Description

Application
For mounting on mullion/transom facades or conservatories, in the soffit or in ventilated facades, in double skin facades, in front of the facade as well as indoors.

Operation
Motor
The slats are raised and lowered as well as tilted by actuating an operating switch.
Voltage: 230 V AC, other voltages possible
Frequency: 50 Hz, other frequencies possible
Degree of protection: IP 54
Plug connection: Hirschmann coupling
When the upper or lower limit position is reached, the drive is switched off by built-in, adjustable limit switches.

Crank
The slats are raised and lowered as well as tilted with the crank. Crank rod with collapsible crank; sealed swivel plate and square with patented thermal separation.
Material: aluminium
Surface: C0 anodised
Crank holder: plastic, grey, white or brown, optional crank holder with magnet

Construction limit values in mm

<table>
<thead>
<tr>
<th>Types</th>
<th>Maximum/minimum dimensions</th>
<th>Average weight in kg/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single unit</td>
<td>Coupled unit</td>
</tr>
<tr>
<td>Width</td>
<td>Height</td>
<td>Surface area in m²</td>
</tr>
<tr>
<td>C 73/93/90 A6</td>
<td>450</td>
<td>4500</td>
</tr>
<tr>
<td>E 73/93/90 A6</td>
<td>600</td>
<td>4500</td>
</tr>
<tr>
<td>C 93/93/90 A6 AS</td>
<td>600</td>
<td>4500</td>
</tr>
<tr>
<td>C 90 A5</td>
<td>600</td>
<td>2700</td>
</tr>
<tr>
<td>E 90 A5</td>
<td>600</td>
<td>2700</td>
</tr>
</tbody>
</table>

1) Width = slat size
2) The indicated maximum surface areas depend on the individual height. Deviating dimensions must be clarified on an individual basis.
3) Narrower slats may not run straight.
4) Model with guide rail and light well cover

Stack heights determined from external venetian blind height in mm

<table>
<thead>
<tr>
<th>Types</th>
<th>External venetian blind height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>C 73</td>
<td>145</td>
</tr>
<tr>
<td>E 73</td>
<td>160</td>
</tr>
<tr>
<td>C 93/90</td>
<td>135</td>
</tr>
<tr>
<td>E 93/90</td>
<td>150</td>
</tr>
</tbody>
</table>

Stack heights determined from clear shading height in mm

<table>
<thead>
<tr>
<th>Types</th>
<th>Clear shading height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>C 73</td>
<td>155</td>
</tr>
<tr>
<td>C 93/90</td>
<td>140</td>
</tr>
<tr>
<td>E 93/90</td>
<td>155</td>
</tr>
</tbody>
</table>

Values highlighted in dark blue: Minimum cover panel height on the C/E 73 = 195 mm and on the C/E 93/90 210 mm.
Slats stack heights are approximate values. For technical reasons, they might be higher or lower.
External venetian blinds with work setting (AS): stack 7 mm higher (installation with top rail bracket art. no. 551012).
External venetian blinds with interlocking slats
E 73/93/90 A6, C 73/93/90 A6, E 90 A5, C 90 A5

Description

Top rail (1)
- **Material:** aluminium, extruded
- **Material thickness:** 1.5 mm
- **Dimensions (W x H):** 59 x 51 mm
- **Profile:** C-profile
- **Surface:** plain, optionally powder-coated or anodised
- **Fixing:** with plain aluminium bracket

Tilt shaft (2)
- **Material:** steel, galvanised
- **Material thickness:** 1 mm
- **Dimensions (W x H):** 12 x 12 mm
- **Profile:** square tube
- **Surface:** plain

Bearing (3)
- maintenance-free, enclosed
- **Enclosure:** plastic, contains Teflon
- **Tilting reel:** plastic
- **Tape reel:** plastic
- **Segment tilting to prevent self-acting adjustment of slats.

Slats (4)
- **Dim-out slats, Edges beaded on both sides, special profile**
- **Material:** aluminium, special alloy
- **Material thickness:** 0.45 mm
- **Dimensions (B):** 73/93 mm
- **Installation:** convex
- **Profile:** special profile, front beading with sealing strip made of soft-elastic plastic
- **Surface:** corrosion-resistant enamel coating applied using special process
- **Colour:** in accordance with WAREMA colour chart for external venetian blinds

All the stamped cut-outs in the slats are beaded around the edge to minimise the wear on the lifting tape.

The external venetian blind lowers with the slats closed and rises with the slats open.

Ladder tape/lift tape (5)
Via loop cords attached to sides (5.1)
- **Material:** polyester with woven-in aramid fibres, weather-proof, UV-resistant
- **Colour:** black, also available in grey

The loops are permanently fixed to the slats by clips made of corrosion-proof stainless steel.

Lift tapes (5.2)
- **Material:** polyester, special coating
- **Colour:** black, also available in grey

Lateral guiding (6)

Rail – A6
- **With inserted black sealing strips for noise attenuation**
- **Material:** aluminium, extruded
- **Dimensions (W x D):** 25 x 18 mm, other rail designs are available
- **Profile:** C-profile
- **Surface:** powder-coated, optionally anodised
- **Fixing:** 2-part guide rail bracket, aluminium and plastic
- **End cap:** plastic, black, also available in grey
- **Sealing strip:** weather-proof, UV-stable, black
- **Guiding nipple:** polyamide, glass-fibre reinforced, impact resistant and joined to slats, slats have nipples on alternate sides

Rail – A5
- **with plastic profile inserted for noise reduction and covering the light gap (C/E 90 only)**
- **Material:** aluminium, extruded
- **Dimensions (W x D):** 25 x 18 mm, other rail designs are available
- **Profile:** C-profile
- **Surface:** powder-coated, also available as anodised
- **Fixing:** 2-part guide rail bracket, aluminium and plastic
- **End cap:** plastic, black, also available in grey
- **Plastic profile:** weather-proof, UV-resistant, black, optionally available in grey
- **Guide:** special stamped cut-outs in the slats for guidance in the plastic profile

Partitioning profile (optional)
- for achieving maximum blackout values
- **Material:** aluminium, folded
- **Dimensions (W x H):** 25 x 100 or 125 x 45 mm

Bottom rail (7)
- **tilts with the slats**
- **Material:** aluminium, extruded
- **Dimensions (W x H):** 73/93 mm
- **Surface:** powder-coated
- **End caps:** black plastic, also available in grey
- **Bottom rail with stabilising webs, integrated fall protection and clip-on slab with matching design. End caps with moveable rail guiding.

Colours
Aluminium parts with chrome-free pre-treatment are powder-coated according to latest RAL classic colour chart (with the exception of camouflage and luminous colours) or are available in DB 701, 702, 703 as well as eight textured colours (W4914 – W4921), four colours with simulated anodised finish (WC31 – WC 34) as well as additional colours in accordance with the WAREMA standard colour range (in WAREMA colour specification).

Other colour specifications and special colours are available on demand for an additional charge.

www.shadefactor.com.au
External venetian blinds with interlocking slats
E 73/93/90 A6, C 73/93/90 A6, E 90 A5, C 90 A5

Measuring instructions
Slat stack height from the table
Stack height with work setting (AS) + 7 mm
Recess height = stack height + 15 mm
Cover panel height = stack height + 20 mm

<table>
<thead>
<tr>
<th>Types</th>
<th>Min. recess height</th>
<th>Min. cover panel height</th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>190</td>
<td>195</td>
</tr>
<tr>
<td>93/90</td>
<td>205</td>
<td>210</td>
</tr>
</tbody>
</table>

*Minimum cover panel height or minimum recess height
(Overlapping ensured between lower edge of cover panel and top slat, as for blackout external venetian blinds the length of the curtain is compensated by the distance between the top slat and the top rail.)

<table>
<thead>
<tr>
<th>Types</th>
<th>Min. recess width</th>
<th>Min. cover panel depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>110</td>
<td>120</td>
</tr>
<tr>
<td>93/90</td>
<td>130</td>
<td>140</td>
</tr>
</tbody>
</table>
Reveal mounting, motor operation, guide rail, Type 93 A6, gallery panel

Installation example
Reveal mounting, motor operation, guide rail, Type E 90 A5, U-shaped panel with plaster base plate

Installation example