

# LOW COST EXPERIMENTAL PNEUMATIC SYSTEMS

Mateo Giardino, Andrés Muriel

## Abstract

This research was focused on the experimental application of inflatable structures and inflatable architectures, using non-traditional construction materials. The use of these systems to generate spatial envelopes, paired with local technology, provides speed, resource savings, transportability and flexibility in solving some habitat issues.

The aim was to provide non-traditional technical-spatial solutions for occasional activities, in places where it's not possible to generate fixed structures. Pneumatic systems have inherent qualities to face these needs. It's lightness and mobility allow to build alternative spaces quickly and with lower costs.

Consequently, we carry an experimental work that allow us to incorporate these technologies into our surrounding environments, using materials available in the local market, with manufacturing techniques relevant to our own production context.

Subsequent constructive experimentation made possible the production of a pneumatic system that allowed us to verify the perceptual impact that it would generate on users, the variability of possible use-scenarios and the various forms of appropriation of the people involved. In accordance with this, a constructive manual was developed that promotes collaborative work methodologies, which are undoubtedly a fundamental tool for the development of effective, productive activities with real appropriation of knowledge. Designing new environments with innovative potential opens and renews the perspective for alternative patterns, collective ideals, and the inclusion of all existing urban diversity.