Strand Lighting

PRODUCT DATA

1.2.8

SPOTLIGHTS

ALTO™

2000 & 2500W

Alto F

High-power Fresnel spotlight giving an intense soft-edged beam. Front and rear screw-action focus provides a variable beam angle between 7° and 57°. Optional barndoors.

W 2500W V 230/240V 7° - 57° 9.7kg
✲ 900 Lux 20m 245 x 245mm 11.7kg
0.1m³ ✔ EN60 598 2-17

Cat. No.	Description
12104	Alto F, 240V CP92 lamp, 15A plug
12103	Alto F, 230V CP92 lamp, Schuko plug

Alto PC

High-power spotlight giving an intense beam of light with a less diffused edge than a Fresnel. Front and rear screw-action focus provides a variable beam angle between 4° and 58°. Optional barndoors.

W 2500W V 230/240V 4° - 58° 12kg
✲ 1400 Lux 20m 245 x 245mm 14.1kg
0.114m³ ✔ EN60 598 2-17

Cat. No.	Description
12114	Alto PC, 240V CP92 lamp, 15A plug
12113	Alto PC, 230V CP92 lamp, Schuko plug

Alto 8/16

Zoom profile spotlight with peak/flat beam adjustment, and a variable beam angle from 8° to 16° for long throws. Lens adjustment is by sliding handles with lever locking operation.

W 2500W V 230/240V 8° - 16° 17kg
✲ 1000 Lux 25m 245 x 245mm A
23.7kg 0.241m³ ✔ EN60 598 2-17

Cat. No.	Description
12124	Alto 8/16, 240V CP92 lamp, 15A plug
12123	Alto 8/16, 230V CP92 lamp, Schuko plug

Alto 14/32

Zoom profile spotlight with peak/flat beam adjustment, and a variable beam angle from 14° to 32° for middle distance throws. Lens adjustment is by sliding handles with lever locking operation.

W 2500W V 230/240V 14° - 32° 17kg
✲ 985 Lux 20m 245 x 245mm A
24kg 0.231m³ ✔ EN60 598 2-17

Cat. No.	Description
12134	Alto 14/32, 240V CP92 lamp, 15A plug
12133	Alto 14/32, 230V CP92 lamp, Schuko plug

Alto 20/38

Zoom profile spotlight with peak/flat beam adjustment, and a variable beam angle from 20° to 38° for shorter distance throws. Lens adjustment is by sliding handles with lever locking operation.

W 2500W V 230/240V 20° - 38° 16kg
✲ 1050 Lux 15m 245 x 245mm A
21.7kg 0.192m³ ✔ EN60 598 2-17

Cat. No.	Description
12144	Alto 20/38, 240V CP92 lamp, 15A plug
12143	Alto 20/38, 230V CP92 lamp, Schuko plug

Alto Accessories

Cat. No.	Description
43924	Additional CP92 2000W, 240V lamp
43923	Additional CP92 2000W, 230V lamp
43914	CP91 2500W, 240V lamp
43913	CP91 2500W, 230V lamp
18200	Barndoor, 4-leaf rotatable
18201	Iris, 18-leaf
18202	Holder for 'A' size gobo
18203	Additional colour frame, metal
55001	Colour Call Scroller CC1
82011	Hook clamp, heavy duty
82001	Safety cable, heavy duty

Photometric Data

Typical performance based on 2500W CP91 240V lamp

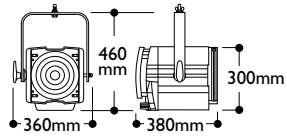
Peak Distribution

Throw (metres)	7.5	10	12.5	15	20	25	30	35
Fresnel (N)		3625	2320	1610	900			
Fresnel (W)	600	340	220	152				
PC (N)		5620	3600	2500	1400			
PC (W)	510	290	184					
8°-16° (N)					1560	1000	700	500
8°-16° (W)				1300	730	470	325	
14°-32° (N)		3945	2525	1750	1000	630		
14°-32° (W)			870	600	340			
20°-38° (N)		2365	1510	1050	600			
20°-38° (W)	1600	900	575	400				

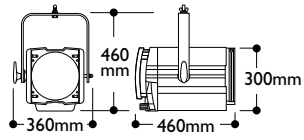
A GUIDE TO SYMBOLS AND ABBREVIATIONS

GENERAL V Supply voltage A Current rating Weight of product Packed weight Packed volume Overall dimension of product ✔ Compliance with international standards. W Watts (maximum recommended) Beam angle (Half-peak angles for Fresnels and PC. Field angles for Profile spotlights Throw (usual working distance from subject in metres) ✲ Illuminance (maximum lux at throw distance stated with lamp recommended or supplied) Gobo (pattern) size. A = 100mm dia., 75mm image. Colour filter cut size
BS British Standard. IP International Protection Standard

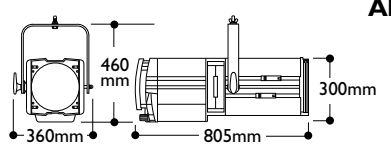
Alto F



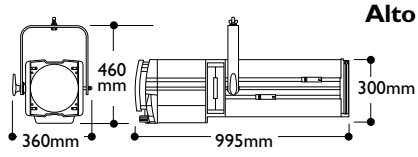
Alto PC



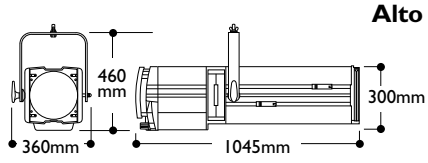
Alto 20/38



Alto 14/32



Alto 8/16



- High-power 2500W/2000W high specification spotlights
- Designed for larger venues and opera houses
- Light-weight housing finished in two-tone black/grey
- Improved lamp life from G22 lamp base
- Easy to use peak/flat field adjustment on profiles
- Rotatable gate assembly standard for profiles
- Automatic power disconnection for easy lamp exchange
- Top or bottom hinged access doors for profile lens cleaning
- Profiles fitted with articulated cranked fork to allow steep tilt angles when hung from pipe
- Supplied with a CP92 2000W lamp, colour frame, mounting fork with M12 wingnut and bolt, and 3m power cable (1.5m for F & PC) with plug
- Available as either 240V version (with 240V lamp and 15A plug) or 230V version (with 230V lamp and Schuko plug)

Photometric Data (continued)

Ø Beam Diameter (m) for Projected Throw in Metres (m)

Throw (metres)	**7.5**	**10**	**12.5**	**15**	**20**	**25**	**30**	**35**
Fresnel (N)		1.3	1.61	1.83	2.58			
Fresnel (W)	8.14	10.8	13.57					
PC (N)		0.82	1.02	1.23	1.64			
PC (W)	8.31	11.08						
8°-16° (N)					2.79	3.49	4.19	4.89
8°-16° (W)				4.21	5.62	7.02	8.43	
14°-32° (N)			3.06	3.68	4.91	6.13		
14°-32° (W)		5.73	7.16	8.6	11.46			
20°-38° (N)		3.52	4.4	5.28	7.05			
20°-38° (W)	5.16	6.88	8.6	10.3				

Peak Intensity, Half Peak and Cut-off

	$^1/_2$ Pk	**$^1/_{10}$ Pk**	**Pk. Candelas**
Fresnel (N)	7.4°	13.8°	362672
Fresnel (W)	64.0°	73.2°	34239
PC (N)	4.7°	7.8°	561903
PC (W)	59.3°	64.0°	28858

	$^1/_2$ Pk (Peaky)	**Candelas (Peaky)**	**$^1/_2$ Pk (Flat)**	**Candelas (Flat)**	**Cut-off**
8°-16°(N)	5.0°	621553	7.8°	674405	8°
8°-16°(W)	6.8°	292285	14.6°	283934	16°
14°-32° (N)	9.5°	394450	10.6°	194350	14°
14°-32°(W)	14.8°	135700	29.1°	48906	32°
20°-38° (N)	11.5°	236214	22.5°	114528	20°
20°-38° (W)	21.0°	90145	39.1°	47191	38°

For performance of any luminaire in either N or W divide Candela by Distance^2

Lamp Data

Specify Strand lamps for replacement purposes to the following specifications

Volts	**230V**	**240V**	**230V**	**240V**
Watts	2500W	2500W	2000W	2000W
Designation	CP91	CP91	CP92	CP92
Base	G22	G22	G22	G22
Lumens	67500	67500	52000	52000
Rated life-hours	400	400	400	400
Colour temp. K	3200K	3200K	3200K	3200K
Cat. No.	43913	43914	43923	43924

Electrical Data

Supply Voltage	230 or 240 volts 50/60 Hz (100/120V versions can be supplied to order).
Max Lamp Watts	2500W
Lamp Type/Base	CP91 2500W or CP92 2000W/ G22 Bi-pin base.
Cable/Connection	3m (1.5m for F & PC) toughened silicone rubber sheathed cable. Conductors 3 x 2.5mm^2. 2 pole microswitch operated by lamphouse access panels prevents access to live parts.
Standards Compliance	Designed to conform to EN 60-598 2-17. GS Approved.

Environmental Data

Max Operating Ambient Temp	45°C
Max Surface Temp	290°C
IP Rating	IP20
Tilt/Recommended angles of use	45 °- 0 - 90°

Mechanical Data

Paint/Finish	High temperature stoved epoxy powder coat in black and dark grey.
Lamp House Construction	Pressure diecast aluminium front and rear sections with extruded aluminium tie bar and formed sections sheet aluminium covers.
Lens Tube (Profiles)	Pressure diecast aluminium front and rear panels with extruded aluminium tie and formed aluminium hinging access panels.
Gate Assembly (Profiles)	Four removable beam shaping shutters of heat resistant nickel alloy and fitted with ergonomically designed heat insulated operating handles, within diecast aluminium gate assembly which is rotatable through 220°. Gate incorporates runner for gobo holder (Size A) or fitting for 18-leaf iris accessory.
Mounting and Suspension	Heavy duty aluminium fork fitted with M12 bolt and wing nut and extra holes for DIN 15560 mounting. Fork position can be adjusted along lens tube or lamp house mounting slot. (Cranked fork version available). Profiles fitted with articulated fork to allow steep angles when hung from pipe.
Rear Handle	Vertical, heat insulated handle on rear of lamp housing.

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Weights and Dimensions

	F	**PC**	**8/16**	**14/32**	**8/16**
Weight	11.00kg	12.0kg	17.0kg	17.0kg	16.0kg
Length	380mm	460mm	1045mm	995mm	805mm
Width	360mm	360mm	360mm	360mm	360mm
Height	460mm	460mm	460mm	460mm	460mm
Packed weight	12.0kg	13.0kg	18.5kg	18.5kg	17.5kg
Packed length	600mm	680mm	1265mm	1215mm	1025mm
Packed width	380mm	380mm	380mm	380mm	380mm
Packed height	425mm	425mm	425mm	425mm	425mm
Filter Cut Size	245 x 245mm				
Colour Runner	245mm^2 DIN size metal colour frame (supplied) fits integral diecast runners with retention spring for single handed insertion and removal.				

Optical System

Profiles	Light collimated through gate using near ellipsoidal reflector of polished anodised aluminium. Image at gate projected using two plano-convex lenses.
F & PC	Lamp filament placed on focal point of hemispherical reflector projects rays towards single lens. Distance between lamp/reflector carriage and lens is adjustable.
Lens(es)	8/16: 230 and 150mmØ; 14/32: 200 and 120mmØ; 20/38: 200 and 120mmØ Lenses of heat resistant clear borosilicate glass mounted in diecast aluminium carriers which slide smoothly on bearing rods. Lens position adjusted by handles which pivot out for focusing and fold flat for locking. Beam angle and focus setting indication is provided. F: 200mmØ Fresnel lens of heat resistant borosilicate glass behind 25mm mesh guard. PC: 200mmØ Prism Convex lens of heat resistant borosilicate glass behind 25mm mesh guard.
Reflector	Profiles: 200mmØ modified ellipsoidal reflector of electro polished and anodised aluminium. Fresnel & PC: 100mmØ hemispherical reflector of electro polished and anodised aluminium.
Gobo Size	A

Operational Data

Lamp Access	Operation of rear catch releases drop down lower covers to give access to reflector and slide down lampholder assembly. Power is disconnected when lower cover opens.
Lens Access	Profiles: Top and bottom full covers hinge open for complete access to lenses for cleaning and maintenance. F & PC: Access through lower lamp housing cover.
Focus Adjustment	Profiles: Lens position adjusted by handles which pivot out for focusing and fold flat to lock lens in position. Beam angle and focus setting indication is provided. F & PC: Rotary control of focusing is provided with operating knobs front and rear through lead screw and rod system.
Field Adjustment	Profiles: Peaky to flat field adjustment is by rotary knob on rear panel.
Lamp Alignment	Profiles: Alignment of lamp on optical axis is by two screwdriver adjustments on rear panel.
Beam Shaping	Profiles: Four removable beam shaping shutters of heat resistant nickel alloy and fitted with ergonomically designed heat insulated operating handles, within diecast aluminium gate assembly which is rotatable through 220°. Gate incorporates runners for gobo holder (Size A) and fitting for 18-leaf iris accessory. F & PC: By optional four leaf barndoor.
Tilt	Adjustment by means of pivots on either side of fork, locked by T-handle on interlocking spring cup and disk mechanism
Pan	Pivot around M12 bolt through centre of fork, or using DIN 15560 mounting.

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