PATENT PENDING



INTRODUCING **CAF**

COMPOSITE AISLEFRAME® (CAF)

Redefining Sustainability in Data Centers with Superior, Eco-Friendly Innovation

Subzero Engineering's new Composite AisleFrame® (CAF) system provides a sustainable frame-based support structure for IT/HPC deployments in environmentally-conscious data centers. Made of composite materials, the CAF helps to reduce environmental impact and promote a greener, more eco-friendly future, from its production to its lifecycle.

The CAF framework is every bit as durable and robust as the Steel AisleFrame® (SAF) system. Its lightweight materials offer more flexibility, easier scalability, and significant cost savings for data center owners.

Material Advantages

- Composite materials provide a longer service life than steel – leading to the lowest Total Cost of Ownership (TCO)
- Manufacturing, delivery, and installation provides a reduced carbon footprint with reduced energy consumption

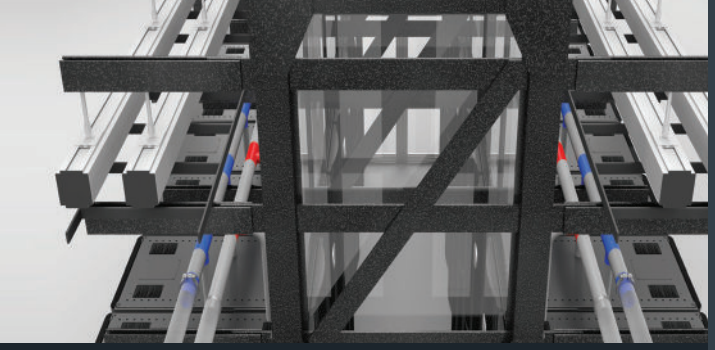
Weight Advantages

- CAF weighs over 50% less than equivalent steel frames, which helps to reduce the impact of transportation costs

For more information visit **subzero**eng.com

SUBZERO ENGINEERING

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Constructed of polyurethane resins, the CAF's structural integrity is just as strong as steel. Its flexible composite materials will not break under higher weight loads.

Greater Flexibility and Scalability

The CAF weighs over 50% less and has 3.8x lower density than Steel AisleFrame® (SAF). This makes it easier to transport, install, and reconfigure in the data center.

Once it arrives at the facility, 2-3 people can install the CAF in half a day. No special tools are required and, except for standard floor anchors, no incremental drilling is needed. The CAF is not electrically-conductive, so no grounding is required. As a lighter-than-steel, modular framework, the CAF can easily be reconfigured, customized with special features for AI and HPC design/structure (e.g. direct-to-chip liquid cooling), or scaled up as your IT deployment grows.

A Green Alternative

The CAF helps your data center to achieve its carbon reduction "net zero" goals. It allows your facility to take its environmental efforts to the data center floor, instead of limiting those efforts to the facility's structural elements.

The following table compares the estimated Global Warming Potential (GWP) savings of a CAF with a high Seismic rating (18.3'/5.6m) versus a SAF made with recycled steel (RCL STL) or non-recycled steel (NON-RCL STL).

Material & Weight	GWP (kg per CO2)	CAF GWP Savings
CAF 2,121 lbs./962 kg	2,405	-
RCL STL 4,518 lbs./2,049 kg	2,867	462
NON-RCL STL 4,518 lbs./2,049 kg	6,737	4,332

Scan to earn more about **The AisleFrame® System**

Benefits of the CAF

- Combines essential IT deployment elements of cabinet docking, aisle containment, mounted power delivery and cable trays/fiber runners in an all-in-one framework
- Modular and customizable to the needs of your IT deployment and your mission-critical environment
- Adaptable to AI installations using direct-to-chip liquid cooling
- Equal seismic and fire suppression ratings to steel structures
- 100% recyclable
- Reduced global warming potential in manufacturing, installation, and transportation
- Lightweight framework makes it easier to transport, install, reconfigure and scale
- Significant cost savings in data center construction, and in CAF delivery, installation, and scaling

Physical Properties

- Exceptional Strength-to-Weight Ratio: Robust performance while being more than 50% lighter than steel
- Higher tensile, flexural and compressive strength by weight than steel
- Lowest thermal expansion
- Non-magnetic, non-metallic
- Superior shock & impact resistance: Absorbs impacts without permanent deformation
- No interference with wireless signals
- Non-conductive: Eliminates the need for grounding

Design & Installation Benefits

- Strategically designed with lighter pre-assembled structures that bolt together and make transporting and installation much easier
- Easy installation: Uses standard tools, no welding or hot works permit needed
- Lower transportation & assembly costs: Lightweight structures require smaller lift equipment. More AisleFrames® are shipped on a single truck
- Custom colors available (dependent on volume)
- We can certify installations in seismic locations

Economic Benefits

- Minimal to zero maintenance costs
- Longer service life than traditional materials
- Lower installation & labor costs
- Reduced transportation expenses
- Comparable cost to steel
- No painting of structure required

Environmental Benefits

- Eco-Friendly: Requires fewer raw materials
- Lower energy consumption during production
- Extended lifespan reduces waste & replacements