

Private Residence – Foldable Umbrellas and a Trisail-structure Abu Dhabi / VAE

A total of 6 single-point funnel canopies for the swimming pool installation and 3 membrane sails for the adjacent private beach were assembled.

The umbrella constructions are mobile and have various heights from 4.60 to 7.40 metres and differing diameters, ranging from 8.10 – 12.60 metres. As some of the umbrella surfaces overlap, they are opened and closed fully automatically in sequence in order to avert possible collisions.

All umbrella membrane surfaces were sewn using 100% PTFE thread and not tacked. By using various material layers at the bottom of the membrane and at the pinnacles, we accentuated the design, which is still further underlined by the use of green PTFE ties. The green colour of the ties harmonises with the turquoise blue tone of the pool and sea water. Further visual refinement was provided on the umbrella stands with ceramics, some of which were decorated with gold-plated tips. The support pedestals were also enhanced with ceramic elements.



The 3 membrane sails for the beach were arranged around a central mast as a so-called "trisail" structure and anchored at the sides. They roof in a total of 320 sqm.

Just as the future location itself - the palace and the entire grounds of the residence -, the materials used for the membrane structures are also only the "creme de la creme": All steel and rope constructions are made using stainless steel with a three-layer white coating. The membranes are made of PTFE tissue, specially created for this task.



Project data

Client	Al Nasr Irrigation & Contracting.Co.LLC Abu Dhabi in the name of Sheikh Sulthan
Planning	Büro für Leichtbau – J.Tritthardt with Textil-Bau-Konstruktion – J.Schilling
Membranbau	CENO TEC GmbH Textile Constructions
Covered Area	Foldable Umbrellas: 4x ø12,60m / 2x ø8,10m Trisails – covered area ~318m ²
Year of Construction	2007

