Turn-Tilt Fitting, Style 180°

**concealed installation, for aluminium window systems with sash overlap**

1 turn-tilt fitting, concealed installation with no visible fitting parts, for aluminium window system with a Euro groove and sash overlap.

**Leaf dimensions**

max. leaf weight: up to 130 kg / 170kg

max. leaf height: 2,600 mm

Leaf width stay size 1: 450 - 700 mm

Leaf width stay size 1: 700 – 1,300 mm

max. leaf width: 1,600 mm (if a second stay is used)

max. opening angle: 180°

Opening angle with 170 kg: 90°

* concealed gear for use with standard window handles.
* safety device to prevent false operation on the corner linkage (optionally on the gear)
* additional horizontal central interlock needed for leaves over 1,301 mm in width
* additional vertical central interlock needed for leaves over 1,301 mm in height
* from 130 kg to 170 kg with additional concealed load transfer on hinge side, max. opening angle 90° (an opening limiter is necessary)

**Tests/standards**

* Corrosion resistance according to **DIN EN 1670, Class 4**
* Certified in accordance with **DIN EN 13126-8** and **DIN EN 1191**

**Optional designs**

* Designed as a fitting for burglar-resistant windows according to
DIN EN 1627 RC2 or RC3.

**Other elements needed**

* Window handle

**Supplementary information**

see the **turn-tilt fittings** catalogue at [www.wss.de/kataloge.html](http://www.wss.de/kataloge.html)

***DANGER!***

*The max. leaf size is limited by the max. leaf weight of 130 kg/170kg. Please pay attention to our application diagrams.*

Tilt-turn fitting, Style 180° **concealed installation, for aluminium window systems with sash overlap**

1 tilt-turn fitting, concealed installation with no visible fitting parts, for aluminium window system with a Euro groove and sash overlap.
The leaf is titled with the handle positioned at 90°. The leaf is turned with the handle positioned at 180°.

**Leaf dimensions**

max. leaf weight: up to 130 kg / 170kg

max. leaf height: 2,600 mm

Leaf width stay size 1: 450 - 700 mm

Leaf width stay size 1: 700 – 1,300 mm

max. leaf width: 1,600 mm (if a second stay is used)

max. opening angle: 180°

Opening angle with 170 kg: 90°

* concealed gear with safety device to prevent false operation, standard bore holes for fastening with standard window handles.
* additional middle interlock at bottom needed for leaves over 1.300 mm in width
* additional middle interlock on handle and hinge side needed for leaves over 1,300 mm in height
* from 130 kg to 170 kg with additional concealed load transfer on hinge side, max. opening angle 90° (an opening limiter is necessary)

**Tests/standards**

* Corrosion resistance according to **DIN EN 1670, Class 4**
* Certified in accordance with **DIN EN 13126-8** and **DIN EN 1191**

**Optional design**

* Designed as a fitting for burglar-resistant windows according to
DIN EN 1627 RC2 or RC3.

**e.g. WSS tilt-turn fitting, style 180°**

**Other elements needed:**

* Tilt-turn window handle: see the **tilt-turn fittings** catalogue at [www.wss.de/kataloge.html](http://www.wss.de/kataloge.html)

***DANGER!****The max. leaf size is limited by the max. leaf weight of 130 kg/170kg. Please pay attention to our application diagrams.*

***DANGER!****An opening limiter must be fitted for a concealed fitting with a leaf weight over 130kg!*

Accessories for WSS turn-tilt fitting, Style 180°

**Force-absorbing opening limiter for aluminium window systems**

1 force-absorbing opening limiter, for aluminium window systems,
for Euro groove, for concealed installation in the lower window rebate.

* ****90° opening angle (depending on installation position)
* leaf width 460 mm to 1,600 mm
* Force-absorbing effect to relieve the load on the hinge parts
* Prevents autonomous movements of the window leaf
* Stainless steel piston rod, maintenance-free
* Housing of anodised aluminium

**e.g. WSS force-absorbing opening limiter – Article** 10.041.----.---

**Supplementary information**WSS complete catalogue for turn-tilt fittings at [www.wss.de/kataloge.html](http://www.wss.de/kataloge.html)

 **Opening limiter for aluminium system windows**

1 opening limiter for aluminium window systems, for Euro groove,

for concealed installation in the lower window rebate

* 90° opening angle (depending on installation position)
* Leaf width 425 mm to 1,700 mm for fittings with surface-mounted hinges
* Leaf width 550 mm to 1,700 mm for fittings with concealed hinges
* all parts of corrosion-resistant material

**e.g. WSS opening limiter – Article:** 10.050.----.---

**Supplementary information**WSS complete catalogue for turn-tilt fittings at [www.wss.de/kataloge.html](http://www.wss.de/kataloge.html)

**Lockable opening limiter for aluminium window systems**

1 two-part lockable opening limiter, for aluminium window systems, for Euro groove, for concealed installation in the lower window rebate.

* Opening width in the stage adjustable from 89 - 120 mm - with catch to prevent the window closing on its own due to draughts.
* The leaf can be opened up to the cleaning position with a key (opening width depends on the position of the end position catch).
* a cylinder with forced locking function prevents an accidental permanently unlocked state when the key is removed - when the leaf is closed it locks safely in the first catch position and only allows the ventilation function.
* Lock installed visibly in the leaf profile.
* Maintenance-free.
* All elements of corrosion-resistant materials.
* Can be used on the left and right﻿.
* 2 keys

**Tests / standards**

* ****Tested in accordance with **DIN EN 13126-1/5**

**Surface cylinder cover**

* Al, E6/C-0 silver anodised
* Al, E4/C-31 stainless steel finish
* Al painted in special finish

**e.g. WSS lockable opening limiter – Article:** 10.055.----.---

**Supplementary information**WSS complete catalogue for turn-tilt fittings at [www.wss.de/kataloge.html](http://www.wss.de/kataloge.html)

***DANGER!***

The maximum opening angle is determined by the leaf width and profile geometry.

Special opening angles on request.

3 sizes of stays available.

Leaf width/opening angle (stay 1) 450 - 575 mm / 50-90° (visible hinge side)
Leaf width/opening angle (stay 2) 576 - 880 mm / 40-90° (visible hinge side)

Leaf width/opening angle (stay 2) 576 - 880 mm / 40-70° (concealed hinge side)

Leaf width/opening angle (stay 3) 881 - 1,200 mm / 30-50° (visible hinge side)

Leaf width/opening angle (stay 3) 881 - 1,200 mm / 30-50° (concealed hinge side)

**Opening limiter for aluminium window systems**

1 opening limiter for aluminium window systems with Euro groove,

for concealed installation in the window rebate, for turn/turn-tilt fittings with concealed hinges, with flap mechanism for narrow window leaves.

* up to 90° opening angle depending on installation position
* ﻿Leaf width: 410 mm to 699 mm
* all elements of corrosion-resistant material

**e.g. WSS opening limiter – Article:** 10.041.5000.---

**Comfort element for heavy turn/turn-tilt windows**

1 sash lever for aluminium window systems with Euro groove,

for concealed installation in the lower vertical window rebate

To assist and increase the ease of operation,
also suitable for handicapped users.

* The sash lever with its concealed installation on the gear side raises the leaf slightly when this is closed to ensure a permanently non-jamming closing and opening - even with large-sized and heavy window leaves.

**Set consisting of**

* Leaf part with sash lever for use on the left/right, with adjusting screw to adjust the leaf-frame gap
* Connecting rod
* Frame element, can be used on the left/right.

**e.g. WSS comfort element – Article:** [Enter text]

**Supplementary information**WSS complete catalogue for turn-tilt fittings at [www.wss.de/kataloge.html](http://www.wss.de/kataloge.html)

**Safety element**

Concealed status/lock monitor for aluminium window systems with Euro groove.

**Set consisting of**

* Magnetic contact firmly installed in the frame
* Circular magnet installed in the push rod of the leaf fitting
* The signal contact is only displayed when the leaf is closed and the window handle is turned into the locked position. Display when the window handle is being turned.

**e.g. WSS safety element – Article:** 10.337.----.---

**Supplementary information**see WSS complete catalogue for turn-tilt fittings at [www.wss.de/kataloge.html](http://www.wss.de/kataloge.html)

**Turning lock with cylinder lock for aluminium window systems**

Turning lock installed visibly and horizontally at the bottom of the window leaf. Prevents the window leaf from turning and only allows it to be tilted. The leaf can only be turned after the key has been actuated (unlocked). For aluminium system windows with a Euro groove.

**Set consisting of**

* Visible frame lock
* 2 keys
* Locking support frame part

**Surface cylinder cover**

* Al, E6/C-0 silver anodised
* Al, RAL 9016 powder-coated
* Al powder-coated in special finish

**e.g. WSS turning lock – Article:** 10.320.----.---

**Supplementary information**WSS complete catalogue for turn-tilt fittings at [www.wss.de/kataloge.html](http://www.wss.de/kataloge.html)