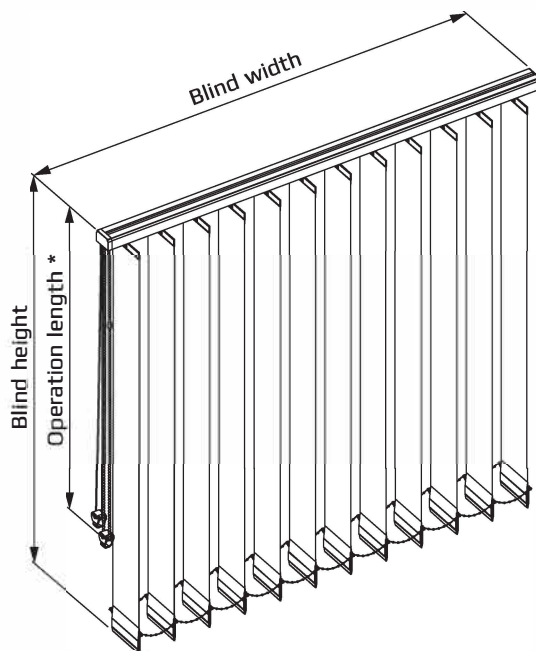


V010 - Standard unit with free hanging louvres.



*** Child safety:**
for further
informations
please refer
to page 70-71

- Dimensions/Measures**
- **Blind width** : **max. 7.00 m** (track length incl. end caps)
 - **Blind height** : **max. 5.00 m** (from the top of the track to the lower corner of the louvre)
 - **Fabric** : **max. 35.00 m²**
 - **Fabric weight** and **blind size** are depending on the control option

- Gear/Hardware**
- **Free-hanging louvres with manual operation**
Chain and cord (optionally with planetary gear 4:1),
Traversing wand,
Mono gear,
Tilt wand/Cord
or
 - **free-hanging louvres with motor operation**
IQ2-motor system.
 - **Track** (40 x 25 mm, max. length 7.00 m) is made of extruded aluminium (Al Mg Si 0.5 F22), technically anodised according to E6/EV1 or powder-coated silver (similar EV1), white (RAL 9016), brown (RAL 8077), black (RAL 9005); special colors are possible.
 - **Shaft** (Ø6.0 mm) is made of extruded aluminium (Al Mg Si 0.5 F22). Torsion-proof grooved shaft, stabilization by stationary shaft support.
 - **Traveller** with arm/stabiliser (traversing wand without arm).
Wear resistant plastic (polyacetal) roller bearing mounted integrated safety clutch, self-lubricating over the product life span.
Replaceable louvre hooks (polycarbonate).
Stainless steel standoff brackets (material 1.4310).
 - Visible **Plastic parts** are matching the colour of the track in grey, white, brown and black.

V010 - Standard unit with free hanging louvres.

Operation

- **Manual operation** optional left or right.
 Operation length: freely selectable (In compliance with child safety according to EN 13120:2009+A1:2014).
 Fixation: Operating chain/Operating cord via Cord/Chain safety device in transparent. (P. 70)
 Monogear with the use of a chain securing device. (P. 71)
 Control options are made of wear resistant plastic (POM - polyacetal) matching the colour of the track.
- **Chain/cord**
 180° rotation of the louvres via plastic ball-chain. (Ø4.5 x 6.0 mm).
 Plastic balls on a polyester cord (Ø1.4 mm) in grey, white, brown or black.
 Movement by pull cord (Ø2.1 mm) made of polyester in grey, white, brown or black.
 Optionally with planetary gear 4:1.
- **Traversing wand**
 180° rotation and movement of the louvres via aluminium wand,
 (Length max. 1.50 m) in anodized, white and black.
 Blind width max. 7.00 m / Blind height max. 3.00 m / Fabric weight max. 6.00 kg for one-piece louvre packing on the left or right side.
 Blind width max. 5.00 m / Blind height max. 3.00 m / Fabric weight max. 6.00 kg for splitted or central louvre package position (with one aluminium wand).
- **Mono gear**
 180° rotation and movement of the louvres via endless ball chain (Ø4.5 x 6.0 mm).
 Plastic balls on a polyester cord (Ø1.4 mm) in grey, white, brown or black.
 Blind width max. 6.00 m / Blind height max. 5.00 m / Fabric weight max. 10.00 kg.
- **Tilt wand/Cord**
 180° rotation of the louvres via tilt wand (Hexagonal SW 7) in transparent (PC - polycarbonate).
 Movement by pull cord (Ø2.1 mm) made of polyester in grey, white, brown or black.
 Blind width max. 4.50 m / Blind height max. 5.00 m / Fabric weight max. 10.00 kg.
- **Motor operation**
 The IQ2-Motor serves to move the louvres sideways and to tilt them.
 It is fitted with 4 functions (open the hanging, close the hanging, tilt the louvres left and tilt the louvres right) and additional functions (decor position and intermediate stop).
 These functions are controlled by an operating button.
 The IQ2-Motor is optionally available with an RTS module for controlling a drive using a Somfy RTS radio transmitter.
 The motor can be installed using a variety of fasteners behind the track to the left, behind the track to the right, above the track to the left, or above the track to the right.
 Colour: anodised according to E6/EV1 or powder-coated white (RAL 9016), brown (RAL 8077), black (RAL 9005).
 Further information can be obtained from *Electrical planning IQ2-Motor*.

Louvre

- **Louvre width:** 127 mm (standard), 89 mm, 63.5 mm (other louvre widths on request).
- **Louvre package** can be moved for window cleaning.
 Left, right, central or split louvre package position as desired.
 Welded louvre holder (PC - polycarbonate).
 Fully plastic weight plates (barium sulphate) und spacing chains (plastic clips on a polyester cord Ø0.8 mm in grey, white, brown or black).
 Optional: Fully plastic weight plates to be welded in (without spacing chains).

Mounting

- **Top fix brackets** in V2A, white or black.
- **Face fix brackets** (adjustable) anodized, in white, brown or black.
 Distances from the wall: 60-108 mm, 108-156 mm, 156-204 mm.
- **Recess profile** enables to mount the track in the ceiling cut-out.
 Technically anodised according to E6/EV1, non-anodized or white.
 For measures, see section *Mounting dimensions* from page 46 to 61.

Test certificate - Vertical Blinds*

1. Overall product test

1.1. Categorised by base type

Straight units
Slope units
Ceiling units
Curved units

1.2. Maximum/Minimum unit lengths

Straight units		
- Chain/cord	7.00 m	200 mm*
- Traversing rod	7.00 m	200 mm*
- Tilt wand	4.50 m	200 mm*
- Monogear 180°	6.00 m	200 mm*
- Monogear 160°	4.50 m	200 mm*
- IQ2 motor	7.00 m	500 mm*
Slope units	7.00 m	200 mm*
Ceiling units (horizontal only)	4.50 m	200 mm*
Ceiling units (vertical only)	4.00 m	200 mm*
Curved units	5.60 m	200 mm*

*at least 2 slats

1.3. Maximum blind length (depending on material)

Straight units	
- Chain/cord	5.00 m
- Traversing rod	3.00 m
- Tilt wand	5.00 m
- Monogear (160°/180°)	5.00 m
- IQ2 motor	5.00 m
Sloped units	5.00 m
Ceiling units, upper and lower, guided	5.00 m
Ceiling unit, horizontal	2.00 m
Curved units	5.00 m

1.4. Maximum hanging weight for manual operation (at max. dimensions)

Straight units	
- Chain/cord	20.00 kg
- Traversing rod	6.00 kg
- Tilt wand	10.00 kg
- Monogear (160°/180°)	10.00 kg
Sloped unit, angle dependent (0-55°)	5.00 - 20.00 kg
Upper and lower guided units	10.00 kg
Ceiling unit	4.00 kg
Horizontally curved units	20.00 kg
Vertical curved unit, radius- and angle-dependent	5.00 - 20.00 kg

1.5. Maximum hanging weight for motor driven units (IQ2 motor)

Straight unit	22.00 kg
Sloped unit, angle-dependent	5.00 - 22.00 kg
Upper and lower guided units	10.00 kg
Ceiling unit	4.00 kg
Horizontally curved units	22.00 kg
Vertical curved unit, radius- and angle-dependent	5.00 - 22.00 kg

Test certificate - Vertical Blinds*

1.6. Functional check: Mechanism durability at room temperature (EN 13120)

Straight unit with chain and cord	5,000 operating cycles
Straight unit with tilt wand and cord	5,000 operating cycles
Straight unit with monogear	5,000 operating cycles
Straight unit with traversing rod drive	5,000 operating cycles
Slope units	5,000 operating cycles
Upper and lower guided units	5,000 operating cycles
Ceiling unit	5,000 operating cycles
Unit with electric drive	10,000 operating cycles
Horizontally curved units	5,000 operating cycles
Vertically curved units	10,000 operating cycles

5,000 operating cycles correspond to 13.5 years x 365 days x one operating cycle daily.

1.7. Functional check: Climatic test (interior application)

Manually driven units	-20 to +70°C
Motor driven units	0 to +70°C

1.8. Functional check: Salt chamber test (interior and outdoor application)

The test corresponds to an outdoor application of approx. 2 years in coastal climate

Aluminium components, anodised surfaces	OK
Aluminium components, painted surfaces	OK
Aluminium components, cut edges	light white
Galvanised components (brackets)	light white, no rust
V2A components (clips)	OK
Plastic components, UV resistant	OK

1.9. Functional check: Incorrect operation/overloading

Monogear: overload safety device starts at 3 kg operating force.
 Motor: prompt automatic electrical overload protection.
 Twisted slats: alignment on tilt by overload safety device.

3. Unit verification electrical components

Supply voltage	180-264 V AC, 50/60 Hz
Power consumption	max 0.35 A at 180 V AC
Current type	Low voltage
Inrush current	<10 A
Protection class housing	IP 20
Protection class	II <input type="checkbox"/>
Control voltage	Low voltage
Control current	10 mA / control signal
Tension	80 Ncm at chainwheel
Max. hanging weight	22 kg
Travel speed	5 m/min
End position detection	electronically by programming
Operating temperature	0 to +70°C
Durability	Approx. 10% operating cycle
Weight	690 g
Dimensions	53.5 mm x 27.4 mm x 400 mm (incl. end caps and cover)

4. Hardware components (max. loading)

Wall bracket loading	max 16 kg
Clip loading	max 16 kg
Blind hook loading	max 0.7 kg
Slope cover loading	max 15 kg
Max. tension for individual track carriages	max 7.0 kg
Max. tension for carriage package	max 9 kg
Ball chain loading Ø4,5 x 6 mm (cord)	max 8.0 kg
Ball chain loading Ø4,5 x 6 mm (single ball)	max 10 kg
Cord loading	max 20 kg

Test certificate

The products of the Benthin® Group are produced in highly developed manufacturing processes and are subject to constant quality controls as per DIN EN 9001:2000 at each step. Thus we ensure and guarantee that Benthin® Sunshade units only use components of the highest quality. Also the completed units that are made of Benthin® components are subject to constant quality controls and are tested by us to according to the extensive list of maximum conditions shown.

The standard conditions and test results required for the functionality and reliability of Benthin® Sunshade units, for which this

TEST CERTIFICATE

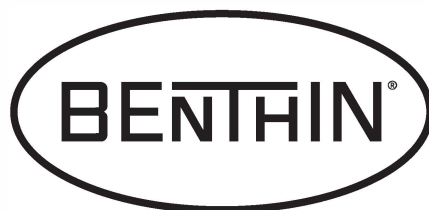
was issued, are attached. The test results are categorised by:

- Total product (Benthin® Vertical Blind* System)
- Drapery (textiles, etc.)
- Electrical/Electronic controls
- Hardware Component (unit testing)

Further details may be requested from us

We reserve the right to perform technical updates resulting from ongoing quality checks, material development and product improvements.

Upon issue of this test certificate all previous certificates are no longer valid.



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(Examiner)



Ralf Zimmermann
(Managing Director)

Summary of the standards used

You can rely on Benthin® products and their manufacturer. This, in addition to the constant efforts to improve quality and performance, is supported by the strict observance of internationally recognised norms and quality standards as well as the regular renewal of certification by independent institutions.

The following is an outline of the most important norms and testing methods, referred to in the respective areas.

EN 9001:2000

The manufacturer has established a quality management system subject to an internationally recognised quality standard. The quality management handbook can be requested from the manufacturer.

CE standard

The manufacturer's quality certification according to the European CE standard is available for the product offered. The document can be requested from the manufacturer.

EMC

The manufacturer's quality certification is available for the product offered, according to which the product does not emit any electromagnetic radiations and is not affected by the same (electromagnetic compatibility test). The document can be requested from the manufacturer.

DIN 4102 A2

The materials used are „not flammable“ in accordance with the regulations of the DIN standard.

DIN 4102 B1

The materials used are „flame resistant“ in accordance with the regulations of the DIN standard.

M1 CSTB 88.27684

The materials used are „flame resistant“ in accordance with the regulations of the French M1 standard.

DIN 54003/4

The curtains used have been checked for „UV resistance“ in accordance with the regulations of the DIN standard and correspond to the indicated UV resistance level (from 1 to 8).

DIN 54021

The curtains used have been checked for „UV resistance“ in accordance with the regulations of the DIN standard and correspond to the indicated UV resistance level (from 1 to 5).

ÖKO-TEX

The textiles used have been tested for harmful substances and are „pollutant free“ in accordance with the test requirements of the International Association for Research and Testing in the Field of Textile Ecology.

DIN 5035-7

The product offered is recommended for „limitation of generation of reflections at computer workstations“ in accordance with the guidelines of the DIN standard.

EN 13120:2009+A1:2014

The product offered corresponds to the regulations and classifications of the EN standard for performance and safety requirements.

Appendant Test standards:

EN 16433:2014 – Internal blinds - Protection from strangulation hazards - Test methods

EN 16434:2014 – Internal blinds - Protection from strangulation hazards - Requirements and Test methods for safety devices.