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Creating a Slice of Heaven Amid New York City's Tallest Skyscrapers is No Easy Task

But with the Help of Techline Dripperline, Chris Stäger of SwissScape has Mastered it for the Past 20 Years.

Chris Stäger, owner of SwissScape, has installed rooftop gardens for some of the most well-known and influential personalities living in Manhattan. Stäger got his start in landscaping in Switzerland before moving to the United States. Since then, his attention to detail and preference for remaining small so that he can personally oversee each job, has earned the confidence and business of many clients, some of whom are among the wealthiest of New York.

Even though working on a penthouse garden in mid-town Manhattan or the Upper East Side can create a feeling of being on top of the world, the noise from gigantic air conditioning units and the traffic below is deafening. As such, rooftop gardens are rarely used for hosting parties or dinners, but are rather designed for the residents and their guests to look onto from the interior of their apartment.

Chris has installed Netafim products on a multitude of landscapes in New York City, from multi-million dollar penthouses on the Upper West Side, Madison Avenue and Central Park South to foundation plantings along Fifth Avenue. His most preferred Netafim products include Techline dripperline, PCDj and BD drippers, 3/4" disc filters and Aqua Pro Controllers to keep the gardens looking great all summer long.

ISSUES TO BE ADDRESSED

Keeping the plant material green and vibrant on top of some of New York's tallest apartment buildings is not simple. Rooftop gardens tend to be very windy. "The wind can gust up to 80 miles per hour up there even if it appears to be a nice day," Stäger commented. Because of that, spray from pop-up or overhead sprinklers would be blown everywhere except on the plants themselves and could soak guests on the patio. And every garden has its own micro-climate that can vary from garden to garden or within the garden itself as it continues around the corner of the building.

New York City Rooftop Summary

Location

New York City

Irrigation Equipment Supplier/Designers

SwissScape - Chris Stäger and J. Mendoza Gardens, Inc.

Issues to Address

- Rooftop garden winds can gust up to 80 miles per hour - spray from pop-up or overhead sprinklers is blown everywhere except on the plants themselves.
- Every garden has its own micro-climate that can vary from garden to garden or within the garden itself.
- Water pressure at the top of apartment buildings is rarely ideal for irrigation systems.
- Irrigation components and products need to be hidden.
- Rooftop drains are not always located at the most convenient locations for runoff from irrigation systems.

Netafim Products Used

- Techline Dripperline, Aqua Pro Controller, 3/4" Disc Filter, Pressure Regulators

Results

- Techline dripperline can be discreetly placed among the garden's plants and in planter boxes feeding water directly to the areas.
- With a variety of flow rates and dripper spacings to choose from, the plants' water needs can be matched.
- Netafim's Aqua Pro Controller allows for more or less frequent watering on chosen areas within their own "micro-climate". The controller is completely waterproof and does not need to be plugged in and can be installed anywhere on the job.
- To combat extreme water pressure differences Netafim Pressure Regulators bring the operating pressure into an acceptable range.

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In addition to high winds, water pressure at the top of apartment buildings is rarely ideal for irrigation systems. "It is either 80 lbs. of pressure or 5," explained Stäger, "the new buildings have way too much and the older buildings barely have enough!"

Appearance, or lack thereof is another issue Chris faces. Whether it is the natural look of a rooftop garden or the necessity to hide irrigation components in a streetscape project, Stäger needs to make sure that the products he uses are "out-of-sight and out-of-mind".

Many of the city's co-op boards require precise calculations of how much water the irrigation system will draw before the garden can even be installed. This information helps determine how much of a weight load can be supported and if the roof's drainage system can handle the water flow.

Furthermore, rooftop drains are not always located at the most convenient locations for runoff from irrigation systems. Many times the drains are in the middle of the terrace far from planter boxes and pots that tend to produce such runoff, Stäger explained. "The clients do not want to see water trickling across the middle of their patio," he said, "and with Netafim's drip irrigation I can control the amount of water put into the system. I can run it for 5 minutes several times in a row, which helps avoid runoff and still provide enough water for better absorption into the planter boxes!"

In addition to the concerns with water volume, pressure and runoff, an even more significant consideration for Stäger is the ability to move material in and out of the job site. "One-third of our entire job is actually getting the materials to the job site. I have to coordinate someone to meet me on the street corner to unload the equipment for the job. Then I must drive around until I find a parking spot and walk back," he explained. "Getting the materials up to the job can be just as difficult. We must use the service elevator, which is usually very small. Typically a building with 80 to 100 apartments has only one service elevator and if that is in use we have to wait or payoff the superintendent or the elevator man. Getting up to the job site can take between five minutes and two and one-half hours!"

These one-of-a-kind problems associated with installing irrigation in New York City landscapes sometimes leaves Chris scratching his head and looking for advice.

THE NETAFIM SOLUTION

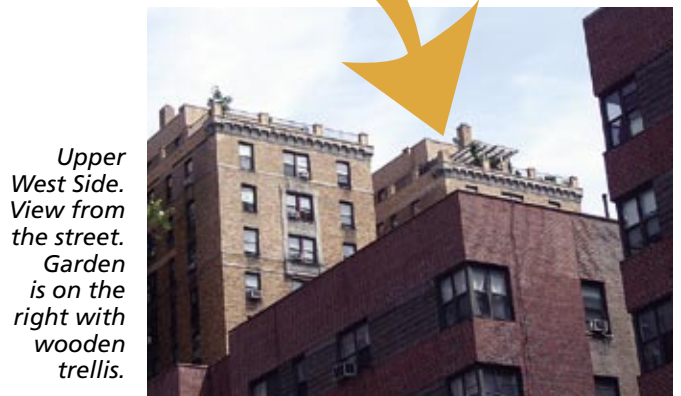
Techline dripperline is a great solution for Chris' clients because they can be discreetly placed among the garden's plants and in planter boxes feeding water directly to the areas needing it, eliminating the potential for over spray from the wind. With a variety of Netafim Techline flow rates and spacings to choose from, Chris can match the plants' water needs with an appropriate application rate for optimum performance. When it comes to the controller for the system, Chris depends on the flexibility of the Aqua Pro Controller. It allows for more or less frequent watering on



Central Park Rooftop. Chris Stäger of SwissScape, on the lower garden rooftop. Moss in foreground irrigated with Netafim Dripperline.



Upper West Side. Main garden east looking east.



Upper West Side. View from the street. Garden is on the right with wooden trellis.



Upper West Side. Close-up of main garden.

chosen areas within their own "micro-climate". Since the controller is completely waterproof and does not need to be plugged in, he can install it anywhere on the job.

To combat extreme water pressure differences Stäger uses Netafim pressure regulators to bring the operating pressure into an acceptable range, and relies on the outstanding performance of Netafim disc filters to clean the water.

Especially important in urban applications, subsurface Netafim systems eliminate the potential for vandalism along streets and sidewalks and avoid the accidental damage caused to sprinklers. Additionally, Netafim systems can be run during the busy Manhattan workday without the worry or liability of overspray onto sidewalks, buildings, streets or passerbys.

Because of the straightforward packaging of Netafim products, Stäger is able to remain organized and make sure all of the materials are easy enough to handle and fit into a service elevator. The simplicity of the systems eliminates the need for a number of cumbersome tools making the job easier to handle.

EASY TO DESIGN AND INSTALL

Garden designers Jeff Mendoza of J. Mendoza Gardens, Inc. (a.k.a. "King of Rooftop Garden") and Robert Monteleone rely on Stäger for the design and installation of irrigation systems for the gardens they design. Mendoza and Monteleone choose Stäger for his quality of work and his choice in drip product.

Monteleone also teaches rooftop gardening at the New York Botanical Garden during the winter months and is very particular about the products he allows on his sites because he knows the complications that inferior products can cause.

EASY TO MAINTAIN

Some of Stäger's Netafim installations are 17 years old and still work flawlessly. Not only does the product exceed expectations, but his interactions with Netafim personnel have also been equally impressive. "In all the years of calling on Netafim personnel there has not been one time that I did not come away without an answer or a solution to the problem I was facing," he complimented.

Even more notably, when Manhattan experienced a drought a few summers ago all watering systems, including fountains using recycled water were turned off and not allowed to run, explained Stäger. "The low-volume Netafim watering systems were not affected." Stäger expected all sorts of hassles about his rooftop watering systems, but not once was he asked to shut the systems down.

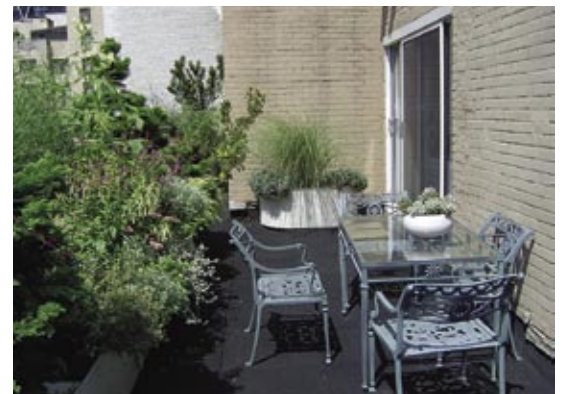
Now if we can only help him find a parking spot and a faster way to get the materials up to the rooftop...



Madison Avenue. View of garden looking west.



Central Park South. Rear garden, planters irrigated with BD button emitters and WPC drippers.



Central Park South. Rear garden.



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