

See-Flo 494 Dispense System for high viscosity structural acrylic adhesives



- ▶ System: See-Flo® 494 Portable Meter-Mix Dispense System
- ▶ Meter, Mix and Dispense high viscosity structural adhesives
- ▶ Fixed Ratio for precision metering
- ▶ Manual application with 30 ft. dispense hoses to dispense valve
- ▶ Disposable static mixer for precision mixed material
- ▶ Air-Oil drive for consistent flow

Large earth-to-satellite antennas are manufactured in many diameters. The antenna shown, manufactured by Vertex RSI -Texas is shipped in pieces and assembled on site. It is 112' diameter and weighs 750,000 pounds.

Manufacturing the dish is a two-step process. First, the adhesive is manually applied to the reflector skin and frame to assemble the tile panels. Then, the tile panels are attached to the frame at the antenna site.

The **See-Flo 494** meter/mix/dispense system is used to apply a Lord 4:1 structural acrylic adhesive for in-plant assembly of aluminum composite panels by bonding the aluminum reflector skin to the aluminum framework. On site, the 2-component adhesive bonds each antenna tile to the steel frame superstructure to complete the dish assembly.

The **See-Flo 494** is mounted on a self contained portable cart with the material supply pumps and controls to be able to move the system from application point to point. To reach the far extents of the antenna, the system is equipped with a boom and 30' of dispense hose.



Bonding Aluminum Composite Tiles to the Metal Superstructure Framework onsite

See-Flo[®] 494 Dispense System



Prior to the installation of the dispense system, the acrylic material was purchased in prepackaged disposable cartridges. The material in the cartridges were an issue - they consumed a lot of time in constantly changing them, and their per pound price were costly. In comparing the cost between the manual (cartridge) and the 494 dispense system, the ROI using the new system was under 1 year and the customer realized a significant increase in production rates.

The See-Flo 494 is a single acting, positive displacement metering system that features:

- ✓ Abrasion resistance metering cylinder and valve components
- ✓ Divorced design, fixed ratio system
- ✓ Heavy duty frame with boom assembly
- ✓ Material displacement up to 9.4 in³ cubic inches per cycle (at a 1:1 volumetric ratio)
- ✓ Meter piston rods do not 'scrub' the cylinder thereby reducing wear on seals
- ✓ Automatic, air powered material inlet and outlet valves with carbide ball and seat
- ✓ Meter cylinder "Quick Service" seal cartridge assemblies with abrasion resistant seals
- ✓ Dispense rate is fixed, but adjustable
- ✓ Wetted components: stainless steel
- ✓ No internal wear components or check valves
- ✓ MicroLogix PLC programmable controls
- ✓ Cart for portability and material supply pumps
- ✓ 30' of dispense hoses
- ✓ Dispense valve that uses No-Flush disposable mixers
- ✓ Actuator is handle mounted trigger



Applying Acrylic Adhesive to the Reflector Skin



5-Gallon Part A and -B Supply Pumps



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