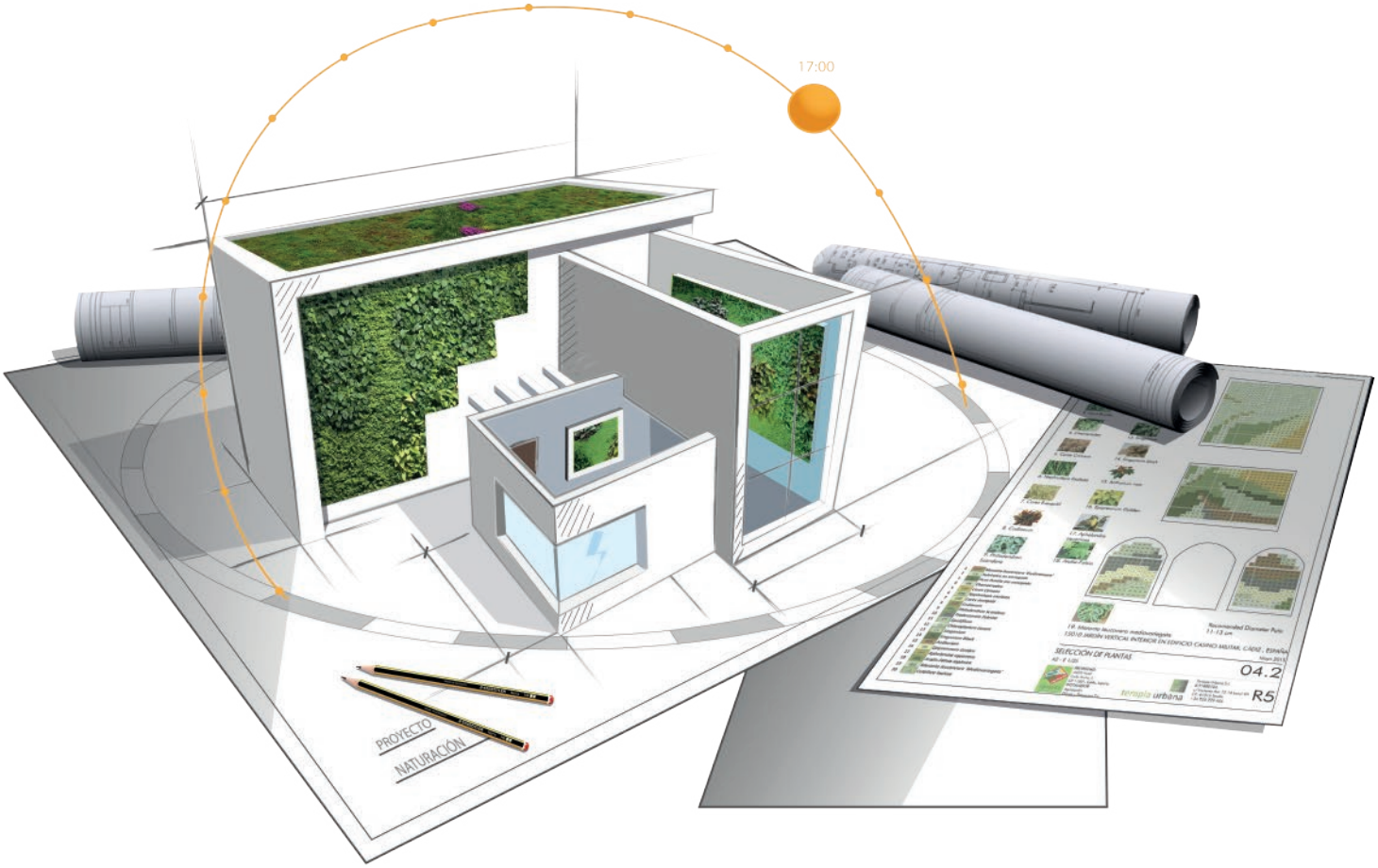
Terapia Urbana



Technical description for projects of the Fytotextile® Living Wall modular system 2017

TECHNICAL DESCRIPTION FOR PROJECTS: LIVING WALL UNIT (LOST SOLUTION IRRIGATION SYSTEM)

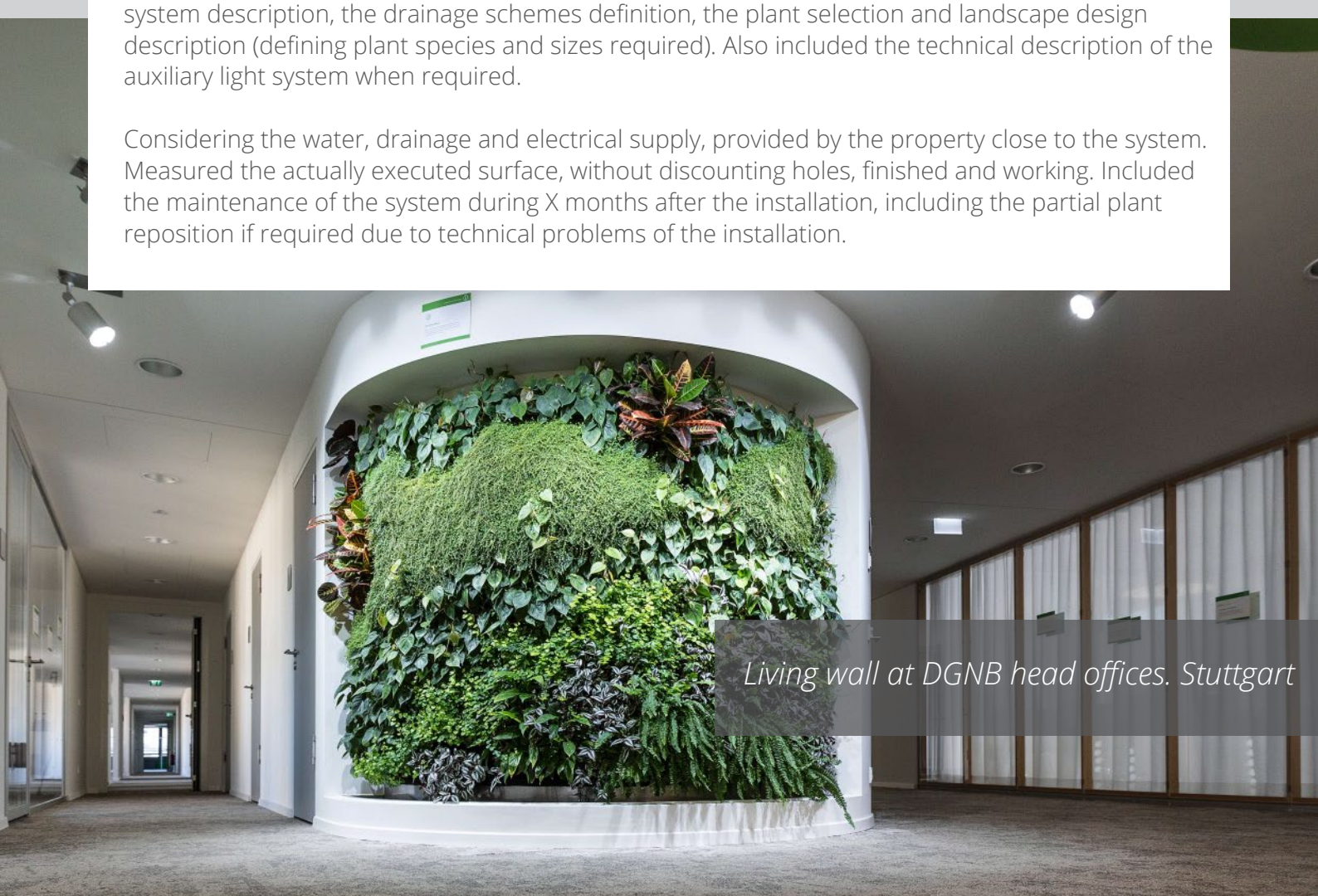
Fytotextile® Living Wall modular system by Terapia Urbana (lost solution irrigation system)

Passive living wall system by Terapia Urbana of XX x YY m², with lost solution irrigation system, composed by connectable and flexible modules Fytotextile® by Terapia Urbana to half-hydroponic crop. Every module has a maximum capacity for 49 plants /m², with planted and saturated weight <= 35 kg/m², and maximum service resistance of 530 Kg/ m². The system thickness without planting of 65-70 mm, and includes an accessible top label for checking the irrigation system.

The system is composed by a galvanised steel framework 50.50.1,5 mm , screwed to th supporting wall; air chamber of 50 mm, carril profile FYT-VOL , multilayer fabric Fytotextile® modules composed by 3 layers of synthetic and organic material, with reduced thickness (back layer FYT-RCF waterproof and UVA radiation resistant, intermediate synthetic layer FYT-DRA, and exterior layer FYT-AIR with a 4-30 Pa of air passage resistence, which helps for an optimal evapotranspiration of the plants]; irrigation system composed by PE pipes with diameter according to calculation, even self-compensating and non-leakage drippers per pocket; galvanised steel gutter chamber for collecting the water (150x100 mm) with filter tray at the bottom of the system, connected to drainage; fertigation system by means of a dosing pump ; plant selection according to botanical and climate conditions; auxiliary engineering composed by solenoid valves for every irrigation sector filters and cut-off valves according to the technical project developed by Terapia Urbana; automation system basic/advanced automation system according to technical project.

Also included the technical design, the frame work definition, distribution of modules of Fytotextile® system , irrigation and fertigation system description, auxiliary engineering definition, the automation system description, the drainage schemes definition, the plant selection and landscape design description (defining plant species and sizes required). Also included the technical description of the auxiliary light system when required.

Considering the water, drainage and electrical supply, provided by the property close to the system. Measured the actually executed surface, without discounting holes, finished and working. Included the maintenance of the system during X months after the installation, including the partial plant reposition if required due to technical problems of the installation.



Living wall at DGNB head offices. Stuttgart

TECHNICAL DESCRIPTION FOR PROJECTS: LIVING WALL UNIT (CLOSED CIRCUIT IRRIGATION SYSTEM)

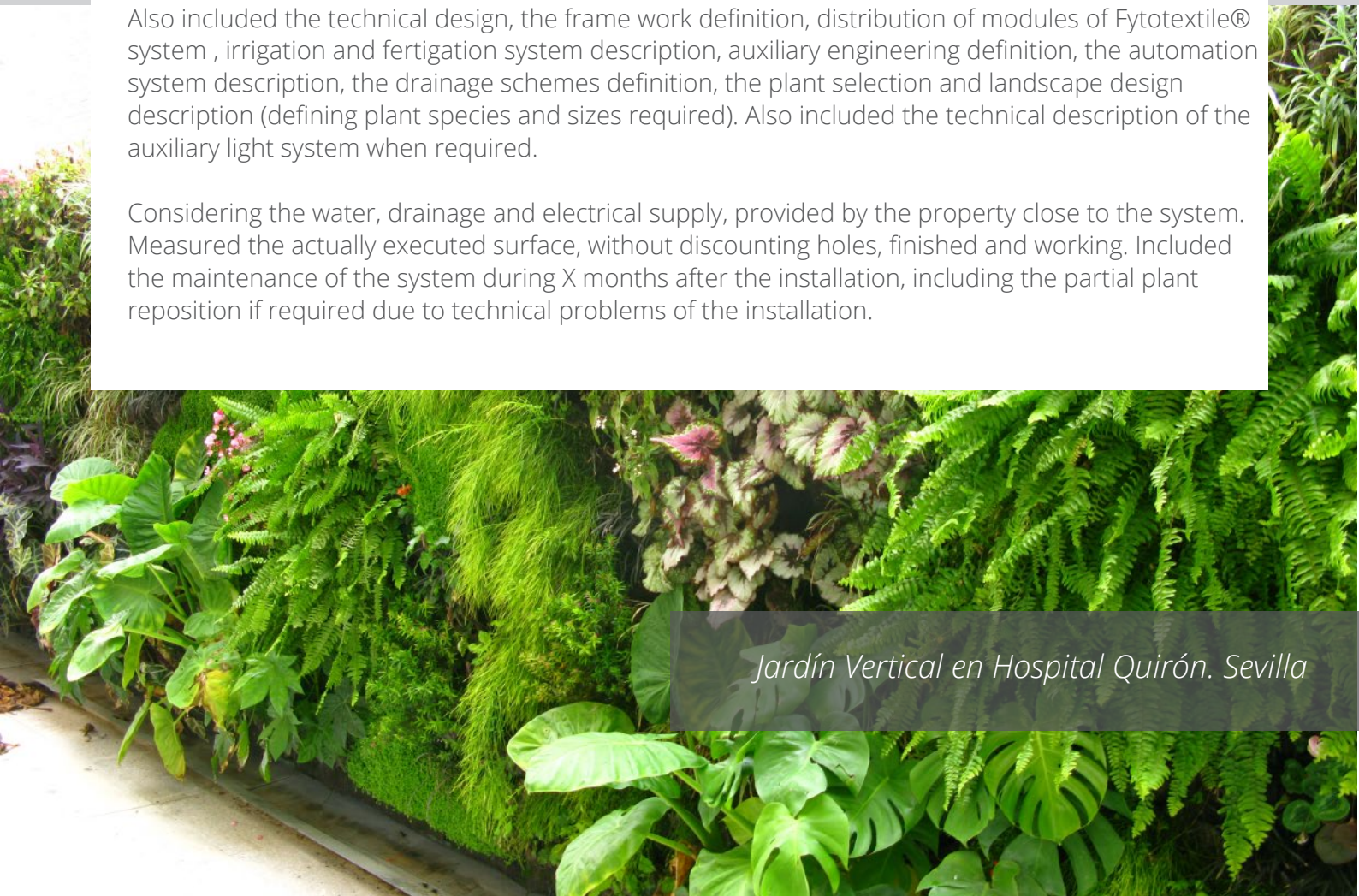
Fytotextile® Living Wall modular system by Terapia Urbana (closed circuit irrigation system)

Passive living wall system by Terapia Urbana of XX x YY m², with close circuit irrigation system, composed by connectable and flexible modules Fytotextile® by Terapia Urbana to half-hydroponic crop. Every module has a maximum capacity for 49 plants /m², with planted and saturated weight <= 35 kg/m², and maximum service resistance of 530 Kg/ m². The system thickness without planting of 65-70 mm, and includes an accessible top label for checking the irrigation system.

The system is composed by a galvanised steel framework 50.50.1,5 mm , screwed to th supporting wall; air chamber of 50 mm, carril profile FYT-VOL , multilayer fabric Fytotextile® modules composed by 3 layers of synthetic and organic material, with reduced thickness (back layer FYT-RCF waterproof and UVA radiation resistant, intermediate synthetic layer FYT-DRA, and exterior layer FYT-AIR with a 4-30 Pa of air passage resistence, which helps for an optimal evapotranspiration of the plants]; close circuit irrigation system composed by PE pipes with diameter according to calculation, even self-compensating and non-leakage drippers per pocket; galvanised steel gutter chamber for collecting the water (150x100 mm) with filter tray at the bottom of the system, connected to water tanks located at a technical room provided, including a decantation water tank, pumps and solenoid valves for every sector; devices for avoiding water pathogens ; auxiliary engineering composed by solenoid valves for every sector, filters and cut-off valves according to the technical project developed by Terapia Urbana; advanced automation system with remote control access for controlling moisture, temperature , Ph and conductivity of the water, besides the flow of the system with automatic refilled of the water tanks, according to the technical project; fertigation system by means of a dosing pump; plant selection according to botanical and climate conditions;

Also included the technical design, the frame work definition, distribution of modules of Fytotextile® system , irrigation and fertigation system description, auxiliary engineering definition, the automation system description, the drainage schemes definition, the plant selection and landscape design description (defining plant species and sizes required). Also included the technical description of the auxiliary light system when required.

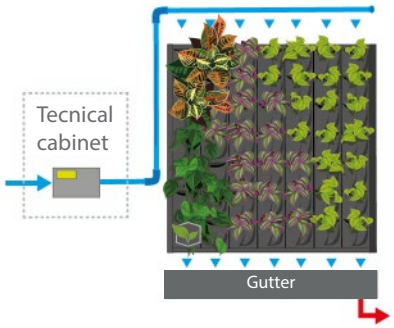
Considering the water, drainage and electrical supply, provided by the property close to the system. Measured the actually executed surface, without discounting holes, finished and working. Included the maintenance of the system during X months after the installation, including the partial plant reposition if required due to technical problems of the installation.



Jardín Vertical en Hospital Quirón. Sevilla

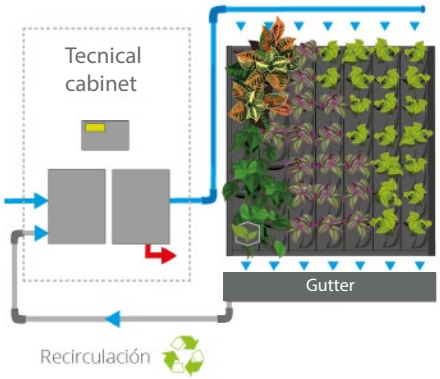
IRRIGATION SCHEMES AND TECHNICAL REQUIREM

LOSS SOLUTION SCHEME



This scheme suits small and medium surfaces of vertical gardens (up to 85-90 m²). in this scheme, extra water is not left, because the system is connected right to the drain. Water and electrical supply in the technical cabinet are necessary for auxiliary installations

CLOSED CIRCUIT SCHEME



This scheme suits large and very large surfaces of vertical gardens (>90 m²). In this scheme, extra water is left for watering in a closed system connected to reservoirs, where water is reused for green wall watering after treatment. Base branches of the water line in the technical room are necessary for additional installations, reservoirs, and control.

Technical requirements for installing a living Wall system

Water supply
A fresh water point for the irrigation is required, with 1,5 atm of pressure available.

Electric connection
An electrical supply placed in the technical room is required of 220v 16 A

Drainage point
A drainage point placed at the bottom of the system (according to the irrigation scheme).

Technical cabinet
To place the irrigation and automation system.

- Lost solution irrigation system: minimum technical cabinet of 90 x 90 x 30 cm
- Close circuit irrigation system: Dimensions according to the Surface (5-10 m)

Auxiliary lighting
Only required for indoor living wall installations with not enough lighting conditions.

Terapia Urbana offers the following services to technicians and prescribers:

- ✓ *Technical assistance for the design of the complete living wall system and the auxiliary installations required (irrigation, drainage, lighting, plant selection, landscape design, etc)*
- ✓ *Fytotextile® and Slimgreenwall ® living wall system production and supply*
- ✓ *Technical assistance to the execution of the living wall project (in collaboration with the installer company)*
- ✓ *Living wall system execution is offered in collaboration with another installer company. Terapia Urbana is not an installer company.*

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