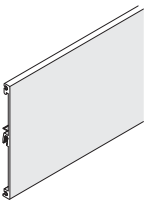


Caution: Hole positions vary.		mm/inch	code
	Top track, alu plain anodized, predrilled	3500 (11'5 $\frac{13}{16}$ ")	24840
		6000 (19'8 $\frac{7}{32}$ ")	24797
		cut to size	24798
	Connecting bolts, set of 6 pieces		17221

Calculation for length of top track:

Length of top track outer sliding level = installation width - 115 mm (4 $\frac{17}{32}$ ")
(drive unit)

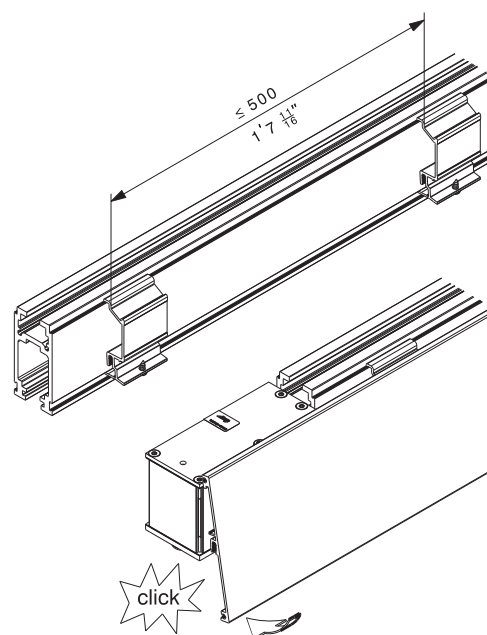
Length of top track inner sliding level = installation width

Covering screens

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

Fitting the covering screens

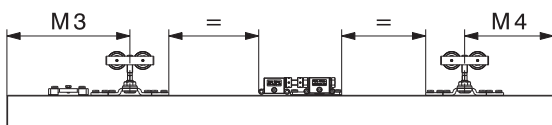
Cover fixings (code 24767) are required for attaching the covering screens.



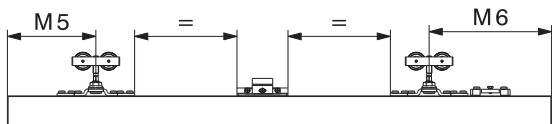
Calculation for suspension points



100/matic	M1	M2
SL1	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")



100/matic	M3	M4
SL2	260 mm (10 $\frac{1}{4}$ ")	100 mm (3 $\frac{15}{16}$ ")

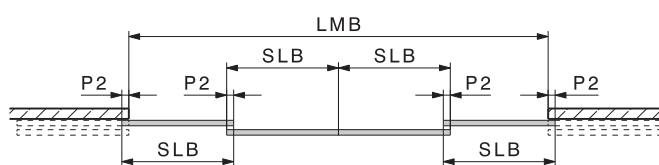


100/matic	M5	M6
SL3	100 mm (3 $\frac{15}{16}$ ")	180 mm (7 $\frac{3}{32}$ ")



100/matic	M7	M8
SL4	160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")

Calculation for sliding shutter width



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

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

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

$$LS2 = LS1 - 115 \text{ mm (4 } \frac{17}{32} \text{ ")}$$

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

Bottom guides

Bottom guides: → page 112.

Order specifications

- Number of sets HAWA-Motronic 100
- Number of partial sets HAWA-Frontslide 100/matic-Symmetric 2+2
- Number and length of toothed belt
- Number and length of top tracks
- 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

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 90 kg (198 lbs.).

Description

HAWA-Frontslide 100/matic-Telescopic can automatically move up to 4 sliding shutters simultaneously when combined with HAWA-Frontslide 100/matic drive components.

Its brushless electric motor, a HAWA-Motronic 100 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.

The HAWA-Frontslide 100/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 administrative premises, apartment buildings, low-energy houses, etc.

Features of the

HAWA-Frontslide 100/matic-Telescopic

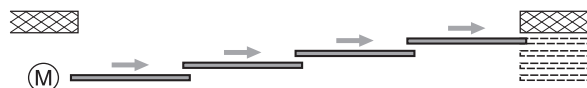
- Max. sliding shutter weight with 2 shutters: 90 kg (198 lbs.)/shutter
- Max. sliding shutter weight with 3 shutters: 80 kg (176 lbs.)/shutter
- Max. sliding shutter weight with 4 shutters: 70 kg (154 lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ "– $1\frac{19}{32}$ ")
- Sliding shutter width: 650–1200 mm ($2'1\frac{19}{32}$ "– $3'11\frac{1}{4}$ "
- Maximum sliding shutter height: 3200 mm (10'6")
- 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: → following page



HAWA-Frontslide 100/matic-Telescopic 2



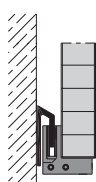
HAWA-Frontslide 100/matic-Telescopic 3



HAWA-Frontslide 100/matic-Telescopic 4

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

Guides
→ page 112



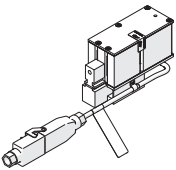
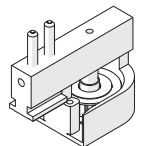
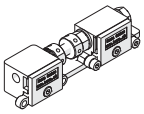

Drive unit HAWA-Motronic 100

HAWA-Motronic 100 is a drive unit with integrated control for automating sliding hardware with a speed of 70 mm ($2\frac{3}{4}$ ")/s and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires. The HAWA-Motronic 100 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.

HAWA-Motronic 100, set for sliding shutter drive

	code
HAWA-Motronic 100 for HAWA-Frontslide 100/matic, incl. control unit, toothed belt lock and pulley wheel	25147

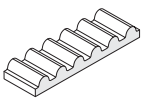
Set comprising

		piece	code
	HAWA-Motronic 100 with integrated control and connecting cable with a premounted Hirschmann plug	1	25062
	Pulley wheel for automatic mechanism	1	24792
	Toothed belt lock	1	19654
	End stop alu	2	24786

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 100/matic: 2 x installation width

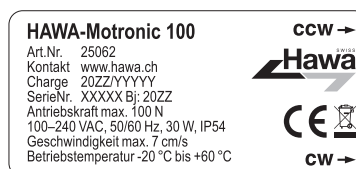
(The toothed belt lock is included with the HAWA-Motronic set 25147)

Technical details HAWA-Motronic 100

- 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 – +60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 70 mm ($2\frac{3}{4}$ ")/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

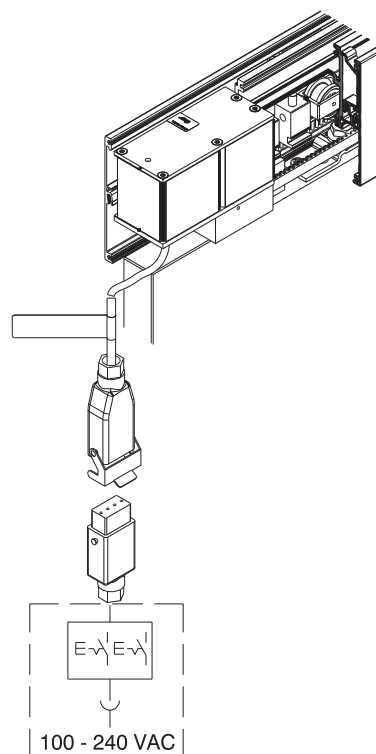
Type label

Every drive unit carries a type label.



Control and operation of the system

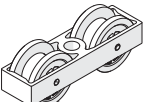
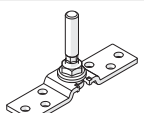
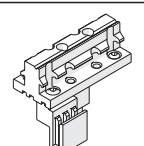
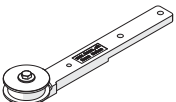
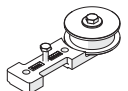
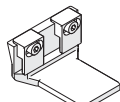
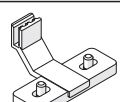
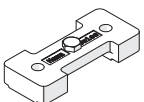
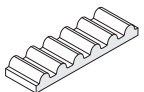
The systems are operated with commercially available electrical switches.



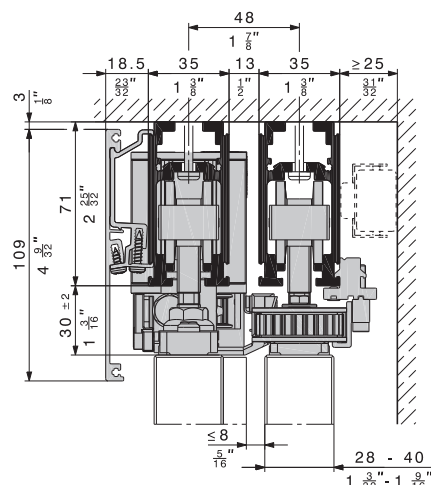
Sets without top tracks and bottom guide channels

	code
HAWA-Frontslide 100/matic-Telescopic 2, set for 2 sliding shutters, 650–1200 mm (2'1 $\frac{19}{32}$ "–3'11 $\frac{1}{4}$ ")	25141
HAWA-Frontslide 100/matic-Telescopic 3, set for 3 sliding shutters, 650–1200 mm (2'1 $\frac{19}{32}$ "–3'11 $\frac{1}{4}$ ")	25142
HAWA-Frontslide 100/matic-Telescopic 4, set for 4 sliding shutters, 650–1200 mm (2'1 $\frac{19}{32}$ "–3'11 $\frac{1}{4}$ ")	25143

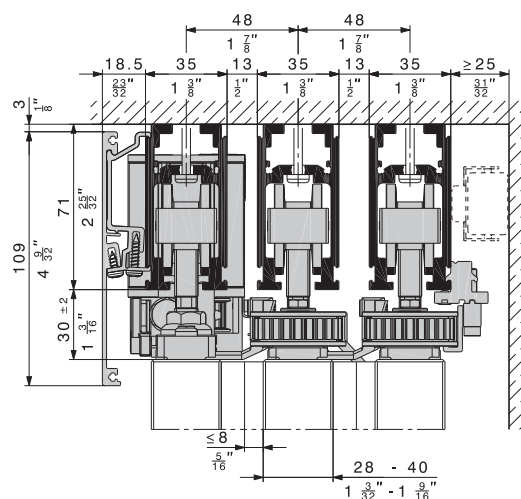
Sets comprising

		25141	25142	25143	code
	Two-wheeled trolley, M10, with plastic wheels	4	6	8	24552
	Top fixing plate, stainless steel, with hanger bolt M10	4	6	8	24564
	Toothed belt clamp for manual and automatic systems	1	1	1	25059
	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

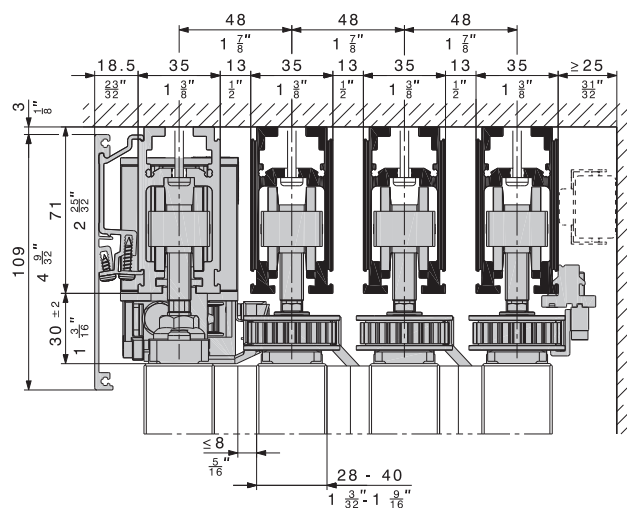
Two sliding shutters of up to 90 kg max. per panel



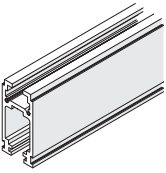

Three sliding shutters of up to 80 kg max. per panel



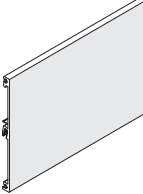



Four sliding shutters of up to 70 kg max. per panel



Top tracks for installations with or without covering screens

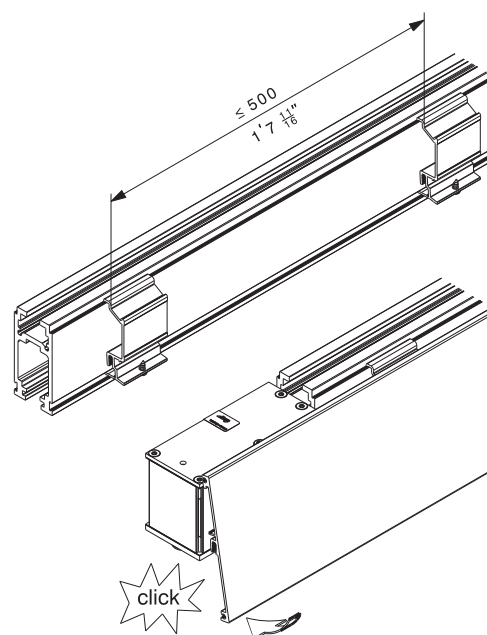
Caution: Hole positions vary.		mm/inch	code
	Top track, alu plain anodized, predrilled	3500 (11'5 ¹³ / ₁₆ ")	24840
		6000 (19'8 ⁷ / ₃₂ ")	24797
		cut to size	24798
	Connecting bolts, set of 6 pieces		17221

Covering screens

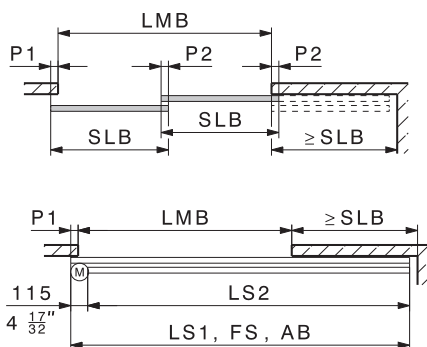
		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 ¹³ / ₁₆ ")	24845
		6000 (19'8 ⁷ / ₃₂ ")	24808
		cut to size	24809
	Covering screens, alu unanodized	6000 (19'8 ⁷ / ₃₂ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting bolts, set of 6 pieces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

Fitting the covering screens

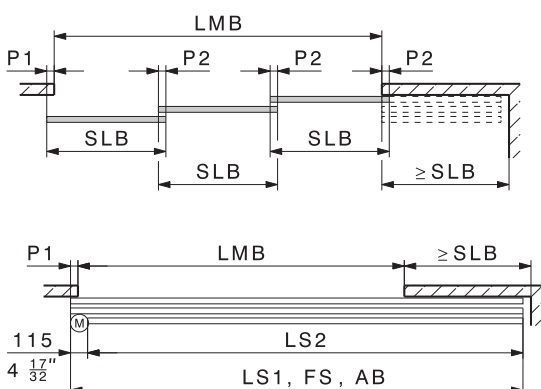
Cover fixings (code 24767) are required for attaching the covering screens.



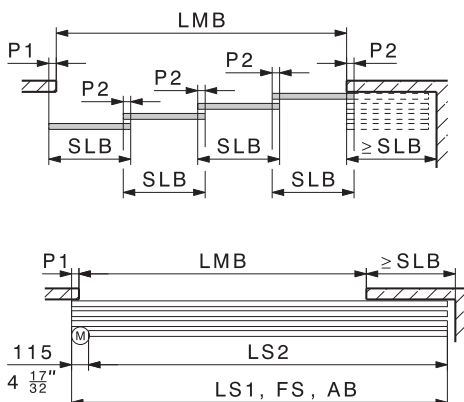
Calculation for sliding shutter width



HAWA-Frontslide 100/matic-Telescopic 2



HAWA-Frontslide 100/matic-Telescopic 3



HAWA-Frontslide 100/matic-Telescopic 4

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

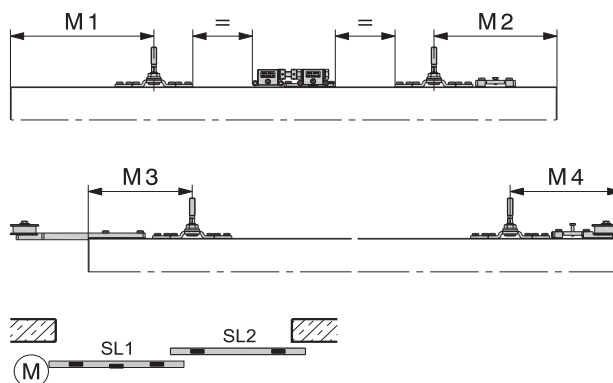
$$P2 \geq 50 \text{ mm (1 } \frac{31}{32} \text{")}$$

$$LS1 = LMB + P1 + SLB$$

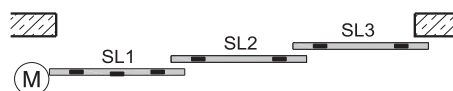
$$LS2 = LS1 - 115 \text{ mm (4 } \frac{17}{32} \text{")}$$

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

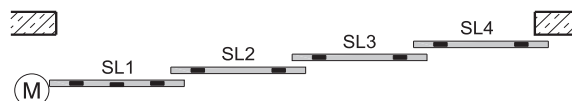
Calculation for suspension points



HAWA-Frontslide 100/matic-Telescopic 2



HAWA-Frontslide 100/matic-Telescopic 3



HAWA-Frontslide 100/matic-Telescopic 4

100/matic	M1	M2	M3	M4
SL1	220 mm (8 $\frac{21}{32}$ ")	180 mm (7 $\frac{3}{32}$ ")		
SL2,3,4			160 mm (6 $\frac{5}{16}$ ")	160 mm (6 $\frac{5}{16}$ ")

Bottom guides

Bottom guides: → page 112.

Order specifications

- Number of sets HAWA-Motronic 100
- Number and type of sets HAWA-Frontslide 100/matic-Telescopic
- Number and length of toothed belt
- Number and length of top tracks
- 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

Planning/installation

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

- HAWA-Frontslide 60/matic-Telescopic 2 code 24994
- HAWA-Frontslide 60/matic-Telescopic 3 code 24995
- HAWA-Frontslide 60/matic-Telescopic 4 code 24996

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





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 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

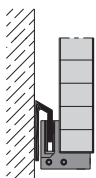
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, etc.

Features of the HAWA-Frontslide 140/A

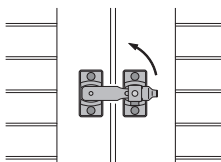
- Maximum sliding shutter weight: 140 kg (308 lbs.)
- Sliding shutter thickness: 28–60 mm ($1\frac{1}{8}$ – $2\frac{3}{4}$ ")
- Minimum sliding shutter width: 700 mm ($2'3\frac{9}{16}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Corrosion-resistant materials
- Fast and efficient assembly from 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)



Guides
→ page 112



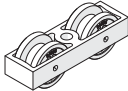
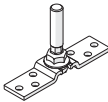
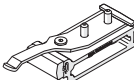
Locking mechanisms
→ page 114



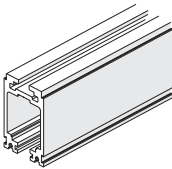

Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 140/A, partial set for 1 sliding shutter	25130

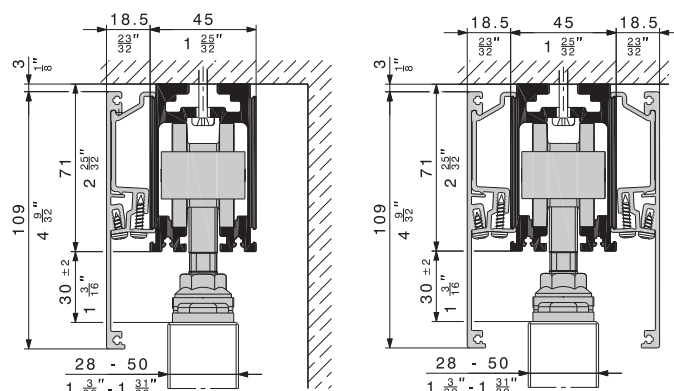
Set comprising

		piece	code
	Two-wheeled trolley, M12, with plastic wheels	2	24554
	Top fixing plate, stainless steel, with hanger bolt M12	2	24567
	Track stop with adjustable retainer	2	24835

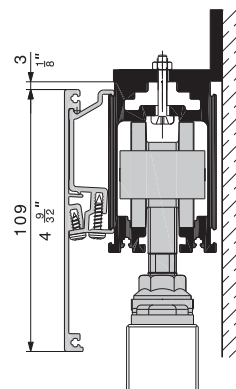
Top tracks for installations with or without covering screens

Caution: Hole positions vary.		mm/inch	code
	Top track, alu plain anodized, predrilled	3500 (11'5 ¹³ / ₁₆ ")	24841
		6000 (19'8 ⁷ / ₃₂ ")	24799
		cut to size	24800
	Connecting bolts, set of 6 pieces		17221

Ceiling or window lintel fitting

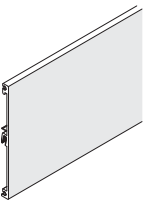
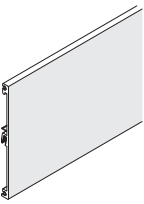




Wall fitting – solution provided by customer



Fixing bracket provided by customer

Covering screens

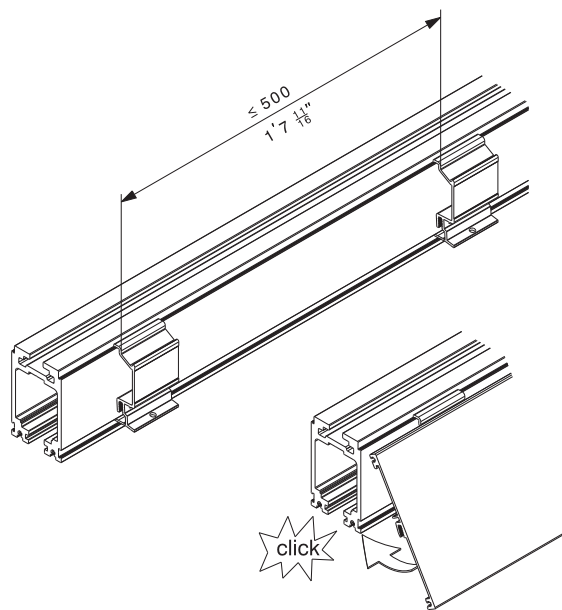
		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 ¹³ / ₁₆ ")	24845
		6000 (19'8 ⁷ / ₃₂ ")	24808
		cut to size	24809
	Covering screens, alu unanodized	6000 (19'8 ⁷ / ₃₂ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting bolts, set of 6 pieces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

Front cover plates

		aluminium	code
	Front cover plates for HAWA-Frontslide 140, for ceiling fitting, 1 pair	plain anodized	24817
		unanodized	24819

Fitting the covering screens

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



Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

Order specifications

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

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 140 kg (308 lbs.), opening simultaneously left and right.

Description

HAWA-Frontslide 140/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. 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.

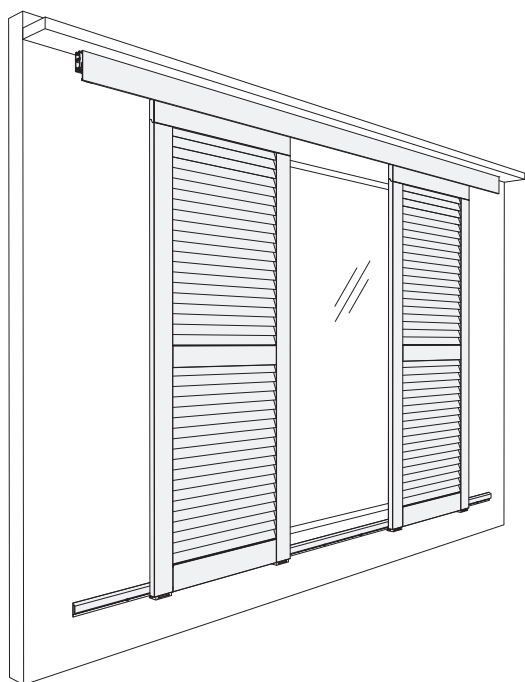
Applications

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.

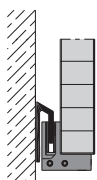
Features of the

HAWA-Frontslide 140/A-Symmetric 2

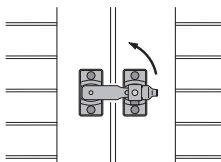
- Maximum sliding shutter weight: 140 kg (308 lbs.)/shutter
- Sliding shutter thickness: 28–60 mm ($1\frac{1}{8}$ – $2\frac{3}{4}$ ")
- Minimum sliding shutter width: 700 mm ($2'3\frac{9}{16}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Maximum installation width: 6000 mm ($19'8\frac{7}{32}$ ")
- Corrosion-resistant materials
- 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)



Guides
→ page 112



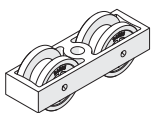
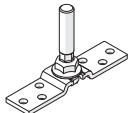
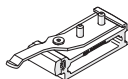
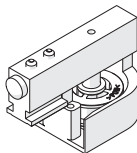
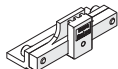
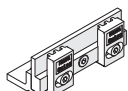
Locking mechanisms
→ page 114



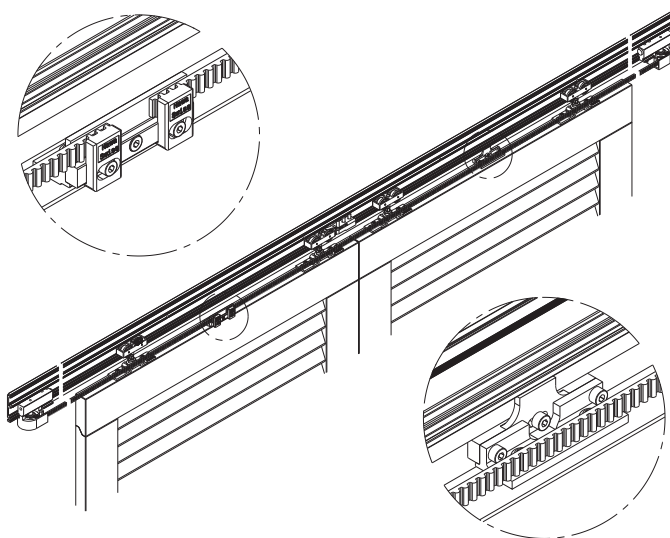
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 140/A-Symmetric 2, partial set for 2 sliding shutters	25451

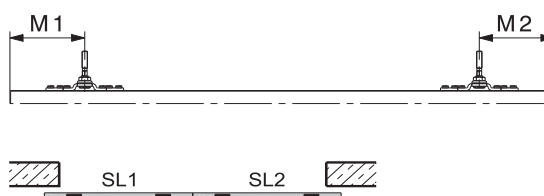
Set comprising

		piece	code
	Two-wheeled trolley, M12, with plastic wheels	4	24554
	Top fixing plate, stainless steel, with hanger bolt M12	4	24567
	Track stop with adjustable retainer	1	24835
	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 lock and driver

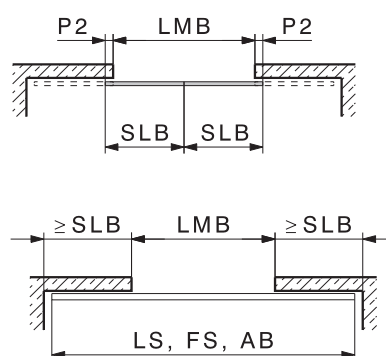


Calculation for suspension points



140/A	M1	M2
SL1	170 mm (6 $\frac{11}{16}$ ")	120 mm (4 $\frac{23}{32}$ ")
SL2	120 mm (4 $\frac{23}{32}$ ")	170 mm (6 $\frac{11}{16}$ ")

Calculation for sliding shutter width

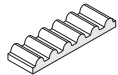


$$SLB = \frac{LMB}{2} + P2$$

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

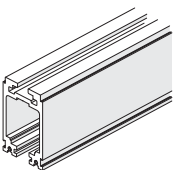

AB	Installation width
LMB	Entire opening width
SLB	Sliding shutter width
P	Sliding shutter overlap
LS	Top track
FS	Bottom guide channel

Toothed belt

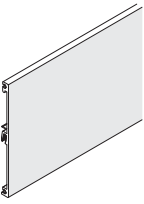
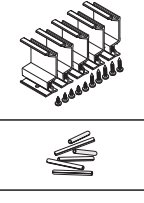


		length	code
	Toothed belt, black, fibre glass reinforced	5 m (16'4 $\frac{27}{32}$ ")	19667
		8 m (26'2 $\frac{31}{32}$ ")	19682
		10 m (32'9 $\frac{23}{32}$ ")	19668
		15 m (49'2 $\frac{9}{16}$ ")	20370
		50 m (164' $\frac{1}{2}$ ")	19669

Length of toothed belt = 2 x top track

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 ¹³ / ₁₆ ")	24841
		6000 (19'8 ⁷ / ₃₂ ")	24799
		cut to size	24800
	Connecting bolts, set of 6 pieces		17221

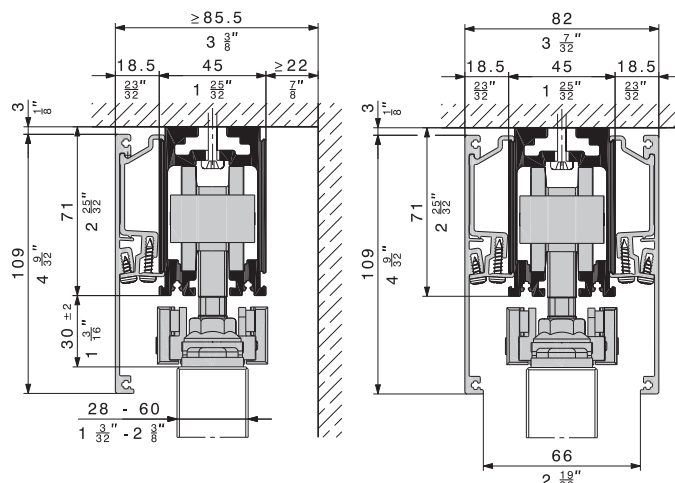
Covering screens

		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

Front cover plates

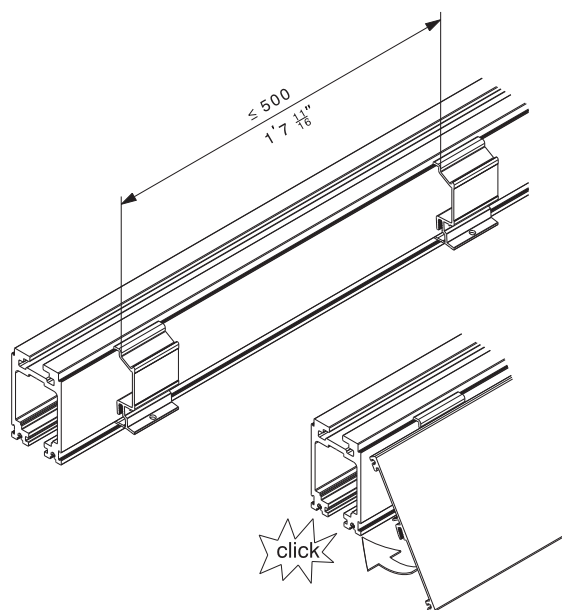
		aluminium	code
	Front cover plates for HAWA-Frontslide 140, for ceiling fitting, 1 pair	plain anodized	24817
		unanodized	24819

Ceiling or window lintel fitting



Fitting the covering screens

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



Order specifications

- Number of sets
- Number and length of top tracks
- Number and length of toothed belt
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

Optional order specifications

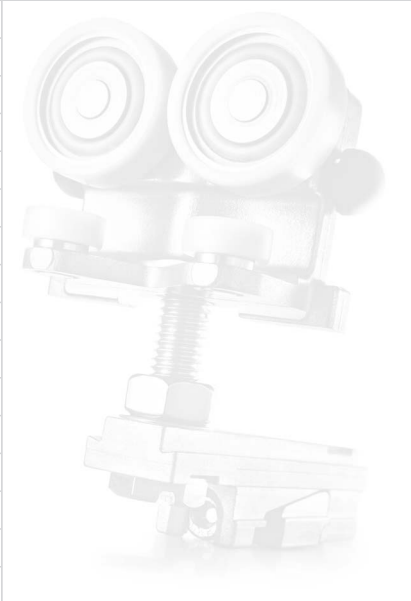
- Number and type of front cover plates
- Number of connecting bolt sets to profiles and covering screens
- Number and type of sliding shutter locking mechanisms

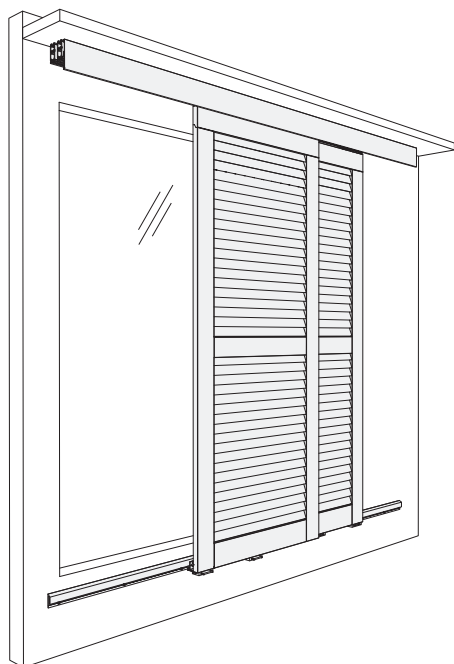
Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

Planning/installation

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





A lot of motion with a single slide.

Hardware for simultaneously sliding up to 2 wood, metal or aluminium shutters of up to 140 kg (308 lbs.).

Description

HAWA-Frontslide 140/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. 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.

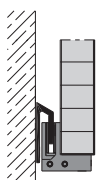
Features of the

HAWA-Frontslide 100/A-Telescopic

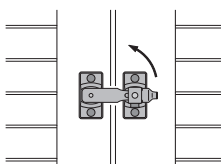
- Max. sliding shutter weight with 2 shutters: 140 kg (308 lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ "– $1\frac{19}{32}$ ")
- Sliding shutter width: 700–1200 mm ($2'3\frac{9}{16}$ "– $3'11\frac{1}{4}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Corrosion-resistant materials
- Fibreglass-reinforced toothed belts guarantee high tensile strength and a low level of expansion
- 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)



Guides
→ page 112



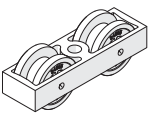
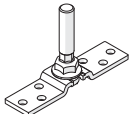
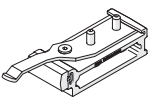
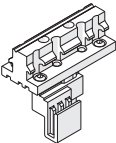
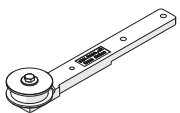
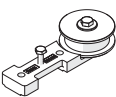
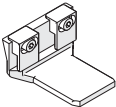
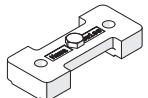
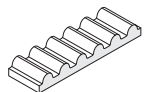
Locking mechanisms
→ page 114



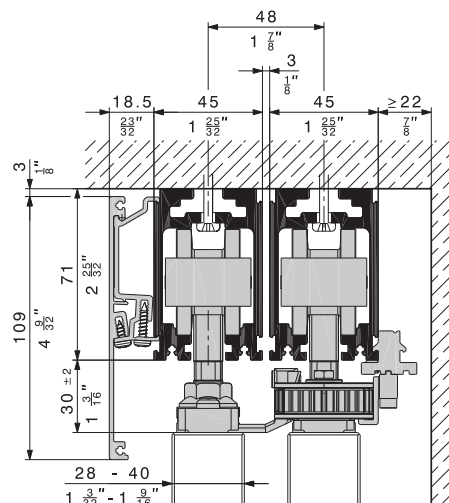
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 140/A-Telescopic 2, set for 2 sliding shutters, 700–1200 mm (2'3 ⁹ / ₁₆ "–3'11 ¹ / ₄ ")	25131

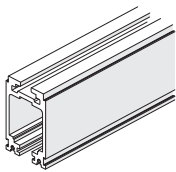

Set comprising

		piece	code
	Two-wheeled trolley, M12, with plastic wheels	4	24554
	Top fixing plate, stainless steel, with hanger bolt M12	4	24567
	Track stop with adjustable retainer	2	24835
	Toothed belt clamp for manual and automatic systems	1	25060
	Guide pulley wheel, with fixing plate, long	1	20139
	Guide pulley wheel, with fixing plate, short	1	20140
	Driver, wide	1	20141
	Driver counter-plate, wide	1	20246
	Toothed belt, black, 2,7 m (8'10 ⁵ / ₁₆ "), fibreglass reinforced	1	20208

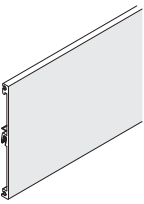
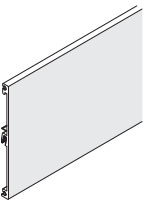


Two sliding shutters of up to 140 kg max. per panel



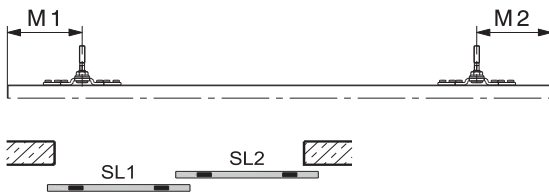
Top tracks for installations with or without covering screens

Caution: Hole positions vary.		mm/inch	code
	Top track, alu plain anodized, predrilled	3500 (11'5 ¹³ / ₁₆ ")	24841
		6000 (19'8 ⁷ / ₃₂ ")	24799
		cut to size	24800
	Connecting bolts, set of 6 pieces		17221

Covering screens

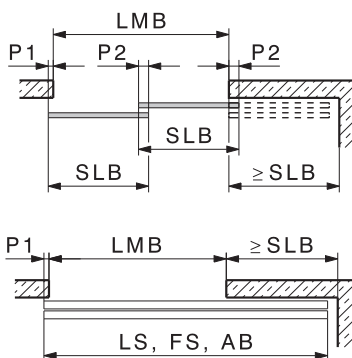
		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 ¹³ / ₁₆ ")	24845
		6000 (19'8 ⁷ / ₃₂ ")	24808
		cut to size	24809
	Covering screens, alu unanodized	6000 (19'8 ⁷ / ₃₂ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting bolts, set of 6 pieces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

Calculation for suspension points



140/A	M1	M2
SL1	170 mm (6 ¹¹ / ₁₆ ")	170 mm (6 ¹¹ / ₁₆ ")
SL2	170 mm (6 ¹¹ / ₁₆ ")	170 mm (6 ¹¹ / ₁₆ ")

Calculation for sliding shutter width



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

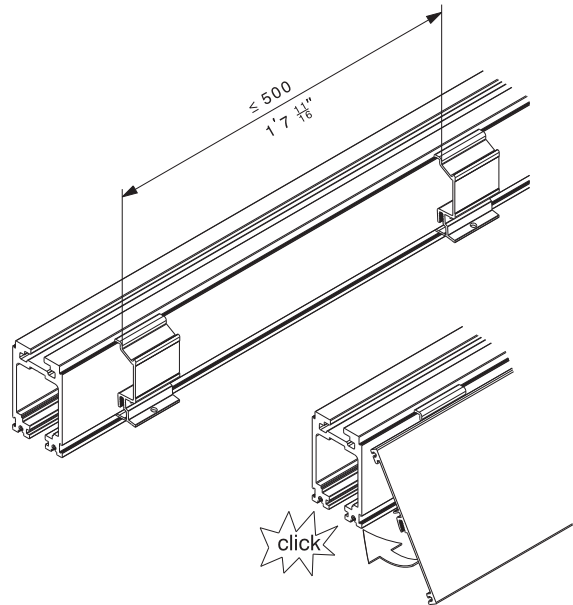
$$P2 \geq 50 \text{ mm (1 } \frac{31}{32} \text{")}$$

$$LS = LMB + P1 + SLB$$

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

Fitting the covering screens

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



Guides and locking mechanisms for sliding shutters

Bottom guides and locking mechanisms: → pages 112–115.

Order specifications

- Number of sets
- Number and length of top tracks
- 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 sliding shutter locking mechanisms

Planning/installation

For planning and installation purposes, please use the installation drawing code 24988. (→ 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 140 kg (308 lbs.).

Description

HAWA-Frontslide 140/matic is an electrically powered hardware system for sliding shutters. Its brushless electric motor, a HAWA-Motronic 140 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.

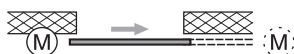
HAWA-Frontslide 140/matic allows maximum flexibility in façade design: various fixing and covering screen options cover virtually all needs.

Applications

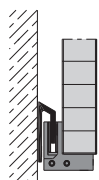
Ideal in building façades designed for privacy and shade, and where space is at a premium, e.g. schools, hotels, public buildings, office premises, low-energy homes, or creative frontage designs in residential settings.

Features of the HAWA-Frontslide 140/matic

- 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: 750 mm ($2'5\frac{17}{32}$ ")
- 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
- 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: → following page



Guides
→ page 112



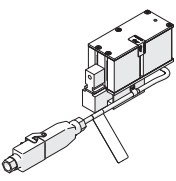
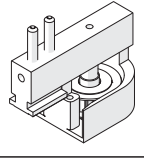
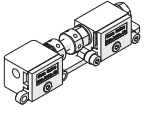

Drive unit HAWA-Motronic 140

HAWA-Motronic 140 is a drive unit with integrated control for automating sliding hardware with a speed of 50 mm ($1 \frac{31}{32}$ "/s) and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires. The HAWA-Motronic 140 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.

HAWA-Motronic 140, set for sliding shutter drive

	code
HAWA-Motronic 140 for HAWA-Frontslide 140/matic, incl. control unit, toothed belt lock and pulley wheel	25148

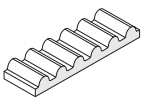
Set comprising

		piece	code
	HAWA-Motronic 140 with integrated control and connecting cable with a premounted Hirschmann plug	1	25063
	Pulley wheel for automatic mechanism	1	24792
	Toothed belt lock	1	19654
	End stop alu	2	24786

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' $\frac{1}{2}$ ")	19669

Calculation for length of toothed belt:

HAWA-Frontslide 140/matic: 2 x installation width

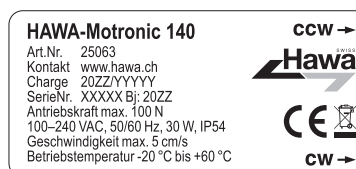
(The toothed belt lock is included with the HAWA-Motronic set 25148)

Technical details HAWA-Motronic 140

- 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 – +60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 50 mm ($1 \frac{31}{32}$ "/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

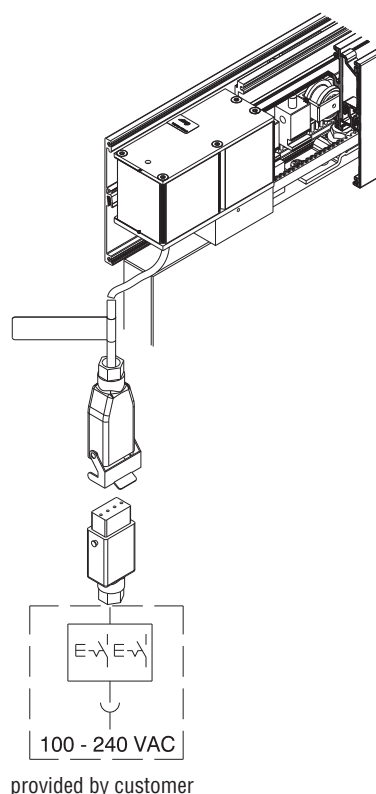
Type label

Every drive unit carries a type label.



Control and operation of the system

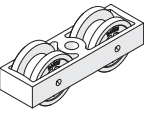
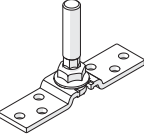
The systems are operated with commercially available electrical switches.



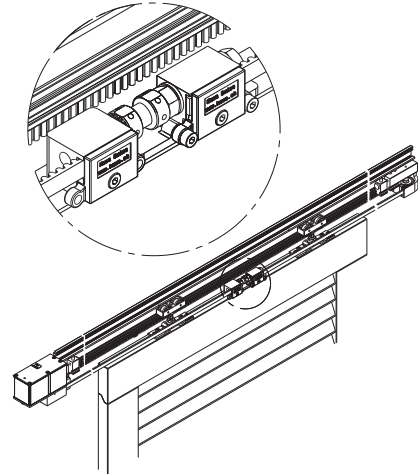
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 140/matic, partial set for 1 sliding shutter	25144

Set comprising

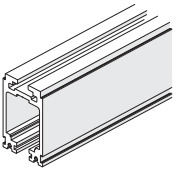

		piece	code
	Two-wheeled trolley, M12, with plastic wheels	2	24554
	Top fixing plate, stainless steel, with hanger bolt M12	2	24567

HAWA-Frontslide 140/matic

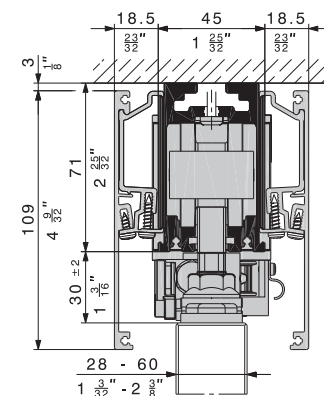
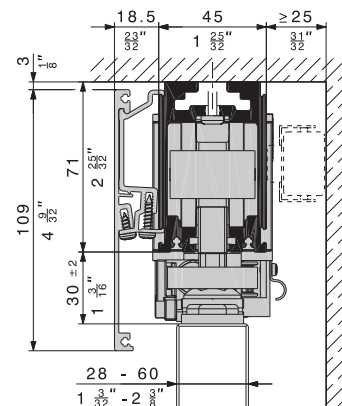


Situation: Toothed belt lock

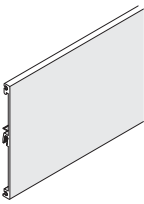
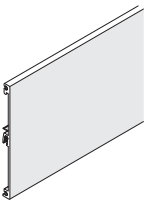


Top tracks for installations with or without covering screens

Caution: Hole positions vary.		mm/inch	code
		3500 (11'5 ¹³ / ₁₆ ")	24841
		6000 (19'8 ⁷ / ₃₂ ")	24799
		cut to size	24800
	Connecting bolts, set of 6 pieces		17221
Calculation for length of top track: Length of top track = installation width - 115 mm (4 ¹⁷ / ₃₂ ") (drive unit)			

Ceiling or window lintel fitting



Covering screens

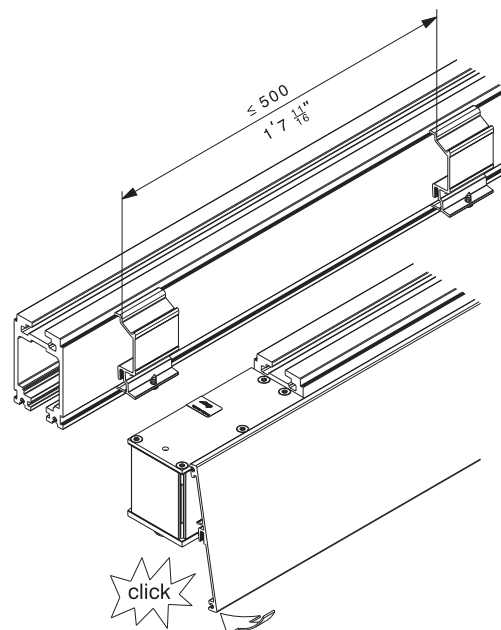
		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 $\frac{13}{16}$ ")	24845
		6000 (19'8 $\frac{7}{32}$ ")	24808
	cut to size		24809
	Covering screens, alu unanodized	6000 (19'8 $\frac{7}{32}$ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting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

Front cover plates

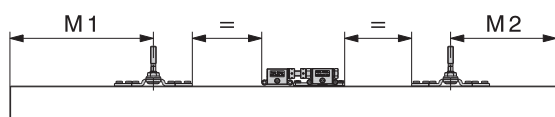
		aluminium	code
	Front cover plates for HAWA-Frontslide 140, for ceiling fitting, 1 pair	plain anodized	24817
		unanodized	24819

Fitting the covering screens

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



Calculation for suspension points



140/matic	M1	M2
SL1	235 mm (9 $\frac{1}{4}$ ")	185 mm (7 $\frac{9}{32}$ ")

Bottom guides

Bottom guides: → page 112.

Order specifications

- Number of sets HAWA-Motronic 140
- Number of partial sets HAWA-Frontslide 140/matic
- Number and length of toothed belt
- Number and length of top tracks
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

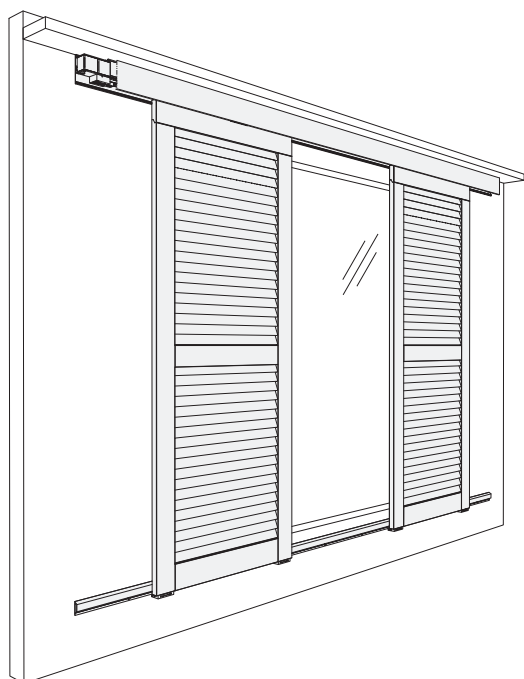
Optional order specifications

- 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 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 100 kg (220 lbs.), opening simultaneously left and right.

Description

HAWA-Frontslide 140/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 140 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 140/matic-Symmetric 2 allows maximum flexibility in façade design: various fixing and covering screen options cover virtually all needs.

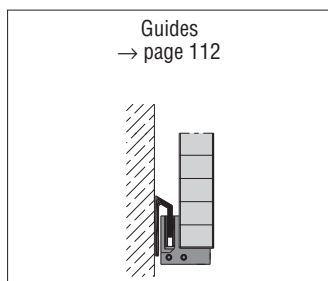
Applications

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 140/matic-Symmetric 2

- Maximum sliding shutter weight: 100 kg (220 lbs.)/shutter
- Sliding shutter thickness: 28–60 mm ($1\frac{1}{8}$ – $2\frac{3}{4}$ ")
- Minimum sliding shutter width: 750 mm ($2'5\frac{17}{32}$ ")
- 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: → following page



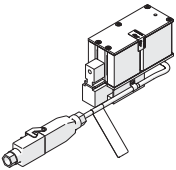
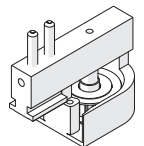
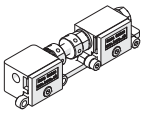

Drive unit HAWA-Motronic 140

HAWA-Motronic 140 is a drive unit with integrated control for automating sliding hardware with a speed of 50 mm ($1 \frac{31}{32}$ "/s) and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires. The HAWA-Motronic 140 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.

HAWA-Motronic 140, set for sliding shutter drive

	code
HAWA-Motronic 140 for HAWA-Frontslide 140/matic, incl. control unit, toothed belt lock and pulley wheel	25148

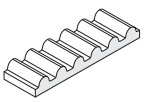
Set comprising

		piece	code
	HAWA-Motronic 140 with integrated control and connecting cable with a premounted Hirschmann plug	1	25063
	Pulley wheel for automatic mechanism	1	24792
	Toothed belt lock	1	19654
	End stop alu	2	24786

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	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:

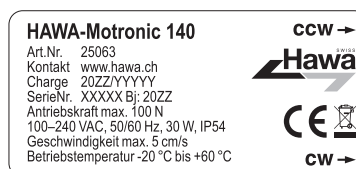
HAWA-Frontslide 140/matic-Symmetric 2: 2 x installation width
(The toothed belt lock is included with the HAWA-Motronic set 25148)

Technical details HAWA-Motronic 140

- 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 – +60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 50 mm ($1 \frac{31}{32}$ "/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

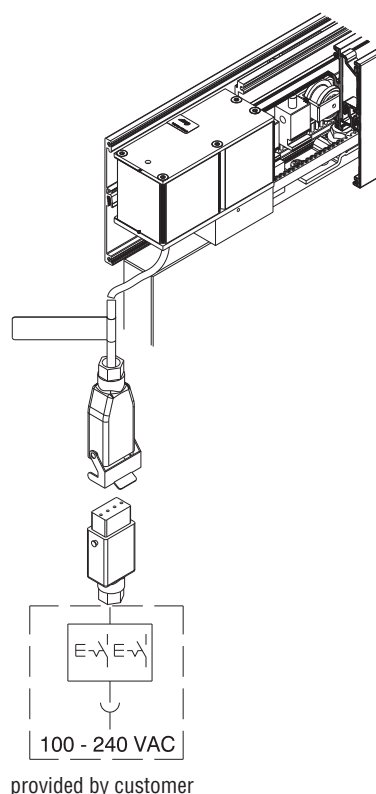
Type label

Every drive unit carries a type label.



Control and operation of the system

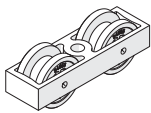
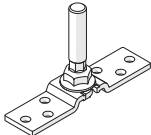
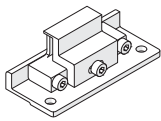
The systems are operated with commercially available electrical switches.



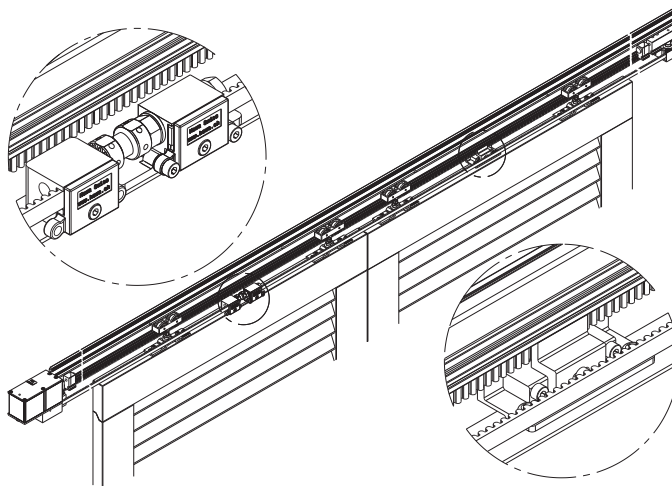
Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 140/matic-Symmetric 2, partial set for 2 sliding shutters	25452

Set comprising

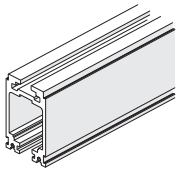

		piece	code
	Two-wheeled trolley, M12, with plastic wheels	4	24554
	Top fixing plate, stainless steel, with hanger bolt M12	4	24567
	Driver for Symmetric installations	1	19655

HAWA-Frontslide 140/matic-Symmetric 2

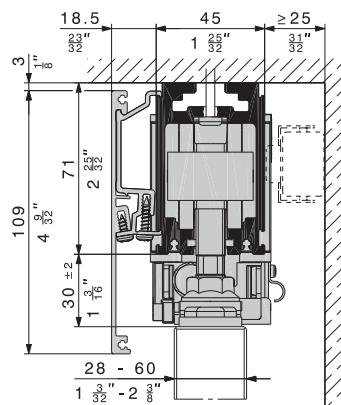


Situation: Toothed belt lock and driver

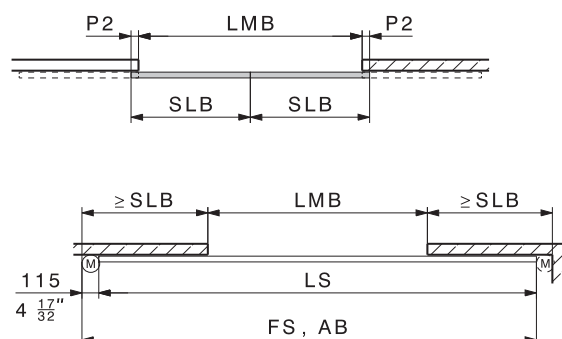
Top tracks for installations with or without covering screens

Caution: Hole positions vary.		mm	code
	Top track, alu plain anodized, predrilled	3500	24841
		6000	24799
		cut to size	24800
	Connecting bolts, set of 6 pieces		17221

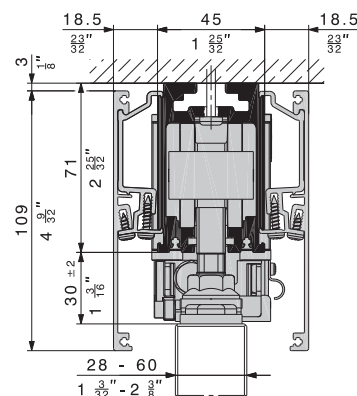
Ceiling or window lintel fitting



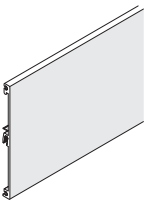
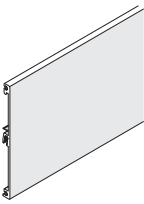


Calculation for sliding shutter width



$SLB = \frac{LMB}{2} + P2$	AB	Installation width
	LMB	Entire opening width
	SLB	Sliding shutter width
	M	Minimum space for drive unit
	P	Sliding shutter overlap
$LS = LMB + (2 \times SLB) - 115$	LS	Top track
$FS = LS + 115 \text{ mm } (4 \frac{17}{32})$	FS	Bottom guide channel



Covering screens

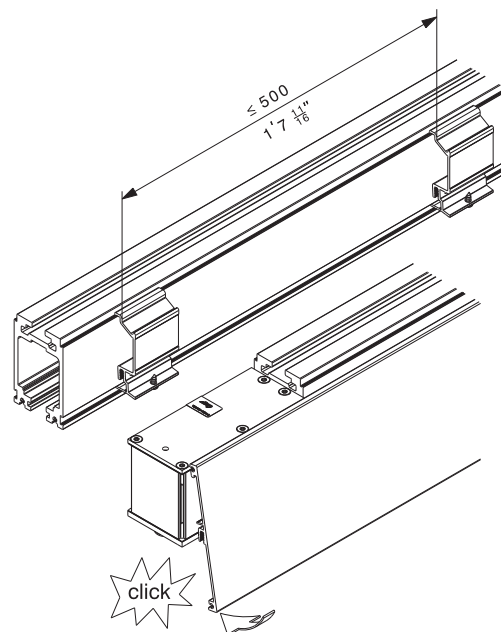
		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 $\frac{13}{16}$ ")	24845
		6000 (19'8 $\frac{7}{32}$ ")	24808
	cut to size		24809
	Covering screens, alu unanodized	6000 (19'8 $\frac{7}{32}$ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting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

Front cover plates

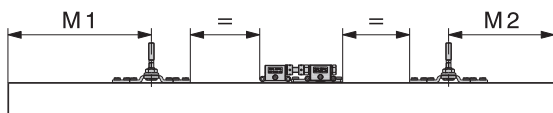
		aluminium	code
	Front cover plates for HAWA-Frontslide 140, for ceiling fitting, 1 pair	plain anodized	24817
		unanodized	24819

Fitting the covering screens

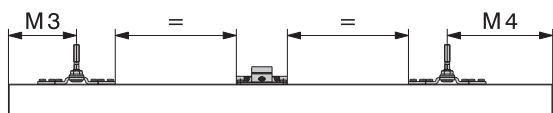
Cover fixings (code 24767) are required for attaching the covering screens.



Calculation for suspension points



140/matic	M1	M2
SL1	235 mm (9 $\frac{1}{4}$ ")	120 mm (4 $\frac{23}{32}$ ")



140/matic	M3	M4
SL2	120 mm (4 $\frac{23}{32}$ ")	185 mm (7 $\frac{9}{32}$ ")

Bottom guides

Bottom guides: → page 112.

Order specifications

- Number of sets HAWA-Motronic 140
- Number of partial sets HAWA-Frontslide 140/matic-Symmetric 2
- Number and length of toothed belt
- Number and length of top tracks
- Number, length and type of covering screens
- Number of fitting parts to covering screens
- Number and type of guides

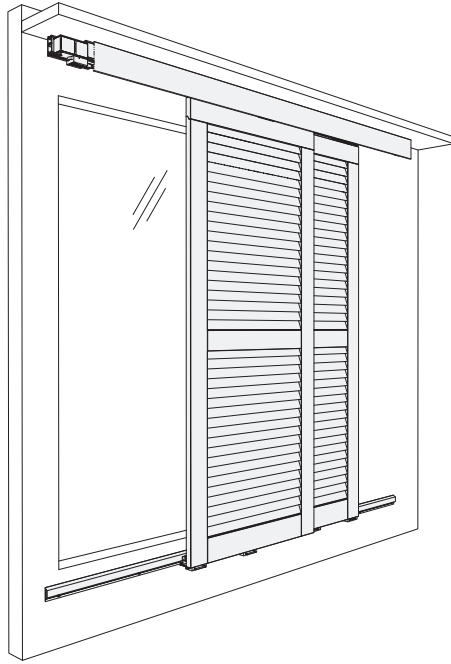
Optional order specifications

- 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 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 – automation in motion.

Hardware for simultaneously automatic sliding up to 2 wood, metal or aluminium sliding shutters up to 140 kg (308 lbs.).

Description

HAWA-Frontslide 140/matic-Telescopic can automatically move up to 2 sliding shutters simultaneously when combined with HAWA-Frontslide 140/matic drive components.

Its brushless electric motor, a HAWA-Motronic 140 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.

The HAWA-Frontslide 100/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.

Features of the

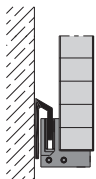
HAWA-Frontslide 140/matic-Telescopic

- Max. sliding shutter weight with 2 shutters: 140 kg (lbs.)/shutter
- Sliding shutter thickness: 28–40 mm ($1\frac{1}{8}$ – $1\frac{19}{32}$ ")
- Sliding shutter width: 750 mm–1200 mm ($2'5\frac{17}{32}$ "– $3'11\frac{1}{4}$ ")
- Maximum sliding shutter height: 3200 mm (10'6")
- Fibreglass-reinforced toothed belts guarantee high tensile strength and a low level of expansion
- 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: → following page



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

Guides
→ page 112



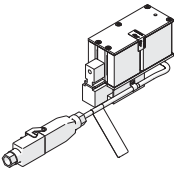
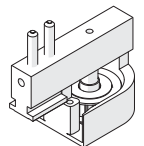
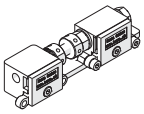

Drive unit HAWA-Motronic 140

HAWA-Motronic 140 is a drive unit with integrated control for automating sliding hardware with a speed of 50 mm ($1 \frac{31}{32}$ "/s) and a maximum drive force of 100 N. Drive commands are triggered by applying a current to the control wires. The HAWA-Motronic 140 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.

HAWA-Motronic 140, set for sliding shutter drive

	code
HAWA-Motronic 140 for HAWA-Frontslide 140/matic, incl. control unit, toothed belt lock and pulley wheel	25148

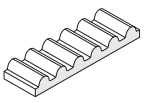
Set comprising

		piece	code
	HAWA-Motronic 140 with integrated control and connecting cable with a premounted Hirschmann plug	1	25063
	Pulley wheel for automatic mechanism	1	24792
	Toothed belt lock	1	19654
	End stop alu	2	24786

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
	Zahnriemen glasfaserverstärkt, schwarz	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

Berechnung der Zahnriemenlänge:

HAWA-Frontslide 140/matic-Telescopic: 2 x installation width

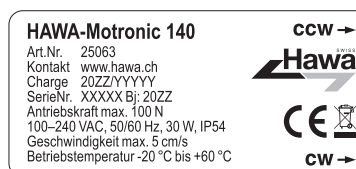
(Das Zahnriemens Schloss ist in der Garnitur HAWA-Motronic 25148 enthalten)

Technical details HAWA-Motronic 140

- 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 – +60 °C
- Degree of siuling: 1
- Degree of protection: IP 54
- Max. speed: 50 mm ($1 \frac{31}{32}$ "/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

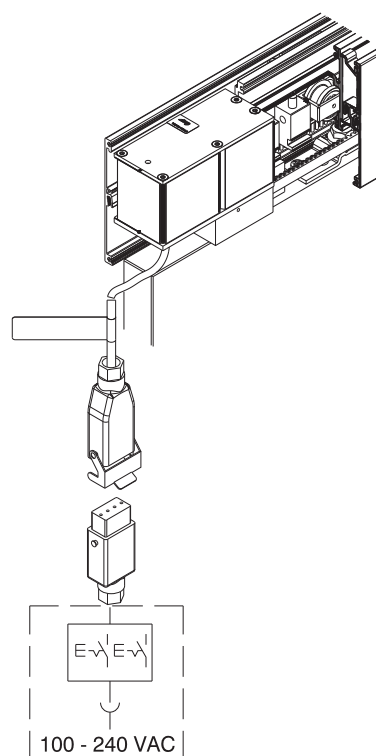
Type label

Every drive unit carries a type label.



Control and operation of the system

The systems are operated with commercially available electrical switches.



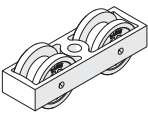
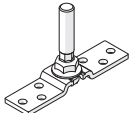
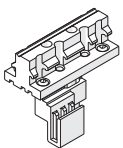
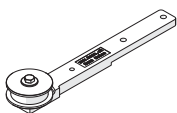
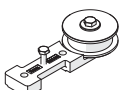
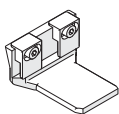
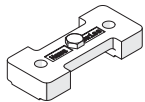
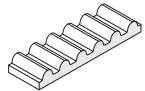
provided by customer

Technische Änderungen vorbehalten.

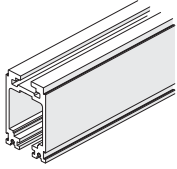

Set without top tracks and bottom guide channels

	code
HAWA-Frontslide 140/matic-Telescopic 2, set for 2 sliding shutters, 750 mm–1200 mm (2'5 ¹⁷ / ₃₂ "–3'11 ¹ / ₄ ")	25145

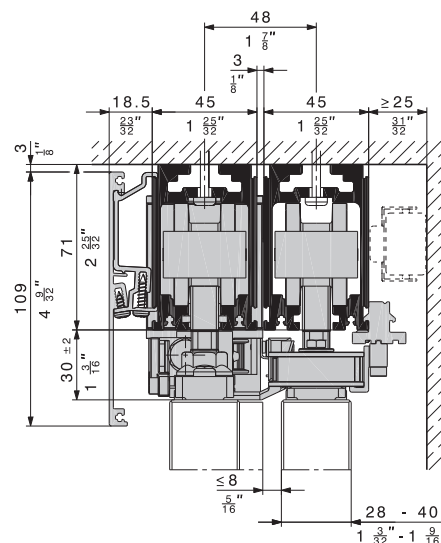
Set comprising

		piece	code
	Two-wheeled trolley, M12, with plastic wheels	4	24554
	Top fixing plate, stainless steel, with hanger bolt M12	4	24567
	Toothed belt clamp for manual and automatic systems	1	25060
	Guide pulley wheel, with fixing plate, long	1	20139
	Guide pulley wheel, with fixing plate, short	1	20140
	Driver, wide	1	20141
	Driver counter-plate, wide	1	20246
	Toothed belt, black, 2,7 m (8'10 ⁵ / ₁₆ "), fibreglass reinforced	1	20208

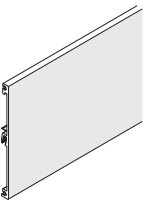
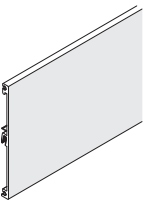


Top tracks for installations with or without covering screens

Caution: Hole positions vary.		mm/inch	code
	Top track, alu plain anodized, predrilled	3500 (11'5 ¹³ / ₁₆ ")	24841
		6000 (19'8 ⁷ / ₃₂ ")	24799
		cut to size	24800
	Connecting bolts, set of 6 pieces		17221

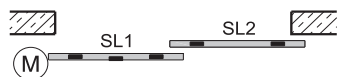
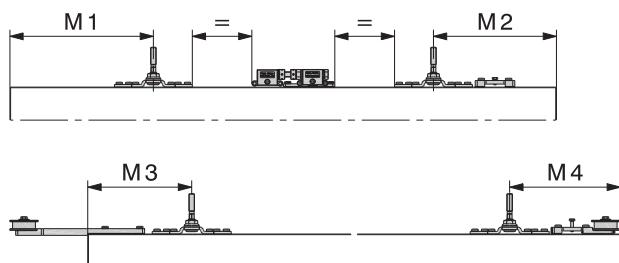
Two sliding shutters of up to 140 kg max. per panel



Covering screens

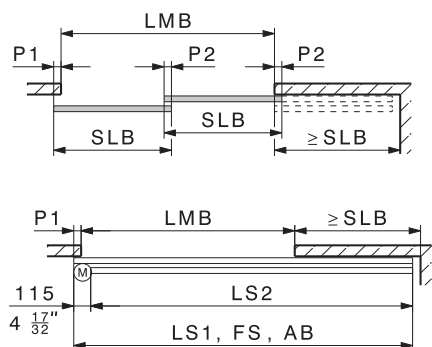
		mm/inch	code
	Covering screens, alu plain anodized	3500 (11'5 ¹³ / ₁₆ ")	24845
		6000 (19'8 ⁷ / ₃₂ ")	24808
		cut to size	24809
	Covering screens, alu unanodized	6000 (19'8 ⁷ / ₃₂ ")	24810
		cut to size	24811
	Parts for fitting top track cover, set of 5 pieces		24767
	Connecting bolts, set of 6 pieces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

Calculation for suspension points



140/matic	M1	M2	M3	M4
SL1	235 mm (9 ¹ / ₄ ")	180 mm (7 ³ / ₃₂ ")		
SL2			170 mm (6 ¹¹ / ₁₆ ")	170 mm (6 ¹¹ / ₁₆ ")

Calculation for sliding shutter width



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

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

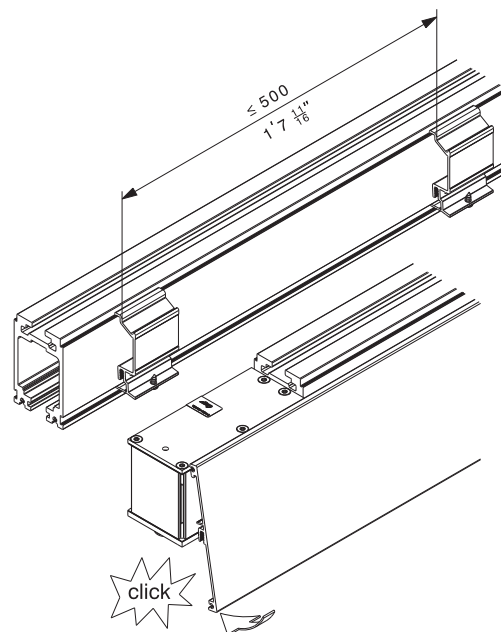
$$LS1 = LMB + P1 + SLB$$

$$LS2 = LS1 - 115 \text{ mm (4 } \frac{17}{32} \text{")}$$

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

Fitting the covering screens

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



Bottom guides

Bottom guides: → page 112.

Order specifications

- Number of sets HAWA-Motronic 140
- Number of sets HAWA-Frontslide 140/matic-Telescopic 2
- Number and length of toothed belt
- Number and length of top tracks
- 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

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)

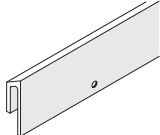
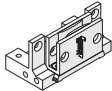
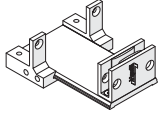

Guides for sliding shutters up to 3200 mm (10'6") in height and 140 kg (308 lbs.) maximum weight.

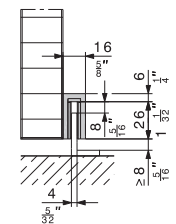
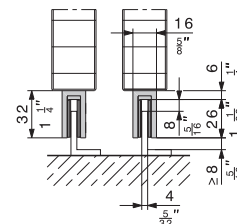
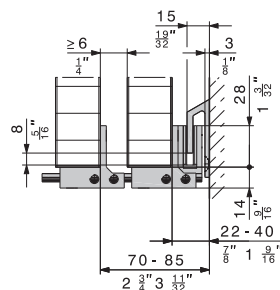
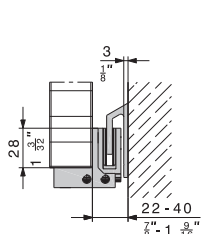
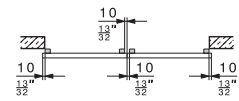
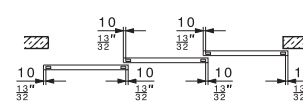
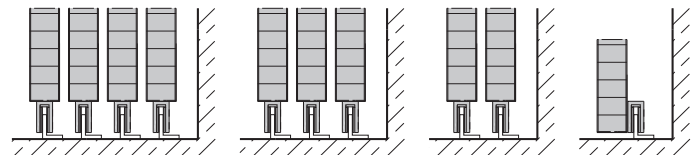
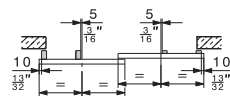
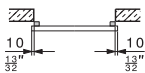
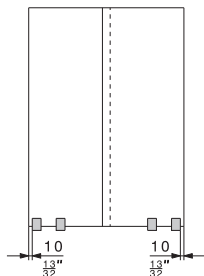
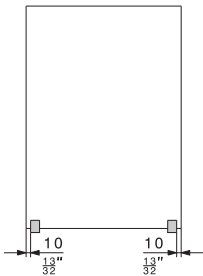
Description

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
	Bottom guide channel, alu plain anodized, predrilled	6000 (19'8 ⁷ / ₃₂ ")	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

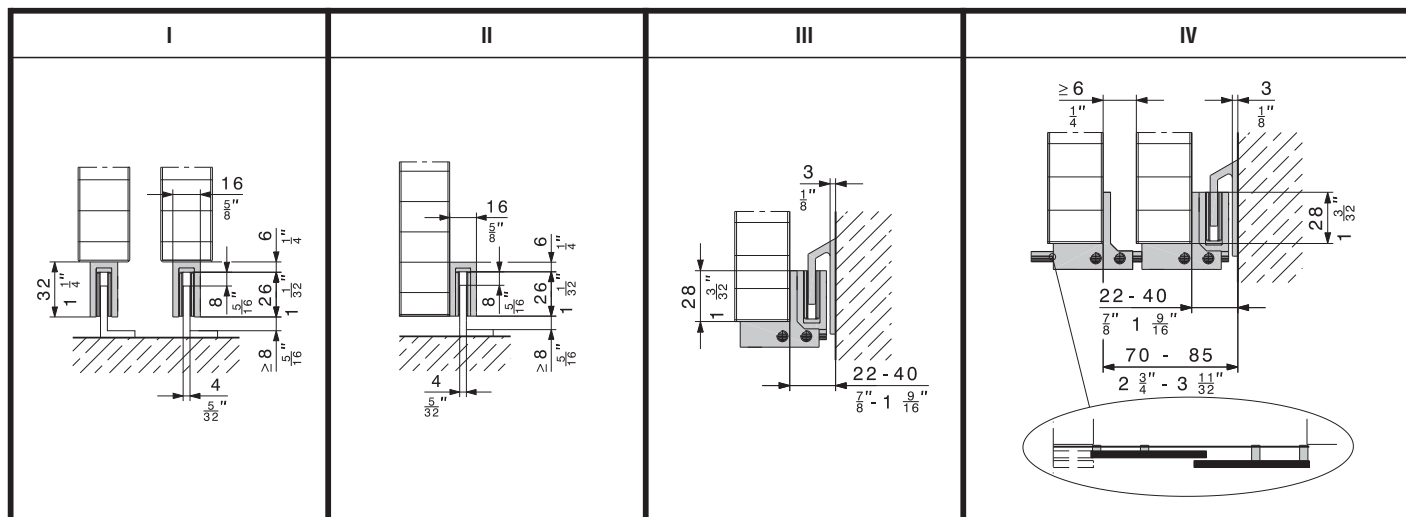


Floor guide 24543, bottom guide channels 24460/24462

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

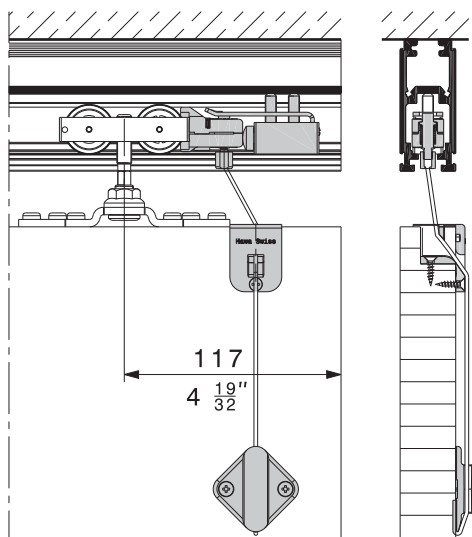
Guide slider 24542 from Hawa and commercially available, anodized aluminum bottom guide profile.

Overview of the guides for HAWA-Frontslide

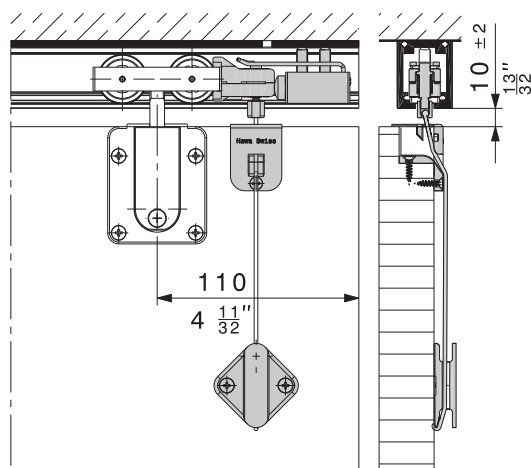


	I	II	III	IV
	✓	✓	✓	-
	✓	-	-	✓
	✓	-	-	-
	✓	-	-	-
	✓	✓	✓	-
	✓	-	-	✓
Guide arrangements Certain guide options are freely adjustable. Further guide options available on request.	 24542	 24542	 24543	 24543/24544
	 Alu profile anodized provided by others	 Alu profile anodized provided by others	 24460/24462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

Sliding shutter locking

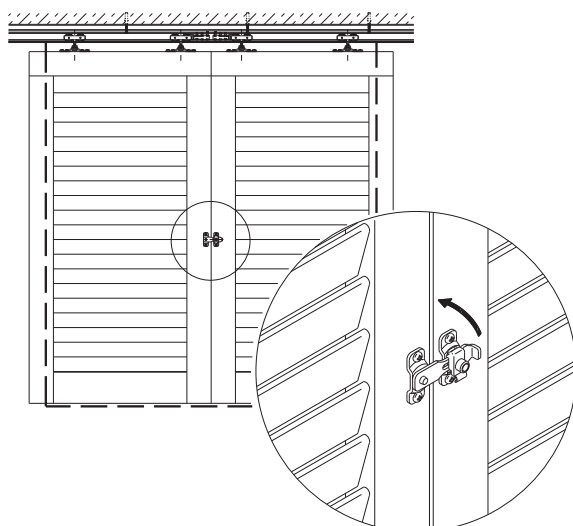


In combination with HAWA-Frontslide 60/A



In combination with HAWA-Frontslide 60/B

Catch for sliding shutters



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

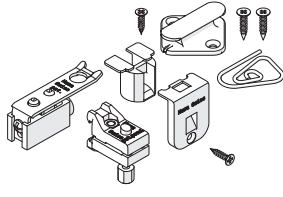
Description

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

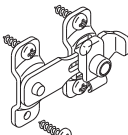
	code
 <p>Sliding shutter locking complete, for HAWA-Frontslide 60/A and 60/B</p>	19319

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

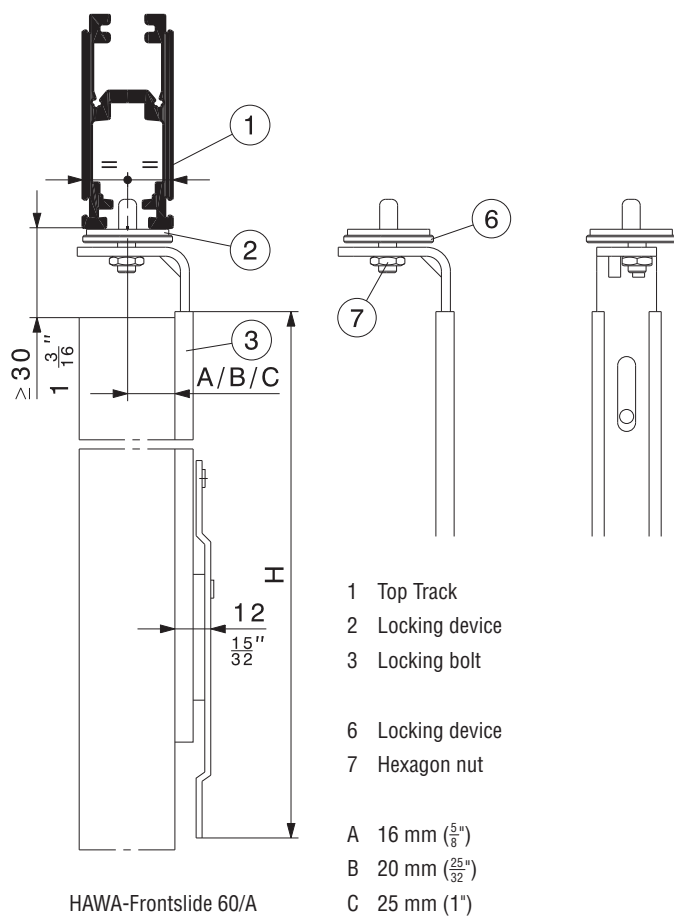
Description

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.

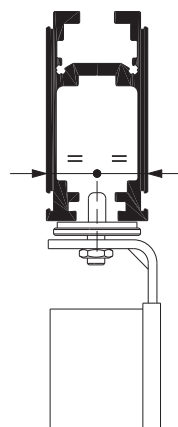
The locking device has an installation height of just 12 mm ($\frac{15}{32}$ ") and screws on to any type of shutter with no need for milling work; the device is also suitable for retrospective fitting.

Two different lengths are available for an ideal gripping position.

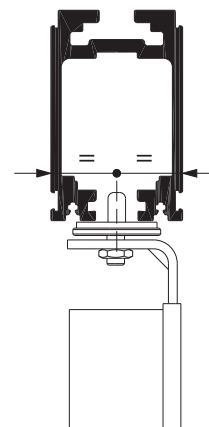
Sliding shutter locking device

	mm/inch	code
	800 (2'7 $\frac{1}{2}$ ")	23714
	1200 (3'11 $\frac{1}{4}$ ")	23715

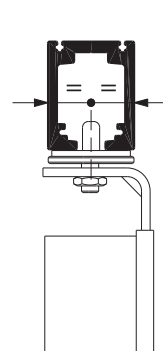
Further application examples



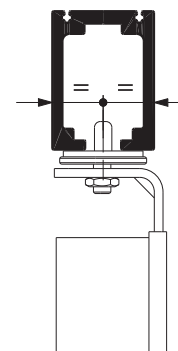
HAWA-Frontslide 100/A



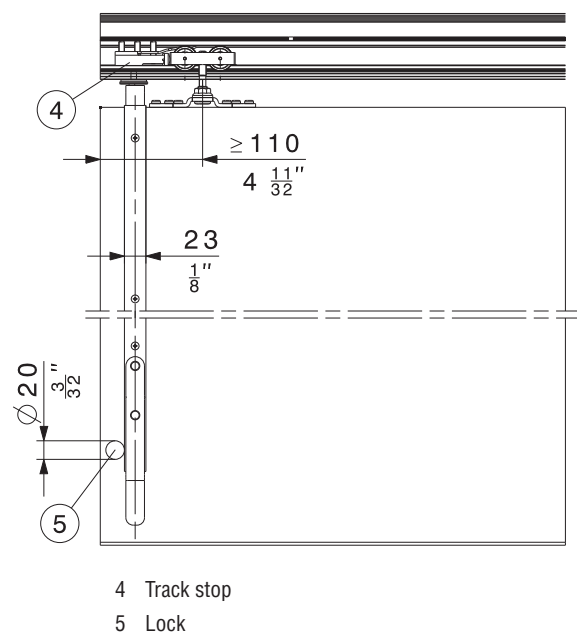
HAWA-Frontslide 140/A



HAWA-Frontslide 60/A
with lower top track



HAWA-Frontslide 100/A
with lower top track



Further information:

Hawa AG
8932 Mettmenstetten
Switzerland
Tel. +41 44 767 91 91
Fax +41 44 767 91 78
www.hawa.ch

