

Honoured with:



Cassette awning

Opal Design II

Opal Design II LED | Valance Plus | LED Valance Plus

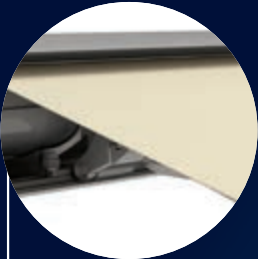
The **Opal Design II** cassette awning stands out for its timeless, classic design hand in hand with groundbreaking weinor technology. Made to shade large areas, it blends in harmoniously with its surrounding architecture, the attractive shape of the cassette adding a sophisticated element. A wide range of tempting and practical optional extras make it easy to operate and wonderfully convenient while also extending its lifetime.

UPDATE
july 2020

Page 50,
Technical drawing added
Page 58,
Mounting plates added

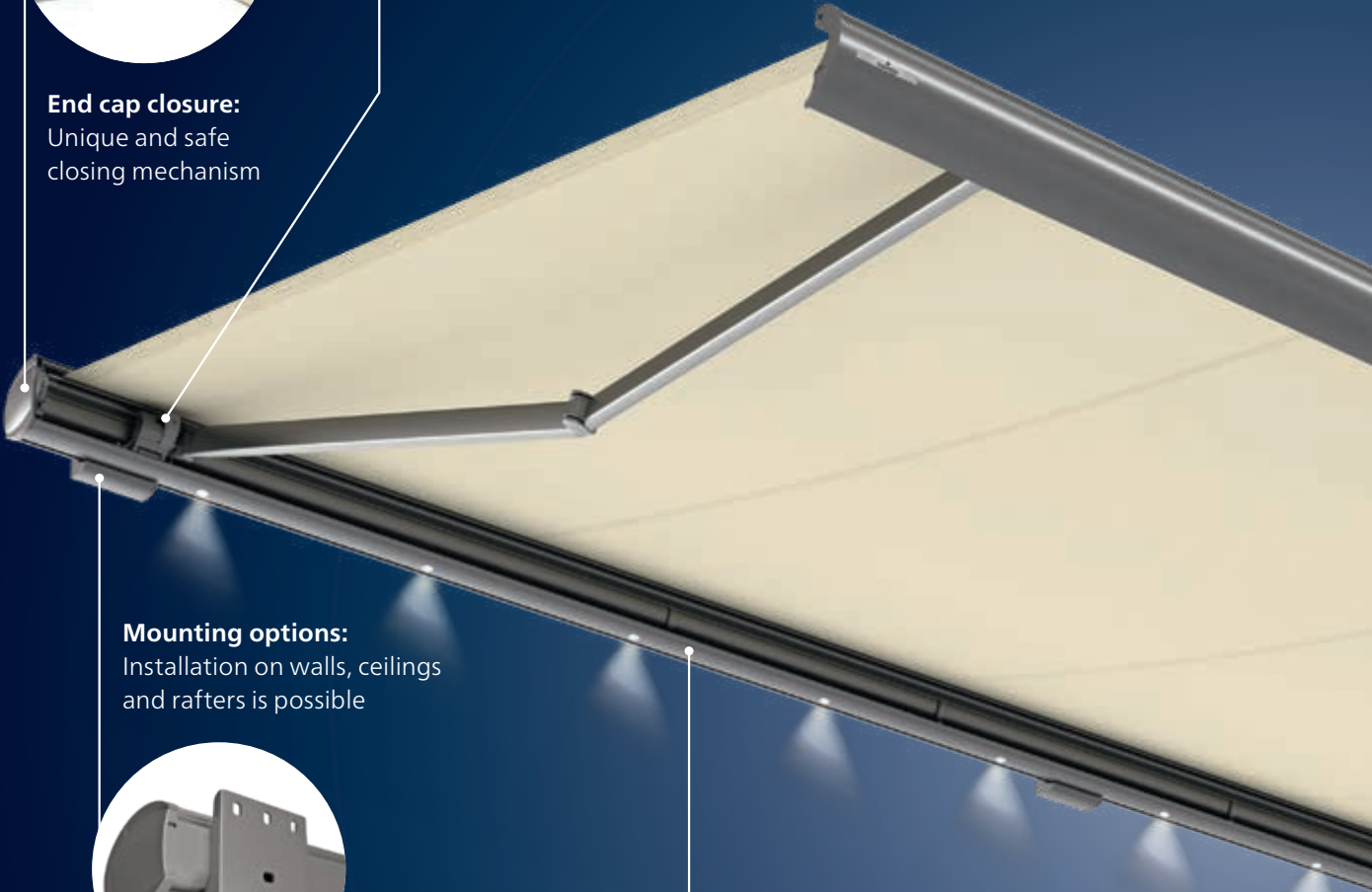
Wind lock safety device:

The ultramodern technology prevents the awning from lifting up when wind gusts from below



End cap closure:

Unique and safe closing mechanism

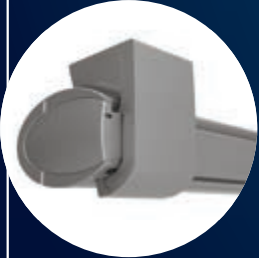


Mounting options:

Installation on walls, ceilings and rafters is possible



Wall mounting



Ceiling mounting



Rafter mounting

Opal Design II LED (optional):

Integrated lighting



Opal Design II Highlights



Awning cassette:
Classic design with the latest technology

Versions:

Valance Plus

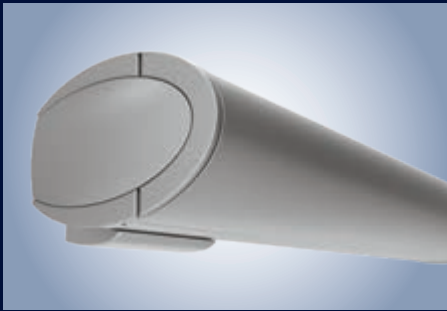
Multi-section units



weinor LongLife arm:
Very durable and low-noise



Opal Design II Benefits



Cassette awning – classic design with the latest technology

Classic, timeless design plus superior high-tech elements are united in the top-class weinor Opal Design II awning.

- Cassette is just 16 cm high: particularly flat, attractive shape
- Smart cassette design for the utmost stability and safety



End cap closure – unique and safe closing mechanism

If you can see that the crescent-shaped caps at the sides of the drop profile are closed then the awning is reliably protected against damp and dirt.

- Unique, patented weinor technology
- The only awning on the market with this USP



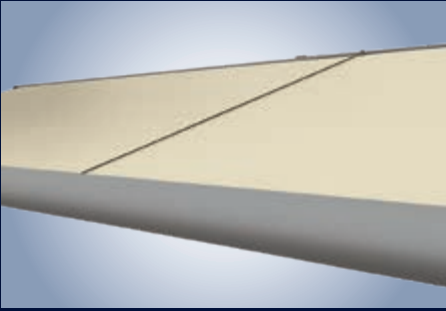
LEDs and Valance Plus – integrated lighting and vertical protection

The Opal Design II LED variant adds integrated “warm light” LED lighting to the awning

- Individual LED spotlights integrated into awning cassette
- Infinitely dimmable when used with BiConnect radio control

The Opal Design II Valance Plus option provides vertical protection against the sun and prying eyes.

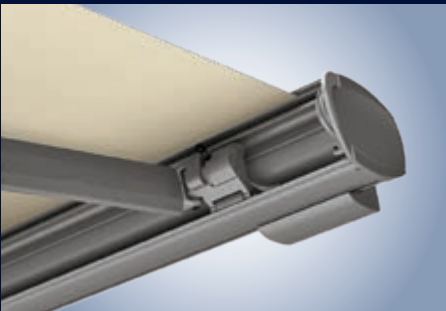
- Attractive fabric combinations
- Patented weinor OptiFlow-System® to keep fabric ideally positioned and to close the drop profile safely



Multi-section units – to shade especially large areas

The Opal Design II also comes as a combined multi-section unit for very large terraces.

- As a 2-part unit up to 1,200 cm
- Jockey cover: easy to fit
- Coupled version not possible with Valance Plus



Wind lock safety device – reliable protection

The ultramodern technology prevents the awning from lifting up when wind gusts from below.

- Patented wind lock safety device
- Via a tilting member, the drop profile and awning arm are tilted when ascending
- Proven, maintenance-free technology
- All components made of forged and extruded aluminium



weinor LongLife Arm – durable, quiet operation

The weinor LongLife arm features an exceptionally robust high-tech belt.

- Tested to more than 100,000 cycles
- Extremely quiet operation
- No maintenance required
- Drop forged aluminium in joint – light but highly robust

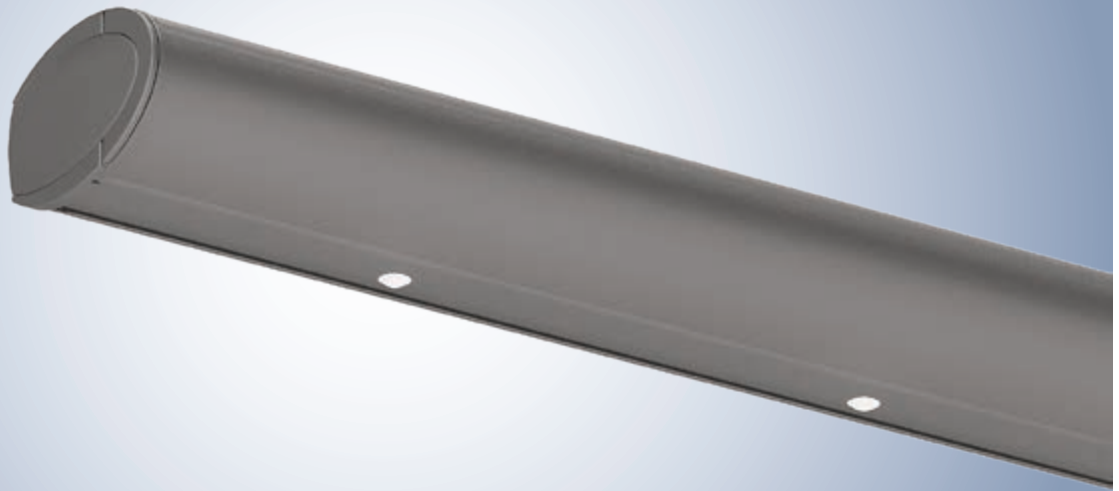
Opal Design II Technology

Versions of Opal Design II	Opal Design II	Opal Design II LED
Technology		
Max. width, 1-section/2-section with jockey cover	650 cm/1,200 cm	650 cm/1,200 cm
Max. projection	400 cm	400 cm
Cassette size (w x h) incl. standard bracket	265 mm x 172 mm	265 mm x 172 mm
Coupled systems	<input type="radio"/>	<input type="radio"/>
Gear drive	<input type="radio"/>	—
Motor drive	<input checked="" type="radio"/> as standard	<input checked="" type="radio"/> as standard
Angle of pitch on awning	5° – 40° (with projection from 351 cm 7° to 40°)	5° – 40° (with projection from 351 cm 7° to 40°)
Installation alternatives	Can be installed on walls, ceilings and rafters	
LED lighting (separate spotlights)	—	<input checked="" type="radio"/> integrated into the awning's cassette
Patented weinor Opti-Flow-System®	<input checked="" type="radio"/> as standard	<input checked="" type="radio"/> as standard
LongLife arm	<input checked="" type="radio"/> as standard	<input checked="" type="radio"/> as standard
Valance Plus option		
Max. width	500 cm/600 cm	500 cm/600 cm
Max. awning projection	350 cm/300 cm	350 cm/300 cm
Cassette size (w x h)	326 x 160 mm	326 x 165 mm
Gear drive	<input type="radio"/>	<input type="radio"/>
Motor drive	<input checked="" type="radio"/> as standard	<input checked="" type="radio"/> as standard
Angle of pitch on awning	10° to 20°	10° to 20°
Valance Plus projection (h)	100 cm, 150 cm, 210 cm	100 cm, 150 cm, 210 cm
Patented weinor Opti-Flow-System®	<input checked="" type="radio"/> as standard	<input checked="" type="radio"/> as standard
Accessories		
Tempura/Tempura Quadra heating system for Opal Design II/LED	<input type="radio"/> bracket with special attachment	<input type="radio"/> bracket with special attachment
BiSens Agido-3V product protection sensor	<input type="radio"/>	<input type="radio"/>
Controls		
Radio control	<input type="radio"/>	<input type="radio"/>
No remote	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Weather sensors		
Sun/wind sensor BiConnect BiSens SW-230V	<input type="radio"/>	<input type="radio"/>
Sun/wind sensor solar powered BiConnect BiSens SW-Solar+	<input type="radio"/>	<input type="radio"/>
Sun/wind/rain sensor BiConnect-BiSens-SWR-230V	<input type="radio"/>	<input type="radio"/>
Quality		
Tested up to	wind resistance class 2 according to DIN 13561 (wind strength 5 on the Beaufort scale)	

standard optional unavailable

Some options are subject to a surcharge. For prices, please refer to the weinor awnings price list.

Opal Design II LED



LED lighting – 30,000 hours of lighting require minimal energy consumption

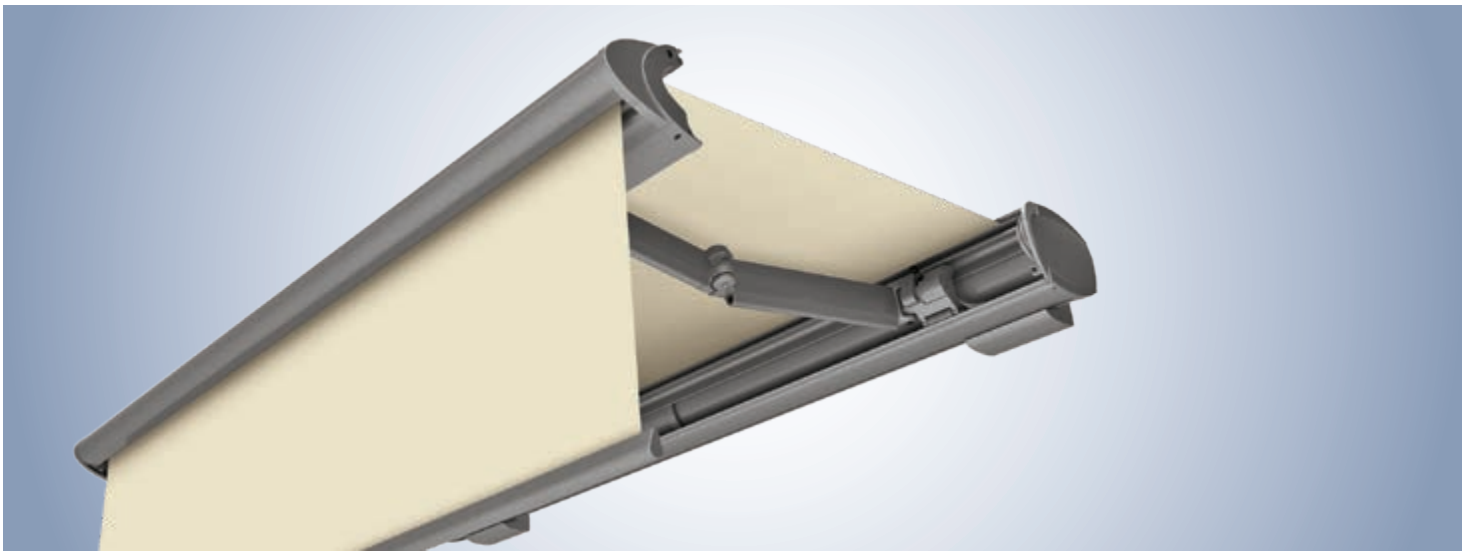
Select LED components for top weinor quality:

- Integrated into the cassette
- Atmospheric light thanks to special glass lenses
- Lighting remains on even when awning is retracted
- Highly energy-efficient
- Operating life of 30,000 hours
- Infinitely dimmable when used with BiConnect radio control
- Easy to service: simply replace individual LED lights without uninstalling the awning

Integrated LED lighting

Awning width in cm	Number of separate LED spotlights	Awning width in cm	Number of separate LED spotlights
187 – 219 cm	3	440 – 494 cm	8
220 – 274 cm	4	495 – 549 cm	9
275 – 329 cm	5	550 – 603 cm	10
330 – 384 cm	6	604 – 650 cm	11
385 – 439 cm	7		

Opal Design II Valance Plus



More privacy thanks to vertical privacy and sun screen (optional)

The motorised vertical awning fits elegantly into the awning's front profile.

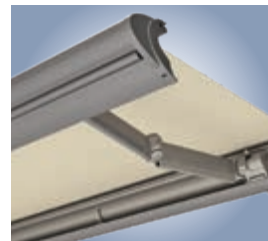
- Glare protection and privacy shield up to a maximum valance height of 210 cm
- Extends to any length
- Awning can be set to any angle from 10° to 20°
- Valance Plus cannot be retrofitted



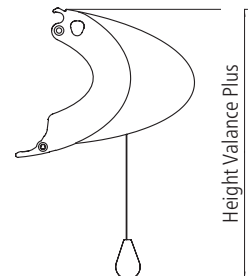
Motorised



Gear drive



Closed



How Valance Plus height is calculated

Update

Maximum awning size for Valance Plus

Motorised main drive			
Width	500 cm	Projection	350 cm
Width	600 cm	Projection	300 cm

Available fabrics for the Valance Plus

Pattern	Soltis® 86, 92	Soltis® 86, 92	Acrylic	Perluca		Polyester		Star-Screen	Fibreglass screen		
	unicolour	unicolour	stripes	unicolour	unicolour	stripes	unicolour	unicolour			
Roll width	177 cm	267 cm	120 cm	120 cm	240 cm	120 cm	240 cm	120 cm	120 cm	325 cm	max. 320 cm*
Valance length											
100 cm	N	N	L	N	N	N/L	N	L	N	N	N
150 cm	N	N	–	Q	N	Q	N	–	Q	N	N
210 cm	Q	N	–	Q	N	Q	N	–	Q	N	–

N Seamless: seamless fabric; structure of fabric runs crosswise to structure of awning fabric

Q Transverse seam: fabric with transverse seam; either in top or bottom third as desired; structure of fabric runs diagonally to structure of awning fabric

L Longitudinal seam: structure of fabric runs longitudinally to structure of awning fabric

– Not available

* Max. roll widths are stipulated in the collection brochure

Please note: On the gear-driven Valance Plus, it is possible that the Valance Plus bottom rail will close unevenly.

Opal Design II Controls

weinor BiConnect radio technology

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Product	Electronics	BiConnect control	Remote receiver	Transmitter
Opal Design II	Opal Design II drive	<ul style="list-style-type: none"> • BiRec receiver integrated into cassette 	BiRec MA-K	<ul style="list-style-type: none"> • BiEasy 1M/5M/15M Go! hand transmitter • App • 1MW-3V wall transmitter
Opal Design II LED	Opal Design II drive and LED lighting	<ul style="list-style-type: none"> • BiRec combi-receiver for main drive and LED spotlights (with integrated power supply pack) integrated into cassette • Dimmable LED 	BiRec MLED	<ul style="list-style-type: none"> • BiEasy 5M/15M Go! hand transmitter • App
Opal Design II Valance Plus	Opal Design II and Valance Plus drive	<ul style="list-style-type: none"> • BiRec combi-receiver for main drive and Valance Plus drive integrated into cassette • Table clearing protection • Gradual soft stop 	BiRec MVLED	<ul style="list-style-type: none"> • BiEasy 5M/15M Go! hand transmitter • App
Opal Design II LED Valance Plus	Opal Design II and Valance Plus drive and LED lighting	<ul style="list-style-type: none"> • BiRec combi-receiver for main drive, Valance Plus drive and LED spotlights (with integrated power supply pack) integrated into cassette • Dimmable LED • Table clearing protection • Gradual soft stop 	BiRec MVLED	<ul style="list-style-type: none"> • BiEasy 5M/15M Go! hand transmitter • App
Accessories (optional)	Tempura/Tempura Quadra heating system	<ul style="list-style-type: none"> • Dimmable, additional receiver required • Installation of the receiver in the design bar provided for this purpose or the Tempura Quadra box 	BiRec HD	<ul style="list-style-type: none"> • BiEasy 5M/15M Go! hand transmitter • App

Requires: awning with BiConnect remote control and sensors require a BiEasy 1M, 5M or 15M Go!



Exclusive retraction protection

- Co-ordinated retraction: first the Valance Plus, then the awning
- To make sure nothing gets knocked over on the terrace

Opal Design II Controls

Somfy io-homecontrol® radio technology

Product	Electronics	Somfy io-homecontrol control	Remote receiver	Transmitter
Opal Design II	Opal Design II drive	<ul style="list-style-type: none"> Somfy io remote-controlled motor integrated into cassette 	Somfy io remote-controlled motor	<ul style="list-style-type: none"> Situo 1 io Pure II/Situo 5 io Pure II/Situo 5 Variation A/M io Pure II hand transmitter Smooove 1 io Pure Shine wall transmitter
Opal Design II LED	Opal Design II drive and LED lighting	<ul style="list-style-type: none"> Somfy io remote-controlled motor integrated into cassette Additional Somfy receiver for the LED spotlights (with downstream power supply pack) integrated into cassette LED not dimmable 	Somfy io remote-controlled motor and io Lighting Receiver Variation on/off	<ul style="list-style-type: none"> Situo 5 io Pure II/Situo 5 Variation A/M io Pure II hand transmitter
Opal Design II Valance Plus	Opal Design II and Valance Plus drive	<ul style="list-style-type: none"> Somfy io remote-controlled motor integrated into cassette Additional Somfy receiver for Valance Plus drive integrated into cassette No retraction protection in windy conditions 	Somfy io remote-controlled motor and radio control Awning Slim Receiver io Plug	<ul style="list-style-type: none"> Situo 5 io Pure II/Situo 5 Variation A/M io Pure II hand transmitter
Opal Design II LED Valance Plus	Opal Design II and Valance Plus drive and LED lighting	<ul style="list-style-type: none"> Somfy io remote-controlled motor integrated into cassette Additional Somfy receiver for Valance Plus drive and LED spotlights (with downstream power supply pack) integrated into cassette LED not dimmable No retraction protection in windy conditions 	Somfy io remote-controlled motor, io Lighting Receiver Variation on/off and radio control Awning Slim Receiver io Plug	<ul style="list-style-type: none"> Situo 5 io Pure II/Situo 5 Variation A/M io Pure II hand transmitter
Accessories (optional)	Tempura/Tempura Quadra heating system	<ul style="list-style-type: none"> Not dimmable, additional receiver required Installation of the receiver in the design bar provided for this purpose or the Tempura Quadra box 	Heating Slim Receiver on/off io 2KW STAS3/STAK3	<ul style="list-style-type: none"> Situo 5 io Pure II/Situo 5 Variation A/M io Pure II hand transmitter Smooove 1 io Pure Shine wall transmitter

Somfy RTS radio technology

Product	Electronics	Somfy RTS control	Remote receiver	Transmitter
Opal Design II	Opal Design II drive	<ul style="list-style-type: none"> Somfy RTS remote-controlled motor integrated into cassette 	Somfy RTS remote-controlled motor	<ul style="list-style-type: none"> Situo 1 RTS Pure II/Situo 1 Soliris RTS Pure II/Situo 5 RTS Pure II/Situo 5 Soliris RTS Pure II hand transmitter Smooove 1 RTS Pure Shine wall transmitter
Opal Design II LED	Opal Design II drive and LED lighting	<ul style="list-style-type: none"> Somfy RTS remote-controlled motor integrated into cassette Additional Somfy receiver for the LED spotlights (with downstream power supply pack) integrated into cassette LED not dimmable 	Somfy RTS remote-controlled motor and Lighting Slim Receiver RTS	<ul style="list-style-type: none"> Situo 5 RTS Pure II/Situo 5 Soliris RTS Pure II hand transmitter
Opal Design II Valance Plus	Opal Design II and Valance Plus drive	<ul style="list-style-type: none"> Somfy RTS remote-controlled motor integrated into cassette Additional Somfy receiver for Valance Plus drive integrated into cassette No retraction protection in windy conditions 	Somfy RTS remote-controlled motor and Universal Receiver RTS	<ul style="list-style-type: none"> Situo 5 RTS Pure II/Situo 5 Soliris RTS Pure II hand transmitter
Opal Design II LED Valance Plus	Opal Design II and Valance Plus drive and LED lighting	<ul style="list-style-type: none"> Additional Somfy receiver for Valance Plus drive and LED spotlights (with downstream power supply pack) integrated into cassette LED not dimmable No retraction protection in windy conditions 	Somfy RTS remote-controlled motor, Universal Receiver RTS and Lighting Slim Receiver RTS	<ul style="list-style-type: none"> Situo 5 RTS Pure II/Situo 5 Soliris RTS Pure II hand transmitter
Accessories (optional)	Tempura/Tempura Quadra heating system	<ul style="list-style-type: none"> Not dimmable, additional receiver required Installation of the receiver in the design bar provided for this purpose or the Tempura Quadra box 	Heating Slim Receiver RTS Plug	<ul style="list-style-type: none"> Situo 5 RTS Pure II/Situo 5 Soliris RTS Pure II hand transmitter

Hard wired with Somfy control

Product	Electronics	Hard wired Somfy control	Control
Opal Design II	Opal Design II drive	<ul style="list-style-type: none"> • Somfy control for awning drive 	e.g. Soliris Smoove Uno
Opal Design II LED	Opal Design II drive and LED lighting	<ul style="list-style-type: none"> • Somfy control for awning drive • Switch on site for the LED spotlights • LED power supply pack integrated into the cassette • LED not dimmable 	e.g. Soliris Smoove Uno and suitable light switch (on site)
Opal Design II Valance Plus	Opal Design II and Valance Plus drive	<ul style="list-style-type: none"> • Somfy control for awning drive • Switch on site for the Valance Plus drive • No retraction protection in windy conditions 	e.g. Soliris Smoove Uno and suitable double rocker switch (on site)
Opal Design II LED Valance Plus	Opal Design II and Valance Plus drive and LED lighting	<ul style="list-style-type: none"> • Somfy control for awning drive • Switch on site for the Valance Plus drive • No retraction protection in windy conditions • Switch on site for the LED spotlights • LED power supply pack integrated into the cassette • LED not dimmable 	e.g. Soliris Smoove Uno, and suitable double rocker switch and light switch (on site)
Accessories (optional)	Tempura/Tempura Quadra heating system	<ul style="list-style-type: none"> • Not dimmable 	Suitable switch (on site)

Hard wired (existing switch/power supply on site)

Product	Electronics	Hard wired control	Control
Opal Design II	Opal Design II drive	<ul style="list-style-type: none"> • Awning switch for the awning drive 	e.g. double rocker switch switch (on site)
Opal Design II LED	Opal Design II drive and LED lighting	<ul style="list-style-type: none"> • Awning switch for the awning drive • Switch on site for the LED spotlights • LED power supply pack integrated into the cassette • LED not dimmable 	e.g. double rocker switch and suitable light switch (on site)
Opal Design II Valance Plus	Opal Design II and Valance Plus drive	<ul style="list-style-type: none"> • Awning switch for the awning drive • Switch on site for the Valance Plus drive • No retraction protection in windy conditions 	e.g. 2 double rocker switches (on site)
Opal Design II LED Valance Plus	Opal Design II and Valance Plus drive and LED lighting	<ul style="list-style-type: none"> • Awning switch for the awning drive • Switch on site for the Valance Plus drive • No retraction protection in windy conditions • Switch on site for the LED spotlights • LED power supply pack integrated into the cassette • LED not dimmable 	e.g. 2 double rocker switches and suitable light switch (on site)
Accessories (optional)	Tempura/Tempura Quadra heating system	<ul style="list-style-type: none"> • Not dimmable 	Suitable switch (on site)

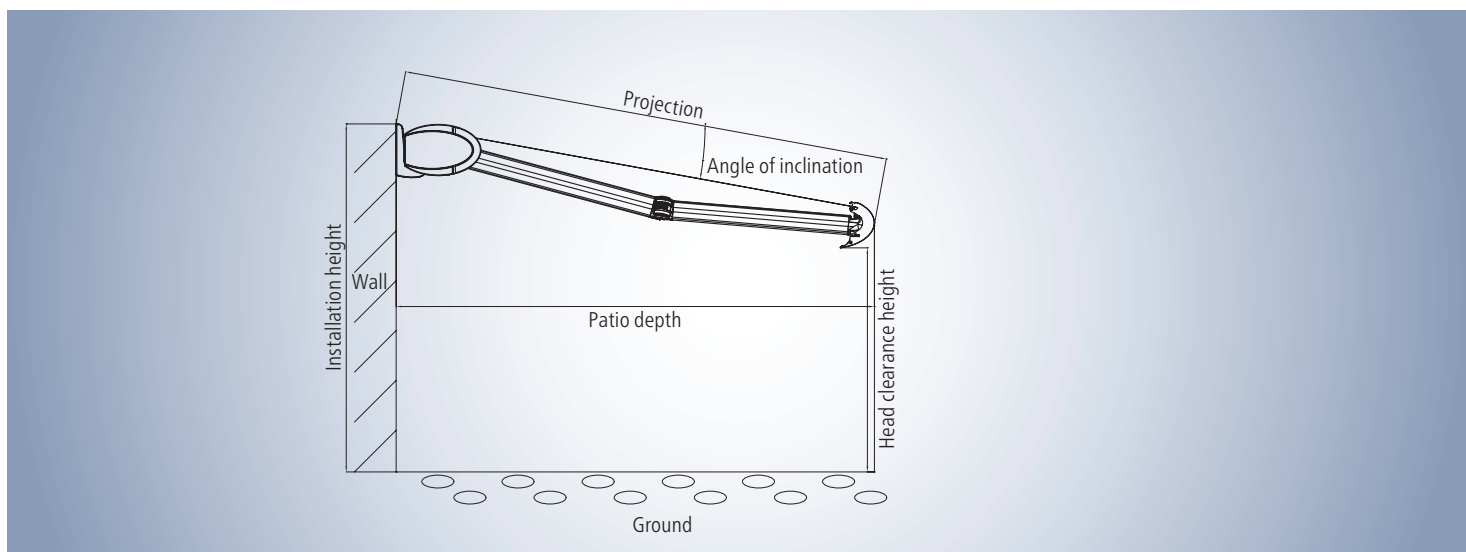


Note:

Please see the "Accessories" technical brochure for further details regarding the drive and control.

Some options are subject to a surcharge. For prices, please refer to the weinor awnings price list.

Opal Design II Planning



Site measurements – Determining the projection and head clearance height

- Find the projection by looking in the “Projection” table for the terrace depth.
- Using the projection from the table and the required angle of inclination, consult the “head clearance height” table for the head clearance height. This head clearance height refers to an installation height of 300 cm.
- Add/subtract the difference between 300 cm and the actual installation height to/from the head clearance height in the table.

Determining the projection

Angle of pitch	Terrace depth in cm					
	150	200	250	300	350	400
5°	150	200	250	300	350	400
15°	160	210	260	310	360	410
25°	170	220	280	330	390	440

Projection in cm (rounded figures)

This table can be used to find the awning projection for any given horizontal patio depth.

Determining the head clearance height

Angle of pitch	Projection in cm					
	150	200	250	300	350	400
5°	275	270	270	260	260	250
15°	250	240	220	210	200	190
25°	220	200	180	160	140	120

Head clearance height in cm (rounded figures)

This table is used to find the head clearance heights for various projections when the angle of pitch is 5°, 15° or 25°.

This table is based on the example of an installation height of 300 cm (upper edge of awning).

Wall bracket

Sizes and bracket recommendations



Width in cm	Number of arms	Projection in cm (irregular figures possible)					
		150	200	250	300	350	400
187 – 200	2	●					
201 – 250	2	●	●				
251 – 300	2	●	●	●			
301 – 350	2	●	●	●	●		
351 – 400	2	●	●	●	●	●	
401 – 450	2	●	●	●	●	●	●
451 – 500	2	●	●	●	●	●	●
501 – 550	2	▲	▲	▲	▲	▲	▲
551 – 600	2	▲	▲	▲	▲	▲	▲
601 – 650	2	▲	▲	▲	▲	▲	▲

Wall mounting on C20/25 concrete

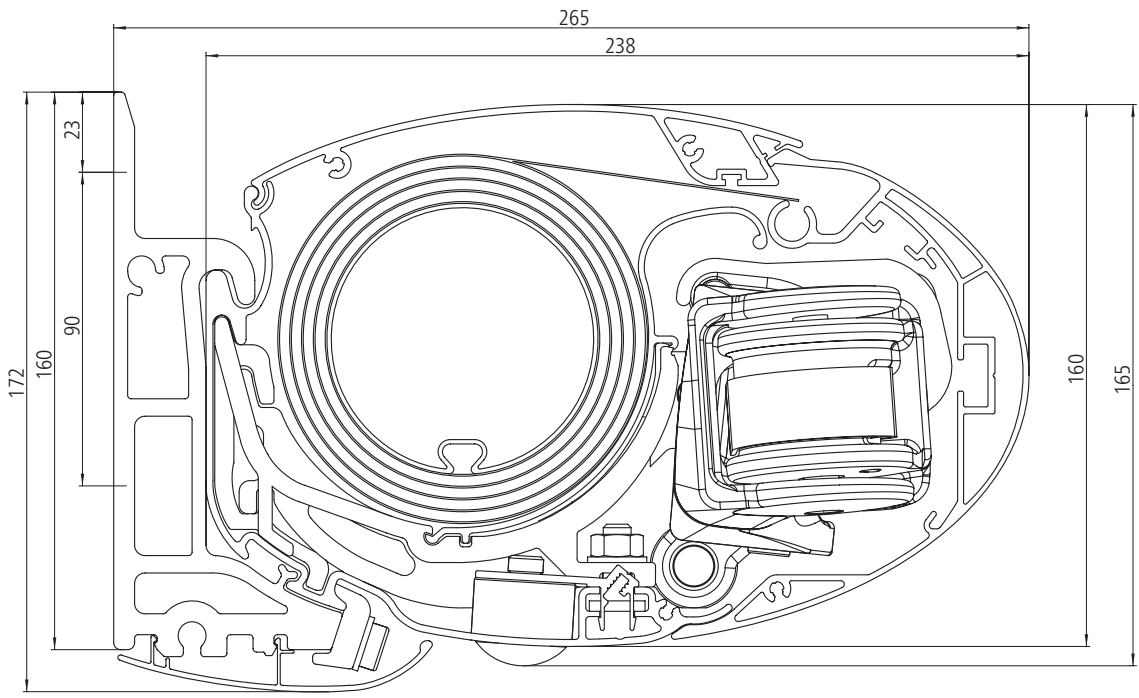
with up to 200-mm facing, wind resistance class 2 and a permissible centic tensile load of 5.71 kN for anchor bolts

- 2 Opal Design II standard wall brackets, 150 mm
- 2 Opal Design II standard wall brackets, 300 mm
- ▲ 3 Opal Design II standard wall brackets, 150 mm
- ▲ 2 Opal Design II standard wall brackets, 300 mm and 1 standard central bracket 150 mm

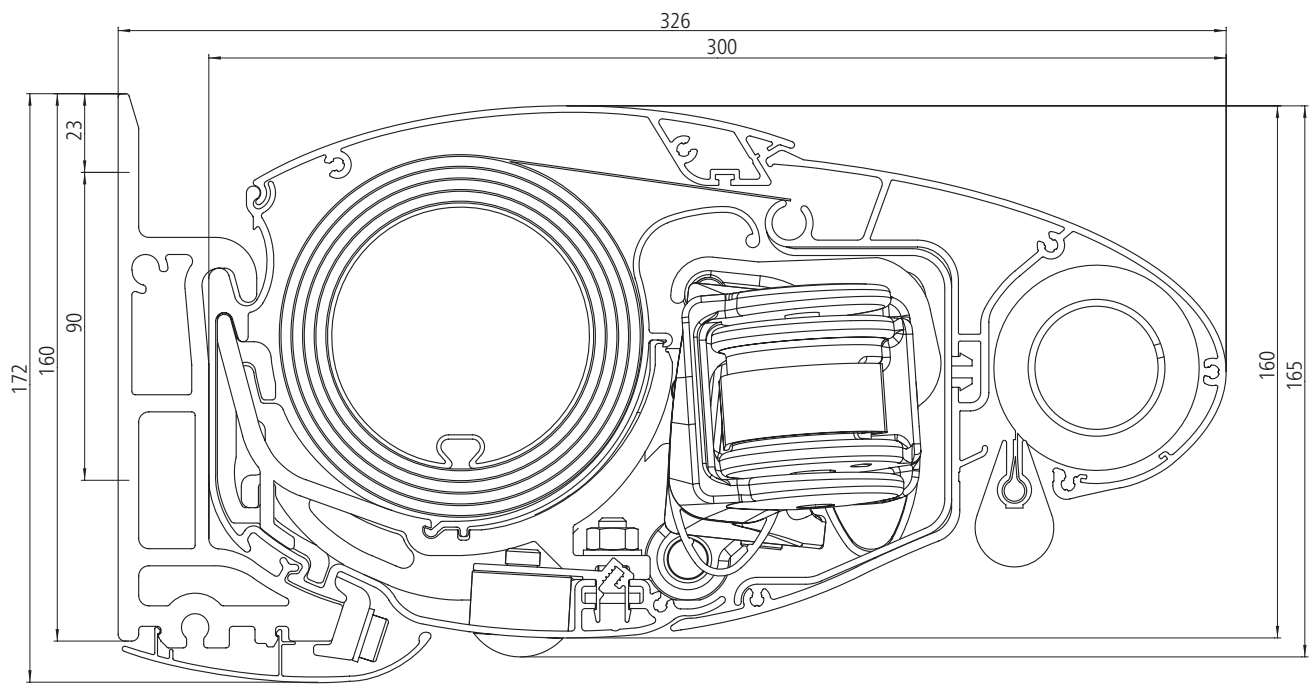


Cross-sections

Opal Design II LED



Opal Design II LED Valance Plus with motor



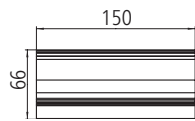
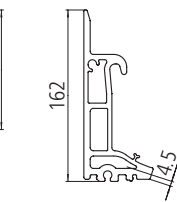
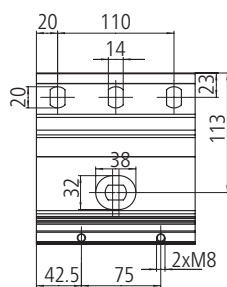
Figures are in mm

Opal Design II Installation

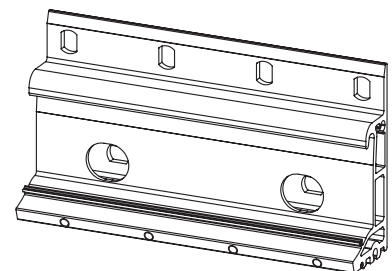
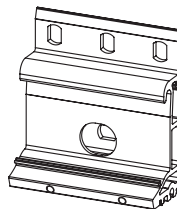
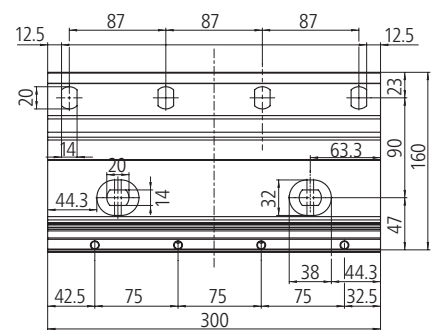
Installation on walls, ceilings and rafters is possible

Its dimensions mean that the Opal Design II can be mounted in a wide range of ways: not only on a wall but also on a ceiling or a rafter. The brackets and mounting plates are made of extruded, powder-coated aluminium.

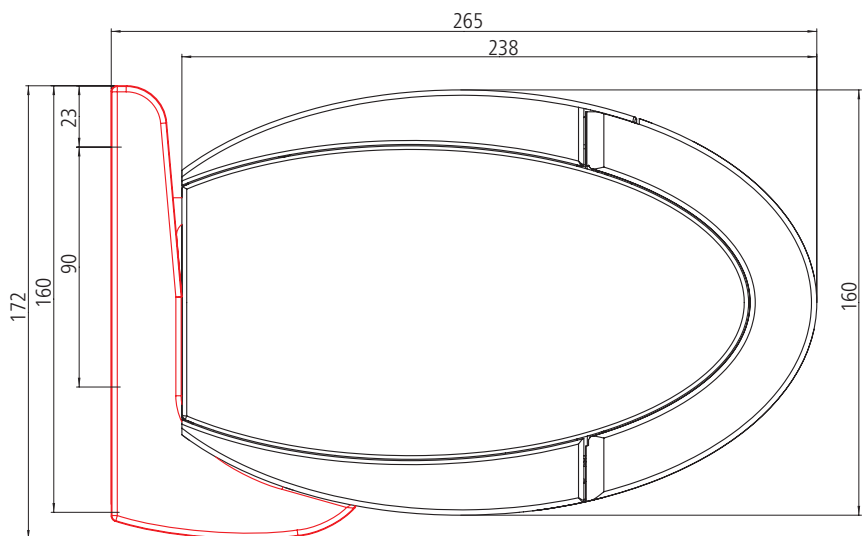
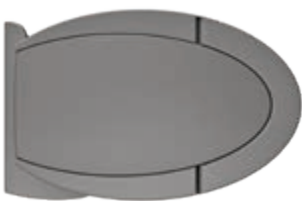
Wall mounting – brackets



150 mm wall bracket



300 mm wall bracket



Cross-section of Opal Design II with ceiling bracket

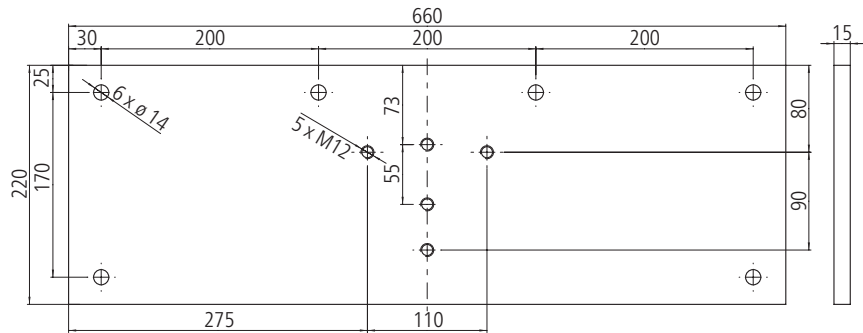
Opal Design II Installation

Wall mounting – mounting plates

Update



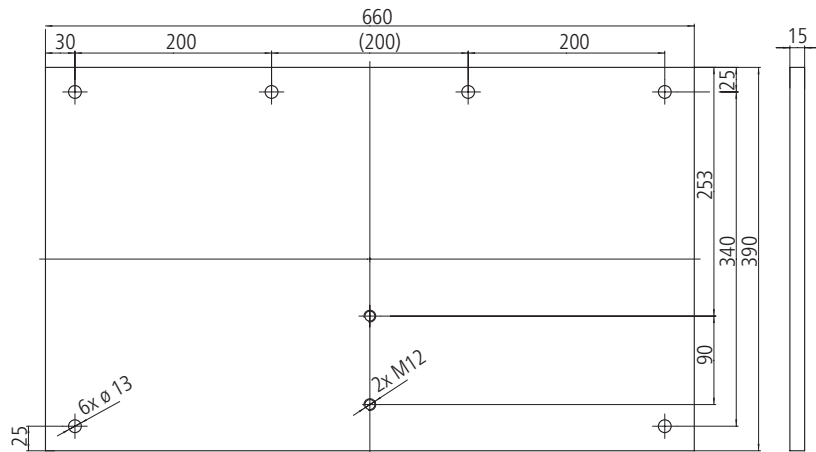
Mounting plate 660 x 220 x 15 mm



Position of the mounting plates using the Opal Design II 500 x 300 cm* as an example.



Mounting plate 660 x 390 x 15 mm

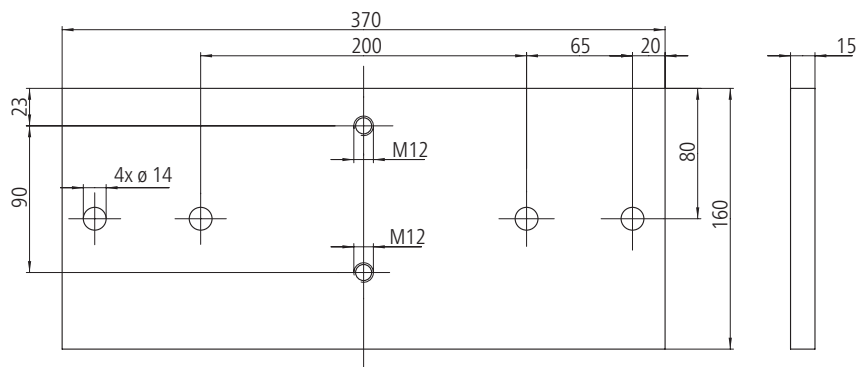


Position of the mounting plates using the Opal Design II 500 x 300 cm* as an example.

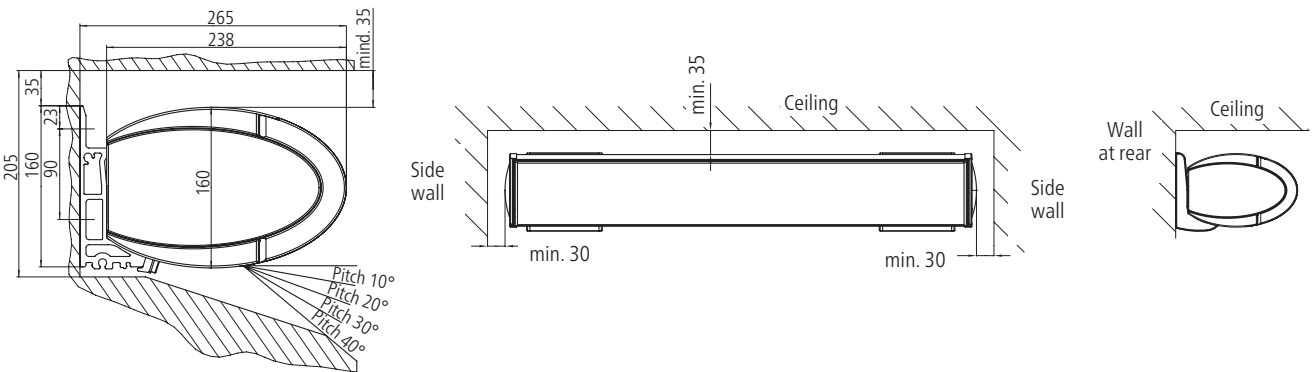
* Depending on the width of the awning, the positioning of the mounting plates may vary.



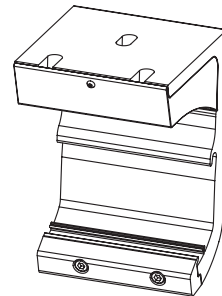
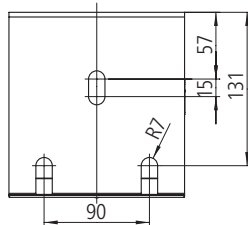
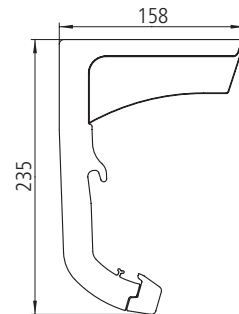
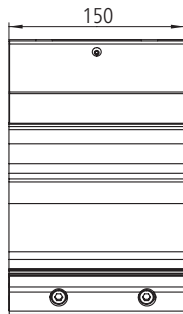
Ceiling front plate 370 x 160 x 15 mm



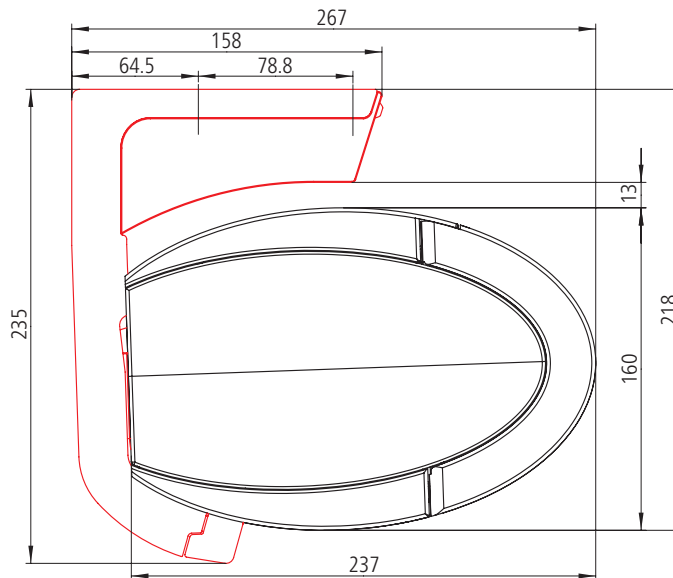
Minimum spacing distances for installation in the niche (wall mounting)



Ceiling mounting



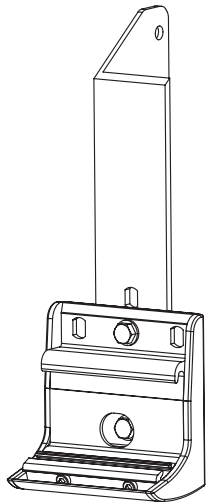
Ceiling bracket



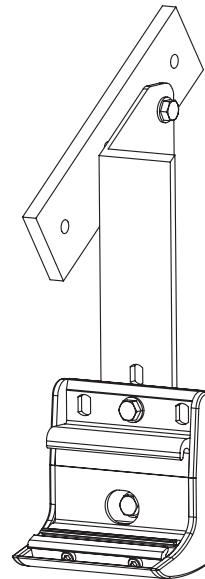
Side view with ceiling bracket

Opal Design II Installation

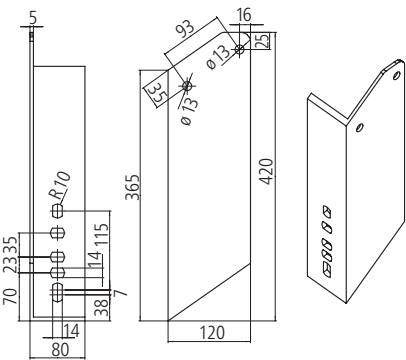
Rafter mounting



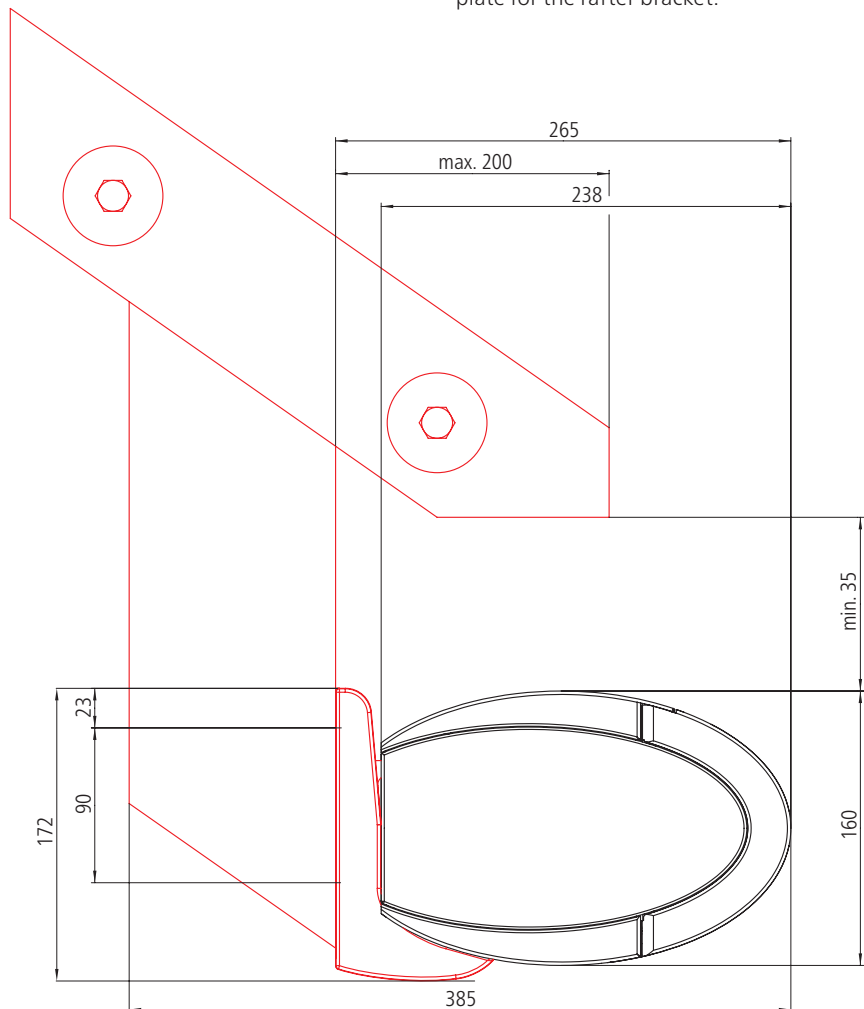
Right-hand rafter bracket



Rafter bracket with mounting plate for right-hand rafter bracket. weinor recommends using a mounting plate for the rafter bracket.



Rafter bracket



Side view: rafter bracket installation

Extraction forces

The extraction force is the force with which the weight of the awning and the wind load pull on each upper fixing. The tables indicate this force in N per upper fixing. It varies depending on the awning size and the wall bracket/mounting plate used.

Selecting the wall bracket and anchoring system:

1. Consult relevant table for extraction force per fixing for selected awning size.

2. Select a wall bracket/mounting plate for which there is fixing material which can resist the indicated extraction force. Remember to take into account the spacing, the area which will be damaged if the fixing breaks out, the type of fixing material used and the mounting base.

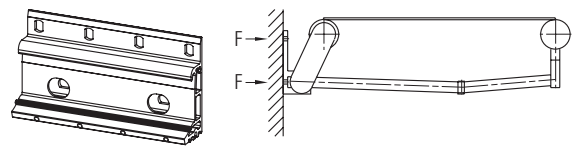
See separate bracket overview for other bases.

- 1 standard wall bracket (150 mm),
1 standard wall bracket (150 mm) per awning arm,
1 standard wall bracket (150 mm) as a central bracket from a width of 501 cm
Fixings: 6* in all
- 1 standard wall bracket (300 mm) plus 1 standard wall bracket (150 mm) as a central bracket from 501 cm,
1 standard wall bracket (300 mm) per awning arm,
Fasteners: 15* in all
- Mounting plate (660 x 220 mm) incl.
1 standard wall bracket (150 mm),
1 standard wall bracket (150 mm) as a central bracket incl. base plate
Fixings: 15* in all
- Mounting plate (660 x 390 mm) incl.
1 standard wall bracket (150 mm),
1 standard wall bracket (150 mm) as a central bracket incl. base plate
Fixings: 15* in all
- 1 standard wall bracket (150 mm) incl. roof front plate (370 x 160 mm),
1 standard wall bracket (150 mm) as central bracket,
1 standard wall bracket (150 mm) per awning arm
Fixings: 11* in all

Wall mounting on C20/25 concrete with up to 200 mm of facing extraction force in N per upper fixing for wall bracket

Width in cm	Projection in cm					
	150	200	250	300	350	400
200	647					
	324					
	159					
	83					
	454					
250	766	1140				
	383	570				
	189	280				
	98	146				
	537	797				
300	884	1317	1861			
	442	659	930			
	218	324	457			
	113	169	238			
	620	921	1299			
350	1003	1495	2108	2871		
	501	747	1054	1436		
	247	367	517	704		
	129	191	270	367		
	703	1045	1472	2003		
400	1121	1672	2355	3199	4069	
	560	836	1178	1599	2034	
	276	411	578	784	996	
	144	214	301	409	519	
	786	1169	1644	2231	2836	
450	1239	1850	2602	3527	4488	6418
	620	925	1301	1763	2244	3209
	305	454	638	864	1099	1571
	159	237	333	450	573	818
	869	1294	1817	2460	3127	4470
500	1358	2027	2849	3854	5548	7024
	679	1014	1425	1927	2774	3512
	334	498	699	945	1359	1719
	174	260	364	492	708	896
	952	1418	1990	2688	3867	4892
550	1476	2205	3097	4710	6034	7630
	738	1102	1548	2355	3017	3815
	363	542	760	1154	1477	1867
	189	282	396	602	770	973
	1035	1542	2162	3286	4205	5314
600	1594	2382	3344	5087	6519	8237
	797	1191	1672	2544	3259	4118
	393	585	820	1247	1596	2016
	205	305	427	650	832	1050
	1117	1666	2335	3549	4543	5737
650	1713	2559	4036	5465	7004	8843
	856	1280	2018	2732	3502	4422
	422	629	990	1339	1715	2164
	220	328	516	698	894	1128
	1200	1790	2818	3812	4881	6159

* Number of fixings required on site



F = force

Extraction forces

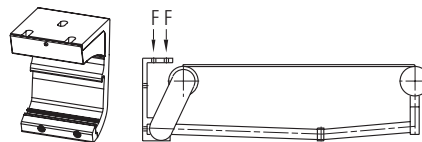
Ceiling installation (on C20/25 concrete)

Extraction forces in N for ceiling mounting

- 1 universal ceiling bracket (with holder plate),
- 1 universal ceiling bracket (with holder plate) as a central bracket from a width of 501 cm,
- 1 universal ceiling bracket (with holder plate) per awning arm

Fixings: 12* in all
* number of fixings required on site

Width in cm	Projection in cm					
	150	200	250	300	350	400
200	449					
250	536	794				
300	623	921	1299			
350	709	1049	1475	2009		
400	796	1176	1651	2241	2858	
450	882	1303	1827	2474	3156	4502
500	969	1430	2003	2706	3883	4929
550	1055	1558	2179	3287	4224	5357
600	1142	1685	2354	3552	4566	5785
650	1228	1812	2817	3817	4907	6213



F = force

Rafter mounting

Shear forces in N per bracket for rafter mounting

- 1 rafter bracket + 1 standard wall bracket (150 mm) one left, one right for each,
- 1 rafter bracket + 1 standard wall bracket (150 mm) as a central bracket from width of 501 cm
- 1 rafter bracket + 1 mounting plate for rafters + 1 standard wall bracket (150 mm) one left, one right for each,
- 1 rafter bracket + 1 mounting plate for rafters + 1 standard wall bracket (150 mm) as a central bracket from a width of 501 cm

Width in cm	Projection in cm					
	150	200	250	300	350	400
200	1153					
	526					
250	1368	2050				
	628	903				
300	1584	2371	3357			
	730	1048	1447			
350	1799	2692	3805	5195		
	832	1193	1643	2205		
400	2014	3013	4253	5790	8294	
	934	1338	1839	2460	3473	
450	2230	3335	4700	6385	9172	11663
	1036	1482	2035	2716	3843	4850
500	2445	3656	5148	6980	10050	12766
	1138	1627	2231	2971	4213	5311
550	2661	3977	5596	8477	10928	13868
	1240	1772	2426	3591	4583	5771
600	2876	4298	6044	9156	11806	14970
	1342	1917	2622	3881	4953	6232
650	3092	4619	7233	9835	12684	16072
	1444	2061	3118	4171	5322	6692

