



TRUST IN THE BEST WOJSKOWE ZAKŁADY LOTNICZE NO. 2 S. A.

COMPANY CATALOGUE



WOJSKOWE ZAKŁADY LOTNICZE NO. 2 S. A.

#### Bydgoszcz

107 Szubińska St. 85-915 Bydgoszcz, Poland phone: + 48 52 36 28 601 fax: + 48 52 36 28 602 e-mail: sekretariat@wzl2.mil.pl

#### Warszawa

1/3 Księcia Bolesława St. 01-452 Warszawa, Poland phone: +48 22 532 43 01 fax: +48 22 532 43 04 e-mail: sekretariat@wzl2.mil.pl

www.wzl2.mil.pl





We are one of the biggest aviation companies in Poland, counted among the elite group of companies strategic for the Polish economy and defence.

We belong to the Polish Armament Group, which in response to growing market requirements and the Polish Armed Forces needs, has made a decision to merge Wojskowe Zakłady Lotnicze No. 2 in Bydgoszcz and Wojskowe Zakłady Lotnicze No. 4 in Warsaw. The merger become effective in January 2020 and since then Warsaw capabilities enhanced offer of WZL No. 2 which currently has approx. 1400 employees.

We have 75 years of experience in maintenance, service and modernization of military aircraft including fighter and transport aircraft of significant technological advancement. The Warsaw part of our company has a wide experience in maintenance of jet, turbine and starter engines as well as low power turbines.

Merged companies under the name of WZL No. 2 offer comprehensive maintenance and modernization services comprising airframe and engines within the one-stop shop. Apart from military aviation, we are constantly developing our activity within civil aviation. Also, in our offer we have unmanned aerial vehicle systems such as tactical short-range UAV and LMS system DragonFly.



We provide technical support, overhauls, repairs and modernizations for the Polish Air Force aircraft such as:





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We provide overhaul and periodical maintenance of Su-22 aircraft. Moreover, we perform servicing and troubleshooting during the aircraft operation period.

We have realized verification overhauls which resulted in prolongation of the aircraft service life for further 10 years. The navigation instruments in the cockpit were converted into the imperial units and an additional radio station was installed. Training aircraft were equipped with the load monitoring system. The ongoing project comprises installation of the DVR system and S2-3a flight data recorder.



### **★** Maintenance of MiG-29

We perform maintenance of MiG-29 aircraft in the scope of control and regeneration works, periodical maintenance after each 150 and 300 flight hours, as well as servicing of aircraft components, blocks, LRUs and airframe.

#### Additionally, we perform upgrade works, including:

- > Navigation system TACAN (Tactical Air Navigation);
- Navigation system VOR (VHF Omnidirectional Range) / ILS (Instrument Landing System landing support);
- > GPS (Global Positioning System) receiver;
- Deep modernization within the scope of navigation system avionics (EGI SAASM, mission computer, MILBUS);
- > Digital Video Recorder (DVR).



### **★** Maintenance of F-16

Within the scope of F-16 maintenance, we perform selective removal of paint coating by the PMB (Plastic Media Blasting) method. Additionally, we repaint aircraft in the Have Glass II system. It is a special coating enabling reduction of effective reflecting surface (Radar Cross Section).

We also perform overhauls of landing gear LRUs (undercarriage struts, angle struts, shock absorbers, wheel axles), hydraulics (tanks, actuators, valves), electrical equipment (converters, control blocks, voltage regulators) and avionics (displays, armament control blocks, radio stations).



### ★ Maintenance of C-130

We have the necessary equipment and infrastructure for repairs, periodical maintenance HSC and ISO, as well as PDM maintenance of C-130 aircraft. We develop technical bulletins and implement the ordered bulletins. Additionally, we repair aircraft systems defined by the user, which includes replacement of airframe and aircraft system elements as well as checks and adjustments.

Within the scope of C-130 maintenance, we also carry out Non Destructive Inspections (NDI) of the airframe structure and its elements.

We repair LRUs on the premises of WZL2 or we cooperate with authorized service centres.



### Maintenance of Engines

#### We overhauland service jet engines for F-16, MiG-29 and Su-22 such as:

- > F100-PW-229;
- > RD-33;
- > AŁ-21F3.

We overhaul and service turbine engines for CASA C295M aircraft and Mi-8 helicopters such as:

- > PW127G;
- > TW2-117 A/AG.





We overhaul and service starter engines for Su-22 and helicopters:

- > TS-21;
- > AI-9W.

Additionally, we manufacture, repair and provide diagnostic services for aviation parts and units as well as we provide service support within the scope of engine unscheduled repairs based on stationary maintenance base and mobile service teams.

### Test Center for Jet Engines

We have two engine test cells that are used to conduct production, maintenance and control tests of aviation propulsion systems for military and commercial aircraft.

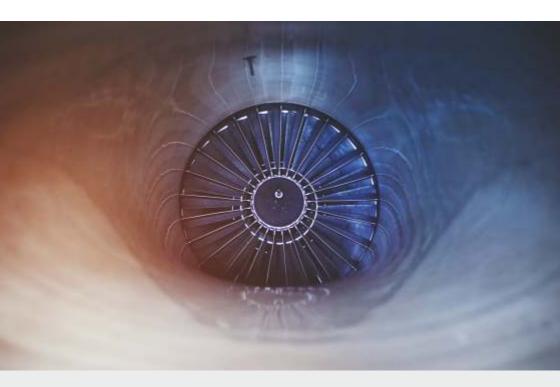
# Test cell for testing of Russian aircraft:

- > At-21F3(Su-22);
- > RD-33 (MiG-29).

# Test cell for testing propulsion systems for military and commercial aircraft:

- > CFM56-3 (Boeing 737);
- > F100-PW-229 (F-16);
- > LEAP-1A (Airbus A320neo).





#### Test Center for Jet Engines enables:

- > testing new generation jet engines with a mass air-flow up to 650 kg/s (1 433 LB/sec) and maximum thrust of 330 kN (75 000 LBF);
- > simultaneous servicing of four engines due to the dedicated engine preparation area:
- > engine control during the test and monitoring of its parameters.

#### **Test Center Equipment:**

- > engine preparation area of 400 square meters and 10 meters in height;
- > monorail hoisting system of lifting capacity up to 2 x 7.5 tons;
- > hydraulic lifting platform of lifting capacity 3 tons;
- > modern fire suppression system;
- > powergenerator which serves as emergency unit;
- > fuelsystem, preservation oilsystem and air start system.

## Amilitary Paint Shop

#### We provide painting services within the scope of:

- application of paint coating on military aircraft: Su-22, MiG-29, C-130 and F-16 with the use of special paints for camouflage painting, recommended by the aircraft manufacturers;
- > painting of ground support equipment;
- > painting of large-size vehicles;
- > painting of other constructions.

# Each painting process can include activities adopted to customer's needs. We offer:

- > stripping of old paint coatings;
- > selective removal of paint coatings with the use of PMB system in a hangar or with the use of mobile equipment;
- > fogging of old paint coatings;
- > application of priming paint on cleaned surfaces;
- > application of intermediate primers;
- > application of finishing enamels.

The Paint Shop Department consists of four hangars designed for painting and preparation of surfaces, and having the following sizes: width 21 m, length 23/30 m, height 8 m (depending on additional equipment):

- > two hangars designed for painting of individual components in open paint spray booths and a closed dust-free painting and drying booth where drying process entails the use of endothermic heating and an IR oven for drying individual components;
- > two hangars designed for aircraft painting.

Three hangars are equipped with the moistening system based on demineralised water. The paint application and drying process is monitored by hytherographs which register painting and drying conditions round-the-clock in a form of records of temperature and relative humidity values.





### Line and base maintenance

Technical service of aircraft is performed in two hangars. The first is a facility which consists of a hall dedicated for maintenance of passenger and transport aircraft and a modern paint shop. The second hangar is an investment completed in 2020, the area of which enables simultaneous maintenance of two aircraft such as Embraer 170/190 or ATR-42/72.

#### Services are provided for the following aircraft:

- > ATR 42/72;
- > BOEING 737 CL/NG;
- > BOMBARDIER DHC-8 (Q400);
- > EMBRAER ERJ 170/190.





# We have our own workshops where we perform maintenance of components such as:

- oxygen and fire protection systems;
- > overhauland repair of wheels, brake assemblies, batteries;
- > overhaul of aircraft interior elements such as passenger's seats.



## र् Civil Paint Shop

During the application process, we use different types of coatings (high solid, base coat, clear coat). Apart from paint coat application, we can also renew aircraft interior. The hangar is equipped with modern heating, moistening, ventilation and lighting systems.

Our offer includes painting of fuselages, control surfaces and aircraft components. Apart from painting, we provide change of aircraft graphics by application of self-adhesive foil of any size. The hangar is also adapted for removal of paint coating by chemical or mechanical methods.





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#### We deal with ground and line aircraft servicing:

- CIRRUS SR20, SR22, SR22T;
- > CESSNA150,152,172,182;
- > PIPER PA-34-200 SENECA, PA-34-220T SENECA III;
- > DIAMOND DA20, DA40, DA42, DV20.

# Cirrus and Diamond Authorized Service Center

Since 2010, we have been the Authorized Service Center of the Cirrus airplanes, and since 2018 – also of Diamond airplanes.

Within the service, we perform servicing after 50 of after 100 flight hours, as well as annual, while the remaining repairs according to approval or upon arrangement with manufacturer and with the Civil Aviation Office. In our service, one can purchase parts and accessories for the Cirrus and Diamond airplanes.

The Center staff have been trained by the airplanes' manufacturers and obtained the certificates necessary to provide the service.





As an EASA Part 145 approved servicing organization, we keep enhancing the scope of service and types of the aircraft serviced, while maintaining the highest standards of the service provided.







We realize the continuous airworthiness management based upon the Civil Aviation Office certificate we have (PART M/G) on the basis of the appropriate maintenance programs and agreements made with the aircraft users.

