Agmay
TECHNOLOGIES

In development



HEAVY-LIFT HYBRID CARGO VTOL

HL-30

30 kg of cargo, 772 km, and no runway

Lifts straight up on eight electric rotors, then a fuel-injected engine flies it on its wing and recharges the lift batteries on the way.

- 30 kg payload
- 7.4 h with 30 kg
- 772 km with 30 kg
- Vertical take-off

OVERVIEW

Lifts like a drone. Flies like an aircraft.

The HL-30 is a heavy-lift hybrid VTOL cargo drone in development at Agmay Technologies in Hyderabad. It takes off and lands vertically on eight electric lift rotors, so it needs no runway.

In cruise, a 110 cc fuel-injected engine flies it on its 6.4 m wing and recharges the lift batteries on the way. That hybrid layout lets it carry 30 kg for 7.4 hours or 772 km.



30 kg Payload, internal bay	**7.4** h Endurance with 30 kg	**772** km Range with 30 kg
104 km/h Best-range speed	**137** km/h Maximum level speed	**132.3** kg Maximum take-off mass

Highlights

- Vertical take-off and landing on eight electric lift rotors, so no runway is needed
- Three ways to deliver: set the container down, lower it on a 15 m winch, or air-drop it under its own parachute
- All-carbon airframe sized to an ultimate factor of safety of 2.0
- 30 kg of cargo for 7.4 hours or 772 km: a fuel-injected engine flies it on its wing and recharges the lift batteries in the air
- Hovers on seven of its eight lift motors and carries a ballistic recovery parachute
- High-altitude kit: 20 kg to a post at 16,000 ft

HOW IT FLIES

One aircraft, two ways of flying

Near the ground the HL-30 is a multirotor; in the air it is an aeroplane.

1

Vertical take-off

All eight lift rotors run. With every motor at its 26 kgf peak, thrust is 1.57 times the weight, and still 1.38 times with one motor out.

2

Transition

The pusher accelerates the aircraft while the rotors hold it up. Once the speed is well past the 23.1 m/s stall speed, the wing carries the weight and the lift rotors stop.

3

Cruise

The 110 cc engine turns the 26-inch pusher at the 29 m/s best-range speed, which takes 4.2 kW at the shaft, while its starter-generator refills the lift batteries.

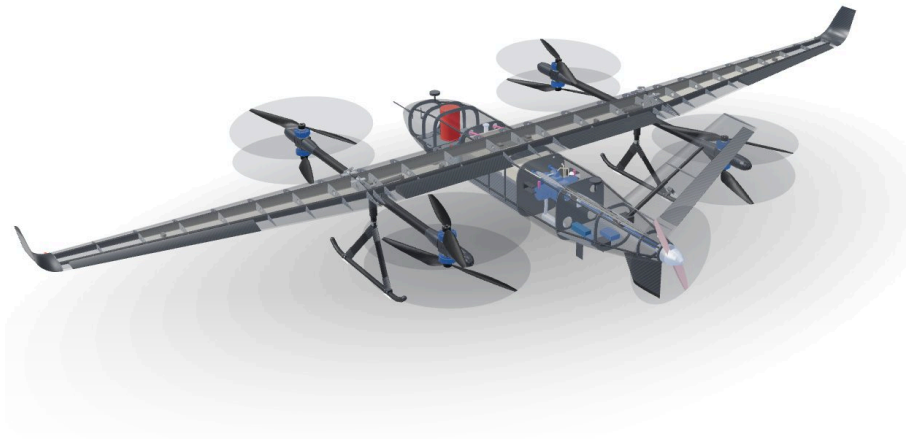
4

Return and land

The aircraft slows into the hover on its lift rotors and settles on landing gear with a 60 mm shock-absorber stroke.

HYBRID POWER

Fuel for the cruise, batteries for the lift



See-through view: engine, generator, fuel and lift systems highlighted.

Lift

8 × 24S outrunner motors in four coaxial pairs, 26 kgf peak each, 40 × 13 in carbon propellers. Each motor is canted 3° so its thrust adds yaw control.

Cruise

110 cc two-stroke boxer twin with electronic fuel injection, a 1.2 kW 48 V starter-generator and a 26 × 12 in pusher on a carbon drive shaft. 18.5 kg (25 L) of fuel.

Battery

Two 12S 22 Ah lithium-polymer packs in series: 24S, 88.8 V, 1.95 kWh, with a smart BMS on the CAN bus. Recharged in flight in about 0.7 h.

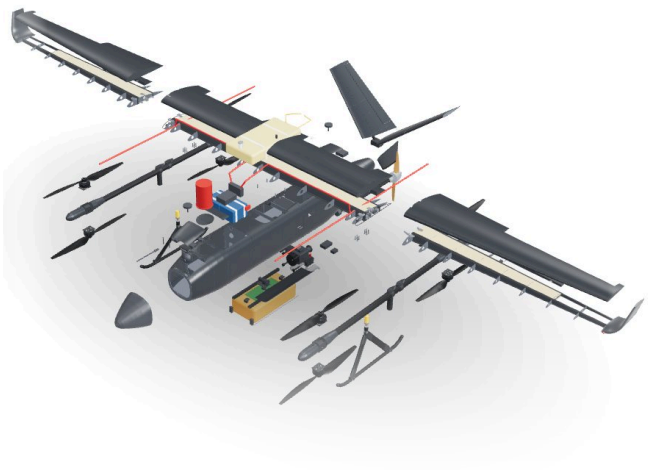
One vertical take-off and landing uses about 0.93 kWh, and 0.43 kWh is always kept in reserve. An all-electric version of the same airframe, with the engine and fuel replaced by 27.7 kg of battery, would fly only 1.38 h and 144 km.

STRUCTURE

Built in carbon

The airframe is all carbon fibre, sized to an ultimate factor of safety of 2.0: a third above the 1.5 that CS-23 and ASTM F3298 ask for. All 67 strength and stability checks across 32 load cases pass.

Skins	Carbon and foam sandwich; the outer 2×2 twill ply is left exposed under a UV-stable clear coat.
Wing	Two spars with pultruded T700 carbon caps that run straight through the fuselage, with extra foam core stiffening the skin between them.
Tubes	Filament-wound carbon booms, landing-gear struts and V-tail spars.
Fittings	Compression-moulded carbon with bonded stainless bushes.



Exploded view of the 541-part CAD assembly.

PAYLOAD AND SAFETY

A 30 kg container, three ways to deliver it

The container rides inside the fuselage on two servo-latched hooks rated 100 kg each.

Set down

Land and release the container on the ground.

Winch

Lower it on a 15 m line from a 12 m hover at up to 1.5 m/s.

Air-drop

Drop it under its own parachute where landing is unsafe.

Safety and avionics

- Recovery parachute: a ballistic canopy, fired by the flight controller or by an independent flight-termination system
- Motor failure: hovers on seven of its eight lift motors, with a thrust-to-weight of 1.38
- Navigation: triple-IMU flight controller and two RTK GNSS receivers that also give heading
- Links: a long-range datalink, a separate RC link and an ADS-B transceiver

HL-30 HA

For mountain work

A 5.7 kg high-altitude kit adds a turbo-normaliser, high-altitude propellers, ice protection and cold-soak heaters. With it the HL-30 HA delivers **20 kg to a post at 16,000 ft**.

SPECIFICATIONS

Technical specifications

Payload	30 kg in an internal bay
Endurance	7.4 h with 30 kg, 30 min reserve kept
Range	772 km with 30 kg
Best-range speed	29 m/s (104 km/h)
Maximum level speed	38 m/s (137 km/h)
Maximum take-off mass	132.3 kg
Operating empty mass	83.8 kg
Wingspan	6.4 m
Length	3.26 m; 3.46 m with the pitot probe
Lift motors	8 × 24S outrunners in four coaxial pairs, 26 kgf peak each, 40 × 13 in carbon propellers
Thrust / weight	1.57 all motors; 1.38 with one out
Cruise engine	110 cc two-stroke boxer twin, fuel injected, 26 × 12 in pusher
Fuel	18.5 kg (25 L)
Lift battery	2 × 12S 22 Ah LiPo in series: 24S, 88.8 V, 1.95 kWh
In-flight charging	1.2 kW 48 V starter-generator, 600 W charger, full in about 0.7 h
Payload system	Internal bay, 2 × 100 kg hooks, 15 m winch, air-drop kit
Recovery	Ballistic parachute with an independent trigger
Avionics	Triple-IMU autopilot, dual RTK GNSS, datalink, RC link, ADS-B
Structure	Carbon fibre; ultimate factor of safety 2.0

The HL-30 is in development. These figures are from design revision C: the CAD model and its structural and flight analysis of 19 November 2026. They may change as development continues.



In cruise: the pusher flies the aircraft on its wing and the lift rotors stop.

MISSIONS

What the HL-30 is suited to

Possible uses, each based on the figures in this brochure. They describe what the aircraft is designed to do, not existing customers or deployments.

Cargo to remote sites

Up to 30 kg where there is no runway. It takes off and lands vertically, so it needs only a small landing site.

Medical supply runs

Long, time-critical runs of up to 772 km with 30 kg. The payload can be set down, or lowered on the winch while the aircraft hovers.

Farm inputs and spares

Inputs and parts for farms far from roads: land, winch the container down or air-drop it.

Disaster relief

Drops where landing is unsafe: lowered at up to 1.5 m/s from a 12 m hover, or air-dropped under its own parachute.

Island and offshore logistics

Long over-water legs of up to 7.4 hours with 30 kg, with a 30 min reserve kept.

High-altitude posts

With the 5.7 kg kit (turbo-normaliser, high-altitude propellers, ice protection and cold-soak heaters), the HL-30 HA delivers 20 kg to a post at 16,000 ft.

Development status. The HL-30 is in development and is not yet for sale. Tell us about your route, payload and landing site, and explore the aircraft in the interactive 3D tour at agmay.in/drones/hl-30/3d-tour/.

Talk to Agmay about the HL-30

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The HL-30 is in development. All figures are from design revision C (19 November 2026) and may change. Images are renders of the CAD model. © 2026 Agmay Technologies Private Limited.