



PROJECT-OUT WINDOWS AND TOP HUNG WINDOWS



F11.13 FRICTION HINGES

01.09.2013



FRICITION HINGES

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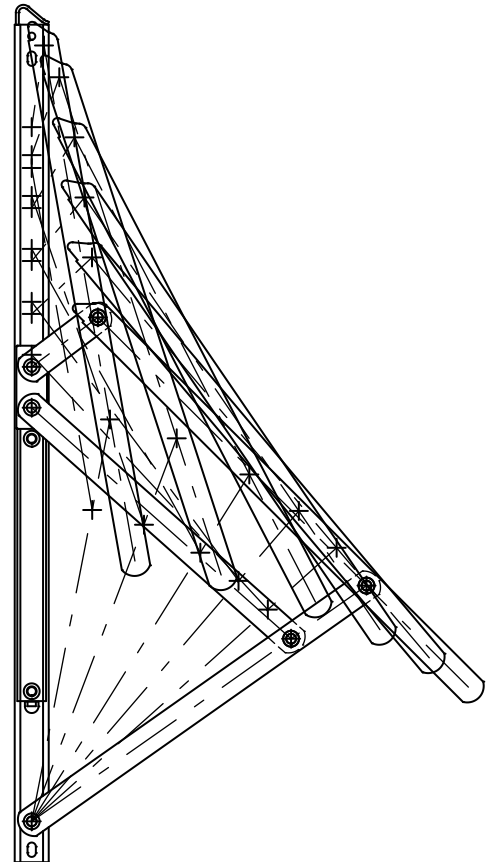
1. General information

Designed for the growing international trend for natural ventilation in curtain walling.

The heavy duty friction hinges n° P691-... have a large application field.

Friction hinges n° P694-... are ideal for domestic use.

- Easy to fit, fully concealed once fitted.
- Adjustable friction mechanism.
- Effective weather sealing and draught-proofing.
- Smooth and balanced operation for life, windows open and close with ease.
- Suitable for PVC, aluminium and timber windows.
- Long and reliable life tested to operate for 50,000 cycles.
- Manufactured from high grade Austenitic (AISI 304) stainless steel for maximum lifetime, even in the most corrosive environment.
- The hinges are manufactured conform to all international window performance standards.
- The hinges are always ordered per pair.



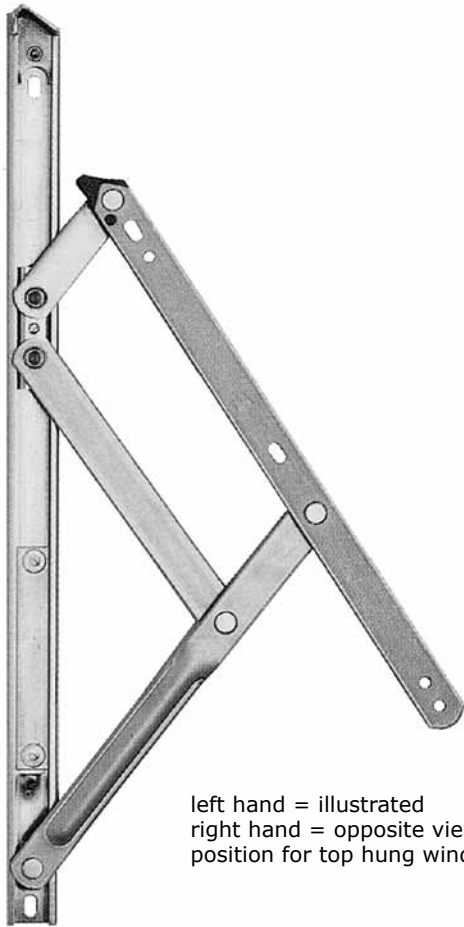
2. Friction hinge n° P691-...

Heavy duty friction hinge for enhanced performance for most applications.

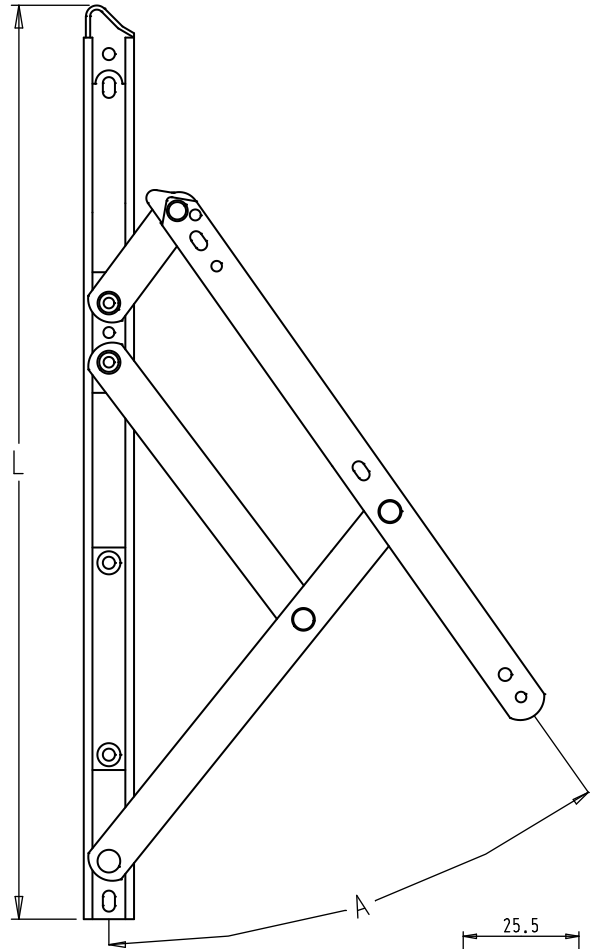
- Carries vents from 300 mm to 2500 mm high, up to 180 kg in weight.
- Self-balancing hinge eliminates the need for additional support arms. We recommend to use an additional window stay for vents of more than 100 kg.
- Austenitic (AISI 304) stainless steel end cap for added strength.
- Composite steel/plastic slider for strength, durability and smooth operation.
- Easy to use, adjustable opening stop on all top hung versions.
- Available in different lengths: from 262 to 682.5 mm top hung (n° P691-255, 305, 406V, 559(V), 660) and from 262 to 415 mm side hung (n° P691S-255, 406); see table next page.
- Types n° P691S-255, 406 side hung, open to around 85° and 60° for easy cleaning of windows.
- Types n° P691-406V, 559 top hung, are reinforced with an indentation in the third link.
- Types n° P691-559V, 660 top hung, are supplied with a special third link to provide a higher strength.
- Type n° P691-660 top hung, is available with adjustable fitting block n° S7280 (type 'R'). In this case the character 'R' is added to the order code.
- Example: A pair of reinforced friction hinges for top hung windows with vent height 1000 mm and vent weight 55 kg. Order code: P691-406V



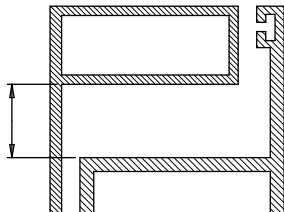
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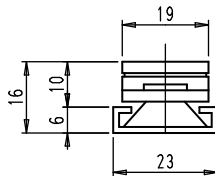
left hand = illustrated
right hand = opposite view
position for top hung window



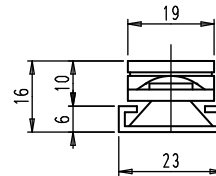
inside gap
16 to 18 mm



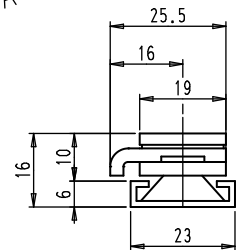
Installation dimensions



n° P691(S)-255
n° P691-305
n° P691S-406



n° P691-406V
n° P691-559



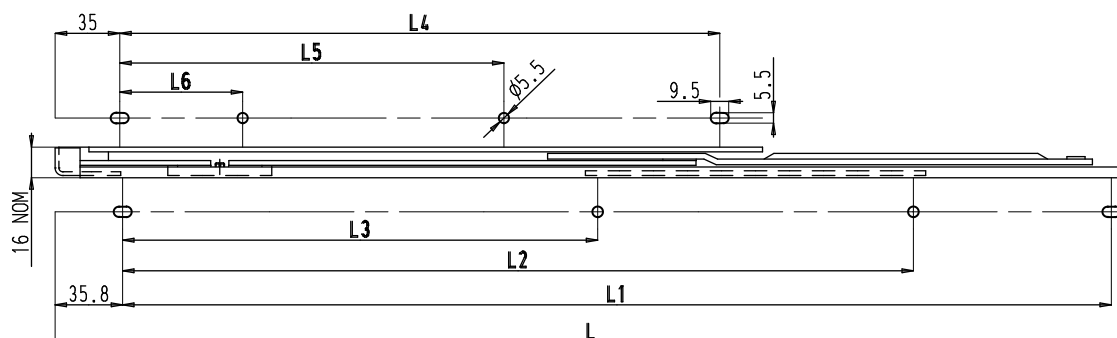
n° P691-559V
n° P691-660(R)

Order code per pair	Hinge length L (mm)	Min/max vent height (mm)	Min/max vent width (mm)	Max vent weight (kg)	Opening angle A (+/- 2,5°)
TOP HUNG					
P691-255	262	267/640	-	40	50°
P691-305	313	640/800	-	50	50°
P691-406V	415	800/1100	-	65	50°
P691-559	567	1100/1500	-	100	45°
P691-559V	570.5	1500/2000	-	100	20°
P691-660	682.5	2000/2500	-	100	20°
P691-660R	716.5	2000/2500	-	180	20°
SIDE HUNG					
P691S-255	262	-	300/660	38	85°
P691S-406	415	-	450/838	55	60°

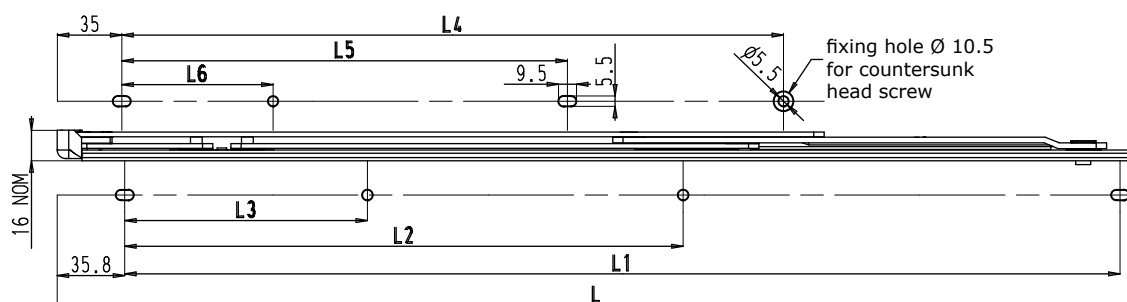
Type 'V' : hinge with reinforced third link (indicate when ordering)
Type 'R' : hinge with adjustable fitting block (indicate when ordering)
We recommend to use an additional window stay for vents of more than 100 kg.



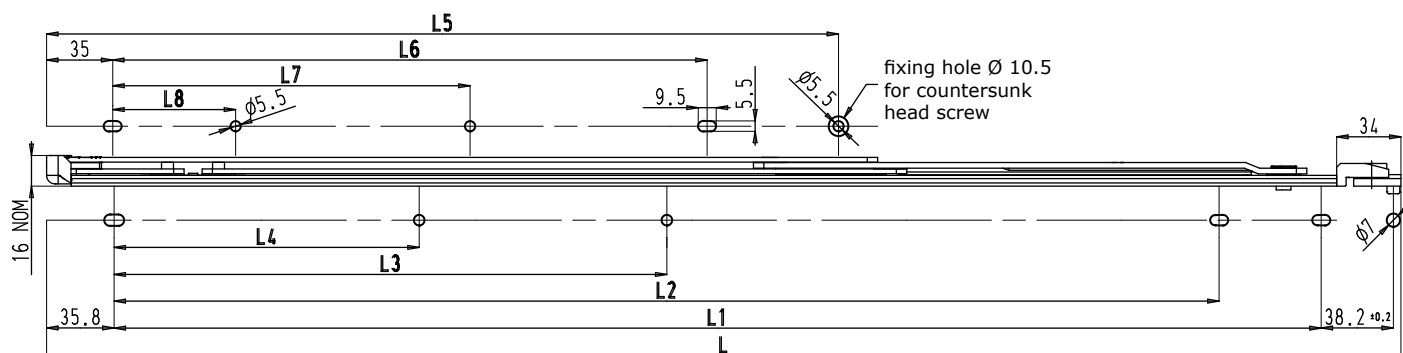
3. Installation instructions friction hinge n° P691-...



Friction hinge	L	L1	L2	L3	L4	L5	L6
P691-255	262	218	178	-	165	41	-
P691-305	313	269	213	-	190	64.5	-
P691-559	567	523	418.5	251.5	317.5	203	65
P691S-255	262	218	178	-	165	34	-
P691S-406	415	370.5	213	-	241	65	-



Friction hinge	L	L1	L2	L3	L4	L5	L6
P691-406V	415	370.5	304	215.5	241	118.5	-
P691-559V	570.5	526.5	295.5	-	350	236	80



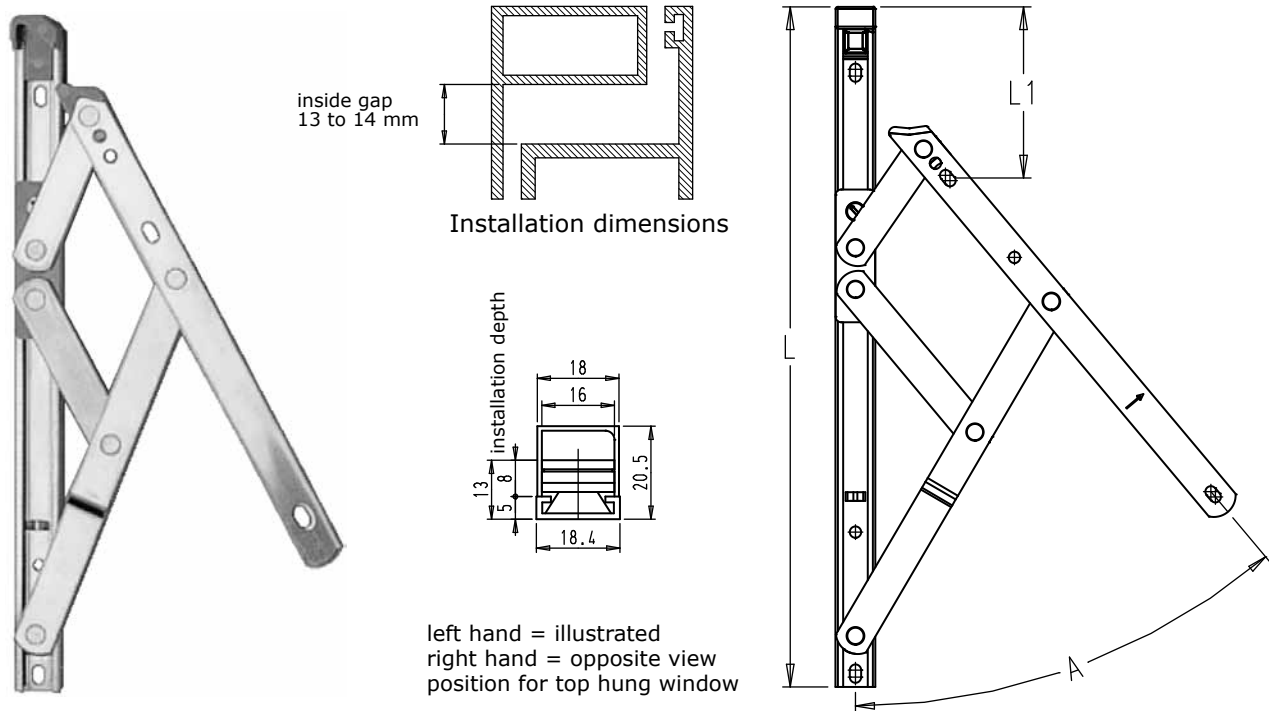
Friction hinge	L	L1	L2	L3	L4	L5	L6	L7	L8
P691-660	682.5	-	584.5	292.5	161.5	419	314.5	189	65
P691-660R	716.5	638.5	584.5	292.5	161.5	419	314.5	189	65



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4. Friction hinge n° P694-...

Standard purpose friction hinge for enhanced performance and minimum cost installations.

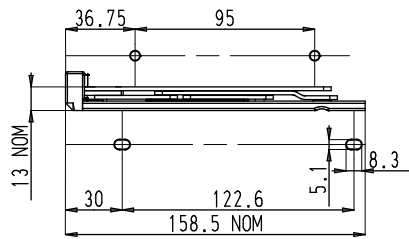


- Extremely cost effective friction hinge for small and light windows.
- The friction hinges are standard supplied in ferritic (AISI 430) stainless steel for low exposure areas. On request they can also be delivered in austenitic (AISI 304) stainless steel for maximum anti-corrosion durability, essential for exposed coastal locations and many industrialised inland areas.
- Carries top hung vents from 0.3 m to 1.2 m high or side hung vents from 0.6 m to 0.7 m wide.
- Allows side hung vents to open up to 60° for easy cleaning inside the building.

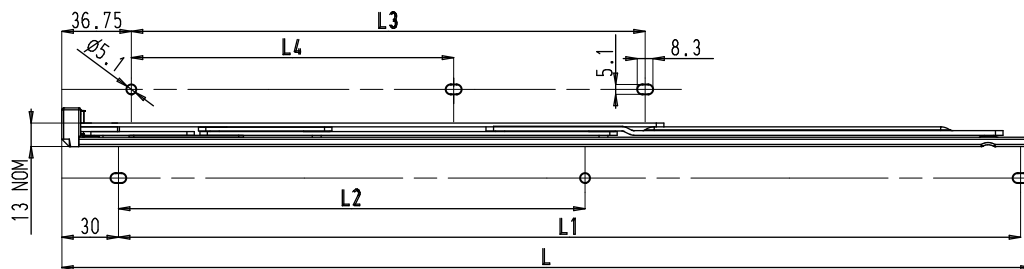
TOP HUNG (max. vent width = 1200 mm)						
Order code per pair	Hinge length L (mm)	Max vent height (mm)	Min vent height (mm)	Max vent weight (kg)	Opening angle A (+/-2,5°)	Dimension 'L1' (mm)
P694-159	159	300	150	10	50°	63
P694-209	209	350	200	12	65°	119
P694-259	259	400	275	16	80°	131
P694-310	310	550	350	20	80°	164
P694-412	412	780	500	21	80°	239
P694-513	513	1100	700	26	50°	215
P694-615	615	1300	850	40	37.5°	156
SIDE HUNG (max. vent height = 1300 mm)						
Order code per pair	Hinge length L (mm)	Max vent width (mm)	Min vent width (mm)	Max vent weight (kg)	Opening angle A (+/-2,5°)	Dimension 'L1' (mm)
P694S-310	310	600	300	22	60°	172
P694S-412	412	700	400	24	60°	170



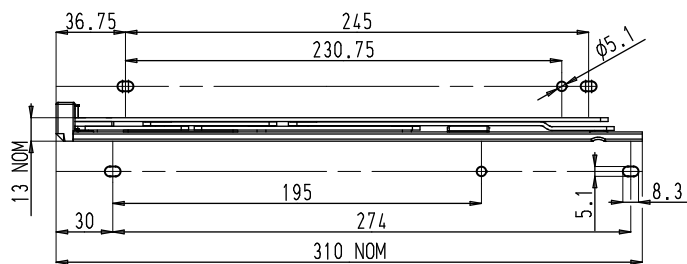
5. Installation instructions friction hinge n° P694-...



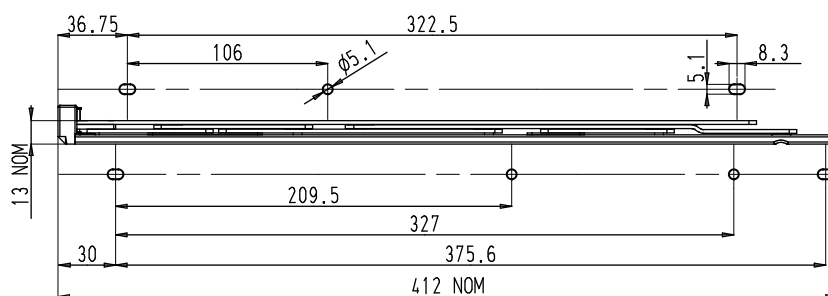
n° P694-159



Friction hinge	L	L1	L2	L3	L4
P694-209	209	172.5	121.5	119.5	18
P694-259	259	223	180	153	32
P694-310	310	274	209.5	188	47
P694-412	412	375.5	281	228.5	106
P694-513	513	477	247	272	170.5
P694-615	615	579	195	322.5	220.5



n° P694S-310

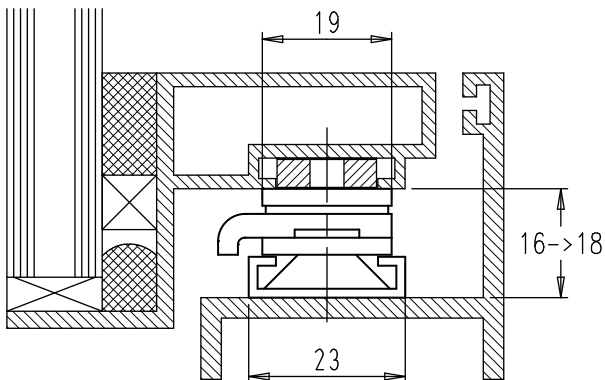


n° P694S-412

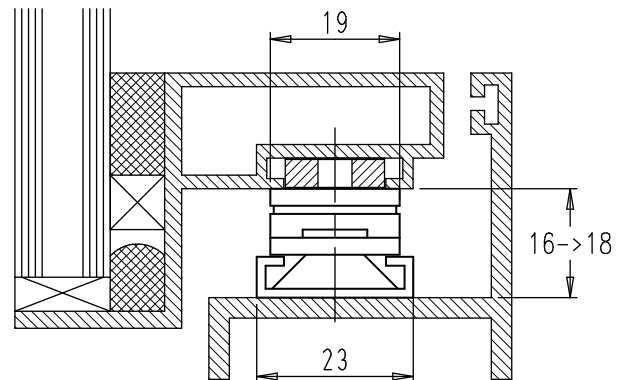


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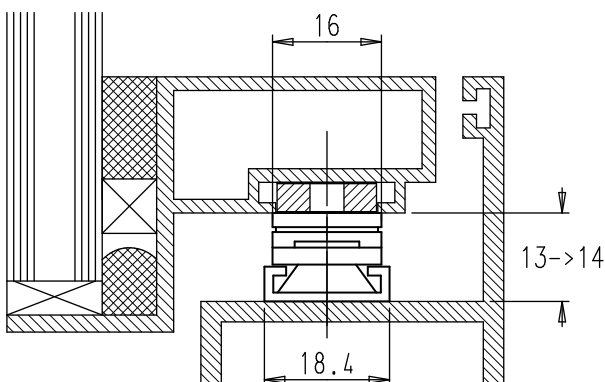
6. Application examples



Reinforced friction hinge type P691-559V
with packer under the vent arm.



Standard friction hinge type P691-...
with packer under the vent arm.



Friction hinge type P694-...
with packer under the vent arm.

Note: when fitting the friction hinge on the groove, we recommend to support the hinge with packers.

7. Additional information

- Recommended maximum dimensions should not be exceeded without prior approval from Sobinco.
- Vent heights and widths are overall vent sizes (not overall frame sizes). For maximum vent weights and widths, consult profile manufacturers for recommendations on requirements of system strength and sealing.
- Installation:
 - Hinges must be fitted between two parallel faces in accordance with the type of friction hinge (see installation dimensions).
 - All fixing positions of the hinges must be used.
 - The hinges are fixed with standard M5 cylinder head screws into minimum 6 mm screw-thread depth.
 - The upper part of the hinges should be fitted preferably at 2 mm from the top inside corner of the frame.