



# SADEV<sup>®</sup>classic

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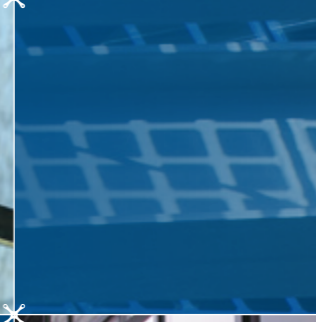
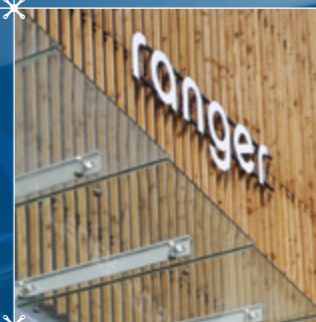
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# SADEV<sup>®</sup>classic

TECHNICAL CATALOGUE

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SADEV®classic

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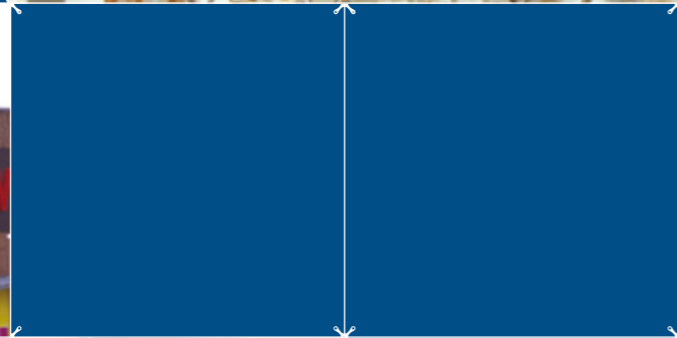
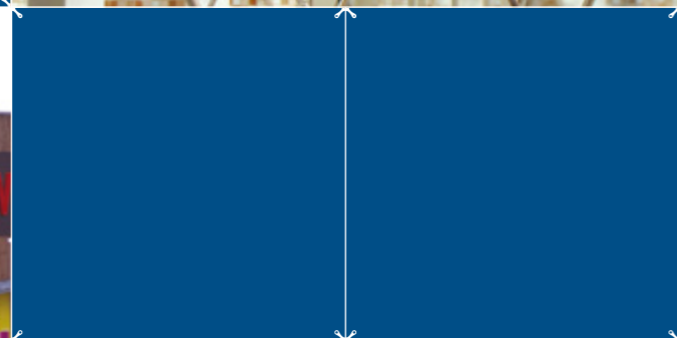
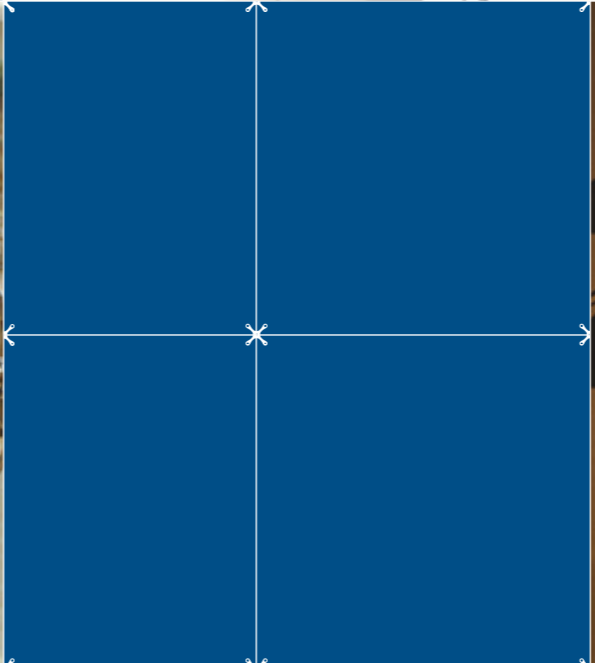


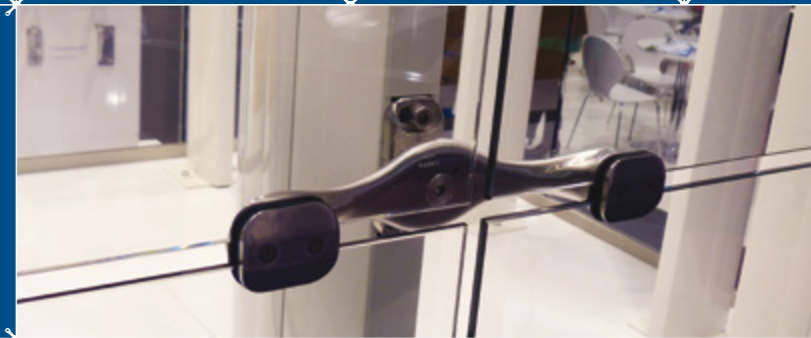
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GLASS CLAMP FACADES



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# Introduction

## Technical

A new façade system for structural glazing with a unique aesthetic design incorporating gentle curves and exceptional finish.

SADEV clamping systems guarantee performance & design, with maximum transparency.

Thanks to a new fixing process, glass panels are supported even in cases of heavy applied loads.

Requires no glass drilling, allowing easy and quick installation.

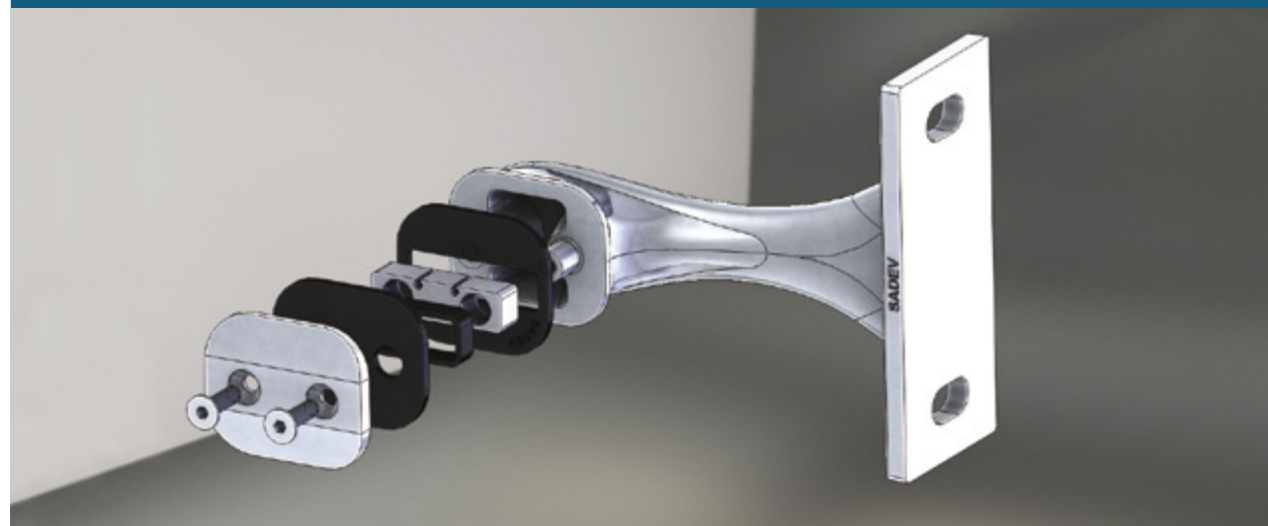
Parts are made out of 316 Stainless Steel with a brushed finish (standard) allowing installation in both interior and exterior environments and nearly any condition.

The fittings dimensions have been calculated to mostly optimize the aesthetic clamp's trace onto the glazed facade. Therefore, glazings are not drilled but just pinched.

The advantages of clamp fixing system :

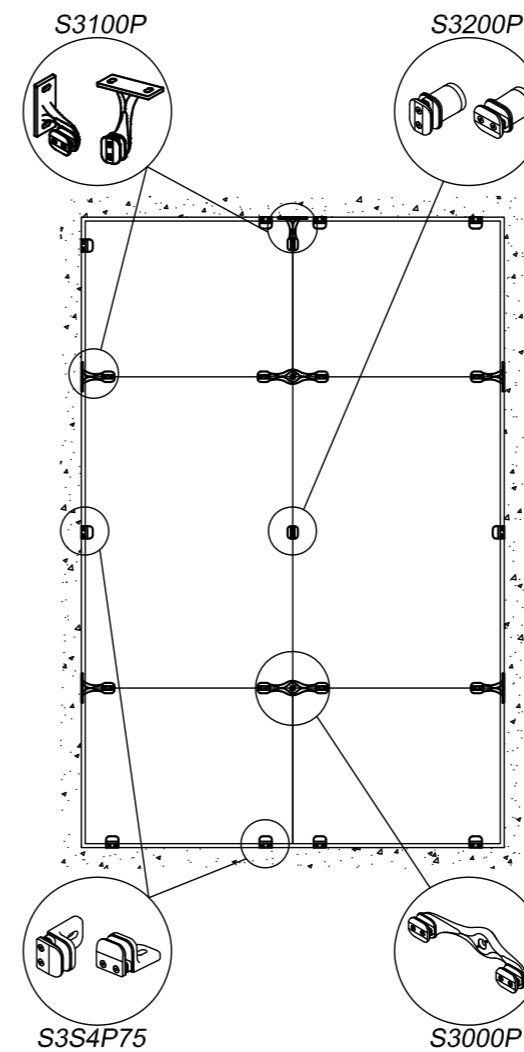
- **Aesthetic** : the spiders' smooth lines and no drilling are the best advantages for a completely transparent façade.
- **Economical** : easy installation & no drilling
- **State-of-the art solution** and excellent alternative to the traditional glass fixing system
- **Full product range** (swivel fittings or 1 arm / 2 arms / 4 arms spiders) to meet the requests of all clamp façade projects
- **Ready-made solution**
- **Possibility to realize complex projects**, e.g. insulating facades.
- **Glass thickness**: from 8 to 31,52mm – (5/16 in. – 1-1/4 in.)
- **Possible to use insulating (IGU) double pane glass.**

## Fixation on the facade

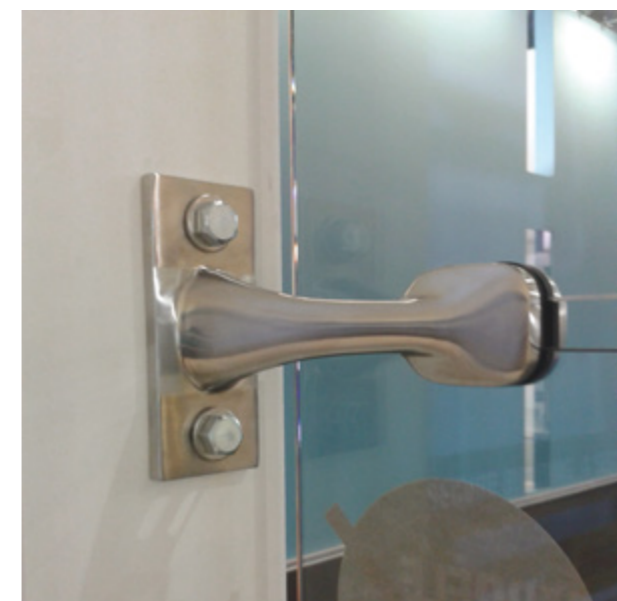
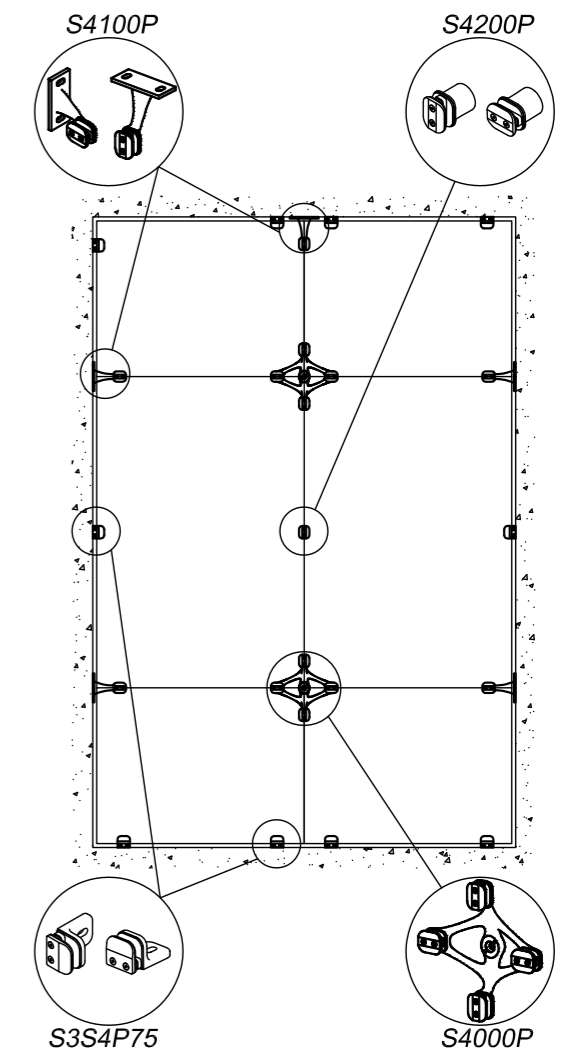


## Typical facade

### S3000P



### S4000P



# S 3000 P

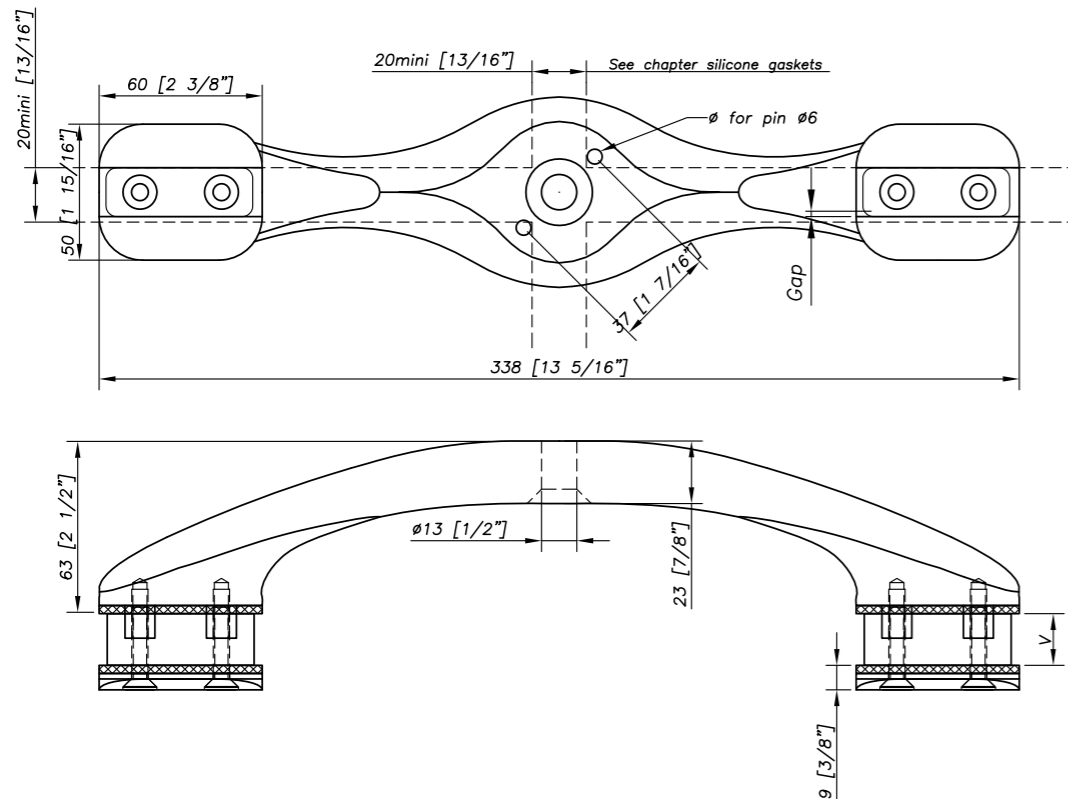
Designation : stainless steel clamp spider



GLASS SIDE VIEW

Material : AISI 316  
Finish : brushed GR400

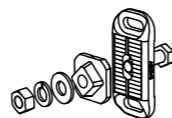
## Dimensions



## References

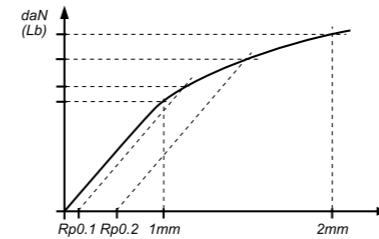
GLASS THICKNESS	REFERENCE
8 ≤ V ≤ 15,52	S3000P-E2-V1
17,52 < V ≤ 25,52	S3000P-E2-V2
26,52 < V ≤ 31,52	S3000P-E2-V3
V ≥ 31,52	S3000P-E2-SP

Omega cone available as option (see p.8.24)



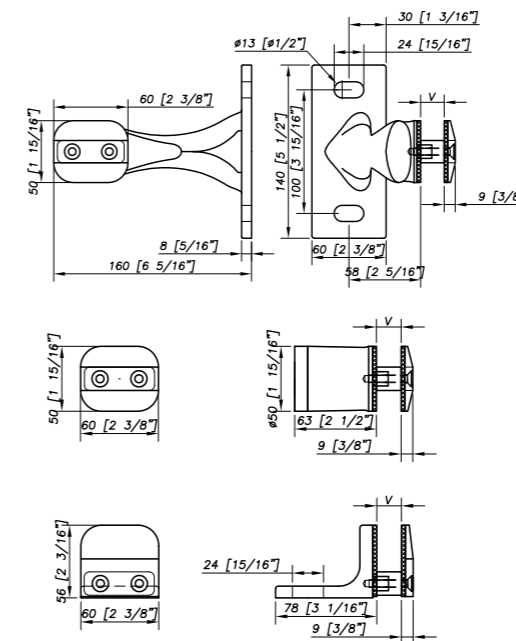
S 3000P

## Mechanical performances



S3000P	LOAD PARALLEL TO GLASS per arm	S3000P	LOAD PERPENDICULAR TO GLASS per arm	
	1 mm	173 daN (388 lb)	1 mm	333 daN (748 lb)
	2 mm	312 daN (701 lb)	2 mm	558 daN (1254 lb)
	Rp 0,1	222 daN (499 lb)	Rp 0,1	354 daN (795 lb)
	Rp 0,2	243 daN (546 lb)	Rp 0,2	441 daN (991 lb)
S3100P	LOAD PARALLEL TO GLASS per arm	S3100P	LOAD PERPENDICULAR TO GLASS per arm	
	1 mm	372 daN (836 lb)	1 mm	247 daN (555 lb)
	2 mm	505 daN (1135 lb)	2 mm	442 daN (993 lb)
	Rp 0,1	309 daN (694 lb)	Rp 0,1	314 daN (705 lb)
	Rp 0,2	360 daN (809 lb)	Rp 0,2	385 daN (865 lb)

## Components



GLASS THICKNESS	REFERENCES
8 ≤ V ≤ 15,52	S3100P-V1
17,52 < V ≤ 25,52	S3100P-V2
26,52 < V ≤ 31,52	S3100P-V3
V ≥ 31,52	S3100P-SP
GLASS THICKNESS	REFERENCES
8 ≤ V ≤ 15,52	S3200P-V1
17,52 < V ≤ 25,52	S3200P-V2
26,52 < V ≤ 31,52	S3200P-V3
V ≥ 31,52	S3200P-SP
GLASS THICKNESS	REFERENCES
8 ≤ V ≤ 15,52	S3S4P75-V1
17,52 < V ≤ 25,52	S3S4P75-V2
26,52 < V ≤ 31,52	S3S4P75-V3
V ≥ 31,52	S3S4P75-SP

## Suggested mounting

### Mounting the spiders to the structure

#### S3000P

If mounting directly to the structure anti-rotation pins are recommended to prevent the clamps from rotating. The diameter of the anti-rotation pins is 6 mm. Do not pre-drill the holes for the pins in your structure before mounting spiders. Drill bits and anti-rotation are provided.

An alternate attachment interface (Omega) is available. The Omega interface allows for vertical adjustment of the clamp fitting to account for tolerances in the drilling of the structural steel.

The fixing of the spider is done with a M12 (1/2 in.) Flat head screw (Not supplied by Sadev). A vertical slot in the structural steel for vertical adjustment is not recommended due to the high dead load weight of the glass.

#### Installing the glass

Mount the gravity shelf to the spider casting. Install the glass panel and secure with the external clamp plate using M6 screws provided. Torque both screws to 20 Nm (15 ft lbs) for monolithic glass and 10Nm (8 ft lbs) for laminated (PVB) glass.

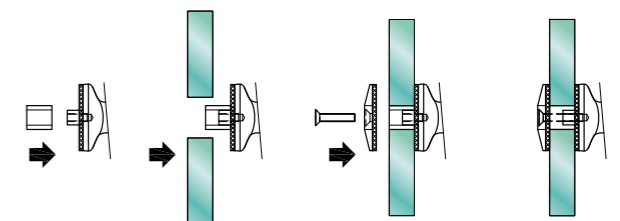
SADEV recommends using thread locking, except specific mounting constraint.

#### S3100P

Attaching the spider to the vertical fin or support is done with two M12 (1/2 in.) bolts (not supplied by Sadev).

#### S3200P / S3S4P75

The fixing of the single point clamp is done with one M12 bolts (Not supplied by Sadev).



# S 4000 P

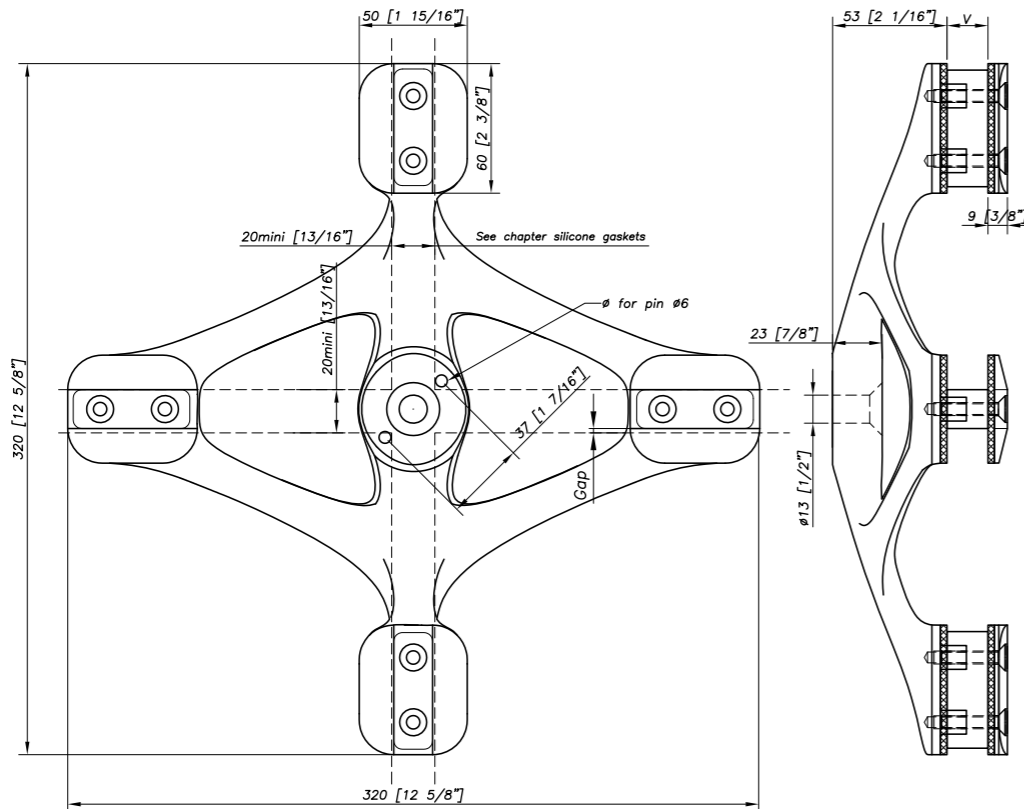
Designation : stainless steel clamp spider



GLASS SIDE VIEW

Material : AISI316  
Finish : brushed GR 400

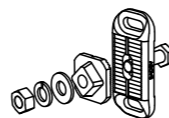
## Dimensions



## References

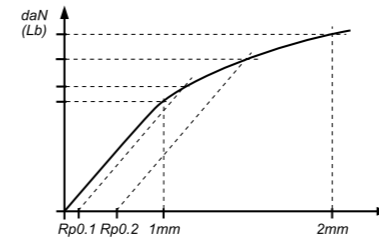
GLASS THICKNESS	REFERENCE
8 ≤ V ≤ 15,52	S4000P-E4-V1
17,52 < V ≤ 25,52	S4000P-E4-V2
26,52 < V ≤ 31,52	S4000P-E4-V3
V ≥ 31,52	S4000P-E4-SP

Omega cone available as option (see p.8.24)



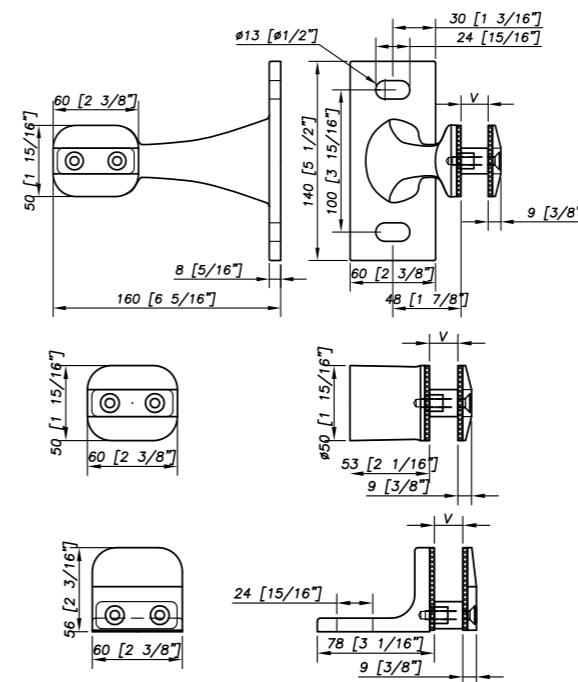
S 4000 P

## Mechanical performances



S 4000 P	LOAD PARALLEL TO GLASS per arm	S 4000 P	LOAD PERPENDICULAR TO GLASS per arm	
	1 mm	196 daN (440 lb)	1 mm	174 daN (391 lb)
	2 mm	329 daN (739 lb)	2 mm	329 daN (739 lb)
	Rp 0,1	871 daN (1958 lb)	Rp 0,1	310 daN (696 lb)
	Rp 0,2	974 daN (2189 lb)	Rp 0,2	355 daN (798 lb)
S 4100 P	LOAD PARALLEL TO GLASS per arm	S 4100 P	LOAD PERPENDICULAR TO GLASS per arm	
	1 mm	372 daN (836 lb)	1 mm	247 daN (555 lb)
	2 mm	505 daN (1135 lb)	2 mm	442 daN (993 lb)
	Rp 0,1	309 daN (694 lb)	Rp 0,1	314 daN (705 lb)
	Rp 0,2	360 daN (809 lb)	Rp 0,2	385 daN (865 lb)

## Components



GLASS THICKNESS	REFERENCES
8 ≤ V ≤ 15,52	S4100P-V1
17,52 < V ≤ 25,52	S4100P-V2
26,52 < V ≤ 31,52	S4100P-V3
V ≥ 31,52	S4100P-SP
GLASS THICKNESS	REFERENCES
8 ≤ V ≤ 15,52	S4200P-V1
17,52 < V ≤ 25,52	S4200P-V2
26,52 < V ≤ 31,52	S4200P-V3
V ≥ 31,52	S4200P-SP
GLASS THICKNESS	REFERENCES
8 ≤ V ≤ 15,52	S3S4P75-V1
17,52 < V ≤ 25,52	S3S4P75-V2
26,52 < V ≤ 31,52	S3S4P75-V3
V ≥ 31,52	S3S4P75-SP

## Suggested mounting

### Mounting of the spiders on the structure

#### S4000P

If mounting directly to the structure anti-rotation pins are recommended to prevent the clamps from rotating. The diameter of the anti-rotation pins is 6 mm. Do not pre-drill the holes for the pins in your structure before mounting spiders. Drill bits and anti-rotation are provided.

An alternate attachment interface (Omega) is available. The Omega interface allows for vertical adjustment of the clamp fitting to account for tolerances in the drilling of the structural steel.

The fixing of the spider is done with a M12 (1/2 in.) Flat head screw (Not supplied by Sadev). A vertical slot in the structural steel for vertical adjustment is not recommended due to the high dead load weight of the glass.

#### Installing the glass

Mount the gravity shelf to the spider casting. Install the glass panel and secure with the external clamp plate using M6 screws provided. Torque both screws to 20 Nm (15 ft lbs) for monolithic glass and 10Nm (8 ft lbs) for laminated (PVB) glass.

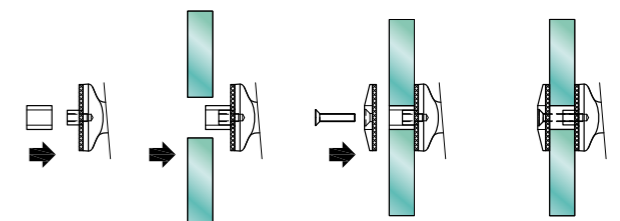
Sadev recommends using tread locker on the external clamping screws on exterior applications.

#### S4100P

Attaching the spider to the vertical fin or support is done with two M12 (1/2 in.) bolts (not supplied by Sadev).

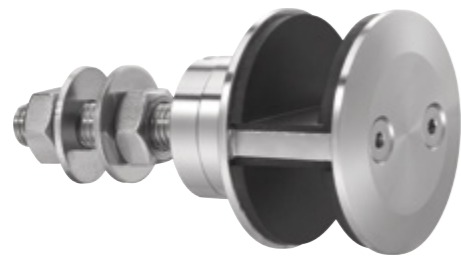
#### S4200P / S3S4P75

The fixing of the single point clamp is done with one M12 bolts (Not supplied by Sadev).



# RC 70

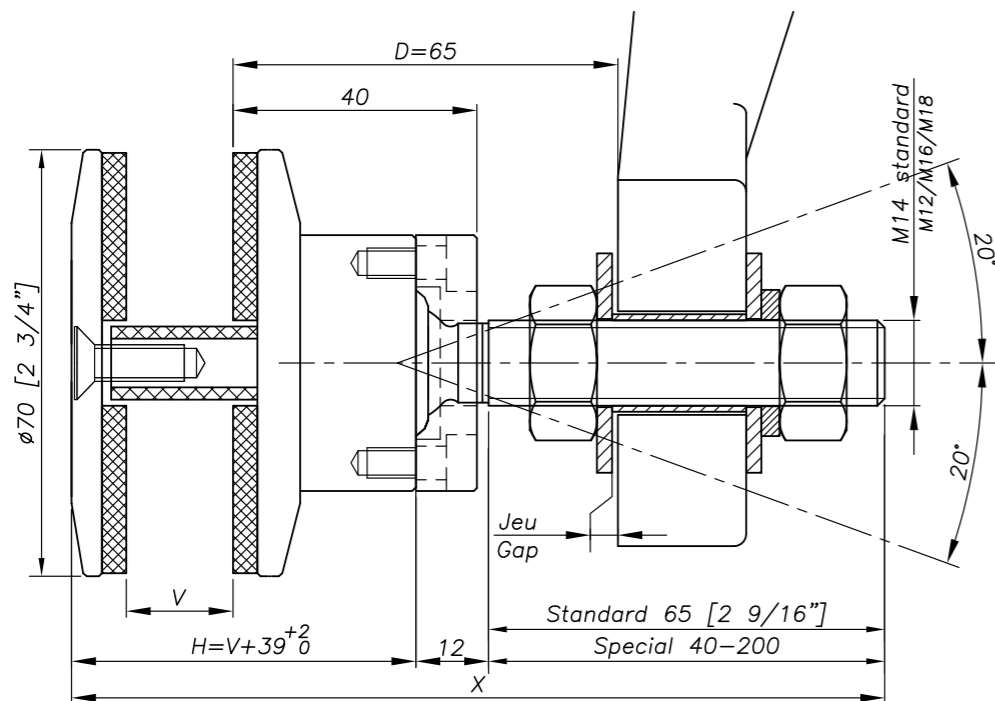
Designation : clamp swivel fitting



Patent N° 9806556

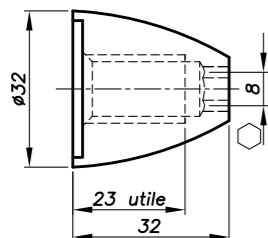
REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	RC70-V1
15 < V ≤ 22	M14	65	RC70-V2
22 < V ≤ 26	M14	65	RC70-V3
SPECIAL	SPECIAL	SPECIAL	RC70-SP

## Dimensions

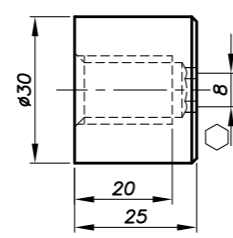


V\* = glass thickness.

MONTI M 14 OPTION



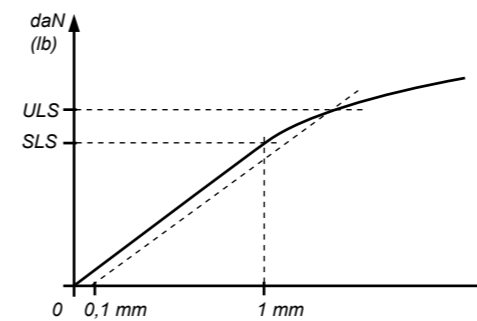
3025 M 14 OPTION



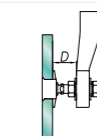
## No glass drilling

RC 70

## Mechanical performances

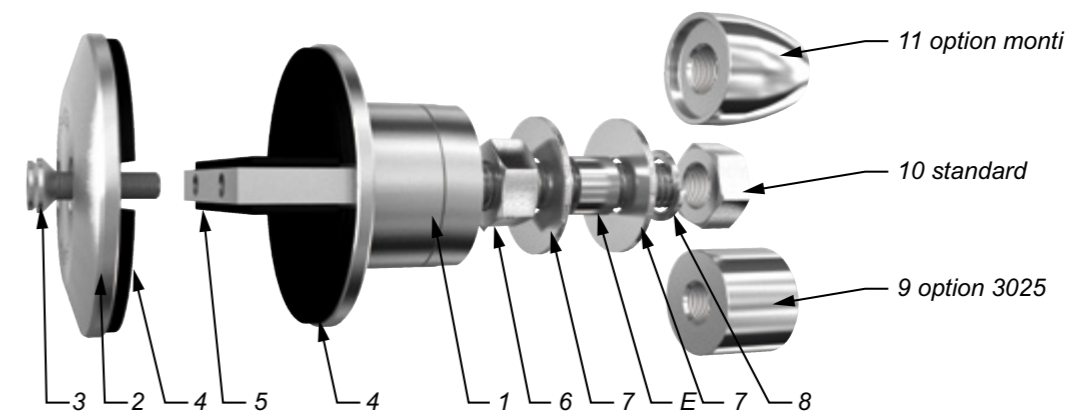


	D	BENDING CAPACITY		PULL OUT CAPACITY
		SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	



\*SLS – Serviceability Limit State : load at 1mm deformation  
 \*ULS – Ultimate Limit State : load at the elastic limit (Rp0.1).  
 Values are given without factor of safety.  
 Tests available online : [www.sadev.com](http://www.sadev.com)

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel fittings body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	External plate	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
3	2	Bolt DIN 7991 M6 x 25	A4
4	4	Security disk	EPDM
5	2	Protection plate	EPDM
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Washer DIN127	A4
9	1	Option 3025	A4
10	1	Nut DIN 934	A4
11	1	Monti option	A4

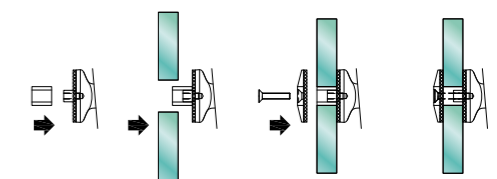
## Suggested mounting

Install the nut (# 6) + 1 washer (#7) on part (#1).

Install through the hole in the support or spider casting. Spacer E over threads to prevent fitting from fully tightening on support for differential movements between structure and glass support (supplied on request). Adjust depth in or out as needed.

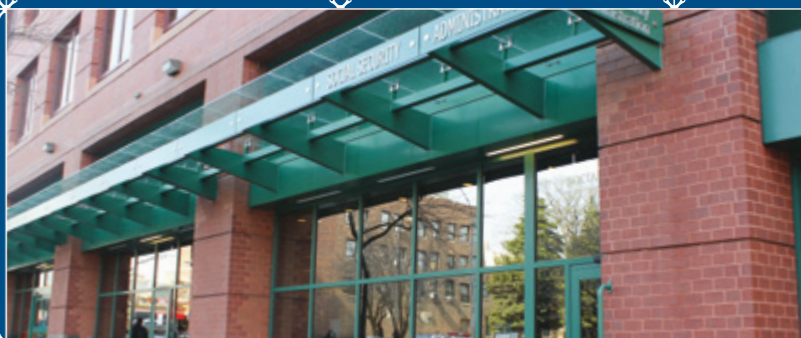
Mounting other washer (#7) and lock washer (#8) + nut (#9, 10 (standard), or 11) and torque to 60 Nm (45 ft lbs). Set glass on gravity shelf with EPDM (#5) setting block.

Mount the external disc (#2) with EPDM (#4) washer between glass and metal using 2 screws (#3) provided. Torque screws to 20 Nm (15 ft lbs) for monolithic glass and 10 Nm (8 ft lbs) for laminated (PVB) glass using a 4mm hex wrench.



Sadev recommends using tread locker on the external clamping screws on exterior applications.





HOOK SYSTEM



Fixing for glass facade ..... 2.2



Fixing system for glass roof or canopy ..... 2.4



# Fixing for glass facade



## Description

- **Point Supported "Hook" system for facade.**
- 316 stainless steel single or double attachment.
- Alternative to traditional spider + rotule.
- Simple design.
- The hook system allows for rotation around the pin axis and horizontal movement.
- Available in both countersunk or cylindrical through hole glass drilling.
- It installs on a standard glass thickness between 10 (3/8 in) and 26 mm (1 in) (other thickness on request).
- Glass attachment body is attached to the glass and the panels **hook onto the pin**.

## Performances

AXIS	D	BENDING CAPACITY			PULL OUT CAPACITY
		F 1 MM (SLS)	F 2 MM	RP0,1 (ULS)	ULS
	Ø 17	1028 daN (2311 lb)	1930 daN (4338 lb)	1273 daN (2861 lb)	3399 daN (7641 lb)*

\* Tensile strength calculation according to EN 1993-1-8.

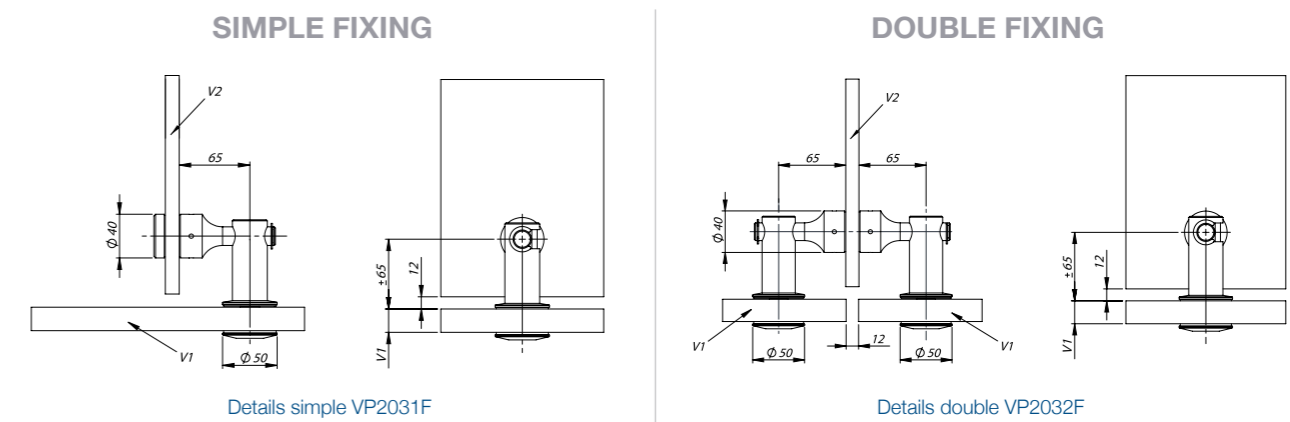
Fixing for **glass facade**

## References

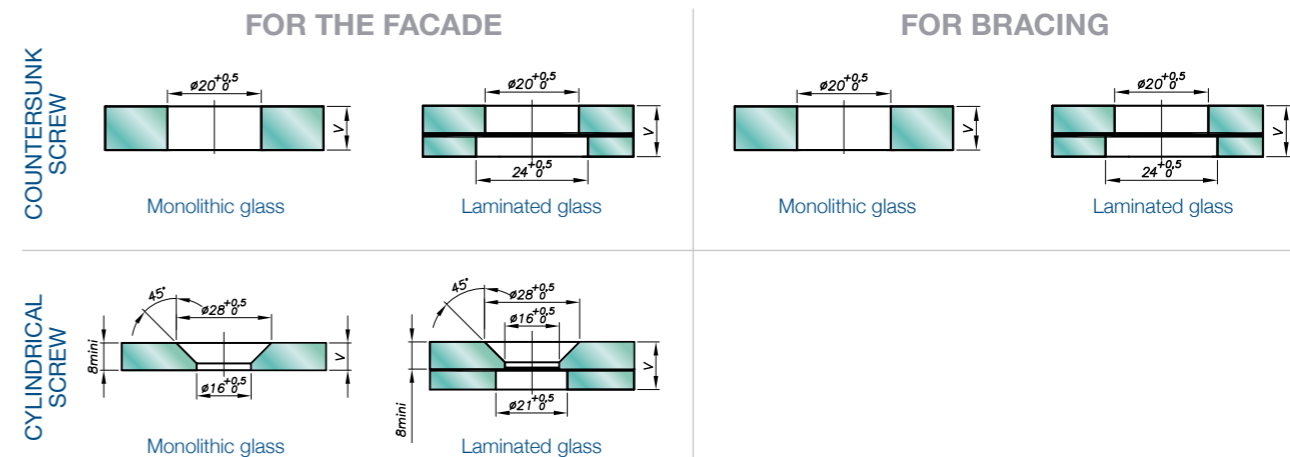
PHOTO	REFERENCE *	DESCRIPTION	GLASS DRILLING
	VP2031F	Simple fixing	Cylindrical
	VP2032F	Double fixing	Cylindrical
	VP2061F	Simple fixing	Countersunk
	VP2062F	Double fixing	Countersunk

\* Please specify the glass thickness of facade and bracing.

## Dimensions



## Drilling



# Fixing system for glazing roof or canopy



## Description

- **Fixing system** for glass roof or canopy.
- 316 stainless steel single or double attachment.
- Alternative to traditional spider + rotule.
- Simple design.
- The canopy system allows for rotation around the pin axis and horizontal movement.
- The canopy system is available with countersunk screws or cylindrical.
- It installs on a standard glass thickness between 10 (3/8 in) and 26 mm (1 in) (other thickness on request).
- Glass attachment body is attached to the pin and the glass panels **are installed on the fitting (connections do not "Hook")**

## Performances

AXIS	D	BENDING CAPACITY			PULL OUT CAPACITY
		F 1 MM (SLS)	F 2 MM	RP0,1 (ULS)	ULS
	Ø 17	1028 daN (2311 lb)	1930 daN (4338 lb)	1273 daN (2861 lb)	3399 daN (7641 lb)*

\* Tensile strength calculation according to EN 1993-1-8.

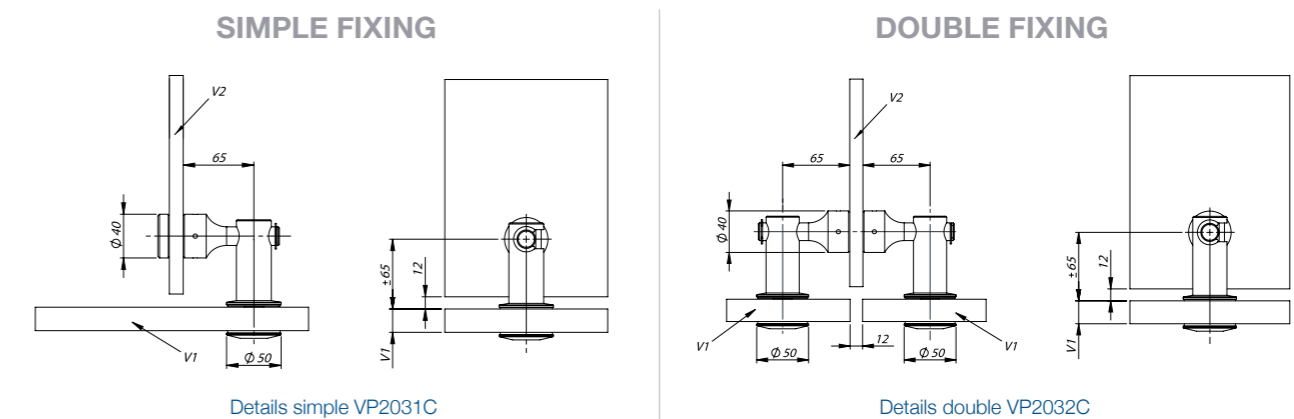
Fixing system for **glazing roof or canopy**

## References

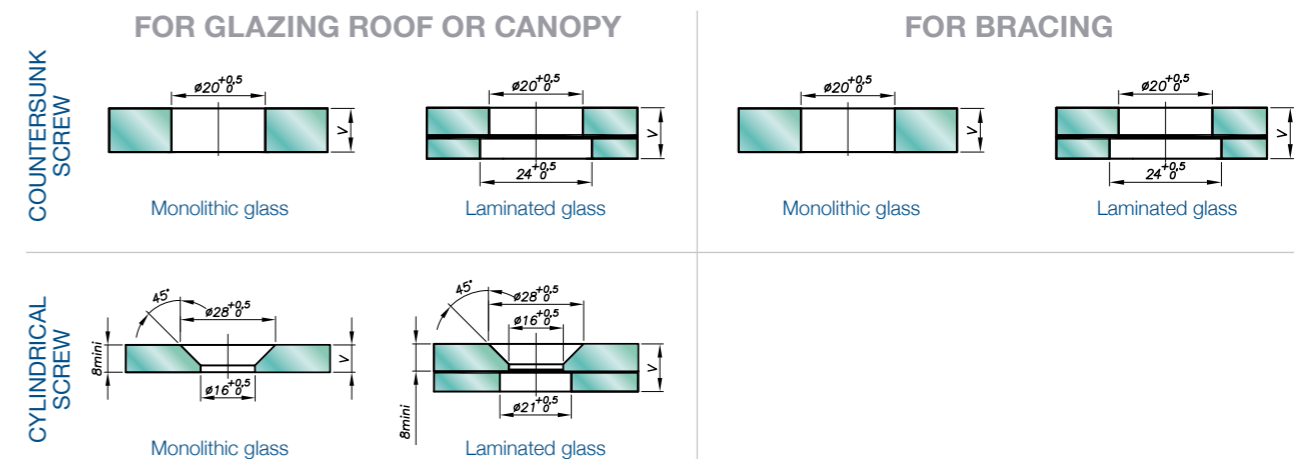
PHOTO	REFERENCE *	DESCRIPTION	GLASS DRILLING
	VP2031C	Simple fixing	Cylindrical
	VP2032C	Double fixing	Cylindrical
	VP2061C	Simple fixing	Countersunk
	VP2062C	Double fixing	Countersunk

\* Please specify the glass thickness of facade and bracing.

## Dimensions



## Drilling





CLADDING SYSTEM



Cladding system ..... 3.2

# Cladding system

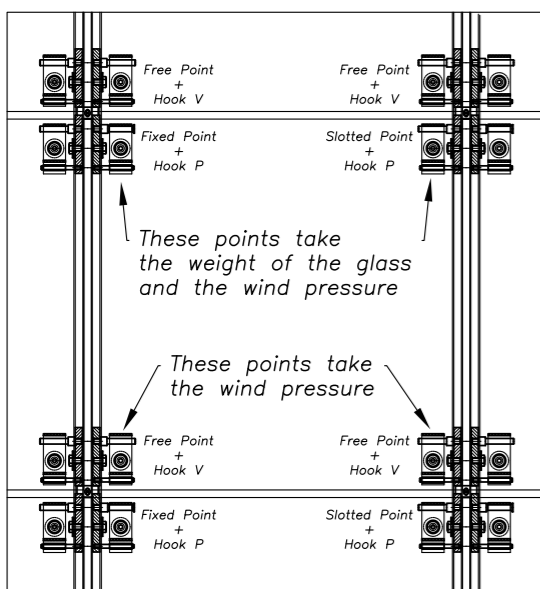
Designation : exterior glass wall cladding



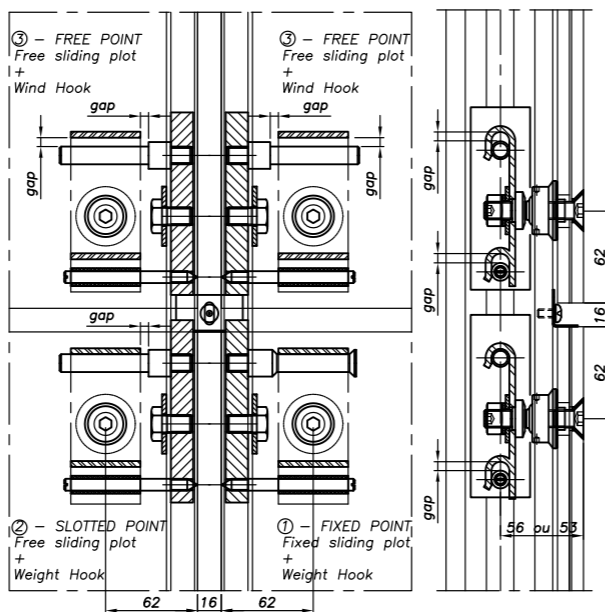
Patent N° 9707408  
Technical assesment available on request



## Configuration



## Detail

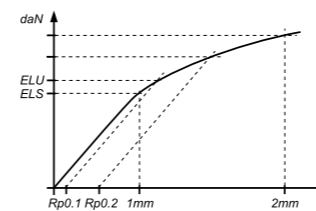


## Recommendation

- A complete glass cladding system to enhance the thermal insulation or for use as a rain screen on buildings.
- When used with color or opaque glass it can provide an aesthetic covering on existing worn or outdated surfaces.
- Articulating fitting points for use with laminated glass.
- Fixed points used for monolithic glass.
- The system can support up to 300 kg (660 lbs.) glazing.
- Can be used on sloped applications.
- Ideal for photovoltaic facade applications.
- Installation instructions on request.

Cladding system

## Mechanical performances



M12	SWIVEL FITTINGS				M12	FIXED BOLTS			
	SHEAR STRENGTH		PULL OUT CAPACITY			SHEAR STRENGTH		PULL OUT CAPACITY	
	D	TOTAL FAILURE	TOTAL FAILURE	TOTAL FAILURE		D	TOTAL FAILURE	TOTAL FAILURE	
	30mm	1797 daN* (4039 lb)	1055 daN* (2371 lb)		30mm	4342 daN* (9761 lb)	3399 daN* (7641 lb)		

\* Tensile strength calculation according to EN 1993-1-8 and shear resistance according to EN 1993-1-4

## References

PHOTO	DIMENSIONS	GLASS DRILLING	GLASS THICKNESS	REFERENCE
Support profile		-	-	VET-PROF-4M Profil en longueur 4m
			8.6 8.8 10.8	VET0-R2006-8.6-P VET0-R2006-8.8-P VET0-R2006-10.8-P
			8.6 8.8 10.8	VET0-R2006-8.6-V VET0-R2006-8.8-V VET0-R2006-10.8-V
			8 10 12 15	VET0-VISG-8-P VET0-VISG-10-P VET0-VISG-12-P VET0-VISG-15-P
			8 10 12 15	VET0-VISG-8-V VET0-VISG-10-V VET0-VISG-12-V VET0-VISG-15-V
		-	-	VET5-FIXE VET5-LD
		-	-	VET11-EAS1 VET11-EAS1-D VET11-EAS1-G



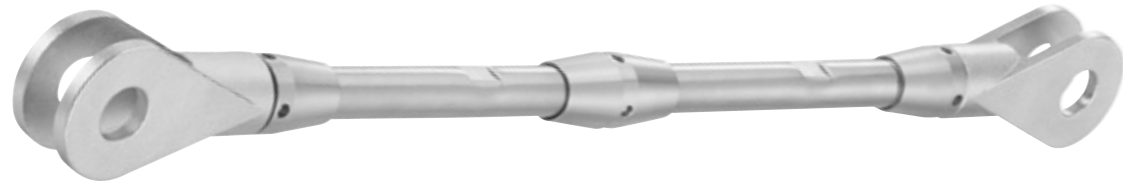
TENSION RODS



Tension rods ..... 4.2



# Tension rods



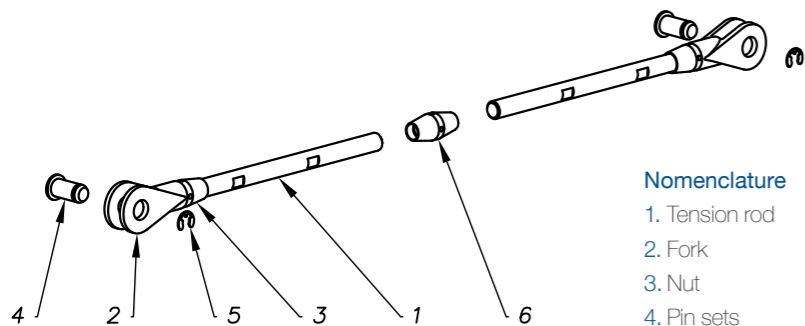
## Description

Sadev designs, manufactures and markets a wide range of rods to meet the aesthetic requirements required for contemporary structures. The rods are available in 9 sizes and bars 1 single length up to 3m, sleeved beyond.

Material : stainless steel AISI 316 – X2CrNiMo17-12-2 according EN 10088-3 – Marine quality.

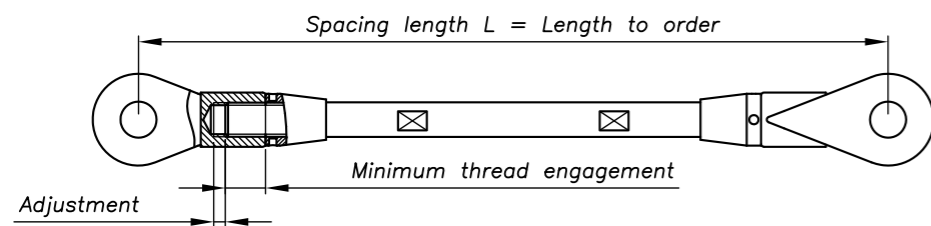
Elastic limit =  $R_p0,2\% = 355 \text{ N/mm}^2$

Tensile strength =  $R_m = 700 \text{ N/mm}^2$



### Nomenclature

1. Tension rod
2. Fork
3. Nut
4. Pin sets
5. Circlips
6. Coupler



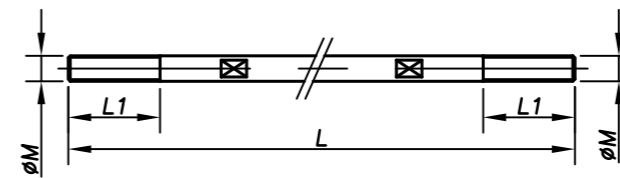
SET REFERENCE	Ø THREAD	F1 KN (IB)	F2 KN (IB)	F3 KN (IB)
13STR15M08L	M8	17,8 (4001)	14,6 (3282)	30,5 (6856)
13STR18M10L	M10	27,8 (6249)	22,6 (5080)	48,3 (10858)
13STR18M12L	M12	40,1 (9014)	32,8 (7373)	66 (14837)
13STR25M14L	M14	54,6 (12274)	44,7 (10048)	95,4 (21446)
13STR25M16L	M16	71,3 (16028)	58,5 (13151)	128,2 (28820)
13STR31M18L	M18	90,3 (20300)	74 (16635)	141,4 (31787)
13STR31M20L	M20	111,5 (25066)	91,4 (20547)	174,2 (39161)
13STR38M22L	M22	134,8 (30304)	110,5 (24841)	230,7 (51863)
13STR38M24L	M24	160,5 (36081)	131,5 (29562)	288,5 (64857)

F1 = 0,2% yield strength (KN)

F2 = Permissible load = 0.2% yield strength with 18% safety factor (Kn)

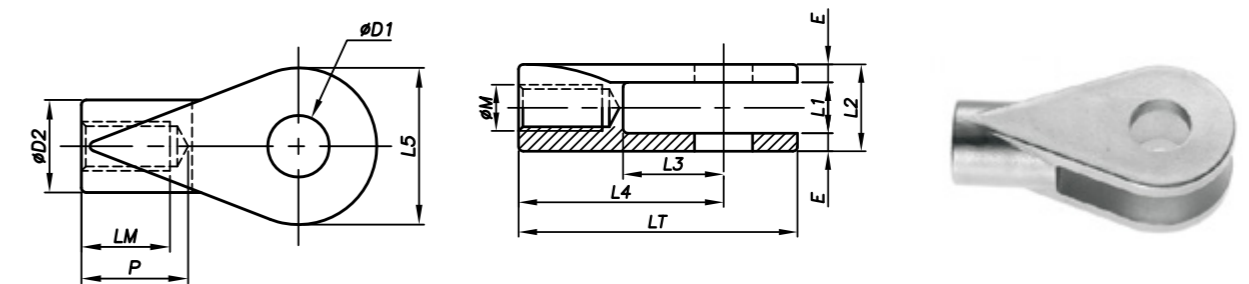
F3 = Breaking load (Kn)

## Tension rods



REFERENCE	SCREW THREAD	L1	SETTING
13-TIR-08-L	M8	34	±5
13-TIR-10-L	M10	36	±6
13-TIR-12-L	M12	36	±6
13-TIR-14-L	M14	50	±8,5
13-TIR-16-L	M16	50	±8,5
13-TIR-18-L	M18	62	±10,5
13-TIR-20-L	M20	62	±10,5
13-TIR-22-L	M22	72	±12,5
13-TIR-24-L	M24	72	±12,5

## Fork



Elastic limit =  $R_p0,2\% = 200 \text{ N/mm}^2$   
Tensile strength =  $R_m = 510-710 \text{ N/mm}^2$

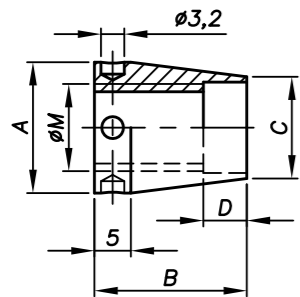
Finish : Electropolished.  
For other surface treatment, contact us.

REFERENCE *	TOLERANCE	D1	D2	R	L1	L2	L3	L4	L5	LT	E	P	LM
STR15-EP-M08	M8 *1,25	10,5	15	1	9	15	18,5	35,5	25	48	3	17	17
STR18-EP-M10	M10 *1,5	12,5	18,8	1	11	18,8	21,6	44,1	31,8	60	3,9	22	18
STR18-EP-M12	M12 x 1,75	12,5	18,8	1	11	18,8	21,6	44,1	31,8	60	3,9	22	18
STR25-EP-M14	M14 x 2	15,5	25	1,5	13	25	28,8	58,8	42,6	80	6	30	26
STR25-EP-M14	M16 x 2	15,5	25	1,5	13	25	28,8	58,8	42,6	80	6	30	26
STR31-EP-M18	M18 x 2,5	20,5	31,2	2	16,5	31,2	35,9	73,4	53,2	100	7,35	37	32
STR31-EP-M20	M20 x 2,5	20,5	31,2	2	16,5	31,2	35,9	73,4	53,2	100	7,35	37	32
STR38-EP-M22	M22 x 2,5	25,5	37,5	2	21,5	37,5	43,1	88,1	63,8	120	8	45	38
STR38-EP-M24	M24 x 3	25,5	37,5	2	21,5	37,5	43,1	88,1	63,8	120	8	45	38

\* Specify the thread (G for left / D for right).

## Accessories

## NUTS

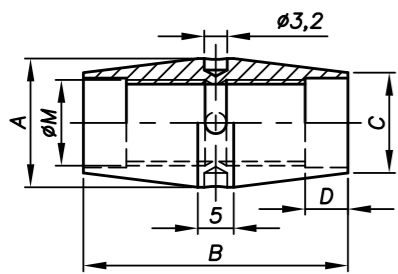


REFERENCES*	A	B	C	D
STR15-EINCH-M8	15	21	10	6
STR15-EINCH-M10	18	21	12	6
STR15-EINCH-M12	18	21	14	6
STR15-EINCH-M14	25	27	16	6
STR15-EINCH-M16	25	27	18	6
STR15-EINCH-M18	30	34	20	6
STR15-EINCH-M20	30	34	22	8
STR15-EINCH-M22	35	40	25	8
STR15-EINCH-M24	35	40	27	8

For this article, think about ordering a **Spanner** for the nuts.

\* Specify the thread (G for left / D for right).

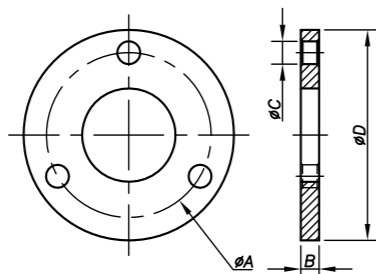
## COUPLER



REFERENCES	A	B	C	D
STR15-MANIN-M8	15	37	10	6
STR15-MANIN-M10	18	37	12	6
STR15-MANIN-M12	18	37	14	6
STR15-MANIN-M14	25	49	16	6
STR15-MANIN-M16	25	49	18	6
STR15-MANIN-M18	30	63	20	6
STR15-MANIN-M20	30	63	22	8
STR15-MANIN-M22	35	75	25	8
STR15-MANIN-M24	35	75	27	8

If the length ordered exceeds 3 meters, the tension rods being delivered in X equal lengths coupled by one or more Coupler.

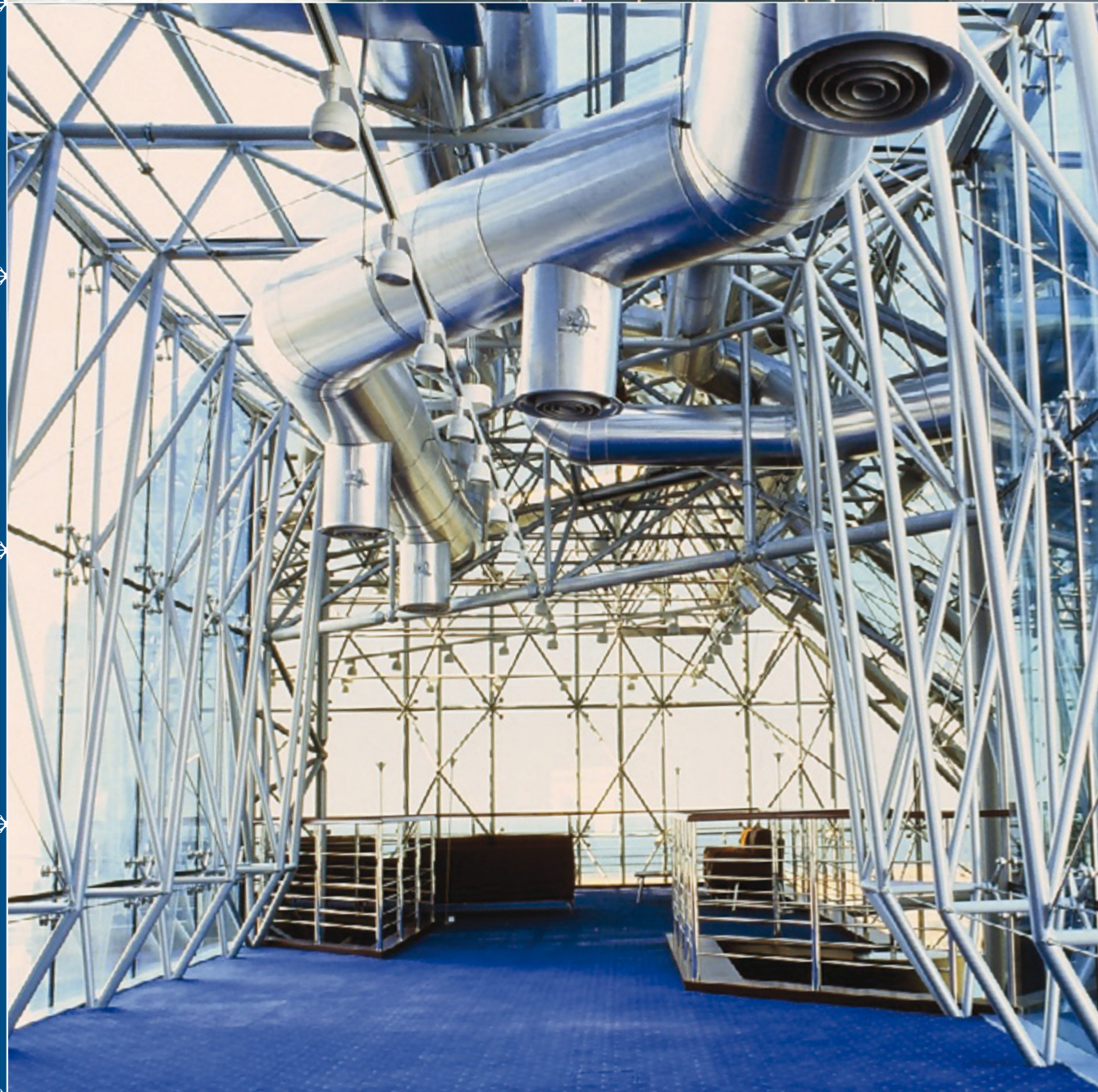
## REPARTITION DISC



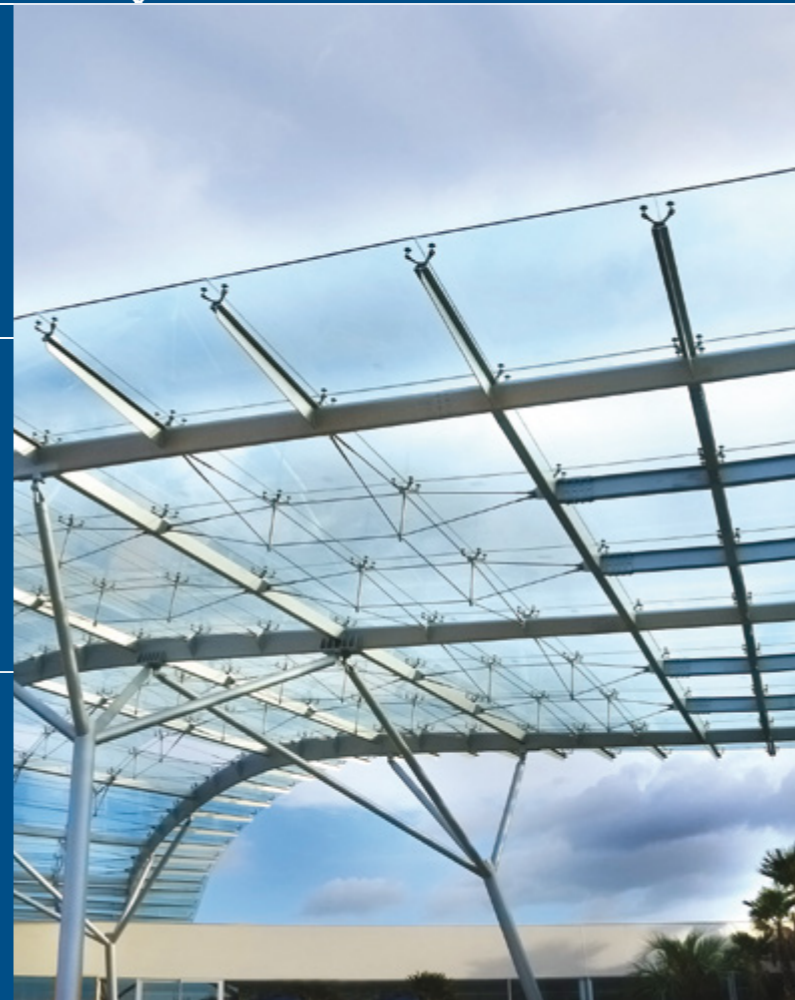
Reference : STR 18 X-DR-90 custom made.







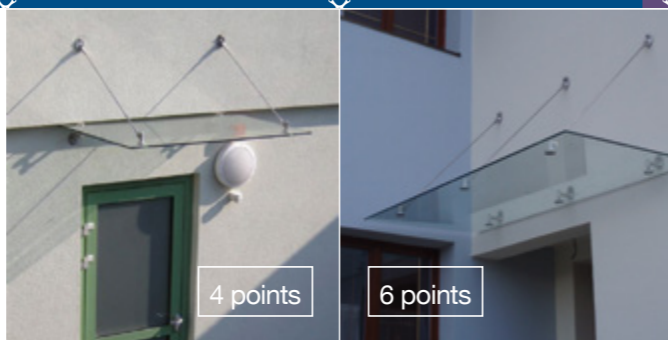
CANOPIES



- Arcade 4 or 6 points ..... 5.2
- Corole 4 points ..... 5.3
- Evolutive Piazza ..... 5.4
- Light 4 points ..... 5.5
- Calculation method ..... 5.6
- Bespoke glass canopies ..... 5.8

# Arcade 4 or 6 points

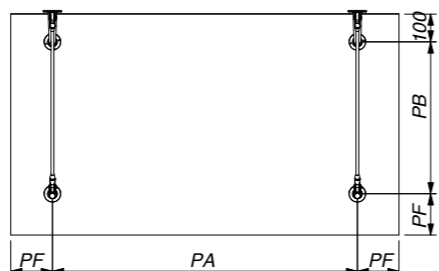
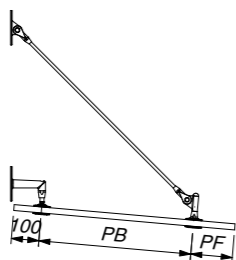
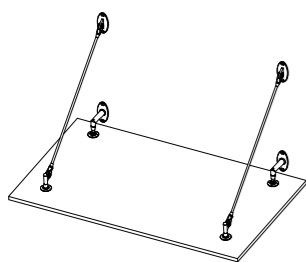
Our canopies are made of 316 (A4) stainless steel. Without glass.



4 points

6 points

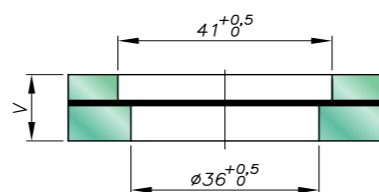
## Dimensions



	GLASS THICKNESS LAMINATED TEMPERED (MM)			
	6.6	8.8	10.10	12.12
PA max for 4 points	1000	1300	1600	1900
PA max for 6 points	800	1000	1100	1300
PB max for 4 or 6 pts	700	1100	1300	1500
PF max	200	250	300	400

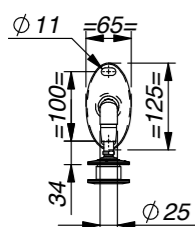
MAX. GLASS DIMENSION (MM)
2700 x 2000
3400 x 2000

### Glass drilling

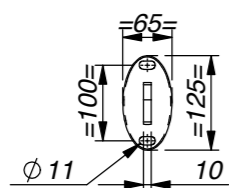


## Fittings

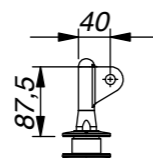
### BOTTOM BRACKET



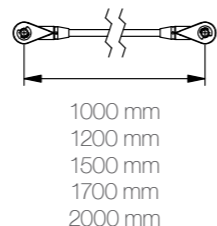
### TOP BRACKET



### GUSSET



### TENSION ROD



## Subassembly reference to order

	REF. TO ORDER FOR 13.52 TO 21.52 MM GLASS THICKNESS	REF. TO ORDER FOR 22 TO 25.52 MM GLASS THICKNESS
800 < B < 1000	13M12-1000-1221	13M12-1000-2225
1000 < B < 1200	13M12-1200-1221	13M12-1200-2225
1100 < B < 1400	13M12-1500-1221	13M12-1500-2225
1300 < B < 1600	13M12-1700-1221	13M12-1700-2225
1400 < B < 2000	13M12-2000-1221	13M12-2000-2225

$B = 100 + PB + PF$

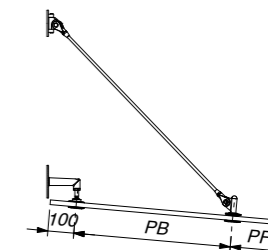
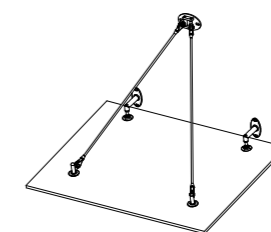
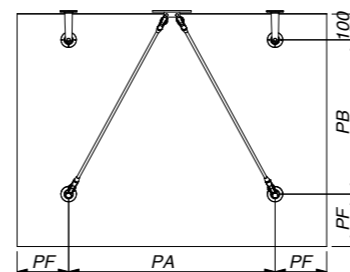
Documentation introducing standard models - Our internal engineering office can design tailor-made models on request.

# Corole 4 points

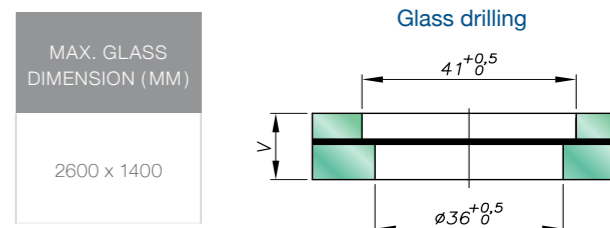
Our canopies are made of 316 (A4) stainless steel. Without glass.



## Dimensions

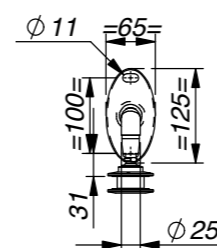


	GLASS THICKNESS LAMINATED TEMPERED (MM)				MAX. GLASS DIMENSION (MM)
	PB/PA	1000 MAX.	1300 MAX.	1600 MAX.	
700 max.	6.6 / PF max 200	8.8 / PF max 250	10.10 / PF max 300	12.12 / PF max 400	2600 x 1400
900 max.	8.8 / PF max 250				

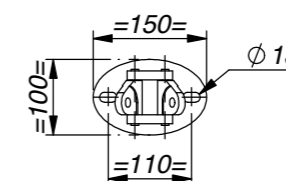


## Fittings

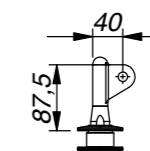
### BOTTOM BRACKET



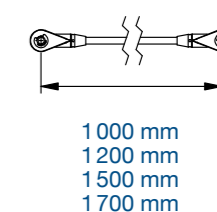
### TOP DOUBLE BRACKET



### GUSSET



### TENSION ROD



## Reference to order

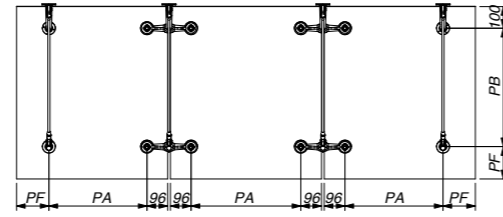
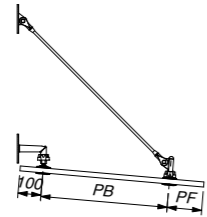
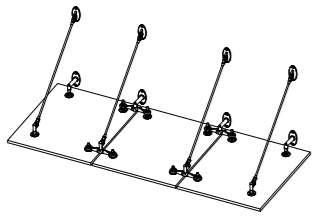
GLASS THICKNESS	PB/PA	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
		13.52 TO 21.52 MM	500	13CORM12-1000-1221					13CORM12-1200-1221					13CORM12-1500-1221		
	600	13CORM12-1000-1221					13CORM12-1200-1221					13CORM12-1500-1221				
	700	13CORM12-1000-1221					13CORM12-1200-1221					13CORM12-1500-1221				
	800	13CORM12-1000-1221					13CORM12-1200-1221					13CORM12-1500-1221				
	900	13CORM12-1000-1221					13CORM12-1200-1221					13CORM12-1500-1221				
22 TO 25.52 MM	500	13CORM12-1000-2225					13CORM12-1200-2225					13CORM12-1500-2225				
	600	13CORM12-1000-2225					13CORM12-1200-2225					13CORM12-1500-2225				
	700	13CORM12-1000-2225					13CORM12-1200-2225					13CORM12-1500-2225				
	800	13CORM12-1000-2225					13CORM12-1200-2225					13CORM12-1500-2225				
	900	13CORM12-1000-2225					13CORM12-1200-2225					13CORM12-1500-2225				



# Evolute Piazza

Our canopies are made of 316 (A4) stainless steel. Without glass.

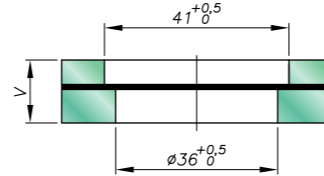
## Dimensions



	GLASS THICKNESS LAMINATED TEMPERED (MM)			
	6.6	8.8	10.10	12.12
PA max for 4 points	1000	1300	1600	1900
PB max for 4 points	700	1100	1300	1500
PF max	200	250	300	400

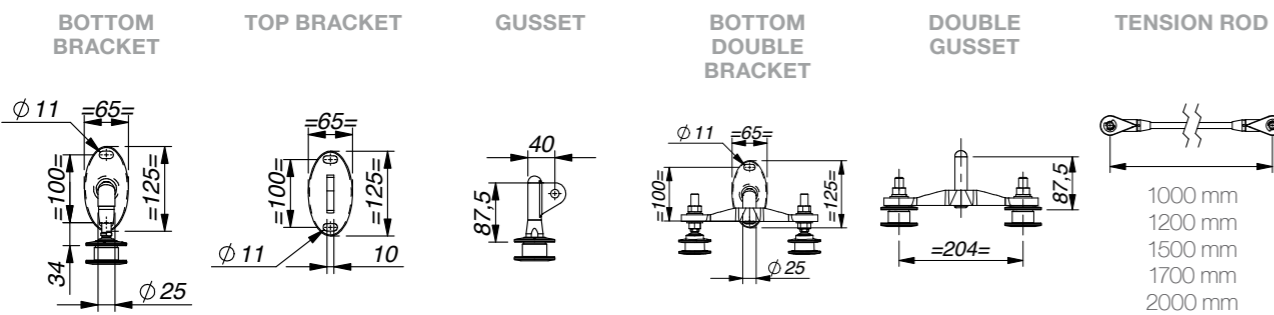
MAX. GLASS DIMENSION (MM)
2700 x 2000

Glass drilling



For further technical information, please refer to the technical catalogue.

## Fittings



## Subassembly reference to order

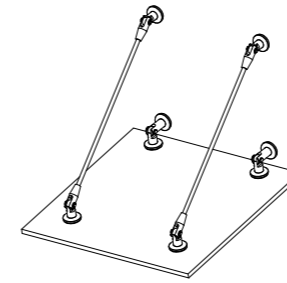
Diagram	FOR 13.52 TO 21.52 MM GLASS THICKNESS		FOR 22 TO 25.52 MM GLASS THICKNESS	
	800 < B < 1000	1000 < B < 1200	1100 < B < 1400	1300 < B < 1600
Diagram 1	13M12-1000-1221	13M12-1200-1221	13M12-1500-1221	13M12-1700-1221
Diagram 2	13M12-1000-2225	13M12-1200-2225	13M12-1500-2225	13M12-1700-2225
Diagram 3	13PLAM12-1000-1221	13PLAM12-1200-1221	13PLAM12-1500-1221	13PLAM12-1700-1221
Diagram 4	13PLAM12-1000-2225	13PLAM12-1200-2225	13PLAM12-1500-2225	13PLAM12-1700-2225
Diagram 5	13M12-2000-1221	13M12-2000-2225	13PLAM12-2000-1221	13PLAM12-2000-2225

B = 100 + PB + PF. Documentation introducing standard models - Our internal engineering office can design tailor-made models on request.

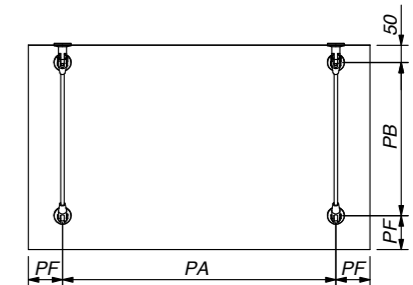
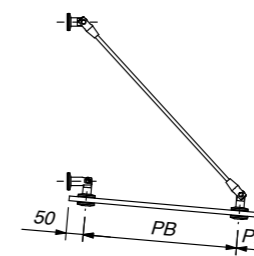
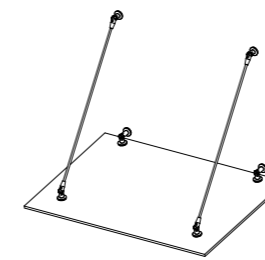


# Light 4 points

Our canopies are made of 316 (A4) stainless steel. Without glass.



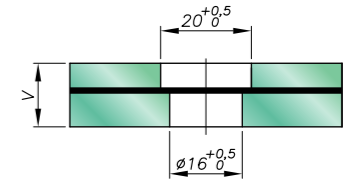
## Dimensions



	GLASS THICKNESS LAMINATED TEMPERED (MM)	
	5.5	6.6
PA max	800	1000
PB max	700	800
PF max	200	250

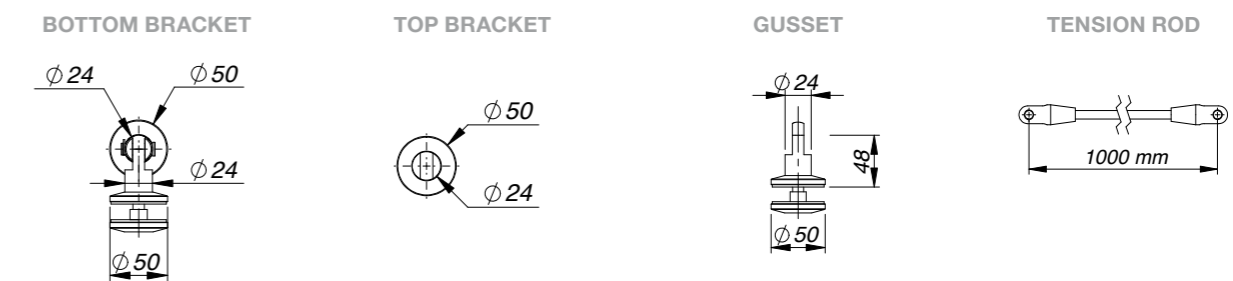
MAX. GLASS DIMENSION
1500 x 1100

Glass drilling

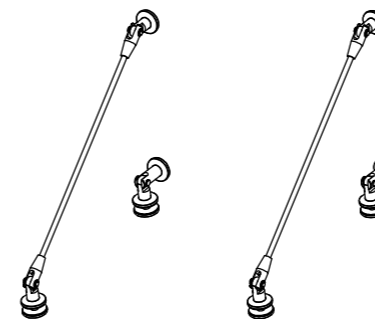


For further technical information, please refer to the technical catalogue.

## Fittings



## Reference to order



A 4 point canopy is available for a 5.5 to 6.6 glass thickness.

Reference : 131LIGHT

This is a standard kit, only available for the dimensions stated above.

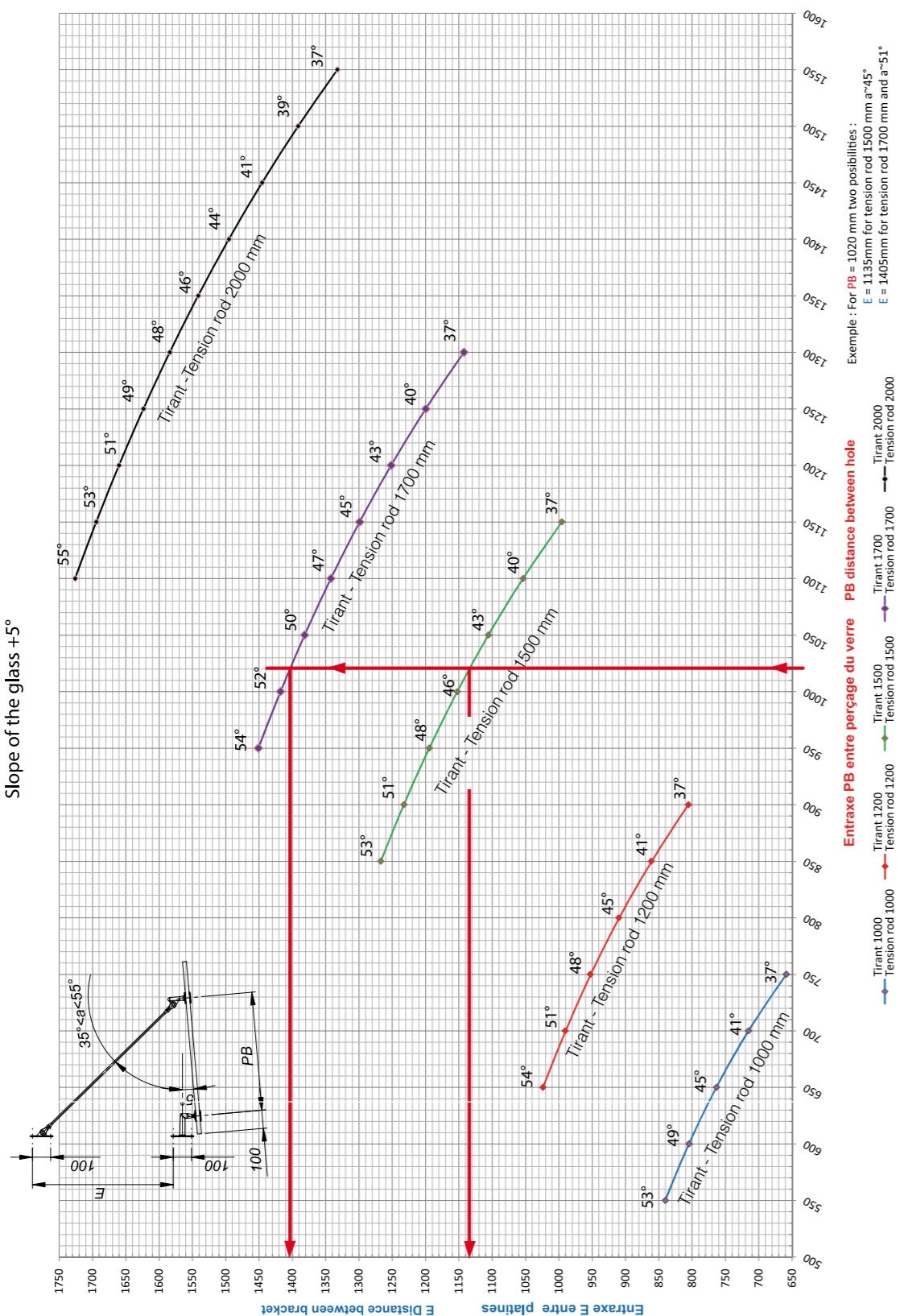
For a tailor-made solution, please choose the equivalent on the Arcade model.

# Calculation method : Arcade and Piazza

Our canopies are made of 316 (A4) stainless steel. Without glass.

## Slope of the glass +5°

Abaque pour déterminer la distance entre platines. Valable pour modèle Arcade et Piazza.  
Pente du verre +5°  
Calculation method for distance between the brackets. Applicable to Arcade and Piazza.

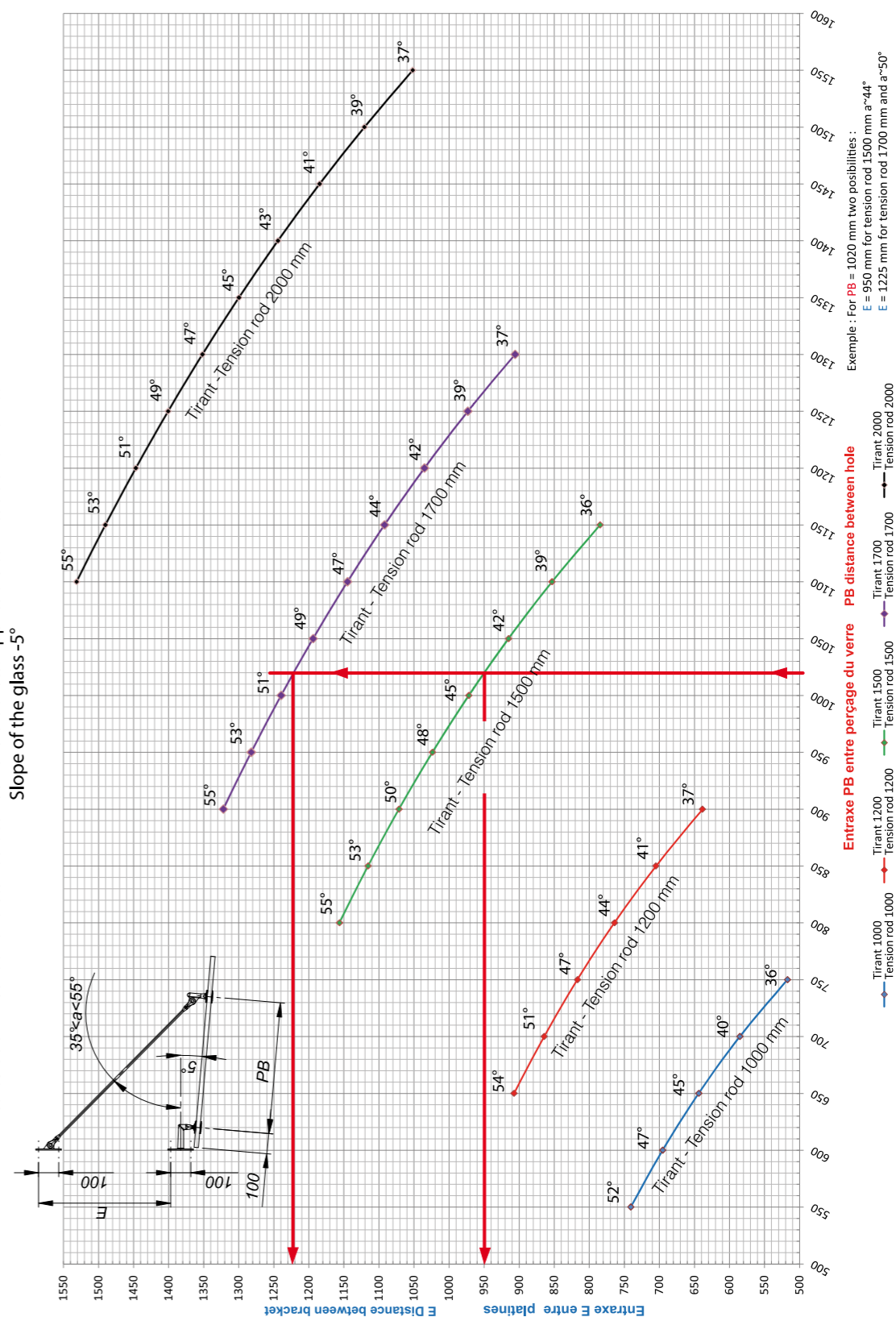


# Calculation method : Arcade and Piazza

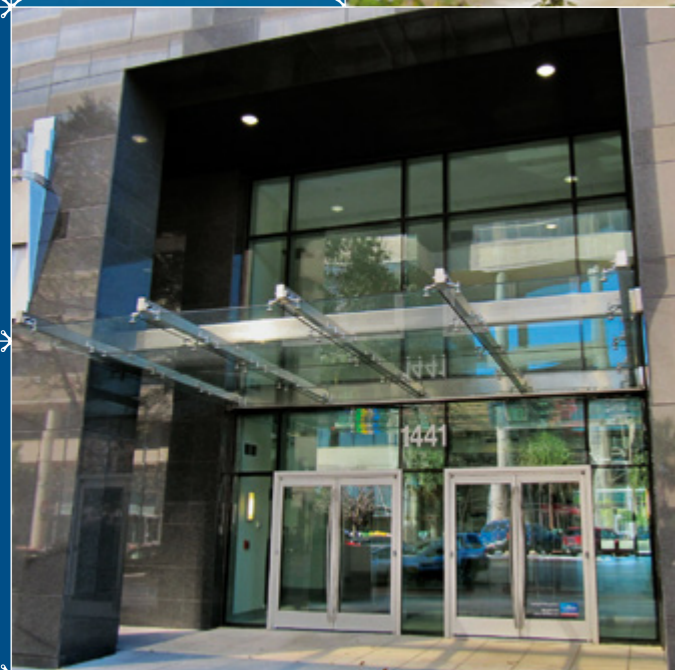
Our canopies are made of 316 (A4) stainless steel. Without glass.

## Slope of the glass -5°

Abaque pour déterminer la distance entre platines. Valable pour modèle Arcade et Piazza.  
Pente du verre -5°  
Calculation method for distance between the brackets. Applicable to Arcade and Piazza.



# Bespoke glass canopies



Sadev can offer a feasibility study and basic structural calculation for your bespoke glass canopies based on EUROCODE.

**Don't hesitate to ask for a quotation !**

## SWIVEL FITTINGS



Technical page for swivel fittings ..... 6.2



**SWIVEL FITTING, COUNTERSUNK HEAD**

- R 1001 ..... 6.4
- R 1101 ..... 6.6



**SWIVEL FITTING, CYLINDRICAL HEAD**

- R 1003 ..... 6.8
- R 1003 Ø70 ..... 6.10
- R 1005 ..... 6.12
- R 1006 ..... 6.14



**SWIVEL FITTING FOR INSTALLATION FROM THE OUTSIDE**

- R 1008 ..... 6.16
- R 1038 ..... 6.18

**SWIVEL FITTING, INSULATING GLASS UNIT**

- R 1001A ..... 6.20
- R 1039 ..... 6.22
- R 1003A ..... 6.24



**SPECIAL SWIVEL FITTING**

- R 1019 ..... 6.26
- R 1006TSSA ..... 6.28
- R 1103 ..... 6.30
- R 1106 ..... 6.32
- RC70 ..... 6.34
- R 1006-M8 ..... 6.36



**SWIVEL FITTING, LC**

- R 1001LC ..... 6.38
- R 1003LC ..... 6.40
- R 1006LC ..... 6.42

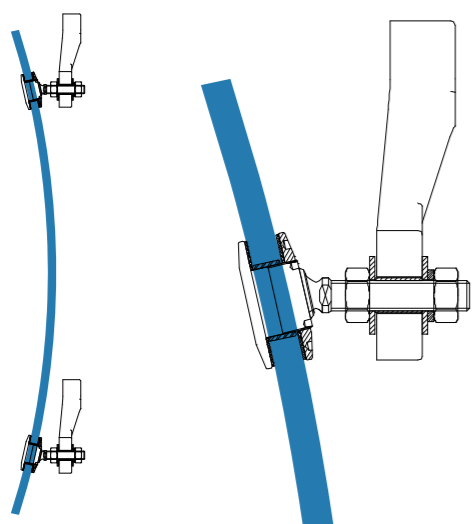
Options ..... 6.44

# Technical page for swivel fittings

## Fixing of the glasses

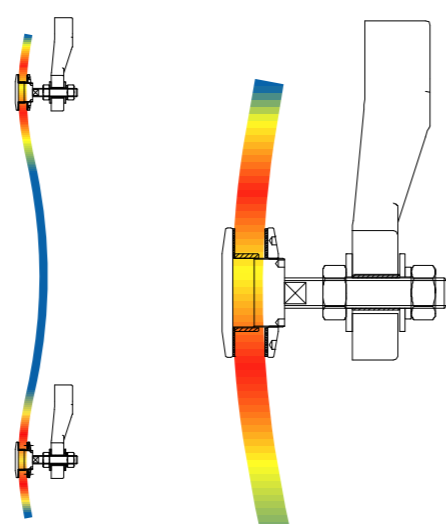
The fixing piece plays a major role in the maintenance of the glasses. SADEV suggests two solutions to find the most adapted piece for your project.

### SWIVEL FITTING (FXR)



- Advantages :**
- Recovers the loads and the deformations of the glass, the Markore no stress in the glass.
  - As the glass is not subjected to any stress, the glass thickness can be reduced.

### FIXED BOLT (FXV)



- Advantages :**
- Product suitable for interior use.
- Disadvantages :**
- Recovers the loads but not the deformations of the glass, the Markore the stress in the glass increases with the applied loads.
  - As the glass is under stress, the glass thickness has to be increased.

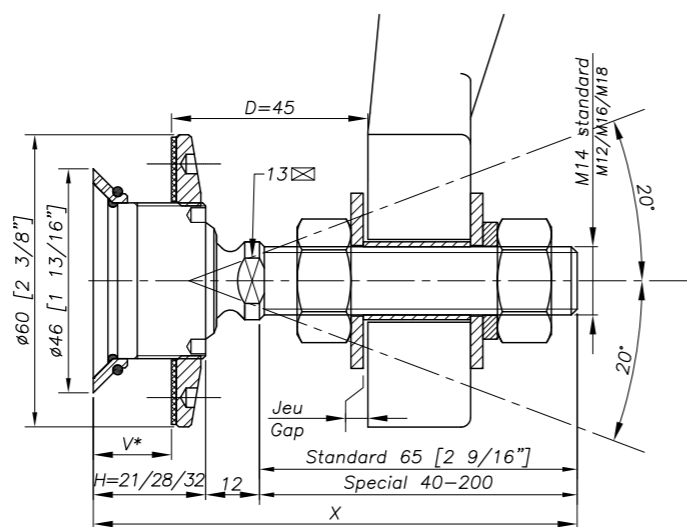
## Standard dimensions

To be able to answer quickly and at the best cost according to your demand, SADEV proposes fittings with standard dimensions available in stock.

The standard dimensions are M14, length 65 mm, diameter 60 mm. Other dimensions are possible by customized fabrication. Mainly made out of stainless steel, the fittings are particularly resistant to corrosion and mechanical stress.

Because the security is a major part for this type of product, the most common fittings are subjected to a technical assessment delivered by the CSTB (French Research Institute for buildings). To ensure maximum reliability for these products, several different tests have been executed: pull out, bending of the threaded axle, water sealing and testing under seismic conditions.

Sadev products need a followed up and regular maintenance device (cleaning once a year). At this occasion, a point shall be made on the aging of the products and all suspicious signs shall be Markorted to SADEV (abnormal oxidation, defective montage etc.).

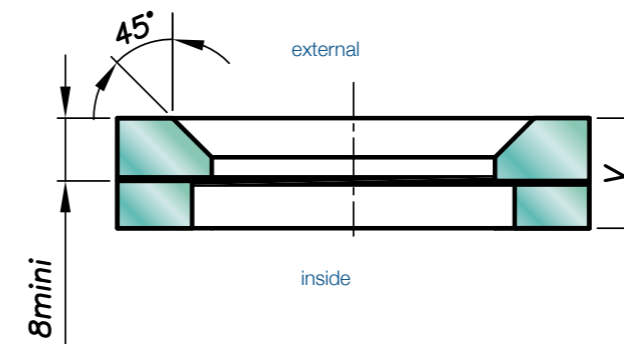


Note : the height H and the length X are validated by SADEV at the order confirmation.

## Glass drilling

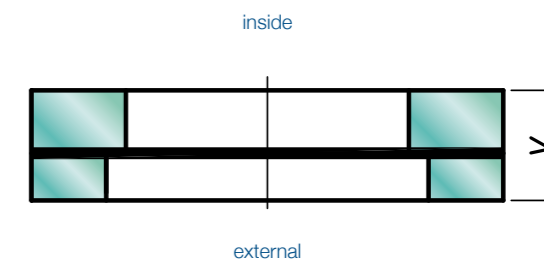
There are two main types of drillings: countersunk and cylindrical. The drilling drawings are included on all technical pages.

### COUNTERSUNK DRILLING



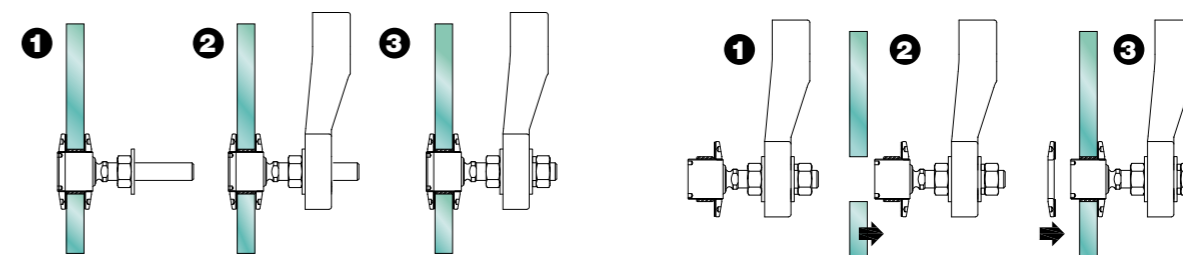
- Advantages :**
- Very esthetical as the head of the countersunk fitting is in the plane of the glass.
  - Simplifies the cleaning of the glass.
- Disadvantages :**
- Highly unrecommended for glass roofs – verify the local regulatory.
  - Make sure that your glass supplier is equipped for making countersunk holes in the glass.

### CYLINDRICAL DRILLING



- Advantages :**
- No danger of mistaking the sense of the drilling.
- Disadvantages :**
- The head of the fitting is not in the plane of the glass, resulting in a less harmonious render.

## Mounting type « blind access »



### Classical mounting

In this case, the point fitting is inserted into the glass. The glass assembly is then mounted onto the spiders.

### « Blind access » mounting

This solution is used when it is impossible to access one side of the glass. TheMarkore, the fitting is mounted directly on the spider and the glass is installed afterwards.

# R 1001

Designation : swivel fitting, countersunk head

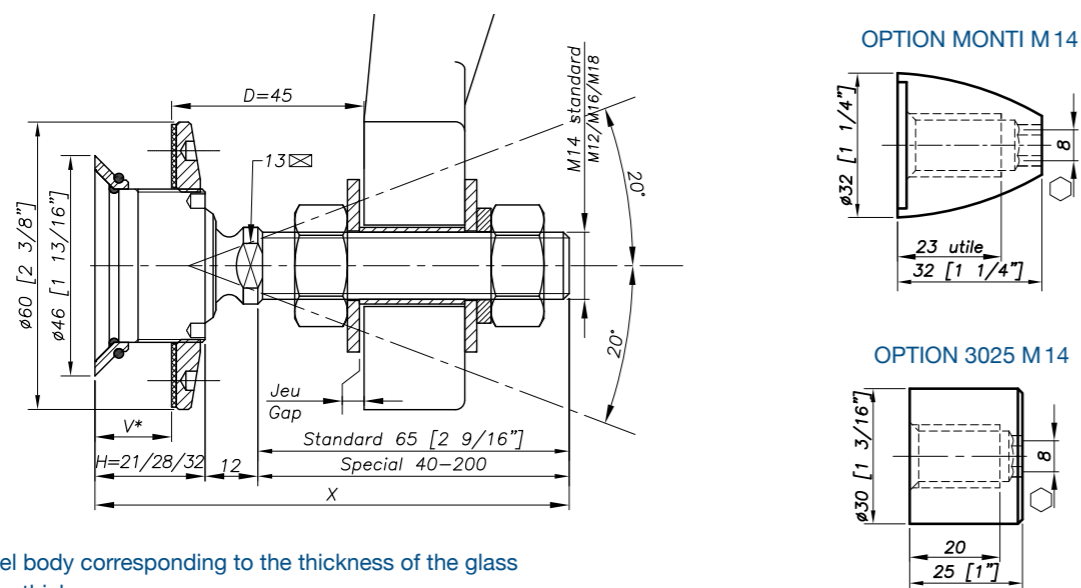


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	R1001-0815-1465*
15 < V ≤ 22	M14	65	R1001-1522-1465
22 < V ≤ 26	M14	65	R1001-2226-1465
SPECIAL	SPECIAL	SPECIAL	R1001-V-SP

Patent No: 9806556  
 Technical assessment available online: [www.sadev.com](http://www.sadev.com)  
 Sealing strip between glazing available p.8.26

\* R1001-0815-1465 : model - Glass Thickness - type axis and length.  
 Seismic swivel fitting optional.

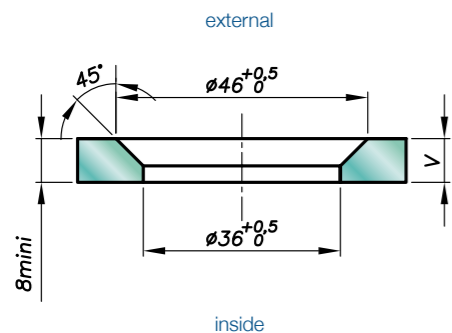
## Dimensions



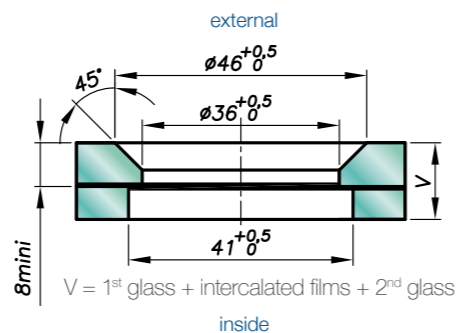
H = Swivel body corresponding to the thickness of the glass  
 V\* = glass thickness

## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS

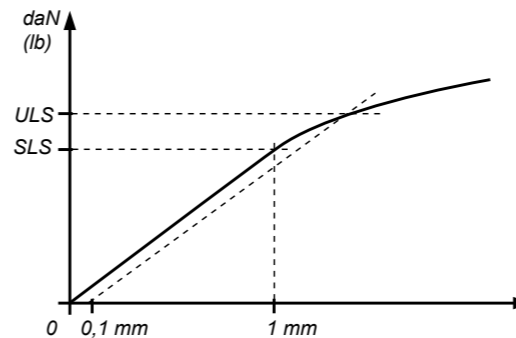


Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1001

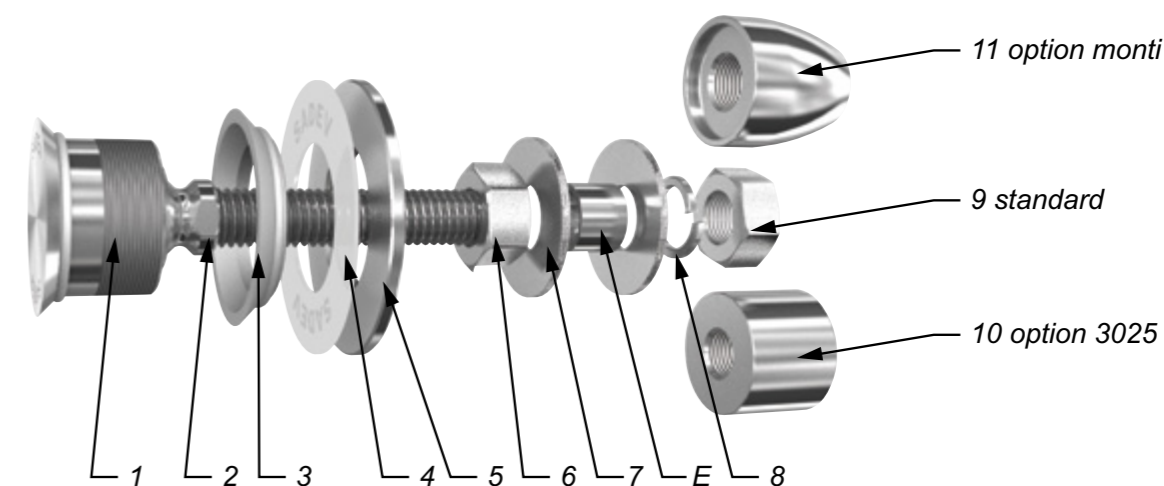
## Mechanical performance



	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	

\*SLS - Serviceability Limit State: load at 1mm deformation  
 \*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
 Values are given without factor of safety.  
 Tests available online: [www.sadev.com](http://www.sadev.com)

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Glass Hole Grommet	AW-1050A as per EN 573-3 / Al 99.5%
4	1	Contact washer	White polyacetyl / white polyethylene
5	1	Glass Nut Ø60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock Lock washer DIN127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap Nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Monti Cap Nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

Insert parts N° 1/2 and 3 into the glass.  
 Mount contact washer N° 4 and nut N° 5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV tools Mark. 097581160 and Mark. CLE-DYN-072031. Mount nut N° 6 and washer N° 7.  
 Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount washer N° 7, lock washer N° 8, and nut N° 9. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench.

SADEV recommends using thread locking compound whenever possible.

# R 1101

Designation : swivel fitting, countersunk head

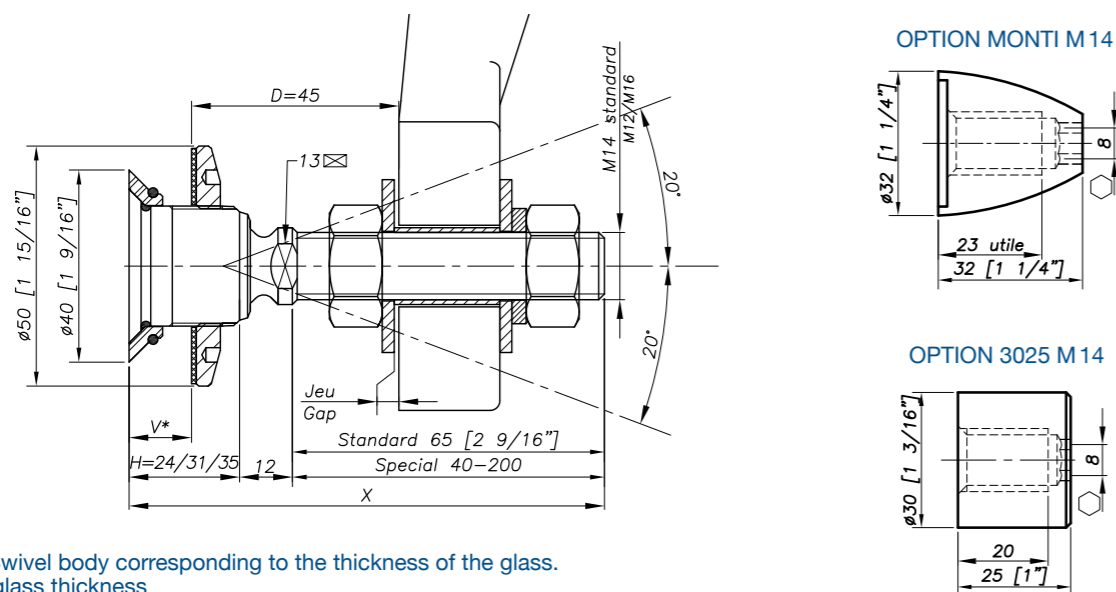


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	R1101-0815-1465*
15 < V ≤ 22	M14	65	R1101-1522-1465
22 < V ≤ 26	M14	65	R1101-2226-1465
SPECIAL	SPECIAL	SPECIAL	R1101-V-SP

Patent No: 9806556  
 Technical assessment available online: [www.sadev.com](http://www.sadev.com)  
 Sealing strip between glazing available p.8.26

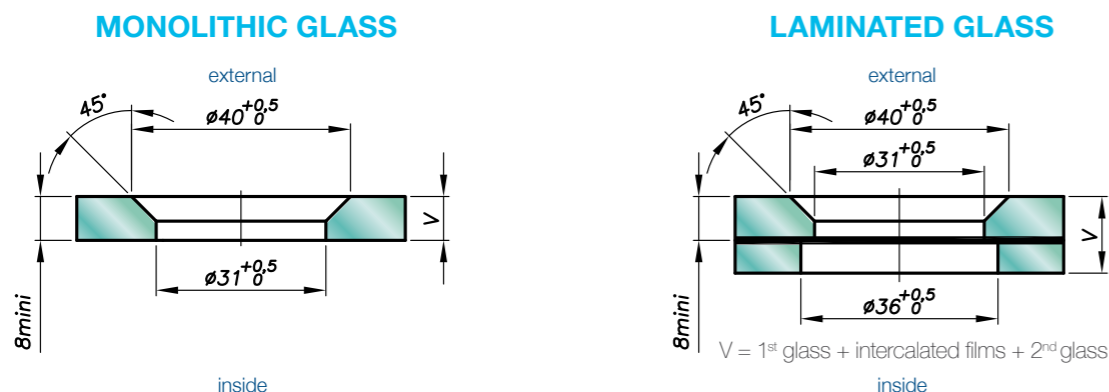
\* R1101-0815-1465 : Model - Glass thickness - Type axis and length.

## Dimensions



H = Swivel body corresponding to the thickness of the glass.  
 V\* = glass thickness

## Glass drilling

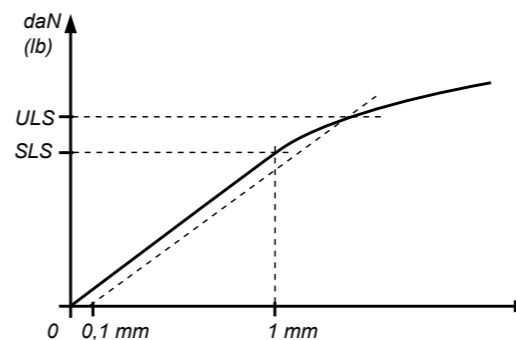


Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1101

## Mechanical performance

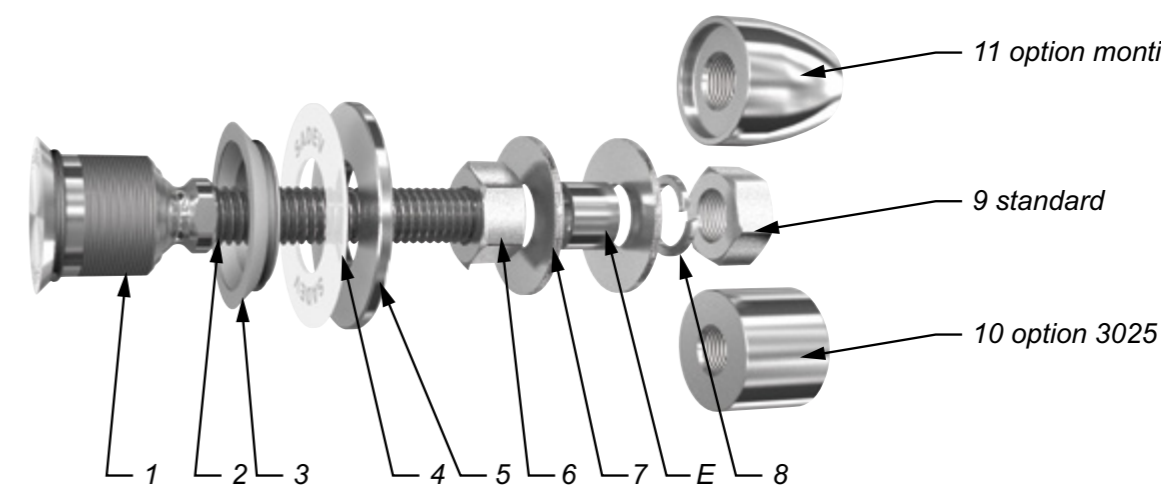


	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	1 400 daN (3147 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	



\*SLS - Serviceability Limit State: load at 1mm deformation  
 \*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
 Values are given without factor of safety.  
 Tests available online: [www.sadev.com](http://www.sadev.com)

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Glass hole grommet	AW-1050A as per EN 573-3/AI 99.5 %
4	1	Contact washer	White polyacetyl / white polyethylene
5	1	Glass nut Ø50	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer DIN127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

Insert parts N° 1/2 and 3 into the glass.  
 Mount contact washer N° 4 and nut N° 5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV tools ref. 097581160 and ref. CLE-DYN-072031. Mount nut N° 6 and washer N° 7.  
 Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount washer N° 7, lock washer N° 8, and nut N° 9. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench.

SADEV recommends using thread locking compound whenever possible.



# R 1003

Designation : swivel fitting, non-fluch countersunk head

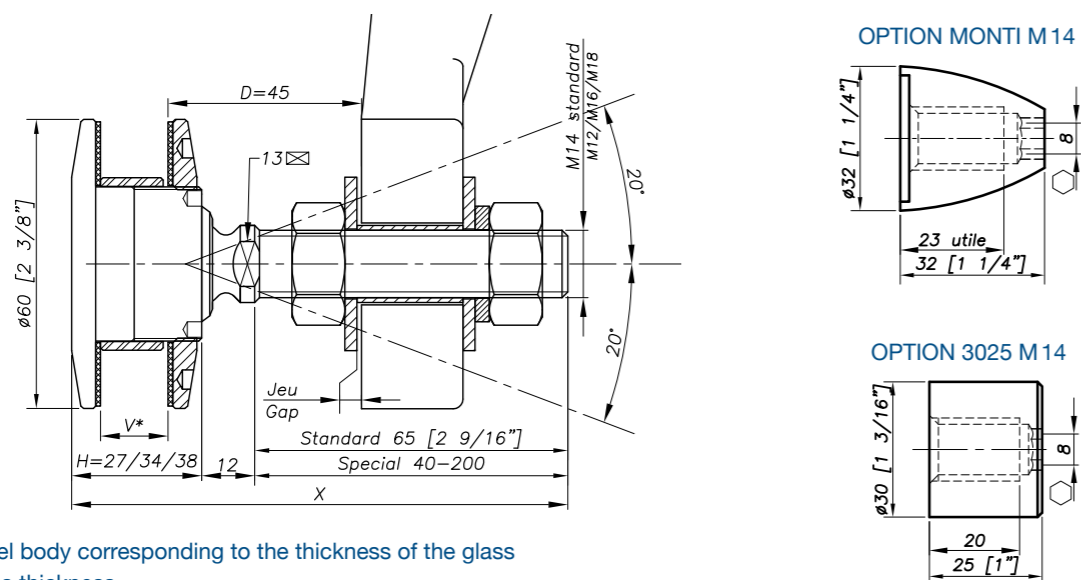


Patent No: 9806556  
 Technical assessment available online: [www.sadev.com](http://www.sadev.com)  
 Sealing strip between glazing available p.8.26

REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	R1003-0815-1465*
15 < V ≤ 22	M14	65	R1003-1522-1465
22 < V ≤ 26	M14	65	R1003-2226-1465
SPECIAL	SPECIAL	SPECIAL	R1003-V-SP

\*R1009-0815-1465 : Model - Glass thickness - type axis and length  
 Seismic swivel fitting / BBR optional

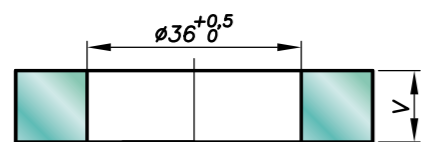
## Dimensions



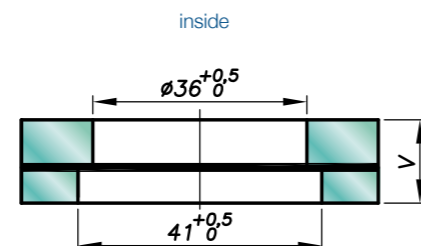
H = Swivel body corresponding to the thickness of the glass  
 V \* = glass thickness

## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS



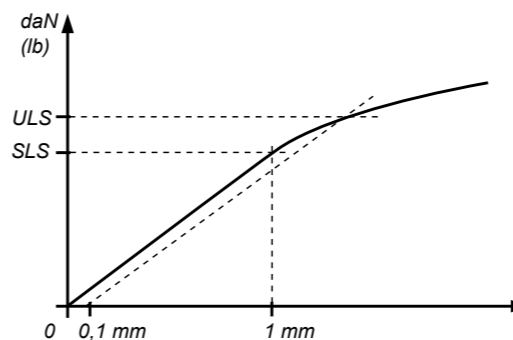
V = 1<sup>st</sup> glass + intercalated films + 2<sup>nd</sup> glass

Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1003

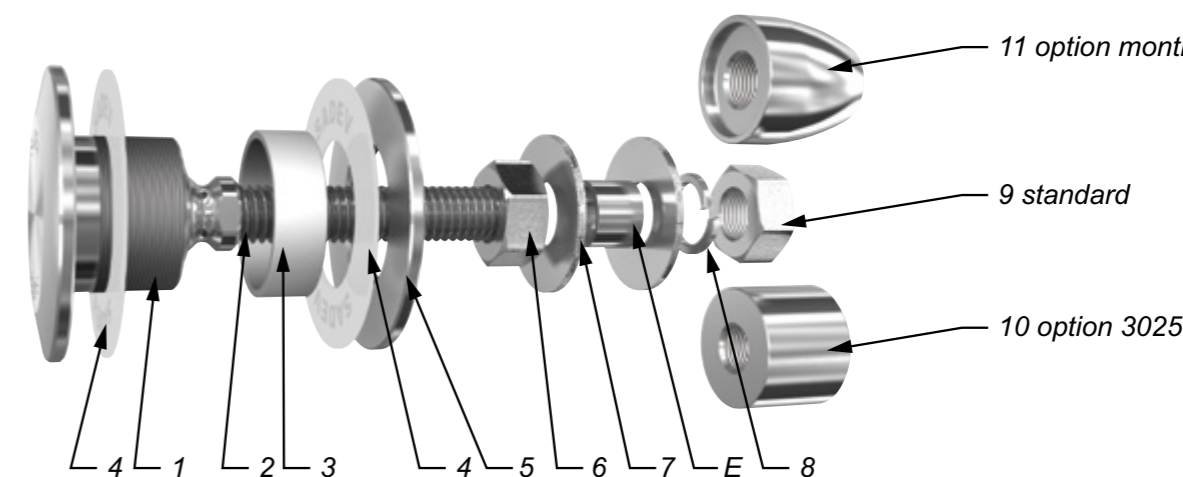
## Mechanical performance



	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	

\*SLS - Serviceability Limit State: load at 1mm deformation  
 \*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
 Values are given without factor of safety.  
 Tests available online: [www.sadev.com](http://www.sadev.com)

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Glass hole grommet	AW-1050A as per EN 573-3/AI 99.5%
4	2	Contact washer	White polyacetyl/white polyethylene
5	1	Glass nut Ø60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer DIN127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

Insert parts N° 1/2, 4, and 3 into the glass.

Mount contact washer N° 4 and nut N° 5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV tools ref. 097581160 and ref. CLE-DYN-072031. Mount nut N° 6 and washer N° 7.

Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount washer N° 7, lock washer N° 8, and nut N° 9. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench.

SADEV recommends using thread locking compound whenever possible.

# R 1003 Ø70

Designation : swivel fitting,  
non-fluch cylindrical head, Ø70mm

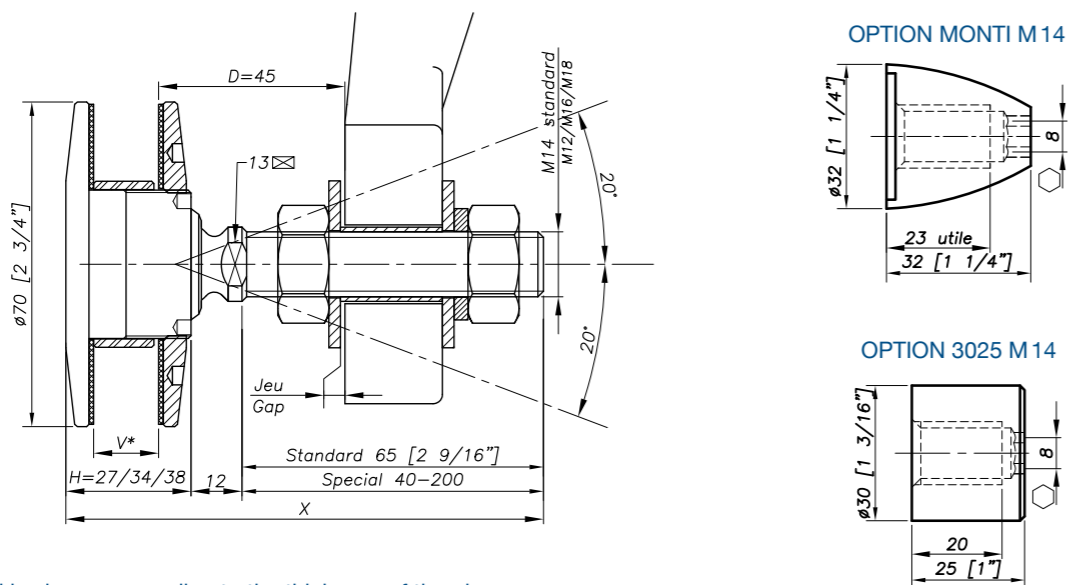


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	R1003-70-0815-1465*
15 < V ≤ 22	M14	65	R1003-70-1522-1465
22 < V ≤ 26	M14	65	R1003-70-2226-1465
SPECIAL	SPECIAL	SPECIAL	R1003-70-V-SP

\* R1003-70-0815-1465 : Model - Glass thickness - Type axis and length.

Patent No : 9806556  
Technical assessment available online : [www.sadev.com](http://www.sadev.com)  
Sealing strip between glazing available p.8.26

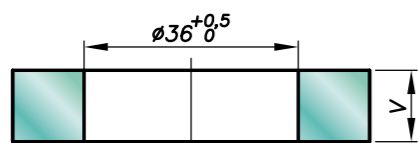
## Dimensions



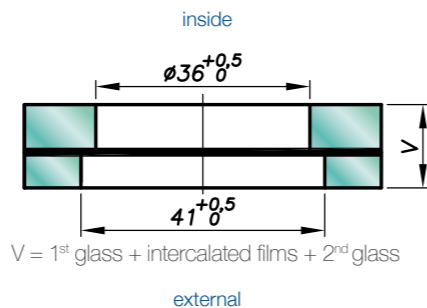
H = Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness

## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS

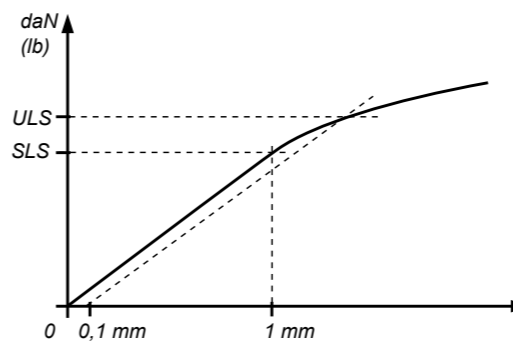


Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

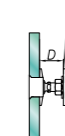
It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1003 Ø70

## Mechanical performance

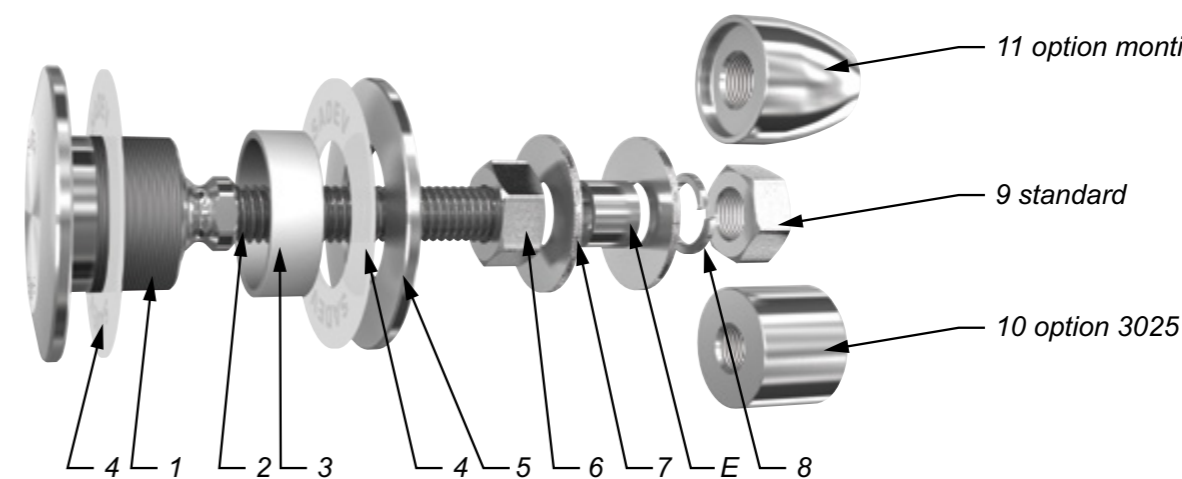


	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	



\*SLS - Serviceability Limit State: load at 1mm deformation  
\*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
Values are given without factor of safety.  
Tests available online : [www.sadev.com](http://www.sadev.com)

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Glass hole grommet	AW-1050A as per EN 573-3/AI 99.5%
4	2	Contact washer	White polyacetyl / white polyethylene
5	1	Glass nut Ø70	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer DIN127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

Insert parts N° 1/2, 4, and 3 into the glass hole.  
Mount the second contact washer N° 4 and nut N° 5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV tools ref. 097581160 and ref. CLE-DYN-072031.  
Thread on nut N° 6 and apply washer N° 7.  
Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth.  
Mount the second washer N° 7, lock washer N° 8, and nut N° 9. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench.

SADEV recommends using thread locking compound whenever possible.

# R 1005

Designation : swivel fitting Ø70, non-fluch, with flange and waterproof gusset

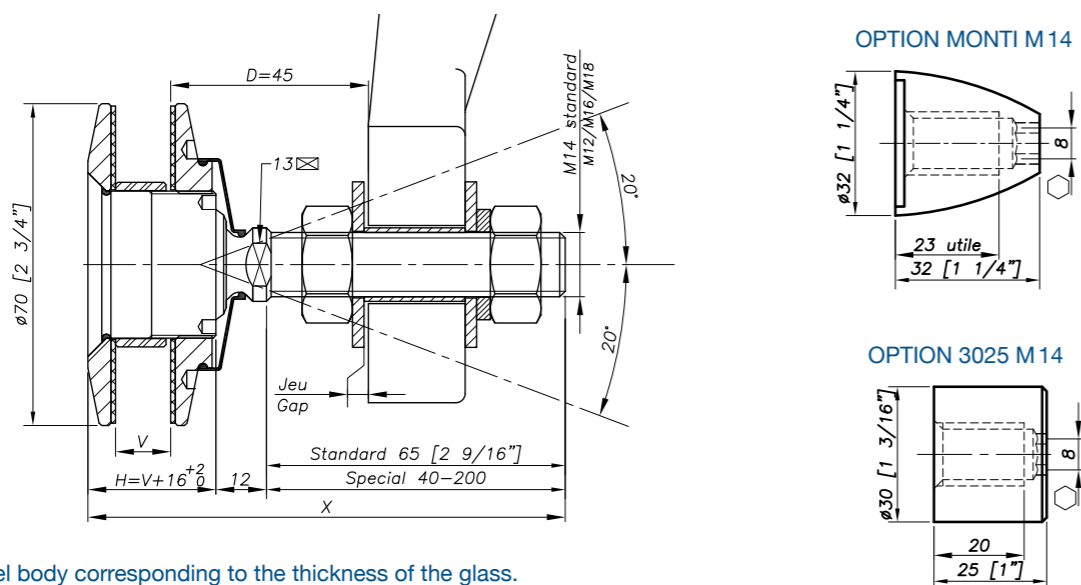


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
Bespoke glass thickness	M14	65	R1005-V-1465*
SPECIAL	SPECIAL	SPECIAL	R1005-V-SP

\* R1005-V-1465 : Model - Glass thickness - Type axis and length.

Patent No: 9806556  
Sealing strip between glazing available p.8.26

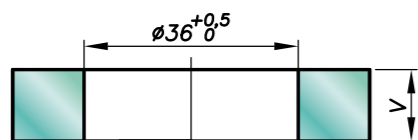
## Dimensions



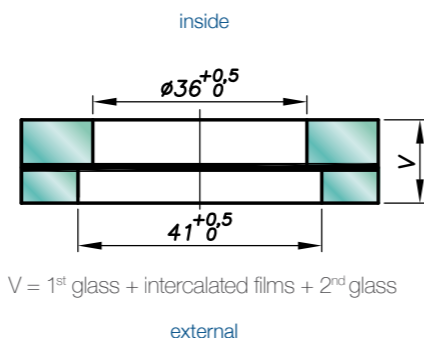
H = Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness

## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS



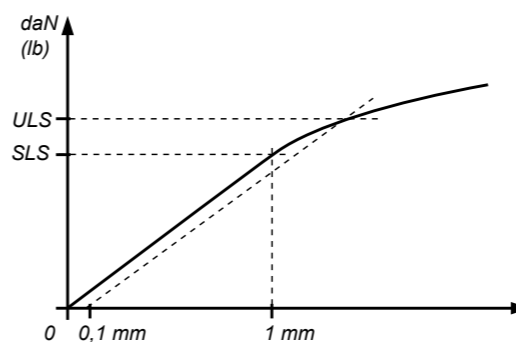
V = 1<sup>st</sup> glass + intercalated films + 2<sup>nd</sup> glass

Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

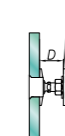
It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1005

## Mechanical performance

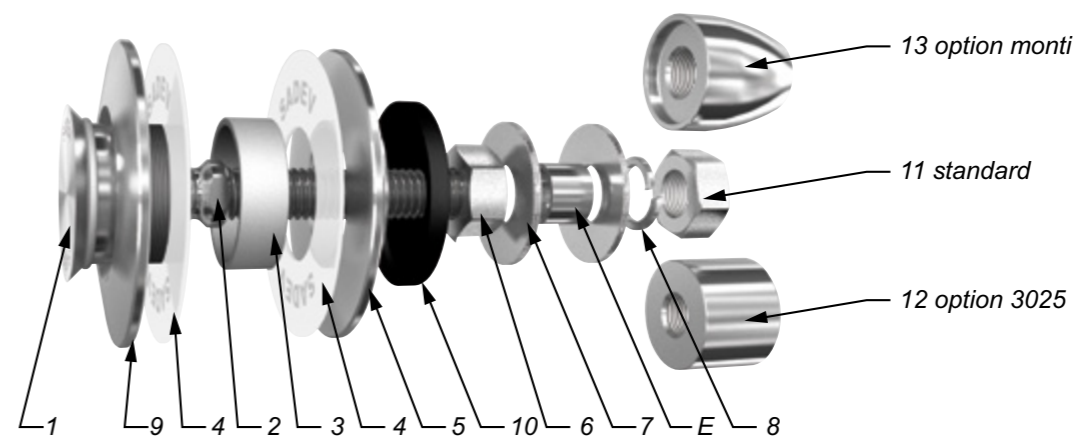


	D	BENDING CAPACITY		PULL OUT CAPACITY
		SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	



\*SLS - Serviceability Limit State: load at 1mm deformation  
\*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
Values are given without factor of safety.  
Tests available online : www.sadev.com

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Glass hole grommet	AW-1050A as per EN 573-3/AI 99.5%
4	2	Contact washer	White polyacetyl/white polyethylene
5	1	Glass nut Ø70	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer DIN127	A4
9	1	Outer disk Ø70	X5 Cr Ni Mo 17.12.2 as per EN 10088-3
10	1	Silicone cover	Silicone 60 Shores
11	1	Nut DIN 934	A4
12	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
13	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

Insert parts N° 1/2, 9, 4, and 3 into the glass hole.  
Mount the second contact washer N° 4 and nut N° 5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV tools ref. 097581160 and ref. CLE-DYN-072031.

Ensure that the silicone cover N° 10 is secured and not stretched too tightly or it may come loose.

Thread on nut N° 6 and apply washer N° 7.  
Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer N° 7, lock washer N° 8, and nut N° 11. Tighten to 60Nm or (45 ft-lb) using a 22 mm wrench.

SADEV recommends using thread locking compound whenever possible.

# R 1006

Designation : **swivel fitting, non-fluch countersunk head for installation from the outside**

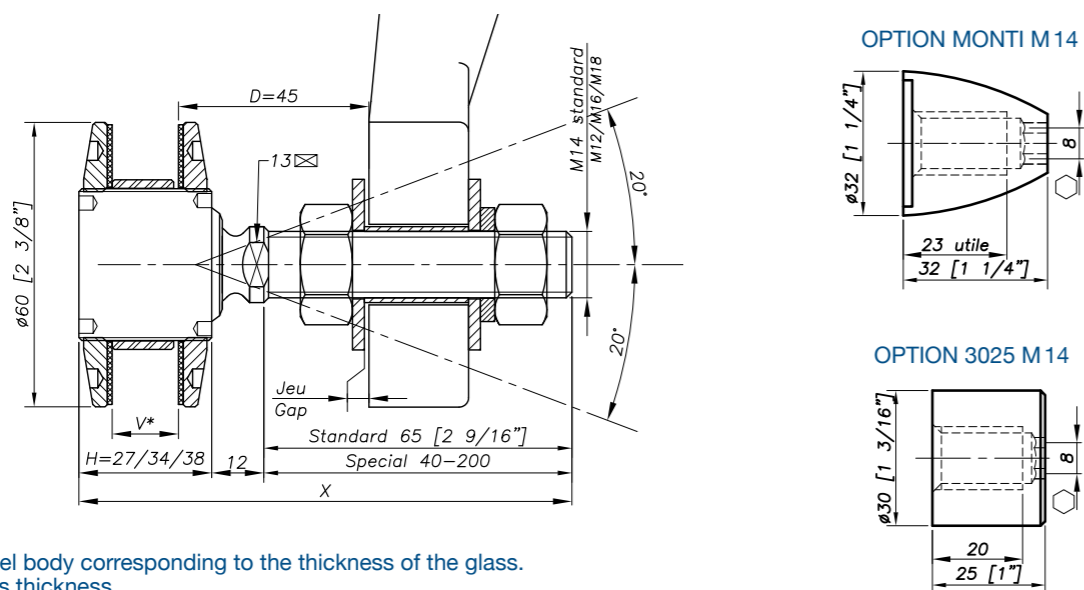


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	R1006-0815-1465*
15 < V ≤ 22	M14	65	R1006-1522-1465
22 < V ≤ 26	M14	65	R1006-2226-1465
SPECIAL	SPECIAL	SPECIAL	R1006-V-SP

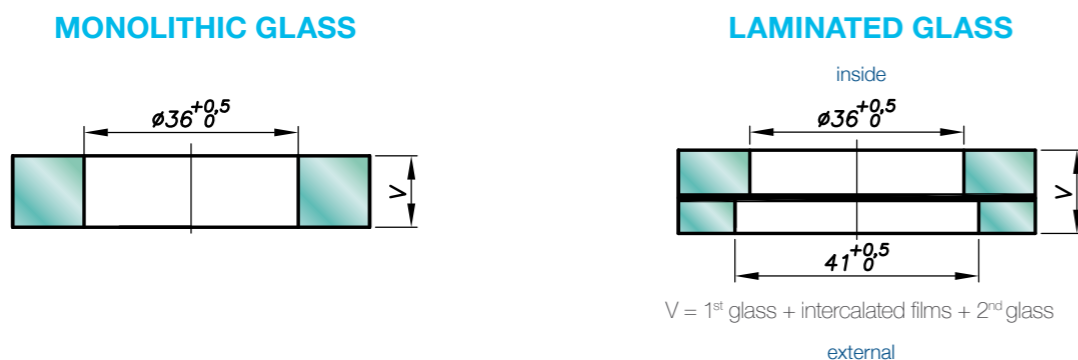
Patent No: 9806556  
 Technical assessment available online: [www.sadev.com](http://www.sadev.com)  
 Sealing strip between glazing available p.8.26

\* R1006-0815-1465 : Model - Glass thickness - Type axis and length.  
 Seismic swivel fitting optional

## Dimensions



## Glass drilling

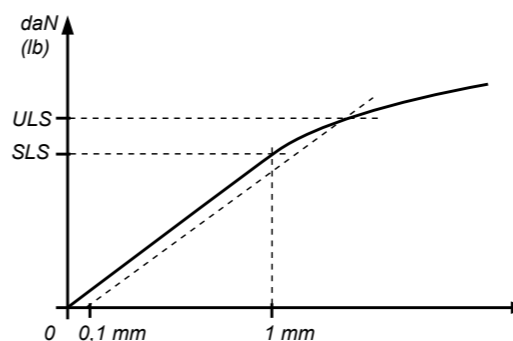


Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1006

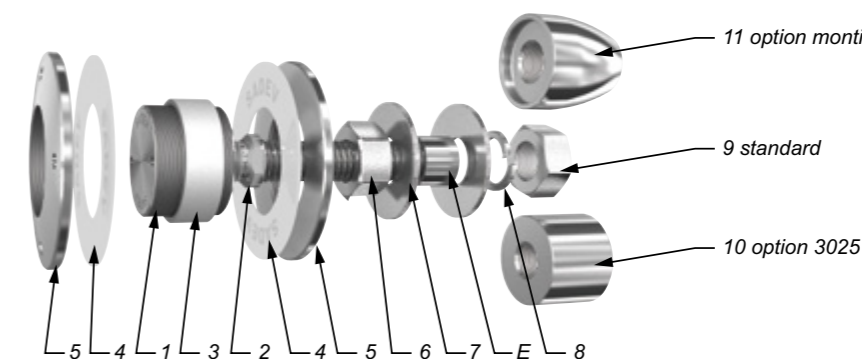
## Mechanical performance



	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	

\*SLS - Serviceability Limit State: load at 1mm deformation  
 \*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
 Values are given without factor of safety.  
 Tests available online: [www.sadev.com](http://www.sadev.com)

## Components

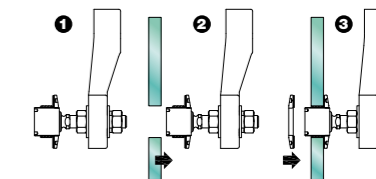


MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Glass hole grommet	AW-1050A as per EN 573-3/Al 99.5%
4	2	Contact washer	White polyacetyl/white polyethylene
5	2	Glass nut Ø60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer DIN127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

### A - Classic mounting

Insert parts N° 1/2, 5, 4 and 3 into the glass hole. Mount the second contact washer N° 4 and nut N° 5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV tools ref. 097581160 and ref. CLE-DYN-072031. Thread on nut N° 6 and apply washer N° 7. Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer N° 7, lock washer N° 8, and nut N° 9. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench.



### B - Blind mounting : installation from the outside (no access to the structure)

Mount nut N° 6 and washer N° 7 onto assembly N° 1/2. Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer N° 7, lock washer N° 8, and nut N° 9. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench. Slide contact washer N° 4 and grommet N° 3 onto swivel body N° 1. Set the glass onto the swivel body, be careful not to contact unprotected glass edges with bare metal parts. Mount the second contact washer N° 4 and nut N° 5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV tools ref. 097581160 and ref. CLE-DYN-072031.

SADEV recommends using thread locking compound whenever possible.

# R 1008

Designation : swivel fitting, countersunk head, for installation from the outside

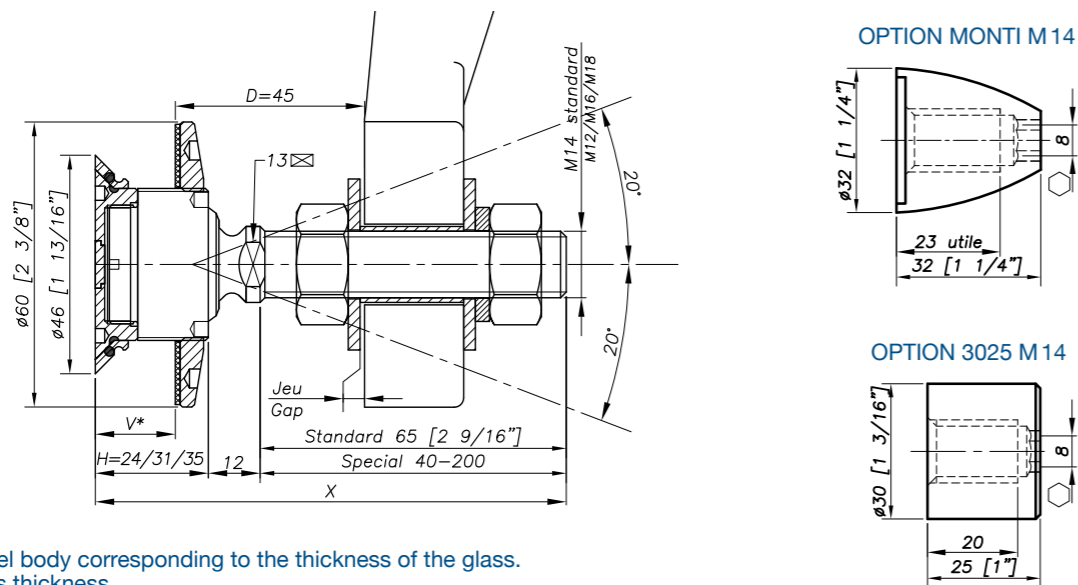


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	R1008-0815-1465*
15 < V ≤ 22	M14	65	R1008-1522-1465
22 < V ≤ 26	M14	65	R1008-2226-1465
SPECIAL	SPECIAL	SPECIAL	R1008-V-SP

Patent No: 9806556  
 Technical assessment available online: [www.sadev.com](http://www.sadev.com)  
 Sealing strip between glazing available p.8.26

\* R1008-0815-1465 : Model - Glass thickness - Type axis and length.  
 Seismic swivel fitting optional

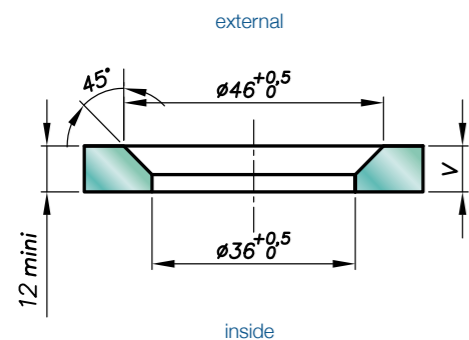
## Dimensions



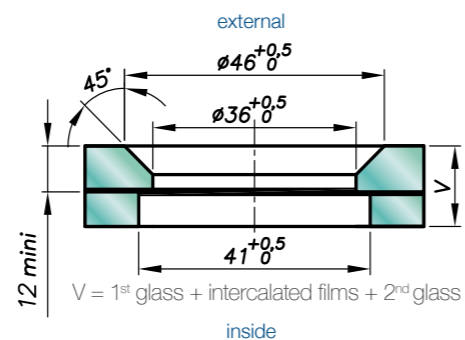
H = Swivel body corresponding to the thickness of the glass.  
 V\* = glass thickness

## Glass drilling

### MONOLITHIC GLASS



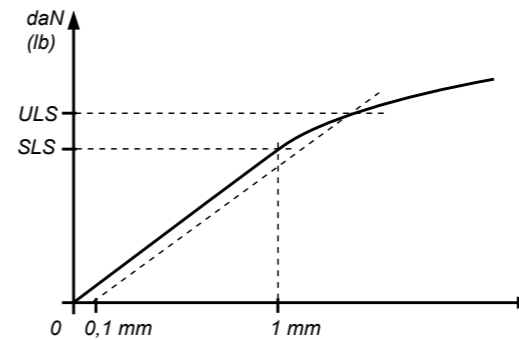
### LAMINATED GLASS



Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

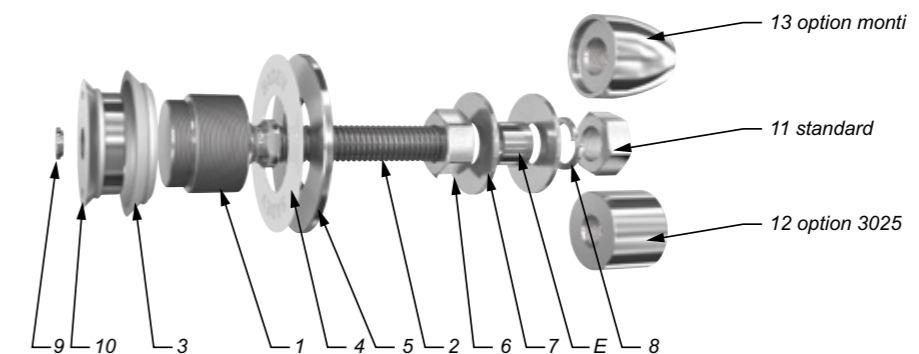
## Mechanical performance



	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	

\*SLS - Serviceability Limit State: load at 1mm deformation  
 \*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
 Values are given without factor of safety.  
 Tests available online: [www.sadev.com](http://www.sadev.com)

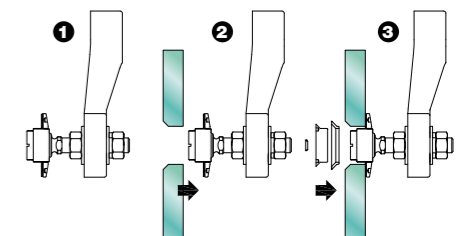
## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Glass hole grommet	AW-1050A as per EN 573-3/AI 99.5%
4	1	Contact washer	White polyacetyl/white polyethylene
5	1	Glass nut Ø60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer DIN127	A4
9	1	Cover cap	X5 Cr Ni Mo 17.12.2 as per EN 10088-3
10	1	Countersunk bush	X5 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Nut DIN 934	A4
12	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
13	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

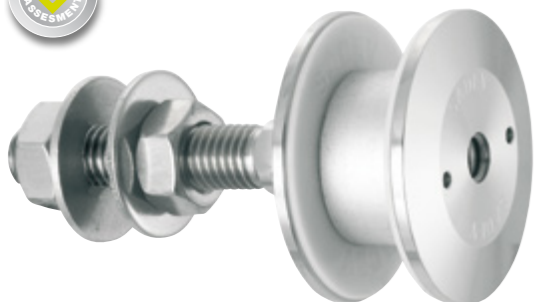
Mount nut N°6 and washer N°7 onto parts N°1/2.  
 Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount washer N°7, lock washer N°8 and nut N°11. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench. Apply contact washer N°4 and glass nut N°5 onto parts N°1/2. Adjust to desired position. Mount the glass onto the assembly.  
 Thread on the countersunk bush N°10 with grommet N°3 onto parts N°1/2. Tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV catalog ref. 097581160 and ref. CLE-DYN-072031. The swivel fitting is maintained with a flat screw driver while fixing part N°10. Glue in the cover cap N°9 into the countersunk bush N°10 using silicone.



SADEV recommends using thread locking compound whenever possible.

# R 1038

Designation : swivel fitting, cylindrical head for installation from the outside

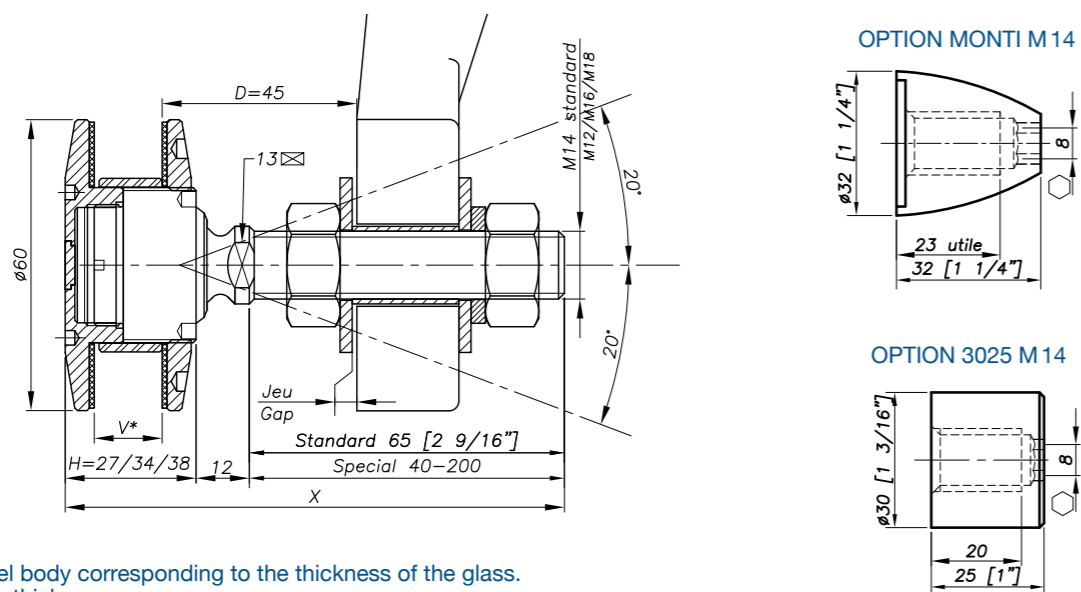


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	R1038-0815-1465*
15 < V ≤ 22	M14	65	R1038-1522-1465
22 < V ≤ 26	M14	65	R1038-2226-1465
SPECIAL	SPECIAL	SPECIAL	R1038-V-SP

Patent No : 9806556  
 Technical assessment available online : [www.sadev.com](http://www.sadev.com)  
 Sealing strip between glazing available p.8.26

\* R1038-0815-1465 : Model - Glass thickness - Type axis and length.

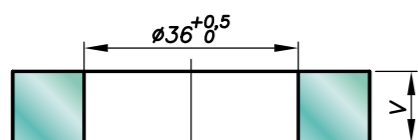
## Dimensions



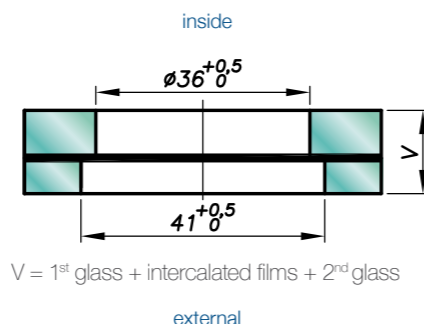
H = Swivel body corresponding to the thickness of the glass.  
 V\* = glass thickness

## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS

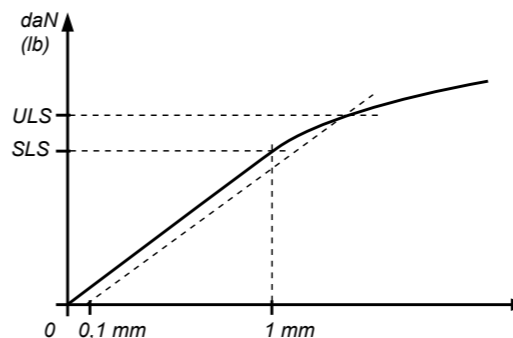


Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

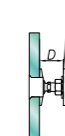
It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1038

## Mechanical performance

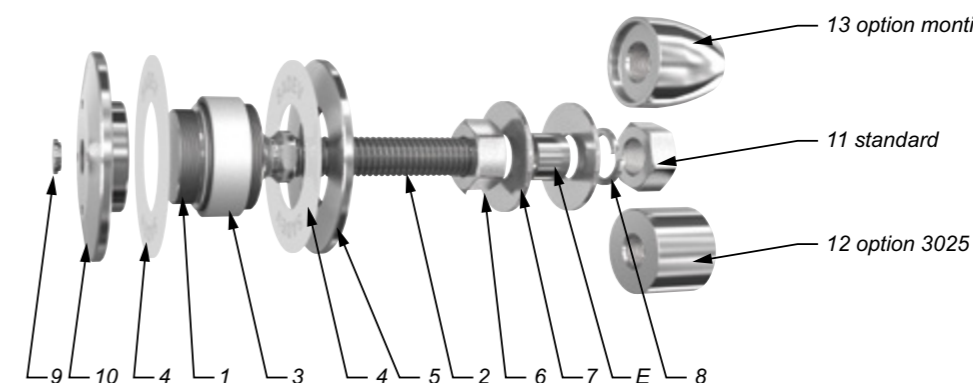


	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	



\*SLS - Serviceability Limit State: load at 1mm deformation  
 \*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
 Values are given without factor of safety.  
 Tests available online : [www.sadev.com](http://www.sadev.com)

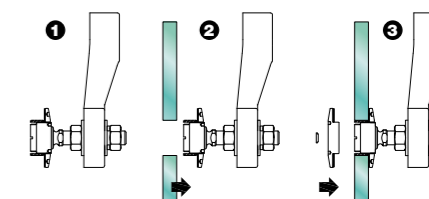
## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Glass hole grommet	AW-1050A as per EN 573-3/AI 99.5%
4	2	Contact washer	White polyacetyl / white polyethylene
5	1	Glass nut Ø60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer DIN127	A4
9	1	Cover cap	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
10	1	Countersunk bush	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Nut DIN 934	A4
12	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
13	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

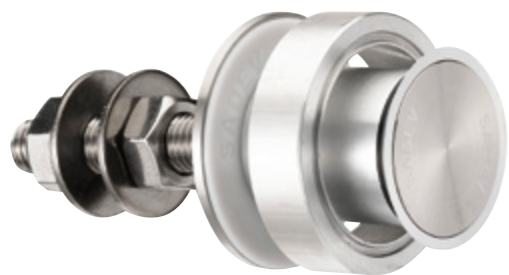
Mount nut N°6 and washer N°7 onto parts N°1/2.  
 Insert the threaded axle into the support with spacer E (available on request), see technical page.  
 Adjust the depth. Mount washer N°7, lock washer N°8, and nut N°11 and tighten to 60Nm (45 ft-lb) using a 22 mm wrench. Apply contact washer N°4 and glass nut N°5.  
 Adjust to the desired location. Mount the glass onto the assembly.  
 Mount parts N°10 and 3 onto parts N°1/2. Tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV ref. 097581160 and ref. CLE-DYN-072031. Insert cover cap N°9 into the countersunk bush N°10.



SADEV recommends using thread locking compound whenever possible.

# R 1001 A

Designation : swivel fitting, countersunk head - insulated glass unit

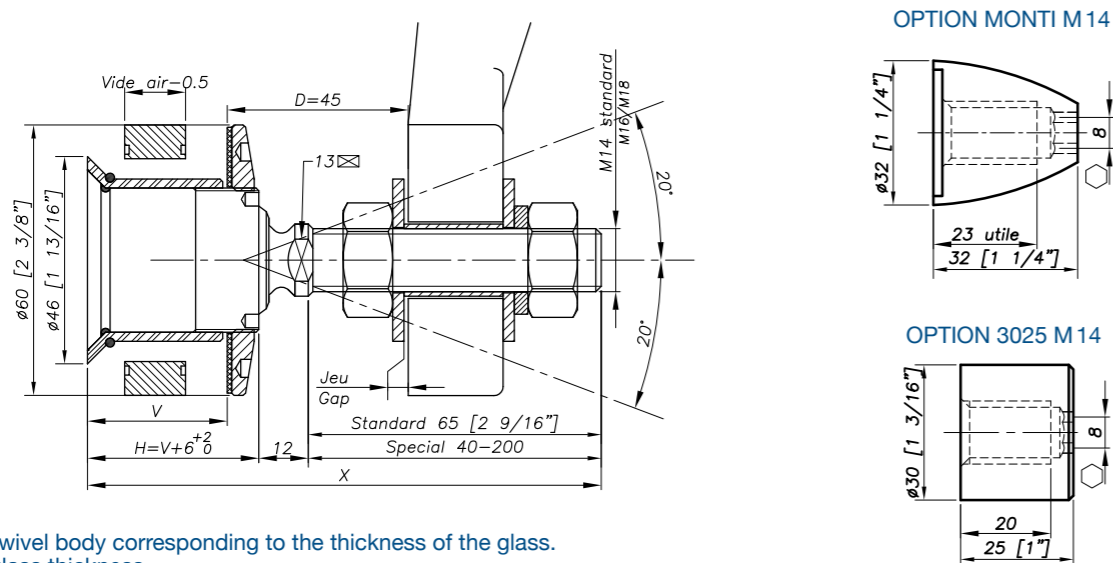


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
Bespoke glass thickness	M14	65	R1001A-V-1465*
SPECIAL	SPECIAL	SPECIAL	R1001A-V-SP

\* R1001A-V-1465 : Model - Glass thickness - Type axis and length.

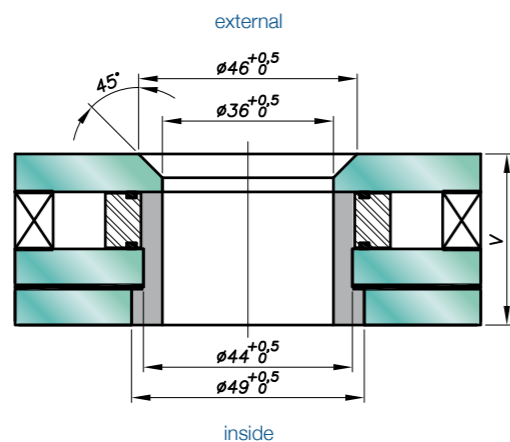
Patent No: 9806556  
Sealing strip between glazing available p.8.26

## Dimensions



H = Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness

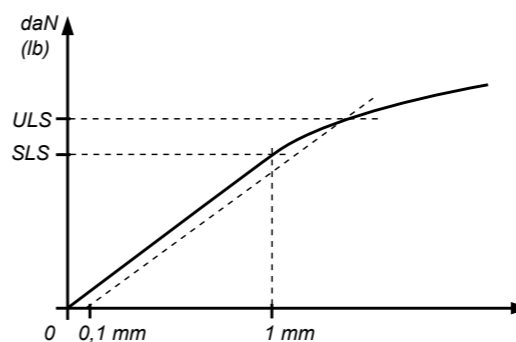
## Glass drilling



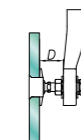
It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1001 A

## Mechanical performance

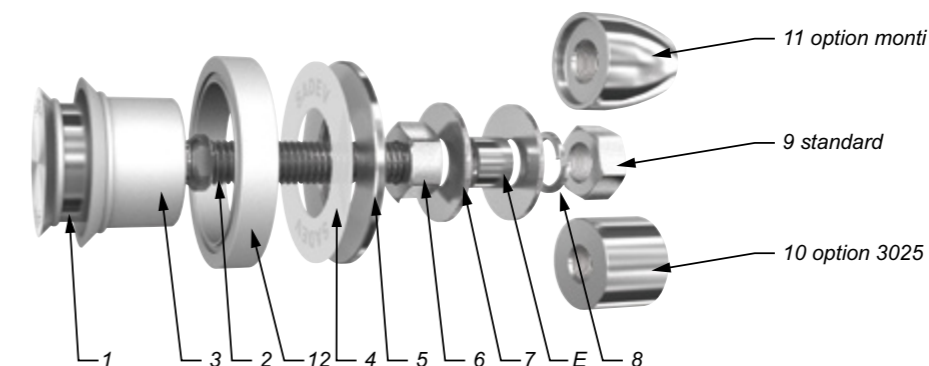


	D	BENDING CAPACITY		PULL OUT CAPACITY
		SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	



\*SLS - Serviceability Limit State: load at 1mm deformation  
\*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
Values are given without factor of safety.  
Tests available online : www.sadev.com

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Glass hole grommet	AW-1050A as per EN 573-3/AI 99.5%
4	1	Contact washer	White polyacetyl / white polyethylene
5	1	Glass nut Ø60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer DIN127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
12	1	Spacing ring	AlCu4MgSi / 2017A (AU4G) as per EN 573-3

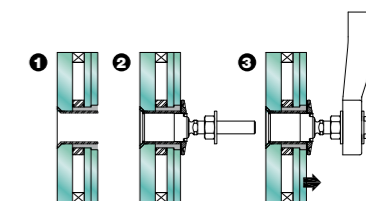
## Suggested mounting instruction

### 1 - In factory : assembly of glass

Suggested method only, not considered to replace the recommendations of the glass manufacturer. Mount spacing ring N°12 between the two pieces of glass using 3 mm butyl cord applied into the grooves. Assemble the IG unit. Insert glass hole grommet N°3 and secure using a neutral cure silicone.

### 2 - On site

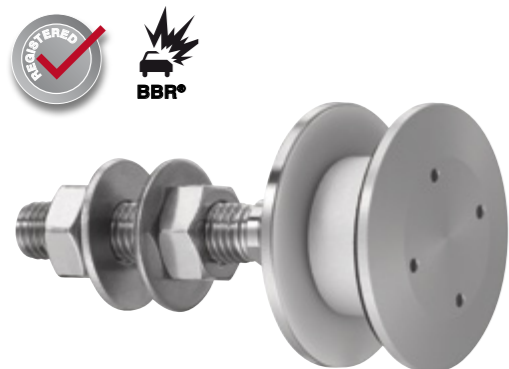
Insert parts N°1/2 into the glass hole. Place the contact washer N°4 over assembly N°1/2 and thread on the glass nut N°5. Tighten to 10Nm (7.5 ft-lb) for tempered glass using SADEV catalog ref. 097581160 and ref. CLE-DYN-072031. Thread on nut N°6 and apply washer N°7. Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer N°7, lock washer N°8, and nut N°9. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench.



SADEV recommends using thread locking compound whenever possible.

# R 1039

Designation : swivel fitting, cylindrical head – insulated glass unit.  
Fixed on one layer of glass only

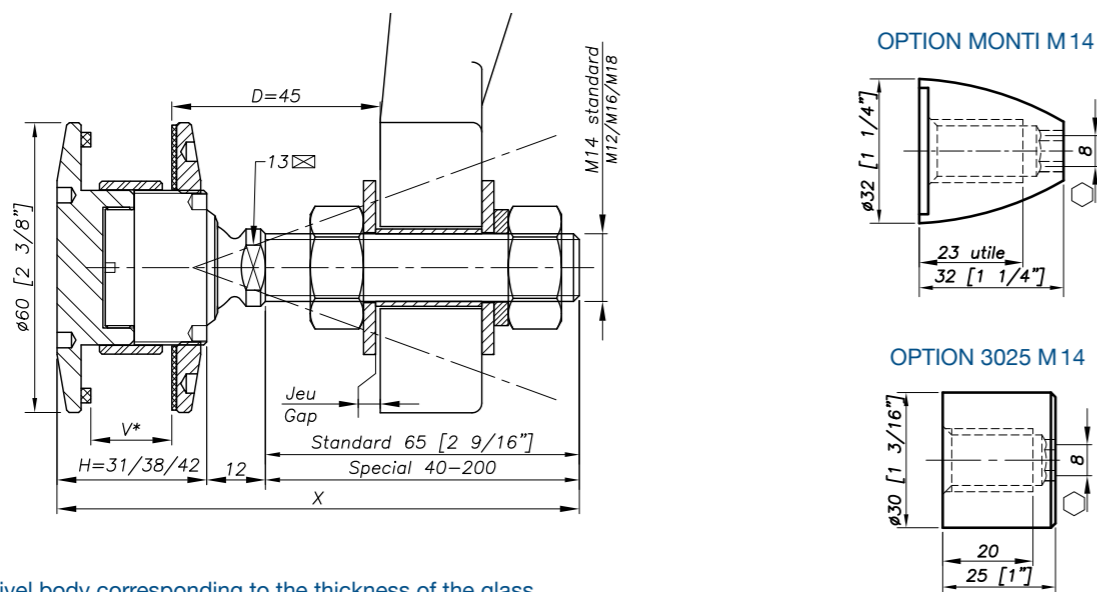


Patent No: 9806556  
Sealing strip between glazing available p.8.26

REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	R1039-0815-1465*
15 ≤ V ≤ 22	M14	65	R1039-1522-1465
22 ≤ V ≤ 26	M14	65	R1039-2226-1465
SPECIAL	SPECIAL	SPECIAL	SPECIAL

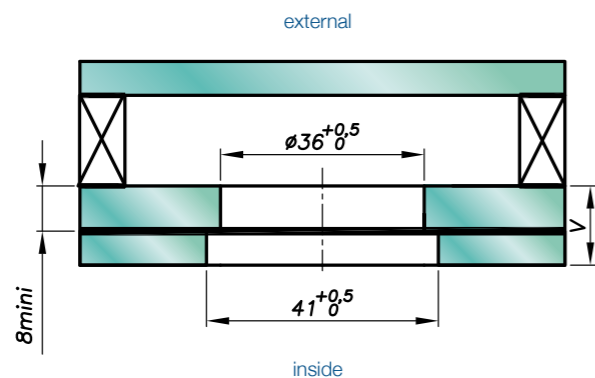
\* R1039-V-1465 : Model - Glass thickness - Type axis and length.  
Rotule BBR en option.

## Dimensions



H = Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness

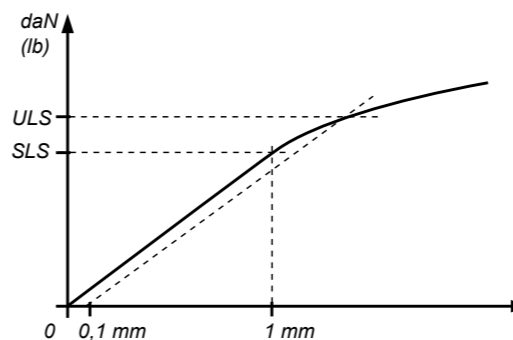
## Glass drilling



It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1039

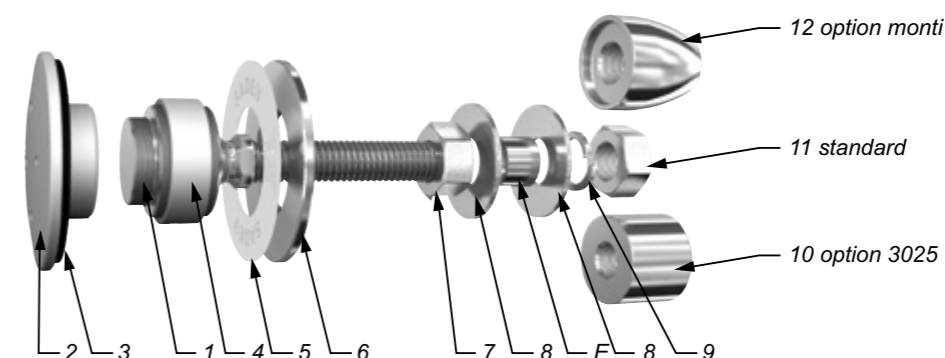
## Mechanical performance



	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	1400 daN (3147 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	

\*SLS - Serviceability Limit State: load at 1mm deformation  
\*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
Values are given without factor of safety.  
Tests available online : www.sadev.com

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Bush	AlCu4MgSi / 2017A (AU4G) as per EN 573-3
3	1	Contact washer	EPDM
4	1	Glass hole grommet	AW-1050A as per EN 573-3 / Al 99.5%
5	1	Contact washer	White polyacetyl / white polyethylene
6	1	Glass nut Ø60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
7	1	Nut DIN 934	A4
8	2	Washer	A4
9	1	Washer DIN 127	A4
10	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Nut DIN 934	A4
12	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

### 1 - In factory :

Mount parts N°2, 3, 4 into the glass with a Butyl sealing strip (not included).  
Assembly by isolating glazing.

### 2 - On site

Mount the N°1 into bush N°2.

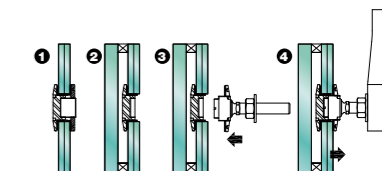
Attach contact washer N° 5 and glass nut N° 6 and tighten to 10 Nm ( 7.5 ft-lb )  
for laminated glass using SADEV ref. 097581160 and ref. CLE-DYN-072031.

Butyl cord applied between item 1 and the glass.

Mount nut N° 7 and washer N° 8.

Insert the threaded axle into the support with spacer E ( available on request ), see technical page. Adjust the depth. Mount washer N° 8, lock washer N° 9, and tighten to 60 Nm ( 45 ft-lb ) using a 22 mm wrench.

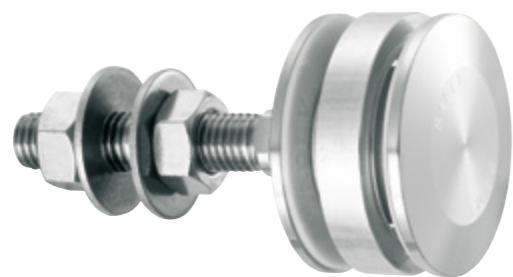
SADEV recommends using thread locking compound whenever possible.





# R 1003A

Designation : swivel fitting, non-fluch - insulated glass unit

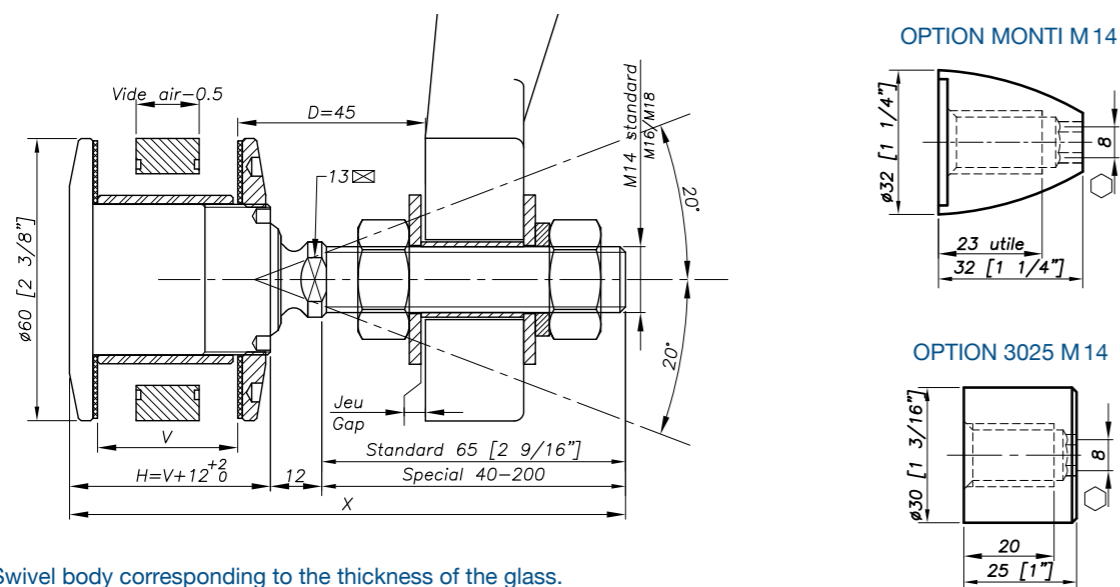


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
Bespoke glass thickness	M14	65	R1003A-V-1465*
SPECIAL	SPECIAL	SPECIAL	R1003A-V-SP

\* R1003A-V-1465 : Model - Glass thickness - Type axis and length.

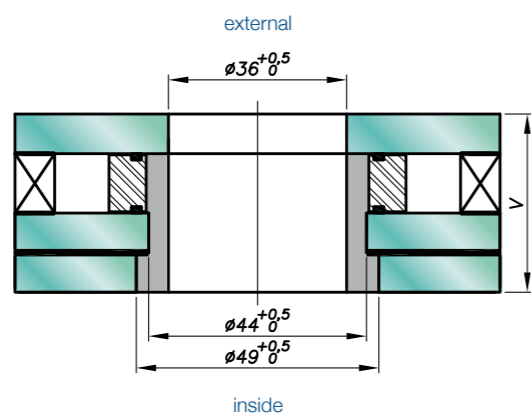
Patent No : 9806556  
Sealing strip between glazing available p.8.26

## Dimensions



H = Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness

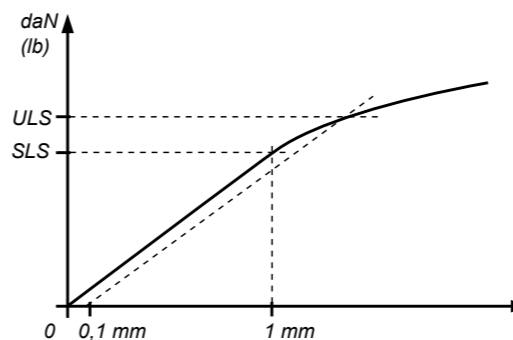
## Glass drilling



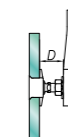
It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1003A

## Mechanical performance

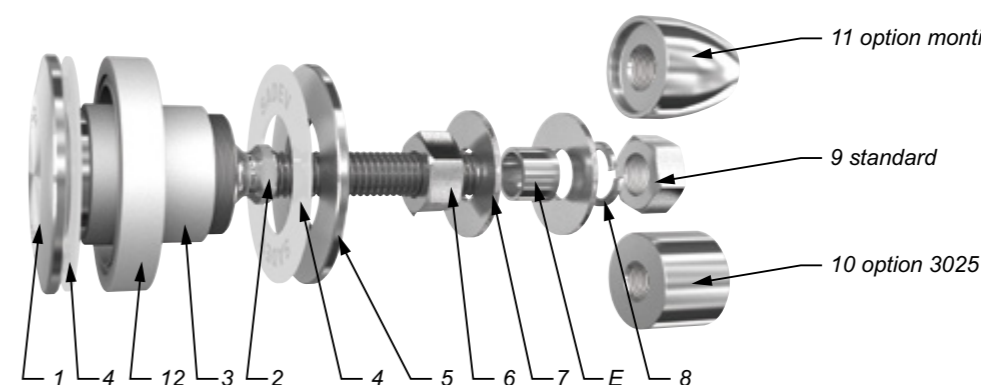


	D	BENDING CAPACITY		PULL OUT CAPACITY
		SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	



\*SLS- Serviceability Limit State: load at 1mm deformation  
\*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
Values are given without factor of safety.  
Tests available online : www.sadev.com

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Glass hole grommet	AW-1050A as per EN 573-3/AI 99.5%
4	2	Contact washer	White polyacetyl/white polyethylene
5	1	Glass nut Ø60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer DIN127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
12	1	Spacing ring	AlCu4MgSi/2017A (AU4G) as per EN 573-3

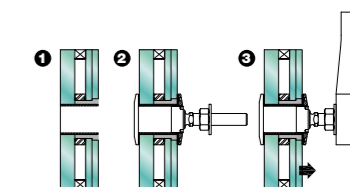
## Suggested mounting instruction

### 1 - In factory : assembly of glass

Suggested method only, not considered to replace the recommendations of the glass manufacturer.  
Mount spacing ring N° 12 between the two pieces of glass using 3mm butyl cord applied in the grooves. Assemble the insulated glass unit. Insert glass hole grommet N° 3 and secure using a neutral cure silicone.

### 2 - On site

Insert parts N° 1/2 and 4 into the glass hole.  
Place the second contact washer N° 4 over assembly N° 1/2 and thread on glass nut N° 5. Tighten to 10Nm (7.5 ft-lb) for tempered glass using SADEV catalog ref. 097581160 and ref. CLE-DYN-072031.  
Thread on nut N° 6 and apply washer N° 7. Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer N° 7, lock washer N° 8, and nut N° 9. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench..



SADEV recommends using thread locking compound whenever possible.

# R 1019

Designation : swivel fitting, countersunk head.  
The head is laminated between layers of glass

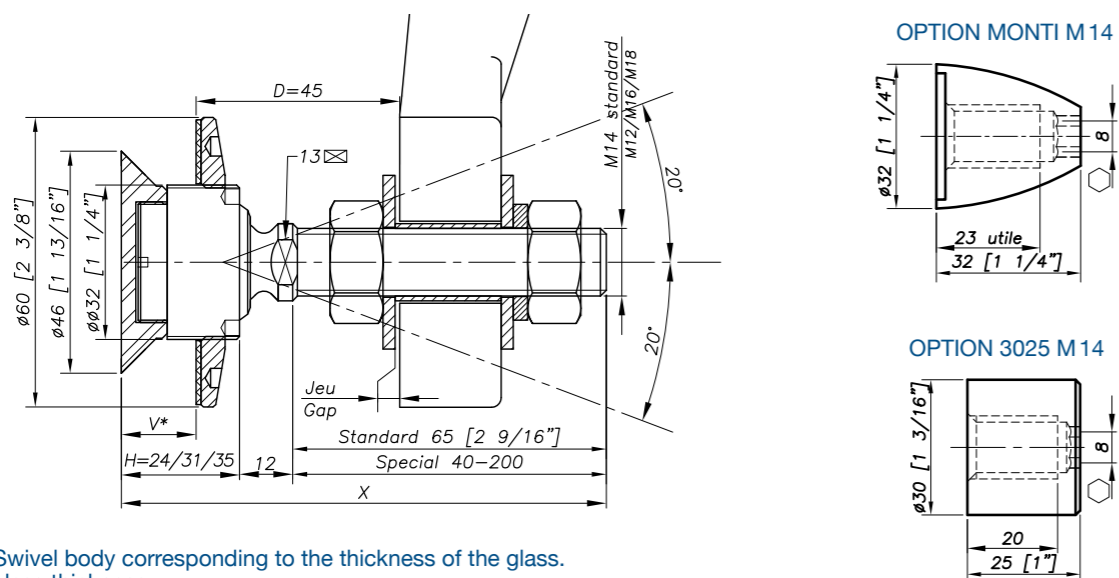


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
10 ≤ V ≤ 15	M14	65	R1019-1015-1465*
15 < V ≤ 22	M14	65	R1019-1522-1465
22 < V ≤ 26	M14	65	R1019-2226-1465
SPECIAL	SPECIAL	SPECIAL	R1019-V-SP

Patent No : 9806556  
Sealing strip between glazing available p.8.26

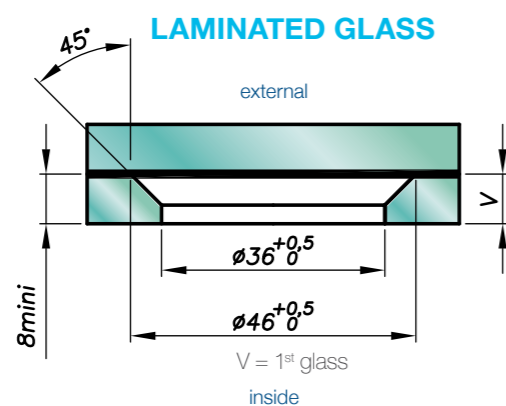
\* R1019-0815-1465 : Model - Glass thickness - Type axis and length.

## Dimensions



H = Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness

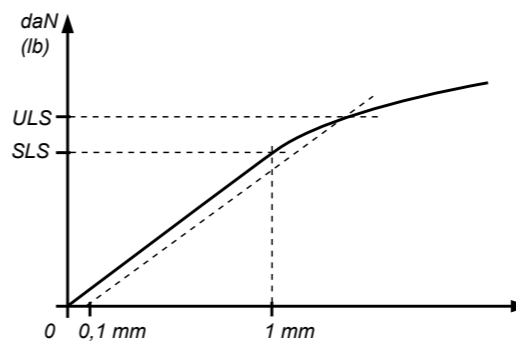
## Glass drilling



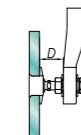
It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1019

## Mechanical performance

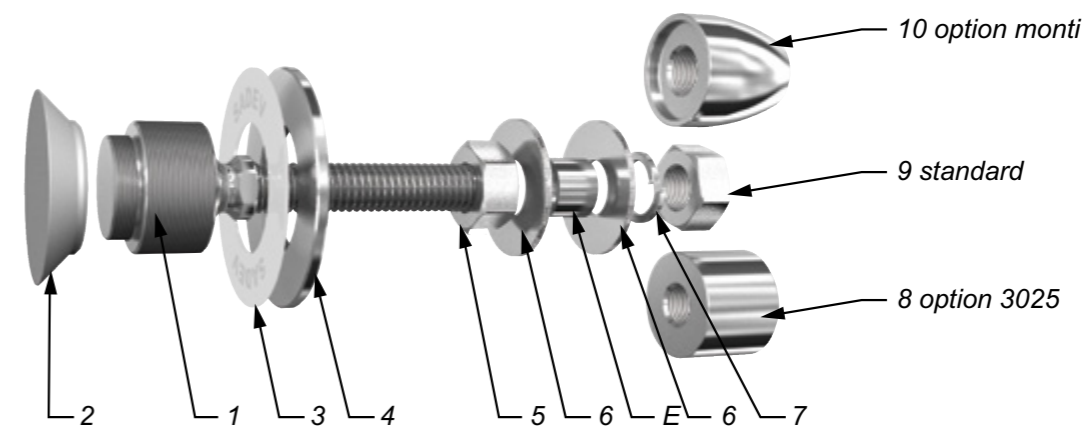


	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	1400 daN (3147 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	



\*SLS - Serviceability Limit State: load at 1mm deformation  
\*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
Values are given without factor of safety.  
Tests available online : www.sadev.com

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Countersunk bush	AW-6060 T5 as per EN 573-3 / Al Mg Si0.5
3	1	Contact washer	White polyacetyl / white polyethylene
4	1	Glass nut Ø60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
5	1	Nut DIN 934	A4
6	2	Washer	A4
7	1	Washer DIN 127	A4
8	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
9	1	Nut DIN 934	A4
10	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

### 1 - In factory

Mount countersunk bush N°2 into the glass.

Assemble the second layer of glass.

### 2 - On site

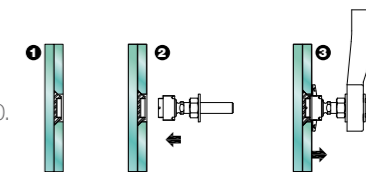
Mount the swivel body N°1 into the countersunk bush N°2 using SADEV wrench ref. 097581160.

Mount the parts N°3 and N°4 and tighten to 10 Nm for laminated glass with SADEV wrench.

Mount the Nut N°5 and washer N°6.

Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth.

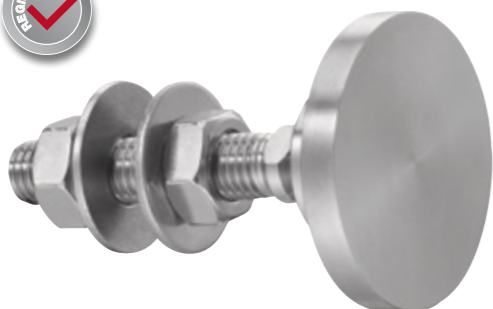
Mount the washer N°6 + washer DIN 127 + nut N°5 and tighten to 60 Nm with plate wrench 22mm



SADEV recommends using thread locking compound whenever possible

# R 1006 TSSA

Designation: swivel fitting, Ø 60 mm, for UV bonding to glass.

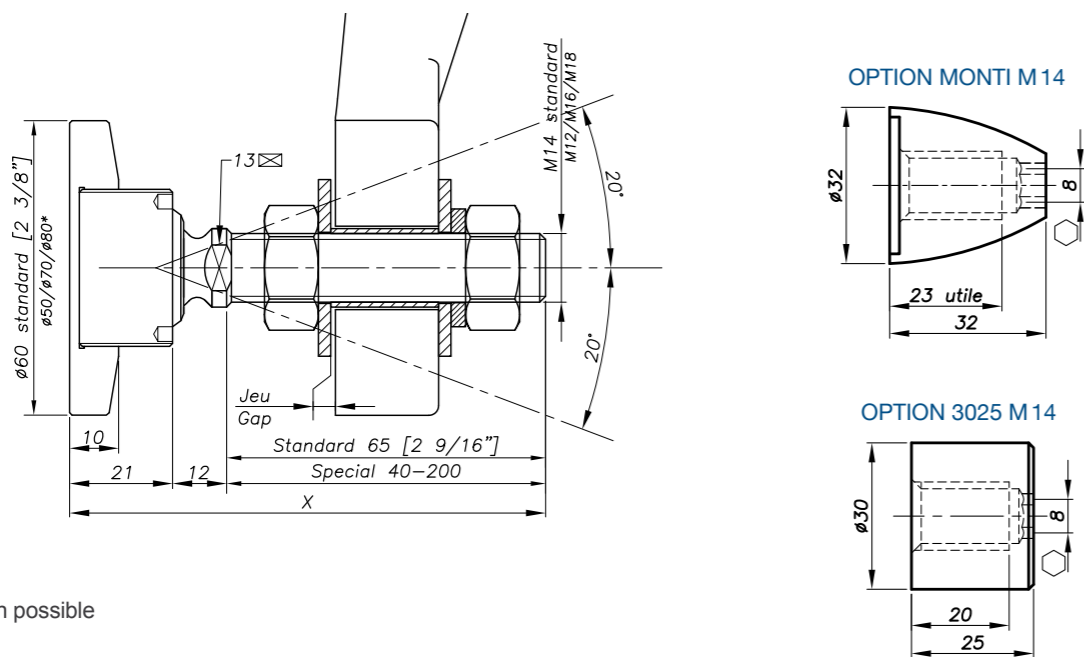


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
	M14	65	R1006TSSA-1465*
	SPECIAL	SPECIAL	R1006TSSA-SP

\* R1006TSSA-1465 : Model - type axis and length.

Patent N°: 9806556  
 Sealing strip between glazing available p.8.26  
 The swivel fitting R1006 TSSA has been specially designed for bonding type Dow Corning TSSA (Transparent Structural Silicone Adhesive).  
 More information on [www.dowcorning.com](http://www.dowcorning.com).

## Dimensions



\* Option possible

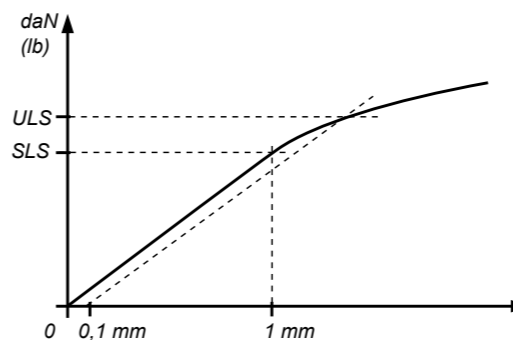
## No glass drilling

SHEAR STRESS	MATERIAL
0.593 kN at 1mm deformation	1.191 kN at 1mm deformation
6.492 kN at failure	5.949 kN at failure
778 N/mm shear rigidity	
453 kNmm Bending Moment	
1191 kN tensile stress at 1mm deformation	
5949 kN tensile stress at failure	

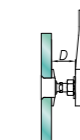
It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1006 TSSA

## Mechanical performance

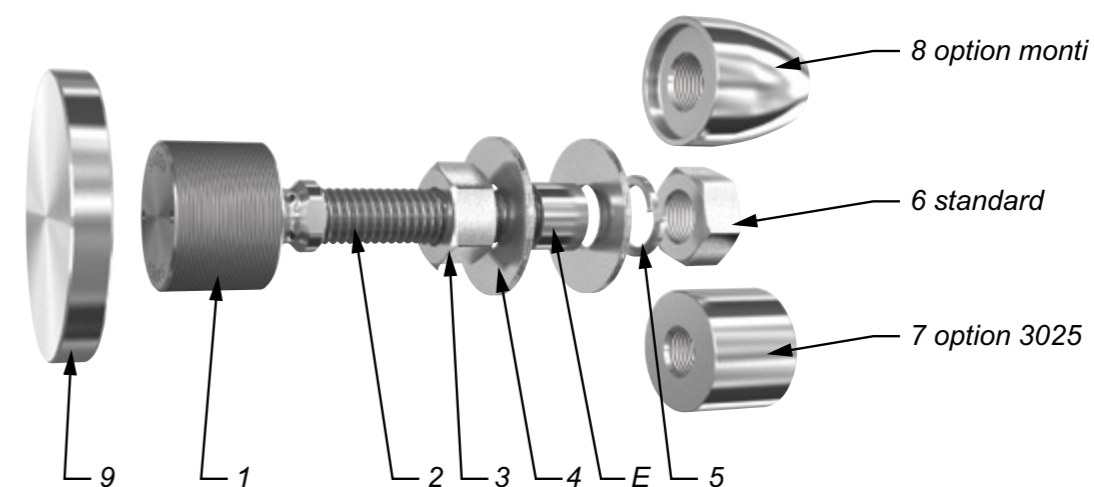


	D	BENDING CAPACITY		PULL OUT CAPACITY
		SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	



\*SLS - Serviceability Limit State: load at 1mm deformation  
 \*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
 Values are given without factor of safety.  
 Tests available online: [www.sadev.com](http://www.sadev.com)

## Components



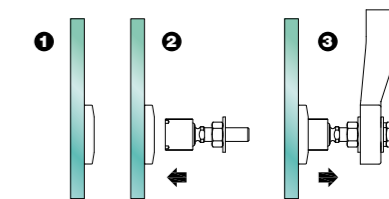
MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Nut DIN 934	A4
4	2	Washer	A4
5	1	Lock washer DIN127	A4
6	1	Nut DIN 934	A4
7	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
8	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
9	1	Adhesion disk	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

Attach adhesion disk N°9 onto the glass in accordance with technical specifications of UV glue manufacturer and glass fabricator (Can be adhered in the factory).

Mount parts N° 1/2 into part N°9. Thread on nut N°3 and apply washer N°4.

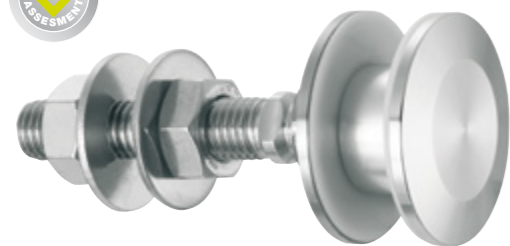
Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer N°4, lock washer N°5, and nut N°6. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench.



SADEV recommends using thread locking compound whenever possible.

# R 1103

Designation : swivel fitting,  
non-fluch countersunk head, Ø50 mm

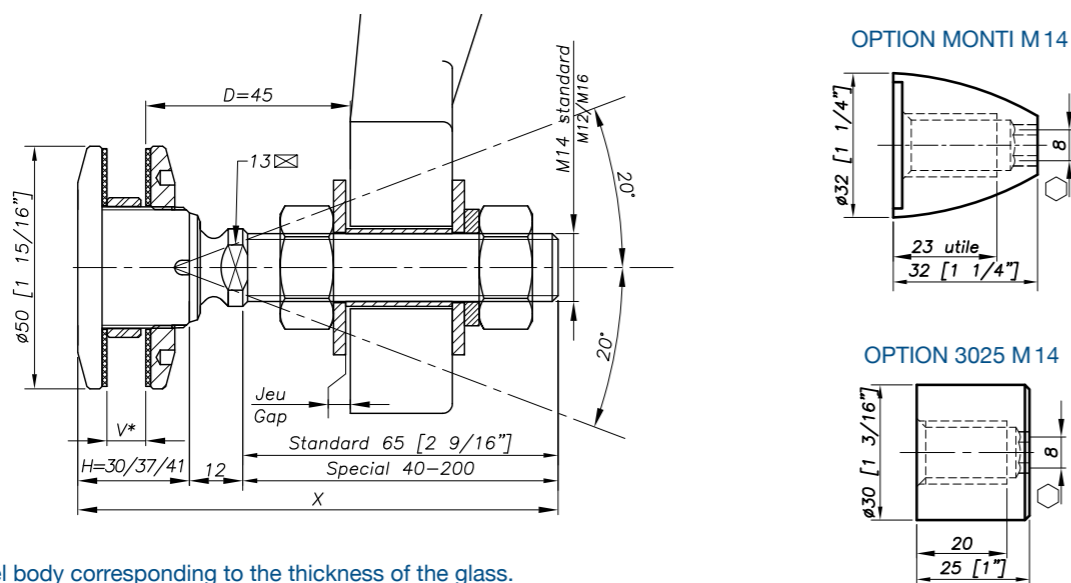


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	R1103-0815-1465*
15 < V ≤ 22	M14	65	R1103-1522-1465
22 < V ≤ 26	M14	65	R1103-2226-1465
SPECIAL	SPECIAL	SPECIAL	R1103-V-SP

\* R1103-0815-1465 : Model - Glass thickness - Type axis and length.

Patent No: 9806556  
Technical assessment available online: [www.sadev.com](http://www.sadev.com)  
Sealing strip between glazing available p.8.26

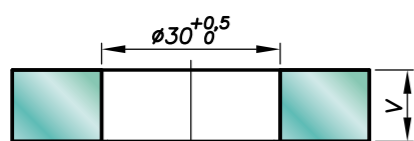
## Dimensions



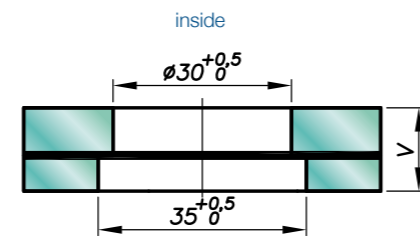
H = Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness

## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS



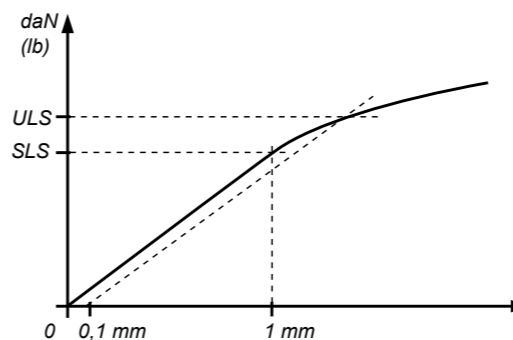
V = 1<sup>st</sup> glass + intercalated films + 2<sup>nd</sup> glass

Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

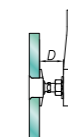
It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1103

## Mechanical performance

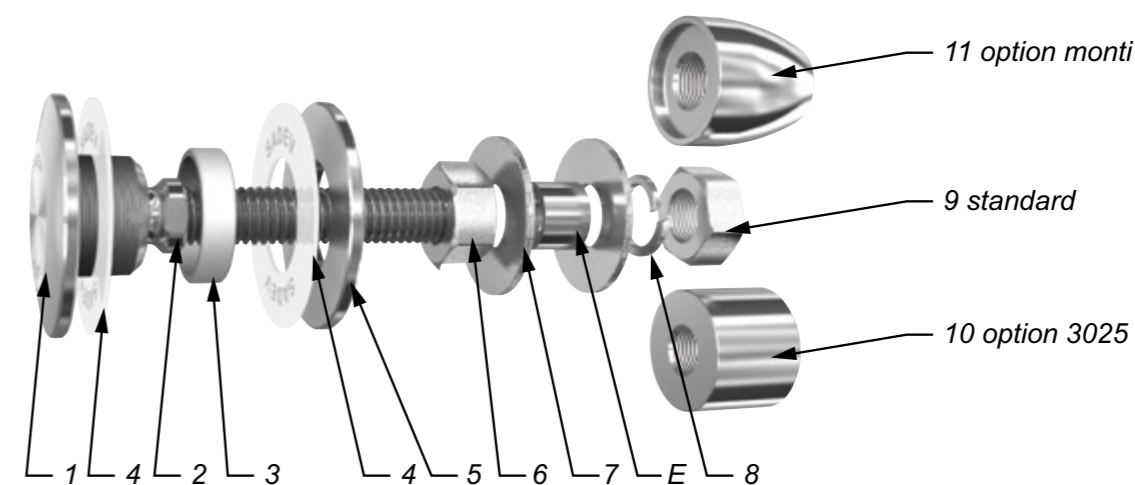


	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	1 400 daN (3147 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	



\*SLS - Serviceability Limit State: load at 1mm deformation  
\*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
Values are given without factor of safety.  
Tests available online: [www.sadev.com](http://www.sadev.com)

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	1	Glass hole grommet	AW-1050A as per EN 573-3/AI 99.5%
4	2	Contact washer	White polyacetyl/white polyethylene
5	1	Glass nut Ø50	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer DIN127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

Insert parts N° 1/2, 4, and 3 into the glass hole.

Mount the second contact washer N° 4 and glass nut N° 5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using tools SADEV ref. 097581160.

Mount nut N° 6 and washer N° 7 onto parts N° 1/2.

Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount washer N° 7, lock washer N° 8, and nut N° 9 and tighten to 60Nm (45 ft-lb) using a 22 mm wrench.

SADEV recommends using thread locking compound whenever possible.



# RC 70

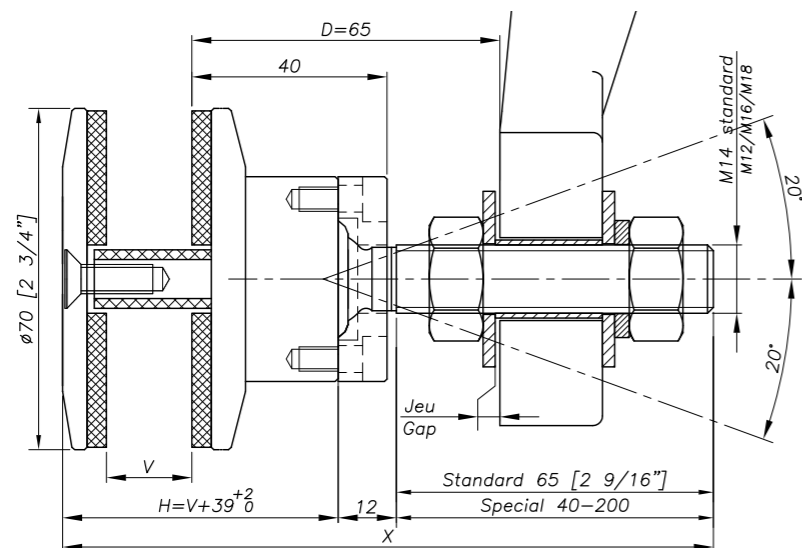
Designation : clamp swivel fitting



REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
$8 \leq V \leq 15$	M14	65	RC70-V1
$15 < V \leq 22$	M14	65	RC70-V2
$22 < V \leq 26$	M14	65	RC70-V3
SPECIAL	SPECIAL	SPECIAL	RC70-SP

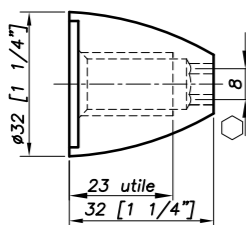
Patent No : 9806556  
Sealing strip between glazing available p.8.26

## Dimensions

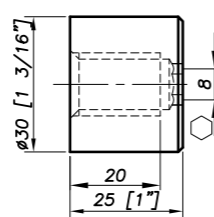


V\* = glass thickness.

OPTION MONTI M14



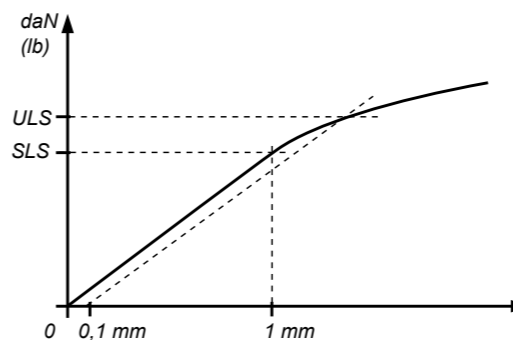
OPTION 3025 M14



## N° glass drilling

RC 70

## Mechanical performance

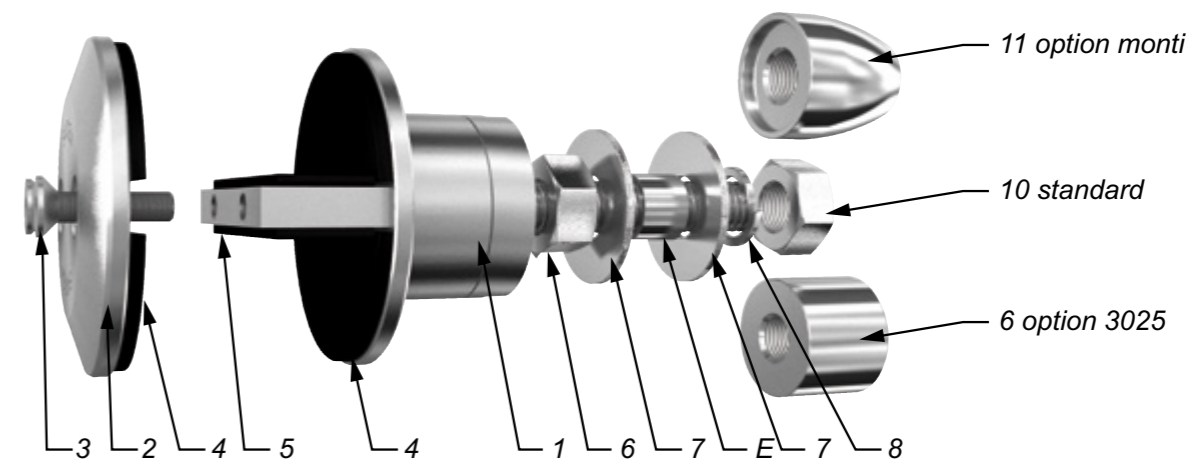


	D	BENDING CAPACITY		PULL OUT CAPACITY
		SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	2000 daN (4496 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	



\*SLS - Serviceability Limit State: load at 1mm deformation  
\*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
Values are given without factor of safety.  
Tests available online : [www.sadev.com](http://www.sadev.com)

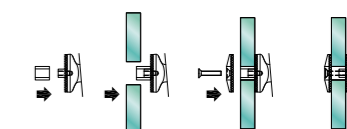
## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Flasque externe	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
3	2	Bolt DIN 7991M6x25	A4
4	4	Demi-lune de protection	EPDM
5	2	Plat de protection	EPDM
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer DIN127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap nut - Option	A4
11	1	Monti cap nut - Option	A4

## Suggested mounting instruction

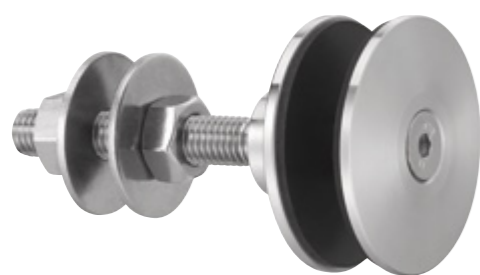
Install the nut (# 6) + 1 washer (#7) on part (#1).  
Install through the hole in the support or spider casting. Spacer E over threads to prevent fitting from fully tightening on support for differential movements between structure and glass support (supplied on request). Adjust depth in or out as needed.  
Mounting other washer (#7) and lock washer (#8) + nut (#9, 10 (standard), or 11) and torque to 60 Nm (45 ft lbs). Set glass on gravity shelf with EPDM (#5) setting block.  
Mount the external disc (#2) with EPDM (#4) washer between glass and metal using 2 screws (#3) provided. Torque screws to 20 Nm (15 ft lbs) for monolithic glass and 10 Nm (8 ft lbs) for laminated (PVB) glass using a 4mm hex wrench.



Sadev recommends using tread locker on the external clamping screws on exterior applications.

# R 1006-M8

Designation : swivel fitting, cylindrical head, installation from the outside possible

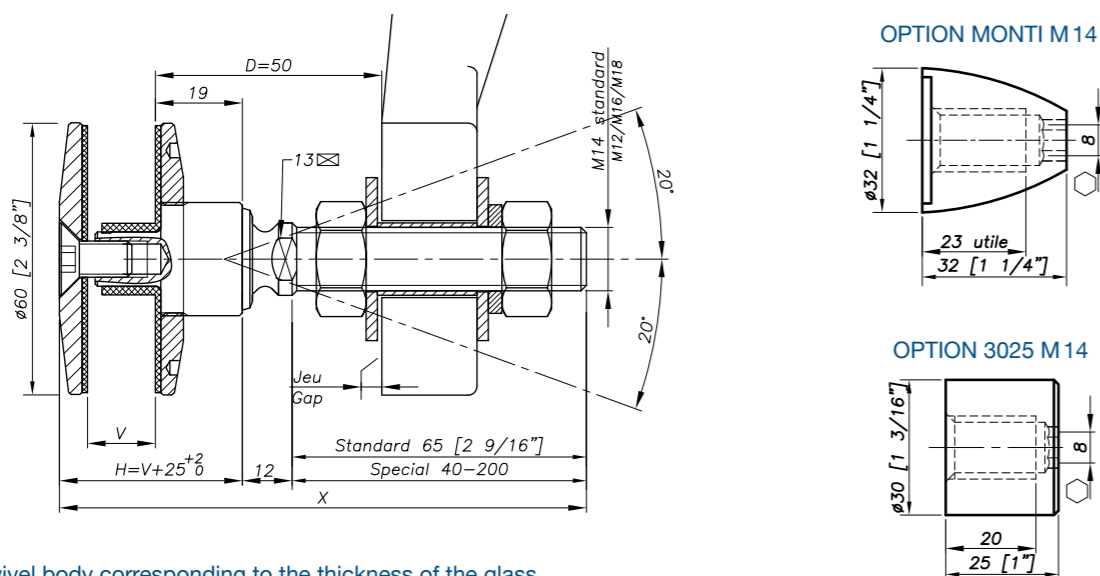


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
Bespoke glass thickness	M14	65	R1006-M8-V-1465*
SPECIAL	SPECIAL	SPECIAL	R1006-M8-V-SP

\* R1006-M8-V-1465 : Model - Glass thickness - Type axis and length.

Patent No: 9806556  
Sealing strip between glazing available p.8.26

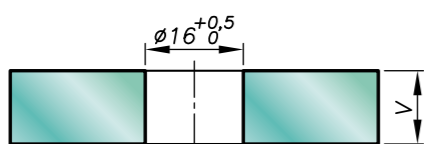
## Dimensions



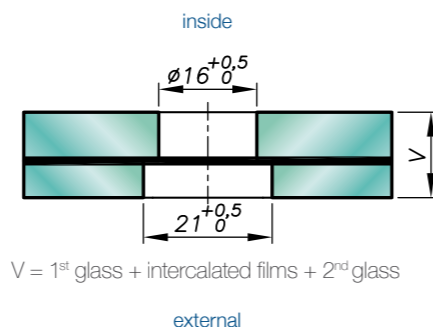
H = Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness

## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS



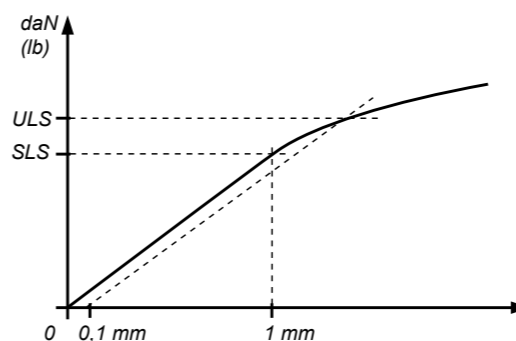
V = 1<sup>st</sup> glass + intercalated films + 2<sup>nd</sup> glass

Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

R 1006-M8

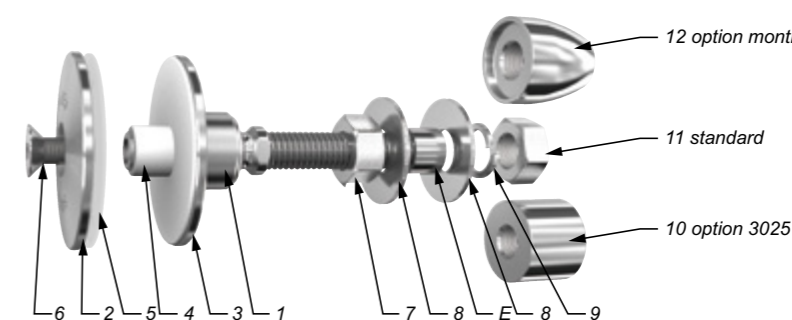
## Mechanical performance



	D	BENDING CAPACITY		PULL OUT CAPACITY
		SLS*	ULS*	ULS*
M 14	45mm	344 daN (773 lb)	577 daN (1297 lb)	1400 daN (3147 lb)
	60mm	153 daN (343 lb)	364 daN (818 lb)	
M16	45mm	504 daN (1133 lb)	827 daN (1859 lb)	
	60mm	253 daN (568 lb)	525 daN (1180 lb)	

\*SLS - Serviceability Limit State: load at 1mm deformation  
\*ULS = Ultimate Limit State: load at the elastic limit (Rp0.1).  
Values are given without factor of safety.  
Tests available online : www.sadev.com

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	External plate	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
3	1	Glass nut Ø60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
4	1	Shoulder contact washer	White polyacetyl / white polyethylene
5	1	Contact washer	White polyacetyl / white polyethylene
6	1	Bolt DIN 7991 M8x20	A4
7	1	Nut DIN 934	A4
8	2	Washer	A4
9	1	Lock washer DIN 127	A4
10	1	3025 Cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Nut DIN 934	A4
12	1	Monti cap nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

### A – Classic mounting

Insert parts N° 1, 3, 4 and 3 into the glass hole. Place the second contact washer N°5 over assembly N°2 and thread on glass nut N°6. Tighten to 20Nm for tempered glass using SADEV catalog ref. 097581160. Thread on nut N°7 and apply washer N°8. Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer N°8, lock washer N°9, and nut N°7. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench.

### B – Blind mounting : installation from the outside (N° access to the structure)

Mount nut N°7 and washer N°8 onto assembly N°1,3,4. Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer N°8, lock washer N°9, and nut N°7. Tighten to 60Nm (45 ft-lb) using a 22 mm wrench. Mount the glazing. Mount contact washer N°8 + plate N°2 with screw M8 N°6 and tighten to 20Nm for monolithic glass and 10Nm for laminated glass using SADEV catalog ref. 097581160.

SADEV recommends using thread locking, except specific mounting constraint.







# R 1006LC

Designation : swivel fitting, cylindrical head, Installation from the outside possible

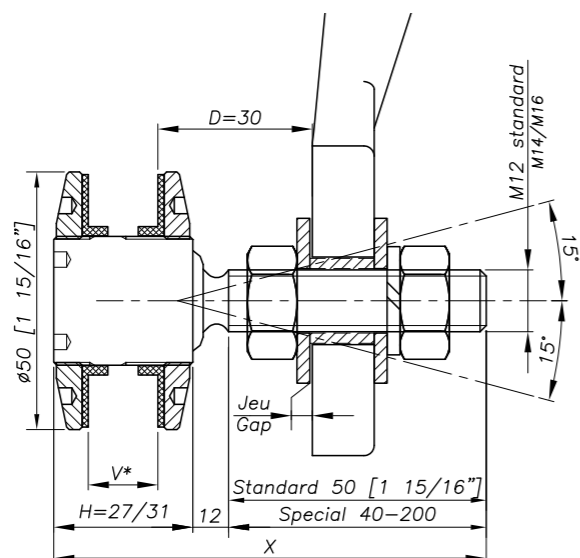


Patent No : 9806556

Sealing strip between glazing available p.8.26

REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (mm)	ARTICLE CODE
8 ≤ V ≤ 14	M12	50	R1006LC-01
14 < V ≤ 18	M12	50	R1006LC-02
SPECIAL	SPECIAL	SPECIAL	R1006LC-SP

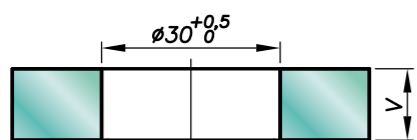
## Dimensions



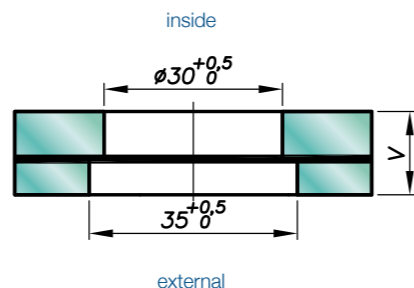
H = Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness

## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS

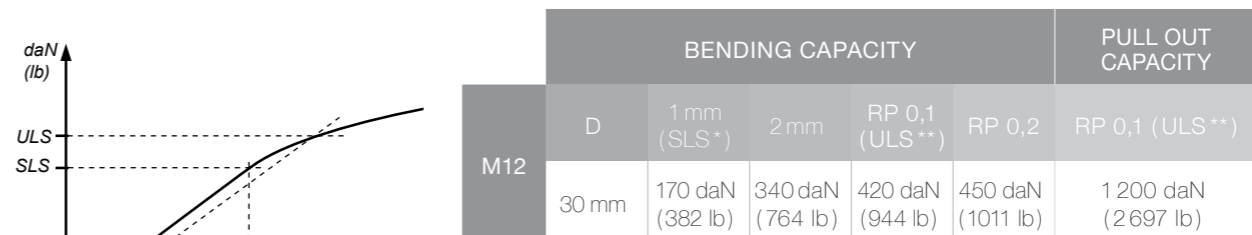


Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

It is important to provide the following information with each request: the glass composition (ex.: 10 mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65 mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

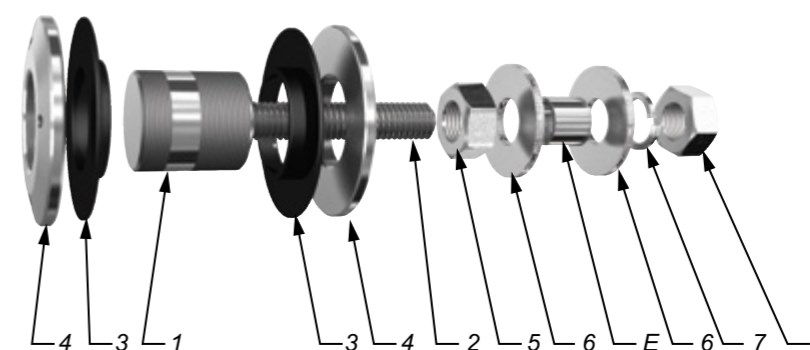
R 1006LC

## Mechanical performance



\*SLS : Serviceability limit state : Bending capacity à 1 mm  
\*\*ULS : Ultimate limit state : Load at the elastic limit Rp0,1  
Values are given without factor of safety  
Tests available online : www.sadev.com

## Components

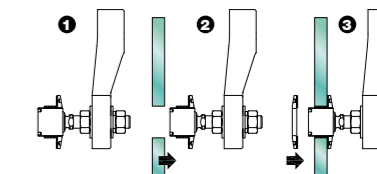


MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Swivel body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded Axle	X4 Cr Ni Mo 16.5.1 as per EN 10088-3
3	2	Glass hole grommet	Polyacétal noir / polyéthylène noir
4	2	Glass nut Ø50	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
5	2	Nut DIN 934	A4
6	2	Washer	A4
7	1	Lock washer DIN127	A4

## Suggested mounting instruction

### A – Classic mounting

Insert parts N° 1, 2, 4 and 3 into the glass hole. Place the second contact washer N°3 over assembly N°2 and thread on glass nut N°4. Tighten to 20Nm for tempered glass using SADEV catalog ref. 758-11-60. Thread on nut N°5 and apply washer N°6. Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer N°6, lock washer N°7, and nut N°5. Tighten to 60Nm (45 ft-lb) using a 19 mm wrench.



### B – Blind mounting : installation from the outside (no access to the structure)

Mount nut N°5 and washer N°6 onto assembly N°1,2. Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer N°6, lock washer N°7, and nut N°5. Tighten to 60Nm (45 ft-lb) using a 19mm wrench. Mount the glazing. Mount contact washer N°3 + plate N°4 and tighten to 20Nm for monolithic glass and 10Nm for laminated glass using SADEV catalog ref. 758-11-60.

SADEV recommends using thread locking, except specific mounting constraint.

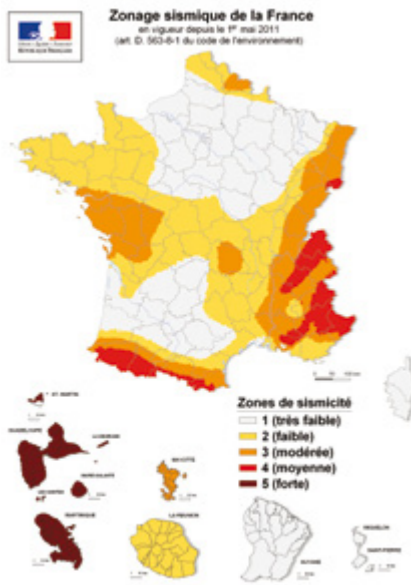
# Options

## Seismic



National regulations define seismic zones, building classes and soil classes. The use of Sadev swivel fitting labeled "seismic" framed areas and building categories defined in the table below. The effects of the seismic action should be taken into account for seismic zones and categories of buildings.

### Extract the French regulation (notebook 3691\_V2 of CSTB)



	CATEGORY OF THE STRUCTURE			
	I	II	III	IV
ZONE 1	without prescription	without prescription	without prescription	without prescription
ZONE 2	without prescription	without prescription	validated *	validated *
ZONE 3	without prescription	validated *	validated *	validated *
ZONE 4	without prescription	validated *	validated *	validated *
ZONE 5	validated *	validated *	validated *	validated *

\* under conditions : the validation according to the zone or category requires a suitable and tested Sadev product.

### Building categories

The seismic location also depends on the type of building. For example, in France :

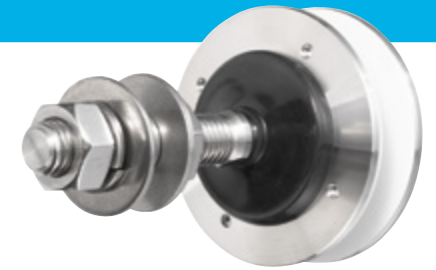
IMPORTANCE CATEGORY OF THE BUILDING	BUILDING TYPE	COEFFICIENT
I	See details in notebook 3691 of CSTB (French Institute)	0.8
II		1
III		1.2
IV		1.4

"Swivel fittings R1001, R1003, R1006, R1008 and spiders S3000, S3001 EVO, S3007 Sadev have successfully passed the seismic tests."



## The Silicone Cover

SADEV provides a protection from elements in the form of a silicone cover. Attention, this cover is not a simple option that you can add later. It is imperative to order a swivel fitting marked «SO» for this option since the swivel body is bigger and the glass nut is accordingly adapted.



## BBR swivel fittings

The swivel fittings R1003BBR and R1039BBR (BBR : Bomb Blast Resistant) were developed for protecting building occupants from blast effects is an international focus of current R&D. In order to allow the construction of safe and secure public buildings, a brand new and effective bolt fixed system has been developed for point fixed glass façades.

High quality, there high performance is confirmed by tests conducted in the UK (100kg of TNT to 25m). They are made in France from 316 stainless steel. The hinge angle at 20° with +/- with SADEV BBR system absorbs the impact of the explosion and deflection.



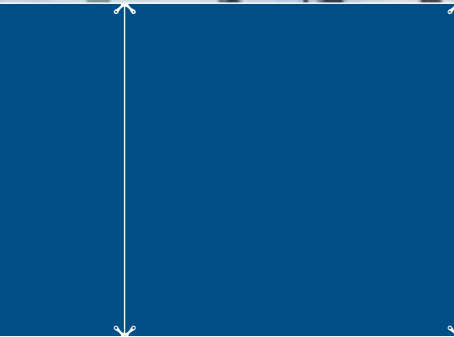
## Insulating swivel fittings

Solar and thermal characteristics of glazing influence the energy performance of facades. Three components determine the coefficient and bioclimatic needs of a façade: heating, air conditioning and lighting. Sadev offers a range of swivel fitting R1001A, R1003A, R1039 with grommets for producing insulating facades in double or triple glazing.





FIXED BOLTS



FIXED BOLT, COUNTERSUNK HEAD  
V 2001 ..... 7.2



FIXED BOLT, COUNTERSUNK HEAD,  
FOR INSTALLATION FROM THE OUTSIDE  
V 2002 ..... 7.4



FIXED BOLT, CYLINDRICAL HEAD,  
FOR INSTALLATION FROM THE OUTSIDE  
V 2003 ..... 7.6  
V 2004 ..... 7.8



FIXED BOLT, CYLINDRICAL HEAD  
V 2005 ..... 7.10



FIXED BOLT, COUNTERSUNK HEAD  
V 2006 ..... 7.12



FIXED BOLT, CYLINDRICAL HEAD, Ø 50 MM  
V 2105 ..... 7.14

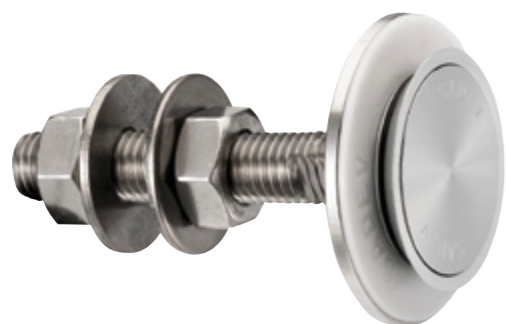


LC FIXED BOLT  
LC ..... 7.16



# V 2001

Designation : fixed bolt, countersunk head

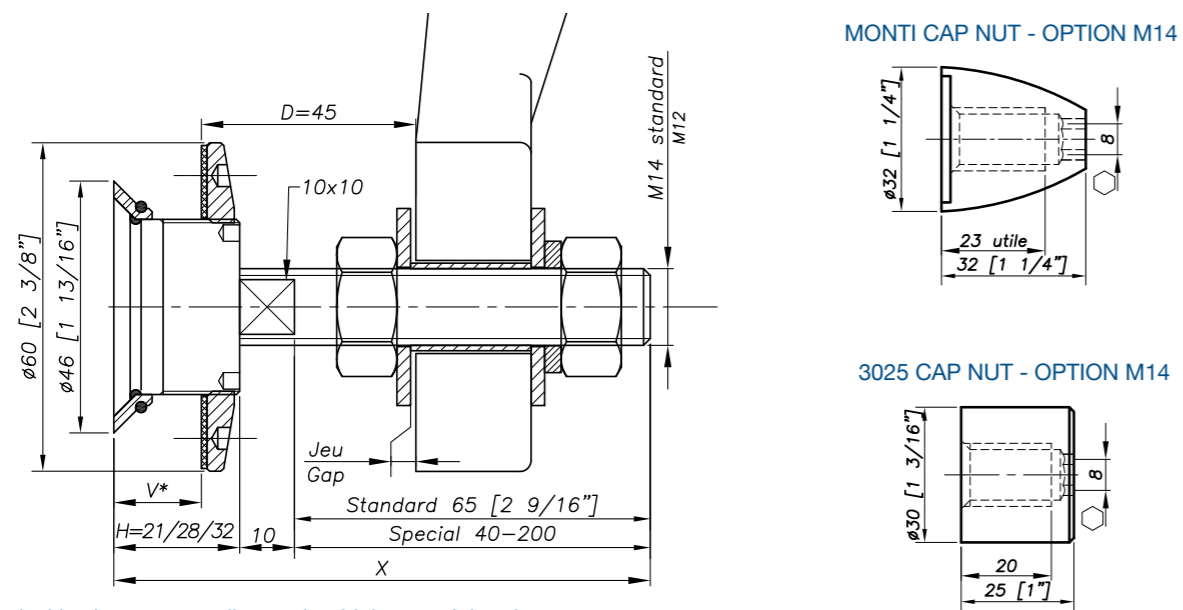


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (MM)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	V2001-0815-1465*
15 < V ≤ 22	M14	65	V2001-1522-1465
22 < V ≤ 26	M14	65	V2001-2226-1465
Special	Special	Special	V2001-V-SP

Sealing strip between glazing available p.8.26

\* V2001-0815-1465 : Model - Glass Thickness - type axis and length

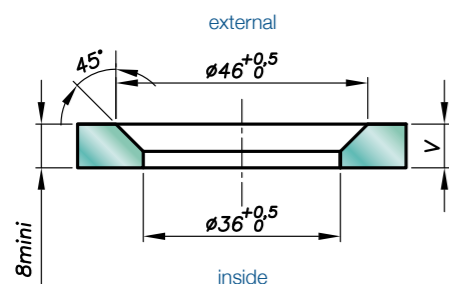
## Dimensions



H= Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness.

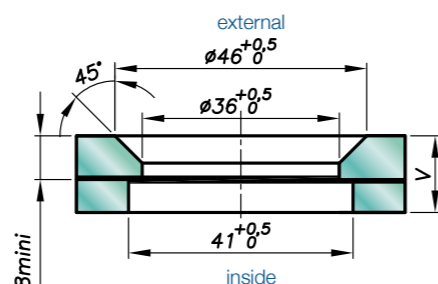
## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS

V = 1<sup>st</sup> glass + intercalated films + 2<sup>nd</sup> glass

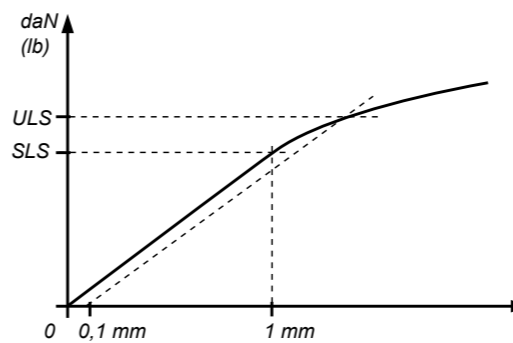


Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

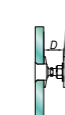
It is important to provide the following information with each request : the glass composition (ex.: 10mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

V 2001

## Mechanical performances

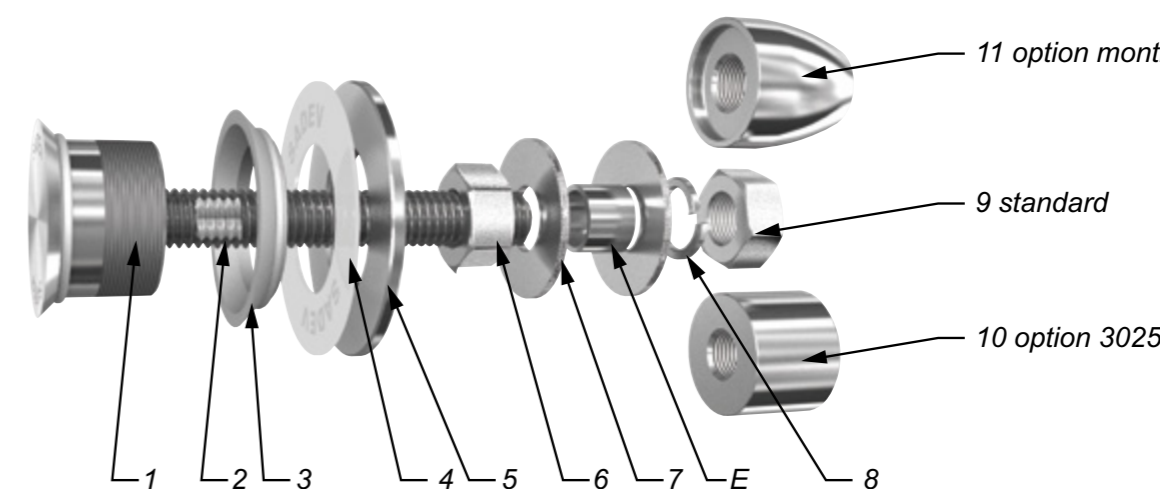


	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M12	45 mm	127 daN (285 lb)	269 daN (604 lb)	
	60 mm	65 daN (146 lb)	147 daN (330 lb)	
M14	45 mm	317 daN (712 lb)	538 daN (1209 lb)	4959 daN (11 148 lb)
	60 mm	144 daN (323 lb)	313 daN (703 lb)	



\*SLS : Serviceability Limit State : load at 1 mm deformation  
\*ULS : Ultimate Limit State : load at the elastic limit (Rp0.1)  
Values are given without factor of safety  
Tests available online : www.sadev.com

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded axle	A4
3	1	Glass hole gro-mmet	AW-1050A as per EN 573-3 / Al 99.5%
4	1	Contact washer	White polyacetyl / white polyethylene
5	1	Glass nut Ø 60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer 127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap Nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Monti Cap Nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

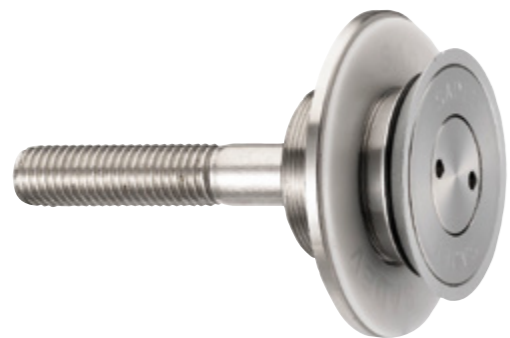
## Suggested mounting instruction

Insert parts No.1/2 and 3 into the glass.  
Mount contact washer No.4 and glass nut No.5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV tools ref. 0975860 and ref. CLE-DYN-072031.  
Mount nut No.6 and washer No.7.  
Insert the thread axle into the support with spacer E (available on request), see technical page. Adjust the depth.  
Mount washer No.7, lock washer No.8, and nut No.9. Tighten to 60Nm (45 ft-lb) using a 22mm wrench.

SADEV recommends using thread locking compound whenever possible.

# V 2002

Designation : fixed bolt, countersunk head, for installation from the outside

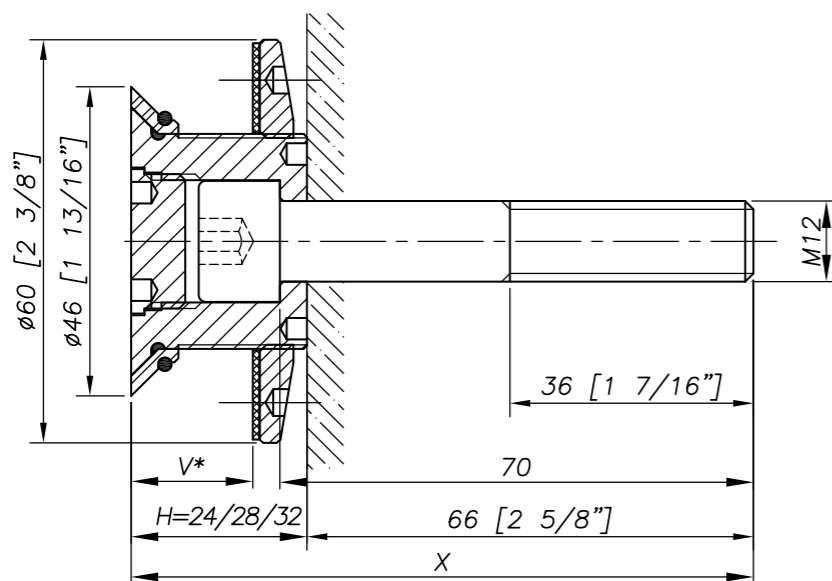


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (MM)	ARTICLE CODE
8 ≤ V ≤ 15	M12	66	V2002-0815
15 < V ≤ 22	M12	66	V2002-1522
22 < V ≤ 26	M12	66	V2002-2226
Special	Special	Special	V2002-V-SP

Sealing strip between glazing available p.8.26

\* V2002-0815 : Model - Glass Thickness

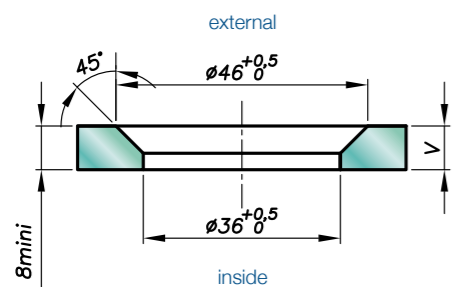
## Dimensions



H= Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness.

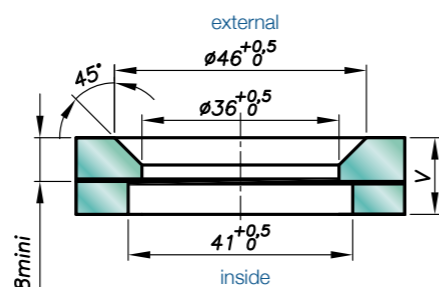
## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS

V = 1<sup>st</sup> glass + intercalated films + 2<sup>nd</sup> glass

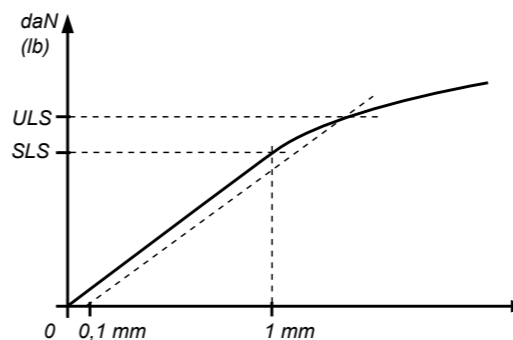


Available for glass thicknesses from 8 to 31.52mm, for other thicknesses please consult us.

It is important to provide the following information with each request: the glass composition (ex.: 10mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

V 2002

## Mechanical performances



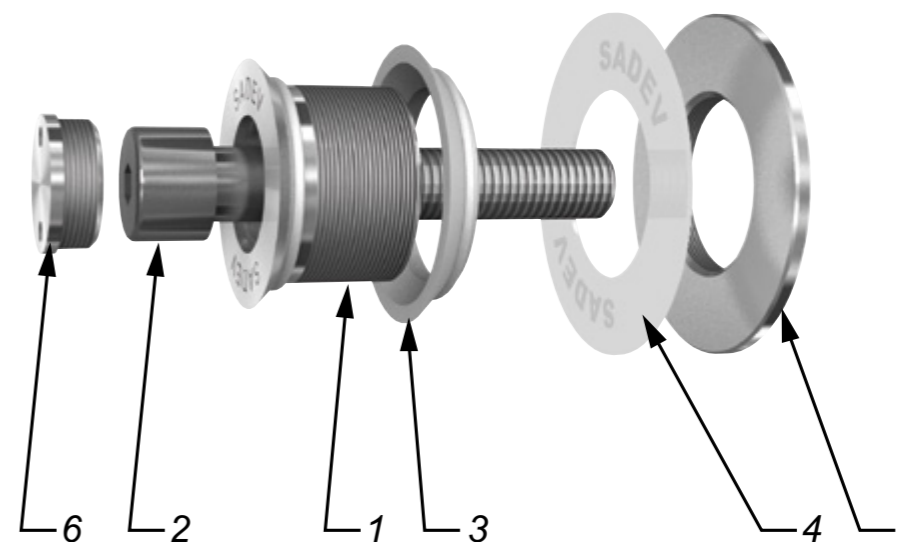
M12	SHEAR STRENGTH	PULL OUT CAPACITY
	ULS*	ULS*
	4342 daN* (9761 lb)	3709 daN (8338 lb)



\*ULS - Ultimate Limit State : load at the elastic limit (Rp0.1)  
Values are given without factor of safety  
Tests available online: www.sadev.com

\*daN: Tensile strength calculation according to EN 1993-1-8 and shear strength calculation according to EN 1993-1-4

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Bolt DIN912 M12-70	A4
3	1	Glass hole grommet	AW-1050A as per EN 573-3 / Al 99.5%
4	1	Contact washer	White polyacetyl / white polyethylene
5	1	Glass nut Ø 60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Cover cap	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

Insert parts No.1 and 3 into the glass hole.

Mount contact washer No.4 and glass nut No.5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV tools ref. 097581160 and ref. CLE-DYN-072031.

Mount into the support with bolt No.2, tighten in function of the support with a 10mm hex key.

Mount cover cap No.6 using SADEV tool ref. 758-11-60.

SADEV recommends using thread locking compound whenever possible.

# V 2003

Designation : fixed bolt, cylindrical head, for installation from the outside

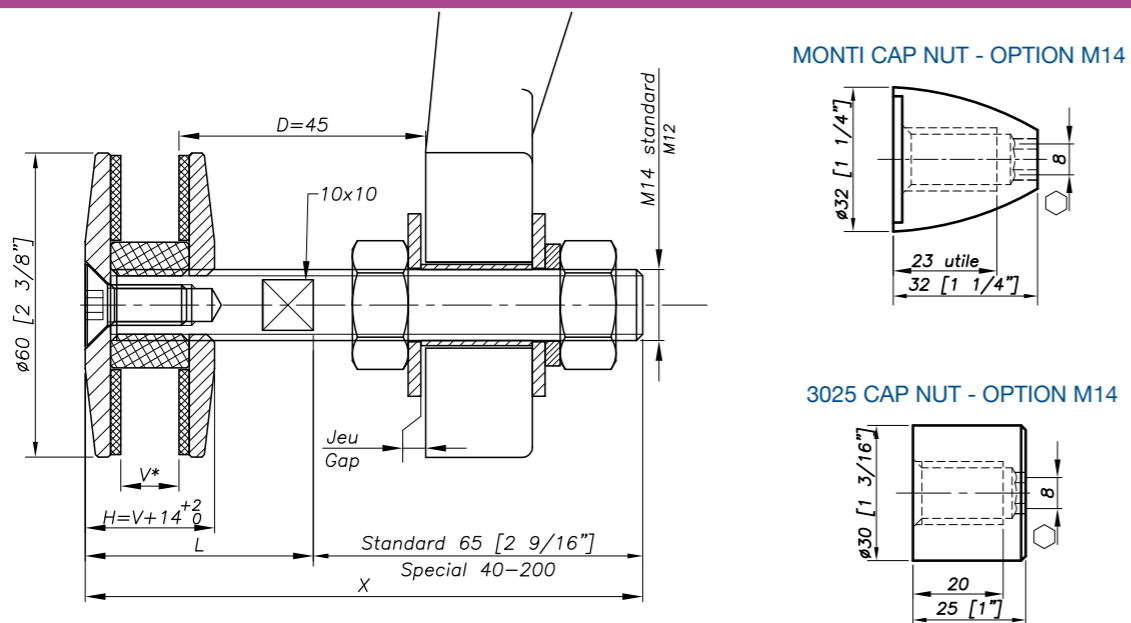


REFERENCE TO ORDER					
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (MM)	LENGTH L	LENGTH X	ARTICLE CODE
6 ≤ V ≤ 22	M14	65	40	115±2	V2003-0622-1465
22 < V ≤ 26	M14	65	45	120±2	V2003-2226-1465

\* V2003-0622-1465 : Model - Glass Thickness - type axis and length

Sealing strip between glazing available p.8.26

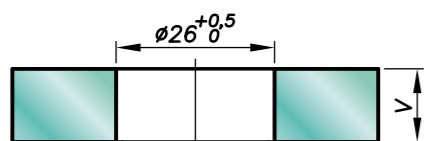
## Dimensions



H= Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness.

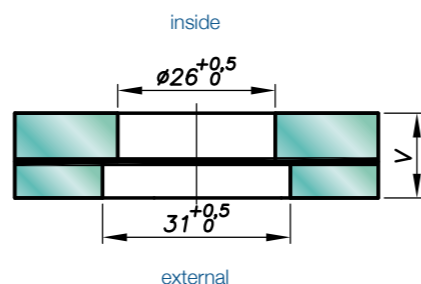
## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS

V = 1<sup>st</sup> glass + intercalated films + 2<sup>nd</sup> glass

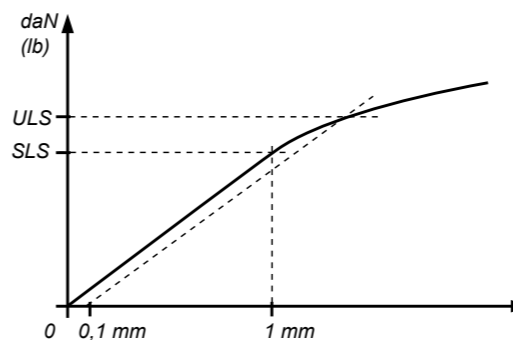


Available for glass thicknesses from 8 to 31.52mm, for other thicknesses please consult us.

It is important to provide the following information with each request : the glass composition (ex.: 10mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

V 2003

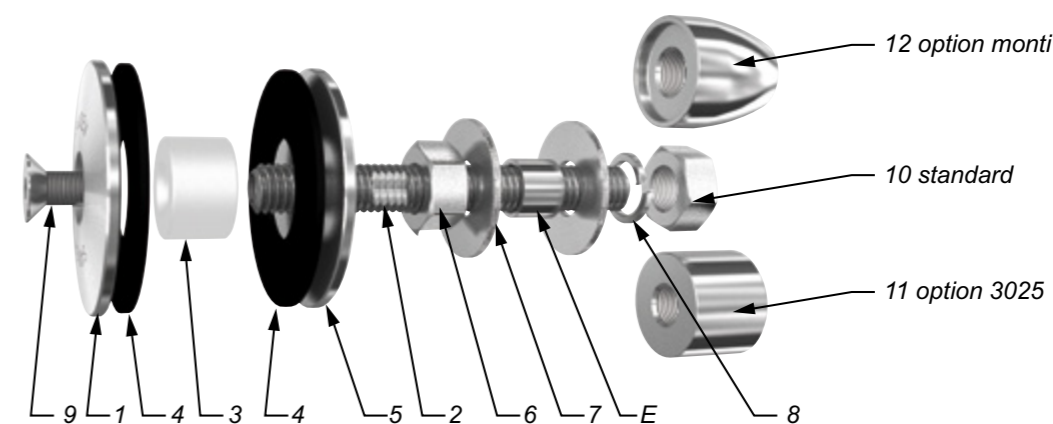
## Mechanical performances



	D	BENDING CAPACITY		PULL OUT CAPACITY
		SLS*	ULS*	ULS*
M12	45 mm	127 daN (285 lb)	269 daN (604 lb)	810 daN* (1820 lb)
	60 mm	65 daN (146 lb)	147 daN (330 lb)	
M14	45 mm	317 daN (712 lb)	538 daN (1209 lb)	1443 daN (3243 lb)
	60 mm	144 daN (323 lb)	313 daN (703 lb)	

\*SLS : Serviceability Limit State : load at 1 mm deformation  
\*ULS : Ultimate Limit State : load at the elastic limit (Rp0.1)  
Values are given without factor of safety  
Tests available online : www.sadev.com  
daN\*: Tensile strength calculation according to EN 1993-1-8 and shear strength calculation according to EN 1993-1-4

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	External plate	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded axle	A4
3	1	Spacer Ø 25	Polyacetyl
4	2	Contact washer	EPDM
5	1	Glass nut Ø 60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer127	A4
9	1	Bolt DIN7991 M8x20	A4
10	1	Nut DIN 934	A4
11	1	3025 Cap Nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
12	1	Monti Cap Nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

### A – Classic mounting

Insert parts No.2/3/4/5 into the glass hole. Mount the second contact washer No.4, external plate No.1, and bolt No.9 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass. Thread on nut No.6 and apply washer No.7. Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer No.7, lock washer No.8, and nut No.10. Tighten to 60Nm (45 ft-lb) using a 22mm wrench.

### B – Blind mounting: installation from the outside (no access to the structure)

Mount nut No.6 and washer No.7 onto parts No.2/3/4/5. Insert the threaded axle into the support with spacer E (available on request), see technical page. Adjust the depth. Mount the second washer No.7, lock washer No.8, and nut No.10. Tighten to 60Nm (45 ft-lb) using a 22mm wrench. Set the glass onto the assembly, be careful not to put unprotected glass edges in contact with bare metal parts. Mount parts No.1/4 and 9 onto parts No.2/3/4/5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using a 10mm wrench and a 5mm hex key.

SADEV recommends using thread locking compound whenever possible.

# V 2004

Designation : fixed bolt, cylindrical head, for installation from the outside

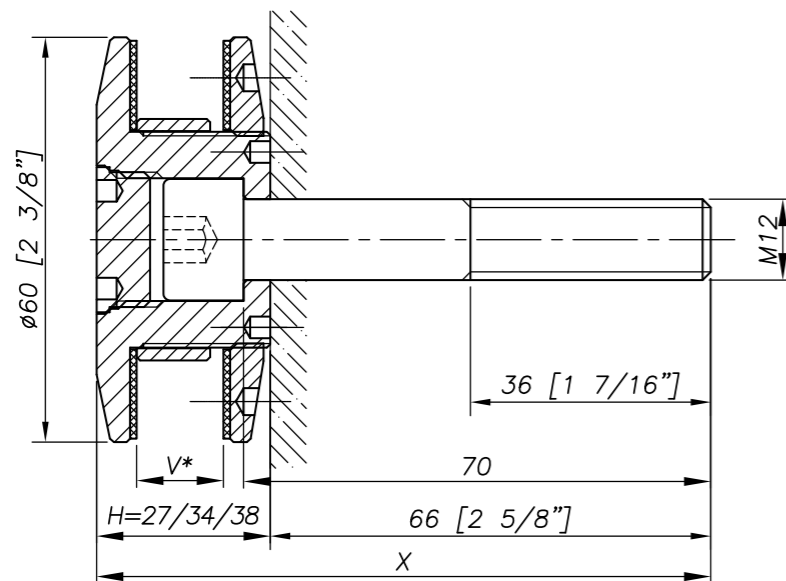


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (MM)	ARTICLE CODE
8 ≤ V ≤ 15	M12	66	V2004-0815
15 < V ≤ 22	M12	66	V2004-1522
22 < V ≤ 26	M12	66	V2004-2226
Special	Special	Special	V2004-V-SP

Sealing strip between glazing available p.8.26

\* V2004-0815 : Model - Glass Thickness

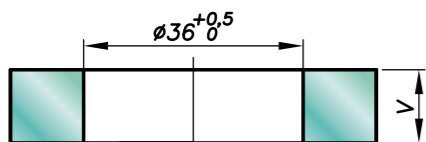
## Dimensions



H= Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness.

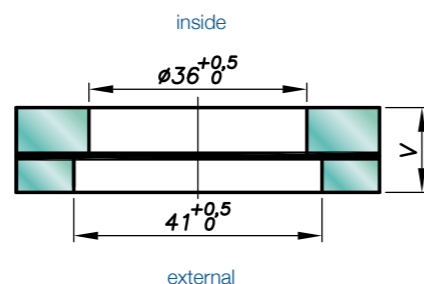
## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS

V = 1<sup>st</sup> glass + intercalated films + 2<sup>nd</sup> glass

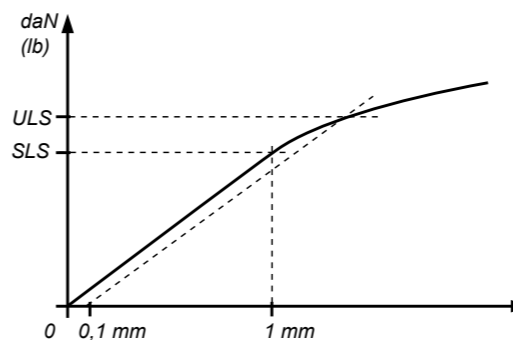


Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

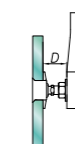
It is important to provide the following information with each request: the glass composition (ex.: 10mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

V 2004

## Mechanical performances



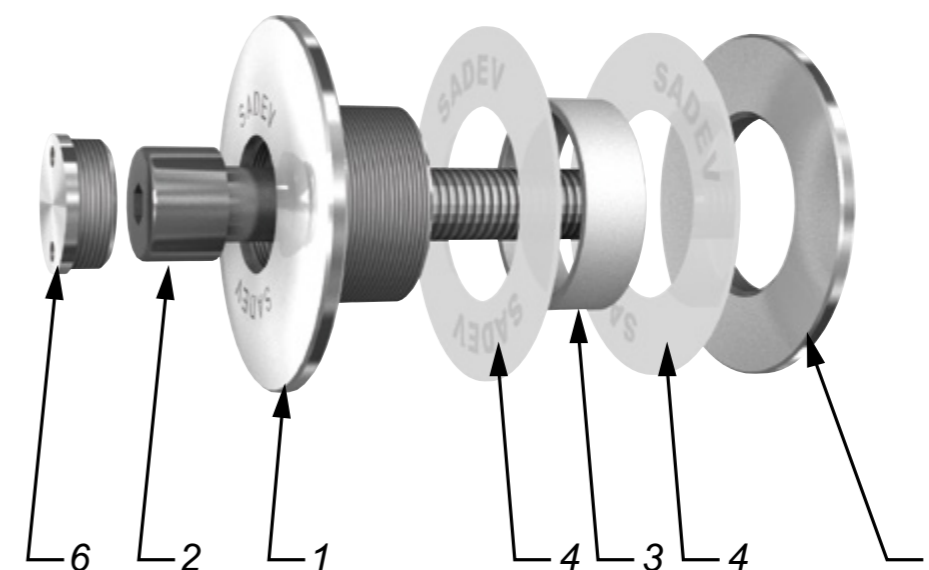
	SHEAR STRENGTH	PULL OUT CAPACITY
	ULS*	ULS*
M12	4342 daN* (9761 lb)	3709 daN (8338 lb)



\*ULS - Ultimate Limit State : load at the elastic limit (Rp0.1)  
Values are given without factor of safety  
Tests available online: www.sadev.com

\*daN: Tensile strength calculation according to EN 1993-1-8 and shear strength calculation according to EN 1993-1-4

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Bolt DIN912 M12-70	A4
3	1	Glass hole grommet	AW-1050A as per EN 573-3 / Al 99.5%
4	2	Contact washer	White polyacetyl / white polyethylene
5	1	Glass nut Ø 60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Cover cap	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

Insert parts No.1, 4, and 3 into the glass hole.

Mount the second contact washer No.4 and glass nut No.5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV tools ref. 097581160 and ref. CLE-DYN-072031.

Mount into the support with bolt No.2, tighten in function of the support with a 10mm hex key.

Mount cover cap No.6 using SADEV tool ref. 097581160.

SADEV recommends using thread locking compound whenever possible.



# V 2005

Designation : fixed bolt, cylindrical head

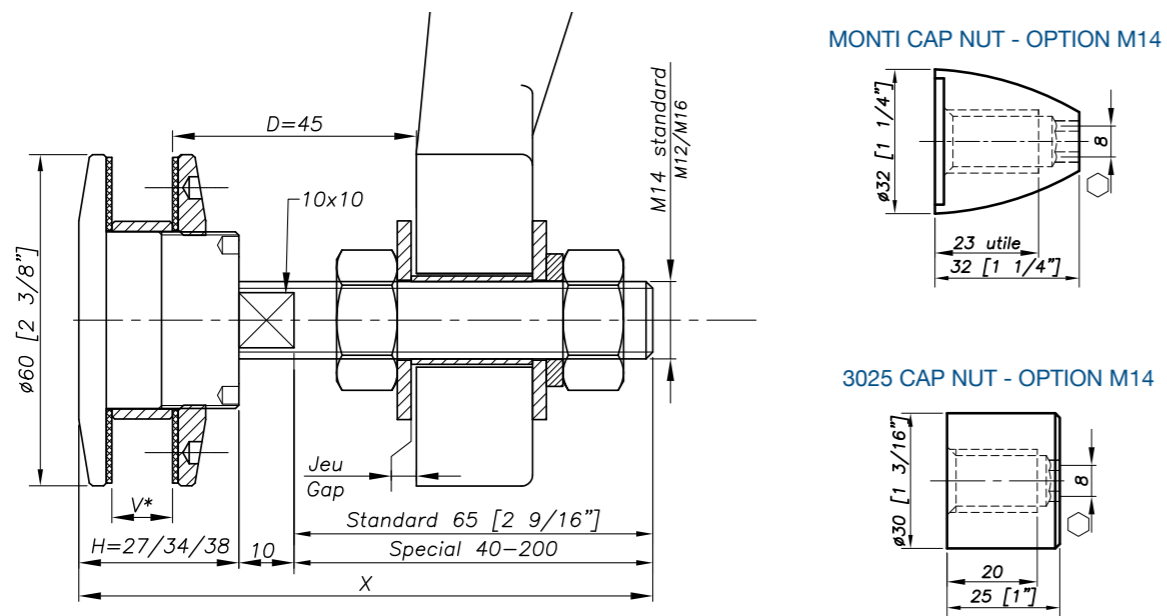


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (MM)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	V2005-0815-1465*
15 < V ≤ 22	M14	65	V2005-1522-1465
22 < V ≤ 26	M14	65	V2005-2226-1465
Special	Special	Special	V2005-V-SP

Sealing strip between glazing available p.8.26

\* V2005-0815-1465 : Model - Glass Thickness - type axis and length

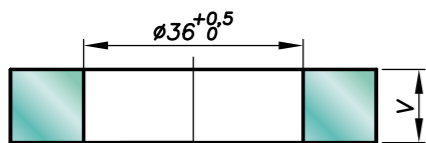
## Dimensions



H= Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness.

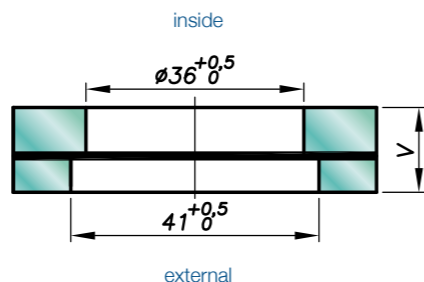
## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS

V = 1<sup>st</sup> glass + intercalated films + 2<sup>nd</sup> glass

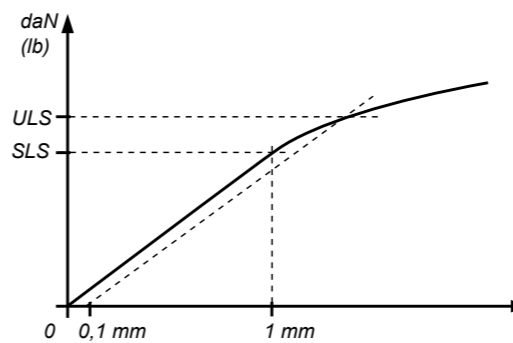


Available for glass thicknesses from 8 to 31.52 mm, for other thicknesses please consult us.

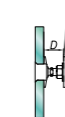
It is important to provide the following information with each request : the glass composition (ex.: 10mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

V 2005

## Mechanical performances

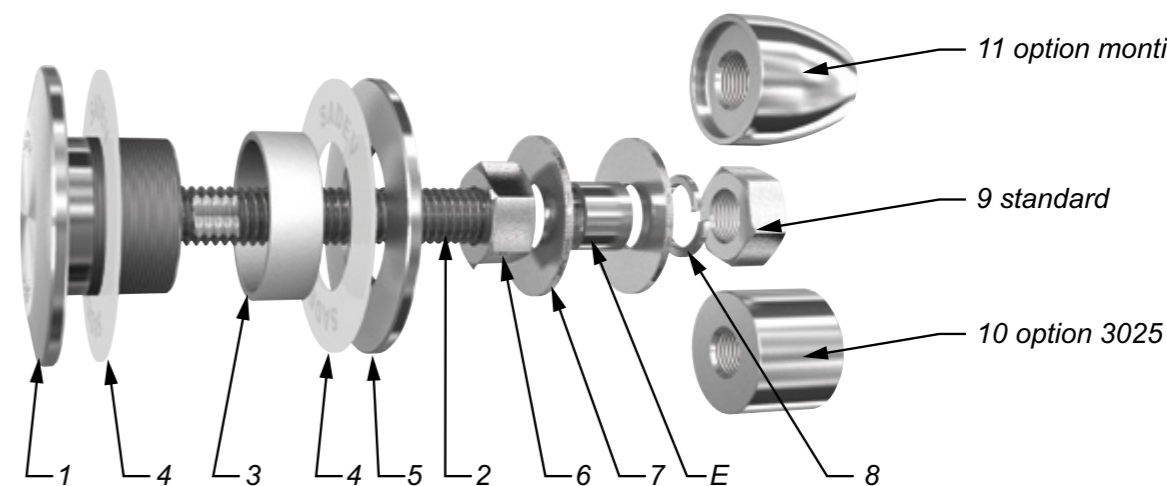


	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M12	45 mm	127 daN (285 lb)	269 daN (604 lb)	
	60 mm	65 daN (146 lb)	147 daN (330 lb)	
M14	45 mm	317 daN (712 lb)	538 daN (1209 lb)	6298 daN (14158 lb)
	60 mm	144 daN (323 lb)	313 daN (703 lb)	



\*SLS : Serviceability Limit State : load at 1 mm deformation  
\*ULS : Ultimate Limit State : load at the elastic limit (Rp0.1)  
Values are given without factor of safety  
Tests available online : www.sadev.com

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded axle	A4
3	1	Glass hole grogmet	AW-1050A as per EN 573-3 / Al 99.5%
4	2	Contact washer	White polyacetyl / white polyethylene
5	1	Glass nut Ø 60	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer 127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap Nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Monti Cap Nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3

## Suggested mounting instruction

Insert parts No.1/2, 4, and 3 into the glass hole.

Mount the second contact washer No.4 and glass nut No.5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using SADEV tools ref. 097581160 and ref. CLE-DYN-072031.  
Thread on nut No.6 and apply washer No.7.

Insert the thread axle into the support with spacer E (available on request), see technical page. Adjust the depth.

Mount the second washer No.7, lock washer No.8, and nut No.9. Tighten to 60Nm (45 ft-lb) using a 22mm wrench.

SADEV recommends using thread locking compound whenever possible.

# V 2006

Designation : fixed bolt, countersunk head

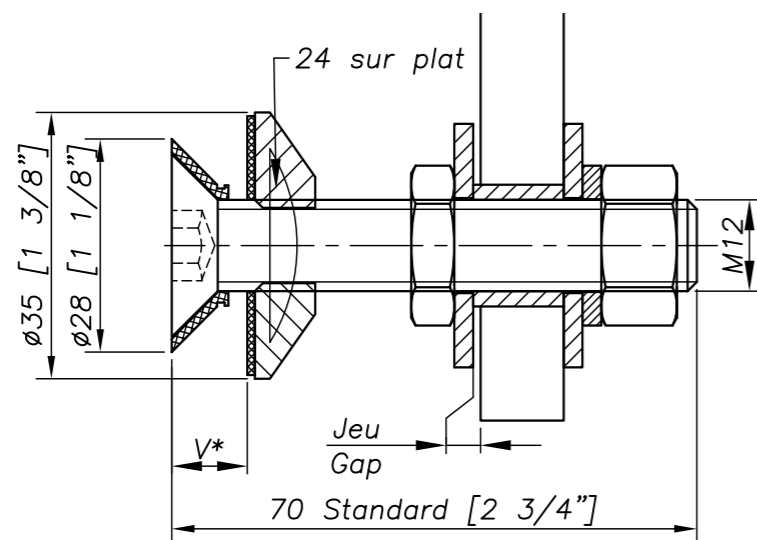


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (MM)	ARTICLE CODE
08 ≤ V ≤ 22	M12	70	V2006-0822*

\* V2006-0822 : Model - Glass Thickness. According to the production series, the screw head may present a marking.

Sealing strip between glazing available p.8.26

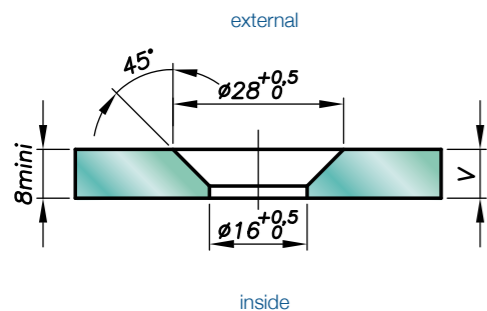
## Dimensions



H= Swivel body corresponding to the thickness of the glass.  
V\* = glass thickness.

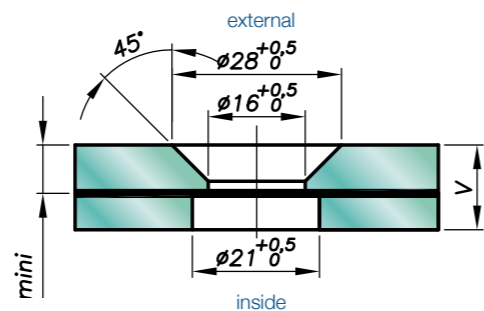
## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS

V = 1<sup>st</sup> glass + intercalated films + 2<sup>nd</sup> glass

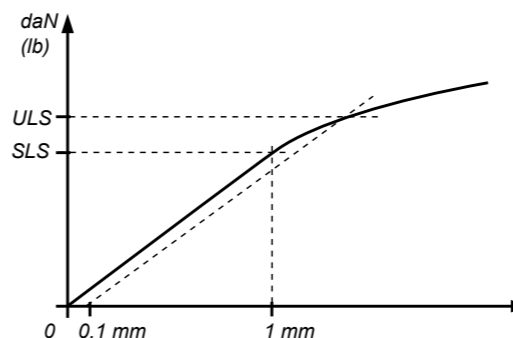


Available for glass thicknesses from 8 to 31.52mm, for other thicknesses please consult us.

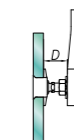
It is important to provide the following information with each request : the glass composition (ex.: 10mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

V 2006

## Mechanical performances

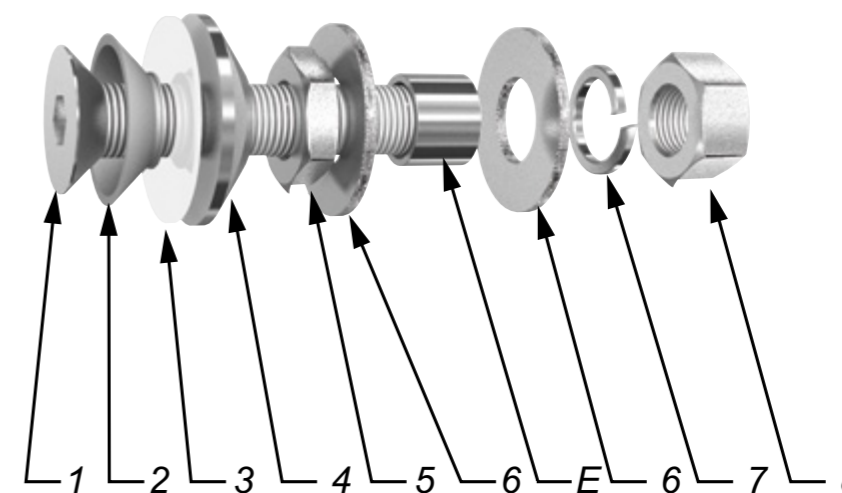


M12	SHEAR STRENGTH	PULL OUT CAPACITY
	ULS*	ULS*
	4342 daN* (9761 lb)	3399 daN*(7641 lb)



\*SLS : Serviceability Limit State : load at 1 mm deformation  
\*ULS : Ultimate Limit State : load at the elastic limit (Rp0.1)  
Values are given without factor of safety  
Tests available online : www.sadev.com  
\*daN: Tensile strength calculation according to EN 1993-1-8 and Sealing strip between glazing available p.8.26 shear strength calculation according to EN 1993-1-4

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Bolt DIN912 M12-70	A4
2	1	Glass hole gro mmet	AW-1050A as per EN 573-3 / Al 99.5%
3	1	Contact washer	White polyacetyl / white polyethylene
4	1	Glass nut Ø 35	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
5	1	Nut DIN 439 M12	A4
6	2	Washer Ø 32	A4
7	1	Lock washer127 B12	A4
8	1	Nut DIN 934 M12	A4

## Suggested mounting instruction

Insert parts No.1 and 2 into the glass.

Mount contact washer No.3 and glass nut No.4 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using a 8mm hex key and a 24mm wrench.

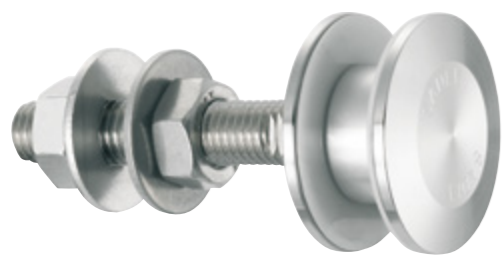
Mount nut No.5 and washer No.6. Insert the thread axle into the support with spacer E (available on request), see technical page. Adjust the depth.

Mount the second washer No.6, lock washer No.7, and nut No.8. Tighten to 60Nm (45 ft-lb) using a 19mm wrench.

SADEV recommends using thread locking compound whenever possible.

# V 2105

Designation : fixed bolt, cylindrical head, Ø 50mm

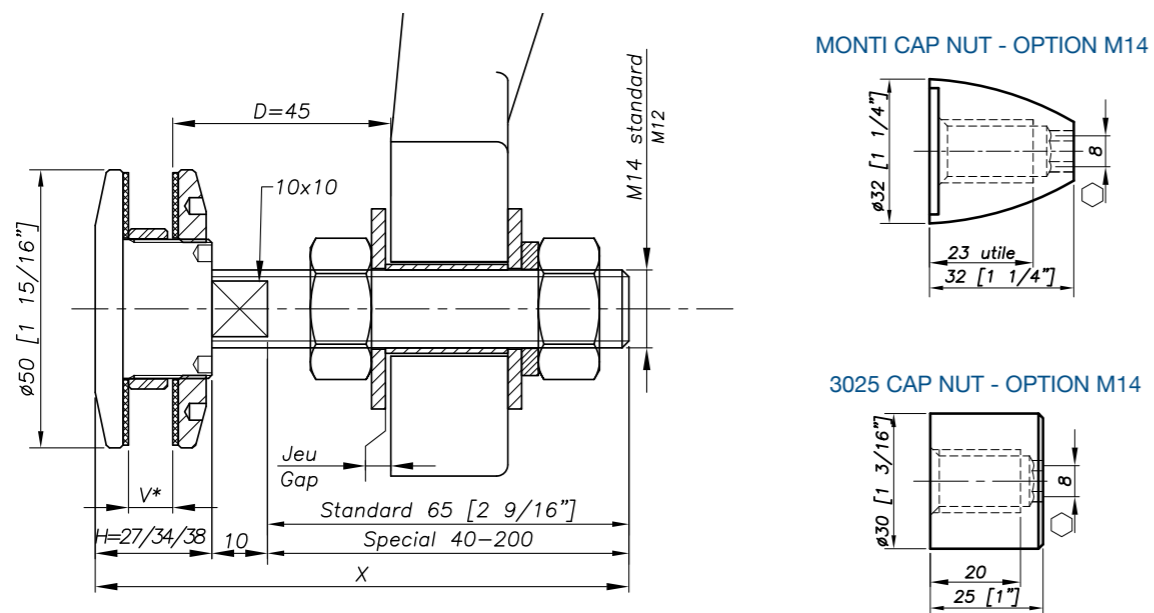


REFERENCE TO ORDER			
GLASS THICKNESS	Ø AXIS	LENGTH AXIS (MM)	ARTICLE CODE
8 ≤ V ≤ 15	M14	65	V2105-0815-1465*
15 < V ≤ 22	M14	65	V2105-1522-1465
22 < V ≤ 26	M14	65	V2105-2226-1465
Special	Special	Special	V2105-V-SP

Sealing strip between glazing available p.8.26

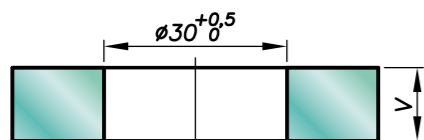
\* V2105-0815-1465 : Model - Glass Thickness - type axis and length

## Dimensions



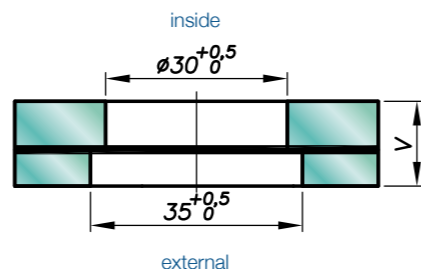
## Glass drilling

### MONOLITHIC GLASS



### LAMINATED GLASS

V = 1<sup>st</sup> glass + intercalated films + 2<sup>nd</sup> glass

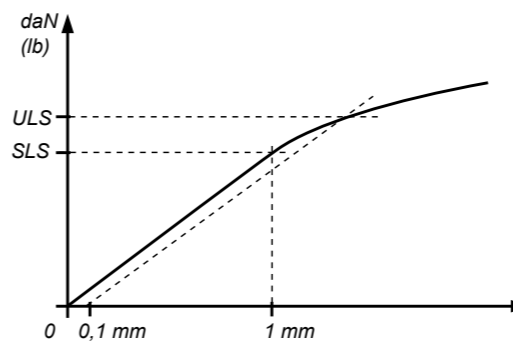


Available for glass thicknesses from 8 to 31.52mm, for other thicknesses please consult us.

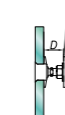
It is important to provide the following information with each request: the glass composition (ex.: 10mm monolithic, 8.8.4 laminated, 8.8.2-12-10 insulating) / the length and diameter of the threaded axle if not standard dimensions (M14, 65mm) / the reference of the spider to be used as support, or the thickness of an existing support for the delivery of the spacer.

V 2105

## Mechanical performances

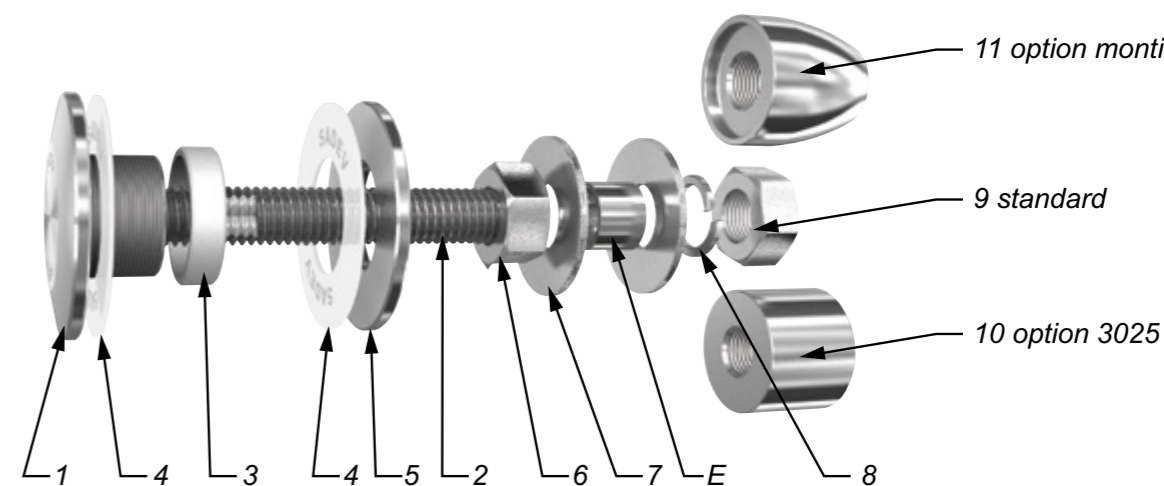


	BENDING CAPACITY			PULL OUT CAPACITY
	D	SLS*	ULS*	ULS*
M12	45 mm	127 daN (285 lb)	269 daN (604 lb)	
	60 mm	65 daN (146 lb)	147 daN (330 lb)	
M14	45 mm	317 daN (712 lb)	538 daN (1209 lb)	6298 daN (14158 lb)
	60 mm	144 daN (323 lb)	313 daN (703 lb)	



\*SLS : Serviceability Limit State : load at 1 mm deformation  
\*ULS : Ultimate Limit State : load at the elastic limit (Rp0.1)  
Values are given without factor of safety  
Tests available online : www.sadev.com

## Components



MARK	QUANTITY	DESIGNATION	MATERIAL
1	1	Body	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
2	1	Threaded axle	A4
3	1	Glass hole grogmet	AW-1050A as per EN 573-3 / Al 99.5%
4	2	Contact washer	White polyacetyl / white polyethylene
5	1	Glass nut Ø 50	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
6	1	Nut DIN 934	A4
7	2	Washer	A4
8	1	Lock washer 127	A4
9	1	Nut DIN 934	A4
10	1	3025 Cap Nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3
11	1	Monti Cap Nut - Option	X2 Cr Ni Mo 17.12.2 as per EN 10088-3


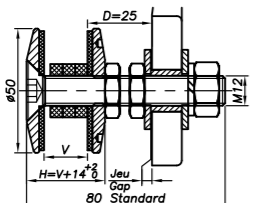
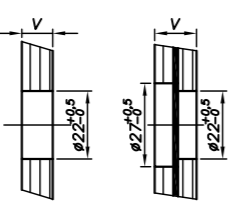

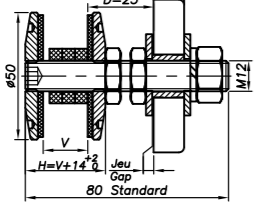
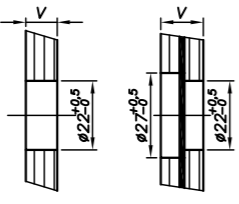

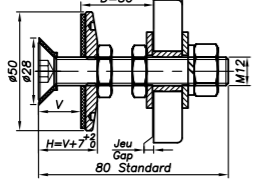
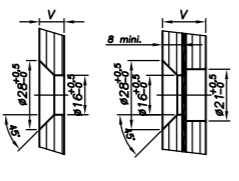
## Suggested mounting instruction

Insert parts No.1/2, 4, and 3 into the glass hole.  
Mount the second contact washer No.4 and glass nut No.5 and tighten to 20Nm (15 ft-lb) for monolithic glass and 10Nm (7.5 ft-lb) for laminated glass using tools SADEV ref. 097581160.  
Mount nut No.6 and washer No.7 onto parts No.1/2.  
Insert the thread axle into the support with spacer E (available on request), see technical page. Adjust the depth.  
Mount the second washer No.7, lock washer No.8, and nut No.9 and tighten to 60Nm (45 ft-lb) using a 22mm wrench.

SADEV recommends using thread locking compound whenever possible.


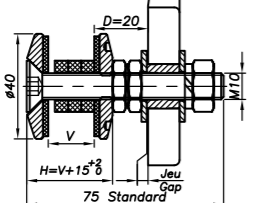
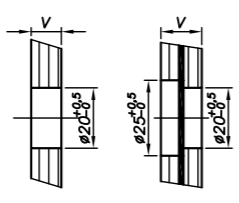

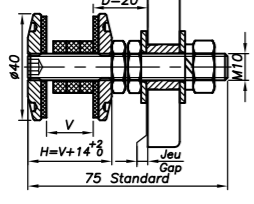
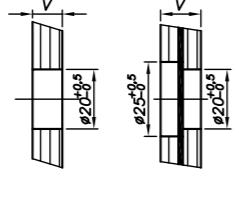

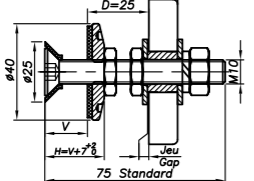
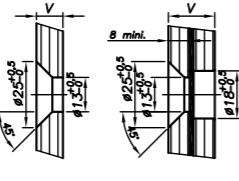
# LC FIXED BOLT

## FXV LC M12

PHOTO	PLAN	GLASS DRILLING	GLASS THICKNESS	REFERENCE
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2003LC-0817-1280 V2003LC-SP
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2004LC-0817-1280 V2004LC-SP
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2006LC-0817-1280 V2006LC-SP

Performance : Pull out Capacity : 2427 daN ( 5 456 lb ) / Shear strength : 3102 daN ( 6 973 lb )  
The SADEV LC fixed bolt are A2 material but are also available in A4 on request.


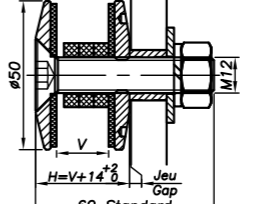
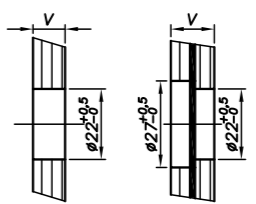

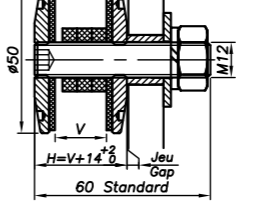
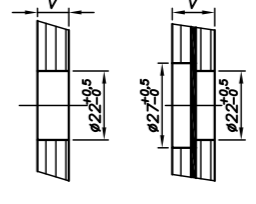

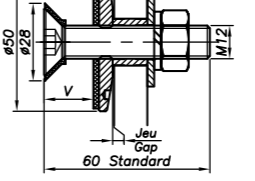
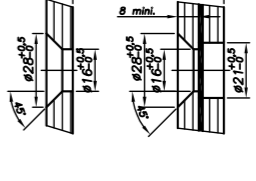
## FXV LC M10

PHOTO	PLAN	GLASS DRILLING	GLASS THICKNESS	REFERENCE
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2103LC-0817-1075 V2103LC-SP
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2104LC-0817-1075 V2104LC-SP
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2106LC-0817-1075 V2106LC-SP

Performance : Pull out Capacity : 1670 daN ( 3754 lb ) / Shear strength : 2513 daN ( 5649 lb )


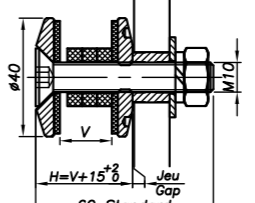
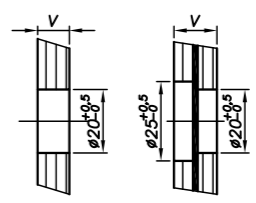

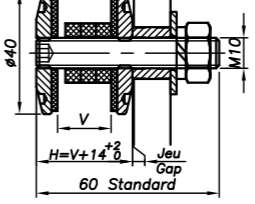
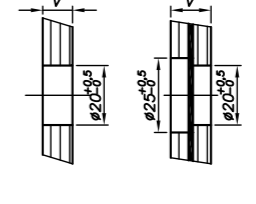

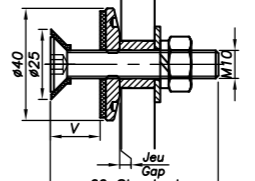
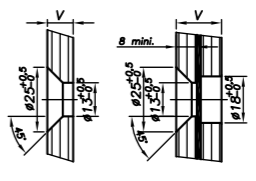
## LC FIXED BOLT

## FXV LC short M12

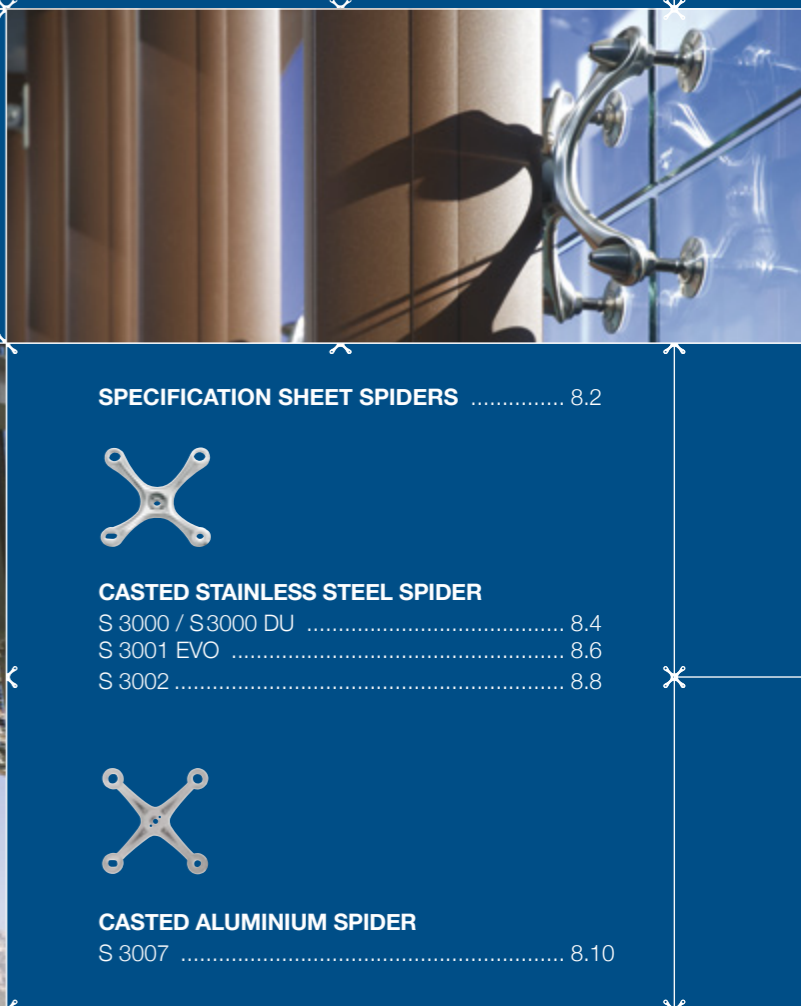
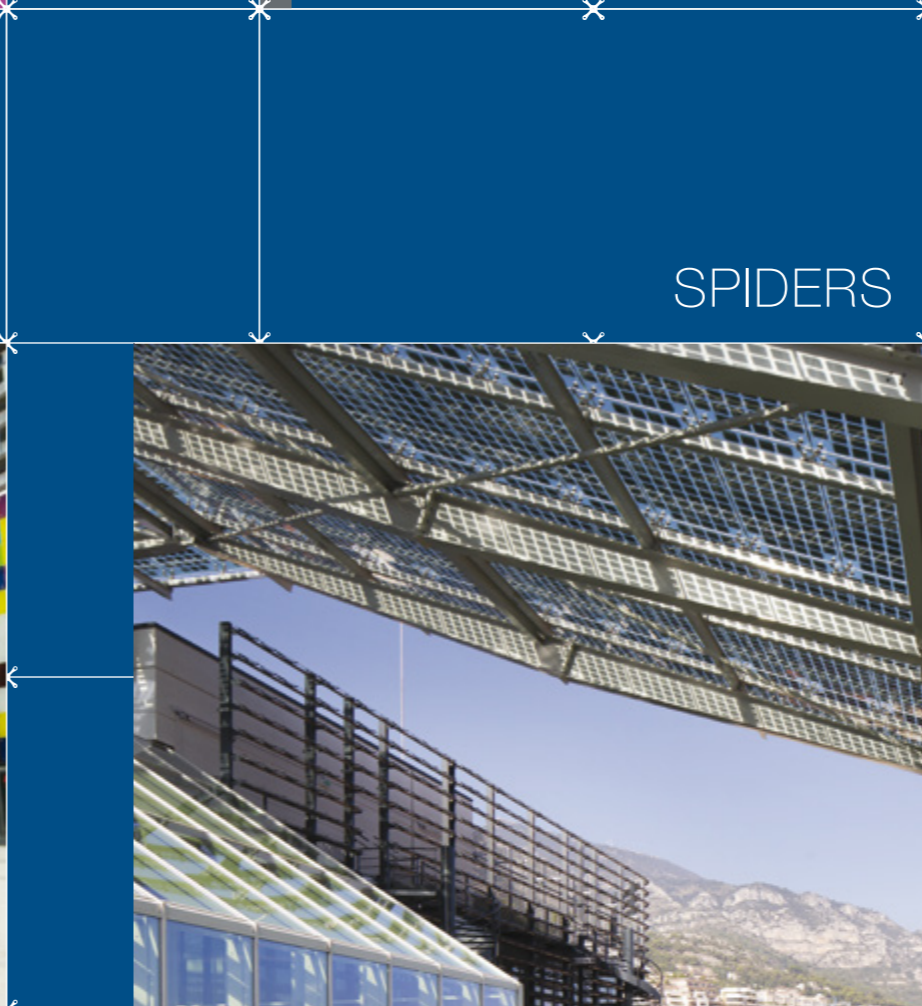
PHOTO	PLAN	GLASS DRILLING	GLASS THICKNESS	REFERENCE
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2013LC-0817-1260 V2013LC-SP
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2014LC-0817-1260 V2014LC-SP
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2016LC-0817-1260 V2016LC-SP

Performance : Pull out Capacity : 2427 daN ( 5 456 lb ) / Shear strength : 3102 daN ( 6 973 lb )  
The SADEV LC fixed bolt are A2 material but are also available in A4 on request.

## FXV LC short M10

PHOTO	PLAN	GLASS DRILLING	GLASS THICKNESS	REFERENCE
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2113LC-0817-1060 V2113LC-SP
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2114LC-0817-1060 V2114LC-SP
			8 ≤ V ≤ 17,52mm V > 17,52mm	V2116LC-0817-1060 V2116LC-SP

Performance : Pull out Capacity : 1670 daN ( 3754 lb ) / Shear strength : 2513 daN ( 5649 lb )



SPIDERS

SPECIFICATION SHEET SPIDERS ..... 8.2



CASTED STAINLESS STEEL SPIDER

S 3000 / S3000 DU ..... 8.4  
 S 3001 EVO ..... 8.6  
 S 3002 ..... 8.8



CASTED ALUMINIUM SPIDER

S 3007 ..... 8.10



CUT SPIDER

S 3003 ..... 8.12

SUN-BREAKER SPIDER

S 3000 AX ..... 8.14

CASTED STAINLESS STEEL SPIDER, WITH PLATE

S3100 / S3100DU ..... 8.16  
 S3101 EVO ..... 8.18  
 S3106 ..... 8.20  
 S3105 ..... 8.22

Accessories / Spacer ..... 8.23



Omega ..... 8.24

Sealing strip ..... 8.26

Suggested mounting instruction ..... 8.28



# SPIDER

Original texts from "cahier 3574 du CSTB

## The technique

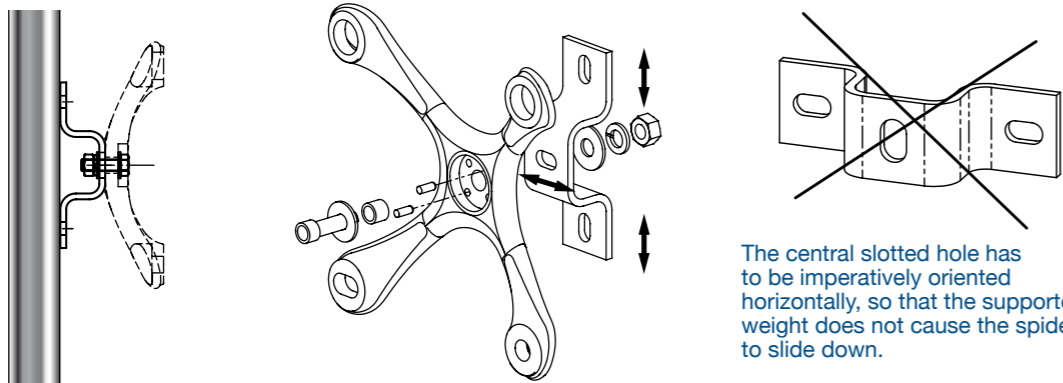
The spider plays the role of intermediary between the carrying structure and the fittings fixed onto the glass panel. The fineness of its lines allows the construction to retain all its transparency.

### 3.1.4 Functional clearances

The anticipated functional clearances of the spiders as well as the point fittings have to allow the glass to move towards their fixing points without creating any stress in the plane of the glass or embedding moments under:

- the effects of the wind or snow loads (shortening of the distance between glass holes and deformation of the structure)
- the differential thermal dilatations between the structure and the glasses
- the differential displacements of the spiders

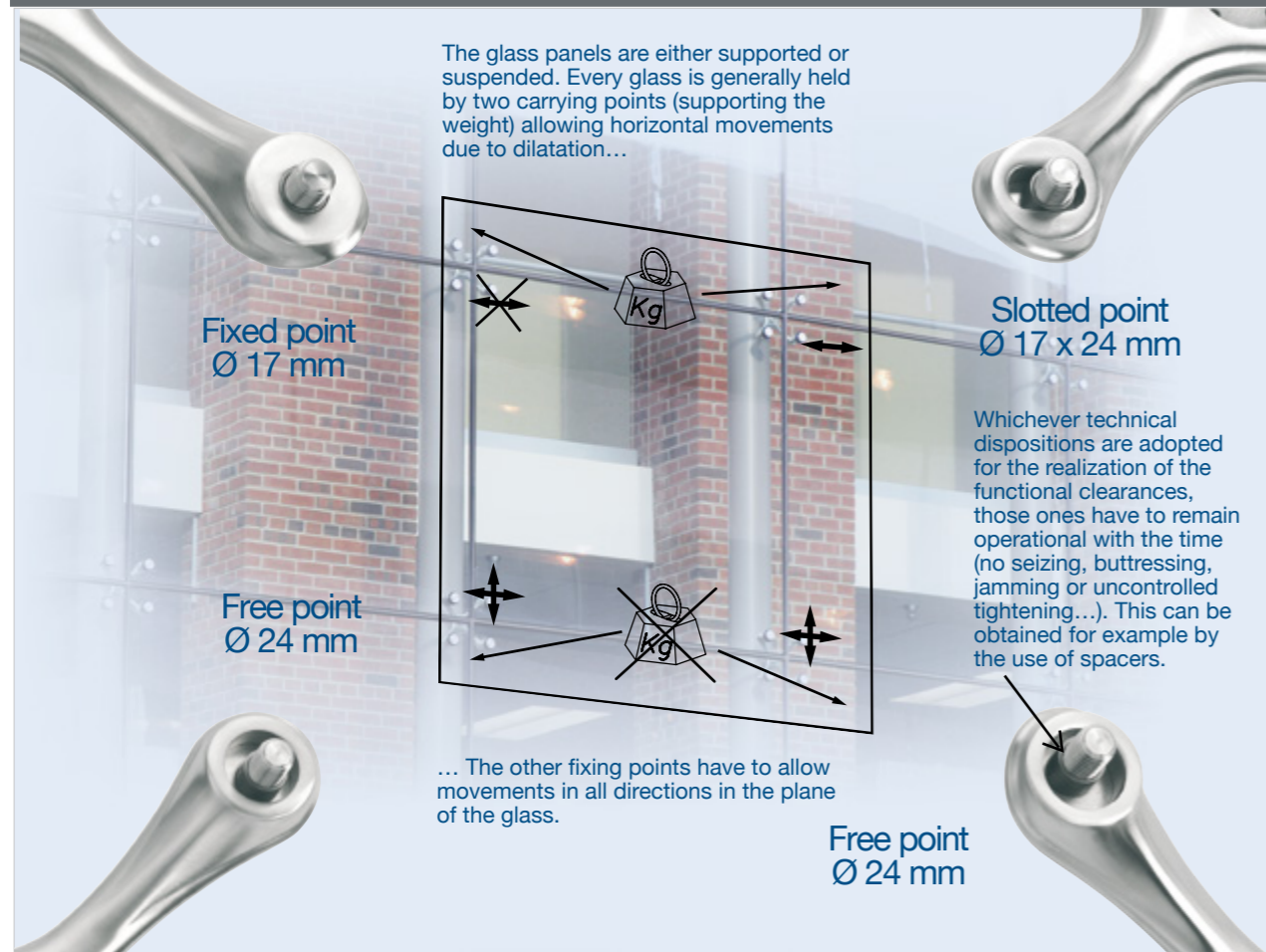
## The fixing of the spiders on the façade



The central slotted hole has to be imperatively oriented horizontally, so that the supported weight does not cause the spider to slide down.

In order to obtain a correct adjustment of the spider, it is recommended to use an intermediary part, the "Omega". This part allows a bi-directional adjustment.

## Dimensions



The glass panels are either supported or suspended. Every glass is generally held by two carrying points (supporting the weight) allowing horizontal movements due to dilatation...

Slotted point  
Ø 17 x 24 mm

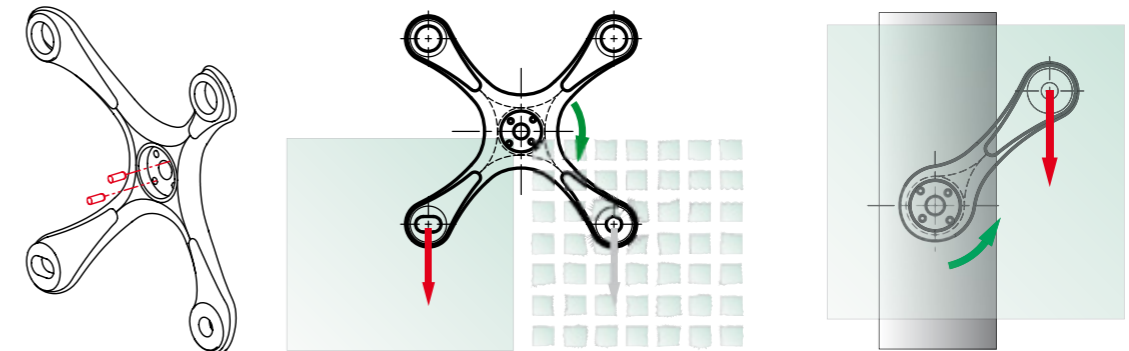
Whichever technical dispositions are adopted for the realization of the functional clearances, those ones have to remain operational with the time (no seizing, buttressing, jamming or uncontrolled tightening...). This can be obtained for example by the use of spacers.

... The other fixing points have to allow movements in all directions in the plane of the glass.

Free point  
Ø 24 mm

## The anti-rotation of the spider

To avoid the risk of displacement of the spiders under the weight of the glasses during installation or in case of accidental glass breakage, the spiders have to be locked in rotation by any appropriate means (for example: use of high resistance bolts under controlled tightening, elastic and cotter pins etc.).



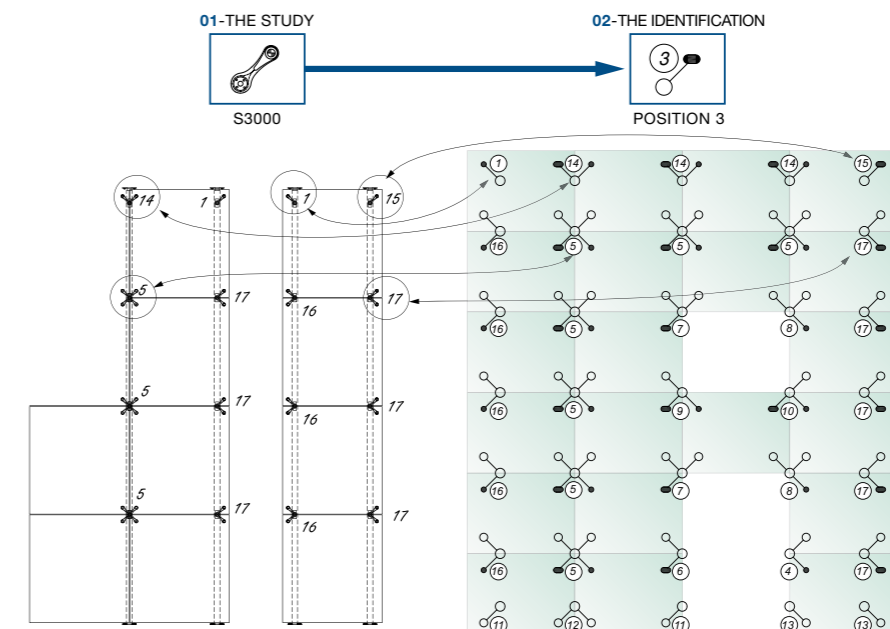
1 - In case of glass breakage, the spider is dragged in rotation by the remaining glass panel. It's from this point that the pins maintain the spider in position.

2 - All spiders positioned at the border of the façade are dragged in rotation by the glass panels. The pins maintain continuously the spiders in position.

## The layout of the spiders on the façade

Each SADEV spider is delivered in accordance to its position on the façade.

In order to facilitate the orientation of the different positions, we've classified them in several mounting instructions that cover all scenarios. For all requests, it's sufficient for you to give us the inventory of your different positions. For example: 56 specimens of S3000 - 5.



# S3000 / S3000 DU

Designation : casted stainless steel spider

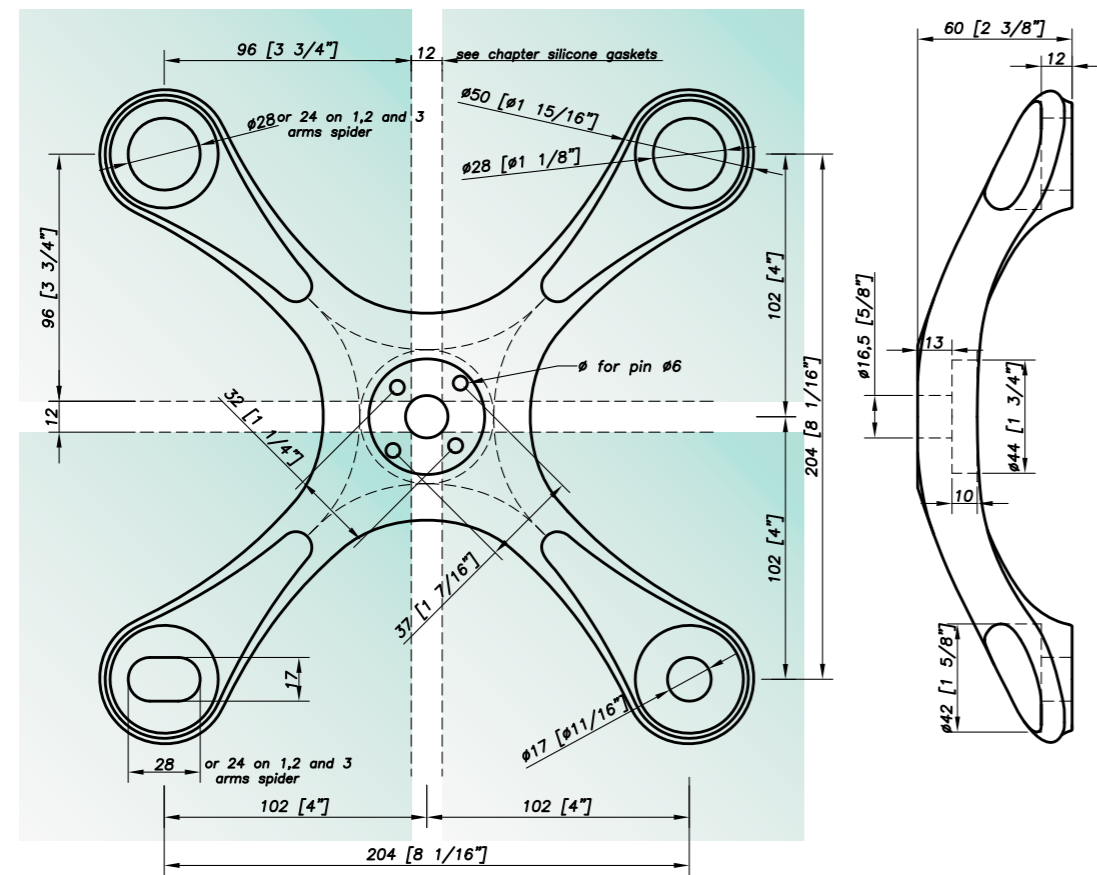


Material : AISI 316  
Surface finish : dull polished GR400

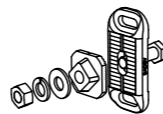
S3000 DU : stainless steel Duplex Uranus 45N

## Dimensions

GLASS SIDE VIEW

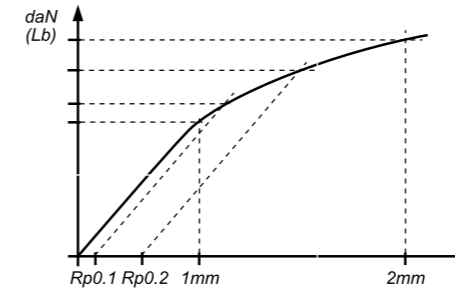


Cone omega available as an optional (see p.8.24)



S3000 / S3000 DU

## Mechanical performances

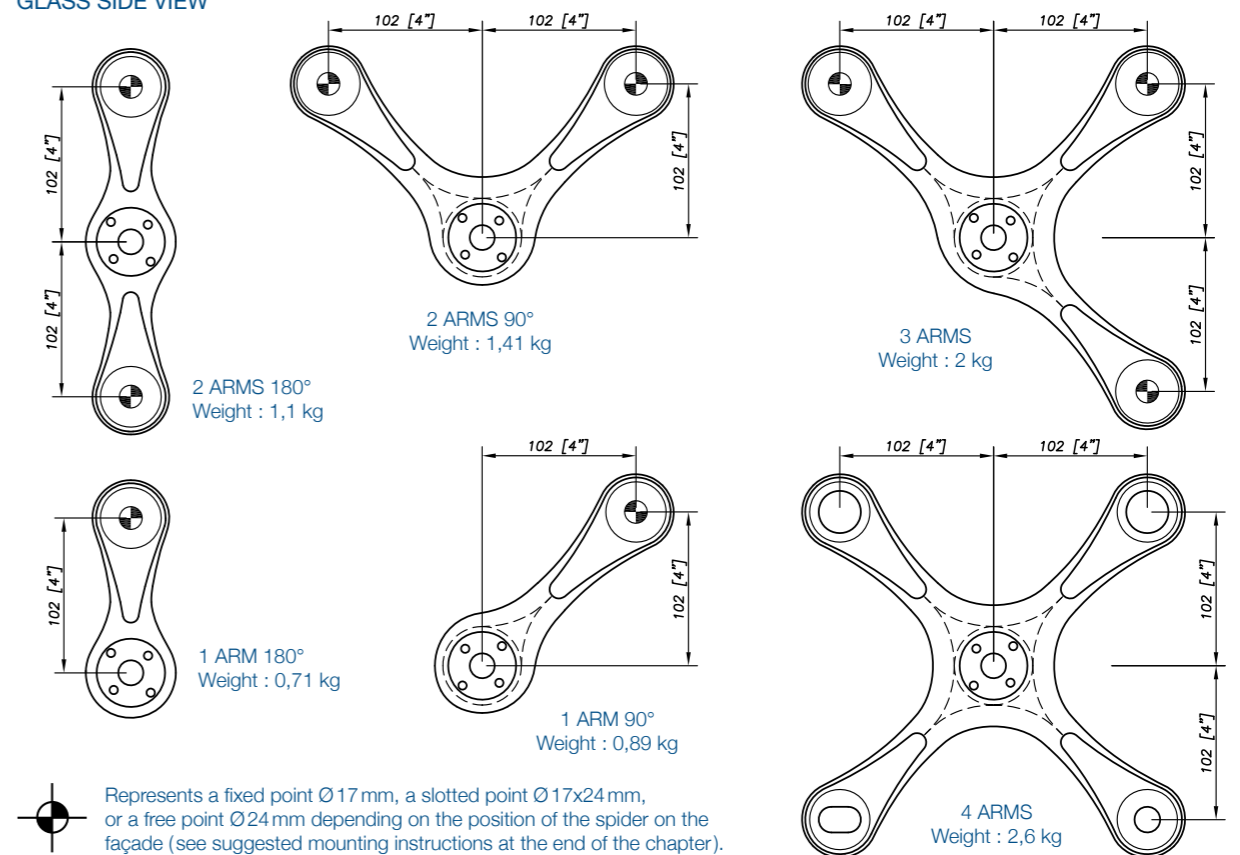


Model	LOAD PARALLEL TO GLASS PER ARM		LOAD PERPENDICULAR TO GLASS PER ARM	
	Deformation	Load (daN)	Deformation	Load (daN)
S3000	1 mm (SLS*)	434 daN (975 lb)	1 mm (SLS*)	238 daN (535 lb)
	2 mm	574 daN (1290 lb)	2 mm	406 daN (912 lb)
	Rp 0,1 (ULS**)	398 daN (894 lb)	Rp 0,1 (ULS**)	300 daN (674 lb)
	Rp 0,2	-	Rp 0,2	367 daN (825 lb)
S3000 DU	1 mm (SLS*)	402 daN (903 lb)	1 mm (SLS*)	296 daN (665 lb)
	2 mm	773 daN (1737 lb)	2 mm	565 daN (1270 lb)
	Rp 0,1 (ULS**)	693 daN (1557 lb)	Rp 0,1 (ULS**)	547 daN (1229 lb)
	Rp 0,2	847 daN (1904 lb)	Rp 0,2	647 daN (1454 lb)

\*SLS : Serviceability Limit State - load at 1 mm deformation \*\*ULS - Ultimate Limit State : load at the elastic limit (Rp0.1)  
Values are given without factor of safety - Tests available online : [www.sadev.com](http://www.sadev.com)

## Configuration

GLASS SIDE VIEW



Represents a fixed point Ø17 mm, a slotted point Ø17x24 mm, or a free point Ø24 mm depending on the position of the spider on the façade (see suggested mounting instructions at the end of the chapter).

## Suggested mounting instruction

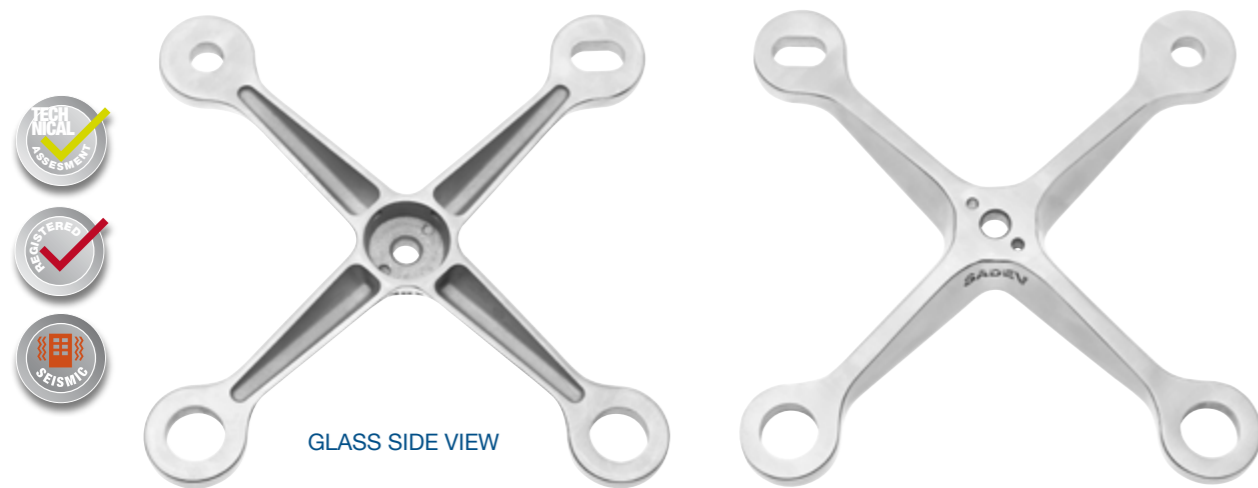
The drilling diameter for the pins is 6mm. Do not drill the holes for the pins in your structure before mounting the spiders. To fix the spider on your structure the "Omega" (see accessories) is highly recommended to adjust the spider's position. The fixing of the spider is done with a M16 or a M12 bolt (out of Sadev supply).

This bolt shall not be fitted into a vertical slotted holes due to the risk of slipping (under the weight), the pins are not designed to hold any permanent loads (cf. specification sheet). The spider has to be positioned on a flat support. The slotted holes Ø17x24mm and free holes Ø24mm in the spider are not to be used to adjust the spider! They are needed to absorb the manufacturing tolerances and the thermal deformation of the glass and of the structure. The spiders are standardized for M14 fittings (FXR, FXV) ; other diameters are available on request.

SADEV recommends using thread locking compound, except in case of specific mounting constraints.

# S 3001 EVO

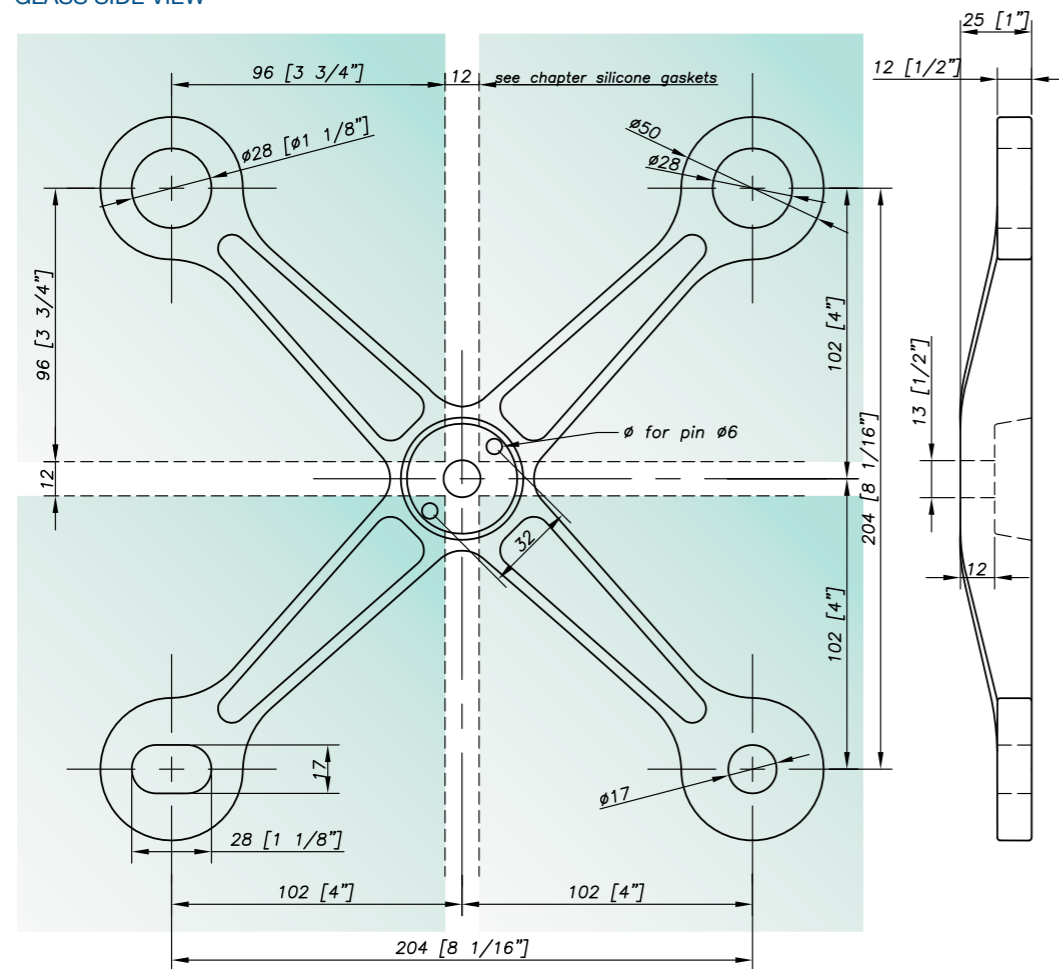
Designation : casted stainless steel spider



Material: AISI 316 - Surface finish: dull polished GR400 - Other finishes available on request.

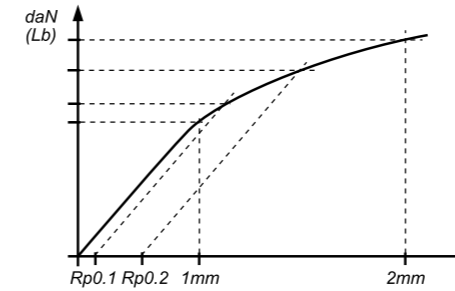
## Dimensions

GLASS SIDE VIEW



S 3001 EVO

## Mechanical performances



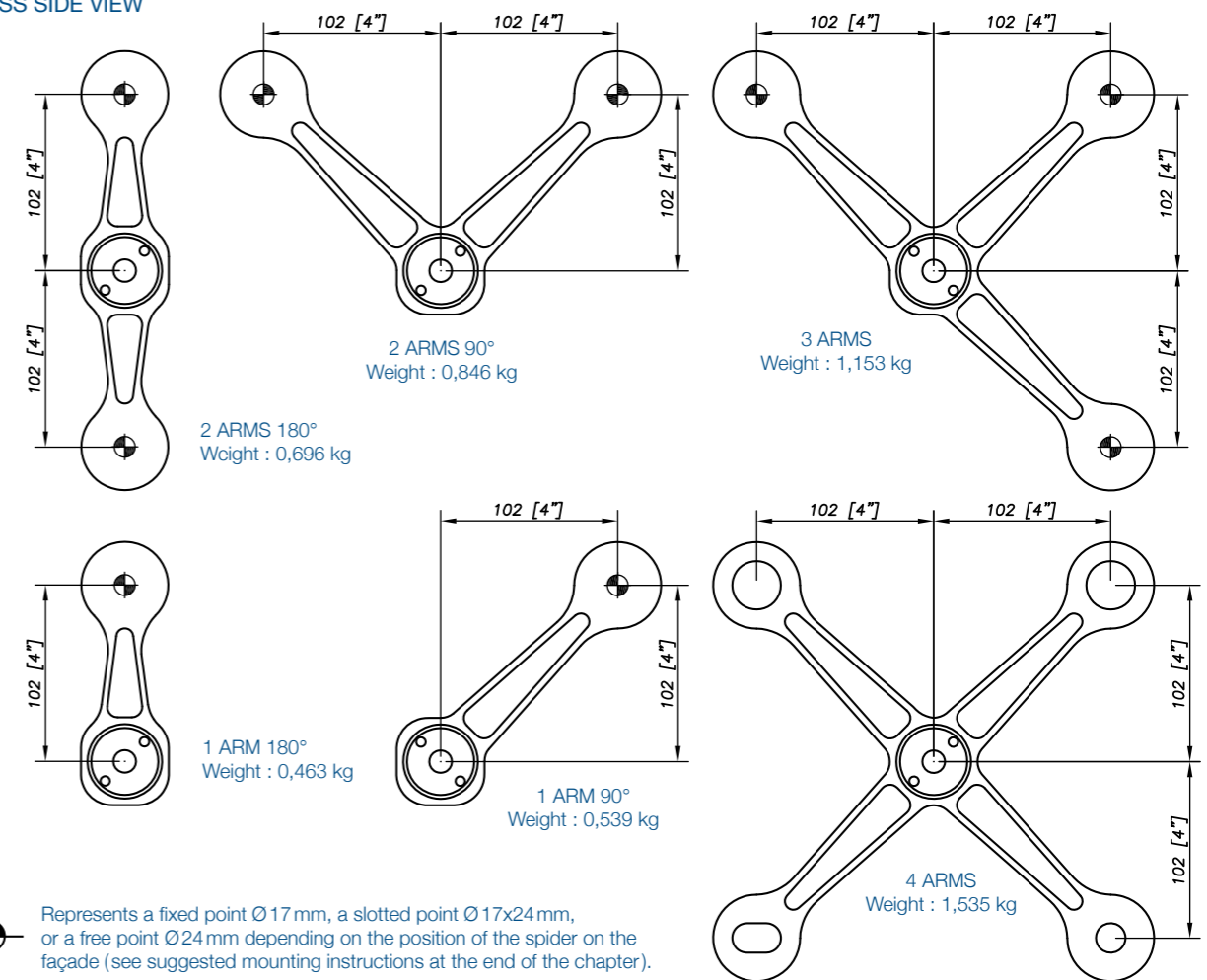
	LOAD PARALLEL TO GLASS PER ARM
1 mm (SLS*)	214 daN (481 lb)
2 mm	406 daN (912 lb)
Rp 0,1 (ULS**)	365 daN (820 lb)
Rp 0,2	427 daN (959 lb)

	LOAD PERPENDICULAR TO GLASS PER ARM
1 mm (SLS*)	110 daN (247 lb)
2 mm	199 daN (447 lb)
Rp 0,1 (ULS**)	153 daN (343 lb)
Rp 0,2	183 daN (411 lb)

\*SLS : Serviceability Limit State - load at 1 mm deformation \*\*ULS - Ultimate Limit State : load at the elastic limit (Rp0.1). Values are given without factor of safety - Tests available online : [www.sadev.com](http://www.sadev.com)

## Configuration

GLASS SIDE VIEW



⊙ Represents a fixed point Ø17 mm, a slotted point Ø17x24 mm, or a free point Ø24 mm depending on the position of the spider on the façade (see suggested mounting instructions at the end of the chapter).

## Suggested mounting instruction

The drilling diameter for the pins is 6mm. Do not drill the holes for the pins in your structure before mounting the spiders. To fix the spider on your structure the "Omega" (see accessories) is highly recommended to adjust the spider's position. The fixing of the spider is done with a M16 or a M12 bolt (out of Sadev supply).

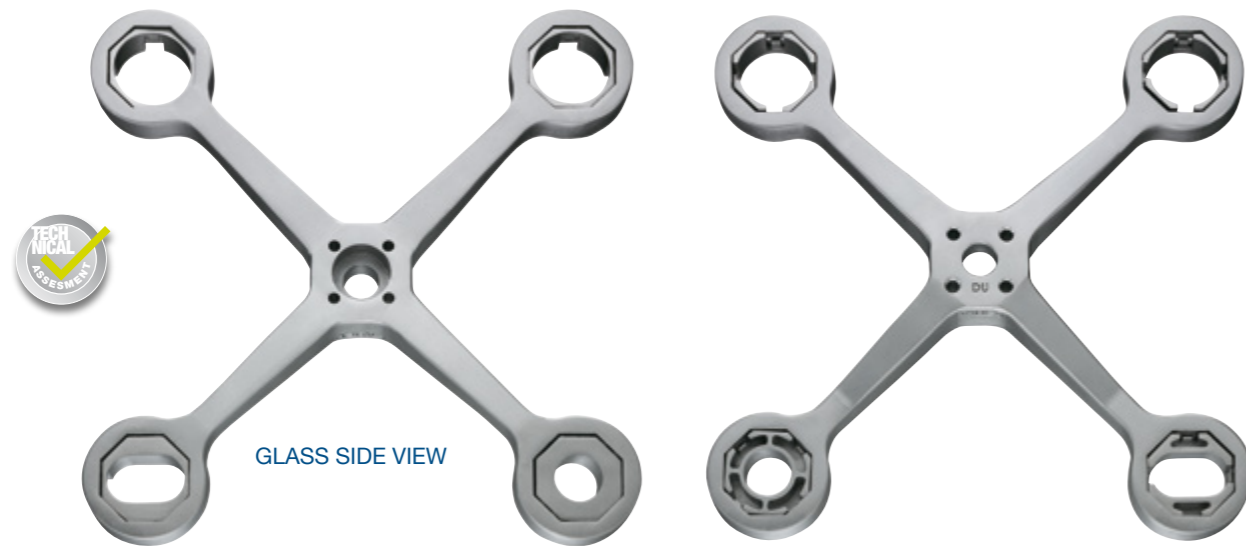
This bolt shall not be fitted into a vertical slotted holes due to the risk of slipping (under the weight), the pins are not designed to hold any permanent loads (cf. specification sheet). The spider has to be positioned on a flat support. The slotted holes Ø17x24mm and free holes Ø24mm in the spider are not to be used to adjust the spider! They are needed to absorb the manufacturing tolerances and the thermal deformation of the glass and of the structure. The spiders are standardized for M14 fittings (FXR, FXV) ; other diameters are available on request.

SADEV recommends using thread locking compound, except in case of specific mounting constraints.



# S 3002

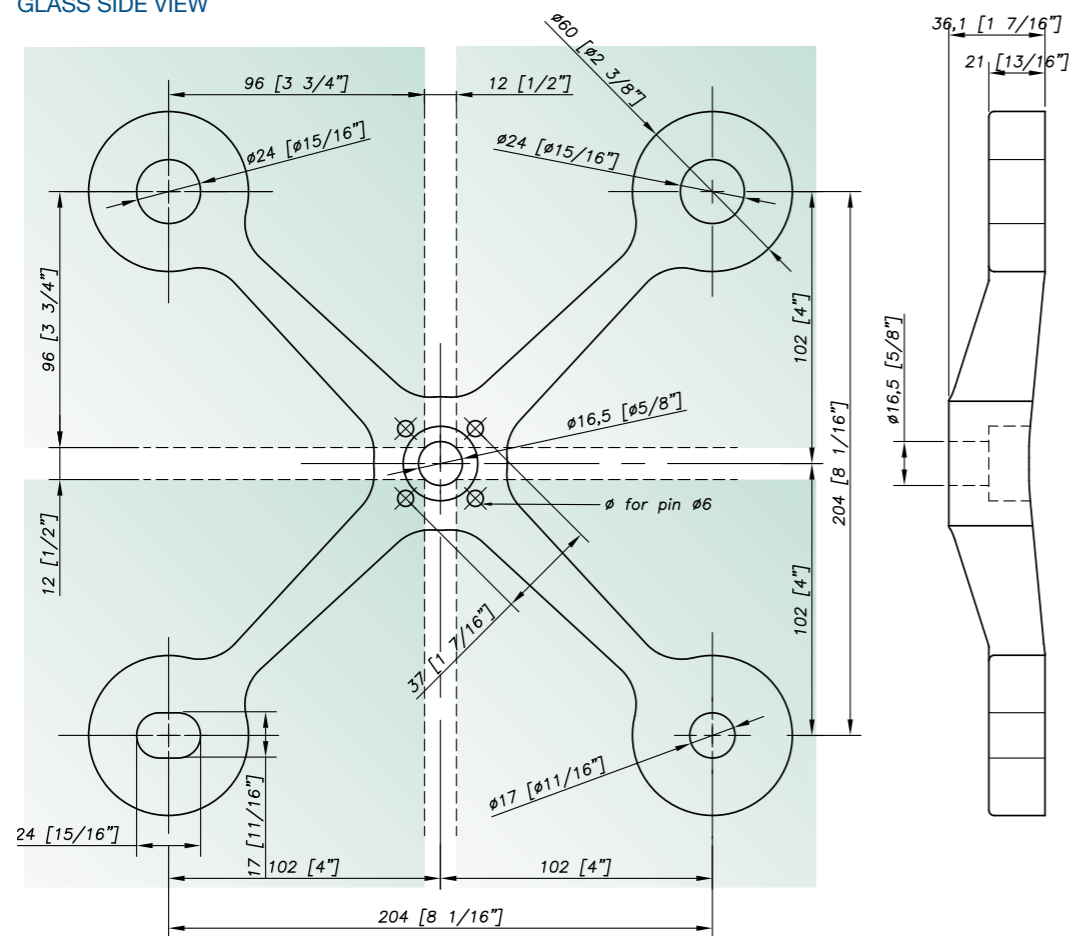
Designation : casted stainless steel spider



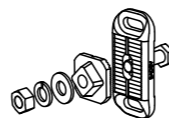
Material : stainless steel Duplex Uranus 45N

## Dimensions

GLASS SIDE VIEW

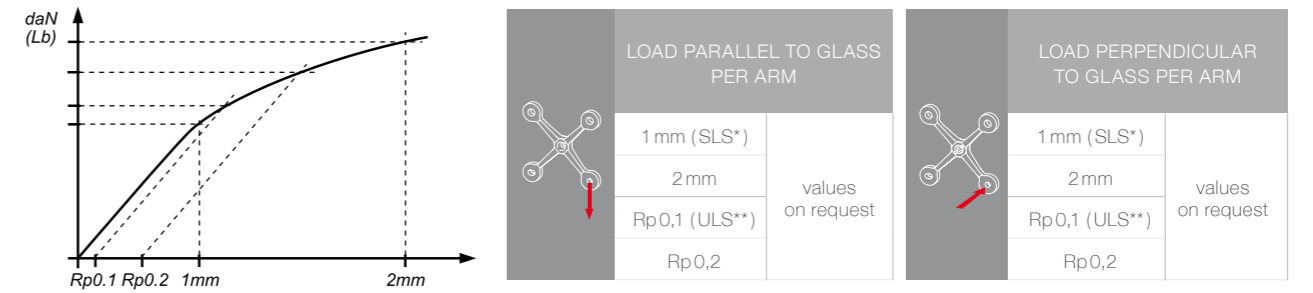


Cone omega available as an optional (see p.8.24)



S 3002

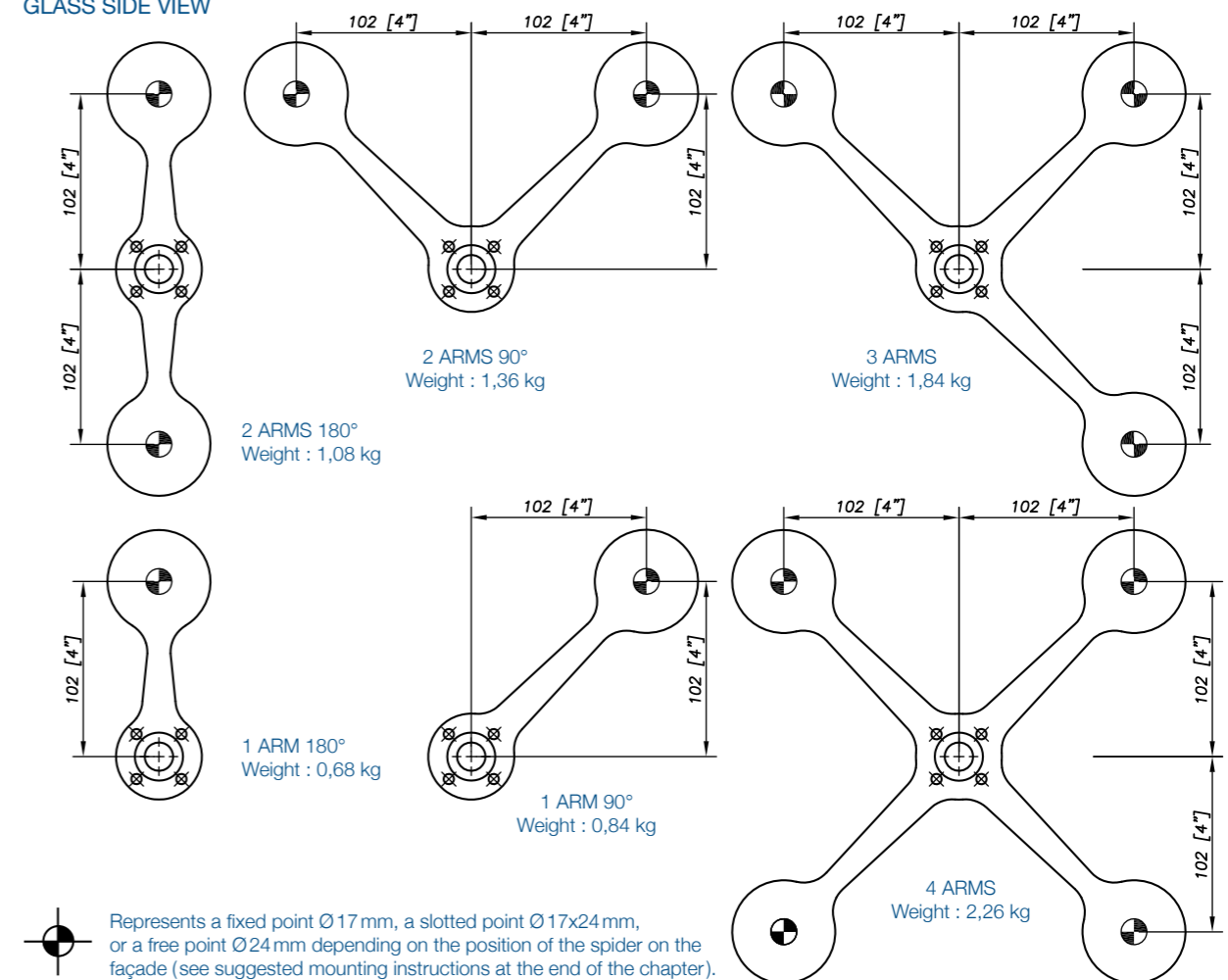
## Mechanical performances



\*SLS : Serviceability Limit State - load at 1 mm deformation \*\*ULS – Ultimate Limit State : load at the elastic limit (Rp0.1). Values are given without factor of safety - Tests available online : [www.sadev.com](http://www.sadev.com)

## Configuration

GLASS SIDE VIEW



Represents a fixed point Ø 17 mm, a slotted point Ø 17x24 mm, or a free point Ø 24 mm depending on the position of the spider on the façade (see suggested mounting instructions at the end of the chapter).

## Suggested mounting instruction

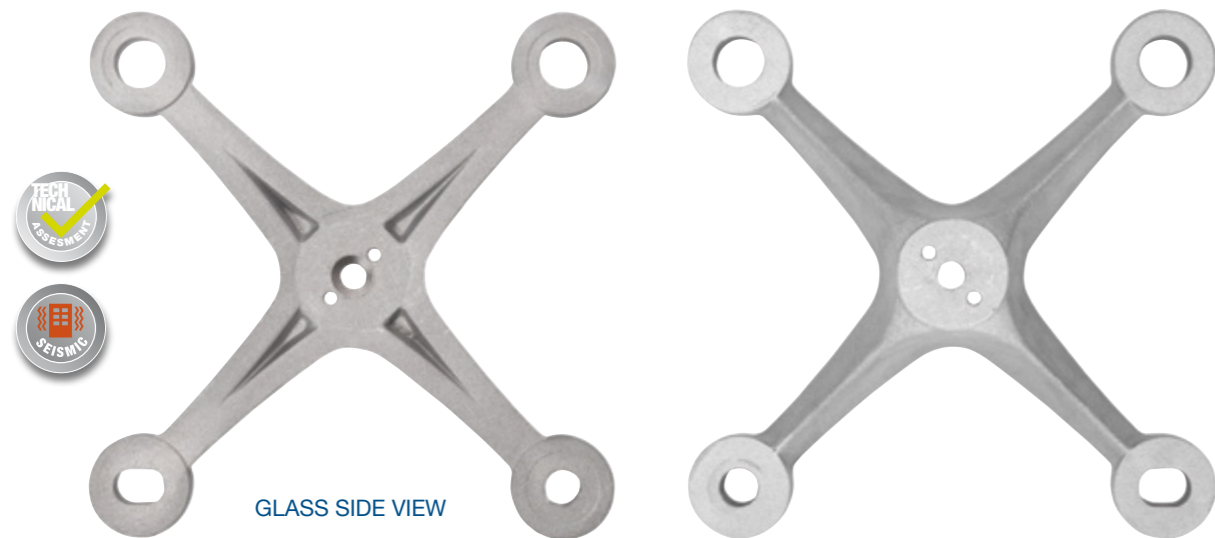
The drilling diameter for the pins is 6 mm. Do not drill the holes for the pins in your structure before mounting the spiders. To fix the spider on your structure the "Omega" (see accessories) is highly recommended to adjust the spider's position. The fixing of the spider is done with a M16 (out of Sadev supply).

This bolt shall not be fitted into a vertical slotted holes due to the risk of slipping (under the weight), the pins are not designed to hold any permanent loads (cf. specification sheet). The spider has to be positioned on a flat support. The slotted holes Ø 17x24 mm and free holes Ø 24 mm in the spider are not to be used to adjust the spider! They are needed to absorb the manufacturing tolerances and the thermal deformation of the glass and of the structure. The spiders are standardized for M14 fittings (FXR, FXV) ; other diameters are available on request.

SADEV recommends using thread locking compound, except in case of specific mounting constraints.

# S 3007

Designation : casted aluminium spider

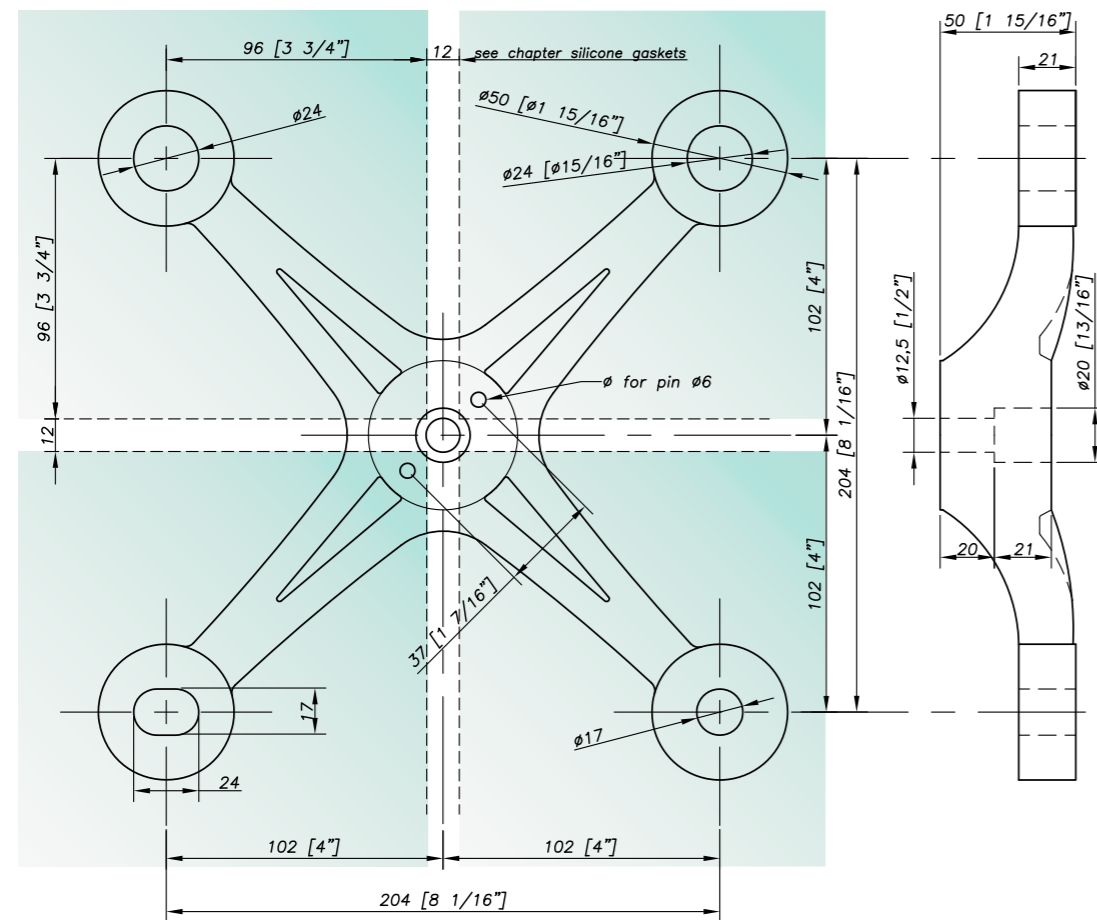


GLASS SIDE VIEW

Material : Al Si 5 Mg - Surface finish : Sanded

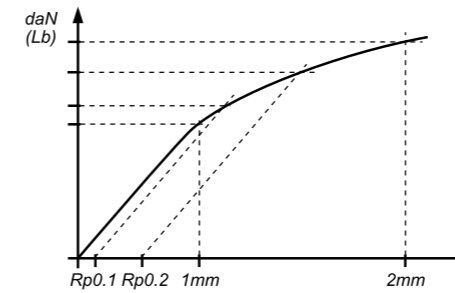
## Dimensions

GLASS SIDE VIEW



S 3007

## Mechanical performances

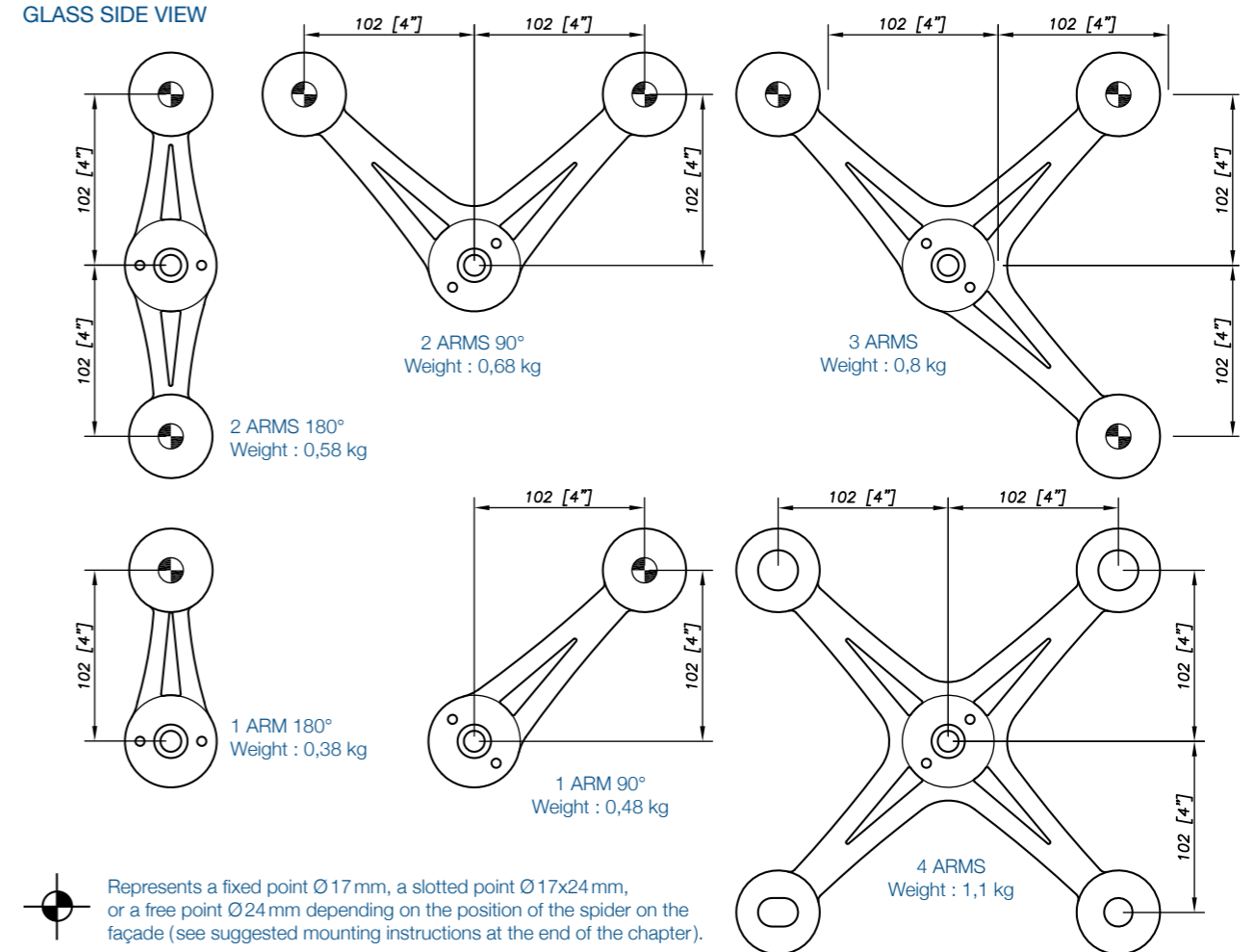


	LOAD PARALLEL TO GLASS PER ARM		LOAD PERPENDICULAR TO GLASS PER ARM	
	1 mm (SLS*)	2 mm	1 mm (SLS*)	2 mm
Rp0,1 (ULS**)	235 daN (528 lb)	-	182 daN (409 lb)	-
Rp0,2	199 daN (447 lb)	-	198 daN (445 lb)	-

\*SLS : Serviceability Limit State - load at 1 mm deformation \*\*ULS - Ultimate Limit State : load at the elastic limit (Rp0.1). Values are given without factor of safety - Tests available online : [www.sadev.com](http://www.sadev.com)

## Configuration

GLASS SIDE VIEW



Represents a fixed point Ø17 mm, a slotted point Ø17x24 mm, or a free point Ø24 mm depending on the position of the spider on the façade (see suggested mounting instructions at the end of the chapter).

## Suggested mounting instruction

The drilling diameter for the pins is 6 mm. Do not drill the holes for the pins in your structure before mounting the spiders. To fix the spider on your structure the "Omega" (see accessories) is highly recommended to adjust the spider's position. The fixing of the spider is done with a M16 or a M12 bolt (out of Sadev supply).

This bolt shall not be fitted into a vertical slotted holes due to the risk of slipping (under the weight), the pins are not designed to hold any permanent loads (cf. specification sheet). The spider has to be positioned on a flat support. The slotted holes Ø17x24 mm and free holes Ø24 mm in the spider are not to be used to adjust the spider! They are needed to absorb the manufacturing tolerances and the thermal deformation of the glass and of the structure. The spiders are standardized for M14 fittings (FXR, FXV) ; other diameters are available on request.

SADEV recommends using thread locking compound, except in case of specific mounting constraints.

# S 3003

Designation : laser cut spider



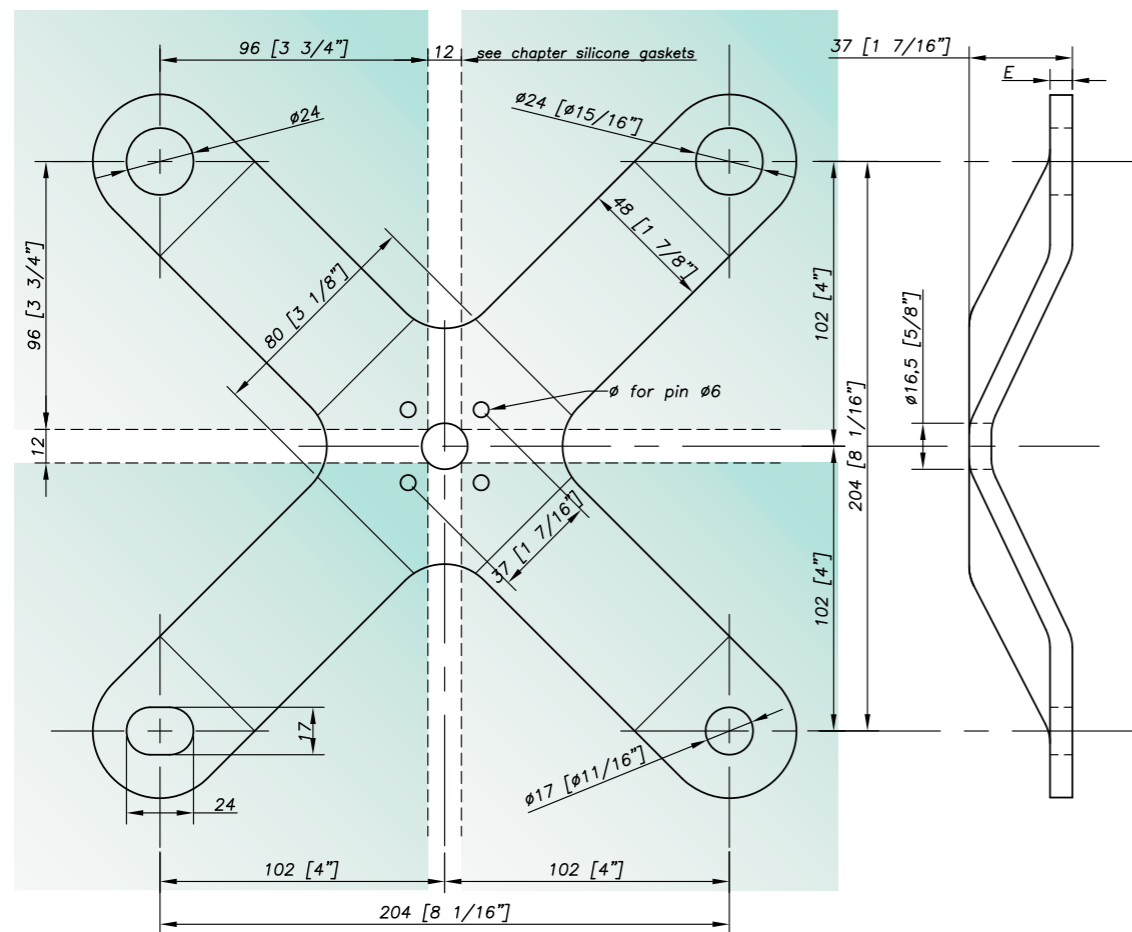
GLASS SIDE VIEW

Material : AISI 316L - Surface finish : dull polished GR220  
Material : E36 / Epoxy painting, polished zinc undercoat

Thickness : E = 8mm, 10mm, 12mm, 15mm

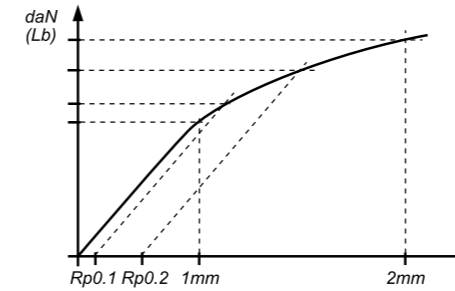
## Dimensions

GLASS SIDE VIEW



S 3003

## Mechanical performances

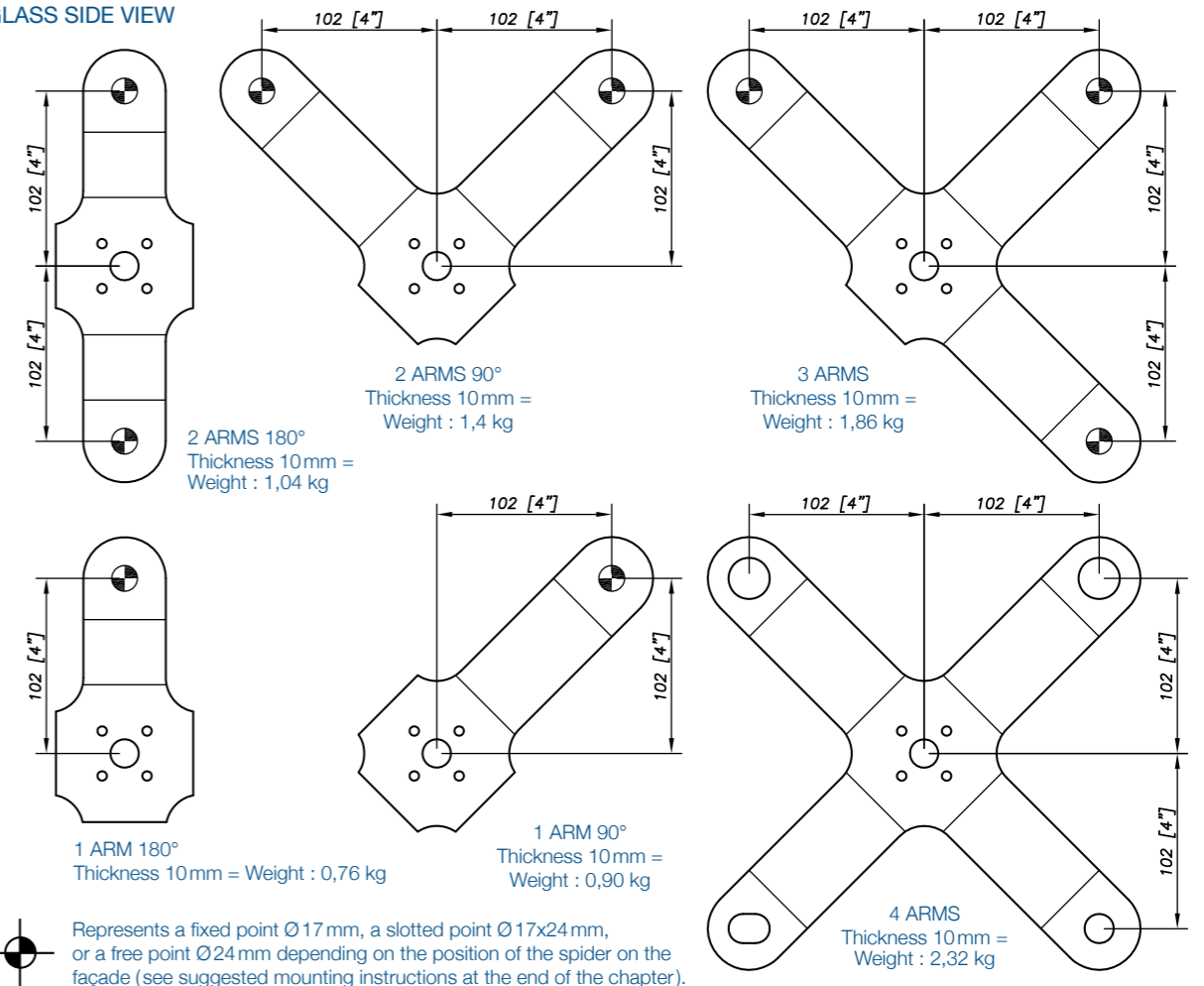


	LOAD PARALLEL TO GLASS PER ARM		LOAD PERPENDICULAR TO GLASS PER ARM	
	Thickness	Load	Thickness	Load
1 mm (SLS*)	1077 daN (2421 lb)	1 mm (SLS*)	85 daN (191 lb)	
2 mm	-	2 mm	-	
Rp0,1 (ULS**)	820 daN (1843 lb)	Rp0,1 (ULS**)	136 daN (305 lb)	
Rp0,2	-	Rp0,2	-	

\*SLS : Serviceability Limit State - load at 1 mm deformation \*\*ULS – Ultimate Limit State : load at the elastic limit (Rp0.1). Values are given without factor of safety - Tests available online : [www.sadev.com](http://www.sadev.com)

## Configuration

GLASS SIDE VIEW



## Suggested mounting instruction

The drilling diameter for the pins is 6 mm. Do not drill the holes for the pins in your structure before mounting the spiders. To fix the spider on your structure the "Omega" (see accessories) is highly recommended to adjust the spider's position. The fixing of the spider is done with a M16 or a M12 bolt (out of Sadev supply). This bolt shall not be fitted into a vertical slotted holes due to the risk of slipping (under the weight), the pins are not designed to hold any permanent loads (cf. specification sheet). The spider has to be positioned on a flat support. The slotted holes Ø17x24 mm and free holes Ø24 mm in the spider are not to be used to adjust the spider! They are needed to absorb the manufacturing tolerances and the thermal deformation of the glass and of the structure. The spiders are standardized for M14 fittings (FXR, FXV) ; other diameters are available on request.

SADEV recommends using thread locking compound, except in case of specific mounting constraints.

# S 3000 AX

Designation : casted stainless steel spider



Material : AISI 316  
Finish : polished GR400

## Descriptif



The S3000 AX spider has been specially designed for the integration of solar shading on the transparent glass facades in order to preserve natural lighting while cutting glare or reflection of radiation from the sun.

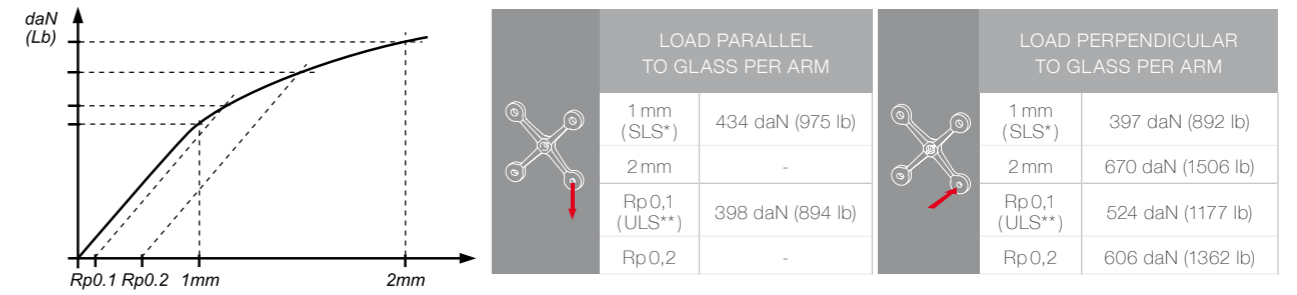
### Advantages sunscreens

- natural light preserved with visibility on the outside
- Optimal use of natural light and passive solar energy, resulting in a reduced need for heating and consequently saves energy
- Possibility of articulate the solar shading: This allows the slats of venetian blinds in the optimal position relative to the sun and also contributes to an even greater power efficiency
- The transparency of a glass facade is kept
- Controlling the entry of light into the building
- Integration of photovoltaic panel as possible
- Possibility of including silkscreen glass in order to make shadow areas and make attractive facades



S 3000 AX

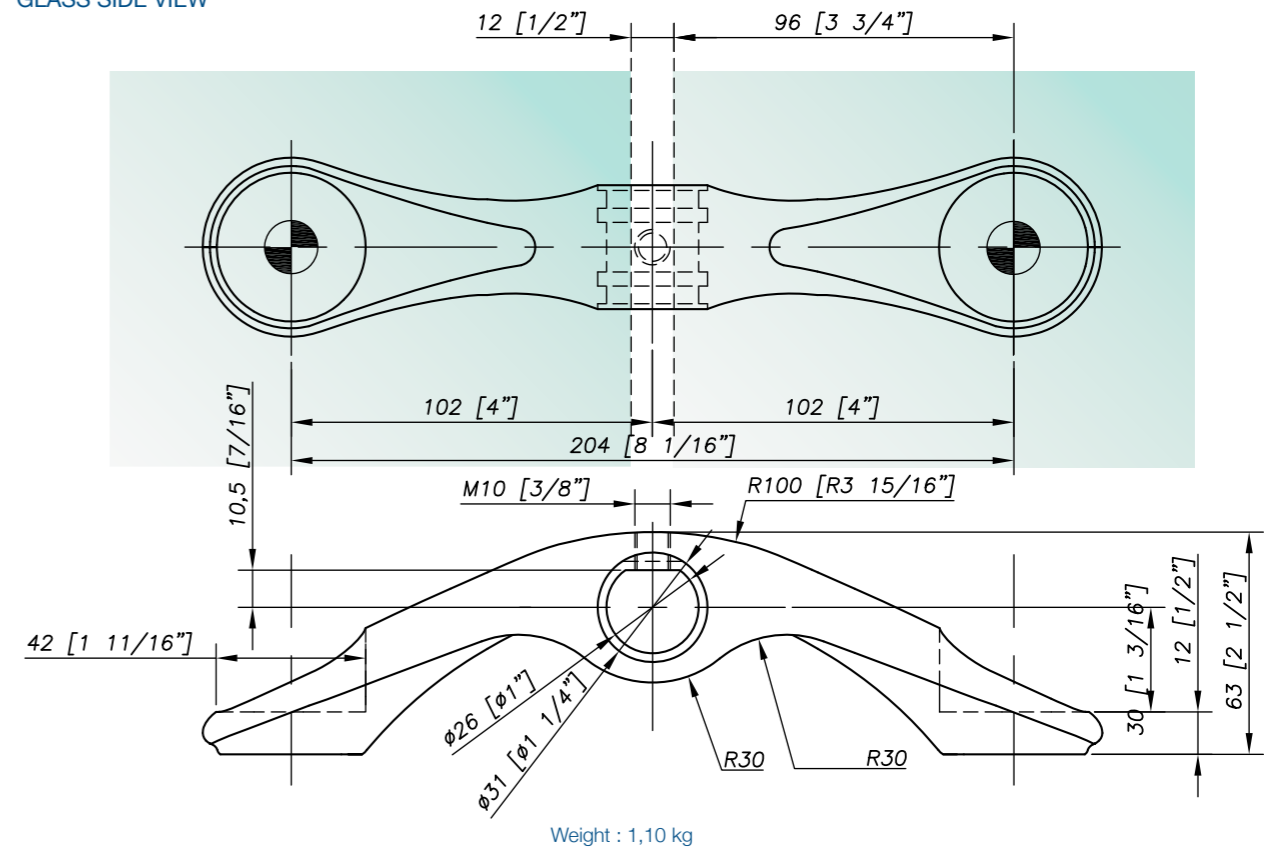
## Mechanical performances



\*SLS : Serviceability Limit State - load at 1 mm deformation \*\*ULS - Ultimate Limit State : load at the elastic limit (Rp0.1). Values are given without factor of safety - Tests available online : [www.sadev.com](http://www.sadev.com)

## Configuration

### GLASS SIDE VIEW



⊙ Represents a fixed point Ø17 mm, a slotted point Ø17x24 mm, or a free point Ø24 mm depending on the position of the spider on the façade (see suggested mounting instructions at the end of the chapter).

## Suggested mounting instruction

Fit 2 seal rings with inner diameter Ø of 24,6mm torus of Ø3,6mm (allowing the absorption of mounting kits) in the 2 groove of spider S3000AX. Inserting the fastener in a Ø25 axis having a flat anti-rotation (see the design of axis section). And mount the locking screw M10 flat end (DIN913) 12mm length.

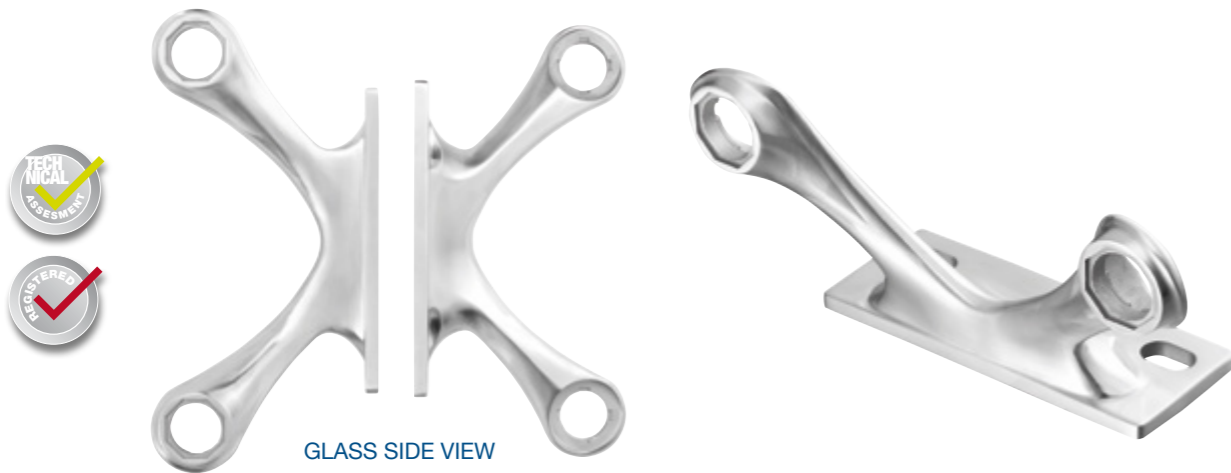
The slotted holes Ø17x24 mm and free holes Ø24 mm in the spider are not to be used to adjust the spider! They are needed to absorb the manufacturing tolerances and the thermal deformation of the glass and of the structure. The spiders are standardized for M14 / M12 fittings (FXR, FXV).

Maintenance recommendations - see end of catalog.

SADEV recommends using thread locking compound, except in case of specific mounting constraints.

# S 3100 / S 3100 DU

Designation : casted stainless steel spider, with plate.

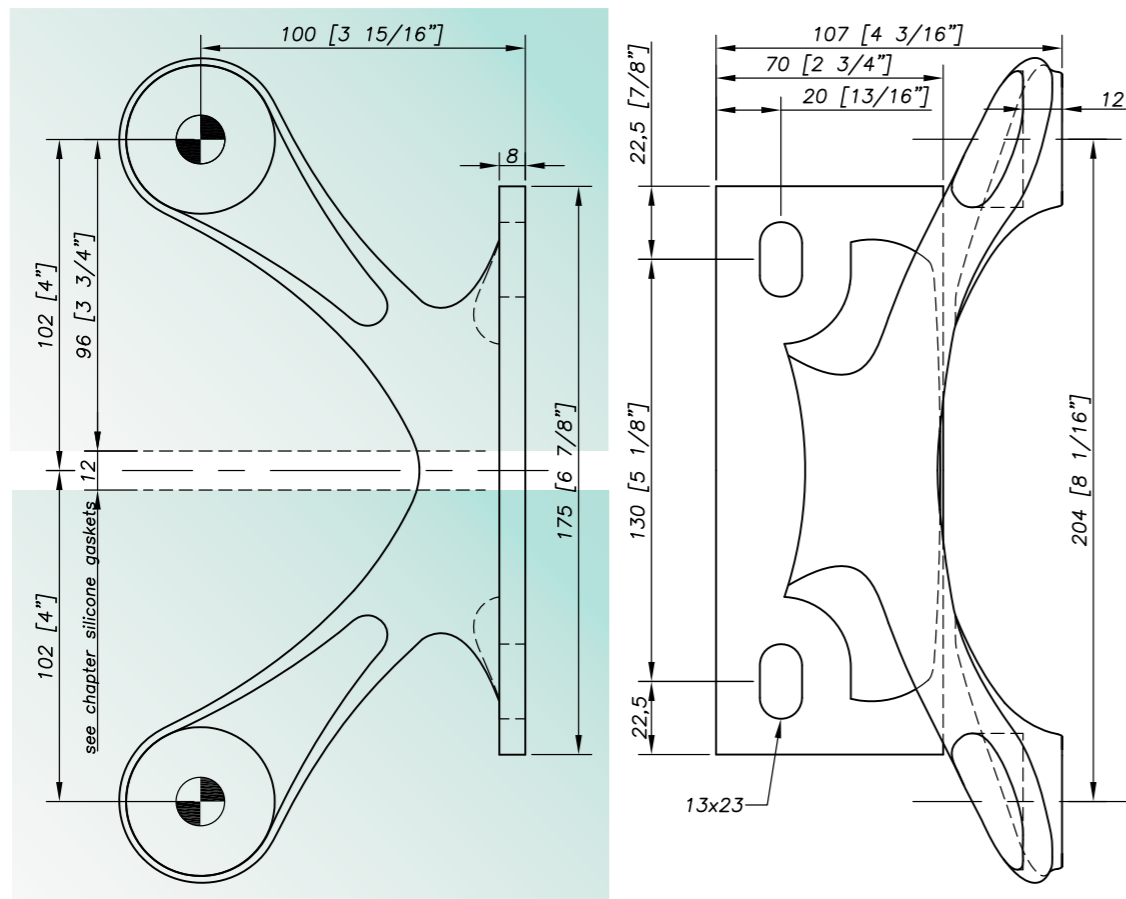


GLASS SIDE VIEW

S3100 Monti : AISI 316 - Surface finish : Dull polished GR400  
S3100 DU : Stainless steel Duplex Uranus 45N

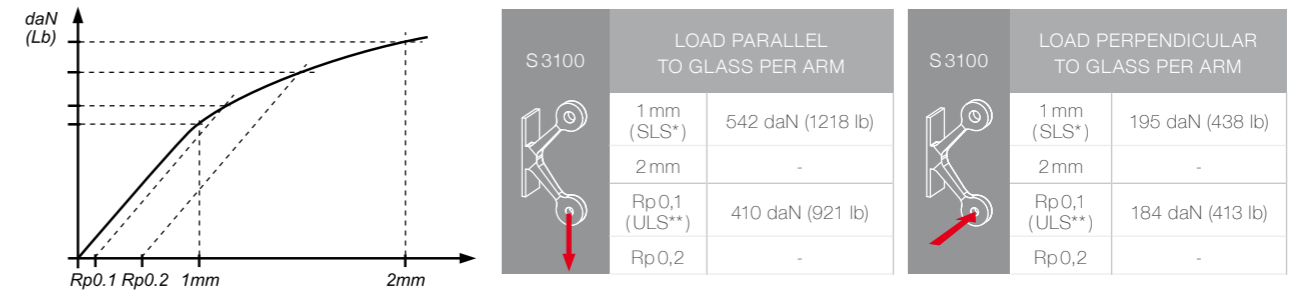
## Dimensions

GLASS SIDE VIEW



S 3100 / S 3100 DU

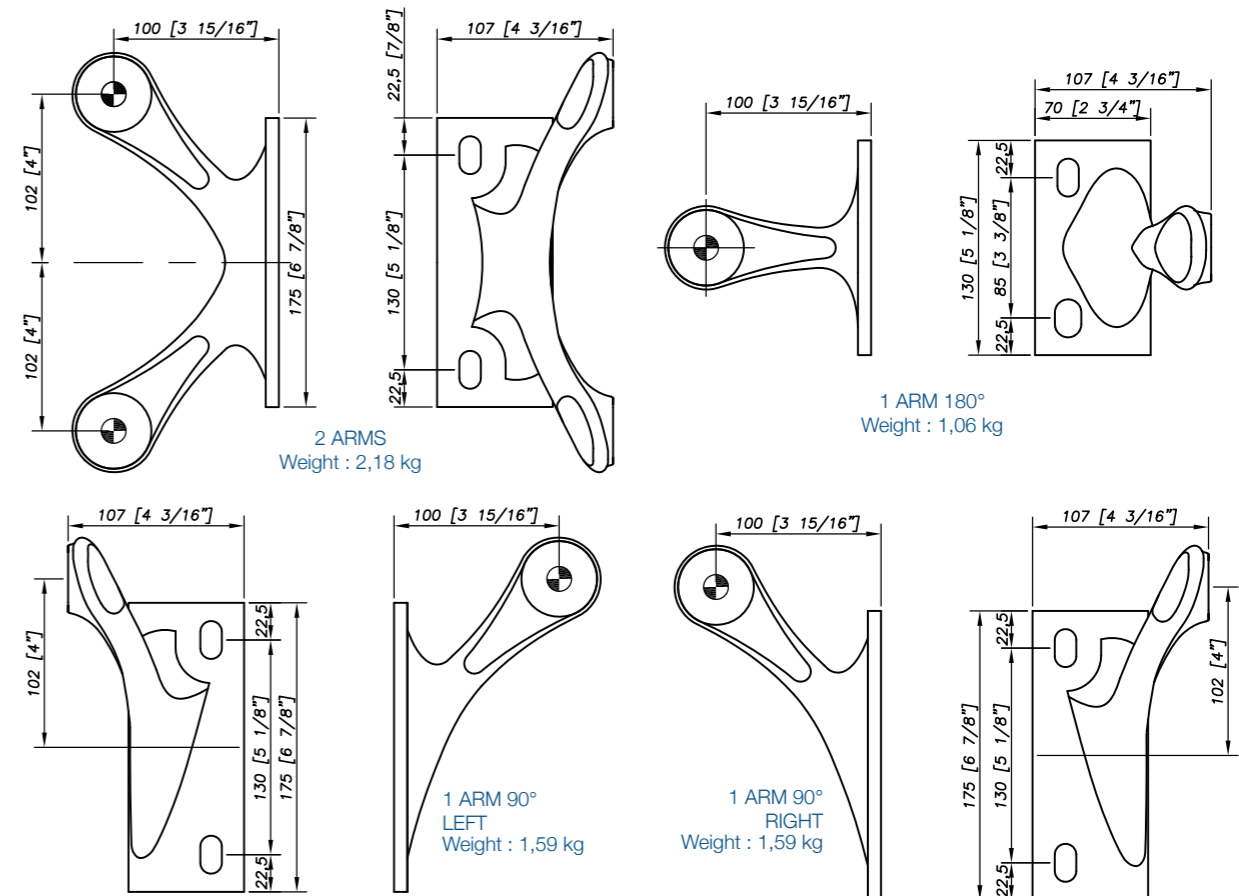
## Mechanical performances



\*SLS : Serviceability Limit State - load at 1 mm deformation \*\*ULS - Ultimate Limit State : load at the elastic limit (Rp0.1). Values are given without factor of safety - Tests available online : [www.sadev.com](http://www.sadev.com)

## Configuration

GLASS SIDE VIEW



Represents a fixed point Ø17 mm, a slotted point Ø17x24 mm, or a free point Ø24mm depending on the position of the spider on the façade (see suggested mounting instructions at the end of the chapter).

## Suggested mounting instruction

The fixing of the spider is done with a M16 or a M12 bolt (out of Sadev supply). The slotted holes Ø17 x 24mm and free holes Ø24mm in the spider are not to be used to adjust the spider! They are needed to absorb the manufacturing tolerances and the thermal deformation of the glass and of the structure.

The spiders are standardized for M14 fittings (FXR, FXV). Other diameters are available on request.

SADEV recommends using thread locking compound, except in case of specific mounting constraints.



# S 3106

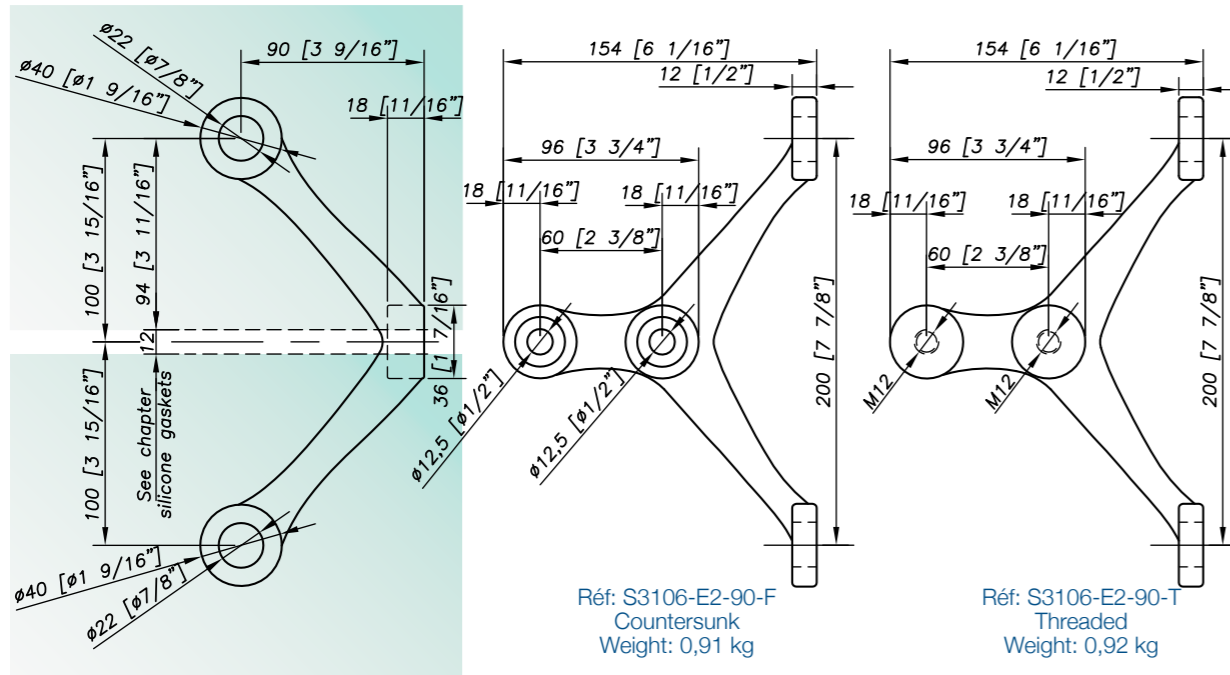
Designation: Casted stainless steel spider, with plate



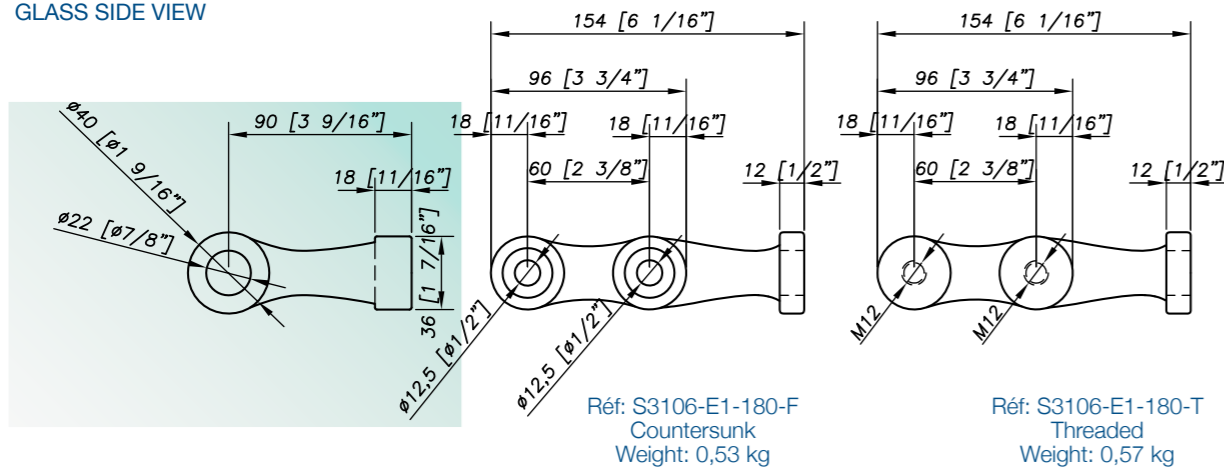
Material: AISI 316 (1.4408) – Surface finish: Dull polished GR400

## Dimensions

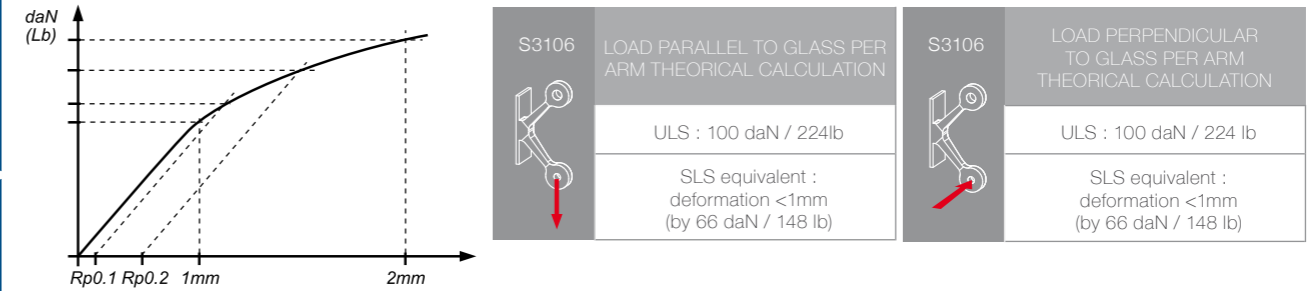
GLASS SIDE VIEW



GLASS SIDE VIEW

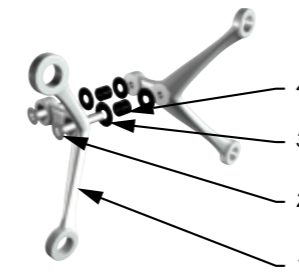


## Mechanical performances

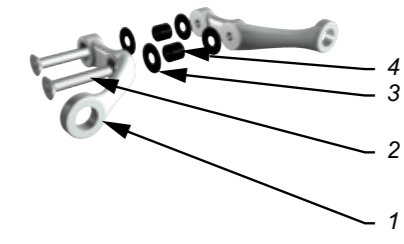


\*SLS – Serviceability Limit State : load at 1mm deformation \*\*ULS – Ultimate Limit State : load at the elastic limit (Rp0.1) Values are given without factor of safety.

## Configurations

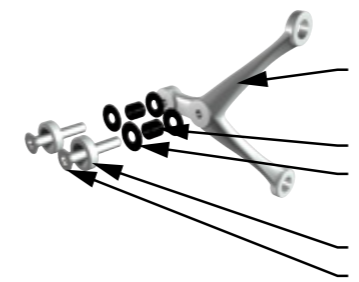


Ref: K3106-V-2B-2B  
Weight: 1,93 kg

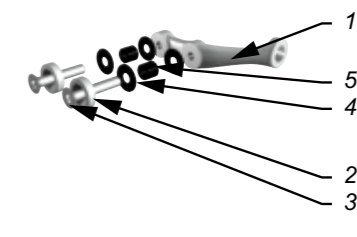


Ref: K3106-V-1B-1B  
Weight: 1,2 kg

MARK	QTY	DESIGNATION	MATERIAL
1	1+1	Spider S3106	AISI 316 - surface finish: dull polished GR400
2	2	Bolt DIN7991 M12	A4
3	4	Contact Washer	Polyacetal / polyethylene
4	2	Glass hole grommet	Polyacetal / polyethylene



Ref: K3106-V-2B  
Weight: 1,17 kg



Ref: K3106-V-1B  
Weight: 0,8 kg

MARK	QTY	DESIGNATION	MATERIAL
1	1	Spider S3106	AISI 316 - surface finish: dull polished GR400
2	2	Backing plate flange countersunk hole	AISI 316L - surface finish: dull polished GR400
3	2	Bolt DIN7991 M12	A4
4	4	Contact Washer	Polyacetal / polyethylene
5	2	Glass hole grommet	Polyacetal / polyethylene

## Suggested mounting instruction

The fixing of the spider occurs with two countersunk screws DIN7991 M12 (available on request). These spiders have no positioning insert (fixed point, dilating and free point). The holes of dilatation Ø22 in the spiders are not to be used to adjust the spiders! They are needed to absorb the manufacturing tolerances and the thermal deformation of the glass and of the structure.

# S 3105

Designation : casted stainless steel spider, with plate.

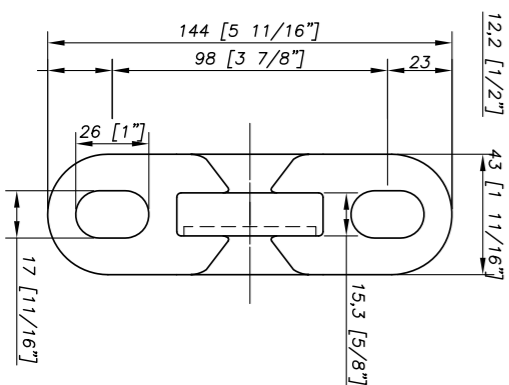
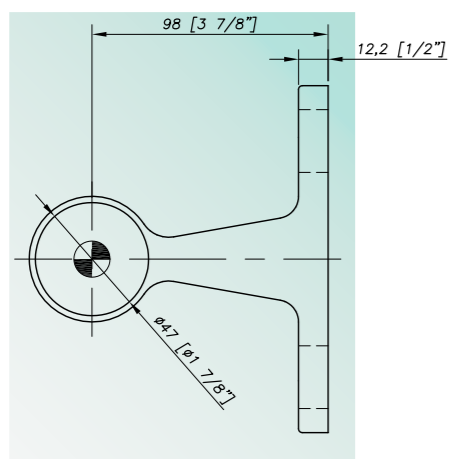


GLASS SIDE VIEW

Material : AISI 316  
Finish : polished GR400

## Dimensions

GLASS SIDE VIEW

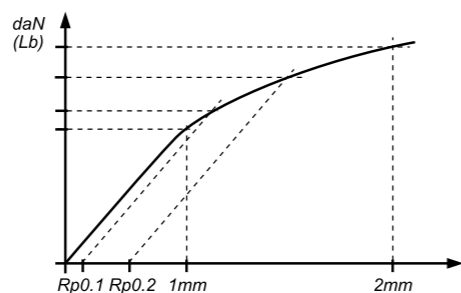


## Mechanical performances

LOAD PARALLEL TO GLASS PER ARM	
1 mm (SLS*)	772 daN (1735 lb)
2 mm	1298 daN (2918 lb)
Rp0,1 (ULS**)	772 daN (1735 lb)
Rp0,2	945 daN (2124 lb)

LOAD PERPENDICULAR TO GLASS PER ARM	
1 mm (SLS*)	470 daN (1056 lb)
2 mm	903 daN (2030 lb)
Rp0,1 (ULS**)	820 daN (1843 lb)
Rp0,2	968 daN (2176 lb)



\*SLS : Serviceability Limit State - load at 1 mm deformation  
\*\*ULS – Ultimate Limit State : load at the elastic limit (Rp0.1).  
Values are given without factor of safety.

## Suggested mounting instruction

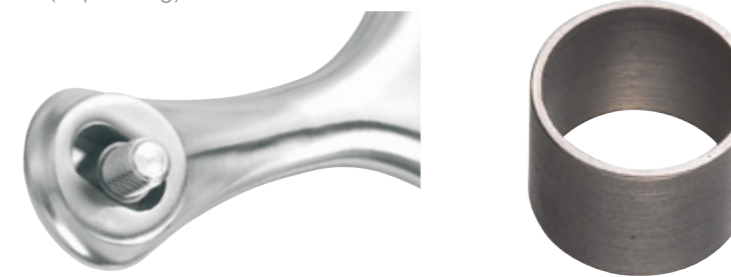
The fixing of the spider is done with a M16 bolt (out of Sadev supply). The slotted holes  $\varnothing 17 \times 24$ mm and free holes  $\varnothing 24$ mm in the spider are not to be used to adjust the spider! They are needed to absorb the manufacturing tolerances and the thermal deformation of the glass and of the structure. The spiders are standardized for M14 fittings (FXR, FXV). Other diameters are available on request.

SADEV recommends using thread locking compound, except in case of specific mounting constraints.

# Stainless steel spacer

Designation : casted stainless steel spider, with plate.

The spacer is compulsory in order to allow the free displacement of the fitting towards the spider.  
One spacer per spider's arm (or per fitting) are needed.



DESIGNATION	DIAMETER OF THE FITTING	REFERENCE
Spacer for S3000, S3000 DU, S3001 EVO, S3101 EVO, S3100, S3100 DU, S3003, S3105 thickness 12	M12	ENT-12-16.5-12.5
Spacer for S3003 thickness 8	M12	ENT-12-16.5-8.5
Spacer for S3003 thickness 10	M12	ENT-12-16.5-10.5
Spacer for S3003 thickness 15	M12	ENT-12-16.5-15.5
Spacer for S3002, S3007	M12	ENT-12-16.5-21.5
Spacer for S3000, S3000 DU, S3001 EVO, S3101 EVO, S3100, S3100 DU, S3003, S3105 thickness 12	M14	ENT-14-16.5-12.5
Spacer for S3003 thickness 8	M14	ENT-14-16.5-8.5
Spacer for S3003 thickness 10	M14	ENT-14-16.5-10.5
Spacer for S3003 thickness 15	M14	ENT-14-16.5-15.5
Spacer for S3002, S3007	M14	ENT-14-16.5-21.5
Spacer for S3000, S3000 DU, S3001 EVO, S3101 EVO, S3100, S3100 DU, S3003, S3105 thickness 12	M16	ENT-16-18.5-12.5
Spacer for S3003 thickness 8	M16	ENT-16-18.5-8.5
Spacer for S3003 thickness 10	M16	ENT-16-18.5-10.5
Spacer for S3003 thickness 15	M16	ENT-16-18.5-15.5
Spacer for S3002, S3007	M16	ENT-16-18.5-21.5

## Stainless steel elastic pin

The pin is compulsory in order to lock the spider in rotation towards the structure. Two pins per spider are needed +5 %.

DESIGNATION	REFERENCE
Pin for S3000, S3001 EVO, S3003	D1481A2-6-36
Pin for S3007	D1481A2-6-60
Pin for S3002	D1481A2-6-45



## Special drill for stainless steel

Special drill for stainless steel. Diameter 6mm.

Reference : 09 90 01 60



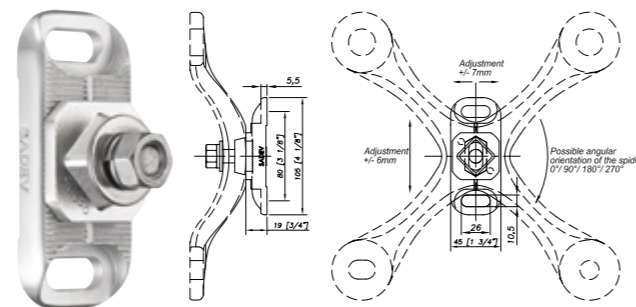


# Cone Omega

Designation : cone omega for vertical mounting

**SETTING (1)**  
Adjustment of +/- 5 mm horizontally and vertically

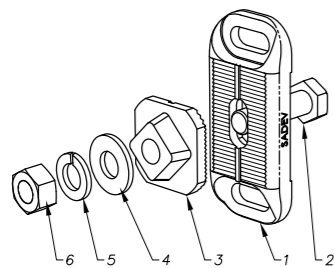
Vertical use compulsory



REFERENCE	
S3000-OMEGA-R	AISI 316 Stainless steel model for S3006 Vertech spider

Patented model n° 0905034

## Fastenings kit for cone omega



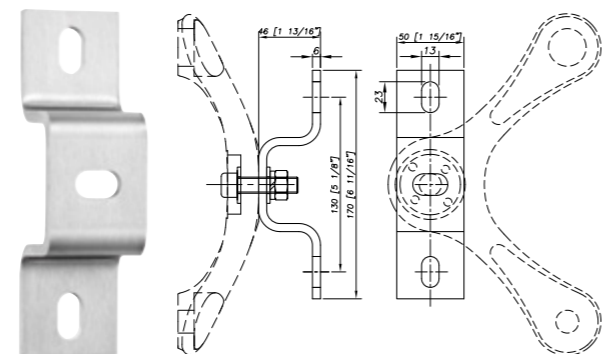
MODEL FOR S3000 SPIDERS	
KIT-OM-VIS-S3000	
1 – Omega	4 – Washer M12
2 – Bolt H M12	5 – Washer grower
3 – Anti-rotation plate	6 – Nut M12

# Bended Omega

Designation : bended omega for vertical mounting

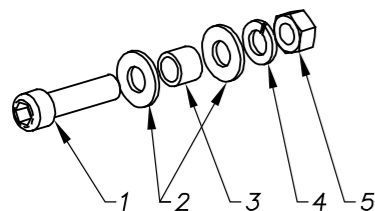
**SETTING (1)**  
Adjustment of +/- 5 mm horizontally and vertically

Vertical use compulsory



REFERENCE FOR SPIDERS S3000, S3001, S3003, S3007	
OMEGA-IN12V	AISI 316L Stainless steel model dull polished Painted
OMEGA-IN12V-R	AISI 316L Stainless steel model with your needed RAL-colour

## Fastenings kit for bended omega



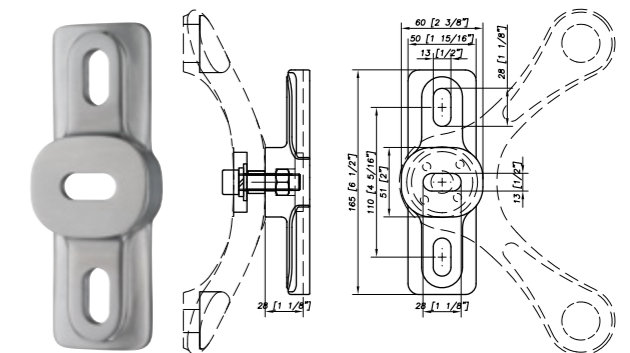
MODEL FOR S3000 SPIDERS	KIT FOR S3001, S3003 AND S3007 SPIDERS
KIT-OM-VIS-S3000	KIT-OM-VIS-S300137
1 – M12 bolt	1 – M12 bolt
2 – Washer for M12	2 – Washer for M12
3 – Insert (S3000 only)	4 – grower washer
4 – Grower washer	5 – M12 nut
5 – M12 nut	

# Tube Omega

Designation : Omega for fixation on tube Ø70 at 120mm

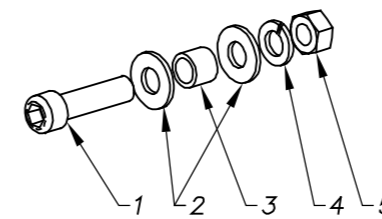
**SETTING (1)**  
Adjustment of +/- 5 mm horizontally and vertically

Vertical use compulsory



REFERENCE	
OMEGA-TUB-IN12V	Omega for fixation for S3000, S3001 EVO, S3003, S3007

## Fastenings kit for tube omega



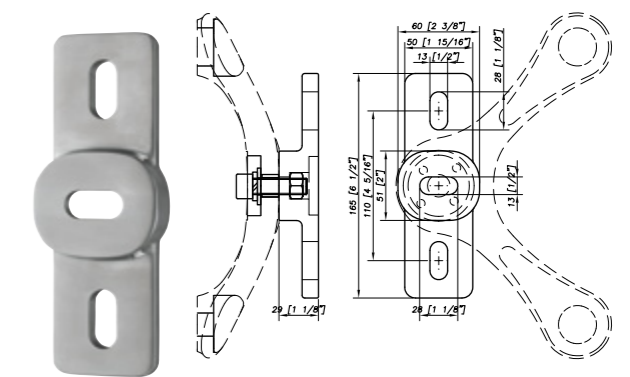
MODEL FOR 3000 SPIDERS	KIT FOR S3001 EVO, S3003 AND S3007 SPIDERS
KIT-OM-TUB-VIS-S3000	KIT-OM-TUB-VIS-S3001
1 – M12 bolt	1 – M12 bolt
2 – Washer for M12	2 – Washer for M12
3 – Insert (S3000 only)	4 – grower washer
4 – Grower washer	5 – M12 nut
5 – M12 nut	

# Flat Omega

Designation : Omega for fixation on flat support

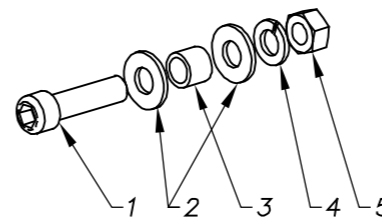
**SETTING (1)**  
Adjustment of +/- 5 mm horizontally and vertically

Vertical use compulsory



REFERENCE	
OMEGA - PLA-IN 12V	Omega for fixation for S3000, S3001 EVO, S3003, S3007

## Fastenings kit for flat omega



MODEL FOR S3000 SPIDERS	KIT FOR S3001 EVO, S3003 AND S3007 SPIDERS
KIT-OM-VIS-S3000	KIT-OM-VIS-S300137
1 – M12 bolt	1 – M12 bolt
2 – Washer for M12	2 – Washer for M12
3 – Insert (S3000 only)	4 – grower washer
4 – Grower washer	5 – M12 nut
5 – M12 nut	

# Sealing strip

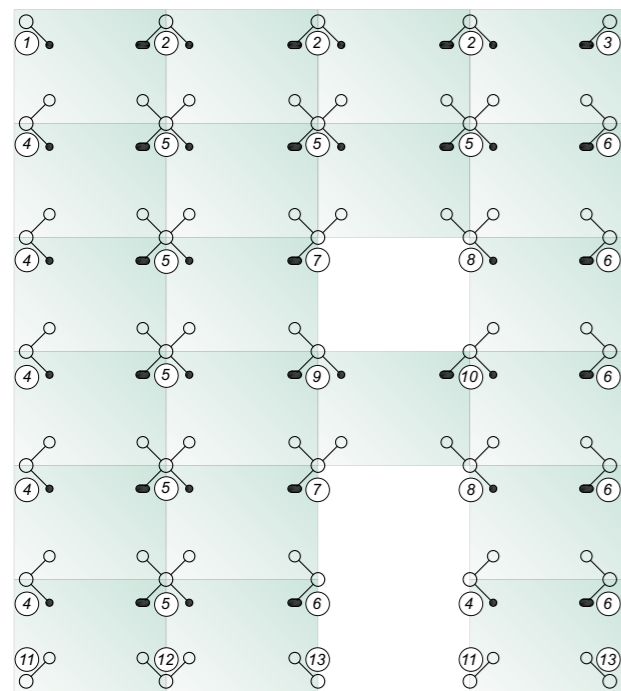
DIMENSION	SETTLEMENT PATTERN	REFERENCES
		White translucent color Black color <i>JOINT-VEA1015D</i> <i>JOINT-VEA1015D-N</i>
		White Translucent color Black color <i>JOINT-VEA2030D</i> <i>JOINT-VEA2030D-N</i>
		White translucent color Black color <i>JOINT-VEA1015S</i> <i>JOINT-VEA1015S-N</i>
		White translucent color Black color <i>JOINT-VEA2030S</i> <i>JOINT-VEA2030S-N</i>
		White translucent color Black color <i>JOINT-VEA4110</i> <i>JOINT-VEA4110-N</i>
		White translucent color Black color <i>JOINT-VEA4235</i> <i>JOINT-VEA4235-N</i>
		White translucent color Black color <i>JOINT-VEA4244</i> <i>JOINT-VEA4244-N</i>
		White translucent color Black color <i>JOINT-VEA3347B</i> <i>JOINT-VEA3347B-N</i>
		White translucent color Black color <i>JOINT-VEA3414</i> <i>JOINT-VEA3414-N</i>

Sealing strip

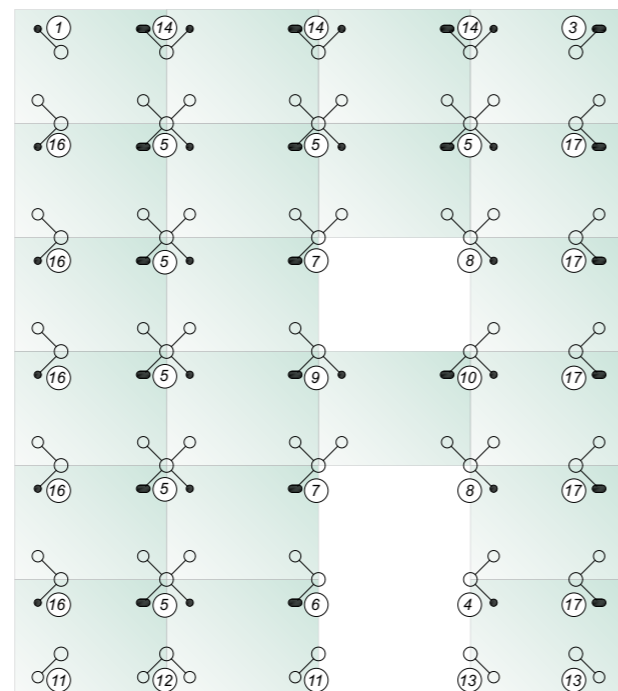
DIMENSION	SETTLEMENT PATTERN	REFERENCES
		White translucent color Black color <i>JOINT-VEA1312A</i> <i>JOINT-VEA1312A-N</i>
		White translucent color Black color <i>JOINT-VEA1324</i> <i>JOINT-VEA1324-N</i>
		White translucent color Black color <i>JOINT-VEA1368</i> <i>JOINT-VEA1368-N</i>
		White translucent color Black color <i>JOINT-VEA1369</i> <i>JOINT-VEA1369-N</i>
		White translucent color Black color <i>JOINT-VEA1399</i> <i>JOINT-VEA1399-N</i>
		White translucent color Black color <i>JOINT-VEA1444</i> <i>JOINT-VEA1444-N</i>
		White translucent color Black color <i>JOINT-VEA1684</i> <i>JOINT-VEA1684-N</i>
		White translucent color Black color <i>JOINT-VEA1746</i> <i>JOINT-VEA1746-N</i>
		White translucent color Black color <i>JOINT-VEA3346</i> <i>JOINT-VEA3346-N</i>
		White translucent color Black color <i>JOINT-VEA3413</i> <i>JOINT-VEA3413-N</i>

# Suggested mounting instruction

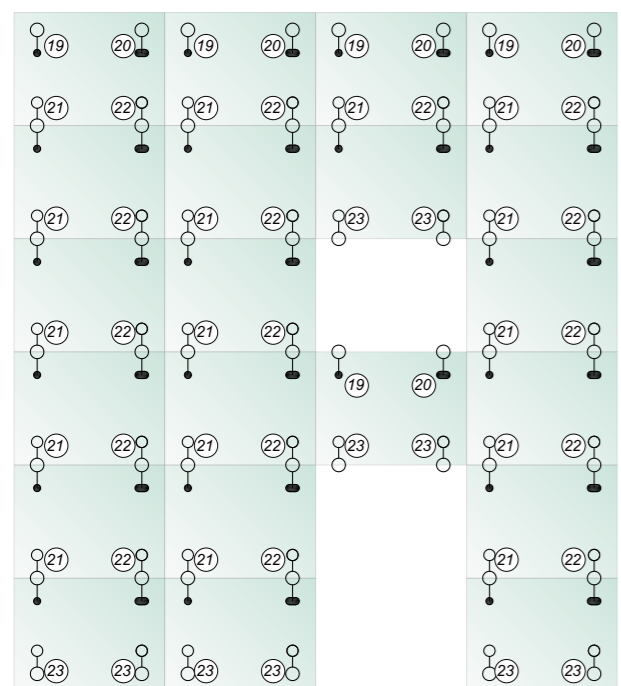
Mounting - A



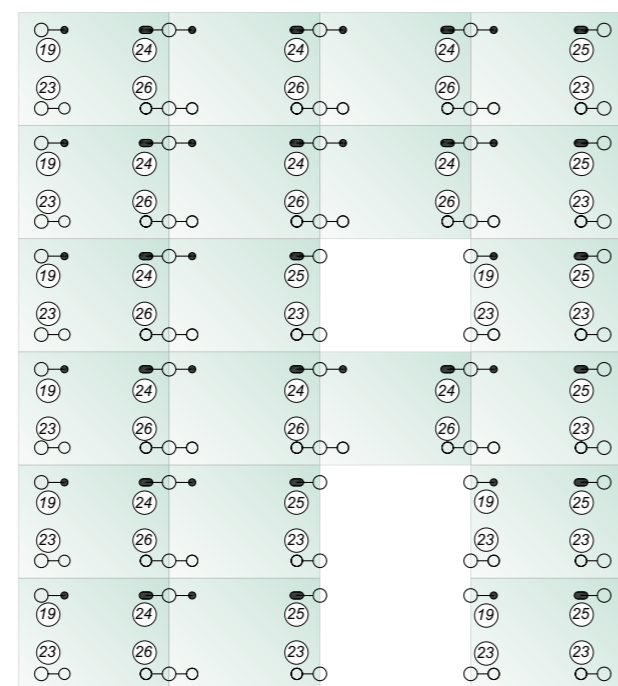
Mounting - B



Mounting - C

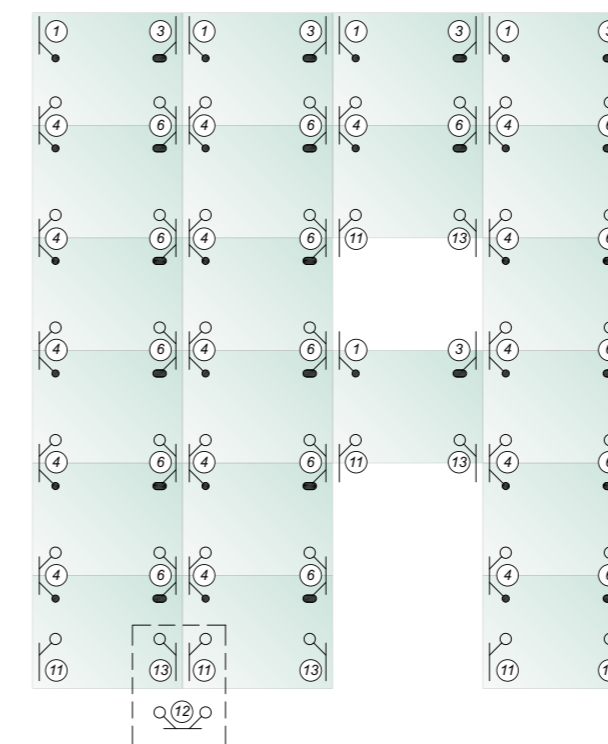


Mounting - D

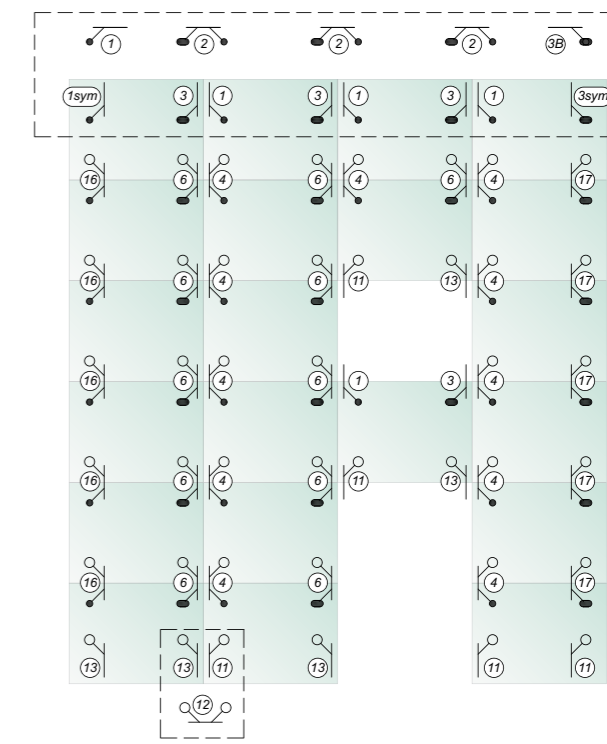


# Suggested mounting instruction

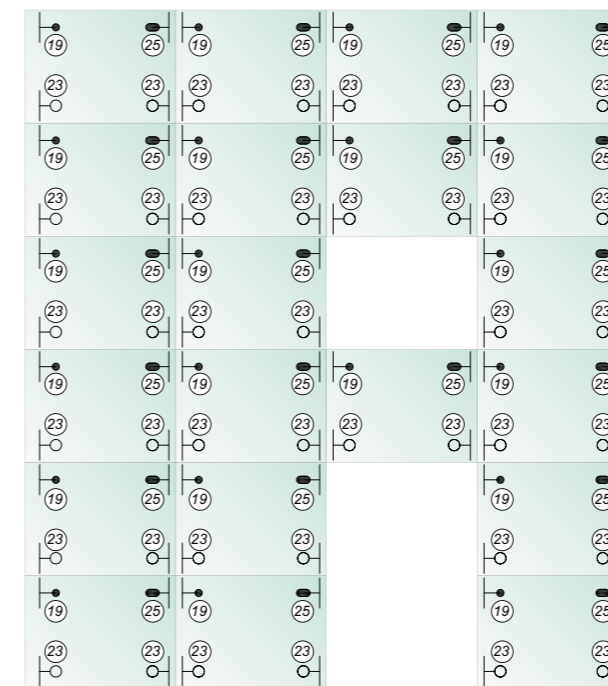
Mounting - E



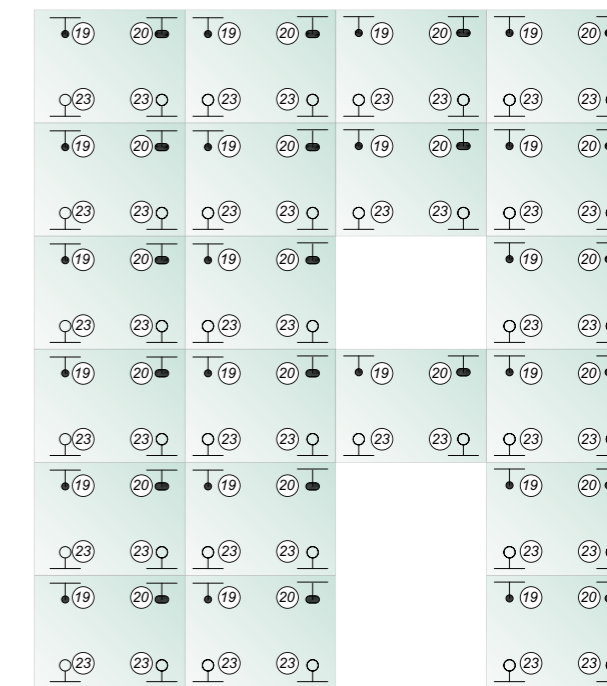
Mounting - F



Mounting - G



Mounting - H





THE SAFCO SYSTEM

SAFCO ..... 9.2

Safco system components ..... 9.5

Presentation of the components  
of the facade provided by Sadev ..... 9.6



## SAFCO

## SADEV Facade Concept

This turnkey point supported glass facade system can be used either as the first envelop of the building or as a secondary skin in the case of new construction or renovations. The latter case contributes to sustainable development since significant energy savings can be made through a decrease in heat loss and utilization of the greenhouse effect. In addition to energy savings, the SAFCO system provides a smooth exterior glass rain screen to protect the primary structure in areas with heavy annual precipitation. A final added benefit is the creation of an additional acoustical barrier significantly lowering exterior noise pollution.



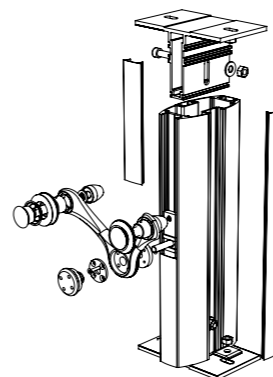
## Advantages :

- Turnkey installation of a glass facade as a 1<sup>st</sup> or 2<sup>nd</sup> building envelop.
- Pre-engineered point supported glass façade.
- The installation of a SAFCO facade as a double skin offers high-performance thermal and acoustical insulation.
- Increases the energy performance.
- Sunshades integration limits solar radiation and raise of the temperature in the building.
- Safe and efficient System (french technical evaluation document).
- A modern, transparent façade system, that is equally suitable as a primary envelope for new or existing construction.
- Thanks to the standardization of the different elements that compose the SAFCO facade, SADEV is capable of offering you very competitive prices.
- Built in adjustments and installer friendly.



## What is it all about exactly ?

It is a simple turnkey solution for the construction of your glass facade. The system includes aluminum posts as well as the lower and upper brackets to anchor the posts to the building main structure. Depending on your aesthetic and technical criteria, we select the models of hardware, bolts, and spiders that suit your project best. SADEV will then provide the drawings for the facade, material take off, and deliver the entire package ready to install.



## Characteristics :

- Standard height = 6.5m or 21.3 feet (please enquire for taller structures)
- SAFCO can incorporate door openings; the system is also suitable for building angles.
- The standard components of this system are under technical approval delivered by the CSTB\*
- The dimensioning of the glass panels are calculated by SADEV in compliance with the criteria of CSTB\* specifications n° 3574.
- In addition, the structure and engineering of the SAFCO system glass panels have been the subject of calculations validated by the SOCOTEC inspection bureau (France). For the US, SADEV will design the glass in accordance to local building codes and performance design criteria.
- Tested for guard railing applications.
- The SAFCO components (posts and brackets) are available in stock in raw aluminum. Clear Anodize, RAL powder coat and painted finishes are available on request.

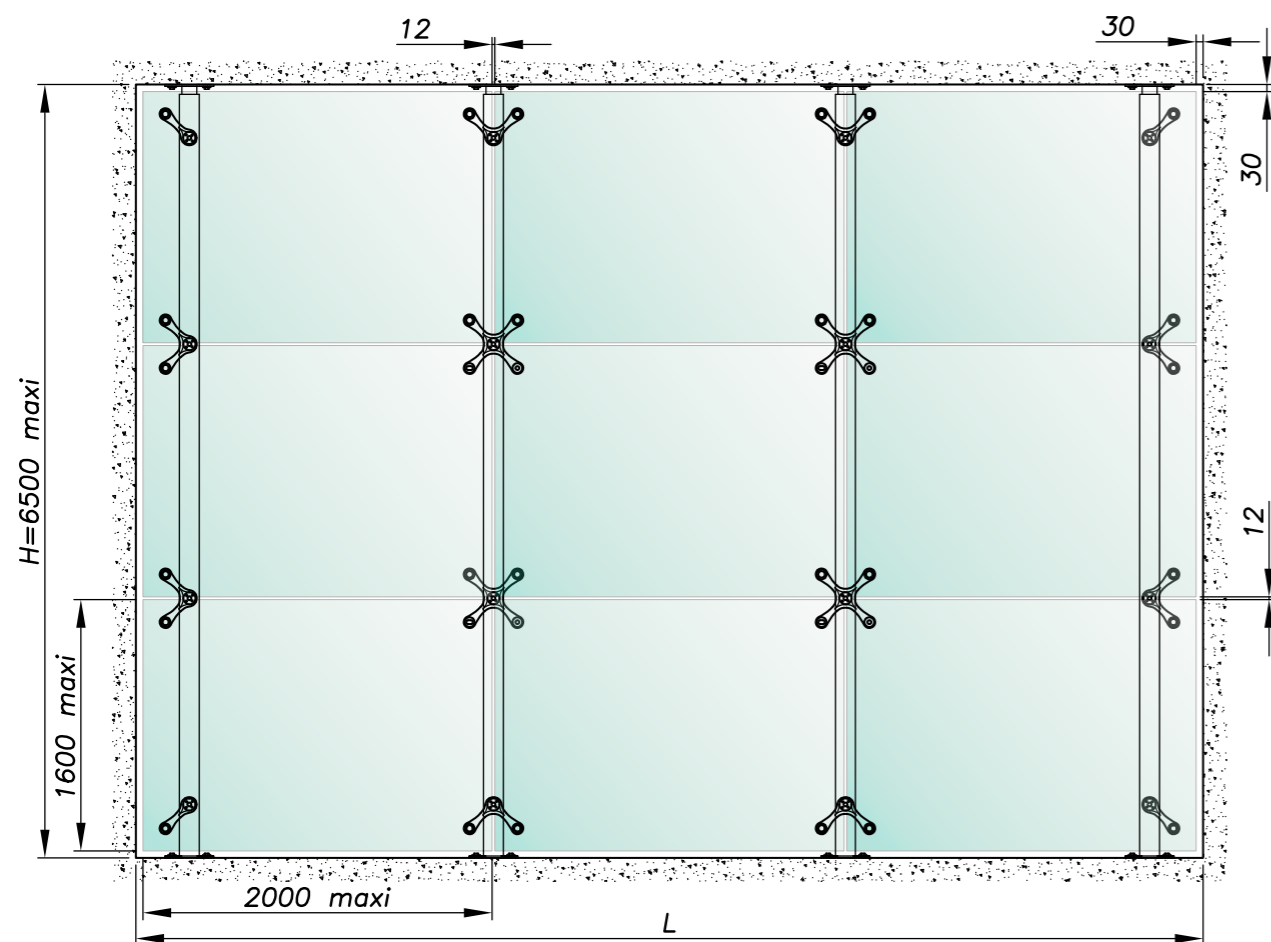
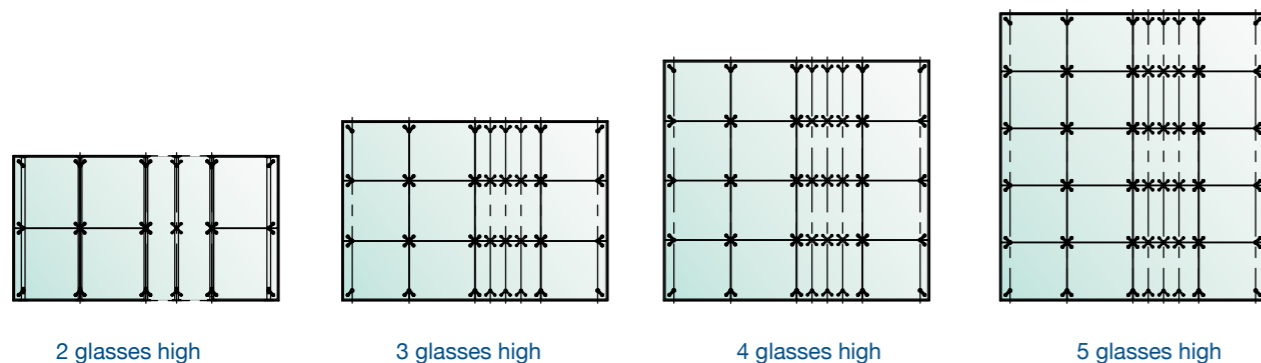
Note : if your choice is made using S3007 spiders, it is possible to have them painted the same color as the posts.

\*French testing laboratory



### Configuration

Different configurations are available according to the façade height :



SADEV provides a pre-engineered turnkey façade solution, ready to install. Calculations valid within the following criteria :

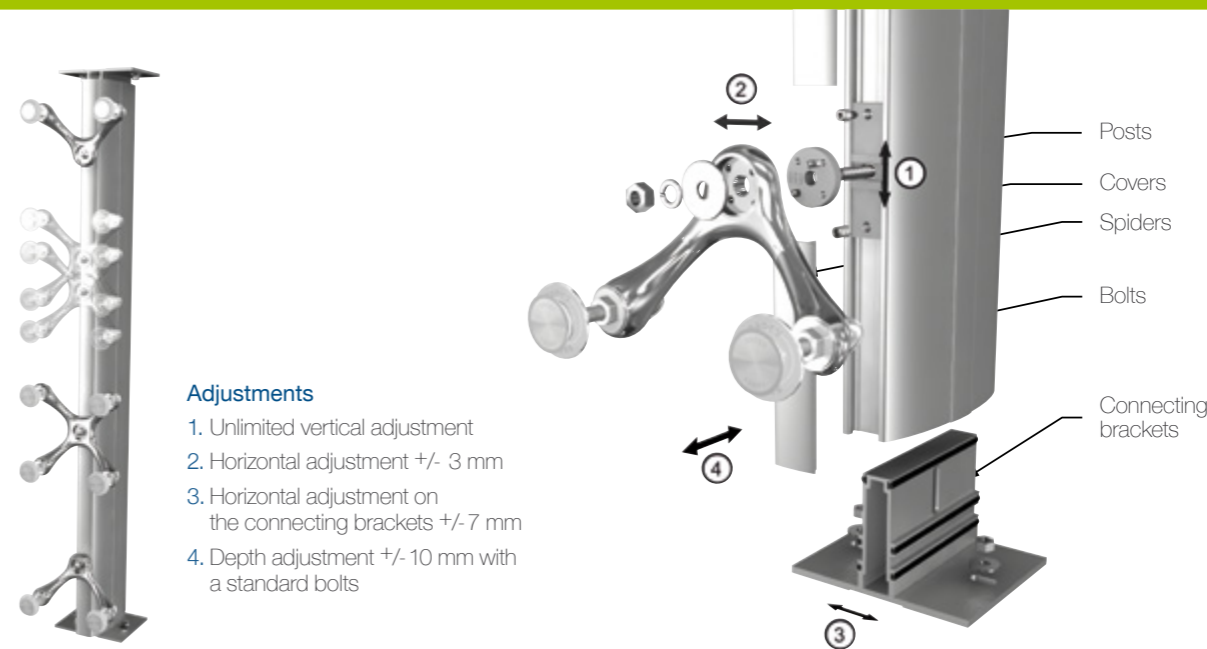
- Maximal wind load = **1000 Pascals**
- Maximum glass height = **1.6 m**
- Maximum glass width = **2 m**
- Maximum façade height = **6.5 m**

INERTIE POTEAU SAFCO		
	JX	230cm <sup>4</sup>
	JY	1 690cm <sup>4</sup>
	Weight	7,976 kg/m

In case these conditions would not be fulfilled, a design calculation should be carried out. Consult us.

### Components of the SAFCO system

#### Details



**Adjustments**

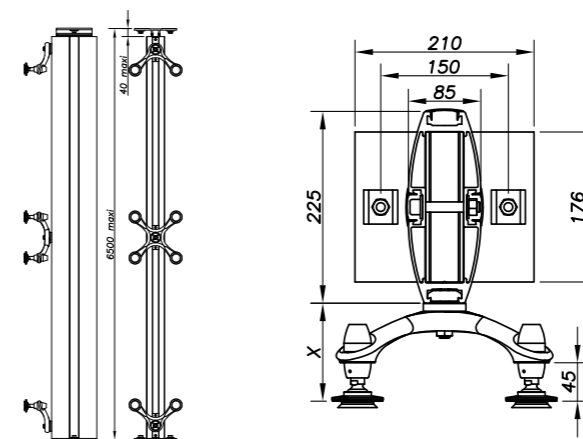
- Unlimited vertical adjustment
- Horizontal adjustment +/- 3 mm
- Horizontal adjustment on the connecting brackets +/- 7 mm
- Depth adjustment +/- 10 mm with a standard bolts

#### References

DRAWING	REFERENCE	COMMENTS
	SAF-P176-L	L ≤ 7500
	SAF-CACHE-6500	L ≤ 6500
	SAF2-DKIT176-BRUT	reference to 2 connecting brackets top and bottom

DRAWING	REFERENCE	COMMENTS
	SAF1-KITFIX-S3000	to S3000 / S3000DU
	SAF1-KITFIX-S3001E	to S3001 EVO
	SAF1-KITFIX-S3007	to S3007
	SAF1-KITFIX-S3002	to S3002
	SAF1-KITFIX-S3000P	to S3000P
	SAF1-KITFIX-S4000P	to S4000P

#### Dimensions



REFERENCE	X
S3000	115 mm
S3001EVO	80 mm
S3007	105 mm
S3002	91 mm
S3000P	73 mm
S4000P	63 mm

# Presentation of the facade components provided by SADEV

## The swivel fittings



Parts that are offered here to meet all technical advice CSTB (available on request). All technical information is available in swivel fittings chapter technical catalog CLASSIC.



R1001

R1003

R1006

R1001A

R1039

## The spiders



Parts that are offered here to meet all technical advice CSTB (available on request). All technical information is available in spiders chapter technical catalog CLASSIC.



S3000

S3001 EVO

S3007

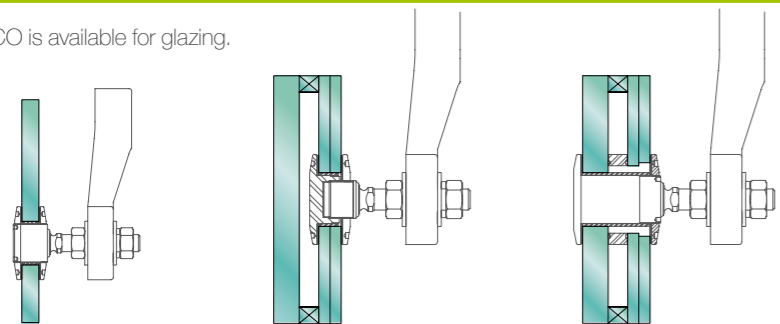
S3002

S3000P

S4000P

## Glazing

SAFCO is available for glazing.



Monolithic or laminated glass

Insulating glass

Insulating glass

## Sealing strip

To be placed between the panes of glass or between wall and glass. They provide waterproofing, thermal and acoustic insulation.



## Custom-built configuration

- 1&2 Corner post
- 3 Strut
- 4 External gangway
- 5 Safety rail (tension rods)



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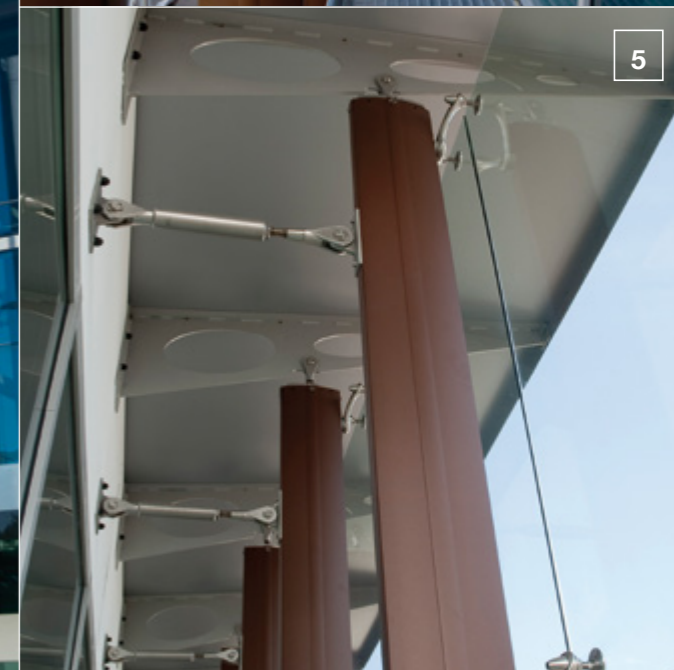
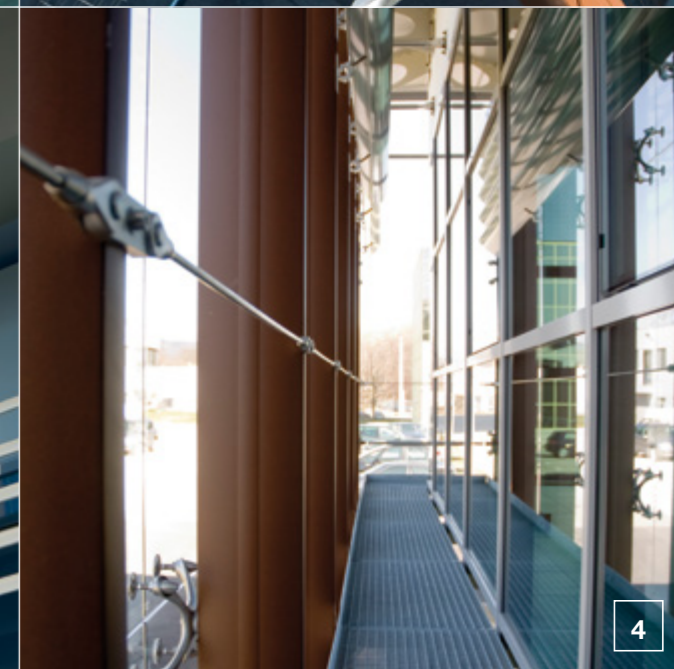
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APPENDICES

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# Stainless steel maintenance manual

## Fabrication precautions

From the design of your project, until the delivery ; we focus on the products quality during the fabrication, packing, storage then the preparation of the dispatch.

### Non rusting principle :

Stainless steel has an invisible passive layer. In case of deterioration, two ways of repair should be considered : naturally or chemically (through a passivation method).

This document is our suggested, general methods and if doubts, expert advice should be requested from Stainless Steel organizations.

## Recommendations when working on site

In order to maintain stainless steel characteristics you must store, handle and work in a clean environment until the end of the project.

### Typical working area rules should include :

- Avoid iron particle pollution caused by someone nearby working with iron or steel
- Galvanic corrosion separation materials must be inserted in the case where two dissimilar materials come into contact.
- Chemical pollution : do not use products that are incompatible with stainless steel

It is impossible to list exhaustively all types of pollution that may affect the quality of the stainless steel as a multitude of factors can come into play. In case of doubt, we would suggest the use of specialist cleaning companies as some of the chemicals used need to follow health & safety regulations and can change the appearance of the stainless steel.



## Maintenance cleaning

For routine cleaning, we recommend the common method used for handover cleaning, ie use simply water and mild soap to clean. Rinse with water and dry with a soft cotton cloth to finish.

Any cleaning movements should be in the direction of any surface graining.

### The maintenance cleaning should be developed according to the building and its location :

- If near the sea or salt, close to a road (salt) then cleaning needs to be planned.
- Chlorine laden environments: swimming pools need special care and attention.
- Industrial buildings could have sulphur in the air
- Visual discoloration of the stainless steel could mean the item is "under attack" in this instance a deep cleaning such as pickling should be considered.

Intervals for cleaning: this will depend on the environment and will need to be developed "locally".



## Handover cleaning

Stainless steel should be cleaned when a 'project' is passed to the client. The commonly recognized method for cleaning is simply with water and a mild soap followed by a rinse with water to finish. A "brighter" appearance will be achieved if dried with a soft cotton cloth.

Suggested methods using different chemicals should only be used according to health & safety rules and should only be attempted in diluted quantities (according to the product's directions). Any cleaning should be tested in an area that is less visible – beware of possible scratching. Do not use any cleaning agents with chlorine (for example hydrochloric acid, hypochlorite bleach).



## REFERENCES

« Cleaning Architectural Stainless steel »

> Nancy Baddo, Euro Inox

« Tout ce que vous vouliez savoir sur l'inox sans avoir osé le demander ! »

> Inox consulting SAS

« Fiche technique N°20 Nettoyage et entretien des inox »

> id inox

## TO GO FURTHER

« L'acier inoxydable en piscine »

> Arcelor Mittal

« Stainless steel in swimming pools »

> Eric Chaveau

# Terms of sales

## ARTICLE 1 : ACCEPTANCE OF ORDERS

We are not bound by offers, commitments made by our employees or verbal or written orders except in the case of a written confirmation, or shipment of merchandise on our part.

## ARTICLE 2 : TOLERANCE AFTER DELIVERY

Delivery of our supplies, products and merchandise is always carried out according to the usual practices of the profession, whether concerning quantities or the quality and norms of the product.

## ARTICLES 3 : DELIVERIES

**3.1** Delivery is carried out by the transfer of merchandise, either directly to the client, or via a consignee or a carrier chosen by us with the lowest cost, with no responsibility on our part. In all cases, the merchandise is transferred at the risk and peril of the client.

**3.2** Insurance against breakage, theft or loss is provided only upon written request by the client who shall pay us the necessary sum in advance for the payment of resulting premiums, fees and duties.

**3.3** We reserve the right to invoice the client a fixed amount pertaining to the cost of transport for small orders. 50 euros minimum invoice charge for any delivery lower than this amount

**3.4** In the case of delay, damage or loss of all or some of the transported merchandise and products, it is the client's own responsibility to find solutions.

**3.5** Claims made on the characteristics, quality, quantity or weight of the delivered merchandise or a discrepancy with its dispatch note or delivery slip, shall be put in writing before 15 days after the date of reception of the merchandise without prejudice to the measures that need to be taken with regard to the carrier- this 15 day deadline being sufficient time for the client to carry out the necessary qualitative and quantitative controls of the delivered merchandise.

**3.6** All increase in charges, duties, taxes and stamp duties calculated, based on the cost or volume of the merchandise, occurring after contracting with the client, is the responsibility of the purchaser, even if the sale is considered to be "duties paid"

## ARTICLE 4 : DELIVERY DATE

The delivery dates mentioned in our documents are only indicative values and only apply when all the conditions of sale are agreed by both parties. Delivery dates do not engage the responsibility of our company, unless otherwise stipulated, in an agreement signed by all parties.

## ARTICLE 5 : AFTER SALES RESPONSIBILITIES

**5.1** In the case of delivery of damaged goods, our responsibility is limited to the obligation of replacing the merchandise or reimbursing the amount invoiced to the client; at the exclusion of all forms of damages and interests.

**5.2** Any reimbursement of all defective merchandise will be made by all means available to us: credit note, cheque etc. It shall be subject to prior payment of all outstanding invoices by the client and the said client shall respect his prior contractual agreements, especially those resulting in the current general conditions of sale.

**5.3** The client requesting a replacement or a reimbursement of an amount of damaged merchandise shall make the said products or materials available for possible inspection and expert assessment. In the case of negligence, our responsibility can not be brought into question.

**5.4** Sadev products need a followed up and regular maintenance device (cleaning once a year). At this occasion, a point shall be made on the aging of the products and all suspicious signs shall be reported to SADEV (abnormal oxidation, defective montage etc.).

## ARTICLE 6 : CAUSES OF MODIFICATIONS OF AGREED CONDITIONS

**6.1** In the case where one or more modifications of the client's situation would unfavourably influence the client credit that we have accorded to him, we reserve the right to unilaterally cancel the current contract and /or demand new guarantees.

**6.2** For all contracts made with the client, the client credit which we consented to provide shall be limited to the initial agreed contract. In consequence, if the client makes additional orders while the initial contract is not fully paid, in such a way that this new situation unfavourably modifies client credit that we consented to provide, we reserve the right to demand new guarantees from the client or to demand anticipated payment of his obligations in order to recreate a favourable client credit with our company.

**6.3** If the agreed deal involves more than one delivery and if the client refuses an expected delivery or he does not pay the totality of the contractual payment obligations as contained in the invoice that we have sent him, the whole deal is CANCELLED. In consequence, the client cannot refuse any demand for compensation with regard to our "delivery required", which then becomes null and void. Furthermore, the vendor may, according to a common agreement between the parties, exercise the option of requesting payment of all sums due by referring to the initial order and the contract agreed to by all parties. Therefore, all sums due concerning the order in question and all other nature of sums due to us by the said client become immediately payable, irrespective of the previously agreed contractual conditions; without any formal notice on our part, or further discussion.

**6.4** In the case of late payment or partial payment of instalments, except in the case of prior written agreement from us, deliveries are suspended until entire payment of the total sum due is made; including the capital and interest; and the agreement made between the parties is cancelled.

**6.5** In the case of non respect of any of the obligations from the agreement or the present general conditions of sale, we reserve the right to cancel the intervening sale(s) which shall come into effect ten days after reception of a registered letter, if no action is taken beforehand.

## ARTICLE 7 : PAYMENTS

**7.1** Payments are made out to us, and sent to our billing address.

**7.2** Respect of the contractual payment terms is imperative. Unless otherwise stipulated, our invoices shall be paid 30 calendar days from the date of dispatch of the merchandise. In the case of payment by bill of exchange, the purchaser is obliged to return the effects sent to him within 7 days.

**7.3** Pursuant to Article L441-6 of the Commercial Code in the case where the sums due have not been paid at the agreed date, penalties for late payment – of an amount equal to three times the legal rate of interest shall be applied to said sums due, and shall be calculated until full and complete payment. Recovery costs: flat rate of 40 euros.

**7.4** In the case of late payment or partial payment of the fixed amount due, we reserve the right to suspend deliveries until payment of the sums due, including the capital and interest.

**7.5** According to a common agreement between parties, a surcharge of EUR 150 will be applied for each unpaid account receivable.

**7.6** If the financial situation of our client is not satisfactory, we reserve the right to demand new guarantees and cancel the contract.

**7.7** The agreed prices take into account monetary and economic conditions, and the price of raw materials at the time. We reserve the right to bill all or part of the transaction at different prices, according to the variations these conditions may undergo, whether it be before the order is made or during the execution of the transaction. Our prices

are always based on the valid market price at the moment of the presentation of the offer or registration of the order; and can be reappraised in the case of modifications of said price.

## ARTICLE 8 : QUALITY AND QUALITY CONTROL OF DELIVERED PRODUCTS

**8.1** Except in the case of a specific request made by the client, being subject to a written agreement between the parties, concerning the special quality of the products or certain defined controls of quality applied to the products; the sold merchandise have a standard, habitual, market quality.

**8.2** All information concerning quality, the chemical composition, the characteristics and physical properties etc of the sold merchandise are simply informative and do not, under any circumstances, imply any form of guarantee by the vendor; unless stipulated otherwise.

## ARTICLE 9 : PURCHASING CONDITIONS OF THE CLIENT

**9.1** Making an order, or confirming an order implies full acceptance of the present general conditions of sale WITHOUT reserve by the client. Therefore the client expresses that he is FULLY AWARE of the present general conditions of sale.

**9.2** In consequence, the client or purchaser concerned by the present conditions of sale RENOUNCES his own conditions of sale; irrespective of the terms, and specifically in the case where he has addressed us conditions of sale or other documents containing similar provisions which are contrary to our own conditions of sale, unless the said provisions are part of a special written agreement signed by the parties that allows the waiver of these terms.

## ARTICLE 10 : RESERVATION OF TITLE

We sell under reservation of title - without exception - all products, materials and merchandise that we commercialize.

We maintain ownership of delivered merchandise, as a guarantee on present and future accounts receivable that we impose on our buyer until complete payment by the latter of the sums due. Our right of ownership extends to new products from the transformation of merchandise under reservation of title. The buyer manufactures the new product for us (at the exclusion of his own reservation of title). He cannot therefore, make any claims against us. If other suppliers, having themselves an extended reservation of title, are implicated in the transformation of merchandise, we become co-owners with them of the final product at the exclusion of the purchaser, added value included. Our share of the ownership of the new goods shall correspond to a percentage of the billing value of our merchandise over the total billing value of other products, under reservation of title in the transformation process. The purchaser immediately assigns his accounts receivable as well as all related rights to us, as a guarantee from the resale of the merchandise under reservation of title; corresponding to our present and future deliveries, within the limits of our participation in the co-ownership. As long as the purchaser respects the contractual obligations, he has the right to resell the merchandise delivered under reservation of title and he may himself proceed to the collection of assigned claims. In the case of late payment or well-founded doubts regarding solvency or financial credibility of the purchaser, we have the right to recover the assigned claims ourselves and take back the delivered merchandise under reservation of title; while only a formal document will allow cancellation of the contract.

## ARTICLE 11 : ATTRIBUTION OF JURISDICTION

Attribution of jurisdiction is made exclusively to the tribunals of ANNECY, even in the case of multiple defendants; all of which is an essential condition in the framework of our business activity. Acceptance of regulations or payment outside ANNECY, does not lead to substitution, or derogation of this clause.

