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Scout B1-100 UAV

Highly Efficient Carbon Main Rotor Blades

GENERAL The autonomous industrial unmanned helicopter Scout B1-100 has been developed for professional airborne applications such as **aerial mapping, airborne broadcasting, search & rescue, surveillance** and **inspection** as well as **law enforcement.**

HIGHLY EFFICIENT CARBON MAIN ROTOR BLADES The new carbon main rotor blades developed by Aeroscout GmbH are highly efficient as they are reducing the average power consumption during the flight by minimum 10% compared to the standard main rotor blades. The decrease of power consumption is directly indicated on the power/carburetor indicator on the ground control station.

SAFTEY The state-of-the-art carbon main rotor blades are produced industrially with latest carbon multi-cross-layer technology using autoclave fabrication. The static tensile strength has been verified by a factor of three relative to the nominal operation for the Scout B1-100 UAV helicopter.

DESIGN The highly efficient carbon main rotor blades have been designed specifically for the operation on the Scout B1-100 UAV helicopter considering take-off weight, main rotor speed, main rotor diameter and physical operation modes of the Scout B1-100 UAV helicopter while optimizing lift efficiency, aerodynamic drag, and continuousness of the angle of attack. In addition, these blades have superior behavior under extreme maneuvers.

UPGRADING Due to the industrial production process the new carbon main rotor blades have long-life endurance and can be used immediately with the same main rotor speed controller settings. Furthermore, only small mechanical modifications are required when mounting the new carbon rotor blades.

DEMONSTRATION System demonstrations are available on request in Lucerne, Switzerland.

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Highly Efficient Carbon Main Rotor Blades for the Scout B1-100 UAV

TECHNICAL DATA

Main rotor diameter	3.2 m
Weight per blade (approx.)	1.5kg
Material	Carbon (multi-layer)
Nominal main rotor speed	860 rpm
Performance increase (reduced power consumption[i])	>10%
Tensile strength testing	Zwick Z150 kN

FEATURES

- No modification for the rpm controller settings required
- Highly efficient and effective movements of the helicopter including extreme maneuvers
- Increased safety margins for customers with heavy and/or valuable payloads
- Promotional upgrade kits available for existing customers
- Increased accuracy of the nominal rpm speed control
- Modern industrial production process
- Verified tensile strength testing
- No mechanical changes of the existing blade holders
- Aerodynamic smoothness of the angle of attack
- Reduced vibration excitation on ground and during the flight
- Most durable and resistant materials used
- Increased flight endurance

INFORMATION

For further information on the various upgrade options please contact Aeroscout GmbH, Switzerland.

[i] As indicated on the ground control station carburetor setting. Valid for power indication between 40...80% before installation of the highly efficient carbon main rotor blades.