Communications Shelter Manufacturing

Situation

MUTI (short for Midwest Underground Technology, Inc.) is a service provider to the telecommunications industry, specializing in the erection, maintenance and inspection of wireless communications towers. Headquartered in Champaign, Ill., MUTI also manufactures and reconditions communications shelters, trailer-like buildings, often seen at the foot of towers, which house sensitive computers and electronics.

The shelters range in weight from 10,000 lbs. up to 90,000 lbs. and vary considerably in length. MUTI needed a safe, flexible way of moving the shelters through the assembly/reassembly process as well as to a shipping department, where the shelters are craned onto trucks.

Solution

Airfloat designed and built an innovative air bearing (or “air caster”) transporter system for MUTI. The system consists of three dual-air-skid platforms, a primary pneumatic tugger, a secondary tugger, and a set of connecting air hoses. Each platform has a capacity of 40,000 lbs., creating a total system capacity of 120,000 lbs. Smaller shelters are moved using one or two of the Airfloat platforms. For extended loads, a third platform is added.

No-load casters allow the Airfloat platforms to be maneuvered into fork pockets at the base of a shelter. Then the air bearings are inflated, lifting both platform and shelter off the ground. A tugger attaches to a platform by means of a quick-mounting bracket. The tugger swivels 180° and provides 650 lbs. of tractive effort, each.

Result

The Airfloat equipment has helped MUTI improve productivity, enhance worker ergonomics and safety and maximized the use of their floor space. With air casters, two or three workers can easily move 90,000-lb. shelters in any direction – even in spaces too tight for forklift trucks to maneuver. Because Airfloat equipment glides on a thin film of air, the shelters can be moved without fear of jostling the sensitive electronics inside.