

H20PRO technical specification



Performance (15°C, 1013.5hPa)

Max thrust @ 125 000RPM (1minute max):	210N +/-8N
Max continuous thrust**:	172N +/-8N
Max. physical rotor speed (1minute max):	125 000 RPM
Max continuous rotor speed*:	118 000 RPM
Min. idle physical speed:	37 000 RPM
Exhaust gas temperature (EGT) at 125kRPM:	~710°C
Specific fuel consumption @ 200N:	0.162 kg/N/h
Ambient temperature limits:	-25°C to +40°C***
Operation envelope (ALT, MN):	18000ft; M0.7
Operating voltage:	10 to 14V (absolute limit 15V)
Startup current:	20A peak
Startup power consumed:	~1,5Wh
Electric power consumption during run:	3W @ idle; 33W @ 210N
Startup time to idle:	~30-35s
Startup time to full power:	~35-40s

* The max thrust duration of 1 minute can be extended and the max continuous thrust can be set higher, but at the cost of reduced engine life/TBO.

*** For operation at low temps special instructions apply

Dimensions, weight

Engine diameter at attachment positions:	111 mm
Engine length:	280 mm
Engine weight without external accessories (EIU, Pump, Battery):	1650g
Fuel pump weight:	72g
Fuel pump cable (500mm) weight:	20g
EIU (Engine Interface Unit) weight:	90g

General description

- A turbojet engine with a single-stage centrifugal compressor, annular combustor and single stage axial turbine.
- In-house full-authority digital control system with pressure altitude and inlet temperature compensations.
- Brushless fuel pump and starter motor for maximum reliability.

Communication protocols:	CAN bus, RC signal and Analog 0-5V
Ignition system:	two independent ceramic igniters (orders of magnitude lower failed start-up rate after long storage compared to plasma+spray ignition)

Operation and maintenance

Time between overhauls (TBO):	50h (typical cycle: 12% MTO, 88% MCT or less)
Conservation intervals:	2 years
Fuel:	Jet A1, Diesel. + 4% Oil
Lubrication:	by fuel