

VENETIAN SHADES**SPECIFICATIONS FOR 25mm VB SYSTEM**

Providing and fixing 25mm *Venetian Blinds* manufactured by Hunter Douglas, to the following specifications:

1. The **HEAD RAIL** shall measure 25mm wide and 25mm deep, roll-formed & coated over 0.5mm Electro Galvanized Steel and coated in the required color as per the color coordination chart.
2. The **BOTTOM RAIL** shall be measuring 19.5mm wide & 10mm deep, roll- formed from 0.5mm Electro Galvanized steel and coated in the required color as per the color coordination chart.
3. The **TILT ROD** shall be hot dipped galvanized "D" section, steel wire of 4mm diameter.
4. The **CORD LOCK** shall be made from polycarbonate polymer incorporating a stainless steel wear plate and brass rollers for durable slip-free performance. A cord-separating pin shall prevent cords from entangling and entwining in the cord lock.
5. The **WAND TILTER** shall be made from polycarbonate polymer incorporating a worm gear arrangement for rotating the "TILT ROD" on turning the "TILT WAND" with a gear ratio of 1:10.
6. The **BEARING BRACKET** shall be moulded from high engineering grade plastic and shall support the "TAPE ROLL" mounted on the "TILT ROD" while allowing free movement of the same. It shall also incorporate a metal pulley mounted on the lower surface to channelize & facilitate the movement of the "LADDER STRING".
7. The **TAPE ROLL** shall be moulded from high engineering grade plastic, with a prong to hook the "LADDER STRING" and mounted co-axially on the "TILT ROD".
8. The **INSTALLATION BRACKETS** shall be press formed & finished in clear passivated zinc plating and provided with a rotating arm lock to fit inside the lips of the "HEAD RAIL". The **INSTALLATION BRACKET** shall be fitted to the plenum using corrosive resistant fasteners.
9. The **LADDER STRING** shall be made from high tenacity, multifilament, 100% polyester yarn with a nominal distance of 28mm between side cords & ladder spacing of 21.5 mm. The nominal width of "ALUMINIUM SLAT" accommodated will be 25mm. The **LADDER STRING** shall be color coordinated to the "HEAD RAIL" & "BOTTOM RAIL".
10. The **CORD** shall be made from high tenacity, multifilament, 100% polyester yarn, in 1.4mm diameter, with a center core to provide strength. The **CORD** shall be color coordinated to the "HEAD RAIL" & "BOTTOM RAIL".
11. The **ALUMINIUM SLATS** in approved color, shall be made from high tensile 6011 aluminium alloy & shall be crowned to withstand bending through 180° over a mandrel of radius 12.5mm without incurring permanent deformation. The paint formulation will be of a thermosetting polyester coating over a chromate conversion coating.

VERTICAL SHADES**Specifications for 100mm VVB system**

Providing and fixing 25mm *Vertical Blinds* manufactured by Hunter Douglas, to the following specifications:

1. The **HEAD CHANNEL** shall measure 30mm wide and 27.6mm deep with a nominal wall thickness of 1.2mm to 1.4mm extruded from patented 6063-T5 alloy finished in clear anodisation to a thickness of 20 microns.
2. The **SPLINE SHAFT** shall be a tri-lobular patented aluminium extrusion of 6063-T5 alloy.
3. The **SLAT TRAVELLERS** assembly shall be moulded in a imported high engineering grade plastic & shall incorporate a gear clutch designed to prevent damage to the assembly. Slat hooks shall be removable to allow replacement where required without dismantling the tracking system.
4. The **SLAT SPACER LINKS** shall be moulded from imported high engineering grade plastic and shall couple the slat travelers together in a predetermined spaced relationship and to allow equal overlap (minimum 12mm) between slats across the width of the shade.
5. The **TILT CONTROL** shall be by means of imported braided nylon cord with 3.25mm diameter engineering grade plastic, balls moulded co-axially to it on 4.4mm c-t-c distance, by pulling on the ball chain connected to a pulley.
6. The **SLAT CARRIERS** shall be of moulded nylon and shall be suitable for snap insertion into the hook of the traveler assembly.
7. The **BOTTOM LINKAGE CHAIN** shall couple adjacent slats at the base to minimize differential movement of slats.
8. The **CHANNEL MOUNTING BRACKETS** shall be press formed angle brackets and provided with holes for fixing screws and nut attachment of the channel mounting clips. Finish shall be clear passivated Zinc plate.
9. The **TRAVERSING CORD** shall be 2.0mm diameter and constructed with a braided polyester jacket over a polyester core. The cord shall be held in tension by a cord weight.
10. The **FABRIC SLATS** shall be slit in 100mm widths & provided with bottom pockets for housing bottom weights which are coupled together by means of endless bead chains pivotally attached by clasps to each side of each weight. The clasp shall be capable of self-release from the bottom weight when the chain is subjected to accidental loads. Slat overlaps shall never be less than 12mm minimum.
11. The **BOTTOM WEIGHTS** shall be moulded from high quality plastic and shall weigh not less than 32 gms. each, to ensure constant tensioned straightness of the fabric slats.

VERTICAL SHADES

FABRIC SPECIFICATIONS – 100MM WIDTH

	CELESTE	FORREST	REVERSON
Composition of Fabric	100% Polyester	100% Polyester	100% Polyester
	Woven	Non Woven	Woven
Weight gms/sq meter	214	230	290
Thickness mm (average)	0.46	0.65	0.32
Weldability	-	-	No
Blockout	-	-	Yes
Cleaning	Moderate rubbing or wiping with damp cloth + Mild detergent, hand dry		
Colour Features to Light	Grade 7	Grade 7	-
Coating	Acrylic	Acrylic	Acrylic

Range	SHADOWS	ANITA	LISA
Composition of Fabric	100% Polyester	100% Polyester	100% Polyester
	Woven	Non Woven	Non Woven
Weight gms/sq meter	190	280	370
Thickness mm (average)	0.36	0.84	0.82
Weldability	-	-	-
Blockout	-	-	-
Cleaning	Moderate rubbing or wiping with damp cloth + Mild detergent, hand dry		
Colour Features to Light	Grade 7	Grade 7	Grade 7
Coating	Acrylic	Acrylic	Acrylic

Range	BLOOMER	MORAN	ADI
Composition of Fabric	100% Polyester	100% Polyester	100% Polyester
	Woven	Woven	Woven
Weight gms/sq meter	266	244	244
Thickness mm (average)	0.50	0.40	0.40
Weldability	-	-	-
Blockout	-	-	-
Cleaning	Moderate rubbing or wiping with damp cloth + Mild detergent, hand dry		
Colour Features to Light	Grade 7	Grade 7	Grade 7
Coating	Acrylic	Acrylic	Acrylic

Range	SHER	SHARON
Composition of Fabric	100% Polyester	100% Polyester
	Woven	Non Woven
Weight gms/sq meter	244	244
Thickness mm (average)	0.40	0.40
Weldability	-	-
Blockout	-	-
Cleaning	Moderate rubbing or wiping with damp cloth + Mild detergent, hand dry	
Colour Features to Light	Grade 7	Grade 7
Coating	Acrylic	Acrylic

ROLLERSHADES – CHAIN DRIVE SYSTEM

SPECIFICATIONS FOR HD ROLLER SHADES

Providing and fixing *Roller Blinds* manufactured by Hunter Douglas, to the following specifications:

The **DRIVE UNIT** shall be of moulded plastic with steel spring support and inserted into the tube end. It shall be driven by a ball chain pulley with ball chain and can be positioned at right side or left hand side of the Shade. The Shade when lowering or raising, shall be automatically locked in position upon release of the ball chain by means of a built in friction lock.

The **END PLUG** shall be moulded of plastic with a steel location pin. The plug shall be inserted into the tube end. (Opposite to the Drive Unit).

The **SUPPORT BRACKETS** shall be of coated steel & provided with covers and used in right hand or left hand positions differentiated by the acceptance of the of the rectangular drive unit support or the round idler plug pin.

The **ROLLER TUBE** shall be of extruded aluminum with 38mm internal diameter & skin thickness of 1mm and shall incorporate a keyway integral with the tube to accommodate the spline. The outside diameter of the roller tube shall be 40mm.

The **BOTTOM RAIL** shall be a stiffening element inserted into a bottom rod pocket. The material may be timber, PVC covered steel tube or VB Bottomrail.

The **BALLCHAIN** shall be 2mm diameter cord with 4.5mm diameter acetal balls moulded co-axially to it on 6mm pitch to form an endless ballchain. It is used for raising or lowering action of the shades.

The **FABRIC** shall be as per selection from the Hunter Douglas range (see fabric specifications) and shall be sized according to site requirement (subject to maximum width limitation of individual fabric types). A bottom pocket shall be created in the fabric to incorporate the bottom rail.

VENETIAN SHADES

Component Specification for 25mmVB system**HD Headrail**

Code : L13-1
Description : Rollformed U-profile
Material : Steel 0.5 mm
Finish : colour according to order
Dimensions : 25 x 24 mm

HD Bottomrail

Code : L13-3
Description : Rollformed C- profile
Material : Steel 0.5mm
Finish : colour according to order
Dimensions : 19.5 x 10mm

Ladder string

Code : L13-18a
Description : Braided stringtape, two parallel twisted ladder threads
Material : High tenacity polyester
Finish : Colour according to order
Pitch : 21.5 mm
Width : 28 mm

Cord 1.4mm

Code : L13-19a
Description : Round braided Nylon cord
Material : High tenacity polyester
Finish : Colour according to order
Diameter : 1.2 mm

Tiltrod

Code : V13-14
Description : D-shaped tilt rod
Material : Steel, cold rolled
Dimensions : 4 mm

Bearing Bracket

Code : **V13-6**
Description : 25mm Tape roll support: allows easy cording and insertion of tape roll from below.
Material : Polyetherimid (PEI), wear resistant plastic
Finish : Colour white

Tape roll

Code : **V13-7**
Description : Plastic tape roll with tape retaining clip, small diameter for light operation and optimal closure
Material : Polyetherimid (PEI), wear resistant plastic
Finish : colour white

Wand Tilter

Code : **V13-28**
Description : 25mm Wandtilter, 1:10 gear ratio for light and positive tilting: suits 4mm D-shaped
Material : SAN / Polycarbonate / Polyacetal
Finish : Transparent

Cord Lock Right Hand

Code : **V13-32c**
Description : 25mm Cordlock, suited for 2 to 6 cords: two serrated locking Rolls clamp the cords against a serrated surface : a wire bracket is Included for cord retaining and separation: included one sided metal protector for wear & tear resistance and smooth operation.
Material : Polycarbonate / Brass / Steel (zinc plated)
Finish : Transparent

Cord Lock Left Hand

Code : **V13-32d**
Description : 25mm Cordlock, suited for 2 to 6 cords: two serrated locking Rolls clamp the cords against a serrated surface : a wire bracket is Included for cord retaining and separation: included one sided metal protector for wear & tear resistance and smooth operation.
Material : Polycarbonate / Brass / Steel (zinc plated)
Finish : Transparent

Cord Corrector

Code : **V13-26b**
Description : Cord connector 1.2, allows leveling of up to 4 1.2 mm
Material : Polycarbonate
Finish : Colour according to order

Clear Wand Hollow / Clear

Code : **V13-25a**
Description : Hexagonal, hollow wand
Material : PMMA
Finish : Transparent
Dimensions : hex. 7.0 mm ?

Snap Hook for Clear Wand

Code : V13-23
Description : Wandhook connects wand to wandtilter
Material : Polycarbonate
Finish : Transparent

Snap Button for Wand Tube

Code : V13-24
Description : Wandknob, consisting of transparent knob
Material : PMMA
Finish : Transparent

Inner Button for Hollow Clear Wand

Code : V13-24a
Description : End plug for hollow clear wand.
Material : Polycarbonate
Finish : Transparent

Tassel Large

Code : V13-14
Description : Cordknob, consisting of grey cover and transparent knob,
cord connected by means of bayonet lock
Material : PMMA
Finish : Transparent

Tape spacer 25mm

Code : V13-31
Description : Transparent tape spacer, quick assembly
Material : Polycarbonate
Finish : Transparent
Dimensions : 25mm

Tape Lock Button for Bottomrail

Code : V13-8
Description : 25mm Tape button, fits HD bottomrail
Material : Polycarbonate
Finish : Transparent/white

Headrail Endcap

Code : L13-9
Description : 25mm headrail endcap, fits ultimate headrail
Material : Polycarbonate
Finish : Transparent/white

Bottomrail Endcap

Code : L13-13
Description : 25mm bottomrail endcap, fits HD bottomrail
Material : Polycarbonate
Finish : Transparent/white

Code : V13-29

Wand Tilter Adapter

Description	:	Cover to conceal the tilter, mechanism and ensure perfect fit inside the headrail
Material	:	Polycarbonate
Finish	:	Transparent/white

Hunter Douglas Department of Process & Material Development

Specification for HD Venetian Blindstrip

1. Aluminium.

1.1 General.

The main aluminium alloy used for Hunter Douglas Venetian Blind strip 100017 is alloy AA 6011.

The chemical composition of alloy AA 6011 is in accordance with the designation of the Aluminium.

Association and is chosen for its high and stable mechanical properties.

1.2 Mechanical properties.

AA 6011 T8	100017
Tensile strength	>330 N/mm.
Yield strength	>320 N/mm.
Elongation (50mm)	> 3%

1.3 Chemical composition.

Aluminium alloy AA 6011 has the following composition:

Si: 0,6-1,2 %

Fe: < 1,0 %

Cu: 0,40-0,9 %

Mn: < 0,8 %

Mg: 0,6-1,2 %

Cr: < 0,30 %

Ni: < 0,20 %

Zn: < 1,5 %

Ti: < 0,20 %.

2. Pre-treatment of aluminium.

Hunter Douglas has gained an outstanding reputation for its environmentally friendly, yet top class pre- treatment systems. This pre-treatment of all cold-rolled strip guarantees a perfect and permanent paint adhesion and results in a reliable resistance against humid conditions.

3. Paintfinishes.

The chemically pre-treated aluminium strip is provided with a decorative finish suitable for interior application. This finish usually consists of one coat paint film. All finishes are applied on constantly controlled paintlines, thus guaranteeing attractive, tough, smooth and uniform venetian blind material. In this product only thin coatings are used.

The special Hunter Douglas coil coating process ensures a consistent level of colour reproduction and our method of paint application makes certain that edges are always coated. Only finishes that meet our rigid specifications are accepted. The main part of our paint systems are based on polyester chemistry. Testing is carried

out in accordance with ECCA or other internationally accepted test methods and specifications.

4. Testing: Methods and specifications.

4.1 Film thickness.

4.1.1 Test method: ECCA T1

4.1.2 Conventional paints: 7-12 mu each side
Transparent metallic paints: 4-10 mu each side
Specialties: upon request.

4.1.3 Variation within one batch:

- up to 10 mu: ± 2 mu
- 10 mu and above: ± 3 mu.

4.2 Specular gloss.

4.2.1 Test method ECCA T2.

4.2.2 Conventional glossy paints: $>70\%$
Conventional s.g.(special gloss) paints: 25-50%
Specialties: upon request.

4.2.3 Gloss variation within one batch:

- up to 20%: $\pm 3\%$
- between 20 and 50%: $\pm 5\%$
- 50% and above: $\pm 7\%$

4.3 Colour difference.

4.3.1 Test method ECCA T3 (CIELAB).

4.3.2 Colour difference between batches:

- plain non-metallics: E 4 units
- others: L= ± 4 units.

4.3.3 Colour difference within one batch:

- plain non-metallics: E 2 units
- others: L= ± 2 units.

4.4 Pencil hardness.

4.4.1 Test method ECCA T4.

4.4.2 Conventional paintfilms: phh >F
Other systems upon request.

4.5 Adhesion.

4.5.1 Test method ISO 2409, with Scotch cellotape no. 600, 3/4" wide.

4.5.2 Conventional paints: Better than or equal to rating 1, other paints upon request.

4.6 Resistance to salt spray fog.

4.6.1 Test method ECCA T8.

4.6.2 After 100 hours testing undercreep from the (unprotected) edges

nor from the cross shall exceed 2mm.
Blistering shall not exceed F 8, according to ASTM method D714-56.

4.7 Water immersion resistance.

4.7.1 Test method ECCA T9.

4.7.2 After 100 hrs testing blistering shall not exceed F 8, according to ASTM method D 714-56.

4.8 Colour fastness.

4.8.1 Test method DIN 54004.

4.8.2 All finishes shall have a colour fastness of at least 6.

5. Dimensions and tolerances.

5.1 Gauge.

The thickness of the substrate is $0,155 \pm 0,01$ mm.

5.2 Width.

The width of the strip is $25,0 \pm 0,2$ mm.

6. Shape of the strip.

Camber.

Camber shall not exceed 3 mm on 2 m striplength.

Specification for Roller Fabrics

FABRIC : ANNA

Basic Material	100 % Polyester
Weave	
Fabric Width	200 cm
Fabric Weight	170 g/m ²
Thickness	0.4 mm
Finishing	Double side vinyl acetate, pigment coated

TECHNICAL DETAILS

Light Fitness	Note:	≥ 5-6
DIN 54004 / DIN EN ISO 105 – B02		
Rubbing Fastness	Dry	
DIN 54021 / DIN ISO 150 – X12	Wet	
Shrinkage [%]	Warp	< 0.5 %
DIN 53892 B 2	Weft	
Moisture Resistance		
Flame Retardancy		
Radiation Rate : [DIN 67507 / ISO 9050]		
Light – Reflexion [%]		
Light –Transmission [%]		
Light – Absorption [%]		
UV – Transmission [%]		
Total Energy Penetration		
Manufacturing Procedure		To cut with cold blade
Care Instruction		Spongeable

FABRIC : SECLUSION

Basic Material	100 % Polyester
Weave	
Fabric Width	200 cm (also available in 100mm)
Fabric Weight	270 – 295 g/m ²
Thickness	0.50 mm
Finishing	Blackout Fabric, reverse & front side pigment color coated

TECHNICAL DETAILS

Light Fastness	Note:	> 5-6
DIN 54004 / DIN EN ISO 105 – B02		
Rubbing Fastness	Dry	Depending on colour
DIN 54021 / DIN ISO 150 – X12	Wet	
Shrinkage [%]	Warp	< 0.5 %
DIN 53892 B 2	Weft	
Moisture Resistance		
Flame Retardancy		
Radiation Rate : [DIN 67507 / ISO 9050]		
Light – Reflexion [%]		82
Light – Transmission [%]		0
Light – Absorption [%]		18
UV – Transmission [%]		
Total Energy Penetration		
Manufacturing Procedure		To cut with cold blade
Care Instruction		Spongeable