

**Zefhir: da ultraleggero bi-posto
a drone per applicazioni in scenari urbani ed extra-urbani**
Ing. Alessandro Curti CEO CURTI S.p.A:



Con il patrocinio di:



Zefhir Advanced Ultralight & Zefhir U-750



Zefhir Manned

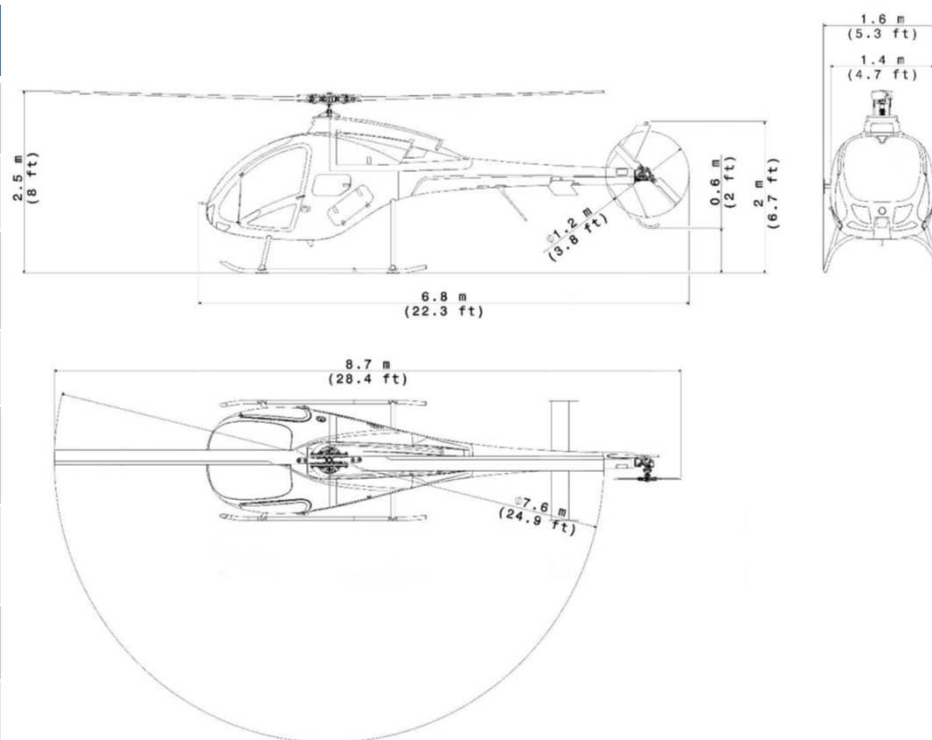


Basic Zefhir characteristics

Basic Specifications	
Category	Two-Seat Helicopter
Main rotor	2 blades, teetering
Tail rotor	2 blades, teetering
Landing gear	Skids
Powerplant	Turboshaft engine
Fuselage	Composite materials
Safety	High auto-rotating capabilities
	High safety level
Safety	Parachute (on demand)
Comfort	High comfort due to special sits

Basic Zefhir Technical Performances

Main Performance	
Maximum Take Off Weight	600 Kg
Fuel Capacity (JET A1)	120 l (40 USG)
Maximum Level Speed @ 100% MCP (SL ISA)	185 km/h (100 KIAS)
Best Cruise Speed @MCP (s.l ISA)	161 km/h (87 KIAS)
Max range @100 knots (10 min. reserve)	244 km (132 nm)
Max endurance @42 knots (10 min. reserve)	1h 48 min
V _{NE} (s.l ISA)	189 km/h (102 KIAS)
OGE Hovering Ceiling (600 kg, ISA)	4000 m (13123 ft)



Unique Characteristics

- Zefhir is the only helicopter in the world with tested ballistic parachute (Sardinia 2018)
- It is an extra safety measure, in addition to autorotation (like all helicopters, Zefhir is very good in performing autorotation)
- The system has been patented in Italy, Europe and USA



Regulatory and Certifications

- Advanced VDS certification (Ultralight Italy) already obtained: ongoing lobbying activity for reciprocity agreements with the main European authorities/markets.
- USA certification from the FAA – LSA (MOSAIC) to be obtained (release of new regulation was expected for Q2-2025). CURTI already started a preliminary gap analysis.

Other appreciable characteristics

- Extremely powerful (Nominal Power 105 KW derated by 160 KW)
- High maneuverability and responsiveness
- START- FLIGHT- STOP in windy conditions up to 20 kts or lateral wind speed.
- Simple and effective driving command chain (no servo-controls)
- Long range autonomy (> 2hours)
- Comfortable in sit and view (High visibility in all directions)
- Tested ballistic parachute (see video)

Nothing comparable in the category!

 Zefhir Parachute

Competitive advantages

- Helicopter highly appreciated by the market, as it brought high technology into a segment usually characterized by essential and unsafe
- Most important structural parts and components tested (fatigue tests) on certified test benches, in order to validate any single calculation.
- CURTI hold several certifications both as production capability and systems integrator
- Internal manufacturing capabilities and knowledge of the processes that regulate aeronautical best practices, are in place continuously since many decades



Zefhir Markets

- USA market numerically represents 32% of the helicopter market (in service) in the world (38% including Canada). This is the primary target market for:
 - Wide range in the recreational flying
 - School, private and Law Enforcement customers
- ITALY – recreational flying
- ALL OTHER COUNTRIES - depending on obtaining reciprocity on the certification obtained



Manned ultralight/Sport/Experimental Market

Aerokopter AK1-3 Sanka	Ukrainian
CICARE8	ARGENTINA
Famà Kiss 216 M/SL	Italy
Heli-Sport CH-7	Italy
Dragon Fly 333-AC	Italy
Mosquito Aviation XE	Canada
Edm Aerotec CoAX 2D/2R	Germany
Mustang F290	France
Hungaro Copter	
Revolution Mini-500	USA
Konner K1	Italy
Eagle Helicycle	USA
HTC130	

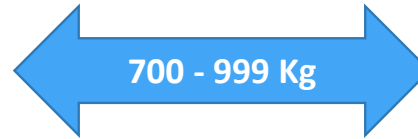
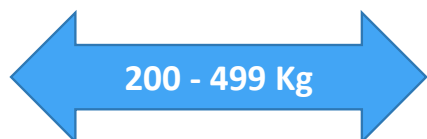
Aerokopter AK1-3 Sanka	Ukrainian
CH-77 Ranabot	Italy
Alpi Syton AH 130	Italy
Rotorway A600	USA
Dynali H3 EasyFlyer	Belgium
YO YO 222	Italy
RotorWay Exec 162F	USA
LCA LH 212 Delta	Italy
Dragon Fly F 334-AC	Italy
Dragon Fly SK-1	Italy
*Robinson R22	USA

Take off weight range

Famà Kiss 216 MF/E	Italy
Skyline SL-231 Scout	Russia
BAS- 750 Rosrec	Russia
Safari 400	USA
Cicare CH-12	ARGENTINA
Dynali H2S	Belgium
Berkut-M	
*Cabri G2	France
*S-300 Sikorski	USA
Zefhir	Italy

Vertical Hummingbird	USA
*Enstrom F-28	USA

***certified**



Coming soon

- New FAA Regulation for LSA “Mosaic” and Zefhir helicopter allowed to be used for commercial and Law Enforcement
- Approach the US market through the sale of a certified aircraft, via dedicated road show by some flight schools
- Entry into the American "municipalities" market, i.e. Law Enforcement, and other structures other than private ones.

Zefhir U-750 (Unmanned)



© 2014

Programs ZEFHIR U-750

- Partners scouting and evaluation finalized on September 2023
- Kick off of the project with the partners on January 2024
- Design Review with two leading companies specialized in unmanned vehicles and last generation autopilots.
- Zefhir UAV demonstrator presentation foreseen on Q3-2026



Zefhir U-750 Markets

- Law Enforcement (Civil Protection, Forestry, Fire Brigade etc.)
- Both in patrolling and patrolling/offense versions
- Rescue units in the high mountains and in areas affected by natural and non-natural disasters
- Off Shore supply, maintenance and procurement management
- The payload capability (max 250 kg) allows this machine to generate a new market niche still identified as "blue ocean"





FEDERMANAGER
BOLOGNA - FERRARA - RAVENNA

Grazie per l'attenzione!

