

Plant Minders

Architects and interior designers are increasingly using indoor arrangements of live plants to enhance the attractiveness of office suites, hotel lobbies, restaurants, lounges, banks and homes. Plants are generally installed by contractors called "plantscapers," who also perform contract maintenance functions—watering, inspection, cleaning, rotation and replacement. By one estimate, watering accounts for 25-60 percent of the time spent on-site by maintenance technicians. Therefore, maintenance costs can be substantially reduced by an automated system for watering indoor plants, says Stuart Snyder, president of Aqua/Trends, Boca Raton, Florida, who invented a family of computer-controlled Micro-Irrigation Systems.

At upper right is a Palm Beach (Florida) condominium lobby whose plants have been automatically tended for five years by an Aqua/Trends system. In the center photo, Snyder is pictured with some of the elements of his system in a home installation. The Aqua/Trends system draws water from building outlets or from a pump/reservoir module and distributes it to the plants via a network of tubes and adjustable nozzles. A key element of the system is an electronic controller programmed to dispense water according to the needs of the



various plants in an installation. At far right is a closeup of an adjustable nozzle that meters out exactly the right amount of water at the proper time to the plant it is serving. More than 100 Aqua/Trends systems are in service in the U.S.; they come in various sizes, from a simple residential system that takes care of up to 12 houseplants to a Mirage III system integrated into a

structure to water all the greenery in a large office or apartment building.

NASA provided Snyder assistance during development of the Aqua/Trends line through the Southeast Area Office of the Southern Technology Applications Center (STAC), located at Florida Atlantic University, Fort Lauderdale. STAC furnished pertinent NASA technical reports, advised Snyder of seminars useful in product development, and put him in contact with NASA's National Space Technology Laboratories (NSTL). NSTL conducts an

ongoing research effort in plant use for water purification and pollution control (see page 94) and it made available to Snyder reports of this work. ▲