

# SHUTTER HARDWARE



OPENING DOORS



## ARLU, THE REFERENCE FOR OPENING DOORS

ARLU is the manufacturer behind the argenta® and rob® brand names.
Rob has been a pioneering brand in outdoor hardware for more than 80 years.

Throughout its history, it has invariably focused on offering a complete range of technologies to effortlessly open and close doors and shutters of all shapes and sizes, across their entire lifespan.

Whether your doors slide, fold or tilt, flawless movement starts with reliable hardware. If that hardware can be designed to be fully integrated and as unobtrusive as possible, this only contributes to an unparalleled total experience that perfectly combines looks and user comfort.

Rob stands for a complete range of durable outdoor hardware.

#### 01 STRAIGHT-SLIDING SHUTTERS

sliding shutterssymmetricalsliding shutters

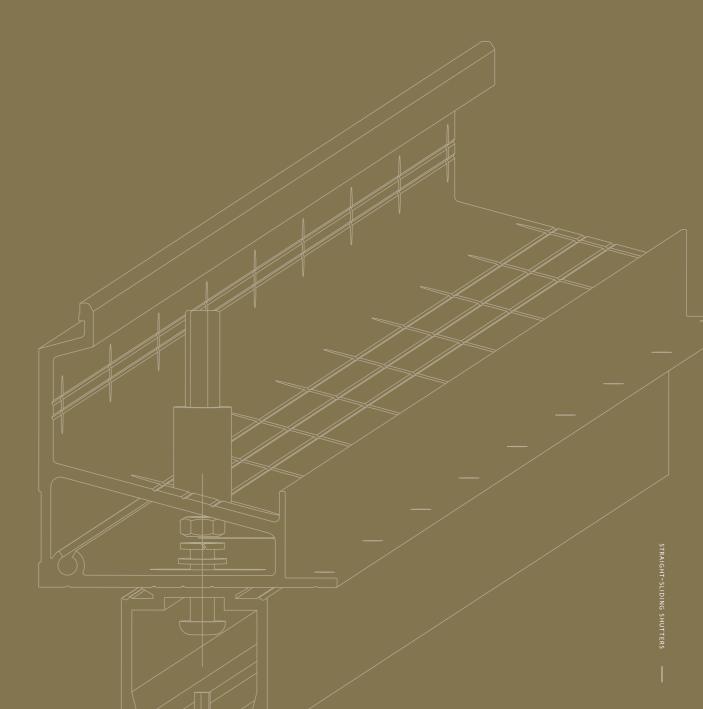
32 telescopic sliding shutters

**02**FOLDING SHUTTER HARDWARE

folding shutters 20 kgfolding shutters 40 kg

# STRAIGHT-SLIDING SHUTTERS

Rob's hardware enables straight-sliding shutters to move more smoothly than ever. Every series is made to operate shutters within its own weight category in the best possible way. Shutters of 40, 80, or 120 kg are fitted with an aluminium track with cover options. Combining a smooth aluminium profile with UPVC wheels on ball bearings, ensures silent operation. A stainless steel variant provides a safe and secure solution to move the heavier shutters up to 180 kg.

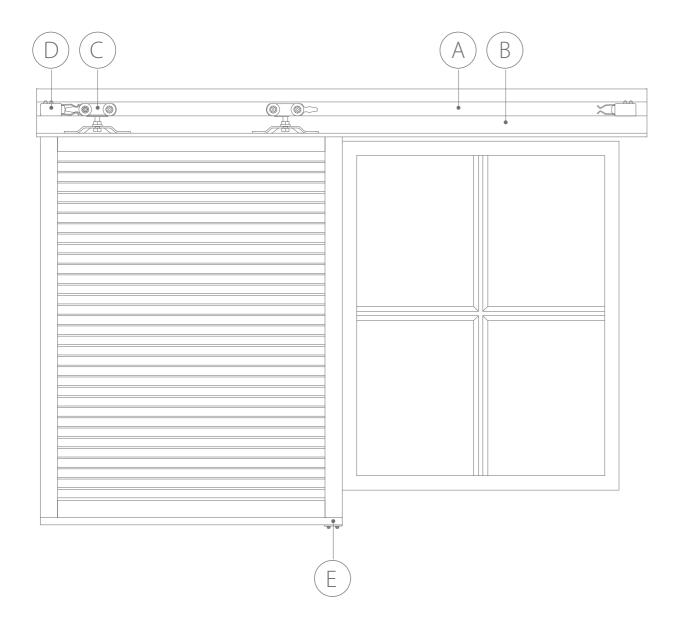


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#### general information

#### Aluminium, timber and PVC

Straight-sliding shutter hardware can be used to slide single, symmetrical or telescopic shutters of various weights, manually or automatically. A wind permeability of at least 50% is required. The maximum surface area must always be respected. If these requirements are met, the hardware complies with the NBN B 03-002-1 standard (wind load on buildings). The quality of this hardware guarantees at least 100,000 cycles.



Running tracks are available for weights of up to 40, 80, or 120 kg per panel. They have bevelled sides that ensure smooth and centred movement of the roller system. All aluminium running tracks are anodised, which makes the running surface even smoother and prevents corrosion. Tracks fit for ceiling mounting all come with pre-drilled holes. For wall-mounted systems, this can be combined with multiple wall brackets. For heavy shutters of up to 180 kg, a stainless steel running track is available that can be mounted to the façade using wall or ceiling brackets.

All hardware is neatly hidden with cover profiles. These untreated aluminium profiles must be removed from their packaging and processed immediately upon receipt to prevent oxidation.

All roller systems are fitted on ball bearings reducing any resistance and allowing each shutter to open with minimal effort. The 80 kg Superior rollers and the heavier 120 kg and 180 kg versions come with one ball bearing per wheel. All random parts are made of AISI 304 stainless steel.

D Just like the roller system, the stopper is a core element of a sliding shutter. When it reaches its end position, the tip of the roller latches into the clamp on the stopper. The stopper catches the shutter and keeps it in position. It can easily be positioned, and the clamping force can be adjusted if necessary. Only the 180 kg version runs into a stopper fitted with rubber and without hold position.

A guide channel is used to keep the shutter at a perfect right angle while moving. Several options are available, but in all cases, a guiding channel limits the maximum surface area of the shutter to 3 m<sup>2</sup>. This surface area can be increased by guiding the shutter through multiple connected channels – feel free to contact us for more information.

The stoppers determine the end positions of the shutters, but they need an additional locking system to hold the shutters firmly in place in their positions. This prevents the shutter from moving and makes it wind-resistant. If a shutter is not locked into place, the wind may cause it to bash against the stoppers too quickly and strongly, which may lead to damage.

<sup>\*</sup> Any warranty will lapse if the proposed setup and the components used therein are deviated from.

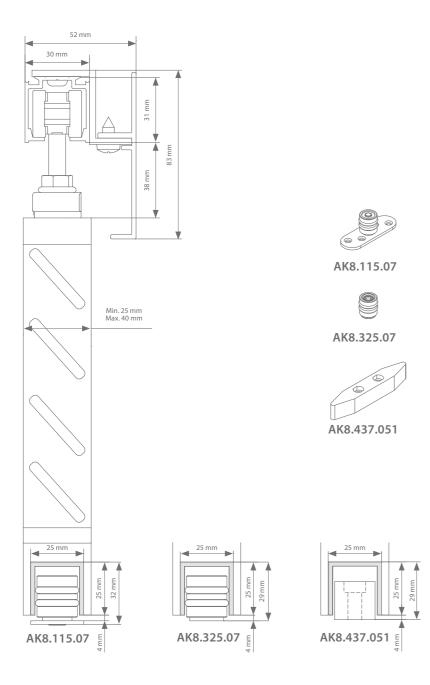


## rob **STRAIGHT-SLIDING SHUTTER HARDWARE** 40 - 180 KG

The shutter can be mounted under the lintel or upon the wall, providing a suitable solution for every situation. With the right choice of bottom guiding system, shutter installations can be expanded from a maximum of 3 m² to a maximum of 6 m². Shutters can be automated for even greater ease of use. What's more, this automation makes it possible to operate the shutters without any need to be able to open the window.

## 40 kg lintel mount

## Technical drawing



## Product requirements

Shutter weight	Max. 40 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Height adjustment	+ / - 3 mm



#### Profiles

	Max. shutter width	Length	Article number
	1000 mm	2000 mm	AG0.208.200
Running track	1500 mm	3000 mm	AG0.208.300
(grey anodised aluminium)	2000 mm	4000 mm	AG0.208.400
	3000 mm	6000 mm	AG0.208.600
	1000 mm	2000 mm	AG9.938.200
Cover profile	1500 mm	3000 mm	AG9.938.300
(untreated aluminium)	2000 mm	4000 mm	AG9.938.400
	3000 mm	6000 mm	AG9.938.600
+ mounting bracket for cover profile	Required eve	ery 480 mm	AG1.138.1
+ set of screws	Required ever	ry 3000 mm	AG1.128.300.9

## Floor-mounted guiding system

	1000 mm	1000 mm	AK0.618.100
Guiding track	2000 mm	2000 mm	AK0.618.200
(untreated aluminium)	3000 mm	3000 mm	AK0.618.300
(untreated aluminium)	4000 mm	4000 mm	AK0.618.400
	6000 mm	6000 mm	AK0.618.600
Guiding system options	1x required up to shutter surface area of 3 m2		AK8.115.07
			AK8.325.07
	2x required up to shutter surface area of 6 m2		AK8.437.051

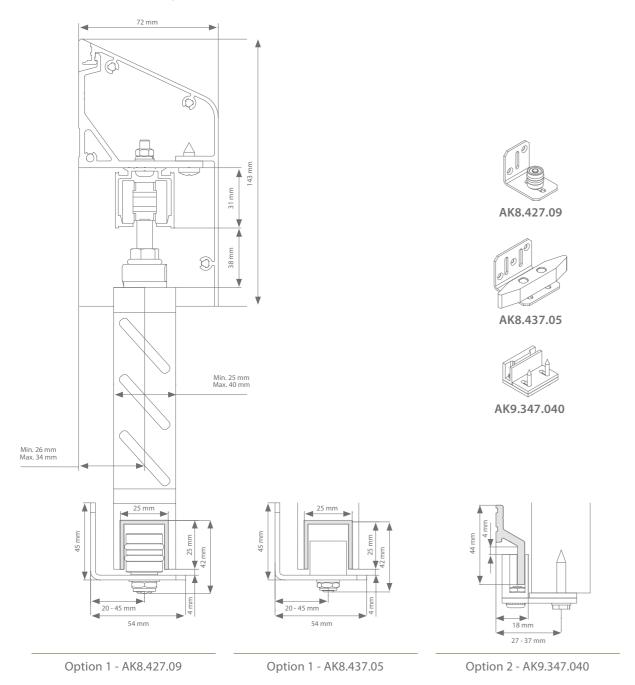
#### Accessories selection

Suspension	ion Transverse suspension	
Fittings	Set incl. 2 rollers, 2 stoppers, and 2 support plates	AG0.100.004

## 40 kg wall mount

# assemble your set

## Technical drawing



## Product requirements

Shutter weight	Max. 40 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m² with an additional guiding system
Height adjustment	+ / - 3 mm

#### Profiles

	Max. shutter width	Length	Article number
	1000 mm	2000 mm	AG0.208.200
Running track	1500 mm	3000 mm	AG0.208.300
(grey anodised aluminium)	2000 mm	4000 mm	AG0.208.400
	3000 mm	6000 mm	AG0.208.600
End wall bracket (untreated aluminium)	2x requi	red	AG1.128.1
Middle wall bracket (untreated aluminium)	Required every 480 mm		AG1.128.2
	1000 mm	2000 mm	AG9.928.200
Cover profile	1500 mm	3000 mm	AG9.928.300
(untreated aluminium)	2000 mm	4000 mm	AG9.928.400
	3000 mm	6000 mm	AG9.928.600
+ set of end caps	1x required		AK9.928
+ set of screws	Required every 3000 mm		AG1.128.300.9

## Wall-mounted guiding system option 1

	1000 mm	1000 mm	AK0.618.100
Guiding track	2000 mm	2000 mm	AK0.618.200
3	3000 mm	3000 mm	AK0.618.300
(untreated aluminium)  Guiding system options	4000 mm	4000 mm	AK0.618.400
	6000 mm	6000 mm	AK0.618.600
	1x required up to shutter surface area of 3 m <sup>2</sup>		AK8.427.09
	2x required up to shutter surface area of 6 m <sup>2</sup>		AK8.437.05

#### Wall-mounted guiding system option 2

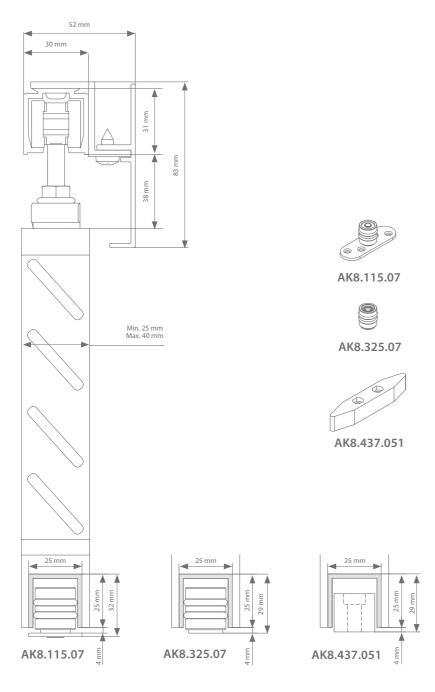
Guiding system options	$2x$ required up to shutter surface area of 3 $m^2$ $4x$ required up to shutter surface area of 6 $m^2$		AK9.347.040
	3000 mm	6000 mm	AK9.340.600
(untreated aluminium)	2000 mm	4000 mm	AK9.340.400
Guiding track	1500 mm	3000 mm	AK9.340.300
	1000 mm	2000 mm	AK9.340.200

#### Accessories selection

Suspension	Transverse suspension	Article number
Fittings	Set incl. 2 rollers, 2 stoppers, and 2 support plates	AG0.100.004

## 80 kg lintel mount

## Technical drawing



## Product requirements

Shutter weight	Max. 80 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Height adjustment	+ / - 3 mm



#### Profiles

	Max. shutter width	Length	Article number
	1000 mm	2000 mm	AK0.208.200
Running track	1500 mm	3000 mm	AK0.208.300
(grey anodised aluminium)	2000 mm	4000 mm	AK0.208.400
	3000 mm	6000 mm	AK0.208.600
	1000 mm	2000 mm	AG9.938.200
Cover profile	1500 mm	3000 mm	AG9.938.300
(untreated aluminium)	2000 mm	4000 mm	AG9.938.400
	3000 mm	6000 mm	AG9.938.600
+ mounting bracket for cover profile	Required ever	y 480 mm	AG1.138.1
+ set of screws	Required every 3000 mm		AG1.128.300.9

## Floor-mounted guiding system

	1000 mm	1000 mm	AK0.618.100
Guiding track	2000 mm	2000 mm	AK0.618.200
3	3000 mm	3000 mm	AK0.618.300
(untreated aluminium)	4000 mm	4000 mm	AK0.618.400
	6000 mm	6000 mm	AK0.618.600
			AK8.115.07
Guiding system options	1x required up to shutter surface area of 3 m <sup>2</sup>		AK8.325.07
_	2x required up to shutter surface area of 6 m <sup>2</sup>		AK8.437.051

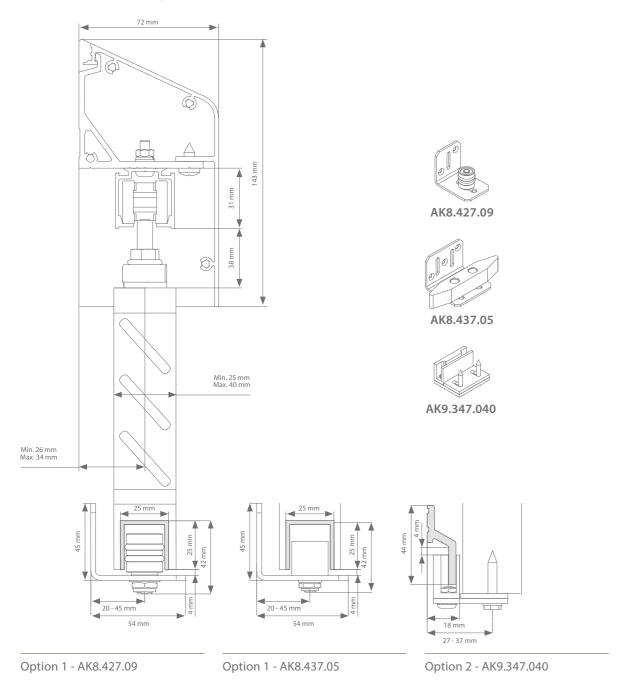
#### Accessories selection option 1

Suspension	Transverse suspension	Article number	
Eittings	Set incl. 2 rollers, 2 stoppers, and 2 support plates	AK0.100.044	
Fittings	Superior Set incl. 2 rollers, 2 stoppers, and 2 support plates	AK0.100.004	

spension Transverse suspension with motor		Article number	
	Superior Set incl. 2 rollers, 2 stoppers, and 2 support plates	AK0.100.004	
Fittings	Automation set incl. carrier, reversing wheel, motor, electronic control panel, transformer, and switch	AK3.100.004.00	
	Min. belt length in metres = (4 x shutter width) + 200 mm	(no. of metres) x AK9.709.001	

## 80 kg wall mount

#### Technical drawing



### Product requirements

Shutter weight	Max. 80 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Height adjustment	+ / - 3 mm

#### Profiles

	Max. shutter width	Length	Article number
	1000 mm	2000 mm	AK0.208.200
Running track	1500 mm	3000 mm	AK0.208.300
(grey anodised aluminium)	2000 mm	4000 mm	AK0.208.400
	3000 mm	6000 mm	AK0.208.600
End wall bracket (untreated aluminium)	2x requi	2x required	
Middle wall bracket untreated aluminium)	Required ever	y 480 mm	AG1.128.2*
	1000 mm	2000 mm	AG9.928.200
Cover profile	1500 mm	3000 mm	AG9.928.300
untreated aluminium)	2000 mm	4000 mm	AG9.928.400
	3000 mm	6000 mm	AG9.928.600
+ set of end caps	1x required		AK9.928
+ set of screws	Required every	<sup>7</sup> 3000 mm	AG1.128.300.9

#### Wall-mounted guiding system option 1

dululing system options	2x required up to shut	ter surface area of 6 m <sup>2</sup>	AK8.437.05
Guiding track (untreated aluminium)  Guiding system options	1x required up to shut	ter surface area of 3 m <sup>2</sup>	AK8.427.09
	6000 mm	6000 mm	AK0.618.600
	4000 mm	4000 mm	AK0.618.400
	3000 mm	3000 mm	AK0.618.300
	2000 mm	2000 mm	AK0.618.200
	1000 mm	1000 mm	AK0.618.100

#### Wall-mounted guiding system option 2

Guiding system options	2x required up to shutter surface area of 3 m <sup>2</sup> / 4x required up to shutter surface area of 6 m <sup>2</sup>		AK9.347.040
	3000 mm	6000 mm	AK9.340.600
(untreated aluminium)	2000 mm	4000 mm	AK9.340.400
Guiding track	1500 mm	3000 mm	AK9.340.300
	1000 mm	2000 mm	AK9.340.200

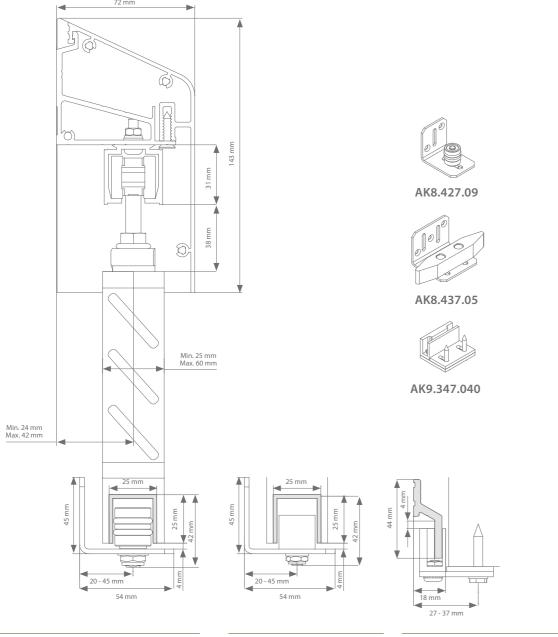
#### Accessories selection option 1

Suspension	Transverse suspension	Article number
Fittings	Set incl. 2 rollers, 2 stoppers, and 2 support plates	AK0.100.044
	Superior Set incl. 2 rollers, 2 stoppers, and 2 support plates	AK0.100.004

uspension Transverse suspension with motor		Article number	
	Superior Set incl. 2 rollers, 2 stoppers, and 2 support plates	AK0.100.004	
Fittings	Automation set incl. carrier, reversing wheel, motor, electronic control panel, transformer, and switch	AK3.100.004.00	
	Min. belt length in metres = (4 x shutter width) + 200 mm	(no. of metres) x AK9.709.001	

## 80 kg wall mount with support profile

#### Technical drawing



Option 1 - AK8.427.09

Option 1 - AK8.437.05

Option 2 - AK9.347.040

#### Product requirements

Shutter weight	Max. 80 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Height adjustment	+ / - 3 mm

#### Advantages

The main advantage of a support profile is that it facilitates quicker installation compared to measuring and positioning every wall bracket.

#### Profiles

	Max. shutter width	Length	Article number
	1000 mm	2000 mm	AK0.208.200
Running track	1500 mm	3000 mm	AK0.208.300
(grey anodised aluminium)	2000 mm	4000 mm	AK0.208.400
	3000 mm	6000 mm	AK0.208.600
	1000 mm	2000 mm	AK1.128.200
Support profile	1500 mm	3000 mm	AK1.128.300
(untreated aluminium)	2000 mm	4000 mm	AK1.128.400
	3000 mm	6000 mm	AK1.128.600
	1000 mm	2000 mm	AK9.928.200
Cover profile	1500 mm	3000 mm	AK9.928.300
(untreated aluminium)	2000 mm	4000 mm	AK9.928.400
	3000 mm	6000 mm	AK9.928.600
+ set of end caps	1x requi	red	AK9.928
+ set of screws	Required every 3000 mm		AK1.128.300.9

#### Wall-mounted guiding system option 1

dululing system options	2x required up to shut	ter surface area of 6 m <sup>2</sup>	AK8.437.05
Guiding track (untreated aluminium)  Guiding system options	1x required up to shut	ter surface area of 3 m <sup>2</sup>	AK8.427.09
	6000 mm	6000 mm	AK0.618.600
	4000 mm	4000 mm	AK0.618.400
	3000 mm	3000 mm	AK0.618.300
	2000 mm	2000 mm	AK0.618.200
	1000 mm	1000 mm	AK0.618.100

#### Wall-mounted guiding system option 2

Guiding system options	2x required up to shutter surface area of 3 m $^2$ / 4x required up to shutter surface area of 6 m $^2$		AK9.347.040
	3000 mm	6000 mm	AK9.340.600
(untreated aluminium)	2000 mm	4000 mm	AK9.340.400
Guiding track	1500 mm	3000 mm	AK9.340.300
	1000 mm	2000 mm	AK9.340.200

#### Accessories selection option 1

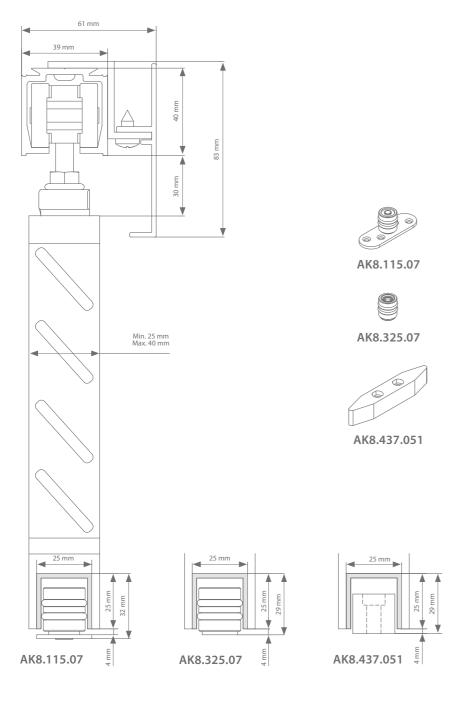
Suspension	Transverse suspension	Article number
Fittings	Set incl. 2 rollers, 2 stoppers, and 2 support plates	AK0.100.044
Fittings	Superior Set incl. 2 rollers, 2 stoppers, and 2 support plates	AK0.100.004

Suspension	Transverse suspension with motor	Article number	
	Superior Set incl. 2 rollers, 2 stoppers, and 2 support plates	AK0.100.004	
Fittings	Automation set incl. carrier, reversing wheel, motor, electronic control panel, transformer, and switch	AK3.100.004.00	
	Min. belt length in metres = (4 x shutter width) + 200 mm	(no. of metres) x AK9.709.001	

# rob sliding shutters 120 kg lintel mount

assemble	your	set	

## Technical drawing



#### Profiles

	Max. shutter width	Length	Article number
	1000 mm	2000 mm	AM0.208.200
Running track	1500 mm	3000 mm	AM0.208.300
(grey anodised aluminium)	2000 mm	4000 mm	AM0.208.400
	3000 mm	6000 mm	AM0.208.600
	1000 mm	2000 mm	AG9.938.200
Cover profile	1500 mm	3000 mm	AG9.938.300
(untreated aluminium)	2000 mm	4000 mm	AG9.938.400
	3000 mm	6000 mm	AG9.938.600
+ mounting bracket for cover profile	Required every	y 480 mm	AG1.138.1
+ set of screws	Required every	3000 mm	AG1.128.300.9

## Floor-mounted guiding system

	1000 mm	1000 mm	AK0.618.100
Guiding track	2000 mm	2000 mm	AK0.618.200
(untreated aluminium)	3000 mm	3000 mm	AK0.618.300
(untreated aluminium)	4000 mm	4000 mm	AK0.618.400
	6000 mm	6000 mm	AK0.618.600
Guiding system options			AK8.115.07
	1x required up to shutt	er surface area of 3 m2	AK8.325.07
_	2x required up to shutt	er surface area of 6 m2	AK8.437.051

#### Accessories selection

Suspension	Transverse suspension	Article number
Fittings	Set incl. 2 rollers, 2 stoppers, and 2 support plates	AM0.100.004

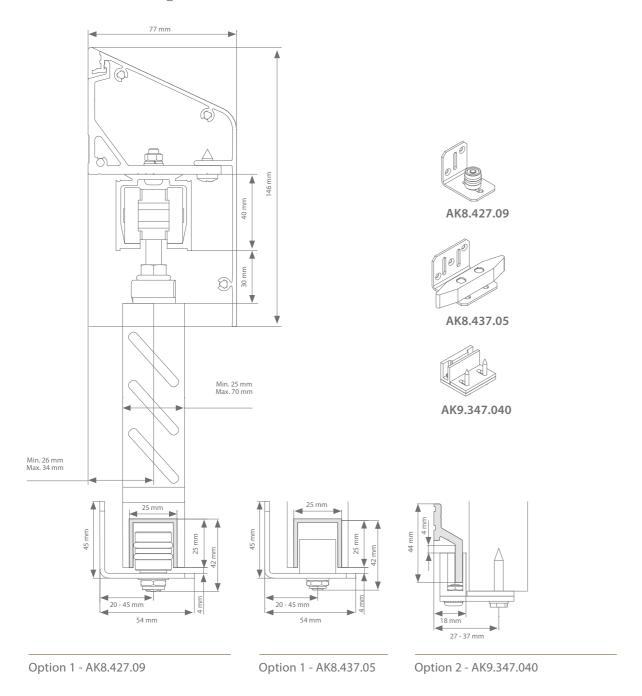
## Product requirements

Shutter weight	Max. 120 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Height adjustment	+ / - 3 mm

## 120 kg wall mount

# assemble your set

## Technical drawing



## Product requirements

Shutter weight	Max. 120 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Height adjustment	+/-3 mm

#### Profiles

	Max. shutter width	Length	Article number
	1000 mm	2000 mm	AM0.208.200
Running track	1500 mm	3000 mm	AM0.208.300
(grey anodised aluminium)	2000 mm	4000 mm	AM0.208.400
	3000 mm	6000 mm	AM0.208.600
End wall bracket (untreated aluminium)	2x requi	red	AM1.128.1
Middle wall bracket (untreated aluminium)	Required every 480 mm		AM1.128.2
	1000 mm	2000 mm	AM9.928.200
Cover profile	1500 mm	3000 mm	AM9.928.300
untreated aluminium)	2000 mm	4000 mm	AM9.928.400
	3000 mm	6000 mm	AM9.928.600
+ set of end caps	1x requi	red	AM9.928
+ set of screws	Required every	3000 mm	AG1.128.300.9

## Wall-mounted guiding system option 1

	1000 mm	1000 mm	AK0.618.100
Cuidin a top als	2000 mm	2000 mm	AK0.618.200
Guiding track	3000 mm	3000 mm	AK0.618.300
(untreated aluminium)	4000 mm	4000 mm	AK0.618.400
	6000 mm	6000 mm	AK0.618.600
Guiding system options	1x required up to shut	ter surface area of 3 m <sup>2</sup>	AK8.427.09
	2x required up to shut	ter surface area of 6 m <sup>2</sup>	AK8.437.05

#### Wall-mounted guiding system option 2

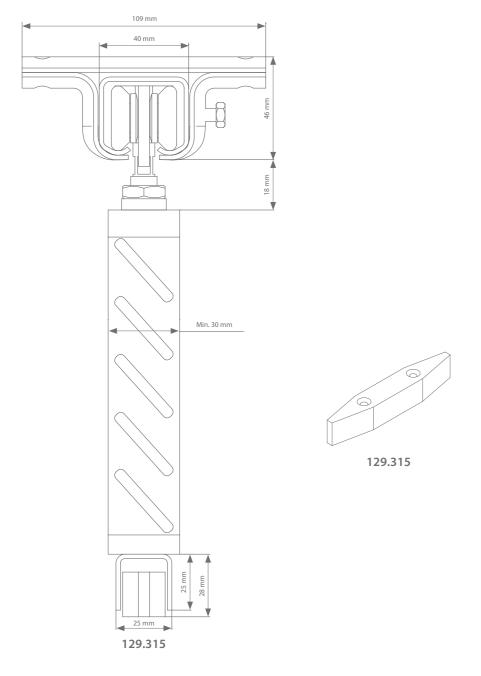
Guiding system options		ter surface area of 3 m <sup>2</sup> ter surface area of 6 m <sup>2</sup>	AK9.347.040
	3000 mm	6000 mm	AK9.340.600
(untreated aluminium)	2000 mm	4000 mm	AK9.340.400
Guiding track	1500 mm	3000 mm	AK9.340.300
	1000 mm	2000 mm	AK9.340.200

#### Accessories selection

Suspension	Transverse suspension	Article number
Fittings	Set incl. 2 rollers, 2 stoppers, and 2 support plates	AM0.100.004

# rob sliding shutters 180 kg lintel mount

## Technical drawing



## Product requirements

Shutter weight	Max. 180 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Height adjustment	+ / - 3 mm



## Profiles

	Max. shutter width	Length	Article number
	1000 mm	2000 mm	120.007.200
Running track	1500 mm	3000 mm	120.007.300
(stainless steel)	2000 mm	4000 mm	120.007.400
	3000 mm	6000 mm	120.007.600
End lintel bracket (stainless steel)	2x requi	red	121.227
Middle lintel bracket (stainless steel)	Required ever	y 600 mm	121.217

## Floor-mounted guiding system

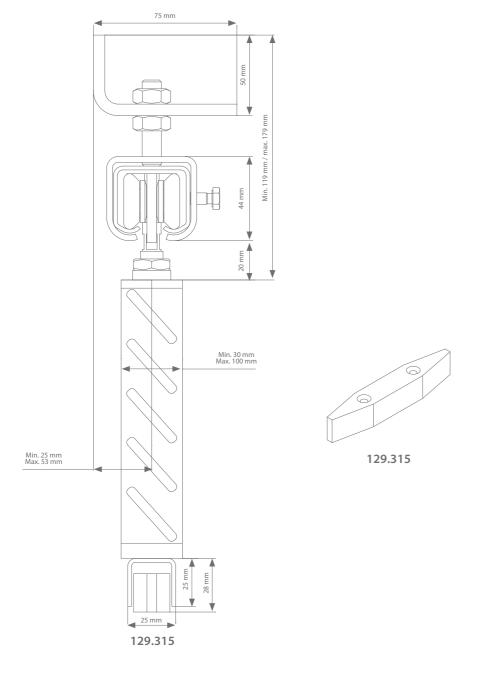
Guiding channel	1x required up to shutter surface area of 6 m2		129.315
	6000 mm	6000 mm	120.607.600
(untreated aluminium)	4000 mm	4000 mm	120.607.400
Guiding track	3000 mm	3000 mm	120.607.300
	2000 mm	2000 mm	120.607.200

## Fittings

Stainless steel roller	2x required	124.257 (with steel bearings) 124.257.02 (with stainless steel bearings)
Stainless steel stopper	2x required	129.617
Stainless steel support plate	2x required	127.617

# rob sliding shutters 180 kg wall mount

## Technical drawing



## Product requirements

Shutter weight	Max. 180 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Height adjustment	+ / - 3 mm



## Profiles

	Max. shutter width	Length	Article number
	1000 mm	2000 mm	120.007.200
Running track	1500 mm	3000 mm	120.007.300
(stainless steel)	2000 mm	4000 mm	120.007.400
	3000 mm	6000 mm	120.007.600
Threaded joint bracket (stainless steel)	2x requi	ired	121.327
Threaded bracket (stainless steel)	Required ever	y 600 mm	121.317
Angle	Required for ev	ery bracket	121.917

## Wall-mounted guiding system option 1

Guiding channel	1x required up to shutter surface area of 6 m2		129.315
	6000 mm	6000 mm	120.607.600
(untreated aluminium)	4000 mm	4000 mm	120.607.400
Guiding track	3000 mm	3000 mm	120.607.300
	2000 mm	2000 mm	120.607.200

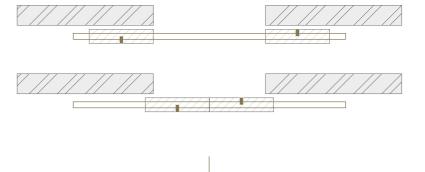
#### Fittings

Stainless steel roller	2x required	124.257 (with steel bearings) 124.257.02 (with stainless steel bearings)
Stainless steel stopper	2x required	129.617
Stainless steel support plate	2x required	127.617



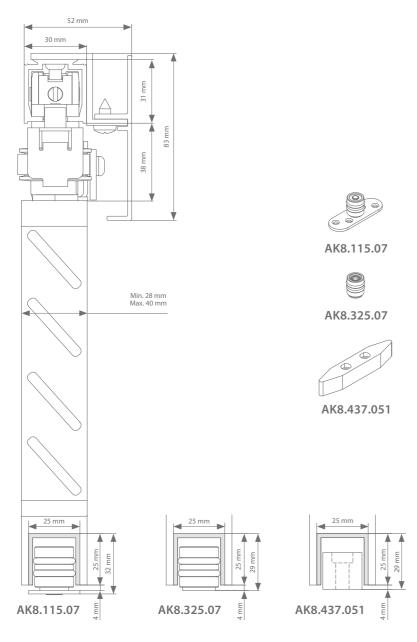
## rob SYMMETRICAL SLIDING SHUTTERS

Symmetrical shutters can be used when there is not enough space available on one side of the window. In a symmetrical system, two shutters are positioned either side of the window, which also has a beneficial effect on the appearance of the façade. Both shutters are connected through a belt to ensure they move simultaneously. With the right choice of bottom guiding system, shutter installations can be expanded from a maximum of 3 m² to a maximum of 6 m². Shutters can be automated for even greater ease of use. What's more, this automation makes it possible to operate the shutters without any need to be able to open the window.



# rob symmetrical sliding shutters 80 kg lintel mount

## Technical drawing



## Product requirements

Shutter weight	Max. 80 kg per panel
Automated shutter weight	Max. 40 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Min. clearance	950 mm - max. clearance = 2900 mm
Height adjustment	+/-3 mm



#### Profiles

	Max. shutter width	Length	Article number
	500 mm	2000 mm	AK0.208.200
Running track	750 mm	3000 mm	AK0.208.300
(grey anodised aluminium)	1000 mm	4000 mm	AK0.208.400
	1500 mm	6000 mm	AK0.208.600
	500 mm	2000 mm	AG9.938.200
Cover profile	750 mm	3000 mm	AG9.938.300
(untreated aluminium)	1000 mm	4000 mm	AG9.938.400
	1500 mm	6000 mm	AG9.938.600
+ mounting bracket for cover profile	Required eve	ry 480 mm	AG1.138.1
+ set of screws	Required ever	y 3000 mm	AG1.128.300.9

#### Floor-mounted guiding system

	1000 mm 2000 mm	1000 mm 2000 mm	AK0.618.100 AK0.618.200
Guiding track 2x	3000 mm	3000 mm	AK0.618.300
(untreated aluminium)	4000 mm	4000 mm	AK0.618.400
	6000 mm	6000 mm	AK0.618.600
	2x required up to shutter surface area of 3 m <sup>2</sup>		AK8.115.07
Guiding system options	2x required up to shutter surface area of 5 m		AK8.325.07
_	3x required up to shutt	ter surface area of 6 m <sup>2</sup>	AK8.437.051

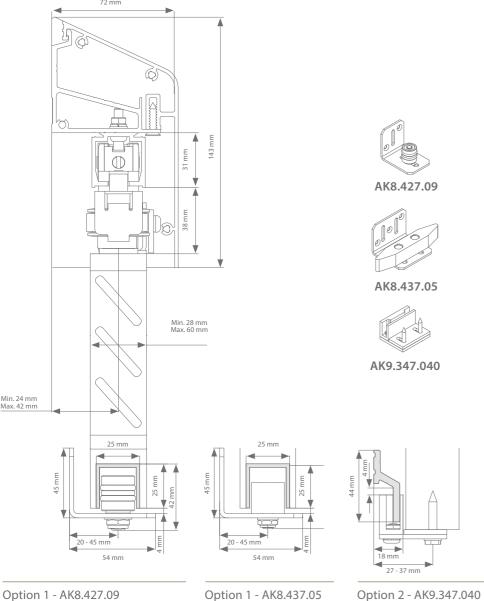
#### Accessories selection option 1

Suspension	Transverse suspension	Article number
Fittings	Superior set incl. 4 rollers, 4 stoppers, 4 support plates, 2 carriers and 2 reversing wheels	AK0.700.004
	Min. belt length in metres = (8 x shutter width) + 200 mm	(no. of metres) x AK9.709.001

Transverse suspension with motor	Article number	
Superior set incl. 4 rollers, 4 stoppers, 4 support plates, 2 carriers and 2 reversing wheels	AK0.700.004	
Automation set incl. carrier, reversing wheel, motor, electronic control panel, transformer, and switch	AK3.700.004.00	
Min. belt length in metres = (8 x shutter width) + 200 mm	(no. of metres) x AK9.709.001	
	Superior set incl. 4 rollers, 4 stoppers, 4 support plates, 2 carriers and 2 reversing wheels  Automation set incl. carrier, reversing wheel, motor, electronic control panel, transformer, and switch	

#### 80 kg wall mount with support profile

#### Technical drawing



Option 1 - AK8.427.09

Option 1 - AK8.437.05

#### Advantages

The main advantage of a support profile is that it facilitates quicker installation compared to measuring and positioning every wall bracket.



#### Max. shutter width Length Article number 500 mm 2000 mm AK0.208.200 AK0.208.300 Running profile 750 mm 3000 mm (grey anodised aluminium) 1000 mm 4000 mm AK0.208.400 AK0.208.600 1500 mm 6000 mm AK1.128.200 500 mm 2000 mm Support profile 750 mm 3000 mm AK1.128.300 AK1.128.400 (untreated aluminium) 1000 mm 4000 mm 1500 mm 6000 mm AK1.128.600 2000 mm AK9.928.200 500 mm Cover profile 750 mm 3000 mm AK9.928.300 (untreated aluminium) 1000 mm 4000 mm AK9.928.400 1500 mm 6000 mm AK9.928.600 + mounting bracket Required every 480 mm AK9.928 for cover profile + set of screws Required every 3000 mm AK1.128.300.9

## Wall-mounted guiding system option 1

dululing system options	3x required up to shutter surface area of 6 m <sup>2</sup>		AK8.437.05
Guiding system options	2x required up to shutter surface area of 3 m <sup>2</sup>		AK8.427.09
	6000 mm	6000 mm	AK0.618.600
Guiding track 2x (untreated aluminium)	4000 mm	4000 mm	AK0.618.400
	3000 mm	3000 mm	AK0.618.300
	2000 mm	2000 mm	AK0.618.200
	1000 mm	1000 mm	AK0.618.100

#### Wall-mounted guiding system option 2

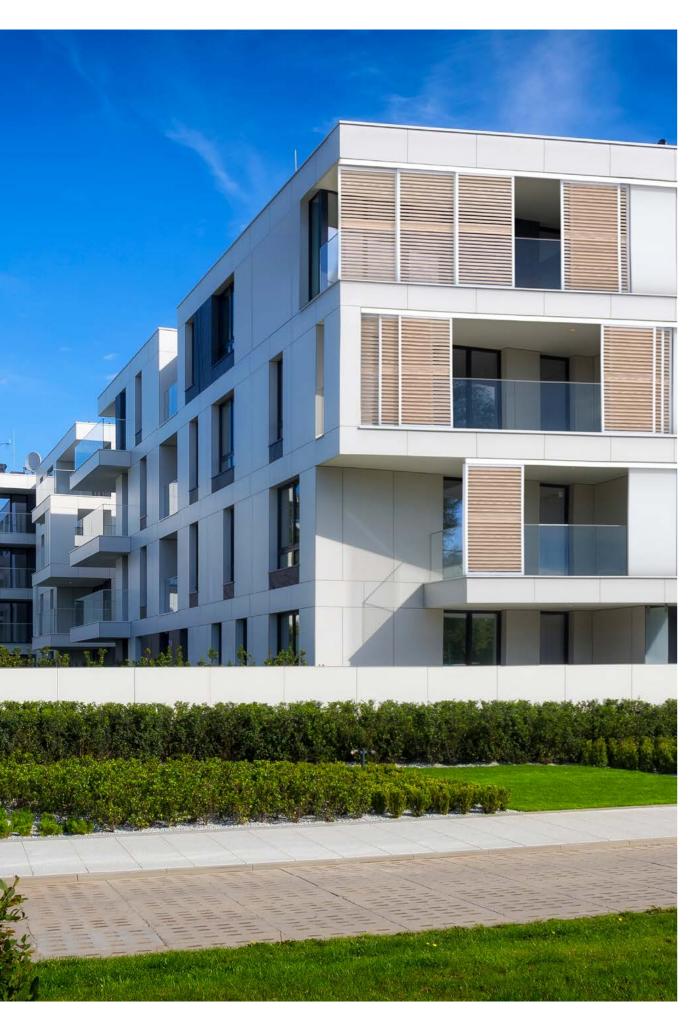
Guiding system options	4x required up to shutter surface area of 3 m <sup>2</sup> / 8x required up to shutter surface area of 6 m <sup>2</sup>		AK9.347.040	
	1500 mm	6000 mm	AK9.340.600	
(untreated aluminium)	1000 mm	4000 mm	AK9.340.400	
Guiding track	750 mm	3000 mm	AK9.340.300	
	500 mm	2000 mm	AK9.340.200	

#### Accessories selection option 1

Suspension	Transverse suspension	Article number
Fittings	Superior set incl. 4 rollers, 4 stoppers, 4 support plates, 2 carriers and 2 reversing wheels	AK0.700.004
-	Min. belt length in metres = (8 x shutter width) + 200 mm	(no. of metres) x AK9.709.001

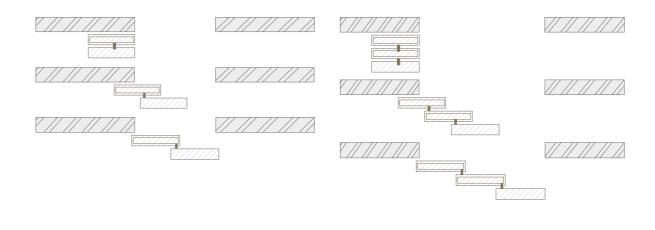
Suspension	Transverse suspension with motor	Article number
Fittings	Superior set incl. 4 rollers, 4 stoppers, 4 support plates, 2 carriers and 2 reversing wheels	AK0.700.004
	Automation set incl. carrier, reversing wheel, motor, electronic control panel, transformer, and switch	AK3.700.004.00
	Min. belt length in metres = (8 x shutter width) + 200 mm	(no. of metres) x AK9.709.001

Shutter weight	Max. 80 kg per panel
Automated shutter weight	Max. 40 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Min. clearance	950 mm - max. clearance = 2900 mm
Height adjustment	+ / - 3 mm



# rob TELESCOPIC SLIDING SHUTTERS

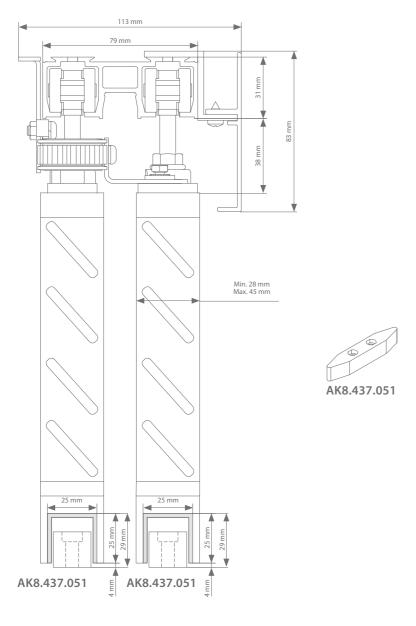
Windows are increasing in surface, but shutters often remain the preferred sun protection option. Using a telescopic system makes it possible to split wide shutters into 2 or 3 shutters, each of which can be stored compactly by the side of a large window. All shutters move simultaneously thanks to a belt connection, which also ensures silent operation. With the right choice of bottom guiding system, shutter installations can be expanded from a maximum of 3 m² to a maximum of 6 m². Shutters can be automated for even greater ease of use. What's more, this automation makes it possible to operate the shutters without any need to be able to open the window.



32

## 2 x 80 kg lintel mount

## Technical drawing



## Product requirements

Shutter weight	Max. 80 kg per panel
Automated shutter weight	Max. 40 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Min. clearance	1120 mm - max. clearance = 3900 mm
Height adjustment	+ / - 3 mm

#### Profiles

	Max. shutter width	Length	Article number
	667 mm	2000 mm	AK0.202.200
Running track	1000 mm	3000 mm	AK0.202.300
(grey anodised aluminium)	1333 mm	4000 mm	AK0.202.400
	2000 mm	6000 mm	AK0.202.600
	667 mm	2000 mm	AG9.938.200
Cover profile	1000 mm	3000 mm	AG9.938.300
(untreated aluminium)	1333 mm	4000 mm	AG9.938.400
	2000 mm	6000 mm	AG9.938.600
+ mounting bracket for cover profile	Required every 480 mm		AG1.138.1
+ set of screws	Required every 3000 mm		AG1.128.300.9

## Floor-mounted guiding system

Guiding system options	7x required up to shutter surface area of 6 m <sup>2</sup>		AK8.437.051
	6000 mm	6000 mm	AK0.618.600
(untreated aluminium)	4000 mm	4000 mm	AK0.618.400
Guiding track 2x (untreated aluminium)	3000 mm	3000 mm	AK0.618.300
	2000 mm	2000 mm	AK0.618.200
	1000 mm	1000 mm	AK0.618.100

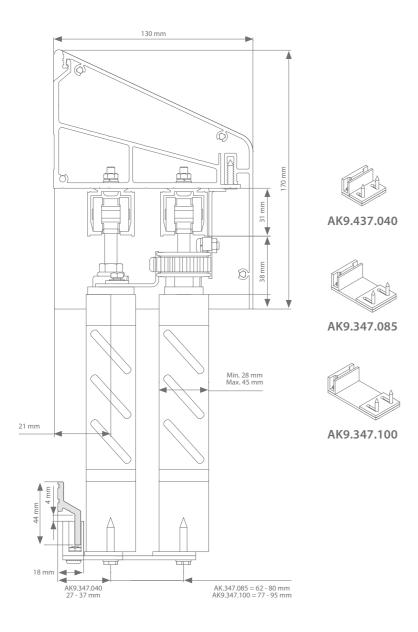
#### Accessories selection option 1

Suspension	Transverse suspension Article number		
Fittings	Superior set incl. 4 rollers, 4 stoppers, 4 support plates, 1 carrier, 1 lock system, and 2 reversing wheels	AK0.800.004	
	Min. belt length in metres = (2 x shutter width) + 400 mm	(no. of metres) x AK9.709.001	

ion Transverse suspension with motor	
Superior set incl. 4 rollers, 4 stoppers, 4 support plates, 1 carrier, 1 lock system, and 2 reversing wheels	AK0.800.004
Automation set incl. carrier, reversing wheel, motor, electronic control panel, transformer, and switch	AK3.100.004.00
Min. belt length in metres = (8 x shutter width) + 600 mm	(no. of metres) x AK9.709.001
	Superior set incl. 4 rollers, 4 stoppers, 4 support plates, 1 carrier, 1 lock system, and 2 reversing wheels  Automation set incl. carrier, reversing wheel, motor, electronic control panel, transformer, and switch

#### 2 x 80 kg wall mount

## Technical drawing



## Product requirements

Shutter weight	Max. 80 kg per panel
Automated shutter weight	Max. 40 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m² with an additional guiding system
Min. clearance	1120 mm - max. clearance = 3900 mm
Height adjustment	+ / - 3 mm



AK9.347.085

(shutter thickness 28 - 35)

AK9.347.100

(shutter thickness 36 - 45)

#### Profiles

	Max. shutter width	Length	Article number
	667 mm	2000 mm	AK0.208.200
Running track (2x)	1000 mm	3000 mm	AK0.208.300
(grey anodised aluminium)	1333 mm	4000 mm	AK0.208.400
(510) 411041044 414111111411,	2000 mm	6000 mm	AK0.208.600
	667 mm	2000 mm	AK1.168.200
Support profile	1000 mm	3000 mm	AK1.168.300
(untreated aluminium)	1333 mm	4000 mm	AK1.168.400
	2000 mm	6000 mm	AK1.168.600
	667 mm	2000 mm	AK9.968.200
Cover profile	1000 mm	3000 mm	AK9.968.300
(untreated aluminium)	1333 mm	4000 mm	AK9.968.400
	2000 mm	6000 mm	AK9.968.600
+ set of end caps	1x requi	red	AK9.968
+ set of screws	Required every	3000 mm	AK1.168.300.9
Floor-mounted gu	uiding system		
	667 mm	2000 mm	AK9.340.200
	1000 mm	3000 mm	AK9.340.300
Guiding track		4000 mm	AK9.340.400
Guiding track (untreated aluminium)	1333 mm	4000 mm	AK9.340.400
_	1333 mm 2000 mm	4000 mm 6000 mm	AK9.340.600

## Accessories selection option 1

**Guiding system options** 

Suspension	Transverse suspension	Article number
Fittings	Superior set incl. 4 rollers, 4 stoppers, 4 support plates, 1 carrier, 1 lock system, and 2 reversing wheels	AK0.800.004
J	Min. belt length in metres = (2 x shutter width) + 400 mm	(no. of metres) x AK9.709.001

2x required up to shutter surface area of 3 m<sup>2</sup> /

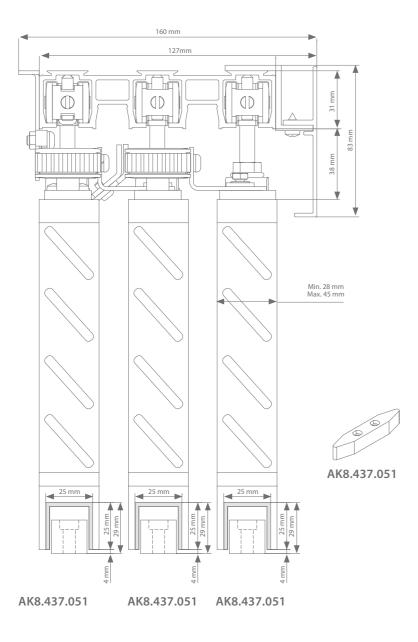
4x required up to shutter surface area of 6 m<sup>2</sup>

2x required up to shutter surface area of 3 m<sup>2</sup> / 4x required up to shutter surface area of 6 m<sup>2</sup>

Suspension	Transverse suspension with motor	Article number	
	Superior set incl. 4 rollers, 4 stoppers, 4 support plates, 1 carrier, 1 lock system, and 2 reversing wheels	AK0.800.004	
Fittings	Automation set incl. carrier, reversing wheel, motor, electronic control panel, transformer, and switch	AK3.100.004.00	
	Min. belt length in metres = (8 x shutter width) + 600 mm	(no. of metres) x AK9.709.001	

## 3 x 80 kg lintel mount

## Technical drawing



## Product requirements

Shutter weight	Max. 80 kg per panel
Wind permeability	Min. 50 %
Surface area	Max. 6m <sup>2</sup> with an additional guiding system
Min. clearance	1680 mm - max. clearance = 4400 mm
Height adjustment	+ / - 3 mm



#### Profiles

Max. shutter width	Length	Article number
500 mm	2000 mm	AK0.203.200
750 mm	3000 mm	AK0.203.300
1000 mm	4000 mm	AK0.203.400
1500 mm	6000 mm	AK0.203.600
500 mm	2000 mm	AG9.938.200
750 mm	3000 mm	AG9.938.300
1000 mm	4000 mm	AG9.938.400
1500 mm	6000 mm	AG9.938.600
Required ever	y 480 mm	AG1.138.1
Required every	7 3000 mm	AG1.128.300.9
	500 mm 750 mm 1000 mm 1500 mm 500 mm 750 mm 1000 mm 1500 mm	500 mm 2000 mm 750 mm 3000 mm 1000 mm 4000 mm 1500 mm 6000 mm 500 mm 2000 mm 750 mm 3000 mm 1000 mm 4000 mm

## Floor-mounted guiding system

Guiding system options	7x required up to shut	ter surface area of 6 m <sup>2</sup>	AK8.437.051
Guiding track 3x (untreated aluminium)	6000 mm	6000 mm	AK0.618.600
	4000 mm	4000 mm	AK0.618.400
	3000 mm	3000 mm	AK0.618.300
	2000 mm	2000 mm	AK0.618.200
	1000 mm	1000 mm	AK0.618.100

#### Accessories selection

Suspension	Transverse suspension	Article number
Fittings	Superior set incl. 6 rollers, 6 stoppers, 6 support plates, 2 carriers, 1 lock system and 4 reversing wheels	AK0.803.004
	Min. belt length in metres = (4 x shutter width) + 200 mm	(no. of metres) x AK9.709.001

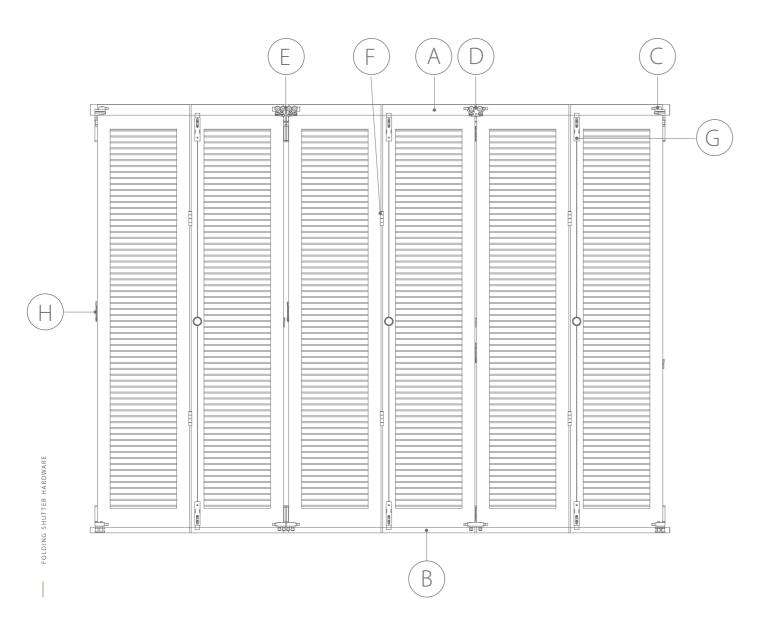


#### folding shutter hardware

#### general information

#### Aluminium, timber and PVC

Folding shutter hardware can be used to equip folding shutters of 20 kg or up to 40 kg per shutter in wood, aluminium of PVC. Our hardware allows folding shutters to be mounted to either the façade or underneath the lintel, for an even number of panels. The hinges are placed on the side of the panels, and a locking option is available. When open, the shutters are at a right angle to the façade (90°). Our hardware guarantees extremely small installation dimensions. Through the special concept of front shutters with a connection against the profiles and a limited opening between the shutters, maximum sun protection is provided in a closed position. The concept of front shutters also offers the option of allowing the same shutter system to run across multiple floors.



A The upper running track carries the weight of the panels. All running tracks in all weight categories can carry a maximum of 4 shutters on each side in a folded position. In case of lower weights per shutter, the number of shutters on each side can be increased as long as the total sum of the shutters does not exceed 4 times the maximum shutter weight. (4 x 20 kg or 4 x 40kg)

The bottom guide track acts as a guiding system for the shutter. In our 20 kg hardware range in particular, we offer multiple track types for floor mounting, wall mounting and recessed installation, as well as a surface mounted track suitable for wheelchair users. If the situation permits, we recommend installing the guiding track with the opening downward. This setup will ensure no water or dirt remains inside the track, meaning it requires no maintenance and will continue to work well.

The fixed pivot determines the direction the shutters fold in and the position they are stored in. Perfect perpendicular installation of the top and bottom pivot will ensure the system works well.

The bottom pivot is vertically flexible. This unique concept allows the shutters to compensate for expansion or contraction of up to 6 mm without a problem. These folding shutters are the only ones on the market that will not be damaged by this kind of expansion.

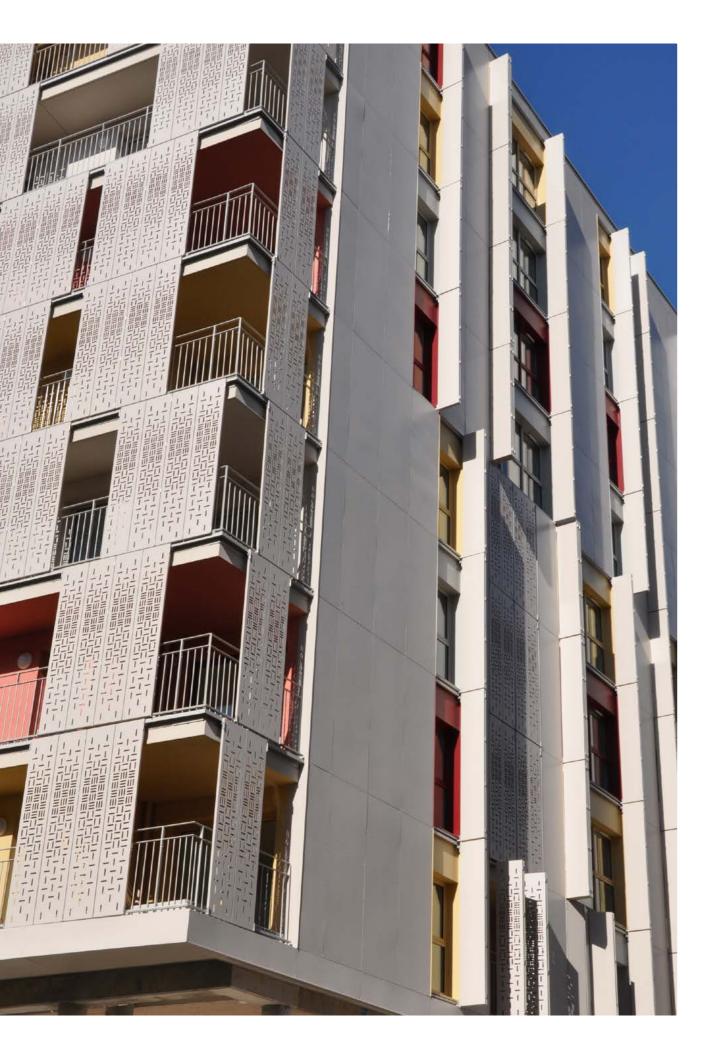
The middle roller holds the middle shutters in place and lines in with the fixed pivot in a folded position. This ensures the shutters are perfectly parallel to each other.

The end roller also lines in with the middle roller to bring the final folded panels into a parallel position.

Every shutter pair is connected to the others with hinges. The number of hinges is determined by the height of the shutter.

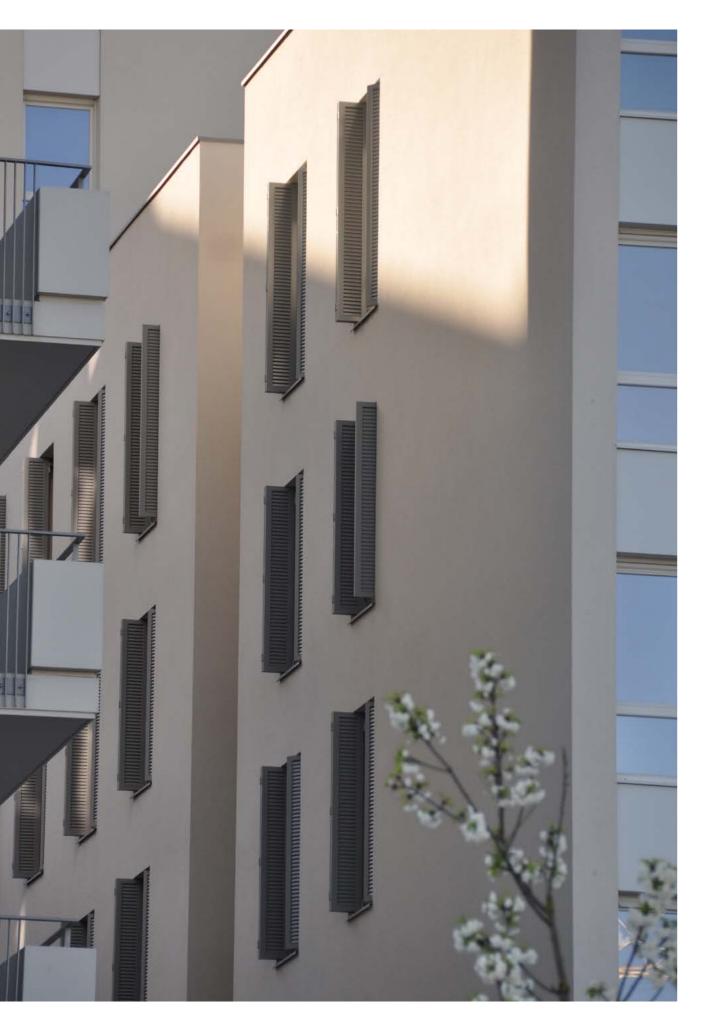
Both locking systems are absolutely essential to withstand hurricane conditions of 12 Beaufort in a flat position.

When the shutters are folded, they need a locking system to be able to withstand wind forces of up to 12 Beaufort. This locking system can be neatly concealed in the slots between the various panels.



## rob FOLDING SHUTTERS 20 KG

Folding shutters are the most compact method to stack A number of shutters aside a window. The gear positions The shutter always in front of the top and bottom track turning the fittings almost invisible on the outside of the building. A folding shutter setup can be fully integrated in a facade cladding. The wide variety of tracks and the 2 types of suspension provide a solution for every facade. Locking in open and/or closed position makes the system resistant to important wind loads.



rob folding shutters 20 kg

#### product requirements



Our 20 kg folding shutters are tested and certified according to the EN 13659 wind load standard. This test subjects the setup to wind forces of 12 Beaufort.

	Beaufort	Wind speed km/h	Wind pressure Pa
Storm	10	89 - 102	374 - 505
Violent storm	11	103 - 117	506 - 665
Hurricane	12	118 - 133	666 - 853

Shutter weight	Max. 20 kg per panel
Number of shutters per side <sup>1</sup>	Max. 4
Wind permeability	0 %
Surface area	Max. 1,5 m <sup>2</sup>
Height <sup>2</sup>	Max. 3 m
Width <sup>3</sup>	Max. 0,5 m
Thickness	30 - 34 mm

In the test, 4 folding shutters on 1 side were used with a maximum width of 0.5 m and a height of 3 m, leading to a surface area of 1.5 m<sup>2</sup>. Each shutter weighed 20 kg, resulting in a total weight of 80 kg.

If more panels are required on each side, the weight per shutter will need to be lowered:

#### Max. weight per shutter (kg) = 80 kg / no. of shutters

Shutters taller than 3 m are possible subject to the use of an additional middle hinge and if the maximum surface area of 1.5 m<sup>2</sup> is respected. If wider shutters are required, the weight per shutter will need to be lowered. Please contact our sales team to discuss these different requirements.

This setup – which is the heaviest possible – was subjected to a static test in which the wind pressure was applied frontally to the shutters in a closed position. The test was carried out on both the outer and inner side of the hardware. The fully closed shutters were subjected to wind pressure of 12 Beaufort.

The folding shutters subsequently underwent a dynamic test in which they were placed in a flat and folded position to be subjected to the same wind pressure. The shutters were turned through 90° each time to simulate the heaviest wind load.

The folding shutters always need a locking system at the top and bottom to be able to withstand such heavy wind loads in a flat position. When the shutters are in a folded position, they need a middle locking system to be able to withstand hurricane conditions. The shutters are only resistant to these wind loads when they are locked in an open or closed position.



static tes



lynamic test



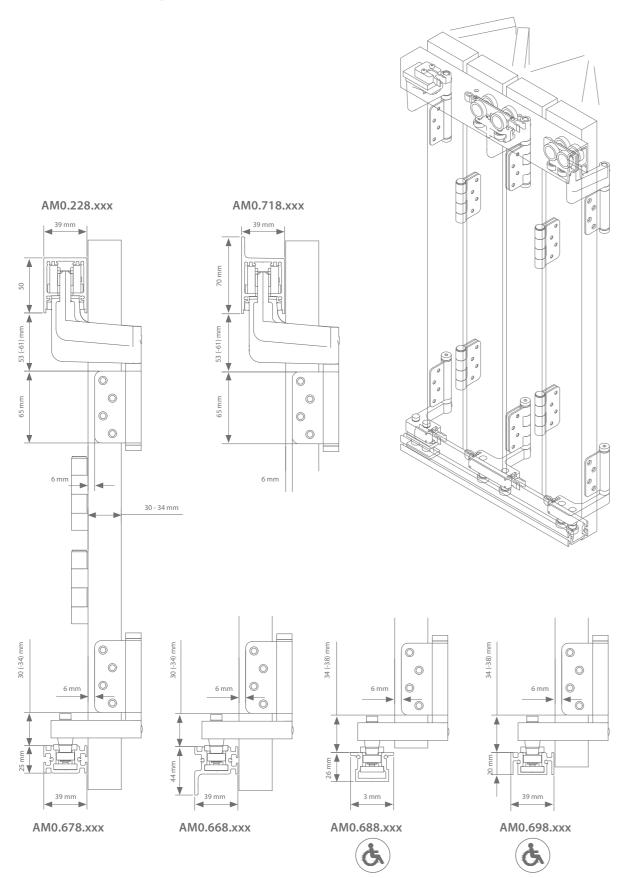
lynamic test

<sup>\*</sup>Test reports can be requested during the sales process.\*\* Any warranty will lapse if the proposed setup and the components used therein are deviated from.

## 20 kg upward guiding track

## assemble your set: part 1

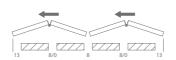
#### Technical drawings



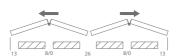
#### Accessories selection Shutter setup looking from the inside out



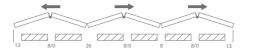
2 Shutters left	Product code
Interior standard	AM0.440.402.00
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.402.00
Coastal area* + RAL of choice	on demand



4 Shutters left	Product code
Interior standard	AM0.440.404.00
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.404.00
Coastal area* + RAL of choice	on demand



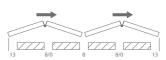
2 Shutters left - 2 Shutters right	Product code
Interior standard	AM0.440.402.02
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.402.02
Coastal area* + RAL of choice	on demand



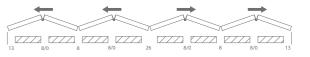
2 Shutters left - 4 Shutters right	Product code
Interior standard	AM0.440.402.04
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.402.04
Coastal area* + RAL of choice	on demand



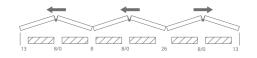
Shutters right	Product code
nterior standard	AM0.440.400.02
nterior + RAL of choice	on demand
Coastal area* standard	AM0.445.400.02
Coastal area* + RAL of choice	on demand



4 Shutters right	Product code
Interior standard	AM0.440.400.04
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.400.04
Coastal area* + RAL of choice	on demand



4 Shutters left - 4 Shutters right	Product code
nterior standard	AM0.440.404.04
nterior + RAL of choice	on demand
Coastal area* standard	AM0.445.404.04
Coastal area* + RAL of choice	on demand



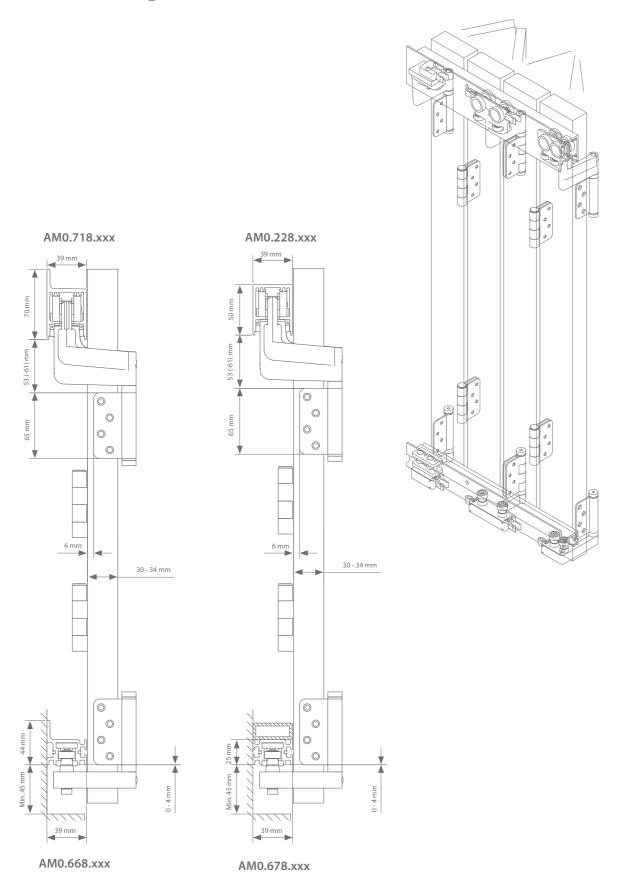
4 Shutters left - 2 Shutters right	Product code
Interior standard	AM0.440.404.02
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.404.02
Coastal area* + RAL of choice	on demand

<sup>\*</sup> The coastal area version is necessary when the folding shutters are installed within 20 km of a coastline. The coastal version is also required in areas with high pollution, high salinity, or high contamination.

## 20 kg downward guiding track

## assemble your set: part 1

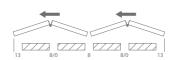
Technical drawings



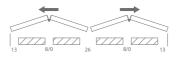
#### Accessories selection Shutter setup looking from the inside out



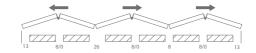
2 Shutters left	Article number
Interior standard	AM0.440.602.00
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.602.00
Coastal area* + RAL of choice	on demand



4 Shutters left	Article number
Interior standard	AM0.440.604.00
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.604.00
Coastal area* + RAL of choice	on demand



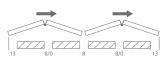
2 Shutters left - 2 Shutters right	Article number
Interior standard	AM0.440.602.02
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.602.02
Coastal area* + RAL of choice	on demand



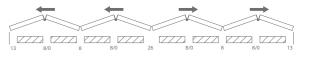
2 Shutters left - 4 Shutters right	Article number
Interior standard	AM0.440.602.04
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.602.04
Coastal area* + RAL of choice	on demand



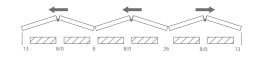
2 Shutters right	Article number
nterior standard	AM0.440.600.02
nterior + RAL of choice	on demand
Coastal area* standard	AM0.445.600.02
Coastal area* + RAL of choice	on demand



4 Shutters right	Article number
Interior standard	AM0.440.600.04
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.600.04
Coastal area* + RAL of choice	on demand



4 Shutters left - 4 Shutters right	Article number
Interior standard	AM0.440.604.04
Interior + RAL of choice	on demand
Coastal area* standard	AM0.445.604.04
Coastal area* + RAL of choice	on demand



Article number
AM0.440.604.02
on demand
AM0.445.604.02
on demand

<sup>\*</sup> The coastal area version is necessary when the folding shutters are installed within 20 km of a coastline. The coastal version is also required in areas with high pollution, high salinity, or high contamination.

#### hinges & profiles

## assemble your set: part 2



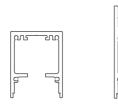
## Middle hin

Intermediate hinge	Rear hinge *clearance can be reduced to 0 mm
AM5.427	AM5.427
on demand	on demand
	011 011111111

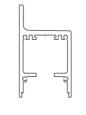
2400 mm < H < 3000 mm

#### Profiles

	Length	Untreated aluminium	Anodised alu	+ RAL of choice
Top track	2000 mm	AM0.228.200	AM0.228.200.0	
Lintel mounting	3000 mm	AM0.228.300	AM0.228.300.0	on demand
	4000 mm	AM0.228.400	AM0.228.400.0	on demand
	6000 mm	AM0.228.600	AM0.228.600.0	
Top track	2000 mm	AM0.718.200	AM0.718.200.0	
Wall mounting	3000 mm	AM0.718.300	AM0.718.300.0	on demand
	4000 mm	AM0.718.400	AM0.718.400.0	on demand
	6000 mm	AM0.718.600	AM0.718.600.0	
Bottom track	2000 mm	AM0.678.200	AM0.678.200.0	
Floor mounting	3000 mm	AM0.678.300	AM0.678.300.0	
	4000 mm	AM0.678.400	AM0.678.400.0	on demand
	6000 mm	AM0.678.600	AM0.678.600.0	
Bottom track	2000 mm	AM0.668.200	AM0.668.200.0	
Wall mounting	3000 mm	AM0.668.300	AM0.668.300.0	
_	4000 mm	AM0.668.400	AM0.668.400.0	on demand
	6000 mm	AM0.668.600	AM0.668.600.0	
Bottom track	2000 mm	AM0.688.200	AM0.688.200.0	
Terrace profile for recessed	3000 mm	AM0.688.300	AM0.688.300.0	
installation	4000 mm	AM0.688.400	AM0.688.400.0	on demand
	6000 mm	AM0.688.600	AM0.688.600.0	
Bottom track	2000 mm	AM0.698.200	AM0.698.200.0	
Floor mounting suitable for	3000 mm	AM0.698.300	AM0.698.300.0	
wheelchairs	4000 mm	AM0.698.400	AM0.698.400.0	on demand
	6000 mm	AM0.698.600	AM0.698.600.0	



AM0.228.xxx



AM0.718.xxx



AM0.678.xxx



AM0.668.xxx



AM0.688.xxx



AM0.698.xxx

rob folding shutters

## folding shutters 20 kg

## assemble your set: part 3



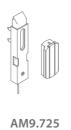
#### Associated locking system

All locking systems listed are required to ensure that the shutters can handle the wind load in a flat or folded position.

					cking systems flat position	Number of locking systems required for folded position
Shutter	r setup looking from the	e inside out		AM9.728 or AM9.725 or AM9.748.240	AM9.728.02*	AM9.738* or AM9.737*
			2R	1x	1x	1x
2L				1x	1x	1x
2L			2R	2x	2x	2x
			4R	2x	2x	2x
4L				2x	2x	2x
4L			4R	4x	4x	4x
4L			2R	3x	3x	3x
2L			4R	3х	3x	3x

If using profile AM0.688.xxx, you will need an AM9.727.03 terrace piece per locking system in a flat position.



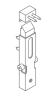




AM9.748.240



AM9.728.02





AM9.737

AM9.738

<sup>\*</sup> Locking mechanism AM9.728.02, AM9.738 or AM9.737 are only required if the area of the shutter exceeds 1,1m<sup>2</sup>.



## rob FOLDING SHUTTERS 40 KG

Folding shutters are the most compact method to stack a number of shutters aside a window. The gear positions the shutter always in front of the top and bottom track turning the fittings almost invisible on the outside of the building. A folding shutter setup can be fully integrated in a facade cladding. The folding shutters up to 40 kg per panel are the strongest of its kind and are able to fold full panels up to 2.4 m². Locking in open and/or closed position makes the system resistant to important wind loads.

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rob folding shutters 40 kg

#### product requirements



Our 40 kg folding shutters are tested and certified according to the EN 13659 wind load standard. This test subjects the setup to wind forces of 12 Beaufort.

	Beaufort	Wind speed km/h	Wind pressure Pa
Storm	10	89 - 102	374 - 505
Violent storm	11	103 - 117	506 - 665
Hurricane	12	118 - 133	666 - 853

In the test, 4 folding shutters on 1 side were used with a maximum width of 0.8 m and a height of 3 m, leading to a surface area of 2.4 m<sup>2</sup>. Each shutter weighed 40 kg, resulting in a total weight of 160 kg.

If more panels are required on each side, the weight per shutter will need to be lowered:

#### Max. weight per shutter (kg) = 160 kg / no. of shutters

Shutters taller than 3 m are possible subject to the use of an additional middle hinge and if the maximum surface area of 2.4 m<sup>2</sup> is respected. If wider shutters are required, the weight per shutter will need to be lowered. Please contact our sales team to discuss these different requirements.

This setup – which is the heaviest possible – was subjected to a static test in which the wind pressure was applied frontally to the shutters in a closed position. The test was carried out on both the outer and inner side of the hardware. The fully closed shutters were subjected to wind pressure of 12 Beaufort.

The folding shutters subsequently underwent a dynamic test in which they were placed in a flat and folded position to be subjected to the same wind pressure. The shutters were turned through 90° each time to simulate the heaviest wind load.

The folding shutters always need a locking system at the top and bottom to be able to withstand such heavy wind loads in a flat position. When the shutters are in a folded position, they need a middle locking system to be able to withstand hurricane conditions. The shutters are only resistant to these wind loads when they are locked in an open or closed position.

Shutter weight	Max. 40 kg per panel
Number of shutters per side <sup>1</sup>	Max. 4
Wind permeability	0 %
Surface area	Max. 2,4 m <sup>2</sup>
Height <sup>2</sup>	Max. 3 m
Width <sup>3</sup>	Max. 0,8 m
Shutter thickness	30 - 34 mm / 40 mm



static tes



lynamic test



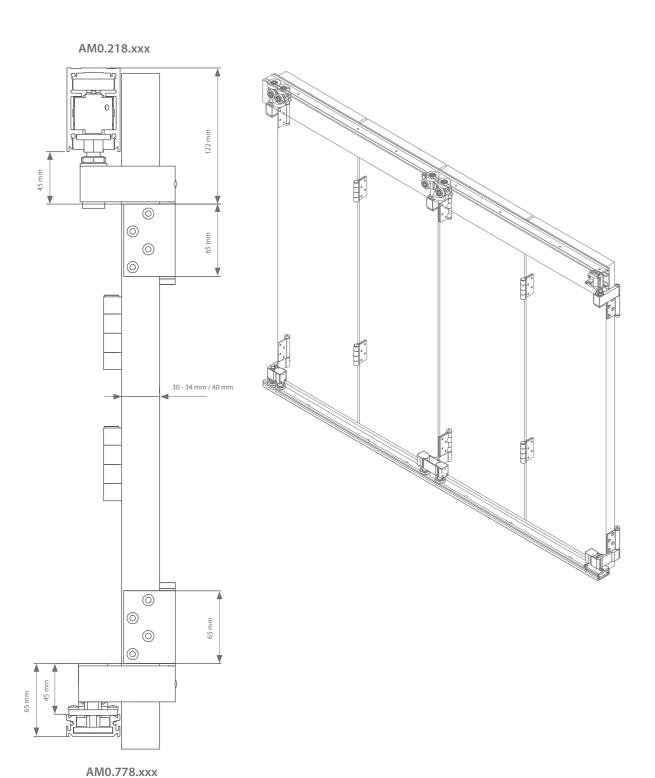
namic test

Test reports can be requested during the sales process." Any warranty will lapse if the proposed setup and the components used therein are deviated from.

## 40 kg upward guiding track

## assemble your set: part 1

Technical drawings



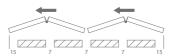
#### Accessories selection Shutter setup looking from the inside out



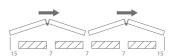
2 Shutters left	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.402.00	AM0.465.402.00
+ RAL of choice	on demand	on demand



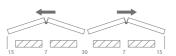
2 Shutters right	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.400.02	AM0.465.400.02
+ RAL of choice	on demand	on demand



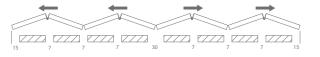
4 Shutters left	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.404.00	AM0.465.404.00
+ RAL of choice	on demand	on demand



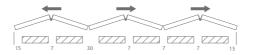
4 Shutters right	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.400.04	AM0.465.400.04
+ RAL of choice	on demand	on demand



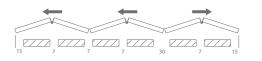
2 Shutters left - 2 Shutters right	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.402.02	AM0.465.402.02
+ RAL of choice	on demand	on demand



4 Shutters left - 4 Shutters right	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.404.04	AM0.465.404.04
+ RAL of choice	on demand	on demand



on demand	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.402.04	AM0.465.402.04
+ RAL of choice	on demand	on demand



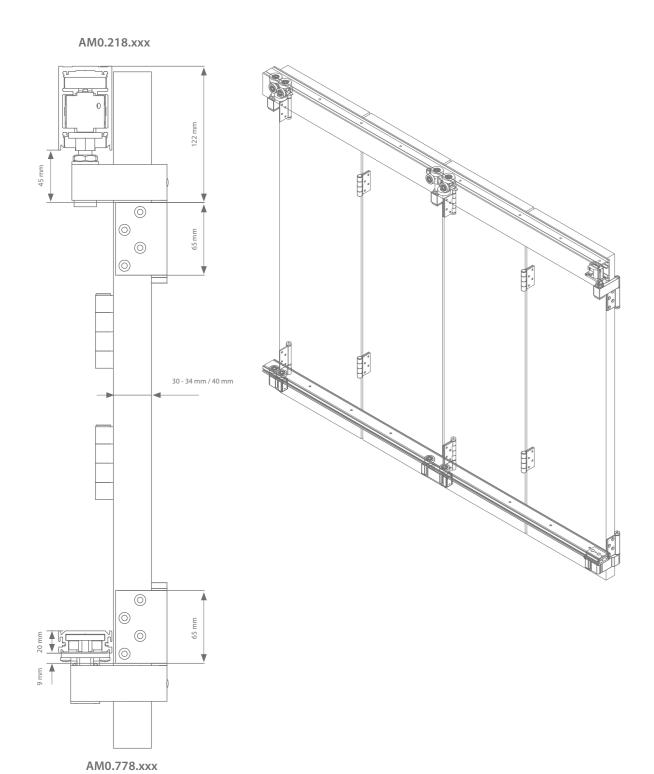
4 Shutters left - 2 Shutters right	Shutter thickness 30-34 mm	Shutterthickness 40 mm
Anodised aluminium	AM0.455.404.02	AM0.465.404.02
+ RAL of choice	on demand	on demand

<sup>\*</sup> Both versions are resistant to circumstances with high salinity, high pollution, or high contamination.

## 40 kg downward guiding track

## assemble your set: part 1

Technical drawings



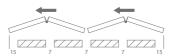
#### Accessories selection Shutter setup looking from the inside out



2 Shutters left	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.602.00	AM0.465.602.00
+ RAL of choice	on demand	on demand



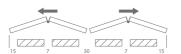
2 Shutters right	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.600.02	AM0.465.600.02
+ RAL of choice	on demand	on demand



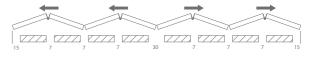
4 Shutters left	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.604.00	AM0.465.604.00
+ RAL of choice	on demand	on demand



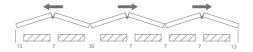
4 Shutters right	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.600.04	AM0.465.600.04
+ RAL of choice	on demand	on demand



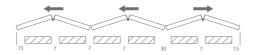
2 Shutters left - 2 Shutters right	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.602.02	AM0.465.602.02
+ RAL of choice	on demand	on demand



4 Shutters left - 4 Shutters right	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.604.04	AM0.465.604.04
+ RAL of choice	on demand	on demand



2 Shutters left - 4 Shutters right	Shutter thickness 30-34 mm	Shutter thickness 40 mm
Anodised aluminium	AM0.455.602.04	AM0.465.602.04
+ RAL of choice	on demand	on demand



4 Shutters left - 2 Shutters right	Shutter thickness 30-34 mm	Shutterthickness 40 mm
Anodised aluminium	AM0.455.604.02	AM0.465.604.02
+ RAL of choice	on demand	on demand

<sup>\*</sup> Both versions are resistant to circumstances with high salinity, high pollution, or high contamination.

## hinges & profiles

## assemble your set: part 2



#### Middle hinges

	Shutterthickness 30-34 mm	No. of hinges per 2 shutters	Shutter height	
9.034 AM5.429.040	AM5.429.034	2	H < 1500 mm	Middle hinge
		3	1500 mm < H < 2400 mm	
		4	2400 mm < H < 3000 mm	
and on demand	on demand	2	H < 1500 mm	Middle hinge RAL of choice
		3	1500 mm < H < 2400 mm	
		4	2400 mm < H < 3000 mm	
	on dem	2 3	2400 mm < H < 3000 mm  H < 1500 mm  1500 mm < H < 2400 mm	Middle hinge RAL of choice

#### Profiles Profile length = (no. of shutters x shutter width) + sum of clearances

	Length	Untreated aluminium	Anodised alu	+ RAL of choice
Top track	2000 mm	AM0.218.200	AM0.218.200.0	
(Lintel mounting)	3000 mm	AM0.218.300	AM0.218.300.0	
	4000 mm	AM0.218.400	AM0.218.400.0	on demand
	6000 mm	AM0.218.600	AM0.218.600.0	
Bottom track	2000 mm	AM0.778.200	AM0.778.200.0	
(Floor mounting)	3000 mm AM0.778.300 AM0.778.300.0			
	4000 mm	AM0.778.400	AM0.778.400.0	on demand
	6000 mm	AM0.778.600	AM0.778.600.0	





AM0.218.xxx

AM0.778.xxx

rob folding shutters

## folding shutters 40 kg

## assemble your set: part 3



#### Associated locking system

All locking systems listed are required to ensure that the shutters can handle the wind load in a flat or folded position.

				Number of locking systems required for flat position		Number of locking systems required for folded position
Shutter setup looking from the inside out				AM9.728 or AM9.725 or AM9.748.240	AM9.728.02*	AM9.738* or AM9.737*
			2R	1x	1x	1x
2L				1x	1x	1x
2L			2R	2x	2x	2x
			4R	2x	2x	2x
4L				2x	2x	2x
4L			4R	4x	4x	4x
4L			2R	3x	3x	3х
2L			4R	3x	3x	3х

<sup>\*</sup> Locking mechanism AM9.728.02, AM9.738 or AM9.737 are only required if the area of the shutter exceeds 1,1m².













AM9.728

AM9.725

(30-34 mm) AM9.748.540

AM9.728.02

AM9.738

AM9.737









