

Patented fabric tensioning system

Technical literature



Illuminated signs

KPPS



Suited for the construction of simple face lightboxes. Front tensioning ,

so possibility to fit the lightbox into a niche. Delivered naked or painted white (RAL)

KPPS of





Suited for the construction of simple face or double face lightboxes.

Side tensioning and "full face" lighting. Delivered naked or painted white (RAL)





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SPECIFICATIONS OF THE SYSTEM	A DVANTAGES	P ROOFS
Something new	A way to differ	Used by big stores* (see listing below)
It is an adaptable product	Freedom of creation, can be bended	GAMM VERT, KILOUTOU, IBIS, IRISBUS, HOME SALON, VIRGIN
Easy to use	No special tools are needed	A simple plastic-head hammer is enough
Nice to handle	Only noble components	Aluminium, PVC fabric
A unique support adaptable to many typs of markings	A only one product to handle	The fabric
Lots of applications	Openings to other markets	Architecture, Display
Adaptable on all the flexible supports	A unique system, a unique method	Fabric, metal canvas, tiveck, PVC fabric, etc
A light and non in the way product	Costs for packaging and transport are lower	Only about 80 kg for a 100 m² picture against about 800 kg and 8 m³ for a iron sign
It is a product quickly to install	Saving of labours time at the installation	4 hours are enough for 2 persons to install a more than 50 m² picture (10x5)
It is a light product	Easy to handle	A person can fit a 4m x 3m frame. No heavy handling means
It is a non voluminous product	Less stocking and handling	Canvas rolls or aluminium bars delivered
The construction can be made with many pre-assembled pieces	Easy to deliver	A light utility vehicle is enough
Product totally made to measure	No rest of fabric and aluminium	Fabric prices are pro M2, the rests of the profils can be reused
Innovative, prescribed and acknowledged	Know-how and quality guarantee	Prescribed by architects and big stores, Product approved by FERRARI
Tension without folds	Easy to fit	Demonstration
Adapted for big format	No more joints, a fabric only in one piece	Lots of realizations over 500 m2
Exceptional attitude for Outdoor	A resistant and secured snap mechanism	A tear-out resistance til 1360 kg/ml (approved by official report)

THANKSO UR CUSTOMERS THE BIG STORES BELIEVEIN CRYSTAL:

* APPLE - AQUILUS - AUCHAN - AXA - BIERE DE LA LICORNE - BMW - BOUYGUES TELECOM - BRICO MARCHE - BUREAU DES ARCHIS - GRAND PALAIS DE PARIS - CARREFOUR - CISCO SYSTEMES - CITE DES SCIENCES ET DE LÓINDUSTRIE CITROEN - COCA COLA - CONSERVATOIRE DE MUSIQUE DE CLAMART - COURTEPAILLE - CREDIT AGRICOLE - DARTY - ECOMARCHE - EDF - FIAT - FERRARI - FESTIVAL DE CANNES - FINA - FNAC - FRANCE TELECOM - GALERIES LAFAYETTE GAMM VERT - GAZ DE FRANCE - HOME SALON - HOTEL IBIS - HOTEL LE MERIDIEN - HOTEL MERCURE - HYPER U - IKEA - INTERSPORT - INTERMARCHE - IRISBUS - KILOUTOU - LA HALLE AUX CHAUSSURES - LA HALLE AUX VETEMENTS LA SAMARTIAINE - LANCIA - LECLERC - LOUIS VITTON - MAC DONALDSÓ - MERCEDES - MOBILIER DE FRANCE - MOTOROLA - MUSEC COGNAC-JAY PARIS - MUSEC DE LA SOIRIE LYON - MUSEUM DOHISTOIRE NAURELLE - NISSAN - PANO BOUTIQUE - PAR ASTERIX - PEUGEOT - PIZZA PAI - PIZZA PINO - QUICKSILVER - RADIO MONTE CARLO - RENAULT - ROLAND GARROS - SAMSUNG - SFR - TROC DE LILLE - VETI MARCHE - VIRGIN - VOLVO etc..

> Firmcertified ISO 9001:2000 By











Technical literature

Simple face & double-sided lightboxes in **KPPS**

KPPS & KPPS SF : Simple face

Description + assembly instructions

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Lightbox in one piece

Lightbox in several pieces on 1 line 6

Lightbox in several pieces on 2 lines 7

Electric installation

Front tensionning KPPS : Finishing

The fastening and tensioning of the fabric 17

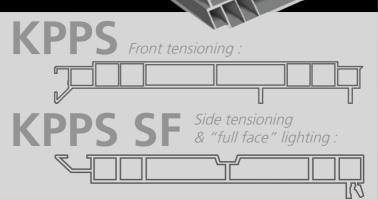
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instructions. Feel free to contact us on

+33/04 74 86 69 90

KPPS

The profile KPPS, one profile of the CRYSTAL range, enables you to make simple face lightboxes.

KPPS suited for the construction of lightboxes with a PVC clamping bar in front (the PVC clamping bar can be visible or hidden by an aluminium moulding cover). In that case, the lightbox can be consequently totally fitted into a niche or into a dividing wall.

KPPS SF suited for the construction of lightboxes with a surrounding PVC clamping bar, not visible from the front view. Thanks to the inclination of their channels, this profile offers a «full face» lighting (* see page 10).

This profile KPPS fulfils your requirements with the reliable simplicity of the Crystal tensioning system.

The profile KPPS can be supplied naked or painted white RAL. For other colours of the RAL scale, please contact us.

Size: 160 x 22mm Weight: 1.6 kg/ml

Instructions to assemble stiffeners and backwalls

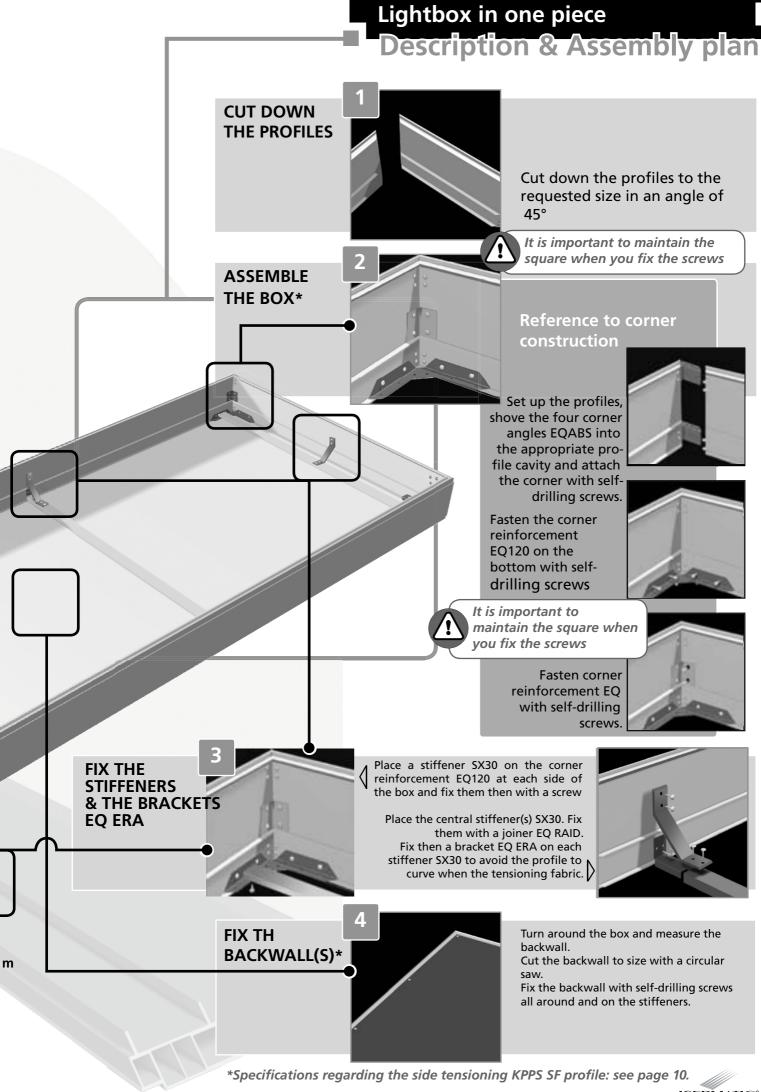
Generally the stiffeners have to reinforce the lightboxes as well as the joints between backwalls. We recommend a maximal axis-distance of 1Meter between each stiffener.

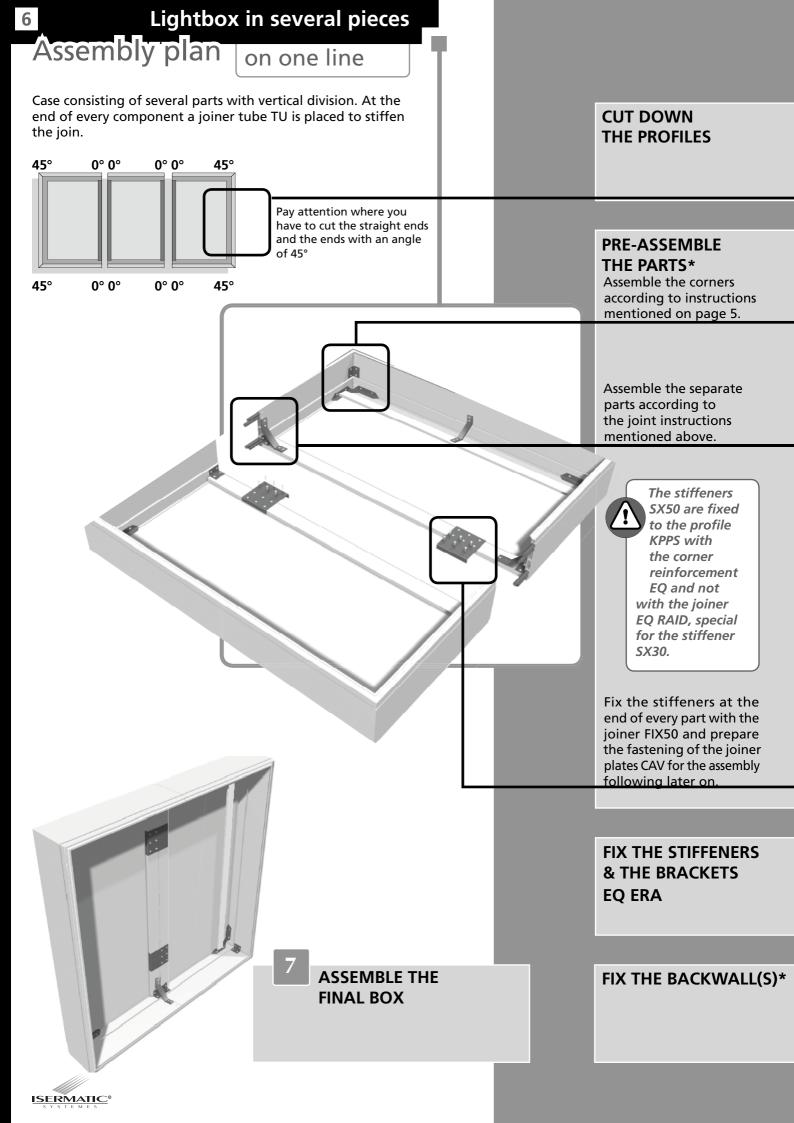


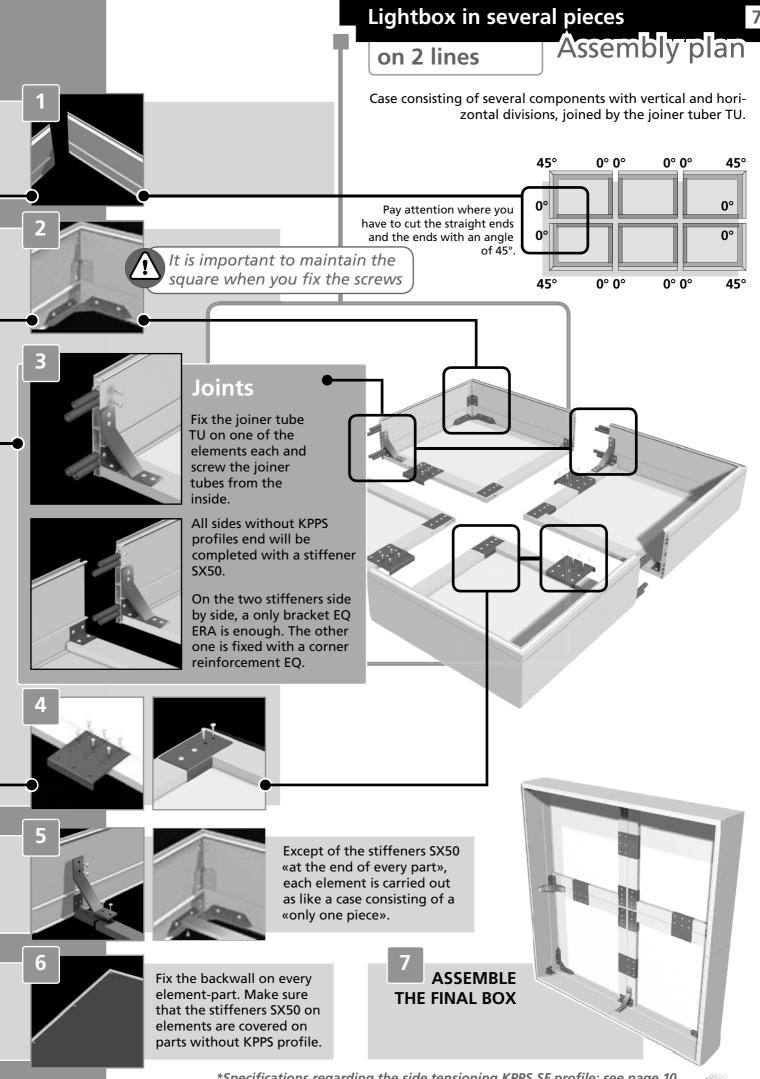




The distance between each stiffener depends both on the neon tubes and the electric components. So, you will valid this distance according to that. (see page 8)....









Attention: For the assembly of the installation further stiffeners may be needed.

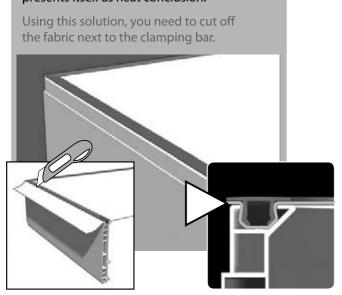
The neon holders CN attached onto the stiffener with a self drilling screw enable you to clip them on the stiffeners.

Afterwards the neon tubes are connected to electronic ballast with movable lamp sockets.

The profile KPPS offers two finishing of your box

Classic fi nishing

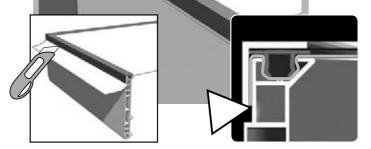
The clamping bar remains visible and presents itself as neat conclusion.



Front tensioning KPPS: finishing*

Due to the installation of a moulding cover L20 all around the box, you achieve the perfect conclusion. On the one hand the moulding cover hides and protects the clamping bar and on the other hand it makes the dismantling and re-use of the fabric easier later on.

> Using this solution, you need to cut the fabric under the moulding cover.





Construction

The flexibility the Crystal tensioning system provides makes many forms of boxes possible. We would like to introduce some examples here.

The production of these differs slightly from the general assembly instructions described here.

We are always at your disposal for these special constructions. Feel free to contact our technical team.



To meet your needs of creativity, the KPPS profile can be bended. Attention: minimum bend-radius is 50cm.



Very large-sized lightboxes

To prevent the fabric touching the neon tubes (in case of an external lightbox open to wind) or touching the structure of the lightbox, we recommend the use of distance plates AR. These are fixed to the stiffeners with self-drilling screws.





10 Side tensioning KPPS SF

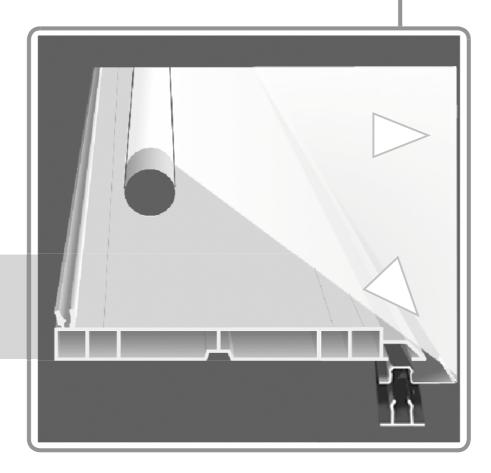
«full face» lighting

One of the main advantage of the **KPPS SF** is to obtain a «full face» lighting, avoiding shadows all around the box, thanks to the inclination of the channel (see picture below).

Note

The assembly plan for the construction of a lightbox described on previous pages is similar for KPPS and KPPS SF.

«FULL FACE» LIGHTING



KPPS SF: FIXING OF THE BACKWALLS

On the back of the KPPS SF profile you have a groove «to slide» the backwall» of the lightbox.

During the construction of the lightbox (see page 4 and page 5), assemble just 3 sides and assemble the last one after fixation of the backwall.

Cut first the backwall(s) down and fix it (them) in the groove. Assemble then the last side of the lightbox and flange then the part at regular intervals with the hammer

Then screw on the stiffeners.

to clip the backwall(s).

Side tensioning KPPS SF & DF: finishing

The clamping bar is very discreet given it is on the side of the lightbox. Not visible from the front view (invisible when both clamping bar and profile have the same colour...).

You have then to cut off the fabric along the clamping bar.









Technical literature

lightboxes **Side tensioning KPPS DF** double-sided

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Double-sided lightbox

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Double-sided lightbox with wall mounting brackets

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Electric installation & finishing

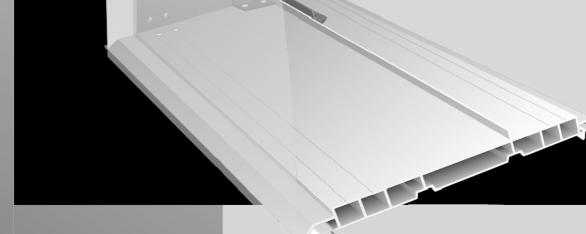
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The fastening and tensioning of the fabric

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Components and profiles

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KPPS DF Side tensioning & "full face" lighting:



ISERMATIC

thanks you for having chosen Crystal:
The fabric tensioning system with many advantages.

SIMPLICITY

No making No eyelets No ropes No hems

CONTINUAL TENSION

No clamps No clips No screw-system No strings

ESTHETICALLY SPEAKING

No joint between panels No plate

LIGHT DESIGN

No heavy, rigid plate

EASY TO INSTALL

No heavy handling means

SAFETY

Tear proof up to 1360 kg/ml

Those directions for use enable you to make and to assemble lightboxes with right angles.

Nevertheless the flexibility the Crystal system provides, makes many forms possible (please note that the minimum bend-radius is 500mm).

The production of these differs slightly from the general assembly instructions described here. We are always at your disposal for these special instructions. Feel free to contact us on

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KPPS DF

The profile KPPS DF, one profile of the CRYSTAL range, enables you to make double face lightboxes.

KPPS DF, suited for the construction of lightboxes with PVC surrounding clamping bar. The two clamping bars are quasi not visible from the front view.

KPPS DF offers a «full face» lighting thanks to the inclination of their channels (*see page 16). Moreover, its large depth offers a full lighting on each side avoiding shadows.

This profile KPPS DF fulfils your requirements with the reliable simplicity of the Crystal tensioning system.

The profile KPPS DF can be supplied naked or painted white (RAL). For other colours of the RAL scale, please contact us.

Size: 190x22mm Weight: 1.8kg/ml

Tear out resistance til

1360 Kg/ml

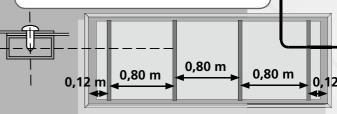
certified by report

Instructions to assemble stiffeners and backwalls

Generally the stiffeners have to reinforce the lightboxes. Given the double sided lightbox does not have any backwall, we recommend a maximal axis-distance of 80cm between each stiffener.



The first stiffener has to be placed on the bracket EQ 120, at approx. 0.12Meter from the bordure.





The distance between each stiffener depends both on the neon tubes and the electric components. So, you will valid this distance according to that (see page 16).

Double sided lightbox

Description & Assembly plan

Remark

For the construction of a double-sided lightbox with several components and divisions joined by joining tubes, please follow the instructions described on the chapter regarding KPPS simple face.

CUT DOWN
THE PROFILES

ASSEMBLE

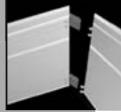
THE BOX

Cut down the profiles to the requested size in an angle of 45°

It is important to maintain the square when you fix the screws.

Reference to corner construction

Set up the profiles, shove the four corner angles EQABS into the appropriate profile cavity and attach the corner with self-drilling screws.



Fasten the corner reinforcement EQ120 on the bottom with self-drilling screws.

It is important to maintain the square when you fix the screws.

Fasten corner reinforcement EQ with self-drilling screws.



FIX THE STIFFENERS & THE BRACKETS EQ ERA

Place a stiffener \$X30 on the corner reinforcement EQ120 at each side of the box and fix them then with a screw

Place the central stiffener(s) SX30. Fix them with a joiner EQ RAID. Fix then a bracket EQ ERA on each stiffener SX30 to avoid the profile to curve when the tensioning fabric.



RIGIDITY OF

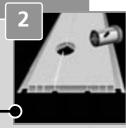
Small format illuminated sign made with KPPS DF profiles are solid when installed.

THE LIGHTBOX For big format illuminated sign, the light structure does not enable the lightbox to be solid enough in case of free standing sign. In that case we recommend the construction of a metal structure to fix then the illuminated sign on it.

Lightbox with wall mounting brackets Construction Remark: **CUT DOWN** Case consisting in the construction of a self-THE PROFILES supporting lightbox. The lightbox can be fixed Cut down the profiles to the onto a pole or onto a wall with wall mounting requested size in an angle of brackets. 45° PERFORATE THE SIGN TO SET UP THE TUBES Perforate the case with a hole saw (diameter 32mm) as described in the picture. **ASSEMBLE** THE LIGHTBOX See page 5. The assembly plan is the same. **INSTALL** THE TUBES 30X3 ASSEMPLY PLAN **OF THE TUBES 30X3** Wall mounting brackets are extended with tubes of 30x3mm. Those tubes not only reinforce the lightbox as stiffeners but also are the basis to fix the electric material as well as the neon tubes on. The maximum distance between each tube: 0.80m The first tube has to be set up at 0.20m maxi from the bordure of the lightbox. **ELECTRIC** 0,80 m INSTALLATION 0,80 m 0,20 m **PRODUCTION & ASSEMBLY** The distance between the tubes depend on the installation of the neon tubes **FASTENING OF THE** and of the electric material. WALL MOUNTING So the quantity will be define **BRACKETS ON THE** according to the situation **TUBES** (see page 16) <u>ISERMATIC</u>®

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Remark

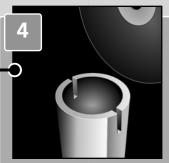
Boring

We recommend to bore from the external part from the profile

Respect the distances! (see page 14 regarding the assembly instruction of the tubes 30x3mm).



It is important to maintain the square when you fix the screws.



Assembly plan

First of all, make a section of ca. 10 mm on each side of the tube 30x3mm.

Shove the tube and put the sectioned part into the internal lip of the profile till it stops.





Fasten then brackets EQ ERA to fix the tube onto the profile.

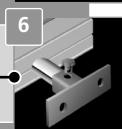


Do the same in the opposite part . Thanks to the brackets the profile can not curve during the fabric tensioning.



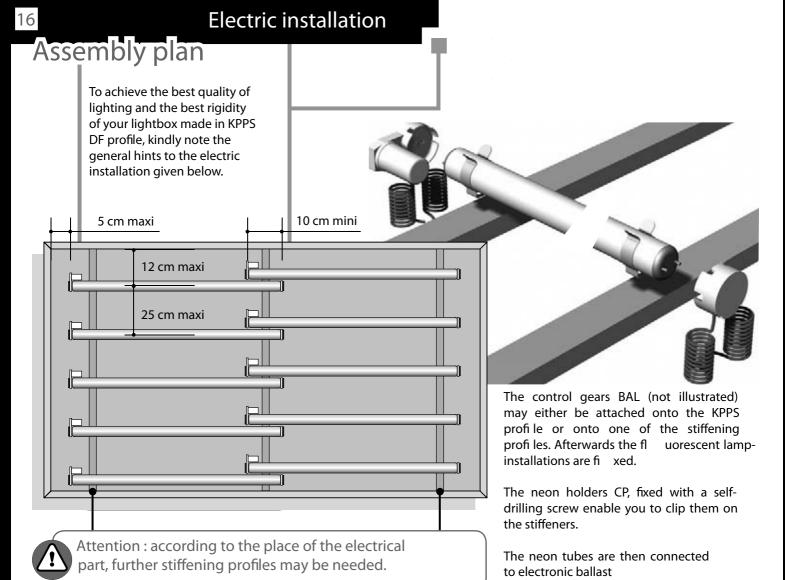


Install the power cable are placed.



setting a cable hole into the side where the tubes

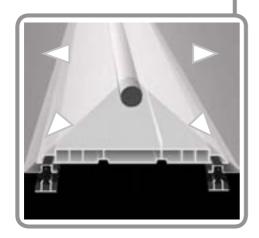




«FULL FACE» LIGHTING

The main advantage of the

KPPS DF profile is the fact that it offers a full lighting on each side avoiding shadows, thanks to the inclination of its channel (see picture).



Side tensioning KPPS DF: Finishing

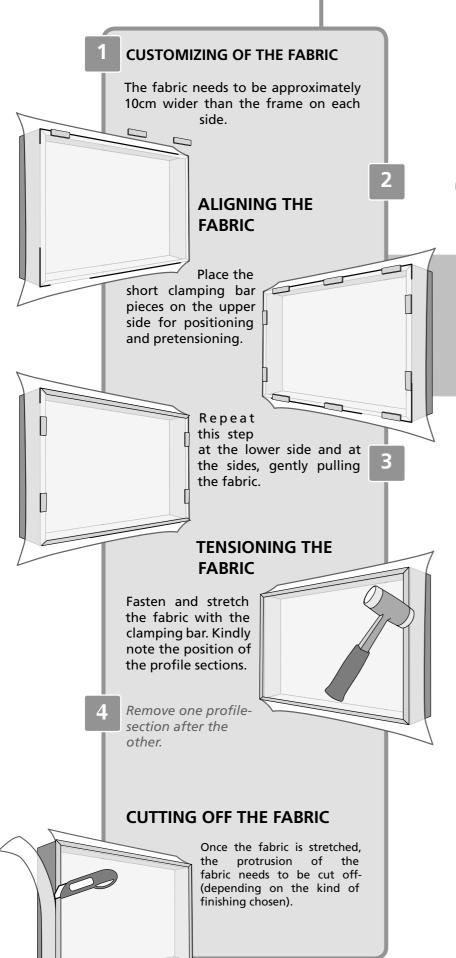
with movable lamp sockets.

The clamping bar is very discreet given it is on the side of the lightbox. Not visible from the front view (invisible when both clamping bar and profile have the same colour...).

You have then to cut off the fabric along the clamping bar.



Instructions



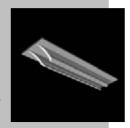
The fastening and tensioning of the fabric form the conclusion of the CRYSTAL system. Please exactly follow the installation instructions and only use the tools recommended by ISERMATIC.



Attention: To stretch the fabric, always use a non rebound plastic-head hammer.

CLAMPING PROFILE SECTIONS

The profile-sections are remnant pieces with a length of approximately 10 to 30cm.



CHOICE OF CLAMPING BAR





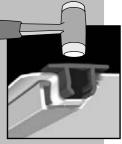
For lightboxes used inside, please choose the standard clamping bar JN. For lightboxes used outside, please choose the reinforced clamping bar JR. The standard colour is white (different colours available).

FASTENING OF THE CLAMPING BAR

Clamp the fabric by first of all shoving the bar from the exterior edge to the inside.



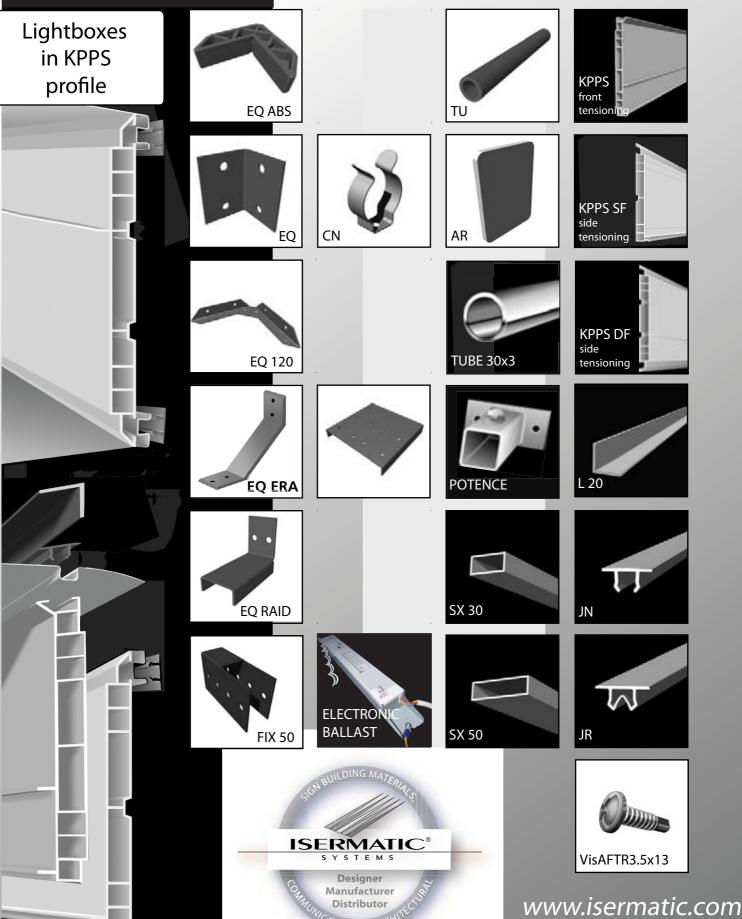
Hit the clamping bar with the headplastic hammer into the profile channel. Doing this you stretch the fabric.







Components & profiles



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Extract from REPORT

File Nr. 745701 - Inquiry Nr. 2975 - dd November 25th, 2002

Subject: Pull-out tests on the whole "CRYSTAL" system aluminium profil - fabric

1- Items supplied by the requester:

All the fabrics have the trademark "Ferrari"

- profil KT + / tension reinforced tension rod in front / Fabric 502 Mark CETIM 1 (picture Nr1)
- profil KT + / tension reinforced tension rod in front / Fabric Defender 7760 -Mark CETIM 2 (picture Nr1)
- profil KT + / tension reinforced tension rod in front / Fabric Precontraint 371- Mark CETIM 3 (picture Nr1)
- profil KT + / tension reinforced tension rod in front / Fabric Precontraint 1302 Mark CETIM 4 (picture Nr1)
- profil KT + / tension reinforced tension rod in front / Fabric Soltis 92 Mark CETIM 5 (picture Nr1)
- profil KT + / tension reinforced tension rod in side / Fabric Soltis 92 Mark CETIM 6 (picture Nr2)
- profil KT + / tension reinforced tension rod in side / Fabric Precontraint 502 Mark CETIM 7 (picture Nr2)
- $-profil\ KT+/\ tension\ reinforced\ tension\ rod\ in\ side/\ Fabric\ Defender\ 7760-Mark\ CETIM\ 8\ \ (picture\ Nr2)$

2 - Tests performed:

Tests performed with Sirs ANTOINE and JACQUET of the firm ISERMATIC SYSTEMES.

- You can find hereunder the pictures explaining the configuration of the 2 different set-ups for the test.
- The pull-out test was performed on the Instron 1116 tensile testing machine.
- The speed of the load is 1 cm/minute.





luminium profil

3 - Results:

Mark CETIM	Resistant length of the fabric	Last load * daN	Resistan ce da N /m
1		490	980
2	2 x 25 cm	550	1100
3		550	1100
4		350	700
5		480	960
6	2 x 25 cm	650	1300
7		660	1320
8		680	1360

^{*} the last load at which the tension rod pulled out from the aluminium profil's groove

Metallurgy Technician Michel CELLE

P.o. diva Recohini

Metallurgy Department Manager Bernard GAGNAIRE





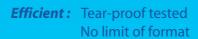
Firm certified ISO 9001:2000 By





on new markets with the Crystal system

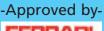
CRYSTAL® Patented fabric tensioning system





Simple: Easy and fast to install



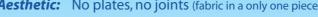






















nnovate

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