CUSTOMIZABLE UNMANNED HELICOPTER

LX300™

Unmanned Helicopter Customizable Platform
The **LX300™** is a new multitask unmanned aerial vehicle – vertical take-off and landing (UAV-VTOL).

With its tandem-rotor configuration, the **M-BARK™** technology and its unique capabilities, the **LX300™** is the best suited UAV for commercial applications.

**No matter the environment, get the job done**

The work has to be done, now. Exceeding the operation limits of smaller UAS and manned helicopter, the **LX300™**, with its tandem-rotor configuration, can tolerate high winds and fly in harsh condition, like mountainside. Work can be done where and when it has to be done.
A RELIABLE CERTIFIED-CLASS HELICOPTER

The LX300™ features a state-of-the-art design using the most advanced technologies. Commercial applications need reliable and efficient UAVs to work day after day under severe weather conditions. The LX300™ is designed according to requirements of certified manned helicopter standards.

Advanced materials and processes, similar to those used for manned aircrafts, give the LX300™ reliability and endurance usually pursued by commercial operators.

With its small rotor diameters, its blades and fuselage made of composite material, and with its advanced rotor technology, this helicopter is designed to eliminate vibration at sources.

LAFLAMME HS-Blade™ (patent pending) features a unique blade construction able to face the most hazardous flight conditions.

The advanced rotor design produces less vibration for better payload performances.

The monocoque carbon fiber fuselage reduces vibrations and offers outstanding aerodynamic qualities for better stability and fuel consumption.

M-BARK™ TECHNOLOGY
See details on next page

100-HP fuel-injection engine offering a TBO of 2,000 hrs

Open-architecture onboard software with SECURE™ obstacle-detection system

MIL-spec Servos

LAFLAMME AERO

Image courtesy of VOLZ Servos

Image courtesy of BRP Powertrain
M-BARK™ TECHNOLOGY

Do not waste money by modifying your payload to fit a UAV platform: the LX300™ features the M-BARK™ technology with unique capabilities that allows embarking nearly every kind of payload up to 90 kg without any platform modification.

EMBARKING PAYLOADS ON UAVs HAS NEVER BEEN EASIER

And if your payloads do not reach 90 kg, you can use every kilogram of useful load by embarking extra fuel. That is what is called versatility!

M-BARK™ CARGO COMPARTMENTS

The LX300™ features 7 ft² of cargo compartments fully integrated in the monocoque fuselage for a better payload protection. Those cargo compartments also reduce aerodynamics penalties, for better fuel consumption.

The main 4 ft³ cargo compartment comes with innovative optional functions:

CLIMA-CARGO™
The first insulated cargo compartment dedicated to temperature-sensitive missions:

COLD-CARGO MISSIONS
- Blood, organ and medical product transportation;
- Desert and/or warm-environment missions;
- Sampling;
- Fresh product delivery (food, etc.).

WARM-CARGO MISSIONS
- Artic-environment missions;
- Warm product delivery.

AIRDROP SYSTEM
The first “low-velocity airdrop system” that allows dropping the entire main cargo compartment.
**M-BARK™ QUICK-ATTACH SYSTEM** (Patent pending)

M-BARK™ technology features a switchable track-mounted attach system, which comes with fully-customizable brackets that allow fixing payloads from their current attachment points. You can now easily embark and/or switch payloads in only a few minutes.

**INTEGRATED TANKS**

**AIRDROP SYSTEM**

**PAYLOAD COVER**

**CLIMA-CARGO™**

**SLING**

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**M-BARK™ AUTOMATIC WEIGHT-AND-BALANCE**

M-BARK™ technology allows positioning your payloads anywhere between the two rotors. The LX300™ will automatically adjust the collective differential between the two rotors. You no longer will be restricted by single-rotor tight CG envelops. You can now place your payloads where you want, without much restriction.

**Other**

**LX300™**
FULLY-CUSTOMIZABLE
TO MEET COMMERCIAL MISSIONS

LAFLAMME AERO offers some pre-packaged versions of the LX300™. Of course, the standard platform remains customizable to meet your specific application.

**Mines and Energy**
- Mining prospection;
- Pipelines and power line inspection;
- Law enforcement and site surveillance;
- Infrastructures monitoring;
- Deliveries;
- Oil rig operation support;
- Gas/water/soil sampling;
- Corridor mapping.

**Agriculture**
- Crop spraying;
- Crop monitoring (pest detection, soil moisture, crop growth, etc.);
- Livestock census;
- Freeze protection;
- Law enforcement and farm surveillance;
- Predator detection (day and night);
- Pest control (riversides and marshes).

**First-aid assistance**
- Firefighter operation support (wildfires and other disasters);
- Survivors detection (earthquakes and others);
- First-aid delivering;
- Medical product deliveries;
- Law enforcement: blackout, flooded and/or cluttered areas;
- Communication relay;
- Search and rescue (visual/thermal searching).

**Overwater**
- Ice surveying;
- Communication relay;
- Coast/border patrol;
- Law enforcement;
- Castaways first-aid delivery;
- Waterway scouting.
POWERFUL ACCESSORIES
TO COMPLETE THE SYSTEM
LAFLAMME AERO offers the right accessories for your specific needs.

GROUND CONTROL STATION (GCS)
The LX300™ GCS offers a user-friendly interface, and the flight-programming software is easy to use.

OBSTACLE-DETECTION SYSTEM
The SECURE™ obstacle-detection system is a unique way to navigate close to obstacles using the advanced navigation, guidance and control system that employs proximity sensors.

MOBILE GCS
The optional mobile GCS offers the fastest deployment solution. The unit (typically a RAM Promaster™) holds the LX300™ VTOL-UAV for transportation and integrates the ground control station.

FLIGHT SIMULATOR
The optional VENOM™ Flight Simulator is a powerful tool to plan and practice specific interventions. Use it for training, or to validate the mission.
# TECHNICAL SPECIFICATIONS

## PERFORMANCE
- **Max takeoff weight**: 300 kg
- **Empty weight**: 190 kg
- **Payload weight**: ≤ 90 kg
- **Fuel weight**: ≤ 100 kg
- **Endurance**: ≤ 8 hours
- **Mission radius**: ≤ 150 km
- **Max speed**: 210 km/h
- **Cruise speed**: 115 km/h

## HELICOPTER TECHNOLOGIES
- Composite blades and fuselage
- Double-hinged rotor technology
- Integrated payload compartment
- Autorotation capability

## ON-BOARD SYSTEMS
- GPS/INS navigation system w/ optical camera
- Autonomous takeoff and landing system
- SECURE™ obstacle-detection system

## INTEGRATED PAYLOAD
- 3D-mapping equipment (LIDAR)
- Detection sensor (Radar)
- Communication relay
- Hooking system
- High-definition optical camera w/ gimbal
- Thermal camera
- Liquid or solid spreaders

## GROUND CONTROL STATION
- User-friendly interface
- Single or dual operator mode
- Pre-program autopilot mode
- Manual override mode
- Flight-programming software
- Compact GCS
- Mobile GCS

## DATA LINK
- Combined data link - Visual range
- High-range control data link
- Low-range high-bandwidth link
- High-range low-bandwidth link
- High-range high-bandwidth link

## FLIGHT SIMULATOR
- VENOM® flight simulator
- Custom mission simulator

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