

# External Venetian Blinds

## Complete Flexibility



For many years European architects have been specifying Hunter Douglas external blinds as experience has shown it to be the most efficient and most flexible form of solar and light control.

With external blinds transfer of heat to interior is minimal resulting in the lowest shading coefficients of any window treatment. They also control light diffusion and eliminate glare.

External blinds can be raised and lowered depending on weather conditions. Their angle of tilt can be regulated to keep direct sunlight out and let natural daylight in as required. From the user's point of view they offer complete flexibility.

### SOLAR CONTROL

External blinds provide the most effective sun protection available. Blinds with slats opened at a 40° angle, before clear insulating glass, will transmit only 10% of the total solar radiation to the interior, providing agreeable working conditions and allowing a considerable reduction of the air-conditioning equipment.



## LIGHT CONTROL

### • Admittance of daylight

Daylight is 'free of charge' energy and indispensable for the human body. Protection from solar heat inevitably involves obstructing the entry of solar light. Hunter Douglas external blinds are adjustable so that the level of daylight allowed into the building can be varied to suit the individual requirements.

### • Distribution of daylight

Adjusting the slat angle of Hunter Douglas external blinds reduces the high level of light intensity close to the window and improves the light level in the darker recesses of the room by reflecting light to the ceiling.

### • Reflection on computer screens

Reflection on computer screens causes eye fatigue and failing performance. Hunter Douglas external blinds reduce the glare and provide better light conditions in the room.

## LIGHT CONTROL BLIND - TYPE DUOLUX™

The Duolux™ light control blind offers the optimal solution for rooms with screen work places. Besides the excellent benefit of sun protection, this type of blind also offers a high flexibility in the setting of the required slat angles because of the almost independent tilting of the top and lower part of the blind. This feature enables optimal light conditions throughout the room.

*See our special Hunter Douglas Light Control brochure.*

## SPECIFICATION

### • Slats

Profile made of a special aluminium alloy. With beaded edges (except 50, 60 and 80 mm flexible). Material pre-coated with Anorcoat® primer, replacing conversion coating system. Colour coated with polyester paint and stove enamelled to Hunter Douglas paint specification.

### • Head Rail

Rollformed zinc-plated steel U-shaped channel 57 x 51 mm. Optional: Extruded aluminium profile, natural anodized with cover and end caps.

### • Tilting and raising/lowering mechanism

Made of durable maintenance free plastics. Positive tilting mechanism prevents movement of the slats by wind load. Stainless steel tilting spring enclosed in two different slat suspension rings for smooth and exact operation. During lowering slats are fully closed, during raising slats are fully open.

The optional automatic tilting device pre-sets the slats at a 40° angle. The system is re-set automatically during lifting of the slats.

### • Lift tape

Made of durable UV and weather resistant pre-shrunk polyester (6 x 0.33 mm). Alternative: 88 KV-ELV types, made of durable UV and weather resistant plastic (dymetrol), 15.2 x 1.27 mm.

### • Bottom rail

Extruded aluminium profile, natural anodized or powder coated, adapted to the shape of the slats, with plastic end caps provided with guiding pins or cable guiding rivets.

### • Side guiding

- 50, 60 and 80 mm types: Stainless steel cable tensioned between headrail and guide cable bracket.
- 60, 80 and 88 mm types: Extruded aluminium profile with plastic insert for noise reduction, natural anodized or powder coated. Slats supplied with guiding pins at the extreme ends.

### • Slat suspension

- 50, 60 and 80 mm types: UV and weather resistant woven polyester ladder braid. Slats inserted between ladders.
- 88 mm types: UV and weather resistant woven polyester ball tapes. Slats individually connected to the tape by special clips in the bead of the slat.



### • Connection cord

UV and weather resistant woven polyester cord connects slat suspension to the mechanism. Provides quick release and adjustment of the slat stack.

### • Operation

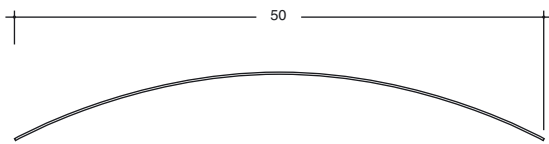
- Crank operation: With crank rod via universal joint to a self braking gearbox incorporated in the headrail or located at the extreme end of the headrail.
- Electric operation: With electric motor ( 220/240V - 50 Hz) enclosed within the headrail. The motor is thermally protected against over heating and splash proof (IP54).

Blinds can be operated individually and/or linked together by relay switches. Group controls can be extended to cover complete floors and/or facades.

Electrically operated installations can also be actuated by various controls, including solar sensors, anemometers, time switches and relays to provide a fully automated central control system.

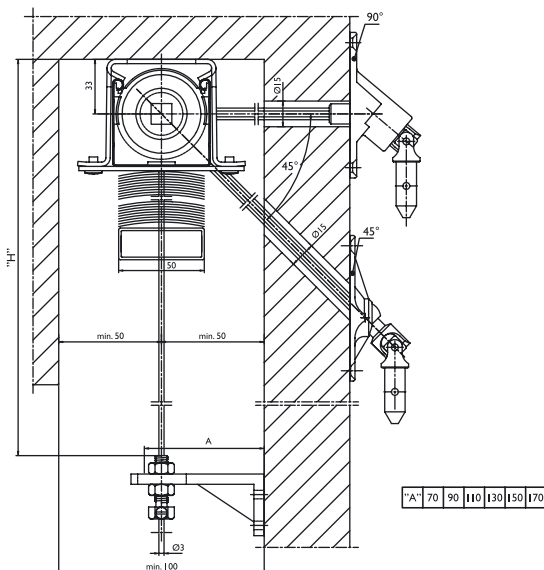


50

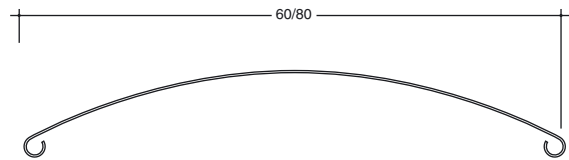


External blinds with 50 mm flexible slats. Hardware system for tilting, lowering and raising incorporated in the headrail.

- Operation by:
  - (K) crank with 45° or 90° feed through with cardan joint
  - (EL) motor
- Suideguiding:
  - (A) stainless steel cable

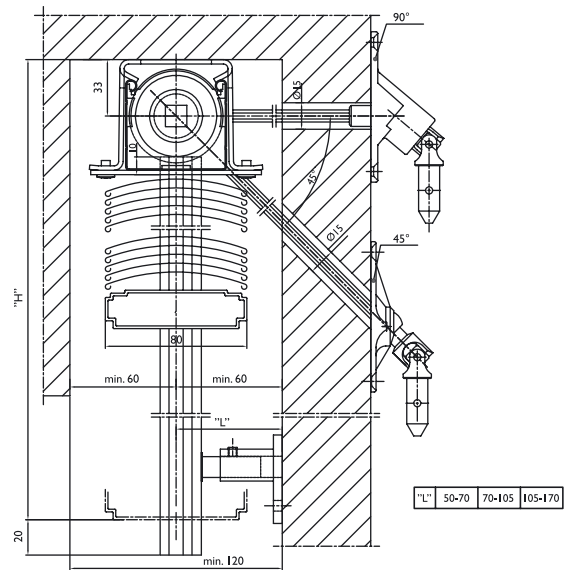


60/80



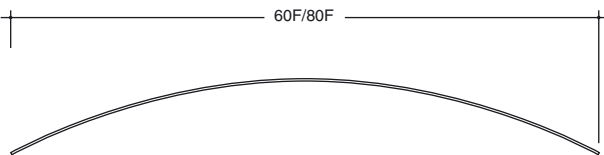
External blinds with 60 or 80 mm sturdy rollformed slats with beaded edges. Hardware system for tilting, lowering and raising incorporated in the headrail.

- Operation by:
  - (K) crank with 45° or 90° feed through with cardan joint
  - (EL) motor
- Suideguiding:
  - (A) stainless steel cable
  - (AS) standard sideguiding channels
  - (ASS) push-on guiding channels
  - (ASK) guiding mounted with clamping brackets
- Optional:
  - 40° tilting angle
  - round side guiding channels with ASK
  - mounting systems on or between the side tracks



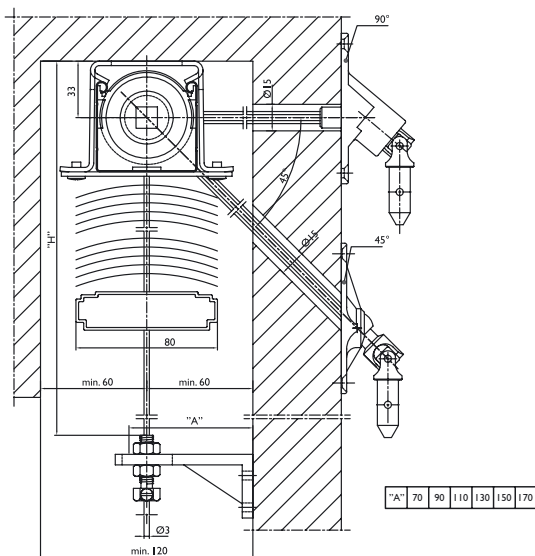


## 60F/80F



External blinds with 80 mm flexible slats. Hardware system for tilting, lowering and raising incorporated in the headrail.

- Operation by:
  - (K) crank with 45° or 90° feed through with cardan joint
  - (EL) motor
- Sideguiding:
  - (A) stainless steel cable
- Optional:
  - 40° tilting angle

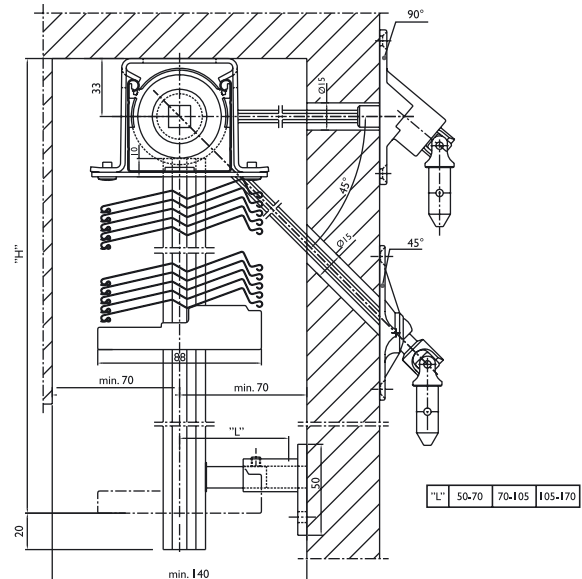


## 88



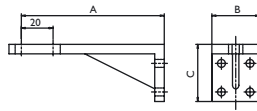
External blinds with 88 mm Z-shaped rollformed slats with beaded edges. Hardware system for tilting, lowering and raising incorporated in the headrail. Rolled-in insert for sound absorption.

- Operation by:
  - (K) crank with 45° or 90° feed through with cardan joint
  - (EL) motor
- Sideguiding:
  - (AS) standard sideguiding channels
  - (ASS) push-on guiding channels
  - (ASK) guiding mounted with clamping brackets
- Optional:
  - 40° tilting angle
  - round side guiding channels with ASK
  - mounting systems on or between the side tracks
  - guiding system with lift tape inside the channels (KV/ELV)



# Sideguiding and installation

## Type A : Cable guiding

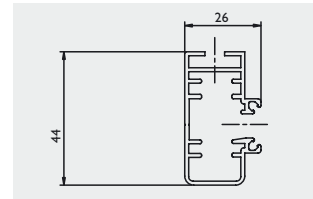
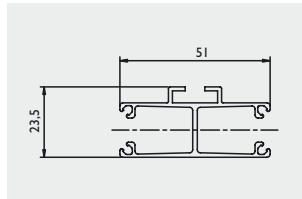
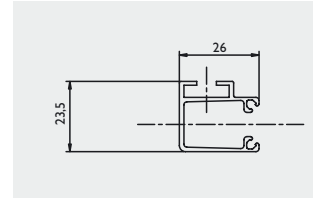
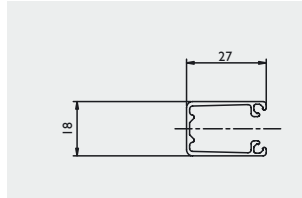
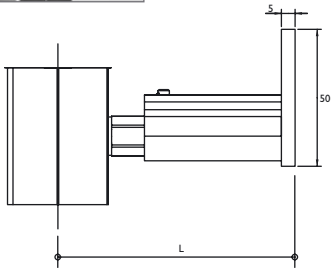


A	50	70	90	110	130	150	170
B	30	30	30	30	30	35	35
C	20	36	36	40	40	50	50

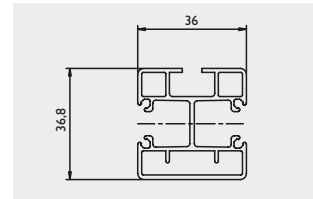
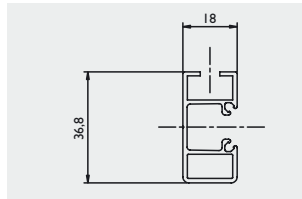
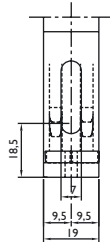
## Type AS : Standard side channel guiding



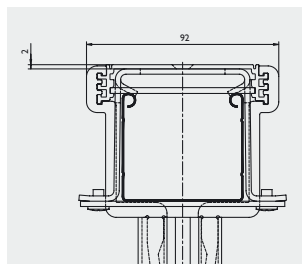
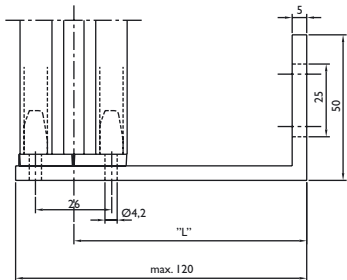
L1 = 50 - 70 mm  
L2 = 70 - 105 mm  
L3 = 105 - 170 mm



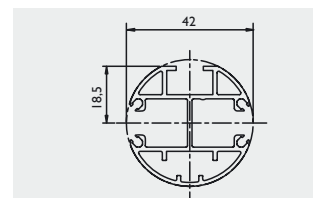
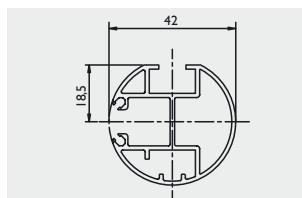
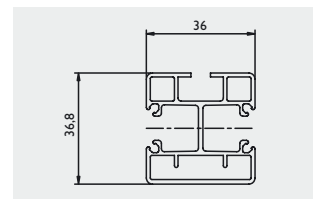
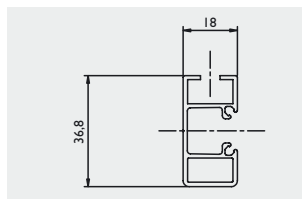
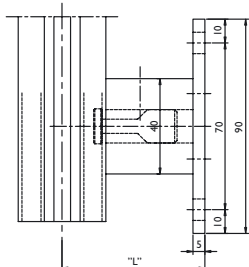
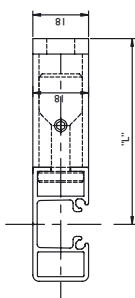
## Type ASS : Push-on guiding system



Optional: mounting on top of side channels



## Type ASK : Side channel guiding with clamping piece



All sizes in mm.

# List of types

## External Venetian Blinds

Type no.	Type	Width of the slats (mm)	Type of operation (lift/tilt)	Sideguiding	Construction limits						
					Single installation			Group installation			
					Width		Height	Surface	Width	Height	Surface
					Min. (cm)	Max. (cm)	Max. (cm)	Max. (m²)	Max. (cm)	Max. (cm)	Max. (cm)
8131	K 50 A	50	crank	cable	80	400	400	12	800	400	16
8141	EL 50 A	50	motor	cable	80	400	400	12	800	400	20
8231	K 60 A	60	crank	cable	80	500	450	12	1000	450	12
8631	K 60 AF	60 flexible	crank	cable	80	400	400	12	800	400	12
8232	K 60 AS	60	crank	standard sideguiding channels	80	400	400	12	1000	400	12
8233	K 60 ASS	60	crank	push-on side guiding channels	80	300	250	7	1000	250	12
8234	K 60 ASK	60	crank	channels with clamping brackets	80	400	400	12	1000	400	12
8241	EL 60 A	60	motor	cable	80	500	450	12	1000	450	20
8641	EL 60 AF	60 flexible	motor	cable	80	400	400	12	800	400	20
8242	EL 60 AS	60	motor	standard sideguiding channels	80	400	400	12	1000	400	20
8243	EL 60 ASS	60	motor	push-on side guiding channels	80	300	250	7	1000	250	20
8244	EL 60 ASK	60	motor	channels with clamping brackets	80	400	400	12	1000	400	20
8331	K 80 A*	80	crank	cable	80	500	450	12	1000	450	12
8531	K 80 AF*	80 flexible	crank	cable	80	400	400	12	1000	400	12
8332	K 80 AS*	80	crank	standard sideguiding channels	80	400	400	12	1000	400	12
8333	K 80 ASS*	80	crank	push-on side guiding channels	80	300	250	7	1000	250	12
8334	K 80 ASK*	80	crank	channels with clamping brackets	80	400	400	12	1000	400	12
8341	EL 80 A*	80	motor	cable	80	500	450	12	1000	450	20
8541	EL 80 AF*	80 flexible	motor	cable	80	400	400	12	1000	400	20
8342	EL 80 AS*	80	motor	standard sideguiding channels	80	400	400	12	1000	400	20
8343	EL 80 ASS*	80	motor	push-on side guiding channels	80	300	250	7	1000	250	20
8344	EL 80 ASK*	80	motor	channels with clamping brackets	80	400	400	12	1000	400	20
8432	K 88 AS*	88	crank	standard sideguiding channels	80	400	400	10	1000	400	10
8433	K 88 ASS*	88	crank	push-on side guiding channels	80	300	250	7	1000	250	10
8434	K 88 ASK*	88	crank	channels with clamping brackets	80	400	400	10	1000	400	10
8442	EL 88 AS*	88	motor	standard sideguiding channels	80	400	400	12	1000	400	16
8443	EL 88 ASS*	88	motor	push-on side guiding channels	80	300	250	7	1000	250	16
8444	EL 88 ASK*	88	motor	channels with clamping brackets	80	400	400	12	1000	400	16
8435	KV 88 A-S	88	crank	lifttape inside guiding channels	80	300	350	10	700	350	16
8445	ELV 88 A-S	88	motor	lifttape inside guiding channels	80	300	350	10	700	350	16
*) outside blinds with light control option					100	300	300	9	600	300	16

## List of bundle heights when blind is totally lifted (in mm)

Outside blind height, incl. headrail bracket in cm	Strip width and type of operation												
	50 mm strip		60 mm strip		60 mm strip FLEXIBLE		80 mm strip		80 mm strip FLEXIBLE		88 mm strip		88 mm strip
	operation		operation		operation: motor		operation		operation: motor		operation		lifttape inside
	crack	motor	crack	motor	every 5th strip with a guiding eyelet	all strips with a guiding eyelet	crack	motor	every 5th strip with a guiding eyelet	all strips with a guiding eyelet	crack	motor	guiding channels
100	117	127	165	183	144	164	152	162	142	153	160	170	200
150	130	140	202	222	149	177	182	192	156	174	180	190	235
200	142	152	240	260	176	201	212	222	168	189	220	230	270
210	145	155	248	268	179	207	218	228	172	194	227	237	277
250	155	165	278	297	191	236	242	252	180	211	255	265	305
300	167	177	315	340	215	260	272	282	193	232	290	300	340
350	182	192	355	380	222	277	302	312	203	250	325	335	375
400	197	207	395	420	226	296	332	342	218	267	360	370	x

## List of reflection values (Values according to EN410)

colorcode	SOLAR (300-2500 Nm)		VISIBLE LIGHT (380-780 Nm)	
	Total reflection value	Total absorption value	Total reflection value	Total absorption value
4872	0,0785	0,9215	0,0775	0,9225
4846	0,092	0,908	0,0745	0,9255
7043	0,154	0,846	0,154	0,846
3240	0,1557	0,8443	0,0744	0,9256
7140	0,2354	0,7646	0,2309	0,7691
2743	0,2661	0,7339	0,0772	0,9228
2440	0,2795	0,7205	0,1102	0,8898
5440	0,2928	0,7072	0,1111	0,8889
5043	0,3339	0,6661	0,0841	0,9159
4742	0,3473	0,6527	0,3371	0,6629
0664	0,3938	0,6062	0,4473	0,5527
2343	0,253	0,747	0,224	0,776
7042	0,463	0,537	0,428	0,572
7040	0,4857	0,5143	0,4882	0,5118
0663	0,5283	0,4717	0,5928	0,4072
4041	0,5424	0,4576	0,4817	0,5183
4540	0,552	0,448	0,5659	0,4341
4441	0,6591	0,3409	0,7252	0,2748
0141	0,7553	0,2447	0,8225	0,1775
0193	0,7619	0,2381	0,8582	0,1418
0264	0,7621	0,2379	0,8632	0,1368

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