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WCBKT S.A. for civil airports

GPU 7/90 TAURUS servicing one of the largest airplanes in the world Antonov AN-124 Ruslan. Photo: Michał Woźny, LS Airport Services.

WCBKT S.A. – Central Military Bureau of Design and Technology designs, manufactures and provides high quality specialized ground support equipment for aircraft. Its current market position and recognition from handling companies WCBKT S.A. owes primarily to the quality of products and services.

The quality is confirmed by, among others, acquired and updated certified qualifications, such as: ISO 9001:2015, AQAP 2110: 2016, Internal Control System and NATO Commercial and Government Entity Code NCAGE.

Indicting sources of the success Piotr Kisiel, president of WCBKT S.A., said: *strength of our company is constant improvement of performed tasks quality and satisfying the growing needs of potential investors which result from ever-changing aviation industry market. Our manufactured aviation equipment is made on order, therefore, many technical arrangements which meet additional customer*

requirements are possible to execute. These requirements may result from both technical issues which must be compatible with other components and obtained infrastructure. In order to maintain in-country leadership position in the production of airport equipment we monitor Polish aviation market based on ongoing solid relations with representatives of the handling companies. As a result we introduce new products or improve others and thus we systematically increase our participation in aviation market.

Current WCBKT S.A. offer dedicated to civil market includes the following ground support equipment (GSE):

- » Ground Power Units: GPU 7/90 TAURUS and GPU 2/90 TAURUS eco,
- » dehumidifiers,
- » diagnostic devices,
- » lighting towers.
- » Therein airport equipment such as:
- » passenger steps of height range 1800 mm to 5800 mm,
- » maintenance stairs for different types of aircraft,
- » luggage trailers,
- » trailers for containers and pallets,
- » unit load devices (known as ULDs) and pallet racks used to secure freight, luggage and mail in air transport,
- » frames of modular construction for full or empty container storage,
- » scissor lifts for transport and handling pallets and containers,
- » various auxiliary equipment facilitating many operations performed by employees of handling companies.

An abrupt increase of air traffic on Polish airports visible for several years has become a difficult phenomenon for entities such as handling companies. The basic and largest problem is the shortage of staff in the Polish labor market. The scale of these companies' services deviates from the labor market possibilities.

Therefore WCBKT S.A. sees the opportunity in designing and manufacturing devices to expedite work in these companies

Maintenance stairs MAU next to Boeing 737-800. Photo: Michał Wajnchold.





GPU 7/90 TAURUS powering Bombardier Q400 at Chopin Airport in Warsaw. Photo: Jakub Bytner.

The company's new specialty which increases our share in the range of manufactured products, is cargo terminal equipment – informs WCBKT S.A.'s president. Our capabilities in design and production are the result of air transport development and car freight. Having its own designing office and experienced technical personnel WCBKT S.A. prepared a technological line which service deliveries and shipment of air parcels in newly created, one of the first, professional facilities of air cargo in Poland at Warsaw Chopin airport. Technological line allows to form and disband cargo on pallets and containers in user-operated aircraft. Cargo delivered to the facility in bulk or on pallets is offloaded via scissor lift with rollers with a working range adopted to height of a truck and then moved onto the racks inside the cargo hall where it is further processed. Cargo delivery is similar from the airport side, where the cargo to the cargo facility is delivered on air pallets placed on trailers for pallets and containers.

The technology line of this type includes devices such as:

- » racks for forming and disbanding cargo on pallets and air containers,
- » racks for forming and disbanding cargo on pallets and containers with additional locks,
- » rack with a weight of carrying capacity of 8 tons,
- » scissor lift equipped with an overlay with Colson wheelsets with carrying capacity of 8 tons, embedded in the floor and adapted for work at heights from - 850 mm to 1600mm above the floor,

Maintenance stairs for Airbus 320. Photo: WCBKT S.A.



and in Electromobility Plan introduced by the Polish government.

WCBKT S.A. activity in this area is solid. In December 2019 we made a decision to design and manufacture passenger stairs with a height range of 2200 mm to 3800 mm with power supply and a function which enables visualization of safe approach under fuselage. This will allow the handling company to replace four people engaged in operating passenger stairs with one person. The stairs drive is based on a replaceable battery made in lithium-ion technology with a total capacity of 360 Ah along with a charger for this type of set. Its maneuvering under fuselage will proceed via steering cassette located on a drawbar on the front of stairs and hydraulic motors mounted on the rear wheels. Both design and testing of the stairs we want to end in June 2020. It will be transferred to one of Polish handling companies for practice tests after acquiring positive assessment – says WCBKT S.A. president.

Due to lack of different kind of equipment essential for handling companies, WCBKT S.A. designed and manufactured new type of luggage trailer WB-P for transporting passengers' luggage and other cargo with a completely new construction. New technical specification was developed with representatives of technical units. This new device will ensure safe transport of passengers' luggage regardless of weather conditions. A complete cover of the trailer will not allow luggage to fall out during transport or possible damage from rain or snow. It is also more resistant to potential mechanical damage. Its prototype was finished in February 2020 and was about to have been passed on for further testing, however, global pandemic situation did not allow it.

GPU 7/90 TAURUS powering Boeing 787-9 Dreamliner. Photo: Jakub Bytner.



Moreover, at the end of 2020 WCBKT S.A. plans to design and manufacture passenger steps with a height range of 2400 mm to 5800 mm which will have electric or combustion drive for easy control by the operator and safe driveway under a passenger airplane. Its height range will enable service on all types of aircrafts, including Airbus A-380 which operate on Polish aviation market.

- » scissor lift (receiver) equipped with an overlay with smooth rollers with a carrying capacity of 8 tons, embedded in the floor and adapted for work at heights from - 850 mm to 1700 mm above the floor,
- » railway winch used to move blocked containers and pallets in trucks during their unloading (bollard: 1200 kg),

GPU 7/90 TAURUS servicing An-225 Mrija.
Photo: Michał Woźny, LS Airport Services.



- » racks' fenders equipped in the upper part in smooth rollers to freely move pallets and containers on and off transport trailers,
- » light and acoustic system for car docking at the cargo ramp facility which facilitates driver's work and protects against damaging objects and vehicle,
- » mobile movable frame.

The technological line was designed and manufactured for WELCOME Airport Services company in Warsaw last year and is now used fulfilling intended functions and user expectations. It is a great success for WCBKT S.A. and good ground for further business development in cargo projects.

Cargo terminal in Szczecin operated by WELCOME Airport Services company was also equipped by WCBKT S.A. with transport trailers for pallets and air containers. In addition to that, WCBKT S.A. designed mobile racks for moving pallets and air containers inside a building. These racks are dedicated to cooperate with the charger of MOVER type. The whole project was carried out in cooperation with WEIMEA GROUP company which was the main contractor of cargo facility in Szczecin.

Experience gained in equipping cargo facilities starts to pay off because the company has received

another order for designing and manufacturing technological line for one of the facility in Warsaw of the Polish Post company. Technical design with contract proposal were submitted with the offer to realize the project in October 2020.

WCBKT S.A. in less than two years of its activity related to design and production of equipment for civil market manufactured:

1. Airport equipment:
 - » passenger steps LSP3, LSP3S, LSP3Ma;
 - » maintenance stairs MAU;
 - » luggage trailers WB1;
 - » trailers for containers and pallets PT02;
2. Cargo terminal equipment:
 - » mobile unit load devices for transporting pallets and air containers PR07SV-3W;
 - » scissor lifts embedded in the floor along with service ground channels;
 - » weights with a carrying capacity of 8 tons;
 - » cargo racks with Colson wheelsets;
 - » railway winches;
 - » cargo racks' fenders;
 - » cargo reverse devices with Colson wheelsets;

Planned for 2020 delivery of hangar airport equipment includes:

- » passenger steps LSP3Ma (hand-drawn);

- » luggage trailers WB5;
- » unit load devices and pallet racks;
- » passenger steps LSP3 with electric drive;
- » luggage trailers post-tested;
- » trailers for containers and pallets PT01 and PT02;
- » multi-storey frames for storing empty air pallets;
- » passenger steps LSP1 with drive of adjustable height from 2400 to 5800 mm;
- » luggage trailers WB7.

Planned for 2020 delivery of equipment for cargo terminal includes:

- » unit load devices with carrying capacity of 8 tons;
- » cargo unit load devices with Colson wheelsets;
- » moveable mobile racks PR07SV-3W;
- » racks with smooth rollers PR01;
- » fenders for racks.

Production of all the equipment depends on development of global pandemic situation and time of its duration.

Overall, the mission of WCBKT S.A. - Central Military Bureau of Design and Technology is active effort to build and sustain company's economic potential both on military and civil markets through providing products and services that meet individual needs and customer requirements.

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Passenger steps LSP 3 VIP dedicated for governmental aircraft Boeing 737-800. Photo: WCBKT S.A.