



Technical Details

Wingcopter 178 Heavy Lift A (Delivery Variant)

WINGCOPTER

Hardware

Drone Type	Tilt rotor vertical take-off and landing (eVTOL)
Dimension	48 x 178 x 146 cm [H x W x L]
Weight	8.4 kg empty 12.0 kg with 2 batteries 13.9 kg with 3 batteries 15.7 kg with 4 batteries 18.0 kg maximum take-off weight
Max Payload Weight	6.0 kg
Drone Battery	Lithium-Polymer // 22.2 V // 16 Ah per battery Vehicle can be equipped with 2x, 3x or 4x battery
Sensors	Dual-GNSS, Dual Magnetometer, IMU, Pitot Tube, LiDAR Altimeter
Transmitter	ADS-B In/Out
Radio / Telemetry	2x RC-Radio (2.4 GHz) 1x Cellular Telemetry (4G) 1x Satellite Telemetry (Iridium)
Ground Station	1x Windows TOUGHBOOK incl. Wingcopter Ground Control Software incl. WLAN and SIM Slot for Telemetry

Operation

	Multicopter Mode	Fixed-wing Mode
Flight Speed IN MISSION MODE	0 m/s minimum speed 5 m/s default cruise speed 14 m/s maximum cruise speed	14 m/s minimum speed 24 m/s default cruise speed 42 m/s maximum cruise speed
Climb Speed IN MISSION MODE	2.0 m/s climb rate 2.5 m/s descent rate	2.5 m/s climb rate 3.0 m/s descent rate
Maximum Wind Resistance STEADY AND GUST	15 m/s Take-off and Landing 10 m/s Delivery Slow Drop	20 m/s During Flight
Maximum Flight Time	2 min (at a time)	120 min
Maximum Altitude	3000 m AMSL	5000 m AMSL
Auto-landing accuracy	3 m	-

Flight Modes	Manual or Automatic Mission Mode
Operating Temperature	0- 40° Celsius
Weather	No operation during icing conditions, heavy rain, or thunderstorms

Range Estimation

	6 kg Payload	4 kg Payload	2 kg Payload	0 kg Payload
Max. Batteries	2x	3x	4x	4x
Direct one-Way Flight	40 km 35 min	60 km 50 min	100 km 85 min	120 km 100 min
Flight with Slow Drop or Delivery Landing	35 km 30 min	50 km 40 min	75 km 65 min	90 km 80 min

Considering ideal conditions (no wind, sea level altitude, 15°C air temperature), ideal cruise speed and 30% battery reserve

Delivery Payload

	Hardcase Delivery Box	Cardboard Box
Delivery	On Landing	On Landing or Slow Drop
Release Mechanism	Manual by hand / Remotely Triggered / Programmed	
Outer Dimensions	22 x 36 x 80 cm [H x W x L]	19 x 24 x 75 cm [H x W x L]
Inner Dimensions	20 x 25 x 32 cm [H x W x L] 16 l volume	18 x 23 x 28 cm [H x W x L] 10 l volume
Empty weight	0.5 kg	0.3 kg
Optional Insulation Box	12.5 x 26 x 25 cm [H x W x L] (Outer Dimensions) 6.5 x 22.3 x 17.2 cm [H x W x L] (Inner Dimensions) 4.5 l volume // 0.1 kg weight	11.7 x 21 x 26 cm [H x W x L] (Outer Dimensions) 8.4 x 17.8 x 22.7 cm [H x W x L] (Inner Dimensions) 3.4 l volume // 0.1 kg weight

Transport

Drone Transport Case	57 x 87 x 103 cm [H x W x L] 32 kg (equipped, without batteries)
Equipment Case	28 x 48 x 83 cm [H x W x L] 16 kg (equipped, without batteries)
Hardcase Delivery Box	28 x 48 x 83 cm [H x W x L] 9.4 kg (equipped, without batteries)
Required Batteries	Drone Battery 24 x 11 x 9 cm [H x W x L] // 2.0 kg (inc. transport box) RC-Radio 8 x 4 x 2 cm [H x W x L] // 0.15 kg TOUGHBOOK 15 x 7 x 2cm [H x W x L] // 0.35 kg

