LOADING UP

Aircraft need beltloaders – and the market supply is plentiful. Alwyn Brice brings an update.

The conventional...

GSS Online is one of several beltloader manufacturers, and it offers examples running on petrol. According to the company's Luke Brown, the very first demonstration unit was sent out in 2015. He adds that at present the company sees no great need to offer other types of power plant.

"Over the last 12 months, our beltloader has been modified a couple of different ways. LGSTX, who was one of the first users, requested that the next generation would have power brakes. Thus, we will apply those as an option for future customers. Additionally, while we can use any engine that the customer prefers, we are starting to recommend the a Mitsubishi 2.4 litre engine and GM 6L50 transmission because we have found immense success with it in our 11 person trams, and we know that it will make the beltloaders more durable, stronger and overall better.

"As far as safety devices go, we realise that last year there was a multi-billion dollar bill in terms of aircraft damage because of GSE hitting aircraft across the industry. In consequence, we have incorporated an Aircraft Avoidance Strike System, or AASA facility, in order to avoid that damage to aircraft. By using a camera and infra-red lighting, the beltloader is able to stop on a dime and avoid hitting aircraft in any situation, short of a white-out. This system promotes safety for both the aircraft and the personnel."

In closing, he mentions that Pinnacle Logistics and LGSTX are both keen purchasers of the GSS beltloader.

TLD continues to increase its market share of beltloaders in the US through a mature design coupled with innovative safety features. Beltloaders are typically supplied by TLD's Sherbrooke factory, which completed an expansion in 2019 to help meet a growing demand for all products.

TLD's beltloader product line has been active for over 60 years, originating in Salinas, California. The real expansion of the product line and definition of the NBL configuration occurred in TLD's Saint Lin (France) factory in the 1990s. This product became part of the TLD RANGER programme in the late 1990s and began to be built in TLD's Shanghai factory for the Asian market, before coming to Canada.

Today, the NBL is the most widely used beltloader on the market, with three factories producing well over 1,000 machines per year. The NBL is becoming more and more the choice of safety conscious customers in the US because of the pioneering Aircraft Safe Docking feature, which is now in its sixth year of production. This well-known system ensures that the operator's speed is controlled in the docking process to the aircraft to avoid collision. This system was developed with the advent of composite aircraft and led the way for IATA to define the regulations in place today.

Today, nearly all NBLs are delivered with this feature and nearly 2,000 are in operation. Also available is the "no touch" option that not only controls approach speed but also stops the GSE inches from the aircraft. Newly offered in 2020 is the Anti Pinch which immediately stops the conveyor belt if a baggage strap or person's hand becomes caught between the belt and the boom.

Like all GSE, the beltloader market is racing towards electrification. Thus the NBL-E is available with several choices of lead-acid or lithium-ion batteries; there is also TLD's own patented iBS lithium-ion battery system, which allows a modular approach for the customer. All TLD E products can be powered with one to four modules, depending on the power requirement and the duty cycle. Modularity allows streamlined spare parts management and the ability to "downstream" the modules from high power TLD GSE to lower power TLD GSE, essentially permitting a second life for the batteries and providing a higher return on the battery investment.

Meanwhile, Textron GSE continues to ship its proven 660 design globally. Says Brad Compton: "Manufacturing has increased year over year and we anticipate another busy year. ▶

TLD has a long history in beltloaders and now offers a range of power units

Our production team has expanded capacity by adding a second line to accommodate this demand. As we stay in line with the current trends and ramp standards, we continue to produce both petrol and diesel engines, as well as our electric drive design.

"Although a high percentage of deliveries is within the Americas, we now have the production capability to manufacture the 660 CE model in our Douglas, UK, factory. Our goal continues to be that of getting closer to our customers worldwide, not only face to face but in terms of finished goods closer to the operations."

He adds that conventionally-powered units are being chased by electric, with lithium now in the equation.

"We have worked very hard to offer the best in class 660 avoidance system which we have labelled the "Textron GSE smart sense". As we know, every ramp around the world is a bit different, which provided us with the opportunity to make sure our system matched the specific customer operational procedure as it relates to aircraft approach."

And ahead?

"The key words are safety and green. We continue to produce beltloaders with both safety and emissions as the focus, but without forgetting our roots by remaining best in class for both petrol and diesel."

… and the unconventional…

Ramp operations don't necessarily have to go down the conventional loader route. Many years back (around two decades, in fact), an innovation hailing from Denmark changed the way the sector thought about the beltloader. The RampSnake put a different spin on the traditional approach that involved an endless rotating rubber belt.

Brilliant though the idea was, technical problems and complexity militated against its market success. Because of these drawbacks, it never really flourished, yet its potential was appreciated by others in the GSE marketplace. Power Stow, NMC Wollard and Mallaghan have all since brought to market versions of what is essentially a loader with an articulated belt, one that is capable of being extended into the aircraft hold and then retracted into the vehicle when not in use. Mallaghan, however, only manufactures this unit in the UK whereas the other two makers have US operations.

So, has the alternative beltloader prospered? The short answer has to be yes: last year, for example, was another record year for Power Stow in terms of sales, asserts the company's Ben Reeves. But Power Stow has not been content to rest on its corporate laurels.

"Changes in 2019 have been limited to reliability upgrades, which is a case of continuous improvement for us, and customer-driven options: these have included our own telescopic, collapsible handrail on the unit," Reeves adds.

And what of engine Tiers: where is Power Stow with this?

"We offer gasoline, electric and diesel models," he replies. "Regarding diesel, we can provide a unit with a Deutz Tier IV Final engine fitted.

"Having said that, electric seems to be a growing percentage of our customer purchases," he notes. "This is being driven in part by airport electrification assistance, particularly in Nevada and Massachusetts."

… or a choice of loaders

At NMC Wollard, the last 12 months have been a profitable time for the company, slightly better than 2018, declares the company's Tim Taylor. "TC-888 sales were within projection, but our relaunched extendable TC-999 were not, however. We suspect that the price point as well as the placement by a worthy competitor, Power Stow, are the reasons behind this.

"We did nothing significant to the range last year. We did make multiple incremental upgrades to the TC-888, though, including a more robust conveyor frame, a more robust and stable lift mechanism, a stronger axle and brake system, as well as a revised and augmented handrail safety system. Then there were electrical upgrades to wiring, panels and speed controls, as well as additional improvements with respect to ergonomics."

Both of Wollard's beltloaders are available with 80V AC electric power but where customers seek diesel options, Tier IV Final is the standard engine level.

News is mixed, however, when it comes to the topic of environmental progress. "Enquiries are increasing, but sales are not," says Taylor bluntly. "The primary rationale cited is lack of facility infrastructure. We have come to know that several facilities have been mandated to cross over to electrics, but they also tell us in the same breath that the facilities still won't be in place by the mandated cross over dates. We believe that the demand will be there, but there continues to be a conflict with respect to who is going to pay for the infrastructure to support the use of the electrics." RON

A United front

Ray Ames at United is a happy Power Stow client, having purchased 300 examples since 2016. He cites benefits that include fuel savings from removing the cargo load system (and avoiding cargo load system installation on newer aircraft); reduced maintenance costs for the cargo load systems; manpower reduction and a reduction in worker injuries. But why Power Stow?

"Power Stow had an electric version and was easier to use from an operator perspective. We had very positive operational results once it was introduced and it was preferred over traditional or alterative products.

"Service and support has been very good and the manufacturer is very responsive. Powerstow focuses on quality at the factory."

And were there there plans to add more to the United fleet?

"We're always looking for equipment where it makes sense from an operational and economical perspective."