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Hardware specification for profiles with C groove (15-20mm)







The nature of family's nobility is happiness

The greatness of love is honesty

The success of career comes from sharing

Dream can be realized only with insistence









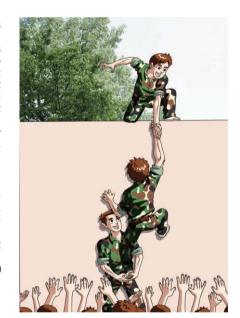






Starting from normal sliding windows and doors solutions, including roller carriages, locking systems and handles, our product range has been expanded to all kinds of window and patio door fitting systems, as well as electric ventilators and RWA system (smoke and heat extraction system with normal ventilation function). Our purpose is to provide systematic solutions for windows and doors fabricators, and curtain wall companies. Highest quality and perfect function to fit various requirements of modern buildings with modern architectural designs is always our target.

Our experience to cooperate with world-wide famous window and door fittings companies improved our quality control system. We are lunching products with special galvanizing technology, targeting at environment protection and high anti-rust levels. We even developed complete stainless stain steel (SS304) solutions for tilt-turn windows and transmission gears for wood and PVC windows and doors. Quality, humanization, environment protection are principles for technical research and development which forms the foundation of sustainable development of the company



HOPO in field of solutions for sliding windows and doors (including rollers, gears & handles, MA locks, butterfly locks) is the leading brand in Chinese market and some overseas market. Among the standard window fittings (tilt-turn, casement, top-hung, etc. for aluminum, wood and PVC profiles), HOPO tilt-turn and transmission gears made of stainless steel SS304 is the only one in the world at present, with highest anti-rust property, with ideas of environment protection and Recycling. The designs of HOPO lift-sliding and sliding-folding systems had completed from thorough study of all systems of top-brands in Europe, achieving the final optimized solutions with features of stable usage, easy adjustment and operation, maintenance-free. HOPO patent aluminum sliding folding system, SF65, is very attractive in the market. Ventilator and electric window opening systems have been supplied to the market with years' experience.

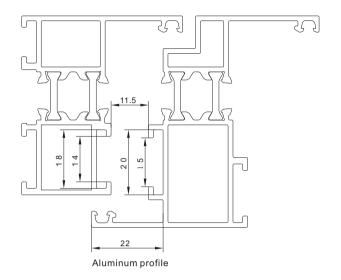
HOPO technical service for application including profile design, hardware specifications, drawings for installation and adjustment are key points to ensure perfect function of HOPO fittings. Thorough technical clarification is the basis of all HOPO business.

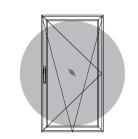
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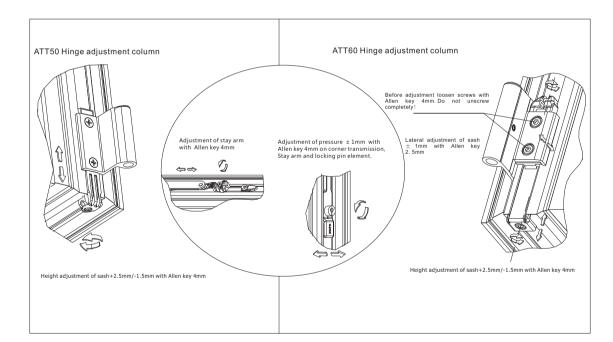












HOPO window fittings for Aluminum Profiles

Profile Dimensions

Sash groove is C type with dimensions of 15mm and 20mm for movement of transmission rod. Frame groove is C type with dimensions of 14mm and 18mm for mounting locking plates and hinges. Groove distance between sash and frame is 11.5mm, and width of overlap is 22mm.

Types of Application

HOPO fittings can be used for single tilt-turn, single inward opening windows, double leaf windows, and casement windows.

Range of Application

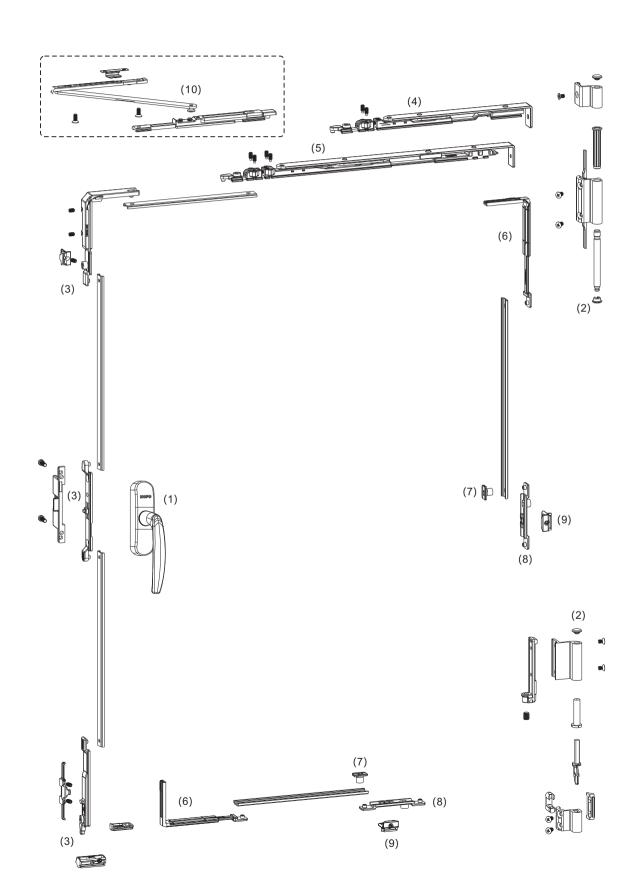
ATT50 is a tilt-turn solution for max. width of 900mm, max. weight of 80kg. ATT60 is a tilt-turn solution for max. width of 900mm, max. weight of 90kg, and 130kg with special optional parts.

Adjustments

Hinge parts of ATT50 and ATT60 can be adjusted in 3 dimensions.





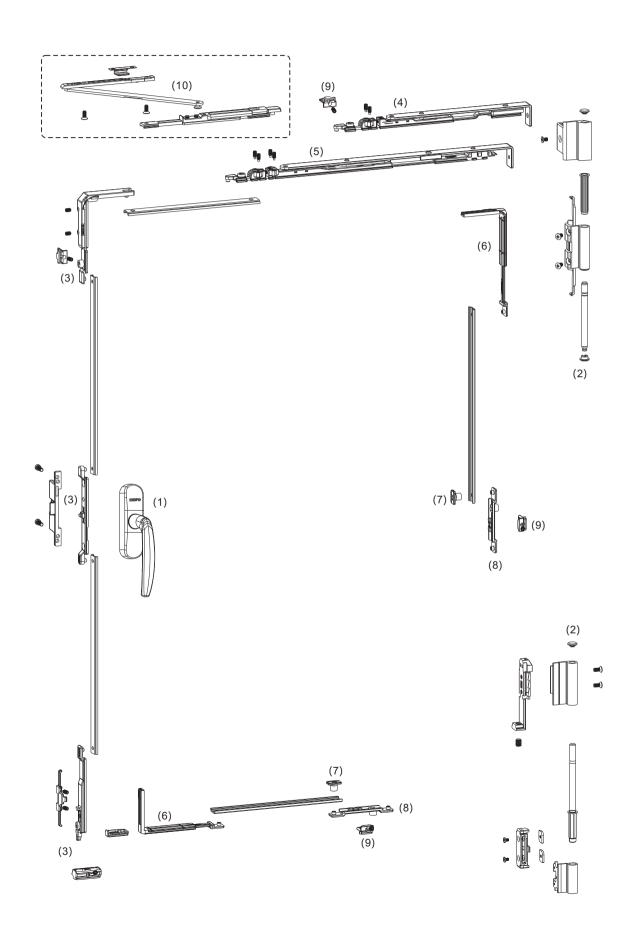


ATT50 Tilt-turn Fitting for Aluminum Windows

Description	Article Number	Unit	Q'ty	Notes
1. Handle	AH606.22.011	рс	1	Anodized silver
2. Hinge Components	AHA50.00.011	set	1	Anodized silver
3. Transmission Components	AD10.00.021	set	1	
4. Stay arm (less than 600mm)	ASA50.30.021	set	1	450-800mm
5. Stay arm (more than 600mm)	ASA50.50.021	set	1	595-1000mm
Option 1: Colors of hinge component	S			
	AHA50.00.04	set	1	Anodized bronze
2. Hinge components	AHA50.00.07	set	1	Painted white
	AHA50.00.069	set	1	Painted black
Option 2: Colors of handles				
	AH606.22.04	рс	1	Anodized bronze
1. Handle	AH606.22.07	рс	1	Painted white
	AH606.22.069	рс	1	Painted black
Option 3: other optional parts				
6. Corner transmission for middle lock	AMCT10.00.021	рс	1	
7. Locking pin	ALC10.00.021	рс	1	
8. Locking rod	ALR10.00.021	рс	1	
9. Locking plate	ALP10.00.021	рс	1	
10. Additional stay arm	AASA10.00.021	рс	1	

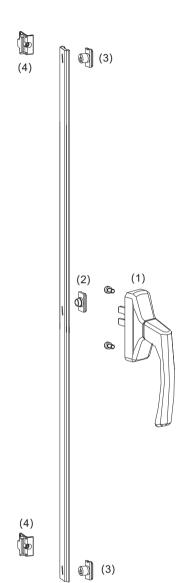


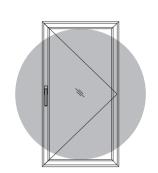




ATT60 Tilt-turn Fitting for Aluminum Windows

9									
Description	Article Number	Unit	Q'ty	Notes					
1. Handle	AH606.22.011	рс	1	Anodized silver					
2. Hinge Components	AHA60.00.011	set	1	Anodized silver					
3. Transmission Components	AD10.00.021	set	1						
4. Stay arm (less than 600mm)	ASA50.30.021	set	1	450-800mm					
5. Stay arm (more than 600mm)	ASA50.50.021	set	1	595-1000mm					
Option 1: Colors of hinge components									
	AHA60.00.04	set	1	Anodized bronze					
2. Hinge components	AHA60.00.07	set	1	Painted white					
	AHA60.00.069	set	1	Painted black					
Option 2: Colors of handles									
	AH606.22.04	рс	1	Anodized bronze					
1. Handle	AH606.22.07	рс	1	Painted white					
	AH606.22.069	рс	1	Painted black					
Option 3: other optional parts									
6. Corner transmission for middle lock	AMCT10.00.021	рс	1						
7. Locking pin	ALC10.00.021	рс	1						
8. Locking rod	ALR10.00.021	рс	1						
9. Locking plate	ALP10.00.021	рс	1						
10. Additional stay arm	AASA10.00.021	рс	1						











Side Hung Inward Opening Windows

HOPO has two solutions for side hung inward opening windows with different hinges TSH20 and AMH51.

Application range of solution 1 with hinge TSH20: Max. width 900mm, Max. height 2400mm (depends on profiles and number of hinges), Max. weight 60kg.

Application range of solution 1 with hinge AMH51: Max. width 900mm, Max. height 2400mm (depends on profiles and number of hinges), Max. weight 90kg.

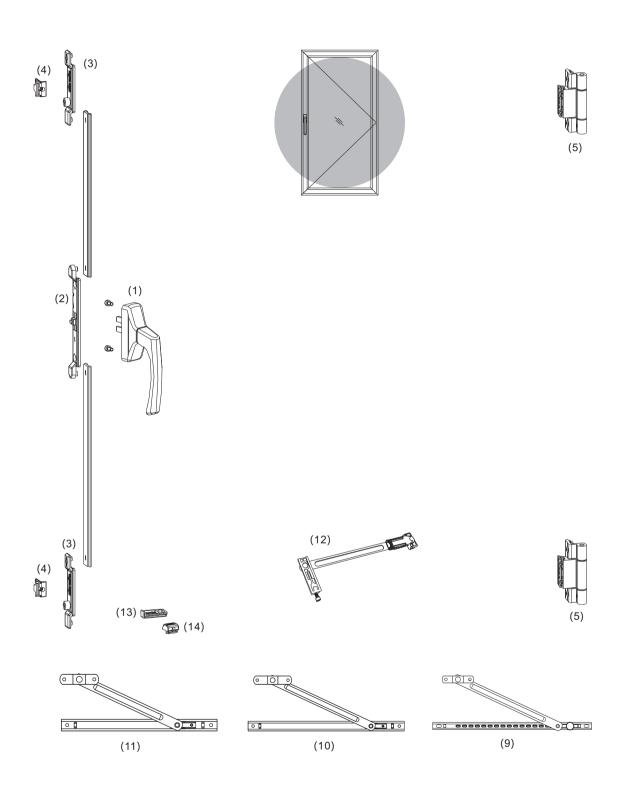
Solution I

Description	Article Number	Unit	Q'ty	Notes	
1. Handle	AH20.22.07	рс	1	White	
2. Transmission part	ATP10.00.021	рс	1		
3. Locking pin	ALC10.00.021	рс	2		
4. Locking plate	ALP10.00.021	рс	2		
5. Hinge (2 wings)	TSH20.07	рс	3		
Note: Colors of painted black, silver, bronze for handle are available.					

Note: Opening restrictor refers to next page.





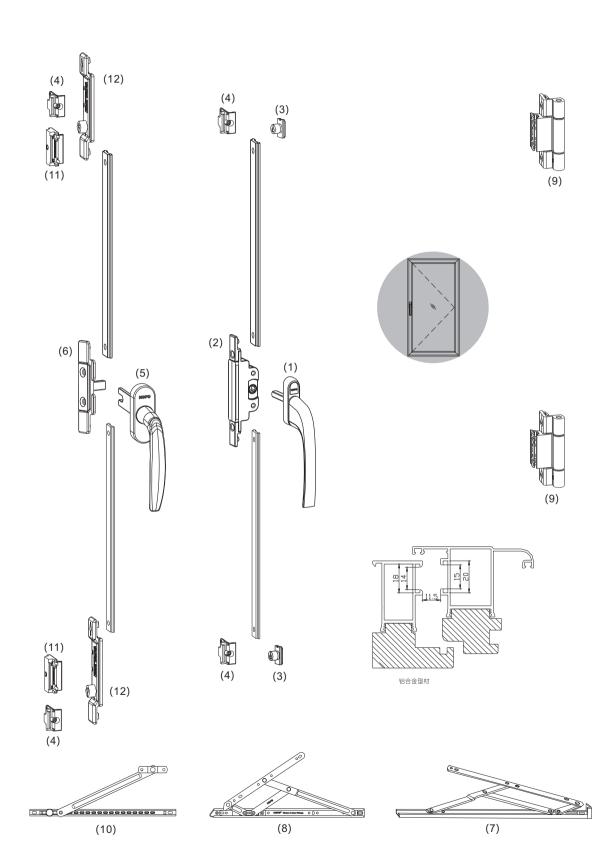


Solution ${\rm I\hspace{-.1em}I}$

Description	Article Niumber	Linit	01417	Notes
Description	Article Number	Unit	Q'ty	Notes
1. Handle	AH20.22.07	рс	1	White
2. Transmission part	APT10.00.021	рс	1	
3. Locking pin	ALR10.00.021	рс	2	
4. Locking plate	ALP10.00.021	рс	2	
5. Hinge (3 wings)	AMH51.07	рс	2	
Optional parts				
	TR14.13.16.08C38			SS304, Overlay height 16.5mm, length 08"
9. Opening restrictor Width of base: 13.5mm	TR14.13.16.10C38	рс	1	SS304, Overlay height 16.5mm, length 10"
Wider of Base. To.oniin	TR14.13.16.12C38			SS304, Overlay height 16.5mm, length 12"
	TR16.18.13.08C38	pc		SS304, Overlay height 13.5mm, length 08"
	TR16.18.13.10C38			SS304, Overlay height 13.5mm, length 10"
10. Opening restrictor*	TR16.18.13.12C38		1	SS304, Overlay height 13.5mm, length 12"
Width of base: 18.5mm	TR16.18.16.08C38	PC	_	SS304, Overlay height 16.5mm, length 08"
	TR16.18.16.10C38			SS304, Overlay height 16.5mm, length 10"
	TR16.18.16.12C38			SS304, Overlay height 16.5mm, length 12"
	TR18.22.16.08C38			SS304, Overlay height 16.5mm, length 08"
11. Opening restrictor* Width of base: 22.5mm	TR18.22.16.10C38	рс	1	SS304, Overlay height 16.5mm, length 10"
vvidui di dase. 22.5MM	TR18.22.16.12C38			SS304, Overlay height 16.5mm, length 12"
12. Opening restrictor	ATR20.10C38		1	C groove mounting, SS304, length 10"
(C groove mounting, for tilt-turn windows)	ATR20.12C38	pc	1	C groove mounting, SS304, length 12"
13. Anti-sink block	AAS10.00.01	рс	1	
14. Supporting block on frame	AFS10.00.01	рс	1	







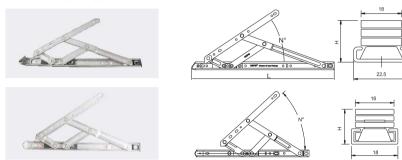
Casement Windows with C Groove Profiles

	Description	Article Number	Unit	Q'ty	Notes
	1. Handle	PH310.40.07	рс	1	White
	2. Gear box	AGC30.23.012	рс	1	Double direction, backset 23mm
Locking solution 1 handle with square	Z. Odai box	AGC30.30.012		1	Double direction, backset 30mm
spindle	3. Locking rod	ALC10.00.021	рс	2	
	4. Locking plate	ALP10.00.021	рс	2	
	5. Handle	AH35.40.07	рс	1	White
Locking solution 2	6. T-type connector	TTC31.19.069	рс	1	
Handle with fork	3. Locking pin	ALC10.00.021	рс	2	
	4. Locking plate	ALP10.00.021	рс	2	
		HFH22.16.10C38			
		HFH22.16.12C38			
		HFH22.16.14C38	1		
	7. Heavy duty friction hinge Width of base: 22mm	HFH22.16.16C38	pair	1	
		HFH22.16.18C38	1		
		HFH22.16.20C38	1		
Hinge solution 1		HFH22.16.22C38	1		
Friction hinge		FH01.2216.10C38		1	
		FH01.2216.12C38			
		FH01.2216.14C38	pair		
	8. Heavy duty friction hinge	FH01.2216.16C38			
	Width of base: 22mm	FH01.2216.18C38			
		FH01.2216.20C38			
	9. Hinge (3 wings)	AMH51.07	рс	2~3	
Hinge solution 2		TR14.13.16.08C38			SS304, Overlay height 16.5mm, length 8"
Hinge (3 swings)	10. Opening restrictor Width of base: 13.5mm	TR14.13.16.10C38	рс	1	SS304, Overlay height 16.5mm, length 10"
		TR14.13.16.12C38	<u> </u>		SS304, Overlay height 16.5mm, length 12"
Option					
	11. Adjustable locking plate	AALP10.021	рс	2	
	12. Locking rod, 6.5mm	ALR10.021	рс	2	



Friction hinge

3 kinds of friction hinges with overlay heights of 13.5mm, 16.5mm and 17mm can be chosen for different profiles and different load. HOPO friction hinges are made of stainless steel SS304.



Technical Specifications of Standard Friction hinges

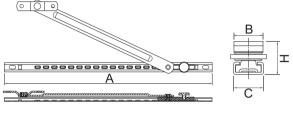
Length(in)	Open Angle	Overlay height	Max. Vent weight	Steel plate thickness	Article number
08"	87°	13.5mm	12kg	2.0mm	SFH18.13.08C38
10"	87°	13.5mm	16kg	2.0mm	SFH18.13.10C38
12"	64°	13.5mm	22kg	2.0mm	SFH18.13.12C38
14"	55°	13.5mm	22kg	2.0mm	SFH18.13.14C38
16"	55°	13.5mm	24kg	2.0mm	SFH18.13.16C38
08"	87°	16.5mm	16kg	2.5mm	SFH18.16.08C38
10"	87°	16.5mm	22kg	2.5mm	SFH18.16.10C38
12"	64°	16.5mm	25kg	2.5mm	SFH18.16.12C38
14"	55°	16.5mm	30kg	2.5mm	SFH18.16.14C38
16"	55°	16.5mm	32kg	2.5mm	SFH18.16.16C38

Technical Specifications of Enhanced Friction hinges

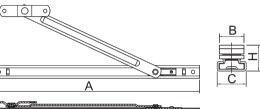
Length(in)	Open Angle	Overlay height	Max. Vent weight	Steel plate thickness	Article number
10"	87°	16.5mm	25kg	2.5mm	HFH22.16.10C38
12"	87°	16.5mm	30kg	2.5mm	HFH22.16.12C38
14"	87°	16.5mm	32kg	2.5mm	HFH22.16.14C38
16"	87°	16.5mm	35kg	2.5mm	HFH22.16.16C38
18"	87°	16.5mm	38kg	2.5mm	HFH22.16.18C38
20"	87°	16.5mm	41kg	2.5mm	HFH22.16.20C38
22"	55°	16.5mm	48kg	2.5mm	HFH22.16.22C38

Technical Specifications of Heavy Duty Friction hinges

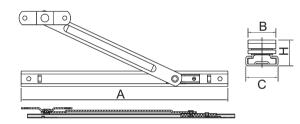
Length(in)	Open Angle	Overlay height	Max. Vent weight	Steel plate thickness	Article number
10"	87°	17mm	30kg	3.0mm	FH01.2216.10C38
12"	87°	17mm	35kg	3.0mm	FH01.2216.12C38
14"	87°	17mm	38kg	3.0mm	FH01.2216.14C38
16"	87°	17mm	40kg	3.0mm	FH01.2216.16C38
18"	87°	17mm	43kg	3.0mm	FH01.2216.18C38
20"	87°	17mm	46kg	3.0mm	FH01.2216.20C38
22"	55°	17mm	53kg	3.0mm	FH01.2216.22C38
22"	55°	17mm	56kg	3.0mm	FH01.2216.24C38



Article No. Data	Α	В	С	Н
TR14.13.16.08C38	216	14	13.5	16
TR14.13.16.10C38	268	14	13.5	16
TR14.13.16.12C38	298	14	13.5	16

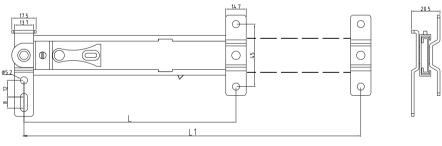


Article No.	Α	В	С	Н
TR16.18.13.08C38	216	16	18.5	13.5
TR16.18.13.10C38	268	16	18.5	13.5
TR16.18.13.12C38	298	16	18.5	13.5
TR16.18.16.08C38	216	16	18.5	16.5
TR16.18.16.10C38	268	16	18.5	16.5
TR16.18.16.12C38	298	16	18.5	16.5



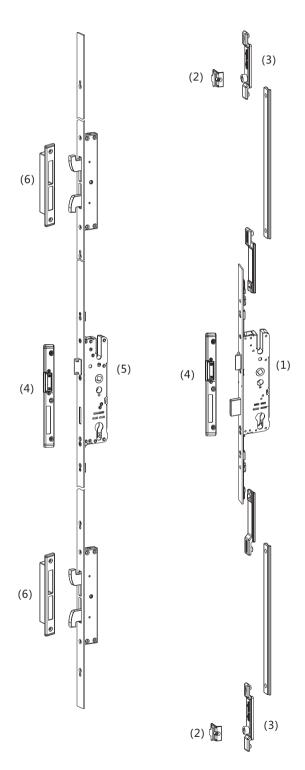
Article No. Data	Α	В	С	Н
TR18.22.16.08C38	216	18	22.5	16.5
TR18.22.16.10C38	268	18	22.5	16.5
TR18.22.16.12C38	298	18	22.5	16.5

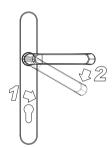
Opening restricter



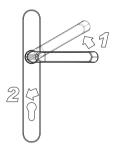


Size	Closing Length	Extending length	Article Number
06	158	208	SS12.06C38
80	207	306	SS12.08C38
10	258	408	SS12.10C38
12	308	508	SS12.12C38





- Open
 1. Turning key to unlock the handle.
 2. Turning handle down to open the door.



- Lock
 1. Turn handle up to lock the door.
 2. Use key to lock the handle.

Handle-operated Multi-points Lock

The handle-operated multi-points Lock is suitable for doors in balcony, passageway, and

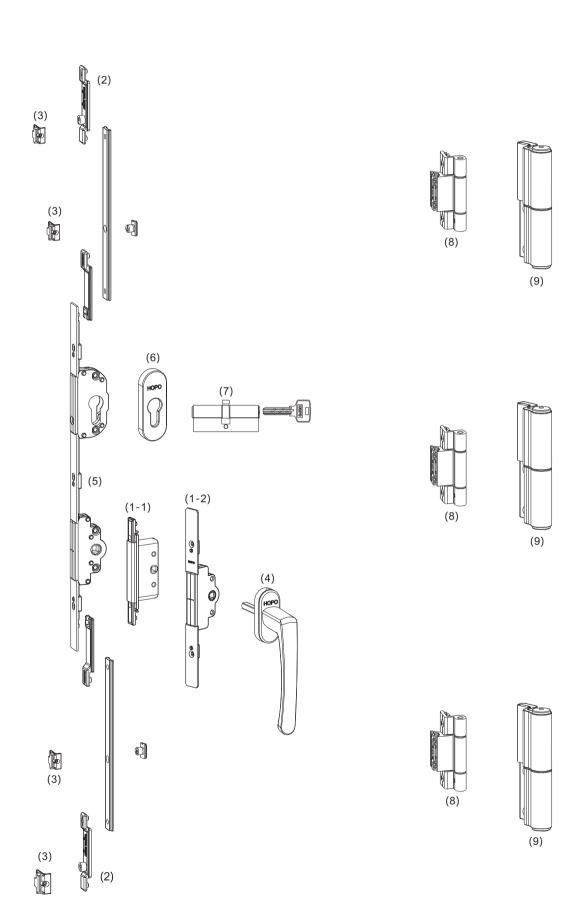
Multi-points locking mechanism increases level of security and sealing effect.

To lock or unlock the door with handle, to lock or unlock the handle with key.

Items	Description	Article Number	Backset/Center distance	Width fo Dead-bolt	Square Spindle
1	Lock	SDLH51.33.20C	33mm/92		
1		SDLH51.26.20C	26mm/92	20mm	8*8mm
2	Locking plate	ALP10.00.021		20mm	8*8mm
3	Locking rod	ALR10.00.021			
4	Door locking plate	ALPD50.05.021L/R			
5	Lock	SDLH53.33.23C	33mm/92		
6	Bi-forks locking plate	LPD50.01.38		23mm	8*8mm







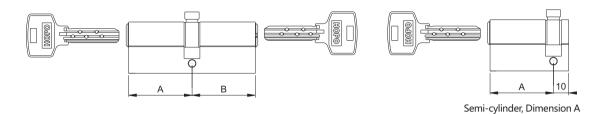
Specifications for swinging Door with C groove profiles

	Description	Article Number	Unit	Q'ty	Notes	
	1-1. Gear box	AGC30.30.012	рс	1	2-directioins, BS 30mm	
		AGC50.28.021		1	1-directioin, BS 28mm	
	1-2. Gear box	AGC50.33.021	рс		1-directioin, BS 33mm	
Locking solution I Without cylinder		AGC50.43.021	1		1-directioin, BS 43mm	
without cylinder	2. Locking rod	ALR10.00.021	рс	2~3		
	3. Locking plate	ALP10.00.021	рс	2~3		
	4. Handle	PH100.35.07	рс	1		
		AGC51.23.021		1	1-directioin, BS 30mm	
	5. Gear with cylinder	AGC51.28.021	рс		1-directioin, BS 28mm	
		AGC51.33.021			1-directioin, BS 33mm	
		AGC51.43.021			1-directioin, BS 43mm	
Locking solution II With cylinder	4. Handle	PH100.00.07	set	1	White	
vvia vymiae.	4. Handle	PH101.00.07	Set		vvriite	
	Square spindle	SP7.102	рс	1	(7*7)102mm	
	Screw	SC5. 01. 75	рс	2	M5*75	
	6. Cylinder rosette	CC50.0707	set	1	White (in-outside)	
	7. Cylinder	C98.4040C029	рс	1		
Hinge Solution I	8. Hinge (3 wings)	AMH51.011	рс	2 [~] 3	70~90kg	
Hinge Solution II	9. Barrel hinge	ABH50.00.012	рс	2~3	120~150kg	





Cylinders

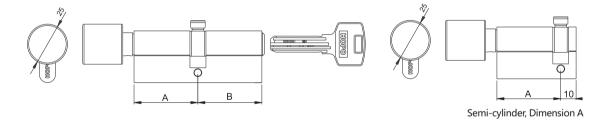


Double-sides Cylinder, Ariticle No. C98. A B C029. Available dimension of A and B:

Dimension A	Dimension B	Notes
	00	Semi-cylinder
25	25	Normal
30	30	Normal
35	35	Normal
40	40	Normal
45	45	Normal
50	50	Normal
55	55	Normal



Cylinders with the different A & B dimensions are available upon request. Example: C98.3045C029 means A=30mm, B=45mm



Cylinder with knob (inside), Article No. C99. A B C029. Available dimension of A and B:

Dimension A	Dimension B	Notes	
	00	Semi-cylinder	
25	25	Normal	a
30	30	Normal	
35	35	Normal	
40	40	Normal	
45	45	Normal	
50	50	Normal	
55	55	Normal	

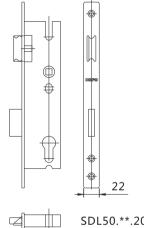


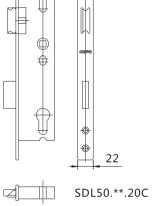
Cylinders with the different A & B dimensions are available upon request. Example: C99.3045C029 means A=30mm, B=45mm

Mortise Lock





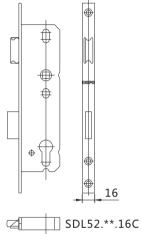




Center distance 92mm, square spindle 8x8mm Forend 20mm

Article No.

Backset32mm SDL50.32.20C38 Backset26mm SDL50.26.20C38



Center distance 92mm, square spindle 8x8mm Forend 20mm

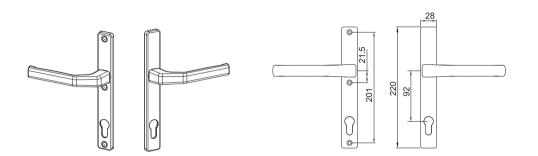
Article No.

Backset28mm SDL52.28.16C38 Backset35mm SDL52.35.16C38

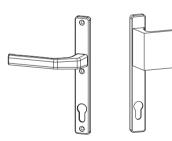


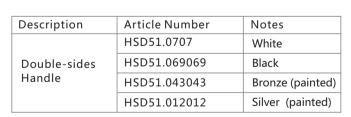
Double Sides Handle

The narrow front width (28mm) makes it suitable for PVC and aluminum profiles. For entrance doors, fixed outside handle solution should be chosen.

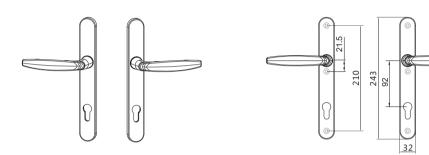


	Description	Article Number	Notes
		HSD50.0707	White
	Double-sides Handle	HSD50.069069	Black
		HSD50.043043	Bronze (painted)
		HSD50.012012	Silver (painted)



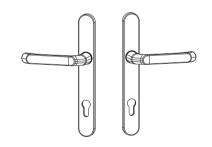


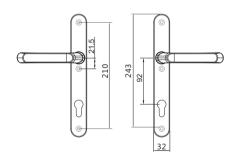
Screws have been hided by the front cover. Width of cover is 32mm.



Description	Article Number	Notes
	HSD531.0707R/L	White
Double-sides Handle	HSD531.069069R/L	Black
	HSD531.0404R/L	Bronze (painted)
	HSD531.011011R/L	Silver (painted)

Double-sides Handle with no cylinder hole: HSD541.0707R/L Handles are fixed, used on passive leaf.

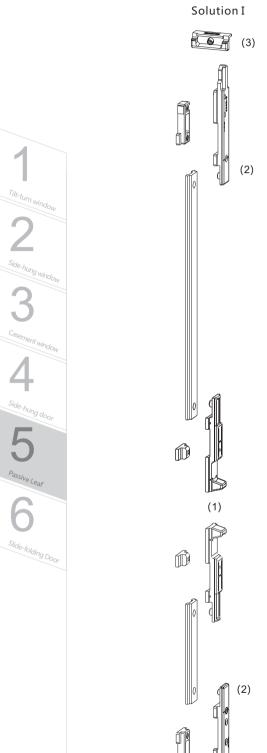




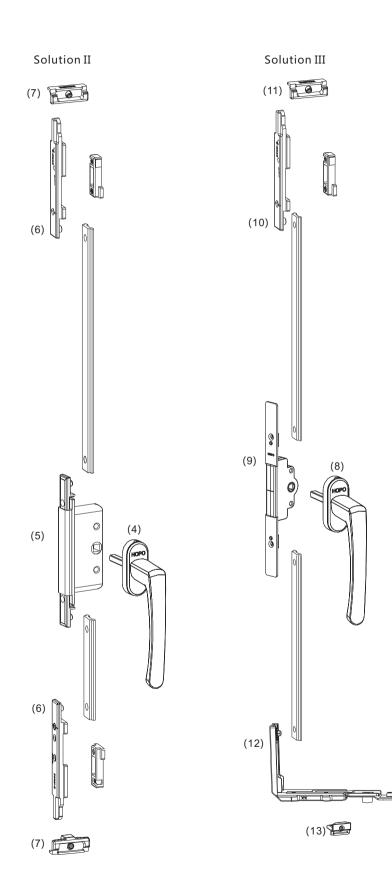
Description	Article Number	Notes
	HSD533.0707R/L	White
Double-sides	HSD533.069069R/L	Black
Handle	HSD533.0404R/L	Bronze (painted)
	HSD533.011011R/L	Silver (painted)

Double-sides Handle with no cylinder hole:HSD543.0707R/L Handles are fixed, used on passive leaf.





(3)



Specifications for Passive Leaf of Doors (and Windows) with C Groove Profile

	Description	Article Number	Unit	Q'ty
Solution I:	1. Grip for shoot bolt	ASBH20.00.06	рс	2
Grip operated (for movable mullion	2. Shoot bolt for C groove	ASB20.00.021	рс	2
with C groove)	3. Shoot bolt for C groove profile	ASLP20.00.021	рс	2
	4. Handle	PH100.35.07	рс	1
		AGC30.20.012		1
Solution II:	5. 2 directions gear box	AGC30.23.012	рс	
Handle + gear box (2 directions)		AGC30.30.012		
	6. Shoot bolt for C groove	ASB20.00.021	рс	2
	7. Shoot locking plate	ASLP20.00.021	рс	2
	8. Handle	PH100.35.07	рс	1
	0.1 11 11	AGC50.28.021		1
	9. 1 direction gear box	AGC50.33.021	рс	
Solution III:	10. Shoot bolt for C groove	ASB20.00.021	рс	1
Handle + gear box (1 direction)	11. Shoot locking plate	ASLP20.00.021	рс	1
	12. Corner transmission	ACT10.00.021	рс	1
	13. Locking plate	ALP10.00.021	рс	1

1
2
de-hung window
4
Side-hung door
5
Passive Leaf





HOPO Aluminum Sliding Folding Window system SF65

Patent system solution for profile and fittings ensures easy and fast assembly and installation. Enhanced structure design make the movement of sliding very smoothly.

Patent profile system

With few kinds of profiles, the system can achieve various door types, single-leaf door, double-leafs door, bi-folding door, slide-folding door. The gasket design has the function of anti-crush for fingers. Bottom profile has an embedding stainless steel rod structure as guide rail, to prevent damage to the surface finishing as normal structure and to make the movement of door leafs more smoothly. Fabricators can adjust the profile structure according to the requirements of static calculation and decorative effect.

Patent fitting system

Hinges mounting on grooves of sashes achieves harmonious visual effect. For a finished sliding folding door, changing positions of rollers can change door schemes easily. The end-edge folding solution hides rollers in closing position, while rollers are not visible at any position for bi-folding solution. Clamping-Mounting method of hinges and rollers makes the installation and adjustment very easy with no need of any screw. Roller structure of bottom roller carriage is 4 stainless steel load-bearing rollers and 3 guide rollers. Max. height of the system can reach up to 3000mm (depends on profile). Max. width of each leaf is 900mm with max. weight of 100kg.

Main Fittings of HOPO Slide-folding Door System SF65

1. Box of Rollers ABR65.30.011

The key point to design the roller structure is to overcome the influence of the eccentric load-bearing during the slide-folding movement of door leafs. The top roller carriage has 3 guiding rollers equipped with self-lubricating bearings made by powder metallurgy that is the ideal solution for taking the eccentric load-bearing effect. The bottom roller carriage has 4 stainless steel wheels to take the vertical load of the door leaf and the eccentric load during opening procedure, while the 3 guide rollers on the bottom roller carriage forms the secondary insurance for the eccentric load. The roller carriages has the Clamping-Mounting structure with no need of screwing. Adjustment of rollers are available in 3 dimensions.





2. Folding hinge ASH65.02.011

The folding hinge is made of extruded aluminum profile with anodized silver color. The hinge has the same clamping-mounting structure as the rollers.



3. Handle hinge AHH65.011

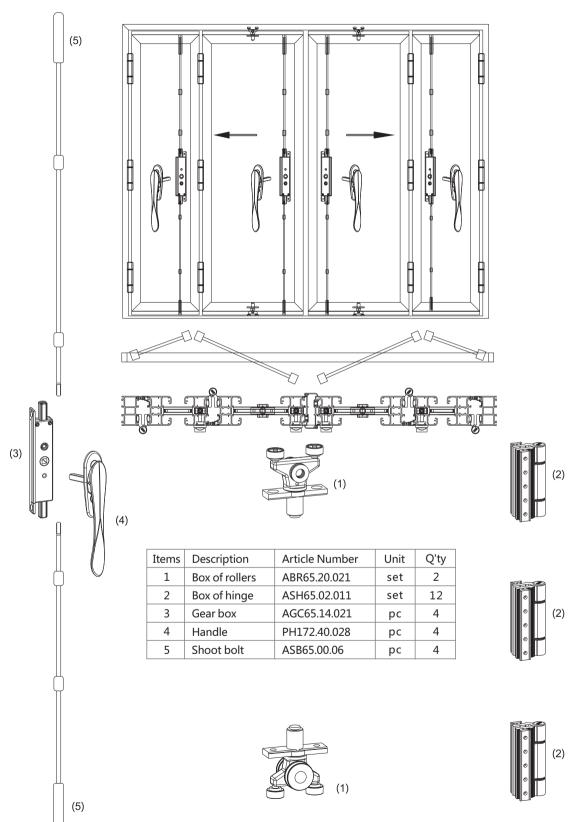
The handle hinge is installed on height of 1 meter above ground for easy operation of closing the door leafs.



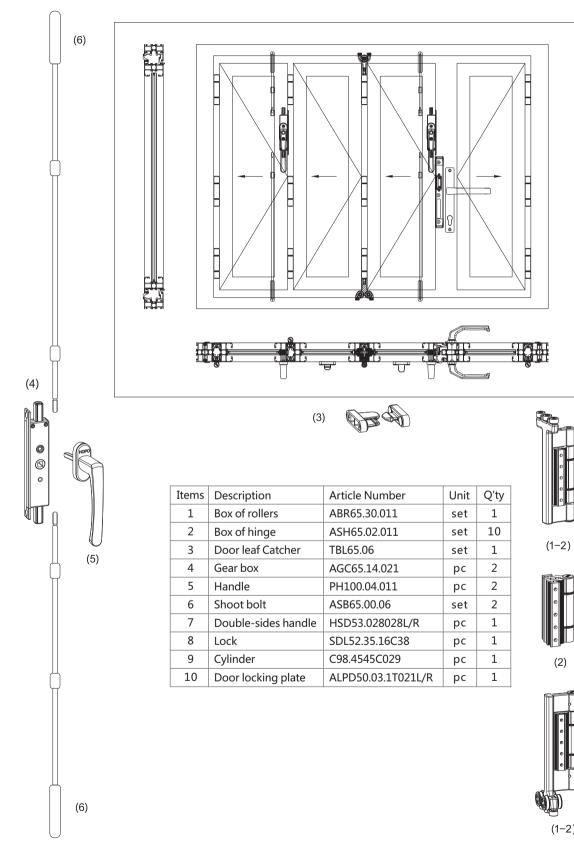


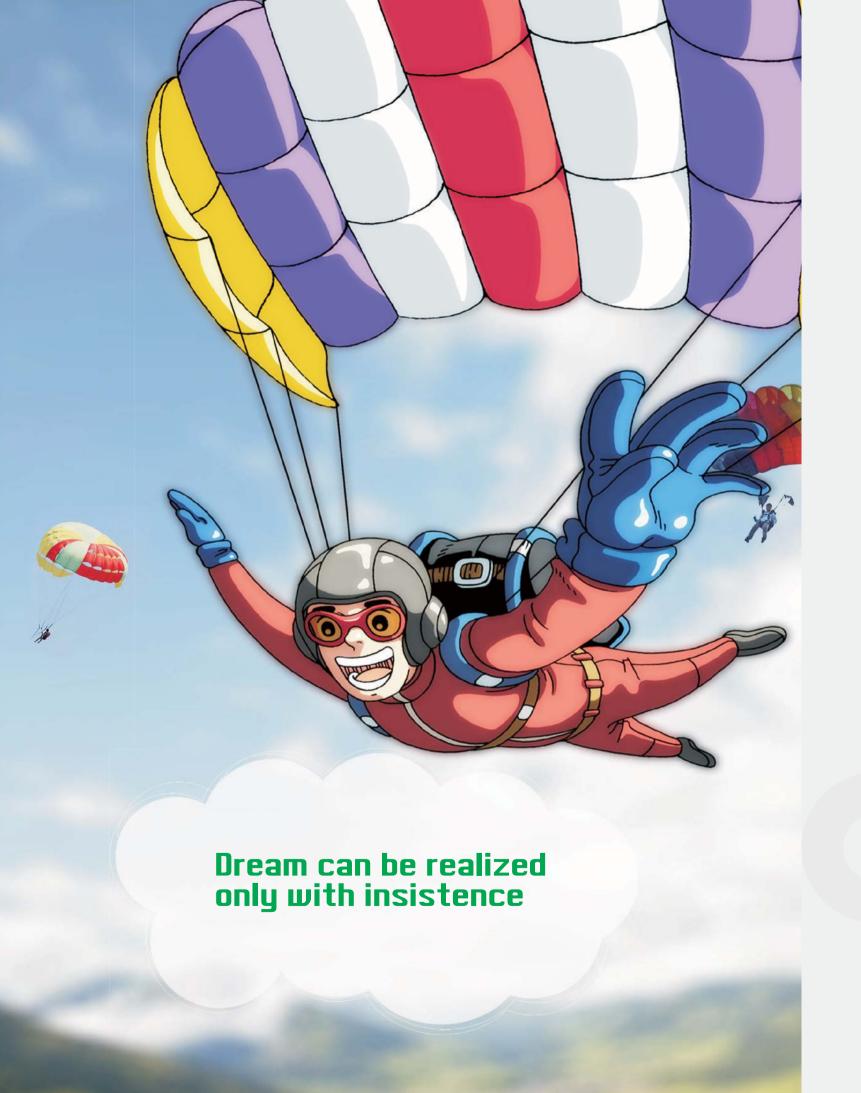






Specification for Sliding Folding Doors, Scheme 431





The most difficult thing for realizing your idea is often the first step you realize it.

To arm your dream with bravery,

you will achieve the final target after overcoming all difficulties.