



**novelty**

**REFERENCES  
2025 - 2026**

[www.novelty.fr](http://www.novelty.fr)



## YOUR TECHNICAL PARTNER Expert & Specialist at your service

### NOVELTY | 50 years of experience

Network | Video | Lighting | Power | Truss | Pipes & Drapes

### NOVELTY in figures:

- 50 years of experience
- Turnover of €165M (2023-2024)
- 10 000 events per year
- 450 employees
- More than 500 temporary staff per month
- 40,000 m<sup>2</sup> of storage, workshops, and offices

### NOVELTY is a brand of the Groupe Novelty, the European leader in event technology.

Eager to export its know-how and «French touch» internationally, the Group accompanies its clients all over the world.

We tailor our offering to the realities of your context, driven by solid practical values to always strive for operational excellence. At all stages in the process, our teams are service-minded and keep their sights set on success in both touch technical and human terms.

Thanks to the synergies activated between our brands and teams, we provide our clients with:

- The largest equipment fleet in Europe
- A cross-functional design office
- A full-time QSE prevention specialist
- A fleet of over 200 eco-friendly vehicles
- Nearly 50 years of experience
- Locations in France and abroad,
- International quality references.

A fleet of state-of-the-art equipment, teams of experienced professionals; this is where we make the difference!

### The Groupe Novelty is present in France and around the world:

- BORDEAUX
- CAEN
- CANNES
- LYON
- MARSEILLE
- NANTES
- NICE
- PARIS
- STRASBOURG
- TOULOUSE
- BARCELONA
- BRUSSELS
- DAMMAM
- DOHA
- DUBAI
- LISBON
- LONDON
- MADRID
- MARRAKECH
- MILAN
- MONACO
- RIYAD



### Our brands:

ALABAMA • BBS BACKLINE • BEST AUDIO & LIGHTING • C17 • DE PREFERENCE • DUSHOW  
DUSHOW TV • MAGNUM • MAGNUM POWER • NOMAD • NOVELTY • ON STAGE  
PIX BOX BY ALABAMA • POTAR • SEVEN • TEAMAGINE



NETWORK

VIDEO

LIGHTING

SOUND SYSTEMS

ENERGY

STRUCTURE

PIPES & DRAPES

TECHNICAL GUIDE

MISCELLANEOUS



# SERVICES

## **DELIVERIES**

Our prices are net, ex-stock. Nevertheless, we can deliver and collect the equipment. Our delivery prices are calculated according to volume and distance.

## **SHIPMENTS**

Our Longjumeau depot is located near major logistics stations in the Île-de-France region, and so we can ensure rapid dispatch and tracking of your equipment throughout France and Europe. Our proximity to the Freight area at Orly allows us to deliver the equipment anywhere in the world.

## **ADVICE**

You can contact us at any time. We will advise you on the best choice of equipment for your operation. We are also able to carry out any required technical study.

## **HOTLINE**

During busy periods, Novelty provides a telephone hotline in case of a sudden breakdown, a problem to be solved or a fixed installation requiring urgent repair. Do not hesitate to ask for this telephone hotline number from your preferred contact.

## **TECHNICAL SERVICES**

If you wish to be provided aid in the installation and technical operation of the equipment, in the creation of computer graphics or the establishment of technical safety files for your operation or event, Novelty will advise you on the best technical service providers.

## **STORE AND CONSUMABLES**

When you come for a pick-up or a return, you will find in the Store a wide and varied choice

NOVELTY is proud to present its new catalogue.  
Discover our new products on the following pages.

NOVELTY | Tailor-made technology for your events!

NOVELTY is proud to present its new list of products.  
We let you discover in these pages our new products.

NOVELTY | All customized technique for your events!

of consumables necessary for your service: gelatins, lamps, gaffer, barnier, video supports.

## SALE AND INTEGRATION

Novelty's Sales & Integration unit is dedicated to turning customer requirements into technical solutions.

With 20 years of experience, the unit has several missions:

- Supporting customers in the study and feasibility of technical projects
- Advising on the choice of the most suitable equipment
- Manufacturing or integrating appropriate systems, even the most specific ones that require "tailor-made" solutions
- Selling equipment and ensuring its installation, integration and maintenance through privileged contacts with the manufacturers

The solution for your equipment... The equipment for your solutions.

## SECOND-HAND PRODUCTS

Novelty offers a wide range of second-hand products for the entertainment industry for professionals (sound, lighting, structure, video, etc.).

All products are systematically checked in our premises by our team of qualified technicians before being shipped.

Our teams, which are constantly being trained by the leading manufacturers, will guarantee you a quality service.

A single dedicated platform: **[www.nomad-online.com](http://www.nomad-online.com)**



# NETWORK

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## NETWORKS AT NOVELTY

Network technologies have greatly evolved over the years and many of the equipment used in our services have network-compatible interfaces.

The development of equipment and habits in this area are at the heart of the development focus within the Novelty eco-system: Lighting, Sound, Video, Energy.

The term network is by definition made quite generic in use. It is therefore necessary to structure the meaning of this type of interface as well as the associated uses for the different business lines within Novelty (Lighting, Sound, Video, Energy, etc.).

By primary definition, a computer network is a set of devices linked together to exchange information.

Let us lay the foundations of two fundamental aspects in our approach to a network with these two definitions:

### Control/Supervision [C/S]

The equipment can be controlled and supervised remotely, its own functionalities are used in remote mode, the control and supervision of the equipment is carried out via a computer interface (windows, menus, physical interfaces, touch interfaces, etc.).

**Control data** is transported via various protocol sets for the control and administration of amplifiers, mixing consoles, wireless transmission systems, lighting systems, video systems, etc.

### Transport [T]

The equipment can receive and/or send signal data (digital audio, digital video, etc.) through the created network. This device will then convert the signal(s) and make them compatible to send them into the network.

**Signal data** is transported via various protocol subsets for the control and administration of amplifiers, mixing consoles, wireless transmission systems, lighting systems, video systems, etc.

### Normative protocol sets

In the end, all these protocol sets are based on a standardised system enabling data packets to be transported in a standardised network: **Ethernet** (ISO/IEC/IEEE 8802-3:2014).



## NETWORKS AT NOVELTY

The products are therefore interconnected within the Novelty network eco-system through different physical interfaces.

Communication protocols define, in a formal and interoperable way, how information is exchanged between network devices.

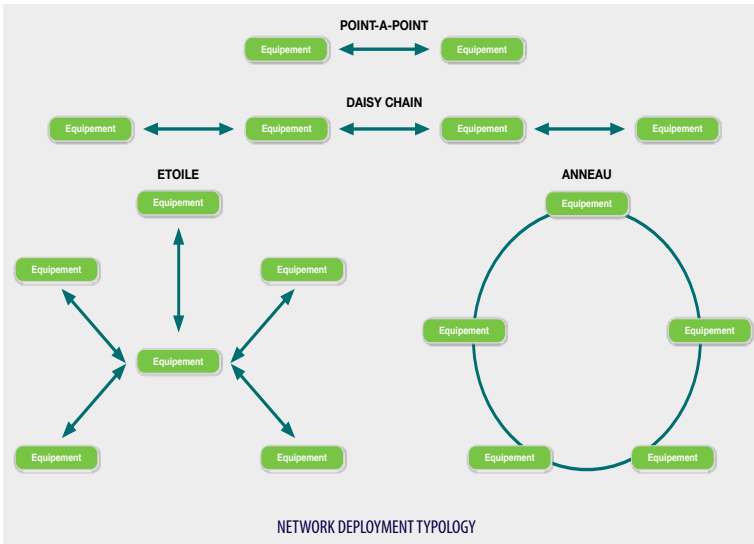
A piece of equipment can have both types of interfaces and can be controlled/supervised as well as have a transport interface.

### Copper wiring interfaces

- Cat5e, Cat6 cables, RJ45 connectors
- Hubs/switches

### Fibre optic cable interfaces

- Fibre optics SC, LC, ST, Neutrik Opticalcon, Fibercast, Fiberco etc., conversion and adaptation jumpers, etc.
- Hubs/switches



## COMPUTER NETWORKS

**NON-MANAGEABLE SWITCHES**

<b>SWISSON XES8G</b>	8-port 10/100/1000 optimised for sound/light
<b>D-LINK DGS1016D</b>	16-port 10/100/1000 half or full duplex
<b>D-LINK DGS1024D</b>	24-port 10/100/1000 half or full duplex
<b>NETGEAR GS516UP</b>	16-port Gigabit: 8-port PoE++ and 8-port PoE+
<b>NETGEAR GS108</b>	8-port 10/100/1000 half or full duplex
<b>TENDA TEG1016G</b>	16-port 10/100/1000

**MANAGEABLE SWITCHES**

<b>CISCO SG300-10P</b>	8-port Gigabit POE + 2 fibre ports
<b>CISCO SG300-20</b>	18-port Gigabit + 2 fibre ports
<b>AGORA Ghost 2 MK2</b>	14-port Gigabit stage switch
	4-port 1/10 Gbits SM fibre trunk
<b>LUMINEX Gigacore 20T</b>	20-port Gigabit stage switch
	4-port SM 10 Gigabit fibre trunk
<b>TP-LINK T1500G</b>	8-port POE+ Gigabit + 2-port GBIC
<b>OXO CORE8PRO</b>	8-port PoE+ 10/100 switch + 2-port RJ45 1Gbit trunk

**WIFI ROUTERS**

<b>TP LINK WR1043ND</b>	4-port Gigabit-Wifi N300
<b>NETGEAR RG6220</b>	4-port Gigabit-Wifi AC1200
<b>MIKROTIK HAP AX2</b>	5-port Gigabit-Wifi 6



AGORA GHOST MK2



LUMINEX GIGACORE 20T



SWISSON XES8G



CISCO SG300-10P



CISCO SG300-20



NETGEAR GS108

## NETWORK WIRING

## OPTICAL FIBRE

Single-mode OS2 / 9-125 $\mu$ 

<b>NEUTRIK</b>	OpticalCON MTP24, 200 m on reel
<b>NOVELTY B024SMBOX</b>	Pelicans BreakOut MTP24 to 12 OpticalCON DUO
<b>NOVELTY B024SMRACK</b>	BreakOut MTP24 Rack to 12 x OpticalCON DUO
<b>NOVELTY B024SMTRUSS</b>	Bridge housing BreakOut MTP24 to 12 x OpticalCON DUO
<b>NOVELTY B0SMQUADTO2DUO</b>	BreakOut SM OpticalCON Quad > 2 OpticalCON DUO
<b>NEUTRIK</b>	OpticalCON DUO, 50 m in a case
<b>NEUTRIK</b>	OpticalCON DUO, 150 m on reel
<b>NEUTRIK</b>	OpticalCON DUO, 200 m on reel
<b>NEUTRIK</b>	OpticalCON QUAD X-TREM, 200 m on reel
<b>NEUTRIK</b>	OpticalCON Lite DUO 1 m
<b>NEUTRIK</b>	OpticalCON Lite DUO 3 m
<b>NEUTRIK</b>	OpticalCON Lite DUO 5 m
<b>NEUTRIK</b>	OpticalCON Lite DUO 10 m
<b>NEUTRIK</b>	OpticalCON Lite DUO 25 m
<b>NOVELTY</b>	LC / LC DUO jumper, 1 m
<b>NOVELTY</b>	LC / SC DUO jumper, 1 m
<b>NOVELTY</b>	SC / SC DUO jumper, 1 m
<b>NEUTRIK</b>	OpticalCON duo coupler
<b>NEUTRIK</b>	Coupleur OpticalCON MTP24

Multimode OM3 / 50-125 $\mu$ m

<b>NEUTRIK</b>	OpticalCON DUO, 2m multimode DUO
<b>NEUTRIK</b>	OpticalCON DUO, 150 m on reel
<b>NEUTRIK</b>	OpticalCON DUO, 200 m on reel
<b>NEUTRIK</b>	OpticalCON QUAD X-TREM, 200 m on reel
<b>NOVELTY</b>	LC / LC DUO jumper, 1 m
<b>NOVELTY</b>	LC / SC DUO jumper, 1 m
<b>NOVELTY</b>	SC / SC DUO jumper, 1 m

## NETWORK WIRING

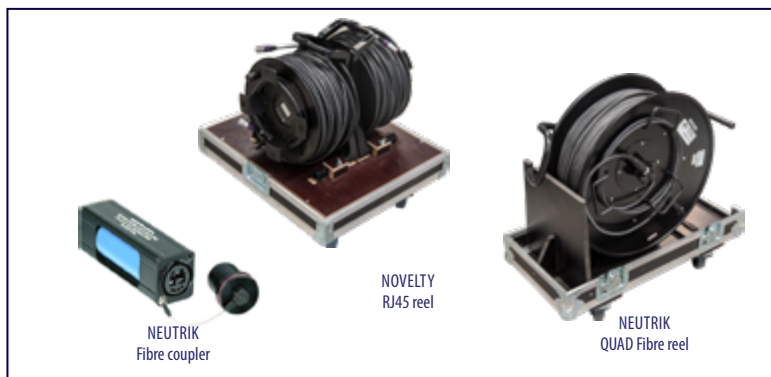
### RJ 45 NETWORK CABLES

<b>Cable category 6 FTP</b>	5 m
<b>Cable category 6 FTP</b>	10 m
<b>Cable category 6 FTP</b>	20 m
<b>Cable category 6 FTP</b>	50m
<b>Cable category 6 GigaAudio Ethercon</b>	50 m on reel
<b>Cable category 6 GigaAudio Ethercon</b>	100 m on reel
<b>Cable category 6 Audiolan24 Ethercon</b>	50 m on reel
<b>Cable category 6 Audiolan24 Ethercon</b>	100 m on reel

<b>Multi 5 cables category 6 Ethercon</b>	25 m
<b>Multi 5 cables category 6 Ethercon</b>	50 m
<b>NEUTRIK RJ45 coupler category 6a</b>	

<b>Cable category 6a Audiolan6a Ethercon</b>	5 m
<b>Cable category 6a Audiolan6a Ethercon</b>	10 m
<b>Cable category 6a Audiolan6a Ethercon</b>	20 m
<b>Cable category 6A Audiolan6A Ethercon</b>	30m
<b>Cable category 6a Audiolan6a Ethercon</b>	50 m on reel
<b>Cable category 6a Audiolan6a Ethercon</b>	100 m on reel

<b>Cable category 7 FFTP</b>	20 m, AWG-26
<b>Cable category 7 FFTP</b>	40 m, AWG-26
<b>Cable category 7 FFTP</b>	60 m on reel, AWG-26
<b>Cable category 7 FFTP</b>	80 m on reel, AWG-23
<b>Cable category 7 Kramer link</b>	150 m on reel, AWG-23







# VIDEO

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## INNOVATION IN VIDEO

### NOVELTY IN 4K



ANALOG WAY AQUILON C+ | see p.52



ANALOG WAY ZENITH 200 ALTA 4K | see p.52



ANALOGWAY Pulse 4K | see p.66



LANSEE Muxlan 8+8 12GSDI | see p.71

## NOVELTY IN 4K



BLACKMAGIC DESIGN VIDEO ASSIST 7\"/>



AJA Ki Pro Ultra 12G | see p.64



BLACKMAGIC DESIGN URSA Broadcast G2  
| see p.60



LILIPUT Q23-8K | see p.38



KILOVIEW N60 | see p.69



KILOVIEW N50 | see p.69

## INNOVATION IN VIDEO

### NOVELTY IN 4K



ABSEN POLARIS PRO V2 PL3.9 | see p.47



EIZO EV2740X-BK | see p.38



NOVASTAR MX40 PRO | see p.50



NOVASTAR MX30 | see p.50



PANASONIC TH-43/55/65/75/86EQ2W  
+ 12G CARD | see p.37



FUSION TOOLS HDMI 2.0 Fiber Link  
| see p.71



DECIMATOR DD-12G CROSS | See p.69



ROLAND V-160HD | see p.68



LUMATEK EZ-PRO VS10  
| see p.68



LANSEE TIDY 3GSDI-LAN  
| see p.71



LILLIPUT PVM2205 | see p.38



EPSON EB-PU2220B | see p.23



PANASONIC AW HE145 | see p.61



SWIT FLOW 500 | see p.62

## INNOVATION IN VIDEO

### ROSS ULTRIX FR2

Ross modular chassis supplied with 16x16 BNC card and 4 redundant power supplies.  
Fully configurable unified multi-user management.  
Video and audio routing, embedded or via MADI auxiliary SFPs.

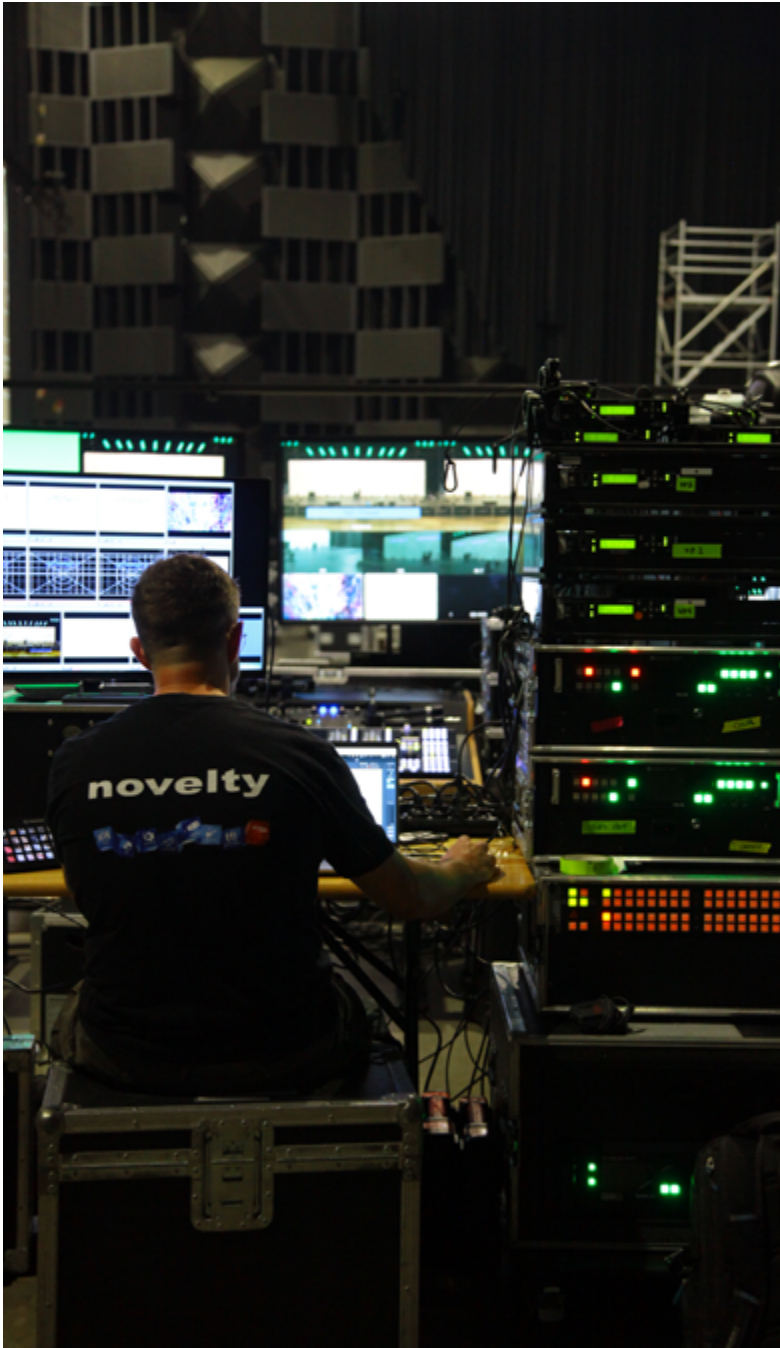
Numerous options available on request: additional 16x16 card, MADI coaxial IN/OUT SFP, 4K  
12GSDI licence, multiviewer licence, MADI SRC licence and audio delay...



ROSS ULTRIX FR2 | see p.70







## VIDEO PROJECTORS 16/9

### BARCO • UDM 4K30

27.000 lumens ISO , 4K UHD  
Resolution: 3840 x 2400 pixels (16/10)  
Weight: 61 kg  
Consumption: 1900 W  
Input: HDBaseT simple / HDMI 2.0 (HDCP 2.2, HDR10)  
DP 1.2 (HDCP1.3)/ Quad 3G/12G SDI/BarcoLink ULTRA  
Motorised multifunctional cradle



### BARCO • HDF-W30

30,000 lumens ANSI, 1920 x 1200, Full HD  
Flex brightness (20,000 to 30,000 lumens in 2,000 lumen increments)  
Dimensions: L 707 mm x H 548 mm x D 1,025 mm  
Weight: 99 Kg | Consumption: 4,550 W  
Inputs: DVI-I  
(HDCP, including analogue RGB YUV)  
SDI/HDSDI/dual HDSDI/3G/BarcoLink



### BARCO • HDX-W20

20,000 lumens ANSI, 1920 x 1200, Full HD  
Flex brightness (10,000 to 20,000 lumens in 2,000 lumen increments)  
Dimensions: L 475 mm x H 725 mm x D 382 mm  
Weight: 50 Kg | Consumption: 2,850 W  
Inputs: DVI-I  
(HDCP, including analogue RGB YUV)  
SDI/HDSDI/dual HDSDI/3G/BarcoLink



## VIDEO PROJECTORS 16/9

**EPSON · EB-PU2220B**

20.000 lumens, Resolution: 1920 x 1200  
 Dimensions: 586 x 492 x 218 mm  
 Weight: 24.4 kg | Consumption: 1 300 W  
 Inputs: DVI, VGA, HDMI, HDBaseT, 3GSDI

**CHRISTIE · HD 20K-J**

18,000 lumens, Resolution: 1920 x 1080  
 Dimensions: 815 x 621 x 419 mm  
 Weight: 95 Kg | Consumption: 4,000 W  
 Inputs: DVI, VGA, 3GSDI, RVBHV,  
 Composite, S-Video

**CHRISTIE · HD 14K-M**

12,000 lumens, Resolution: 1920 x 1080  
 Dimensions: 561 x 500 x 259 mm  
 Weight: 25 kg | Consumption: 1,500 W  
 Inputs: Dual Link DVI, Dual 3G  
 SD, HD-SDI, HDMI, RVBHV

**CHRISTIE · HD 10K-M**

10,000 lumens, Resolution: 1920 x 1080  
 Dimensions: 561 x 500 x 259 mm  
 Weight: 25 kg | Consumption: 1,320 W  
 Inputs: DVI, VGA, HD-SDI, RVBHV,  
 Composite, S-Video



## VIDEO PROJECTORS 16/9

### PANASONIC · PT-RZ120BE

12,000 lumens, WUXGA, 1920 x 1200, laser source  
Dimensions: L 498 mm x H 200 mm x D 581 mm  
Weight: 22.8 kg | Consumption: 1100 W  
1 DLP chip  
Inputs: 3GSDI, DVI, RVBHV, HDMI, VGA, HDBaseT



### PANASONIC · PT-DZ110XE

10,600 lumens ANSI, (Resolution: 1920 x 1200 Native)  
Dimensions: L 530 mm x H 200 mm x D 548.5 mm  
Weight: 24 kg | Consumption: 920 W  
Inputs: SDI, HDMI, DVI-D, RGB, Composite,  
S-Video, D-Sub, RJ45



### PANASONIC · PT-DZ10KE

10,600 lumens ANSI, (Resolution: 1920 x 1200 Native)  
Dimensions: L 500 mm x H 200 mm x D 548 mm  
Weight: 24 kg | Consumption: 900 W  
Inputs: SDI, HDMI, DVI-D, RGB, Composite,  
S-Video, D-Sub, RJ45



## VIDEO PROJECTORS 16/9

**PANASONIC · PT-RZ970BE**

10,000 lumens, WUXGA, 1920 x 1200, laser source  
 Dimensions: L 498 mm x H 200 mm x D 581 mm  
 Weight: 23.2 kg | Consumption: 1050 W  
 1 DLP chip  
 Inputs: 3GSDI, DVI, RVBHV, HDMI, VGA, HDBaseT

**PANASONIC · PT-DZ780LB**

7,000 lumens ANSI, WUXGA (Resolution: 1920 x 1200)  
 Dimensions: L 498 mm x H 175 mm x D 521 mm  
 Weight: 17.6 kg | Consumption: 790 W  
 1 DLP chip  
 Inputs: 3G-SDI, HD-SDI, SD-SDI, HDMI, DVI-D, RVBHV, VGA, HDBaseT

**PANASONIC · PT-RZ670**

6,500 lumens ANSI, (Resolution: 1920 x 1200), laser source  
 Dimensions: L 498 mm x H 200 mm x D 581 mm  
 Weight: 23 kg | Consumption: 720 W  
 1 DLP chip  
 Inputs: 3G-SDI, HD-SDI, HDMI, DVI-D, RVBHV, VGA, HDBaseT

**PANASONIC · PT-RZ660WE**

6,000 lumens, WUXGA, 1920 x 1200, laser source  
 Dimensions: L 498 mm x H 200 mm x D 581 mm  
 Weight: 22.4 kg | Consumption: 825 W  
 1 DLP chip  
 Inputs: 3GSDI, DVI, RVBHV, HDMI, VGA, HDBaseT



## VIDEO PROJECTORS 16/9

### VIVITEK • DK10000Z-BK

10,000 lumens, 4K, 3840 x 2160, laser source  
Dimensions: L 500 mm x H 580 mm x D 205 mm  
Weight: 30.6 kg | Consumption: 1350 W  
1 DLP chip  
Inputs: 3GSDI, HDMI, DP, HDBaseT



### VIVITEK • DK8500Z-BK

10,000 lumens, 4K, 3840 x 2160, laser source  
Dimensions: L 500 mm x H 580 mm x D 205 mm  
Weight: 28 kg | Consumption: 845 W  
1 DLP chip  
Inputs: 3GSDI, HDMI, DP, HDBaseT



### VIVITEK • DU7098Z

7,000 lumens, 1920 x 1200, laser source  
Dimensions: L 470 mm x H 517 mm x D 202 mm  
Weight: 23 kg | Consumption: 630 W  
1 DPL Chip  
Inputs: HDMI, DVI, VGA, RVBHV, HDBaseT  
Black or white



### BENQ • MH684

3,500 lumens ANSI, (Resolution: 1920 x 1080)  
Dimensions: L 314 mm x H 116 mm x D 216 mm  
Weight: 3.3 kg | Consumption: 310 W  
Inputs: Computer in (D-sub 15pin),  
Composite, Video, S-Video, HDMI

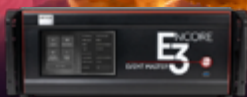




EXPANDING THE EXPERIENCE<sup>3</sup>



**QDX**



**ENCORE3**



**I600**

Barco comes with two new projection platforms and an image processing solution.

Three innovations, one common goal: expanding your experience, while also reducing TCO, energy consumption and operational hassle.



Meet the QDX, ENCORE3 and I600 at  
[www.barco.com/entertainment](http://www.barco.com/entertainment)

**BARCO**



## VIDEO PROJECTOR ACCESSORIES

**BARCO OPTICS HDQ-XLM series**

<b>Fixed optic</b>	1.0 (16/9) XLD HB
<b>Zoom</b>	1.45- 1.8 (16/9) XLD HB
<b>Zoom</b>	1.8 -2.4 (16/9) XLD HB
<b>Zoom</b>	2.2-3.0 (16/9) XLD HB
<b>Zoom</b>	2.8-5.5 (16/9) XLD HB
<b>Zoom</b>	5.5-8.5 (16/9) XLD HB

**BARCO OPTICS UDX-HDF-HDX-FLM-SLM series**

<b>Fixed optic</b>	0.38 UST 90° (16/9)
<b>Zoom</b>	0.67 - 1 (16/9)
<b>Zoom</b>	0.68 - 0.87 UST 90° (16/9)
<b>Zoom</b>	0.85-1.24 (16/9)
<b>Zoom</b>	1.16-1.49 (16/9)
<b>Zoom</b>	1.35-1.85 (16/9)
<b>Zoom</b>	1.85-2.59 (16/9)
<b>Zoom</b>	2.59-4.16 (16/9)
<b>Zoom</b>	4.16-6.93 (16/9)
<b>Zoom</b>	6.93-10.30 (16/9)

**EPSON OPTICS EB-PU series**

<b>ELPLX02S</b>	10 to 20k: 0.35:1	
<b>ELPLU03S</b>	10 to 20k: 0.48 - 0.57:1	7 to 9.5k: 0.65 - 0.78:1
<b>ELPU04</b>	10 to 20k: 0.64 - 0.77:1	7 to 9.5k: 0.87 - 1.06:1
<b>ELPLW08</b>	10 to 20k: 0.86 - 1.21:1	
<b>ELPLW06</b>	10 to 20k: 1.19 - 1.62:1	
<b>ELPLM15</b>	10 to 20k: 1.57 - 2.56:1	7 to 9.5k: 2.16 - 3.48:1
<b>ELPLM10</b>	10 to 20k: 2.42 - 3.71:1	7 to 9.5k: 3.31 - 5.07:1
<b>ELPLM11</b>	10 to 20k: 3.54 - 5.4:1	7 to 9.5k: 4.84 - 7.39:1
<b>ELPLL08</b>	10 to 20k: 5.27 - 7.41:1	7 to 9.5k: 7.2 - 10.12:1

## VIDEO PROJECTOR ACCESSORIES

### PANASONIC OPTICS

<b>Zoom ET-DLE020</b>	0.29 - 0.31 (4/3)   0.28 - 0.3 (16/9)
<b>Fixed optic ET-DLE030</b>	0.39 (4/3)   0.38 (16/9)
<b>Fixed optic ET-DLE050</b>	0.8
<b>Fixed optic ET-DLE055</b>	0.8
<b>Zoom ET-DLE060</b>	0.62 - 0.83 (4/3)   0.6 - 0.8 (16/9)
<b>Zoom ET-DLE080</b>	0.82 - 1.03 (4/3)   0.79 - 0.98 (16/9)
<b>Zoom ET-DLE085</b>	0.81 - 1.01 (4/3)   0.78 - 0.97 (16/9)
<b>Zoom ET-DLE100</b>	1.3 - 2.0 (4/3)   1.3 - 1.9 (16/9)
<b>Zoom ET-DLE150</b>	1.3 - 2.0 (4/3)   1.3 - 1.9 (16/9)
<b>Zoom ET-DLEST</b>	1.8 - 2.4 (4/3)   1.8 - 2.4 (16/9)
<b>Zoom ET-DLE200</b>	2.6 - 4.3 (4/3)   2.4 - 4.0 (16/9)
<b>Zoom ET-DLE250</b>	2.6 - 4.0 (4/3)   2.3 - 3.6 (16/9)
<b>Zoom ET-DLE310</b>	3.6 - 4.7 (4/3)   3.4 - 4.5 (16/9)
<b>Zoom ET-DLE350</b>	3.8 - 5.7 (4/3)   3.6 - 5.4 (16/9)
<b>Zoom ET-DLE410</b>	4.9 - 9.0 (4/3)   4.5 - 8.4 (16/9)
<b>Zoom ET-DLE450</b>	6.0 - 9.6 (4/3)   5.5 - 8.9 (16/9)
<b>Zoom ET-D75LE5</b>	0.8 - 1.0 (4/3)   0.7 - 1.0 (16/9)
<b>Zoom ET-D75LE50</b>	0.8 - 1.0 (4/3)   0.7 - 1.0 (16/9)
<b>Zoom ET-D75LE6</b>	1.0 - 1.2 (4/3)   0.9 - 1.1 (16/9)
<b>Zoom ET-D75LE10</b>	1.4 - 1.8 (4/3)   1.3 - 1.7 (16/9)
<b>Zoom ET-D75LE1</b>	1.5 - 2.0 (4/3)   1.4 - 1.8 (16/9)
<b>Zoom ET-D75LE20</b>	1.8 - 2.6 (4/3)   1.7 - 2.4 (16/9)
<b>Zoom ET-D75LE2</b>	2.0 - 3.0 (4/3)   1.8 - 2.8 (16/9)
<b>Zoom ET-D75LE30</b>	2.6 - 5.1 (4/3)   2.4 - 4.7 (16/9)
<b>Zoom ET-D75LE3</b>	3.0 - 5.0 (4/3)   2.8 - 4.6 (16/9)
<b>Zoom ET-D75LE4</b>	5.0 - 8.0 (4/3)   4.6 - 7.4 (16/9)

### CHRISTIE OPTICS ILS series

<b>Fixed optic</b>	0.67 (4/3)   0.73 (16/9)
<b>Fixed optic</b>	1.1 (4/3)   1.2 (16/9)
<b>Zoom</b>	1.4-1.8 (4/3)   1.5-2.0 (16/9)
<b>Zoom</b>	1.8-2.6 (4/3)   2.0-2.8 (16/9)
<b>Zoom</b>	2.6-4.1 (4/3)   2.8-4.5 (16/9)
<b>Zoom</b>	4.1-6.9 (4/3)   4.5-7.5 (16/9)





PANASONIC ET-DLE055



PANASONIC ET-DLE250



PANASONIC ET-DLE450



PANASONIC ET-DLE030



PANASONIC ET-D75LE20



PANASONIC ET-D75LE30

## VIVITEK OPTICS

**Optic VL911G/LNS-5WZ2** 0.77-1.10

**Optic D88-ST001** 1.70-1.90

**Optic D88-WZ01** 1.85-2.50

**Optic D88-UWZ01** 1.98-2.30

## VP BRACKETS AND SUPPORTS

**SmartMetals ball joint**

For VP on frame

**Panasonic rotating bracket**

For 10,000 series

**VP-Fix Panasonic**

For 5000/6000 series

**VP-Fix PM**

Universal support for Small models

**Stand on castors for small VP**

Adjustable height, 0.40 to 1.90m



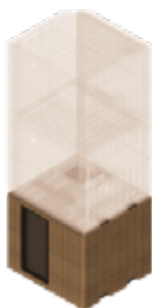
## PROJECTION BOOTHS

### PROJECTION BOOTHS

**CAB MAPPING V2B** Low projection booth model  
 This model can only be used on the ground floor  
*1 service door (W 810 x H 1900mm)*  
*Ladder attached for access to upper floor*  
*Service lighting*  
*Ø10 cm hole in floor for cable routing*  
*2 Ø10cm holes for cable routing between DRC and R+1*  
*Human access hatch*  
*4 twist locks*  
*4 retractable support legs*

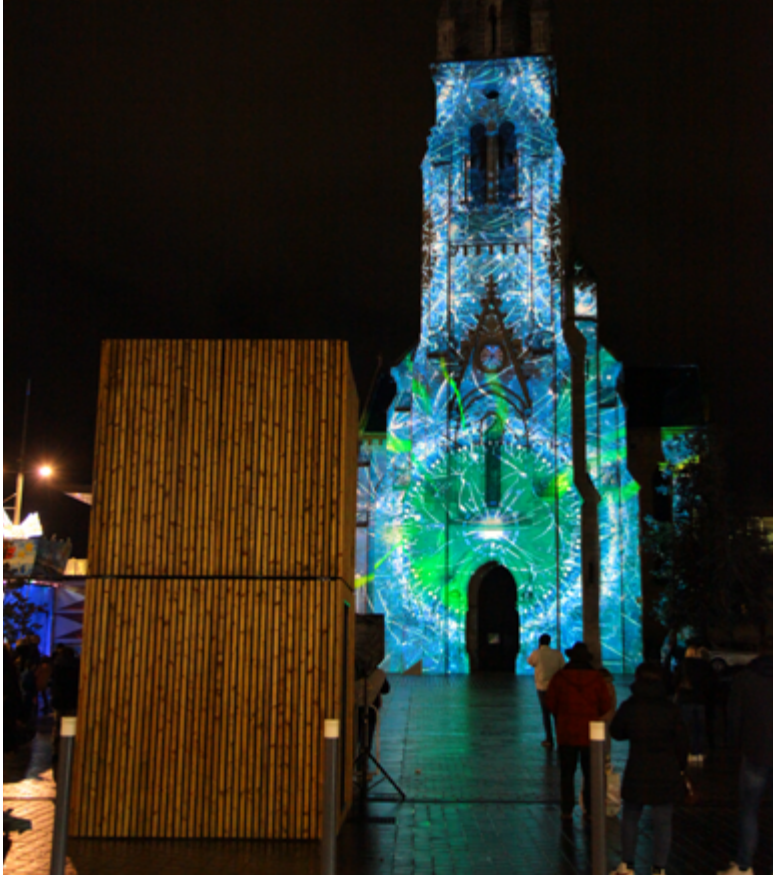
**CAB MAPPING V2H** High projection booth model  
 This model can be used on ground or upper floors  
*2 steel tubes for VP attachment (Ø50)*  
*Hot air extraction system*  
*4 universal adapters for hot air extraction*  
*Reversible air conditioning*  
*Service lighting*  
*Ladder fixed for access to upper floor*  
*Hatch for human passage*  
*2 holes Ø10cm for cable routing between ground floor and first floor*

**Possible combinations:** 1 high booth on the ground floor (accessible via the container's double door)  
 1 high booth + 1 low booth  
 2 high booths + 1 low booth



CAB MAPPING V2B

CAB MAPPING V2H



## PROJECTION BOOTHS

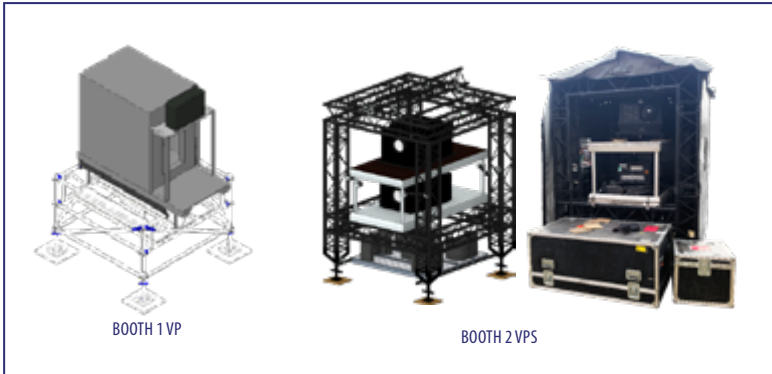
### PROJECTION BOOTHS

#### BOOTH 1 VP

Compact booth for 1 high-powered VP, with extraction and air conditioning.

#### BOOTH 2 VPs

Set of frames and tarpaulins for 2 high-powered VPs.



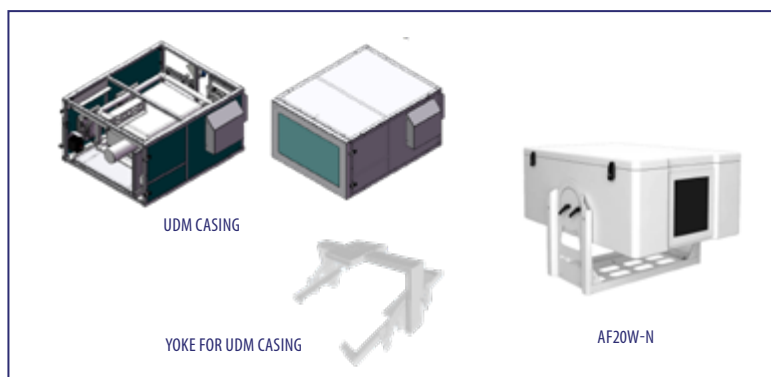


## PROJECTION BOOTH ACCESSORIES

## PROJECTION BOOTH ACCESSORIES

**UDM CASING** Watertight casing for 1 UDM VP with base.  
Automatic temperature and humidity management  
Use in portrait or landscape mode  
Optional yoke.

**AF20W-N** Waterproof casing for medium-sized projector



## LED SCREENS

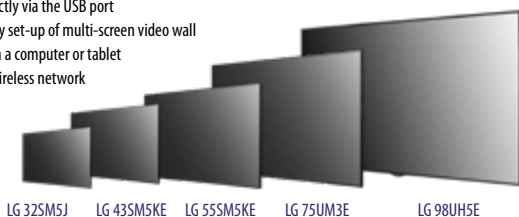
<b>PANASONIC TH-85EQ2W</b>	85" LED screen with SDM slot, ultra-thin edge (14.9 mm) Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>PANASONIC TH-85EQ2W</b>	75" LED screen with SDM slot, ultra-thin edge (14.9 mm) Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>PANASONIC TH-65EQ2W</b>	65" LED screen with SDM slot, ultra-thin edge (14.9 mm) Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>PANASONIC TH-55EQ2W</b>	55" LED screen with SDM slot, ultra-thin edge (14.9 mm) Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>PANASONIC TH-43EQ2W</b>	43" LED screen with SDM slot, ultra-thin edge (14.9 mm) Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>PANASONIC TY-SB01QS</b>	Card for SDM slot, 12GSDI
<b>LG 98UH5E</b>	98" LED screen, bord ultra fin (14.9 mm) Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>LG 75UM3E</b>	75" LED screen Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>LG 55SM5KE</b>	55" LED screen Native resolution: 1920 x 1080, Full HD
<b>LG 43SM5KE</b>	43" LED screen Native resolution: 1920 x 1080, Full HD
<b>LG 32SM5J</b>	32" LED screen Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>LG 75UH5F-H</b>	75" LED screen   Matte finish Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>LG 75UM3DG-H</b>	75" LED screen   Matte finish Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>LG 55UH5F-H</b>	55" LED screen   Matte finish Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>LG 43UH5F-H</b>	43" LED screen   Matte finish Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>SAMSUNG QM98F</b>	98" LED screen Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>SAMSUNG ME95</b>	95" LED screen, Ultra-thin edge (12.3 mm) Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG QB75H</b>	75" LED screen Native resolution: 3840 x 2160, 4K UHD, Format: 16/9
<b>SAMSUNG ME75</b>	75" LED screen, Ultra-thin edge (14 mm) Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG DM75</b>	75" LED screen Native resolution: 1920 x 1080, Full HD, Format: 16/9

<b>SAMSUNG ED75E</b>	75" LED screen Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG UE55</b>	55" LED screen, Ultra-thin edge (5.2 mm) Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG DB55</b>	55" LED screen Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG DB48</b>	48" LED screen Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG UE46</b>	46" LED screen, Ultra-thin edge (5.2 mm) Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG DB40</b>	40" LED screen Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG DB32</b>	32" LED screen Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG DM32</b>	32" LED screen Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG ME32</b>	32" LED screen Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG DB22</b>	22" LED screen Native resolution: 1920 x 1080, Full HD, Format: 16/9
<b>SAMSUNG DB10</b>	10" LED screen Native resolution: 1280 x 800, Full HD, Format: 16/9

**Main features common to all or most of our professional monitors:**

- Monitors designed for 24/7 operation
- Advanced media player with playlist management and internal memory for media storage
- Easy integration of media directly via the USB port
- Internal image cut-out for easy set-up of multi-screen video wall
- Wireless screen mirroring from a computer or tablet
- Remote control via wired or wireless network

**LG MONITORS**



LG 32SM5J    LG 43SM5KE    LG 55SM5KE    LG 75UM3E    LG 98UH5E

**PANASONIC MONITORS + 12G CARD**



TH-43EQ2W    TH-55EQ2W    TH-65EQ2W    TH-75EQ2W    TH-86EQ2W

## TOUCHSCREENS

- NEC P484 SST** 48" monitor  
Native resolution: 1920 x 1080, 10-point touchscreen  
ShadowSense™ Touch Technology up to 100,000 lux, OPS Slot
- NEC P554 SST** 55" monitor  
Native resolution: 1920 x 1080, 10-point touchscreen  
ShadowSense™ Touch Technology up to 100,000 lux, OPS Slot
- COOLHOOD 14"** Compact 14" monitor with full HD touchscreen, HDMI USB-C

## LCD SCREENS

- EIZO EV2740X-BK**  
27" monitor, 4K, 3840 x 2160, inputs HDMI 2.0 (MHL), DP 1.2, USB-C, calibrated
- SAMSUNG U28E850R**  
28" LCD screen, 4K, 3840 x 2160, inputs HDMI 2.0 (MHL), DP 1.2
- IYYAMA XB2481 HS-B1 WITH ASG Bellows 15-45°**  
LCD 24", 16/9, Full HD 1920 x 1080 with multi-tilt stage return support
- NEC 2690 · 26"**  
26" LCD screen, 16/10, Full HD 1920 x 1200 with HP
- DELL U2415 · 24"**  
24" LCD SCREEN, 16/10, Full HD 1920 x 1200
- IYYAMA B2280HS · 22"**  
22" LCD screen, 16/9, Full HD 1920 x 1080

## TV MONITORS

- SAMSUNG UE48J5000 · 48"**  
48" LED TV, 16/9, Full HD 1920 x 1080
- SAMSUNG UE40N · 40"**  
40" LED TV, 16/9, 4K, 3840 x 2160

## VIDEO MONITORS

- NEOVO HX24**  
24" LCD monitor, 16/9, Full HD 1920 x 1080, input 3GSDI, DVI, HDMI, VGA, Composite
- LILLIPUT Q23 8K**  
23.8" LCD monitor, 16/9, 4K, 3840 X 2160, input 4x12GSDI, HDMI.2.0
- LILLIPUT PVM220S**  
21.5" LCD monitor, 16/9, Full HD 1920 x 1080, input 3GSDI, HDMI, USBC

## VIDEO MONITORS

**SONY LMD-A170**

17" LCD monitor, 16:9, Full HD 1920 x 1080, 3GSDI, HDMI, Composite

**PANASONIC BT-LH80W**

7.9" Camera or control room video monitor, 16/9, 800 x 450, HD-SDI

**BLACKMAGICDESIGN VIDEO ASSIST 7"**

7" monitor, 12GSDI and HDMI 2.0 with vectorscope and recording on UHS-II or USB-C

**SWIT M-1071H**

Banner of 2 7" monitors 3GSDI, HDMI 2.0

**SWIT M-1073H**

Banner of 2 7" monitors 6GSDI, HDMI 2.0 4K



SWIT M-1073H



EIZO EV2740X-BK



IIYAMA B2280HS



NEOVO HX24



DELL U2415



U28E850R



SONY LMD-A170

## SCREEN ACCESSORIES

**Novelty tubular stand**

for 32 to 55" screens

**Table stand for tubular stand**

For computer/DVD player/tablet

**Stage return kit for tubular stand**

For 32-55"

**Castor kit for tubular stand**

For 32-55"

**Wooden stage back**

Pour 32-49"

**Mobile base 60 x 80**

Mobile base for beam of series 300 square/tri and tube Ø50 (pole and screen support)

**Horizontal/Vertical bridge bracket**

Small model

**Horizontal/Vertical bridge bracket**

Large model





NOVELTY  
Bridge bracket / tube Ø50



Mobile base 60 x 80



NOVELTY stand for 32 to 55"  
screens



Bridge bracket, large model

## INDOOR VIDEO WALLS

### ABSEN Mled PL2.5

Resolution (pitch) of 2.5 mm | Indoor, 200 x 200 px

Dimensions: L 500 x H 500 x D 87 mm | Weight: 7.65 Kg | Consumption: 135 W

Features automatic locking system and an inner and outer curve locking system for easy installation.

### PL2.5Pro Bumper x1

Hanging bumper for 1 x PL2.5 Pro panel

### PL2.5Pro Bumper x2

Hanging bumper for 2 x PL2.5Pro panels

### PL2.5Pro Base x1

Floor base for 1 x PL2.5Pro panel

### PL2.5Pro Stand x2

Floor base for 2 x PL2.5Pro panels

### PL2.5Pro Rear Hook

Rear hook arm for PL2.5Pro panels





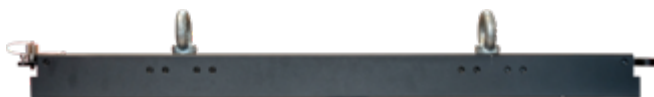
# MLed PL2.5



MLed PL2.5



PL2.5 Bumper x1



PL2.5 Bumper x2



PL2.5 Base x1



PL2.5 Base x2

## INDOOR VIDEO WALLS

### INFILED X3.9

Resolution (pitch) of 3.9 mm | 128 x 128 px

Dimensions: L 500 x H 84 mm | Weight: 8.9 Kg | Consumption: 200 W

Tilttable in five steps to an angle of 20°.

An exceptional diameter of 2.86 m to make a complete circle.

Patented single-action locking mechanism with positioning pins for easy panel alignment.

It also has individual flexibility of the LED modules.

#### X3.9 Flat

LED panel, pitch 3.9 mm, "flat" model, 128 x 128 px

#### X3.9 Curve

LED panel, pitch 3.9 mm, "curved" model  
angle 0°, 10°, 20°, 128 x 128

#### X3.9 Edge L&R

LED panel, pitch 3.9 mm, "edge" model  
angle 90°, 128 x 128 px

#### X3.9 Bumper solo

Single hanging bumper for 1 x 3.9 panel

#### X3.9 Base solo

Single floor base for 1 x 3.9 panel

#### X3.9 Rear Hook

Rear hook arm for 3.9 panel

#### X3.9 Docking Plate

Corner docking plate for 4 x 3.9 panels



X3.9



INFILED 3.9



3.9 Rear Hook



3.9 Bumper solo



3.9 Docking Plate



## OUTDOOR VIDEO WALLS

**ABSEN POLARIS PRO V2 PL3.9**

Pitch resolution of 3.9 mm, brightness > 4500 nits, refresh rate > 3840 Hz and a wide viewing angle of 160/160.

With high brightness, high contrast and high colour uniformity thanks to Absen's advanced calibration and image processing technologies, the PL3.9 delivers high-impact image performance on a grand scale.

**PL3.9 50 x 100**

LED wall panel, W 50 x H 100 x D 78, 128 x 256 px

Weight: 13 kg, consumption: 400 W

**PL3.9 50 x 50**

LED wall panel, L 50 x H 50 x P 78, 128 x 128 px

Weight: 7.8 kg, consumption: 200 W

**PL3.9 Bumper x1**

Hanging bumper for 1 x PL3.9 Pro panel

**PL3.9Pro Bumper x2**

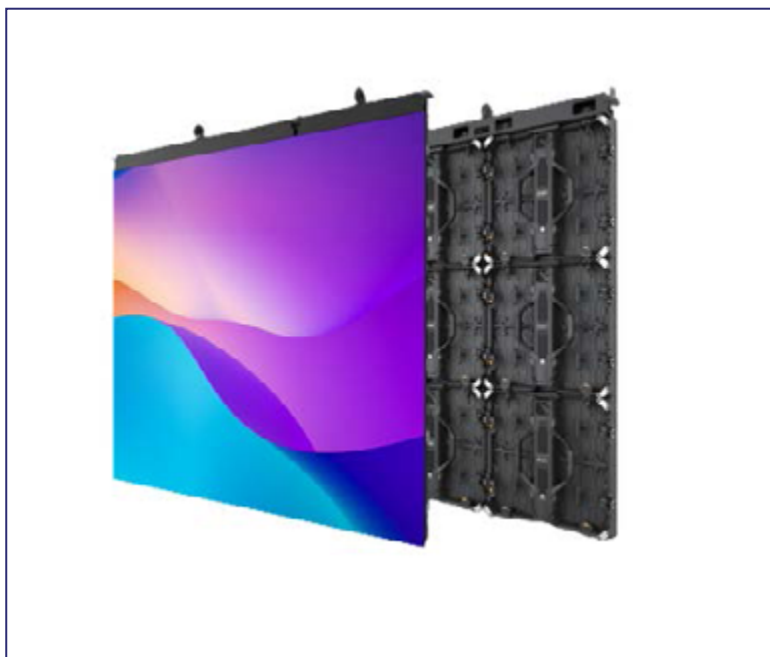
Hanging bumper for 2 x PL3.9Pro panels

**PL3.9Pro Base x1**

Floor base for 1 x PL3.9Pro panel

**PL3.9Pro Base x2**

Floor base for 2 x PL3.9Pro panels



## OUTDOOR VIDEO WALLS

### DAYLIGHT SCREENS

#### MLED M6

Resolution (pitch) of 6.25 mm | 144 x 128 px

Dimensions: L 800 mm x H 900 mm x D 65 mm | Weight: 18 Kg | Consumption: 450 W

A pitch of 6.25 mm, brightness > 6000 nits, refresh rate > 2000 Hz and a wide viewing angle, make this video wall the perfect product for your large-scale events!

#### MLED BUMP1

Hanging bumper for 1 column of panels

#### MLED BUMP2

Hanging bumper for 2 columns of panels

#### MLED BASE2

Stacking base for 2 panels + 1 stabiliser + 1 ladder

#### MLED BASE3

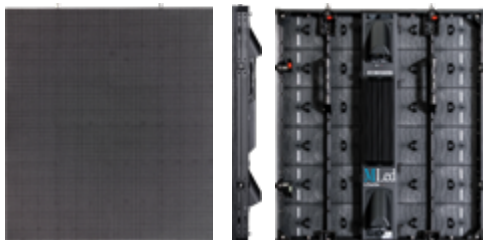
Stacking base for 3 panels + 2 stabilisers + 2 ladders

#### MLED ECH

Additional rear support ladder



# MLed M6



Rear support ladder



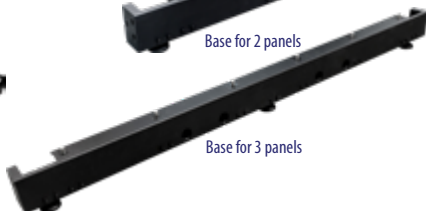
Flight-case for 4 panels



Stabiliser for base



Base for 2 panels



Base for 3 panels



## LED WALL PROCESSORS

<b>NOVA PRO UHD Jr</b>	LED screen processor, Input 3840 x 2160 + rotation + scaler + PIP
<b>NOVASTAR MCTRL4K</b>	LED screen processor, Input 3840 x 2160
<b>NOVASTAR MCTRLR5</b>	LED screen processor, Input 3840 x 1080 + rotation
<b>NOVASTAR MCTRL660</b>	LED screen processor, Input 1920 x 1080
<b>NOVASTAR VX1000</b>	LED screen processor, Input 3840 x 2160 + scaler
<b>NOVASTAR VX4S</b>	LED screen processor, Input 1920 x 1080 + scaler
<b>NOVASTAR VX6S</b>	LED screen processor, Input 1920 x 1080 + scaler
<b>NOVASTAR CVT4K</b>	Remote Nova processor, 16 EtherCON outputs
<b>NOVASTAR CVT10 PRO-S</b>	Remote Nova processor, 10 EtherCON outputs
<b>NOVASTAR MX40 PRO</b>	LED screen processor, Input 3840x2160 + scaler + PIP
<b>NOVASTAR MX30</b>	LED screen processor, Input 3840x2160 + scaler + PIP



NOVASTAR MX40 PRO



NOVASTAR CVT10 PRO-S







## DYNAMIC & PANORAMIC IMAGE MANAGEMENT

### **BARCO E2**

4K screen management system.

Generation 1, generation 2 and tri-combo input and output boards available.

### **BARCO EC50**

Compact event controller

For E2, S3, EX

### **ANALOG WAY Aquilon C+ LivePremier**

4K/8K mixer

5RU chassis, fully configurable according to need and budget

Up to 24 4K inputs and 20 4K outputs, 2 multiviewers

### **ANALOG WAY Zenith 200 Alta 4K**

Zenith 200 has 16 inputs, including 14 4K60 inputs (8 x HDMI 2.0, 4 x DP1.2 and 2 x 12GSDI) and 2 1080p inputs with selectable HDMI and 3GSDI connectors. It also features 6 independent 4K60 outputs, each with twin HDMI and SDI connectors. It is also equipped with a dedicated Multiviewer output.

### **ANALOG WAY RC400T**

A control console designed to dramatically increase operational efficiency and provide instant access to the most important features of the LivePremier, Alta 4K and Midra 4K range of image processors. Controls up to 5 LivePremier processors in parallel, 1 USB port on rear panel and 1 USB port on front panel, 1 Ethernet network control interface 1 XLR 4-pin connector for LED lamp.

### **ANALOG WAY Ascender 32 ASC3204 Livecore**

Powerful Seamless Mixer for multiple displays.

Based on Analog Way's LiveCore™ platform, offering state-of-the-art real-time processing, Soft-Edge and 4K applications, for qualitative presentations.

Supplied with SB-80 remote control + inverter.

### **ANALOG WAY Ascender 16 ASC1602 Livecore**

Powerful Seamless Mixer for multiple displays.

Based on Analog Way's LiveCore™ platform, offering state-of-the-art real-time processing, Soft-Edge and 4K applications, for qualitative presentations.

Supplied with SB-80 remote control + inverter.



ANALOG WAY AQUILON C+



ANALOG WAY ZENITH 200 ALTA 4K



ANALOG WAY RC400T



ANALOG WAY Ascender 32



BARCO EC50

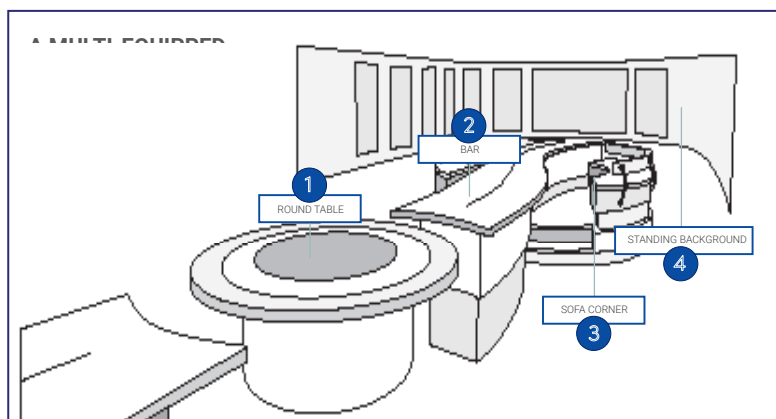


BARCO E2

# STUDIO PARIS GRENELLE

## A TURNKEY STUDIO FOR YOUR DIGITAL EVENTS

We can organise **your turnkey programme** in our TV Studio for any **100% digital project.**



**Encourage** and consolidate links with your network  
**Boost** your communication strategy  
**Embrace** innovation and creativity  
**Broaden** your field of action

## A FULLY EQUIPPED STUDIO

- 7 HD CAMERAS (2 TRACKING CAMERAS, 1 OF WHICH IS MOTORISED)
- 28 HD SCREENS
- 8 HF LAPEL MICROPHONES
- 2 HF HAND-HELD MICROPHONES
- BROADCAST PLATFORM
- MONITORING
- 6 HF EAR MONITORS
- HD FIBRE CONNECTION
- A BROADCAST 2.0 CONTROL ROOM
- SMODE SOFTWARE TO ENHANCE YOUR BROADCASTS



## ONE PRICE, SIMPLIFIED KIT

### STUDIO

- SHOOTING - ½ Day - 4hrs €3,300 excl. tax  
Equipped studio - Technical equipment - Director + Project manager - Sound engineer - Camera operator
- SHOOTING - 1 Day - 8hrs €3,800 excl. tax  
Equipped studio - Technical equipment - Director + Project manager - Sound engineer - Camera operator

*Rental includes equipment, staff (before and during the event) and delivery of the final mix.*

### OPTIONAL SERVICES

- Creation of a video package for the fixed background programme €2,200 excl. tax
- Creation of a video package for the animated programme €4,500 excl. tax
- Duplex / Visio €700 excl. tax  
Duplex / visio to connect up to 6 people simultaneously
- Video editing €650 excl. tax/day  
Editing station €150 excl. tax/day  
Editor €430 excl. tax/day
- Live streaming €650 excl. tax  
Live in HD on Youtube, Facebook and Twitter.  
Possibility of broadcasting on the customer's platform (RTMP stream(s) and stream key required) Tests with the customer.
- Set assistant €450 excl. tax
- Smode operator €850 excl. tax
- Make-up €450 excl. tax

### Studio Paris Grenelle 10 boulevard de Grenelle, 75015 Paris

#### Sales contact:

Guillaume Cannard | g.cannard@novelty.fr | +33 (0)6 14 61 88 62

#### Technical contact:

Norberto Tomaz | n.tomaz@novelty.fr | +33 (0)6 60 66 93 93

## DYNAMIC & PANORAMIC IMAGE MANAGEMENT

### LICENCES SMODE

#### **SMODE Live Ultimate**

Smode Live Ultimate license, unlimited video I/O and DMX universe

#### **SMODE Live Ultimate Spare**

Smode Live Ultimate license, video I/O with filigree

#### **SMODE Compose Basic**

Smode Compose Basic license, 1 video I/O, 1 DMX universe

### MODULO $\Pi$ Player

Modulo Player broadcast station

**Modulo Player Pro 6 streams in 2560x1600 or 4 streams in 4K**

**Modulo Player Pro 6 streams in 2560 x 1600**

**Modulo Player Pro 4 streams in 2560x1600 or 2 streams in 4K**

**Modulo Player Pro 4 streams in 2560x1600**

Optional SDI, HDMI, Timecode cards on request

### RACK ARKAOS

Media Master v5 + Blackmagic UltraStudio 4K + 4K  
dual-display Thunderbolt 3 laptop dock

### CATALYST

Media Server and video mastering software

### RESOLUME ARENA 7

Media Server and video mastering software

### MILLUMIN V3

Multi-screen player, soft-edge, video-mapping



RACK ARKAOS



MODULO II Player





## RECORDING - CAMERA CONTROL

### HD DIGITAL VIDEO CONTROL

Comes with 3 digital cameras

Extra camera option

#### Includes

- 1 FOUGEROLLE CDD-S4AS 4 balanced audio Embedder + (HD)SDI to (HD)SDI
- 1 WOHLER AMP1A audio monitor - 1 SONY OLED 25" real monitor
- 1 CLEARCOM MS702 2-channel intercom system
- 3 AUXLAWOLBP17 Control bars
- 1 PANASONIC AVHS410 HD / SD / Multi-format Digital Video Mixer
- 1 16-port RJ45 Loudspeaker Switch
- 1 FOUGEROLLE Quadruple distributor D3G-4444/19 3G, HD-SDI, SD-SDI ASI - 1 to 4
- 1 Power supply + SAMSON Powerbrite Pro PB10 rack lighting
- 1 FOUGEROLLE TGS 6008 Synchronisation generator
- 1 LGZ H.264 SDI/HD-SDI USB recorder, requires an embedder + additional. USB
- 1 SONY OLED 17" Vision monitor
- 1 HARRIS HD-SDI 1 Oscilloscope - 1 CLEARCOM RM-702 2-channel intercom station
- 3 SONY camera remote controls (Joystick)
- 1 SDI 1x8 KRAMER SD 7108 distributor
- 1 TENDA TEG1016G 10/100/1000 Mbits 16-way switch
- 1 Rack of 2 7" Swit screens
- 1 ROSENDAHL MIF4 Time Code Generator
- 1 CLEARCOM IF4W4 Quadruple 2-wire / 4-wire interface
- 1 RJ45 8-port switch PoE+ 180W HP JG350A
- 1 320Gb hard drive Passport essential black USB 3.0
- 1 Power supply + SAMSON Powerbrite Pro PB10 rack lighting
- 3 HXC-100 SONY Camera control channels
- 3 SONY HXC-100 HD Cameras
- 3 17X FUJINON ZA17X7 Standard lenses, full-motorised with extender
- 3 Fujinon lens covers + 3 Fujinon lens sun visors
- 3 FUJINON EPD21A full-servo focus demands + 3 FUJINON ERD20A zoom demands
- 3 SONY HDVF-C550W viewfinders + 3 SONY HDVF-200 eyepiece-type small viewfinders
- 3 VINTEN Vision 250 black camera stands + 3 VINTEN Vision 250 stand heads
- 2 Dolly wheeled bases for V250





## RECORDING - CAMERA CONTROL

**COMPACT MANAGER**

Supplied without camera

Options: turret or platform camera, turret control panel, CyanView multi-brand RCP, Intercom

**Includes**

- Roland V160HD
- Blackmagic Design 12x12 Cleanswitch grille
- 4 HDMI to SDI 3G Digital Forcast Converters
- Dual 3G SDI distributors Lansee Aja
- Gen10 sync generator
- 32" Iiyama
- Smartscope DUO Blackmagic Design
- Audiomonitor 12G Blackmagic Design Blackmagic Design
- Hyperdeck studio HD+ recorder with 500 GB USC-C disk
- Netgear GS516UP 16-port POE+/+++ switch
- Lenovo M75n
- PC Asus 16" touchscreen laptop monitor
- Wireless keyboard and mouse



## CAMERAS AND CAMCORDERS

### **CANON XF605**

4K, HDR XF-AVC handheld camcorder  
1 CMOS 1" sensor  
Mains power supply  
Battery charger



### **SONY PMW-350 2/3"**

XDCAM EX Full HD Camcorder (plus SD option)  
3 CMOS Exmor 2/3" sensors  
Mains power supply  
Battery charger



### **SONY PXW-X160**

3 CMOS Full HD 1/3-inch sensors  
Full HD recording, XAVC at  
112 Mbits/s or MPEG HD422 at 50 Mbits/s  
Accessories: Mains power supply,  
Battery charger, Zoom demand,  
SXS to SDXC adapters



### **BLACKMAGIC DESIGN URSA BROADCAST G2**

Versatile 6k camera, SDI-12G, supplied with broadcast lens,  
power supply, charger, batteries.  
ProRes or H265 recording on CFast 2.0 or SD-UHSII cards  
Live streaming  
Optional on-set camera kit.



## PTZ CAMERAS

**PANASONIC AW-UE150**

4K robotic PTZ camera with 12G-SDI video output and IP streaming with accessories

**PANASONIC AW-UE100**

4K robotic PTZ camera with 12G-SDI video output and IP streaming (NDI, NDIHX, SRT) with accessories

**PANASONIC AW-HE130**

HD robotic PTZ camera with video output 1" 3G-SDI MOS sensor and IP streaming with accessories

**PANASONIC AW-HE130**

Full HD robotic PTZ camera with 3G-SDI video output and IP streaming with accessories

**PANASONIC AW-HE42**

Full HD robotic PTZ camera with 3G-SDI video output and IP streaming with accessories



## PTZ CAMERAS

### ACCESSORIES FOR PTZ CAMERA

#### **AW-RP150**

Control panel for up to 10 PTZ cameras with direct access, up to 100 IP cameras, with touch screen

#### **AW-RP120**

Control panel for up to 10 PTZ cameras with direct access, up to 100 IP cameras

#### **AW-RP60**

Control panel for 5 PTZ cameras with direct access, up to 100 IP cameras, with touch screen

#### **AW-RP50**

Control panel for 5 PTZ cameras with direct access, up to 100 IP cameras

#### **AK-HRP200**

Remote control for colour and iris settings...

## CAMERAS AND ACCESSORIES

### **ENEO MPC52**

1/3" palm camera

Output: 3GSDI

Comes with wide-angle lens



### **GO PRO HERO 12 BLACK**

Action camera up to 5.3K, 120 Hz, HDR, WIFI, Bluetooth, waterproof 10m

Supplied with Media Module and other accessories

### **HD CAMERA LENSES**

#### **CANON HJ40X IAS D**

40 x 10-400 mm, comes with full-servo demands

#### **FUJINON HA22X7.8 BERD**

22 x 7.8 BERD, comes with full-servo demands

#### **CANON HJ11X4.7 IAS E**

11 x 4.7-52 mm, comes with full-servo demands

### **CAMERA ACCESSORIES**

**CYANVIEW RCP** - Universal remote control for IP camera, unlimited license

**CYANVIEW RIO Live** - RS / IP / USB multi-protocol interface

**SWIT Flow 500** - Wireless multicast system 150m 3GSDI or HDMI

**LedPro x6** - On-camera light, 8W, 3200°K-5600°K

**Camcorder stand**

**SACHTLER camera stand**

**Heavy stand for long lenses**

**Dolly wheel basey**

**Video mixers**

p.66 to 68



## VIDEO RECORDING & SOURCES

### DIGITAL RECORDERS

#### AJA Ki Pro Ultra 12G

4 stream HD or 1 stream 4K recorder  
Supplied with 2 x 1TB PAK cards and a card reader

#### VIDEO Devices Pix270i

SD/HD player/recorder on disc  
Delivered with 1 x 3TB LaCie drive + 2 x 480Gb Pix-caddy drives

#### BLACKMAGICDESIGN HyperDeck Studio HD Plus

UHS-II SD card or USB-C drive player/recorder  
USB-C output for Webcam emulation  
Comes with Teranex Mini embedder

#### AJA KiPro Rack

SD/HD player/recorder on disc  
Delivered with 1 x 3TB LaCie drive + 2 x 500GB KiStore drives

#### DUPLICATOR 4K

SD/HD-SDI recorder on SD card

#### LGZ USB

SD/HD-SDI recorder to external memory via USB

### DIGITAL PLAYERS

#### THEATRIXX xPressCue

4k Media player

#### BRIGHTSIGN HD224

Programmable and synchronizable 4k player  
With GPIO inputs and outputs, on micro SD card

#### HDX 1000

Full HD player on SD card



AJA KiPro Ultra 12G



VIDEO Devices Pix270i



THEATRIX xPressCue



DUPLICATOR  
Black Magic



## COMPUTERS & VIDEO MIXERS

### **BARCO E2**

4K screen management system

### **BARCO EC50**

Compact event controller for E2, S3, EX

### **ANALOG WAY AQUILON C+**

4K/8K mixer, 5RU chassis, up to 24 4K inputs and 20 4K outputs, 2 multiviewers

### **ANALOG WAY ZENITH 200**

4K60 mixer with 16 inputs, 6 PGM outputs, 1 MV output, 4 layer mixers

### **ANALOG WAY Ascender 32 ASC3204 Livecore**

Powerful Seamless Mixer for multiple screens

LiveCore™, offering state-of-the-art real-time processing,

Soft-Edge and 4K applications for quality presentations

Delivered with SB-80 remote control + inverter

### **ANALOG WAY Ascender 16 ASC1602 Livecore**

Powerful Seamless Mixer for multiple screens

LiveCore™, offering state-of-the-art real-time processing,

Soft-Edge and 4K applications for quality presentations

Delivered with SB-80 remote control + inverter

### **ANALOG WAY Pulse 4K**

Mixer 4k60 10 inputs, 2 PGM outputs, 1 MV output, 4 PIP maximum.

### **ANALOG WAY Pulse2-3G PLS350-3G**

Seamless multilayer mixer with 8 inputs and Native Matrix mode

### **ANALOG WAY RC400T**

Management console for LivePremier, Alta 4K and Midra 4K ranges



Barco E2



Barco EC50

## COMPUTERS &amp; VIDEO MIXERS

**ANALOG WAY Axion 2 ARC200**

Control console, up to 6 screen configurations  
single or multiple + sequence mode and offline programming

**ANALOG WAY Smart Matrix SMX200**

Scaled 12 x 2 matrix with native output. High resolution with 4 scalers

**ANALOG WAY Eikos EKS500**

High-resolution multi-layer mixer  
Clean-switching switcher with 4 scalers  
Dedicated to high-end audiovisual presentations



ANALOG WAY RC400T



ANALOG WAY AQUILON C+



ANALOG WAY Zenith 200



ANALOG WAY Pulse 4K



ANALOG WAY Pulse2-3G

## DIGITAL VIDEO MIXERS

### **PANASONIC AV-HS6000**

2M/E mixer

32 inputs, 16 outputs in 1080i, 16 inputs, 8 outputs in 1080P, 8 inputs, 4 outputs in 4K, 4

### **MV ROSS CARBONITE BLACK SOLO**

3GSDI mixer 6 SDI, 3 HDMI in, 5 SDI, 1 HDMI out

### **BLACKMAGIC DESIGN ATEM TV STUDIO PRO 4K**

12GSDI mixer with 8 inputs

### **ROLAND V-160HD**

3GSDI mixer, 8 SDI, 8 HDMI in, 3 SDI, 3 HDMI and a USB-C out

### **LUMANTEK EZ-PRO VS10**

12GSDI mixer, 8 SDI, 2 HDMI in, 5 SDI, 2 HDMI out

### **LUMANTEK EZ-PRO VS4**

HD mixer with 4 inputs (1 SDI, 2 HDMI, 1 SDI or HDMI), 1 HDMI + SDI output, 1 HDMI multiviewer

### **BLACKMAGIC DESIGN ATEM TV STUDIO HD**

3GSDI mixer, comes with a HD Web Presenter

4 HDMI, 4 HDMI in, 2 SDI, 1 HDMI(MV) out

### **PANASONIC AV-HS410**

HD / SD / Multi-format digital video mixer

### **AVMATRIX PVS 0615**

Mixer with 6 inputs 3GSDI, 2 HDMI, 2 DVI-I, 2 USB

Integrated 15.6" Preview

### **BLACKMAGIC DESIGN ATEM MINI PRO**

Mixer HDMI 4 inputs and 1 output, +1 USB-C output and 1 Ethernet output for streaming

### **BLACKMAGIC DESIGN ATEM 2M/E CONSTELLATION HD**

3GSDI mixer, 20 SDI, 12 SDI OUT, 2 MV

### **BLACKMAGIC DESIGN ATEM MICRO PANEL**

USBC panel for ATEM mixer



LUMANTEK EZ-PRO VS10



ROSS CARBONITE BLACK SOLO



BLACKMAGIC DESIGN ATEM TV STUDIO PRO 4K



ROLAND V-160HD



PANASONIC AV-HS6000



PANASONIC AV-HS410

**ANALOG WAY VIO4K**

Multi-format video converter, supplied with 2 HDMI 2.0 IN/OUT cards and DP 1.2 and one XLR audio card

**NOVASTAR V1**

4K video resolution converter

**FOLSOM IMAGE PRO-II**

Video resolution converter, scan converter and switcher-mixer

**FOLSOM IMAGE PRO-HD**

Transcoder, scaler, down converter, seamless switcher, TBC in the following formats: HD SDI, VGA, DVI, Composite, Component

**DECIMATOR DD-12G-CROSS**

4K multi-format digital converter

**DECIMATOR MD-HX**

Multiformat digital converter

**DECIMATOR DD-4S**

Multi viewer quad 3G SDI converter

**XVISION XVVSDI2HDMI**

3G SDI to HDMI converter (with integrated audio)

**BLACKMAGIC DESIGN Bidirectional MicroConverter**

HDMI to 3G SDI and 3G SDI to HDMI converter

**BLACKMAGIC DESIGN MicroConverter 12G SDI to HDMI 4K**

12G SDI to HDMI 4K micro-converter (with integrated audio)

**DIGITAL FORECAST BridgeM-HH**

HDMI to SDI + HDMI converter with integrated scaler

**NEWTEK Spark Plus IO**

HDMI to NDI bi-directional 4K video encoder

**BLACKMAGIC DESIGN Web Presenter HD**

Streaming solution, delivered with an Atem TV Studio HD

**HDCVT HDV-US60**

3GSDI to USB 3.0 acquisition device

**KILOVIEW N50**

12GSDI NDI Full / NDI HX2/3 decoder encoder

**KILOVIEW N60**

HDMI 2.0 NDI Full / NDI HX2/3 decoder encoder



NEWTEK Spark Plus IO



DECIMATOR DD-12G-CROSS



BLACKMAGIC DESIGN Web Presenter HD



XVISION XVVSDI2HDMI

## PERIPHERALS

### DISTRIBUTORS

#### HDSDI

<b>BLACKMAGIC DESIGN TERANEX MINI</b>	12GSDI 4K 1 < 8
<b>LANSEE</b>	12GSDI 4K 2 x 1 < 4
<b>XVISION</b>	3GSDI 2 x 1 < 4

#### DVI

<b>KRAMER VM4HDCPXL</b>	1 x 4 with EDID management
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#### HDMI

<b>XVISION</b>	1 x 4 HDMI 2.0
<b>EXTRON DA4HDMI / 4K/4K+</b>	1 x 4

#### DISPLAY PORT

<b>ATEN VS194</b>	1 x 4 DP 1.2a MST or SST mode
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### EMBEDDER / DE-EMBEDDER

<b>AJA 3G-AMA</b>	XLR - 3G SDI audio embedder/de-embedder
<b>AJA HD 10 AMA</b>	XLR - HDSDI audio embedder/de-embedder
<b>NEOTECK HDMIAC</b>	HDMI de-embedder to 2 Cinch + HDMI loop

### GRID

#### SDI

<b>ROSS ULTRIX FR2</b>	2U modular chassis
<b>BLACKMAGICDESIGN Smart videohub Cleanswitch</b>	12 x 12 6GSDI with synchronizers
<b>FOLSOM Matrix Pro</b>	8 x 8 HDSDI

#### DVI

<b>FOLSOM Matrix Pro</b>	8 x 8 DVI
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### SÉLECTEURS HDMI

<b>ANFI VS31A-IR</b>	3 x 1 4K with remote control IR
<b>KRAMER VS-311H</b>	3 x 1
<b>KRAMER VS-41-H</b>	4 x 1

**EXTENDERS OPTICAL FIBRE****LANSEE Muxlan8+8 12GSDI**

Multiplexer 8x12GSDI IN + 8x12GSDI OUT  
With dual Gigabit Ethernet connection  
on EtherCON connector

**LANSEE EXTENDEUR 12GSDI-LAN**

Connection to Neutrik® DUO / 12G-SDI connectors  
With Gigabit Ethernet connection on EtherCON  
connector  
12 volts output on XLR4 for camera  
200 m kit

**LANSEE TIDY 3GSDI-LAN**

Connection to Neutrik® DUO / 3G-SDI connectors  
With Gigabit Ethernet connection  
200 m kit

**LANSEE TIDY RACK**

Docking station for 8 tidies with power supply

**FOUGEROLLE MiniFlex - LAN**

Connection to Neutrik® DUO / 3G-SDI connectors  
With Gigabit Ethernet connection  
200 m kit

**FOUGEROLLE MiniFlex**

Connection to Neutrik® DUO / 3G-SDI connectors  
200 m kit

**XVISION SDIFIBER**

Connection to Neutrik® DUO / 3G-SDI connectors  
200 m kit

**FUSION TOOLS HDMI2.0 FIBER LINK**

4K 60Hz HDMI 2.0 extender with network  
and KVM on Neutrik® connectors  
200 m kit

**LIGHTWARE MODEX-OPTS**

Connection to Neutrik® DUO /  
DVI-HDMI 1.4, Gigabit link,  
200 m kit

**LIGHTWARE TX-RX100**

HDMI 1.3 extender  
with Neutrik® Duo adapters,  
200 m kit



LANSEE Muxlan 8+8 12GSDI



LANSEE Tidy 3GSDI-LAN

FUSION TOOLS HDMI2.0  
FIBER LINK

## PROJECTION SCREENS

### FRAMES WITH WHITE EDGES 16/9

<b>STUMPFL</b>	Canvas screen, 6.30 x 3.63 m image
<b>STUMPFL</b>	Canvas screen, 5.08 x 2.94 m image
<b>STUMPFL</b>	Canvas screen, 4.47 x 2.60 m image
<b>STUMPFL</b>	Canvas screen, 4.25 x 2.49 m image
<b>STUMPFL</b>	Canvas screen, 3.45 x 2.07 m image
<b>STUMPFL</b>	Canvas screen, 2.86 x 1.70 m image

### FRAMES WITH WHITE OR BLACK EDGES 4/3

<b>STUMPFL</b>	Canvas screen, 6.30 x 4.77 m frame
<b>STUMPFL</b>	Canvas screen, 5.08 x 3.86 m frame
<b>STUMPFL</b>	Canvas screen, 4.47 x 3.40 m frame
<b>STUMPFL</b>	Canvas screen, 3.25 x 2.49 m frame
<b>STUMPFL</b>	Canvas screen, 2.64 x 2.03 m frame

### RETRO FRAMES WITH BLACK EDGES 16/9

<b>STUMPFL</b>	Canvas screen, 6.10 x 3.43 m image / 6.30 x 3.63 m frame
<b>STUMPFL</b>	Canvas screen, 4.88 x 2.74 m image / 5.08 x 2.94 m frame
<b>STUMPFL</b>	Canvas screen, 4.05 x 2.29 m image / 4.25 x 2.49 m frame
<b>STUMPFL</b>	Canvas screen, 3.25 x 1.83 m image / 3.45 x 2.03 m frame
<b>STUMPFL</b>	Canvas screen, 2.66 x 1.50 m image / 2.86 x 1.70 m frame

### RETRO FRAMES WITH BLACK EDGES 4/3

<b>STUMPFL</b>	Canvas screen, 6.10 x 4.57m image / 6.30 x 4.77 m frame
<b>STUMPFL</b>	Canvas screen, 4.88 x 3.66 m image / 5.08 x 3.86 m frame
<b>STUMPFL</b>	Canvas screen, 4.27 x 3.20 m image / 4.47 x 3.60 m frame
<b>STUMPFL</b>	Canvas screen, 3.05 x 2.29 m image / 3.25 x 2.49 m frame
<b>STUMPFL</b>	Canvas screen, 2.44 x 1.83 m image / 2.64 x 2.03 m frame

### ROLLS

<b>ORAY Screen duo</b>	147 x 196 cm (4/3) – 110 x 196 cm (16/9)
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*"Custom canvas available - Please contact us for dimensions"*



## MISCELLANEOUS ACCESSORIES

**D'SAN Perfect Cue Mini**  
**D'SAN PC-AS4-Grn**

HF remote control, can control 2 PCs  
Remote control HF remote control  
+ high-powered green laser pointer

**D'SAN PRO2000 Limitimer**

Bluetooth talk time timer kit,  
consisting of 1 Bluetooth control console  
LimiTimer PRO2000, 1 Bluetooth receiver with  
its TR-2000BT power supply, 1 podium display  
PSL-20V, 1 ASLA-ND3 audience display  
Bluetooth for PRO2000

**D'SAN Display unit 10cm**  
**INTERSPACE Micro Cue V3**  
**INTERSPACE Micro Cue**  
**ELAGATO Streamdeck**

HF remote control, can control 3 PCs  
HF remote control, can control 1 PC  
USB control interface, 6 to 32 buttons  
fully customisable

**AVERMEDIA CP150**  
**Green laser pointer**

Media viewer, composite + VGA  
Pen format

**SPLITTERS/MULTIVIEWERS****MIRANDA X16D**

16 3G-SDI inputs, 2 HDMI outputs,  
2 3G SDI router outputs, delivered with control PC and accessories

**DECIMATOR DD-4S**

Multi viewer quad converter, 3G SDI

**DATAPATH FX4-H**

1 DP input, 2 HDMI inputs, 4 HDMI outputs

**DATAPATH FX4-SDI**

1 SDI input, 1 DP input, 1 HDMI input, 4 SDI outputs

**DATAPATH X4**

1 DVI input, 4 DVI outputs



## WIRING

### HDSI CABLES

- 1 metre
- 2 metres
- 5 metres
- 10 metres
- 20 metres
- 30 metres
- 50 metres on reel
- 100 metres on reel

### HDMI CABLES

- 1.8 metres
- 5 metres
- 10 metres
- 20 metres active
- 40 metres active

### DVI CABLES

- 2 metres
- 5 metres
- 10 metres

### 4K CABLES

- HDMI / HDMI, DVI / HDMI or DVI / DVI
- 2 metres
- 5 metres
- 10 metres

HDMI over Optical fibre

- 20 metres
- 40 metres

DisplayPort

- 2 metres
- 3 metres
- 5 metres
- 10 metres
- 15 metres



## COMPUTERS

### COMPUTERS & TABLETS

#### **APPLE Mac Pro 2018**

8 cores 3GHz, 32GB, 1TB PCIe, 2 x FirePro D700 6GB

#### **APPLE MacBook Pro 16" 2018 - 2020**

Core i7, 2.6 Ghz, 512GB SSD, 16GB RAM

#### **APPLE MacBook Pro 15" RETINA**

15" laptop, Intel Core i7 quad-core processor

#### **APPLE-SONNET xMac Mini Server**

Digital audio station with Logic Pro X/Nuendo sequencers (+ info p.138)

#### **APPLE AppleTV 4K**

4K multimedia player

#### **DELL G5**

Core i7 1TB NVMe, 16 GB RAM

#### **DELL 3560 Precision**

Core i7 512 GB NVMe, 32 GB RAM

#### **DELL e5570 Latitude**

15" laptop, Intel Core i7 processor

#### **DELL M3510**

15" laptop, Intel Core i7 processor

#### **DELL M 4700**

15" laptop, Intel Core i7 processor

#### **LENOVO E15**

Core i5-10210U, 1.6GHz, 8GB RAM, 256GB SSD

#### **LENOVO E580**

Core i5-8250U, 1.6 GHz, 8GB RAM, 256GB SSD

#### **LENOVO E570**

15.6" laptop, Intel Core i5 processor

#### **HP 245-G8**

AMD 3500U, 8GB RAM, 256 GB SSD

#### **APPLE iPad v6 2018 Wifi 32GB**

Touchscreen tablet, 9.7", A10 chip

#### **APPLE iPad Air 2 16Go**

Touchscreen tablet, 9.7", A8x chip

**SOFTWARE** *(leased only installed on one of our leased computers)***TELEPROMPT+**  
**MILLUMIN**Teleprompter software for Mac  
Multi-screen player, soft-edge, video-mapping**DT VIDEOLABS Playback Pro**

HD video management software + sound card

**ARKAOS Media Master v5**

Media Server and video mastering software

**RACK ARKAOS**Media Master v5 + Blackmagic UltraStudio 4K  
+ 4K60, thunderbolt 3 I/O interfaces**APPLE Logic Pro X**

Digital audio editing software

**Catalyst**

Media Server and video mastering software

**Mad Mapper**

Video mastering management software

**RESOLVE ARENA 7**

Media Server and video mastering software

**PIXAP PIXTIMER**Licence for professional time  
management software**ACCESSORIES****POLYCOM POLYSTUDIO**

USB videoconferencing bar

**Switch - Routers - Wiringsee "Network" chapter | p.18 to 21**

DELL E5570 laptop

Laptop  
APPLE MAC BOOK PRO 16 2020

DELL G5



APPLE Mac Pro 2018

Tablet  
APPLE iPad v6 WifiACER PC  
VERITON X680G

APPLE Logic Pro X



RACK ARKAOS





# LIGHTING

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ROBE iBOLT | see p.85



AYRTON Rivale | see p.84



CHAUVET OVATION RÊVE F3 IP | see p. 103



CHAUVET OVATION RÊVE E3 | see p.102



PORTMAN S-TRIBE | see p.100



CHAUVET WELL STX 360 | see p.94



ASTERA AX2  
| see p.94



ASTERA AX3  
| see p.94



ASTERA PIXELBRICK  
| see p.94



ASTERA NYX BULB | see p.94



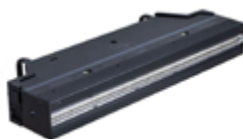
ASTERA AX5 | see p.94



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HUALI QUARTZ LED 480W | see p.96



HYRWELL HYRO | see p.108

# iFORT<sup>3</sup> FRESNEL



# iFORT<sup>3</sup> LTX



# ROBE<sup>®</sup>

## SERVO-CONTROLLED FLOODLIGHTS

## LUMINAIRE YOKES

*Spot*

<b>ELATION Proteus Hybrid</b>	Servo-controlled floodlight, "Spot" yoke type IP65, 470W, 8,000°K
<b>ROBE BMFL Blade</b>	Servo-controlled floodlight, "Spot" yoke type, 1700W HTI, zoom 5 to 55° aperture, gobos, colour wheel, 6000°K
<b>ROBE Mega Pointe</b>	Servo-controlled floodlight, "Spot & Beam" yoke type, 470W, zoom 3 to 42° aperture, 7,500°K
<b>ROBE Pointe</b>	Servo-controlled floodlight, "Spot & Beam" yoke type, 280W, zoom 2.5 to 20° aperture
<b>MARTIN MAC AXIOM HYBRID</b>	Servo-controlled floodlight, "Hybrid" Wash & Beam yoke type, 600W, zoom 2 to 44°, gobos
<b>MARTIN MAC Viper Perfo.</b>	1000W HTI, 10 to 44° blades
<b>MARTIN MAC Viper Profile</b>	1000W HTI, 10 to 44°
<b>MARTIN RUSH MH3 Beam</b>	390W, 1 to 3.8°
<b>CLAY PAKY SHARPY</b>	Servo-controlled yoke floodlight, Spot type, 190W, 17 gobos
<b>ROBE Robospot</b>	Automatic tracking system
<b>ROBE BMFL FollowSpot LT</b>	Servo-controlled floodlight, dedicated to tracking system, long range, 2° to 8° zoom, 1700W HTI
<i>Wash</i>	
<b>ROBE BMFL WashBeam</b>	Servo-controlled floodlight, "Wash" yoke type, 1700W HTI, zoom 5 to 45° aperture, 6000°K
<b>MARTIN MAC Viper Wash DX</b>	Servo-controlled floodlight, "Wash" yoke type 1000W HTI 13.5 to 59°

## SERVO-CONTROLLED FLOODLIGHTS

### LED yokes

#### Spot

<b>ELATION Proteus Maximus</b>	Servo-controlled floodlight, "Spot" yoke type IP65, 950W, 8,000°K
<b>ELATION Picasso</b>	Servo-controlled LED floodlight, 7 to 55°, 620 W
<b>ROBE iForte LTX</b>	Servo-controlled LED floodlight, 3.5 to 52°, 1000 W, IP65
<b>ROBE Forte</b>	LED floodlight, 5.5 to 50°, 1250 W
<b>ROBE Esprite</b>	Servo-controlled LED floodlight, 5.5-50°, 650 W
<b>ROBE MiniMe</b>	Spot RGB LED floodlight and video (2500 Lumens)

<b>AYRTON Rivale</b>	LED floodlight, knife-edge type travelling, 4° to 55°, 30,000 lumens, 450W, IP65
<b>AYRTON Ghibli</b>	LED floodlight, bladed yoke type travelling, 7° to 56°, 25,000 lumens, 900W 750W LED, 12° to 36° zoom
<b>MARTIN MAC Quantum Profile</b>	60 W, 4.5°, ring of 24 LEDs
<b>MARTIN RUSH MH10 FX</b>	LED Spot yoke 75W
<b>MARTIN RUSH MH5 Profile</b>	Profile type servo-controlled yoke floodlight, 180W, strobe effect, iris, 2 colour wheels and 2 gobo wheels
<b>MARTIN RUSH MH1 Profile Plus</b>	850W, zoom 9-45°, waterproof

### SGM G-Spot

#### Effect

<b>GLP JDC1</b>	Hybrid LED stroboscope on a servo-mounted yoke
<b>CHAUVET ColorStrike</b>	Hybrid LED stroboscope on a servo-mounted yoke, IP65
<b>GLP X4bar 10</b>	Linear LED floodlight, 10x15 W RGBW 2,500-10,000K, zoom 7°-50°
<b>GLP X4bar 20</b>	Linear LED floodlight, 20x15 W RGBW 2,500-10,000K, zoom 7°-50°
<b>AYRTON Magic Blade</b>	7-LED light strip, 15W RGBW, beam angle 4.5°

#### Wash

<b>ROBE iForte Fresnel</b>	Lyre-type wash spotlight fresnel lens, 6 to 61°, 1000W, IP65
<b>WashROBE Tarrantula</b>	Servo-controlled floodlight, "Wash" yoke type 1 LED 60W RGBW + 36 x LEDs 40W RGBW, fast zoom from 5.5° to 55°

## SERVO-CONTROLLED FLOODLIGHTS

### ROBE Spider

Servo-controlled floodlight, "Wash" yoke type  
1 LED 60W RGBW + 18 x LEDs 60W RGBW, fast zoom from 4° to 28°

### ROBE Spikie

Servo-controlled floodlight, "Wash Beam" yoke type  
1 LED 60W RGBW, fast zoom from 4° to 28°

### LASER yokes

#### ROBE iBolt

Servo-controlled floodlight, laser yoke type  
10,000°K, 460W, IP65



ROBE iBOLT



ROBE iFORTE Fresnel



ROBE iFORTE LTX



AYRTON Rivale



## SERVO-CONTROLLED FLOODLIGHTS

### *Wash*

#### **ROBE LedBeam 150**

Servo-controlled, "Wash" yoke type  
7x40W, RGBW - 3.8°

#### **AYRTON MagicDot SX**

60WLED servo-controlled floodlight, "beam" type  
4.5°, zoom 5° to 40°, 1,700 lumens

#### **AYRTON MagicDot R**

60W LED servo-controlled floodlight, "beam" type  
4.5°, 1,700 lumens

#### **CLAY PAKY K15**

Servo-controlled floodlight, "Wash" yoke type,  
19 LED 60W, RGBW, zoom 4° to 60°

#### **CLAY PAKY K25**

Servo-controlled floodlight, "Wash" yoke type,  
19 LED 60W, RGBW, zoom 4° to 60°

#### **MARTIN MAC Aura XIP**

LED 7x60W RGB, zoom 6.3 to 50.4°

#### **MARTIN MAC Aura PXL**

LED 19x40W, zoom 7 to 55°

#### **MARTIN MAC Quantum Wash**

LED 50x15W, zoom 11 to 59°

#### **MARTIN MAC Aura**

LED-Zoom 11 to 58°

#### **MARTIN RUSH MH6**

LED-Zoom 10 to 60°, 150W

#### **MARTIN MAC101**

36 x LED RGB, 12.5°, white or black



MARTIN Mac Aura XIP



MARTIN Mac Aura PXL



DÉCOUVREZ LE  
**MAC VIPER XIP**



LIGHTING

LA LÉGENDE **FRAPPE UNE NOUVELLE FOIS**

Des scènes de concert aux plateaux de télévision ou encore des festivals aux opéras,  
le nouveau MAC Viper XIP couvre de très nombreuses applications.



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DES APPLIQUÉS  
EN INTÉRIEUR  
ET EXTÉRIEUR



UN PLUS GRAND  
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DES CHANGEMENTS



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DE TOUTES LES LIGNES



LE MEILLEUR DU MONDE  
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**Martin**



## CONSOLES FOR SERVO-CONTROL

<b>MA LIGHTING Grand MA3 FullSIZE</b>	16 DMX universes
<b>MA LIGHTING Grand MA3 Light</b>	8 DMX universes
<b>MA LIGHTING Grand MA3 Compact XT</b>	8 DMX universes
<b>MA LIGHTING Grand MA2 FullSIZE</b>	16 DMX universes
<b>MA LIGHTING Grand MA2 Light</b>	8 DMX universes
<b>MA LIGHTING Grand MA2 Ultra Light</b>	8 DMX universes
<b>MA LIGHTING Dot2 XL-F</b>	2 DMX universes
<b>MA LIGHTING MA2on PC Command Wing</b>	Control unit, supplied with computer
<b>MA LIGHTING NPU</b>	Network processing units 8 DMX universes, 4096 circuits
<b>MA LIGHTING GPU M</b>	Network processing units 16 DMX universes, 16384 circuits, Ethernet
<b>MA LIGHTING GPU XL</b>	Network processing units 32 DMX universes, 4096 circuits, Ethernet
<b>MA LIGHTING VPU Basic MK2</b>	Image Management Unit, outputs: 2 x DVI + 1 VGA
<b>CHAMSYS MQ500 Stadium</b>	Lighting console, 200 universes
<b>CHAMSYS MQ500</b>	Lighting console, 24 universes, 12,288 channels
<b>CHAMSYS Quick20</b>	Lighting console, up to 1024 floodlights 2 universes, wifi
<b>LUMINEX Node 12</b>	12 IN 12 OUT, DMX
<b>ELC Node 8</b>	8 IN 8 OUT, DMX
<b>LUMINEX Node 4</b>	4 IN 4 OUT, DMX
<b>LUMINEX Node 4 Truss</b>	4 IN 4 OUT, DMX, 4 Ethernet PoE ports
<b>LUMINEX Node 2</b>	2 IN 2 OUT, DMX
<b>LUMINEX Node 2 Truss</b>	2 IN 2 OUT, DMX, 2 ports Ethernet PoE
<b>OXO Solano2</b>	DMX playback unit



## ACCESSORIES FOR SERVO-CONTROL

<b>OXO BBox6</b>	DMX/RDM signal Splitter-Booster
<b>DYNATEC Booster 6S</b>	DMX signal Splitter-Booster
<b>SWISSON XSR-R5-5R</b>	DMX/RDM signal Splitter-Booster, 2 universes, 5 outputs per universe
<b>SWISSON XPD-28</b>	DMX/RDM signal Splitter-Booster 2 universes, 4 outputs per universe
<b>W-DMX Black Box FLEX-1 G4</b>	HF DMX Transmitter Receiver
<b>W-DMX Black Box FLEX-2 G5</b>	HF DMX Transmitter Receiver
<b>W-DMX Black Box FLEX-1 G6</b>	HF DMX Transmitter Receiver
<b>W-DMX Black Box Micro F1 G5</b>	HF DMX Transmitter Receiver, battery-operated
<b>OXO TW512</b>	Wifi DMX Transmitter Receiver (for ColorBatt)
<b>LUMEN RADIO INRFX1</b>	CRMX NOVA DMX/RDM/ETH Transmitter Receiver
<b>LUMEN RADIO STARDUST</b>	CRMX NOVA DMX/RDM/ETH Transmitter Receiver
<b>ROBE RDM Communicator</b>	Multi-function DMX interface
<b>GOBOS</b>	For servo-control
<b>NOVELTY Pole head</b>	Pole head for MARTIN servos and VARI-LITE (black and alu) Pole head for CLAY PAKY servos and ROBE (black and alu) Pole head for universal servos X30-H30 (black and alu)
<b>NOVELTY RainCov/L</b>	Rain cover for servos, to be hooked / Ø 50cm
<b>NOVELTY RainCov/S</b>	Rain protection for servos, to be hooked / Ø 36cm
<b>NOVELTY RS32</b>	Electrical distribution cabinet Adjustable differential protection P17 32A tri > 6 x PC16A + Socapex 419
<b>NOVELTY RS63 V2</b>	Electrical distribution cabinet Adjustable differential protection P17 63A tri > 12 x PC16A + 2 x Socapex 419
<b>NOVELTY RS63 V3</b>	Electrical distribution cabinet Adjustable differential protection P17 63A tri > 24 x PC16A + 4 x Socapex 419
<b>NOVELTY RS125</b>	Electrical distribution cabinet Adjustable differential protection P17 125A tri > 24 x PC16A + 4 x Socapex

## ACCESSORIES FOR SERVO-CONTROL

### **NOVELTY RS125 V2**

Electrical distribution cabinet  
Adjustable differential protection  
P17 125A tri > 24 x PC16A  
+ 4 x Socapex 419

### **NOVELTY RS125 V3**

Electrical distribution cabinet  
Adjustable differential protection  
P17 125A tri > 12 x PC16A  
+ 8 x Socapex 419



## SPECIAL EFFECTS

## SMOKE/FOG MACHINES

<b>MARTIN Jem Glaciator Dynamic</b>	High density smoke machine
<b>LOOK VIPER NT</b>	DMX smoke machine
<b>MDG ME1</b>	DMX fog machine, 1 output + fan
<b>MDG ME2</b>	DMX fog machine, 2 outputs + fan
<b>MDG Atmosphère ATMe</b>	Fog machine, CO2
<b>REEL FX DF50</b>	DMX fog machine
<b>CHAUVET VESUVIO II</b>	Fog machine + LED floodlight RBA + UV
<b>LOOK SOLUTION Unique 2.1</b>	Fog machine MDG Atmosphère ATMe Fog machine, CO2
<b>SHOWTECH HURRICANE</b>	DMX-controlled fan
<b>MARTIN Air Force One</b>	DMX-controlled fan
<b>Industrial fan</b>	Large household fan
<b>MARTIN OIL</b>	Normal or slow dispersion, 5-litre can
<b>MDG Neutral</b>	4-litre can
<b>LOOK Unique</b>	For Unique2, 2-litre can
<b>CO2</b>	for MDG machines, 10 kg cylinder

## EFFECTS &amp; MISCELLANEOUS

<b>GLP JDC Line 1000</b>	RGBW 1600W Hybrid LED Stroboscope
<b>GLP JDC Line 500</b>	RGBW 700W Hybrid LED Stroboscope
<b>GLP JDC1</b>	Hybrid LED Stroboscope on a servo-controlled yoke
<b>CHAUVET ColorStrike</b>	Hybrid LED Stroboscope on a servo-controlled yoke, IP65
<b>MARTIN Atomic 3000</b>	3000 W DMX stroboscope + remote control
<b>OXO UV BEAM</b>	LED black light flood light, 90 W, IP65
<b>CAMEO Thunder Wash 600UV</b>	LED black light flood light, 160 W
<b>CAMEO UV Bar 200 IR</b>	LED black light bar, 12 x 3W, 65°, DMX3B
<b>MACMAH BLACKGUN</b>	Narrow-beam, long-range black light, 400 W, hexagonal
<b>BRITEQ LED ROTOR</b>	LED-effect fan, 70x70cm
<b>CHAUVET Swarm 4</b>	Disco-effect LED floodlight, "beam" type
<b>CHAUVET Double Derby</b>	Disco effect LED floodlight, "derby" type
<b>CHAUVET DJ Bank</b>	Disco effect LED floodlight, "light-chaser" type



**GHOST MovingBar**  
**Half Ball 40**  
**Half Ball 50**

**Ball 50**  
**Ball 100**  
**GHOST GYRO36R**

**DESON LD194**  
**WAHLBERG**  
**WAHLBERG**

LED Moving Bar RGBW 85W  
 Faceted half ball Ø 40 cm, with motor  
 Faceted ball Ø 50 cm, with motor Ball 30-40 Faceted  
 ball Ø 30 or 40 cm, with motor  
 Faceted ball Ø 50 cm, with motor  
 Faceted ball Ø 100 cm, with motor  
 Pro rotating beacon, blue, orange, red, 2 x PAR36

LED ball Ø35 cm with DMX winch  
 DMX telescopic column  
 DMX rotary motor



MDG ME2 + Flight case

CHAUVET ColorStrike

CAMEO Thunder Wash  
600UV

GLP JDC1

SHOWTECH Hurricane

CAMEO UV Bar 200 IR

## STAND-ALONE LIGHTING

<b>ASTERA HYPERION</b>	Battery powered LED decorative tube, LED 144W RGBWW, 180° angle, set of 4
<b>ASTERA TITAN TUBE</b>	Battery powered LED decorative tube, LED 72W RGBWW, 180° angle, set of 8
<b>ASTERA AX1</b>	Battery powered LED decorative tube, LED 28W RGBW, 180° angle, set of 8
<b>ASTERA AX2</b>	Battery powered LED bar, 1m, LED 160W, RGBW, angle 21°, set of 4
<b>ASTERA AX3</b>	Battery powered LED spotlight, LED 15W RGBW, 16° angle, set of 8, white
<b>ASTERA AX5</b>	Battery powered LED spotlight, LED 45W RGBW, 13° angle, set of 8
<b>ASTERA AX9</b>	Battery powered LED spotlight, LED 105W RGBW, 13° angle, set of 8
<b>ASTERA PixelBrick</b>	Battery powered LED spotlight, LED 15W RGBW, 13° angle, set of 8
<b>ASTERA NYX Bulb</b>	Ampoule LED RGBW Wireless DMX set de 8
<b>ASTERA Accessories</b>	Accessories for ASTERA spotlights on request
<b>CHAUVET WELL STX 360</b>	Stand-alone LED tube, RGBW, IP65, set of 4



ASTERA AX9



ASTERA AX5



ASTERA PixelBrick



ASTERA AX3



ASTERA NYX BULB



ASTERA AX2



CHAUVET WELL STX 360



ASTERA TITAN TUBE



## LED FLOODLIGHTS

## LED BARS, DMX OR VIDEO SOURCE

**MARTIN VDO SCEPTRON 10 1000MM / WITHOUT DIFFUSER**

Flat, round, square and tube diffusers

**MARTIN VDO SCEPTRON 10 320MM / WITHOUT DIFFUSER**

Flat, round, square and tube diffusers

**MARTIN P3 POWERPORT 1500**

Power supply and DMX / Video switch

**MARTIN P3-175**

Video System Controller

**MARTIN P3-050**

Video System Controller

**MARTIN MAXEDIA COMPACT RACKMOUNT**

Control panel for media composition and playback, user-friendly touch interface

**MARTIN BBD-BDD POWER DATA + CABLE**

1 / 5 / 10 / 25 m

## LED BARS

**OXO PIXYLINE**

LED linear floodlight, 14x10W, RGBW, 20x50°C, IP65

**AYRTON ARCALINE2 3G**

10-LED strip, Full Colour RGBW, Angle 40°, 1020mm

**ROBE RDM Communicator**

Multi-function DMX interface for AYRTON ARCALINE

## SOFT LIGHT

**ARRI SKYPANEL S360-C**

Full RGB+W LED floodlight, Cinema-TV-Photo type, aperture 105°, 2,800 to 10,000°K, 1500W

**ARRI SKYPANEL S60-C**

Full RGB+W LED floodlight, Cinema-TV-Photo type, aperture 115°, 2,800 to 10,000°K, 450W

**ARRI SKYPANEL S30-C**

Full RGB+W LED floodlight, Cinema-TV-Photo type, aperture 115°, 2,800 to 10,000°K, 220W

**ELATION KL PANEL XL**

Full RGB+W LED floodlight, Cinema-TV-Photo type, aperture 110°, 2,000 to 10,000°K, 544W

**ELATION KL PANEL**

Full RGB+W LED floodlight, Cinema-TV-Photo type, aperture 110°, 2,000 to 10,000°K, 295W

**ELATION TVL2000 II**

LED floodlight (450 cool white & 450 warm white), 4 shutters, aperture 30°, 3,200 to 6,500°K

## LED FLOODLIGHTS

### ARCHITECTURAL

<b>SGM P10 WASH</b>	48 RGBW LED of 24W, angle of aperture 10°/19°/45°, IP66
<b>SGM P6 WASH</b>	24 RGBW LED of 24W, angle of aperture 10°/18°/47°, IP66
<b>SGM P5 WASH</b>	44 RGBW LED of 10W, angle of aperture 43°, IP66
<b>SGM P3 VISION</b>	18 LED RGBW of 15W, angle of aperture 10°/25°/35°IP66
<b>SGM P2 WASH</b>	18 RGBW LED of 10W angle of aperture 15°/21°/43°, IP66
<b>SGM I2 WASH</b>	69 RGBW LED, angle of aperture 8.5°, IP65

#### SGM Q10

Flood blind strobe 2048 RGB LED + 2048 White LED, angle of aperture 110°, IP65

#### SGM Q8

Flood blind strobe 1812 LED RGBW, angle of aperture 110°, IP65

#### SGM Q7

Flood blind strobe 2000 LED RGBW, angle of aperture 110°, IP65

#### HUALI QUARTZ LED 480W

Quartz Led 480W, 5100°K, 20° 40° and 90°, Black, DMX

#### PHILIPS ARENA LED

ArenaVision LED Gen3, 1578 W, 5700°K, lens 12x12°

#### OXO SUNFLOOD 500

24 x 20W White LED floodlight 6000K, aperture 12°, with shutters and lenses (10°x40°, 16°, 40°)

#### NOVELTY AF237 HORIZIODE QLED 200W

Asymmetric horizon, LED 200W, 4200°K, IP66, 15 to 75°, 21000 lm, PC16A recovery

#### NOVELTY HORIZIODE QLED 63W BLACK

Asymmetric horizon, LED 63W, 4000°K, IP65, 6500 lm



ARRI SKYPANEL S30-C



ARRI SKYPANEL S60-C



ELATION KL Panel



HUALI QUARTZ LED 480W



ARRI SKYPANEL S360-C

## LED FLOODLIGHTS

## LED PAR

**CHAUVET Colorado Quad 2 Zoom IP**

14 x RGBW LED of 15W, angle of aperture 6.3°

**CHAUVET SlimPAR Pro H USB**

LED PAR 12x10 W RGBAW + UV, angle of aperture 24°

**CHAUVET ColourDash Accent Quad**

LED PAR 10W RGBA, angle of aperture 15°-29°

**LICIALED**

Waterproof floodlight 21 W RGB (7 LED 3W), DMX

Tube 33 cm

Tube 50cm

Tube 85 cm

Tube 100 cm

Tube 167 cm

White or black skin

## BATTERY-POWERED LED PAR

**CHAUVET Well Fit**

LED floodlight, 4 x RGBA of 10W, aperture 11-18°, battery-operated, battery life of 8 to 20 hrs, controllable via DMX, HF, tilting stand, black, white or chrome-plated, set of 6



## HPL LAMP FLOODLIGHTS 3200°K

### PROFILES

<b>ETC Source 4</b>	Body + fixed lens 5/10/14°
<b>ETC Source 4</b>	Body + fixed lens 19/26/36/50°/70°
<b>ETC Source 4 Zoom</b>	Body + zoom lens 15/30°
<b>ETC Source 4 Zoom</b>	Body + zoom lens 25/50°

*These profiles can be installed at 575 W or 750 W.*

### PAR

<b>ETC Source 4 PARNEL</b>	Fresnel lens, 575 W
<b>ETC Source 4 PAR</b>	Diffusing lenses, 575 W

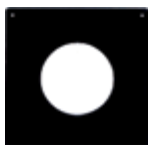
*Different beams: VN5P/NSP/MFL/WFL. Supplied with shutters, filter holder, hook, safety sling, set of lenses.*

### ACCESSORIES

<b>ETC</b>	Iris for Source 4 profiles
<b>ETC</b>	Gobo-holder for Source 4 profiles, size A or B
<b>ETC</b>	Glass gobo holder, size B
<b>ETC</b>	"Donut" for Source 4 profiles, 5 to 50°
<b>ETC</b>	"Top Hat" for Source 4 PAR 19/26/36/50°
<b>ETC</b>	"Egg crate louver" for Source 4 PAR
<b>ETC</b>	Concentric cone for Source 4 PAR



ETC Shutters



ETC "donut"



ETC "egg crate louver"



ETC "Iris"



ETC "Top Hat"



ETC Gobo holder



ETC Source4  
5°



ETC Source4  
PAR



ETC Source4  
10°



ETC Source4  
Zoom 15/30°



ETC Source4  
14/19/26/36/50/70°

## TRADITIONAL FLOODLIGHTS

### OUTDOOR ENVIRONMENTS

<b>CARIBONI</b>	Waterproof HPIT, asymmetrical 150W, black
<b>GEWISS</b>	Waterproof HPIT, symmetrical 150W, grey
<b>GEWISS</b>	Waterproof HPIT, asymmetrical 150W, grey
<b>GEWISS</b>	Waterproof HPIT, symmetrical 400W, grey
<b>MAZDA Cormoran 300 W</b>	Horizon 300W, waterproof
<b>MAZDA Cormoran 1000 W</b>	Horizon 1000W, waterproof

### STAGE ENVIRONMENTS

<b>ROBE PATT 2013</b>	"Softlight" type floodlight, set of 2 750W HPL, 3,050°K, retro look ideal for decorative lighting
<b>ROBE PICKLE PATT</b>	"Softlight" type floodlight, set of 2 575W HPL, 3,050°K, retro look ideal for decorative lighting
<b>ROBE ONEPATT</b>	"Softlight" type floodlight, set of 7 LED 30W, RGBW, 3,050°K, retro look
<b>STAR WAY Orion</b>	Decorative ambient floodlight, 7 x 300W halogen
<b>PORTMAN S-TRIBE</b>	Decorative ambient floodlight, 5 x 40W, 10 LED RGW
<b>PORTMAN P3 Pix 3L</b>	Decorative ambient floodlight, 3 x 230W, gold finish
<b>PORTMAN P2 Hexaline</b>	Decorative ambient floodlight, 6 x 250W gold or silver finish
<b>PORTMAN P1 Retro</b>	Decorative ambient floodlight, 7 x 230W, silver finish
<b>ADMIRAL Aradred 41</b>	Decorative ambient floodlight, 60W, 38cm, set of 4
<b>ADMIRAL Aradred 56</b>	Decorative ambient floodlight, 60W, 53cm, set of 2
<b>PANAVISION Skypan 2k/5k</b>	Halogen 2000 or 5000 W
<b>ADB ACP1001</b>	Asymmetrical CYC, 1000-1250 W
<b>KEYLITE Chinese Ball</b>	Halogen 1000 W
<b>BRITEQ BT NonaBeam</b>	Svoboda LED, 9 x 60 W, BQ1
<b>OXO Funstrip</b>	Strip of 10 LV dichro, 75W, 240V, DMX

### LOW VOLTAGE / BLINDERS

<b>ELATION DTW 350IP</b>	DTW Blinder 350 IP, 1 800-3 200°K, adjustable PAN
<b>ELATION DTW 700IP</b>	DTW Blinder 700 IP, 1,800-3,200°K, adjustable PAN
<b>TS FL1300</b>	2 x PAR36 650 W = 1300 W/220 V
<b>DTS FL2600</b>	4 x PAR36 650 W = 2600 W/220 V
<b>DTS MOLEFAY</b>	8 x PAR36 650 W = 5200 W/220 V
<b>SCENILUX BT250</b>	250 W/220 V, integrated transfo.
<b>SCENILUX BT500</b>	500 W/220 V, integrated transfo.
<b>SCENILUX BT1000</b>	1000 W/220 V, integrated transfo.

TRADITIONAL FLOODLIGHTS

**PROFILES** *(Halogen Profiles)*

**JULIAT 613SX**

**JULIAT 614SX**

**JULIAT 710SX**

**JULIAT 713SX**

**JULIAT 714SX2**

**JULIAT Iris**

**JULIAT PG**

Short profile 1000 W/220V, 58°

Profile 1000 W/220 V, zoom 16/35°

Profile 2 kW/220 V zoom 10/25°

Profile 2 kW/220 V zoom 29/50°

Profile 2 or 2.5kW/220 V zoom 15/40°

Iris for 613S/614SX/714SX

Gobo-holder size A for 614SX/714SX



ROBE ONEPATT



ROBE PICKLE PATT



ROBE PATT 2013



STAR WAY Orion



PORTMAN P1 Retro



PORTMAN P2 Hexaline



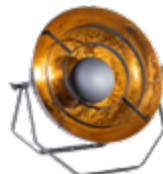
PORTMAN P3 Pix 3L



PORTMAN S-TRIBE



ADMIRAL Aradred 56



ADMIRAL Aradred 41

## TRADITIONAL FLOODLIGHTS

### HMI Profiles

#### ETC/BRON COLOR Kobold DW400

Source Four profile with lens unit

"Kobold" DW400, 400W daylight

MSR 2500 W, offset ballast, 9 to 26°

MSR 2500 W, offset ballast, 30 to 53°

MSR 2500 W, offset ballast, 18 to 36°

#### JULIAT 930 SNX

#### JULIAT 933 SNX

#### JULIAT 934 SNX

### LED Mini-Profiles / Profiles

#### CHAUVET OVATION RÊVE E3

Profile 367W, 2800 > 8000 °K, RGBW,

zoom 15-30° or 25-50°, black

#### ETC Source Four LED Lustr2

Profile 246W, 5600°K, RGBW, zoom,

black

#### ETC Source Four LED Lustr+

Profile 170W, 5600°K, RGBW, zoom, 15-30°

or 25-50°, black

#### ETC Source Four LED Zoom

Profile 170W, 5600°K, zoom 15-30° or

25-50°, white

#### ETC Source Four LED

Profile 170W, 5600°K

Focus 5°/10°/14°/19°/26°/36°/50°/70°

#### ETC Source Four mini LED 36°

LED mini-profile, 12W, black, 4000°K,

blades, rotary gobo-holder, aperture 36°

#### ETC Source Four mini LED 50°

LED mini-profile, 12W, black, 4000°K,

blades, rotary gobo-holder, aperture 50°

#### floodlight Profiled50

50 W, 20/40°, cold white 5700K

## FRESNELS (all fresnels are delivered with 4-sided shutters)

### Halogen Fresnels

#### DESISTI Magis 500 W

500 W/220 V, 3200°K

#### DESISTI Leonardo 1 kW

1000 W/220 V, 3200°K

#### DESISTI Leonardo 2 kW

2000 W/220 V, 3200°K

#### DESISTI Leonardo 5 kW

5000 W/220 V, 3200°K

### HMI Fresnels

#### ARRI Studio T12

Fresnel 12 KW, HMI, 12 kg

#### ARRI Compact SE4000

HMI 4000 W, DMX self-ballast

#### ARRI Compact SE2500

HMI 2500 W, DMX self-ballast

#### ARRI Compact SE2500

HMI 2500 W, DMX electronic ballast

#### COMPULIGHT CoronaM

DMX Shutter for SE2500

#### BRON COLOR Kobold DW800

800W, waterproof, "daylight", 47°

#### BRON COLOR Kobold DW400

400W, waterproof, "daylight", 15 to 45°



## TRADITIONAL FLOODLIGHTS

### *LED Fresnels*

#### **ARRI L5-C**

LED Fresnel 115 W, 4-sided shutter, 2,800 to 10,000°K

#### **ARRI L7-C**

LED Fresnel 160 W, 4-sided shutter, 2,800 to 10,000°K

#### **ARRI L10-C**

LED Fresnel 400 W, 4-sided shutter, 2,800 to 10,000°K

#### **CHAUVET OVATION RÊVE F3 IP**

LED Fresnel, 4-sided shutter, 2,800 to 8,000 k°

#### **ELATION KL6-CW**

LED Fresnel 150 W 5600°K

#### **LTM LT300N-LED-RAIL**

LED floodlight 1x40W, Fresnel lens, "MIZAR" type, 4000°K, 12W console, 4-sided shutter (equivalent to 400W halogen), black or white, equipped with PC16 and LITA power strip

#### **DESISTI Piccoletto**

LED Fresnel 30W / 4000°K / white or black



Full kit BRON COLOR DW400



ARRI L10-C



CHAUVET OVATION RÊVE F3 IP



ARRI L7-C



LTM LT300N-LED-STRIP



DESISTI PICCOLETTO

## TRADITIONAL FLOODLIGHTS

### CONVEX PLANES

**JULIAT 310H**

PC lens, 1000 W/220 V

**JULIAT 329H**

PC lens, 2000 W/220 V

### PAR & ACL

**PAR36**

LV, integrated transfo., 30 W/220 V, hexagonal

**PAR38 "BN"**

Hexagonal, 120 W/220 V, mains outlet

**PAR56**

Black, hexagonal, 300 W/220 V, mains outlet

**PAR64**

Chrome-plated or black alu, 1000 W/110 or 220 V

**PAR64BARRE**

Bar of 6 PAR64 black alu, 6000 W/110 V

**ACL600**

Hexagonal, single unit, transfo., 600 W/220 V

**SERIE ACL250**

2 bars of 4xACL250, 2000 W/220 V, alu or black

### FOLLOWSPOTS

**ROBE Robospot**

Automated tracking system

**JULIAT Arthur**

800 LED with Gitzo stand, 5,5/15°

**JULIAT Victor 1800MSD**

with Gitzo stand, 7/14.5°

**JULIAT Cyrano 2500HMI**

with Gitzo stand, 3/8°

**JULIAT Aramis 2500HMI**

with Gitzo stand, 4,5/8°

**JULIAT Ivanhoe 2500HMI**

with Gitzo stand, 9/21°

**JULIAT Héloïse 2500HMI**

with Gitzo stand, 15/29°

**Bridge seat**

For suspended tracker





JULIAT 310H



JULIAT Arthur



JULIAT Héloïse  
2500HMI



JULIAT Victor  
1800HMI

**novelty**

LIGHTING



## LED TUBE, FLUO & GARLAND LIGHTING

**KINOFLOW 60**  
**KINOFLOW 120**

Proj. TV/Photo, 4 60cm fluorescent tubes  
Proj. TV/Photo, 4 120cm fluorescent tubes

**KEYLITE Chinese Ball**

Halogen 1000 W

**LUMILA TUBELED1500**  
**NOVELTY Colorwhite033**  
**NOVELTY Colorwhite100**  
**NOVELTY Colorwhite150**  
**NOVELTY Colorwhite200**

Rotating magnetic LED tube, IP65 5000 °K, 1.5 m  
LED bars RGBW 6000°K 3.4 x 2.5 - 33 cm  
LED bars RGBW 6000°K 3.4 x 2.5 - 100 cm  
LED bars RGBW 6000°K 3.4 x 2.5 - 150 cm  
LED bars RGBW 6000°K 3.4 x 2.5 - 200 cm

**HALOLITE FLUO 52**  
**HALOLITE FLUO 117**

Fluorescent strip T5 in 4000 / 6500°  
Fluorescent strip T5 in 4000 / 6500°

**NOVELTY FLUO 120**  
**NOVELTY FLUO IP44 120**  
**NOVELTY FLUO IP44 120**  
**NOVELTY FLUO 120DMX**

Strip of 1 fluo, 1.20 m, starter, 36W  
Strip of 1 fluo, waterproof, 1.20 m, starter, 36W  
Strip of 1 waterproof LED fluo, 1.20 m  
Strip of 1 fluo, 1.20 m, DMX, 36W, with dimmer (Dali)

**GARLAND**  
**GUIRLANDE**  
**GARLAND**

Black, 10m, 3 LED bulbs per m  
Black, 20/25m, 3 LED bulbs per m  
Black, 50 m, 3 LED bulbs per m



## LED POLES

### **INNLED T4X black**

Battery-powered black or white LED light pole, set of 2 T°-controlled power, at Full 4300°K, battery life>10 Hrs

### **INNLED T4X white**

Battery-powered black or white LED light pole, set of 2 T°-controlled power, at Full 4300°K, battery life>10 Hrs



## STRIP/EXHIB./DECO LIGHTING

### **THREE-PHASE STRIP (BLACK OR WHITE)**

#### **LITA**

Three-phase strip 16 A, 3-starter strip

#### **LITA**

Strip connectors/strip power supply/various adapters

#### **PICCOLO**

Strip with two conductors 27 x 15 mm, 150W max

### **FLOODLIGHTS FOR EXHIB./DECO**

#### **PROCEDES HALLIER Fenyx**

LED mini-profile 16 to 40°, black or white, lita strip, 20/25W

#### **PROLIGHTS Eclipse Zoom**

LED mini-strip 19 to 36°, black, PC16, 35W

#### **PROLIGHTS Gallery Eclipse**

LED mini-profile 19 to 36°, black, strip, 35W, 4000K

#### **PROLIGHTS Mini Eclipse Zoom**

LED mini-profile, 19/26/36/50°, black, PC16, 28W

#### **HYRWELL Hyro**

LED floodlight, 28W, white or black, 12 to 55°

#### **CLS Jade Zoom**

LED floodlight, black, zoom from 9 to 58°, 3000K

#### **LOUPI SpotC**

Spot C, black or white, 2.1W, 4000°K, 10/40° or elliptical

#### **NOVELTY AR111**

LED floodlight AR111, 18.5W, 36°, black or white, lita strip

#### **SOKA.D ETA GZ10N**

LED floodlight 50W, black, 4000° K, lita strip

#### **PROCEDES HALLIER Luneo**

Set of 24 LED spotlights 5W, 4000°K, 25°, lita strip

#### **AMBIANCE LUMIÈRE Piko**

Set of 8 LED spotlights 1.25W, 28 cm rod, 18°, 4000°K

## STRIP/EXHIB./DECO LIGHTING

**MOLE RICHARDSON EXPOLED  
NOVELTY PELLÉD**

LED on 30 cm curved tilting rod, 50W/220V, black  
LED floodlight 60W, "pie server" type,  
25W, 4000°K, black or white

**NOVELTY PELLÉD DALI**

LED floodlight 60W, "pie server" type,  
25W, 4000°K, black or white, DALI / DMX

**floodlight Profiled50  
MOLE RICHARDSON VM70  
MOLE RICHARDSON Mickey  
CHAUVET EZBAR**

Mini-profile 50 W, 20/40°, Cold white 5700K  
Mini-profile 70 W, dichroic, white or black  
Dichroic LV, with shutters, 50 W, white or black  
Set of 4 strips of 3 LED spotlights 5W, 4000°K,  
battery-powered

## LED / INTEGRATION

**NOVELTY DALI**

DMX -> Dali 6-channel converter

**NOVELTY RUBLED RGBW  
NOVELTY LED strip RGB-72  
NOVELTY RUBLED19,2W**

LED strip 30W-96 LED/m RGBW 3000 and 6000°K  
LED strip RGB 17.5W-72 Led/m, 5 m  
LED strip 19.2W-240 LED/m 2200 / 2700  
/ 3000/ 3500 / 4000 / 5700°K, 5m  
Profile for LED strip integration

**NOVELTY Planche-King  
ENTTEC E-STREAMER MK2  
ENTTEC Pixelator**

Controller 4 x 680 RGB pixels, 5 or 12V  
48 DMX-universe recorder  
LED controller, 8160 RGB pixels via  
48 Artnet universes, 24 Plink Ethernet ports  
Controller 340 matrixed pixels

**ENTTEC PLINK**

**NOVELTY DriveLED 410**

LED power supply and dimmer, DMX512  
(XLR and RJ45 in-out), 4 x 10A, 4 x 240W, 24V

**NOVELTY DriveLED 323**

LED power supply and dimmer, DMX512  
(XLR and RJ45 in-out), 32 x 3A, 32 x 72W, 24V  
specific cables SAC 5/10/20 m

**NOVELTY DriveLED 306**

LED power supply and dimmer, DMX512  
(XLR and RJ45 in-out), 3 x 6A, 3 x 144W, 24V

**NOVELTY DriveBattV3  
ACCLAIM LIGHT DriveLED 8RGBx2**

LED power supply, battery-powered, 24V, 12A  
LED power supply and dimmer, DMX512  
(XLR and RJ45 in-out), 8xRGBW, 144W Max



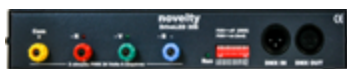
PIXELATOR and LED strips



NOVELTY Planche King



NOVELTY DriveBattV3



NOVELTY DriveLED 306



NOVELTY DriveLED 410



NOVELTY DriveLED 323



NOVELTY PELLED



PROCEDES HALLIER Luneo set x24



LOUPI SpotC





# LIGHTING



CHAUVET EZ BAR



NOVELTY  
LED-AR111-Rail



CLS Jade Zoom



HYRWELL HYRO



PROLIGHTS Eclipse Zoom



PROLIGHTS Mini Eclipse Zoom



PROCEDES Hallier  
Fenix 20W



AMBIANCE LUMIERE  
Piko

## CENTREPIECE/ CHANDELIER / LAMP

### CentreTabLED

Tabletop lighting,  
Battery-powered LED, 20 hrs battery life  
with dimmer, customisable lampshade  
DHX-HF controls  
Lampshade Ø140 /200 mm, stand Ø200 mm  
height 320 mm, weight 1.160 kg

### OBELIE

Tabletop lighting, set of 15  
Battery-powered LED, 7 hrs battery life  
with dimmer, customisable lampshade  
DHX-HF controls  
Lampshade Ø120 /100 mm, stand Ø140 mm  
height 320 mm, weight 1.345 kg  
Lamp bottom illuminates in warm white (2800°K)  
Full colour lampshade

### PARA NOCTA

Battery-powered LED lamp, 3000°K, IP6, set of 2

### Castries Lamp

Parisian style, 1 head with 6 glass sides  
cast aluminium, black and gold body,  
E27 low-energy lamp

**PROLIGHT SmartTorch** LED torch RGBW IP54, battery-powered, set of 6  
**LUMINARA LED torches** Ivory LED torches, 10/13/17/23 cm, battery-powered

### CHAUVET Festoon 2

Garland 20 RGB bulbs 15m

### CHAUVET Festoon 2

Controller for Festoon 2 RGB





## DMX ORGAN SETS

<b>ADB MIKADO</b>	12/24 circuits
<b>MA LIGHTING Lightcommander II</b>	12/24 circuits
<b>ZERO 88 JESTER</b>	24/48 circuits
<b>MA LIGHTING Lightcommander II</b>	24/48 circuits
<b>MA LIGHTING Lightcommander II</b>	48/96 circuits
<b>MA LIGHTING Grand MA3 FullSIZE</b>	16 DMX universes
<b>MA LIGHTING Grand MA3 Light</b>	8 DMX universes
<b>MA LIGHTING Grand MA3 Compact XT</b>	8 DMX universes
<b>MA LIGHTING Grand MA2 FullSIZE</b>	16 DMX universes
<b>MA LIGHTING Grand MA2 Light</b>	8 DMX universes
<b>MA LIGHTING Grand MA2 Ultra Light</b>	8 DMX universes
<b>MA LIGHTING Dot2 XL-F</b>	2 DMX universes
<b>MA LIGHTING MA2 on PC Command Wing</b>	Control unit

## DIMMER PACKS

<b>OXO Simoun2</b>	DMX, input PC16A/output PC16A
<b>RVE Stager 6x2.3</b>	DMX, input P17 32tri/outputs PC16A
<b>CRYSTAL EQT 6x12</b>	DMX, input P17 125tri/outputs 6x63 Mono P17
<b>RVE LIVE 12x3</b>	DMX, input P17 63tri/outputs PC16A
<b>AVOLITE Powercube 12x3 / 18x2</b>	DMX, input P17 63tri/outputs PC16A/Soca
<b>RVE 24x3 HDL</b>	DMX, input P17 125tri/outputs PC16A
<b>RVE 36x2</b>	DMX, input P17 125tri/outputs PC16A
<b>AVOLITE Powercube 48x2</b>	DMX, Powerlock input/Soca outputs

## DMX ACCESSORIES

<b>JULIAT</b>	HERMES Interface
<b>OXO Solano2</b>	DMX playback unit
<b>ROBE RDM Communicator</b>	Multi-function DMX interface
<b>ASTERA ART7 Bluebox</b>	Bluetooth / CRMX / W-DMX Interface
<b>CHAUVET Festoon driver</b>	"Data over power" Festoon bulb driver
<b>OXO BBox6</b>	DMX/RDM signal Splitter-Booster
<b>DYNATEC Booster 6S</b>	DMX signal Splitter-Booster
<b>SWISSON XSR-R5-5R</b>	DMX/RDM signal Splitter-Booster, 2 universes, 5 outputs per universe
<b>SWISSON XPD-28</b>	DMX/RDM signal Splitter-Booster 2 universes, 4 outputs per universe

DMX ACCESSORIES

**W-DMX Black Box FLEX-1 G4**  
**W-DMX Black Box FLEX-2 G5**  
**W-DMX Black Box FLEX-1 G6**  
**W-DMX Black Box Micro F1 G5**

HF DMX Transmitter Receiver  
 HF DMX Transmitter Receiver  
 HF DMX Transmitter Receiver  
 HF DMX Transmitter Receiver, battery-operated

**OXO TW512**  
**LUMEN RADIO STARDUST**  
**LUMEN RADIO INRFX1**  
**ROBE RDM Communicator**

Wifi DMX Transmitter Receiver (for ColorBatt)  
 CRMX NOVA DMX/RDM/ETH Transmitter Receiver  
 CRMX NOVA DMX/RDM/ETH Transmitter Receiver  
 Multi-function DMX interface



ZERO 88 JESTER

ADB MIKADO

LUMEN RADIO INRFX1

LUCENTI Festoon

ASTERA ART7 Bluebox

SWISSON XSR-RS-5R

SWISSON XPD-28

## MULTIPAIR WIRING

<b>SOCAPEX</b>	Multipair 6 circuits 3 x 2.5 mm <sup>2</sup>
<b>SOCAPEX</b>	Whip or bridge box 6 circuits 3 x 2.5 mm <sup>2</sup>
<b>SOCAPEX</b>	Variable-length whip 3 x 2.5 mm <sup>2</sup>
<b>SOCAPEX COVER</b>	Protective cover for Socapex socket

## DMX WIRING

<b>DMX 3-pin</b>	Length: 3/5/10/20/50/100
<b>DMX 5-pin</b>	Length: 3/5/10/20/50/100
<b>DMX 3-pin KIT</b>	24 x 3 m / 24 x 5 m / 24 x 10 m / 12 x 20 m
<b>DMX 5-pin KIT</b>	24 x 3 m / 24 x 5 m / 24 x 10 m / 12 x 20 m
<b>1/2 DMX 5-pin KIT</b>	12 x 3 m / 12 x 5 m / 12 x 10 m / 6 x 20 m
<b>NOVELTY BDx4U</b>	4 DMX universe box on RJ45 category 5

## LIGHTING ACCESSORIES

<b>IFF Pantograph</b>	Cross-bar suspension, 6 m max, 40 kg max Boom control
<b>AVENGER C825</b>	Telescopic rod 117 cm / 30 kg to 220 cm / 7 kg
<b>MANFROTTO Baby 30</b>	Chrome-plated stand for floodlight, 1.30 to 3 m, 10 kg max
<b>MANFROTTO 126CSU</b>	Chrome-plated stand for floodlight
<b>ASD AL250</b>	Steel stand of 1.30 to 2.50 m, 70 kg max
<b>ASD ALT300</b>	Steel stand of 1.30 to 2.50 m, 70 kg max
<b>MANFROTTO WIND-UP</b>	Rack-and-pinion stand 3.7 m, 30 kg max, black
<b>MANFROTTO WIND-UP-ROUL</b>	Rack-and-pinion stand 3.7 m, 30 kg max, black on castors
<b>MANFROTTO EXTENSION</b>	Extension cord for Wind-Up, black
<b>NOVELTY</b>	Coupling bar for 2 to 4 floodlights
<b>NOVELTY</b>	Floor cross for 1 floodlight

# LIGHTING









# SOUND SYSTEMS

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## INNOVATIONS IN SOUND SYSTEMS



L-ACOUSTICS LA-RAK III-AVB | see p.131



L-ACOUSTICS LA-RACK II - AVB | see p.131



M1 HOLLYLAND | see p.147



L-ACOUSTICS SOKA | see p.129



L-ACOUSTICS P1 | see p.136



L-ACOUSTICS SB10i | see p.130



YAMAHA DM7-EXT | see p.134



YAMAHA DM3 | see p.134



L-ACOUSTICS SYVA BLANC  
| see p.129

INNOVATIONS IN SOUND SYSTEMS

L-ACOUSTICS SERIES L



L-ACOUSTICS L2 | see p.128



L-ACOUSTICS L2-D | see p.128



L-ACOUSTICS L2-Bump | see p.128

## L-ACOUSTICS SERIES K



L-ACOUSTICS K3 | see p.128



L-ACOUSTICS K3-Bump | see p.128



L-ACOUSTICS K3-Tilt | see p.128



## INNOVATIONS IN SOUND SYSTEMS



Translation booth  
| see p.152



TAIDEN HCS-4800MA | see p.153



TAIDEN HCS-4838NCSD-D/80  
| see p.154



BOSCH DCNM-WDE | see p.154



TAIDEN HCS5100MA08M + HCS5100PA  
| see p.152



SENNHEISER HDE 2020-D-II  
| see p.155



SENNHEISER EK 2020-D-II  
| see p.155



NOVELTY Headset  
Handsfree Kit  
| see p.153



BEYERDYNAMIC  
BD-UNIT-TP  
| see p.155



TAIDEN HCS8685  
| see p.152

### BROADCASTING SYSTEM

<b>PS15 R2</b>	Speaker, delivered with yoke 2 active/passive channels - 100° x 55° - 1 x 15"/1 x 2"
<b>PS10 R2</b>	Speaker, delivered with yoke 2 passive channels - 100° x 55° - 1 x 10"/1 x 1"
<b>PS8 R2</b>	Speaker, delivered with yoke 2 passive channels - 100° x 55° - 1 x 8"/1 x 1"
<b>RS18</b>	Subwoofer - 2 x 18"
<b>LS18</b>	Subwoofer - 1 x 18"
<b>ID24</b>	Compact full-range speaker, set of 4 500W/16Ω, 120°x40°, black and white, set of 4
<b>IDS110</b>	Subwoofer, 1x10", 650W/4Ω, 43-130Hz, black

### WEDGE

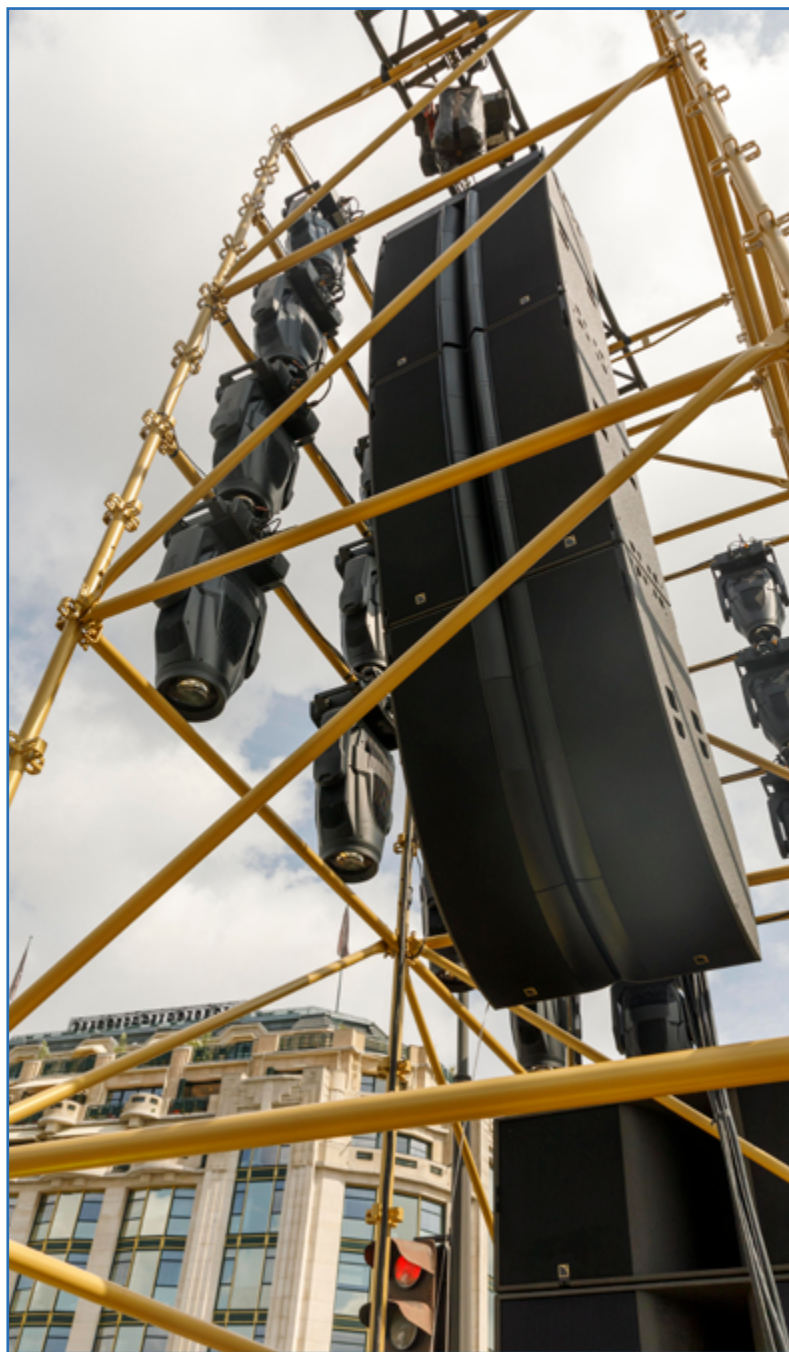
<b>NEXO 45N12</b>	106 dB, 50Hz-20kHz, 30° H-22.5° Diag, 60°
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### AMPLIFIERS

<b>NXAMP 4X1C</b>	Amplifier + processor - 4x1000W / 4Ω
<b>NXAMP 4X4C</b>	Amplifier + processor - 4x4000W / 4Ω
<b>DTDamp 4x1.3</b>	Amplifier 4x1200W/4Ω









### L SERIES

<b>L2</b>	16-channel active speaker WST 10° progressive curve
<b>L2-D</b>	16-channel active WST speaker with 60° progressive curve
<b>L2-Bump</b>	Bumpers for L2 speakers
<b>L2-Bar</b>	L2-BUMP extension bar

### K SERIES

<b>K3</b>	3-channel speaker - 2 x 12" 4 x 6.5" 2 x 3"
<b>K3-Bump</b>	Hanging bumper for K2 speakers
<b>K3-Tilt</b>	Installation element for KS28
<b>K2</b>	3-way speaker - 2 x 12" 4 x 6,5" 2 x 3"
<b>K1-Sub</b>	Subwoofer - 2 x 15"
<b>K2-Bump</b>	Hanging bumper for K2 speakers
<b>KARA-DOWN-K2</b>	Fixing device for KARA under K2
<b>KUDO</b>	3-channel speaker - 2 x 12" 4 x 5" 2 x 1.75"
<b>K-Bump</b>	Hanging bumper for Kudo speakers
<b>K-Jack x2</b>	Adjustment system for K-Bump in ground position
<b>K-Lift</b>	Horizontal hanging bumper for Kudo speakers
<b>KARAI</b>	Speaker, 2 active channels, 139dB, 55 Hz/20 kHz, set of 3
<b>M-Bump</b>	Hanging bumper for Kara speakers
<b>M-Barre</b>	Extension bar for M-Bump
<b>Minibu</b>	Compact lifting or laying bumper for 6 KARA
<b>Pullback</b>	Plate for rear attachment of KARA in shower configuration
<b>KIVAII</b>	"Line-array" speaker 16 Ohms, 2 channels, 138dB SPL, aperture 100°
<b>KIBUII</b>	Hanging bumper for lifting "KIVA" speakers
<b>KIETII</b>	Stirrup for hanging of 3 Kiva / Kiva II max in "under-balcony" or on stands
<b>Kibu-SB</b>	Lifting or laying bumper for Kiva and SB15M
<b>Pullback</b>	Rear lifting accessory for KIVA II and KIVA systems



## L-ACOUSTICS SOUND SYSTEMS

## S SERIES

<b>SOKA</b>	Speaker, 2 passive channels LF = 9x3.5", HF=3x1", horizontal cover 140°
<b>SYVA</b>	Speaker, 2 passive channels, MF = 6x5", HF=3x1.75", horizontal cover 140°, vertical cover +5/-21°, 137 db SPL, 8 Ω + accessories
<b>SYVA LOW</b>	Subwoofer for "Syva" system, 4Ω, 137 dB SPL, 2 x 12" + Base
<b>SYVA SUB</b>	Subwoofer for "Syva" system, 8Ω, 128 dB SPL, 1 x 12"
<b>SYVA BLANC</b>	Speaker, 2 passive channels, MF = 6x5", HF=3x1.75", horizontal cover 140°, vertical cover +5/-21°, 137 db SPL, 8 Ω
<b>SYVA LOW BLANC</b>	Subwoofer for "Syva" system, 4Ω, 137 dB SPL, 2 x 12"

## A SERIES

<b>ARCS II</b>	"WST source line" speaker with constant curve 50Hz to 20kHz, 60° asymmetrical x 22.5°
<b>Bump3</b>	Lifting bumper in vertical position
<b>LiftBar</b>	Lifting bar for 2 x ArcBump
<b>ArcBump</b>	Lifting bumper in horizontal position
<b>A10 Wide / Focus</b>	"WST source line" speaker with constant curve
<b>A15 Wide / Focus</b>	"WSR source line" speaker with constant curve
<b>A10 Bump</b>	Bumper for A10
<b>A15 Bump</b>	Bumper for A15
<b>A-TILT</b>	Bracket for KS21 and A10/A15



### SÉRIE X

<b>X15 HiQ</b>	2 active channels - 50° x 50° - 1 x 15" / 1 x 1.4"
<b>115XT</b>	2 active channels - 80° x 80° - 1 x 15" / 1 x 1.4"
<b>115XT HiQ</b>	2 active channels - 50° x 50° - 1 x 15" / 1 x 1.4"
<b>15" Yoke</b>	Yoke for 15" series
<b>X12</b>	2 active/passive channels (switch) - 90° x 90° - 1 x 12" / 1 x 3"
<b>12XT</b>	2 actives/passive channels (switch) - 90° x 90° - 1 x 12" / 1 x 3"
<b>12" Yoke</b>	Yoke for 12" series
<b>X8</b>	2 passive channels - 100° x 100° - 1 x 8" / 1 x 1.5"
<b>8XT</b>	2 passive channels - 100° x 100° - 1 x 8" / 1 x 1.5"
<b>8" Yoke</b>	Yoke for 8" series
<b>5XT</b>	2 passive channels - 110° x 110° - 1 x 5" / 1 x 1" brown (5XT) or white (5XT-W)
<b>5XT Yoke</b>	Yoke for 5XT

### P SERIES "AMPLIFIER"

<b>112P</b>	Amplifier, 2 active channels - 90° x 90° - 1 x 12" / 1 x 3"
<b>112 Yoke</b>	Yoke for 112 series
<b>108P</b>	Amplifier, 2 passive channels - 100° x 100° - 1 x 8" / 1 x 1"
<b>108 Yoke</b>	Yoke for 108 series
<b>SB15P</b>	Amplified subwoofer 1 x 15"

### SUBWOOFER

<b>KS28</b>	Subwoofer for large format systems K1-K2, 4Ω, 143 dB SPL, 2x18"
<b>KS28 Bump</b>	Bumper 16 x KS28
<b>KS21</b>	Subwoofer for medium format systems
<b>SB28</b>	High-power subwoofer 1225 W 2 x 18"
<b>SB18</b>	High-power subwoofer 700 W 1 x 18"
<b>SB118</b>	High-power subwoofer 700 W 1 x 18"
<b>SB15M</b>	Compact high-power subwoofer 600 W 1 x 15"
<b>SB10i</b>	Subwoofer 1x10"



## L-ACOUSTICS SOUND SYSTEMS

### AMPLIFIER CONTROLLERS

**L-ACOUSTICS LARAK-III-AVB**

Rack of 3 LA7.16 with LS10 AVB switch

**L-ACOUSTICS LARAK-II-AVB**

Rack of 3 LA12X with LS10 AVB switch

**L-ACOUSTICS LARAK-AES**

Rack of 3 x LA8-AES - 12 x 1800 W

**L-ACOUSTICS LA12X**

Amplifier controller based on an architecture of 4 inputs/4 outputs, amplification module 12,000 W (4 x 3,300 W)

**L-ACOUSTICS LA8 AES**

Amplifier processor - 4 x 1800 W

**L-ACOUSTICS LA4X**

Amplifier processor - 4 x 1000 W



L-ACOUSTICS LA12X



L-ACOUSTICS KS28



L-ACOUSTICS X8



L-ACOUSTICS X12



L-ACOUSTICS X15 HiQ



L-ACOUSTICS 108P



L-ACOUSTICS 112P



L-ACOUSTICS SB15M



L-ACOUSTICS SB10i



L-ACOUSTICS LARAK-II-AVB

## BOSE SOUND SYSTEMS



### SHOWMATCH SMAFT KIT

<b>DeltaQ SM5</b>	Speaker 80hms, 2 channels, 128 dB SPL, aperture 70° Hx5°V
<b>DeltaQ SMS118</b>	Subwoofer for DeltaQ SM5 system
<b>SMAFT</b>	Hanging bumper for ShowMatch DeltaQ Array system
<b>DeltaQ-X8TOUR</b>	Bose Showmatch X8 Tour Rack Ampli amplifier rack
<b>SMAFMP</b>	Bracket hanging system for increasing hanging points on bumpers from 7 to 45

## SOUND SYSTEMS

<b>YAMAHA VXS8</b>	Wall speaker 180 W, black
<b>YAMAHA VXS5</b>	Set of 2 wall speakers 150 W, black or white
<b>YAMAHA VXS3F</b>	Set of 2 wall speakers 40 W, black or white
<b>YAMAHA VXS10S</b>	Passive subwoofer 2 x 200W, black
<b>APG DX5W</b>	Compact speaker, 1 x 13 cm + 1 x tweeter, white
<b>BOSE S1</b>	Amplifier speaker, mixing table 3 integrated channels with reverb and Bluetooth streaming, XLR input and 3.5 mm Jack, set of 2 + stands
<b>BOSE L1</b>	Compact Line-Array Speaker, black Amplifier, vertical position 3 different installation heights
<b>BOSE 802 Série III</b>	240 W / 8 Ω, 1 passive channel
<b>BOSE Freespace DS40F</b>	Passive speaker 40W / 8 Ω or 70V / 100V, white
<b>FISHERAMPS BassPump III</b>	Bass pump system "Shaker" type, amplifier, ideal for drummers
<b>GENELEC 8030</b>	Pair of monitor speakers (80W bi-amp)
<b>GENELEC 8020</b>	Pair of monitor speakers (40W bi-amp)
<b>YAMAHA MSP5</b>	Pair of monitor speakers (40+27W bi-amp)
<b>YAMAHA SW10</b>	"Subwoofer" amplifier speaker 160W

## BATTERY-POWERED SOUND SYSTEMS

<b>FOHNN FP22 RX</b>	Battery-powered amplifier speaker, CD player, 1 Sennheiser EW HF receiver
<b>FOHNN FP22 RXTX</b>	Battery-powered amplifier speaker, CD player, 1 transmitter + 1 HF receiver Sennheiser EW

## 100V SOUND SYSTEMS

<b>JET SON PDS</b>	20 W / 100 V, + hook yoke
<b>TOA F150/F160</b>	20 W / 100 V, + hook
<b>TOA PA031 Rack X2</b>	2 x amplifiers 120 W / 100 V
<b>NOVELTY hanging cross</b>	For 4 PDS
<b>NOVELTY hanging bar</b>	For 2 PDS
<b>NOVELTY line reel</b>	100 m

## AMPLIFIERS

<b>QSC PLX1802</b>	Amplifier 2 x 325 W / 8Ω
<b>YAMAHA XMV8140D</b>	Amplifier 8 x 140 W / DANTE
<b>YAMAHA XMV8280D</b>	Amplifier 8 x 280 W / DANTE
<b>YAMAHA PC412-DI</b>	Amplifier 4 x 1200 W / DANTE / 100V
<b>L-ACOUSTICS DX5 AMPLI</b>	Amplifier rack LA48A + DP224
<b>BEHRINGER HA8000</b>	Headphone amplifier, 8 stereo channels

## PUBLIC ADDRESS SYSTEMS

<b>BOSCH Rack Sécu V2</b>	Message broadcasting system <i>security EN-54 LBB1965+Inverter with remote switch</i>
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## SPEAKER STANDS

<b>K&amp;M</b>	Rack-and-pinion speaker stand
<b>K&amp;M</b>	Coupling bar for speakers
<b>K&amp;M Stand Diff3 and 4</b>	Black or white speaker stand with base – 1.10 m to 1.81 m
<b>ASD ST780</b>	With dolly + hoist max=7.83 m/500 kg



## DIGITAL CONSOLES

<b>DIGICO SD10</b>	Digital mixing console, 96 inputs, 48 bus, output matrix 16x23
<b>DIGICO SD10</b>	Flight, accessories, screen, fibre 150 m
<b>WAVES</b>	Soundgrid extreme server V2
<b>WAVES</b>	Mercury Bundle pack
<b>WAVES Digigrid</b>	SG/MADI BNC
<b>ALLEN &amp; HEATH SQ5</b>	16 Faders, 48 channels
<b>YAMAHA DM7-EXT</b>	30 Faders, 120 channels, 60 bus
<b>YAMAHA DM3</b>	9 Faders, 16 channels, 8 bus
<b>YAMAHA CL5</b>	32 Faders, 72 channels, 32+2 bus
<b>YAMAHA CL1</b>	16 Faders, 48 channels, 32+2 bus
<b>YAMAHA QL5</b>	32 Faders, 72 channels, 32+2 bus
<b>YAMAHA QL1</b>	16+2 faders, 32+8 channels, 16 mix, 8 matrix
<b>YAMAHA TF1</b>	Digital console 16+1 faders, 32 mono channels
<b>YAMAHA O1V96i</b>	16 Faders, 32 channels, 8+1bus
<b>QSC TouchMix16</b>	20 inputs (12 mono + 4 stereo), 6+2 aux

## REMOTE DIGITAL RACK

<b>MIDAS DL251</b>	Stage rack 58 in / 16 out
<b>YAMAHA RIO 3224D / RIO 3224D2</b>	Input/Output rack under DANTE network protocol, 32 IN, 16 OUT, + 4 OUT AES/EBU Compatible with YAMAHA consoles with DANTE protocol RJ45 or Optical Fibre connection, manageable ethernet switch Supplied with a set of 2 RJ45 Cat5e 100m reels
<b>YAMAHA RIO 1608D / RIO 1608D2</b>	Input/Output rack under DANTE network protocol, 16 IN, 8 OUT, + 4 OUT AES/EBU Compatible with YAMAHA consoles with DANTE protocol RJ45 or Optical Fibre connection, manageable ethernet switch Supplied with a set of 2 RJ45 Cat5e 100m reels
<b>DIGICO SD Rack</b>	I/O patch under Optocore network protocol 56 IN / 40 OUT 16 AES out



## ANALOGUE CONSOLES

**MIDAS Venice160**

8+4st Analog IN, 6 Aux, 4 GRP, 1 St Analog OUT

**MIDAS Venice240**

16+4st Analog IN, 6 Aux, 4 GRP, 1 St Analog OUT

**MIDAS Venice320**

24+4st Analog IN, 6 Aux, 4 GRP, 1 St Analog OUT

**YAMAHA MG12XU**

Mixing console, 12 channels – 6 micro inputs,  
12 line inputs (4 mono + 4 stereo)

**YAMAHA MG06X**

Mixing console, 6 channels – 2 micro inputs,  
6 line inputs (2 mono + 2 stereo)

**YAMAHA EMX312SC**

Amplifier analogue console, 2 x 300W

## PRESS BOX / SPLITTER

**T RACKS DS2418 (setx2)  
XTA DS800**

1 mono input / 8 outputs or 2 inputs / 4 outputs  
8 stereo inputs / 32 outputs



Digico SD10



YAMAHA DM7-EXT



ALLEN & HEATH SQ5



YAMAHA DM3



YAMAHA CL5

## PERIPHERALS

### PREAMPS

<b>AVALON VT737SP</b>	Mic/line preamp + equalizer + comp.
<b>FOCUSRITE Octopre Platinum</b>	8-mic preamp, ADAT card
<b>SPL Channel One</b>	mic preamp with lamp

### COMPRESSORS

<b>BSS DPR402</b>	Stereo, XLR I/O
<b>BSS DPR404</b>	Stereo, XLR I/O
<b>BSS DPR901</b>	Stereo or mono 4 bands, XLR
<b>DRAWNER DL241</b>	Stereo, XLR I/O
<b>EMPIRICAL LABS Distressor EL-8X</b>	Stereo, XLR I/O

### NOISE-GATE

<b>BSS DPR504</b>	4 channels, XLR I/O
<b>DRAWMER DS201</b>	Stereo, XLR I/O

### EQUALIZERS & SIGNAL PROCESSING

<b>UNIVERSAL AUDIO APOLLO 16</b>	Thunderbolt 2 audio interface 16 x 16
<b>PORTICO5045</b>	Analogue feedback eliminator processor
<b>BSS FCS966</b>	2 x 31 bands, graphic
<b>KLARK TECHNIC DN360</b>	2 x 31 bands, graphic
<b>SPL StereoVitalizer MK2-T</b>	Dynamics processor with lamp

### DIGITAL PROCESSORS

<b>BSS Soundweb 9088ii</b>	8 inputs/8 outputs <i>(computer and technician on quotation)</i>
<b>LAKE LM44</b>	4 inputs/4 outputs
<b>L-ACOUSTICS P1</b>	Digital audio processor

**DIGITAL DELAYS**

**TC ELECTRONIC 2290**  
**TC ELECTRONIC D-TWO**

Mono, XLR I/O  
 Stereo, 6.35 Jack I/O

**DIGITAL REVERBS**

**LEXICON PCM70**  
**LEXICON PCM90/91**

Stereo, 6.35 Jack I/O  
 Stereo, memory card

**DIGITAL MULTI-EFFECTS**

**TC ELECTRONIC TC6000**  
**TC ELECTRONIC M2000**  
**LEXICON PCM80**  
**LEXICON PCM96**  
**YAMAHA SPX900/1000**  
**YAMAHA SPX990**  
**YAMAHA SPX2000**

Stereo Version Mastering  
 Double stereo, memory card  
 Stereo, memory card  
 Surround, memory card  
 Stereo  
 Stereo, memory card  
 Stereo

**HARMONIZER**

**EVENTIDE H3000**

Stereo, XLR I/O

**DIGITAL CLOCKS**

**ROSENDAHL NANOSYNC HD**  
**ROSENDAHL NANOCLOCK**

Multi-standard sync interface  
 Digital clock with 12 outputs

## AUDIO DATA PROCESSING

### INTERFACES

<b>FOHNN A-1 Live</b>	Audio output interface USB to 2 x XLR
<b>SCARLETTT 2i2</b>	2-input sound card, 2 XLR JACK outputs
<b>SCARLETT 2i4</b>	2-input sound card, 4 XLR JACK outputs
<b>SCARLETT 18i20</b>	8-input sound card, 10 XLR JACK outputs
<b>MOTU 828Mk3</b>	FireWire Interface, 24 bit, 192 kHz
<b>MOTU 828Mk3 Hybrid</b>	FireWire/USB Interface, 24 bit, 192 kHz
<b>RME MADI Router</b>	12 ports and format converter
<b>RME MADIface XT</b>	USB3/MADI interface with 394 channels (196 IN + 198 OUT) 192 kHz
<b>ROLAND UA-1610</b>	USB 2.0 interface, 24 bit, 192 kHz
<b>WAVES Soundgrid Extreme Server</b>	Audio processing server
<b>DIGICO Digigrid MGB</b>	Audio processing server

### COMPUTERS & SOFTWARE

#### APPLE-SONNET xMac Mini Server

Station with sequencer software Logic Pro X/Nuendo  
RME HDSP AES-32 Audio card and Dante virtual card

#### NOVELTY Rack Mesure Smaart V8

Acoustic measurement station  
Smaart v8Di software

#### 10EAZY Class 1

Class 1-compliant SPL measurement control system

#### AFF25 TOURING

Triple pressure level display compliant with decree  
2017-1244

#### APPLE Logic Pro X

Delivered as an additional feature on a computer only

#### AVID Pro Tools

Delivered as an additional feature on a computer only

#### FIGURE 53 QLab Pro

Delivered as an additional feature on a computer only

#### STEINBERG Nuendo

Delivered as an additional feature on a computer only

#### WAVES GoldNative+MultiRack

Delivered as an additional feature on a computer only

#### WAVES Mercury Bundle

Delivered as an additional feature on a computer only

#### WAVES MultiRack

Delivered as an additional feature on a computer only

#### WAVES SoundGrid Studio

Delivered as an additional feature on a computer only

# SOUND SYSTEMS



WAVES Mercury Bundle + WAVES Multi-Rack + Soundgrid Extreme Server + DIGICO Digigrd MGB



SCARLETT2 i4



APPLE-SONNET Mac Mini Server + Logic Pro X



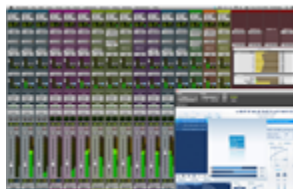
AFF25 TOURING



FIGURES3 Qlab Pro



WAVES Gold Native + MultiRack



STEINBERG Nuendo

## MOBILE CONTROL UNITS

### **NOVELTY Rack Conference V2 – BX**

AX-BX-GX frequency plan conference rack, equipped with 2 HF microphones (hand and headband), 2 "swan neck" desk microphones, 1 CD/MP3 player, 1 digital console with recording function, accessories

## SOURCES

**TASCAM CD-200**

CD / MP3 / WAV player

**TASCAM SS-CDR200**

CD/SD/CF/USB player/recorder

## TELEPHONE INSERT

**AEQ TH-02**

Telephone insert + handset

## DJING

**PIONEER DJM-V10**

6 line inputs + 2 phono for Serato / Rekordbox

**PIONEER DJM2000 Nexus**

6 line + 2 phono + 4 digital inputs

**PIONEER DJM900 Nexus 2**

DJ mixer 4 audio channels, 2 mic channels, 4 digital inputs, 6 line, 2 phono

**PIONEER DJM A9**

DJ console 4 audio channels, 2 mic channels, 4 digital inputs, 6 line, 2 phono

**ALLEN & HEATH Xone92**

6 line + 4 phono inputs

**ALLEN & HEATH Xone22**

2 line / phono inputs

**ALLEN & HEATH XoneDB4**

4 line / phono inputs + effects

**PLAYDIFFERENTLY Model1**

6 line / phono inputs

**RANE TTM57SL**

Console with Serato Live, vinyl and Timecode CD

**PIONEER CDJ3000**

USB/SD player with touchscreen

**PIONEER CDJ2000 Nexus 2**

USB/CD/SD player with pitch

**PIONEER CDJ2000 Nexus**

USB/CD/SD player with pitch

**RANE SL4 Serato**

Supplied with vinyl and timecode CD

**TECHNICS SL1210mk2**

Vinyl turntable

**TECHNICS SL1210mk7**

Vinyl turntable +16 / - 16

**PIONEER PLX1000**

Vinyl turntable

**LUKE ASB1**

Absorber for SL1200

**PIONEER RMX1000**

DJ remixing station

**KORG KA0SS PAD**

DJ effects controller

**ADAM HALL LAPTOP Stand**

SLT005 DJ LAPTOP Stand

# SOUND SYSTEMS



NOVELTY Rack Conference V2 – BX



RANE Serato SL4



PIONEER CDJ3000



PIONEER CDJ2000 2



PIONEER DJM-V10



PIONEER DJM-S9



PIONEER DJM900 Nexus 2



ALLEN & HEATH Xone92



ALLEN & HEATH Xone22



ALLEN & HEATH XoneDB4



TECHNICS SL1210Mk7



TECHNICS SL1210Mk2

## HF MICROPHONES (WIRELESS)

### SENNHEISER

#### SENNHEISER EW335 G3

Single UHF connection 1 transmitter + single receiver Plan AX / BX / GX

#### SENNHEISER SK300

Pocket transmitter, mini jack connector Plan AX / BX / GX

#### SENNHEISER EW335 G4

Single UHF connection 1 transmitter + single receiver Plan GW

### SHURE

#### SHURE UR4D+

Dual receiver, Plan H4E / J5E / L3E

#### SHURE UR1M

Miniature pocket transmitter, TA4M connector, Plan H4E / J5E / L3E

#### SHURE UR1

Pocket transmitter, TA4M connector, Plan H4E / J5E / L3E

#### SHURE UR2

Hand transmitter, Plan H4E / J5E / L3E

#### SHURE AD4D

Dual receiver, Plan G56

#### SHURE AD4Q

Quad receiver, Plan G56

#### SHURE AD1

Pocket transmitter, TA4N connector, Plan G56

#### SHURE ADX1M

Miniature pocket transmitter, LEMO3 connector, Plan G56

#### SHURE AD2

Handheld transmitter, Plan G56

*available with SHURE hand transmitters: capsule SMS8 (black or grey), Beta58 black, Beta87, Neumann KSM9 black and Neumann KSM8 black*

### TIE AND HEADBAND

#### DPA 4488-DC-F

Cardioid headband, flesh color

#### DPA 4088F

Cardioid headband, flesh color

#### DPA D:fine 4088F

Cardioid headband, flesh color or black

#### DPA D:fine 4466-OC-F

Omni-directional headband, flesh color

#### DPA D:fine 4066F

Omni-directional headband, flesh color

#### DPA D:screet 4060F

Omni-directional headband, flesh color or black

#### SENNHEISER ME3-EW

Cardioid headset, for SK100/300/500, black

#### SENNHEISER MKE40

Cardioid tie, black

#### SHURE WL183

Omni necktie, black

#### SHURE WL184

Super-cardioid necktie, color black

#### SHURE WL185

Cardioid necktie, color black

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## HF MICROPHONES (WIRELESS)

## HF RACK

**SHURE Axient Digital link 12 handheld or tie transmitters**

3 AD4Q receivers, 12 AD2 or AD1 transmitters, antenna coupler

## ACCESSORIES

<b>SHURE UR3-J5E</b>	ÉuR3 UHF-R Plug-On Transmitter (J5E 578-638 MHz plan)
<b>SHURE AD3</b>	ÉaD G56 Series Plug-On Transmitter
<b>SHURE AXT600</b>	UHF spectrum manager, provides broadband exploration of the UHF spectrum, spectrum analysis and coordination of compatible frequencies
<b>SHURE AD600</b>	Real-time UHF spectrum manager
<b>SHURE AD610</b>	ShowLink access point
<b>SHURE UA864-LO</b>	Amplified wall antenna Frequency band A (470 to 636 MHz)
<b>SHURE UA860SWB</b>	Passive omni-directional antenna UHF broadband (470 to 1100MHz)
<b>SHURE UA874E</b>	Broadband amplified directional antenna (470 to 698MHz). Antenna gain 7.5dBi. Switchable amplifier gain -6dB / 0dB / +6dB / +12dB
<b>SHURE PA805SWB</b>	7 dB directional antenna
<b>SHURE UA845</b>	Antenna splitter
<b>SENNHEISER ASA3000</b>	Antenna splitter
<b>SENNHEISER AD1031</b>	Omni-directional antenna
<b>SENNHEISER A2003UHF</b>	Passive directional antenna
<b>MANFROTTO 1005BAC</b>	Antenna stand
<b>MANFROTTO MAGIC ARM</b>	Arm with superclamp and spigot 3/8
<b>SHURE SBRC x 2</b>	Charging station for SB900A
<b>SHURE SB900A</b>	Battery for AD1, AD2, AD3, PSM1000

*All our HF frequency plans are compatible with the regulation (freeing of the 700Mhz band).*



SHURE UR4+



SENNHEISER ASA3000



SHURE AD600



SHURE Axient Digital



SHURE UA864-LO

**DYNAMIC MICROPHONES**

<b>SHURE WH20 XLR</b>	Wired dynamic headband
<b>AUDIX D2/D4/D6</b>	Hypercardioid dynamic
<b>AUDIX D6</b>	Cardioid dynamics
<b>AUDIX OM7</b>	Hypercardioid dynamic
<b>AUDIX I5</b>	Cardioid dynamic
<b>AUDIO TECHNICA MB3K</b>	Unidirectional dynamic, with switch
<b>BEYERDYNAMIC M88</b>	Hypercardioid dynamic
<b>ELECTROVOICE RE20</b>	Cardioid dynamic
<b>SHURE SM57/SM58</b>	Cardioid dynamic
<b>SHURE SM55 SH</b>	Cardioid dynamic
<b>SHURE BETA57A/BETA58A</b>	Supercardioid dynamic
<b>SHURE BETA52</b>	Cardioid dynamic
<b>SHURE SM58 / SE</b>	Cardioid dynamic, with switch
<b>SENNHEISER e606, e609</b>	Supercardioid dynamic
<b>SENNHEISER e825-S/e835-S</b>	Cardioid dynamic, with switch
<b>SENNHEISER e845-S</b>	Supercardioid dynamic, with switch
<b>SENNHEISER e835/e840,e935</b>	Cardioid dynamic
<b>SENNHEISER e845/e855</b>	Supercardioid dynamic
<b>SENNHEISER e904</b>	Cardioid dynamic
<b>SENNHEISER e906</b>	Supercardioid dynamic
<b>SENNHEISER MD421/MD441</b>	Supercardioid dynamic
<b>TELEFUNKEN M80</b>	Cardioid dynamic

**MICROPHONE ACCESSORIES**

<b>AVALON U5</b>	Tube direct/preamplifier box
<b>BSS AR133</b>	Active direct box
<b>RADIAL ENGINEERING J48</b>	Active DI box
<b>RADIAL ENGINEERING JDI</b>	Passive direct gearbox
<b>RADIAL ENGINEERING PRO D2</b>	Active stereo DI box
<b>RADIAL ENGINEERING PRO AV1</b>	Multimedia DI box
<b>RADIAL ENGINEERING</b>	Transfo 600/600 twin Iso
<b>K&amp;M</b>	Coupling bar for 2/4 mics
<b>K&amp;M</b>	Micro, small, large boom stand, with base
<b>K&amp;M</b>	Studio microphone giraffe stand
<b>RADIAL ENGINEERING NEERING HotShot DM-1</b>	Switcher pedal for dynamic pickups

## MICROPHONES

### STATIC MICROPHONES

<b>AKG C411</b>	Miniature cardioid mic
<b>AKG C3000B</b>	Cardioid static + suspension
<b>AKG C414 XLS</b>	Multi-directional static + suspension
<b>AKG C535</b>	Cardioid static
<b>AUDIO TECHNICA AT4033ASM</b>	Cardioid static mic
<b>AUDIO TECHNICA AT831B</b>	Cardioid tie pin mic
<b>AUDIO TECHNICA AT8035</b>	"Gun" type static
<b>AUDIX SCX1</b>	Cardioid static
<b>DPA 4011</b>	Cardioid static
<b>DPA d:screet 4060F</b>	Miniature, omni-directional flesh-coloured or black
<b>DPA d:vote 4099</b>	Miniature, static, supercardioid Multiple attachments (extra)
<b>NEUMAN KM184</b>	Cardioid static + suspension
<b>NEUMAN KM185</b>	Cardioid static + suspension
<b>NEUMAN TLM103</b>	Cardioid static
<b>NEUMAN KMS105Bk</b>	Hypercardioid static
<b>SHURE KSM9-CG</b>	Cardioid and Supercardioid static mic
<b>SHURE BETA87A</b>	Supercardioid static
<b>SHURE BETA98HC</b>	Cardioid static + clamp
<b>SHURE SM81</b>	Cardioid static
<b>SHURE SM91/BETA91</b>	Semi-cardioid PZM static
<b>SENNHEISER MKH406</b>	Cardioid static
<b>SENNHEISER MKH416</b>	Shotgun mic
<b>SCHOEPS CMC6+MK4</b>	Cardioid static + suspension
<b>SCHOEPS CMC6+MK21</b>	Infra-cardioid static + suspension
<b>SCHOEPS CMC6+MK41</b>	Infra-cardioid static + suspension
<b>CROWN PCC160</b>	Supercardioid surface mic

### DESK MICROPHONES

<b>SHURE MX412 (set x2)</b>	Static swan neck + base
<b>SHURE MX418 (set x2)</b>	Static swan neck + base
<b>SCHOEPS CMC6+MK4+SKC300</b>	Static swan neck + suspension



RADIAL ENGINEERING  
HOTSHOT DM-1



DPA 4011



AUDIX D2



AUDIX D4



AUDIX D6



AUDIX SCX1



KSM9-CG

<b>Digital HF Intercom set</b>	10 HF sets 1 CLEARCOM Freespeak 2 station 1 CLEARCOM antenna splitter 3 CLEARCOM active antennas
<b>HF + Wired Intercom Set</b>	4 HF sets, 8 wired sets CLEARCOM 1 station HOLLYLAND Solidcom M1 1 station CLEARCOM MS702 2 directional antennas
<b>Digital wired intercom set</b>	15 wired sets 1 CLEARCOM Helixnet station 1 CLEARCOM Helixnet digital interface 1 table station + 1 microphone
<b>Wired Intercom Set</b>	8 wired stations CS-702 CLEARCOM
<b>CLEARCOM AC10K</b>	Interface module
<b>CLEARCOM IF4W4</b>	2-wire / 4-wire interface
<b>CLEARCOM FL7</b>	Illuminated terminal
<b>GREENGO BPX</b>	32-channel wired beltpack
<b>GREENGO MCX</b>	32-channel wired rack station
<b>GREENGO MCXD</b>	32-channel wired table station
<b>GREENGO WBPX</b>	32-channel wireless beltpack
<b>GREENGO WAA</b>	Active antenna for wireless box
<b>GREENGO DANTE INTERFACE X</b>	DANTE AES67 interface
<b>GREENGO INTERFACE X</b>	2-wire - 4-wire interface
<b>GREENGO RDX</b>	Walkie-talkie interface

## WALKIE-TALKIES

**MOTOROLA DP1400/SET** Set of 6 walkie-talkies + remote mic + earpieces

## LONG-RANGE DIGITAL HF LINK

**DIWEL Melody Caster** Wireless connection kit, 5Ghz band  
1 stereo transmitter, 2 stereo receivers,  
omni and directional antennas +23dBi  
2 AES or analogue channels, range of up to 4km



### EAR-MONITOR SYSTEMS

**SHURE P9HW**  
**SHURE PSM1000**

Wired connection, without earpiece  
UHF connection, transmitter + receiver,  
without earpiece

**SHURE PSM1000 RACK**

Rack of 4 UHF connections, without earpiece  
+ *helical antennas + directional antennas (+7dB)*  
+ *4-input antenna combiner*

**PHONAK Roger**

Digital earpiece, 2.4GHz + repeater

### EAR-MONITOR ACCESSORIES

**SHURE SE112**  
**SHURE SE315-CL**  
**SHURE SE425-CL**  
**SHURE SE535CL**  
**SHURE PA821**

In-ear earphones  
1-channel stereo earphones, transparent  
2-channel stereo earphones, transparent  
3-channel stereo earphones  
8-input antenna combiner, for  
wireless Ear-Monitor systems of the PSM range

**SHURE PA805SWB**  
**SHURE HA8089**

Directional antenna 7 dB  
Helical antenna



## WIRING

### MODULATION WIRING

<b>NOVELTY</b>	XLR module cable M/F 1/3/5 m
<b>NOVELTY</b>	XLR module cable M/F 10 m
<b>NOVELTY</b>	XLR module cable M/F 20 m
<b>NOVELTY</b>	XLR module cable M/F 50 m
<b>NOVELTY</b>	XLR module cable M/F AES 100 m
<b>NOVELTY</b>	Various adapters, Jack 6.35/XLR/RCA/Insert cables...
<b>Module Kit</b>	12x1m + 12x3m + 12x5m + 12x10m + 12x20m

### CÂBLAGES HP

<b>L-ACOUSTICS</b>	CACOM cap, without M/F ring
<b>L-ACOUSTICS</b>	DO HP cable, 0.70/7 m
<b>L-ACOUSTICS</b>	DO HP cable, 10 m/ DO 10 P
<b>L-ACOUSTICS</b>	DO HP cable, 25 m/ DO 25 P
<b>L-ACOUSTICS</b>	DO HP cable, 50 m/ DO 50 P
<b>L-ACOUSTICS</b>	DO HP cable, Fill / Sub / 3 WFILL

<b>NOVELTY</b>	Speakon 4-point loudspeaker cable, 1/5/10/20 m
<b>NOVELTY</b>	Speakon 4-point loudspeaker cable, 5/10/20 m, white
<b>NOVELTY</b>	Speakon 8-point loudspeaker cable, 1/5/10/20 m
<b>NOVELTY Kit Speakon</b>	6x5m + 6x10m + 6x20m + 12 male/male NL4MM
<b>KLOTZ LSV2864</b>	Distribution housing Spk8-Spk4





**MULTIPAIR WIRING**

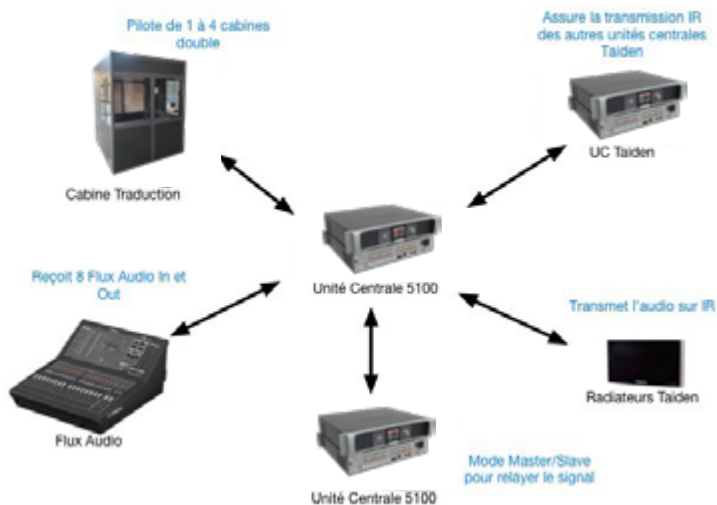
<b>NOVELTY MULTI 4 PAIRS AES</b>	Length: 5 m Length: 20 m
<b>NOVELTY MULTI 8 PAIRS AES</b>	Length: 5 m Length: 20 m
<b>NOVELTY PA-COM</b>	Length: 50 m Length: 100 m Length: 200 m Male/female whip
<b>NOVELTY Harting 20p</b>	Length: 5 m Length: 10 m Length: 25 m Length: 50 m Length: 100 m Stage box MLP1/3 Male or female whip
<b>NOVELTY VEAM 16P</b>	Length: 6 m Length: 10 m Length: 30 m Length: 50 m Stage box 16p AES 16p XLR female AES whip 16p XLR male AES whip Splitter, large model 32p Stage interface 32p AES (for R10 and ML32...)



NOVELTY VEAM 16P

## SIMULTANEOUS INTERPRETATION

HCS5100 : Une centrale multifonctions



### TRANSLATION BOOTHS

**Translation booth**

**TAIDEN HCS8685**

**TAIDEN HS8385HDMI**

**IYYAMA B2280HS**

For 2 interpreters, 1.70 x 1.70 x 2.05 m

Interpreter's desk + headset

Video selector for interpreters, 64 channels,

2 HDMI out and 1 HDSDI input

LED monitor, 22"

### TRANSLATION UNITS

**TAIDEN HCS-5100MA16BD**

**TAIDEN HCS-4800MA**

**TAIDEN HCS-8600MIO/16AD**

**TAIDEN TMX0808SDI**

16-channel digital infrared transmitter

Central unit, translation, voting, conference,  
64 channels

16-channel input/output interface

HDSDI switchbox for interpreter, 8 channels

# SIMULTANEOUS INTERPRETATION

## INFRARED

**TAIDEN HSC5100T35B** Infrared radiator, 35 W

## INFRARED RECEPTION

**TAIDEN HCS5100R32** 32-channel battery-operated infrared receiver

**TAIDEN HCS5100PA** Headphones

**NOVELTY Disposable headphones | COVID standard**

Sale of disposable headphones

**NOVELTY Customisable disposable headphones | COVID standard**

Sale of disposable headphones, customisable with your logo, silk-screen printing in max. 2 colours



Translation booth

TAIDEN HCS4800MA

TAIDEN HCS5100R32 + HCS5100PA

TAIDEN HCS8685

## SIMULTANEOUS INTERPRETATION

### WIRED CONFERENCE MIC

**TAIDEN HCS-4800MA**

Central discussion unit

**TAIDEN HCS-8600MEA**

Extension unit

**TAIDEN HCS-4838CS/80**

Chairman unit, listening only

**TAIDEN HCS-4838DS/80**

Delegate unit, listening only



TAIDEN HCS-4800MA



TAIDEN HCS-8600MEA



TAIDEN HCS-4838CS/80



TAIDEN HCS-4838DS/80

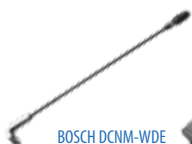
### WIFI CONFERENCE MIC

**BOSCH DCNM-WAP**

Wireless access terminal and central unit

**BOSCH DCNM-WDE**

Wireless chairman/delegate unit



BOSCH DCNM-WDE



BOSCH DCNM-WAP

## SIMULTANEOUS INTERPRETATION

### GUIDED TOUR

**SENNHEISER SR 2020-D**

Guided tour fixed transmitter - 863/865 Mz

**SENNHEISER SKM 2020-D**

Guided tour handheld transmitter - 863/865 Mz

**SENNHEISER EK 2020-D-II**

Guided tour pocket receiver - 863/865 Mz

**SENNHEISER HDE 2020-D-II**

Guided tour stethoscope receiver - 863/865 Mz



SENNHEISER  
EK 2020-D-II

SENNHEISER  
SKM 2020-D

SENNHEISER SR 2020-D

SENNHEISER HDE 2020-D-II

### GUIDED TOUR + DECT BROADCAST

**BEYERDYNAMIC BD-UNIT-TH**

DECT handheld transmitter

**BEYERDYNAMIC BD-TG-H56C-TG**

DECT headset with mic

**BEYERDYNAMIC BD-UNIT-TP**

DECT pocket transmitter

**BEYERDYNAMIC BD-UNIT-AP4**

DECT 4-channel transmitter

**BEYERDYNAMIC BD-UNIT-RP**

DECT pocket receiver



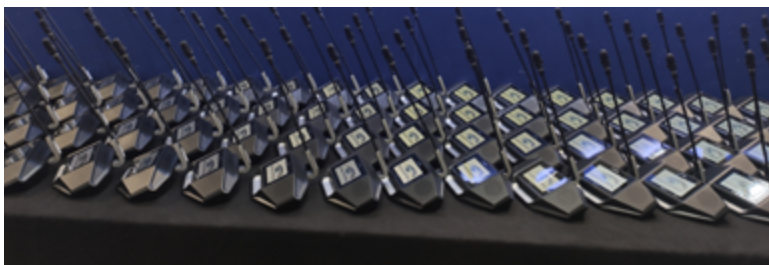
BEYERDYNAMIC  
BD-TG-H56C-TG

BEYERDYNAMIC  
BD-UNIT-RP

BEYERDYNAMIC  
BD-UNIT-AP4

BEYERDYNAMIC  
BD-UNIT-TH

BEYERDYNAMIC  
BD-UNIT-TP



## SIMULTANEOUS INTERPRETATION

### REMOTE INTERPRETING STUDIO

Since May 2021, at the Novelty-Magnum-Dushow Group's headquarters, we have provided a remote interpreting studio equipped to accommodate 10 interpreters and work in 6 languages.

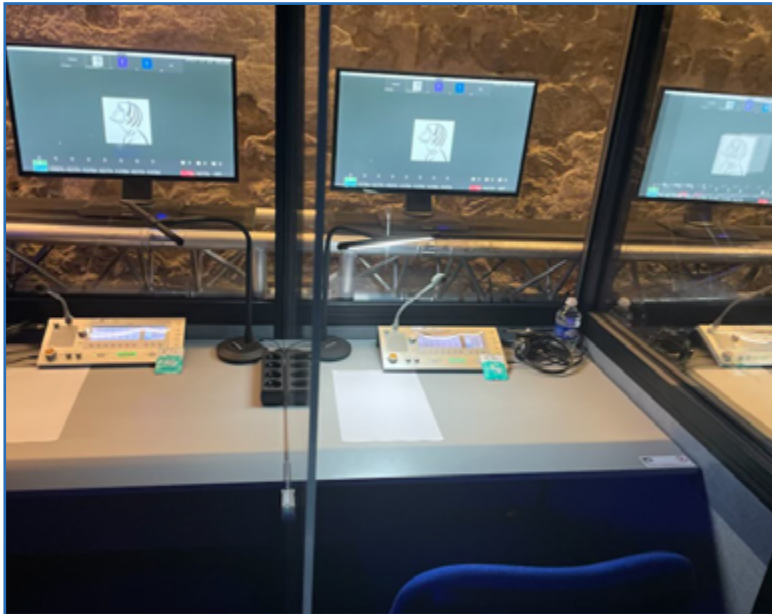
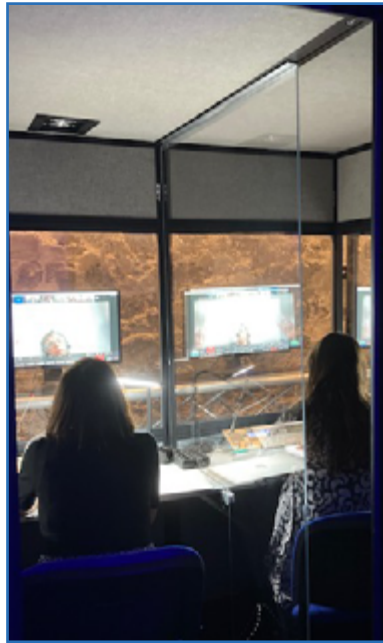
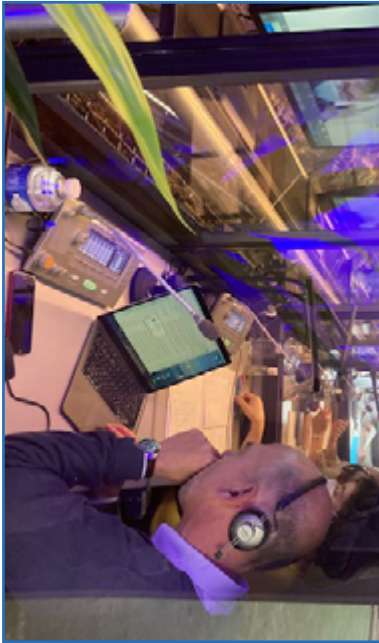
This studio is the only one of its kind in Paris, located in the heart of the 7th arrondissement.

We can work from and to any platform, although we recommend ZOOM or KUDO, which allow us to meet in a single session and share video and slides, while following the meeting in the desired language.

By combining a digital mixing console with the Taiden digital interpretation system, we have the advantage of working entirely on the Dante network, which guarantees quality.



# SIMULTANEOUS INTERPRETATION









# ENERGY

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## INNOVATION IN ENERGY



R532 V3 | see p.162



NOVELTY RS63 V3 | see p.162



NOVELTY RS125 V3 | see p.163



AP32M-MID | see p.172



BD125T/2X63T | see p.171



AP32T-MID | see p.172



Distribution box 32 tri | see p.171



GR600 | see p.172



RS63 V3 PLEXI | see p.162



RS63 V3 COVER | see p.162



RS125 V3 plexi and cover | see p.163



## DISTRIBUTION CABINETS

### THREE-PHASE 32A DISTRIBUTION

<b>AD32T/3x32M</b>	Differential protection 30mA <i>P17 32A tri &gt; 3 x P17 32mono + 6 x PC16A + repeater</i>
<b>RC32</b>	Differential protection <i>P17 32A tri &gt; 3 x P17 32mono + 6 x PC16A</i> <i>In flight case, lighting backed up on inverter,</i> <i>Power monitoring and management unit</i>
<b>RS32</b>	Differential protection <i>P17 32A tri &gt; 6 x PC16A + 1 x Soca 419</i> <i>In flight-case, lighting on inverter,</i> <i>Monitoring and energy management unit</i>
<b>RS32 V2</b>	Differential protection <i>P17 32A tri &gt; 6 x PC16A + 2 x Soca 419 + recopy</i> <i>Flight case, lighting on inverter,</i> <i>Monitoring and energy management unit</i>
<b>RS32 V3</b>	Differential protection <i>P17 32A tri &gt; 6 x PC16A + 2 x Soca 419 + 6 True1 + recopy</i> <i>In flight-case, lighting on inverter,</i> <i>Monitoring and energy management unit</i>

### THREE-PHASE 63A DISTRIBUTION

<b>AD63T/2x32T+M</b>	Differential protection <i>P17 63A tri &gt; 2 x P17 32tri + 3 x P17 32mono + 3 x PC16</i>
<b>AD63T/6x32M</b>	Differential protection <i>P17 63A tri &gt; 6 x P17 32mono</i>
<b>AD63T/2x32</b>	Differential protection 300mA <i>P17 63A tri &gt; 2 x P17 32tri</i>
<b>RS63 V2</b>	Differential protection 300mA <i>P17 63A tri &gt; 12 + 3 x PC16 + 2 x Soca 419</i>
<b>RS63 V3</b>	Differential protection 300mA <i>P17 63A tri &gt; 24 x PC16 + 4 x Soca 419</i>
<b>R63 V3 Plexiglas</b>	Plexiglas cover for AR 63
<b>R63 V3 Cover</b>	Protective cover for AR 63

### THREE-PHASE 125A DISTRIBUTION

<b>AR125EVO</b>	Adjustable differential protection <i>P17 63A tri &gt; 4 x P17 32tri + 3 x P17 32mono + 9 x PC16</i>
<b>AD125T/2x63T +4x32T+2xPC16</b>	Differential protection <i>P17 125A tri &gt; 2 x P17 63tri + 4 x P17 32Atri</i> <i>+ 2 x PC16A + recopy</i>

## DISTRIBUTION CABINETS

## THREE-PHASE 125A DISTRIBUTION

- AR125T/4x32F** Fuse protection  
*P17 125A tri > 4 x P17 32Atri + 2 x PC16A*
- RC125V2** Adjustable differential protection  
*P17 125A tri > 2 x P17 63A tri + 4 x P17 32A tri + 3 x PC16A + recopy In flight case, lighting on inverter, Monitoring and energy management unit*
- RS125 V2** Adjustable differential protection  
*P17 125A tri > 24+3 x PC16 + 4 x Soca 419 + recopy In flight-case, Lighting on inverter, Monitoring and energy management unit*
- RS125 V3** Adjustable differential protection  
*P17 125A tri > 12 x PC16 + 8 x Soca 419 + recopy In flight-case, Lighting on inverter, Monitoring and energy management unit*
- R125 V3 Plexi** Plexiglas protection for AR 125
- R125 V3 Cover** Cover protection for AR 125

## THREE-PHASE 250A DISTRIBUTION

- AD250T** Adjustable differential protection  
*Outputs: 2 x P17 125tri + 2 x P17 63tri + 8 x 32tri*
- RC250 Indoor** Adjustable differential protection, Powerlock  
*Outputs: 3 x 125tri + 2 x 63tri + 4 x 32tri + 3 x 32mono*

## THREE-PHASE 630A DISTRIBUTION

- AD630T/631** Adjustable differential protection, Powerlock  
*Outputs: 5 x 125tri + 4 x 63tri + 4 x 32tri + 4 x 32mono + 6 x PC16 Adjustable differential protection on each feeder. Downgradable to 40*
- AD630T/5x125T** Adjustable differential protection  
*Outputs: 5 x P17 125tri + 2 x P17 63tri + 6 x P17 32tri + 3 x PC16A*
- RC630 Indoor** Rack-mounted distribution cabinet. Input: 2 sets of Powerlock.  
*Outputs: 5 x P17 125tri + 2 x P17 63tri + 6 x P17 32tri + 3 x PC16A Adjustable differential protection on each feeder. Downgradable to 400A, 250A. Built-in voltmeter and ammeter.*

## DISTRIBUTION &gt;1000A

- 1200 A CABINET** Custom-made
- 2000 A CABINET** Custom-made

## RS32 V3 CABINET



### ENTREE

P17 32A tri  X 1

### SORTIES

Socapex 419  X 2

True1  X 6

PC 16A  X 9

### DIMENSIONS

53(L) x 58.5(l) x 55(h) cm

### POIDS

49 kg

## RS63 V3 CABINET



### ENTREE

P17 63A tri  X 1

### SORTIES

Socapex 419  X 4

PC 16A  X 9

### DIMENSIONS

54(L) x 76 (l) x 60 (h) cm

### POIDS

57 kg

## RS63 V3 PLEXI



## RS63 V3 COVER



## ARMOIRE AR125EVO



<b>ENTREE</b>	<b>SORTIES</b>	<b>DIMENSIONS</b>
P17 125A tri X 1	P17 32A tri (Ugr. 30mA) X 4	56(L) x 40(h) x 92(l) cm
	P17 32A mono (Disjoncteur 30mA) X 3	<b>POIDS</b>
	PC 16A X 9	54.5 kg
	P17 03A tri X 1	

## RS125 V3 CABINET



<b>ENTREE</b>	<b>SORTIES</b>	<b>DIMENSIONS</b>
P17 125A tri X 1	3000pin 48V X 8 (including 2 also PCU)	46.3 (L) x 21 (h) x 80 (p) cm
<b>RECOPIE</b>	PC 16A X 3	<b>POIDS</b>
P17 125A tri X 1		66 kg

## RS125 V3 PLEXI AND COVER



## RC250TRI CABINET / 3 X 125TRI + 2 X 63TRI + 4 X 32TRI + 3 X 32MONO



### ENTREE

Powerlock X 1

### SORTIES

- P17 125A tri  X 3
- P17 63A tri  X 2
- P17 32A tri  X 4 (including 1 adjustable difference)
- P17 32A mono  X 3





## RC630TRI CABINET / 5 X 125TRI + 2 X 63TRI + 6 X 32TRI + 3 X PC16 DOWNGRADABLE TO 400A TRI



### ENTREE

Powerlock X 2

### SORTIES

- P17 125A tri  X 5 (with adjustable difference)
- P17 63A tri  X 2 (with adjustable difference)
- P17 32A tri  X 6 (with adjustable difference)
- PC 16A  X 3 (with adjustable difference)



## 32TRI CABINET / 3 X 32MONO + 6 X PC16



## ENTRÉE

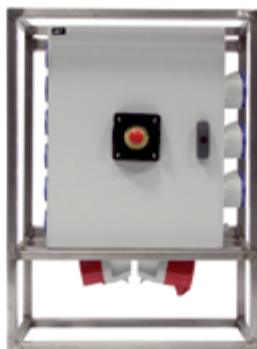


X 1

## RECOPIE



P17 32A tri X 1



## SORTIES



X 3



X 6

P17 32A mono  
(Disjoncteur 30mA)PC 16A  
(Disjoncteur 30mA)

## DIMENSIONS

55 (L) x 30 (P) x 75 (H) cm

## POIDS

26,5 kg

## 63TRI CABINET / 2 X 32TRI + 3 X 32MONO + 3 X PC16



## ENTRÉE



X 1

## RECOPIE



P17 63A tri X 1



## SORTIES



X 2



X 3



X 3

P17 32A tri  
(Disjoncteur 30mA)P17 32A mono  
(Disjoncteur 30mA)PC 16A  
(Disjoncteur 30mA)

## DIMENSIONS

60 (L) x 30 (P) x 87 (H) cm

## POIDS

33,5 kg

## 125TRI CABINET / 2 X 63TRI + 4 X 32TRI + 2 X 32MONO + 2 X PC16



### ENTRÉE

P17 125A tri  
(Vigi réglable)



### SORTIES

P17 63A tri  
(fusible) X 2



P17 32A tri  
(Disjoncteur 30mA) X 4



Alimentation  
Blocs de Secours X 2



PC 16A  
(Disjoncteur 30mA) X 2



### DIMENSIONS

75(L) x 40(l) x 110(h) cm

### POIDS

69,2kg

## 250TRI CABINET / 2X125TRI + 2X63TRI + 8X32TRI + 2XPC16



### ENTRÉE

Jeu de barres (cosses)



### SORTIES

P17 125A tri X 2



P17 63A tri X 2



P17 32A tri X 8



PC 16A X 2



## 630TRI CABINET / 5 X 125TRI + 2 X 63TRI + 6 X 32TRI + 3 X PC16 DOWNGRADABLE TO 400A TRI



**ENTRÉE**

Bornier 5 x 120mm2  
(Disjoncteur Vigi réglable)



**SORTIES**

- P17 125A tri (X 5)
- P17 63A tri (X 2)
- P17 32A tri (Vigi 30mA) (X 6)
- PC 16A (Vigi 30mA) (X 3)



**DIMENSIONS**

102(L) x 50(H) x 152(P) cm

**POIDS**

155 kg

## 630TRI V2 CABINET / 5 X 125TRI + 4 X 63TRI + 4 X 32TRI + 4 X 32MONO + 6 X PC16



**ENTRÉE**

Powerlock X 2  
Jeu de barres (cosses)



**SORTIES**

- P17 125A tri (X 5)
- P17 63A tri (X 4)
- P17 32A tri (X 4)
- P17 32A mono (X 4)
- PC 16A (X 6)

## AMPERAGE / MAINS / POWER BOARD

POWER rated	INTENSITY phase-wise	MAINS minimal	PLUG EEC
3.5 kW	Single-phase 16A	3 x 2.5 mm <sup>2</sup>	PC16
3.5 kW	Single-phase 16A	3x 2.5 mm <sup>2</sup>	P17
7 kW	Single-phase 32A	3 x 6 mm <sup>2</sup>	P17
10.5 kW	Three-phase 16A	5 x 2.5 mm <sup>2</sup>	P17
21 kW	Three-phase 32A	5 x 6 mm <sup>2</sup>	P17
41.6 kW	Three-phase 63A	5 x 16 mm <sup>2</sup>	P17
82.5 kW	Three-phase 125A	5 x 25 mm <sup>2</sup>	P17
165 kW	Three-phase 250	5 x 70 mm <sup>2</sup>	TERMINAL BLOCK
264 kW	Three-phase 400	5 x 120 mm <sup>2</sup>	TERMINAL BLOCK
380 kW	Three-phase 630	5 x 240 mm <sup>2</sup>	TERMINAL BLOCK



## DISTRIBUTION BOXES

## SINGLE-PHASE 32A

**32M/4PC box**

32M distribution box &gt; 2x2 PC 16 30mA



32 A housing

## THREE-PHASE 32A

**BD32/2X32T**

32T distribution box &gt; 2 x 32T

**BD32T/3X2PC**

32T distribution box &gt; 3 x 2 PC 16 A / recopy 32T

**BD32T/6XPC**

Distribution box 32T &gt; 6 x 2 PC 16 A / recopy 32T

**BD32T/3X32M6PC**

32T distribution box &gt; 3 x 32M / 6 x PC 16, 30mA



## THREE-PHASE 63A

**BD63/001**

Distribution box 63T &gt; 2 x 32T

**BD63/003**

63T distribution box &gt; 2 x 32T / 3 x 32M / 3 x PC 16



## THREE-PHASE 125A

**BD125T/2X63T**

P17 125A tri + 2 x P17 63tri



## PROTECTIVE CABINETS

### THREE-PHASE 32A PROTECTION

**AP32DIF** Differential protection, input/output P17 32 tri

### THREE-PHASE 63A PROTECTION

**AP63DIF** Differential protection, on terminals

### THREE-PHASE 125A PROTECTION

**AP125DIF** Differential protection, input/output P17 125 tri  
**AP125TDIF** 300ma adjustable differential protection, input/output P17 125 tri

### 250A TO 630A PROTECTIVE CABINET

**AP600/250** Adjustable differential protection, Powerlock

## METER/CLOCK/CARNIVAL CABINETS

**AP32M-MID** Meter cabinet, 32 mono  
**AP32T-MID** Meter cabinet, 32 tri  
**AP63HORL** Clock cabinet, 63A  
**ACOMPT125A** Meter cabinet 125A  
**Blue Tariff** EDF 63A meter cabinet  
**Yellow Tariff** Meter cabinet 160 to 400A  
**Green Tariff** Meter cabinet over 400A



AP32M-MID



AP32T-MID



GR600

## ELECTRICAL WIRING

**16A - CROSS-SECTION 2.5 MM<sup>2</sup>**

<b>PC16A</b>	3 x 2.5 mm <sup>2</sup> , H07RNF
<b>KIT PC16A</b>	12 x 3 m + 12 x 5 m + 12 x 10 m + 6 x 20 m + 24 sector plates
<b>Demi KIT PC16A</b>	6 x 3 m + 6 x 5 m + 6 x 10 m + 3 x 20 m + 12 sector plates
<b>KIT PC16A-3M</b>	48 x 3 m
<b>KIT PC16A-5M</b>	48 x 5 m
<b>KIT PC16A-10M</b>	24 x 10 m
<b>KIT QUAD</b>	48 x quadruplets PC16
<b>P17 16A mono</b>	3 x 2.5 mm <sup>2</sup> , H07RNF
<b>P17 16A tri</b>	Motor cable, 4 x 2.5 mm <sup>2</sup> , H07RNF
<b>P17 16A tri</b>	5 x 2.5 mm <sup>2</sup> , H07RNF

**32A - CROSS-SECTION 6 MM<sup>2</sup>**

<b>P17 32A mono</b>	3 x 6 mm <sup>2</sup> , H07RNF
<b>P17 32A tri</b>	5 x 6 mm <sup>2</sup> , H07RNF

**63A - CROSS-SECTION 16 MM<sup>2</sup>**

<b>P17 63A tri</b>	5 x 16 mm <sup>2</sup> , H07RNF
--------------------	---------------------------------

**125A - CROSS-SECTION 25 MM<sup>2</sup>**

<b>P17 125A tri</b>	5 x 25 mm <sup>2</sup> , H07RNF
---------------------	---------------------------------

**CROSS-SECTION 70 TO 240 MM<sup>2</sup>**

<b>CS170C</b>	Copper single-core cable 70 mm <sup>2</sup>
<b>CS1120C</b>	Copper single-core cable 120 mm <sup>2</sup>
<b>CS1150C</b>	Copper single-core cable 150 mm <sup>2</sup>
<b>CS1150CP</b>	Copper single-core cable 150 mm <sup>2</sup> Powerlock
<b>CS1240C</b>	Copper single-core cable 240 mm <sup>2</sup>
<b>CS1240CP</b>	Copper single-core cable 240 mm <sup>2</sup> Powerlock
<b>CS1240A</b>	Aluminium single-core cable 240 mm <sup>2</sup>
<b>GR600</b>	Terminal block grid, 70 to 240 mm <sup>2</sup>

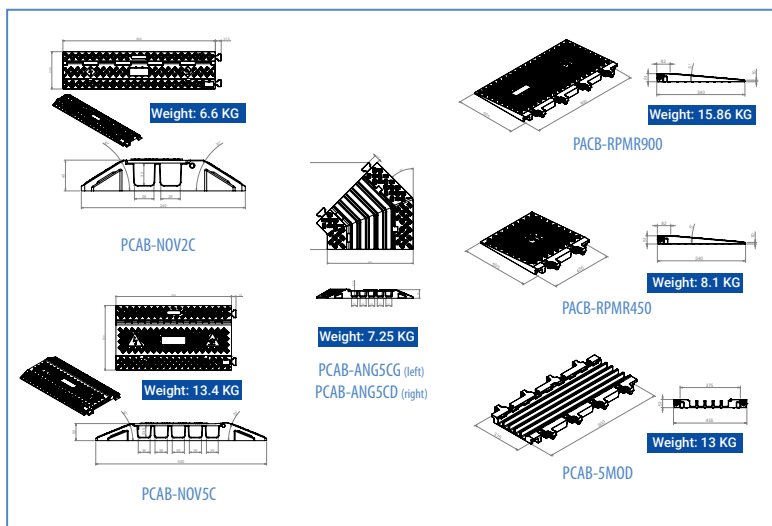
## GENERATOR SETS

### MISCELLANEOUS

Generator set 5.5 to 400 kVA

## CABLE DUCTS

<b>PCAB-NOV5C</b>	Cable duct, 5 channels, 900 x 500 mm
<b>PCAB-ANG5CD</b>	Right-angle cable management system, 5 channels
<b>PCAB-ANG5CG</b>	Left angle for cable entry, 5 channels
<b>PMR</b>	Cable duct, 7 channels, PMR, 830 x 435 mm
<b>PCAB-NOV2C</b>	Cable duct, 2 channels, 980 x 240 mm
<b>PCAB-5CMOD</b>	Cable duct, 5 channels, modular 935 x 500 mm
<b>PCAB-RPMR450</b>	5-channel modular cable tray, 450 mm
<b>PCAB-RPMR900</b>	5-channel cable tray, modular, 900 mm
<b>PCAB-LINK</b>	5-channel cable duct connection, modular



## MISCELLANEOUS & ACCESSORIES

<b>EATON 9PX3000</b>	Inverter 3000VA
<b>NOVELTY</b>	Cable reel unwinder
<b>NOVELTY</b>	Earth spike, 1.5 m
<b>NOVELTY</b>	Earth braid 16/25/35 mm <sup>2</sup>



## EMERGENCY LIGHTING

**BAES (Autonomous emergency lighting unit)**

<b>LED PANIC LIGHT UNIT</b>	2.400 lumens, black , IP65
<b>LED EMERGENCY EXIT UNIT</b>	400 lumens, self-contained
<b>LED EMERGENCY EXIT UNIT</b>	45 lumen LED, stand-alone
<b>URA BAES</b>	Cylindrical LED emergency exit unit, stand-alone, stainless steel, emergency exit signalling

*The emergency units are mounted on a hanging plate.*



LED emergency exit lighting unit  
45 lumens



LED emergency exit lighting unit  
400 lumens



LED anti-panic lighting unit

## FORCED-AIR HEATING

<b>Ascim Jouanin</b>	Electric fan heater 9kW 9kW
<b>FRICO Tiger</b>	Electric fan heater 7.5 -> 15kW
<b>Ascim Jouanin</b>	Electric fan heater 18kW



FRICO Tiger

## CALCULATION/HEATING RULE

**Number of devices =**  $\frac{\text{Volume} \times \text{Insulation factor} \times (\Delta \text{Temp}^\circ)}{\text{Heating capacity of the air heater}}$

<b>* Insulation factor:</b>	Warehouse / Hangar	3
	Cladded structure	3.5
	Structure	4

## RADIANT HEATING

**VARMA TEC 400**

1.5 kW, PC16A mono, black



VARMA TEC 400

**NOVELTY Radiant15**  
**NOVELTY Radiant24**  
**RVE BP12x5**

Radiant chandelier 15 kW, P17 32A tetra  
 Radiant chandelier 24 kW, P17 63A tetra  
 Dimmer unit 4 x 32A tetra for chandelier 15 kw

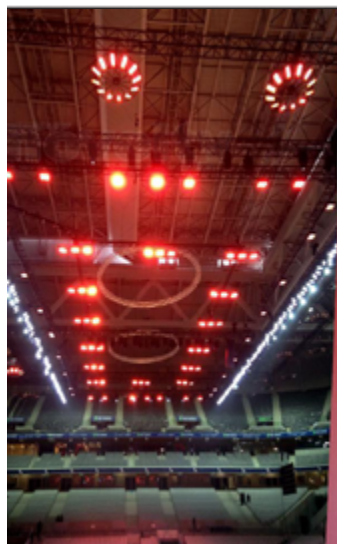
*Prices do not include installation and wiring.*



### Comfort

- Immediate perception of warmth
- No displacement of air
- No stratification of air
- Silent running
- Frees up floor space

	Dimensions	
	15 kW	24 kW
Diameter	175 cm	200 cm
Height	39 cm	37 cm
Fly	180 x 180 x 40 cm	210 x 210 x 40 cm
Weight	40 kg	45 kg



novelty



# STRUCTURE

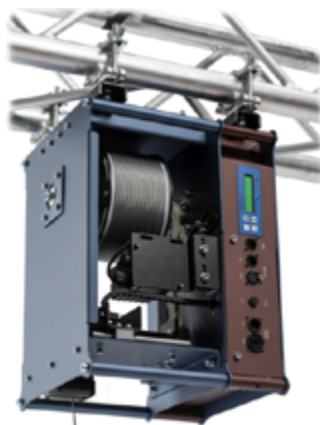
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Innovation in structure	180
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## INNOVATION IN STRUCTURE



GIS LPL500 | p.202



WINCH 50 | p.202



GIS LPM500 D8+ | p.202



GIS LPM250 D8+ | p.202

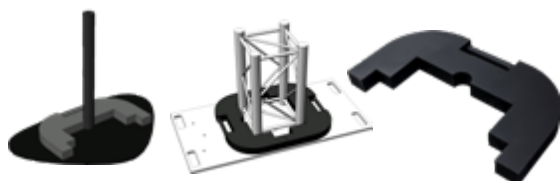


Remote control 12 TD | p.204





ASD TL400 | see p. 186



NOVELTY Ballast | see p. 196



ASD ALT 550 | see p.202



ASD EST 660 | see p.202

## ALUMINIUM BRIDGES

Paint on request

### MONOTUBE Ø50 (ALU)



<b>ASD EX50050A</b>	0.5 m long
<b>ASD EX500100A</b>	1 m long
<b>ASD EX50200A</b>	2 m long
<b>ASD EX50300A</b>	3 m long
<b>ASD EX50-Cer180A</b>	Alu Circle Ø1 m 80
<b>ASD EX50-Cer500A</b>	Alu Circle Ø5 m

### MONOTUBE Ø50 (BLACK)



<b>ASD FX50N</b>	0.29/0.50 m long
<b>ASD FX50N</b>	0.71 / 1 m long
<b>ASD FX50150N</b>	1.5 m long
<b>ASD FX50200N</b>	2 m long
<b>ASD FX50250N</b>	2.5 m long
<b>ASD FX50300N</b>	3 m long
<b>ASD FX50350N</b>	3.5 m long
<b>ASD FX50400N</b>	4 m long
<b>ASD FX50-45X24N</b>	3D "T"-shaped black corner piece, base 45 cm x stand 24 cm
<b>ASD FX50-71X24N</b>	3D "T"-shaped black corner piece, base 71 cm x stand 24 cm

<b>ASD FX50-Cer0150N</b>	Circle Ø1.5 m, monotube black
<b>ASD FX50-Cer0300N</b>	Circle Ø3 m, monotube black
<b>ASD FX50-Cer0500N</b>	Circle Ø5 m, monotube black
<b>ASD EC50-Cer01200N</b>	Circle Ø12 mn monotube black

<b>ASD FX50-HB-N</b>	Modular tubular ladder, Entraxe 75 cm/H. 100 cm
<b>ASD FX50-HCA-N</b>	Modular tubular ladder with black collar

### X30L LADDER BRIDGE (ALU)



<b>ASD X30L050A</b>	0.50 m long
<b>ASD X30L071A</b>	0.71 m long
<b>ASD X30L100A</b>	1 m long
<b>ASD X30L200A</b>	2 m long
<b>ASD X30L300A</b>	3 m long
<b>ASD X30LC007A</b>	2D 90° corner piece
<b>ASD X30LC020A</b>	3D 90° corner piece



## ALUMINIUM BRIDGES

**TRIANGULAR ALU BRIDGE X30D/SX290 (ALU)** 

<b>ASD SX290</b>	0.29/0.50/0.71 m long
<b>ASD SX290</b>	1/2/3/4 m long
<b>ASD SX290</b>	2D corner piece
<b>ASD SX290</b>	3D/4D corner piece
<b>ASD SX290</b>	5D/6D corner piece
<b>ASD SX290</b>	Movable corner/cardan
<b>ASD SX290</b>	Special angles (120°, 135°, etc.)
<b>ASD SX290</b>	Suspension, max. load 125/500 kg
<b>ASD SX290</b>	Motor insert 250 kg, 0.50 m
<b>ASD SX290</b>	Reduced footplate, totem head

**TRIANGULAR ALU BRIDGE X30D/SX290 (BLACK)** 

<b>ASD SX290</b>	0.29/0.50/0.71 m long
<b>ASD SX290</b>	1/2/3/4 m long
<b>ASD SX290</b>	2D corner piece
<b>ASD SX290</b>	3D/4D corner piece
<b>ASD SX290</b>	5D corner piece
<b>ASD SX290</b>	Movable corner/cardan
<b>ASD SX290</b>	Special angles (120°, 135°, etc.)
<b>ASD SX290</b>	Suspension, max. load 125/500 kg
<b>ASD SX290</b>	Motor insert 250 kg, 0.50 m
<b>ASD SX290</b>	Reduced footplate, totem head

**TRIANGULAR ALU BRIDGE X30D/SX290 (WHITE)** *Paint on request*

<b>ASD SX290</b>	0.29/0.50/0.71 m long
<b>ASD SX290</b>	1/2/3 m long
<b>ASD SX290</b>	2D corner piece
<b>ASD SX290</b>	3D/4D corner piece
<b>ASD SX290</b>	Small base



## ALUMINIUM BRIDGES

### SQUARE ALU BRIDGE H30V/SC300 (ALU)

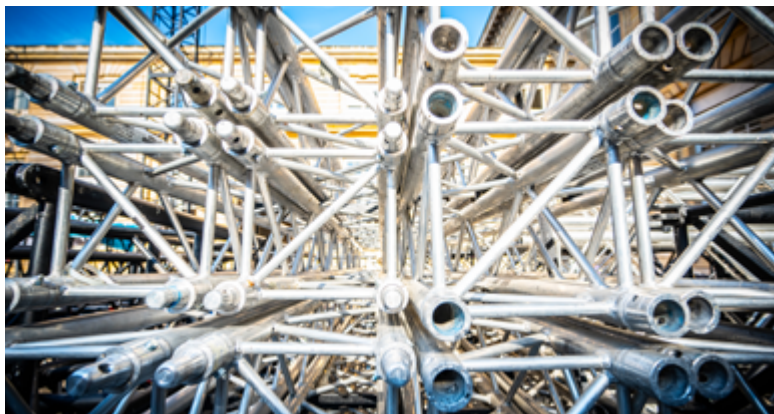


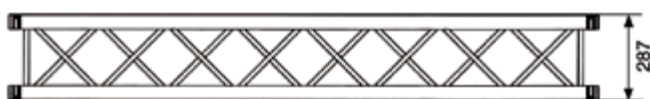
<b>ASD SC300</b>	0.145/0.20/0.21/0.29/0.50/0.645/0.71 m long
<b>ASD SC300</b>	1/2/3/4 m long
<b>ASD SC300</b>	2D corner piece
<b>ASD SC300</b>	3D corner piece
<b>ASD SC300</b>	4D corner piece
<b>ASD SC300</b>	5D corner piece
<b>ASD SC300</b>	Magic corner piece H30V/H30V or H30V/H40V, moveable cardan
<b>ASD SC300</b>	Special angles (120°, 135°, etc.)
<b>ASD SC300</b>	Suspension, max. load 125/500 kg
<b>ASD SC300</b>	Reduced base, totem head

### SQUARE ALU BRIDGE H30V/SC300 (BLACK)



<b>ASD SC300</b>	0.145/0.20/0.21/0.29/0.50/0.645/0.71 m long
<b>ASD SC300</b>	1/2/3/4 m long
<b>ASD SC300</b>	2D corner piece
<b>ASD SC300</b>	3D corner piece
<b>ASD SC300</b>	4D corner piece
<b>ASD SC300</b>	5D corner piece
<b>ASD SC300</b>	Magic corner piece H30V/H30V or H30V/H40V, cardan
<b>ASD SC300</b>	Special angles (120°, 135°, etc.)
<b>ASD SC300</b>	Suspension, max. load 125/500 kg
<b>ASD SC300</b>	Reduced base, totem head
<b>ASD TL290</b>	Kit Tower 1t, 10m





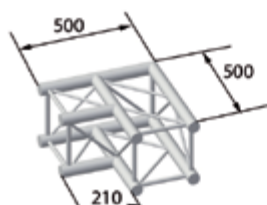
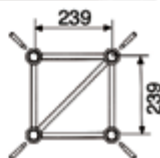
Poids (équipé de 3 manchons/goupilles/sécsus) =

0,21m = 3,05kg / 0,29m = 3,55kg

0,50m = 4,85kg / 0,71m = 6,15kg

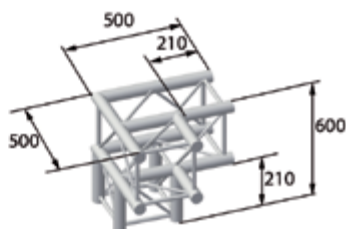
1m = 7,8kg / 2m = 13,45kg

3m = 19,40kg / 4m = 25,20kg



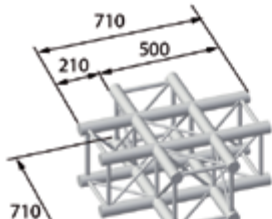
**H30V - C003 (90°)**

Poids (équipé) = 6,7kg



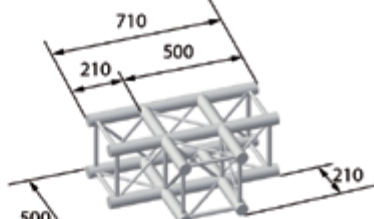
**H30V - C012 (90°)**

Poids (équipé) = 8,6kg



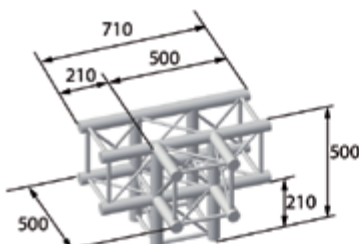
**H30V - C016 (90°)**

Poids (équipé) = 10,75kg



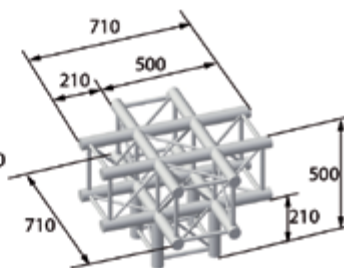
**H30V - C017 (90°)**

Poids (équipé) = 9,3kg



**H30V - C020 (90°)**

Poids (équipé) = 10,55kg



**H30V - C024 (90°)**

Poids (équipé) = 12,1kg

## ALUMINIUM BRIDGES

### SQUARE ALUMINIUM BRIDGE H40V/SC390 (ALU)

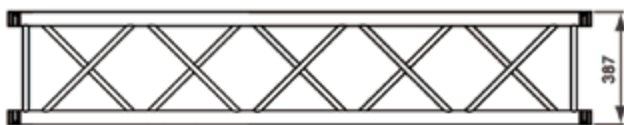
<b>ASD SC390</b>	Length 0.25/0.30/0.50/0.60/0.81 m
<b>ASD SC390</b>	Length 1/2/3/4 m
<b>ASD SC390</b>	2D angles
<b>ASD SC390</b>	3D angles
<b>ASD SC390</b>	4D angles
<b>ASD SC390</b>	5D angles
<b>ASD SC300</b>	Magic angle H30V/H30V or H30V/H40V, cardan joint
<b>ASD SC390</b>	Suspension, max. load 125/500 kg
<b>ASD SC390</b>	Reduced footplate, totem head

### SQUARE ALUMINIUM BRIDGE H40V/SC390 (BLACK)

<b>ASD SC390</b>	Length 0.25/0.30/0.50/0.60/0.81 m
<b>ASD SC390</b>	Length 1/2/3/4 m
<b>ASD SC390</b>	2D angles
<b>ASD SC390</b>	3D angles
<b>ASD SC390</b>	4D angles
<b>ASD SC390</b>	5D angles
<b>ASD SC390</b>	Suspension, max. load 125/500 kg
<b>ASD SC390</b>	Reduced base, totem head
<b>ASD TL400</b>	Tower kit, 400 series foot, 400/500 series start

### TRUSS RODS

<b>ASD SX290 (X30D)</b>	Alu or black truss rod Ø3/4/5/6/8/10/12/15 m
<b>ASD SX290 (X30D)</b>	Alu truss rod Ø20 m
<b>ASD SC300 (H30V)</b>	Alu or black truss rod Ø3/4/5/6/8/10/12 m
<b>ASD SC300 (H30V)</b>	Black truss rod Ø15 m
<b>ASD SC300 (H30V)</b>	Black truss rod Ø18 m
<b>ASD SC300 (H30V)</b>	Black truss rod Ø20 m
<b>ASD SC300 (H30V)</b>	Black truss rod Ø25 m
<b>ASD SC300 (H30V)</b>	Black truss rod Ø34 m
<b>ASD SC390 (H40V)</b>	Alu or black truss rod Ø3/4/5/6/8/10/12 m
<b>ASD SC300 (H40V)</b>	Black truss rod Ø25 m



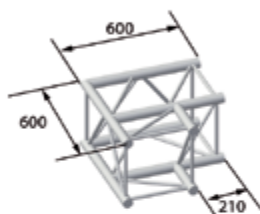
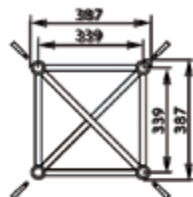
Poids (équipé de 3 manchons/goupilles/sécus) =

0,25m = 4,00kg / 0,30m = 4,20kg

0,50m = 5,90kg / 0,81m = 7,75kg

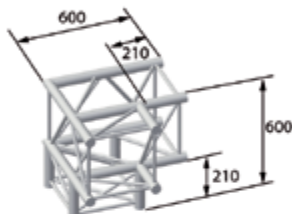
1m = 8,70kg / 2m = 14,70kg

3m = 20,60kg / 4m = 26,80kg



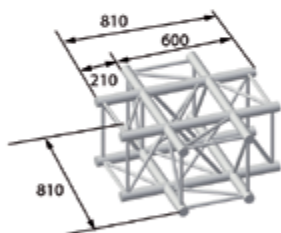
**H40V - C003 (90°)**

Poids (équipé) = 5,63kg



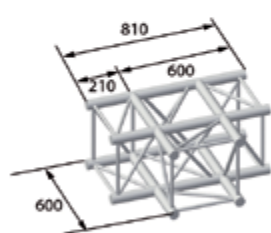
**H40V - C012 (90°)**

Poids (équipé) = 8,80kg



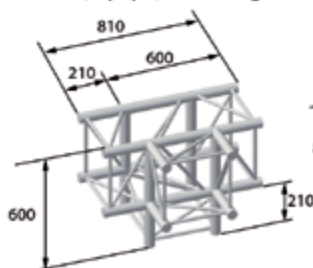
**H40V - C016 (90°)**

Poids (équipé) = 14,30kg



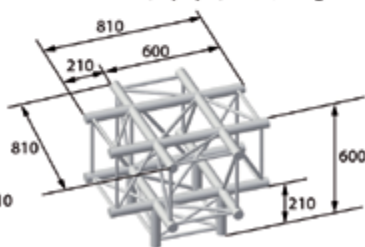
**H40V - C017 (90°)**

Poids (équipé) = 11,05kg



**H40V - C020 (90°)**

Poids (équipé) = 11,60kg



**H40V - C024 (90°)**

Poids (équipé) = 12,60kg

## EXAMPLES OF CORNER AND SPECIAL PIECES FOR SERIES 300 / 400



ASD Bar H



ASD magic corner piece H30V/H40V  
(available in black and alu)



ASD T for H30V



ASD corner piece H40V 18°



ASD truss rod Ø70 H30V



ASD magic corner piece H30V/H30V  
(available in black and alu)



ASD T for all series



ASD truss rod Ø180 H30V

## EXAMPLES OF CORNER AND SPECIAL PIECES FOR SERIES 300 / 400



ASD high motor support  
for H40V



ASD corner piece H30V 45°



ASD corner piece X30D 60° + stand



ASD corner piece H30V  
135° + stand



ASD corner piece H30V 135°



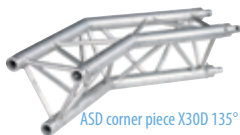
ASD corner piece X30D  
120° + stand



ASD corner piece 90° H30V +  
stand H40V



ASD corner piece H30V 120°



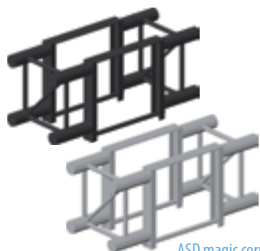
ASD corner piece X30D 135°



ASD corner piece  
H30V 90°



ASD corner piece  
H30V 90°



ASD magic corner piece  
H30V 90°



ASD magic corner piece  
H40V 90°



ASD variable corner  
piece H40V



## ALUMINIUM BRIDGES

### TRIANGULAR ALU BRIDGE SERIES 500 (BLACK)

<b>PA507</b>	0.70 m long
<b>PA514</b>	1.40 m long
<b>PA528</b>	2.80 m long
<b>PA528 0</b>	2.80 m long, open
<b>PA5CRX</b>	4D 90° horizontal cross
<b>PA5TE</b>	3D 90° horizontal corner piece
<b>PA5SUSP</b>	TSuspension triangle
<b>PA5ESSE</b>	Cable gland bridge S-hook

**Materials:** Alloy 6060 T5 / TIG welding  
Members Ø50 thick. 5 mm / Lower cross-beams Ø50 thick. 5 mm /  
Diag. Ø30 thick. 3 mm

**Weight:** 0.70 = 14.0 kg / 1.40 = 19.5 kg / 2.80 m = 32.0 kg / 2.80 open + arms = 33.0 kg

### SQUARE ALU BRIDGE SERIES 500 SC500 (BLACK)

<b>ASD SC5280N</b>	2.80 m long
<b>ASD SC5140N</b>	1.40 m long
<b>ASD SC5070N</b>	0.70 m long
<b>ASD SC5035N</b>	0.35 m long
<b>ASD SC5005D</b>	5D corner piece
<b>ASD SC5005D</b>	Offset bracket 500 kg
<b>ASD SC5005D</b>	Motor suspension 1t
<b>ASD TL400</b>	Tower Kit, stand series 400, outlet series 500
<b>ASD C4DLV</b>	4D angle, steel

**Materials:** Members Ø50 thick. 5 mm / Cross-beams Ø50 thick. 5 mm / Diagonals Ø30 thick.  
3 mm

**Weight:** 0.35 = 13.5 kg / 0.70 = 18.0 kg / 1.40 = 35.0 kg / 2.80 m = 54.0 kg

### SQUARE ALU BRIDGE SERIES 500 ST52 (BLACK)

<b>THOMAS ST52N300</b>	3.00 m long
<b>THOMAS ST52N250</b>	2.50 m long
<b>THOMAS ST52N200</b>	2.00 m long
<b>THOMAS ST52N100</b>	1.00 m long
<b>THOMAS ST52N</b>	2D / 3D / 4D corner piece

**Materials:** Members Ø50 thick. 5 mm / Cross-beams Ø50, 8 thick. 4 mm /  
Diagonals Ø24 thick. 3.2 mm

**Weight:** 1.00 m = 16 kg / 2.00 m = 27 kg / 2.50 m = 33 kg / 3.00 m = 36 kg



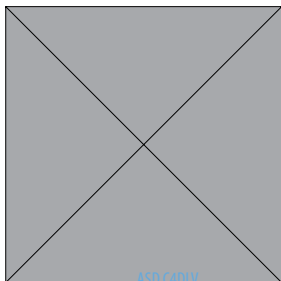
# STRUCTURE



STACCO PA500



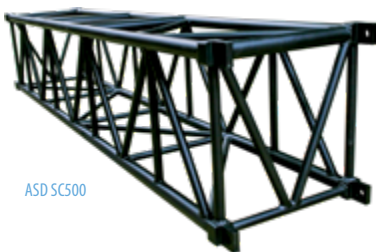
STACCO PA500  
Suspension



ASD C400V



ASD SC500  
motor suspension 1t



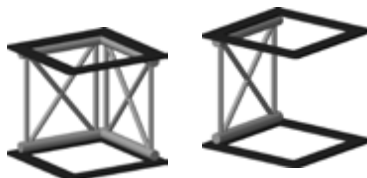
ASD SC500



ASD SC500

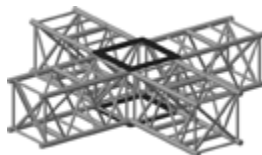


THOMAS ST52



THOMAS ST52

THOMAS ST52



## ALUMINIUM BRIDGES

### ALU BRIDGE SERIES 6043 (BLACK)



#### ASD SR6043 RV-240

2.40 m beam, cross-section 60 x 43  
1 adjustable tube in the centre for height, black  
(equipped with 4 sleeves + 8 pins)

#### ASD SR6043 RV-100

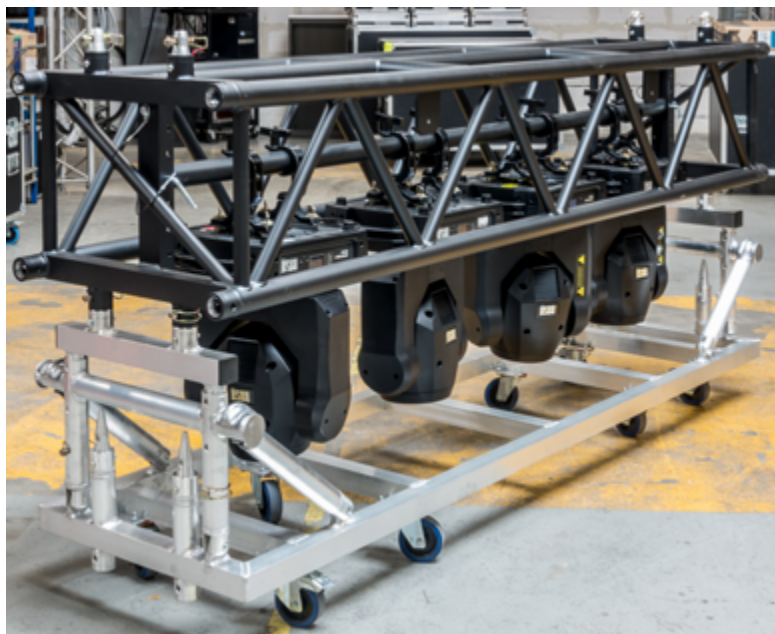
1 m beam, cross-section 60 x 43  
1 adjustable tube in the centre for height, black  
(equipped with 4 sleeves + 8 pins)

#### ASD SR6043 RV-30

0.30 m beam, cross-section 60 x 43, black  
(equipped with 4 sleeves + 8 pins)



# STRUCTURE



STRUCTURE

## BASES, BALLAST AND DOLLY

### CONCRETE BASES

**EMBBET1T** Concrete base 120 x 120 cm, 1000 kg, SC300/SC400 square, SC500 with base plate

### "PALLET" BASES

**EMBRECT500K** Steel "pallet" base 80 x 120 cm, 500 kg, SC300/SC390

**EMBRECTSTAB** Steel "pallet" base with stabilos 80 x 120 cm, 715 kg

### HEAVY BASE 100CM

**EMB1000X1000X16** Square base 100 x 100 x 16 cm in three parts, 120 kg, centered/uncentered

**EMBCARREX1000** Square base 100 x 100 cm SC300/SC390 centered, 50 kg

### HEAVY ROUND AND RECTANGULAR BASES

**EMBRONDEPOLY** Base Ø80 cm, 60 kg, SZ290/SC300/SC390, centered/uncentered 29

**EMBRONDEPOLYC2** Base Ø90 cm, 80 kg, SZ290/SC300/SC390, centered/uncentered 29

**EMBRECTPOLY** Rectangular base, 50 x 100 cm, 60 kg, SZ290/SC300/SC390, centered/uncentered 29

**EMBRECT1000X400** Rectangular base, 40 x 100 cm, 60 kg, SZ290/SC300/SC390, centered/uncentered 29

### HEAVY ROUND TUBE SUBBASES

**EMBASEMONOØ40** Base Ø40 cm, 15 kg, for ASD monotube

**TUB50EMB30x30** Base 60kg (round or rectangular), with Ø50 cm tube stanchion, black or white

**TUB50EMB40** Base Ø40 cm + chimney tube Ø50 cm, black or white

**EMB30X50** Rectangular base, 30 x 50 cm, 25 kg, centered/uncentered



TUB50EMB30x30

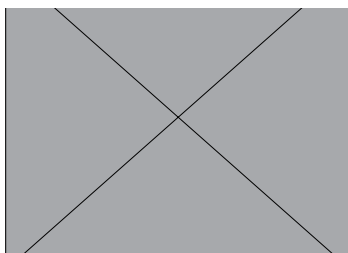


TUB50EMB40



EMB30X50

# STRUCTURE



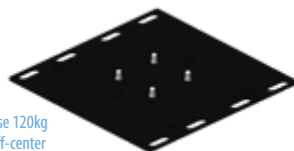
EMBBET1T



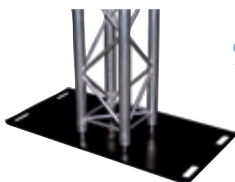
Stabilo kit  
for 500 kg pallet base



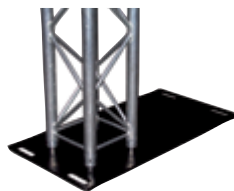
ASD Base 500kg H30V/H40V



ASD heavy base 120kg  
centred or off-center  
for H30V/X30D/H40V



ASD heavy base 80kg  
centred or off-centred  
for H30V/X30D/H40V



## BASES, BALLAST AND DOLLY

### HEAVY BASE ON CASTORS

<b>EMB60X80ROUL</b>	Base on castors, 80 x 60 cm, 80 kg, SZ290/SC300/TUBE
<b>EMB80x60ROUL</b>	Base on castors, 80 x 60 cm, 79 kg, SC300/BARREHB/TUBE
<b>EMB80X120ROUL</b>	Base on castors, 80 x 120 cm, 57 kg, SC300/BARREHB
<b>EMB80X160ROUL</b>	Base on castors, 80 x 160 cm, 122 kg, SC300/BARREHB/TUBE

### DOLLY

#### NOVELTY DOLLY 100 x 100 MASTER

#### NOVELTY DOLLY 100 x 100 SLAVE

#### NOVELTY DOLLY 100 x 100 MOTION SERVER

Motorised dolly for moving the stage, video wall, stage design

Maximum load of 1t per dolly, can be assembled by 300 square beam

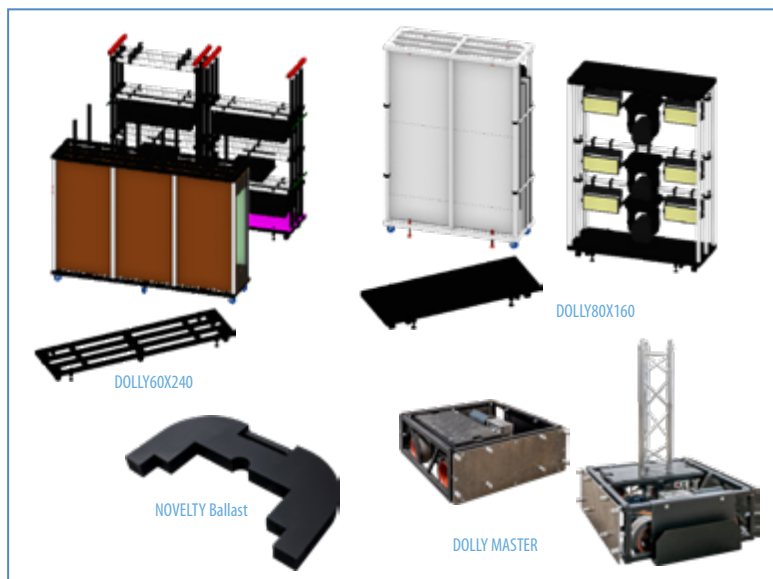
**DOLLY80X160** 80x160 cart, ASD tube compatible

**DOLLY60X240** 60x240 cart, ASD tube compatible

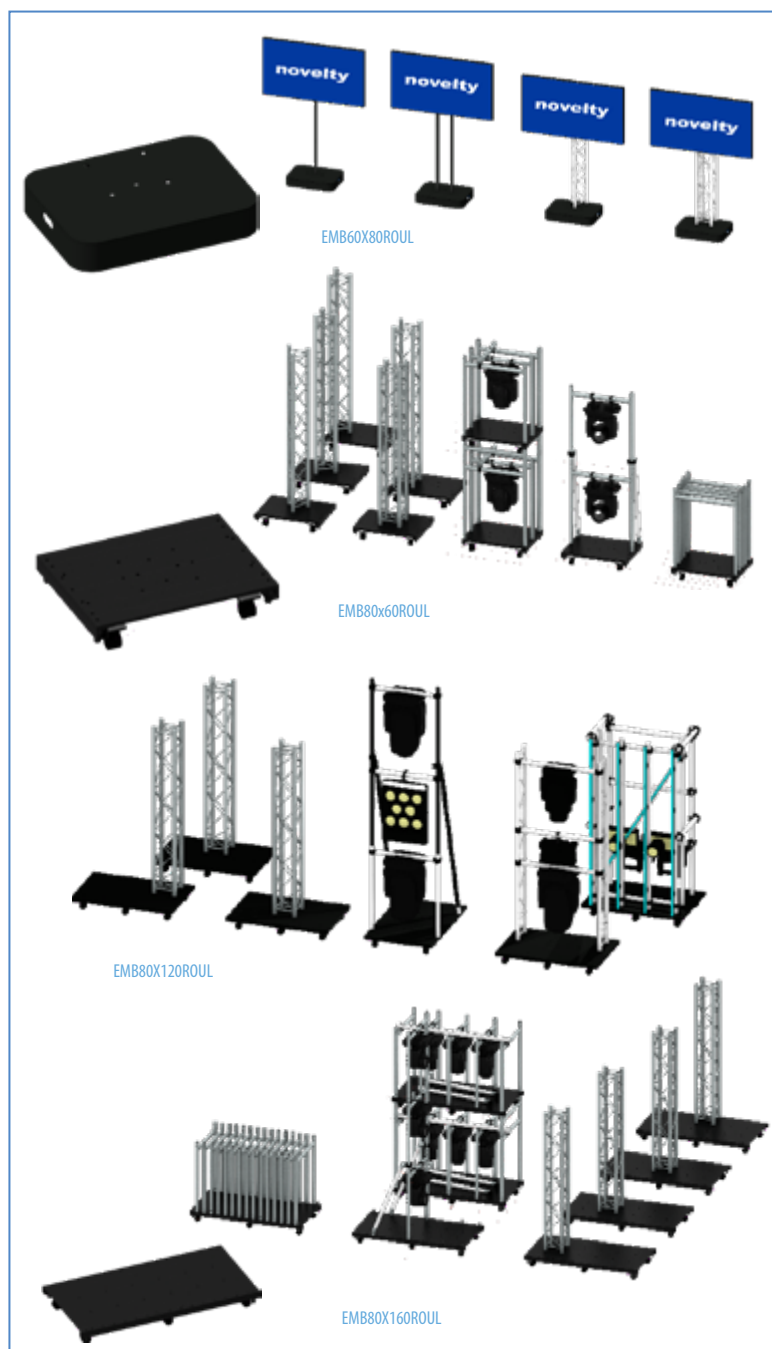
### BALLAST

**BALLASTTOTEM25KG** 25 kg ballast with handles

**EML259/2N** Black stand-alone half-base



# STRUCTURE



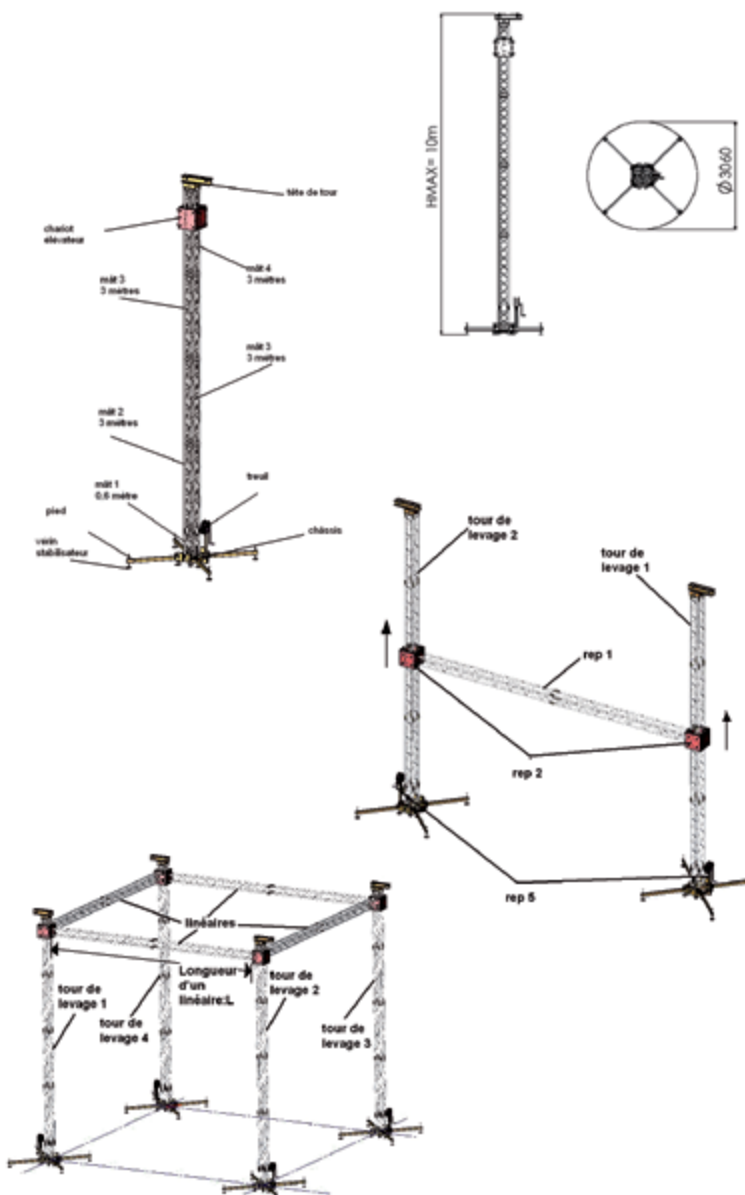


## ASD TOWER TL290 (FOR SERIES 300 & 400, SQUARE OR TRIANGULAR)





## ASD TOWER TL290 (FOR SERIES 300 & 400, SQUARE OR TRIANGULAR)



## SOUND CLUSTER TOWER

### **ASD ST780**

Sound cluster tower, max. height 7.83m

Max. load 500 kg

### **ASD STM500/650**

Sound cluster tower, max height 6.5m

Charge max 300 kg

### **ASD ST780**



ASD STM500/650



## LIFTING

### SERVO-CONTROLLED ELECTRIC HOIST

#### WINCH 50

"Winch" cable motor, load 50 kg,  
max. height 12m, variable speed 9-45cm/s  
DMX512

### ELECTRIC HOIST

#### GIS LPM250

Electric hoist 250 kg D8+, double-brake

#### VERLINDE SR1

Electric hoist 250 kg, 4 m/mn *20 m*

#### VERLINDE SR2

Electric hoist 250 kg, 4 m/mn *20 m*

#### GIS LPM500 D8+

Electric hoist 500 kg D8+, double-brake

#### GIS LPL500

1000 kg D8 electric hoist, 4m/mn

#### VERLINDE SR5

Electric hoist 500 kg, 4 m/mn *20 m*

#### VERLINDE SM5

Electric hoist 500 kg, 4 m/mn *20 m*

#### GIS LP1000 D8+

Electric hoist 1,000 kg D8+, double-brake

#### VERLINDE SR10

Electric hoist 1,000 kg, 4 m/mn *20 m*

#### SHOW DISTRIBUTION TR1000

Electric hoist 1,000 kg, 4 m/mn *28 m*

### MANUAL HOIST

#### ELLER

500 kg manual hoist, black chain *15 m*

### STANDRA

#### ASD AL250

Steel stand from 1.30 to 2.50 m, 70 kg max

#### ASD ALT300

Steel foot from 1.60 to 3.00 m, 70 kg max

#### ASD ALT550

Lifting stand 5.50 m, 225 kg, bridgehead

#### ASD ST650

Lifting stand 6.50 m, 225 kg, bridge head

#### MANFROTTO WIND-UP

Rack and pinion jack, 3.7 m, max. 30 kg, black

#### MANFROTTO WIND-UP CASTORS

Rack-and-pinion foot, castors, 3.7 m, 30 kg max, black

#### MANFROTTO EXTENSION

Extension for Wind-Up, black

#### ALP M476

Lifting foot 4.76 m, 300 kg

#### GENIE SL18

Lifting tower 5.20 m, 300 kg

#### GENIE ST25

Lifting stand 8 m, 295 kg

#### ASD ELP730

Lifting stand 7.3 m, 300 kg

#### ASD EST660

Lifting stand 6.6 m, 200 kg

### AERIAL WORK PLATFORMS

#### GENIE AWP-36S

Electric boom lift 11 m, 180 kg

#### ALP PHC1200

Electric aerial work platform 10 m, 180 kg

#### GENIE AWP-30S

Electric aerial work platform 9 m, 180 kg

# STRUCTURE



## LIFTING

### REMOTE CONTROL

<b>TELEC1</b>	Remote control for 1 motor, P17 32tri
<b>TELEC4 SRS</b>	Remote control for 4 motors, P17 32tri
<b>TELEC8</b>	Remote control for 8 motors, P17 32tri
<b>TELEC12N</b>	Remote control for 12 motors, P17 32tri, digital
<b>TELEC12 SRS</b>	Remote control for 12 motors, P17 32tri, Harting, remote housing, linkable
<b>TELEC12 TD</b>	Remote control for 12 motors, P17 32tri, Harting, Soca remote housing, linkable
<b>TELEC24</b>	Remote control for 24 motors, P17 63tri
<b>P17 16A tri</b>	4 x 2.5 mm <sup>2</sup> , motor extension, per m
<b>P17 motor kit</b>	Motor extensions: 10 x 5 m + 10 x 10 m + 10 x 20 m
<b>Harting motor kit</b>	Harting 4 circuits: 1 x 30 m + whips

## LIFTING ACCESSORIES

### SLING

<b>NOVELTY</b>	Floodlight secure sling, 0.6 m/200 kg
<b>NOVELTY</b>	Sheathed sling, 0.3 to 5 m/cm 400 kg
<b>NOVELTY</b>	Sheathed sling, 0.3 to 5 m/cm 700 kg
<b>NOVELTY</b>	Sheathed sling, 0.3 to 10 m/1 t
<b>NOVELTY</b>	Steelflex/cm 2 t
	0.5 m
	1 m
	1.5 m
	2 m
	2.5 m
	3 m
<b>NOVELTY</b>	Deckchain 1.5 m/cm 2 t
<b>NOVELTY</b>	Stackchain 1 m/cm 2 t



# STRUCTURE



Remote control 12N



Remote control 4



Remote control 12 SRS



Remote control 12 TD



## SCAFFOLDING TOWERS

### ASD TOWER UP'4

Height of 4 m, 2 m x 0.90 m

### ASD TOUR UP'6

Height of 6 m, 2 m x 1.60 m

*Double width 2 m x 1.60 m - Complete tower with stabiliser - Delivered in a dolly of 3 m x 0.60 m x 2 m*

## TUBULAR STRUCTURES

### TUBE Ø35MM

#### ARMUR TUB35

Aluminium tube, AU4G, Ø35/5 mm

#### ARMUR TUB35

Jack, screw jack + base plate

#### ARMUR TUB35 angle

Various 2D, 3D, 4D, 5D assembly corner pieces  
*corner piece, variable, sleeves,...*

### TUBE Ø50MM

#### TUB50

Steel tube, Ø50 mm

#### Painting

Paint on steel tube, Ø50 mm

#### DOUGHTY

Double collar, Ø50 mm, 90° fixed or adjustable

#### LAYER

Double collar, Ø50 mm, 90° fixed or adjustable

## MISCELLANEOUS ATTACHMENTS

#### DELTA PLUS STOP CHUTE

250 kg, 10 m

#### KRATOS fall protector

15 kN, 15 m

#### LADDER

3 plane, 6.85 m

#### LADDER

7 plane, 3.59 m

#### NOVELTY

Shackle 0.2 to 2 t

#### DOUGHTY Gravelock

Pair of couplers for attaching tubes on IPN at 90°

#### ESPACE CONCEPT EC1/EC2

IPN clamps and structure, 250 / 500 kg, 90 to 125 mm

#### HADEF 75-230

IPN clamps, 1,000 kg, 75 to 230 mm

#### NOVELTY

IPN clamps, 3,000 kg, 95 to 360 mm

#### NOVELTY

IPN clamps, 5,000 kg, 95 to 360 mm

#### IFF MONO 6

Pantograph 6 m/40 kg

#### AVENGER C825

Telescopic bar 117 cm/30 kg to 220 cm/7 kg



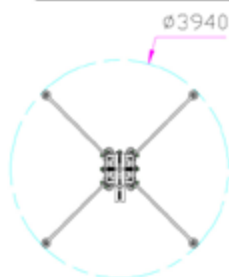


ASD TOWER UP6 on dolly



ASD Tower TL400

Vue de dessus



DOUGHTY  
Gravelock



NOVELTY Clamp  
IPN 3,000 kg



HADEF  
IPN clamp 1,000 kg



NOVELTY Clamp  
IPN 5,000 kg



AVENGER DC600

## STAGE DESIGN

### PROPS

<b>ASD 2x1</b>	Prop 2 m x 1 m, 750 kg / m <sup>2</sup>
<b>ASD 2x0.5</b>	Prop 2 m x 0.50 m, 750 kg / m <sup>2</sup>
<b>ASD 1.5x1</b>	Prop 1.5 m x 1 m, 750 kg / m <sup>2</sup>
<b>ASD 1x1</b>	Prop 1 m x 1 m, 750 kg / m <sup>2</sup>
<b>ASD 1x0.5</b>	Prop 1 m x 0.5 m, 750 kg / m <sup>2</sup>
<b>ASD 0,5x0,5</b>	Prop 0.5 m x 0.5 m, 750 kg / m <sup>2</sup>
<b>ASD DT211 D</b>	Right-handed triangle prop 2 m x 1 m x 1 m, 750 kg / m <sup>2</sup>
<b>ASD DT211 G</b>	Left-handed triangle prop 2 m x 1 m x 1 m, 750 kg / m <sup>2</sup>
<b>ASD Fixed stand</b>	Set of 4 stands h=20/40/60/80/100 cm
<b>ASD Adjustable stand</b>	Set of 4 adjustable stands 1.20 m to 2.20 m
<b>ASD RAC2</b>	2-stand connector
<b>ASD RAC4</b>	4-stand connector
<b>ASD GARD2</b>	Railing 2 m x 1 m, noir
<b>ASD GARD1</b>	Railing 1 m x 1 m, noir
<b>ASD Ladder 20-100</b>	Modular ladder from 20 to 100 cm
<b>ASD MC100</b>	Handrail for ladder
<b>ASD STR300</b>	Prop / structure connection series 300 for self-supporting walkways or mezzanines
<b>ASD RISER 1x2</b>	Riser prop frame on castors 1 m x 2 m
<b>ASD RISER 2x2</b>	Prop frame on castors 2 m x 2 m



ASD Dolly of  
4 props 1.5m x 1m



ASD STR300



ASD RAC2

# STRUCTURE



ASD Prop 1.5m x 1m x 0.40m  
+ railino 1m and 2m



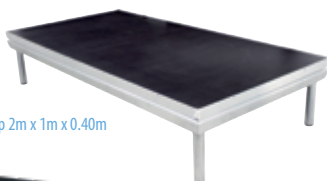
ASD Prop 2m x 0.5m x 0.40m



ASD Prop 1m x 1m x 0.40m



ASD Prop 1 m x 0.5 0 m x 0.40 m



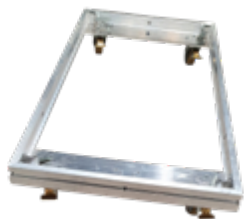
ASD Prop 2m x 1m x 0.40m



ASD DT211G



ASD DT211D



ASD RISER 1x2



ASD RISER 2x2



TO FIND OUT ABOUT ALL OUR STAGES,  
CONSULT THE CATALOGUE:

# On STAGE

## ON STAGE

ON STAGE consists of 2 major stage complexes, mobile stages and scaffolding, located throughout France, providing its know-how for the live and festival sectors, as well as for events and customised projects.

## ON STAGE IS

- 2 sites across the country
- 1 centralised request centre (contact@onstage-live.com | +33 1 60 13 88 90)
- 1 centralised design and validation office

## ON STAGE, SERVING THE SECTOR

- 6 mobile stages
- 6 covered stages from 10 to 20m
- 7 covered stages from 20 to 48m
- Scaffolding of all types
- Customised construction projects

## YOUR CONTACTS

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CATALOGUE AVAILABLE HERE



[HTTPS://WWW.ONSTAGE-LIVE.COM/](https://www.onstage-live.com/)

## ORDER OF 25 JULY 2022 ON DEMOUNTABLE STRUCTURES

To help you comply with the Order of 25 July 2022 (in force from 1 August 2023) laying down the safety rules and technical provisions applicable to temporary and demountable structures, here is an explanatory note.

The organizer must provide the appropriate documents for their project, which will be validated, if necessary, by a control office.

### 1. CLASSIFICATION OF FRAMEWORKS

*OP: Frameworks designed to accommodate the public (stage, control tower, podium, etc.).*

*OS: Frameworks for stage equipment not intended for public use (totem lights, etc.).*

OPs and OSs are classified from 1 to 3 (depending on the height and type of installation), which determines which controller is competent to carry out the verification and inspection.

STRUCTURES FOR EQUIPMENT ONLY			STRUCTURES FOR PEOPLE		
<b>OS1</b> h < 3.50m	<b>OS2</b> 3.50m < h < 6.20m	<b>OS3</b> h > 6.20m	<b>OP1</b> h < 1.20m	<b>OP2</b> 1.20m < Platform < 2.00m	<b>OP3</b> Platform ≥ 2.00m Other ≥ 3.50m

#### • Upstream studies:

OS1/OP1: Manufacturer's certificate

OS2: Opinion on model or Opinion on technical file + Calculation note

OS3/OP2/OP3: Opinion on model or opinion on technical file + Calculation note drawn up exclusively by a structural engineer.

#### • Checked before opening to the public:

OS1/OP1: Certificate of Proper Assembly

OS2: An approved inspection body or competent technician

OS3/OP2/OP3: Only an approved inspection body

### 2. DOCUMENTATION TO BE PROVIDED

The documentation to be provided depends on the project category, but in summary should include the following points (non-exhaustive list):

- An assembly drawing
- A list of equipment mounted on the demountable assembly
- A soil resistance rating.
- A calculation note for resistance to external forces
- Lifting equipment certificates

The calculation note must be provided to the inspection office beforehand, along with all certificates and documents.

This calculation note can be produced by the design office of your choice

### 3. PRINCIPLES TO REMEMBER

To ensure that your project is compliant, plan as far ahead as possible to gather the necessary documentation and studies for submission to the inspection body. Public safety remains the responsibility of the organizer, but we ensure that our equipment is properly installed. Put together a technical file that includes all these elements.



**TEAMAGINE, the Novelty Group's R&D office, can assist you in this process.**

[www.teamagine.com](http://www.teamagine.com)



## OUR SERVICES STRUCTURE

- Custom structure design
- Load studies and recommendations for existing structures
- Design of computerized machinery systems
- Drawings & manufacturing drawings (if necessary with design office)
- Product development support
- Servo motorization & customized tracking
- Integration of other technologies associated with servo-control of structures
- Safety processes
- Transport optimization





# PIPES & DRAPES

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Curtain tracks	216

## PIPES & DRAPES

### SHOWTEX EASYDRAPE

EasyDrape Set: 24 m x H.3 m max / 6 x curtains 4 x 3 m

Class M1

EasyDrape Base Plate 50 x 50, 14 kg

EasyDrape Horizontal Drape Support / length: 180 to 300 cm

EasyDrape Black drape 4 x 3 m 300 g/m<sup>2</sup>

EasyDrape Telescopic Upright / length: 175 to 300 cm

EasyDrape dolly / for 8 stands, 8 horizontals, 6 drapes

## CONTROL PANEL COVER

### WENTEX CONTROL PANEL COVER

Control panel cover kit, 3 to 6 m

## TENTS

### TENTS

Folding tent 3 x 3 m, black

## DRAPES

### DRAPES

H. 4 x L. 6 m / Knotted / Wool Serge M1

H. 6 x L. 6 m / Knotted / Wool Serge M1

H. 8 x L. 3 m / Knotted / Wool Serge M1

H. 8 x L. 4.5 m / Knotted / Wool Serge M1

H. 8 x L. 6 m / Knotted / Wool Serge M1

H. 8 x L. 9 m / Knotted / Wool Serge M1

H. 9 x L. 4 m / Knotted / Wool Serge M1

Custom-made

## FRIEZES

### FRIEZES

L. 9 x H. 0.8 m / Knotted / Wool Serge M1

L. 21 x H. 2 m / Knotted / Wool Serge M1

L. 20 x H. 70 m / Knotted / Wool Serge M1

L. 20 x H. 1.20 m / Knotted / Wool Serge M1

L. 20 x H. 1.50 m / Knotted / Wool Serge M1

## CURTAIN TRACKS

### CURTAIN TRACKS

Unitrack curtain track, rail 2 m, 10 m

Unitrack curtain track, rail 2 m, 12 m

Grippontube, Snap-hook for drapes

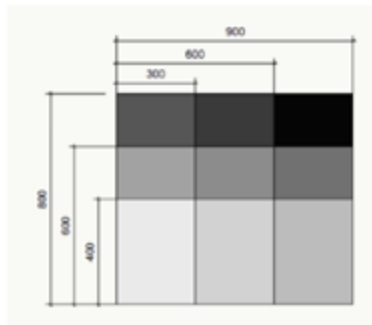
Max. load 20 kg



## Rideau laine Serge

Rideaux en Laine Serge Noire M1 Oeillets et pouettes en tête fourreau lesté en bas, ourlets sur les cotés

Sacs en Toile Noire avec drisse de serrage



9 Tailles en stock: . 8m Haut, Largeur 9m – 6m – 3m  
 . 6m Haut, Largeur 9m – 6m – 3m  
 . 4m Haut, Largeur 9m – 6m – 3m

SHOWTEX EASYDRAPE SET



WENTEX CONTROL PANEL COVER



# TECHNICAL GUIDE

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## NETWORK

### TECHNOLOGY

#### Data transport and network technologies

##### 1 - Topologies:

###### ***“Point to point” solution***

This solution makes it possible to respond to distance-based transmission limits; it is limited in its form to a transmission/reception via an element called the transmitter and another element called the receiver. A single receiver can receive the signal from a single transmitter.

###### ***“Star” or multipoint solution***

###### ***the network is centred around a central node***

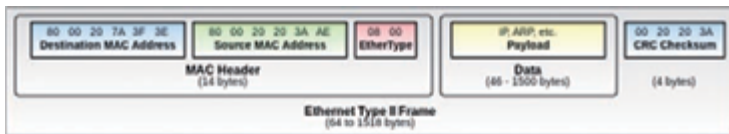
This solution is a true transmission network and provides great management flexibility.

##### 2 - Ethernet:

Sound, video, control and supervision signals are fed into and retrieved from the thus created network via converters. The data is transported via protocol sub-sets such as Dante, Ethersound, Ravenna, AVB, AES67 for the sound part, and Artnet, MA-Net, etc. for the light part. Control data is transported via various protocol sets for the control and administration of amplifiers, mixing consoles, wireless transmission systems, etc.

In the end, all these protocol sets are based on a standardised system enabling data packets to be transported in a standardised network: Ethernet (ISO/IEC/IEEE 8802-3:2014)

###### ***An Ethernet-type infrastructure has many advantages:***



- Very flexible management compared to a point-to-point network; it is thus possible to dynamically add or remove equipment
- Full hardware compatibility (switches, copper or fibre wiring, connectors etc.) with standard computer hardware
- Standard and proven redundancy systems
- Possible and easy development
- Controlled deployment costs

### 3 - Type of network:

#### XBase-Y (e.g.: 100Base-T)

X => Speed in Mbits / sec (10, 100, 1000, 10000)

Y => Type of connection used

T (twisted pairs with number of pairs)

TX (full-duplex twisted pairs)

BX (single-mode optical fibre – 10 km max)

FX (multimode optical fibre – 2 km max)

SX (cost-effective optical fibre – 300 m max)

### 4 - Quality of the connections: Media

In order to ensure the transmission of audiovisual signals in a qualitative manner, various factors must be considered.

- **Quality of connections:** traditional copper wiring, RJ45 copper wiring, optical fibre.

- **Type of connection:** point-to-point typology, ring typology, star typology.

- **Network architecture:** fast converters/switches fully compatible with Ethernet network standards (ISO/IEC/IEEE 8802-3:2014).

### 5 - Copper wiring:

Twisted pairs allow keeping a constant distance between the 2 wires of the pair. This distance determines the impedance of the cable, which should be about 100Ω (depending on the category).

The greater the number of twists, the lower the crosstalk. The average number of twists per metre is part of the cable specification, but each pair in a cable is twisted slightly differently to avoid crosstalk.

### 6 -Types of cables:

- Unshielded twisted pair (UTP or U/UTP)

- Foil twisted pair (FTP or F/UTP): an aluminium foil is used as general shielding

- Shielded twisted pair (STP or U/FTP): each pair is individually shielded

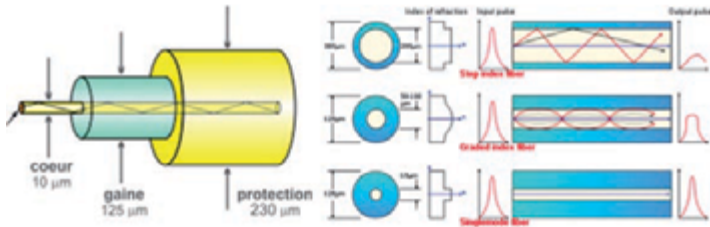
- Shielded Foil Twisted Pair (SFTP or SF/UTP): aluminium foil and a braid is used as general shielding

- Screened Shielded Twisted Pair (SSTP or S/FTP): each pair is individually shielded and the whole is shielded again.

## NETWORK

### 7 - Optical fibre:

- They conduct light signals by reflections against the "walls" of a "silica" core
- Different types, different diameters, different wavelengths
- Single mode: very thin silica core (OS1 or OS2)
- Multimode: larger synthetic core (OM1, OM2, OM3, OM4)



### Advantages of optical fibre over copper

- **Increased distance** - You can run a fibre optic cable over several kilometres
- **Reduced attenuation** - As light signals encounter little resistance, the data can be transported further
- **Security** - Unauthorised connections are easy to detect in a fibre cable. Any unwanted connection causes light to be emitted from the cable and the whole system to fail
- **Increased bandwidth** - Fibre cables can transport more data than copper cables. Optical fibre is ideal for high-speed applications involving the transfer of large files, such as multimedia
- **Immunity** - Optical fibre is immune to interference
- **Design** - Much lighter than copper, optical fibre is easier to transport and handle

### 8 - Multimode or single-mode fibre?

**Multimode** fibre has a large core diameter and therefore offers several modes of light propagation: several light wavelengths can travel through the fibre core. It is mainly used for voice and data applications.



However, **single-mode** optical fibre has a smaller core which allows only one mode of propagation. As only one wavelength passes through the core of the single-mode fibre, the light is realigned towards the centre of the core instead of bouncing off its edge as in multimode fibre.

What is the advantage? Increased distance, up to **50 times** more range in single-mode than in multimode.

For this reason, single-mode fibre is typically used in long-distance network connections covering large areas, such as cable TV and high-speed backbone cables.

The bandwidth is also higher. With a full-duplex single-mode fibre pair, you can achieve up to twice the throughput of multimode fibre. The actual range of single-mode fibre varies depending on the manufacturer of the network peripherals you use with the cable. In contrast to multimode optical fibre, there are still very few established standards for single-mode fibre.



Le connecteur ST®, avec son système de verrouillage à baïonnette, est le plus courant.

Le connecteur SC connector comprend un corps surmoulé et un système de verrouillage par pousser-tirer.

Le connecteur FDDI comporte une fêrûle de 2,5 mm et une protection fixe pour réduire la perte de signal lumineux.

Le connecteur MT-RJ (type RJ) à faible encombrement) comprend un corps surmoulé et se monte par clivage de la fibre.

Le connecteur LC, à faible encombrement, comporte une fêrûle en céramique et ressemble à un connecteur SC miniature.

Le connecteur FC est un connecteur à bague fileté. Il est utilisé dans les environnements à vibrations intenses.

Le connecteur MU ressemble au connecteur SC, en plus petit. Il utilise un système de verrouillage simple par pousser-tirer. A utiliser dans les applications à haute densité.

## NETWORK

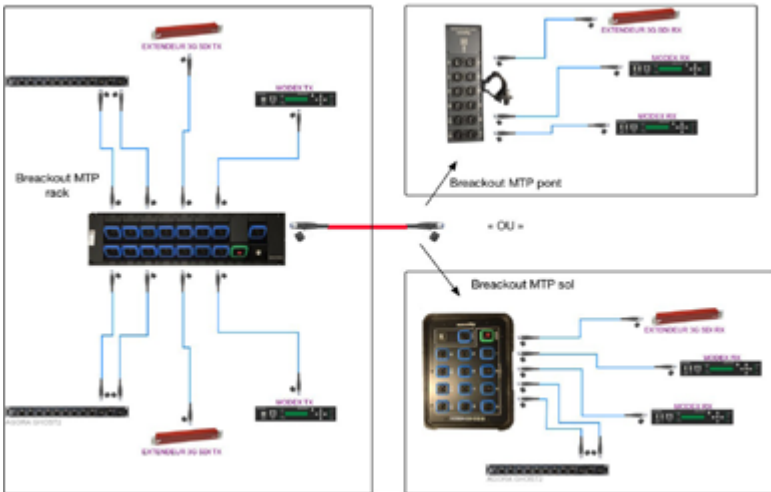
### 9 - MTP24 fibre:

**MTP24** fibre is a flexible field cable consisting of 24 assembled fibre channels. Available in single or multi-mode, the MTP24 cable consists of opticalCON MTP connectors. It features a spring-loaded push-pull locking mechanism and excellent cable retention using aramid wire. The optical connection is exceptionally well protected against dirt and dust by an automatically operated sealing cover. There are three types of MTP breakout boxes that convert 1 opticalCON MTP24 to 12 opticalCON DUO:

**The Rack version:** intended for transmissions from the control room, this version is rackable in standard 19" fly

**The Bridge version:** intended for burst signals on structural bridges

**The Floor version:** which is a box that is placed on the floor for signal reception at the level of stages, other rooms, etc.



## LED TECHNOLOGY

### **LED (Light-Emitting Diode) technology:**

Conventional LCD flatscreens operate with a neon (tube) backlight system. The drawback of this technology is that the light at the back of the LCD panel is not always evenly distributed.

"LED" displays use a completely different backlight technology. The neon tubes (CCFL) are replaced by several hundred light-emitting diodes (LEDs), arranged on the back of the LCD panel.

### **Screens that use LED technology have several advantages:**

- more uniform backlighting of the LCD panel
- higher contrast ratio
- deeper blacks
- up to 40% lower power consumption than conventional LCD displays

### **There are several different LED technologies:**

**EDGE LED technology:** The LEDs are placed on the edge of the LCD panel. This technology makes it possible to save on thickness and to obtain even thinner screens, of less than 3 centimetres.

**Full LED technology:** the diodes are placed over the entire surface of the LCD panel. Both of these technologies can, on some models, also benefit from the "Local Dimming" technology.

### **LCD flatscreens with EDGE LED technologies:**

In LCD screens with Edge LED technology, the LEDs are installed along the entire edge of the LCD panel. Light reflectors are used to spread the LED light over the entire LCD panel. In addition to the advantages of LED backlighting, this system reduces the space required at the back of the panel. On ultra-slim TVs, the screen is less than 3 cm thick.

### **LCD flatscreens with Full LED or Direct LED technology:**

Some TV sets use a Full LED or Direct LED diode distribution. This means that the LEDs used for backlighting line the back of the LCD panel, covering the entire screen. The backlighting is even more uniform than the EDGE LED, but the screen thickness is greater. In some TV sets, the backlighting is provided by three LEDs (RGB: red, green, and blue). This system allows a better adjustment of the colourimetry.

## VIDEO

### LED TECHNOLOGY - CONTINUED

#### **LED screens with Full LED + Local Dimming technology:**

LED technology is best used when each LED can be switched on and off intelligently, i.e. only when the brightness of the scene or scene detail requires it. This dynamic LED lighting technology is called "local dimming". The lighting of the areas is dynamic and the blacks are much deeper than on conventional LCD screens. In terms of rendering and image quality, this technology is very similar to plasma screens.

#### **LED screens with Edge LED + Local Dimming technology:**

This type of screen combines the advantages of local dimming in terms of image quality with the thinness of the screen (LEDs on the edges of the LCD panel).

### LCD TECHNOLOGY

**LCD (Liquid Crystal Display) technology** is based on a screen composed of two parallel transparent grooved plates, oriented at 90°, between which is wedged a thin layer of liquid containing molecules (liquid crystals) which have the property of orienting themselves when subjected to an electric current. In combination with a light source, the first grooved plate acts as a polarising filter, allowing only those light components to pass which oscillate parallel to the grooves. In the absence of electrical voltage, the light is blocked by the second plate, acting as a perpendicular polarising filter. Under the effect of a voltage, the crystals will gradually align themselves in the direction of the electric field and thus be able to cross the second plate! By locally controlling the orientation of these crystals, it is possible to form pixels. A distinction is usually made between two types of flatscreens, depending on the control system used to polarise the crystals:

**"Passive matrix"** screens, where the pixels are controlled by row and column. It is a technology that is being phased out of use.

**"Active matrix"** screens, where each pixel is individually controlled. The most commonly used technology for this type of display is TFT (Thin Film Transistor) technology, which allows each pixel to be controlled by three transistors (corresponding to the three RGB colours).

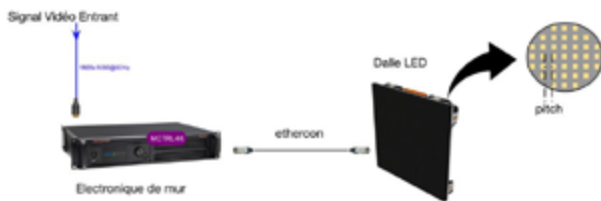
### LED WALLS

A LED wall is an assembly of several LED panels. They are assembled and connected according to precise patterns that allow coherent images to be sent to the LED wall.

The LED panels are controlled by electronics that will read a video signal entering the wall pixel by pixel.

An LED panel is equipped with a receiver card that interprets the signal sent by the electronics. It allows assigning the position of the LED panel in a wall, synchronising its image to the other panels, ensuring the consistency of the colorimetry of the panel in the LED wall.

On a panel, all LEDs are spaced at the same distance (horizontally and vertically). This space gives the Pitch of the LED panel. The finer the pitch, the higher the LED resolution.



Exemple d'impact du pitch sur la résolution d'un mur

**PL3.5 Pro - Absen pitch 2.5mm - 200 x 200 px**  
 Taille du mur : 3 x 2 m  
 Résolution du mur : 1200 x 800 px  
 Nombre de dalles : 24 dalles



**X3.9 - Infield pitch 3.9mm - 128 x 128 px**  
 Taille du mur : 3 x 2 m  
 Résolution du mur : 768 x 512 px  
 Nombre de dalles : 24 dalles



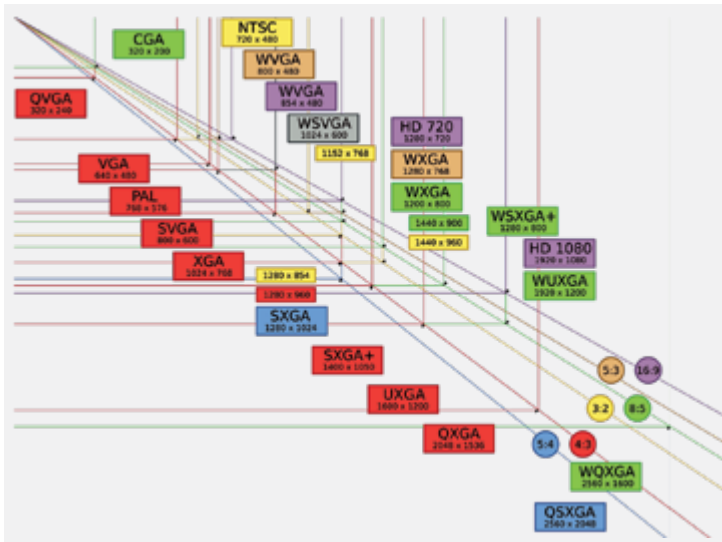
**M6 - Desay pitch 6mm - 128 x 144 px**  
 Taille du mur : 3.2 x 1.9 m  
 Résolution du mur : 512 x 288 px  
 Nombre de dalles : 6 dalles



## VIDEO

### VIDEO RESOLUTION

Name	Dimensions	L/H ratio	Name	Dimensions	L/H ratio
QQVGA	160x120	4:3	WUXGA	1920x1080	16:9
QVGA	320x240	4:3	WUXGA+	1920x1200	16:10
HVGA	320x480	4:3	QXGA	2048x1536	4:3
VGA	640x480	4:3	WQXGA	2560x1600	16:10
Hercules	720x348	4:3	QSXGA	2560x2048	5:4
SVGA	800x600	4:3	WQSXGA	3200x2048	25:16:00
WSVGA	964x544	16:9	QUXGA	3200x2400	4:0:3
XGA	1024x768	4:3	WQUXGA	3840x2400	16:10
WXGA-H	1280x720	16:9	HXGA	4096x3072	04:0:3
WXGA-H+	1280x800	16:10	WHXGA	5120x3200	16:10
SXGA+	1280x1024	5:4	HSXGA	5120x4096	05:0:4
WSXGA	1366x768	16:9	WHSXGA	6400x4096	25:16:00
WSXGA+	1440x900	16:10	HUXGA	6400x4800	04:0:3
SXGA+	1400x1050	4:3	UHDV	7680x4320	16:0:9
WSXGA	1600x1024	25:16	WHUXGA	7680x4800	16:10
WSXGA+	1680x1050	16:10	QHXGA	8192x6144	04:0:3
UXGA	1600x1200	4:3	H <sup>2</sup> XGA	16384x12288	04:0:3



## DIGITAL VIDEO WIRING STANDARDS

Standard	Name	Bitrates	Video format examples
SMPTE 259M	SD-SDI	270 Mbit/s 360 Mbit/s 143 Mbit/s 177 Mbit/s	480i, 576i
SMPTE 344M	ED-SDI	540 Mbit/s	480p, 576p
SMPTE 292M	HD-SDI	1.485 Gbit/s 1.485/1.001 Gbit/s	720p, 1080i
SMPTE 372M	Dual Link HD-SDI	2.970 Gbit/s 2.970/1.001 Gbit/s	1080p
SMPTE 424M	3G-SDI	2.970 Gbit/s 2.970/1.001 Gbit/s	1080p
TBA	6G UHD-SDI	6 Gbit/s	4 K
TBA	12G UHD-SDI	12 Gbit/s	4 K

## PROJECTION RATIO

**Projection ratio** = The ratio between the projector-to-screen distance and the width of the projected image.

**Projection distance (m)** = Screen width (m) X lens ratio

*For example:* A lens with a ratio of 5 will make a 4m base image at 20m distance ( $5=20/4$ ), while a 0.7 lens will make the same image at 2.8m ( $0.7=2.8/4$ ).

In the case of a zoom lens, this ratio is variable, and two ratios are indicated. They correspond to the minimum and maximum values of this ratio.

Note, however, that some lenses can be used on different projectors, which may have different matrix sizes depending on their native resolution (4:3, 16:9 or other). The lens ratio is a function of the projector matrix on which it is mounted.

*For example:* A lens with a 1.2 ratio on a 4:3 projector will have a 1.1 ratio on a 16:9 projector.

**To avoid mistakes, do not hesitate to consult the correspondence tables, or use the calculation software offered by the manufacturers.**

## VIDEO

### LENSES

		Ratio 4/3 approx.	ratio HD-WU approx.
ILS			
118-100110-01	Lens ILS 0.73:1SX+/0.67:1HD	0.73:1	<b>0.67:1</b>
118-100117-01	Lens ILS 1.25X+/1.1:1HD	1.2:1	<b>1.1:1</b>
118-100111-01	Lens ILS 1.25-1.65X+/1.16-1.49HD	1.25-16.1:1	<b>1.16-1.49:1</b>
118-100112-01	Lens ILS 1.5-2.05X+/1.4-1.8HD	1.5-2.0:1	<b>1.4-1.8:1</b>
118-100113-01	Lens ILS 2.0-2.85X+/1.8-2.6HD	2.0-2.8:1	<b>1.8-2.6:1</b>
118-100114-01	Lens ILS 2.8-4.55X+/2.6-4.1HD	2.8-4.5:1	<b>2.6-4.1:1</b>
118-100115-01	Lens ILS 4.5-7.35X+/4.1-6.9HD	4.5-7.3:1	<b>4.1-6.9:1</b>
118-100116-01	Lens ILS 7.5-11.25X+/6.9-10.4HD	7.5-11.2:1	<b>6.9-10.4:1</b>

### LENSES

DLP chip	PT-DZ21K	PT-DZ12000 PT-DZ8700/ DZ110X	PT-DW10000	PT-DS20K	PT-DS8500/ DS100X PT-D12000/ D10000
ET-D75 LE1		1.4-1.8:1			1.5-2.0:1
ET-D75 LE10		1.3-1.7:1			1.4-1.8:1
ET-D75 LE2		1.8-2.8:1			2.0-3.0:1
ET-D75 LE20		1.7-2.4:1			1.8 2.6:1
ET-D75 LE3		2.8-4.6:1			3.0-5.0:1
ET-D75 LE30		2.4-4.7:1			2.6-5.1:1
ET-D75 LE4		4.6-7.4:1			5.0-8.0:1
ET-D75 LE40		4.6-7.4:1			5.0-8.0:1
ET-D75 LE5	no Shift	0.7:1	no Shift	no Shift	0.75:1
ET-D75 LE50	no Shift	0.7:1	no Shift	no Shift	0.75:1
ET-D75 LE6	H+/-15%, V+/-44%	0.9-1.1:1	H+/-15%, V+/-50%	H+/-20%, V+/-40%	1.0-1.2:1
ET-D75 LE8		7.3-13.8:1			8.0-15:1
H-Shift		+/- 20%	+/- 20%		+/- 30%
V-Shift		+/- 55%	+/- 60%		+/- 50%
Aspect Ratio		16:10	16:9		4:3
Resolution		1920x1200	1920x1080		1400x1050
Chip size		0.96"	0.95"		0.95"



### CHRISTIE VIDEO PROJECTORS

		Ratio 4/3 approx.	ratio HD-WU approx.
CT			
104-110101-01	Fixed Lens 0.67:1HD (SXGA+0.73:1)	0.73:1	<b>0.67:1</b>
104-111101-01	Fixed Lens 1.1:1HD (Long Focal)	1.2:1	<b>1.1:1</b>
104-137101-01	Zoom Lens 1.16-1.49:1HD (SXGA+1.25-1.6:1)	1.25-16.1:1	<b>1.16-1.49:1</b>
104-112101-01	Zoom Lens 1.4-1.8:1HD (SXGA+1.5-2:1)	1.5-2.0:1	<b>1.4-1.8:1</b>
104-113101-01	Zoom Lens 1.8-2.6:1HD (SXGA+2-2.8:1)	2.0-2.8:1	<b>1.8-2.6:1</b>
104-114101-01	Zoom Lens 2.6-4.1:1HD (SXGA+2.08-4.5:1)	2.8-4.5:1	<b>2.6-4.1:1</b>
104-115101-01	Zoom Lens 4.1-6.9:1HD (SXGA+4.5-7.3:1)	4.5-7.3:1	<b>4.1-6.9:1</b>
104-130101-01	Zoom Lens 6.9-10.4:1HD (SXGA+7.5-11.2:1)	7.5-11.2:1	<b>6.9-10.4:1</b>

### PANASONIC VIDEO PROJECTORS

DLP chip	PT-DZ770	PT-DZ6710	PT-DZ6700	PT-DW740/DW730	PT-DW6300	PT-DW5100	PT-DW5000
Standard Lens	1.8-2.4:1		1.8-2.5:1		1.8-2.4:1		
ET-DLE030	no Shift	0.4:1	no Shift	no Shift	0.4:1	no Shift	
ET-DLE050	no Shift	0.8:1	no Shift	no Shift	0.82:1	no Shift	
ET-DLE055	no Shift	0.8:1	no Shift	no Shift	0.84:1	no Shift	
ET-DLE080	0.79-0.98:1			0.82-1.03:1			
ET-DLE100	not recommended				1.4-1.8:1		
ET-DLE150	1.3-1.9:1			1.4-2.0:1			
ET-DLE200	not recommended			2.5-4.1:1			
ET-DLE250	2.3-3.6:1			2.4-3.8:1			
ET-DLE300	not recommended			not recommended			
ET-DLE310	not recommended			3.6-4.7:1			
ET-DLE350	3.6-5.4:1			3.8-5.7:1			
ET-DLE400	not recommended			not recommended			
ET-DLE410	not recommended			4.7-8.9:1			
ET-DLE450	5.3-8.4:1			5.7-9.0:1			
H-Shift	+/- 10%			+/- 10%			
V-Shift	+ 50%			+ 60%		+ 50%	
Aspect Ratio	16:10			16:10		15:9	
Resolution	1920x1200			1280x800		1280x768	
Chip size	0.67"			0.65"			

## VIDEO

### EPSON EB-PU SERIES

Lens compatibility - High brightness

	ELPLX025	ELPLU035	ELPU04	ELPLW08	ELPLW06	ELPLM15	ELPLM10	ELPLM11	ELPLL08
<b>EB-PU1006 6000 lm</b>									
Ratio	x	0.65 - 0.78:1	0.87 - 1.06:1	x	x	2.16 - 3.48:1	3.31 - 5.07:1	4.84 - 7.39:1	7.2 - 10.12:1
Lens Shift V/H	x	±67% / ±30%	±67% / ±30%	x	x	±67% / ±30%	±67% / ±30%	±67% / ±30%	±67% / ±30%
Max. brightness	x	5100 lm	5400 lm	x	x	5900 lm	5800 lm	5600 lm	5600 lm
<b>EB-PU1007 7000 lm</b>									
Ratio	x	0.65 - 0.78:1	0.87 - 1.06:1	x	x	2.16 - 3.48:1	3.31 - 5.07:1	4.84 - 7.39:1	7.2 - 10.12:1
Lens Shift V/H	x	±67% / ±30%	±67% / ±30%	x	x	±67% / ±30%	±67% / ±30%	±67% / ±30%	±67% / ±30%
Max. brightness	x	6000 lm	6300 lm	x	x	6900 lm	6800 lm	6600 lm	6600 lm
<b>EB-PU1008 8500 lm</b>									
Ratio	x	0.65 - 0.78:1	0.87 - 1.06:1	x	x	2.16 - 3.48:1	3.31 - 5.07:1	4.84 - 7.39:1	7.2 - 10.12:1
Lens Shift V/H	x	±67% / ±30%	±67% / ±30%	x	x	±67% / ±30%	±67% / ±30%	±67% / ±30%	±67% / ±30%
Max. brightness	x	7300 lm	7700 lm	x	x	8400 lm	8300 lm	8000 lm	8000 lm
<b>EB-PU2010 10000 lm</b>									
Ratio	0.35:1	0.48 - 0.57:1	0.64 - 0.77:1	1.19 - 1.62:1	0.86 - 1.21:1	1.57 - 2.56:1	2.42 - 3.71:1	3.54 - 5.41:1	5.27 - 7.41:1
Lens Shift V/H	+25% / ± 15%	±24% / ±10%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%
Max. brightness	9000 lm	8700 lm	9500 lm	9600 lm	9700 lm	10000 lm	9900 lm	9500 lm	9500 lm
<b>EB-PU2113W / PU2213B 13000 lm</b>									
Ratio	0.35:1	0.48 - 0.57:1	0.64 - 0.77:1	1.19 - 1.62:1	0.86 - 1.21:1	1.57 - 2.56:1	2.42 - 3.71:1	3.54 - 5.41:1	5.27 - 7.41:1
Lens Shift V/H	+25% / ± 15%	±24% / ±10%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%
Max. brightness	11765 lm	11050 lm	12155 lm	12805 lm	12675 lm	13000 lm	12610 lm	12415 lm	12415 lm
<b>EB-PU2116W / PU2216B 16000 lm</b>									
Ratio	0.35:1	0.48 - 0.57:1	0.64 - 0.77:1	1.19 - 1.62:1	0.86 - 1.21:1	1.57 - 2.56:1	2.42 - 3.71:1	3.54 - 5.41:1	5.27 - 7.41:1
Lens Shift V/H	+25% / ± 15%	±24% / ±10%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%
Max. brightness	14480 lm	13600 lm	14960 lm	15760 lm	15600 lm	16000 lm	15520 lm	15280 lm	15280 lm
<b>EB-PU2120W / PU2220B 20000 lm</b>									
Ratio	0.35:1	0.48 - 0.57:1	0.64 - 0.77:1	1.19 - 1.62:1	0.86 - 1.21:1	1.57 - 2.56:1	2.42 - 3.71:1	3.54 - 5.41:1	5.27 - 7.41:1
Lens Shift V/H	+25% / ± 15%	±24% / ±10%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%	±60% / ±18%
Max. brightness	18100 lm	17000 lm	18700 lm	19700 lm	19500 lm	20000 lm	19400 lm	19100 lm	19100 lm

### BARCO SERIES SLM, FLM, HDX, HDF, UDM, UDX, QDX

Projection distance according to lenses and desired image size [in metres]

TDL+ Lenses	UDM W series	UDM 4K series	UDX W series
R9801661 TLD+ 038:1 (video lens)	0.39	0.42	0.39
R9862001 TLD+ 0.65 - 0.85:1 (video lens)	0.67 - 0.88	10.71 - 0.93	0.67 - 0.88
R9862000 TLD+ 0.73:1	0.67	x	0.67
R9801414 TLD+ 0.8 - 1.16:1	0.86 - 1.25	0.93 - 1.33	0.86 - 1.25
R9862005 TLD+ 1.25 - 1.6:1	1.17 - 1.5	1.25 - 1.6	1.17 - 1.5
R9862010 TLD+ 1.5 - 2.0:1	1.39 - 1.89	1.49 - 2.03	1.39 - 1.89
R9862020 TLD+ 2.0 - 2.8:1	1.89 - 2.55	2.02 - 2.73	1.89 - 2.55
R9862030 TLD+ 2.8 - 4.5 :1	2.56 - 4.13	2.74 - 4.43	2.56 - 4.13
R9862040 TLD+ 4.5 - 7.5:1	4.12 - 6.97	4.42 - 7.46	4.12 - 6.97
R9829997 TLD+ 7.5 - 11.2:1	6.92 - 10.21	7.41 - 11.03	6.92 - 10.21

TDL+ Lenses	UDX U series	UDX 4K series	QDX W/4K series
R9801661 TLD+ 038:1 (video lens)	10.47	0.42	0.39
R9862001 TLD+ 0.65 - 0.85:1 (video lens)	0.8 - 1.05	0.71 - 0.93	0.67 - 0.88
R9862000 TLD+ 0.73:1	10.8	x	0.67
R9801414 TLD+ 0.8 - 1.16:1	1.04 - 1.49	0.93 - 1.33	0.86 - 1.25
R9862005 TLD+ 1.25 - 1.6:1	1.4 - 1.8	1.25 - 1.6	1.17 - 1.5
R9862010 TLD+ 1.5 - 2.0:1	1.78 - 2.27	1.49 - 2.03	1.39 - 1.89
R9862020 TLD+ 2.0 - 2.8:1	2.26 - 3.06	2.02 - 2.73	1.89 - 2.55
R9862030 TLD+ 2.8 - 4.5 :1	3.07 - 4.96	2.74 - 4.43	2.56 - 4.13
R9862040 TLD+ 4.5 - 7.5:1	4.94 - 8.36	4.42 - 7.46	4.12 - 6.97
R9829997 TLD+ 7.5 - 11.2:1	8.32 - 12.35	7.41 - 11.03	6.92 - 10.21

## VIDEO

### PMW-150 SONY RECORDING FORMAT

	Video recording format	Audio recording format	Recording duration on 64 GB	Recording duration on 32 GB
UDF				
HD422 Mode	MPEG-2 422P@HL, 50Mbps / CBR 1920 x 1080/50i, 25p 1280 x 720/50p, 25p	LPCM 24 bits, 48 kHz, 4 channels	+/- 120 minutes	+/- 60 minutes
HD420 Mode	MPEG-2 MP@HL, 35Mbps / VBR 1440 x 1080/50i, 25p 1280 x 720/50p	LPCM 16 bits, 48 kHz, 4 channels	+/- 180 minutes	+/- 90 minutes
DVCAM Mode	720 x 576/50i, 25PsF	LPCM 16 bits, 48 kHz, 4 channels	+/- 220 minutes	+/- 110 minutes
FAT				
HQ 1920 Mode	MPEG-2 MP@HL, 35Mbps / VBR 1920 x 1080/50i, 25p	LPCM 16 bits, 48 kHz, 4 channels	+/- 200 minutes	+/- 100 minutes
HQ 1440 Mode	MPEG-2 MP@HL, 35Mbps / VBR 1440 x 1080/50i, 25p	LPCM 16 bits, 48 kHz, 4 channels	+/- 200 minutes	+/- 100 minutes
HQ 1280 Mode	MPEG-2 MP@HL, 35Mbps / VBR 1280 x 720/50p, 25p	LPCM 16 bits, 48 kHz, 4 channels	+/- 200 minutes	+/- 100 minutes
SP 1440 Mode	MPEG-2 MP@H-14, 25Mbps / CBR 1440 x 1080/50i	LPCM 16 bits, 48 kHz, 2 channels	+/- 280 minutes	+/- 140 minutes
DVCAM Mode	720 x 576/50i, 25PsF	LPCM 16 bits, 48 kHz, 2 channels	+/- 260 minutes	+/- 130 minutes

## KIPRO RACK AJA RECORDING FORMAT

With audio set to 48kHz, 24 bits, 2 channels

CODEC	500 GB HARD DRIVE
<b>1080p @ 24fps</b>	
Apple ProRes 422 (HQ)	4.5 hours
Apple ProRes 422	7 hours
Apple ProRes 422 LT	10.5 hours
Apple ProRes 422 (Proxy)	22.5 hours
<b>1080i @ 30fps or 720p @ 60fps</b>	
Apple ProRes 422 (HQ)	4 hours
Apple ProRes 422	5.5 hours
Apple ProRes 422 LT	8.5 hours
Apple ProRes 422 (Proxy)	18 hours
<b>1080p @ 25fps or 720p @ 50fps</b>	
Apple ProRes 422 (HQ)	4.5 hours
Apple ProRes 422	7 hours
Apple ProRes 422 LT	10 hours
Apple ProRes 422 (Proxy)	22 hours
<b>Pal</b>	
Apple ProRes 422 (HQ)	16 hours
Apple ProRes 422	24 hours
Apple ProRes 422 LT	33 hours
Apple ProRes 422 (Proxy)	68 hours
<b>NTSC</b>	
Apple ProRes 422 (HQ)	13.5 hours
Apple ProRes 422	20 hours
Apple ProRes 422 LT	28 hours
Apple ProRes 422 (Proxy)	59 hours

For more details on recording capacities, AJA recommends you to use its dedicated tool "AJA Data Rate Calculator Application" which you can find here: <http://www.aja.com/support/kona/kona-3-3x.php> or its iOS equivalent on the AppStore: <http://itunes.apple.com/us/app/aja-datacalc/id343454572?mt=8>.

## LIGHTING

### SPECIFICATIONS

Brand	Type	Gobo size	PF size (in mm)	Ø lens (in mm)
ADB	A56	x	155x155	110
ADB	ACP1001	x	430x270	x
ARRI	Compact 2500	x	Ø330	25
COLLYNS	Foudre II	x	x	x
COEMAR	Blackgun	x	x	x
DESISTI	Magis	x	130	100
DESISTI	Monet	x	185	140
DESISTI	Leonardo	x	270	240
DTS	Flash 2000L	x	x	x
DTS	Flash 4000L	x	x	x
DTS	Flash 8000L	x	x	x
ETC	Source Four 5°	A or B	355x355	310
ETC	Source Four 10°	A or B	305x305	265
ETC	19/26/36/50 °	A or B	158x158	125
ETC	Source Four Zoom	A or B	190x190	160
ETC	Source Four PAR	x	190x190	165
F.A.L.	Versatile	x	x	x
GEWISS	HPIT 400			
GEWISS	HPIT 150			
HIGH END	Cyber	see tab.	x	x
ROBERT JULIAT	613S/614S	B	180x180	140
ROBERT JULIAT	614SX	A	180x180	140
ROBERT JULIAT	714SX	A	215x215	200
LEGRAND	Fluo 2.40	x	x	x
LEGRAND	Garland 12m	x	x	x
LMT	LT300	x	Ø100	70
LTM	LT300	x	Ø100	70
MAZDA	Cormoran500	x	x	x
MAZDA	Cormoran1000	x	x	x
MAZDA	HPIT150	x	x	x

### OF FLOODLIGHTS

Lamp type	Cap type	Power (W)	Voltage (V)	Temp (°K)	Service life
M40	GY9.5	500	230	3000	2000
K4	R7S	1,000	230	3000	200
HMI2500/SE	G38	2500	Ballast	6000	500
XOP15	x	1,500	105	5600	500
H400BL	E40	400	Ballast	x	2000
CP82	GY95	500	230	3200	200
CP40	G38	1,000	230	3200	200
CP73	G38	2000	230	3200	480
DWE	Leads	650W x2	120	3200	1,000
DWE	Leads	650W x4	120	3200	1,000
DWE	Leads	650W x8	120	3200	1,000
HPL575	G9.5	575	230	3200	400
HPL575	G9.5	575	230	3200	400
HPL575	G9.5	575	230	3200	400
HPL575	G9.5	575	230	3200	400
HPL575	G9.5	575	230	3200	400
T11/T19	GX9.5	1,000	230	3000	750
W/645	E40	400	125	4500	20000
W/942	RX75	150	x	4200	16000
HMI1200/SE	G38	1200	Ballast	6000	750
T11/T19	GX9.5	1,000	230	3000	750
T11/T19	GX9.5	1,000	230	3000	750
CP43/CP72	GY16	2000	230	3200	300
Fluo	G13	2x32	220	6200	8000
Bulb	E27	40x40	220	x	x
CP81	GY9.5	300	230	3200	150
CP82	GY9.5	500	230	3200	150
J500/K1	R7S	500	230	3000	2000
K4	R7S	1,000	230	3000	2000
HPA400S	38R7S	400	Ballast	x	x

## LIGHTING

### SPECIFICATIONS

Brand	Type	Gobo size	PF size (in mm)	Ø lens (in mm)
CLAY PAKY	Alpha Spot 700	25.7 mm	x	x
CLAY PAKY	Alpha Spot 300	25.7 mm	x	x
MARTIN	MAC250	22.5 mm	x	x
MARTIN	MAC700	27.9 mm	x	x
MARTIN	MAC2000	E	x	x
MARTIN	VIPER	E	x	x
MARTIN	MAC III	E	x	x
PULSAR	PAR46MK2	x	x	x
ROBERT JULIAT	310H	x	180	180
ROBERT JULIAT	329H	x	210	185
ROBERT JULIAT	710Sx	x	195	180
ROBERT JULIAT	933Sx	A	180	x
ROBERT JULIAT	ARAMIS	x	235	240
ROBERT JULIAT	IVANHOE	A	180	200
ROBERT JULIAT	HELOISE	x	175	210
ROBERT JULIAT	KORRIGAN	A	175	185
ROBERT JULIAT	PIXIE	x	x	140
SCENILUX	BT250	x	235x235	x
SCENILUX	BT500	x	355x355	x
SCENILUX	Svoboda	x	1000x370	x
SPOTLIGHT	Profiled 5Z5	x	80	64
STUDIO DUE	City Color	x	x	x
THOMAS	PAR36	x	x	x
THOMAS	PAR38	x	x	x
THOMAS	PAR56	x	x	x
THOMAS	PAR56 Rail	x	230x230	x
THOMAS	PAR64	x	255x255	x
VARILITE	VL 3000/3500	E	x	x
VARILITE	VL 2500	22.5 mm	x	x



### OF FLOODLIGHTS - CONTINUED

Lamp type	Cap type	Power (W)	Voltage (V)	Temp (°K)	Service life
MSR250/2	GY9.5	250	230	8100	x
MSR700/D4/60		700	230	7500	x
OSR 1200/S	Crayon	1200	230	7500	x
1000/80		1,000	80	6000	x
HTI 1500/60/D5	Fast Fit	1,500	230	6000	x
MSR700	Mini Fast Fit	700	230	7500	x
MSR300	Mini Fast Fit	300	230	7500	x
PAR46	Screw	30	6 + Transfo	2800	100
CP40/CP70	GY9.5/G38	1,000	230	3200	200
CP92	G38	2000W	230	3200 K	400
CP72	GY9.5	2000W	230	3200 K	400
2500W/SE	G38	2500W	115	6000 K	500
HMI 2500SXS	Sfa 21	2500W	115	6000 K	500
HMI 2500W/SE	G38	2500W	115	6000 K	500
HMI 2500W/SE	G38	2500W	115	6000 K	500
HMI 1200/DXS	Sfc 15.5	1200W	100	6000 K	1,000
HMI 575/DXS	Sfc 10	575W	95	6000 K	1,000
Domed LV	E27	250	24 + Transfo	3000	50
Domed LV	E40	500	24 + Transfo	3000	50
Domed LV	E40	9x250	9x24	3000	50
LED Cool White	x	50	x	5700	x
MHD1800	PSFC20-6	1800	Ballast	5600	4000
PAR36	Screw	30	6 + Transfo	3200	200
PAR38	E27	120	230	3000	2000
PAR56	GX16d	300	230	3000	2000
PAR56	GX16d	300	230	3000	2000
PAR64	GX16d	1,000	120	3000	4000
MSR Gold 1200	Crayon	1200	230	7500	x
MSR700 SA	GY9.5	700	230	7500	x

## LIGHTING

### DIAMETER OF A LIGHT BEAM AS A FUNCTION OF

The diameter of the projection beam is

	1 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m	9 m	10 m	11 m	12 m
5°	0.09	0.17	0.26	0.35	0.44	0.52	0.61	0.70	0.79	0.87	0.96	1.05
10°	0.17	0.35	0.52	0.70	0.87	1.05	1.22	1.40	1.57	1.74	1.92	2.09
11°	0.19	0.38	0.58	0.77	0.96	1.15	1.34	1.54	1.73	1.92	2.11	2.30
12°	0.21	0.42	0.63	0.84	1.05	1.26	1.47	1.67	1.88	2.09	2.30	2.51
13°	0.23	0.45	0.68	0.91	1.13	1.36	1.59	1.81	2.04	2.27	2.49	2.72
14°	0.24	0.49	0.73	0.98	1.22	1.47	1.71	1.95	2.20	2.44	2.69	2.93
15°	0.26	0.52	0.79	1.05	1.31	1.57	1.83	2.09	2.36	2.62	2.88	3.14
16°	0.28	0.56	0.84	1.12	1.40	2.67	1.95	2.23	2.51	2.79	3.07	3.35
17°	0.30	0.59	0.89	1.19	1.48	1.78	2.08	2.37	2.67	2.97	3.26	3.56
18°	0.31	0.63	0.94	1.26	1.57	1.88	2.20	2.51	2.83	3.14	3.45	3.77
19°	0.33	0.66	0.99	1.33	1.66	1.99	2.32	2.65	2.98	3.31	3.65	3.98
20°	0.35	0.70	1.05	1.40	1.74	2.09	2.44	2.79	3.14	3.49	3.84	4.19
22°	0.38	0.77	1.15	1.54	1.92	2.30	2.69	3.07	3.45	3.84	4.22	4.61
24°	0.42	0.84	1.26	1.67	2.09	2.51	2.93	3.35	3.77	4.19	4.61	5.02
26°	0.45	0.91	1.36	1.81	2.27	2.72	3.17	3.63	4.08	4.54	4.99	5.44
28°	0.49	0.98	1.47	1.95	2.44	2.93	3.42	3.91	4.40	4.88	5.37	5.86
30°	0.52	1.05	1.57	2.09	2.62	3.14	3.66	4.19	4.71	5.23	5.76	6.28
32°	0.56	1.12	1.67	2.23	2.79	3.35	3.91	4.47	5.02	5.58	6.14	6.70
34°	0.59	1.19	1.78	2.37	2.97	3.56	4.15	4.77	5.34	5.93	6.52	7.12
36°	0.63	1.26	1.88	2.51	3.14	3.77	4.40	5.02	5.65	6.28	6.91	7.54
38°	0.66	1.33	1.99	2.65	3.31	3.98	4.64	5.30	5.97	6.63	7.29	7.95
40°	0.70	1.40	2.09	2.79	3.49	4.19	4.88	5.58	6.28	6.98	7.68	8.37
42°	0.73	1.47	2.20	2.93	3.66	4.40	5.13	5.86	6.59	7.33	8.06	8.79
44°	0.77	1.54	2.30	3.07	3.84	4.61	5.37	6.14	6.91	7.68	8.44	9.21
46°	0.80	1.60	2.41	3.21	4.01	4.81	5.62	6.42	7.22	8.02	8.83	9.63
48°	0.84	1.67	2.51	3.35	4.19	5.02	5.86	6.70	7.54	8.37	9.21	10.05
50°	0.87	1.74	2.62	3.49	4.36	5.23	6.11	6.98	7.85	8.72	9.59	10.47
52°	0.91	1.81	2.72	3.63	4.54	5.44	6.35	7.26	8.16	9.07	9.98	10.89

### THE ANGLE AND DISTANCE OF PROJECTION

expressed in metres (for a 75 mm diameter projection window)

	13 m	14 m	15 m	16 m	17 m	18 m	19 m	20 m	25 m	30 m	35 m	40 m
5°	1.13	1.22	1.31	1.40	1.48	1.57	1.66	1.74	2.18	2.62	3.05	3.49
10°	2.27	2.44	2.62	2.79	2.97	3.14	3.31	3.49	4.36	5.23	6.11	6.98
11°	2.49	2.69	2.88	3.07	3.26	3.45	3.65	3.84	4.80	5.76	6.72	7.68
12°	2.72	2.93	3.14	3.35	3.56	3.77	3.98	4.19	5.23	6.28	7.33	8.37
13°	2.95	3.17	3.40	3.63	3.86	4.08	4.31	4.54	5.67	6.80	7.94	9.07
14°	3.17	3.42	3.66	3.91	4.15	4.40	4.64	4.88	6.11	7.33	8.55	9.77
15°	3.40	3.66	3.93	4.19	4.45	4.71	4.97	5.23	6.54	7.85	9.16	10.47
16°	3.63	3.91	4.19	4.47	4.74	5.02	5.30	5.58	6.98	8.37	9.77	11.16
17°	3.86	4.15	4.45	4.74	5.04	5.34	5.63	5.93	7.41	8.90	10.38	11.86
18°	4.08	4.40	4.71	5.02	5.34	5.65	5.97	6.28	7.85	9.42	10.99	12.56
19°	4.31	4.64	4.97	5.30	5.63	5.97	6.30	6.63	8.29	9.94	11.60	13.26
20°	4.54	4.88	5.23	5.58	5.93	6.28	6.63	6.98	8.72	10.47	12.21	13.96
22°	4.99	5.37	5.76	6.14	6.52	6.91	7.29	7.68	9.59	11.51	13.43	15.35
24°	5.44	5.86	6.28	6.70	7.12	7.54	7.95	8.37	10.47	12.56	14.65	16.75
26°	5.90	6.35	6.80	7.26	7.71	8.16	8.62	9.07	11.34	13.61	15.87	18.14
28°	6.35	6.84	7.33	7.82	8.30	8.79	9.28	9.77	12.21	14.65	17.10	19.54
30°	6.80	7.33	7.85	8.37	8.90	9.42	9.94	10.47	13.08	15.70	18.32	20.93
32°	7.26	7.82	8.37	8.93	9.49	10.05	10.61	11.16	13.96	16.75	19.54	22.33
34°	7.71	8.30	8.90	9.49	10.08	10.68	11.27	11.86	14.83	17.79	20.76	23.72
36°	8.16	8.79	9.42	10.05	10.68	11.30	11.93	12.56	15.70	18.84	21.98	25.12
38°	8.62	9.28	9.94	10.61	11.27	11.93	12.59	13.26	16.57	19.89	23.20	26.52
40°	9.07	9.77	10.47	11.16	11.86	12.56	13.26	13.96	17.44	20.93	24.42	27.91
42°	9.52	10.26	10.99	11.72	12.46	13.19	13.92	14.65	18.32	21.98	25.64	29.31
44°	9.98	10.75	11.51	12.28	13.05	13.82	14.58	15.35	19.19	23.03	26.86	30.70
46°	10.43	11.23	12.04	12.84	13.64	14.44	15.25	16.05	20.06	24.07	28.09	32.10
48°	10.89	11.72	12.56	13.40	14.23	15.07	15.91	16.75	20.93	25.12	29.31	33.49
50°	11.34	12.21	13.08	13.96	14.83	15.70	16.57	17.44	21.82	26.17	30.53	34.89
52°	11.79	12.70	13.61	14.51	15.42	16.33	17.24	18.14	22.68	27.21	31.75	36.28

## LIGHTING

### PAR GOBO SIZE / FLOODLIGHTS

Type/Size	Outer Ø of the Gobo	Useful Ø of the image
A Size	100 mm	75 mm
B Size	86 mm	64.5 mm
B Size Glass (Obsolete)*	79 mm	64.5 mm
M Size (S4 Jr.)	66 mm	49.5 mm
D Size (Steel)	53.3 mm	40 mm
E Size	37.5 mm	38 mm
Clay Paky Stage Scan, Zoom	51.8 mm	48 mm
Clay Paky VIP	31.5 mm	23 mm
Martin MAC2000 / VIPER / MAC III	37.5 mm	38 mm
Martin MAC 500, 918	27.8 mm	23 mm
Martin MAC 250	22.25 mm	17 mm
Martin 518	25 mm	14 mm
CP Mini-Scan HPE, Stagelight 300	25 mm	22-20 mm
Trackspot	25 mm	18 mm
Vari*Lite VL1	25 mm	18 mm
Vari*Lite VL2	SPEC	SPEC
Vari*Lite VL3000 / VL3500	37.5 mm	38 mm
Vari*Lite VL6	SPEC	SPEC



### THE DMX PROTOCOL

The **DMX 512 protocol** allows transmitting information between a command (control panel, DMX player/recorder...) and multiple remote receivers (servo-controlled yokes, LED projectors, DMX I/O, etc.).

The **DMX 512 protocol** allows controlling 512 DMX channels, which are themselves divided into 256 values (from 0 to 255 in 8 data bits per channel). A "DMX universe" therefore has a maximum of 512 DMX channels.

The signal consists of digital pulse trains of rectangular signals transmitted cyclically at a frequency of 250,000 bps (250 kbps). The set of these pulse trains are called a "DMX frame". The entire frame is transmitted 44.3 times per second (i.e. at 44hz) (Calculation: 2,500,000 bps / 513 channels (512+1) X 11 bits (8 data bits + 3 frame start and end bits for control

= 44.3 Hz). The amplitude value of the signals is set from - 7 V min. to + 12 V max. with respect to the ground.

The transmission is serial and unidirectional, no acknowledgement from the receivers to the transmitter is possible: the transmission is asynchronous.

The signals are transmitted via a symmetrical link. Two wires carry the signals in opposite phase and the input stage of the receiver detects the amplitude differences between these two conductors. In this way, an induced interference on both wires will be reduced to zero potential through the use of a differential amplifier.

The data is copied by each receiver, mostly passively. The theory states that 32 receivers can be connected behind one transmitter (with a maximum of 16 channels per receiver). The number of receivers in series on the line therefore depends on all the electrical characteristics of the network (quality of the cable, quality of the transmitter current, passive or active recopying, etc.) and also on the number of channels required to operate the machine. Many servo-controlled yokes now have much more than 16x channels/parameters to make them work.

The standard cable has a cable impedance of 120 ohms and consists of 2 twisted pairs wrapped in a shield.

The standard specifies the 5-pin XLR as the termination of the cable carrying DMX signals (type NC5MX and NC5FX). However, many devices, especially LEDs, have 3-pin connectors.

It is recommended to insert a "DMX 120 Ohms p between pins 2 and 3 of the male XLR) at the end of the line to avoid data reflections (data coming back on the line).

It is recommended to insert a "DMX 120 Ohms p between pins 2 and 3 of the male XLR) at the end of the line to avoid data reflections (data coming back on the line).



pin 1	ground
pin 2	data -
pin 3	data +
pin 4	Not connected
pin 5	Not connected

Different light panels (or controllers) now have the ability to issue several different control protocols to allow different machines to be controlled:

## SOUND SYSTEMS

### SOUND PRESSURE

The variation **N** (dB) of sound pressure **Rt** (dB) is obtained as a function of:

- **Ro** = Theoretical efficiency of the speaker in dB, for a power **Po** of 1W at 1 m.
- **Px** = Power in watts, actually delivered by the speaker.
- **Dx** = Distance in metres from the speaker to the listening point.

$$Rt \text{ (dB)} = Ro \text{ (1W/1m)} + 10\log(Px/Po) - 20\log(Dx/Do)$$

Px	N (dB)	N (dB)	Dx
1W	0 dB	0 dB	1 m
2W	+3 dB	-6 dB	2 m
4W	+6 dB	-12 dB	4 m
8W	+9 dB	-18 dB	8 m
16W	+12 dB	-24 dB	16 m
32W	+15 dB	-30 dB	32 m
64W	+18 dB	-36 dB	64 m
128W	+21 dB	-42 dB	128 m
256W	+24 dB	-48 dB	256 m
1024W	+27 dB	-54 dB	1024 m

#### Example:

Calculation of the acoustic efficiency of a speaker delivering 100dB at 1m and a power Px of 128W at a distance of 64m.

$$Rt = 100 + 21 - 36 = \mathbf{85 \text{ dB}}$$

#### Simplified free field calculation:

- Doubling the power increases the sound pressure by 3dB at the same distance.
- Doubling the distance from the listening point, causes a loss of 6dB of sound pressure at the same power.

### GAIN AND VOLTAGE

The table below shows the electrical voltage at the output of the device (console, amp, peripheral, etc.) as a function of the gain or attenuation delivered by this device.

These values are calculated with  $\text{odB reference} = 1 \text{ mW}/600\Omega$

Voltage	Gain	Voltage	Gain
0.002 V	-50 dB	1.735 V	+7 dB
0.008 V	-40 dB	1.946 V	+8 dB
0.025 V	-30 dB	2.184 V	+9 dB
0.0775 V	-20 dB	2.452 V	+10 dB
0.245 V	-10 dB	2.75 V	+11 dB
0.275 V	-9 dB	3.086 V	+12 dB
0.3085 V	-8 dB	3.462 V	+13 dB
0.346 V	-7 dB	3.884 V	+14 dB
0.388 V	-6 dB	4.358 V	+15 dB
0.436 V	-5 dB	4.89 V	+16 dB
0.489 V	-4 dB	5.487 V	+17 dB
0.549 V	-3 dB	6.155 V	+18 dB
0.616 V	-2 dB	6.91 V	+19 dB
0.775 V	0 dB	7.75 V	+20 dB
0.87 V	+1 dB	15.47 V	+26 dB
0.976 V	+2 dB	24.507 V	+30 dB
1.095 V	+3 dB	30.855 V	+32 dB
1.228 V	+4 dB	48.9 V	+36 dB
1.378 V	+5 dB	77.5 V	+40 dB
1.547 V	+6 dB	97.57 V	+42 dB

#### Example:

An amplifier rated at 32dB gain with an input sensitivity of 0dB will deliver an output voltage of 30.855V.

A mixer producing a signal at +4dB will deliver an output voltage of 1.228V. In this case:  $\text{0dB Vu} = +4\text{dBm}$

## SOUND SYSTEMS

### IMPEDANCE MATCHING OF LOW IMPEDANCE LOUDSPEAKER LINES

The table below shows the current in the speaker line as a function of amp power and speaker impedance.

When calculating the cross-section of the loudspeaker cable, the admissible current density of the copper ( $Cu = 5A/mm^2$ ) or aluminium ( $Al = 3A/mm^2$ ) must be taken into account.

At low impedance, the current in the loudspeaker line is:  $I (A) = \sqrt{P (W) / Z (\Omega)}$ .  
**P** being the amp power and **Z** being the impedance of the H line.

Amp power	4Ω	8Ω	16Ω
1W	0.50A	0.35A	0.25A
2W	0.71A	0.50A	0.35A
4W	1.00A	0.71A	0.50A
5W	1.12A	0.79A	0.56A
8W	1.41A	1.00A	0.71A
10W	1.58A	1.12A	0.79A
20W	2.24A	1.58A	1.12A
30W	2.74A	1.94A	1.37A
40W	3.16A	2.24A	1.58A
50W	3.54A	2.50A	1.77A
100W	5.00A	3.54A	2.50A
200W	7.07A	5.00A	3.54A
300W	8.66A	6.12A	4.33A
400W	10.00A	7.07A	5.00A
500W	11.18A	7.91A	5.59A
600W	12.25A	8.66A	6.12A
700W	13.23A	9.35A	6.61A
800W	14.14A	10.00A	7.07A
900W	15.00A	10.61A	7.50A
1000W	15.81A	11.18A	7.91A

**Example:**

For a 4Ω loudspeaker line and an amp delivering 400W, the line current is 10A. We therefore



### IMPEDANCE MATCHING OF 70V OR 100V LOUDSPEAKER LINES

The table below shows the current in the loudspeaker line as a function of amp voltage (70V or 100V) and loudspeaker impedance.

US-standard amps deliver 70V and EEC-standard amps deliver 100V.

In a "100V" or "70V" line, the impedance of the loudspeaker line is:  $Z (\Omega) = U^2 (V) / P (W)$   
**P** being the amp power and **U** being the amp output voltage.

Amp power	EEC = 100V		USA = 70V	
	Z	I	Z	I
1W	10000Ω	0.01A	4900Ω	0.01A
4W	2500Ω	0.04A	1225Ω	0.057A
5W	2000Ω	0.05A	980Ω	0.071A
8W	1250Ω	0.08A	612Ω	0.11A
10W	1000Ω	0.10A	490Ω	0.14A
12W	833Ω	0.12A	408Ω	0.17A
15W	666Ω	0.15A	326Ω	0.21A
20W	500Ω	0.20A	245Ω	0.28A
30W	333Ω	0.30A	163Ω	0.42A
60W	166Ω	0.60A	81Ω	0.85A
100W	100Ω	1A	49Ω	1.42A
120W	83Ω	1.2A	41Ω	1.71A
240W	41.6Ω	2.4A	21Ω	3.42A
360W	27.7Ω	3.6A	13.6Ω	5.14A
480W	21Ω	4.8A	10Ω	6.85A

If all the speakers have the same impedance, the maximum number of speakers that can be connected in parallel is:

$$n = Zt (\text{total line impedance}) / Zx (\text{impedance of one speaker})$$

**Example:**

For an amp delivering 100W at 100V, the maximum number of 20Ω speakers that can be powered is  $100\Omega / 20\Omega = 5$ .

## SOUND SYSTEMS

### AMPLIFICATION PRINCIPLES

1. To reduce the current in the loudspeaker lines, for long-range distributions, a step-up transformer is placed at the output of the amp. We therefore work in voltage and no longer in current. Line losses and the cross-section of the distribution cable can thus be reduced.

**EEC standard = 100V / USA standard = 70V**

Example: - a 100W/4Ω amp delivers a current of 5A  
 - a 100W/100V amp delivers a current of 1A

2. An amplifier distributing a voltage network signal must not be connected to a loudspeaker distribution line with an equivalent impedance lower than its matching impedance.

Example: - 120W & 100V amp,  
 $Z_{eq} = (100 \times 100) / 120 = 83.3\Omega$   
 - 20W & 100V speaker  
 $Z_u = (100 \times 100) / 20 = 500\Omega$   
 - the maximum number of speakers on the loudspeaker line is:  
 $n = Z_u / Z_{eq} = 500 / 83.3 = 6$  speakers max.

3. The sum of the power ratings of the connected loudspeakers must not exceed the power of the amp.

Example: - 120W amp & 20W speakers  
 - the maximum number of speakers on the loudspeaker line is:  
 $n = 120 / 20 = 6$  speakers max.



### MICROPHONE SELECTION TABLE

There are two main categories of microphones: **dynamic** (only needing to be plugged into a mixer) and **static** (needing phantom power from 12 to 48V).

The choice of a microphone is based on several criteria:

- the **directionality** which is (from the widest to the tightest): omnidirectional / bidirectional / cardioid / supercardioid / hypercardioid
- the **sensitivity**, depending on the sound pressure the microphone will be subjected to
- the **response curve** of the microphone which will define its sound "colour"

The following table gives you the most suitable microphone choices for the main recordings to be made.

Source	Dynamic	Static
Song, speech	SM58/Beta58/SM57	SM87/Beta87/C535
Bass drum	RE20/Beta52/MD421/D112	Beta91/SM91
Snare drum	SM57/Beta57/M88	C35
Tom-toms	SM57/Beta57/MD421/M88/e604	Beta98
Drum cymbals		SE300/SM81/KM184/C451/C414
Guitar	SM57/Beta57/MD421/M88/e609	C35
Acoustic guitar	SM57/Beta57	SM81/SE300/C451/C414/KM184
Bass	RE20/MD421/Beta52	
Brass instruments	SM57/Beta57/SM58/MD421/M88/RE20	C535/C414
Percussion instruments	SM57/Beta57/MD421/e604/M88	C535/C414/SE300/C451
Piano		Beta91/SM91/PCC160/SM81/C414/CMC6
Choir		CMC6/C414/SE300/SM81/MKH416/KM184
Speech, conference	SM58/Beta58/SM57	C647/C747/C535

## ENERGY

### ALTERNATING CURRENT POWER & INTENSITY

$$P \text{ in (kW)} \rightarrow P \text{ (kW)} = U \text{ (V)} \times I \text{ (A)} \times \cos \varphi \rightarrow P \text{ (kW)} = U \text{ (V)} \times I \text{ (A)} \times \cos \varphi \times 1.732$$

1000

1000

ALTERNATING

SINGLE-PHASE

THREE-PHASE

$$P \text{ IN (KVA)} \rightarrow S \text{ (kW)} = U \text{ (V)} \times I \text{ (A)} \rightarrow S \text{ (kW)} = U \text{ (V)} \times I \text{ (A)} \times 1.732$$

The  $\cos \varphi$  depends on the machines or floodlights connected to the electrical installation.  
For example:

for an incandescent lamp  $\cos \varphi \approx 1$

for a fluorescent lamp  $\cos \varphi \approx 0.5$

With voltage  $U(V) = 400$   
 $\cos \varphi = 0.93$  (EDF recommendation)

With voltage  $U(V) = 400$   
 $\cos \varphi = 0.80$  (Adverse reality)

Current/ Phase	Total Active Power
32 A	21 kW
63 A	41 kW
125 A	81 kW
250 A	161 kW
400 A	258 kW
630 A	406 kW
1000 A	644 kW

Current/ Phase	Total Active Power
32 A	18 kW
63 A	35 kW
125 A	69 kW
250 A	139 kW
400 A	222 kW
630 A	349 kW
1000 A	554 kW

### EDF RATES

Blue Tariff 3 to 36 kW

EDF metering

Yellow Tariff 36 to 250 kW

Green Tariff > 250 kVA

### KW <--> KVA CONVERSION

Active power is expressed in **kW** (kiloWatt) while apparent power is expressed in **kVA** (kiloVolt-Ampere).

The conversion formula is:

$$P \text{ (kW)} = P \text{ (kVA)} \times \cos \varphi$$

The table below gives the active power delivered by a generator according to its apparent power.

#### USEFUL POWER DELIVERED BY A GENERATOR IN KW (Cos φ = 0.8)

P (kVA)	P (kW)	P (kVA)	P (kW)	P (kVA)	P (kW)
3	2.4	35	28	150	120
4	3.2	40	32	160	128
5	4	45	36	170	136
6	4.8	50	40	180	144
7	5.6	60	48	200	160
8	6.4	70	56	250	200
9	7.2	80	64	300	240
10	8	90	72	350	280
15	12	100	80	400	320
20	16	120	96	500	400
25	20	130	104	600	480
30	24	140	112	1,000	800

#### Example:

To connect 200kW of floodlights, a generator of at least 250kVA is required, assuming that the powers are correctly balanced on the 3 phases, at full power (67kW / phase).

## ENERGY

### TECHNICAL NOTE

For 400 volts / equivalence table for  $0.80 < \cos \varphi < 0.93$

Power in kW	9	18	36	72	142	240	400	680
Power in kVA	11	22	45	90	180	300	500	860
Amperage per phase	16	32	63	125	250	400	630	1200
Cable cross-section for 100 m	5x2.5 <sup>2</sup>	5x6 <sup>2</sup>	5x16 <sup>2</sup>	5x25 <sup>2</sup>	5x120 <sup>2</sup>	5x185 <sup>2</sup>	5x240 <sup>2</sup>	10x240 <sup>2</sup>

### NEUTRAL SYSTEM AND GROUNDING

#### Standards in force:

**1st letter =**

#### Position of the neutral point

**T** means "direct connection to ground"

**I** means "Insulated or impedance neutral"

**2nd letter =**

#### Grounding method

**T** means "direct connection to ground"

**N** means "connection to source Neutral".

**3rd letter =**

#### Neutral & Ground position

**C** means "Ground & Neutral combined"

**S** means "Earth & Neutral separate".

Examples:

**TT** = Primary neutral directly to Ground - Ground separate from Neutral

**TN-S** = Neutral & Ground separate / **TN-C** = Neutral & Ground combined /

**IT** = Impedance neutral or insulated from ground

#### Things to remember:

#### Current carrying capacity of the wiring:

The following data is an approximation that can be used for lengths  $< 20$  m and cross-sections  $< 16$  mm<sup>2</sup>.

Copper (Cu) = 5 A/mm<sup>2</sup>

Aluminium (Al) = 3 A/mm<sup>2</sup>

### ELECTRICAL CABLE CROSS-SECTION WITH RESPECT TO ITS LENGTH

The tables below give the maximum length of cable that can be used depending on the voltage, current and power to be supplied.

#### SINGLE-PHASE CURRENT, 220V

P (kW)	I (A)	Cable cross-section (mm <sup>2</sup> )						Max. cable length (in m)
		2.5	4	6	10	16	25	
0.5	2.2	165	265	395	-	-	-	
1	4.3	84	135	200	335	530	-	
2	8.7	43	68	100	170	265	430	
3	13	29	45	66	110	180	285	
4	17.5	21	34	49	84	135	210	
5	21.5	-	27	39	68	105	170	
6	26	-	23	32	56	90	140	
7	30	-	-	28	48	76	120	
8	34.5	-	-	-	42	67	105	
9	39	-	-	-	38	60	94	
10	43.5	-	-	-	34	54	84	

(For a voltage drop of 3%)

#### THREE-PHASE CURRENT, 380V

P (kW)	I (A)	Cable cross-section (mm <sup>2</sup> )						Max. cable length (in m)
		2.5	4	6	10	16	25	
6	12	135	210	315	525	810	-	
12	24	69	110	160	265	415	640	
18	36	-	-	110	180	280	430	
20	40	-	-	98	160	255	390	
25	50	-	-	-	130	205	315	
30	60	-	-	-	-	170	260	
40	80	-	-	-	-	-	195	
50	100	-	-	-	-	-	160	

(For a voltage drop of 3%)

## ENERGY

### FREQUENCY & VOLTAGE BY COUNTRY

Country	Frequency	Voltage	Country	Frequency	Voltage
Azores	50Hz	220/380V	Central African Republic	50 Hz	220/380V
Afghanistan	50Hz	220/380V	Chile	50Hz	220/380V
South Africa	50Hz	220/380V	China	50Hz	220/380V
Algeria	50Hz	220/380V	Cyprus	50Hz	240/415V
Germany	50Hz	220/380V	Colombia	60Hz	110/220V
England	50Hz	240/415V	Congo	50Hz	220/380V
Angola	50Hz	220/380V	Korea	60Hz	100/200V
Saudi Arabia	60Hz	127/220V	Costa Rica	60Hz	120/240V
Argentina	50Hz	220/380V	Dahomey	50Hz	220/380V
Australia	50Hz	220/415V	Denmark	50Hz	220/380V
Austria	50Hz	220/380V	Dominican Republic	60 Hz	110/220V
Bahamas	60Hz	120/240V	Egypt	50Hz	220/380V
Bahrain	50Hz	230/400V	Spain	50Hz	220/380V
Bangladesh	50Hz	230/400V	USA	60Hz	115/200V
Barbados	50Hz	110/200V	Ethiopia	50Hz	220/380V
Belgium	50Hz	220/380V	Fiji	50Hz	200/415V
Benin	50Hz	220/380V	Finland	50Hz	220/380V
Bermudas	60Hz	115/230V	France	50Hz	220/380V
Myanmar	50Hz	220/240V	Ghana	50Hz	220/400V
Bolivia	50Hz	220/380V	Greece	50Hz	220/380V
Botswana	50Hz	220/380V	Greenland	50Hz	220/380V
Brazil	60Hz	127/220V	Guatemala	60Hz	120/240V
Bulgaria	50Hz	220/380V	Guinea	50Hz	220/380V
Cambodia	50Hz	120/208V	Haiti	60Hz	110/220V
Cameroon	50Hz	220/380V	Upper Volta	50Hz	220/380V
Canada	60Hz	120/240V	Netherlands	50Hz	220/380V
IEC	50Hz	127/220V	Honduras	60Hz	110/220V



### FREQUENCY & VOLTAGE BY COUNTRY - CONTINUED

Country	Frequency	Voltage
Hong Kong	50Hz	200/346V
Hungary	50Hz	220/380V
India	50Hz	230/400V
Indonesia	50Hz	127/220V
Iraq	50Hz	220/380V
Iran	50Hz	220/380V
Ireland	50Hz	220/380V
Iceland	50Hz	220/380V
Israel	50Hz	220/400V
Italy	50Hz	220/380V
Jamaica	50Hz	110/220V
Japan	60Hz	100/200V
Kenya	50Hz	240/415V
Kuwait	50Hz	240/415V
Laos	50Hz	220/380V
Lebanon	50Hz	110/190V
Libya	50Hz	127/220V
Luxembourg	50Hz	220/380V
Malaysia	50Hz	240/415V
Malta	50Hz	240/415V
Morocco	50Hz	115/200V
Mexico	60Hz	127/220V
Mozambique	50Hz	220/380V
Nepal	50Hz	230/440V
Nicaragua	50Hz	120/240V
Niger	50Hz	220/380V
Nigeria	50Hz	230/415V

Country	Frequency	Voltage
Norway	50Hz	230V
New Zealand	50Hz	230/400V
Oman	50Hz	220/440V
Uganda	50Hz	240/415V
Pakistan	50Hz	230/400V

## STRUCTURE

### MONOTUBE STRUCTURE Ø50 ASD EX50



The table below gives the maximum load that can be attached to an **EX 50 structure**, depending on the length and load distribution.

**TABLE OF ADMISSIBLE LOADS**

Deflection condition (deflection span)	Max. admissible load	1 m	2 m	3 m	4 m	5 m	6 m
1/150	Centred (kg)	105	50	22	10	5	1
Maximum resistance	Distributed (kg/ml)	210	43.4	12.3	4.7	2	0.8
1/300	Centred (kg)	110	26	10	4	-	-

### MONOTUBE STRUCTURE Ø50 ASD FX50



The table below gives the maximum load that can be attached to an **FX 50 structure**, depending on the length and load distribution.

**TABLE OF ADMISSIBLE LOADS**

Deflection condition (deflection span)	Max. admissible load	1 m	2 m	3 m	4 m	5 m	6 m
1/150	Centred (kg)	148	72	31	15	6	1
Maximum resistance	Distributed (kg/ml)	298	61.2	17.3	6.6	2.8	1.1
1/300	Centred (kg)	153	37	14	5	-	-

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## LADDER SERIES 300 H30L STRUCTURE



H30L - ADMISSIBLE LOADS								
	Uniformly distributed load Load per metre	De- flec- tion		Deflec- tion				Total weight
	UDL		A central point CPL		Distribution on 2 points (Load per point) TPL	Distribution on 3 points (Load per point) QPL	Distribution on 4 points (Load per point) FPL	
m	kg/m	mm	kg	mm	kg	kg	kg	
1	1718.7	1	1718.7	1	859.4	572.1	429.7	5.0
2	856.9	4	1259.2	3	856.9	569.6	428.4	10.0
3	556.9	8	835.3	6	626.5	417.7	346.7	15.0
4	311.1	14	622.1	11	466.6	311.1	258.2	20.0
5	197.3	22	493.2	18	369.9	246.6	204.7	25.0
6	135.5	32	406.4	26	304.8	203.2	168.7	30.0
7	98.2	44	343.7	35	257.8	171.9	142.6	35.0
8	74.0	57	296.1	46	222.0	148.0	122.9	40.0
9	57.4	72	258.4	58	193.8	129.2	107.3	45.0
10	45.6	89	227.8	71	170.9	113.9	94.6	50.0
11	36.8	108	202.4	86	151.8	101.2	84.0	55.0
12	30.1	128	180.7	103	135.5	90.4	75.0	60.0
13	24.9	150	162.0	120	121.5	81.0	67.2	65.0
14	20.8	174	145.6	140	109.2	72.8	60.4	70.0
15	17.5	200	131.1	160	98.3	65.5	54.4	75.0
16	14.8	228	118.0	182	88.5	59.0	49.0	80.0

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## STRUCTURE

### LADDER SERIES 300 X30L STRUCTURE



#### X30L - ADMISSIBLE LOADS (STRUCTURE ATTACHED AT THE ENDS)

Length m	UDL	Deflection mm	Load on 1 central point	
	kg/m		CPL kg	Deflection mm
1	992.2	0	992.2	0
2	339.0	1	339.0	1
3	114.0	2	171.0	2
4	44.0	3	88.0	2
5	20.0	3	50.0	2

#### X30L - ADMISSIBLE LOADS (STRUCTURE ATTACHED AT EVERY METRE)

Length m	UDL	Deflection mm	Load on 1 central point	
	kg/m		CPL kg	Deflection mm
4	245.8	17	523.8	13
5	166.5	26	416.3	21
6	114.7	37	344.2	30
7	83.5	51	292.2	41
8	63.2	66	252.9	53
9	49.3	84	222.0	67
10	39.0	100	196.9	83
11	27.8	110	176.2	100
12	20.7	120	158.6	119

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### LADDER SERIES 300 X30L STRUCTURE - CONTINUED



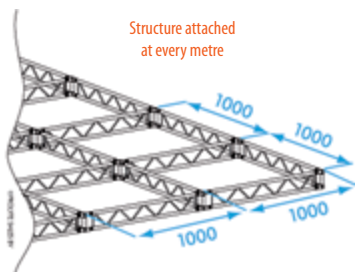
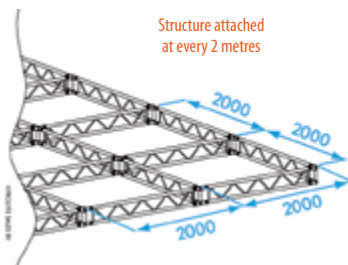
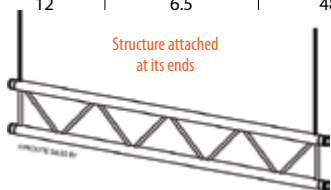
#### X30L - ADMISSIBLE LOADS (STRUCTURE ATTACHED AT EVERY 2 METRES)

Uniformly distributed load



Load on 1 central point

Length	UDL	Deflection	CPL	Deflection
m	kg/m	mm	kg	mm
4	82.5	5	165.0	4
5	51.7	8	129.3	7
6	35.0	12	105.0	10
7	24.9	16	87.2	13
8	18.4	21	73.5	17
9	13.9	27	62.5	22
10	10.7	33	53.4	27
11	8.3	40	45.7	32
12	6.5	48	39.0	38



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## STRUCTURE

### TRIANGULAR SERIES 200 E20D STRUCTURE



#### E20D - ADMISSIBLE LOADS

m	Uniformly distributed load Load per metre	De- flec- tion	A central point		Distribution on 2 points (Load per point)		Distribution on 3 points (Load per point)		Distribution on 4 points (Load per point)	
	UDL		CPL	De- flec- tion	TPL	QPL	FPL	Total		
	kg/m	mm	kg	mm	kg	kg	kg			
1	339.8	1	339.8	1	169.9	113.0	85.0	1.6		
2	169.1	3	225.4	2	169.0	112.2	84.6	3.2		
3	99.3	7	148.9	5	111.7	74.5	61.8	4.8		
4	55.1	12	110.3	10	82.7	55.1	45.8	6.4		
5	34.7	19	86.8	15	65.1	43.4	36.0	8.0		
6	23.6	27	70.9	22	53.1	35.4	29.4	9.6		
7	19.9	37	59.3	29	44.4	29.6	24.6	11.2		
8	12.6	48	50.3	39	37.8	25.2	20.9	12.8		
9	9.6	61	43.2	49	32.4	21.6	17.9	14.4		
10	7.5	75	37.4	60	28.0	18.7	25.5	16.0		
11	5.9	91	32.5	73	24.4	16.2	13.5	17.6		
12	4.7	108	28.2	87	21.2	14.1	11.7	19.2		

**These data are not contractually binding and are given for assessment purposes only. Any hanging project must first be the subject of a specific study which must be transmitted to a control office for final acceptance.**

## SQUARE SERIES 200 E20V STRUCTURE



### E20V - ADMISSIBLE LOADS

m	Uniformly distributed load Load per metre	De- flec- tion mm	A central point	De- flec- tion mm	Distribution on 2 points (Load per point)	Distribution on 3 points (Load per point)	Distribution on 4 points (Load per point)	Total weight
	UDL		CPL		TPL	QPL	FPL	
	kg/m		kg		kg	kg	kg	
1	381.8	1	381.8	1	190.9	126.9	95.4	2.1
2	189.8	3	379.7	3	189.8	125.9	94.9	4.2
3	125.9	8	346.4	6	188.8	124.8	94.4	6.3
4	93.9	14	258.0	11	187.7	123.8	93.9	8.4
5	74.7	22	204.5	17	153.4	102.2	84.9	10.5
6	56.2	31	168.5	25	126.4	84.2	69.9	12.6
7	40.7	43	142.5	34	106.8	71.2	59.1	14.7
8	30.7	56	122.7	45	92.0	61.3	50.9	16.8
9	23.8	71	107.1	57	80.3	53.5	44.4	18.9
10	18.9	87	94.4	70	70.8	47.2	39.2	21.0
11	15.2	106	83.8	85	62.8	41.9	34.8	23.1
12	12.5	126	74.8	101	56.1	37.4	31.0	25.2

**These data are not contractually binding and are given for assessment purposes only. Any hanging project must first be the subject of a specific study which must be transmitted to a control office for final acceptance.**

## STRUCTURE

### TRIANGULAR SERIES 300 ASD SX290 STRUCTURE



The table below gives the maximum load that can be attached to an **SX 290 structure**, depending on the length, load distribution and the "upper point" or "lower point" assembly (in the indicated loads, the dead weight of the structure is not included).

**TABLE OF ADMISSIBLE LOADS**  
**"upper point" ASSEMBLY**

Deflection condition (deflection span)	Max. admissible load	4 m	6 m	8 m	10 m	12 m	14 m	16 m	18 m	20 m
1/100 Maximum resistance	Centred (kg)	808	522	374	281	175	102	52	14	-
	Distributed (kg/ml)	406	187	101	49	26	15	8	4	2
1/300 Operating load	Centred (kg)	684	283	136	63	18	-	-	-	-
	Distributed (kg/ml)	277	78	30	13	5	2	-	-	-

**TABLE OF ADMISSIBLE LOADS**  
**"lower point" ASSEMBLY**

Deflection condition (deflection span)	Max. admissible load	4 m	6 m	8 m	10 m	12 m	14 m	16 m	18 m	20 m
1/100 Maximum resistance	Centred (kg)	394	246	167	116	78	48	24	2	-
	Distributed (kg/ml)	202	87	47	28	18	12	8	4	2
1/300 Operating load	Centred (kg)	394	246	136	63	18	-	-	-	-
	Distributed (kg/ml)	202	78	30	13	5	2	-	-	-

Deflection calculation method at 1/300:  
Length between 2 attachment points (span) in cm ÷ 300.

*Example for a 10 m span:  $1000 \text{ cm} \div 300 = 3.33 \text{ cm}$  deflection, for a load of  $10 \times 13 \text{ kg} = 130 \text{ kg}$ .*



### SQUARE SERIES 300 ASD SC300 STRUCTURE



The table below gives the maximum load that can be attached to an **SC300 structure**, depending on the length and load distribution (in the indicated loads, the dead weight of the structure is not included).

**TABLE OF ADMISSIBLE LOADS**

Deflection condition (deflection span)	Max. admissible load	4 m	6 m	8 m	10 m	12 m	14 m	16 m	18 m	20 m
1/100	Centred (kg)	1169	758	546	413	320	250	195	149	109
Maximum resistance	Distributed (kg/ml)	350	231	143	89	60	42	31	23	17
1/300	Centred (kg)	1169	758	546	329	195	110	50	5	-
Operating load	Distributed (kg/ml)	350	231	117	56	30	16	9	4	1

### SQUARE SERIES 400 ASD SC390 STRUCTURE



The table below gives the maximum load that can be attached to an **SC390 structure**, depending on the length and load distribution (in the indicated loads, the dead weight of the structure is not included).

**TABLE OF ADMISSIBLE LOADS**

Deflection condition (deflection span)	Max. admissible load	4 m	6 m	8 m	10 m	12 m	14 m	16 m	18 m	20 m
1/100	Centred (kg)	1540		720	550	430	340	260	210	150
Maximum resistance	Distributed (kg/ml)	390	257	190	119	80	56	41	31	23
1/300	Centred (kg)	1540		720	550	430	290	170	100	30
Operating load	Distributed (kg/ml)	390	257	190	115	65	38	22	13	7

**These data are not contractually binding and are given for assessment purposes only. Any hanging project must first be the subject of a specific study which must be transmitted to a control office for final acceptance.**

## STRUCTURE

### SQUARE SERIES 500 ASD SC500 STRUCTURE



The table below gives the maximum load that can be attached to an **SC 500 structure**, depending on the length and load distribution.

**TABLE OF ADMISSIBLE LOADS**

Length of the beam between supports (M) Corresponds to module No. 2.80 + 2 x 1/2 angle of 0.65 m	3.45	6.25	9.05	11.85	14.65	17.45	20.25	23.05
Total mass uniformly distributed over the point P (kg)	4240	4200	3410	2520	1950	1490	930	540
Deformation at centre (cm)	3.3	1.5	3.3	5.6	8.4	11.6	13.5	15.4
3 point weights P (kg) at 1/4, 1/2 and 3/4 of the beam	3x 1430	3x 1310	3x 950	3x 700	3x 540	3x 390	3x 240	3x 140
Deformation at centre (cm)	0.4	1.7	3.5	5.8	8.8	11.6	13.5	15.4
2 point weights P (kg) at 1/3, 2/3 of the beam	2x 1910	2x 1650	2x 1260	2x 1010	2x 810	2x 550	2x 340	2x 200
Deformation at centre (cm)	0.4	1.5	3.3	5.9	9.3	11.6	13.5	15.4
1 point weight P (kg) at the centre of the beam	2860	2510	1870	1400	1080	860	580	340
Deformation at centre (cm)	0.4	1.4	3.0	5.1	7.7	11.1	13.5	15.4
Point weight P = 1500 kg* at the end of the cantilever 2.80 m max	<i>The maximum allowable weights take into account the limitation of the deflection of the beams at L/150 (L = length of the beam between supports)</i>							
Deformation at the tip = 1.1 cm	* Provided that the user has previously checked the non-tilting stability of the beam							

**These data are not contractually binding and are given for assessment purposes only. Any hanging project must first be the subject of a specific study which must be transmitted to a control office for final acceptance.**

### TRIANGULAR FL PL500 STRUCTURE



Uniformly distributed load P on a beam with free supports at its ends

Span L (m)	Max. load P (kg/m) for a max. deflection of			
	F = 1/100	F = 1/200	F = 1/300	F = 1/400
5.60		710*	710*	660
7.00		565*	450	335
7.50		530*	365	270
8.40		390	255	190
9.00		315	205	150
10.00		225	145	115
11.20		155	100	73
12.00		125	80	57
13.00		95	60	42
14.00	150	75	45	31
15.00	120	59	35	23
16.00	100	46	27	17
16.80	85	38	22	
18.00	65	29	15	
19.00	57	23		
19.60		20		
20.00		18		

\* Load limited by the permissible shear load T

*The data are the result of theoretical calculations*

**These data are not contractually binding and are given for assessment purposes only. Any hanging project must first be the subject of a specific study which must be transmitted to a control office for final acceptance.**

GRUPE  
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# MISCELLANEOUS

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Consumables

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## CONSUMABLES

All these products are available in our store in Longjumeau. You can find a wide choice of consumables necessary for your service (gelatins, lamps, gaffer, barnier, video supports, etc.). Due to constant market fluctuations, please contact our sales department on 01 76 91 90 00 for information on the prices.

### ADHESIVES

<b>ADVANCE Barnier</b>	Width 10 mm
<b>ADVANCE Dance mat</b>	Roll of 50 mm x 33 m
<b>MAGTAPE Gaffeur</b>	Black/white/grey, 50 mm x 50 m
<b>MAGTAPE Gaffeur</b>	Black/white/grey, 50 mm x 100 m
<b>ALL COLOR Gaffeur</b>	Fluo colour, 50 mm x 25 m
<b>ADVANCE Gaffeur Alu</b>	High t°, std alu, 50 mm x 25 m
<b>ADVANCE Gaffeur Alu</b>	High t°, black alu, 50 mm x 25 m
<b>Double-sided</b>	50 mm x 25 m
<b>Ribbon tape</b>	Red and white, 50 mm x 100 m

### GELATIN

<b>GAMCOLOR</b>	A roll (5.00 x 0.61)
<b>ROSCO E-color</b>	A roll (7.62 x 1.22)
<b>ROSCO Supergel</b>	A roll (7.62 x 0.61)
<b>ROSCO Heat Shield</b>	A roll (60 cm x 7.62 m)
<b>ROSCO</b>	Supergel series, a roll (7.62 x 0.61)
<b>ROSCO Cinefoil</b>	A roll (61 cm x 7.62 m / 30 cm x 15.5 m)

### GOBOS

**Custom-made gobos** for all types of floodlights

### LAMPS

<b>PHILIPS</b>	Contact us for the model numbers
<b>GE LIGHTING</b>	Contact us for the model numbers
<b>OSRAM</b>	Contact us for the model numbers

# MISCELLANEOUS

## SMOKE MACHINE

**MARTIN HUILE**

**MDG Neutral**

**REEL EFX Liquid DF50**

**LOOK Unique**

**LOOK VIPER**

**CO2**

**CHAUVET Geyser**

Normal or slow dispersion, 5-litre can

4-litre can

5-litre can

For Unique2, 2-litre can

5-litre can

for MDG machines, 10 kg cylinder

5-litre can

## BATTERIES

**LR03**

**LR06**

**LR14**

**LR20**

**6LR61**

Battery 1.5V, size AAA

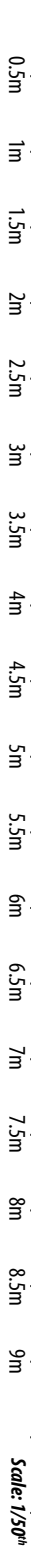
Battery 1.5V, size AA

Battery 1.5V, size C

Battery 1.5V, size D

Battery 9V

For any other request, please contact us at **01 76 91 90 00**



## GENERAL TERMS AND CONDITIONS OF RENTAL OF NOVELTY

### Article 1 - BOOKING THE EQUIPMENT:

- 1.1.: All bookings imply unconditional acceptance of our general terms and conditions of rental, regardless of the clauses contained in the customer's purchase orders.
- 1.2.: All telephone bookings must be confirmed by e-mail at least 24 hours before the start of the rental period.
- 1.3.: Bookings are only accepted while stocks last.
- 1.4.: All bookings must be accompanied by an advance payment of 50% of the total amount (including tax) of the order.
- 1.5.: If a booking is cancelled less than 48 hours before the start of the rental period, the advance payment already made shall be retained by NOVELTY as fixed compensation.
- 1.6.: The customer must indicate at the time of booking if the equipment is to be used outside French territory.

### Article 2 - COLLECTING THE EQUIPMENT:

- 2.1.: The equipment is collected in exchange for a purchase order for companies having an account in our books. For individuals, proof of address will be required, as well as payment of the rental fee and a deposit.  
A deposit will always be required for new customers.
- 2.2.: The equipment is handed over in perfect working order; it can also be checked by the customer before each rental.
- 2.3.: Collection takes place from Monday to Friday from 9 am to 12 noon and from 2:30 pm to 6 pm. Collection outside these times is possible with a minimum of 2 days' notice and an additional charge of 10% of the rental value.

### Article 3 - RENTAL PERIOD:

- 3.1.: The equipment is systematically accompanied by a rental voucher on which the dates and times of the scheduled collection and return of the equipment are indicated.
- 3.2.: The rental period is expressed in days and starts from the day of collection of the equipment to the day of its physical return to our premises, including Sundays and public holidays, regardless of whether the equipment is used or not.

### Article 4 - RETURNING THE EQUIPMENT:

- 4.1.: The return of the equipment is at the customer's expense and must be made on our premises at the dates and times specified at the time of booking. A return outside the working hours of the site is possible with a minimum of 2 days notice and an additional charge of 10% of the rental value.



## GENERAL TERMS AND CONDITIONS OF RENTAL OF NOVELTY

- 4.2.: Any extension of the rental period must be notified at least 24 hours before the initially planned return date and may only be carried out with the agreement of NOVELTY. This extension must be validated within the same timeframe by a new purchase order which must be confirmed under the same conditions as the initial purchase order.
- 4.3.: Any return made before the scheduled date will be invoiced according to the terms of the original order.
- 4.4.: The customer shall be liable for any damage suffered by NOVELTY and its customers as a result of a delay in the return of the equipment.
- 4.5.: Any equipment not returned in its original packaging or dirty will be invoiced.
- 4.6.: Any missing or damaged equipment will be invoiced on the basis of the current NOVELTY tariff, i.e. the new public price.
- 4.7.: An additional period of 48 hours is allowed for the return of small items of equipment and accessories that are missing; after this period, the invoice will become final.
- 4.8.: Lamps for lighting and/or video projection that are returned "out of order" will be charged at 70% of their new value.
- 4.9.: No claim will be accepted after a rental if the customer has not tested the equipment on its return in the presence of our technicians.

### Article 5 - RATES:

- 5.1.: The invoiced prices shall be those in force on the day of delivery. NOVELTY reserves the right to modify its prices at any time without notice. The VAT rate applied is 20% on all services offered as of 1 November 2018; this rate is subject to change according to legislation.
- 5.2.: Quotes are valid for a period of 30 days from the date of issue.
- 5.3.: The photos and characteristics of the NOVELTY catalogue are not contractually binding.

### Article 6 - OPENING AN ACCOUNT AND PAYMENTS:

- 6.1.: NOVELTY may, with the agreement of its financial department, open a customer account. This request must be accompanied by the following documents:
- K-Bis extract (company registration certificate) less than 3 months old
  - Bank account details (RIB or RIP in France)
- Unless special conditions are negotiated when the account is opened, invoices are payable on collection of the equipment, as well as for any order less than or equal to €750 including tax.
- 6.2.: For customers with an account, payment is made by bill of exchange at 45 days from the end of the month, in accordance with the law. Bills must be returned accepted within eight days.

## GENERAL TERMS AND CONDITIONS OF RENTAL OF NOVELTY

### Article 7 - LATE PAYMENT:

7.1.: The non-payment of a bill on its due date shall result in all sums due becoming immediately payable. Any extension of the due date must be submitted to our financial department for approval. They will only be granted on an exceptional basis, and in all cases, be subject to the payment of a fixed indemnity of €40 to compensate for collection costs (decree of 2/10/2012), and late payment interest at a rate of 1.5% per month, each month started being considered indivisible.

### Article 8 - RETENTION OF TITLE CLAUSE:

8.1.: The equipment is the property of NOVELTY. As such, it cannot be seized by third parties, and the lessee does not have the right to transfer or sublet it. It must not make any superficial or substantial changes to the equipment.

### ARTICLE 9 - CITATION AND COMMUNICATION:

9.1.: NOVELTY shall be entitled to quote and use, in its internal and external information tools, as well as in any other communication medium, the service or rental that NOVELTY has provided to its customer.

9.2.: NOVELTY may also record and use visuals of the operation.  
If the customer requires complete confidentiality, it shall inform NOVELTY in writing before the date of the transaction.

### Article 10 - LIABILITY:

10.1.: The lessee, as the custodian, assumes full responsibility for the equipment from when it is collected from our premises and until it is returned.

10.2.: The lessee shall be liable to third parties for the use of the equipment and in particular for the use of loudspeaker, audio or video transmitters, walkie-talkies, radios, telephones, etc., without recourse against NOVELTY in any respect whatsoever. It must obtain the necessary authorisations for the use of the above-mentioned equipment.

10.3.: All rentals of lifting equipment, structures, supports, towers, work platforms, ladders and floors, without NOVELTY's assistance, are under the full responsibility of the lessee, who must take out insurance in compliance with the safety conditions on its site and civil liability insurance.

10.4.: The lessee undertakes to use the equipment in accordance with its intended purpose and not to make any modifications or repairs to the equipment without prior agreement from NOVELTY.

## GENERAL TERMS AND CONDITIONS OF RENTAL OF NOVELTY

- 10.5.: In the event of damage, the equipment will be invoiced at the price of new equipment according to the current tariffs, and the costs of repairing the equipment will be charged at the current cost.
- 10.6.: NOVELTY shall not be held liable for the non-operation or malfunction of the rented equipment due to the addition of incompatible equipment or misuse.

### Article 11 - INSURANCE:

- 11.1.: The rented equipment can be the subject of an optional machine breakdown insurance generating a premium of 4% of the rental amount with a fixed deductible of €5000. In no case does this insurance cover the equipment against theft.
- 11.2.: If the lessee does not take out the insurance offered by NOVELTY, the lessee shall insure the rented equipment for its replacement value as new. The insurance must in this case cover the risks of theft, loss or damage, whatever the cause or nature.
- 11.3.: The lessee shall be responsible for all risks of civil liability for any damage caused by the equipment or by any use made of it while it is in its custody.
- 11.4.: In the event of a claim, the lessee must send a detailed declaration on a paper with its letterhead within 48 hours, and in the event of theft, the original receipt of the report issued by the police station. This declaration is made by registered mail with acknowledgement of receipt. In the event of theft, the equipment must be reimbursed at its new replacement value.

### Article 12 - GDPR:

Your personal information is processed for the purpose of executing the contract, managing our services and complying with all our legal and regulatory obligations. It may also be used in compliance with legal provisions to promote our services. We implement the necessary measures to ensure data security.

In accordance with the French Data Protection Act of 6 January 1978 as amended and articles 16 and 17 of the GDPR, you have the right to access, rectify and object to any personal data concerning you, as well as the right to data portability. These rights can be exercised by contacting the Data Protection Officer (DPO on the dedicated e-mail [dpo-rgpd@novelty.fr](mailto:dpo-rgpd@novelty.fr)), and this applies to any complaints as well.

For more information on how we process your personal data, please refer to our privacy policy at [www.novelty.fr](http://www.novelty.fr).

Finally, you have the right to lodge a complaint with the supervisory authority, the CNIL.

### Article 13 - APPLICABLE LAW AND JURISDICTION:

For any dispute relating to the interpretation and execution of this contract, the Commercial Court of EVRY (1, Rue de la Patinoire - 91000) shall have sole jurisdiction.



## NOVELTY and its Sustainable Development process

For several years now, Novelty has been implementing various initiatives to limit the effects of its activities on the environment, while respecting the principles of Corporate Social Responsibility (CSR).

This commitment is formalized by:

- Its membership of the United Nations Global Compact, which promotes 10 universal principles in the areas of human rights, labor standards, the environment and anti-corruption.
- Obtaining recognized labels and certifications such as PrestaDD, Ecovadis, RFAR (Responsible Purchasing and Supplier Relations) and ISO 20121.
- Its role in favor of diversity and professional equality, marked by its membership of SYNPASE and its status as a founding member of GEIQ RSE.

By aiming to comply with the ISO 20121 standard, Novelty has structured its approach around three essential pillars:

- Economic commitments: promoting ethics, transparency and integrity in its activities.
- Environmental commitments: controlling pollution, optimizing waste management and promoting responsible purchasing.
- Social and societal commitments: guaranteeing health and safety in the workplace, encouraging employee well-being, supporting training and learning, and promoting diversity and inclusion.

Among the concrete actions implemented, Novelty stands out for:

- Investments in environmentally-friendly technologies, such as low-consumption LED equipment and energy-saving video projectors.
- An optimized waste sorting policy, implemented in collaboration with partners such as Cliqueco.
- Integrating electric and hybrid vehicles into its fleet to reduce its carbon footprint.

This approach reflects Novelty's desire to reconcile performance, respect for the environment and collective well-being, while asserting itself as a responsible and committed player in the audiovisual sector.

### For further information:

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EU VAT FR 30 419 822 408 -  
Capital €5,000,000

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