NEW AIRCRAFT TOWING SYSTEM MAKES U.S. DEBUT

News / Business aviation

Starting this month, North American FBOs, airports and others with an interest in aircraft ground handling will have a new option when it comes to moving aircraft with the debut of the TugMaxxe line of remote-operated tug vehicles (ROTV). The system, developed in Germany by TNA Aviation Technologies, has been in use elsewhere for more than a decade, with approximately 3,000 devices in service in Europe, Asia, Australia and the Middle East. The compact units are well suited to Europe's crowded airports.

Operators were looking for something that can make better use of hangar or apron space, according to company managing partner Michael Turwitt, who noted how much potential aircraft storage space has been rendered unusable by the limitations of traditional tow-bar and tug systems.

The TugMaxxe ROTV comes in three sizes: the SM3, with a towing capacity of 33,000 pounds suitable for moving turboprops, smaller jets and medium, wheeled rotorcraft; the SM4, with a 55,000-pound limit for midsize jets and larger helicopters; and the SM5, rated at 132,000 pounds for the largest purpose-built business jets.

Like other popular brands on the market, the remotely operated units differ from traditional tow tugs in that no tow bar is required. As the device is positioned near the aircraft nose gear, steered using a wireless controller that looks like one for a high-end radio-control car or UAV, one side of the square unit opens. Once the coupling is closed around the nosewheel, the tug elevates it four inches off the ground without the need for straps or winches. The attachment process takes

seconds, Turwitt told AIN. “The cradle is designed to automatically adjust to wheel size, whether it’s a single wheel or a dual wheel.”

Unlike other designs, the TugMaxxe features a turntable cradle on which the nosegear rests, allowing the aircraft to be moved without changing the direction of the nose gear itself. As the ROTV pivots 360 degrees around the nosegear, it allows the airplane to rotate within its own wingspan. “That is revolutionary when you compare it to any other tow possibility out there on the market,” said Turwitt. There is no tow bar or tow tug involved, removing at least 15 to 20 feet of machinery from in front of the aircraft, “and this means that you can now move the aircraft into tight areas where you couldn’t get in with a normal tow tug. Up to 40 percent more hangar space utilization is definitely possible.”

The device also eliminates damage to the aircraft nosegear attributable to mistakes such as failure to detach the aircraft steering mechanism or oversteering, the manufacturer notes. “There are many cases with Gulfstreams and Embraers where inexperienced operators oversteered during towing and the repair bill was up to $250,000,” noted Turwitt.

North American deliveries start soon

The company will deliver the first tugs from its factory in Bremen, Germany, to North American launch customers this month. Prices range from around $15,000 for the SM3 to $50,000 for the largest model, and the company can make 400 a year. A lead-gel zero-maintenance battery drives the device, requiring charging every three days or so when used under normal conditions. A power gauge displays the unit’s current charge status, and it will also signal the operator when the battery level drops below 25 percent, allowing ample time to complete the immediate aircraft movements and connect the unit’s integral battery charger to any standard outlet for recharging, which takes approximately three hours. Twenty-four-volt ground power capability is also standard with the ROTV.

Initial training on the unit is included in the delivery price, and TNA offers continuing training at additional cost either at its North American headquarters at Florida’s Northeast Florida Regional Airport in St. Augustine or at the customer’s location. As the first units are delivered, the manufacturer said it is receiving numerous inquiries about the system. “People are realizing this is a smart solution, and there will soon be many units in the U.S.,” predicted Turwitt.

The manufacturer also makes larger, manned tugs known as the Flyer-Truck, which can move commercial aircraft such as the Boeing 737 or Airbus A320 series.

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