

Limiters and stops



Opening limiters

Hold-open limiters

Dual opening limiter

Wire rope safety device

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WSS – Your supplier for hardware for windows and additional accessories

In order to meet the growing demands of the market, WSS impresses with a cleanly coordinated and comprehensive product portfolio for limiters and stops. WSS offers various solutions for different requirements and areas of application. As the products are tested in accordance with DIN EN 13126-5:2015-01 and meet various classes (test cycles / notch test), a wide range of applications can also be covered in public buildings such as kindergartens, schools, universities and hospitals.

Some of the limiters and stops can be installed as independent products in addition to the window fittings or can also be retrofitted with ease – in doing so, they protect the fittings installed and the window, ensuring a longer service life.

Other concepts are based on the complete integration of the limiter or stop into the actual window fitting, so that the functions of the fitting and the limiter/stop combine seamlessly, ensuring safe and easy operation.

Note:

The opening widths and sash widths stated in this catalogue are specially designed for Standard and Heavy Duty (visible hinge side) and Style 180° (concealed hinge side) WSS window fittings. If our product solutions are installed with fittings from other manufacturers, please contact us to check the installation situation.

The installation of a limiter or stop can result in restrictions for the window fitting – e.g. the use of a centre lock may not be possible or only possible to a limited extent.

The limiters and stops are not fall protection devices!



Fridolin freudenfett / CC BY-SA 4.0 (<https://creativecommons.org/licenses/by-sa/4.0/>), from Wikimedia Commons, „Moabit_Heidestraße_50_Hertz.jpg“, https://upload.wikimedia.org/wikipedia/commons/d/d1/Moabit_Heidestra%C3%9Fe_50_Hertz.jpg, edited by WSS

Variety of limiters and stops

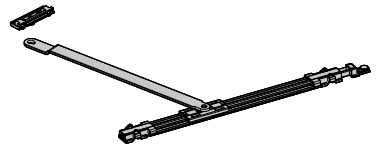
Opening limiter

The **simple opening limiter** holds the window sash in the open position with its freely adjustable end position latch.



Handle-controlled hold-open limiter

With the **handle-controlled hold-open limiter**, WSS has created a solution that allows infinitely variable opening positions simply by using the window handle - the window sash is held in position by the braking effect.



Force-absorbing opening limiter

The **force-absorbing opening limiter** keeps the window sash in the selected open position with its simple braking effect, reduces the risk of the window sash slamming shut and offers a cushioned end stop in the open position (approx. 90°) to protect the hinge side.



Lockable opening limiters

The **lockable opening limiter** (normal and reinforced version) can be used for different window types and different sash weights. The 2-stage limiting offers an adjustable opening width from 89 to 120 mm. The window can only be fully opened after key operation. When closing, the locking cylinder is self-latching to prevent unauthorised or unintentional opening.



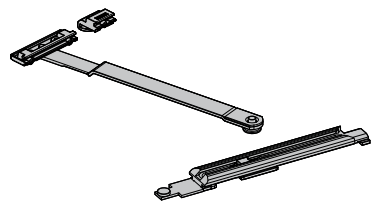
Opening limiter with magnetic stop

Thanks to its choice of material, the **opening limiter with magnetic stop** offers the highest level of security and the possibility of tamper-proof installation. The opening width is determined by the different lengths of the arm and the position of the screw-on parts for the sash frame. The sash is held in position in the selected opening width by way of magnets.



Handle-controlled and lockable dual hold-open limiters






The **handle-controlled and lockable dual hold-open limiter** offers individually adjustable opening widths of 89, 100 or 120 mm via an adjustable stop. It is held in position at the selected opening width by an anti-slam device. Only after key operation can the window sash be opened to the preset opening width with the handle in the turning position.



Note:

For enquiries please use our article questionnaire on our website:
<https://www.wss.de/beschlaege/beschlagtechnik-fuer-fenster>

Overview of technical features

	Lockable opening limiter	Lockable opening limiter, reinforced version	Handle-controlled convenient hold-open limiter	Latching, handle-controlled lockable hold-open limiter	Opening limiter with magnetic stop	Dual, handle-controlled lockable hold-open limiter	Dual, latching, handle-controlled lockable hold-open limiter
Availability				4th quarter 2020	1st quarter 2021		4th quarter 2020
Item no.	10.055. ...	10.056. ...	10.042. ...	10.054. ...		10.044. ...	10.043. ...
Catalogue page	8	9	10	11	12	13	14
Approved per:	DIN EN 13126-5	DIN EN 13126-5	DIN EN 1191		DIN EN 13126-5	DIN EN 13126-5	DIN EN 13126-5
Notch test pendulum class **	 2	 2			 5	 3	 3 *
Corrosion resistant per DIN EN 1670 cl.5	X	X	X	X	X	X	X
20,000 cycles			X				
25,000 cycles	X	X		X	X	X	X
Turn-tilt sash	X	X			X		
Tilt-before-turn sash	X	X					
Side-hung sash	X	X	X	X	X	X	X
Drop-flap sash			X				
Top installation			X	X			
Bottom installation	X	X	X	X	X		
Top & bottom installation						X	X
Side installation			X				
Sash weights (max.)	130 kg	200 kg	200 kg	200 kg	200 kg	200 kg	200 kg
Sash widths (max.)	1,200 mm	1,200 mm	1,700 mm	1,600 mm	1,700 mm	1,600 mm	1,600 mm
Opening widths	89 or 100 mm + full opening	89 or 100 mm + full opening	Individual	120 mm + full opening	individually	89, 100 or 120 mm + full opening	120 mm + full opening

* paired installation assumed

** Information on the determination of the notch test pendulum classes

The pendulum classes are determined by an impact test per EN 13049. Such a test must be carried out to ensure that a limiter or stop can survive a mass (impact body / pendulum) colliding with the open window sash.

The impact body defined in ENV 1630 (an ellipsoidal pendulum) must not fit through any opening, must not loosen the sash of the test specimen, must not separate any fittings or glazing beading strips, or loosen or break parts in a dangerous way.

The impact body used always has the same weight (50 kg) – the pendulum classes are only defined by the different drop height of the impact body.



Pendulum class 1 = 200 mm drop height



Pendulum class 2 = 300 mm drop height



Pendulum class 3 = 450 mm drop height



Pendulum class 4 = 700 mm drop height



Pendulum class 5 = 950 mm drop height

At the end of the test, the limiter or stop must:

- Remain latched
- Continue to function as intended



Figure is not shown in installation position

Opening limiter

- For inwards-opening turn, turn-tilt and tilt-turn sashes (Euronut groove)
- Frame mounting can be clamped and screwed
- Opening angle up to approx. 90°
- Can be used right/left
- all parts made of rustproof materials

Item no.	Sash width, visible hinge side	Sash width, concealed hinge side
10.050.1.000.000	425-750	–
10.050.3.000.000	751-1.700	751-1.700
10.050.2000.000	–	550-750



Brake insert

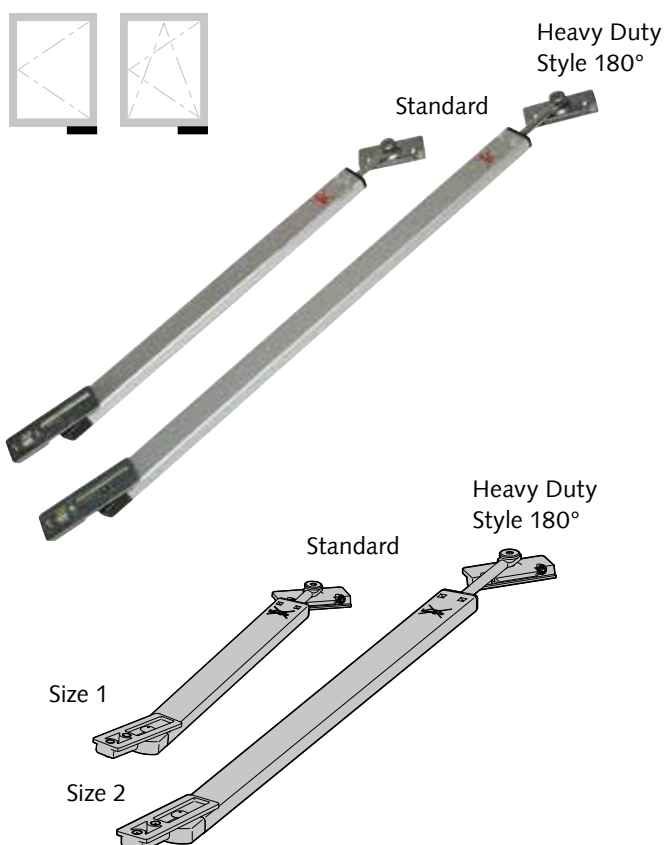
- Braking force seamlessly adjustable

Item no.

10.058.0.000.000

Note:

The brake insert may only be used on windows sashes with a visible hinge side as well as in the case of articles 10.050.----.- -- and 10.055.----.- -- !



Force-absorbing opening limiter

- For inwards-opening turn, turn-tilt and tilt-turn sashes
- Opening angle 90°
- For Standard and Heavy Duty
- Relief of the hinge parts through the force-absorbing effect in the open position (end position)
- Reduces autonomous movement of the sash
- Rustproof materials: Housing aluminium E6/C-0 anodised, piston rod stainless steel
- Maintenance-free
- can be used right/left
- Frame mounting and sash mounting can be clamped

Standard / Heavy Duty

Item no.	Leaf width		Material/finish
	visible hinge side	Size	
10.041.0100.114	460-999	1	Al E6/C-0 silver anod.
10.041.0400.114	1.000-1.700	2	Al E6/C-0 silver anod.

Style 180°

Item no.	Leaf width		Material/finish
	visible hinge side	Size	
10.041.5400.114	700-1.600	2	Al E6/C-0 silver anod.

Stop limiter Style 180°

- For inwards-opening turn, turn-tilt and tilt-turn sashes
- Opening angle 90°
- Rustproof materials
- can be used right/left
- Frame mounting and sash mounting can be clamped

Item no.	Leaf width		Material/finish
	visible hinge side		
10.041.5.000.405	450-699		Stainless steel 304 milled finish

Note:

This limiter can also be used in combination with our Standard and Heavy Duty fittings.

Note:

Without braking effect



Figure is not shown in installation position



Lockable opening limiter For turn-tilt / swing sash / tilt-turn

- For inwards-opening turn, turn-tilt and tilt-turn sashes (LM-Euronut groove)
- For Juliet balcony windows (not at ground level)
- For sash weights up to 130 kg and sash widths up to 1,200 mm
- After unlocking with the key, the sash can be moved to the cleaning position – after closing the window, the limitation to the ventilation position is automatically restored the next time the window is opened
- 2-stage opening width with latching – opening width individually adjustable
- Closing in the same manner with 2 keys, lock self-locking when key is removed
- See table for maximum opening widths
- Tested per DIN EN13126-5:2015-01 with 25,000 actuation cycles and notch test pendulum class 2 (opening widths 89 or 100 mm)
- Frame mounting can be clamped and screwed
- can be used right/left
- Lock rosette available in various colours
- all parts made of rustproof materials
- Temperature range from -25°C to +70°C

Item no.	Sash width / opening angle, visible hinge side	Sash width / opening angle, concealed hinge side
10.055.1000.---	450-575 / 75-45°	—
10.055.2000.---	576-880 / 90-32°	660-880 / 90-30°
10.055.3000.---	881-1.200 / 66-26°	881-1.200 / 65-25°

Available finishes:

- .735 (Zinc cast silver lacquered)
- .755 (Zinc cast RAL 9016 traffic white powder coated)
- .799 (Zinc cast in special finish)

Note:

The maximum opening angles listed above result from the opening width of the 1st latching step and the profile geometry (please specify profile system).
Special sizes or special opening angles on request.

Note:

It is not possible to combine the lockable opening limiter with a bottom centre lock.



Figure is not shown in installation position



Lockable opening limiter reinforced version for turn-tilt / tilt-turn / swing sash

- For inwards-opening turn, turn-tilt and tilt-turn sashes (LM-Euronut groove)
- For floor-depth windows and French windows (larger sash heights and weights)
- For sash weights up to 200kg and sash widths up to 1,200 mm
- After unlocking with the key, the sash can be moved to the cleaning position – after closing the window, the limitation to the ventilation position is automatically restored the next time the window is opened
- 2-stage opening width with latching (1st stage magnet-based holding position / 2nd stage with latching) – opening width individually adjustable
- Opening width individually adjustable – see table for maximum opening widths
- Closing in the same manner with 2 keys, lock self-locking when key is removed
- Tested per DIN EN13126-5:2015-01 with 25,000 actuation cycles and notch test pendulum class 3 (opening widths 89 or 100 mm)
- Frame mounting can be clamped and screwed
- can be used right/left
- Lock rosette available in various colours, optionally with anodised finish
- all parts made of rustproof materials
- Temperature range from -25°C to +70°C

Item no.	Leaf width/opening angle	Leaf width
	visible hinge side	hidden hinge side
10.056.1000.---	650-750 / 90-47°	650-750 / 66-47°
10.056.2000.---	751-900 / 83-65°	751-900 / 88-65°
10.056.3000.---	901-1.200 / 90-44°	901-1.200 / 90-44°

Available finishes:

- .735 (Zinc cast silver lacquered)
- .755 (Zinc cast RAL 9016 traffic white powder coated)
- .799 (Zinc cast in special finish)

Note:

The maximum opening angles listed above result from the opening width of the 1st latching step and the profile geometry (please specify profile system).

Special sizes or special opening angles on request.

Note:

It is not possible to combine the lockable opening limiter with a bottom centre lock.



Convenient hold-open limiter, handle-controlled for swing sash / drop-flap sash

- For inwards opening swing sash or outwards opening drop-flap sash (a limiter on each side, left/right – on request) (LM-Euronut groove)
- For horizontal installation in the bottom area (for horizontal installation in the top area on request)
- For sash weights up to 200 kg and sash widths up to 1,700 mm
- Seamlessly lockable in any position via window handle
- One-hand operation via the window handle – handle position turn to open / handle position closed to lock
- Three sizes for Standard and Style 180° hinge side (see table) Sash parts can be clamped / frame parts can be clamped and screwed
- Protection of the hinge side – Locking by frictional connection / clamping
- Sash parts can be clamped / frame parts can be clamped and screwed
- can be used right/left
- all parts made of rustproof materials

Item no.	Leaf width	Leaf width	Material/finish
	visible hinge side	hidden hinge side	
10.042.1000.114	580-999	–	Al E6/C-0 silver anod.
10.042.2000.114	1,000-1,700	725-999	Al E6/C-0 silver anod.
10.042.3000.114	–	1.000-1.700	Al E6/C-0 silver anod.

Note:

Included in the delivery:


1x Convenient hold-open limiter

1x Corner guide without incorrect operation safeguard



Available from 4th quarter 2020

Latching hold-open limiter Handle-controlled / lockable for swing sash

- For inwards opening swing sash (LM-Euronut groove)  3
- For sash weights up to 200kg and sash widths up to 1,600mm
- The window can be opened up to the preset opening width of 120 mm by turning the handle – after key operation the window can be opened fully
- Lockable in ventilation position (approx. 120 mm) via window handle
- Can be decoupled by unlocking a separate lock or a window handle to reach the cleaning position
- Can be converted - either with a self-latching lock, a lock with forced closing function or a lockable tilt-before-turn window handle / turn gear (one-hand operation) (see accessories page 14)
- Tested per DIN 13126-5:2015-01 notch test pendulum class 3 when using an additional dual hold-open limiter at the bottom for swing sashes – self-locking in combination with lock
- Protection of the hinge side – Locking by form-fit positive locking
- Sash parts and frame parts can be clamped and screwed (frame parts)
- can be used right/left
- all parts made of rustproof materials

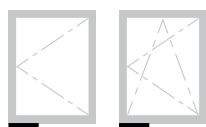
Item no.	Size	Material/finish
10.054.1000.405	1 *	Stainless steel 304 milled finish
10.054.2000.405	2 *	Stainless steel 304 milled finish

Note:

Included in the delivery:
1x Latching hold-open limiter
1x Specific corner guide

* Please check this table to determine the correct size.

Size	Leaf width visible hinge side	Leaf width hidden hinge side	Opening width
1	600-800	650-900	89
1	600-700	650-800	100
2	801-1,600	901-1,600	89
2	701-1,600	801-1,600	100
2	600-1,600	650-1,600	120



Available from 1st quarter 2021

Opening limiter with magnetic stop, reinforced version

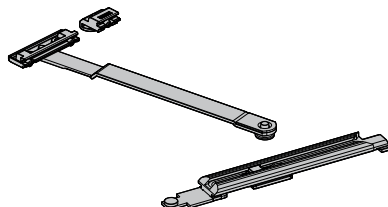


- For inwards opening swing sash or turn-tilt sash (LM-Euronut groove)
- For sash weights up to 200kg and sash widths up to 1,700mm
- Opening width individually adjustable via positioning components (89/100/120mm)
- See table for opening widths and sash widths
- Anti-slam device – Magnet holds window in open position
- Tested per DIN 13126-5:2015-01 notch test pendulum class 5 when installed in pairs (top/bottom)
- Sash parts and frame parts can be screwed
- can be used right/left
- all parts made of rustproof materials

On request



2x



Dual hold-open limiter Handle-controlled / lockable for swing sash



- For inwards opening swing sash (LM-Euronut groove)
- For sash weights up to 200kg when installed in pairs (top/bottom) and with sash widths up to 1600 mm
- Opening width individually adjustable (89/100/120mm) via adjustable stop with anti-slam device (see table)
- The window can be opened up to the preset opening width by turning the handle – after key operation the window can be opened fully
- Can be converted - either with a self-latching lock, a lock with forced closing function or a lockable tilt-before-turn window handle / turn gear (one-hand operation) (see accessories page 15)
- One version for top installation (window) or bottom installation (French windows)
- One-hand operation via the window handle
- Tested per DIN 13126-5:2015-01 notch test pendulum class 3 when installed in pairs (top/bottom) up to 1200 mm sash width – self-latching in combination with lock
- Sash parts and frame parts can be clamped and screwed (frame parts)
- can be used right/left
- all parts made of rustproof materials

Item no.	Size	Material/finish
10.044.1.000.405	1 *	Stainless steel 304 milled finish
10.044.2.000.405	2 *	Stainless steel 304 milled finish

Note:

Different sash dimensions possible on request.

Included in the delivery:

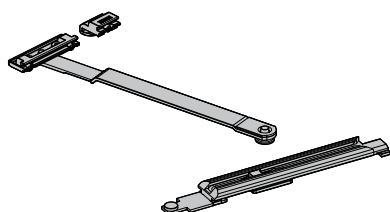
2x Latching hold-open limiter

Note:

Different lengths of the adapter operating rods depending on the opening width – please ensure that you observe the installation drawing and the table.

* Please check this table to determine the correct size.

Size	Leaf width visible hinge side	Leaf width hidden hinge side	Opening width
1	600-800	650-900	89
1	600-700	650-800	100
2	801-1,600	901-1,600	89
2	701-1,600	801-1,600	100
2	600-1,600	650-1,600	120



Available from 4th quarter 2020

Dual latching hold-open limiter Handle-controlled / lockable for swing sash



- For inwards opening swing sash (LM-Euronut groove)
- For sash weights up to 200kg when installed in pairs (top/bottom) and with sash widths up to 1600mm
- Opening width individually adjustable (89/100/120mm) via adjustable stop with anti-slam device (see table)
- Handle-actuated locking of the sash possible at 120mm
- The window can be opened up to the preset opening width by turning the handle – after key operation the window can be opened fully
- Can be converted - either with a self-latching lock, a lock with forced closing function or a lockable tilt-before-turn window handle / turn gear (one-hand operation) (see accessories page 15)
- Tested per DIN 13126-5:2015-01 notch test pendulum class 3 when installed in pairs (top/bottom) – self-latching in combination with lock
- Sash parts and frame parts can be clamped and screwed (frame parts)
- can be used right/left
- all parts made of rustproof materials
- Protection of the hinge side – Locking by form-fit positive locking

Item no.	Size	Material/finish
10.043.1.000.405	1 *	Stainless steel 304 milled finish
10.043.2.000.405	2 *	Stainless steel 304 milled finish

Note:

Different sash dimensions possible on request.

Included in the delivery:

- 1x Latching hold-open limiter
- 1x Hold-open limiter
- 1x Specific corner guide

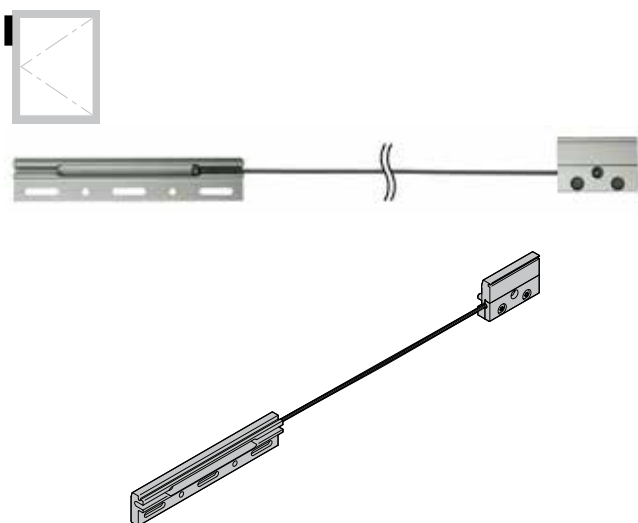
Note:

Different lengths of the adapter operating rods depending on the opening width – please ensure that you observe the installation drawing and the table.

* Please check this table to determine the correct size.

Size	Leaf width visible hinge side	Leaf width hidden hinge side	Opening width
1	600-800	650-900	89
1	600-700	650-800	100
2	801-1,600	901-1,600	89
2	701-1,600	801-1,600	100
2	600-1,600	650-1,600	120

Limiters and stops



Wire rope safety limiter for turn and tilt sashes

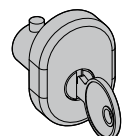
- Opening limiter for inwards opening side-hung windows or narrow ventilation hatches
- For vertical installation
- Opening width dependent on the installation position and freely selectable (89-120 mm)
- Available with/without tamper protection
- Possible window widths from 180 mm to 1700 mm
- Sash weights up to 250 kg
- can be used right/left
- Sash parts and frame parts can be screwed
- Completely rustproof materials
- Can be used as single or redundant solution

Note:

Only on request: The use of the wire rope safety limiter is dependent on the profile and must be checked on a case-by-case basis.

Further possible areas of application are side-hung windows, drop-flap windows, parallel step-out façade windows, tilt win-

Keyhole lock with rosette, self-latching



- Lock self-latching when key is removed
- For combining with lockable stops and limiters (please observe the respective installation drawing)
- Available in various colours
- all parts made of rustproof materials

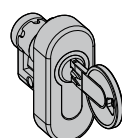
Item no.

10.058.1000.---

Available finishes:

- .735 (Zinc cast silver lacquered)
- .755 (Zinc cast RAL 9016 traffic white powder coated)
- .799 (Zinc cast in special finish)

Keyhole lock with rosette, with forced locking function



Available from 4th quarter 2020

- Lock with forced locking – Key can only be removed once the sash has been closed, the handle returned to the locking position and the lock has been locked
- For combining with lockable latching stops and hold-open limiters (please observe the respective installation drawing)
- Available in various colours
- all parts made of rustproof materials

Item no.

10.058.2000.---

Available finishes:

- .735 (Zinc cast silver lacquered)
- .755 (Zinc cast RAL 9016 traffic white powder coated)
- .799 (Zinc cast in special finish)



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