

M18B



Dromader



PZLMelec

Polskie Zakłady Lotnicze Co. Ltd.
Mielec, Poland



DESCRIPTION

The M18B DROMADER is an agricultural & fire-fighting, single-engine, low-wing airplane, featuring a tricycle fixed-type main gear with a tail wheel, and fiberglass hopper located forward of cockpit. The airplane – operated by a single pilot – is designed for missions from unpaved airstrips.

The "DROMADER" is designed primarily for agricultural operation of large field areas (crop treatment and fertilizing) and forest-, bush- and crop fire fighting.

Built for compliance with the requirements of FAR 23, the "DROMADER" holds, besides Polish TC, certificates of 15 foreign airworthiness authorities, including the US (FAA), Canadian, Australian, Spanish, Brazilian, Chinese, Italian, Greek, and others.

By the end of the year 2003 over 730 M18's were sold to 24 countries worldwide.

M18B Dromader

ADVANTAGES & MERITS

- HIGH PRODUCTIVITY & LOW FIELD WORKING COST
- HIGH RELIABILITY & FLIGHT SAFETY
- EASY MAINTENANCE
- LOW PURCHASE PRICE
- SPARE PARTS SERVICE WORLDWIDE

AIRPLANE MODELS

The two models currently in production are:

M18B - Agricultural/fire-fighting airplane, Max. 2200 KG payload,
Crew: 1 Pilot (possible transportation of a mechanic)

M18BS - Trainer (dual-control), Crew: instructor-pilot + student-pilot + 500 KG payload

POWERPLANT

The powerplant is a radial, air-cooled, piston, supercharged ASz-62IRM18 engine of 1000 HP takeoff power, combined with a four-blade, all-metal, dia. 130 in. (3.3 m) constant-speed propeller.

MISSIONS

- FOREST-, BUSH-, AND CROP FIRE FIGHTING WITH "WATER-BOMBING" WITH EXTINGUISHING LOAD SPLITTING CAPABILITY
- LINE-DROP SPRAYING FOR FIRE-BARRIER PRODUCTION
- PATROLLING (WITH FIRE-RETARDANT IN HOPPER) OVER FOREST AREAS OF HIGH FIRE HAZARD
- TOTAL FOREST PROTECTION: PEST CONTROL, FIRE FIGHTING, FERTILIZING AND RECLAMATION OF EXCESSIVE-ACIDITY LAND
- CROP FERTILIZING & PROTECTION AGAINST PLANT DISEASES AND PESTS (STANDARD OR ULV SPRAYING)
- SEEDING (RICE, WHEAT, RAPE, GRASS)
- RECLAMATION OF CONTAMINATED SOIL (e.g. OIL SPILLS)
- RECLAMATION OF MINE AND OPEN PIT WASTE-HEAPS, IRON MILL & HEAT PLANT WASTE, SLAG AND ASH DUMPS



AG/FIRE-FIGHTING SYSTEMS PERFORMANCE DATA

FIRE FIGHTING SYSTEM

Time of airdrop of 580 US gal (2200 l.)	- 2.2 s
Watered Spot Size	- 25x75 m (82 x 246 ft)
Line-Drop Application Pattern Size (flight height - 20m)	- from width of 20m at the line-drop start to 10 m at the end, total pattern length - 470 m. Extinguishing load can be divided into a few portions.
Hopper Load Discharge Time 580 US gal (2200 l.)	- 11 sec.
Line-Drop Gate-Box Flap Opening Time	- up to max. 1 sec.

DUSTING SYSTEM

Swath Width	- 20 to 40 m (66 to 164 ft)
Total Swath Width	- up to 45 m (148 ft)
Output/second	- 5 to 65 kg/s (11 to 143 lb/s)
Dose	- 50 to 650 kg/ha (45 to 580 lb/acre)

STANDARD SPRAYING SYSTEM (MEDIUM DROPLET)

Swath Width	- 24 to 40 m (79 to 131 ft)
Total Swath Width	- up to 75 m (246 ft)
Dose	- 9.0 to 110 l/ha (1 to 12 gal/acre)

RADIO/NAVIGATION SYSTEM

The airplane standard radio/navigation system is compatible with VFR operation, night and day, meeting the requirements of FAR 91. Optionally, the following units are available:

- Comm./Nav. Unit (Bendix/King) KX 155
- Comm. Transceiver & KI-208 Course Indicator
- Radio Compass (Bendix/King) KR 87 ADF
- Transponder (Bendix/King) KT 76A
- Gyrocompass, Slaved Horizontal Situation Indicator (Bendix/King) KCS 55A
- Outside Air Temperature Indicator
- Flap Position Indicator
- Fan in Cockpit
- Inertia Safety Harness
- Inertia Safety Harness with Lock
- Low Fuel Warning System



OPERATIONAL EQUIPMENT

To provide for operation in a variety of fire-fighting and ag missions, the airplane offers a choice of operational equipment, depending on Operator's specific requirement.

The equipment can be installed/replaced by Operator and includes:

- Multi-function fire-fighting system (water bomb dropping and drop-line application)
- Fire-fighting equipment
- Extinguishing liquid foaming system
- Medium- & coarse droplet spraying system, mechanically-controlled, with universal gate box, two boom lengths available
- Medium- & coarse droplet spraying system, electrohydraulically-operated
- Mechanically-controlled dusting system featuring a universal gate-box
- ULV-spraying (atomizing) system, 10 (ten) AU-5000 atomizers
- Anti-slosh baffles & liquid chemicals level indicators in hopper
 - Engine cylinder winterization shields for operation under freezing ambient air temperatures
 - Extra fuel system with universal gate-box
 - Extra fuel system for electrohydraulically-operated liquid chemicals ag systems



ULV SPRAYING SYSTEM (ATOMIZING)

Swath Width	- 24 to 57 m (79 to 187 ft)
Total Swath Width	- up to 70 m (230 ft)
Dose	- 0.6 to 16 l/ha (0.06 to 1.71 gal/acre)



DROMADER
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M 18B DROMADER - BASIC DATA

Design Gross Weight	9260 lbs (4200 kG)
Max. T-O Weight	up to 11680 lbs (5300 kG) (acc. to CAM 8)
Max. Payload	up to 4800 lbs (2200 kG)
Capacity Hopper	660 US gal (2500 l.)
Fuel Tanks	190 US gal (726 l.)
Wing Span	58 ft (17.7 m)
Wing Area	430.5 sq. ft (40 m ²)
Range	600 miles (1000 km)
T-O Run 9260 lbs (4200 kG)	620 ft (190 m)
T-O Run 11680 lbs (5300 kG)	1100 ft (350 m)
Rate-of-Climb 9260 lbs (4200 kG)	1300 fpm (6.5 m/s)
Rate-of-Climb 11680 lbs (5300 kG)	870 fpm (4.4 m/s)
Working Speed	106-125 mph (170-200 km/h)



THE COMPANY

Polskie Zakłady Lotnicze (Polish Aviation Factory), a Limited-Liability Company, is presently the largest aircraft manufacturer in Poland. For over 60 years aviation industry has been active in Mielec, a town in South-Eastern Poland. The Factory continues as producer of worldwide-popular agricultural & fire-fighting planes, passenger/cargo commuters and trainer aircraft.

THE MISSION

In its mission, the Company seeks to maintain the position of Mielec as Poland's leader in aviation business, with a strong and stable market presence among East/Central European aircraft producers. The Company's main strategic objective is to develop products of its own design for introduction onto various markets of the world. One of the corporate priorities is also to increase the share of international aviation-related co-operation programs with the world's leaders in the aviation industry. BAE Systems, Boeing, Lockheed Martin, SAAB, GKN Westland, Pratt&Whitney Canada are some of the brand-names the Company supplies to on a sub-contracting basis.

THE OFFER

Our aircraft product line:

- | | |
|---------------------|--------------------------------|
| M28 SKYTRUCK | - Passenger/Cargo Transport |
| M28B BRYZA | - Maritime Patrol |
| M18 DROMADER | - Agricultural & Fire-Fighting |
| M26 ISKIERKA | - Air Sports & Trainer |



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