

SX1

TECHNICAL SPECIFICATIONS



Our vision transcends mere innovation. We're dedicated to shaping the future of padel sports in a way that everyone can access and enjoy.

By constantly pushing the boundaries of technology, design, and collaboration, we ensure that they aren't just reserved for the elite but are available to all enthusiasts of the game.

Our mission is to bridge the gap between cutting-edge research and the global padel community. It's about creating a comprehensive ecosystem where innovations, strategic partnerships and empowering tools converge to elevate the sport for all.

We're not just inventing the future of padel;
we're empowering you to own it.

Own the future.

THE PADEL LAB

PADEL COURTS

/

OWN THE

FUTURE



Unlock the potential of innovative padel court construction, designed to bring the game to new heights. Leveraging advanced technology and design, our courts set new benchmarks in durability and aesthetics. Select from a diverse range of designs, each integrating the latest in construction innovation.

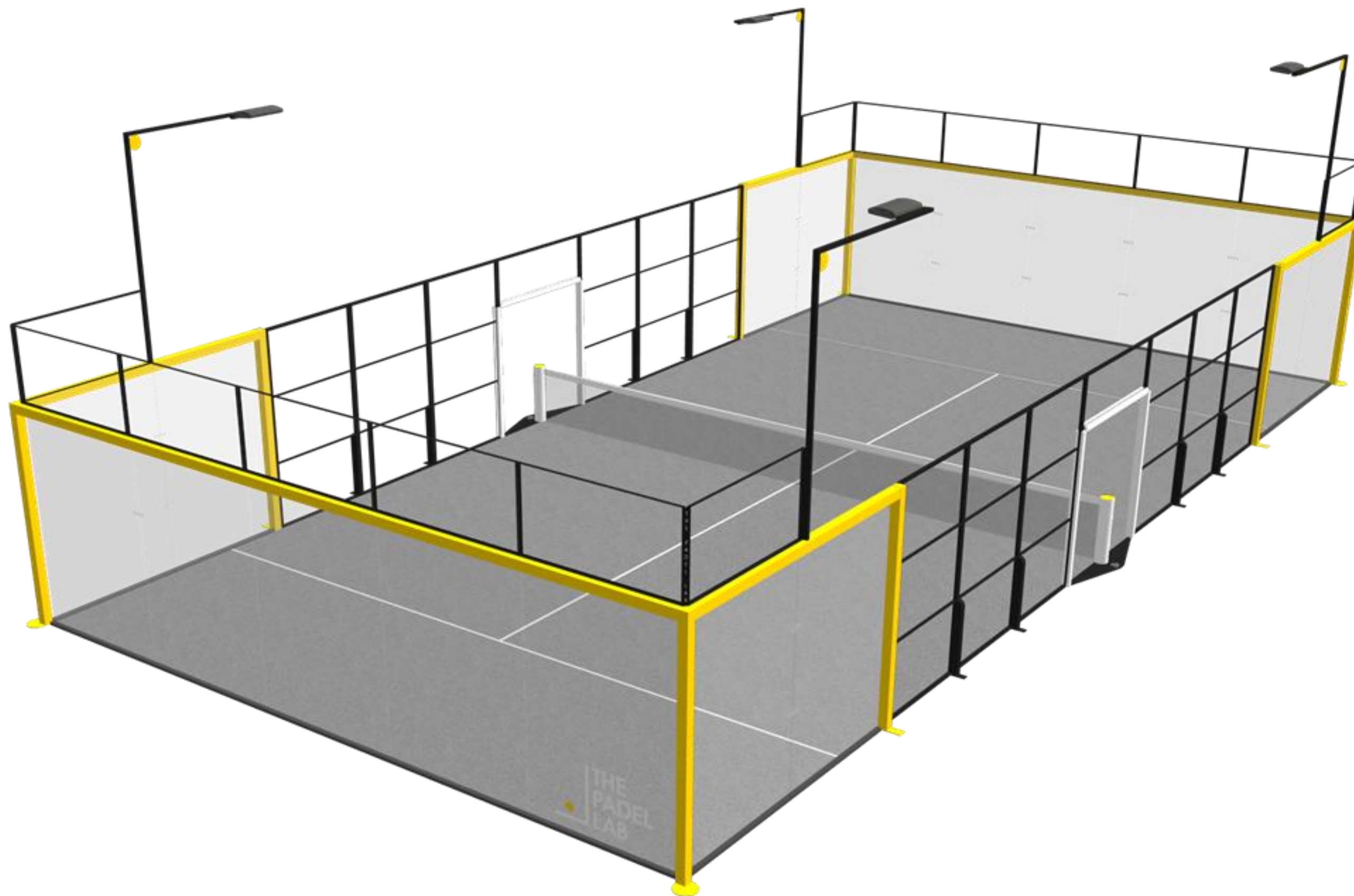
TOP QUALITY PADEL COURTS

The SX1 padel court distinguishes itself with unparalleled cleanliness and elegance. Its defining feature is the absence of visible fixtures for the glass panels, ensuring a spotless look. Engineered for clarity and panoramic views, it offers players and spectators an unblemished, high-definition experience. Our panoramic structure, constructed with hot-dip galvanized steel tubes, ensures the utmost durability of the court, guaranteeing maximum cleanliness and visibility.



SX1

SX1 Padel court

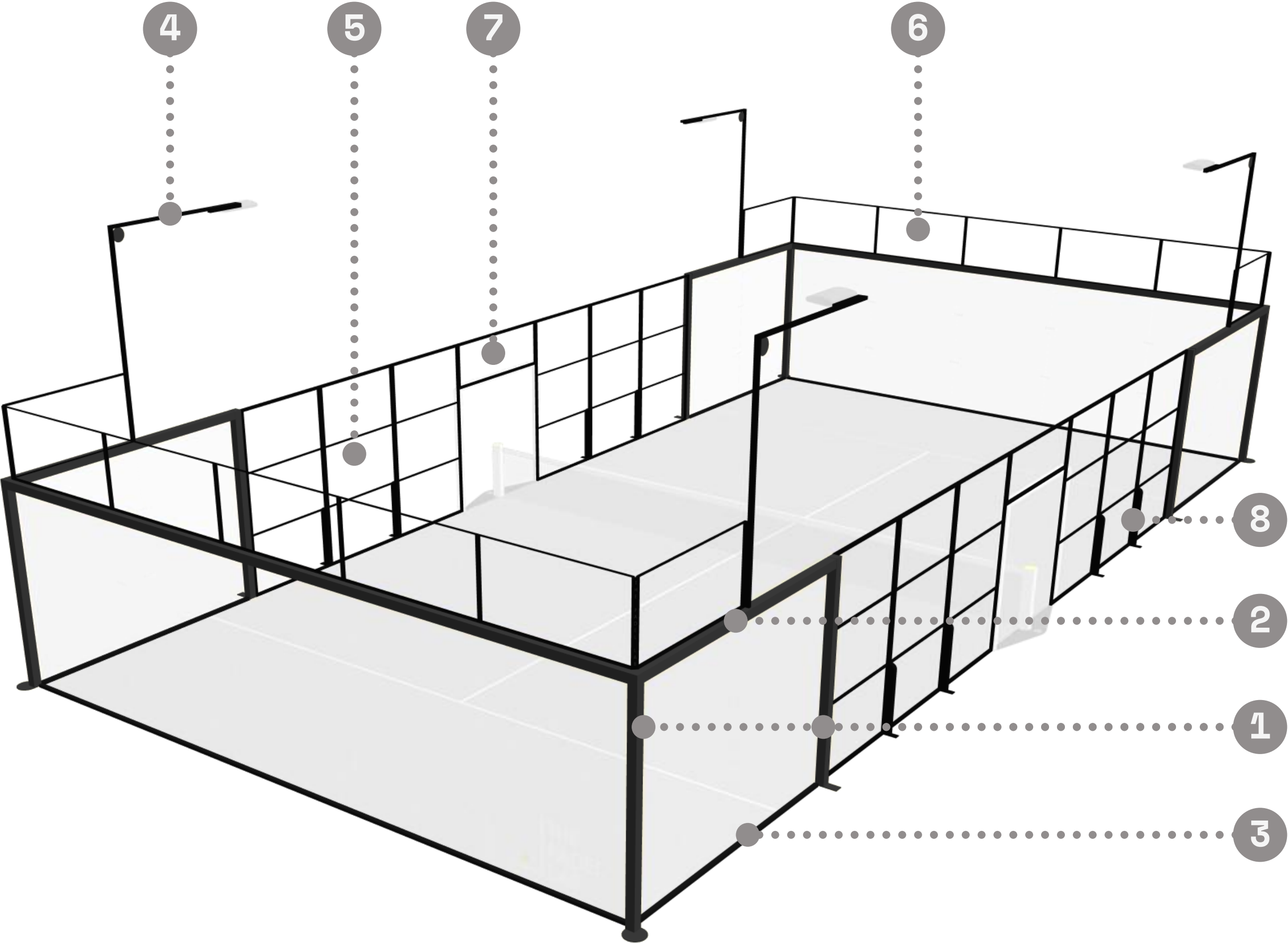


The Ultimate Panoramic Padel Court: Unmatched Visibility and Elegance

Our Panoramic Padel Court represents the pinnacle of innovation and design in the world of padel, offering players and spectators an unrivalled visual experience. With its seamless construction and the absence of visible fixtures, this court provides unobstructed views from every angle. The glass panels are expertly mounted to create a clear, uninterrupted playing environment, enhancing both the aesthetic and functionality of the court.

Built using high-quality, hot-dip galvanized steel, the court is engineered for strength, durability, and resistance to the elements, ensuring longevity and low maintenance. This panoramic design offers an immersive experience, allowing for full engagement with the game, making it a preferred choice for professional tournaments and premium venues. Clean lines, precision engineering, and a commitment to quality make this model a standout in both performance and style.

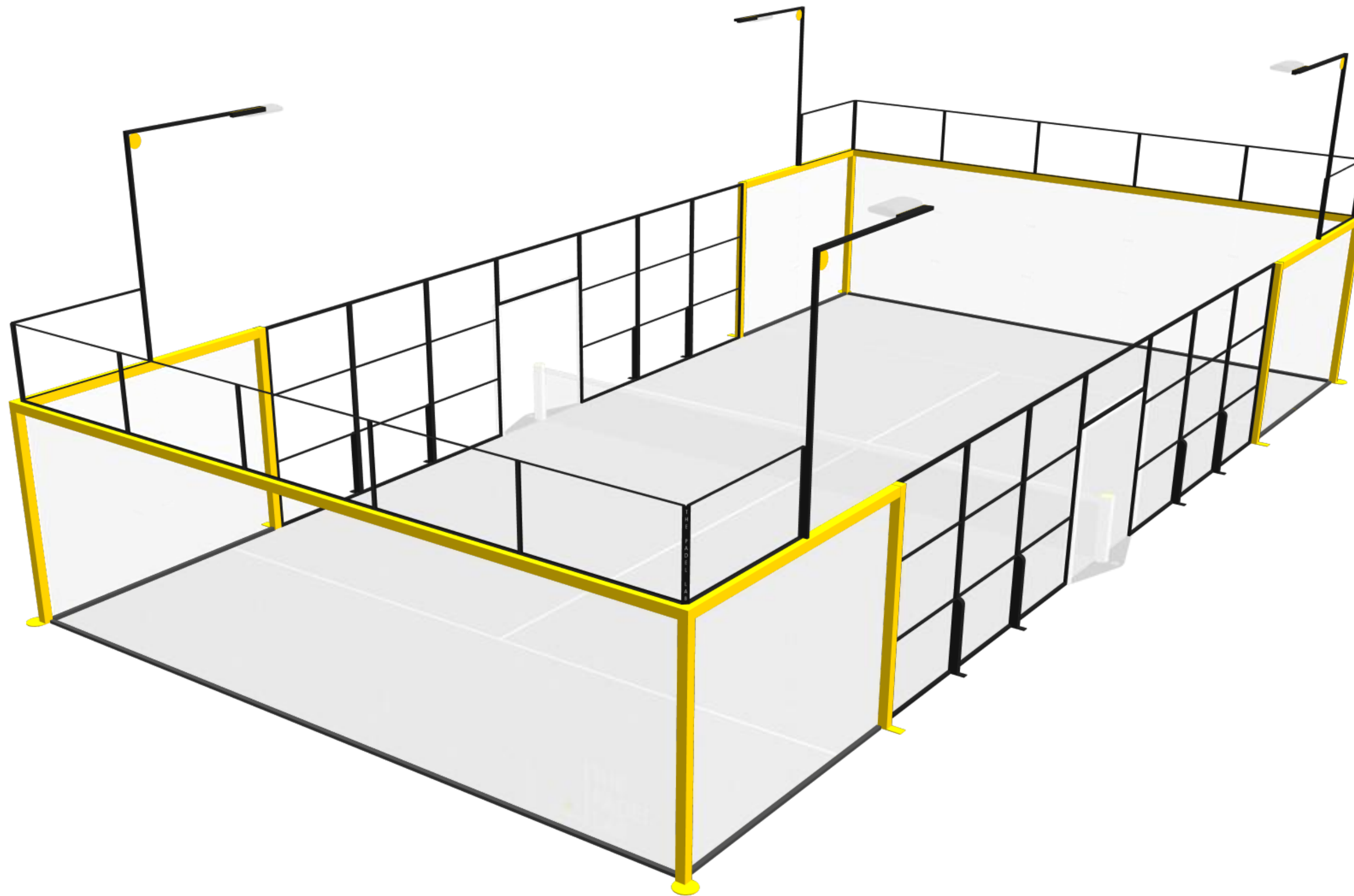
STRUCTURE



CHARACTERISTICS

- 1. **MAIN FRAME:** 8 posts of 2.880mm height made up of 120x120x3mm galvanised steel tube. Made to support the upper ring and light posts, and provide stability to the whole court.
- 2. **MAIN FRAME:** 8 beams of various lengths made up of 120x120x3mm galvanised steel tube. Made to screw and secure the glass panels and support the light posts and upper mesh.
- 3. **GLASS SUPPORT:** 28 linear meters made up 50x30x2mm tube equipped with a welded U-shaped rail. Made to hold and secure the glass in place.
- 4. **LIGHT POSTS:** 4 light posts of various geometries made up of 80x80x3mm galvanised steel tube. Made to support the selected spotlights and provide the adequate lighting to the court.
- 5. **MESH:** 12 modules of 3.000x1.667mm made up of 40x40x2mm galvanised steel tube frame and 50x50x4mm electro-welded mesh. The mesh is inserted in the frame to avoid injuries and provide a continuous playing surface along the whole court.
- 6. **MESH (Top):** 14 modules of 2.000x1.000mm made up of 40x20x2mm galvanised steel tube frame and 50x50x4mm electro-welded mesh.
- 7. **MESH (Entrance):** 2 modules of 1.950x850mm made up of 40x40x2mm galvanised steel tube frame and 50x50x4mm electro-welded mesh.
- 8. **FLOOR REINFORCEMENTS:** 8 floor reinforcements of 1.000mm height made up of 80x80x3mm galvanised steel tube. Made to attach the mesh to the foundations and provide stability.

COATING



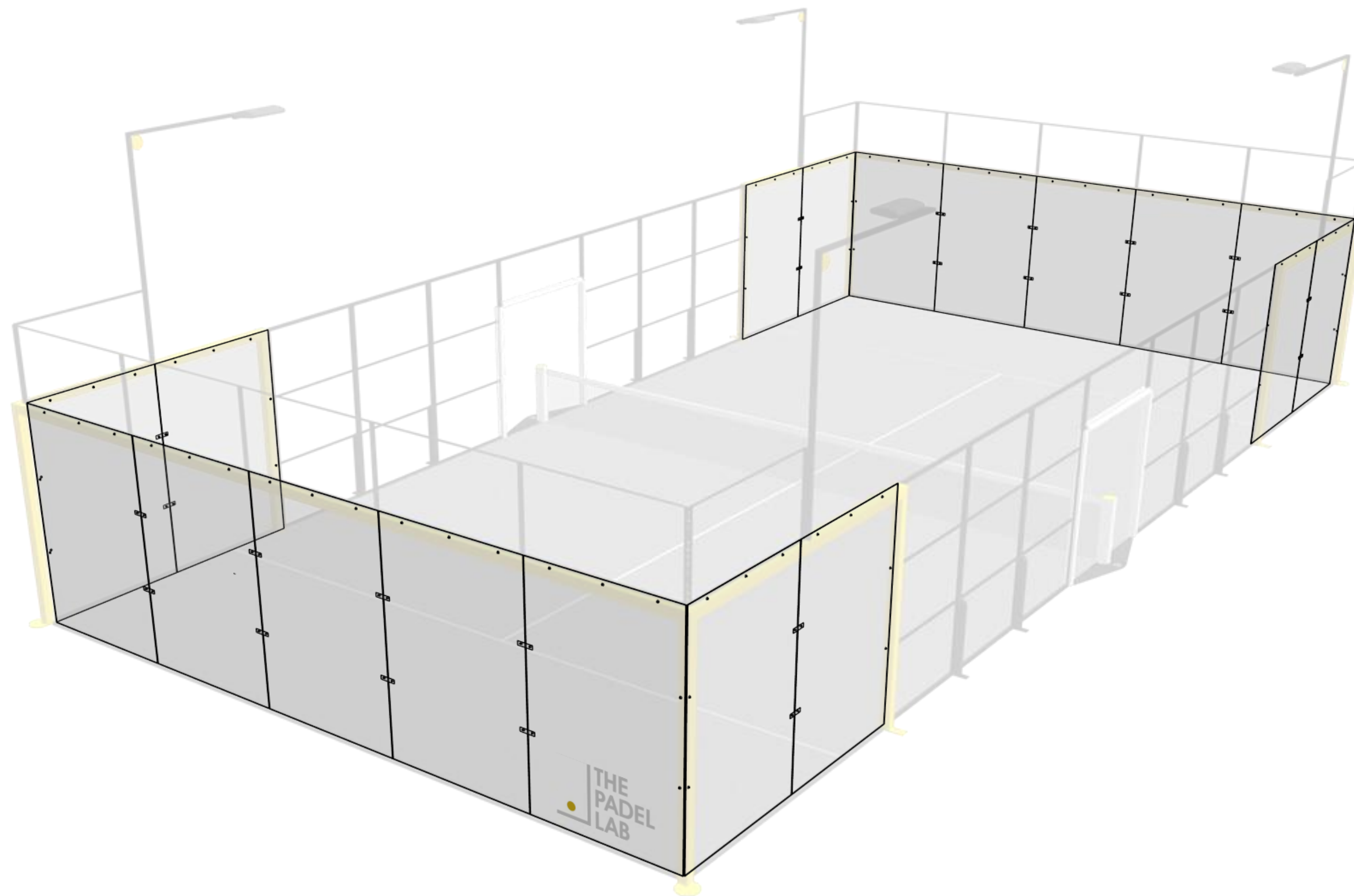
UNLIMITED COLOR OPTIONS

We can paint in any colour from the RAL palette, or create custom colour mixes (minimum quantities apply).

CORROSION PROTECTION LEVELS

- **C4 PROTECTION:**
 - **Composition:** Galvanized Steel Structure with Primer + Polyester Coating.
 - **Use:** Suitable for moderate humidity and pollution, offering improved corrosion resistance.
 - **Durability:** 10-15 years
- **C5 PROTECTION:**
 - **Composition:** Galvanized Steel Structure, Shot Blasting, Primer + Polyester Coating.
 - **Use:** Designed for coastal/industrial areas with high humidity and pollutants.
 - **Durability:** 15-20 years.
- **C5+ PROTECTION:**
 - **Composition:** Galvanized Steel Structure, Shot Blasting, Degreasing, Passivation, 2 coats of Primer, and Polyester Coating.
 - **Use:** Offers the highest protection for extreme environments like marine or heavy industrial areas.
 - **Durability:** 20+ years.

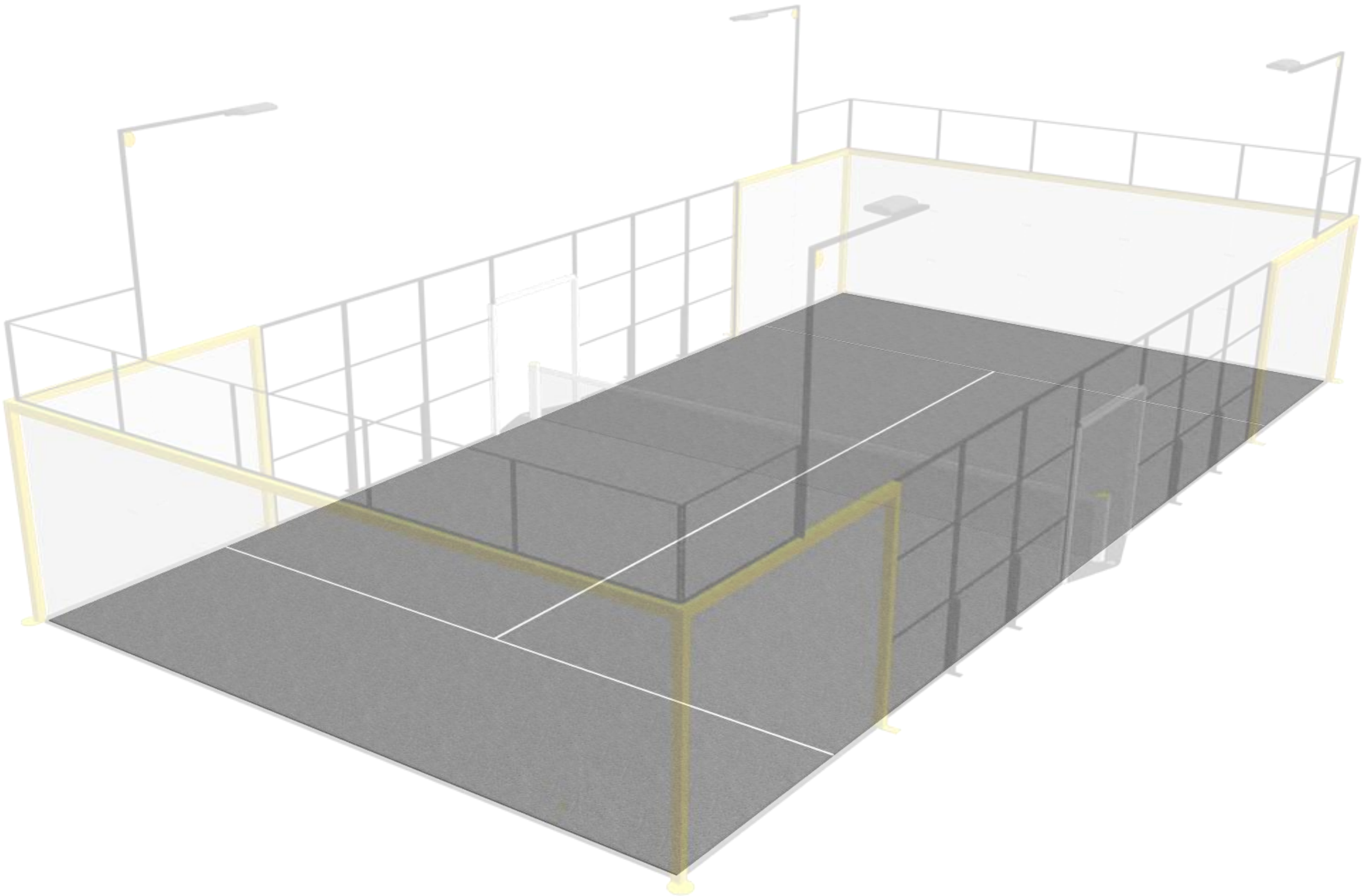
GLASS



CHARACTERISTICS

- **COMPOSITION:** The court is equipped with 18 tempered float glass panels, each measuring 2995x1995mm and 12mm thick. The panels feature polished edges and 7 polished, countersunk holes for secure attachment to the metal structure and to one another.
- **TEMPERED GLASS:** The glass undergoes a heat tempering process that significantly enhances its resistance to impacts and temperature fluctuations, unlike the annealing process. This treatment does not alter the glass's external appearance. In the event of breakage, the glass shatters into small, non-sharp, and non-hazardous fragments, ensuring safety.
- **FASTENING:** Secured by flush screws to avoid protrusions and interference with the game, with plastic washer and locknut for blocking and protection.
- **NEOPRENE:** All the glass rests on a neoprene layer that separates it from the steel structure, guaranteeing safety.
- **SPACERS:** Polycarbonate spacers screwed to the glass are used between the glass panes to prevent lateral movements of the glass and possible damage.
- **SILICONE:** The joints between the glass can be filled with silicone to add an extra layer of safety.

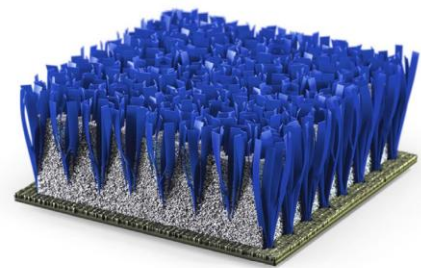
TURF



CHARACTERISTICS

- **PURPOSE:** Turf specially designed for the game of Padel.
- **QUALITY:** Material manufactured in accordance with the requirements of the UNE EN ISO 9001 2000 standard in terms of design, manufacture and traceability in companies with quality system certification granted by recognised bodies.
- **JOINTS:** Rolls are joined using bi-component polyurethane glue with geo-textile bands, with the lines of play marked with similar white grass inserted into the surface in accordance with the regulations.
- **SAND:** Turf filled with rounded quartz sand, washed and dried with 97% silica, with a granulometry between 0.3/0.8 mm in an amount recommended by the manufacturer.

TURF TYPOLOGIES



FIBRILATED

Durability: ★★★
Temp. resistance: ★★
Game speed: ★★★★★
Grip: ★★
Preferred use: Outdoor
Colours: ● ● ●



MONOFILAMENT

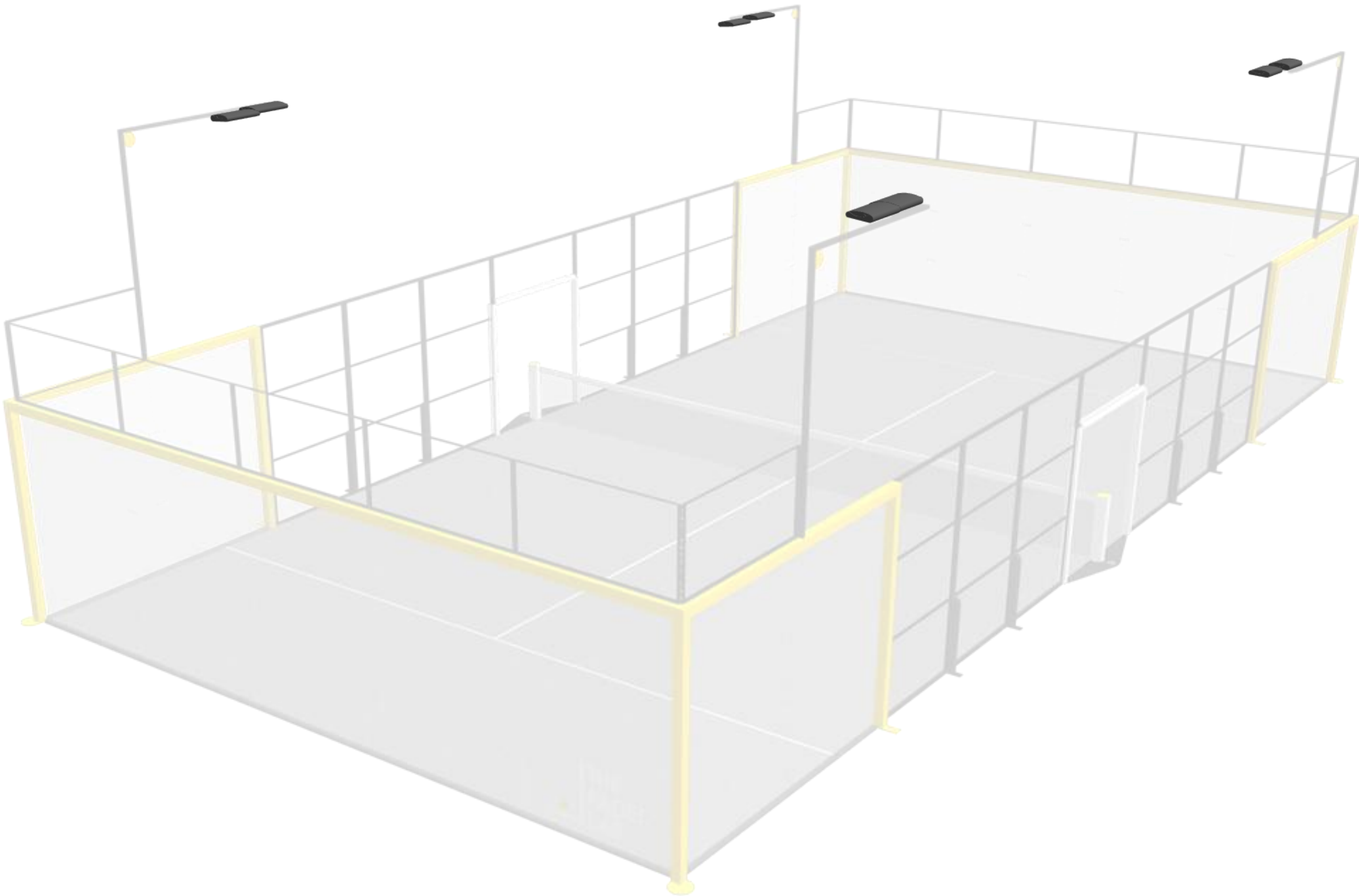
Durability: ★★★★★
Temp. resistance: ★★★★★
Game speed: ★★★★★
Grip: ★★★
Preferred use: Outdoor
Colours: ● ●



TEXTURIZED

Durability: ★★★★★
Temp. resistance: ★★★★★
Game speed: ★★★
Grip: ★★★★★
Preferred use: Indoor
Colours: ● ● ● ● ● ●

LIGHTING



CHARACTERISTICS

- **LIGHTING SYSTEM:** Designed to provide uniform illumination, ensuring optimal visibility and minimize glare.
- **TYPE OF LIGHTING:** High-quality LED lights are used for their energy efficiency, durability, and low maintenance.
- **ILLUMINATION:** Even distribution of light across the court to avoid shadows and reduce glare that could interfere with players' performance.
- **PLACEMENT OF LIGHTS:** Lights are positioned on poles outside the court, at a height of 6 meters, to avoid obstructing gameplay.
- **LUX LEVELS:**
 - Recreational play: 300-500 lux.
 - Professional/competitive use: 500-1000 lux.
- **COLOR TEMPERATURE:** Recommended between 4000K and 5000K, offering bright, natural light that mimics daylight.

SPOTLIGHT TYPOLOGIES



SYMMETRIC LIGHTING

Provides even light distribution across the entire court, ensuring consistent visibility without bright or dark spots for a balanced playing experience.

>300 Lux:
1 Spotlight per post

>500 Lux:
2 Spotlights per post



ASYMMETRIC LIGHTING

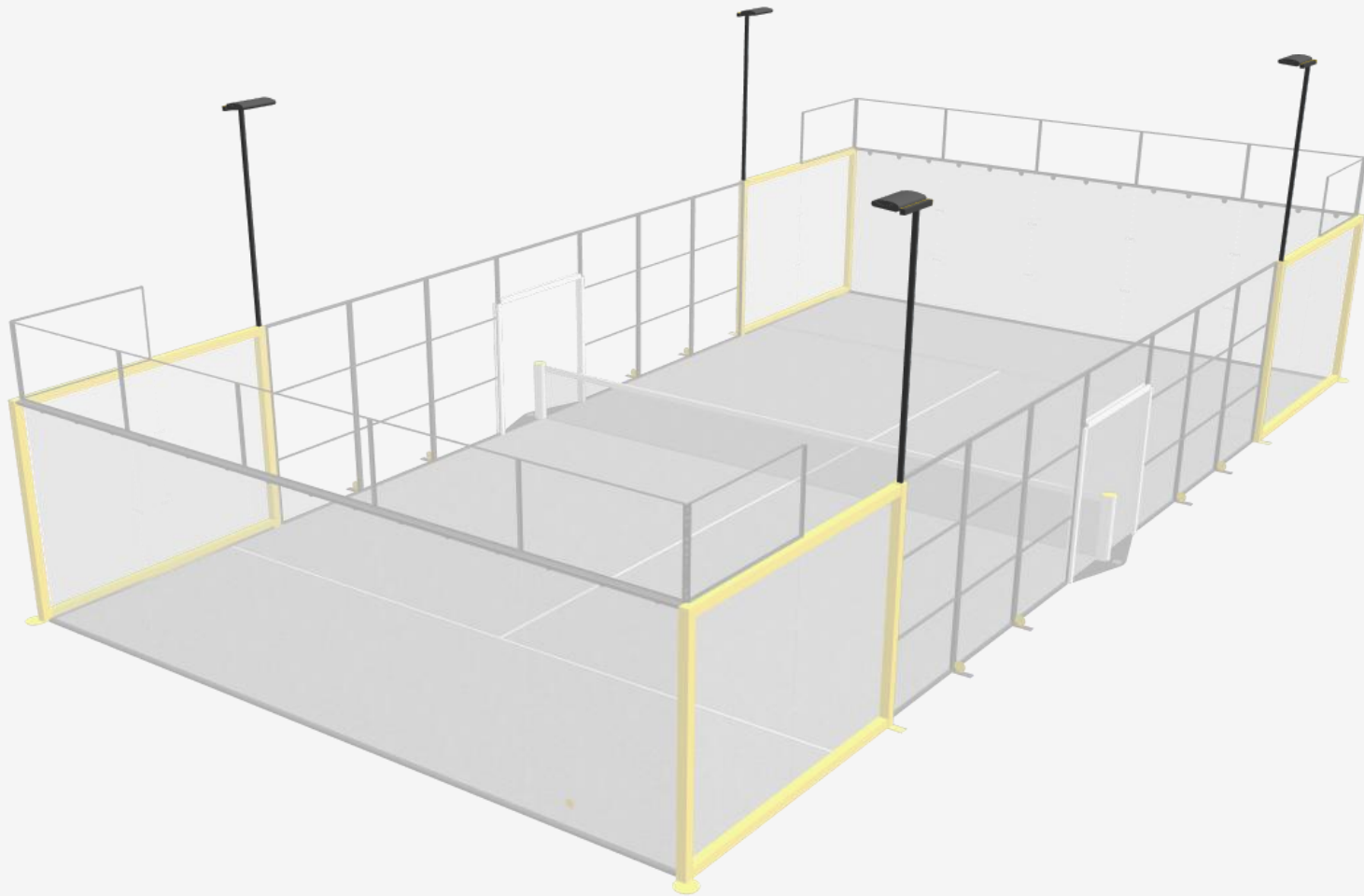
Features uneven light distribution, focusing higher intensity on specific areas like the baseline to improve visibility and reduce glare and shadows for a safer playing environment.

>500 Lux:
1 Spotlight per post

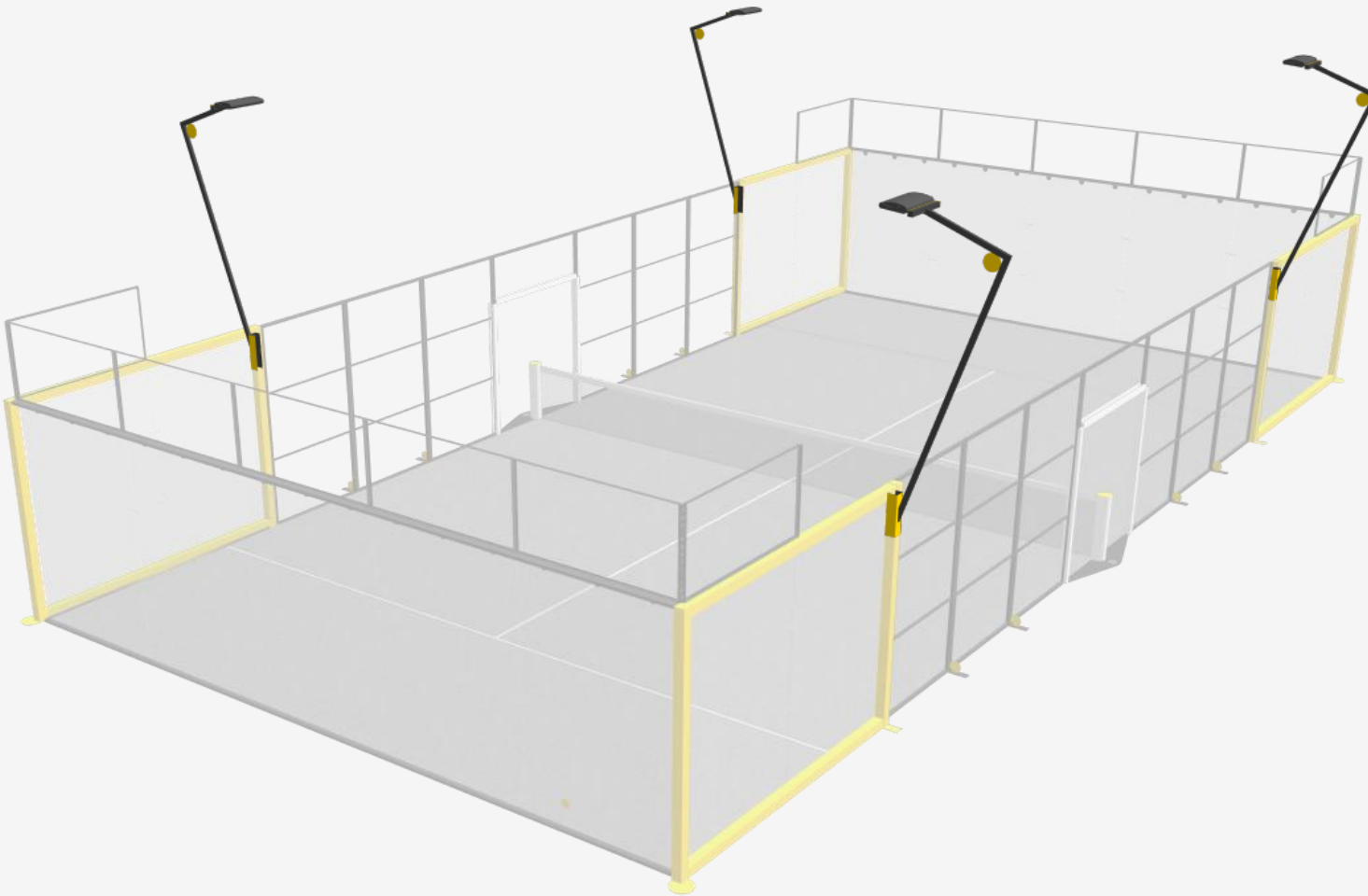
>1.000 Lux:
2 Spotlights per post

LIGHT POST OPTIONS

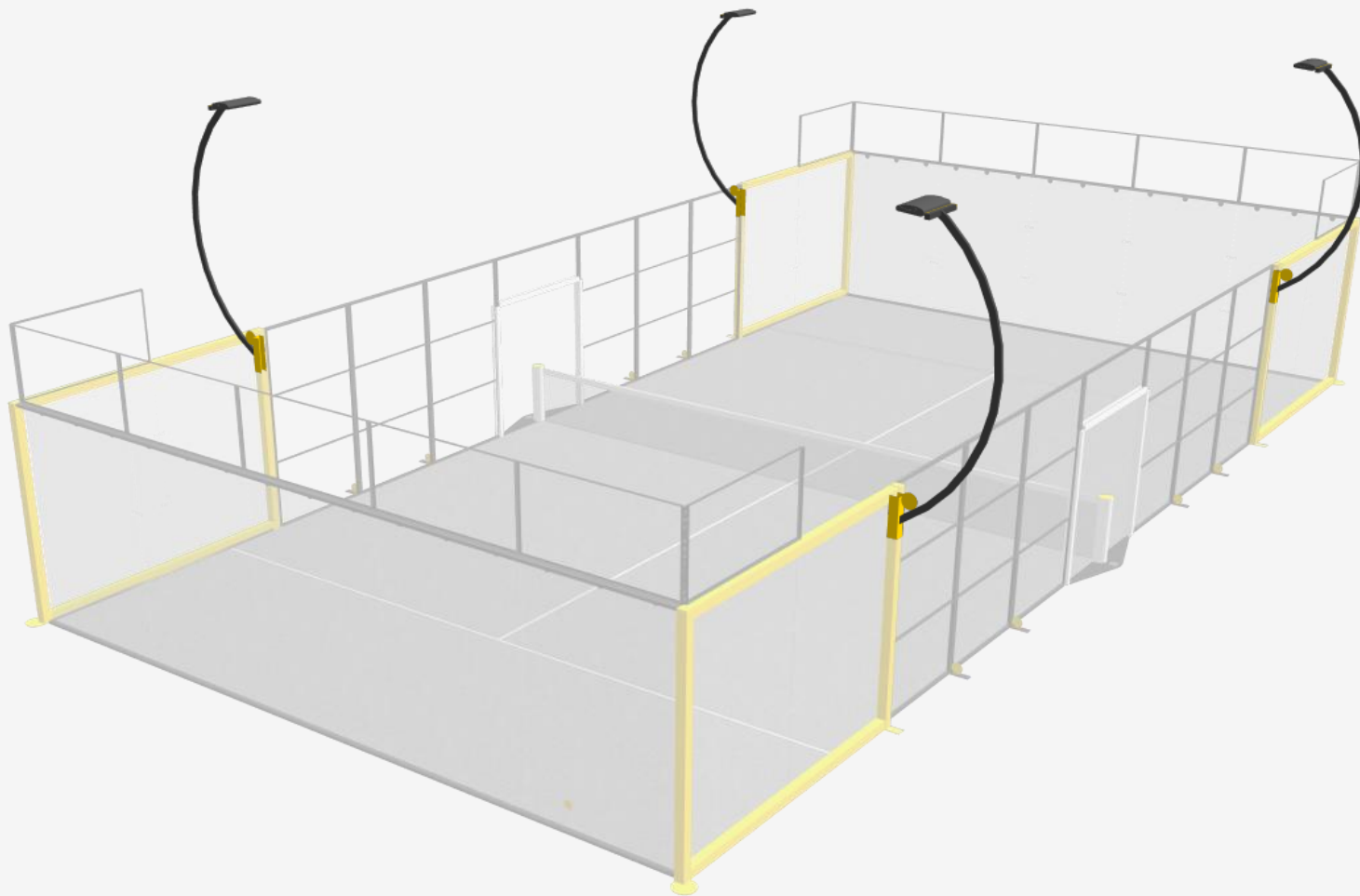
STRAIGHT



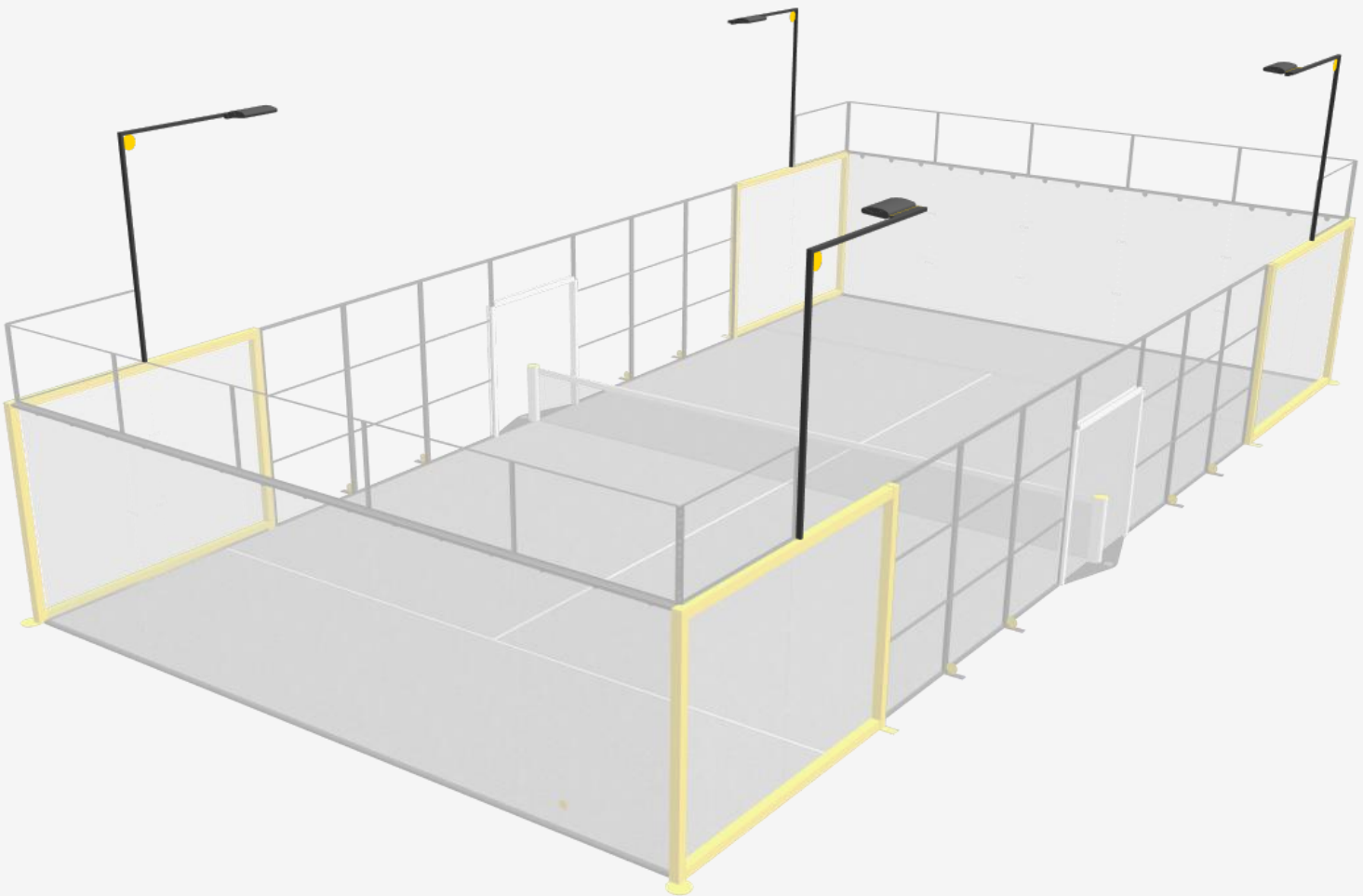
BROKEN



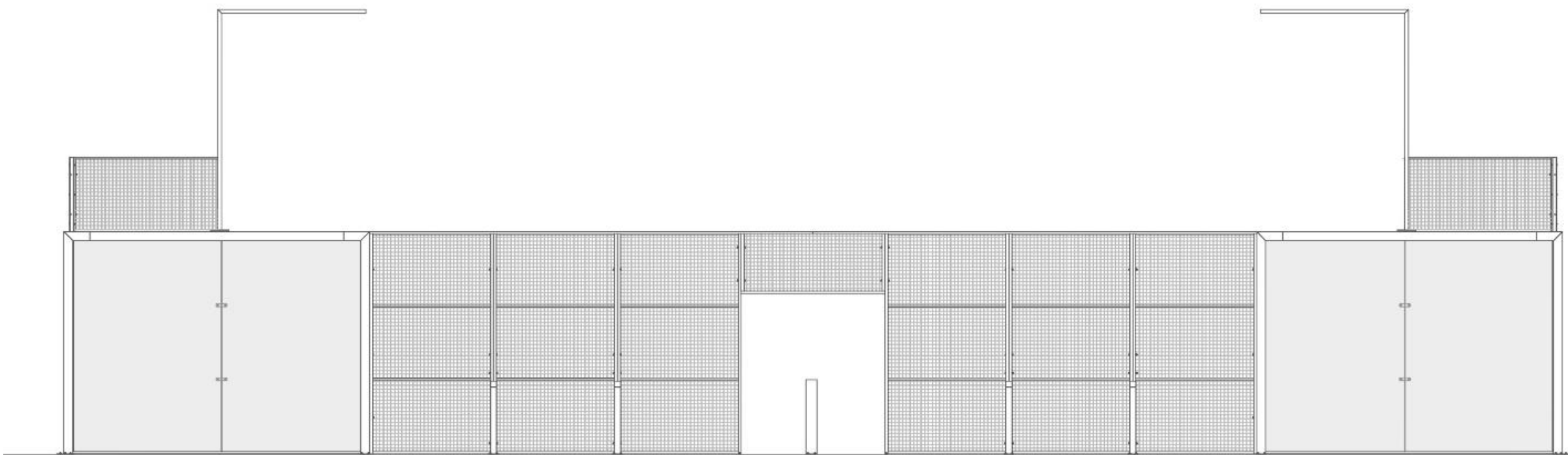
CURVED



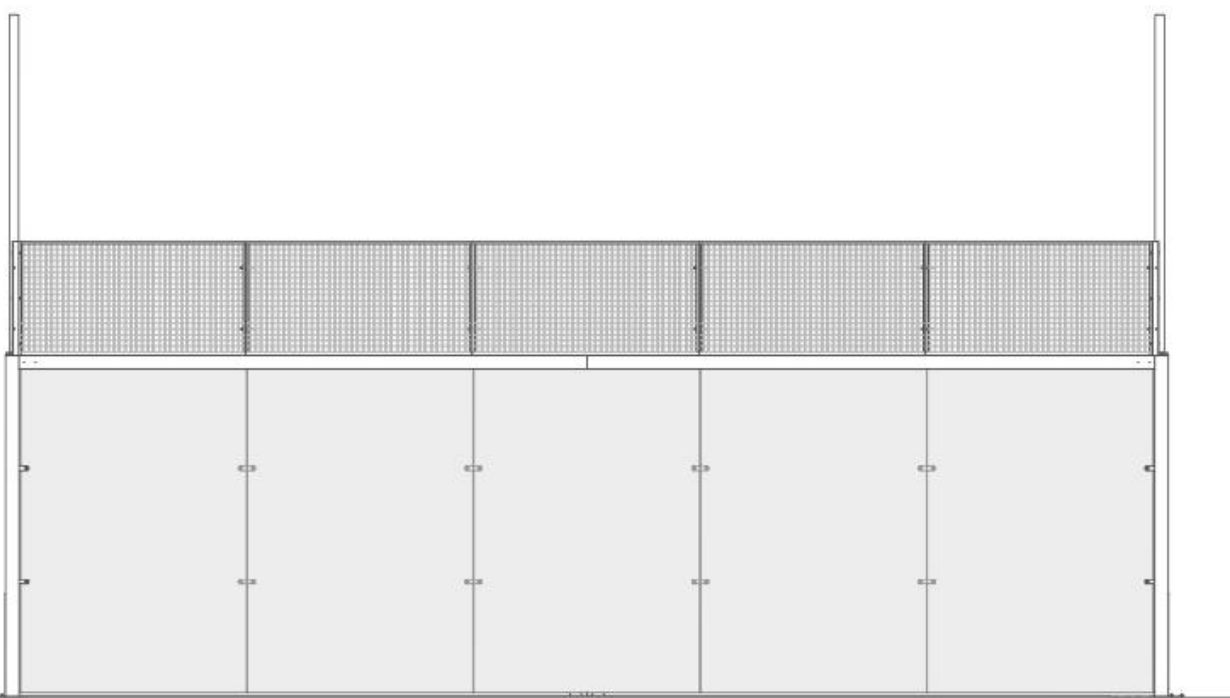
TPL PRO



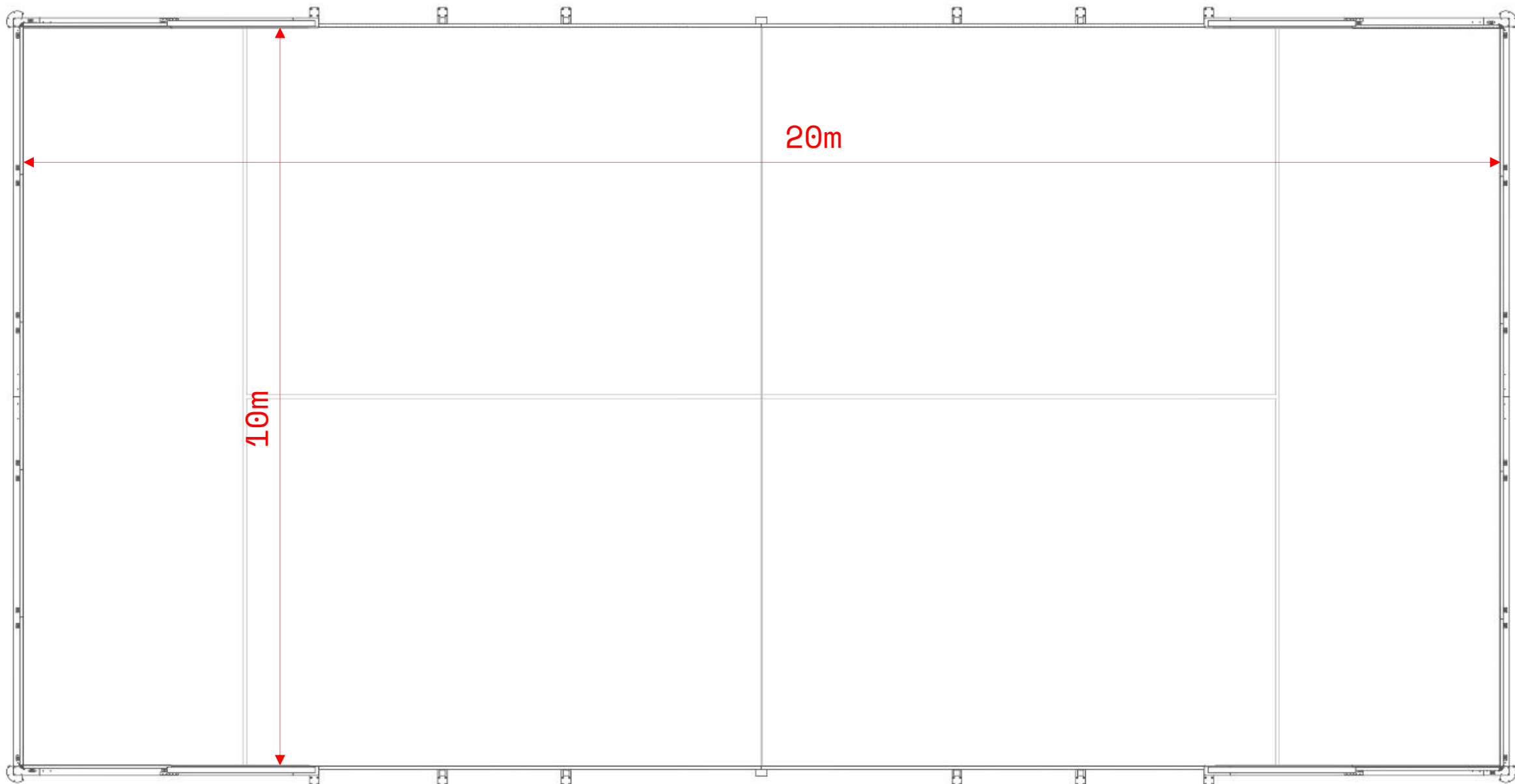
PLANS



LONGITUDINAL ELEVATION



TRANSVERSAL ELEVATION

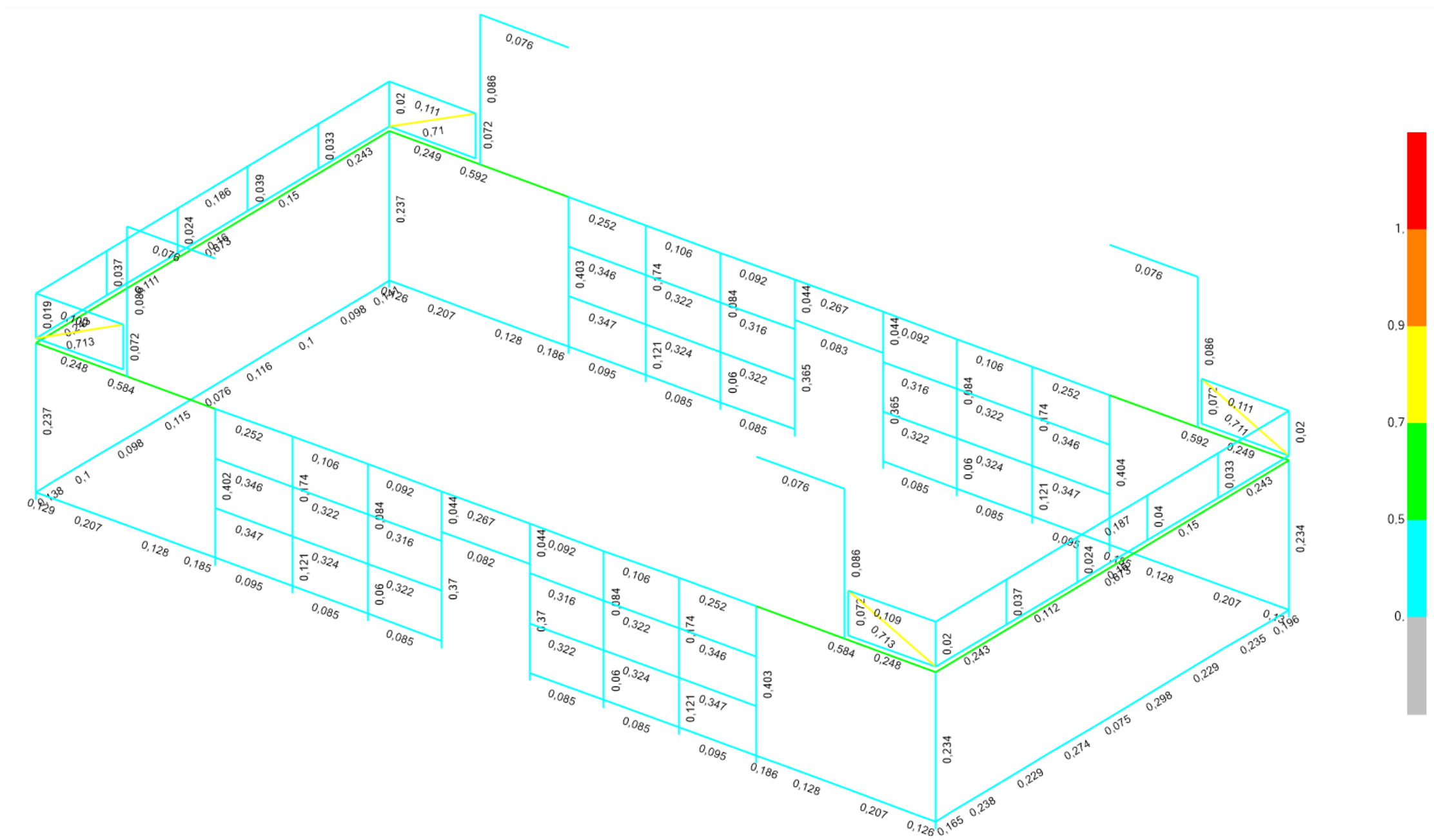


FLOOR PLAN



STRUCTURAL CALCULATIONS

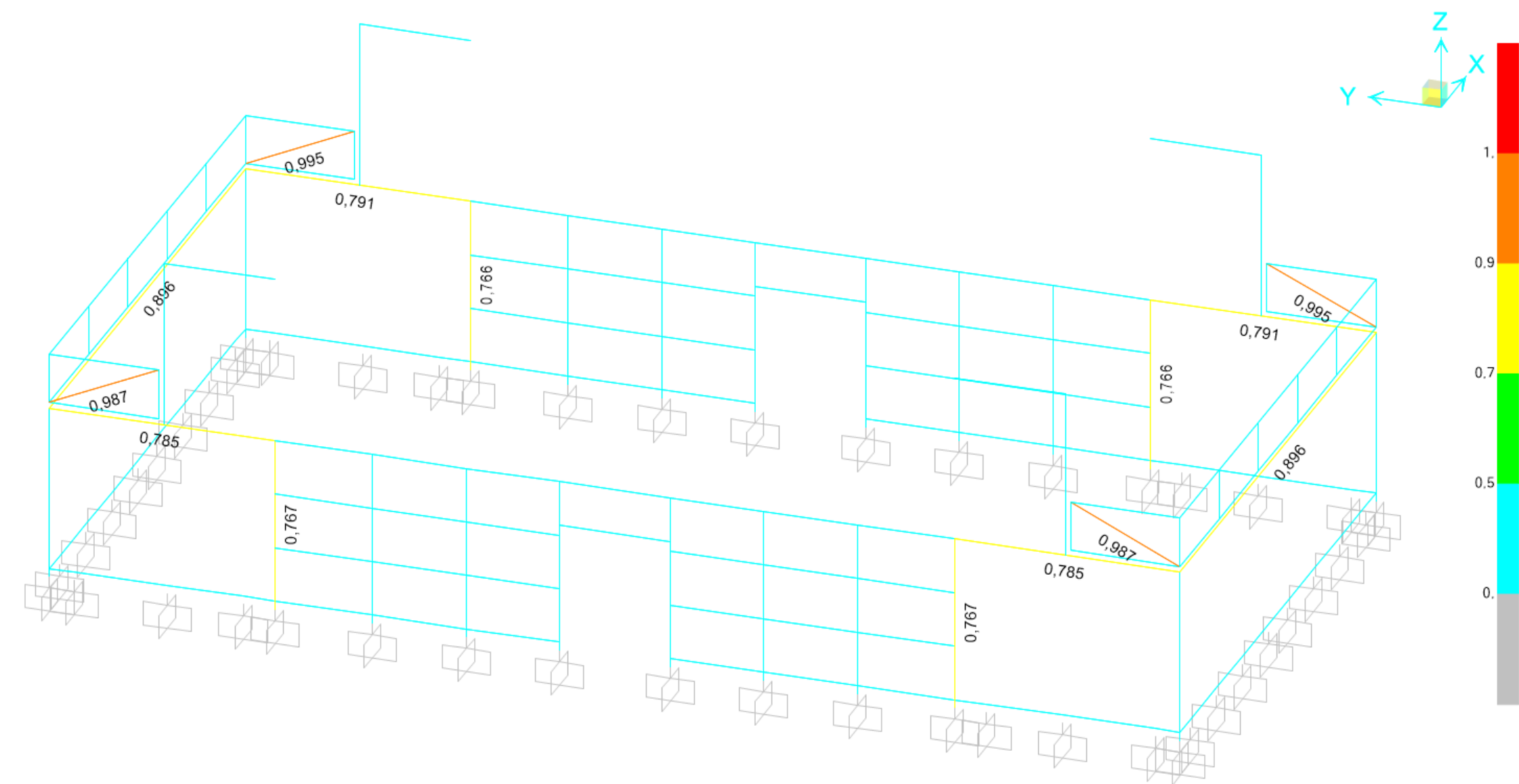
PROFILE CHECK



MAXIMUM STRESS RATIOS (EUROCODE 3-2005)

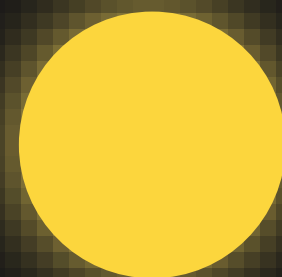
The stress ratio analysis shows that most structure elements have low to medium stress, indicating a well-balanced load distribution. Higher stress is observed near corners and support beams but remains within safe limits, **ensuring the court's durability and safety under normal use.**

MAXIMUM WIND LOAD



STEEL PROFILES COEFFICIENTS OF RESISTANCE

Using a coefficient to the wind loads of x2.22 Is being considered a wind pressure of $2,22 \cdot (0,84+0,36) = 2.66 \text{ kN/m}^2$, considering as coefficients C_e & $C_p = 1,0$, **a maximum resistance to wind load velocity of 65 m/s (234 km/h) is being reached.**



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