

**DRONE NAME:**

HYGEIA EX MACHINA

**REQUIREMENTS**

VALID?

**General Design**

Design Capable of vertical take off and landing	Ok, See dwg isoview
At least one fixed wing	Ok, See dwg isoview
10 >= Total rotors >= 4	Ok, See dwg isoview
Hover rotors >=4	Ok, See dwg isoview
At least 1 pusher propeller	Ok, See dwg isoview
No tilting wings/ rotors	Ok, See dwg isoview

**Specifics**

Wingspan < 5m	Ok, See dwg isoview
Aircraft length < 4m	Ok, See dwg isoview and HEM modular design at Report
Aircraft is modular/ can be disassembled	Ok, See dwg isoview and HEM modular design at Report
Part length < 2m	Ok, See dwg isoview and HEM modular design at Report
Transportable by two avg size people when disassembled	Ok, See dwg isoview and HEM modular design at Report
Failure planned for	Ok, See dwg isoview and HEM fail mitigation at Report
Power purely electric	Ok, See dwg isoview and HEM technical specificationsTable at Report
Off the shelf rechargeable battery	Ok, See dwg isoview and HEM technical specificationsTable at Report
Swappable Batteries	Ok, See dwg isoview and HEM technical specificationsTable at Report
Reserved weight, space and power for items of Ignition Kit	Ok, See dwg isoview and HEM modular design at Report
Fixed-pitch propellers	Ok, HEM technical specificationsTable at Report
Propulsion directly driven	Ok, HEM technical specificationsTable at Report
Single, fixed payload bay (PLB)	Ok, See dwg isoview and HEM modular design at Report
PLB located near COG	Ok, See dwg isoview and HEM modular design at Report
PLB dimensions > 450x350x200mm	Ok, See dwg isoview and HEM modular design at Report
PLB accessible from lower side of the aircraft	Ok, See dwg isoview and HEM modular design at Report
PLB Interchangeable/ modular	Ok, See dwg isoview and HEM modular design at Report
Payload Restrained	Ok, See dwg isoview and HEM modular design at Report
Payload impossible to jettison	Ok, See dwg isoview and HEM modular design at Report

### Performance

MTOM < 25kg	Ok, See HEM technical specifications, Frame sheet and Weights-structures Table at Report
3kg payload	Ok, See HEM technical specifications and Weights-structures Table at Report
Cruise speed >80km/h	Ok, See HEM technical specifications and V-n diagram at Report
Max speed <194km/h	Ok, See HEM technical specifications and Power requirements diagram at Report
Capable of flight with 10m/s ahead and cross wind	Ok, See HEM stability issues at Report