Harol Vertical Sun Protection

Be well-protected against the sunniest of summers____



Screen the sun smartly where ever you are

1.1

Whilst we all yearn the sun, we still need summer shade too, of course. Harol has perfected its sun protection systems over the years to make interiors more pleasant. **Screens, pivot arm awnings, exterior venetian blinds**: Harol products can offer it all in terms of indoor climate, energy savings, aesthetics and comfort - and with no structural alterations or demolition work. Your home or office remains beautifully cool even on the hottest of summer days.

Harol has the **most attractive benefits and quality guarantees** under the sun:

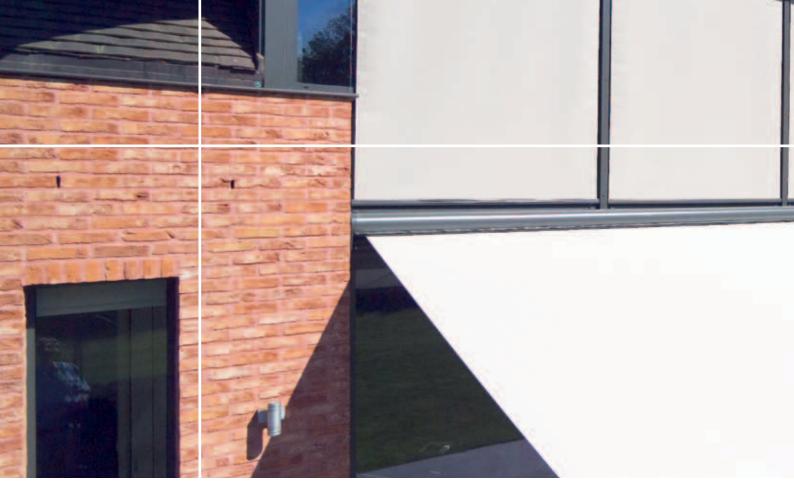


- > Your home can remain **comfortable at all times**
- > Your furniture, wallpaper, flooring and curtains are all **protected against discolouration**
- > You are assured **professionally-fitted**, **bespoke work**
- Your cloths are made in accordance with the standards laid down by VEROZO and ROMAZO (Benelux trade associations)
- > This means you can be sure that only **highly durable materials** have been used
- > You can choose from all possible technical options
- > You can enjoy the **latest in ease of use**, from manual control to home automation
- You can choose from an extensive colour range at the standard price
- > You have the assurance of an **up to 5-year warranty**



>> Harol screens (renovation) Harol screens (new-build houses) >> Harol pivot arm awnings

>> Harol exterior venetian blinds



Quality

Harol offers the highest quality in the largest dimensions, with screens of up to 18 m² to create a uniform and streamlined unit. The innovative tensioning system in the guide rail keeps the fabric in place, preventing the fabric from flapping, the bottom laths from moving and intrusive sunlight from shining in. The SC900 Iso also offers unique insulation of at least 1.3 W/m2K, as well as especially good acoustic insulation.



Comfort

Harol developed its screens in order to make the indoors more pleasant on hot days. Screens keep your home at the right temperate and make it more energy-efficient. You save money on air cooling because 90% of the heat is obstructed before it even reaches the window. The 'SC1000 ENVIRO' SCREEN IS made invisible in the cavity and meets the most stringent energy requirements. Moreover, screens are ideal filters that prevent annoying sunlight on TV and computer screens, yet still give you a clear view outside.



Colours

Harol offers a unique range of colours: in addition to naturalcoloured anodized aluminium, there is also a choice from up to 300 tasteful RAL colours. This allows you to perfectly match your screen to the style and colour of your home or office building facade.

Trendy colours with a granulated structure are also available. This structured paint is especially wear- and scratch-proof, dirtrepellent and, consequently, requires very little maintenance. Structured paint gives your screen a stylish, contemporary look.

Do you want to bring the sun into your home? Or would you prefer to keep heat and light out?



Design

Screens are easy to fit to any window profile or facade. The main components of a screen are the box, the bottom lath, the fabric and the quide rails. These are made from extruded aluminium, with a powder coating or naturalcoloured anodized aluminium. For an extra sleek facade appearance you can choose from the SC900 iso mounted screen, the SC910 PURE and the SC1000 ENVIRO, which has a box that is invisible from the outside.



Controls

There are 2 ways to unroll your Harol screen: manually or using the electric motor with just one press of a button. You can link various home automation systems to the electric controls. They can be set to operate automatically depending on the intensity of the sun and wind. This will make your home feel refreshingly cool when you return home from work in the evening.



Customization

The Harol range includes 5 different types of screen, so you will always find the right one to match your requirements. For the renovation market there is the SC700 BASIC and the SC800 AERO with its wind-resistant screen. For the new-build market Harol has the SC900 uso mounted screen, which, with its high insulation value, is unique in the market. Even for passive houses there is a suitable product, i.e. the SC910 PURE and the SC1000 ENVIRO. With this, Harol offers solutions for every need.

Screens

Screens customized for your requirements

Building and refurbishing have become a case of energy management. Our summers are becoming warmer, leaving us with an overheated house. Sun protection today is an integral part of an energy-efficient house, and innovation provides for increasingly improved performance in the field of thermal and acoustic insulation. Never before was your return on investment in a screen as high.

The SC700 BASIC and SC800 AERO Screens are the ideal solution for renovations and existing windows. For some time now the SC900 ISO already belonged to the new generation with its unique insulation value, and it is now even one step further ahead. With the SC910 PURE and the SC1000 ENVIRO, Harol aims firmly at the new-build market and the highest possible energy requirements. In short, from renovation to passive build, there is now a suitable solution for every need.

Ask a Harol partner to give you advice that fully meets your specific needs.



RENOVATION



- > box is fitted in front of the window
- > 2 versions: rounded and straight
- > perfect basic model



- > box is fitted in front of the window
- > 2 versions: rounded and straight
- > fabric with track principle
- > ideal for large areas

NEW-BUILD HOUSES + BIGGER RENOVATIONS



- > box is fitted on the window
- with thermal (unique) and acoustic insulation



- > box is fitted on the window
- insulation to be provided by the customer



- box is fitted in the cavity, in front of the window
- perfect for low-energy and passive houses
- > no perforation of building shell

Harol screen with Crystal-Clear windows

Fabrics that always appeal

The fabric in particular determines the appearance. At Harol, you can choose from a wide range of **single or two-coloured fabrics**. Whether you opt for a neutral colour or a striking one, you are sure to find a fabric that perfectly matches the frame and the style of your home.

The sun-resistant screen fabrics are made of **polyester or glass fibre**. They are resistant to the wind and weather, rot-proof, mildew proof and dirt-repellent. Unlike the fabric on blackout screens, a screen fabric is always somewhat **transparent** so as to maintain your view outside. For a great view of your garden, even when the screens are down, you can incorporate **Crystal-Clear windows** in the fabric for exterior use in your garden or on your terrace.

Harol blackout screens are the solution for your bedroom or projection room. The **polyester with coating** combined with the zipper system in the guide rails ensure that light is kept out completely.



Fabric type: polyester 86/92

- > composition: polyester fibres coated with PVC
- > **colours**: single colours as the collection brochure
- > thickness: 86: 0.43 mm 92: 0.45 mm
- > transmittance of direct sun rays: 14% or 4%
- properties: excellent ventilation, protection against UV radiation, dirt-repellent, fire retardant class M1

Fabric type: glass fibre

- **composition:** glass fibres coated with PVC
- > colours: single or two-coloured fabrics as the collection brochure
- > thickness: 0.55 mm
- > transmittance of direct sun rays: 5%
- properties: excellent ventilation properties, protection against UV radiation, dirt-repellent, fire retardant class M1

Fabric type: Precontraint and Crystal-Clear

- > composition: pre-tensioned using the précontraint principle and coated with PVC
- > colours: 602 is available in 2 colours
 - **302** is available in 16 single colours
 - Crystal-Clear in transparent
- > thickness: 302: 0.40 mm
 - **602:** 0.60 mm
 - Crystal-Clear: 0.70 mm
- > properties: PVC Precontraint 602 fabric: light-proof, fire retardant class M2 PVC Precontraint 302 fabric: light-permeable, fire retardant class M2

Fabric type: blackout fabric B92

Both the **SC900** and the **SC800** can also be used as a blackout screen if they are made with blackout fabric.

- > composition: polyester fibres coated with PVC
- > colours: one side always grey, other side: single colours as the collection brochure
- > thickness: 0.60 mm
- > opaque fabric: direct sunlight allowed through 0%
- > properties: protection against UV radiation, dirt-repellent, fire retardant class M2

 * with the exception of the SC700 $_{\text{BASIC}}$



Operation

The screens are extremely easy to use. You can open or close them **manually** with an operating rod or **electrically**, perhaps even integrated into a home automation system. They can even be set to operate automatically depending on the intensity of the sun and wind.

- You can choose from the following systems for the SC700 BASIC:
 - > Manual operation with a tape, cord or operating rod
 - Electrically operated, built-in tubular motor with a wall transmitter, remote control or home automation & wind and/or sun sensor
- You can choose from the following systems for the SC800 AERO:
 - > Manual operation with an operating rod
 - Electrically operated, built-in tubular motor with a standard switch, wall transmitter, remote control or home automation & wind and/or sun sensor
- The SC900 ISO, SC910 PURE and SC1000 ENVIRO are always electrically operated. As with the SC800 AERO, you can fit your screen with a wind and/or sun sensor for automatic operation. This controls your screen depending on the intensity of the sun and the wind speed.





remote control



Smoove sender

wind- and/or sun sensor

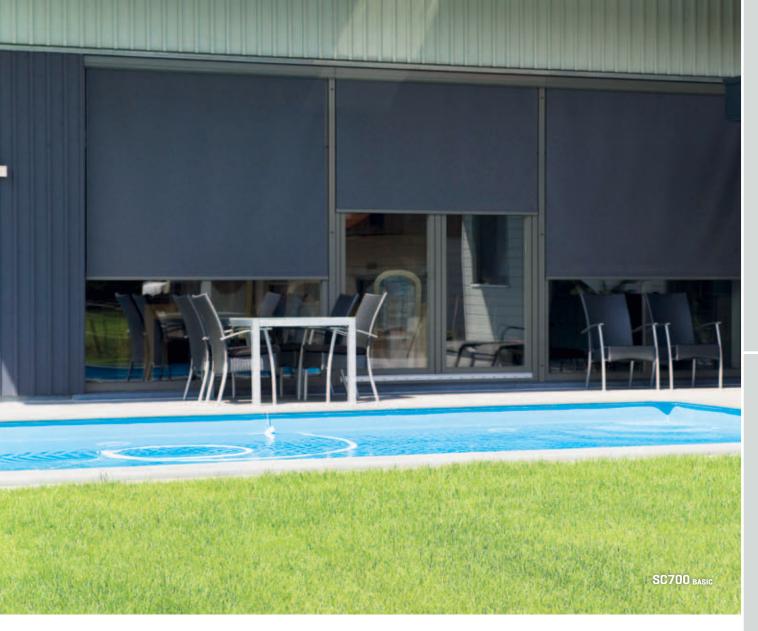


Bottom lath

The bottom lath contains a **strengthening strip** which ensures proper guidance and tensioning of the fabric so that it doesn't sag. With regular maintenance, your Harol fabric will look as good as new.

The bottom lath of the SC800 AERO has a **rubber** buffer strip. This absorbs any unevenness in the sill and prevents light shining under the bottom lath.

* optional for the SC7OO вазіс



Jhe robust screen that feels at home anywhere.

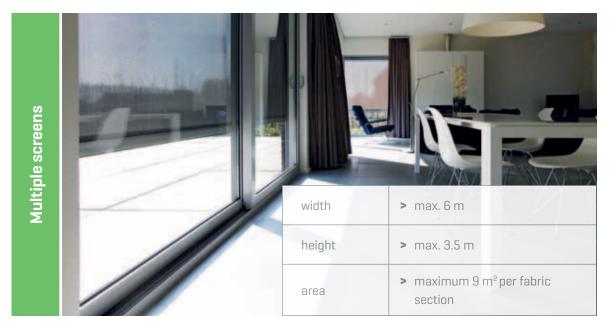
SC700 BASIC

Would you like all the convenience of a screen without intrusive installation work? The SC700 **BASIC** is **simple to install** on any window profile or façade and keeps out excess sunlight and heat. The box, bottom lath and guide rails are made of extruded aluminium with a powder coating or anodised in its natural colour. The **weighted bottom lath** is available in 2 depths. This screen is available in sizes up to **9 m² in 1 piece** and complies with wind class 2.

12

Dimensions





Choice of 7 guide rail types. It is possible to **combine 2 or 3 fabrics** in a single screen box up to a maximum box width of 6 m. Two types of combination are possible:

- > with the fabrics immediately next to one another (DVC)
- > with a space of at least 25 mm and no more than 500 mm between the screens (DVS)

These combined fabrics can be **operated either together or separately** as you choose.

The wind-proof screen that offers practical protection against insects

SC800 AERO

Are you looking for an extremely robust screen but also want to keep insects out? With the **SC800** AERO, you can kill **two birds with one stone**. This screen has a unique **track system** which makes it wind-proof and keeps the fabric perfectly tensioned and in position in the guide rails. The thickened track on the fabric slides in a plastic guide profile which is in turn slid into the aluminium guide rail profile. The SC800 AERO also offers practical **protection against insects** as the space between the box, the guide rails and the fabric is completely sealed off. You can use this screen - which complies with wind resistance class 3 - to screen an area of **up to 18 m² with a single piece of fabric**.

Dimensions



There is a choice of 6 standard guide rail types and 6 narrow guide rails: It is possible to **combine 2 or 3 screen fabrics** in a single screen box up to a maximum box width of 6 m. Two types of combination are possible:

- > with the screen fabrics immediately next to one another (DVC)
- > with a space between the screen fabrics (DVS)
- > of between min. 90 mm and max. 500 mm (if the fabric parts are linked)
- of between min. 25 mm and max. 500 mm (if each fabric is operated separately)

These combined screens can be **operated either together or separately** as you choose.

Super-insulating exterior sun protection, installed vertically on any window frame.

SC900 **ISO**

The Harol **SC900** ISO combines the best of both worlds: a **streamlined and** modern appearance with performance that easily **complies with the current energy saving standards**. This screen keeps out both the sun and curious glances. It is also easy to maintain and has a wide range of automation options.

With its **high insulation level** (1.3 W/m²K) and **especially good acoustic insulation properties**, it is unique in the market. The screen is always **electrically operated** and is available in all RAL colours and structured varnishes. Using the track principle, the fabric sits in the guide rails even under storm conditions*. The well considered design of the SC900 _{ISO} also makes it very easy to install and maintain.

* See p. 21

SC910 pure

The '**SC910** _{PURE}', which is supplied without insulation, is a 'naked' version of the SC900 _{ISO}, so to speak, whereby the insulation can be included depending on what you want or need. Both screens are wind resistant* (with an average size of 3.5 m x 3 m).

* See p. 21

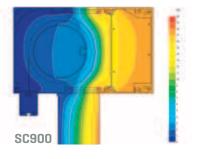
Dimensions

The mounted screen can be fitted to all window frames between 65 mm and 135 mm.



Technical details of the **SC900 ISO/SC910 PURE**

- Unique: very high insulation level (1.3 W/m²K) and especially good acoustic insulation properties.
- The SC900 mounted screen is fitted directly to the window.
- Solid wind-proof box in aluminium with thermal breaks. The square box shape lends itself perfectly to modern architecture, with taut fabrics up to 14 m² in size.
- > Available in all RAL colours and structured varnishes.
- No flapping fabrics or bottom laths that ride up due to the innovative tensioning system in the guide rail.



Very high insulation level (1.3 W/m²K)



Obtrusive – unobtrusive

SC1000 ENVIRO

The '**SC1000** ENVIRO' screen has been made invisible, hidden in the cavity. The building shell is not perforated, there is no thermal bridge, and it does not affect the plaster or paintwork. The clip system is remarkably handy for placing an insect screen. The bottom lath is fully integrated, which means that in the retracted position the screen is invisible from the outside of your home. Would you like a new screen fabric? This can be done very efficiently and easily from the bottom by simply extending the fabric roll and motor.

Dimensions



The ultimate solution for passive building

Building has become a matter of energy management: overheating will become more common in summer. With the SC1000 ENVIRO Harol looks to the new-build market and to the highest energy requirements. The SC1000 ENVIRO is literally fitted into the cavity to prevent the possibility of perforating the building shell.

Technical details of the SC1000 ENVIRO

- > The screen has been made invisible, hidden in the cavity.
- > No perforation of the building shell.
- > Provided with a clip system for placing an insect screen, if required.
- > Fully integrated bottom lath in retracted position.
- > Easily accessible



Modern solution for strict energy performance and indoor climate requirements for passive and low-energy dwellings





Technical details

Harol offers you 3 different types so that you can match your screen precisely to your needs:

	Renov	vation	New-build houses	
Characteristics	SC700 BASIC	SC800 AERO	SC900 iso/ SC910 pure	SC1000 ENVIRO
Max. number of m ² in one piece	9 m²	18 m²	16 m²	14 m²
Max. width	3,5 m	5 m	5 m	4 m
Max. height	3,5 m	6 m	4 m	4 m
Linked screen possible	Yes	Yes	No	No
Track system	stem No Yes		Yes	Yes
Wind-proof according to norm EN13561 : 2004	Wind resistance class 2 (up to force 5 on the Beaufort scale)	Wind resistance class 3 (up to force 6 on the Beaufort scale)	Wind resistance class 3 (up to force 6 on the Beaufort scale)	Wind resistance class 3 (up to force 6 on the Beaufort scale)
Blackout fabric available	No	Yes	Yes	Yes
Insect-repellent	No	Yes	Yes	Yes
Fitting	surface mounting	surface mounting	mounted	in the cavity
Visibility				
Insulation	ion N.A. N.A. SC900 ISO: 1,3 W/m ² K building shell) Suilding shell)		N.A. (no perforation of building shell)	



Windtests

Testresults by contant pressure (1000 Pa)

				Beaufort wind force scale									
				Beaufort	Description	Average speed km/h							
SC700	SC800	SC900/ SC910	910	910	SC1000	0	Calm	<1					
SC	SC		SC1	1	Light air	1 - 5							
		SC90		2	Light breeze	6 - 12							
				3	Gentle breeze	13 - 19							
NORM	NORM	NORM	RM	4	Moderate breeze	20 - 27							
N	DN		UN :	N	Ň	N	N	N	N	N	DN	5	Fresh breeze
				6	Strong breeze	38 - 48							
						7	High wind	49 - 62					
		TEST TEST				8	Fresh gale	63 - 73					
				9	Strong gale	74 - 87							
	TES		TES	TES	TEST	10	Storm	88 - 102					
						11	Violent storm	103 - 117					
				12	Hurricane force	> 118							

Wind resistance class of 3 according to norm EN13561 : 2004.
 Testresults according to WTCB and with constant pressure till 1000Pa and average dimensions of 3,5 x 3m.

Would you like more information about Harol screens?

- Then go to www.harol.eu
- Or contact your Harol partner without any obligation. You can find the necessary details on the back of this brochure.

Harol **pivot arm awnings**

A Harol pivot arm awning is ideal for keeping the heat out. This type of façade sun protection is fitted in front of your windows and is a **great alternative** to a folding. This façade awning with variable drop angle not only improves the **look** of your home, but also creates a **pleasant climate indoors**. You can set the level of sunlight yourself and create a unique atmosphere in your home through the combination of drop angle, sun and fabric as well as your choice of fabric colour.

An elegant solution for a cool home



What sets them apart

- > Variable drop angle (from 0 to 120°) so you can decide for yourself how much sun you want to let in
- > Extremely wind-resistant due to the separate structure and strong drop arms
- > Easy to operate
- > High-quality fabrics
- > Fits all buildings and any type of window (from 0.63 to 5 m wide)
- > The screens can be linked together up to 10 m in width
- > Always custom made

Technical details

- > **High-quality materials**: robust powder coated aluminium profiles, plastic parts, rot-proof and mildew proof fabrics and a stylised cassette
- Choice of 4 drop arms: fixed arms, storm-proof arms, sliding and gas-spring arms
 - > Storm-proof arms (SA): arms with a fixed hinge point and stainless steel pull spring
 - **Gas-spring arms (WGA)**: arms with a fixed hinge point and strong gas spring
 - > Sliding arms (GA): the pivot arms slide up with the fabric
 - Fixed arms (VA): arms with a fixed hinge point and ejector leaf spring

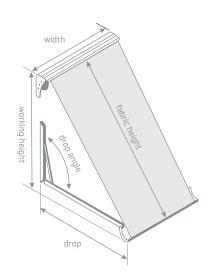
Choice of 2 different types of pivot arm awnings: **US701 and US702**

Characteristics	US701	US702
Extra wall brackets needed	From 4 m	Yes
Min. width	0.63 m	1 m
Max. width	5 m	5 m
Max. width in 2 parts	10 m	10 m

Dimensions

Harol always makes your sun protection to your specifications. As a result, you decide how wide your awning should be. The options for a pivot arm awning are as follows:

					Fabric height in mm				
Drop in mm	SA	WGA	GA	VA	1400	1600	1950	2200	2500
900	Х	Х	-	X	90°	120°			
1050	Х	Х	-	Х		90°	120°		
1250	Х	Х	-	Х			90°	120°	
1400	Х	Х	-	Х				90°	120°
1650	-	-	Х	-			90°		
1950	-	-	Х	-				90°	
<u>.</u>					position of the arms (max. drop angle)				





3 installation options

You have a choice of **various fitting options**:

- on the **façade**
- in the **recess**
- on the window frame
- > US701

Fitted with high end cheeks with fixed attachment positions. This type can be fitted very quickly, attached directly to a sufficiently rigid surface.

> US702

Fitted with low end cheeks that offer no load-bearing. Consequently, wall brackets should always be used. This type is intended for installation on a less solid surface (such as cement or wood). Multiple movable installation points are possible so that the screen can be secured in the most appropriate spot.



Operation of your pivot arm awning

You can roll your Harol pivot arm awning in and out in 2 ways: manually or using an electric motor at the press of a button. Various automation systems are also available that can be electrically operated.

Various operation options:

- > Manual: with a detachable operating rod (on the outside) or crank operation (on the inside)
- > Electric: with tubular motor connected to an electronic timer, or wind and sun automated
- > **Electronic**: electric tubular motor connected to a timer (at a set time), group operation (for all awnings) or automated system

Automation options:

- > Wind sensor: your pivot arm awning is automatically rolled up if it is too windy
- > **Sun sensor**: what happens if the sun starts to shine brightly when you are very busy indoors? The screen is unfurled automatically
- > Rain sensor: the pivot arm awning is automatically rolled up when it rains

my v

Smoove sender



remote control



wind- and/or sun sensor

Keep up with the latest trends. Visit www.harol.eu and click on 'News'. Pivot arm awnings



Durable fabrics in a stylish shade

The fabric determines how your pivot arm awning will look. Harol only supplies top-quality fabrics:

- An infinite number of colour options: plain colours, block strips or fancy stripes? You can choose which fabric best suits the colour of the frame and the style of your home. Do you have a retail business? Then you can have your fabric printed with a logo or wording. The arms and box are available in all RAL colours and structured varnish at no extra cost.
- Long service life: your fabric will look great for a long time because Harol only uses specially-treated acrylic and polyester fabrics that are mildew-resistant and dirt-repellent.

Different types of pivot arm awnings	Acrylic	Polyester
Material	Spun-dyed acrylic fibre	Polyester fibres coated with PVC
Thickness	+ 0.5 mm	+ 0.45 mm
Colours	Fancy, block and single colours as the collection brochure	Single colours as the collection brochure
Features	 > Easy care as it is treated against rot, mildew and dirt > 100% colour-fast > Total blocking of UV radiation (with SPF 50+label) > Visually appealing 	 Excellent ventilation properties Offers protection against UV radiation Easy to wash off Highly resistant to both weather and wind Visually appealing



Would you like more information about Harol pivot arm awnings?

- Then go to www.harol.eu
- Or contact your Harol partner without any obligation. You can find the necessary details on the back of

Less heat, more light: an envious com

Harol exterior venetian blinds

Exterior venetian blinds with **slats** (ARO 65, AR 80 and AR 92) are ideal for blocking out heat because they reflect the heat away from the front façade whilst still letting in light. The design has a **streamlined, contemporary look** and is fitted along the outer edge of your window. It is ideal for **homes, office buildings and catering businesses** and can be manually or electricallyoperated as you choose.





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Various types of exterior venetian blinds		AR 63 ECN ARO 65	AR 80 ECN Aro 80	AR 92
Slat width	Slat width		80 mm	92 mm
Max. width		5000 mm	5000 mm	4000 mm
Max. height		5200 mm	5200 mm	4600 mm
Extra wind protectio	Extra wind protection*		Yes	Yes
Max. area		14 m²	14 m²	11.5 m ²
Max. package height	1000 2000 3000 4000 5000	235 305 390 460	- 220 285 345 405	150 205 260 320 345

* additional tensioning cables are available as an optional extra to give your exterior venetian blind better protection against the wind.

High-quality materials

- **Upper rail:** galvanised, U-shaped profile and cold-rolled profile with flange on both sides.
- Ladder cord made of **durable terylene polyester**: shrink-proof, heat-fixed, colour-fast.
- Lift tape with sliding bearing for **non-wear running** and **maximum UV protection**.
- Slats in **Z, C or S-shapes**.
- Lower rail: closed profile of extruded aluminium.
- The omega-shaped punch hole gives an even longer service life as well as improving the guiding of the ladder cord.



Operating your exterior venetian blinds

You can operate your Harol exterior venetian blinds with a crank. But would you like it to be easy? Then choose electric operation, perhaps integrated into an automation system.

- Remote control: operation with a scroll button lets you adjust the slats to any position so you can even reflect the light indoors. Optionally, you can even choose to have the lower slats closed and leave the upper ones open, so as to avoid irritating sunbeams on your computer screen or TV.
- Wind sensors protect your exterior venetian blinds against unexpected gusts of wind or heavy storms
- > **Sun sensors** ensure that your exterior venetian blinds are rolled down when the sun is shining.
- > A combination of wind and sun automation ensures that the exterior venetian blinds are rolled up or down depending on when it is windy or sunny.

Colour options for your exterior venetian blinds

At Harol, you can choose from a range of colours for the slats, guide rails and box of your exterior venetian blinds:

- > **Slats**: you can choose from twenty standard colours.
- > Guide rails and boxx: you can choose from among all of the RAL colours

Would you like more information about Harol exterior venetian blinds?

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Installation by **experts**

All Harol awnings are fitted by experts from partner companies. Each partner can demonstrate **many years of experience** in this field. They also regularly attend **Harol training courses** to learn about fitting techniques, maintenance and advice.

100%

100% guaranteed quality

Not only do all Harol products meet the most **stringent of quality standards**, but these same standards also apply to the way they are manufactured and delivered. This is why Harol offers a 5-year quality guarantee!



Only made to measure

All Harol awnings can be customised to meet **your requirements**. Do you want manual or electric operation? With or without an automation system? Specify **your requirements** to your Harol partner, and he will make sure they are met. Fancy a special colour? Again, you have plenty of choice. You can choose your fabric from a wide range of fabrics, colours and patterns. In short: **you can be sure you will find what you are looking for at Harol.**



Easy to operate

Our awnings are available with **manual or electric operation** and can be fitted with an **automatic wind and sun sensor** and/or a **rain sensor** should you wish. These allow you to specify how you want to control the temperature in your home, while you can also automatically protect your sun protection from the wind and weather.

5

Full service from start to finish

An awning is not the sort of purchase you can make lightly. That is why your Harol partner is **there for you at all times**. Based on your wishes and requirements, he will assist you in locating the perfect solution. As an expert with years of experience, he can guarantee **perfect installation**. You can always contact him with questions about materials, colours and maintenance. And you can rely on him 100% for **after-sales service** too. When you buy Harol, you buy more than just a Harol product: it is always accompanied by excellent service.









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Your Harol partner:

