

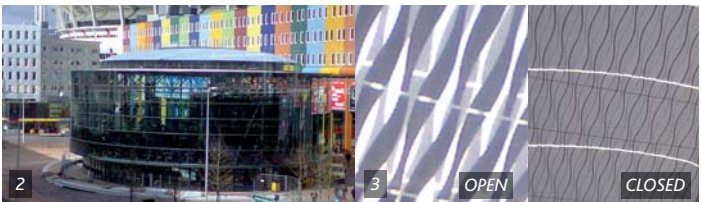
Extension to a catering pavilion on the Arena Boulevard Amsterdam, The Netherlands



The pavilion was designed by cepezed in the 1990s. Due to the scale enlargement of the entire area during the last decade, the Municipality of Amsterdam requested the owner and operator to invest in high-quality expansion. The original building consists of an elongated, two-storey box measuring 20x10m. In the initial designs, the extension involved a skin of ETFE cushions that constituted a roofed-over winter garden, stretching over the pavilion as a kind of rotation figure. As a result of various regulations and a refinement of the programme by the client, the concept eventually evolved into a transparent glass oval, more than 12m high and measuring 43 by 30m in length and width, accommodating wholly climatized bar and restaurant functions. On the ground floor, the main volume has a 2m constriction, while the first floor has a gallery more than 4m wide. The façade and the roof are particularly striking. The façade consists of cold-bent insulation glass, which was bent and placed by means of suckers on the site itself. On the ground floor, the façade can be opened over more than three quarters of its length by means of a faceted folding wall in which every separate part has a different radius (Fig 1-2). The façade accommodates three stability crosses, of which two are situated at the heads of the oval. These locations are also used for the organization of the stairs. The roof is more than 2.5m high and comprises eight large pneumatic cushions mounted on a refined detailed steel construction of faceted delta-beams. Each of the cushions consists of four layers of ETFE with three air chambers in each cushion. The ETFE bears a pattern through which the sun and light transmittance can be regulated by a change in pressure in the innermost chamber (Fig 3). The air supply for the cushions is integrated in the construction. A cooling "patio" has been integrated in the roof for the building-related installations that must have contact with the outside air. The paving of the boulevard continues on into the pavilion. Embedded in large plant pots that were cast in the floor at the time of construction, the greenery appears natural and self-evident.

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Figure 1. Internal view.
 Figure 2. External view.
 Figure 3. Pattern regulating light transmittance.



Name of the project:	JinSo Pavillion
Location address:	Arena Boulevard, Amsterdam, The Netherlands
Client (investor):	Sojin Holding BV
Function of building:	Restaurant
Type of application of the membrane:	Roof
Year of construction:	2008/ 2009
Architects:	Cepezed, Delft, The Netherlands
Consulting engineer for the membrane:	Tentech BV, Utrecht
Engineering of the controlling mechanism:	Buitink Technology
Contractor for the membrane (Tensile membrane contractor):	Buitink Technolgy,
Supplier of the membrane material:	Nowofol, Germany
Manufacture and installation:	Buitink Technology
Material:	ETFE Film
Covered surface (roofed area):	600m ²