



Lucy

Performing Arts Centres



01 | Technical Description

Back

The inner support is made of 15mm x 30mm steel profile, shaped & bended in cold that serves as a “one piece rectangular hoop” for five serpentine springs of 3mm thickness and seven turns each. This frame is entirely integrated with M3 fire class cold moulded polyurethane foam shaped to the contour of the springs on the surface. The resulting curved block of inner metal structure & foam acts as a foundation and stopper for the tipping seat thanks to the 20x50mm metal plate welded to the bottom of the back. The upholstery cover is securely fastened to it by means of Velcro® stripes to facilitate ease of re-upholstering. The curved back is finished with an outer 13mm plywood panel (11 interior boards of beech) with concealed fixing.

Seat

The inner support is made of 15mm x 30mm steel profile, shaped & bended in cold that serves as a “one piece rectangular hoop” for five serpentine springs of 3mm thickness and seven turns each. The self-lifting mechanism is inserted within the metal frame: a 30mm Ø round shaft with its own regulation system inside. The curved frame with the tipping mechanism is totally integrated with M3 fire class cold moulded polyurethane shaped to the contour of the springs on the bottom. This curved seat is fully upholstered with a single piece detachable cover with zip (outer plywood panel available).

Middle Standards

Manufactured of 2mm welded steel to a 65x40mm rectangular tube. The top of the column is welded to a rectangular profile with holes to secure the attachment of the aisle & middle standards with the armrests. A 2mm reinforced steel plate foot is welded to the bottom of the rectangular tube covering all stress areas 360 degrees around the tube with continuous thin wire and is concealed on the inside so as not to detract from the clean appearance; all weldings are gas shielded, arc weld. The plates are fabricated to be compatible with the floor incline, and to maintain proper seat and back height and angle. All exposed metal parts are powder coated with an epoxy powder coat finish. The powder coat finish is applied by electrostatic means to a thickness of 80-90 microns and after coating is oven baked to cause proper flow of the epoxy powder to result in a smooth, durable finish. The upper part of the standards are prepared to host the timber arms that are secured from the bottom.

Aisle Standards

Wooden pieces of 34mm Middle Density Fiberboard structure with outer plywood panels. Floor fixing is concealed. Each wooden standard is imbedded over a metal plate of 8mm thickness with two extruding 20mm Ø round shafts of 8mm metric. Then every standard is screwed to the plate with two screws of 8mm metric and concealed head. The top of the panels provide the shape for the secure attachment of the arms.

Armrests

Solid beech wooden arms with all edges well rounded. These 475x60mm wooden armrests are furnished with two keyholes in the bottom that lock securely to dovetail lugs provided on aisle and middle standards.

01 Technical Description

Numbering

Seat: 30mm numbers embroidered on the centre of the upper plate of the tipping seat

Row: 48mm round Gravoply discs recessed into the aisle timber panels

Upholstery

Seat and back covers are upholstered in a single piece with zip - both are securely fastened to the flat surface of the cushions by means of Velcro[®] stripes to facilitate ease of re-upholstering, then finished with outer plastic shells. All double stitching with Serafil 40 thread made from 100 % polyester continuous filaments of high tenacity.



02 Finishes & Tests

Fabric

M1 fire class TREVIRA CS **MINI fabric** from **FIDIVI TESSITURA VERGNANO (Italy)**: produced from 100% Polyester TREVIRA CS and manufactured using environmentally friendly non-metallic dyestuffs. This fabric achieves full euro flammability award: Italian Classe 1 IM, British BS7176; 1995 Medium Hazard, French M1 and German B1. These durable fabrics have non-pilling properties.

Composition: 100% Polyester TREVIRA CS. Non metallic dyestuffs. Recycled / EU Flower certified

Weight: 340g/m²

Abrasion Resistance Pilling: 100,000 Martindale cycles (full details available) (ISO 12947-2:2000)

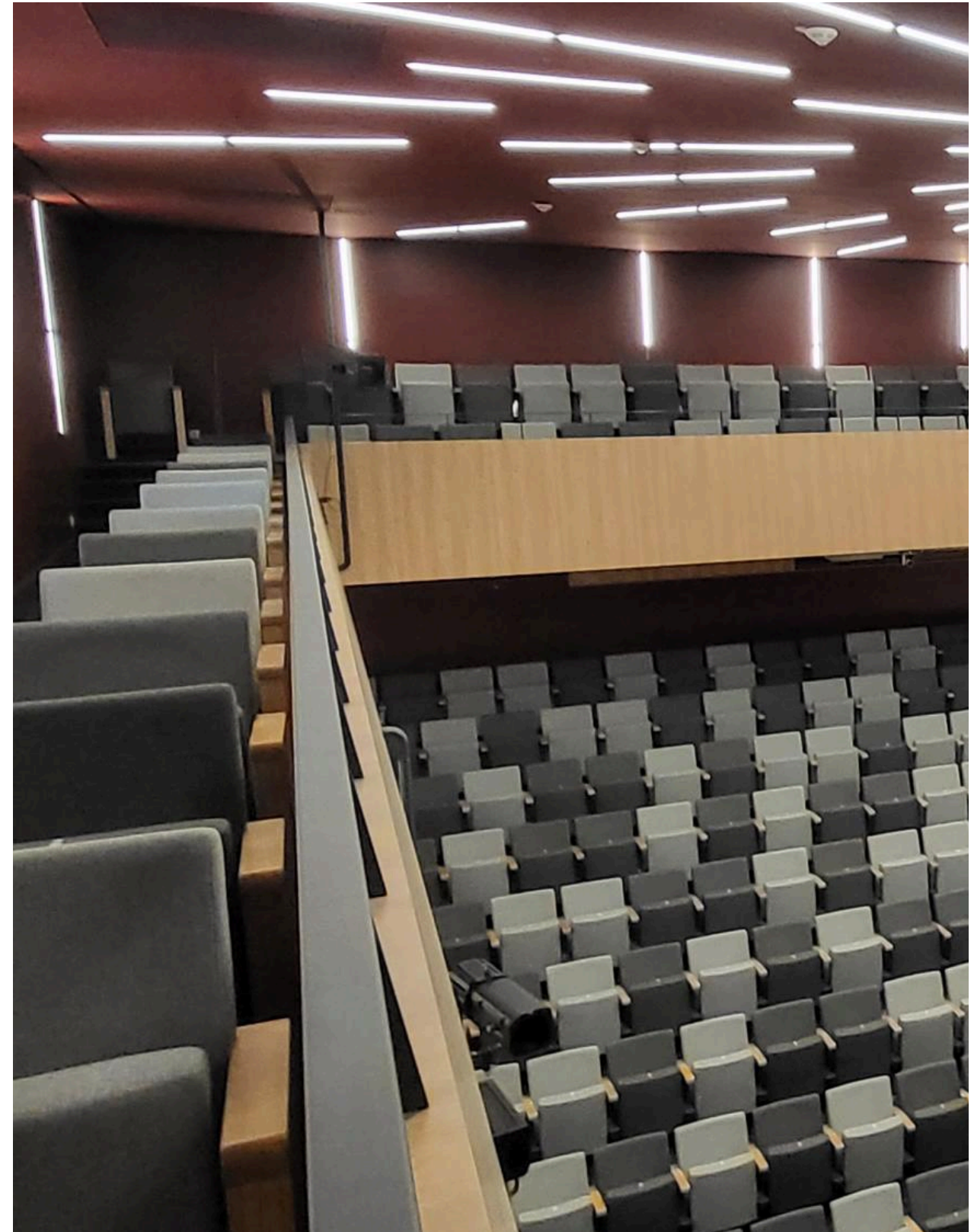
Flammability: UNI 9174 - 8456 Class C1; UNI 9175 Class 1 IM; DIN 4102 Class B1; NF 92501-7 Class M1; NF D 60013 Class AM18; EN 1021-1 & 2; BS Crib 5; BS 7176 Class Medium Hazard; EN 13773 Class 1 O; ENORM 3800-1 Class B1,Q1,TR1 California TB117; USA NFPA 701; USA NFPA 260; IMO A 652 (16) Part 8 Upholstery

Light Fastness: 6 (ISO 105-B02:1999 - Xenotest)

Fastness to Rubbing: 4/5 (ISO 105 - X12:2002 Crockmeter)

Pilling 2000 rubs: 5 (ISO 12945-2)

Maintenance: Washable to 60°C. Vacuum regularly. Wipe clean with a damp cloth or shampoo using appropriate upholstery shampoo composition.



02 Finishes & Tests

Thread

Serafil Sewing thread from Amman and Soehne Gmbh (Germany)

Linear density (dtex) (ISO DIN EN ISO 2060): approx. 504 * 3 dtex

Linear density (Nm) (ISO DIN EN ISO 2060): approx. Nm 20 / 3

Breaking force (ISO DIN EN ISO 2062): approx. 8960 cN

Elongation at break (ISO DIN EN ISO 2062): approx. 19 %

Colour fastness to artificial daylight (ISO 105 B 02): 5

Colour fastness to perspiration (ISO 105 E 04): 4

Colour fastness to washing 95°C (ISO 105 C 06 - E2): 3-4

Colour fastness to rubbing 1) dry (ISO 105 X 12): 4

Colour fastness to rubbing 2) wet (ISO 105 X 12): 4

Stability

Compliance with Standards UNE EN 12727:01 - Furniture. Ranked Seating. Test Methods and Requirements for Strength and Durability.

Seat and Back Static Load Test (Fv=2000N, Fh760N, n=10 times):

Correct

Horizontal Forward Static Load to Back (Fh=760N, n=10 times):

Correct

Vertical Static Test on Back (Fv=900N, n=10 times): Correct

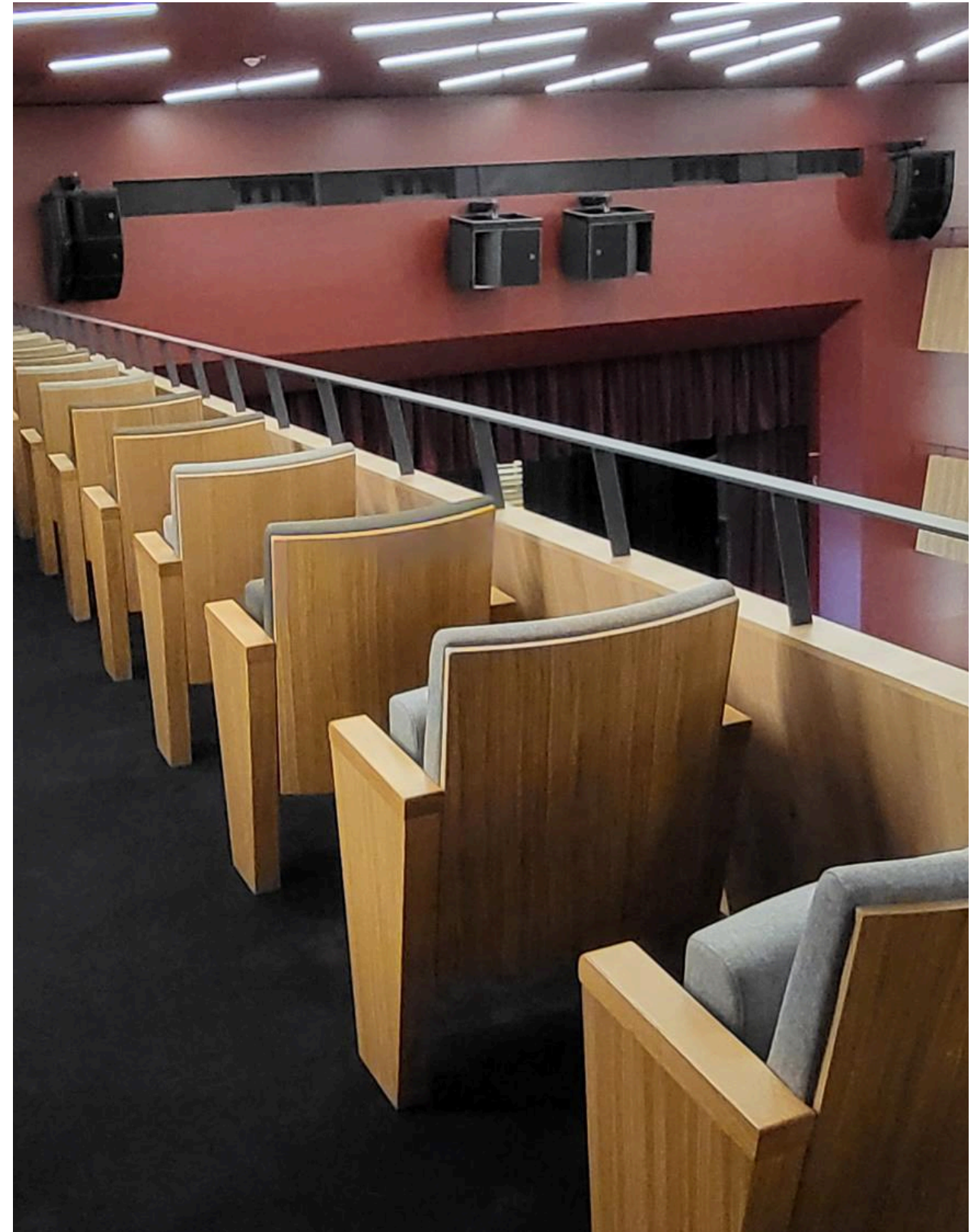
Arm Sideways Static Load Test (Fh=1000N, n=10 times): Correct

Arm Downwards Static Load Test (Fh=1000N, n=10times): Correct

Back Impact Test (M=5kg, a=68°, n=10 times): Correct

Arm Impact Test (M=5kg, a=68°, n=10 times): Correct

Tipping Seat Operation Test (n=100,000 cycles): Correct



03 Acoustics

Conditions of the test

Cold moulded foam (seat)
Cold moulded foam (back)
Upholstered back with outer plywood shell
Fully Upholstered seat
Upholstered standards
Fabric 100% Trevira CS 420 gr/m²
12 chairs (4 rows of 3 chairs)
950mm Row Distance

Empty Seats

f (Hz)	α_s	α_p
100	0,23	0,25
125	0,27	
160	0,30	
200	0,41	0,55
250	0,53	
315	0,72	
400	0,72	0,70
500	0,70	
630	0,67	
800	0,75	0,75
1000	0,75	
1250	0,77	
1600	0,77	0,75
2000	0,78	
2500	0,76	
3150	0,79	0,80
4000	0,82	
5000	0,82	

Weighted sound absorption
coefficient, according to EN ISO
11654:1997

$\alpha_w = 0,75$



04 Dimensions

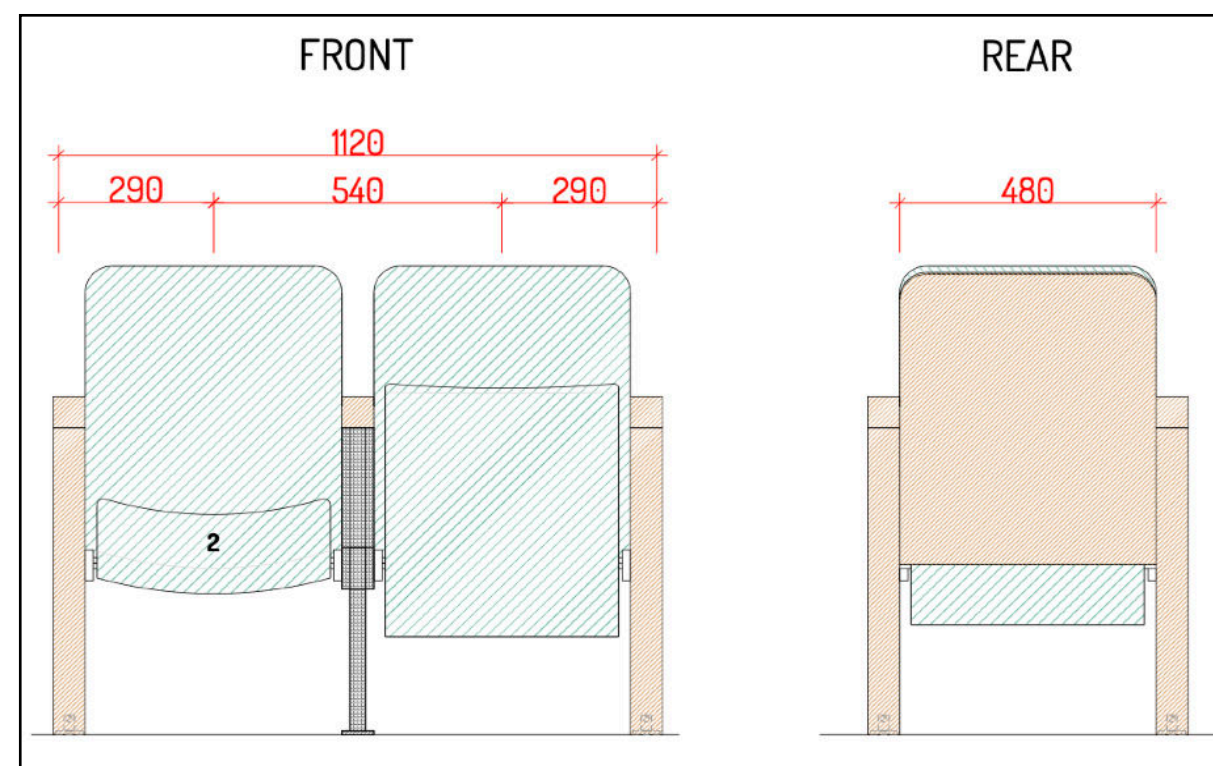
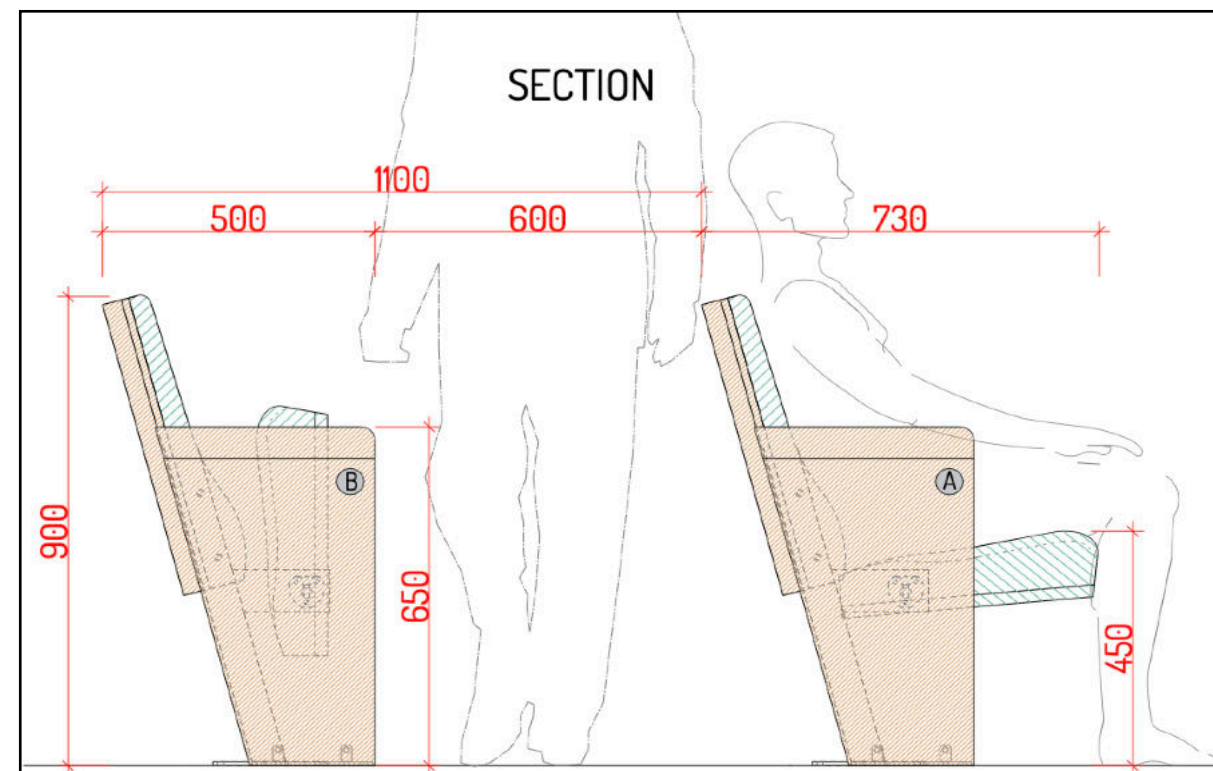
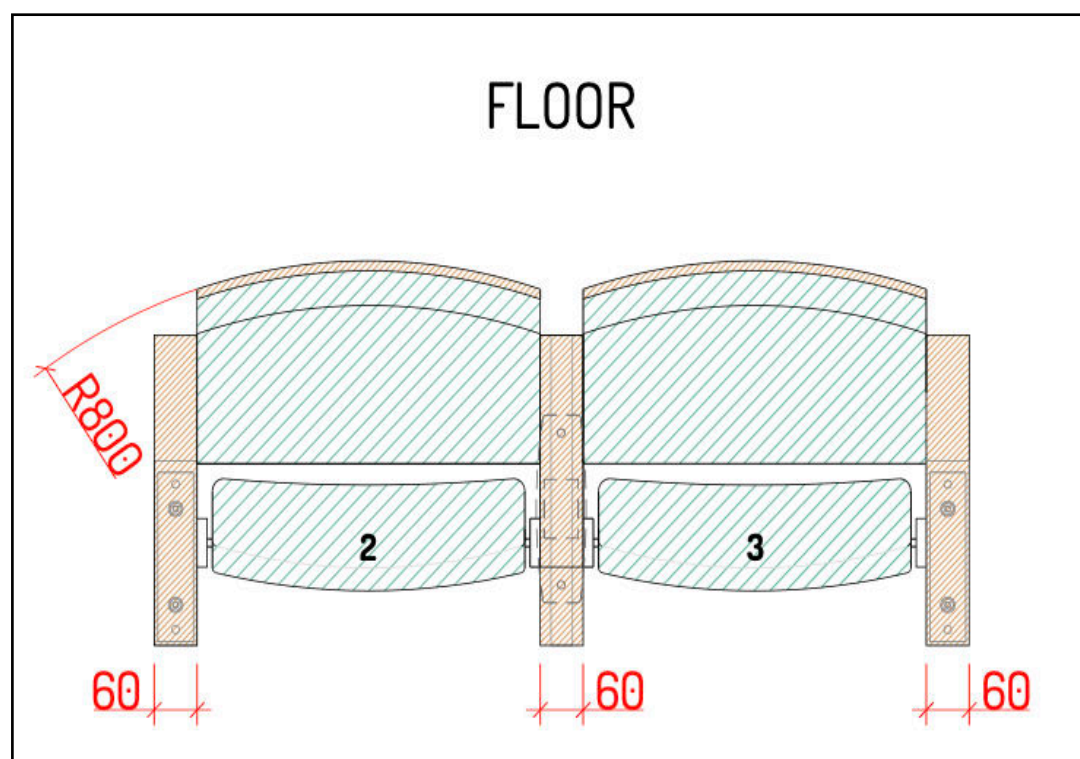
General Dimensions

Overall Height: 900mm

Seat Centres: 500 to 580mm.

Seat Height: 450mm

Envelope: 450 and 500mm. Bespoke solutions available.



05 Options



Oak Wood

Aisle standards, panels and arms



Reduced Envelope

From 400 to 350mm



Higher back panel & seat panel

Different options & dimensions

06 References

Museum Holocaust, Mechelen, [Belgium](#)
Filarmonika, České Budějovice, [Chequia](#)
Jiráskovo Divadlo Česká Lípa, [Chequia](#)
Kamenice Cultural Centre, [Chequia](#)
Conservatoire Henry Dutilleux, Clamart [France](#)
Centre de Gerontologie, [France](#)
Brest Le Quartz, [France](#)
Sorbonne Pol Nation, Paris, [France](#)
Ministry of Labour, Riyadh, [KSA](#)
QOBT Church, Kuwait City, [Kuwait](#)
Ciudad Hospitalaria, Ciudad de Panamá, [Panama](#)
Tuchola Cultural Centre, [Poland](#)
Cine Teatro Sao Bras de Alportel, [Portugal](#)
Cine Teatro de Lousa, [Portugal](#)
Institute Rosatom, Moscow, [Russia](#)
IES Gabriel Miro, Orihuela, [Spain](#)
Teatro Álvarez Quintero, Osuna, [Spain](#)
Universidad Santiago de Compostela, [Spain](#)
Sede Caja Cantabria, Santander, [Spain](#)
Auditorio Municipal de Ourense, [Spain](#)

Auditorio El Ejido, [Spain](#)
Teatro Reina Victoria, Madrid, [Spain](#)
Auditorio Arroyomolinos, [Spain](#)
Auditorio Campolongo, [Spain](#)
Auditorio Isla de Arousa, [Spain](#)
Centro Cultural San Chinarro, [Spain](#)
Escuela de Administración Local de Toledo, [Spain](#)
Palacio de Congresos de Boltaña, [Spain](#)
Teatro Auditorio La Mojonera, [Spain](#)
Teatro Leidor Tolosa, [Spain](#)
Teatro Ramos Carrión Zamora, [Spain](#)
Sede CEOE Cepyme, Madrid, [Spain](#)
Auditorio Rianxo, [Spain](#)
Seminario Menor Santiago, [Spain](#)
Cine Teatro Fantasio, Navia, [Spain](#)
Hospital Universitario de Melilla, [Spain](#)
Centro Formación Cáceres, [Spain](#)
Dental Care Institute, [The Netherlands](#)
Kazerne Dossin Memorial Mechelen, [The Netherlands](#)
Broadway Theatre, Lewisham, [United Kingdom](#)



#loveyourvenue