



HS90 - EXTREME

- Maximum Vent Width of 950 mm and a Maximum Weight of 35 Kg.
- Opening Angle of 90 Degrees.
- Available in 13mm and 17mm Stack Heights
- Tested to 50,000 cycles for Durability.
- Easy to fit with adjustable Friction mechanism.
- Overlap slide for enhanced smooth operation.
- 2 Reinforced austenitic Heavy Duty links for added strength.
- Easy clean complies with BS8213.
- The HS90 Extreme conforms to (BS6375 Part 2 1987), North America (AAMA 904.1), and Singapore (SISIR 212 1998) AND BBA Assessment report 2161A.

PRODUCT	SIZE	SIZE	WINDOW SIZE APPROX WIDTH MM	WINDOW WEIGHT APPROX KG	STACK HEIGHT MM	OPENING ANGLE
HS12-90 Extreme	12	311	750	30KG	13mm & 17mm	87 DEG
HS16-90 Extreme	16	406	950	35KG	13mm & 17mm	84 DEG





HD10R/16R/22R: RESTRICTED HEAVY DUTY FRICTION STAYS

Heavy-Duty Restricted friction stay for enhanced performance with timber, Upvc and large section aluminum.

- Easy to fit with adjustable friction mechanism.
- Can be restricted up to 3 different angle of openings
- Smooth and balanced operation for life windows open and close with ease.
- Effective weather sealing and draught proofing fully concealed once fitted.
- Conforms to BS8213 Minimum 95mm gap for Window Cleaning (Profile Dependant)
- Corrosion resistance meets the requirements of BS 7412: 1991.
- Manufactured from high-grade Austenitic stainless steel for maximum longevity. Even in the most corrosive environments.
- Composite steel /plastic slider for strength, durability and smooth operation.
- The Heavy Duty range has been proven to a lifetime 50,000 cycles.
- The Heavy Duty friction stays conforms to all leading international window performance standards in the UK (BS6375 Part 2 1987), North America (AAMA 904.1), France (NFP-20-302) and Singapore (SS 212 1998).
- On any windows over 32Kg we recommend that you fit our Heavy Duty Friction Arms (HD102)

	RECOMMENDED MAXIMUM WINDOW WEIGHTS & SIZES									
PRODUCT	TOP/SIDE HUNG	SIZE	SIZE	WINDOW SIZE APPROX WIDTH MM	WINDOW SIZE APPROX HEIGHT MM	WINDOW WEIGHT APPROX KG	MAXIMUM OPENING ANGLE			
HD10R	TOP	10.3	262	2000	650	50Kg @ 50 ° & 40KG @' 84°	50° & 84°			
HD16R	TOP	16.3	415	2000	800	100Kg @ 30°,55Kg @ 50° & 50Kg @ 90°	30°,50° or 90°			
HD22R	TOP	22.3	567	2000	1500	100Kg @ 20°,80Kg @ 45° & 75Kg @ 90°	20°,45° or 90°			
HD10R	SIDE	10.3	262	660	1524	34.5Kg	50° & 84°			
HD16R	SIDE	16.3	415	762	1619	42Kg	30°,50° or 90°			
HD16R	SIDE	16.3	415	700	1600	60Kg @ 30° & 50° 42Kg @ 90°	30°,50° or 90°			

IT IS THE RESPONSIBILITY OF THE WINDOW MANUFACTURER TO ENSURE THAT THE FINISHED WINDOW MEET ANY REQUIRED SAFETY AND PERFORMANCE SPECIFICATIONS





HD22SB, HD26-180 & HD28 HEAVY DUTY SELF-BALANCING STAYS FOR COMMERCIAL APPLICATIONS.

Heavy-duty self-balancing handed friction stay for enhanced performance with top hung timber, Upvc and large section aluminium.

- Carries commercial vents up to 2.5m height and 180kg in weight.
- East to fit with adjustable friction mechanism.
- Smooth and balanced operation for life windows open and close with ease.
- Effective weather sealing and draught proofing fully concealed once fitted.
- Manufactured from high-grade Austenitic stainless steel for maximum longevity. Even in the most corrosive environments.
- Austenitic stainless steel cap for added strength.
- Self-balancing stay eliminates the need for additional support arms.
- Composite steel /plastic slider for strength, durability and smooth operation.
- The Heavy Duty range has been proven to a lifetime 50,000 cycles.
- Conforms to all leading international window performance standards in the UK (BS6375 Part 2 1987), North America (AAMA 904.1),
 France (NFP-20-302) and Singapore (SS 212 1998).

PRODUCT	SIZE	SIZE	WINDOW SIZE APPROX HEIGHT MM	WINDOW WEIGHT APPROX KG	STACK HEIGHT MM	OPENING ANGLE
HD22SB	22.3	567	1500	100Kg @ 20° & 80Kg @ 40°	16	20 & 40 DEG
HD26-180	27.1	689	2500	180KG	16	20 DEG
HD28	27.8	707	2200	100KG	16	15 DEG





FORTIS HDA FRICTION STAYS FOR COMMERCIAL APPLICATIONS.

Heavy-Duty Handed friction stay for enhanced performance in Top & Side Hung for Timber, Upvc and large section Aluminium.

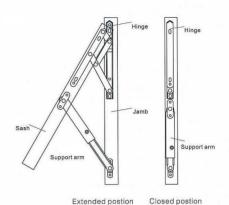
- Carries commercial vents up to 1200mm Wide or 1800mm High and 140kg in weight.
- Stays available in 2.5mm Austenitic Steel or 3.0mm to special order
- 16.5mm Stack height
- East to fit with adjustable friction mechanism.
- Smooth and balanced operation for life windows open and close with ease.
- Effective weather sealing and draught proofing fully concealed once fitted.
- Manufactured from high-grade Austenitic stainless steel for maximum longevity. Even in the most corrosive environments.
- Austenitic stainless steel cap for added strength.
- Additional linkage for greater strength and rigidity.
- Composite steel /plastic slider for strength, durability and smooth operation.
- Conforms to all leading international window performance standards in the UK (BS6375 Part 2 1987), North America (AAMA 904.1), France (NFP-20-302) and Singapore (SS 212 1998).
- On any windows over 32Kg we recommend that you fit either our Heavy Duty Friction Arms (HD102), TEL or TELK support arm

	RECOMMENDED MAXIMUM WINDOW WEIGHTS & SIZES										
PRODUCT	APPLICATION	SIZE INS	SIZE MM	WINDOW SIZE APPROX WIDTH MM	WINDOW SIZE APPROX HEIGHT MM	WINDOW WEIGHT APPROX	OPENING ANGLE				
HDA-16-3.0mm	SIDE HUNG	16.9	400	750		45KG	88 DEG				
HDA-16-2.5mm	SIDE HUNG	16.9	400	750		42KG	88 DEG				
HDA-18-3.0mm	SIDE HUNG	18.3	466	1000		60KG	15 DEG				
				800		43KG	88 DEG				
HDA-18-2.5mm	SIDE HUNG	18.3	466	800		40KG	88 DEG				
HDA-24T90-3.0mm	SIDE HUNG	24	610	1200		40KG	20 DEG				
HDA-16-3.0mm	TOP HUNG	16.9	400		1400	90KG	27.5 DEG				
HDA-16-2.5mm	TOP HUNG	16.9	400		1100	72KG	27.5 DEG				
HDA-18-3.0mm	TOP HUNG	18.3	466		1400	105KG	27.5 DEG				
HDA-18-2.5mm	TOP HUNG	18.3	466		1200	87KG	27.5 DEG				
HDA-24T90-3.0mm	TOP HUNG	24	610		1800	140KG	20 DEG				
HDA-24T90-2.5mm	TOP HUNG	24	610		1800	115KG	20 DEG				



TELESCOPIC SUPPORT ARM

- Manufactured from high grade Austenitic Stainless Steel
 Tel series used on top hung windows to limit the opening. The vent can be locked open at a desired position for ventilation and to prevent sudden closing during wind gusts. To unlock the support arms from its opening position, simply lift the sash slightly then close.
- © TELK-14" is suitable for Top Hung windows, it allows 5 different restriction points.

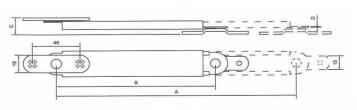




Technical Data

SIZE	Α	В	С	D
TEL-8"	203	155	16	1.0
TEL-10"	253	180	16	1.0
TEL-12"	305	205	16	1.0
TEL-14"	354	230	16	1.0
TEL-16"	408	257	16	1.0
TEL-20"	514	310	16	1.0

SIZE	А	В	С	D
TEL-8"A	203	155	16.5	1.2
TEL-10"A	253	180	16.5	1.2
TEL-12"A	305	205	16.5	1.2
TEL-14"A	354	230	16.5	1.2
TEL-16"A	408	257	16.5	1.2
TEL-20"A	514	310	16.5	1.2



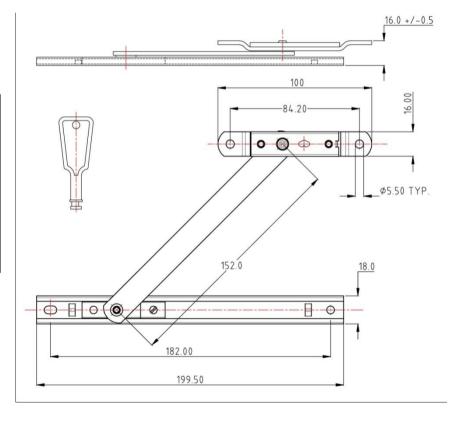
TEL & TEL-A SERIES





The locking friction arm mechanism is released using the key allowing the vent to open to it's full opening potential, facilitating the cleaning of the exterior glass from inside the property, before being re-engaged to retain the restricted opening.

- For use in a 16mm cavity
- Manufactured in Austenitic Steel
- Non handed product
- Easy to fit no routing required
- Can be used on windows without reinforcement







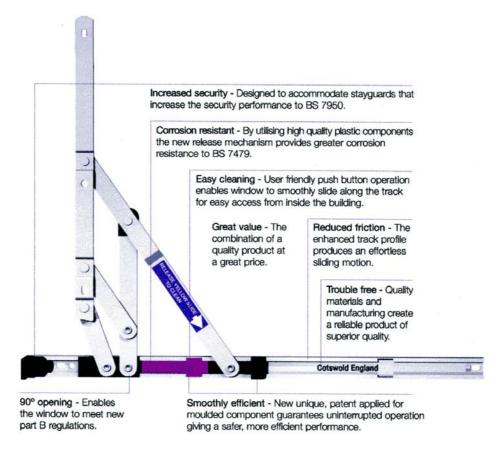
SP312/ 316EZ SLIMLINE FIRE ESCAPE/EASY CLEAN FRICTION STAY

- Full opening to 90° Providing clear egress in excess of 500mm on a 600mm wide vent, enables the window to meet Part B regulations
- Designed to accommodate staygaurds that increase the security performance to BS7950
- By utilising high quality plastic components the new release mechanism provides greater corrosion resistance to BS7479
- User friendly push button operation enables window to slide smoothly along the track to the easy clean position providing access from inside the building.
- New unique patent applied for moulded component guarantees uninterrupted operation giving a safer, more efficient performance
- To reset simply close the window and then re-open to go back to the egress position and close
- When fitting the SP312 /316 please observe. BS8213 Part 1: 1991 Code of practice for safety in use and during cleaning of windows.

Available in Ferretic steel (normal applications) and Austenitic steel (coastal / high humidity areas)

	RECOMMENDED MAXIMUM WINDOW WEIGHTS & SIZES										
APPLICATION	PRODUCT	SIZE	SIZE MM	WINDOW SIZE APPROX WIDTH MM	WINDOW SIZE APPROX HEIGHT MM	WINDOW WEIGHT APPROX KG	STACK HEIGHT MM	OPENING ANGLE			
SIDE HUNG	SP316EZ (HANDED)	16	413	600	1200	21	13 & 17	89°			
SIDE HUNG	SP312EZ (HANDED)	12	311	600	1200	18 or 21 with Riser	13 & 17	85°			





SP316/312 F7 - EXTREME

- Initial opening similar to Standard Side Hung Friction Stay
- Full opening to 90° Providing clear egress in excess of 500mm on a 600mm wide vent
- Easy to operate thumb catches allow the vent to slide to the Easy clean position giving between 100 and 250mm clear opening
- To reset simply close the window and then re-open to go back to the egress position and close
- When fitting the SP312 /316 please observe. BS8213 Part 1: 1991 Code of practice for safety in use and during cleaning of windows.

PRODUCT	SIZE	SIZE	WINDOW SIZE APPROX WIDTH MM	WINDOW WEIGHT APPROX KG	STACK HEIGHT MM	OPENING ANGLE
SP312 EZ Extreme	12	311	700	30KG	13mm & 17mm	85 DEG
SP316 EZ Extreme	16	406	800	35KG	13mm & 17mm	89 DEG





HEAVY DUTY PARALLEL STAY

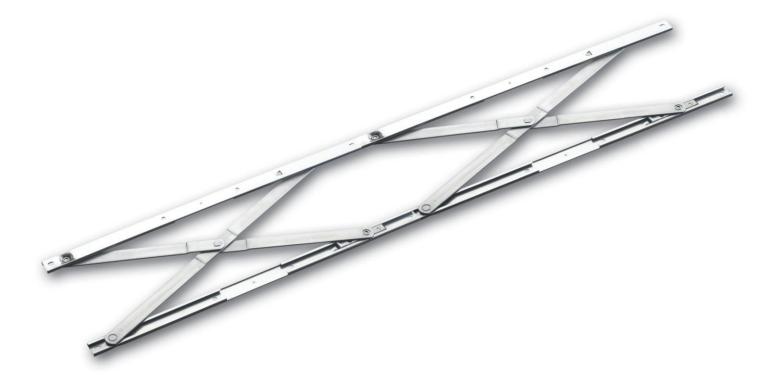
Heavy-Duty Parallel Opening for enhanced performance with timber, Upvc and large section aluminum.

- · Parallel opening windows provide ultimate natural ventilation by allowing a balanced air flow around the entire opening.
- Can be connected to a building management system as part of an automated solution for climate control
- Can be operated manually or using electric actuators
- Sash adjustment feature for use with heavier vents
- The Cotswold Parallel stay closes inline which allows for greater choice in profile section
- Hinge mechanism is fully concealed when the sash is closed
- Adjustable friction mechanism for controlling manually operated sashes
- Manufactured from high-grade Austenitic stainless steel for maximum longevity. Even in the most corrosive environments.
- Composite steel /plastic slider for strength, durability and smooth operation.
- Full technical and sales support which will cover consultancy per project basis and on-site advice when necessary

Note:- The Maximum weights and sizes below are based on the fitting of 2 pairs of Parallel stays Larger sizes and weights are possible by increasing the number of hinges per window

Max Vent	Max Vent	Max Vent	Opening	Cavity (mm)
Weight (Kg)	Height (mm)	Width (mm)	Distance (mm)	
100	970	970	180	16.9 -1.0mm or 21.0 -1.0mm





HEAVY DUTY PARALLEL STAY

Heavy-Duty Parallel Opening for enhanced performance with timber, Upvc and large section aluminum.

- 36" Parallel opening windows provide ultimate natural ventilation by allowing a balanced air flow around the entire opening.
- Can be connected to a building management system as part of an automated solution for climate control
- Can be operated manually or using electric actuators
- Sash adjustment feature for use with heavier vents
- The Cotswold Parallel stay closes inline which allows for greater choice in profile section
- Hinge mechanism is fully concealed when the sash is closed
- Adjustable friction mechanism for controlling manually operated sashes
- Manufactured from high-grade Austenitic stainless steel for maximum longevity. Even in the most corrosive environments.
- Composite steel /plastic slider for strength, durability and smooth operation.
- · Full technical and sales support which will cover consultancy per project basis and on-site advice when necessary

Note:- The Maximum weights and sizes below are based on the fitting of 2 pairs of Parallel stays Larger sizes and weights are possible by increasing the number of hinges per window

Max Vent	Max Vent	Max Vent	Opening	Cavity (mm)
Weight (Kg)	Height (mm)	Width (mm)	Distance (mm)	
200	1250	1250	180	16.9-1.0 or 21.0-1.0mm