Hawa
Sliding Solutions

In buildings

Architectural hardware glass/metal

Hawa Puro
Hawa Purolino Plus
Hawa Ordena
Hawa Variofold
Hawa Centerfold
Hawa Aperto
Hawa Variotec
Hawa Shopfront
Hawa Varioflex

Quality, Support and Service

About Hawa Sliding Solutions

Our metier since 1965 has been pivoting, sliding and folding hardware systems – along with the fascinating applications they have opened for our customers. Thus, we have grown into a name of international repute within our specialist areas of glass/metal/wood architectural hardware, and hardware for furniture.
We – and hence our customers – are totally committed to Swiss quality. Despite the fact that we now export over 80% of our output, production is located at home in Mettmenstetten. This is not least because our business philosophy is still based on characteristically Swiss values like precision, reliability, and durability.

About this catalogue

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

Find out about the rest of the Hawa range:

Architectural hardware wood

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

Catalogue order no: 15625

Furniture hardware

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

Catalogue order no: 15282

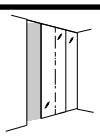
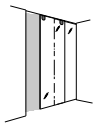
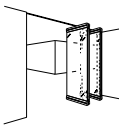
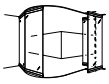
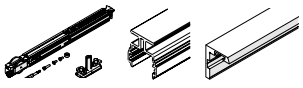
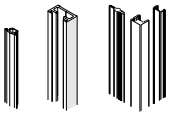
Hardware for folding and sliding shutters

- Manual sliding shutters
- Automatic sliding shutters
- Manual folding sliding shutters
- Automatic folding sliding shutters

Catalogue order no: 20896

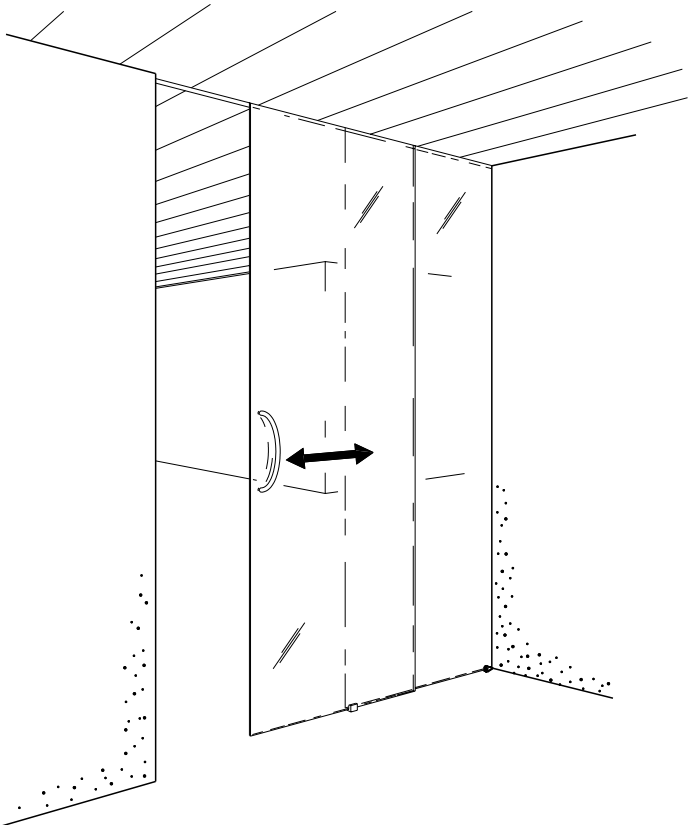
Content

Product index

		Recommended applications in:			For external use		Curved installations	Mode of fixing	
		Residential buildings	Public buildings	Industrial buildings	Non coastal areas	Coastal areas	Minimum radius mm/inch	Wall fitting	Ceiling fitting
Glass sliding doors with concealed suspension		●	●						●
		●	●					●	●
Glass sliding doors with patch suspension		●	●		❶				●
		●	●						●
Glass folding-/sliding walls		●	●		❶				●
		●	●		❶				●
		●	●		●		2000 (6'6 3/4")		●
		●	●		❶		4000 (13'1 1/2")		●
		●	●		❶		4000 (13'1 1/2")		●
		●	●	●	❶		4000 (13'1 1/2")		●
Transport system			●	●			500 (1'7 11/16")		●
Accessories									
									
									
									
Miscellaneous									

❶ possible under certain conditions

	Roller surface		www.hawa.ch					
Integration in concrete ceilings with Hawa Adapto	Plastic roller surface (low track noise levels)	Steel roller surface (higher track noise levels)	Hawa Productfinder → full information	Hawa Systemplanner → planning and quoting	Hardware systems	Maximum door weight		Page
●	●		●		Hawa Puro 100/150	100/150 kg	220/330 lbs.	6
●	●		●		Hawa Purolino Plus 80	80 kg	276 lbs.	14
	●		●		Hawa Ordena 70 P	70 kg	154 lbs.	24
	●		●		Hawa Ordena 70 F	70 kg	154 lbs.	28
	●		●	●	Hawa Variofold 80 GV	80 kg	176 lbs.	32
	●		●	●	Hawa Centerfold 80 GV	80 kg	176 lbs.	36
	●		●	●	Hawa Aperto 60 GL	60 kg	132 lbs.	40
	●		●	●	Hawa Variotec 150 GV	150 kg	330 lbs.	48
	●		●	●	Hawa Variotec 150 GR frame profile	150 kg	330 lbs.	62
		●	●		Hawa Shopfront 103 G 400 | 112 G 400	400 kg	880 lbs.	64
	●		●		Hawa Varioflex 40 TS	40 kg	88 lbs.	68
					Bottom guides / Bottom door stop			70
					Wall connection profile			71
					Rubber profile for glass edge protection			71
					Vertical sealing profile and bottom/wall profile to fixed glass			72
					General Terms and Conditions (GTC)			74



Transparency through complete integration

Hardware system for all-glass sliding doors with concealed suspension, weighing up to 100 or 150 kg (220 or 330 lbs.).

Description

Hawa Puro 100/150: fascinating aesthetic appeal, smooth and easy sliding, and exemplary ease of installation. There are many reasons why sliding solutions incorporating Hawa Puro are so pleasing. High-quality ball bearing technology built into the system's trolleys allows you to slide doors weighing up to 150 kg (330 lbs.) smoothly and quietly along anodised running tracks. And assembly is made simple by benefits such as punctiform, rattle-proof, floor-mounted guides, centric glass suspension and the new, patent-pending wedge suspension. A further plus are removable additional profiles for quick and easy dressing and integration of fixed elements made of glass, wood or other materials.

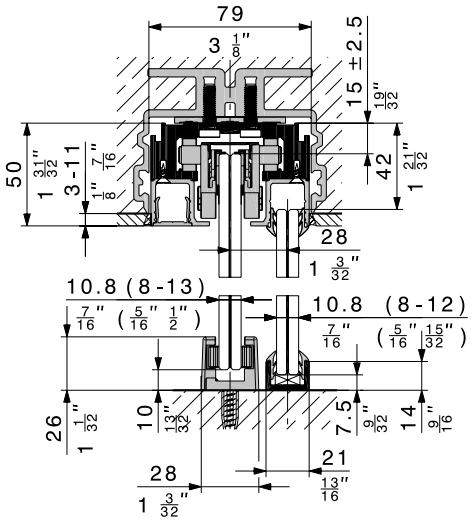
Applications

Wherever glass/glass or glass/wood combinations are used as room partitioning and design elements, not only in hotels, restaurants, conference rooms and administration buildings, but also for private interior design, especially in lofts with suspended ceilings.

Features of the Hawa Puro 100/150

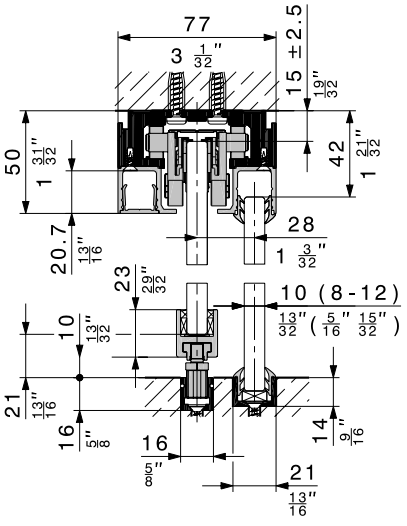
- Maximum door weight 4-wheels, 100 kg (220 lbs.)
- Maximum door weight 6-wheels, 150 kg (330 lbs.)
- Minimum door width 750 mm (2'5 17/32")
- Trolleys with high-quality ball bearing technology
- Glass retention and wedge suspension technology integrated in the running track
- Can be combined with inset profile system Hawa Adapto 100/150 P
- Ceiling joint profiles for suspended lightweight ceilings
- Interlocking suspension of glass doors in the slide axis
- Additional profiles removable from below
- Glass thickness sliding door
  ESG (fully tempered monolithic glass):
  8/10/12/12,7 mm (5/16"/13/32"/15/32"/1/2")
  VSG (fully tempered laminated glass): 8–12,7 mm (5/16"–1/2")
- Glass thickness fixed glass
  ESG (fully tempered monolithic glass)/
  VSG (fully tempered laminated glass): 8–12 mm (5/16"–15/32")
  with silicone up to 13 mm (17/32")

Integration in concrete ceilings



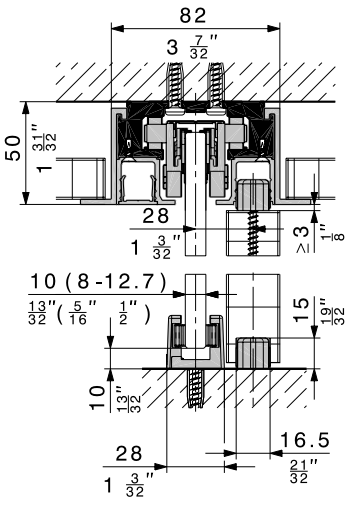
Two-part, rattle-proof floor guide and stationary element in a continuous surface-mounted floor profile.

Surface-mounted running track installation



Glass retention profile with rattle-proof floor guide and fixed glass in a continuous sunken floor profile.

Integration in suspended ceilings, with ceiling lug profiles



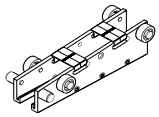
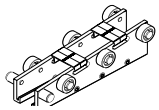
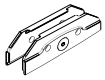
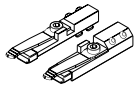
Two-part, rattle-proof floor guide and stationary element made of wood or other materials.

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

Hawa Puro 100/150, set without running track

	code
Hawa Puro 100, set for 1 glass sliding door, ESG[1]/VSG[2]	21141
Hawa Puro 150, set for 1 glass sliding door, ESG[1]/VSG[2]	21111
For two-panel sliding doors please order two sets for single doors.	

Set comprising

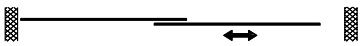
		21141	21111	code
	Four-wheeled trolley, with plastic-tyred ball bearing wheels	2		21190
	Six-wheeled trolley, with plastic-tyred ball bearing wheels		2	21191
	Suspension wedges for glass mounting, set for 1 door	1	1	21193
	Track stop, 1 pair	2	2	21319
	Set of screws for mounting U-profile, 3,5 x 9,5 mm ($\frac{5}{32}$" x $\frac{3}{8}$"), set of 25 pieces	1	1	21128
	Hex key, 3 mm ($\frac{1}{8}$") short version	1	1	10785

Glass fixing parts

		glass thickness mm/inch	code
	Glass fixing parts for 1 sliding door, ESG[1]	8 ($\frac{5}{16}$")	21194
		10 ($\frac{13}{32}$")	21195
		12 (12,7) ($\frac{15}{32}$"/$\frac{1}{2}$")	21196
	Glass fixing parts for 1 sliding door, VSG[2], incl. single use drilling jig	8,0–8,4 ($\frac{5}{16}$"–$\frac{11}{32}$")	21481
		8,5–10,4 ($\frac{11}{32}$"–$\frac{13}{32}$")	21390
		10,5–13,0 ($\frac{13}{32}$"–$\frac{17}{32}$")	21197

Possible combinations

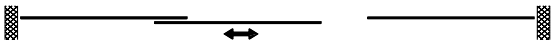
Flexible combination options with one-sided stationary elements in wood or glass and two-sided sliding door pockets in wood.



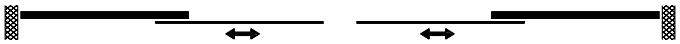
Stationary element in glass

Stationary element in wood

Stationary element as pocket in wood



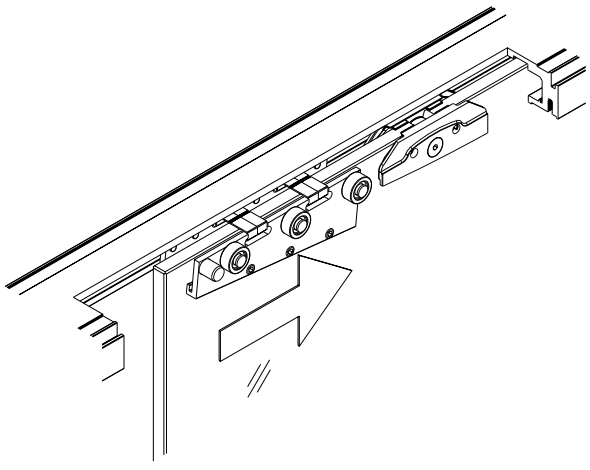
Two stationary elements in glass and one sliding door



Two stationary elements in wood and two sliding doors

Wedge suspension for glass sliding doors

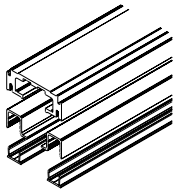
The new, patent-pending wedge suspension sets new standards with regard to the ease and speed of fitting and adjusting the height of sliding glass doors.



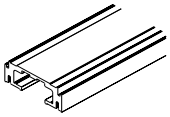
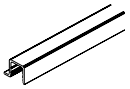
Subject to modification. Metric specifications are exact. Inches are approximate.

[1]fully tempered monolithic glass [2]fully tempered laminated glass

Running track sets to Hawa Puro 100/150

Caution: - Hole positions vary - Minor differences in colour are possible		mm/inch	code
	Running track set, alu plain anodized, predrilled, incl. u-profile and cover profile, alu plain anodized	2500 (8'2 7/16")	20864
		3500 (11'5 13/16")	20863
		6000 (19'8 7/32")	21123
	Running track set, alu plain anodized, predrilled, incl. u-profile and cover profile, alu unanodized	6000 (19'8 7/32")	20857
	Running track set, alu stainless steel effect, brushed, predrilled, incl. u-profile and cover profile, alu stainless steel effect	2500 (8'2 7/16")	20867
		3500 (11'5 13/16")	20866
		6000 (19'8 7/32")	20182

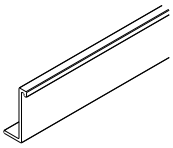
Running track profiles cut to size

Caution: - Hole positions vary - Minor differences in colour are possible			code
	Running track, predrilled, alu, cut to size	plain anodized	21145
		stainless steel effect, brushed	21318
	U-Profile for fixing stationary section, predrilled, to running track, alu, cut to size	plain anodized	21365
		unanodized	21367
		stainless steel effect, brushed	21366
	Cover profile to u-profile, alu, cut to size	plain anodized	19548
		unanodized	20856
		stainless steel effect, brushed	21284

Running track sets comprising

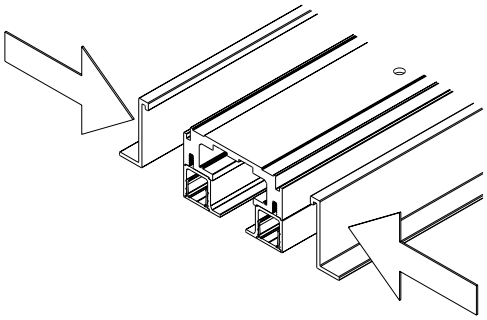
		mm/ inch	20864	20863	21123	20857	20867	20866	20182	code
Running track, predrilled, alu	plain anodized	2500 (8'2 7/16")	1							21142
		3500 (11'5 13/16")		1						21143
		6000 (19'8 7/32")			1	1				21110
	stainless steel effect, brushed	2500 (8'2 7/16")					1			21317
		3500 (11'5 13/16")						1		21316
		6000 (19'8 7/32")							1	21144
U-profile for fixing stationary section, predrilled, to running track, alu	plain anodized	2500 (8'2 7/16")	2							21363
		3500 (11'5 13/16")		2						21361
		6000 (19'8 7/32")			2					21352
	unanodized	6000 (19'8 7/32")				2				21354
	stainless steel effect, brushed	2500 (8'2 7/16")					2			21364
		3500 (11'5 13/16")						2		21362
		6000 (19'8 7/32")							2	21353
Cover profile to u-profile, alu	plain anodized	2500 (8'2 7/16")	2							20865
		3500 (11'5 13/16")		2						21230
		6000 (19'8 7/32")			2					21229
	unanodized	6000 (19'8 7/32")				2				20855
	stainless steel effect, brushed	2500 (8'2 7/16")					2			21315
		3500 (11'5 13/16")						2		21314
		6000 (19'8 7/32")							2	21283

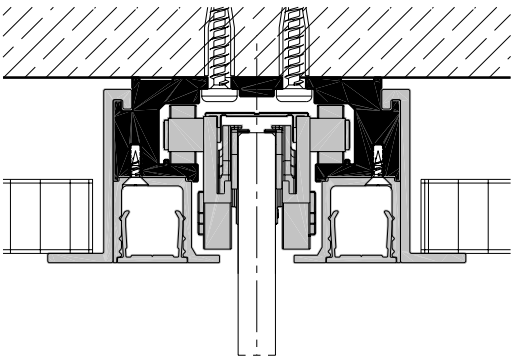
Ceiling joint profiles

Caution: Minor differences in colour are possible		mm/inch	code
	Ceiling joint profile, alu plain anodized, to running track	2500 (8'2 7/16")	21151
		3500 (11'5 13/16")	21149
		6000 (19'8 7/32")	21250
		cut to size	21152
	Ceiling joint profile, alu unanodized, to running track	6000 (19'8 7/32")	21037
		cut to size	21127
	Ceiling joint profile, alu, stainless steel effect, brushed, to running track	2500 (8'2 7/16")	21321
		3500 (11'5 13/16")	21320
		6000 (19'8 7/32")	21150
		cut to size	21322

Integration in suspended ceilings

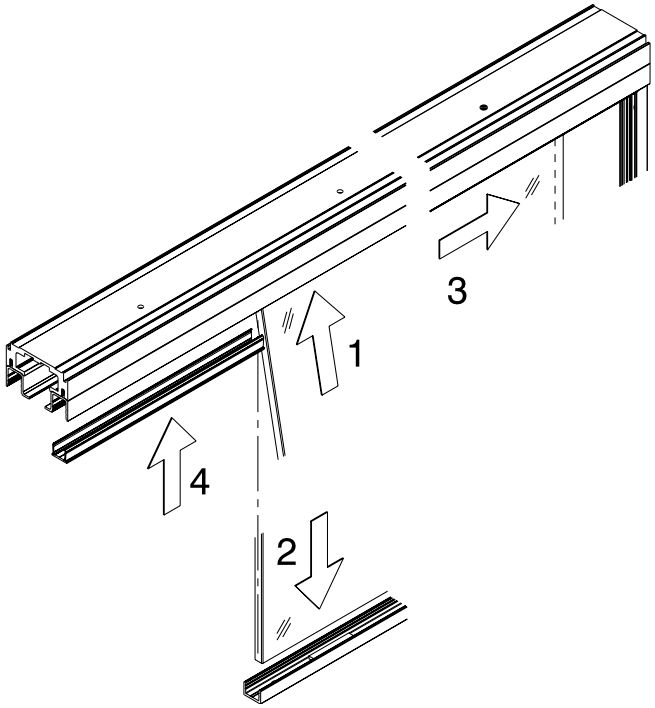
Ceiling joint profiles for running tracks enable simple designs for suspended lightweight ceilings. They are delivered as individual components.
Maximum load per metre of ceiling joint profile: 15 kg/m.



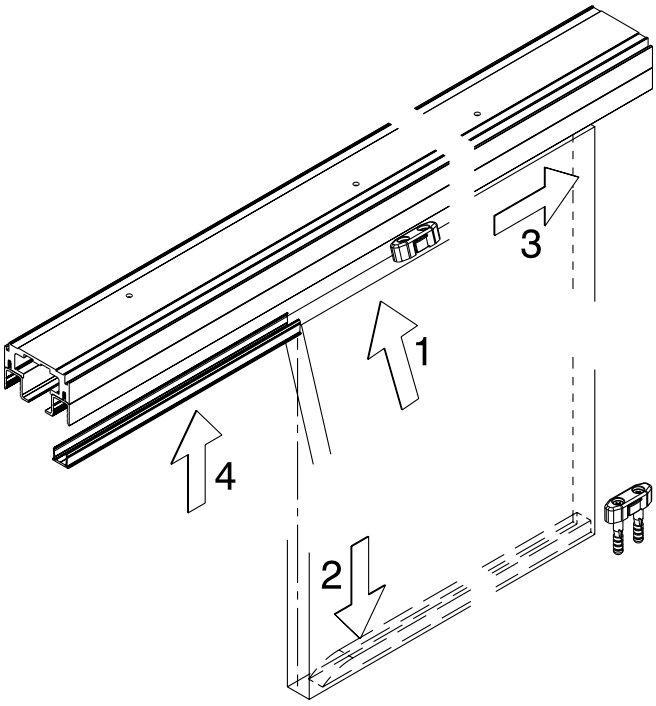


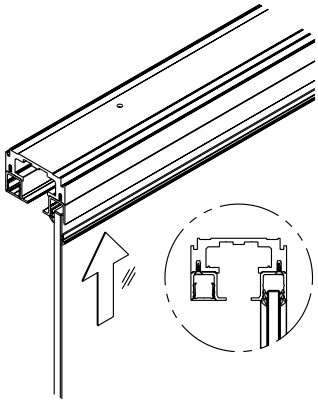
Subject to modification. Metric specifications are exact. Inches are approximate.

Fitting of fixed glass



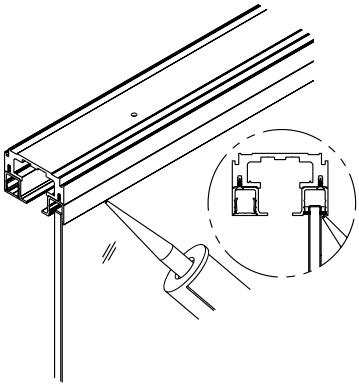
Fitting of stationary element in wood





Dry glazing with the Hawa rubber profile.

Attention:
to be used on both sides, i.e. order double the amount.



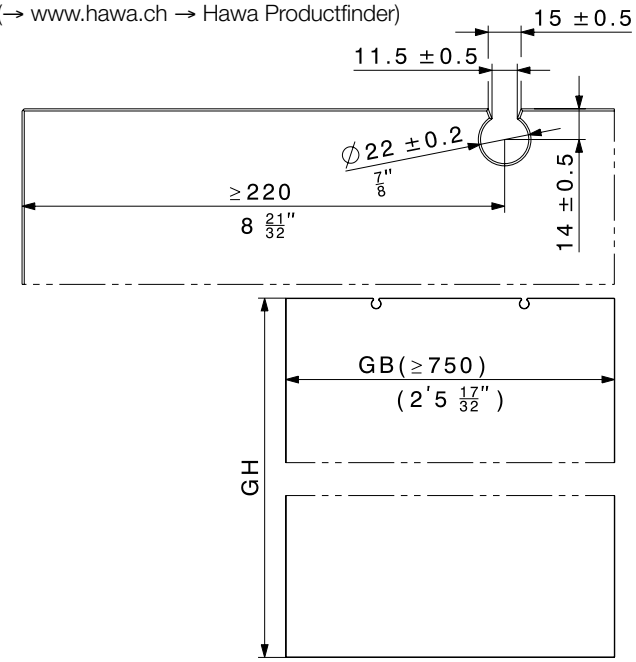
Silicone glazing provided by the customer.

Glass cutouts

Both glass ESG (fully tempered monolithic glass) and VSG (fully tempered laminated glass) can be used.

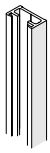
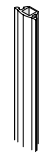
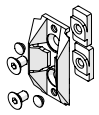
- Glass thickness sliding door ESG (fully tempered monolithic glass): 8/10/12/12,7 mm ($\frac{5}{16}$"/$\frac{13}{32}$"/$\frac{15}{32}$"/$\frac{1}{2}$"), thickness tolerance ± 0,3 mm
- Glass thickness sliding door VSG (fully tempered laminated glass):
  2x4 ± 0,2 mm → film thickness 0,38/0,76/1,52 mm
  2x5 ± 0,2 mm → film thickness 0,38/0,76/1,52 mm
  2x6 ± 0,2 mm → film thickness 0,38/0,76 mm
- All glass edges are seamed; maximum 1 mm ($\frac{1}{16}$") in the glass cutout
- VSG (fully tempered laminated glass) permissible with max. offset of 2 mm ($\frac{3}{32}$") in the glass cutout
- Glass thickness fixed glass ESG (fully tempered monolithic glass)/ VSG (fully tempered laminated glass) 8–12mm ($\frac{5}{16}$"–$\frac{15}{32}$") with silicone up to 13 mm ($\frac{17}{32}$")

Please use assembly instructions number 21133 for detailed glass calculations and to order glass elements.
(→ www.hawa.ch → Hawa Productfinder)

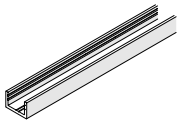


Subject to modification. Metric specifications are exact. Inches are approximate.

Wall connection profile

Caution: Minor differences in colour are possible			mm/inch	code
	Wall profile, alu, undrilled	plain anodized	2500 (8'2 7/16")	17020
			3500 (11'5 13/16")	17021
		stainless steel effect, brushed	2500 (8'2 7/16")	20119
			3500 (11'5 13/16")	20120
	Seal profile, black, for wall profile		roll of 2500 (8'2 7/16")	16452
			roll of 3500 (11'5 13/16")	16453
	Centering assembly black for all glass sliding doors, to wall profile			18663
	Centering assembly grey for all glass sliding doors			18619

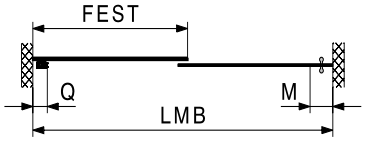
Bottom, wall and rubber profile to fixed glass

Caution: - Hole positions vary - Minor differences in colour are possible		mm/inch	code
	Bottom/wall profile to fixed glass, alu, plain anodized, predrilled	4000 (13'1 1/2")	19549
		6000 (19'8 7/32")	19561
		cut to size	20067
	Bottom/wall profile to fixed glass, alu, stainless steel effect, brushed, predrilled	4000 (13'1 1/2")	21285
		6000 (19'8 7/32")	21286
		cut to size	21287
	Rubber profile, black to fixed glass 8–9.9 mm (5/16"–13/32")	roll of 10 m (32'9 23/32")	25787
	Rubber profile, black to fixed glass 10–12 mm (13/32"–15/32")		25789
	Rubber profile, black to fixed glass 12.1–13.1 mm (15/32"–17/32")		25763

Nominal order length for straight bottom profile

Approximate lengths for ordering floor profiles for fixed glass elements can be calculated as follows:

Nominal order length for straight bottom profile

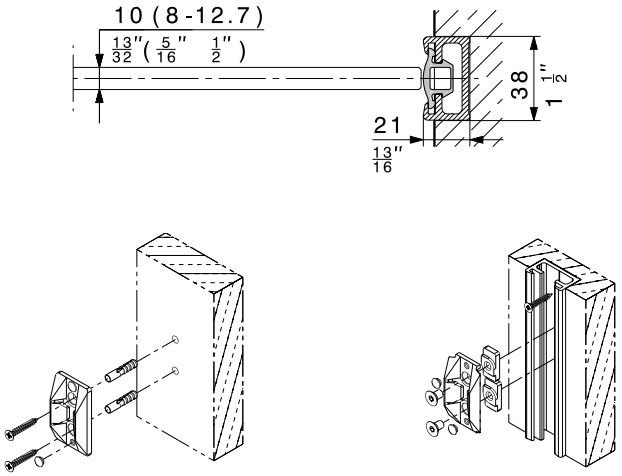
Installation	length incl. trimming reserve
	$\frac{LMB - M + Q + 30}{2}$

LMB	=	Entire opening width
M	=	Door grip (incl. safety clearance)
Q	=	Bottom door stopper [80 mm (3 5/32")]
Fest	=	Length of bottom profile

Refer to assembly instructions code 21133 for further calculation formulas. (→ www.hawa.ch → Hawa Productfinder)

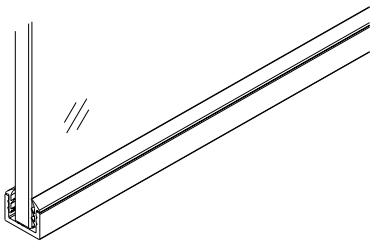
Wall connection profile

The ideal wall connection profile for all-glass sliding doors with unprotected glass edges.

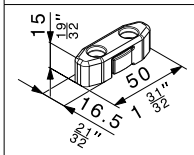


Bottom/wall profile to fixed glass

The retention profile provides stability for the fixed glass element, whether mounted on or sunk into the floor.

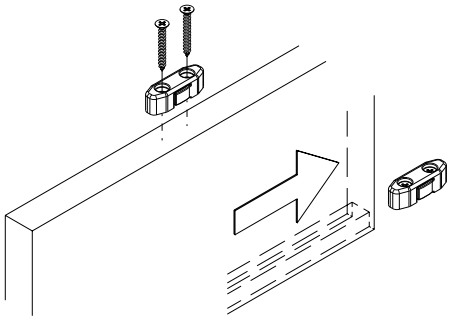


Fixing set for stationary wood

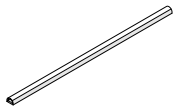
		code
	Fixing set for stationary wood part, black plastic, set of 4 pieces	21346

Fixing set for stationary wood

The fixing set is needed to secure stationary elements made of wood or other materials. Fixing brackets are screwed to the top of the stationary element and to the floor.

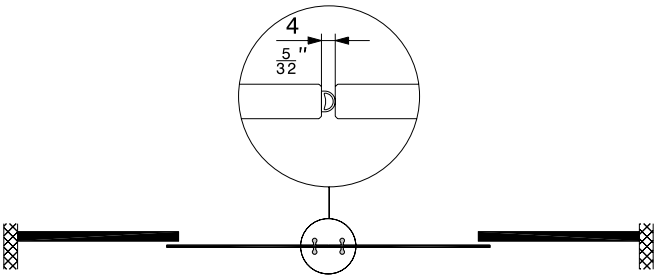


Rubber profile for glass edge protection

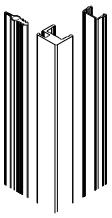
		roll of	code
	Rubber profile self-adhesive, for 8/10 mm (5/16"/13/32") glass thickness, black, glass distance 4 mm (5/32")	5 m (16'4 27/32")	19442
		10 m (32'9 23/32")	19443
		50 m (164'1/2")	19444
	Rubber profile self-adhesive, for 8/10 mm (5/16"/13/32") glass thickness, translucent, glass distance 4 mm (5/32")	5 m (16'4 27/32")	19445
		10 m (32'9 23/32")	19446
		50 m (164'1/2")	19447

Rubber profile for glass edge protection

Self-adhesive rubber profile fitted along the glass edge minimises draughts and buffers impacts between adjacent all-glass sliding doors.

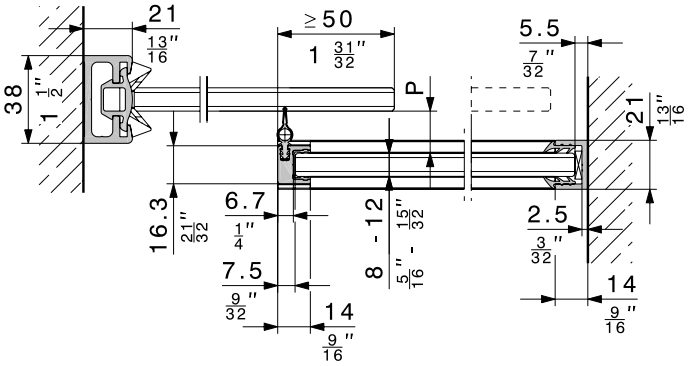


Vertical sealing profile

Caution: Minor differences in colour are possible			mm/ inch	code
	Vertical seal 13/18, alu, for all-glass sliding doors wtih fixed glass, set for glass distance 13–18,5 mm (17"–3/4")	plain anodized	2500 (8'2 7/16")	20283
			3500 (11'5 13/16")	20284
		stainless steel effect, brushed	2500 (8'2 7/16")	21290
			3500 (11'5 13/16")	21291
	Vertical seal 18/20, alu, for all-glass sliding doors with fixed glass, set for glass distance 18–20,5 mm (23"–13")	plain anodized	2500 (8'2 7/16")	21246
			3500 (11'5 13/16")	21247
		stainless steel effect, brushed	2500 (8'2 7/16")	21335
			3500 (11'5 13/16")	21336

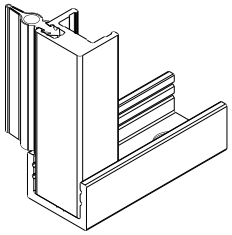
Vertical sealing profile

The vertical sealing profile is effective against draughts. The slim aluminium profile affixes frontally to glass elements 8–12 mm (5/16"–15/32") thick using silicone adhesive. The two-part rubber seal is recessed into the profile and offers three advantages: it slides almost noiselessly, creates minimal resistance to motion and, compared to conventional brush seals, retains its impeccable looks throughout years of service.



Glass distance «P» for vertical sealing profile

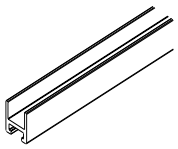
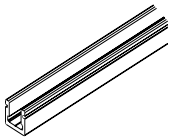
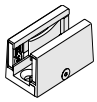
System	Glass thickness sliding door	Vertical seal	Glass distance «P»
Hawa Puro 100/150	11–13 mm (7/16"–17/32")	13/18	13–18,5 mm (17/32"–3/4")
	8–10 mm (5/16"–13/32")	18/20	18–20,5 mm (23/32"–13/16")



The vertical sealing profile is inserted into the floor/wall profile for fixed glass elements.

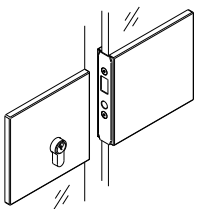
Subject to modification. Metric specifications are exact. Inches are approximate.

Floor-mounted guides / Bottom door stop

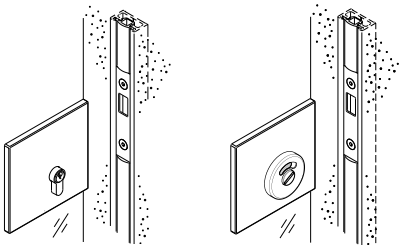
Caution: Minor differences in colour are possible			mm/inch	code
	Glass retention profile for floor guide, alu, for glass thickness 8–13 mm ($\frac{5}{16}$"–$\frac{17}{32}$")	plain anodized	6000 (19'8 $\frac{7}{32}$")	21402
			cut to size	21404
		stainless steel effect, brushed	6000 (19'8 $\frac{7}{32}$")	21405
			cut to size	21403
	Bottom guide channel, alu, predrilled 16 x 16 mm ($\frac{5}{8}$" x $\frac{5}{8}$")	plain anodized	3500 (11'5 $\frac{13}{16}$")	18864
			6000 (19'8 $\frac{7}{32}$")	18216
			cut to size	18477
	Floor guide, screw mounting, rattle proof, alu, for glass retention profile	plain anodized		21406
		stainless steel effect		21159
	Rattle-proof floor guide 2-part, inc. self-adhesive sliders for satinised glass, glass thickness 8–13 mm ($\frac{5}{16}$"–$\frac{17}{32}$")	dull chromium finish		21029
		stainless steel effect		20858
	Bottom door stop with centering assembly	dull chromium finish		20773
		stainless steel effect		21473

Better safe than sorry

Thanks to its combined aesthetic and security appeal, the Hawa Toplock for all-glass sliding doors makes the ideal solution.
Details: → Hawa Toplock



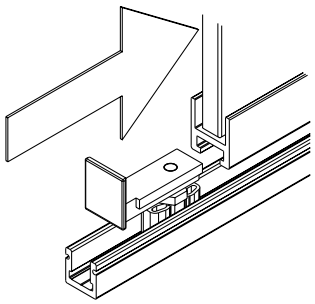
Hawa Toplock with countercasing



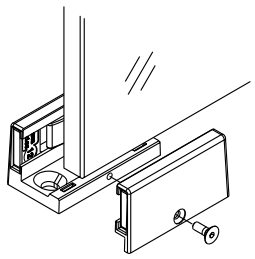
Hawa Toplock with wall profile and seal profile, black 16452/16453.

Floor guide variants

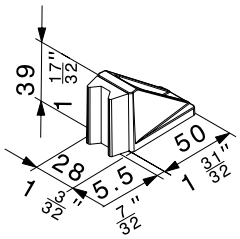
Doors can travel free of play through a continuous two-part floor guide. We recommend the continuous guide profile for doors wider than approx. 1500 mm to achieve optimum stability and best possible sliding properties. Furthermore, sliding doors should be stopped simultaneously at the top and bottom. The bottom door stopper does the job quietly and is gentle to the hardware.



Rattle-proof floor guide, continuous



Rattle-proof floor guide, 2-part



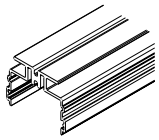
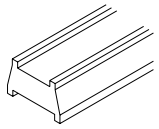
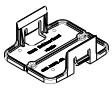
Bottom door stop with centering assembly

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

Hawa Adapto 100/150 P for Hawa Puro 100/150

	mm/inch	code
Hawa Adapto 100/150 P, inset profile for concrete surface, set for Hawa Puro 100/150	2500 (8'2 7/16")	21446
	3500 (11'5 13/16")	21447
	6000 (19'8 7/32")	21448

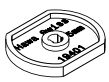
Set comprising

		mm/inch	21446	21447	21448	code
	Hawa Adapto 100/150 P inset profile for concrete surface, alu	2500 (8'2 7/16")	1			21157
		3500 (11'5 13/16")		1		21156
		6000 (19'8 7/32")			1	21154
	Hawa Adapto 100/150 P polystyrene insert	1000 (3'3 3/8")	2	3	6	21399
		500 (1'7 11/16")	1	1		21400
	Hawa Adapto 100/150 P assembly clips, plastic black		4	5	7	21350
	Hawa Adapto 100/150 P cover plate, plastic grey		2	2	2	21343

Fitting sets to Hawa Adapto 100/150 P

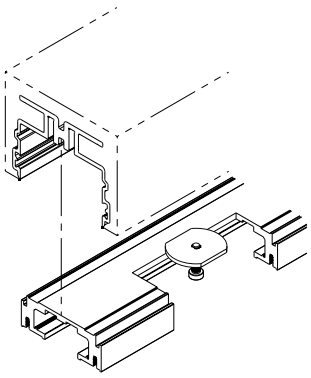
	mm/inch	code
Fitting sets to Hawa Adapto 100/150 P	to 2500 (8'2 7/16")	21323
	2501 to 3500 (8'2 15/32" to 11'5 13/16")	21324
	3501 to 6000 (11'5 27/32" to 19'8 7/32")	21325

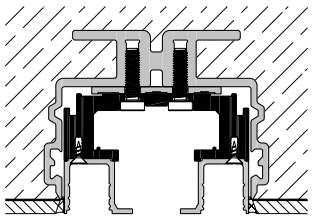
Sets comprising

		mm/ inch	21323	21324	21325	code
	Distance plate, plastic	1 (1/16")	4	4	5	19398
		2 (3/32")	4	4	5	19399
		3 (1/8")	4	4	5	19400
		5 (7/32")	4	4	5	19401
	Special pan head screws, 6 x 22 mm (1/4" x 7/8"), set of 10 pieces		1	2	3	20215

Easy installation of Hawa Puro running tracks

The Hawa Adapto 100/150 P profile has two screw ducts.
Hawa Puro running tracks can be attached via the screw duct with special adjustable screws (cheese head screws).
Dimensional differences in the structure can be quickly and effectively levelled out by inserting spacing plates at the track ends, with additional plates in the centre for lengths of more than 3,5 m (11'5 13/16").





Please observe when designing

The Hawa Adapto 100/150 P profile must be fitted exactly to the shuttering.

For planning and installation purposes, please use the installation drawing code 21119. (→ www.hawa.ch → Hawa Productfinder)

Order specifications

- Type and quantity of sets
- Type and quantity of glass fixing parts
- Type and quantity of running track sets
- Type and quantity of floor-mounted guides

Optional order specifications

- Type and quantity of Hawa Adapto 100/150 P sets
- Type and quantity of Hawa Adapto 100/150 P fitting sets
- Type and quantity of ceiling joint profiles
- Type and quantity of bottom guide channel
- Type and length of rubber profile for glass edge protection
- Type and quantity of wall connection profile

Order specifications stationary sections

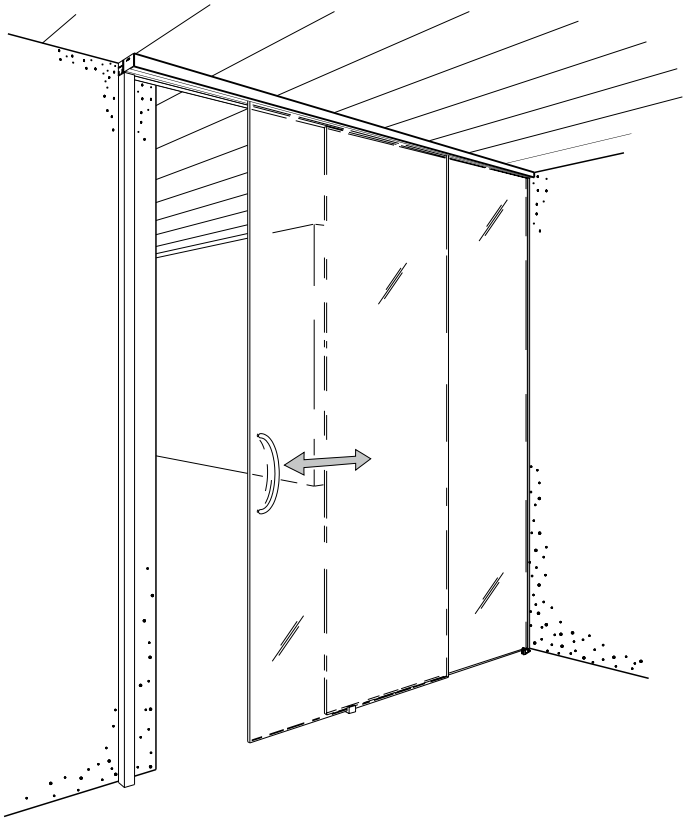
- Type and quantity of bottom/wall profile to fixed glass
- Type and quantity of rubber profile to fixed glass
- Type and quantity of vertical sealing profiles
- Quantity of fixing sets for stationary wood parts

Planning/installation

For planning and installation purposes, please use the installation drawing code 21133. (→ www.hawa.ch → Hawa Productfinder)

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

Pat. pend.



Greatest possible transparency.

Hardware system for all-glass sliding doors with concealed suspension, weighing up to 80 kg (176 lbs.).

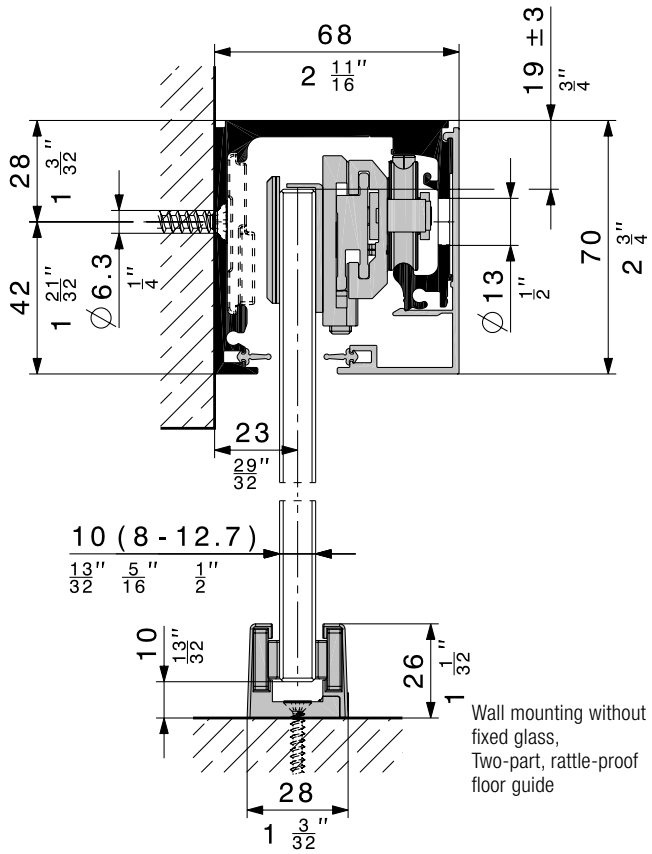
Description

Hawa Purolino Plus 80: the sophisticated hardware system for all-glass sliding doors with concealed suspension for mounting to the wall or ceiling or integrating in the ceiling offers not only outstanding sliding convenience but also exemplary ease of installation. There are many reasons that make sliding solutions based on the Hawa Purolino Plus 80 a pure pleasure. The high-quality ball-bearing technology incorporated in each trolley, for instance, allows you to move doors weighing up to 80 kg quietly and effortlessly on anodized running tracks. During installation, you will benefit from advantages such as the two-part, point-fixing and rattle-proof floor-mounted guide, the simple clip-on cover and screen profiles and the suspension wedges. The word «PLUS» stands for the optionally available soft closing mechanism SoftMove 80 for the Hawa Purolino Plus 80, as well as for the fixed glass profile that guarantees a convenient option for room partitioning solutions when bolted to the running track. There are also optional additional profiles for vertical wall connections and for locking the installation with the Hawa Toplock for all-glass sliding doors.

Applications

Ideal for situations incorporating glass as room partitioning and design elements, for instance in hotels, restaurants, retirement residences, conference rooms, administration buildings and private residences.

Example of application: wall mounting



Wall mounting without fixed glass,
Two-part, rattle-proof floor guide

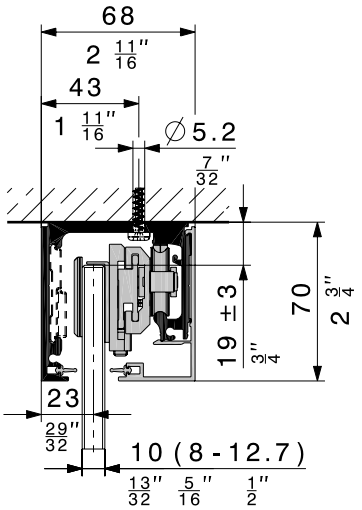
Features of the Hawa Purolino Plus 80

- Maximum door weight 80 kg (176 lbs.)
- Minimum door width
  without soft closing mechanism SoftMove 80: 600 mm (1'11 5/8")
  with SoftMove 80, two-sided damping: 850 mm (2'9 15/32")
- Trolleys with high-quality ball bearing technology
- Glass suspension technology completly integrated in the running track
- Fast installation and height adjustment thanks to suspension wedges
- Glass doors with a interlocking connection to the hardware
- Surfaces of running tracks, fixed glass profiles and cover profiles available in plain anodized or stainless-steel effect
- Removable cover and screen profiles
- Fixed glass profile attachable to the running track
- High-quality metal cover caps for the face side of running tracks without fixed glass elements
- Combinable with a vertical wall profile and a Hawa Toplock
- Glass thickness sliding door
  ESG (fully tempered monolithic glass):
  8/10/12/12,7 mm (5/16"/13/32"/15/32"/1/2")
  VSG (fully tempered laminated glass): 8–12,7 mm (5/16"–1/2")
- Glass thickness fixed glass:
  ESG (fully tempered monolithic glass) and
  VSG (fully tempered laminated glass) 8–12 mm (5/16"–15/32")
  [with silicon up to 13 mm (17/32")]

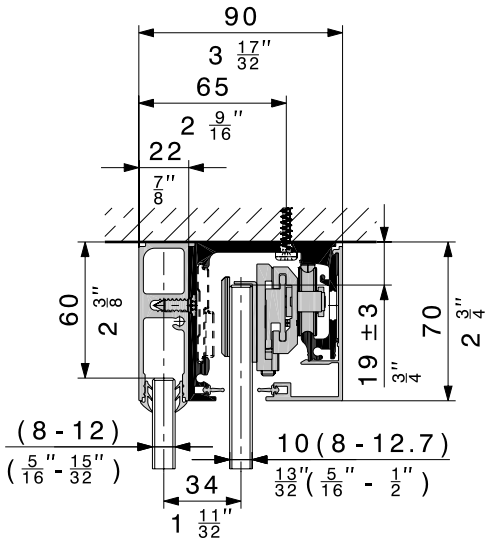
Subject to modification. Metric specifications are exact. Inches are approximate.

Further application examples

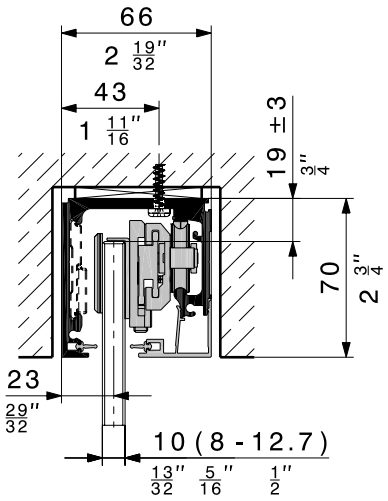
The Hawa Purolino Plus 80 is ideal for mounting to the wall and ceiling and also for recessed ceiling applications. The two ceiling-mounting variants can be designed with or without fixed glass elements. The relevant components such as trolley, track stop and SoftMove 80 can be fitted and removed from underneath on every design option.
Hawa Purolino Plus 80 makes an aesthetically appealing impression all round thanks to the cover and screen profiles that simply clip on when installation is complete.



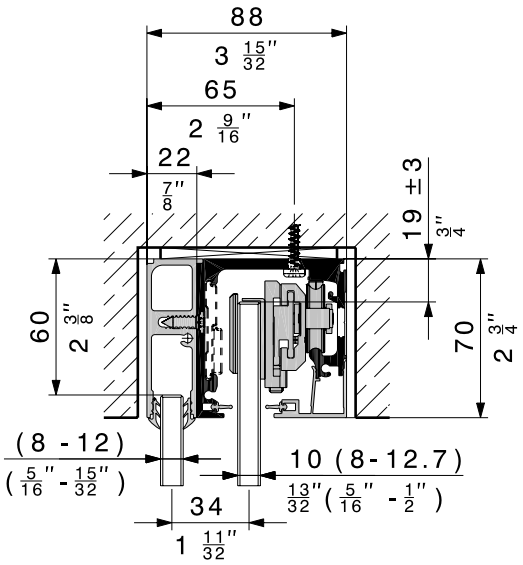
Ceiling mounting
without fixed glass



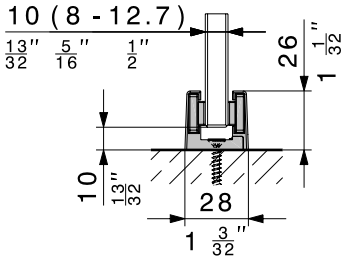
Ceiling mounting with
profile for fixed glass



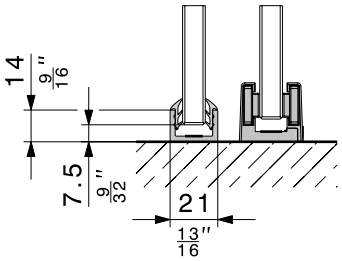
Integrated ceiling mounting
without fixed glass



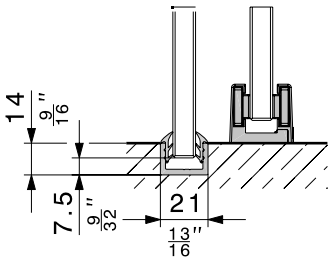
Integrated ceiling mounting
with profile for fixed glass



Two-part, rattle-proof
floor guide



Surface mounted bottom/wall
profile to fixed glass, two-part,
rattle-proof floor guide



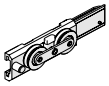
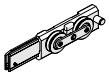
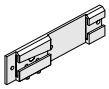
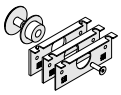
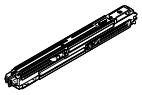
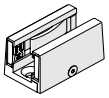
Recess mounted bottom/wall
profile to fixed glass, two-part,
rattle-proof floor guide

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

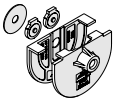
Hawa Purolino Plus 80, set without running tracks

	code
Hawa Purolino Plus 80, set for 1 panel, fully tempered monolithic glass, anodised, no soft closing mechanism	25549
Hawa Purolino Plus 80, set for 1 panel with 1 soft closing mechanism	25550
Hawa Purolino Plus 80, set for 1 panel, fully tempered monolithic glass, stainless steel effect, no soft closing mechanism	25551
Hawa Purolino Plus 80, set for 1 panel, fully tempered monolithic glass, stainless steel effect, soft closing mechanis	25552

Set comprising

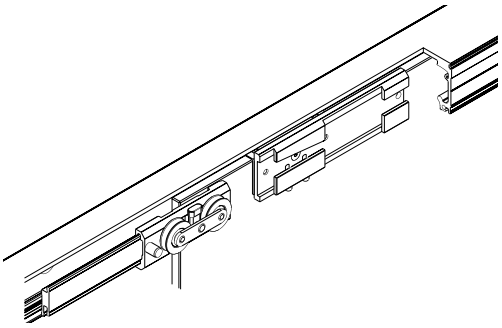
			25549	25550	25551	25552	code
	Two-wheeled trolley left, with plastic-tyred ball bearing wheels		1	1	1	1	23941
	Two-wheeled trolley right, with plastic-tyred ball bearing wheels		1	1	1	1	23942
	Suspension wedges for glass mountig, left		1	1	1	1	23939
	Suspension wedges for glass mountig, right		1	1	1	1	23940
	Track stop, adjustable retaining force, left		1	1	1	1	23874
	Track stop, adjustable retaining force, right		1	1	1	1	23875
	Glass fixing parts for fully tempered monolithic glass, thickness 8, 10, 12 (12,7) mm		1	1	1	1	25553
	Glass connector, complete		–	1	–	1	23747
	Soft closing mechanism SoftMove 80 for Hawa Purolino Plus 80, two-sided damping		–	1	–	1	23880
	Trigger cams, complete, left or right mountable		–	2	–	2	24161
	Rattle-proof floor guide 2-part, incl. self-adhesive sliders for satinised glass, glass thickness 8 –13 mm ($\frac{5}{16}$" – $\frac{17}{32}$")	matt chromium finish	1	1	–	–	21029
		stainless-steel effect	–	–	1	1	20858

Glass fixing parts

		mm	code
	Accessories Hawa Purolino Plus 80, fully tempered laminated glass	2 x 4	25554
		2 x 5	25555
		2 x 6	25556

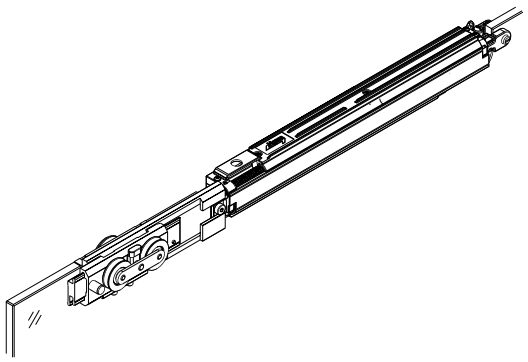
Suspension wedges for glass sliding doors

The suspension wedges set new standards with regard to ease and speed when installing and adjusting the height of glass sliding doors. Firstly, because the wedges simply slide into the trolleys; secondly, because the soft closing mechanism SoftMove 80 for the Hawa Purolino Plus 80 attaches to the left-hand suspension wedge with no need for additional components.



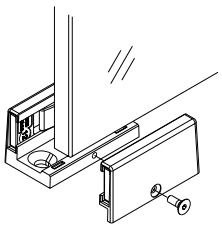
Soft closing mechanism SoftMove 80 for Hawa Purolino Plus 80

The soft closing mechanism SoftMove 80 gently decelerates and closes sliding doors equipped with Hawa Purolino Plus 80. Integrated completely in the running track, the soft closing mechanism SoftMove 80 gently decelerates the sliding doors and pulls them into the end position.



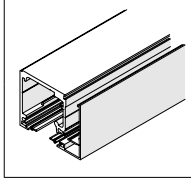
Bottom door stop

The sliding doors have a two-part, rattle-proof floor guide.

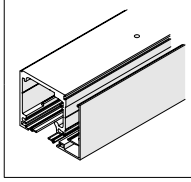


Subject to modification. Metric specifications are exact. Inches are approximate.

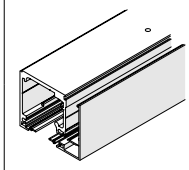
Running track set, wall mounting without fixed glass

Caution: - Hole positions vary - Minor differences in colour are possible			mm inch	code
	Running track set for wall mounting, predrilled, incl. angled cover profile, alu, screen profile, rubber black	plain anodized	2500 (8'2 7/16")	24151
		stainless-steel effect, brushed	2500 (8'2 7/16")	24152

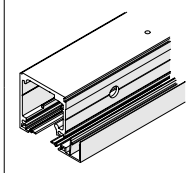
Running track set, ceiling mounting without fixed glass

Caution: - Hole positions vary - Minor differences in colour are possible			mm inch	code
	Running track set for ceiling mounting without fixed glass, predrilled, incl. angled cover profile, alu, screen profile, rubber black	plain anodized	2500 (8'2 7/16")	24153
		stainless-steel effect, brushed	2500 (8'2 7/16")	24154

Running track set, ceiling mounting (with fixed glass)

Caution: - Hole positions vary - Minor differences in colour are possible			mm inch	code
	Running track set, predrilled for ceiling mounting and fixed glass profile, incl. angled cover profile, alu, screen profile, rubber black	plain anodized	2500 (8'2 7/16")	24157
		stainless-steel effect, brushed	2500 (8'2 7/16")	24158
Profile for fixed glass to order separately				

Running track set, integrated ceiling mounting (with/without fixed glass)

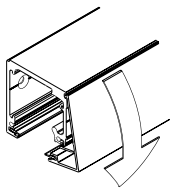
Caution: - Hole positions vary - Minor differences in colour are possible			mm inch	code
	Running track set, predrilled for integrated ceiling mounting and fixed glass profile, incl. lower cover profile, alu, screen profile, rubber black	plain anodized	2500 (8'2 7/16")	24155
		stainless-steel effect, brushed	2500 (8'2 7/16")	24156
Profile for fixed glass to order separately				

Bottom door stop

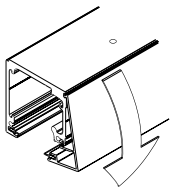
Caution: Minor differences in colour are possible			code
	Bottom door stop with centering assembly	dull chromium finish	20773
		stainless steel effect	21473

Wall or ceiling mounting without fixed glass

The running track is pre-drilled for wall or ceiling mounting; the angled cover profile is clipped on after installation.



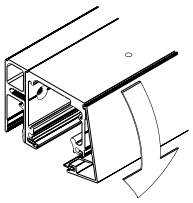
Wall mounting:
Running track without fixed glass, dressing with angled cover profile



Ceiling mounting:
Running track without fixed glass, dressing with angled cover profile

Ceiling mounting with fixed glass

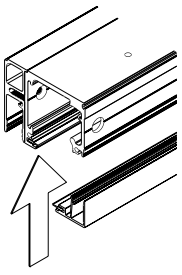
The running track in the running track set for ceiling mounting has drill holes on two sides. Those on the top are for mounting to the ceiling and those on the side are for attaching the fixed glass profile (to be ordered separately).
The angled cover profile is clipped to the running track and fixed glass profile once they are attached to the ceiling.



Ceiling mounting:
Running track with fixed glass and dressing with angled cover profile

Integrated ceiling mounting with/without fixed glass

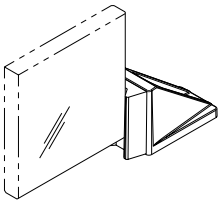
This running track set (running track drilled on two sides) is used for recessed ceiling installations with and without fixed glass elements. The profile for fixed glass elements (to be ordered separately) is attached to the running track with special countersunk screws.
The clip-on cover profile is attached to the running track (with or without a fixed glass profile) from below after it is fitted in the ceiling.



Integrated ceiling mounting:
Running track with fixed glass and dressing with lover cover profile

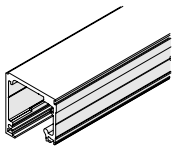
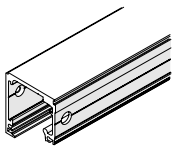
Bottom door stop

The bottom door stop and track stop simultaneously bring the sliding doors to a halt, quietly and with no strain on the hardware.

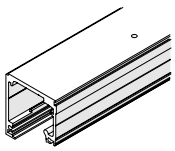
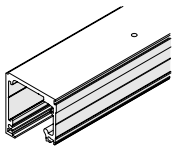


Subject to modification. Metric specifications are exact. Inches are approximate.

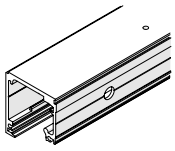
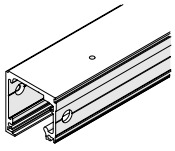
Running track, wall mounting without fixed glass

Caution: - Hole positions vary - Minor differences in colour are possible			mm/inch	code
	Running track with cutout, predrilled for wall mounting, alu	plain anodized	2500 (8'2 7/16")	23841
		stainless-steel effect, brushed	2500 (8'2 7/16")	23842
	Running track, predrilled for wall mounting, alu	plain anodized	6000 (19'8 7/32")	23833
			cut to size	23834
		stainless-steel effect, brushed	6000 (19'8 7/32")	23835
			cut to size	23836

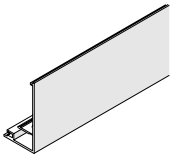
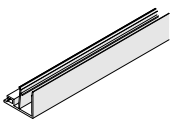
Running track, ceiling mounting without fixed glass

Caution: - Hole positions vary - Minor differences in colour are possible			mm/inch	code
	Running track with cutout, predrilled for ceiling mounting, alu	plain anodized	2500 (8'2 7/16")	23843
		stainless-steel effect, brushed	2500 (8'2 7/16")	23844
	Running track, predrilled for ceiling mounting, alu	plain anodized	6000 (19'8 7/32")	23837
			cut to size	23838
		stainless-steel effect, brushed	6000 (19'8 7/32")	23839
			cut to size	23840

Running track, ceiling mounting (without/for fixed glass)

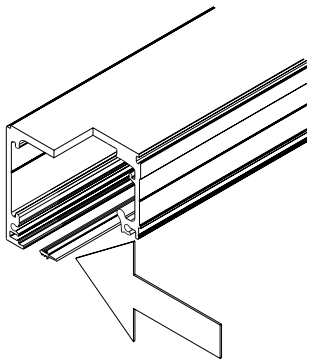
Caution: - Hole positions vary - Minor differences in colour are possible			mm/inch	code
	Running track with cutout, predrilled for ceiling and integrated ceiling mounting as well as fixed glass profile, alu	plain anodized	2500 (8'2 7/16")	24120
		stainless-steel effect, brushed	2500 (8'2 7/16")	24121
	Running track, predrilled for ceiling and integrated ceiling mounting as well as fixed glass profile, alu	plain anodized	6000 (19'8 7/32")	24118
			cut to size	24122
		stainless-steel effect, brushed	6000 (19'8 7/32")	24119
			cut to size	24123
Profile for fixed glass to order separately				

Cover and screen cover profile for running track

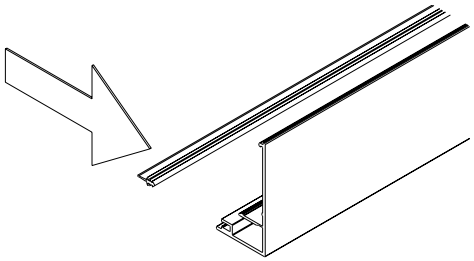
Caution: - Hole positions vary - Minor differences in colour are possible			mm/inch	code
	Angled cover profile for running track, alu	plain anodized	2500 (8'2 7/16")	23810
			6000 (19'8 7/32")	23811
			cut to size	23816
		stainless-steel effect, brushed	2500 (8'2 7/16")	23817
			6000 (19'8 7/32")	23818
			cut to size	23819
	Lower cover profile for running track, alu	plain anodized	2500 (8'2 7/16")	23899
			6000 (19'8 7/32")	23898
			cut to size	23900
		stainless-steel effect, brushed	2500 (8'2 7/16")	23902
			6000 (19'8 7/32")	23901
			cut to size	23903
	Screen cover profile for cover profile and running track	rubber black	2.5 m (8'2 7/16")	23909
			10 m (32'9 23/32")	23910
			50 m (164'0 1/2")	23911

Running tracks, cover- and screen cover profiles

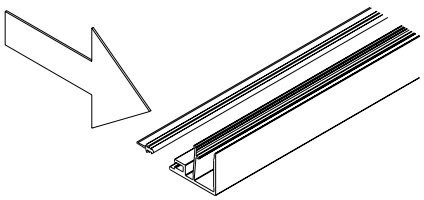
The running tracks, cover profile and screen profile are available not only as a set but also individually in lengths of 2500 mm (8'2 7/16"), 6000 mm (19'8 7/32") and cut to size. Running tracks and cover profiles are available in plain anodized aluminium or a brushed stainless steel effect; the screen profiles are made of black rubber.



Running track with screen cover profile



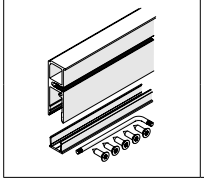
Angled cover profile with screen cover profile



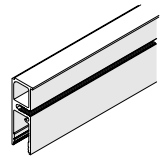
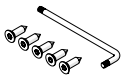
Lower cover profile with screen cover profile

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

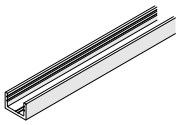
Profile set for fixed glass

Caution: Minor differences in colour are possible			mm/inch	code
	Profile set for fixed glass, incl. cover profile, alu, set incl. special countersunk screws, 5,5 x19 mm (7/32"x3/4")	plain anodized	2500 (8'2 7/16")	24159
		stainless-steel effect, brushed	2500 (8'2 7/16")	24160

Profile for fixed glass

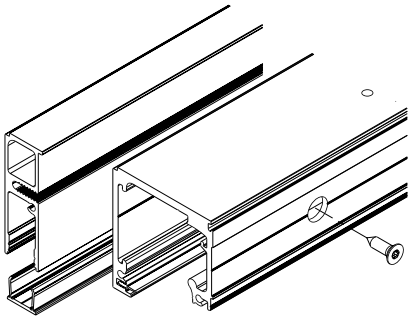
Caution: Minor differences in colour are possible			mm/inch	code
	Profile for fixed glass, alu	plain anodized	2500 (8'2 7/16")	23768
			6000 (19'8 7/32")	23770
			cut to size	23772
		stainless-steel effect, brushed	2500 (8'2 7/16")	23769
			6000 (19'8 7/32")	23771
			cut to size	23773
	Cover profile to profile fixed glass, alu	plain anodized	2500 (8'2 7/16")	20865
			6000 (19'8 7/32")	21229
			cut to size	19548
		stainless-steel effect, brushed	2500 (8'2 7/16")	21315
			6000 (19'8 7/32")	21283
			cut to size	21284
	Special countersunk screws, 5,5 x19 mm (7/32"x3/4") for fixing profile fixed glass to running track, set of 5 pieces, for running track length up to 2500 (8'2 7/16") mm			24138

Bottom, wall and rubber profile to fixed glass

Caution: - Hole positions vary - Minor differences in colour are possible		mm/inch	code
	Bottom/wall profile to fixed glass, alu, plain anodized, predrilled	4000 (13'1 1/2")	19549
		6000 (19'8 7/32")	19561
		cut to size	20067
	Bottom/wall profile to fixed glass, alu, stainless steel effect, brushed, predrilled	4000 (13'1 1/2")	21285
		6000 (19'8 7/32")	21286
		cut to size	21287
	Rubber profile, black to fixed glass 8–9.9 mm (5/16"–13/32")	roll of 10 m (32'9 23/32")	25787
	Rubber profile, black to fixed glass 10–12 mm (13/32"–15/32")		25789
	Rubber profile, black to fixed glass 12.1–13.1 mm (15/32"–17/32")		25763

Profile for fixed glas

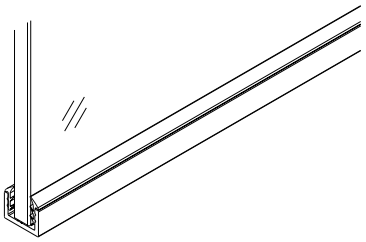
The Hawa Purolino Plus 80 is a versatile room partitioning system thanks to the combination of running track and fixed glass profile. The profile for fixed glass elements is attached to the running track with special countersunk screws.
The Hawa rubber profile or a silicone joint keeps the glass element in place without a cutout or hardware elements and prevent moisture from penetrating between glass and profile.
The clip-on cover profile is designed for the doorway area.



The profile for fixed glass elements is attached to the running track with special countersunk screws and covered from below with the cover profile.

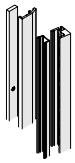
Bottom/wall profile for fixed glass

The retention profile provides stability for the fixed glass element, whether surface mounted or sunk into the floor.



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

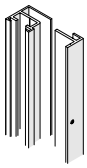
End profile set wall surface assembly

Caution: Minor differences in colour are possible			mm/inch	code
	End profile set wall surface assembly, complete, alu	plain anodized	2500 (8'2 7/16")	22148
			3500 (11'5 13/16")	22150
		stainless-steel effect, brushed	2500 (8'2 7/16")	22149
			3500 (11'5 13/16")	22151
	Rubber seal for end profile wall surface mounting		2500 (8'2 7/16")	22040
			3500 (11'5 13/16")	22041

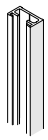
Scope of delivery for end profile for wall surface mounting:

- End profile
- Flat profile 20/4 mm
- Adhesive tape
- Vertical aluminium profile
- Vertical plastic profile
- Cleaning cloth

Wall profile set for wall surface mounting

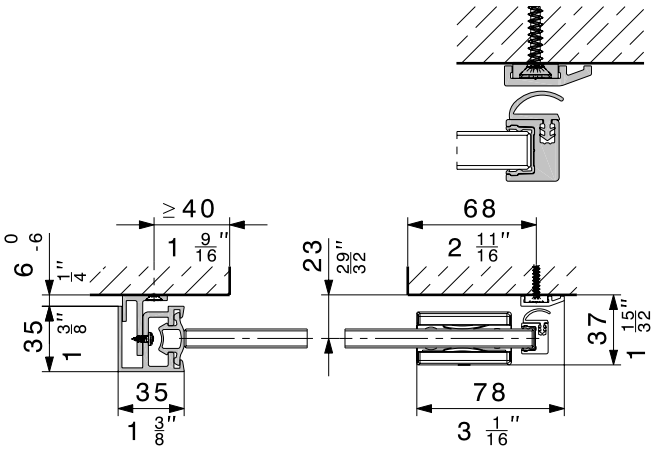
Caution: - Hole positions vary - Minor differences in colour are possible			mm/inch	code
	Wall profile set for wall surface mounting, alu, predrilled, incl. retainer profile, alu	plain anodized	2500 (8'2 7/16")	22144
			3500 (11'5 13/16")	22146
		stainless-steel effect, brushed	2500 (8'2 7/16")	22145
			3500 (11'5 13/16")	22147
	Seal profile, black, for wall profile		roll of 2500 (8'2 7/16")	16452
			roll of 3500 (11'5 13/16")	16453

Wall connection profile

Caution: Minor differences in colour are possible			mm/inch	code
	Wall profile, alu, undrilled	plain anodized	2500 (8'2 7/16")	17020
			3500 (11'5 13/16")	17021
		stainless-steel effect, brushed	2500 (8'2 7/16")	20119
			3500 (11'5 13/16")	20120
	Seal profile, black, for wall profile		roll 2500 (8'2 7/16")	16452
			roll 3500 (11'5 13/16")	16453
	Centering assembly black for all glass sliding doors, to wall profile			18663
	Centering assembly grey for all glass sliding doors			18619

Wall surface mounting

The vertical additional profiles with rubber seals minimise the vertical gaps between the building wall and the sliding glass door. The strike plate of the Hawa Toplock for glass sliding doors can be integrated in the wall profile set with the black seal profile 16452/16453 for lockable sliding doors that run in front of a wall.

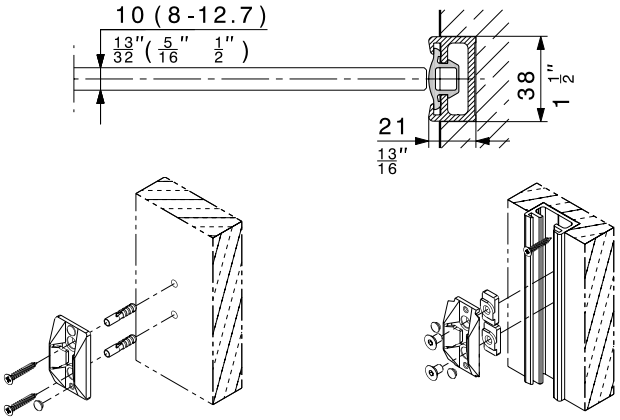


Wall profile set for wall surface mounting including seal profile

End profile for wall surface mounting including rubber seal

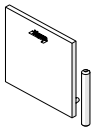
Wall connection profile

The ideal wall connection profile for glass sliding doors with unprotected glass edges.



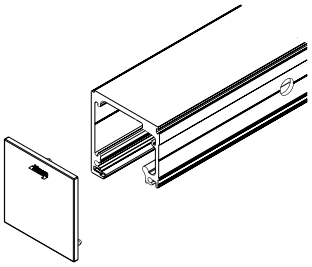
Subject to modification. Metric specifications are exact. Inches are approximate.

Side cover cap for running track without fixed glass

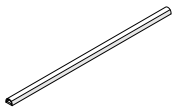
			code
	Side cover cap, incl. grub screw, metal, suitable for both sides, 1 piece	dull chromium finish	24145
		stainless steel effect	24080

Side cover cap for running track

The metal (Zamak) cover cap is available in a matt chromium finish or stainless steel effect for running tracks without a fixed glass profile. It is available individually and can be fitted left or right as required.

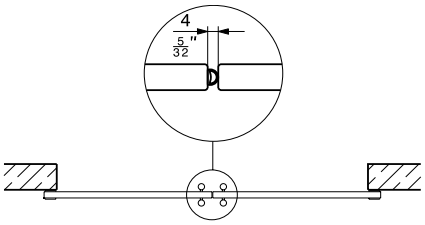


Rubber profile for glass edge protection

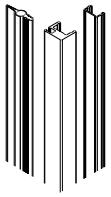
		roll of	code
	Rubber profile self-adhesive, for 8/10 mm ($\frac{5}{16}$"/$\frac{13}{32}$") glass thickness, black, glass distance 4 mm ($\frac{5}{32}$")	5 m (16'4$\frac{27}{32}$")	19442
		10 m (32'9$\frac{23}{32}$")	19443
		50 m (164'$\frac{1}{2}$")	19444
	Rubber profile self-adhesive, for 8/10 mm ($\frac{5}{16}$"/$\frac{13}{32}$") glass thickness, translucent, glass distance 4 mm ($\frac{5}{32}$")	5 m (16'4$\frac{27}{32}$")	19445
		10 m (32'9$\frac{23}{32}$")	19446
		50 m (164'$\frac{1}{2}$")	19447

Rubber profile for glass edge protection

Self-adhesive rubber profile fitted along the glass edge minimises draughts and buffers impacts between adjacent glass sliding doors. Using the soft closing mechanism SoftMove 80 the doors are gently decelerated and pulled to the end position.



Vertical sealing profile

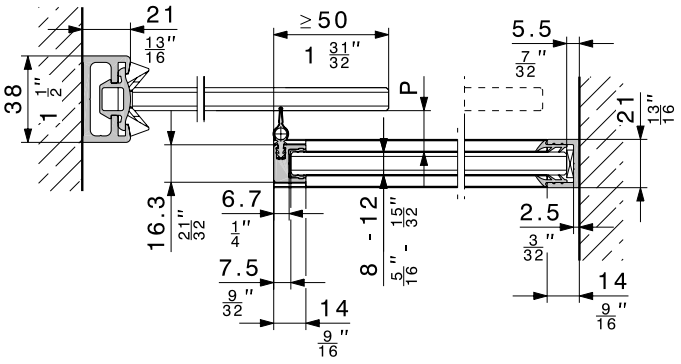
			mm/inch	code
	Vertical seal 20/22, alu, for all-glass sliding doors wtih fixed glass, set for glass distance 20–22 mm ($\frac{25}{32}$"–$\frac{7}{8}$")	plain anodized	2500 (8'2$\frac{7}{16}$")	20650
			3500 (11'5$\frac{13}{16}$")	20651

Glass distance «P» for vertical sealing profile

	glass thickness sliding door	Vertical seal	glass distance «P»
Hawa Purolino Plus 80	8–12 mm ($\frac{5}{16}$"–$\frac{15}{32}$")	20/22	20–22 mm ($\frac{25}{32}$"–$\frac{7}{8}$")

Vertical sealing profile

The vertical sealing profile is effective against draughts. The slim alu-minium profile affixes frontally to glass elements 8–12 mm ($\frac{5}{16}$"–$\frac{15}{32}$") thick using silicone adhesive. The two-part rubber seal is recessed into the profile and offers three advantages: it slides almost noiselessly, creates minimal resistance to motion and, compared to conventional brush seals, retains its impeccable looks throughout years of service.



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

Glass cutouts

Both glass ESG (fully tempered monolithic glass) and VSG (fully tempered laminated glass) can be used.

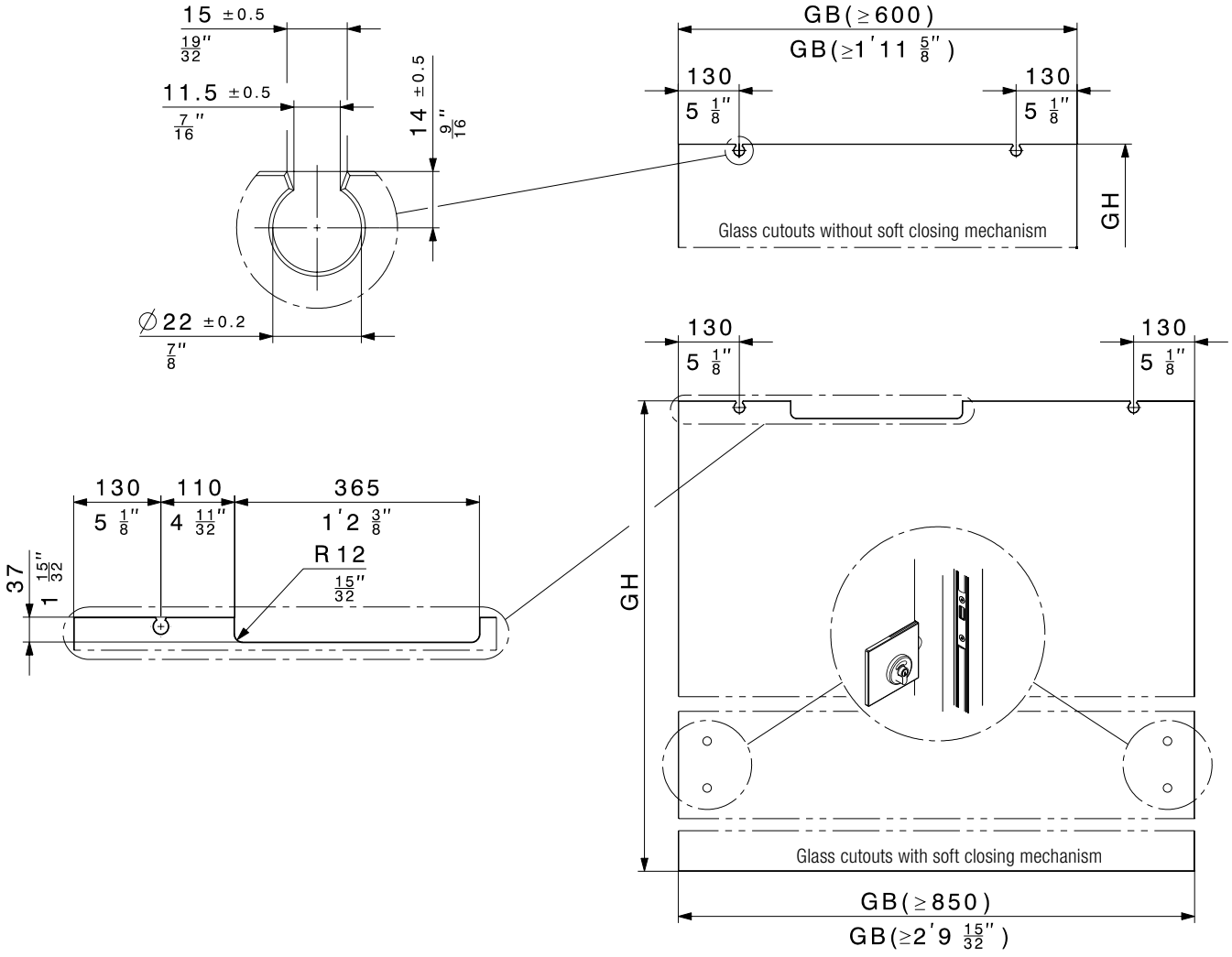
- Glass thickness sliding door ESG (fully tempered monolithic glass): 8/10/12/12,7 mm ($\frac{5}{16}$"/$\frac{13}{32}$"/$\frac{15}{32}$"/$\frac{1}{2}$"), thickness tolerance ± 0,3 mm
- Glass thickness sliding door VSG (fully tempered laminated glass):
  2x4 ± 0,2 mm → film thickness 0,38/0,76/1,52 mm
  2x5 ± 0,2 mm → film thickness 0,38/0,76/1,52 mm
  2x6 ± 0,2 mm → film thickness 0,38/0,76 mm
- All glass edges are seamed; maximum 1 mm ($\frac{1}{16}$") in the glass cutout
- VSG (fully tempered laminated glass) permissible with max. offset of 2 mm ($\frac{3}{32}$") in the glass cutout
- Glass thickness fixed glass ESG (fully tempered monolithic glass)/ VSG (fully tempered laminated glass) 8–12mm ($\frac{5}{16}$"–$\frac{15}{32}$") with silicone up to 13 mm ($\frac{17}{32}$")

Please use assembly instructions number 25557 for detailed glass calculations and to order glass elements.
(→ www.hawa.ch → Hawa Productfinder)

Glass sliding door and soft closing mechanism SoftMove 80

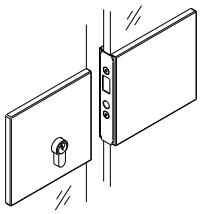
The maximum deflection of the glass element must not exceed ± 2 mm ($\frac{3}{32}$") to maintain the correct functionality of the soft closing mechanism SoftMove 80.

Pull handles are recommended instead of flush handles for greater convenience.

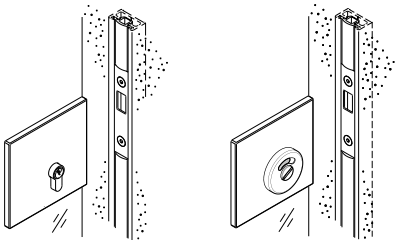


Better safe than sorry

The Hawa Toplock for all glass sliding doors is the ideal solution as it is aesthetically appealing and very secure. Details: → Hawa Toplock.



Hawa Toplock with countercasing



Hawa Toplock with wall profile and seal profile, black 16452/16453.

Order specifications

- Quantity of sets
- Type and quantity of running track sets
- Type and quantity of cover profiles and screen profiles

Optional order specifications

- Type and quantity of side cover caps
- Type and quantity of end profile set for wall surface mounting
- Type and quantity of wall profile set for wall surface mounting
- Type and quantity of wall joint profiles
- Type and quantity of bottom door stop
- Type and length of rubber profile for glass edge protection
- Type and quantity of additional components for VSG (fully tempered monolithic glass)

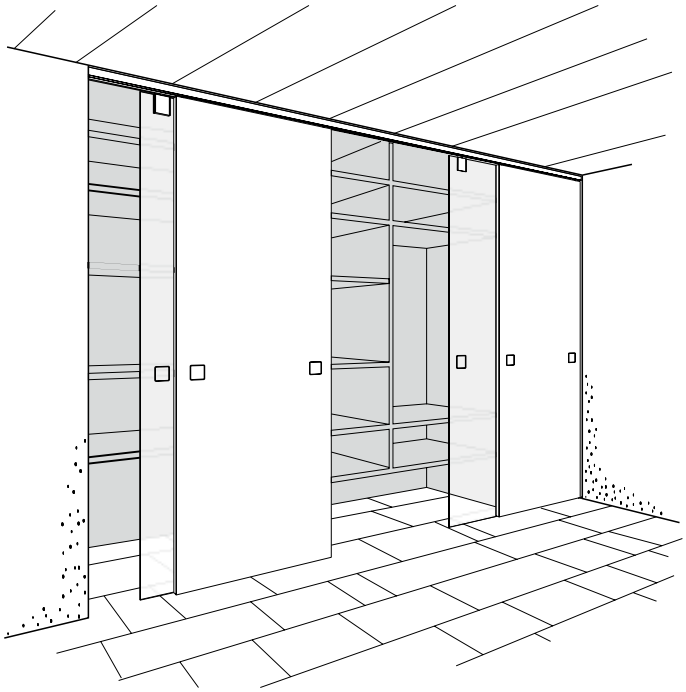
Optional order specifications fixed glass

- Type and quantity of profile set for fixed glass
- Type and quantity of bottom/wall profile and rubber profile for fixed glass
- Type and length of vertical sealing profile

Planning/installation

For planning and installation purposes, please use the installation drawing code 25557. (→ www.hawa.ch → Hawa Productfinder)

For convenient operation of sliding doors with soft closing mechanisms, use bow-type handles instead of shell handles.



For frameless, full room-height sliding doors.

Hardware system with patch-fitting floor guides for wooden and/or glass sliding doors weighing up to 70 kg (154 lbs.).

Description

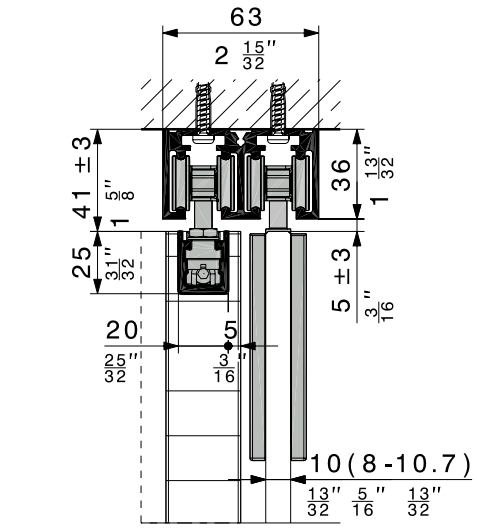
A fit-anywhere, frameless sliding hardware system for wooden and glass sliding doors weighing up to 70 kg (154 lbs.). Ideal not only for walk-in closets, but also for room-height and flexible partitions in residential and office settings. The possibility of combining glass and wood sliding doors gives new freedom to architects and installers. Patch-fitting, rattle-proof floor guides are available for all wood and/or glass combinations. Hawa Ordena 70 P has also been designed with problem-free retrofitting in mind.

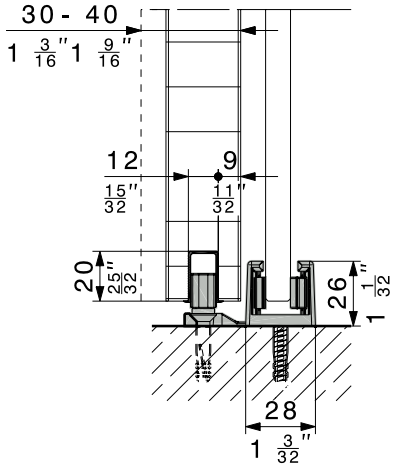
Applications

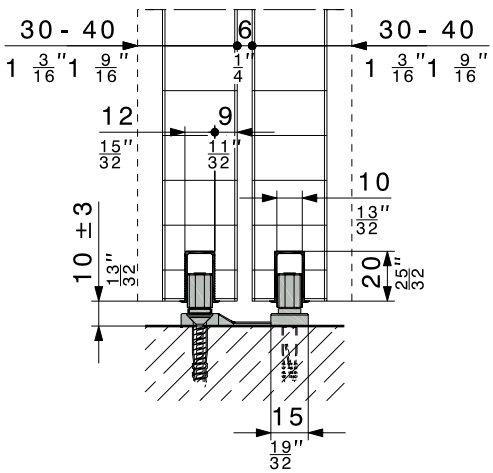
Everywhere that variable space utilisation and unrestricted access should leave a tidy impression, e.g. walk-in closets for office and residential settings, and as a partition or aesthetic room divider in hotels, restaurants, hospitals, schools, offices, and private residential interiors.

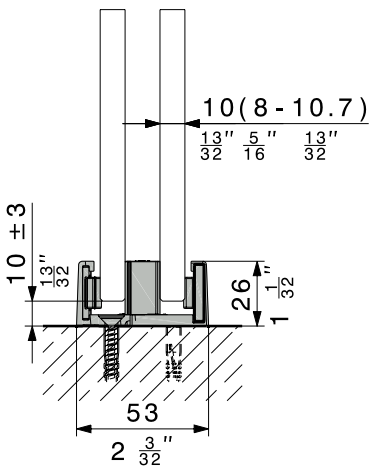
Features of the Hawa Ordena 70 P

- Top-running sliding system, impervious to dust and dirt
- Possibility to combine wood and glass sliding doors
- Patch-fitting, rattle proof floor guide
- Frameless and easy to install
- Maximum door weight 70 kg (154 lbs.)
- Maximum door height 2600 mm (8'6 3/8")
- Minimum door width 600 mm (1'11 5/8")
- Door thickness, wood 30–40 mm (1 3/16"–1 19/32")
- Door thickness, glass:
  ESG (fully tempered monolithic glass): 8/10 mm (5/16"/13/32")
  VSG (fully tempered laminated glass): 8,7–10,7 mm (11/32"–7/16")
- 2–8 mm (3/32"–5/16") minimum clearance between the running track and the top edge of the sliding door
- Glass doors use popular Hawa Junior GP suspensions







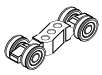
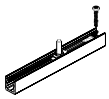


Subject to modification. Metric specifications are exact. Inches are approximate.

Partial sets Hawa Ordena 70 P

		code
Hawa Ordena 70, partial sets for 1 door	wood	19120
	glass (ESG[1]/VSG[2])	20586

Partial sets comprising

		19120	20586	code
	Four-wheeled trolley, M7, plastic-tyred wheels	2	2	10374
	Top fixed suspension with plate M7	2	–	19276
	Cover cap for suspension profile, platic anthracite-grey RAL 7016	2	–	21520
	Patch suspension with glass holder insert (ESG[1]/VSG[2])	–	2	20505
	Suspension bolt M7 and mounting screws	–	1	19117
	Hex key, 4 mm ($\frac{5}{32}$"), length 160 mm (6 $\frac{5}{16}$")	1	–	19931

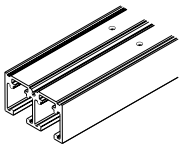
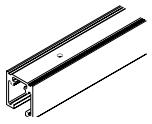
Door stop sets

	number of doors	code
Door stop set for systems with point guidance, incl. single use drilling jig, (ESG[1]/VSG[2])	2 – 3	20588
	4 – 5	20589
	6 – 7	20590

Sets comprising

		20588	20589	20590	code
	Track stop, plastic, with adjustable retainer	4	8	12	10602
	Single use drilling jig, (ESG[1]/VSG[2])	1	1	1	20400
	Screw-on rubber door stop	2	2	2	10629
	Suspsension assembly locking wrench	1	1	1	10778
	Hex key, 3 mm ($\frac{1}{8}$") short version	1	1	1	10785
	Vertical adjustment pin	1	1	1	16329

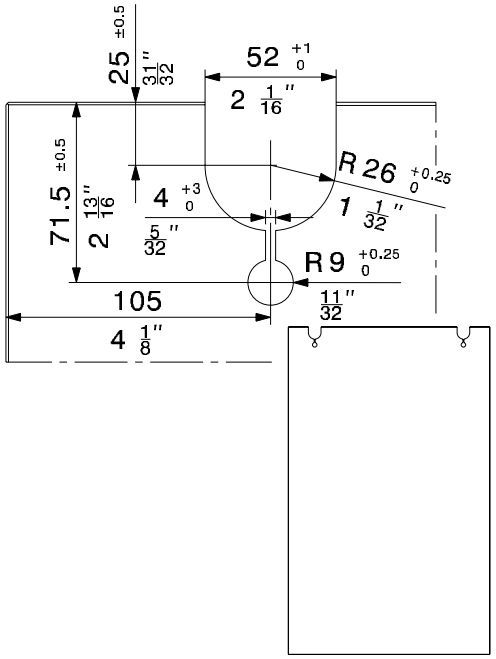
Running tracks

Caution: Hole positions vary		mm/inch	code
	Dual running track, alu plain anodized, predrilled	2500 (8'2 $\frac{7}{16}$")	19213
		3500 (11'5 $\frac{13}{16}$")	19214
		6000 (19'8 $\frac{7}{32}$")	19215
		cut to size	19127
	Single running track, alu plain anodized, predrilled	2500 (8'2 $\frac{7}{16}$")	19370
		3500 (11'5 $\frac{13}{16}$")	19371
		6000 (19'8 $\frac{7}{32}$")	19372
		cut to size	19373

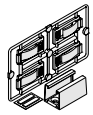
Glass cutouts for sliding door

Both glass ESG (fully tempered monolithic glass) and VSG (fully tempered laminated glass) can be used.

- Glass thickness sliding door ESG (fully tempered monolithic glass): 8/10 mm ($\frac{5}{16}$"/$\frac{13}{32}$"), thickness tolerance ± 0,3 mm
- Glass thickness sliding door VSG (fully tempered laminated glass): 2x4 ± 0,2 mm → film thickness 0,38/0,76/1,52 mm
  2x5 ± 0,2 mm → film thickness 0,38/0,76 mm
- All glass edges are seamed; maximum 1 mm ($\frac{1}{16}$") in the glass cutout
- VSG (fully tempered laminated glass) permissible with max. offset of 2 mm ($\frac{3}{32}$") in the glass cutout

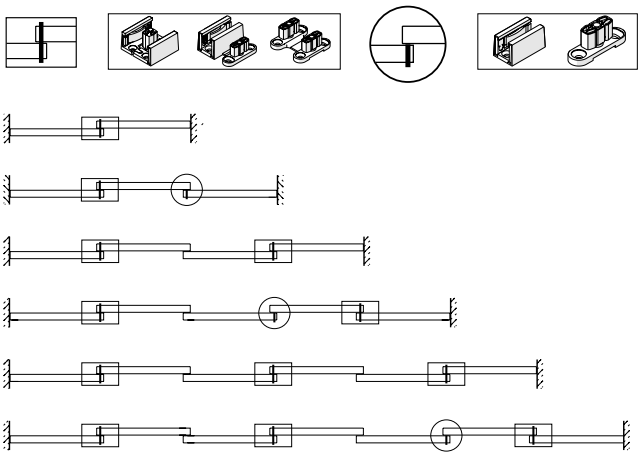


Floor guides

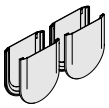
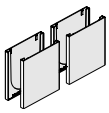
		code
	Dual floor guide, rattle-proof, glass/glass, inc. self-adhesive sliders for satinised glass, dull chromium finish	19138
	Dual floor guide, rattle-proof, glass/wood, inc. self-adhesive sliders for satinised glass, dull chromium finish	19139
	Dual floor guide, screw mounting, rattle proof, wood/wood	19140
	Single floor guide, screw mounting, rattle proof, wood	14283
	Rattle-proof floor guide inc. self-adhesive sliders for satinised glass, glass thickness 8–12,7 mm ($\frac{5}{16}$"–$\frac{1}{2}$"), dull chromium finish	16029
	Guide profile plastic black, 20 x 12 x 1300 mm ($\frac{25}{32}$" x $\frac{15}{32}$" x 4'3 $\frac{3}{16}$"), groove mounted, set of 10 pieces	14540

Screw-in floor guide variants

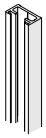
Single and dual point guidance.



Cover plates

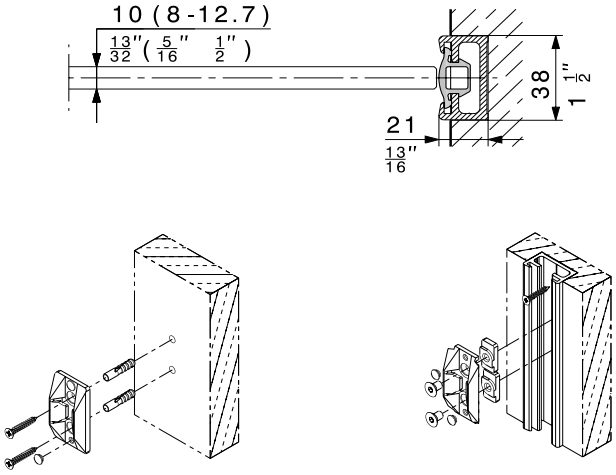
			code
	Rounded cover plate, plastic, dull chromium finish	1 piece	16049
		4-pieces set	16042
	Rounded cover plate, plastic, polished chromium finish	1 piece	17161
		4-pieces set	17160
	Rounded cover plate, plastic, brass polished	1 piece	16050
		4-pieces set	16043
	Rounded cover plate, plastic, stainless-steel effect	1 piece	16051
		4-pieces set	16044
	Rounded cover plate, plastic, raw	1 piece	15823
	Square cover plates, plastic, dull chromium finish	1 piece	19091
		4-pieces set	19092
	Square cover plates, plastic, stainless-steel effect	1 piece	19093
		4-pieces set	19094
	Square cover plate, plastic, raw	1 piece	19000

Wall connection profile

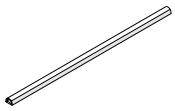
Caution: Minor differences in colour are possible			mm/inch	code
	Wall profile, alu, undrilled	plain anodized	2500 (8'2 7/16")	17020
			3500 (11'5 13/16")	17021
		stainless-steel effect, brushed	2500 (8'2 7/16")	20119
			3500 (11'5 13/16")	20120
	Seal profile, black, for wall profile		roll of 2500 (8'2 7/16")	16452
			roll of 3500 (11'5 13/16")	16453
	Centering assembly black for all glass sliding doors, to wall profile			18663
	Centering assembly grey for all glass sliding doors			18619

Wall connection profile

The ideal wall connection profile for all-glass sliding doors with unprotected glass edges.

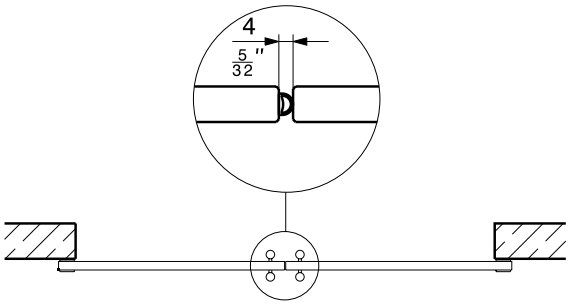


Rubber profile for glass edge protection

		roll of	code
	Rubber profile self-adhesive, for 8/10 mm (5/16"/13/32") glass thickness, black, glass distance 4 mm (5/32")	5 m (16'4 27/32")	19442
		10 m (32'9 23/32")	19443
		50 m (164' 1/2")	19444
	Rubber profile self-adhesive, for 8/10 mm (5/16"/13/32") glass thickness, translucent, glass distance 4 mm (5/32")	5 m (16'4 27/32")	19445
		10 m (32'9 23/32")	19446
		50 m (164' 1/2")	19447

Rubber profile for glass edge protection

Self-adhesive rubber profile fitted along the glass edge minimises draughts and buffers impacts between adjacent all-glass sliding doors.



Accessories

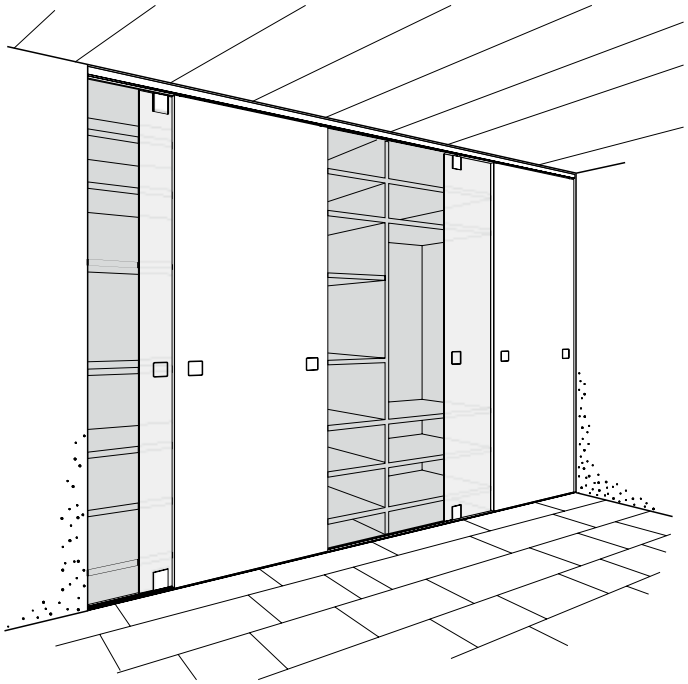
Accessories: → pages 70–73

Order specifications

- Type and quantity of partial sets
- Type and quantity of door stop sets
- Type and quantity of floor guides
- Type and length of running track
- For glass doors
  – Type and quantity of cover plates
  – Length of rubber profile for glass edge protection
  – Quantity of centering assembly for wall connection profile

Planning/installation

Please use the installation drawing code 19433 for planning and execution. (→ www.hawa.ch → Hawa Productfinder)



Full room-height with frameless guides.

Hardware system with continuous bottom guide profile for wooden and/or glass sliding doors weighing up to 70 kg (154 lbs.).

Description

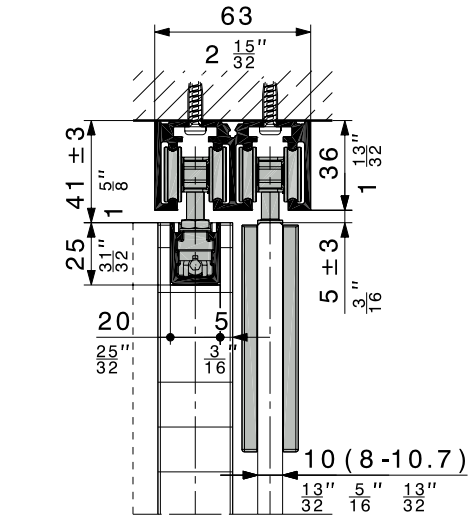
A fit-anywhere, frameless sliding hardware system for wooden and/or glass sliding doors weighing up to 70 kg (154lbs.). Ideal not only for walk-in closets, but also for room-height and flexible partitions in residential and office settings. The possibility of combining glass and wood sliding doors gives new freedom to architects and installers. The combination of a surface mounted continuous bottom guide profile and spring loaded floor guides easily accommodates differences in floor-to-ceiling height and permits any combination of wood and/or glass. Hawa Ordena 70 F has also been designed with problem-free retrofitting in mind.

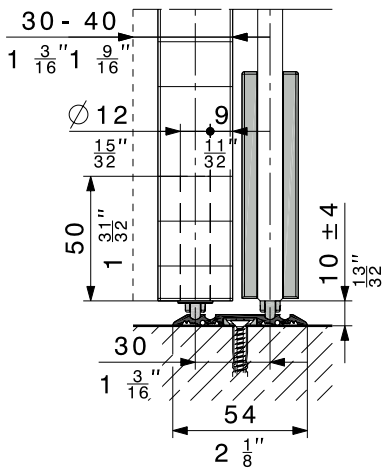
Applications

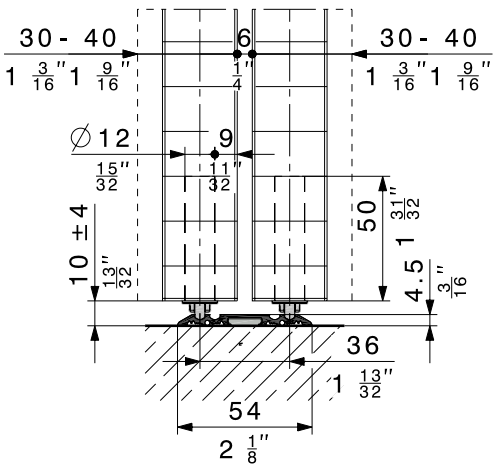
Everywhere that variable space utilisation and unrestricted access should leave a tidy impression, e.g. walk-in closets for office and residential settings, and as a partition or aesthetic room divider in hotels, restaurants, hospitals, schools, offices and private residential interiors.

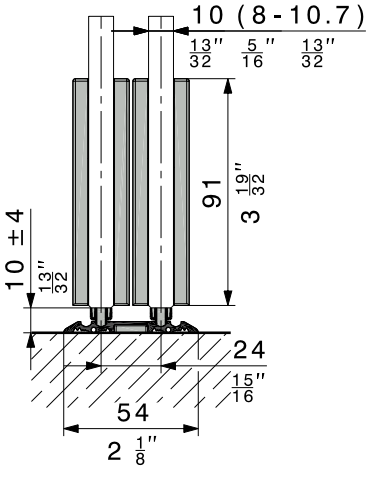
Features of the Hawa Ordena 70 F

- Top-running sliding system, impervious to dust and dirt
- Possibility to combine wood and glass sliding doors
- Wide doors are kept firmly on track by two spring loaded floor guides
- Clip or stick-on 4,5 mm ($\frac{13}{16}$") high floor guide track
- Frameless and easy to install
- Doors can slide across the entire opening width
- Centre stop to hold sliding doors in position
- Maximum door weight 70 kg (154 lbs.)
- Maximum door height 2600 mm (8'6$\frac{3}{8}$")
- Minimum door width 600 mm (1'11$\frac{5}{8}$")
- Door thickness, wood 30–40 mm (1$\frac{3}{16}$"–1$\frac{19}{32}$")
- Door thickness, glass:
  ESG (fully tempered monolithic glass): 8/10 mm ($\frac{5}{16}$"/$\frac{13}{32}$")
  VSG (fully tempered laminated glass): 8,7–10,7 mm ($\frac{11}{32}$"–$\frac{7}{16}$")
- 2–8 mm ($\frac{3}{32}$"–$\frac{5}{16}$") minimum clearance between the running track and the top edge of the sliding doors







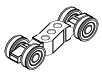
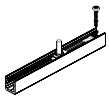


Subject to modification. Metric specifications are exact. Inches are approximate.

Partial sets Hawa Ordena 70 F

		code
Hawa Ordena 70, partial sets for 1 door	wood	19120
	glass (ESG[1]/VSG[2])	20586

Partial sets comprising

		19120	20586	code
	Four-wheeled trolley, M7, plastic-tyred wheels	2	2	10374
	Top fixed suspension with plate M7	2	–	19276
	Cover cap for suspension profile, platic anthracite-grey RAL 7016	2	–	21520
	Patch suspension with glass holder insert (ESG[1]/VSG[2])	–	2	20505
	Suspension bolt M7 and mounting screws	–	1	19117
	Hex key, 4 mm ($\frac{5}{32}$"), length 160 mm (6 $\frac{5}{16}$")	1	–	19931

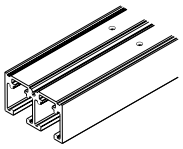
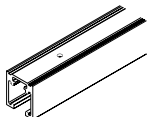
Door stop sets

	number of doors	code
Door stop set for system with bottom guide channel, incl. single use drilling jig, (ESG[1]/VSG[2])	2	20588
Door stop set for system with bottom guide channel, incl. centre stop and single use drilling jig, (ESG[1]/VSG[2])	3	20591
	4	20592
	5	20593
	6	20594

Sets comprising

		20588	20591	20592	20593	20594	code
	Track stop, plastic, with adjustable retainer	4	4	4	4	4	10602
	Centre stop, complete	–	1	2	3	4	19277
	Single use drilling jig, (ESG[1]/VSG[2])	1	1	1	1	1	20400
	Screw-on rubber door stop	2	2	2	2	2	10629
	Suspsension assembly locking wrench	1	1	1	1	1	10778
	Hex key, 3 mm ($\frac{1}{8}$") short version	1	1	1	1	1	10785
	Vertical adjustment pin	1	1	1	1	1	16329

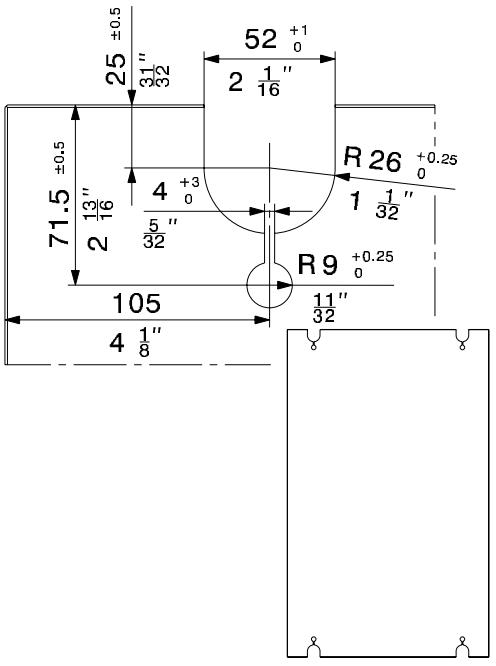
Running tracks

Caution: Hole positions vary		mm/inch	code
	Dual running track, alu plain anodized, predrilled	2500 (8'2 $\frac{7}{16}$")	19213
		3500 (11'5 $\frac{13}{16}$")	19214
		6000 (19'8 $\frac{7}{32}$")	19215
		cut to size	19127
	Single running track, alu plain anodized, predrilled	2500 (8'2 $\frac{7}{16}$")	19370
		3500 (11'5 $\frac{13}{16}$")	19371
		6000 (19'8 $\frac{7}{32}$")	19372
		cut to size	19373

Glass cutouts for sliding door

Both glass ESG (fully tempered monolithic glass) and VSG (fully tempered laminated glass) can be used.

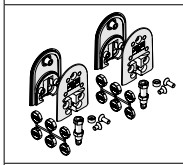
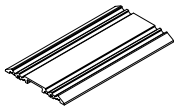
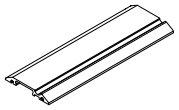
- Glass thickness sliding door ESG (fully tempered monolithic glass): 8/10 mm ($\frac{5}{16}$"/$\frac{13}{32}$"), thickness tolerance ± 0,3 mm
- Glass thickness sliding door VSG (fully tempered laminated glass): 2x4 ± 0,2 mm → film thickness 0,38/0,76/1,52 mm
  2x5 ± 0,2 mm → film thickness 0,38/0,76 mm
- All glass edges are seamed; maximum 1 mm ($\frac{1}{16}$") in the glass cutout
- VSG (fully tempered laminated glass) permissible with max. offset of 2 mm ($\frac{3}{32}$") in the glass cutout



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

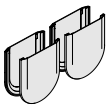
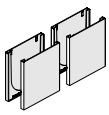
[1]fully tempered monolithic glass [2]fully tempered laminated glass

Floor guides/bottom guide profile

			code
	Spring bottom guide for 1 glass sliding door (ESG[1]/VSG[2]) (2 pieces)		20587
	Spring bottom guide for 1 wooden sliding door (2 pieces)		19155
	Dual bottom guide channel, alu plain anodized	2500 mm (8'2 7/16")	18944
		3500 mm (11'5 13/16")	18945
		6000 mm (19'8 7/32")	18824
		cut to size	18946
	Single bottom guide channel, alu plain anodized	2500 mm (8'2 7/16")	19348
		3500 mm (11'5 13/16")	19349
		6000 mm (19'8 7/32")	18956
		cut to size	19350
	Set of fixing parts for single bottom guide channel, 5 pieces (2 pieces per metre)		19162

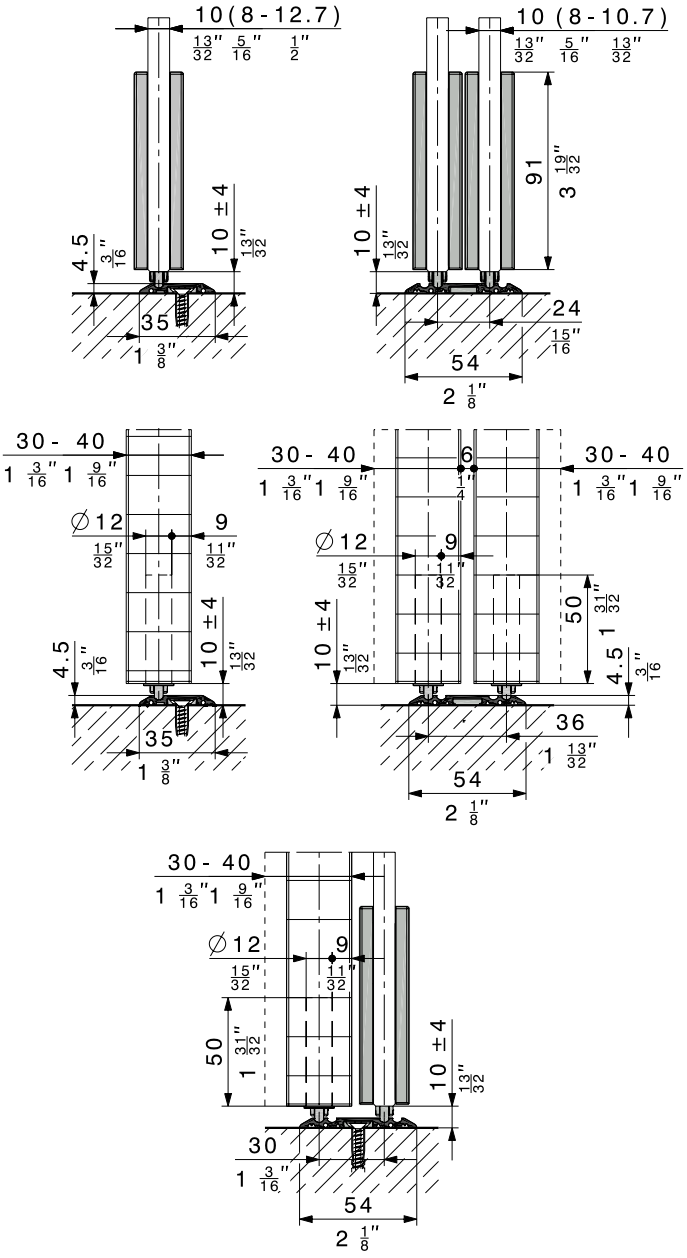
For more guide options: → page 70

Cover plates

			code
	Rounded cover plate, plastic, dull chromium finish	1 piece	16049
		4-pieces set	16042
	Rounded cover plate, plastic, polished chromium finish	1 piece	17161
		4-pieces set	17160
	Rounded cover plate, plastic, brass polished	1 piece	16050
		4-pieces set	16043
	Rounded cover plate, plastic, stainless-steel effect	1 piece	16051
		4-pieces set	16044
	Rounded cover plate, plastic, raw	1 piece	15823
	Square cover plates, plastic, dull chromium finish	1 piece	19091
		4-pieces set	19092
	Square cover plates, plastic, stainless-steel effect	1 piece	19093
		4-pieces set	19094
	Square cover plate, plastic, raw	1 piece	19000

Floor guide variants

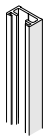
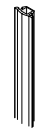
With single bottom guide channel or dual bottom guide channel.



[1] fully tempered monolithic glass [2] fully tempered laminated glass

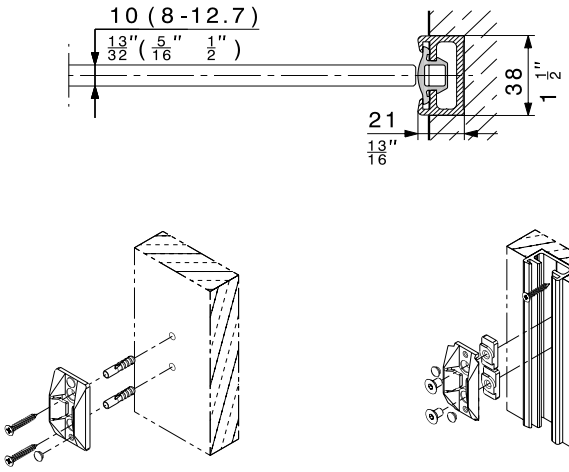
Subject to modification. Metric specifications are exact. Inches are approximate.

Wall connection profile

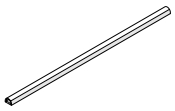
Caution: Minor differences in colour are possible			mm/inch	code
	Wall profile, alu, undrilled	plain anodized	2500 (8'2 7/16")	17020
			3500 (11'5 13/16")	17021
		stainless-steel effect, brushed	2500 (8'2 7/16")	20119
			3500 (11'5 13/16")	20120
	Seal profile, black, for wall profile		roll of 2500 (8'2 7/16")	16452
			roll of 3500 (11'5 13/16")	16453
	Centering assembly black for all glass sliding doors, to wall profile			18663
	Centering assembly grey for all glass sliding doors			18619

Wall connection profile

The ideal wall connection profile for all-glass sliding doors with unprotected glass edges.

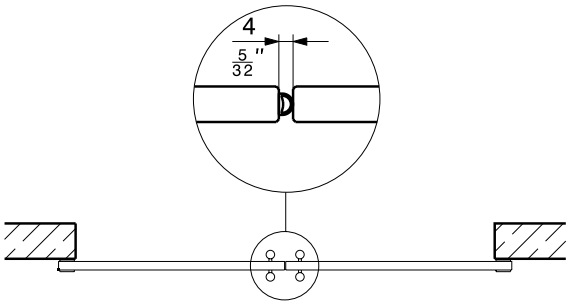


Rubber profile for glass edge protection

		roll of	code
	Rubber profile self-adhesive, for 8/10 mm (5/16"/13/32") glass thickness, black, glass distance 4 mm (5/32")	5 m (16'4 27/32")	19442
		10 m (32'9 23/32")	19443
		50 m (164' 1/2")	19444
	Rubber profile self-adhesive, for 8/10 mm (5/16"/13/32") glass thickness, translucent, glass distance 4 mm (5/32")	5 m (16'4 27/32")	19445
		10 m (32'9 23/32")	19446
		50 m (164' 1/2")	19447

Rubber profile for glass edge protection

Self-adhesive rubber profile fitted along the glass edge minimises draughts and buffers impacts between adjacent all-glass sliding doors.



Accessories

Accessories: → pages 70–73

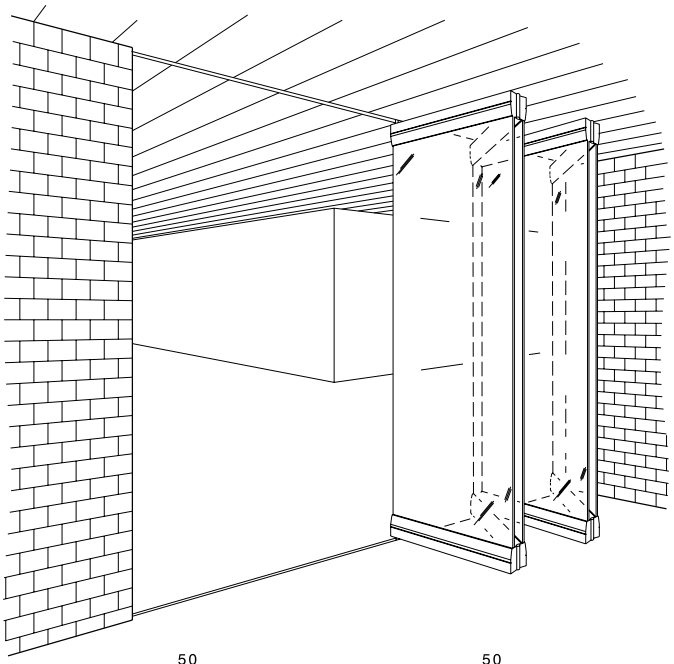
Order specifications

- Type and quantity of partial sets
- Type and quantity of door stop sets
- Type and quantity of floor guides
- Type and length of running track
- Type and length of bottom guide profile
- For glass doors
  – Type and quantity of cover plates
  – Length of rubber profile for glass edge protection
  – Quantity of centering assembly for wall connection profile

Planning/installation

Please use the installation drawing code 19434 for planning and execution. (→ www.hawa.ch → Hawa Productfinder)

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



Hardware system for all-glass folding walls with panels weighing up to 80 kg (176 lbs.)

Description

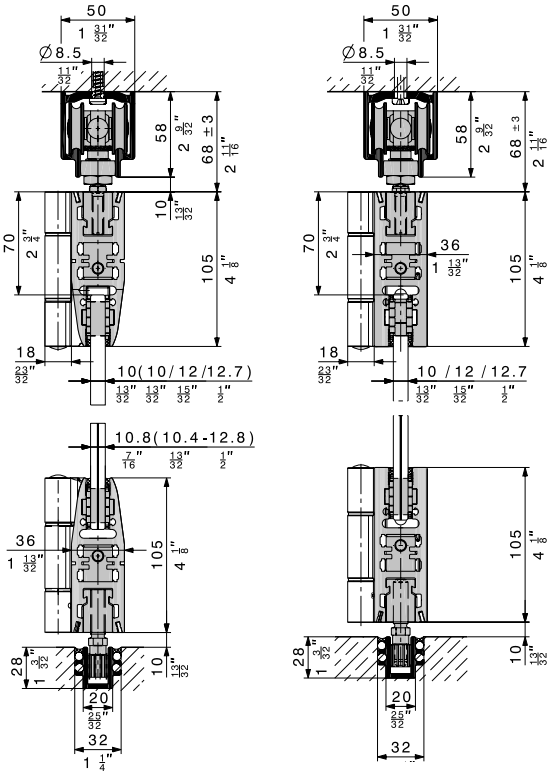
Hawa Variofold 80 GV is a hardware system for all-glass folding-wall installations with an even number of panels. If required, an access door may also be installed on the opposite side to the folding stack. Our documentation simplifies the task of planning such systems, and installation is also simple and convenient. All mechanisms, suspension devices, guides and locks are fully integrated into highly attractive suspension and glass retainer profiles, which are the same ones used for Hawa Variotec 150 GV stacking-wall system. Attached to every other panel is a folding-/pivot door catch with an integrated, individually adjustable retainer, to hold the folding wall flush when closed. The newly developed hinge is installed on the side of the profile.

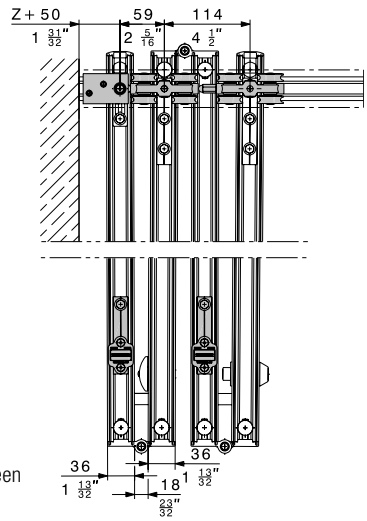
Applications

This hardware system is ideal for use wherever a room needs to be divided using a high-quality glass folding wall that is also simple to operate, e.g. in shopping centres, airports, hotels, restaurants, banks, etc.

Features of the Hawa Variofold 80 GV

- Min. panel width 400 mm (1'3 3/4")
- Max. panel width 900 mm (2'11 7/16")
- Max. panel height 2600 mm (8'6 3/8")
- Max. panel weight 80 kg (176 lbs.)
- The same components may be used for constructing installations that open to the left or right, inwards or outwards
- The opposite side may be equipped with a separate pivot door
- Vertical adjustment ± 3 mm (± 1/8")
- Elegant design
- Secure locking mechanism
- Extremely smooth and silent operation
- Minimal space requirement in stacking area
- Glass thickness fixed glass
  ESG (fully tempered monolithic glass): 10/12/12,7 mm (13/32"/15/32"/1/2")
  VSG (fully tempered laminated glass): 10,8–13 mm (7/16"–17/32")

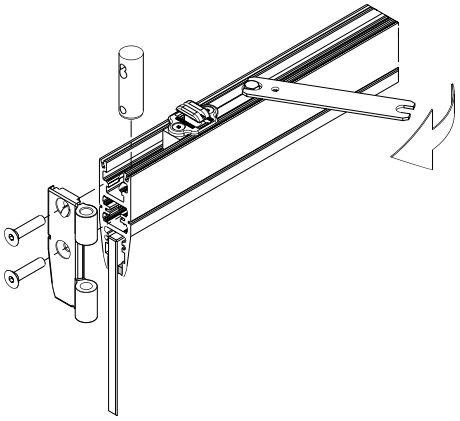




Z ≥ 5 mm (7/32")
Clearance between wall and door

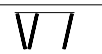
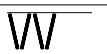
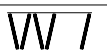
Folding-/pivot door catch

Every other panel has a folding-/pivot door catch (20426). Panels can thus be held flush in position without operating a locking mechanism.



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

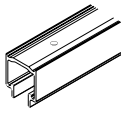
Partial sets without running track and bottom guide channel

		code
	Set for 2 panels	16780
	Set for 2 panel unit with pivot panel	16781
	Set for 4 panels	16782
	Set for 4 panel unit with pivot panel	16783
	Set for 6 panels	16784
	Set for 6 panel unit with pivot panel	16785
Hawa Variofold installations must be equipped with bottom guide channels, except sets 16780 and 16781.		

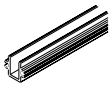
Partial sets comprising

		16780	16781	16782	16783	16784	16785	code
	Four-wheeled trolley, M10, with plastic wheels	1	1	1	1	1	1	16482
	Four-wheeled trolley, M10, with plastic wheels and spacer	–	–	1	1	2	2	16685
	Top pivot bearing	1	2	1	2	1	2	16485
	Vertically adjustable driver for pivot door	1	2	1	2	1	2	16325
	Folding-/pivot door catch, adjustable	1	2	2	3	3	4	20426
	Hawa bar bolt lock, square/hexagon socket 7/8 mm, complete with pivot	–	2	1	2	2	3	16968
	Guide, rattle proof, plastic, 14 mm ($\frac{9}{16}$"), with suspension block	–	–	2	2	3	3	13781
	Vertical adjustment key SW 19	1	1	1	1	1	1	10789
	Suspension assembly locking wrench SW 10/11	1	1	1	1	1	1	14861
	Fork spanner SW 22/12, pivot door vertical adjustment	1	1	1	1	1	1	15409

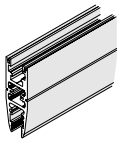
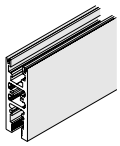
Running tracks

Caution: Hole positions vary		mm/inch	code
	Running track, alu plain, anodized, predrilled	6000 (19'8$\frac{7}{32}$")	16852
		cut to size	16853

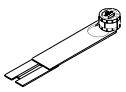
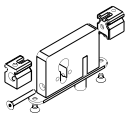
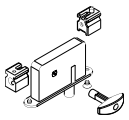
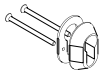
Bottom guide channels

Caution: Hole positions vary		mm/inch	code
	Bottom guide channel, alu plain anodized, predrilled, 31 x 28 mm (1$\frac{7}{32}$" x 1$\frac{1}{8}$")	6000 (19'8$\frac{7}{32}$")	13688
		cut to size	13690

Glass suspension and retainer profiles

		mm/inch	code
	Glass suspension retainer profile, alu plain anodized, brushed	6500 (21'3$\frac{29}{32}$")	16669
		cut to size	19868
	Glass suspension retainer profile, alu, unanodized	6500 (21'3$\frac{29}{32}$")	13576
		cut to size	13681
	Glass suspension retainer profile, alu plain anodized, brushed (straight profile)	6500 (21'3$\frac{29}{32}$")	23440
		cut to size	23443

Components

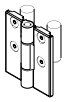
			code
	Set of glass-fixing parts, for 1 sliding door (4 pieces)	ESG[1] 10 mm ($\frac{13}{32}$")	13900
		ESG[1] 12 mm ($\frac{15}{32}$")	13901
		ESG[1] 12,7 mm ($\frac{1}{2}$")	13902
		VSG[2] 2 x 5 mm (2 x $\frac{7}{32}$")	21263
		VSG[2] 2 x 6 mm (2 x $\frac{1}{4}$")	23542
	Hawa bar bolt lock with retention pin	profile cylinder 17 mm ($\frac{11}{16}$")	16760
		round cylinder 22 mm ($\frac{7}{8}$")	16761
	Hawa bar bolt lock, square/hexagon socket 7/8 mm, complete with pivot		16968
	Security rose 12 mm ($\frac{15}{32}$"), for profile cylinder 17 mm ($\frac{11}{16}$"), chromium-nickel steel		14147
	Floor-mounted sleeve with oblong hole and chromium-plated brass spring		13787
	Rosette for floor-mounted sleeve 13787		17326
	Thrust bearing sleeve, Ø 30 mm (1$\frac{3}{16}$"), for pivot door		16326
	Thrust bearing, adjustable, Inox, for fitting into bottom guide channel		22299
	Strike plate, chromium-plated steel		13130

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

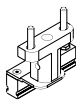
[1] fully tempered monolithic glass

[2] fully tempered laminated glass

Components

			code
	Hinge, zinc alloy, with fixing screws	dull chromium finish	16091
		raw	16088
	Hinge, zinc alloy, with fixing screws (straight profile)	dull chromium finish	25976
	Cover caps, zinc alloy, set of 4 pieces	dull chromium finish	16692
		raw	16693
	Cover caps, zinc alloy, set of 4 pieces (straight profile)	dull chromium finish	25982

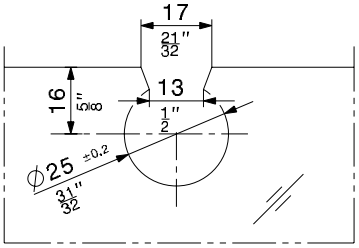
Accessories

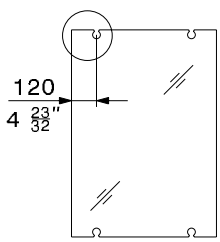
			code
	Cover cap (1 piece)	dull chromium finish	16690
		raw	16691
	Additional top lock		16491
	Short connecting rod for door height up to 2500 mm (8'2 7/16")		14164
	Long connecting rod for door height over 2500 mm (8'2 7/16")		14165
	Brush seal 2,6/18 x 920 mm (1/8"/ 23/32" x 3' 7/32") for glass suspension and retainer profile		16797
	Fork spanner to glass holder insert		13817
	Installation tool for blocking keys 10–12,7 mm (13/32"–1/2") glass		13710
	Drilling jig, for hinge retention bolts		16979

Glass cutouts for sliding door

Both glass ESG (fully tempered monolithic glass) and VSG (fully tempered laminated glass) can be used.

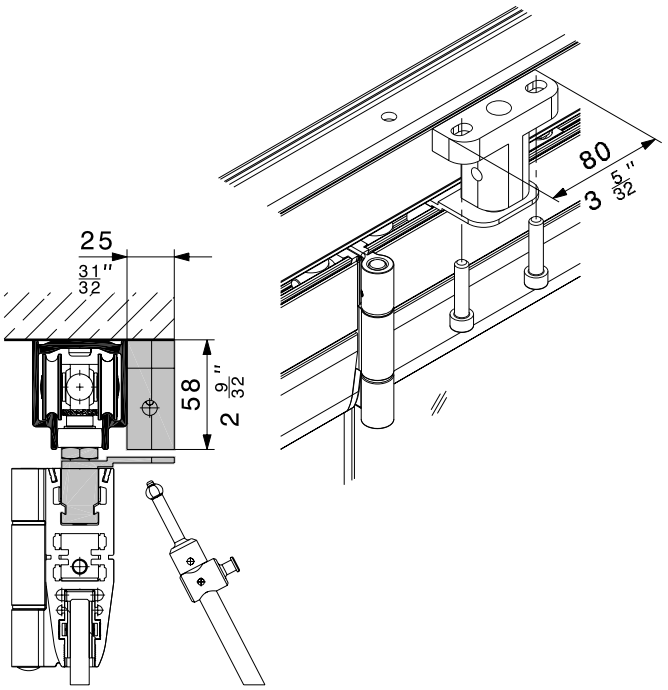
- Glass thickness sliding door ESG (fully tempered monolithic glass): 8/10/12/12,7 mm (5/16"/13/32"/15/32"/1/2"), thickness tolerance ± 0,3 mm
- Glass thickness sliding door VSG (fully tempered laminated glass):
  2x5 ± 0,2 mm → film thickness 0,76/1,52 mm
  2x6 ± 0,2 mm → film thickness 0,38/0,76 mm
- All glass edges are seamed; maximum 1 mm (1/16") in the glass cutout
- VSG (fully tempered laminated glass) permissible with max. offset of 2 mm (3/32") in the glass cutout





Additional top lock

The additional top lock code 16491 ensures more security.



Service

		code
Lock cutout incl drilling for double cylinder	17 mm (11/16")	19615
	22 mm (7/8")	19616
Lock cutout incl. drilling for square/hexagon socket		19617
Lock cutout incl. drilling for double cylinder and retention bolts	17 mm (11/16")	19612
	22 mm (7/8")	19613
Lock cutout incl. drilling for square/hexagon socket andretention bolts		19614
Drilling on both sides for hinge retention bolts		16736
Surface treatment are charged separately. Prices on request.		

Order specifications

- Quantity and type of sets
- Length of running track
- Length of bottom guide channel
- Width and height of glass
- Thickness of glass
- Quantity and type of cover caps
- Quantity and type of bottom guides
- Layout sketch

Optional order specifications

- Quantity of additional top lock
- Quantity and type of connecting rod
- Quantity of drilling jig, for hinge retention bolts
- Quantity and type of tool for glazing
- Quantity of brush profile

Planning/installation

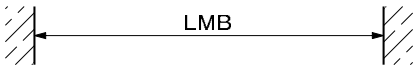
For planning and installation purposes, please use the installation drawing code 16824. (→ www.hawa.ch → Hawa Productfinder)

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

Hawa Variofold 80 GV – Offer and order form

❒ Offer	❒ Order	Delivery address
Customer	Object	Customer
Address	City	Address
Telephon / Telefax	Date	City
Delivery date	Professional worker	Telephon / Telefax

Maximum panel width 900 mm (2'11 11/16"), maximum panel weight 80 kg (176 lbs.)
Please copy this form, fill it out and mail or fax it to Hawa AG (fax no. +41 44 787 17 18)

Sets without running track and bottom guide channel / Necessary components	❒ 16780	❒ 16781	❒ 16782	❒ 16783	❒ 16784	❒ 16785
	2	2 + 1	4	4 + 1	6	6 + 1
						
	Maximum widths of folding partitions					
	1800	2700	3600	4500	5400	6300
	Variofold installations must be equipped with bottom guide channels, except nos. 16780 and 16781.					
Glass thickness/glass attachment components ❒ 10 mm (13/32") 13900 ❒ 12 mm (15/32") 13901 ❒ 12,7 mm (1/2") 13902	2	3	4	5	6	7
Lock for access ❒ cyl. 17 mm (11/16") 16760 ❒ cyl. 22 mm (7/8") 16761 ❒ 4/6-sided nut 16968	2	1	1	1	1	1
Security rose ❒ cyl. 17 mm (11/16") 14147 Security rose for standard profile cylinders 22 mm (7/8")	2	1	1	1	1	1
Locking device ❒ floor-mounted sleeve 13787 ❒ strike plate 13130	2	3	–	–	–	–
Hinge ❒ dull chromium finish 16091/25976 ❒ raw 16088	2	2	6	6	10	10
Thrust bearing ❒ Thrust bearing 16326 ❒ Thrust bearing, adjust. 22299	1	2	1	2	1	2
Cover caps, set of 4 pieces ❒ dull chromium finish 16692/25982 ❒ raw 16693	1	2	1	2	1	2
Clear dimension..... mm	 LMB					

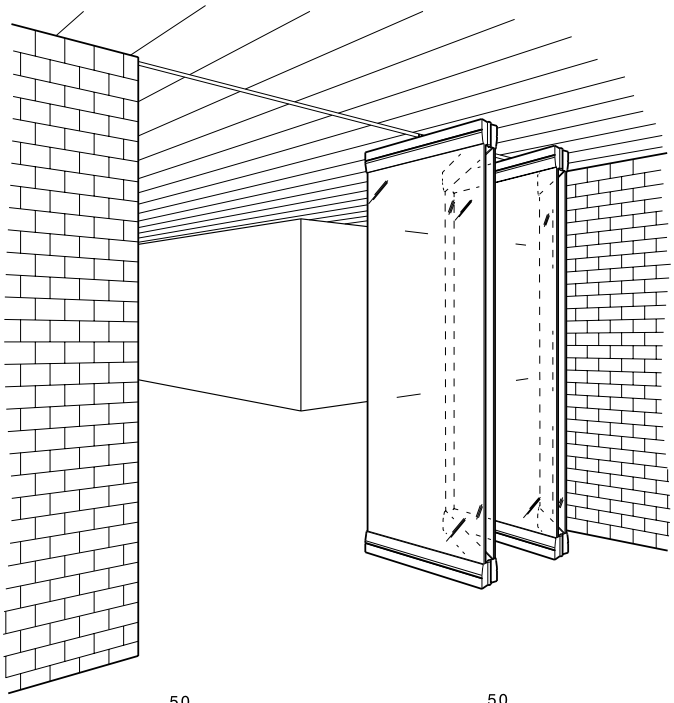
Optional accessories

❒ Additional lock at top 16491	1	2	2	3	3	4
Connecting rod, for door height ❒ up to 2500 mm (8'2 7/16") 14164 ❒ over 2500 mm (8'2 7/16") 14165	1	1	1	1	1	1
❒ Brush seal 2,6/18 x 920 mm (1/8"/23/32" x 3'7/32") 16797	4	6	8	10	12	14
Tools for glazing ❒ Forkspanner 13817 ❒ Installation tool 13710	1	1	1	1	1	1
❒ Drilling jig, for hinge retention bolts 16979	1	1	1	1	1	1
Surface treatment of suspension and glass retainer profiles (16741, basic treatment fee to surface treatment, lump sumper colour)	❒ 14163 Powder-coatet to RAL code			❒ 14630 Chrome effect, polished finish		
	❒ 14626 Plain, anodized, polished, brushed					

Please note: orders can only be processed if this form has been filled out correctliy.

Date ..... **Signature** .....

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



Hardware system for all-glass concertina walls up to 80 kg (176 lbs.).

Description

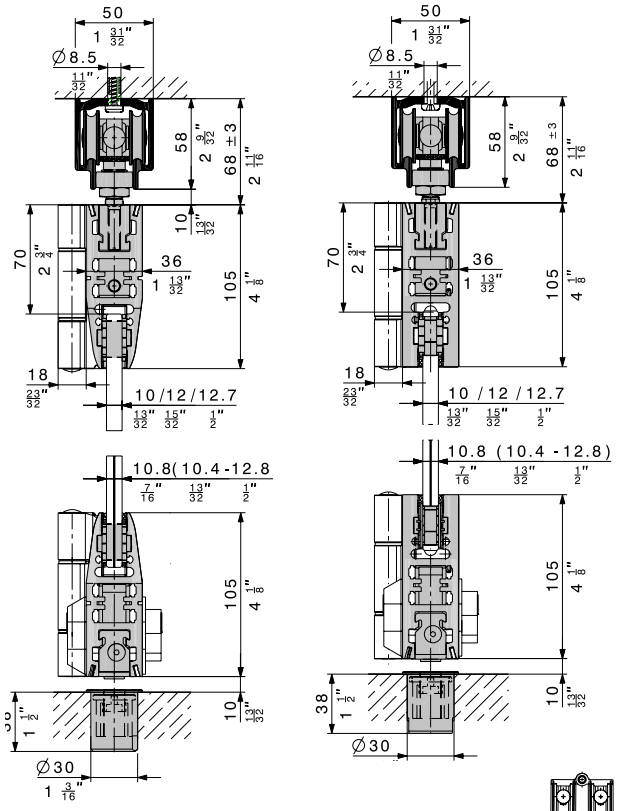
With all-glass concertina-wall installations, the suspension point is in the centre of the panel, which means that up to 6½ panels may be installed without the need for a bottom guide. An access door equipped with our top pivot may also be added on the opposite side to the folding stack. All mechanisms, suspension devices, guides and locks are fully integrated into highly attractive suspension and glass retainer profiles, and our newly developed hinge is installed on the side of the profile. The suspension and glass retainer profiles are the same ones used for Hawa Variotec 150 GV stacking-wall system. Attached to every other panel is a folding-/pivot door catch with an integrated, individually adjustable retainer, to hold the folding wall flush when closed. Our documentation simplifies the task of planning such systems, and installation is also simple and convenient.

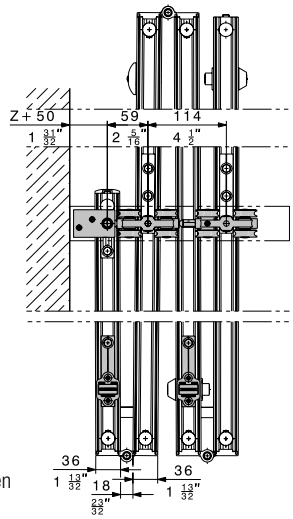
Applications

This hardware system is ideal for use wherever a room needs to be divided using a high-quality glass concertina wall that is also simple to operate, e.g. in shopping centres, airports, hotels, restaurants, banks, etc.

Features of the Hawa Centerfold 80 GV

- Min. panel width 500 mm (1'7 11/16")
- Max. panel width 900 mm (2'11 7/16")
- Max. panel height 2600 mm (8'6 3/8")
- Max. panel weight 80 kg (176 lbs.)
- The same components may be used for constructing installations that open to the left or right, inwards or outwards
- The opposite side may be equipped with a separate pivot door
- Vertical adjustment ± 3 mm (± 1/8")
- Elegant design
- Secure locking mechanism
- Extremely smooth and silent operation
- Minimal space requirement in staking area
- Glass thickness fixed glass
  ESG (fully tempered monolithic glass): 10/12/12,7 mm (13/32"/15/32"/1/2")
  VSG (fully tempered laminated glass): 10,8–13 mm (7/16"–17/32")

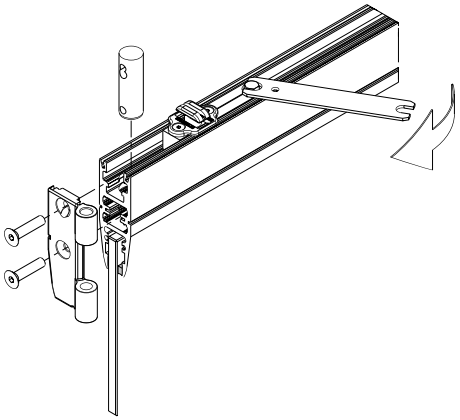




Z ≥ 5 mm (7/32")
Clearance between wall and door

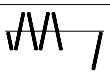
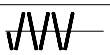
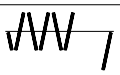
Folding-/pivot door catch

Every other panel has a folding-/pivot door catch (20426). Panels can thus be held flush in position without operating a locking mechanism.



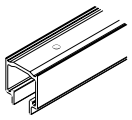
Subject to modification. Metric specifications are exact. Inches are approximate.

Partial sets without running track and bottom guide channel

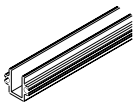
		code
	Set for 1½ panel	16786
	Set for 1½ panel unit with pivot panel	16787
	Set for 2½ panels	16788
	Set for 2½ panel unit with pivot panel	16789
	Set for 3½ panels	16790
	Set for 3½ panel unit with pivot panel	16791
	Set for 4½ panels	16792
	Set for 4½ panel unit with pivot panel	16793
	Set for 5½ panels	16794
	Set for 5½ panel unit with pivot panel	16795

In principle, Hawa Centerfold systems may be installed without the need for a bottom guide channel.

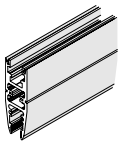
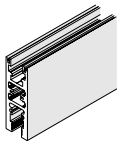
Running tracks

Caution: Hole positions vary		mm/inch	code
	Running track, alu plain, anodized, predrilled	6000 (19'8 7/32")	16852
		cut to size	16853

Bottom guide channels

Caution: Hole positions vary		mm/inch	code
	Bottom guide channel, alu plain anodized, predrilled, 31 x 28 mm (1 7/32" x 1 1/8")	6000 (19'8 7/32")	13688
		cut to size	13690

Glass suspension and retainer profiles

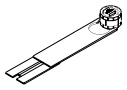
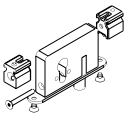
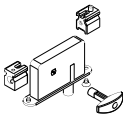
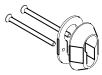
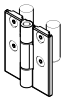
		mm/inch	code
	Glass suspension retainer profile, alu plain, anodized, brushed	6500 (21'3 29/32")	16669
		cut to size	19868
	Glass suspension retainer profile, alu, unanodized	6500 (21'3 29/32")	13576
		cut to size	13681
	Glass suspension retainer profile, alu plain, anodized, brushed (straight profile)	6500 (21'3 29/32")	23440
		cut to size	23443

Partial sets comprising

		16786	16787	16788	16789	16790	16791	16792	16793	16794	16795	code
	Four-wheeled trolley, M10, with plastic wheels	1	1	1	1	1	1	1	1	1	1	16482
	Four-wheeled trolley, M10, with plastic wheels and spacer	–	–	–	–	1	1	1	1	2	2	16685
	Top pivot bearing	1	2	1	2	1	2	1	2	1	2	16485
	Vertically adjustable driver for pivot door	1	2	1	2	1	2	1	2	1	2	16325
	End stop	–	–	1	1	–	–	1	1	–	–	16701
	Folding-/pivot door catch, adjustable	1	2	2	3	2	3	3	4	3	4	20426
	Hawa bar bolt lock, square/hexagon socket 7/8 mm, complete with pivot	–	1	–	2	1	3	2	4	3	5	16968
	Vertical adjustment key SW 19	1	1	1	1	1	1	1	1	1	1	10789
	Suspension assembly locking wrench SW 10/11	1	1	1	1	1	1	1	1	1	1	14861
	Fork spanner SW 22/12, pivot door vertical adjustment	1	1	1	1	1	1	1	1	1	1	15409

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

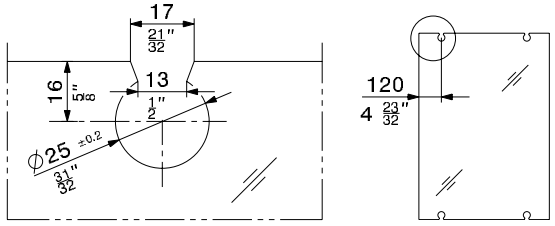
Components

			code
	Set of glass-fixing parts, for 1 sliding door (4 pieces)	ESG[1] 10 mm ($\frac{13}{32}$")	13900
		ESG[1] 12 mm ($\frac{15}{32}$")	13901
		ESG[1] 12,7 mm ($\frac{1}{2}$")	13902
		VSG[2] 2 x 5 mm (2 x $\frac{7}{32}$")	21263
		VSG[2] 2 x 6 mm (2 x $\frac{1}{4}$")	23542
	Hawa bar bolt lock with retention pin	profile cylinder 17 mm ($\frac{11}{16}$")	16760
		round cylinder 22 mm ($\frac{7}{8}$")	16761
	Hawa bar bolt lock, square/hexagon socket 7/8 mm, complete with pivot		16968
	Security rose 12 mm ($\frac{15}{32}$"), for profile cylinder 17 mm ($\frac{11}{16}$"), chromium-nickel steel		14147
	Floor-mounted sleeve with oblong hole and chromium-plated brass spring		13787
	Rosette for floor-mounted sleeve 13787		17326
	Thrust bearing sleeve, Ø 30 mm (1$\frac{3}{16}$"), for pivot door		16326
	Thrust bearing, adjustable, Inox, for fitting into bottom guide channel		22299
	Strike plate, chromium-plated steel		13130
	Hinge, zinc alloy, with fixing screws	dull chromium finish	16091
		raw	16088
	Hinge, zinc alloy, with fixing screws (straight profile)	dull chromium finish	25976
	Cover caps, zinc alloy, set of 4 pieces	dull chromium finish	16692
		raw	16693
	Cover caps, zinc alloy, set of 4 pieces (straight profile)	dull chromium finish	25982

Glass cutouts for sliding door

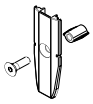
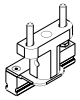
Both glass ESG (fully tempered monolithic glass) and VSG (fully tempered laminated glass) can be used.

- Glass thickness sliding door ESG (fully tempered monolithic glass): 10/12/12,7 mm ($\frac{13}{32}$"/$\frac{15}{32}$"/$\frac{1}{2}$"), thickness tolerance ± 0,3 mm
- Glass thickness sliding door VSG (fully tempered laminated glass): 2x5 ± 0,2 mm → film thickness 0,76/1,52 mm
  2x6 ± 0,2 mm → film thickness 0,38/0,76 mm
- All glass edges are seamed; maximum 1 mm ($\frac{1}{16}$") in the glass cutout
- VSG (fully tempered laminated glass) permissible with max. offset of 2 mm ($\frac{3}{32}$") in the glass cutout



[1]fully tempered monolithic glass [2]fully tempered laminated glass

Accessories

			code
	Cover cap (1 piece)	dull chromium finish	16690
		raw	16691
	Additional top lock		16491
	Short connecting rod for door height up to 2500 mm (8'2 $\frac{7}{16}$")		14164
	Long connecting rod for door height over 2500 mm (8'2 $\frac{7}{16}$")		14165
	Guide with plastic slider, rattle proof, 14 mm ($\frac{9}{16}$") and suspension block		13781
	Brush seal 2,6/18 x 920 mm ($\frac{1}{8}$"/$\frac{23}{32}$" x 3'$\frac{7}{32}$") for glass suspension and retainer profile		16797
	Fork spanner to glass holder insert		13817
	Installation tool for blocking keys 10–12,7 mm ($\frac{13}{32}$"–$\frac{1}{2}$") glass		13710
	Drilling jig, for hinge retention bolts		16979

Additional top lock and services

Details: → Hawa Variofold 80 GV

Order specifications

- Quantity and type of sets
- Length of running track
- Length of bottom guide channel
- Width and height of glass
- Thickness of glass
- Quantity and type of cover caps
- Quantity and type of bottom guides
- Layout sketch

Optional order specifications

- Quantity of additional top lock
- Quantity and type of connecting rod
- Quantity of drilling jig, for hinge retention bolts
- Quantity and type of tool for glazing
- Quantity of brush profile

Planning/installation

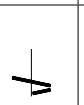
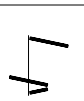
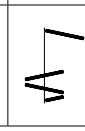
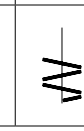
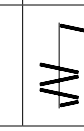
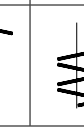
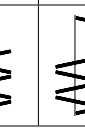
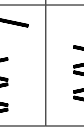
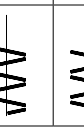
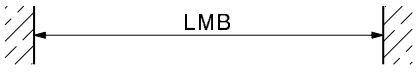
For planning and installation purposes, please use the installation drawing code 16825.
(→ www.hawa.ch → Hawa Productfinder)

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

Hawa Centerfold 80 GV – Offer and order form

❒ Offer	❒ Order	Delivery address
Customer	Object	Customer
Address	City	Address
Telephon / Telefax	Date	City
Delivery date	Professional worker	Telephon / Telefax

Maximum panel width 900 mm (2'11 11/16"), maximum panel weight 80 kg (176 lbs.)
Please copy this form, fill it out and mail or fax it to Hawa AG (fax no. +41 44 787 17 18)

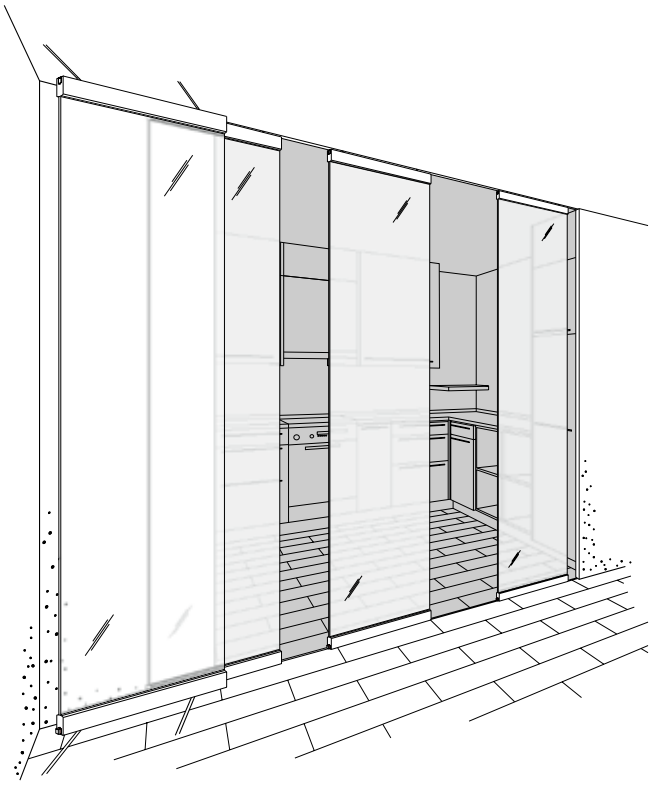
Sets without running track and bottom guide channel / Necessary components	❒ 16786	❒ 16787	❒ 16788	❒ 16789	❒ 16790	❒ 16791	❒ 16792	❒ 16793	❒ 16794	❒ 16795
	1½	1½ + 1	2½	2½ + 1	3½	3½ + 1	4½	4½ + 1	5½	5½ + 1
										
	Maximum widths of folding partitions									
	1400	2300	2300	3200	3200	4100	4100	5000	5000	5900
	In principle, Centerfold systems may be installed without the need for a bottom guide channel.									
Glass thickness/glass attachment components ❒ 10 mm (13/32") 13900 ❒ 12 mm (15/32") 13901 ❒ 12,7 mm (1/2") 13902	2	3	3	4	4	5	5	6	6	7
Lock for access ❒ cyl. 17 mm (11/16") 16760 ❒ cyl. 22 mm (7/8") 16761 ❒ 4/6-sided nut 16968	1	1	2	1	2	1	2	1	2	1
Security rose ❒ cyl. 17 mm (11/16") 14147 Security rose for standard profile cylinders 22 mm (7/8")	1	1	2	1	2	1	2	1	2	1
Locking device ❒ floor-mounted sleeve 13787 ❒ strike plate 13130	1	2	2	3	3	4	4	5	5	6
Hinge ❒ dull chromium finish 16091/25976 ❒ raw 16088	2	2	4	4	6	6	8	8	10	10
Thrust bearing ❒ Thrust bearing 16326 ❒ Thrust bearing, adjust. 22299	1	2	1	2	1	2	1	2	1	2
Cover caps, set of 4 pieces ❒ dull chromium finish 16692/25982 ❒ raw 16693	1	2	1	2	1	2	1	2	1	2
Clear dimension..... mm										

Optional accessories

❒ Additional lock at top 16491	1	2	2	3	2	3	3	4	3	4
Connecting rod, for door height ❒ up to 2500 mm (8'2 7/16") 14164 ❒ over 2500 mm (8'2 7/16") 14165	1	1	1	1	1	1	1	1	1	1
❒ Brush seal 2,6/18 x 920 mm (1/8"/23/32" x 3'7/32") 16797	3	5	5	7	7	9	9	11	11	13
Tools for glazing ❒ Forkspanner 13817 ❒ Installation tool 13710	1	1	1	1	1	1	1	1	1	1
❒ Drilling jig, for hinge retention bolts 16979	1	1	1	1	1	1	1	1	1	1
Surface treatment of suspension and glass retainer profiles (16741, basic treatment fee to surface treatment, lump sumper colour)	❒ 14163 Powder-coatet to RAL code					❒ 14630 Chrome effect, polished finish				
	❒ 14626 Plain, anodized, polished, brushed									

Please note: orders can only be processed if this form has been filled out correctly.

Date ..... **Signature** .....



Glass sliding walls made easy.

Hardware system for stackable glass sliding walls weighing up to 60 kg (132 lbs.).

Description

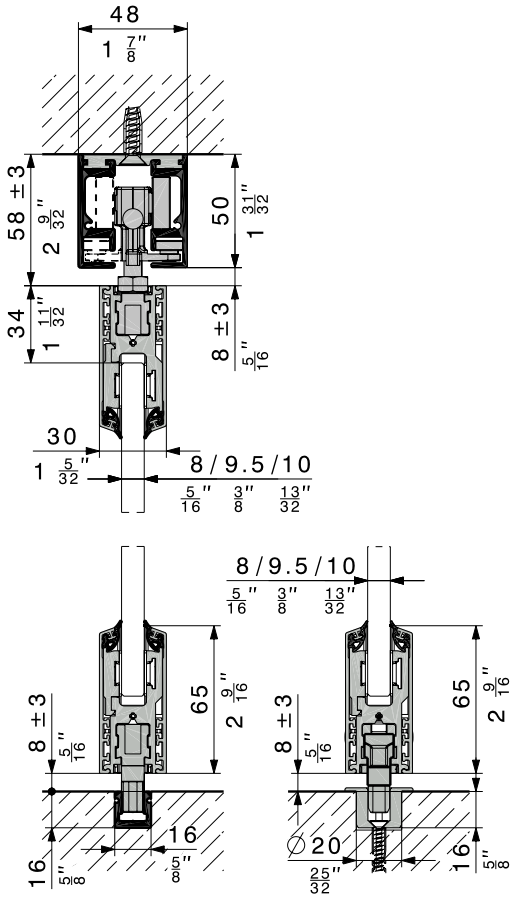
Hawa Aperto 60 GL addresses the need for flexible, open room design. Specially developed for lightweight glass partitions, the system fits in perfectly with contemporary architectural design. Cover profiles are available in various finishes, protected by a removable foil. Hawa Aperto 60 GL is easy to plan and install, thanks to its sophisticated engineering and straightforward component structure. This avoids customer-tailored manufacturing for standard partitions.
Hawa recommends using a bottom guide channel for ultimate ease of operation. However, installations without floor guides are also possible.

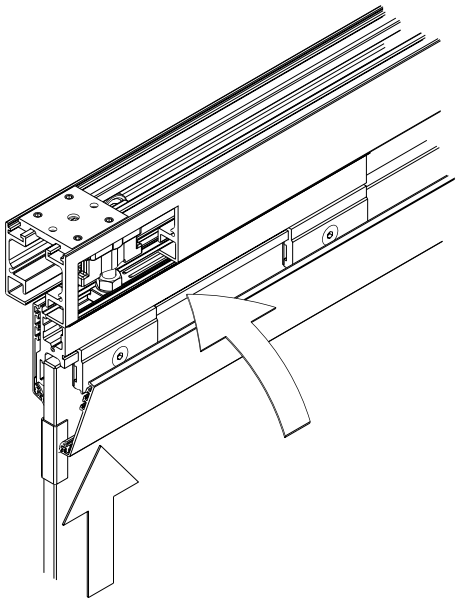
Applications

For partitions and screens wherever individual, changeable space division is required in rooms. With its minimal fitting dimensions and modest stacking space requirements, retrofitting Hawa Aperto 60 GL in existing rooms is also no problem. The system also makes for easier, cheaper realisation of ceiling to counter-top partitions.

Features of Hawa Aperto 60 GL

- Maximum door weight 60 kg (132 lbs.)
- Stacking area accommodates up to 9 door panels incl. pivot door
- Profile height 65 mm (2 9/16")
- Door thickness ESG (fully tempered monolithic glass): 8/9,5/10 mm (5/16"/3/8"/13/32")
- Minimum door width 500 mm (1'7 11/16")
- Maximum door width (stacking parallel to the slide axis)
  – Sliding door: 1100 mm (3'7 5/16")
  – Pivot door: 1200 mm (3'11 1/4")
- Maximum door width (stacking 90° to the slide axis)
  – Sliding door and pivot door: 950 mm (3'1 13/32")
- Maximum door height 2600 mm (8'6 3/8")
- Height adjustment ± 3 mm (1/8")
- Centre stop with progressively adjustable retention spring catch
- Running tracks and bottom guide channels: alu plain anodized
- Complete, harmonious solution thanks to fixed glass set
- Comprehensive planning and assembly instructions



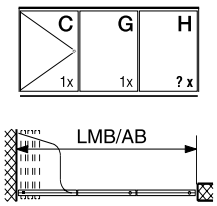


Subject to modification. Metric specifications are exact. Inches are approximate.

Stacking area options

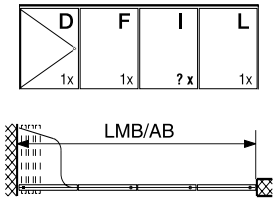
With Hawa Aperto 60 GL, lightweight glass partitions tuck away invisibly behind a wall or a pivot door.

System type 1



Sets	Type	Pieces	code
Pivot door	C	1	19188
Sliding door	G	1	19192
Sliding door	H	**?X**	19193
Stacking area		1	18758

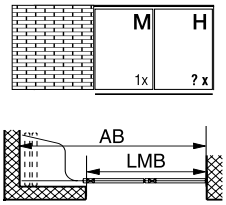
System type 2



Sets	Type	Pieces	code
Pivot door	D	1	19189
Sliding door	F	1	19191
Sliding door	I	**?X**	19194
Sliding door	L	1	›19196
Stacking area		1	18759

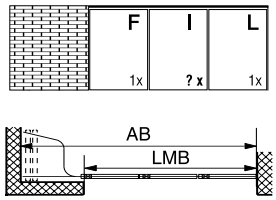
› Recommended connection pieces: → table on the next page.

System type 3



Sets	Type	Pieces	code
Sliding door	M	1	19198
Sliding door	H	**?X**	19193
Stacking area		1	18758

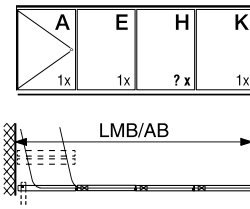
System type 4



Sets	Type	Pieces	code
Sliding door	F	1	19191
Sliding door	I	**?X**	19194
Sliding door	L	1	›19196
Stacking area		1	18759

› Recommended connection pieces: → table on the next page.

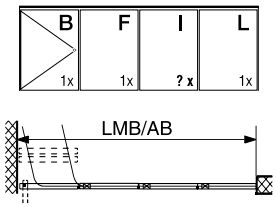
System type 5



Sets	Type	Pieces	code
Pivot door	A	1	19186
Sliding door	E	1	19190
Sliding door	H	**?X**	19193
Sliding door	K	1	›19195
Stacking area		1	18756

› Recommended connection pieces: → table on the next page.

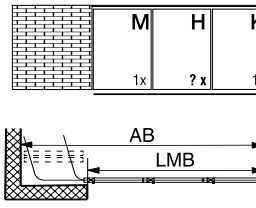
System type 6



Sets	Type	Pieces	code
Pivot door	B	1	19187
Sliding door	F	1	19191
Sliding door	I	**?X**	19194
Sliding door	L	1	›19196
Stacking area		1	18757

› Recommended connection pieces: → table on the next page.

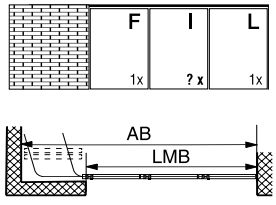
System type 7



Sets	Type	Pieces	code
Sliding door	M	1	19198
Sliding door	H	**?X**	19193
Sliding door	K	1	›19195
Stacking area		1	18756

› Recommended connection pieces: → table on the next page.

System type 8



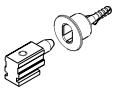
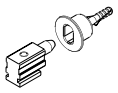
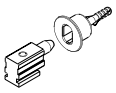
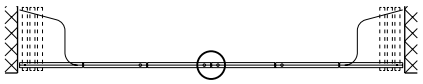
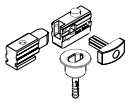
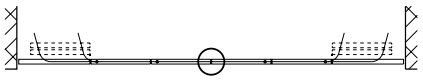
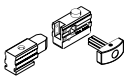
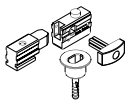
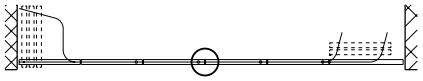
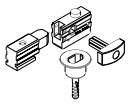
Sets	Type	Pieces	code
Sliding door	F	1	19191
Sliding door	I	**?X**	19194
Sliding door	L	1	›19196
Stacking area		1	18757

› Recommended connection pieces: → table on the next page.

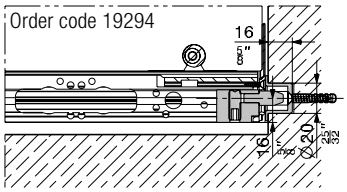
Connection options

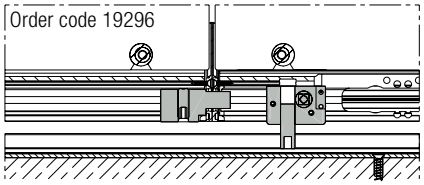
Depending on the connection situation, we recommend using supplementary parts according to the table. They ensure maximum convenience and stabilise the wall when it is closed.

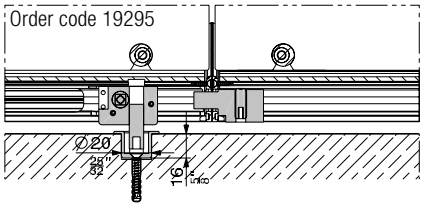
Connection pieces

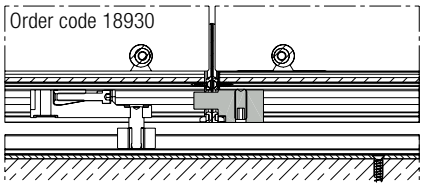
Connection options	**with** bottom guide channel	code	**without** bottom guide channel	code
				19294
		19294		19294
				19295
		19296		19295
		18930		19295

Connection options front view





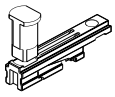
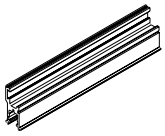
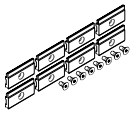




Fixed glass set

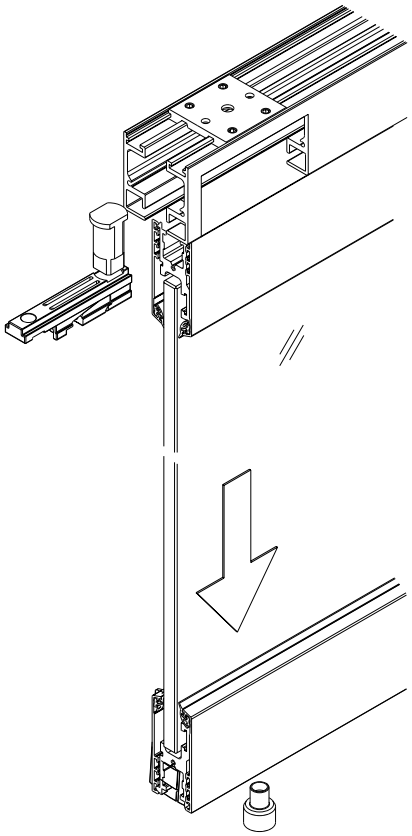
	code
Fixed glass set for Hawa Aperto 60 GL	19750

Set comprising

		pieces	code
	Suspension plate with retainer bolt for fixed glass	2	19714
	Location bolt, stainless steel, for fixed glass, set of 2 pieces	1	19715
	Glass retainer profile 240 mm (9 15/32"), aluminium	4	19026
	Retainer plate for glass retainer profile, including screws, set of 8 pieces (for 1 door)	1	19264
	Suspension bolt for glass suspension profile with set screw, set of 8 pieces (for 1 door)	1	19265
	Eccenter plastic, for glass fixing, set of 8 pieces (for 1 door)	1	19266
	Cover cap for glass retainer profile, plastic anthracite-grey RAL 7016, set of 4 pieces (for 1 door)	1	19267

Fixed glass

The fixed glass set facilitates a complete and harmonious solution.



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

Nominal order length for straight running tracks and bottom guide channels

The basic nominal order length for straight running tracks and bottom guide channels and the number of necessary top fixing plates can be calculated as follows

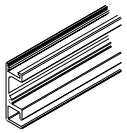
Stacking area 90°

		formula	order length in mm (incl. trimming reserve)	pieces per installation
2 x single toptrack	outside	AB in mm - 130 mm		1
	inside	AB in mm - 500 mm		1
Bottom guide channel		AB in mm + 20 mm		1
Top fixing plate		AB in mm ÷ 500	→	

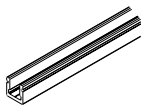
Stacking area parallel

		formula	order length in mm (incl. trimming reserve)	pieces per installation
2 x single toptrack	outside	AB in mm - 730 mm		1
	inside	AB in mm - 1230 mm		1
Bottom guide channel		AB in mm - 500 mm		1
Top fixing plate		AB in mm ÷ 500	→	

Running tracks

		mm/inch	code
	Single running track, alu plain anodized	2500 (8'2 7/16")	17795
		3500 (11'5 13/16")	17796
		6000 (19'8 7/32")	16891
		cut to size	17529
	Top fixing plate for 2 x single running track, alu, 1 piece		17128
	Top fixing plate for 2 x single running track, set of 6 pieces		17806
	Top fixing plate for 2 x single running track, set of 8 pieces		17807
	Cover cap for 2 x single running track, alu plain anodized		19354

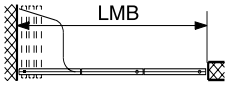
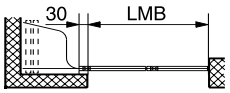
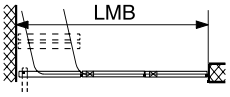
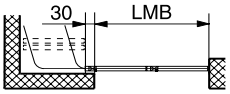
Bottom guide channels

Caution: Hole positions vary		mm/inch	code
	Bottom guide channel, alu plain anodized, undrilled, 16 x 16 mm (5/8" x 5/8")	6000 (19'8 7/32")	18200
	Bottom guide channel, alu plain anodized, predrilled, 16 x 16 x 3 mm (5/8" x 5/8" x 1/8")	3500 (11'5 13/16")	18864
		6000 (19'8 7/32")	18216
		cut to size	18477

Nominal order length for cover profile and clip-on rubber

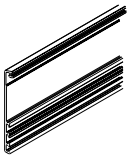
The basic nominal order length for the cover profiles and the clip-on rubber can be calculated as follows

Stacking area 90° and parallel

options	length of cover profile (incl. trimming reserve)	length of clip-on rubber (incl. trimming reserve)
	LMB / AT	LMB x 4
	LMB + 30 / ST	(LMB + 30) x 4
	for STB: LMB - 100 / AT for DT: STB + 100	LMB x 4
	LMB + 30 / ST	(LMB + 30) x 4

AT = Number of doors including pivot door
ST = Number of sliding doors
STB = Sliding door width
DT = Pivot door

Cover profiles/clip-on rubber

		mm/inch	code
	Cover profile, alu unanodized, (finished by customer) set for one door (4 pieces)	800 (2'7 1/2")	19231
		1000 (3'3 3/8")	19232
		1200 (3'11 1/4")	19233
	Cover profile, alu plain anodized, brushed, set for one door (4 pieces)	800 (2'7 1/2")	19234
		1000 (3'3 3/8")	19235
		1200 (3'11 1/4")	19236
	Cover profile, stainless steel effect, brushed, set for one door (4 pieces)	800 (2'7 1/2")	19237
		1000 (3'3 3/8")	19238
		1200 (3'11 1/4")	19239
	Clip-on rubber for cover profile, black, 10 m (32'9 29/32") roll		19175

The clip-on rubber is necessary for installing the cover profile.

Glass fixing parts

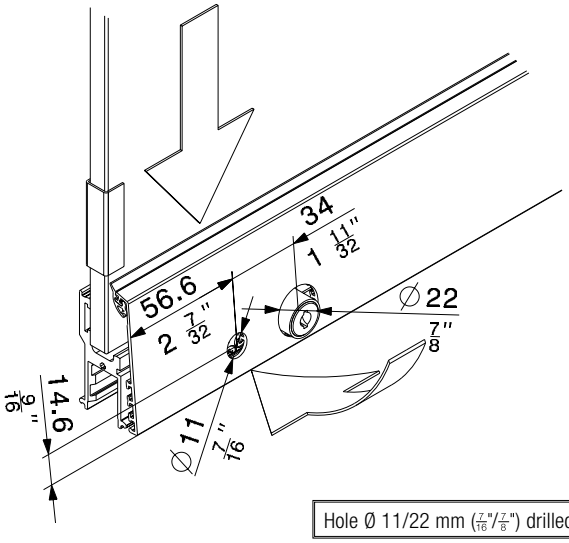
		thickness of glass	code
	Glass fixing parts, set for one door (16 pieces)	8 mm (5/16")	19269
		9,5 mm (3/8")	19271
		10 mm (13/32")	19270

Glass fixing parts must be ordered to match the glass thickness.

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

Cylinder module for round bar lock

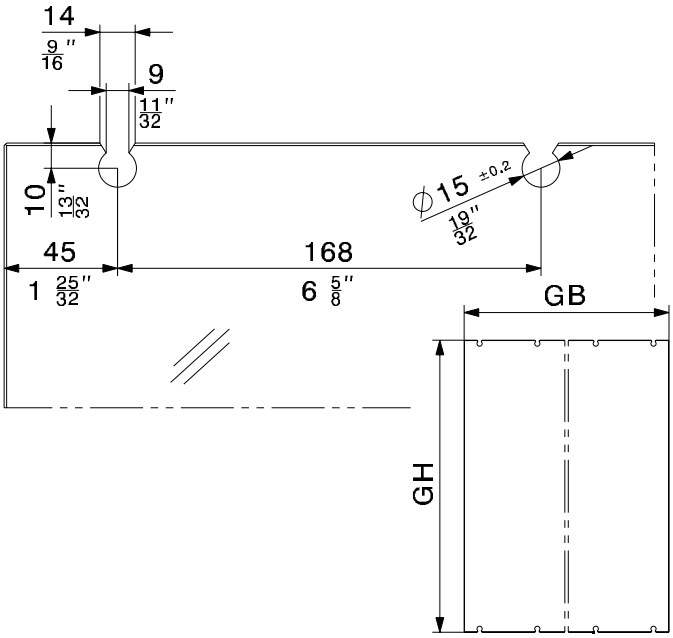
Lockable door sets include a round bar lock with rotary handle.
A cylinder module with 3 locking options may also be ordered where it is necessary to secure the system.
A cylinder module for 17 mm (11/16") profile cylinders is available for installations with increased security requirements, e.g. shop fronts. It can be built into a locking installation and can also be fitted with a special security rosette for half or double-profiled cylinders.



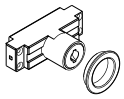
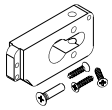
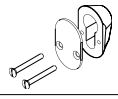
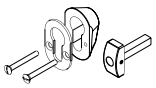
Hole Ø 11/22 mm (7/16"/7/8") drilled by customer

Glass cutouts

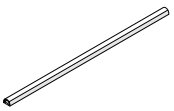
Only glass ESG (fully tempered monolithic glass) may be used.
- Glass thickness sliding door ESG (fully tempered monolithic glass): 8/9,5/10 mm (5/16"/3/8"/13/32"), thickness tolerance ± 0,3 mm
- All glass edges are seamed; maximum 1 mm (1/16") in the glass cutout

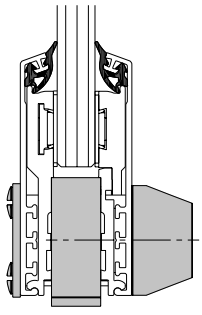


Cylinder module/cylinder rosette

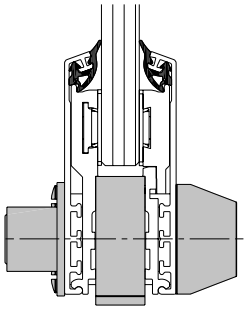
		key	code
	Cylinder module with two keys and rosette	Locking 01	19171
		Locking 02	19172
		Locking 03	19173
	Cylinder module for profile cylinder 17 mm (11/16")		19610
	Special security rose for single profile cylinder, length 29,5–31,5 mm (1 5/32"–1 1/4")		19680
	Special security rose for double profile cylinder, length 59–63 mm (2 11/32"–2 1/2") incl. thumbturn long		19699

Rubber profile for glass edge protection

		roll of	code
	Rubber profile self-adhesive, for 8/10 mm (5/16"/13/32") glass thickness, black, glass distance 4 mm (5/32")	5 m (16'4 27/32")	19442
		10 m (32'9 23/32")	19443
		50 m (164'1/2")	19444
	Rubber profile self-adhesive, for 8/10 mm (5/16"/13/32") glass thickness, translucent, glass distance 4 mm (5/32")	5 m (16'4 27/32")	19445
		10 m (32'9 23/32")	19446
		50 m (164'1/2")	19447



Single cylinder



Double cylinder

Customer tayilored installations

Please contact Hawa for customer tailored installations with special stacking areas, more than 9 doors, curved running tracks or an integral change of track direction

Order specifications

- Quantity and type of pivot door sets: → table
- Quantity and type of sliding door sets: → table
- Quantity and type of stacking area sets
- Quantity and length of running tracks: → calculation
- Quantity and length of bottom guide channels: → calculation
- Quantity and type of glass fixing parts
- Quantity and type of cover profiles: → calculation
- Quantity of clip-on rubber rolls: → calculation
- Quantity of top fixing plates: → calculation
- Quantity and type of connection pieces: → table
- Quantity of fixed glass sets
- Quantity and type of concealed stacking area interior
- Quantity and type of cylinder module
- Quantity and type of special security roses

Planning/installation

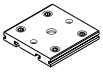
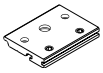
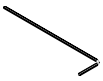
For planning and installation purposes, please use the installation drawing code 19200 (parallel) or code 19201 (90°).
(→ www.hawa.ch → Hawa Productfinder)

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

Stacking area sets

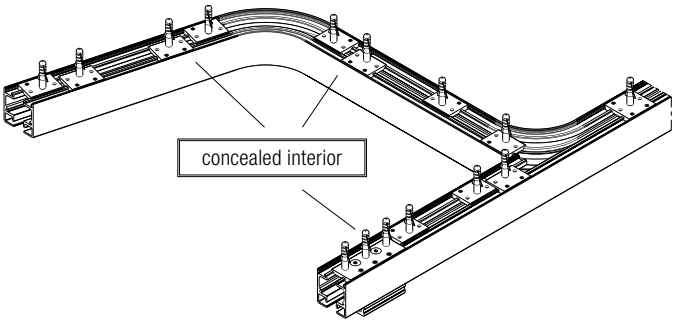
	code
Stacking area set, with bottom guide channel, stacking parallel	18756
Stacking area set, without bottom guide channel, stacking parallel	18757
Stacking area set, with bottom guide channel, stacking 90°	18758
Stacking area set, without bottom guide channel, stacking 90°	18759

sets comprising

		18756	18757	18758	18759	code
	Single running track curved segment, 75° inside, length of leg 580 mm (1'10 27/32")	1	1	–	–	17289
	Single running track curved segment, 75° outside, length of leg 580 mm (1'10 27/32")	1	1	1	1	17290
	Single running track curved segment, 90° inside, length of leg 70 mm (2 3/4")	–	–	1	1	16925
	Running track end stops, set	1	1	1	1	19165
	Connecting bolts, set of 6 pieces	1	1	1	1	17221
	Centre stop with progressively adjustable retention spring catch	1	1	1	1	17283
	Top fixing plate for 2 x single running track, alu	1	1	1	1	17128
	Top fixing plate for single running track, alu	11	11	10	10	17749
	Hexagon key 4 mm, length 230 mm (9 1/16")	1	1	1	1	18751
	End stopper for alu bottom guide channel, 16 x 16 mm (5/8" x 5/8")	2	–	2	–	18652
	End-piece for running track, 150 mm (5 29/32")	1	1	1	1	19160
	Bottom guide channel connecting bolts, set of 8 pieces	1	–	–	–	18640
	Curved bottom guide channel 75°, length of leg 500 mm (1'7 11/16")	1	–	–	–	18748
	Adjustment tool for eccentric glass retainer	1	1	1	1	19256

Stacking area with concealed interior

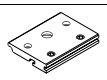
We recommend fitting an interior concealment cover for open, visible stacking areas.



Profile set for concealed interior

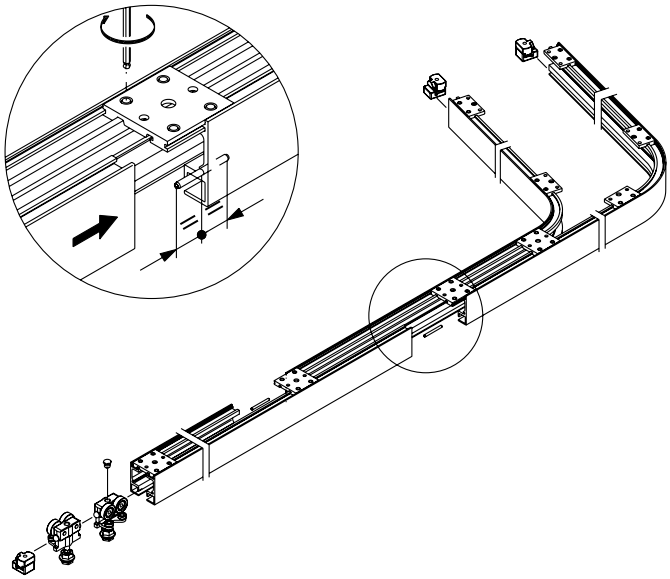
	code
Profile set for concealed interior for installations with stacking parallel to the slide axis, complete	19147
Profile set for concealed interior for installations with stacking 90° to the slide axis, complete	19148

Set comprising

		19147	19148	code
	Single running track curved segment, 75° inside, length of leg 580 mm (1'10 27/32")	1	1	17289
	Single running track 550 mm (1'7 11/16"), for concealed interior, stacking parallel	1	–	19145
	Single running track 700 mm (2'3 9/16"), for concealed interior, stacking parallel and 90°	1	1	19146
	Top fixing plate for single running track, alu	8	7	17749

Easy action

Top fixing plates must be fitted at the running track joints to ensure an easy sliding action.

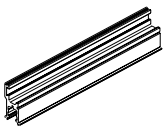
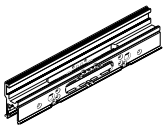
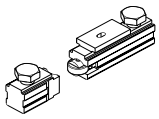
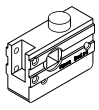
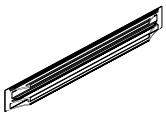
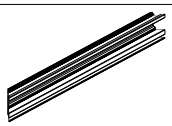


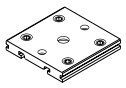
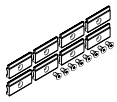
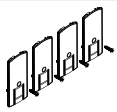
Subject to modification. Metric specifications are exact. Inches are approximate.

Pivot door sets

	type	code
Pivot door set for installation with parallel stacking area, with bottom guide channel	A	19186
Pivot door set for installation with parallel stacking area, without bottom guide channel	B	19187
Pivot door set for installation with 90° stacking area, with bottom guide channel	C	19188
Pivot door set for installation with 90° stacking area, without bottom guide channel	D	19189

Set comprising

	Door types	19186 A	19187 B	19188 C	19189 D	code
	Glass retainer profile 240 mm (9 15/32"), alu	3	3	3	3	19026
	Glass retainer profile 240 mm (9 15/32") , with lock cutout, alu	1	1	1	1	19027
	Top pivot bearing for installations with stacking parallel	1	1	–	–	18779
	Top pivot bearing for installations with stacking 90°	–	–	1	1	19142
	Bottom pivot, fitting with 16 x 16 mm (5/8" x 5/8") bottom guide channel	–	–	1	–	18730
	Bottom pivot with thrust bearing sleeve Ø 20 mm (25/32")	1	1	–	1	18785
	Sleeve closure including fitting screw	–	1	–	1	19149
	Pivot door snap closure including counter-piece	1	1	1	1	19050
	Round bar lock with square socket 7 mm (9/32")	1	1	1	1	19170
	Thumbturn, chromium finish, with square pin 24 mm (15/16")	1	1	1	1	19107
	Matching segment 300 mm (11 13/16"), outside, for running track, concealed interior, stacking parallel	1	1	–	–	18804
	Matching segment 300 mm (11 13/16"), inside, for running track, concealed interior, stacking parallel	1	1	–	–	19144

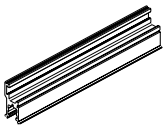
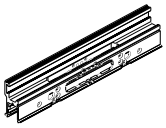
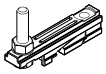
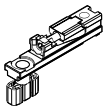
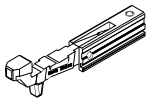
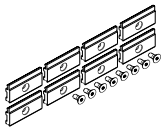
	Door types	19186 A	19187 B	19188 C	19189 D	code
	Top fixing plate for 2 x single running track, alu	1	1	–	–	17128
	Fork spanner SW 13 mm (17/32")	1	1	1	1	19128
	Retainer plate for glass retainer profile, including screws, set of 8 pieces (for 1 door)	1	1	1	1	19264
	Suspension bolt for glass suspension profile, with set screws, set of 8 pieces (for 1 door)	1	1	1	1	19265
	Eccenter, plastic, for glass fixing, set of 8 pieces (for 1 door)	1	1	1	1	19266
	Cover caps for glass retainer profile, plastic anthracite-grey RAL 7016, set of 4 pieces (for 1 door)	1	1	1	1	19267

Sliding door sets

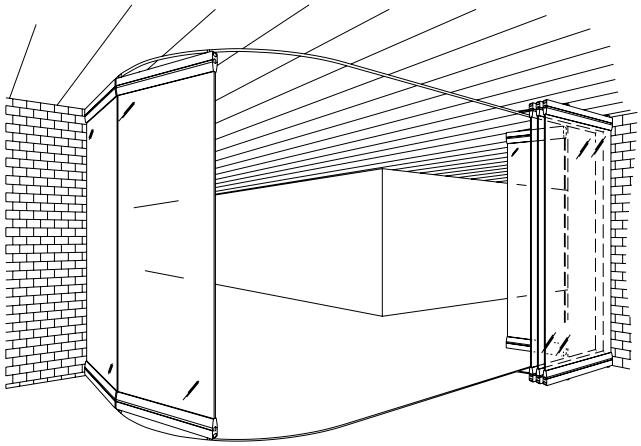
	type	code
Sliding door sets	E	19190
	F	19191
	G	19192
	H	19193
	I	19194
	K	19195
	L	19196
	M	19198
Sets comprising: → following page		

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

Sliding door sets comprising

		19190	19191	19192	19193	19194	19195	19196	19198	
	Door types	E	F	G	H	I	K	L	M	code
	Glass retainer profile 240 mm (9 15/32"), aluminium	4	3	3	4	4	3	3	3	19026
	Glass retainer profile 240 mm (9 15/32"), with lock cutout, aluminim	–	1	1	–	–	1	1	1	19027
	Two-wheeled trolley, M8, plastic-tyred ball bearings	2	2	2	2	2	2	2	2	18708
	Suspension plate, including M8 hanger bolt, with integrated assembly wedge	2	2	2	2	2	2	2	2	18651
	Floor guide rattle proof, plastic, 10 mm (13/32"), with suspension plate	1	–	1	1	–	1	–	–	18649
	Bottom locking device	–	–	–	–	1	–	1	–	18932
	Centering assembly, alu plain anodized	–	–	–	1	–	1	–	–	18930
	Sleeve closure including fitting screw	–	1	–	–	1	–	1	–	19149
	Round bar lock with square socket 7 mm (9/32") and guide pin	–	–	–	–	–	–	–	1	19179
	Round bar lock with square socket 7 mm (9/32")	–	1	1	–	–	–	–	–	19170
	Thumbturn, dull chromium finish, with square pin 24 mm (15/16")	–	1	1	–	–	–	–	1	19107
	Retainer plate for glass retainer profile, including screws, set of 8 pieces (for 1 door)	1	1	1	1	1	1	1	1	19264
	Suspension bolt for glass suspension profile with set screw, set of 8 pieces (for 1 door)	1	1	1	1	1	1	1	1	19265
	Eccenter plastic, for glass fixing, set of 8 pieces (for 1 door)	1	1	1	1	1	1	1	1	19266
	Cover cap for glass retainer profile, plastic anthracite-grey RAL 7016, set of 4 pieces (for 1 door)	1	1	1	1	1	1	1	1	19267

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



Modular hardware system for elegant all-glass sliding walls weighing up to 100 or 150 kg (220 or 330 lbs.) per panel.

Description

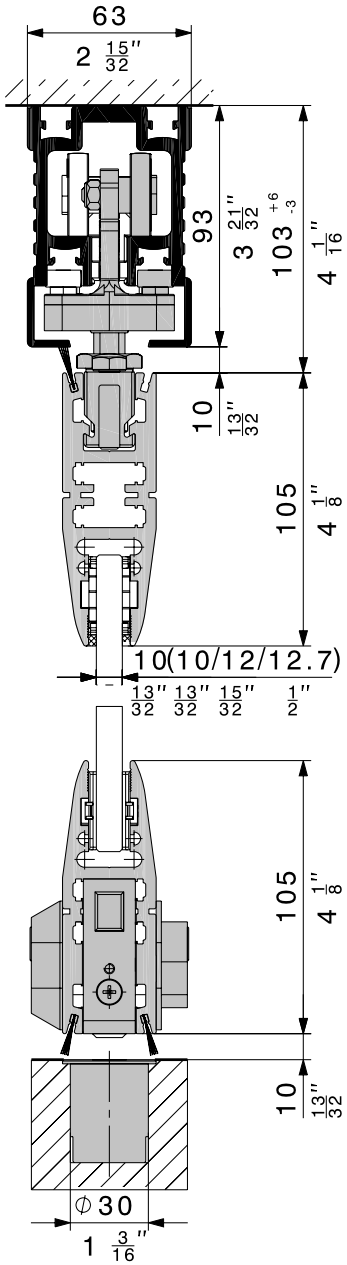
The Hawa Variotec 150 GV is a hardware system with outstanding running properties around curved structures. Thanks to a trolley with 2-point suspension, glass sliding walls can be moved extremely quietly and smoothly along curved tracks. With its advanced technology, it is also regarded as unique among sliding hardware systems. Sliding revolving doors and sliding swinging doors can be integrated at any desired point. This system ensures that you can quickly and easily provide ideal complete solutions, including fixed glass for room separation.

Applications

This hardware system is suitable for use wherever high quality, elegance and quiet operation are called for, e.g. in shopping centres, hotels, restaurants, banks, airports, railway stations, industrial premises, winter garden, administrative buildings, etc.

Example of application

- Sliding door
- Standard profile
- Bar bolt lock
- Closure in bottom sleeve
- ESG (fully tempered monolithic glass)



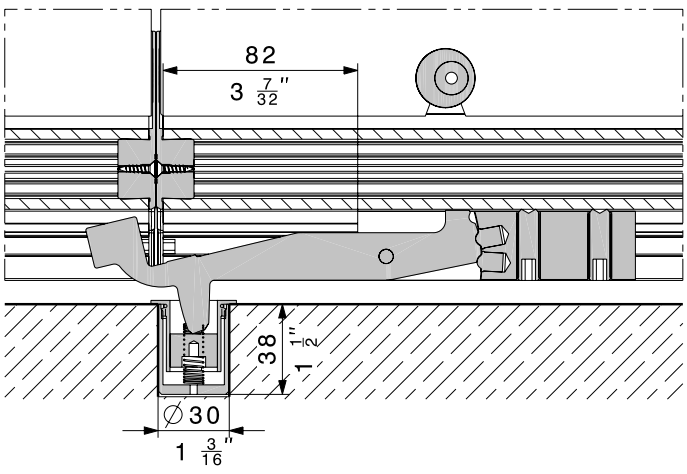
Features of the Hawa Variotec 150 GV

- Modular system
- Trolley with 2-point guide wheels
- Progressive vertical adjustment (+6/-3 mm)
- Extremely smooth and quiet cornering
- Elegant top-fixed suspension and glass retainer
- Precision glazing
- Minimum axis radius, 4000 mm (13'1 1/2")
- All components installed in profile
- Secure locking mechanism
- Minimal space requirement in stacking area
- Running track with facing

Glass cutouts

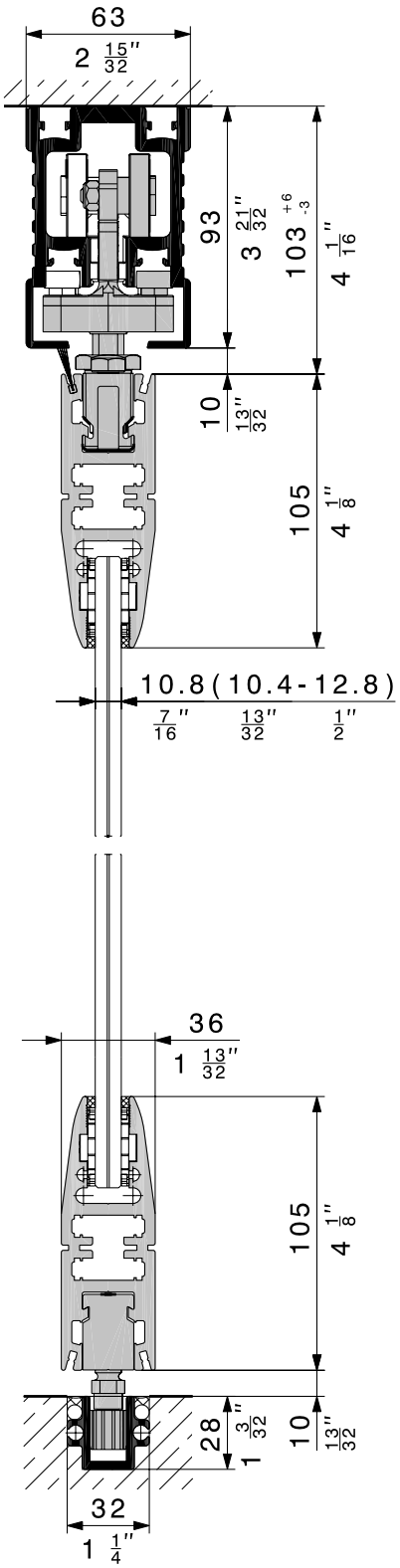
Both glass ESG (fully tempered monolithic glass) and VSG (fully tempered laminated glass) can be used.

- Glass thickness sliding door ESG (fully tempered monolithic glass): 10/12/12,7 mm (13"/15"/1/2"), thickness tolerance ± 0,3 mm
- Glass thickness sliding door VSG (fully tempered laminated glass):
  2x5 ± 0,2 mm → film thickness 0,76/1,52 mm
  2x6 ± 0,2 mm → film thickness 0,38/0,76 mm
- All glass edges are seamed; maximum 1 mm (1/16") in the glass cutout
- VSG (fully tempered laminated glass) permissible with max. offset of 2 mm (3/32") in the glass cutout

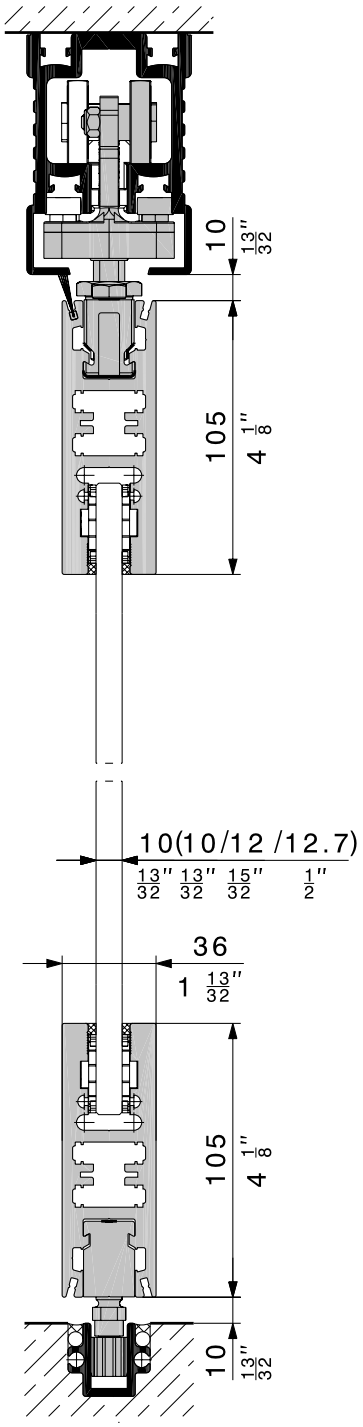


Subject to modification. Metric specifications are exact. Inches are approximate.

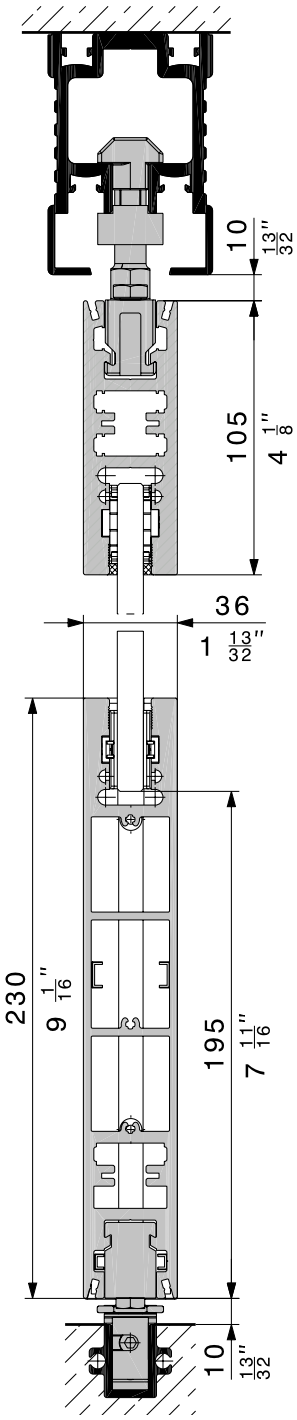
Further examples of application



- Sliding door
- Standard profile
- Guide slider in bottom guide channel
- Without locking mechanism
- VSG (fully tempered laminated glass)



- Sliding door
- Straight profile, 105 mm (4 5/32")
- Guide slider in bottom guide channel
- Without locking mechanism
- ESG (fully tempered monolithic glass)



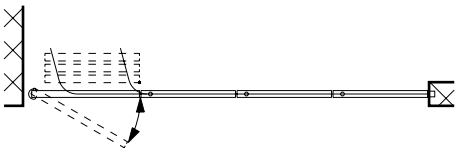
- Pivot door
- Top, straight profile, 105 mm (4 5/32")
- Bottom, straight profile, 230 mm (9 1/16")
- Without locking mechanism
- ESG (fully tempered monolithic glass)

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

Layout examples

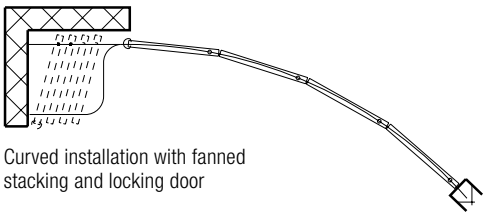
The layout examples shown here clearly demonstrate the flexibility of the Hawa Variotec 150 GV, as well as the creative potentials it offers. This system permits the use of fixed glass fittings, swinging doors, sliding swinging doors and curved installations, etc. Each track can be customized on request for almost every curvature radius. The minimum axis radius for curved all-glass sliding walls is 4000 mm (13'1 $\frac{1}{2}$").

Countless floor plans – 4 examples:

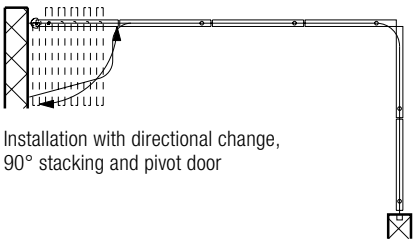


Straight installation with
parallel stacking and pivot door

Straight installation with
parallel stacking and locking door



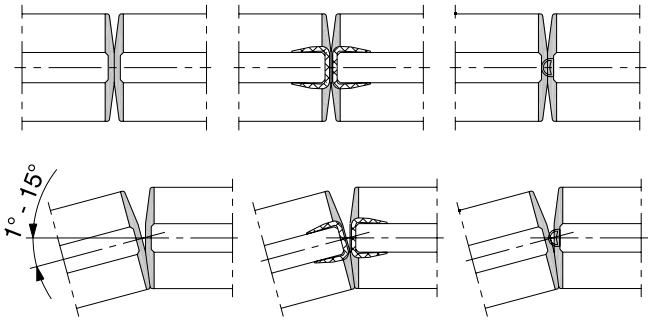
Curved installation with fanned
stacking and locking door



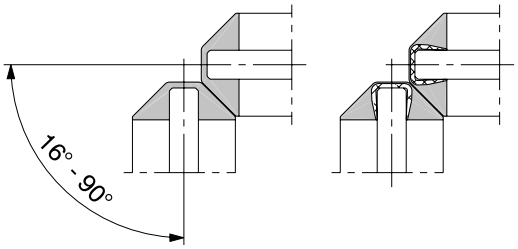
Installation with directional change,
90° stacking and pivot door

Space-saver

The mobility of Hawa Variotec 150 GV makes it possible to save a considerable amount of space. It can stack doors in even the tiniest of spaces. Layout options are limitless thanks to two cover cap designs.

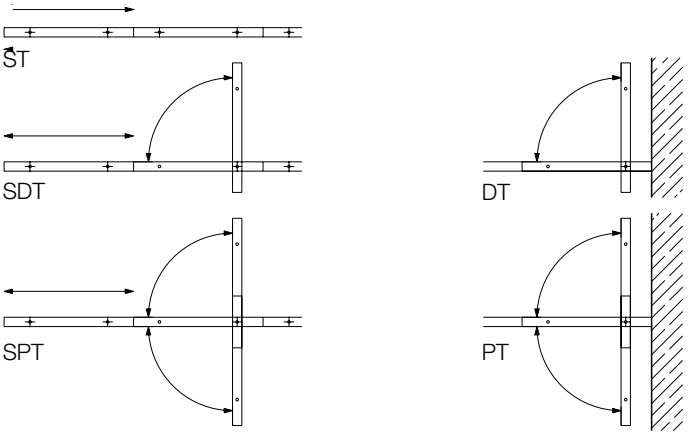


Straight and curved installations, and installations with a directional change of up to 15°, can be implemented using the standard cover cap 19903



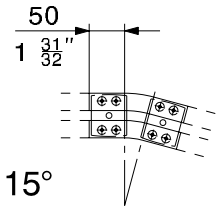
Cover cap 13587 is required for installations with directional changes between 16° and 90°

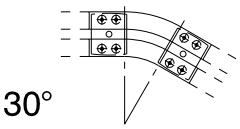
Door types

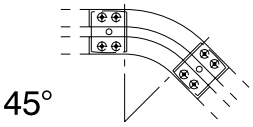


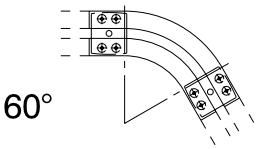
ST	Sliding door
SDT	Sliding pivot door
SPT	Sliding swing door
DT	Pivot door
PT	Swing door

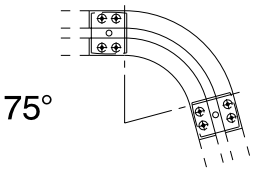
Subject to modification. Metric specifications are exact. Inches are approximate.

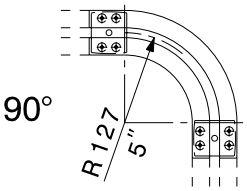








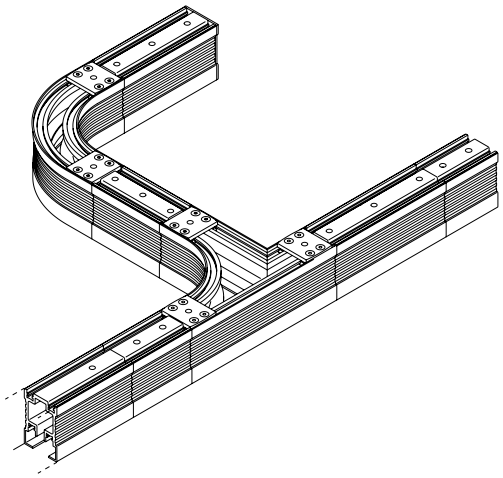




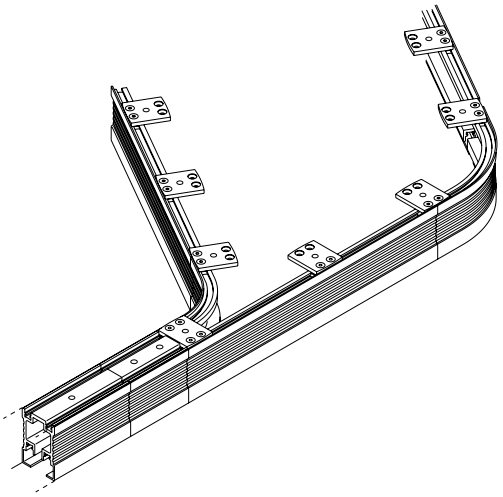
Cornering technology

With this sliding-door hardware system it is possible for straight running tracks with integrated facing and curved sections with or without interior facing to be assembled in combinations of 15, 30, 45, 60, 75 and 90 degrees according to individual requirements. Special customized versions can also be provided. The minimum radius is 4000 mm (13'1 1/2"). This flexibility permits simple storage, as well as planning and modifications at short notice.

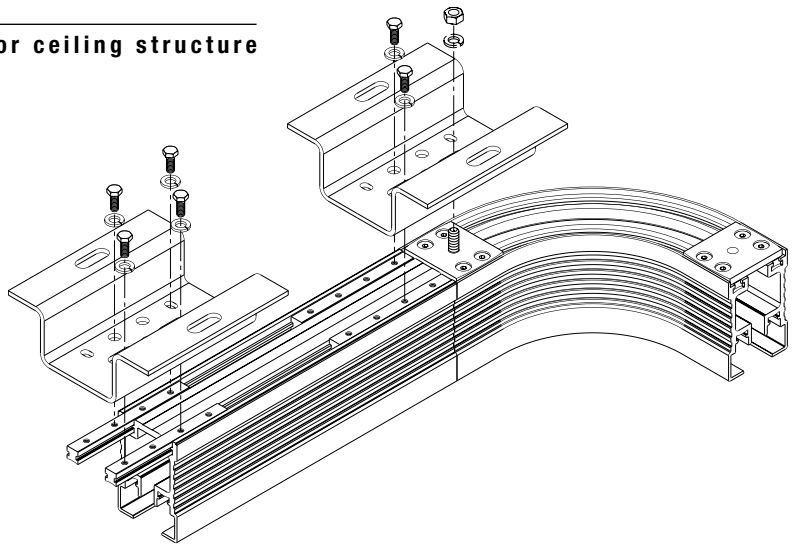
Parking area with concealed interior



Parking area without concealed interior



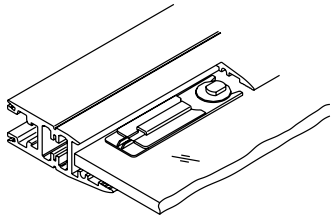
Connecting bracket for ceiling structure



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

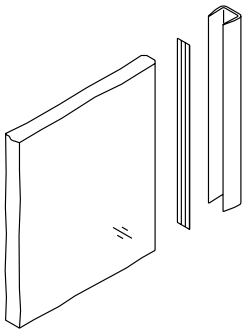
Glass retention eccentric

A glass retention eccentric with side wedge permits optimum and simple attachment of the glass. Before installation, the glass ESG (fully tempered monolithic glass) or VSG (fully tempered laminated glass) have to be prepared with cutouts.

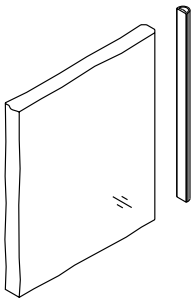


Seals and glass edge protection

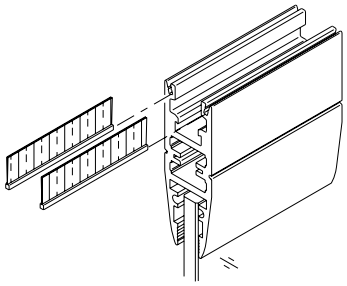
The system permits the integration of horizontal and vertical seals; these can also be fitted retrospectively. A transparent glass edge protection profile and the self-adhesive rubber profile are recommended to protect vertical glass edges. The latter not only protects the glass edge, but also reduces draughts to a minimum.



The glass edge protection profile is made of transparent plastic and is fitted to the glass edge with double-sided adhesive tape.



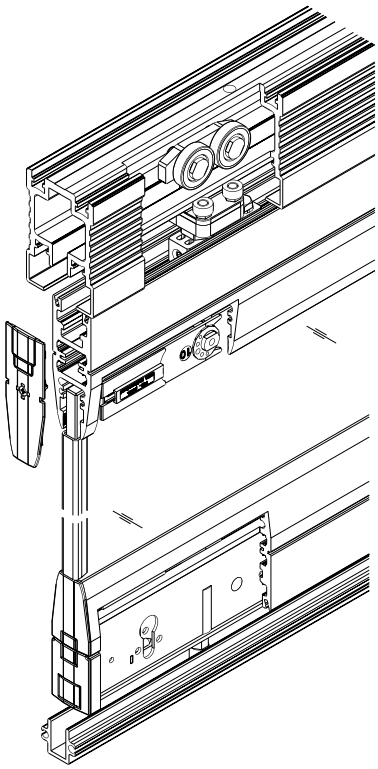
The self-adhesive rubber profile in black or translucent reduces draughts to a minimum and protects the glass edge.



The horizontal brush seal is inserted into the suspension profile and protects against draughts.

Glass suspension and retainer profile

Unsightly operating elements such as locks, top-fixed suspension and guide plates are integrated into the profile. The only visible component is a glass retainer which is of highly attractive design.



Better safe than sorry

One- or two-bolt safety lock is available for securing all-glass sliding doors: single-turn with toughened bars and 20 mm ($\frac{25}{32}$") feed, cylinder aperture 17 mm ($\frac{11}{16}$") or 22 mm ($\frac{7}{8}$"), or with square/hexagon socket. Closure in bottom sleeve with spring-loaded cover or in the bottom guide channel.

Accessories

Item codes and parts illustrations: → next pages

Order specifications

(Layout sketches of closed wall and available stacking space, with dimensions)

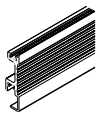
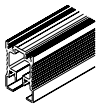
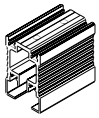
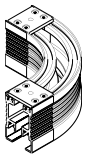
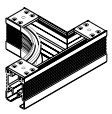
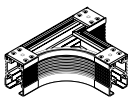
- Vertical cross-section of upper and lower situation
- Length and height of complete glass front
- Door width
- Door height
- Thickness of glass
- Type of stacking
- Quantity of sliding doors
- Quantity of pivot doors
- Quantity of swing doors
- Quantity of sliding pivot doors
- Quantity of sliding swing doors
- Type of glass protective edge profile

Order specifications

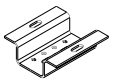
Please contact us for planning and installation documentation.
(→ www.hawa.ch → Systemplanner)

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

Running tracks

			code
	Single running track, alu plain anodized	6000 mm (19'8 7/32")	15358
		cut to size	15360
	Dual running track, alu plain anodized, predrilled	6000 mm (19'8 7/32")	15361
		cut to size	15362
	Servicing unit, dismountable, pivot fixing	100 mm (3 15/16")	15380
	Cover plate for dual running track, alu plain anodized		15439
	Inner curve running track, alu plain anodized	15°	15377
		30°	15375
		45°	15373
		60°	15371
		75°	15369
		90°	15367
	Inner running track special curved segment Rm127, alu plain anodized	angle according to indication	19801
	Outer curve running track, alu plain anodized	15°	15376
		30°	15374
		45°	15372
		60°	15370
		75°	15368
		90°	15366
	Outer running track special curved segment Rm127, alu plain anodized	angle according to indication	19800
	Running track dual curved segment, for change in direction, alu plain anodized	15°	15718
		30°	15719
		45°	15720
		60°	15721
		75°	15722
		90°	15723
	Running track-special dual curved segment Rm127, alu plain anodized	angle according to indication	18667
	Running track curved segment, parking area branch, parking area left, alu plain anodized	45°	17551
		60°	15845
		75°	15843
		90°	15841
	Running track curved segment, parking area branch, parking area right, alu plain anodized	45°	17552
		60°	15846
		75°	15844
		90°	15842
	Top-fixing plate, alu plain anodized		15414
	Top-fixing plate, galvanized steel, for welding		15383
	Coupler to running track, galvanized steel		17232

Connection bracket for ceiling structure

		code
	Connecting bracket for ceiling structur, without fixing parts	17045
	Assembly parts for connecting bracket for ceiling structure	19321

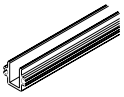
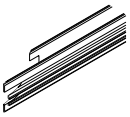
Track stops

		code
	Running track stop complete, for single running track	13779
	Running track stop complete, for dual running track	13780

Matching segments for dual running track

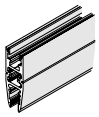
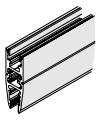
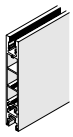
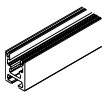
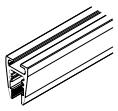
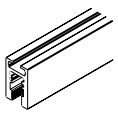
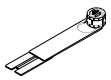
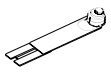
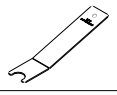
		code
	Matching segment for dual running track 45°– 90° left	16173
	Matching segment for dual running track 45°– 90° right	16174

Bottom guide channels

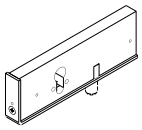
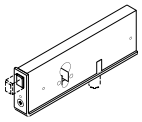
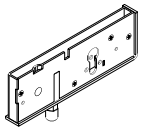
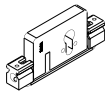
			code
	Bottom guide channel, alu plain anodized, predrilled	6000 mm (19'8 7/32")	13688
		cut to size	13690
	Curved bottom guide channel, alu plain anodized, predrilled	15°	13644
		30°	13647
		45°	13650
		60°	13653
		75°	13656
		90°	13659
	Bottom guide channel special curved segment Rm127, alu plain anodized	angle according to indication	19645
	Matching segment for bottom guide channel 45 – 90°	left	16778
		right	16779
	Connecting bolt, Ø 6 x 40 mm (1/4" x 1 19/32")		13759

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

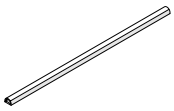
Glass suspension and retainer profiles

			code
	Glass suspension and retainer profile, alu unanodized	6500 mm (21'3 29/32")	13576
		cut to size	13681
	Glass suspension and retainer profile, alu unanodized (straight profile)	6500 mm (21'3 29/32")	23441
		cut to size	23442
	Glass suspension and retainer profile, alu unanodized, incl. lock cutout	1070 mm (3'6 1/8")	17300
	Glass suspension and retainer profile, alu unanodized, incl. lock cutout (straight profile)	1070 mm (3'6 1/8")	23477
	Glass suspension and retainer profile, alu plain anodized, brushed	6500 mm (21'3 29/32")	16669
		cut to size	19868
	Installations with sliding swing and sliding pivot doors cannot be carried out with anodized profiles ex stock.		
	Glass suspension and retainer profile, alu plain anodized, brushed (straight profile)	6500 mm (21'3 29/32")	23440
		cut to size	23443
	Glass suspension and retainer profile, alu unanodizd, height 230 mm (9 1/16")	4500 mm (14'9 3/16")	19180
		cut to size	19066
	Suspension profile, alu unanodized	6500 mm (21'3 29/32")	13682
		cut to size	13683
	Suspension profile, alu plain anodized, brushed	6500 mm (21'3 29/32")	21833
		cut to size	21834
	Glass suspension profile, alu unanodized	6500 mm (21'3 29/32")	13684
		cut to size	13685
	Glass suspension profile, alu plain anodized, brushed	6500 mm (21'3 29/32")	21835
		cut to size	21836
	Glass suspension profile, alu unanodized (straight profile)	6500 mm (21'3 29/32")	23445
		cut to size	23446
	Glass suspension profile, alu plain anodized, brushed (straight profile)	6500 mm (21'3 29/32")	23503
		cut to size	23504
	Set of glass fixing parts, for 1 sliding door (4 pieces)	ESG[1] 10 mm (13/32")	13900
		ESG[1] 12 mm (15/32")	13901
		ESG[1] 12,7 mm (1/2")	13902
	Set of glass fixing parts, for 1 sliding door (4 pieces)	VSG[2] 2 x 5 mm (2 x 7/32")	21263
		VSG[2] 2 x 6 mm (2 x 1/4")	23542
	Fork spanner to glass holder insert		13817
	Installation tool for blocking keys 10–12,7 mm (13/32"–1/2") glass		13710

Safety locks

			code
	One-bolt safety lock	profile cylinder 17 mm (11/16")	13856
		round cylinder 22 mm (7/8")	13857
		square/hexagon socket 7/8 mm	13855
	Two-bolt safety lock	profile cylinder 17 mm (11/16")	13785
		round cylinder 22 mm (7/8")	13786
		square/hexagon socket 7/8 mm	13784
	One-bolt safety lock with bottom guide pin	profile cylinder 17 mm (11/16")	13999
		round cylinder 22 mm (7/8")	14000
		square/hexagon socket 7/8 mm	14076
	Bar bolt lock, with retention pin, stainless steel WNR 1.4301/AISI 304	profile cylinder 17 mm (11/16")	21225
	Thumbturn, chromium finish, with square pin 7 x 25 mm (9/32" x 31/32")		13789
	Security rose 12 mm (15/32"), for profile cylinder 17 mm (11/16"), chromium-nickel steel		14147
	Floor-mounted sleeve with oblong hole and chromium-plated brass spring		13787
	Rosette for floor-mounted sleeve 13787		17326
	Strike plate, chromium-plated steel		13130

Protective transparent edge trims

		glass	mm/inch	code
	Protective transparent edge profile, plastic	10 mm (13/32")	3000 (9'10 1/8")	13822
			6000 (19'8 7/32")	13600
		12 mm (15/32")	3000 (9'10 1/8")	13908
			6000 (19'8 7/32")	13907
		12,7 mm (1/2")	3000 (9'10 1/8")	13912
			6000 (19'8 7/32")	13911
	Rubber profile self-adhesive, for 8/10 mm (5/16"/13/32") glass thickness, glass distance 4 mm (5/32"), roll of	black	5 m (16'4 27/32")	19442
			10 m (32'9 23/32")	19443
			50 m (164'1/2")	19444
		translucent	5 m (16'4 27/32")	19445
			10 m (32'9 23/32")	19446
			50 m (164'1/2")	19447

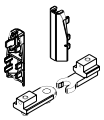
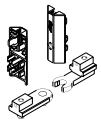
Brush seals

			code
	Double-sided adhesive tape for protective edge trim, transparent	roll of 50 m (164'1/2")	13988
	Brush seal 2,6/18 mm (1/8"/23/32")	920 mm (3'7/32")	16797
		1200 mm (3'11 1/4")	13791

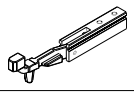
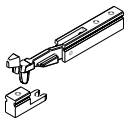
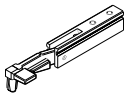
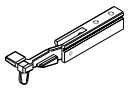
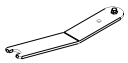
[1]fully tempered monolithic glass [2]fully tempered laminated glass

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

Components for sliding door

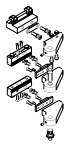
			code
	Single-wheeled trolley, M14, with plastic-tyred wheel and suspension plate (sliding doors up to 100 kg [220 lbs.])		13778
	Two-wheeled trolley, M14, with plastic-tyred wheels and suspension plate (sliding doors up to 150 kg [330 lbs.])		13818
	Guide, rattle proof, with plastic slider 13 mm ($\frac{17}{32}$") and suspension block		13781
	Centering piece, single unit, alu plain anodized		19818
	Centering assembly 0 – 18°		16629
	Centering assembly 15 – 90° complete		17599
	Centering assembly 15 – 90° complete (straight profile)		23516
	Centering assembly with pivot		18271
	Cover cap, incl. fixing screw	black	19903
	Cover cap, incl. fixing screw (for straight profile)	black	23470
	Cover cap for 230 mm (9 $\frac{1}{16}$") tall profile	black	19884
	Cover cap for 230 mm (9 $\frac{1}{16}$") tall profile, matches floor locking lever and centering assembly	black	19885
	Suspension profile cover cap, plastic	black	13585
	Glass suspension profile cover cap, plastic	black	13586
	Glass suspension profile cover cap, plastic (for straight profile)	black	23437
	Cover cap complete for door performing change in direction	black	13587
	Cover cap complete for door performing change in direction (for straight profile)	black	23471
	Cover cap for 230 mm (9 $\frac{1}{16}$") tall profile, for changes in direction	black	19886

Components for sliding door

			code
	Deadbolt lock 13 mm ($\frac{17}{32}$"), with guide pin, galvanized steel		14171
	Deadbolt lock	galvanized steel	14087
		inox	17130
	Thumbturn, chromium finish, with square pin 7 x 25 mm ($\frac{9}{32}$" x $\frac{31}{32}$")		13789
	Floor locking lever		19820
	Floor locking lever 0 – 18°		19822
	Bottom locking device 18 – 90°, left, lateral operation (HAC)		20608
	Bottom locking device 18 – 90°, right, lateral operation (HAC)		20609
	Fork spanner SW 17/8/13 for trolley 70 kg (154 lbs.)		15459
	Fork spanner SW 22/12/13 for trolley 100–150 kg (220–330 lbs.)		15409
	Wrench, hexagon 5 mm ($\frac{7}{32}$"), SW 11 mm ($\frac{7}{16}$")		17110

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

Components for pivot door

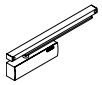
			code
	Servicing unit, dismountable, 100 mm (3 15/16"), pivot fixing		15380
	Top pivot, without track element		16196
	Carrier, adjustable vertically, for pivot door		16325
	Thrust bearing, adjustable (with bottom guide channel)		22299
	Thrust bearing sleeve, Ø 30 mm (1 3/16"), for pivot door		16326
	Pivot door catch complete		17897
	Exterior pivot bearing		16798
	Cover cap, incl. fixing screw	black	19903
	Cover cap, incl. fixing screw (for straight profile)	black	23470
	Suspension profile cover cap, plastic	black	13585
	Glass suspension profile cover cap, plastic	black	13586
	Glass suspension profile cover cap, plastic (for straight profile)	black	23437
	Cover cap complete for door performing change in direction	black	13587
	Cover cap complete for door performing change in direction (for straight profile)	black	23471

Components for swing door

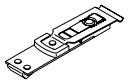
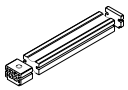
			code
	Servicing unit, dismountable, 100 mm (3 15/16"), pivot fixing		15380
	Top pivot, without track element		16196
	Driver for swing door with commercial bottom door closer		13276
	Cover cap, incl. fixing screw	black	19903
	Cover cap, incl. fixing screw (for straight profile)	black	23470
	Suspension profile cover cap, plastic	black	13585
	Glass suspension profile cover cap, plastic	black	13586
	Glass suspension profile cover cap, plastic (for straight profile)	black	23437
	Cover cap complete for door performing change in direction	black	13587
	Cover cap complete for door performing change in direction (for straight profile)	black	23471

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

Components for sliding pivot door

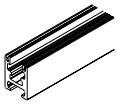
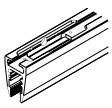
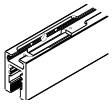
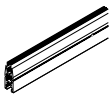
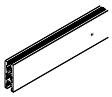
			code
	Two-wheeled trolley, M14, with plastic-tyred wheels and suspension plate (sliding pivot doors up to 90 kg [198 lbs.] and 3000 mm [9'10 1/8"] height)		13821
	Holding device		15398
	Stop plate		15429
	Suspension profile 1100 mm (3'7 5/16"), with cutout, alu unanodized		13868
	Glass suspension profile 1100 mm (3'7 5/16"), with cutout, alu unanodized	left	13861
		right	13862
	Lock complete	left	13823
		right	13824
	Pivot bearing, galvanized steel		13827
	Cover cap, incl. fixing screw	black	19903
	Cover cap, incl. fixing screw (for straight profile)	black	23470
	Suspension profile cover cap, plastic (top)	black	14211
	Suspension profile cover cap, plastic (bottom)	black	13585
	Glass suspension profile cover cap, plastic	black	13586
	Glass suspension profile cover cap, plastic (for straight profile)	black	23437
	Deadbolt lock	galvanized steel	14087
		inox	17130
	Strike plate, chromium-plated steel		14088
	Hexagon key with plastic T-handle, 8/80 mm (5/16"/3 5/32")		13894
	Short connecting rod for door height up to 2500 mm (8'2 7/16")		14164
	Long connecting rod for door height over 2500 mm (8'2 7/16")		14165
	Surface-mounted top door closer GEZE TS 3000V with slide rail TS 5000		15515

Components for sliding pivot door

		code
	Limit stop and baseplate to surface-mounted top door closer	15457
	Limit stop and baseplate to surface mounted top door closer (for straight profile)	24470
	Limit stop to surface-mounted top door closer	15451
	Locking unit for surface-mounted top door closer	15516
	Opening limiter for mounted top door closer	15517
	Instruction	14074

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

Components for sliding swing door

			code
	Single-wheeled trolley, M14, with plastic-tyred wheels and suspension plate (sliding swing doors up to 90 kg [198 lbs.] and 3000 mm [9'10 1/8"] height)		13820
	Holding device		15398
	Stop plate		15429
	Suspension profile 1100 mm (3'7 5/16"), with cutout, alu unanodized		13868
	Suspension profile 1100 mm (3'7 5/16"), with cutout, alu plain anodized, brushed		21837
	Glass suspension profile 1100 mm (3'7 5/16"), with cutout, alu unanodized	left	13861
		right	13862
	Glass suspension profile, 1100 mm (3'7 5/16"), with cutout, alu plain anodized, brushed	left	21838
		right	21839
	Glass suspension profile 1100 mm (3'7 5/16"), with cutout, alu unanodized (straight profile)	left	23505
		right	23506
	Glass suspension profile, 1100 mm (3'7 5/16"), with cutout, alu plain anodized, brushed (straight profile)	left	23507
		right	23508
	Glass suspension/retainer profile 1100 mm (3'7 5/16") with cutout, alu unanodized	left	13872
		right	13873
	Glass suspension/retainer profile 1100 mm (3'7 5/16") with cutout, alu plain anodized, brushed	left	21840
		right	21841
	Glass suspension/retainer profile 1100 mm (3'7 5/16") with cutout, alu unanodized (straight profile)	left	23480
		right	23481
	Glass suspension/retainer profile 1100 mm (3'7 5/16") with cutout, alu plain anodized, brushed (straight profile)	left	23478
		right	23479
	Lock complete, for sliding swing door	left	13823
		right	13824
	Pivot bearing, galvanized steel		13827
	Cover cap, incl. fixing screw	black	19903
	Cover cap, incl. fixing screw (for straight profile)	black	23470
	Suspension profile cover cap, plastic (top)	black	14211
	Suspension profile cover cap, plastic (bottom)	black	13585

Components for sliding swing door

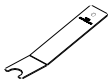
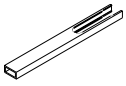
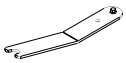
			code
	Glass suspension profile cover cap, plastic	black	13586
	Glass suspension profile cover cap, plastic (for straight profile)	black	23437
	Coupling mechanism to floor door closer, galvanized steel		13825
	Floor door closer GEZE TS 520 with special axis for sliding swing door		13798
	Cover plate to floor door closer, chrome-nickel steel		13799
	Adapter for DORMA floor door closer		14178
	Connecting handle 8 mm (5/16")		15659
	Short connecting rod for door height up to 2500 mm (8'2 7/16")		14164
	Long connecting rod for door height over 2500 mm (8'2 7/16")		14165
	Instruction		14074

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

Profile processing

		left	recht
Cutout for safety lock, for double cylinder	17 mm (11/16")	17987	17988
	22 mm (7/8")	17989	17990
Cutout for safety lock, for double cylinder (straight profile)	17 mm (11/16")	23482	23483
	22 mm (7/8")	23484	23485
Cutout for safety lock, for single cylinder	17 mm (11/16")	17993	17994
	22 mm (7/8")	17995	17996
Cutout for safety lock, for single cylinder (straight profile)	17 mm (11/16")	23486	23487
	22 mm (7/8")	23488	23489
Cutout for safety lock, square/hexagon socket		17991	17992
Cutout for safety lock, square/hexagon socket (straight profile)		23490	23491
Cutout for deadbolt lock for sliding pivot door		14085	14086
Cutout for deadbolt lock for sliding pivot door (straight profile)		23492	23493
Cutout deadbolt lock with guide pin		14186	14187
Cutout deadbolt lock with guide pin (straight profile)		23494	23495
Cutout for deadbolt lock, for side fixing		17973	17974
Cutout for deadbolt lock, for side fixing (straight profile)		23496	23497
Cutout for coupling mechanism for sliding swing door		14040	14041
Cutout for coupling mechanism for sliding swing door (straight profile)		23498	23499
Cutout lock for glass suspension profile SDT/SPT		14042	14043
Cutout lock for glass suspension profile SDT/SPT (straight profile)		23509	23510
Cutout for bottom locking device, lateral operation		20724	20725
Cutout for TGP, external pivot, opening inwards		16709	16710
Cutout for TGP, external pivot, opening inwards (straight profile)		23500	23501
Cutout for dual running track, for external pivot, opening inwards		16713	16714
Suspension profile processing for top door closer		15411	15416
Retainer profile processing for top door closer		15412	15415
Retainer profile processing for limit stop to surface mounted top door closer, axis of rotation (straight profile)		23511	23512
Retainer profile processing for surface mounted top doorcloser (straight profile)		24475	24476
Lock cutout incl. drilling for single cylinder 17 mm (11/16")		23150	23149
Lock cutout incl. drilling for single cylinder 17 mm (11/16") (straight profile)		23700	23699
Lock cutout in glass suspension/retainer profile 230 mm (9 1/16"), for double cylinder	17 mm (11/16")	19901	19902
	22 mm (7/8")	19017	19018
Lock cutout in glass suspension/retainer profile 230 mm (9 1/16"), for deadbolt lock		19019	19020
Lock cutout incl. drilling for 17 mm (11/16") double cylinder			19615
Lock cutout incl. drilling for 17 mm (11/16") double cylinder (straight profile)			23502
Cutout for holding device for running tracks with integrated cover			15421

Tools

		code
	Fork spanner to glass holder insert	13817
	Installation tool for blocking keys 10–12,7 mm (13/32"–1/2") glass	13710
	Fork spanner SW 17/8/13 for trolley 70 kg (154 lbs.)	15459
	Fork spanner SW 22/12/13 for trolley 100–150 kg (220–330 lbs.)	15409
	Wrench, hexagon 5 mm (7/32"), SW 11 mm (7/16")	17110

Surface treatments

	code
Basic treatment fee to surface treatment, lump sum per colour	16741
Powdercoated to RAL tone No.	14163
Plain anodized, polished, brushed	14626
Stainless-steel effect, hard anodized, brushed, polished, mat finish	14378
Stainless-steel effect, nickel plated, brushed, mirror finish	14631
Chrome mirror finish	14630

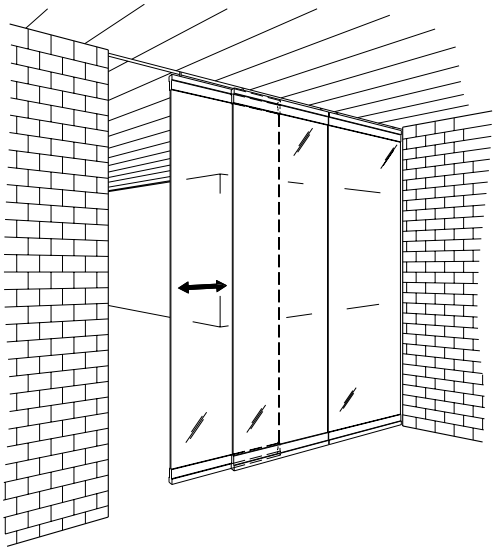
Services

	code
Bending and assembly of dual running track with special radius Hawa Variotec	17294
Bending of running tracks and bottom guide channels for Hawa Variotec special curved segments	16041
Machine set-up time for each profile	16040
Curving and preparing all special radii, per track	16038
Preliminary mounting parking area	15653
Additional packing share for each Variotec/Combitec parking area	15654
Project processing/CAD planning, per hour	14035
Installation assistance per day, without expenses, net	17111
Installation assistance per hour, without expenses, net	17112

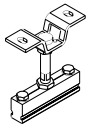
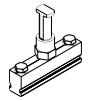
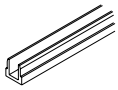
Subject to modification. Metric specifications are exact. Inches are approximate.

Stationary glass Hawa Fixed Glass

You can combine fixed glass designs and sliding doors to form a harmonious unit using our supplementary Hawa Fixed Glass hardware components. In this way you can ensure the best possible prerequisites for providing a uniform complete solution.



Stationary glass Hawa Fixed Glass

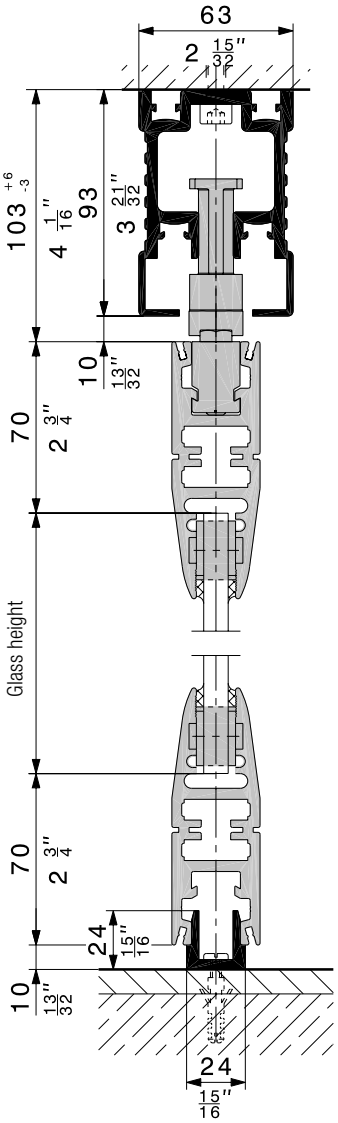
			code
	Top fixing plate set for fixed glass, with hanger bolt M12, Hawa Variotec 150 GV		14688
	Retainer device for fixed glass with dual running track		15803
	Bottom profile, alu plain anodized, undrilled	6000 mm (19'8 7/32")	14691
		cut to size	14692

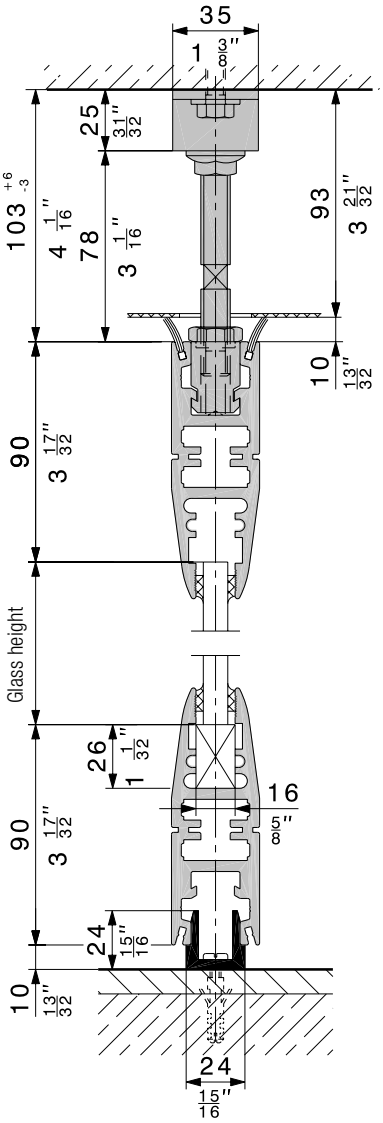
Order specifications for Hawa Fixed Glass

- Number and type of top-fixing plate sets
- Length of bottom profile

Planning/installation

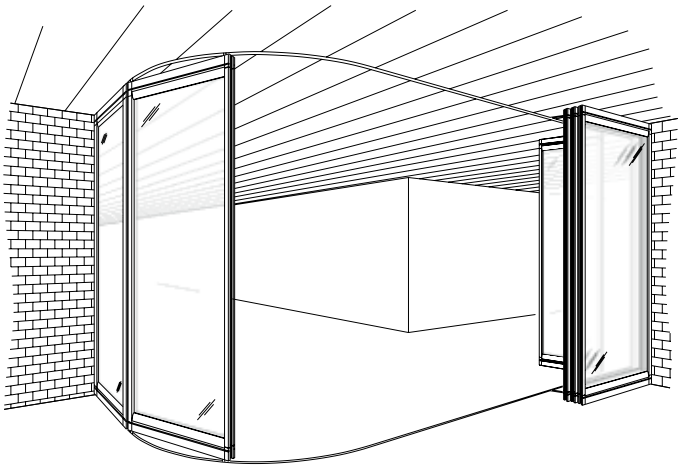
For planning and installation purposes, please use the installation drawing code 15805. (→ www.hawa.ch → Hawa Productfinder)





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

Notes



Frame profile for all-glass sliding walls up to 150 kg (330 lbs.) panel weight. Suitable for Hawa Variotec 150 GV.

Description

This aesthetic frame profile with just 24 mm (15/16") visible width offers enhanced security and rigidity for tall glass structures. The profile reduces glass bowing, makes it difficult to force open tall doors and protects the glass edges. Integrated horizontal brush seals combined with a vertical rubber seal protect against draughts and facilitate effective isolation of air-conditioned rooms or unheated conservatories by limiting the air volume.

Applications

Anywhere that requires enhanced security and rigidity, plus draught-proofing of tall glass constructions, e.g. unheated conservatories, shopping centres, restaurants, banks, airports, stations or office premises.

Features of the Hawa Variotec 150 GR frame profile

- Modular system
- Filigree frame system with just 24 mm (15/16") visible width
- Changes in direction between 16° and 90° are possible
- Maximum panel weight 150 kg (330 lbs.)
- Recommended maximum panel height 3500 mm (11'5 13/16")
- No glass cut-outs required
- Protects against draughts
- Enhanced rigidity for tall glass structures
- All hardware built-in to the profile
- Secure locking
- Combinable with Hawa Motus 150 GV Matic

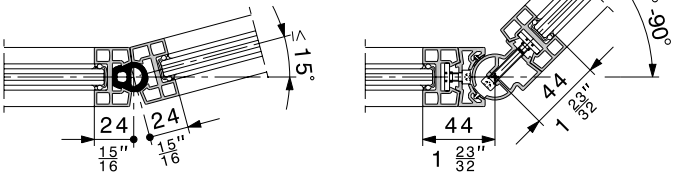
Glass thickness

Both glass ESG (fully tempered monolithic glass) and VSG (fully tempered laminated glass) can be used.

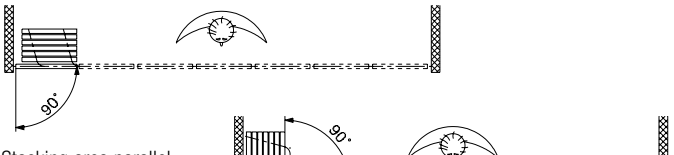
- Glass thickness sliding door ESG (fully tempered monolithic glass): 10/12/12,7 mm (13/32"/15/32"/1/2"), thickness tolerance ± 0,3 mm
- Glass thickness sliding door VSG (fully tempered laminated glass): up to 13 mm (17/32")
- All glass edges are seamed

Changes of direction

Thanks to customizable changes of direction and an option for installations with curved rails, virtually any floor plan layout is possible.



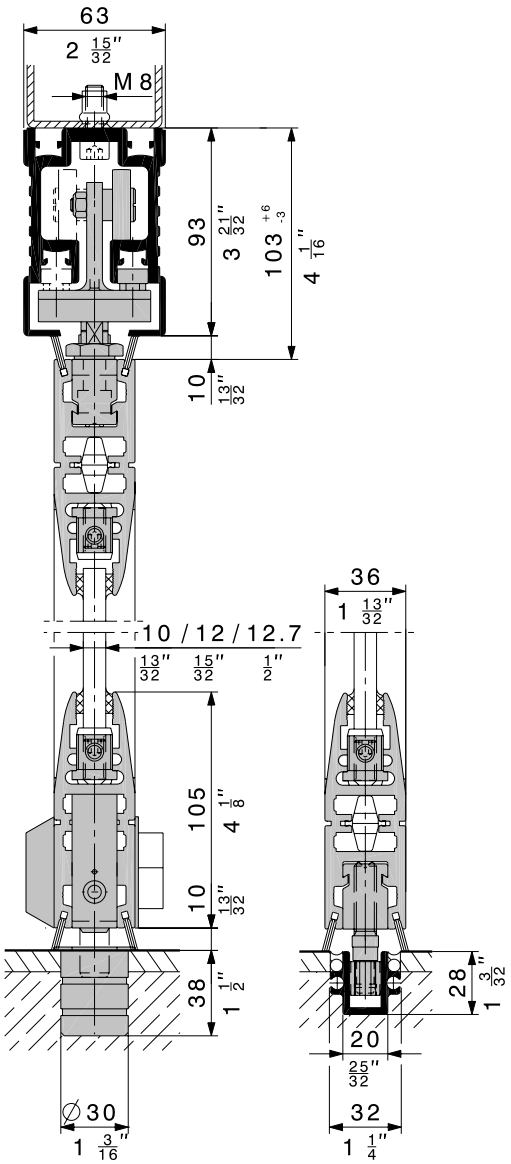
Stacking areas



Stacking area parallel to sliding axis

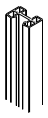
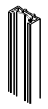
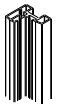
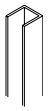
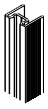
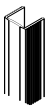
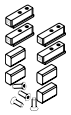
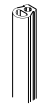
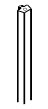
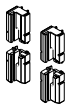
Stacking area 90° to sliding axis

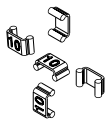
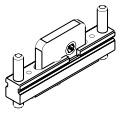
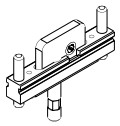
Construction examples



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

Profiles for Hawa Variotec 150 GR frame profile

			code
	Vertical profile, alu unanodized	6500 mm (21'3 29/32")	17730
		cut to size	17731
	Vertical profile No. 1, alu unanodized, for change in direction	6500 mm (21'3 29/32")	17724
		cut to size	17725
	Vertical profile No. 2, alu unanodized, for change in direction	6500 mm (21'3 29/32")	17727
		cut to size	17728
	Stop profile, alu unanodized	6500 mm (21'3 29/32")	17760
		cut to size	17761
	Wall-mounting profile, alu unanodized	6500 mm (21'3 29/32")	17739
		cut to size	17741
	Cover profile, alu unanodized	6500 mm (21'3 29/32")	17950
		cut to size	17951
	Cover profile for pivot door, alu unanodized	6500 mm (21'3 29/32")	17948
		cut to size	17949
	Set of fixing parts, set for 1 door		18287
	Set of fixing parts, for changes in direction for vertical profile No.1, set of 4 pieces		17962
	Set of fixing parts, for changes in direction for vertical profile No. 2, set of 4 pieces		17961
	Rubber for vertical profile, black	roll à 20 m (65'7 13/32")	17733
	Rubber for vertical profile No. 2, black	roll à 5 m (16'4 27/32")	17768
	Rubber profile for pivot door stop profile, black	roll à 5 m (16'4 27/32")	17766
	Cover cap, black		17776
	Set of cover caps for 1 pivot door, black		18048
	Screws for cover cap fixing, set of 50 pieces (for 5 doors)		18012

	Fixing part for cover caps		17858
	Centering clamps for glass, set of 50 pieces	10 mm (13/32")	18013
		12 mm (15/32")	18014
		12,7 mm (1/2")	18015
	Cover cap retention piece for deadbolt lock and safety lock		17921
	Deadbolt lock 13 mm (17/32"), for frontal mounting		17917
	Deadbolt lock 13 mm (17/32"), for frontal mounting, stainless steel WNR. 1.4301/AISI 304		18001
	Deadbolt lock 13 mm (17/32"), with guide pin for frontal mounting		17964

Services for Hawa Variotec 150 GR frame profile

	code
Bottom and top drillings for vertical profile	18314
Bottom and top drillings for stop profile	18315
Drillings for vertical profile No. 1	18316
Drillings for vertical profile No. 2	18317

		left	right
Cutout for safety lock, for double cylinder	17 mm (11/16")	17987	17988
	22 mm (7/8")	17989	17990
Cutout for safety lock, for single cylinder	17 mm (11/16")	17993	17994
	22 mm (7/8")	17995	17996
Cutout for safety lock, square/hexagon socket		17991	17992
Cutout for deadbolt lock, for side fixing		17973	17974

Automatic installations

Hawa Variotec 150 GR frame profile and Hawa Motus 150 GV Matic are combinable in automatic installations. Advice and assembly by authorised fitters.

Order specifications

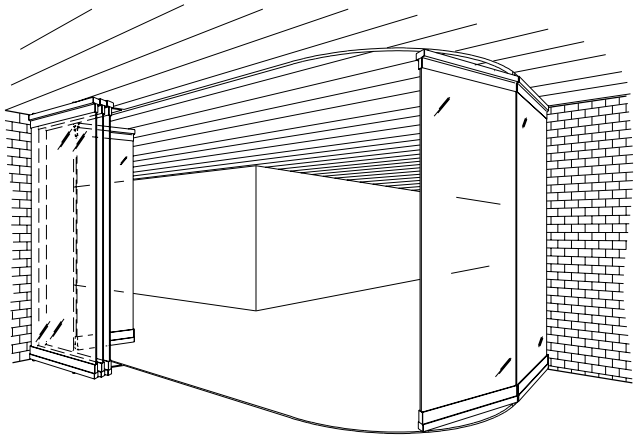
- Length and height of the overall glass frontage (LMB)
- Type of stacking area
- Floor plan drawing, scale 1:50 (as DXF file where possible)

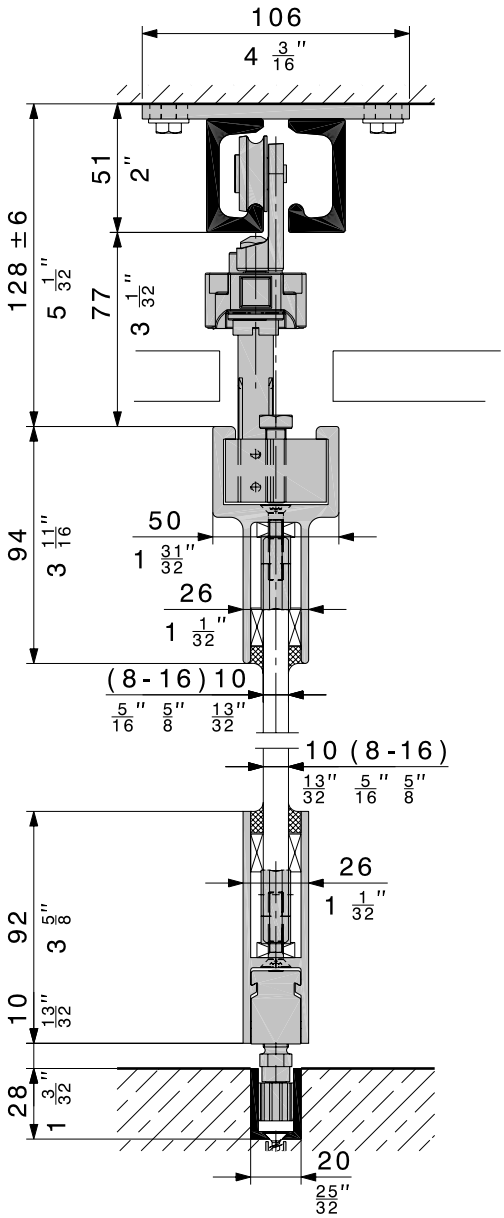
Planning/installation

For planning and installation purposes, please use the installation drawing code 18199. (→ www.hawa.ch → Hawa Productfinder)

Please refer to the following documentation for planning and installation of the bottom guide channels and running tracks:
Planning instructions Nr. 15806 Hawa Variotec 150 GV
Installation plan Nr. 15805 Hawa Variotec 150 GV

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





Hardware system for heavyweight all-glass sliding doors and all-glass sliding walls weighing up to 400 kg (880 lbs.).

Description

The Hawa Shopfront 103 G 400 and 112 G 400 are tried and tested hardware systems for heavyweight all-glass sliding wall installations. The first panel can be installed as a revolving door on the side that is opposite the stacking area. Depending on the given situation, it is also possible to install a revolving door close to the stacking area. The Hawa Shopfront is able to meet requirements for up to 400 kg (880 lbs.) per all-glass sliding door, but can also be modified to handle other special wishes. If you need hardware systems for all-glass doors weighing less than 150 kg (330 lbs.), please ask us for further information.

Applications

These hardware systems are suitable for use wherever heavy-weight doors call for a high degree of quality and precision, e.g. in shopping centres, public buildings, industrial premises and the administrative sector.

Features of the Hawa Shopfront 400 G

- Two-wheeled trolley with steel wheels
- Stainless steel running tracks WNR 1.4301/AISI 304
- Minimum axis radius, 4000 mm (13'1 1/2")
- Smooth and quiet operation
- Suitable for heavyweight all-glass sliding-wall installations
- Minimal space requirement for stacking
- Customized solutions

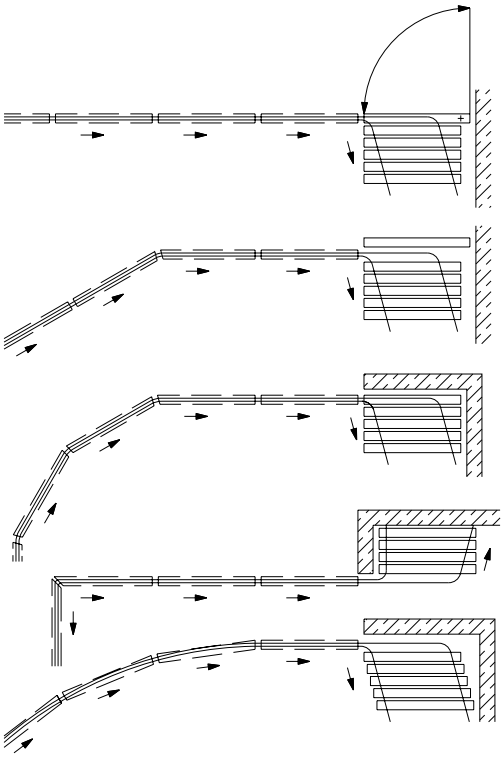
Glass thickness

- Glass thickness ESG (fully tempered monolithic glass): 8–16 mm (5/16"–5/8")
  For tall doors, we recommend glass thicknesses ESG (fully tempered monolithic glass): 12–16 mm (15/32"–5/8").

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

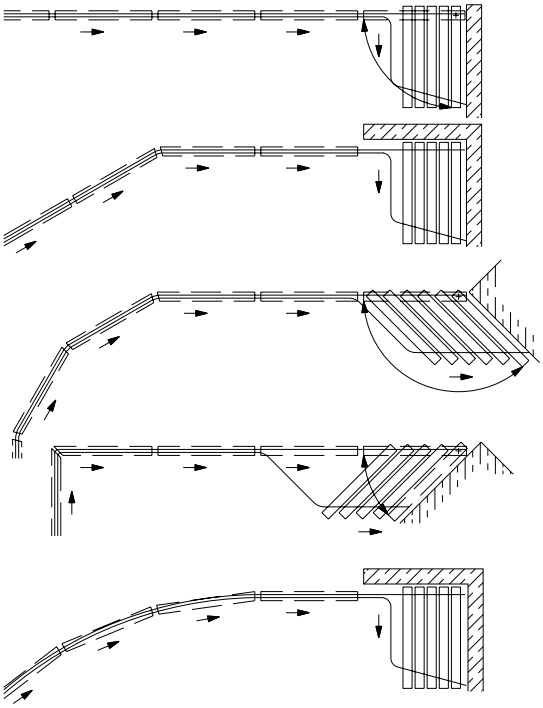
Hawa Shopfront 103 G 400

Sliding panels are stacked parallel to the closing plane.



Hawa Shopfront 112 G 400

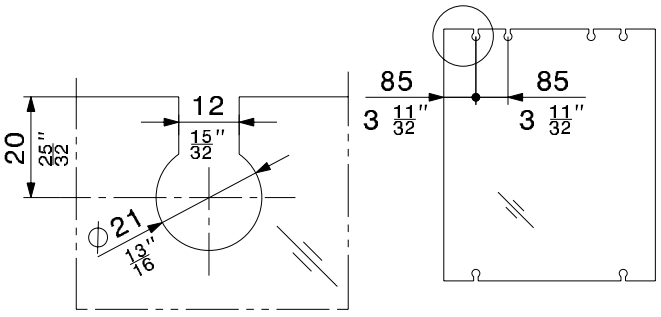
Sliding panels are stacked at an angle to the closing plane.



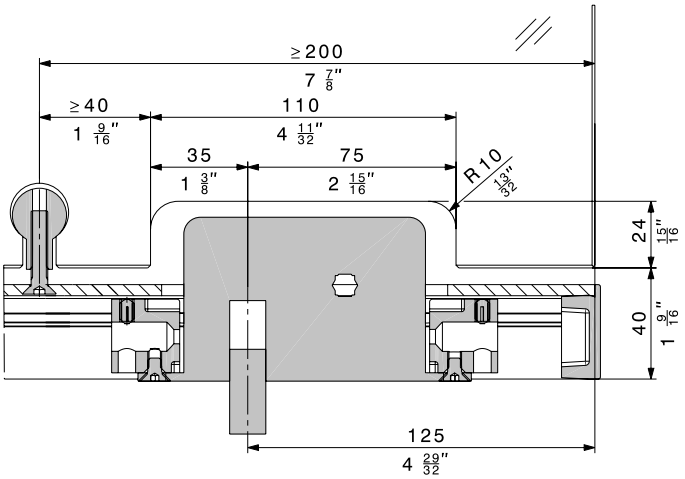
Glass cutouts

The glass ESG (fully tempered monolithic glass) must be provided with cutouts for installation of the glass holder inserts and the safety locks.

- Glass thickness sliding door ESG (fully tempered monolithic glass): 8–16 mm ($\frac{5}{16}$"–$\frac{5}{8}$"), Dickentoleranz ± 0,3 mm
- All glass edges are seamed; maximum 1 mm ($\frac{1}{16}$") in the glass cutout



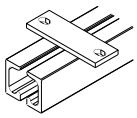
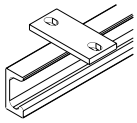
Glass cutout for glass holder



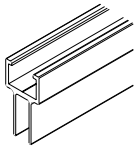
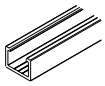
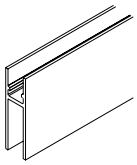
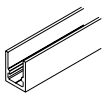
Glass cutout for safety locks

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

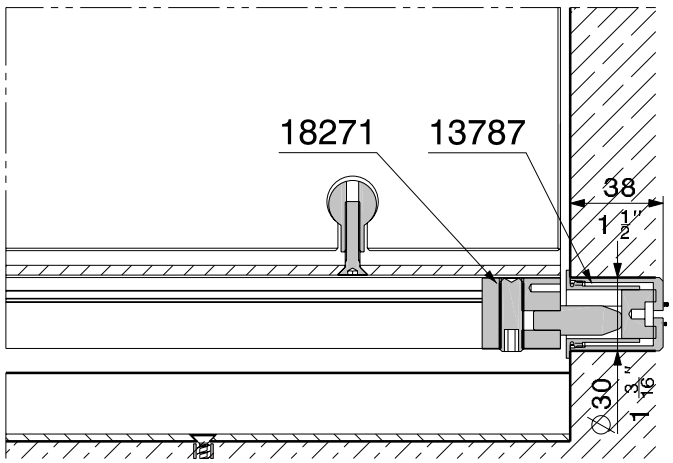
Running tracks

			code
	Dual running track, stainless steel WNR.1.4301/AISI 304, with mounting flanges	cut to size	18038
	Single running track, stainless steel WNR.1.4301/AISI 304, with mounting flanges	cut to size	18036

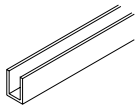
Glass suspension and retainer profiles

		mm/inch	code
	Glass suspension and retainer profile, alu unanodized, undrilled, glass up to 16 mm ($\frac{5}{8}$")	6500 (21'3$\frac{29}{32}$")	13155
		cut to size	13156
	Suspension profile, alu unanodized, undrilled	6500 (21'3$\frac{29}{32}$")	10332
		cut to size	13071
	Cover cap for suspension profile 13155 / 13156 / 10332 / 13071, grey		10619
	Glass suspension/retainer profile, alu plain anodized, brushed undrilled, glass up to 16 mm ($\frac{5}{8}$")	6500 (21'3$\frac{29}{32}$")	21783
		cut to size	21784
	Glass suspension/retainer profile, alu unanodized, undrilled, glass up to 16 mm ($\frac{5}{8}$")	6500 (21'3$\frac{29}{32}$")	13158
		cut to size	13159
	Cover cap for glass suspension/retainer profile 21783 / 21784 / 13158 / 13159, plastic anthracite-grey RAL 7016		21085
	Suspension profile, alu plain anodized, undrilled	6500 (21'3$\frac{29}{32}$")	10345
		cut to size	12915
	Cover cap for suspension profile, plastic anthracite-grey RAL 7016		20907

Wall connection



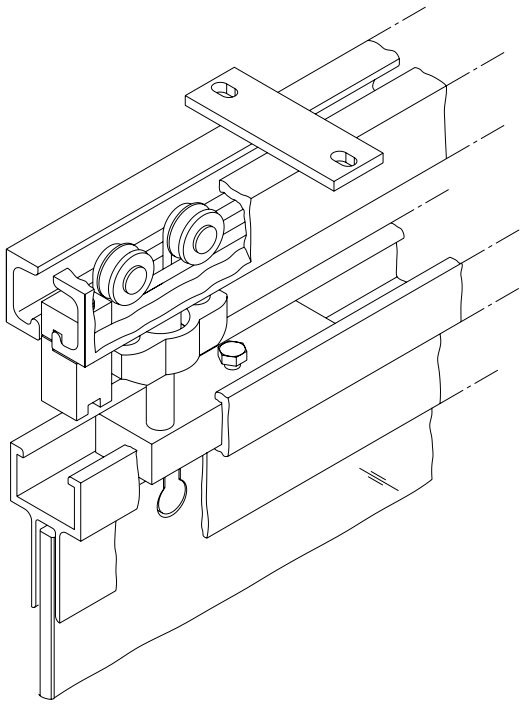
Bottom guide channels

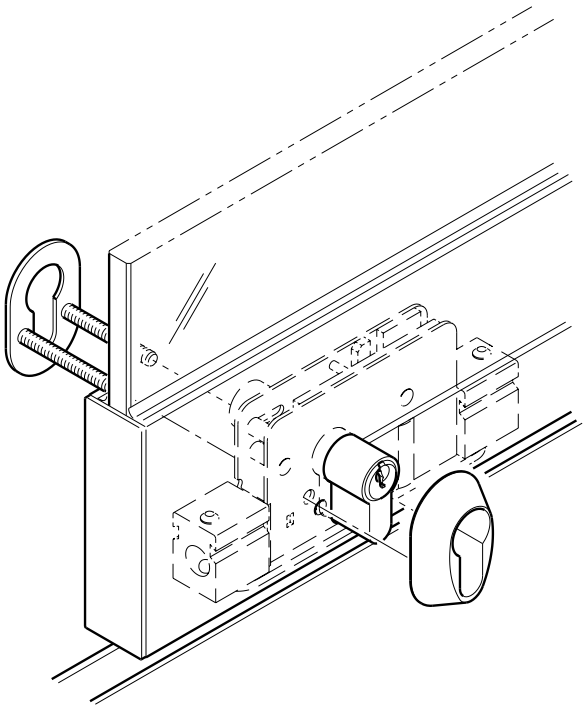
Caution: Hole positions vary		mm/inch	code
	Bottom guide channel, brass, predrilled, 20 x 28 x 3 mm ($\frac{25}{32}$" x 1$\frac{1}{8}$" x $\frac{1}{8}$")	6000 (19'8$\frac{7}{32}$")	10245
		cut to size	10247

Accessories

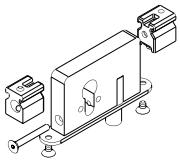
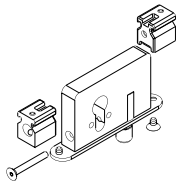
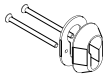
		code
	Welding jig for dual running track, steel	10794
	Track stop, galvanized steel	10595
	Two-wheeled trolley, steel wheels and hanger bolt M14	10366
	Suspension plate M14, with fixing screws, galvanized steel	10449
	Glass holder insert, plastic with screw M6 x 30 mm	10792
	Pivot assembly, complete	10703
	Driver, vertically adjustable, for pivot door	16325
	Thrust bearing, adjustable, Inox, for fitting into bottom guide channel	22299
	Thrust bearing sleeve, Ø 30 mm (1$\frac{3}{16}$"), for pivot door	16326
	Guide, rattle proof, plastic, 14 mm ($\frac{9}{16}$"), with suspension block	13781
	Centering assembly, complete	10556
	Centering assembly with pivot	18271
	Floor-mounted sleeve with oblong hole and chromium plated brass spring cover	13787
	Rosette for floor-mounted sleeve 13787	17326
	Strike plate, chromium-plated steel	13130
	Thumbturn, dull chromium finish, with square pin 7 x 20 mm ($\frac{9}{32}$" x $\frac{25}{32}$")	12620
	Fork spanner SW 22/12, pivot door vertical adjustment	15409

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





Integrated locks

			code
	Bar bolt lock, with retention pin	profile cylinder 17 mm ($\frac{11}{16}$")	16760
		round cylinder 22 mm ($\frac{7}{8}$")	16761
		square/hexagon socket	16762
	Bar bolt lock, with guide pin and fixing parts	profile cylinder 17 mm ($\frac{11}{16}$")	18484
		round cylinder 22 mm ($\frac{7}{8}$")	18485
		square/hexagon socket	18486
	Security rose 16 mm ($\frac{5}{8}$"), for double cylinder 17/61 mm ($\frac{11}{16}$"/2$\frac{13}{32}$"), chrome nickel steel		18502
	Spacer for security rose	profile cylinder 17 mm ($\frac{11}{16}$")	18493
		round cylinder 22 mm ($\frac{7}{8}$")	18494

Cutouts

	code
Cutout, bar bolt lock for 17 mm ($\frac{11}{16}$"), for double cylinder	18489
Cutout left, bar bolt lock for 17 mm ($\frac{11}{16}$"), for single cylinder	21331
Cutout right, bar bolt lock for 17 mm ($\frac{11}{16}$"), for single cylinder	21332
Cutout, bar bolt lock for 22 mm ($\frac{7}{8}$"), for double cylinder	18490
Cutout left, bar bolt lock for 22 mm ($\frac{7}{8}$"), for single cylinder	21333
Cutout right, bar bolt lock for 22 mm ($\frac{7}{8}$"), for single cylinder	21334
Cutout, bar bolt lock, left, square/hexagon socket	18492
Cutout, bar bolt lock, right, square/hexagon socket	18491

Services

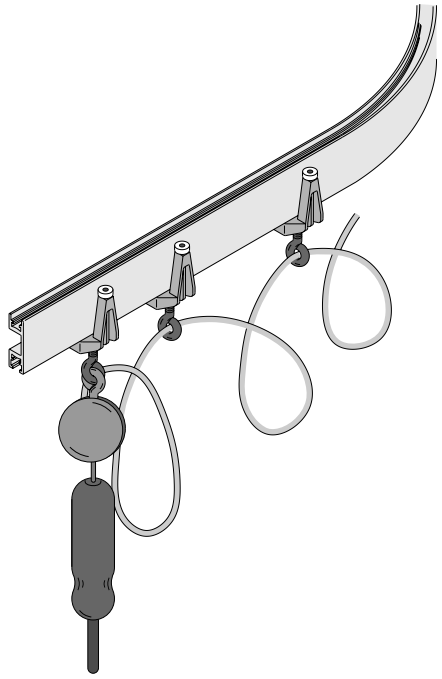
We will provide the following services at extra cost (prices on request): project processing, bending and shaping running tracks and bottom guide channels, countersinking for lock assembly and cylinder, plus surface treatments.

Better safe than sorry

An integrated bar bolt lock compatible with the 17 mm ($\frac{11}{16}$") profile cylinder, 22 mm ($\frac{7}{8}$") round cylinder and square/hexagon socket is available for securing all-glass sliding doors.

Planning/installation

For planning and execution please order the installation drawings
code 12409 Hawa Shopfront 400 G – parallel and
code 12410 Hawa Shopfront 400 G – 90°.
(→ www.hawa.ch → Hawa Productfinder)



Transport system for loads up to 40 kg (88 lbs.) per trolley.

Description

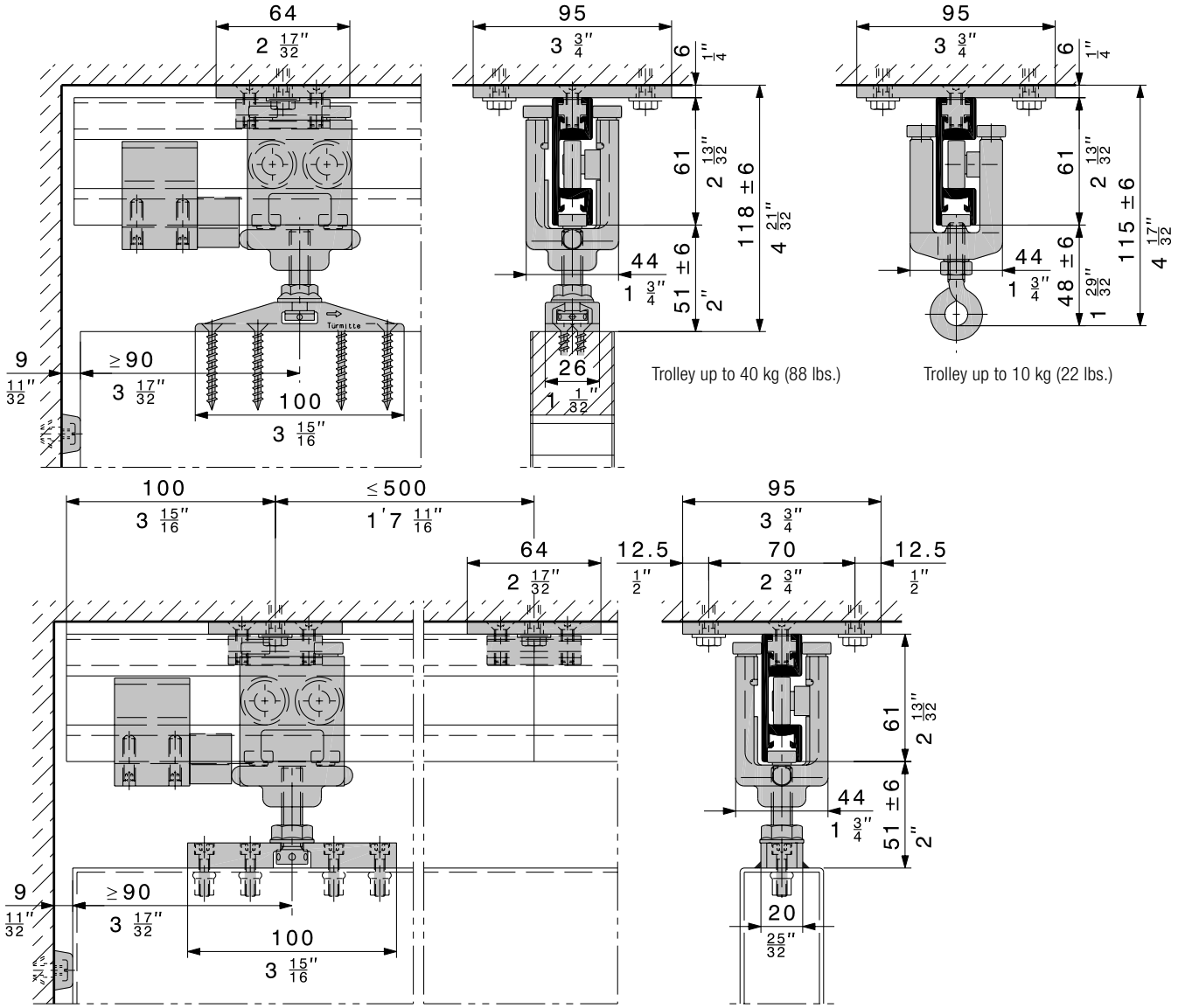
The Hawa Varioflex 40 TS is a hardware system with outstanding cornering properties. The plug-in track system with straight sections and curved rails of 15, 30, 45, 60, 75 and 90 degrees permits complete freedom with regard to construction. Rail joints are linked simply and precisely by means of coupling elements on both sides.

Applications

Map boards, projection walls, work stations with electrical cables and compressed air hoses. Storage and display of articles in shops, snowboards e.g.

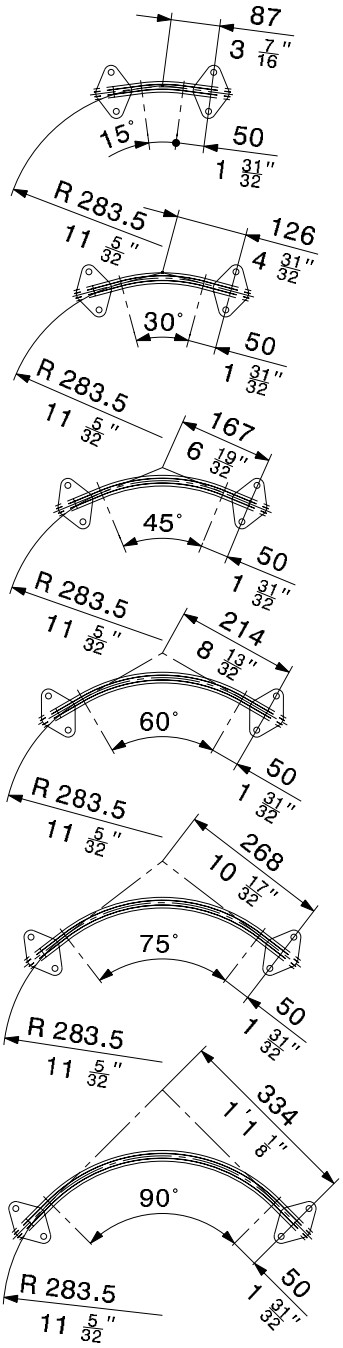
Features of the Hawa Varioflex 40 TS

- Modular system
- Trolley for loads up to 40 kg (88 lbs.) with 2 suspension wheels and 6 guide rollers
- Trolley for loads up to 10 kg (22 lbs.) with 2 suspension wheels and 4 guide rollers
- Outstandingly smooth cornering



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

Curve running tracks



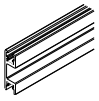
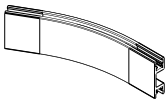
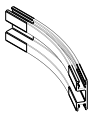
Installation

When assembling the running track, a top fixing plate must be attached every 500 mm (1'7 11/16")

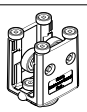
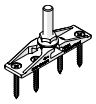
Order specifications

- Length of running track
- Quantity and type of curve running track
- Quantity of top-fixing plate
- Quantity of coupler to running track
- Quantity of running track cover cap sets
- Quantity and type of components

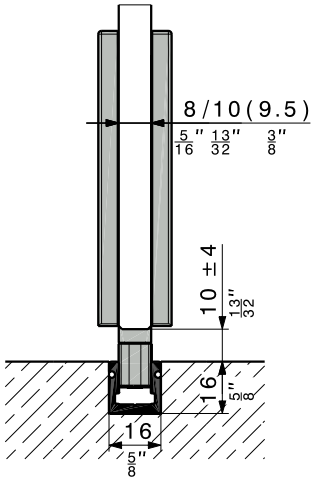
Running tracks

			code
	Running track, alu plain anodized	6000 mm (19'8 7/32")	13975
		cut to size	14345
	Inner curve running track, alu plain anodized	15°	15125
		30°	15127
		45°	15129
		60°	15131
		75°	15133
		90°	14341
	Outer curve running track, alu plain anodized	15°	15126
		30°	15128
		45°	15130
		60°	15132
		75°	15134
		90°	15113
	Top-fixing plate, dull chromium-plated steel (for straight and standard curves)		14463
	Top-fixing plate, dull chromium-plated steel		14468
	Coupler to running track, galvanized steel		17232
	Set of running track cover caps, plastic grey, left/right		14442

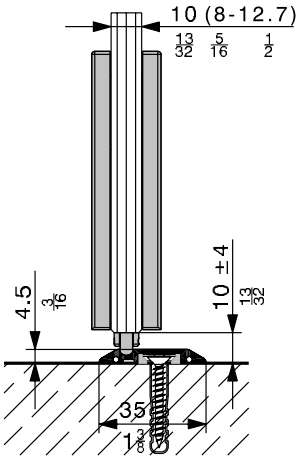
Components

		code
	Trolley with 2 plastic-tyred suspension wheels and 6 guide rollers, M10 (load per trolley 40 kg [88 lbs.])	14337
	Trolley with 2 plastic-tyred suspension wheels and 4 guide rollers, M8 (load per trolley 10 kg [22 lbs.])	15137
	Suspension plate with hanger bolt M10 without fixing screws, steel galvanized (steel constructions)	14484
	Two-way suspension plate, with hanger bolt M10 and fixing screws (wood constructions)	10489
	Eye bolt with nut, galvanized steel, M10 x 40 mm (1 19/32")	15174
	Eye bolt with nut, galvanized steel, M8 x 30 mm (1 3/16")	15173
	Bumper, alu plain anodized	14368
	Bumper door stop, to running track	21010
	Screw-on rubber door stop	10629

Accessories



code 20505
code 19136
code 18477
code 18652

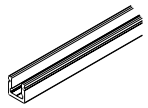
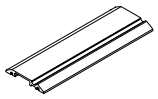


code 20587
code 19350
code 19162

Bottom guides

Additional guide variants for Hawa Ordena 70 and other systems.

Bottom guide channel

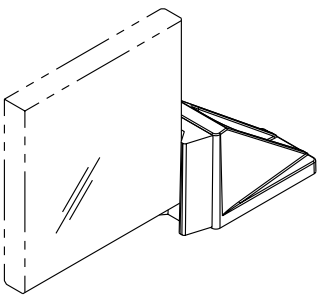
Caution: Hole positions vary		mm/inch	code
	Bottom guide channel, alu, plain anodized, predrilled, 16 x 16 mm (5/8" x 5/8")	3500 (11'5 13/16")	18864
		6000 (19'8 7/32")	18216
		cut to size	18477
	Single bottom guide profile, alu plain anodized	2500 (8'2 7/16")	19348
		3500 (11'5 13/16")	19349
		6000 mm (19'8 7/32")	18956
		cut to size	19350
	Set of fixing parts for bottom guide profiles, 5 pieces		19162

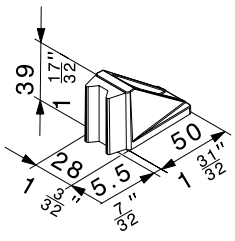
Floor guides

		code
	Spring loaded floor guide, for 1 glass sliding door, ESG[1]/VSG[2] (2 pieces)	20587
	Patch suspension with glass holder insert, ESG[1]/VSG[2]	20505
	Floor guide, rattle proof, to patch suspension 20505	19136

Asccessories

		code
	End stopper for alu bottom guide channel 16 x 16 mm (5/8" x 5/8")	18652
	centering assembly, grey, for all glass sliding doors	18619
Cover plates: → Hawa Ordena 70/Hawa Junior GP		





Hawa Bottom door stop

The bottom door stop quietly and gently stalls sliding doors with panel weights up to 250 kg (550 lbs.).
Sliding doors should be stopped simultaneously at top and bottom.

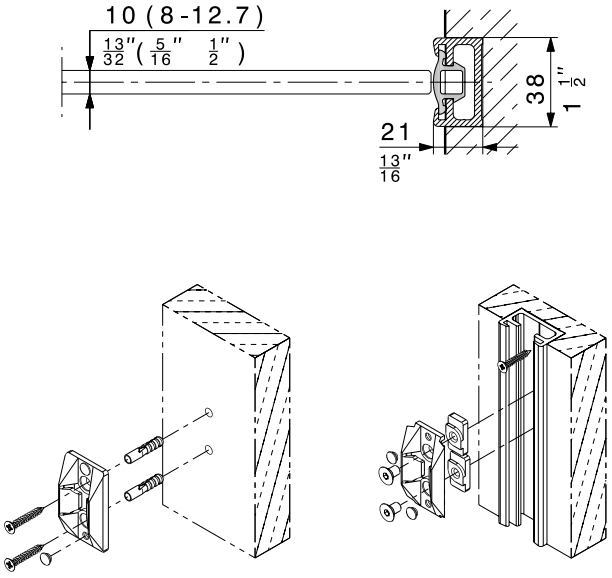
Bottom door stop

			code
	Bottom door stop with centering assembly	dull chromium finish	20773
		stainless steel effect	21473

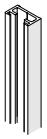
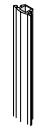
Subject to modification. Metric specifications are exact. Inches are approximate.

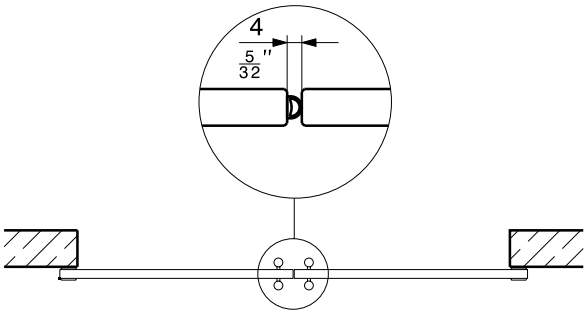
Hawa Wall connection profile

The ideal wall connection profile for all-glass sliding doors with unprotected glass edges, e.g. for Hawa Junior GP and GS.



Wall connection profile

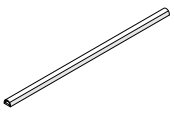
Caution: Minor differences in colour are possible			mm/inch	code
	Wall profile, alu, undrilled	plain anodized	2500 (8'2 7/16")	17020
			3500 (11'5 13/16")	17021
		stainless steel effect, brushed	2500 (8'2 7/16")	20119
			3500 (11'5 13/16")	20120
	Seal profile, black, for wall profile		roll of 2500 (8'2 7/16")	16452
			roll of 3500 (11'5 13/16")	16453
	Centering assembly black for all glass sliding doors, to wall profile			18663
	Centering assembly grey for all glass sliding doors			18619



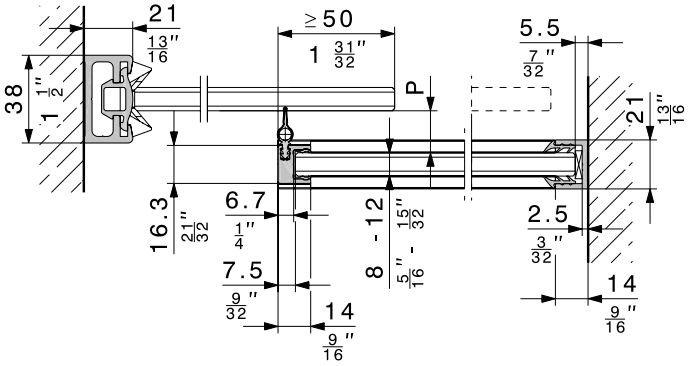
Hawa Rubber profile for glass edge protection

Self-adhesive rubber profile fitted along the glass edge minimises draughts and buffers impacts between adjacent all-glass sliding doors.

Rubber profile for glass edge protection

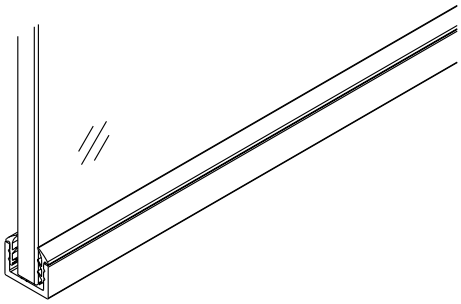
		roll of	code
	Rubber profile self-adhesive, for 8/10 mm (5/16"/13/32") glass thickness, black, glass distance 4 mm (5/32")	5 m (16'4 27/32")	19442
		10 m (32'9 23/32")	19443
		50 m (164'1/2")	19444
	Rubber profile self-adhesive, for 8/10 mm (5/16"/13/32") glass thickness, translucent, glass distance 4 mm (5/32")	5 m (16'4 27/32")	19445
		10 m (32'9 23/32")	19446
		50 m (164'1/2")	19447

Accessories



Glass distance «P» for vertical sealing profile

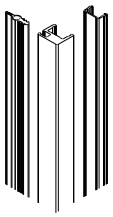
System	Glass thickness sliding door mm/inch	Vertical-seal	Glass distance «P» mm/inch
Hawa Junior 40 GP	8–12 (5/16"–15/32")	13/18	13–15 (17/32"–19/32")
Hawa Junior 80 GP	8–12 (5/16"–15/32")	13/18	15–17 (19/32"–11/16")
Hawa Junior 120 GP	8–12 (5/16"–15/32")	20/22	20–22 (25/32"–7/8")
Hawa Junior 40 GL	8–10 (5/16"–13/32")	13/18	13–16 (17/32"–5/8")
Hawa Junior 80 GL	8–10 (5/16"–13/32")	13/18	15–18 (19/32"–23/32")
Hawa Junior 80 G	8–13 (5/16"–17/32")	13/18	15–17 (19/32"–11/16")
Hawa Junior 120 G	8–13 (5/16"–17/32")	20/22	20–22 (25/32"–7/8")
Hawa Puro 100/150	11–13 (7/16"–17/32")	13/18	14–18,5 (9/16"–3/4")
Hawa Puro 100/150	8–10 (5/16"–13/32")	18/20	18–20,5 (23/32"–13/16")
Hawa Purolino Plus 80	8–12 (5/16"–15/32")	20/22	20–22 (25/32"–7/8")



Vertical sealing profile

The vertical sealing profile is effective against draughts. The slim aluminium profile affixes frontally to glass elements 8–12 mm (5/16"–15/32") thick using silicone adhesive. The two-part rubber seal is recessed into the profile and offers three advantages: it slides almost noiselessly, creates minimal resistance to motion and, compared to conventional brush seals, retains its impeccable looks throughout years of service.

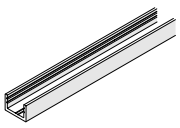
Vertical sealing profile

Caution: Minor differences in colour are possible			mm/inch	code
	Vertical seal 13/18, alu, for all-glass sliding doors wtih fixed glass, set for glass distance 13–18,5 mm (17/32"–3/4")	plain anodized	2500 (8'2 7/16")	20283
			3500 (11'5 13/16")	20284
		stainless steel effect, brushed	2500 (8'2 7/16")	21290
			3500 (11'5 13/16")	21291
	Vertical seal 18/20, alu, for all-glass sliding doors with fixed glass, set for glass distance 18–20,5 mm (23/32"–13/16")	plain anodized	2500 (8'2 7/16")	21246
			3500 (11'5 13/16")	21247
		stainless steel effect, brushed	2500 (8'2 7/16")	21335
			3500 (11'5 13/16")	21336
	Vertical seal 20/22, alu, for all-glass sliding doors wtih fixed glass, set for glass distance 20–22 mm (25/32"–7/8")	plain anodized	2500 (8'2 7/16")	20650
			3500 (11'5 13/16")	20651

Bottom/wall profile to fixed glass

The retention profile provides stability for the fixed glass element, whether mounted on or sunk into the floor.

Bottom, wall and rubber profile to fixed glass

Caution: - Hole positions vary - Minor differences in colour are possible		mm/inch	code
	Bottom/wall profile to fixed glass, alu, plain anodized, predrilled	4000 (13'1 1/2")	19549
		6000 (19'8 7/32")	19561
		cut to size	20067
	Bottom/wall profile to fixed glass, alu, stainless steel effect, brushed, predrilled	4000 (13'1 1/2")	21285
		6000 (19'8 7/32")	21286
		cut to size	21287
	Rubber profile, black to fixed glass 8–9.9 mm (5/16"–13/32")	roll of 10 m (32'9 23/32")	25787
	Rubber profile, black to fixed glass 10–12 mm (13/32"–15/32")		25789
	Rubber profile, black to fixed glass 12.1–13.1 mm (15/32"–17/32")		25763

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

General Terms and Conditions (GTC)

1. General information

1.1 These General Terms and Conditions apply to all contractual arrangements entered into with Hawa Sliding Solutions AG, Mettmenstetten, Switzerland (Hawa), and they constitute an integral element of these contractual arrangements. **Hawa does not recognize contractual partners' contrary or alternative terms and conditions.**

1.2 In order to be valid, all agreements made between the contractual parties must be made in writing, especially in the case of any deviations from these General Terms and Conditions.

1.3 Third parties not party to the contract shall have no entitlement to the assertion of any provisions whatsoever of these General Terms and Conditions.

1.4 If any individual provisions contained in these General Terms and Conditions are deemed by a competent authority to be wholly or partially invalid or unenforceable, this shall not affect the remaining provisions or the remainder of the questionable provisions of these General Terms and Conditions.

2. Deliveries

2.1 Purchase orders shall only be binding on Hawa, if it has confirmed these in writing. If no specific time or date has been agreed for the delivery of supplies and services, Hawa shall deliver these in accordance with its standard business operations.

2.2 In the event of any ambiguities or disagreements concerning the content of a purchase order, Hawa's written order confirmation shall be authoritative, unless the contractual partner has raised an objection to the order confirmation within 24 hours (Monday–Friday), (this time limit shall be correspondingly extended if it expires on a weekend).

2.3 Hawa shall only be bound by dates and time limits for the delivery of supplies and services, if these have been defined in writing and confirmed by Hawa in a binding manner. Hawa's fulfilment of dates and time limits is conditional on the timely receipt of all the documents and releases required from the contractual partner and the fulfilment of all its other obligations. Dates and time limits shall otherwise be appropriately extended.

2.4 In the event that Hawa fails to meet confirmed dates and time limits, the contractual partner must afford it a reasonable additional period of time to deliver performance. If Hawa also fails to render delivery within this additional period of time, the contractual partner shall be entitled to rescind the agreement and demand the repayment of all payments already made. **The contractual partner shall have no fartherreaching rights or claims, especially not to any compensation for delayed performance, or for indirect or third-party damage.**

2.5 Hawa is entitled to make partial deliveries. In the event that the contractual partner is in default of payment, Hawa shall be entitled to withhold other agreed supplies and services, until all outstanding payments have been settled, and adequate collateral has been provided in respect of future supplies and services. The contractual partner has no right of rescission in the event that a delivery is withheld due to a default of payment.

2.6 Subject to any alternative agreement concluded between the contractual parties, deliveries shall be made ex Hawa's warehouse at the cost and risk of the contractual partner (see too No. 3.2). Return consignments of goods require the explicit, prior consent of Hawa. In this case, there will be a credit up to a maximum of 65 % of the product value. The contractual partner shall bear the costs of shipment and processing of return consignments (incoming goods inspection, including packaging, etc.). Custom-made products may not be returned.

2.7 Unless agreed otherwise with the contracting partner, the delivery terms shall be interpreted in accordance with Incoterms 2010 (International Commercial Terms), of the International Chamber of Commerce (ICC).

3. Prices and conditions of payment

3.1 Agreements concerning prices, cash discounts and rebates, etc. shall only be binding on Hawa if agreed in writing. Otherwise the prices contained in Hawa's current price list or order confirmations shall apply. Hawa may amend these price lists at any time. The current price lists shall apply. Prices are listed in Swiss Francs (excluding VAT), unless otherwise explicitly agreed in writing.

3.2 Hawa reserves the right to pass on freight charges. The full freight or postage charge will be invoiced for express, postal or direct consignments. All taxes and charges will be passed on. Hawa reserves the right to charge packaging at cost price. Any requests for special packaging shall be charged separately.

3.3 Payment is deemed made, once the relevant amount is credited to Hawa's account. In the event of a default of payment, Hawa shall be entitled, without having to issue a reminder, to charge interest from the 31st day following the invoice date, at the rate charged by commercial banks on current account overdrafts, but no less than 5% in any case.

3.4 The contractual partner's payments will firstly be applied against the oldest outstanding payments. If costs and interest have already accrued, payments shall first be credited against the costs, then the interest, and finally against the principle debt.

3.5 Payments due to Hawa may only be offset against the contractual partner's counter-claims, if Hawa has consented to this or if a res judicata decision has been issued to this effect.

4. Retention of title

4.1 The delivered goods shall remain the property of Hawa, until the payment of all of Hawa's claims against the contracting partner (including the settlement of all outstanding current account balances). In the event that various goods are combined, the retention of title shall endure in the relevant proportion of the value of the new goods. Hawa is entitled, without any involvement on the part of the contractual partner, to register the retention of title in the retention of title register («Eigentumsvorbehaltsregister») of the competent debt enforcement office, and the contractual partner authorizes Hawa to undertake the actions necessary for this purpose.

4.2 If the contractual partner resells the goods prior to the fulfilment of all of Hawa's claims, **it here and now, by way of precaution, assigns to Hawa** (irrespective of any legally valid retention of title) **the corresponding claims established by way of the resale or arising through any other legal basis.**

4.3 In the event of any third-party interference with the goods subject to a retention of title arrangement, the contracting partner shall be duty bound to indicate Hawa's ownership of said goods, and notify Hawa accordingly.

4.4 In the event of default of payment on the part of the contractual partner, Hawa shall be entitled to repossess the goods delivered. Hawa's repossession of goods shall not constitute any termination of the agreement, and will not release the contractual partner from its contractual duties.

5. Product performance, obligations to provide information and instructions

5.1 Unless the product performance is described in Hawa's current catalogues, brochures or service descriptions etc., the specifications of the specific products must be agreed with Hawa in writing. Unless an agreement has been made to the contrary, the technical specifications may be changed at any time.

5.2 The contractual partner acknowledges that the fitness for purpose of the products is dependent on a wide range of factors, and it undertakes to read the relevant design and assembly instructions.

5.3 In order to fulfil its obligations to provide information and instructions, Hawa provides contracting partners (usually specialist dealers, architects, designers, consultants, workshops/tradesmen, etc.) with catalogues, brochures, design and installation manuals, maintenance manuals, operational advice and training.

5.4 Contractual partners are duty bound to observe Hawa's product information. All requisite instructions are available on Hawa's website, or can also be requested from Hawa. They must be passed on to workshops/tradesmen and users as necessary.

6. Drawings and tools

6.1 Hawa reserves ownership to construction drawings prepared and issued by it specifically for a particular job. Unless Hawa has issued its consent, these may not be passed on to any other parties, or copied or otherwise reproduced.

6.2 Tools produced for special orders shall remain the property of Hawa. The contractual partner will not be able to demand them, even if it has contributed to the tool costs. Special agreements reserved.

6.3 Hawa shall not be liable for any and all consequences resulting from patent or other property right infringements resulting from deliveries made in accordance with the contractual partner's instructions. The contractual partner undertakes to indemnify Hawa fully and unreservedly in such cases.

General Terms and Conditions (GTC)

7. Warranty of title, product warranty, liability

7.1 Hawa guarantees that the products do not violate the intellectual rights of any third parties.

7.2 The contracting partner must inspect supplies and services for defects immediately upon receipt. Hawa must be promptly notified of any complaints; otherwise the purchased goods are deemed accepted.

7.3 With the exception of parts subject to wear and tear, Hawa warrants the flawless functioning of the products delivered by it, as well as the durability of all parts, for a period of 2 years commencing from the transfer of risk. This product warranty does not include damage due to natural wear and tear, improper use, failure to observe installation and maintenance instructions, changes to the goods as delivered or to spare parts that do not correspond to Hawa's original specifications.

7.4 Hawa may demand that the contracting partner return parts about which a complaint has been justifiably made; this shall be performed at the partner's **cost** and risk. Defects affecting parts of a delivery do not entitle the contractual partner to reject or return the entire delivery.

7.5 In the case of justified complaints, the contracting partner is entitled to subsequent improvement (repair) or replacement of the defective part (the decision resting with Hawa). Subsequent improvements or substitute deliveries performed by Hawa are covered by the same product warranty that Hawa extended to the original delivery, except this shall be limited in time to 6 months following the acceptance of the subsequent improvement or the receipt of the substitute delivery.

7.6 **All other liability**, irrespective of the legal basis, **is explicitly repudiated**, insofar as this is legally permissible. This applies particularly to indirect and third-party damage.

8. Applicable law, legal venue

8.1 All contractual agreements concluded with Hawa shall **be exclusively governed by Swiss law** to the exclusion of the rules on the conflict of laws, and the United Nations Convention on Contracts for the International Sale of Goods (CISG).

8.2 **The exclusive legal venue** for all disputes arising from or in connection with the contractual agreements between Hawa and the contractual partner **shall be that court with jurisdiction for the place at which Hawa has its registered address. Hawa is also entitled to pursue legal actions against the contractual partner before that court with jurisdiction for the place at which the latter has its registered address.**

Subject to modification.

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