



JUVIA RESTAURANT, MIAMI BEACH

Located on the rooftop of a 9 story building in Miami Beach, Juvia is a high-end restaurant with an outdoor dining terrace with seating for 60 patrons. The outdoor seating is covered by an En-Fold that spans 55' and is 37' wide.

TRUE TENSILE MEMBRANE STRUCTURE

Like a well-trimmed sail, En-Fold's patented drive mechanism applies precise biaxial pretension to the fabric membrane, thus transforming it into a lightweight tensile structure.

FABRIC OPTIONS

En-Fold comes standard with Sefar Tenara 4T40, the industry's most translucent, long lasting and pliable fabric membrane material.

Attributes include: Strength (high strength-to-weight ratio), Chemical inertness Biocompatibility, High thermal resistance, High chemical resistance in harsh environments, Low flammability, Low coefficient of friction, Low dielectric constant, Low water adsorption, Good weathering properties.

For applications where cost, or color options are a primary criteria En-Fold is also available with other water proof, pliable fabric membrane materials such as Serge Ferrari 502, 702, 1002 T2 and 1202 T2.

Additional fabric options are possible as Uni-Systems' engineers are always researching and testing the applicability of new fabric membranes.

SIZE OPTIONS

The 55' clear span is beyond the capabilities of En-Fold's extruded aluminum drive beams, so in this situation the extra capacity was gained by inserting the aluminum drive beams into twin custom built steel beam structures.

Picking up where other commercially available retractable awnings reach their limits, En-Fold is perfectly suited for medium to very large applications.

En-Fold's high performance extruded aluminum drive beams are capable of spans from 20 feet to 40 feet without added support.

With supplemental support, En-Fold's drive beams are capable of spans up to 100 feet. Due to En-fold's unique modular construction widths in excess of 200 feet in a single unit are possible



PROTOTYPICAL OCEAN-FRONT RESTAURANT

A large En-Fold with a long span and cantilevered drive beam ends creates a perfect transition between the natural and build environments.

WEATHER PROTECTION SUN/RAIN/WIND

Redefining the line between indoors and out; En-Fold maintains the open sky when weather permits or a protective cover in the case of inclement weather.

Wind mitigation plays an important role in the creation of appealing indoor/outdoor spaces and surprisingly the simple addition of an En-Fold roof can greatly reduce wind in many instances by creating a pressure pocket in the semi-enclosed space, thus causing the wind to go up and over the structure.

Excessive sunshine will almost always prevent customers from sitting outdoors, unless shade can be provided. Depending on fabric selection, En-Fold allows from 5% to 40% light transmission and effectively blocks 100% of the sun's harmful UV rays.

Even the remote threat of rain can prevent customers from booking reservations for an outdoor table and the water tight En-Fold can guarantee that customers will stay dry even in the worst of rainstorms.

MODULAR CONSTRUCTION

En-Fold is made up of a small number of identical sub-assemblies that join in an unlimited number of configurations.

The primary sub-assemblies are the patented drive beams that house all of the mechanization and support the entire system, the individual fabric membrane panels and the idler beams that run perpendicular to the drive beams and support fabric.

En-Fold's fabric membrane panels are divided up into long narrow strips that slide into the keder edge retaining features integral to the lightweight extruded aluminum idler beams.

MINIMAL STRUCTURE

With any retractable system, the desired effect is minimal structure overhead, to provide the most open feel and clearest view of the sky.

En-Fold's unique design allows for wide drive beam spacing which means that when the membrane is retracted very little structure remains to block the view.



PROTOTYPICAL COURTYARD POOL APPLICATION

An En-Fold over the pool and deck with wide fabric panels and long spanning beams connecting to the building structure at each end creates a welcoming shaded oasis during the day and desirable table seating area in the evening.

CORROSION RESISTANCE

All exposed materials are corrosion resistant.

Anodized aluminum structural members.

Stainless steel cables and fittings.

The standard fabric membrane is composed of 100% ePTFE (expanded polytetrafluoroethylene) a thin, lightweight waterproof, windproof chemically inert material with excellent weathering properties.

CONTROL SYSTEM OPTIONS

Standard control package includes one cabinet mounted operator control station (OCS) and one handheld remote control.

Tie-in to building management system.

Tie-in to fire/smoke detection systems.

Tie-in to anemometer.

System software to facilitate remote technical support.

WEATHER SEALS

When fully tensioned, the interface between the individual fabric panels and the aluminum idler beams creates a watertight seal.

Watertight seals are available for all En-Fold-to-building interfaces.

Integral gutters are also available for En-Fold-to-building interfaces.



PROTOTYPICAL ROOF APPLICATION

A rooftop terrace becomes an intimate getaway beneath a Small En-Fold with modest span and no overhang on the idler beams. With no cantilever, retractable side curtains are a nice addition to enhance utilization of the space in even the harshest conditions.

ADAPTABLE TO SURROUNDING ARCHITECTURE

En-Fold is highly adaptable due to its modular construction and infinite configuration options.

Can be customized to suit the design criteria of the owner or architect.

FINISH OPTIONS

En-Fold's extruded aluminum structural members are available in standard clear anodized finish, or a number of premium finishes.

These finishes include a limited number of anodized colors, or an infinite number of Sherwin Williams Acrolon acrylic polyurethane paint colors.

EASY TO PURCHASE

En-Fold is a customizable architectural product that can easily be purchased off a P.O., just like any other piece of capital equipment.



SIDEWALK CAFÉ APPLICATION

Gone are the unsightly clusters of umbrellas. Settings such as a romantic sidewalk cafe or an historic building are perfect locations for a free-standing En-Fold.

A TRUE TEMPORARY STRUCTURE

Weighted column bases.

Quick set-up and removal.

No need to anchor to the pavement, or dig footings.

No fixed structural connections.

ALTERNATIVE TO THE UMBRELLA

Can remain deployed during thunderstorm winds without the potential of falling over.

Superior protection from rain, wind and excessive sun than small umbrellas.

En-Fold can withstand hurricane force winds once it is retracted and secured with cradle straps.

DESIGN ALTERNATIVES

Can function as decorative planters.

Can be purchased with special lighting packages that are integral to the structure.

Available in a variety of sizes starting as small as 20' x 20'.

Modular units can be grouped together.

Fire resistant fabrics permit usage of heaters beneath the canopy.



CECCONI'S MIAMI BEACH

Cecconi's restaurant at the Soho Beach House in Miami Beach that features graceful garden dining with Silver Buttonwood trees and the first generation En-Fold roof for an elegant and relaxed indoor/outdoor dining experience.

ROI

ROI is an important calculation for any large capital expense.

Outdoor seating can increase the number of customers served during dinner service hours, but only when the weather cooperates. Studies conducted in the sports industry on the cost benefit of retractable roofs concluded that at \$1m revenue per game a rain-out can cost a ball club as much as \$7m per year, but the losses don't stop there. Even the threat of rain over an 80 game season can cost a ball club an additional \$2.5m per year and rain delays can net an additional \$600k in losses. All tallied this can mean losses of over \$10m annually.

While restaurants and bars don't see revenue of \$1m per night the weather will influence customer behavior in similar a similar manner and will have a negative impact on RevPASH.

RAPID TURN-AROUND

Off-the-shelf components means rapid assembly and the modular construction results in very short installation times given the square footage the product is able to cover.

SUSTAINABILITY

En-Fold is a lightweight structure that covers large spaces with minimal amount of material.

The standard Tenara fabric membrane material has a 25+ year life expectancy and is 100% recyclable.

The all-aluminum structural members are also 100% recyclable.

Blurring the lines between indoors and out, En-Fold allows for natural ventilation and day lighting, to reduce the load on HVAC and electrical systems.

En-Fold is also an excellent source of shade and can help to reduce thermal gain in adjoining structures.