

towing a fully loaded A380, and by 2009 the product had entered the market. The first model was sold to Australia at the InterAirport Europe Exhibition in Munich and sales of TREPEL's pushbacks are progressing consistently every year, with over 100 models already having been sold. It is hoped that in as little as three to five years this vein of the business will be as profitable as the cargo loaders that have earned the company its celebrity in the GSE field. With the tractor's adjustable hydro-pneumatic suspension and enhanced cabin, the CHALLENGER 700 is a valuable innovation in the GSE arena and one of TREPEL's greatest milestones in the last 20 years.

And this is far from the only example of commercial growth. As well as the introduction of pushbacks to its catalogue, the company has expanded its range of loaders, too. Initially producing only two or three models of loader, TREPEL now manufactures six or seven varieties, and in far greater quantities than ever before. These products are sold to customers all over the world, from the US to New Zealand and Greenland to South Africa. If business continues to boom at the rate it has since its 1996 expansion to the new factory, TREPEL will surely continue to see improvements to its operation. In terms of the future, while there are no concrete plans to launch a new product, the success of its previous projects is a good indication of its ability to embark upon future business ventures. TREPEL closely follows the cargo market in order to remain up-to-date with industry trends and projections. According to Philippe de Soyres, there is a lucrative future in GSE leasing companies and he expects a great deal of its business to involve sales to such groups. GSE rental is a fast-growing business and a promising enterprise for all involved. Far be it from TREPEL to underestimate the industry...

**GOLDHOFER**

Goldhofer started developing its range of towbarless aircraft tractors back in January 1987. The idea was to make use of its 40 plus years of experience in designing heavy haulage vehicles, together with an aptitude for building heavy steel frames of high tensile steel in other domains.

Trials for the Goldhofer AST-Prototype (which was 200 tonnes) began in March 1989, with launch customer Swissair in Zurich airport. In September 1989, after finishing the trial period, the AST-Prototype was presented at the InterAirport show, where the first Goldhofer 400 tonne towbarless aircraft tractor was ordered by Swissair. This tractor was finished and delivered in 1991. Despite good results in Zurich and the experience gained at other airports, the potential of towbarless towing was still the subject of much discussion. Only a small number of orders were received in the first ten years, but nearly every customer was satisfied with their improved operations – and they ordered more towbarless tractors.

Beginning in 1996, nearly ten years after starting the initial development, orders had increased and towbarless



towing was becoming more common at the bigger airports. In 1999 the first two Goldhofer AST-2s were delivered to Delta Air Lines in Atlanta. The AST-2 standard version had a 400 hp V6 diesel engine, but the Delta tractors had 500 hp V8 engines as they were intended to be used for high speed, long distance maintenance towing. These first two tractors performed a total of more than 5,000 working hours within their first year at Atlanta.

Following the September 11 attacks in New York, there was nearly a complete stop to investment in the airport business. In 2002 production dropped to less than 50% of 2001 figures. But nevertheless the towbarless towing concept settled down and a few years later, production was buoyant again.

With the development of the Airbus A380, a new class of tractor had to be developed: not for a 400 tonne aircraft, but for one now reaching nearly 600 tonnes. The story continues...

**TCR**

Before TCR launched its first rental operations in 1999, rental of ground support equipment was not even an option. Ownership was more a question of tradition: historically ground handlers owned their equipment. Through the years, complexity of ramp operations, the need for more flexibility through increased competitiveness and increased service quality expectations, have motivated ground handlers to consider operating leases as a valuable solution.

TCR's full service offer, which includes sourcing of the equipment, repair and maintenance and fleet management through to disposal, allows ground handlers to concentrate on their core business while having the guarantee of available equipment at all times. The rental concept works: in Europe, TCR rented 6,000 units of GSE in 2005 and 20,000 units in 2015. The customer retention rate equals 95% and four out of five independent handlers are TCR's customers.

More and more airlines and airports are adopting the solution. Today, the Brussels headquartered company is

