

DAKU EXTENSIVE PITCHED is a system designed for pitched rooftops or for those with complex geometrical shapes, while maintaining the same characteristics and performances of a flat roof.

The system can be installed on rooftops with a maximum sloping of 35°. Depending on the climatic conditions, it might be necessary to include an irrigation mechanism. In order to properly design the anchoring elements and the perimetral barriers, pitched rooftop gardens require an extensive analysis of the surfaces. Roofs with long slopes might require the installation of additional breakers.

Accessibility and safety are common problems for pitched roofs, meaning that it is extremely important to reduce the need for maintenance. This aspect must be considered during the design of the garden.

DAKU EXTENSIVE PITCHED systems comply with the UNI 11235/2015 standards and respect their parameters of efficiency and sustainability.



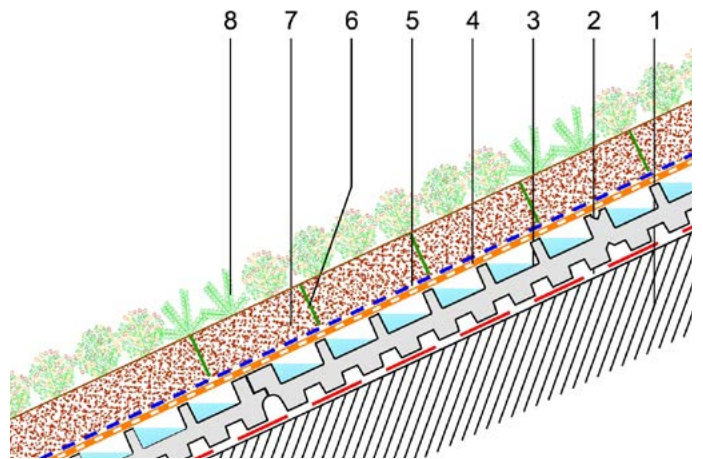
SYSTEM COMPONENTS

1. DAKU SEDUM (Mixture of Sedum)
2. DAKU ROOF SOIL 2 (substrate, 8 cm thick)
3. DAKU GEO 75 (retaining element)
4. DAKU GRID 4 (cellular confinement grid)
5. DAKU STABILFILTER SFE (Filter)
6. DAKU FSD 20 (component for drainage and water storage)

**EXTENSIVE PITCHED
SYSTEMS**

STRATIGRAPHY

1. Sloped floor
2. Waterproof anti-root covering
3. DAKU FSD 20
4. DAKU STABILFILTER SFE
5. DAKU GRID 4
6. DAKU GEO 75
7. DAKU ROOF SOIL 2 (8 cm thick)
8. DAKU SEDUM



SYSTEM COMPOSITION

DAKU FSD 20: it is the fundamental basis and engine package. It is a component made of prefabricated sintered expanded polystyrene, which performs a threefold function of protection, drainage and water storage. It has a gross mass of 25 kg/m³, a thickness of 82 mm and a hydric storage capacity of 13.1 l/m². The horizontal drainage capacity at 20 kPa (i=0.01) is not inferior to 1.44 l/m². The vertical drainage capacity is not inferior to 0.73 l/m². The air volume of the system when fully saturated is of 21.5 l/m².

DAKU STABILFILTER SFE: it is a geotextile stabilizer in polypropylene with filtering capabilities. It has a thickness of 1.35 mm (at 2k Pa) and weights 220 g/m² (+/-10%). The filtering speed is of 85 mm/s (-30%), with the maximum pore openness of 0.08 mm (+/-30%).

DAKU GRID 4: it is a cellular confinement grid, which supports and links the surface. It is made of polypropylene and has a tridimensional bi-oriented structure. Each cell is quadrangular, 40x27 mm wide.

DAKU GEO 75: it is a retainment cell made of polyethylene, with a tridimensional ovoidal shape. It has a height of 75 mm and an internal diameter of 30 mm.

DAKU ROOF SOIL 2: is a substrate mainly composed of volcanic material (lapillus, pumice stone) and organic matter (DAKU KOMPOST). Its granulometry respects the levels established by the UNI 11235/2015 standards and its dry volumetric mass has a value between 650 e 750 kg/m³. The substrate weight, when saturated, is lower than 1.072 kg/m³. The PH levels are between 7/8 and the CEC is not lower than 16.3 m²/100g. The water retention capability is not inferior to 40% and the usable water is never less than 30%. The substrate thickness is of 8 cm.

DAKU PLUS E: it is a fertilizer, in the form of granules, which gradually releases the nutritive substances. It has a concentration of 8 g/m² for each centimeter of the substrate. In the fertilizer there is a 14% percentage of nitrogen, a 13% percentage of phosphorous pentoxide (soluble) and a 12% percentage of potassium oxide.

DAKU SEDUM ZOLLA: it is a mixture of perennial grasses (mainly sedum) with different length and size. The plants are pre-cultivated in a clod and ready to use. In case of slopes with a low steep it is possible to use the DAKU SEDUM TALEA mixture, which is a vegetal substrate composed of perennial grasses. The mixture includes different species of Sedum with a minimum density is of 80 g/ m².

Depending on the morphological and climatic conditions of the local environment, it may be necessary to equip the DAKU EXTENSIVE PITCHED system with an irrigation mechanism.

All DAKU's products comply with the UNI 11235/2015 standards.

TECHNICAL DATA

Thickness of the system (without vegetation)	cm ca.	16,00
Weight when saturated (without vegetation)	kg/mq	103,00
Total amount of water for the vegetation	l/mq	38,50
Air volume at pFI	l/mq	49,50

All technical data in this document are indicative values, used to describe the product. DAKU might modify the data when improving to product: clients should verify to have the latest versions of the documents.

