

GREEN ROOF SYSTEMS

GREEN ROOF SYSTEMS <small>according FLL</small>	SYSTEMS WITH GRANULAR DRAINAGE				SYSTEMS WITH DRAINAGE PLATES			
system designation	G1	G2	G3	G4	P1	P2	P3	P4
typical plants	sedum herbs	sedum herbs perennials	perennials grasses shrubs	grasses shrubs trees	sedum herbs	sedum herbs perennials	perennials grasses shrubs	grasses shrubs trees
extensive soil mix	2"	4"	-	-	3"	5"	-	-
intensive soil mix	-	-	6"	9"	-	-	8"	12"
separation fabric	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
granular drainage	2"	2"	4"	6"	-	-	-	-
drainage plate	-	-	-	-	1"	1-1/2"	1-1/2"	2-1/2"
drainage mat	-	-	-	-	-	-	-	-
protection mat	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
nominal thickness	4"	6"	10"	15"	4"	7"	10"	15"
dry weight	19 lbs/ft ²	28 lbs/ft ²	45 lbs/ft ²	69 lbs/ft ²	14 lbs/ft ²	23 lbs/ft ²	34 lbs/ft ²	52 lbs/ft ²
saturated weight	26 lbs/ft ²	41 lbs/ft ²	70 lbs/ft ²	105 lbs/ft ²	23 lbs/ft ²	37 lbs/ft ²	57 lbs/ft ²	85 lbs/ft ²
minimum slope	0:12	0:12	0:12	0:12	1/4:12	1/4:12	1/4:12	1/4:12
maximum slope	1:12	1:12	1:12	1:12	1:12	1:12	1:12	1:12
water retention/Year*	50%	60%	70%	80%	50%	60%	70%	80%
irrigation system	-	-	subsurface	subsurface	-	-	surface	surface

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* conservative numbers

With the German evolution of modern green roof technology in the last 4 decades more and more green roof systems have been developed and existing systems or green roof components have been improved. There are multiple manufactures that offer different green roof solutions for any size of roof. Some systems are better for smaller application other green roof systems are more efficient for large projects. Sometimes a combination of different systems can be the ideal solution in regard of performance, installing costs, maintenance and efficiency.

All green roof systems and green roof design must meet the FLL-Guideline. Traditionally the German manufactures meet these benchmarks.

Finding Green Roof Solutions That Work for You

Green roof systems have to be flexible enough to allow a custom tailored solution that exactly fits the clients needs, the clients design intent or given elements set by the building. Green Roof Technology has the largest resource and documentation of any type of green roof project done in the last 35 years. There is no project design or project detail that haven't been done before somewhere else (hard to believe for architects) and exactly this experience we utilize for any new project to deliver a living roof on which plants can simply sustain and thrive with an clearly defined effort.

Caribbean Green Roof Technology doesn't reinvent the wheel and we don't over engineer. Keeping all process as efficient as possible is the the goal and our best management practice (BMP). With a dedicated team of experts, **Caribbean Green**

Roof Technology is equipped to respond to any unique opportunities or challenges of any project. We encourage you to explore this website to learn more about green roof systems or contact us.

Types of Green Roofs

Modern Green Roof Technology offers endless varieties of vegetated covers for any impervious surface. Designing and implementing live vegetation requires professional horticultural experience to guarantee a functional system for 50 years or more. Green Roof Technology has the expertise to realize the impossible and the incredible - If you can dream it we can create it and keep in mind: Gardening is the last bastion of the patient, as nature cannot be hurried.

Extensive or Intensive, both types can be created on Sloped Green Roofs

	Extensive Green Roofs	Semi-Intensive Green Roofs	Intensive Green Roofs
Overall Depth	3 - 5 inches	5- 7 inches	7 - 24+ inches
Weight max.	15- 25 lbs/ft ²	25- 40 lbs/ft ²	35 - 80+ lbs/ft ²
Plants Species	Mosses, Sedums, Succulents, Herbs and few Grasses	Selected Perennials, Sedums, ornamental Grasses, Herbs and little Shrubs	Perennials, Lawn, Putting green, Shrubs and Trees, rooftop farming
Irrigation	no, not recommended	partially, as-needed	yes, automatic/flood
Maintenance	low	medium	high
Use	Living machine	Diversity, habitat	Garden, Park
Costs	low	medium	high

Extensive

An extensive green roof system is characterized of its vegetation, ranging from sedums to small grasses, herbs and flowering herbaceous plants, which need **little maintenance** and **no permanent irrigation system**. The growing medium depth for an extensive green roof system is typically 6 inches or less. These systems are ideal for



efficient **stormwater management** with **low maintenance needs**. Extensive greenroofs are very cost efficient.

Semi-Intensive

A semi-intensive green roof system is characterized by small herbaceous plants, ground covers, grasses and small shrubs, requiring moderate maintenance and occasional irrigation. A typical growing medium depth for a semi-intensive green roof is 6 to 12 inches. This system is able to retain more stormwater than an extensive system and provides the potential to host a richer ecology. Though higher in maintenance, this green roof system also provides the potential for a formal garden effect.



Intensive

Intensive Green Roof, Garden Roof, Roof Garden - An intensive green roof system is characterized by its variety of vegetation ranging from herbaceous plants to small trees with professional maintenance and advanced green roof irrigation systems. A typical growing medium depth of an



intensive green roof is 6 inches or more. Intensive green roofs offer a great potential for design and biodiversity. This system supports everything from small personal/home gardens to full scale public parks. Plant selection and design greatly affects the maintenance required for the upkeep of these roofs. Rooftop farms, urban roof farms

or vegetable farms on roofs are clearly intensive green roofs and require higher nutrient applications and focused maintenance.

Sloped

Planted sloped or pitched roofs look great and due to their high visibility they have been the focus for several new projects. In order to achieve lasting success with a sloped extensive green roof there are a few basic things to consider.



Sloped roofs retain less water in general and the moisture

content varies from the ridge to the eave (lowest edge of the roof). It is the task of the designer to make adjustments in the green roof system accordingly (e.g. drainage, thickness of growing media plant varieties etc.). Recent failures of sloped green roofs in the United States showed that many of designers are not aware of this unique situation. This is most unfortunate and the amazing design that they had in mind rarely develops into a successful and lasting one.

Caribbean Green Roof Technology offers exactly the support and knowledge needed for designers to produce beautiful designs with long lasting results.