

Hydro-One 100

Inflatable survey USV for shallow and inland waters

Hydro-One 100 pairs a drop-stitch inflatable hull with a rigid sensor deck. The hull packs into a bag and inflates in minutes. The deck carries the sealed electronics case, dual GNSS antennas and the sonar mount, so every sensor sits at a fixed, calibrated offset. Inflate, clip on the deck, and survey where crewed boats cannot go.



10 h
ENDURANCE

12 kg
CARRY WEIGHT

RTK
CENTIMETRE
POSITIONING

10 min
SETUP TIME

Packable hull

Stable, wide footprint with high freeboard. Deflates to fit a car boot or checked luggage.

Twin thrusters

Differential steering for tight line-keeping and a zero-radius turn at the end of each line.

RTK GNSS with heading

Multi-band RTK gives centimetre position. Optional dual antennas add true heading without a magnetic compass.

Autonomous survey lines

Plan "lawnmower" or cross-line patterns on the tablet. Manual override at any time.

Swappable sensor deck

T-slot rails take echosounders, ADCPs, sondes and cameras. Change payloads with hand tools.

Sealed electronics

Autopilot, radio, battery and logger in one IP67 case. One connector per sensor.

PRE-ORDER • SPECIAL INTERGEO 2026 PRICE

from € 8.800

Standard version with single-beam echosounder, RTK GNSS for navigation and autopilot, and RC controller. The complete package to go surveying.

Delivery from 01.12.2026



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Specifications

Sample values for review. Final figures
subject to type testing.

HULL AND DIMENSIONS

Hull type	Drop-stitch inflatable PVC, rigid deck plate
Length × beam	1.00 m × 0.72 m
Height, mast folded / deployed	0.35 m / 0.85 m
Draft, hull / thrusters	0.08 m / 0.22 m
Weight, ready to survey	12 kg
Payload capacity	15 kg

PROPULSION AND POWER

Thrusters	2 × brushless electric, 350 W each
Steering	Differential thrust
Survey speed / max speed	1 m/s / 2 m/s
Battery	4S Li-ion, 30 Ah, swappable · not included
Endurance at survey speed	10 h
Charge time	3 h, mains

ENVIRONMENT

Operating temperature	-5 °C to +40 °C
Water conditions	Calm water; drives through its own wake
Ingress protection	IP67 electronics case
Minimum water depth	0.30 m

APPLICATIONS

- Reservoir and dam volume surveys
- River cross-sections, discharge and scour monitoring
- Pre- and post-dredge checks in ports and berths
- Tailings ponds, keeping crews off hazardous water
- Water-quality transects and habitat mapping
- Research and field-course teaching

NAVIGATION AND CONTROL

Positioning	Multi-band GNSS, RTK; dual-antenna heading optional
Position accuracy, RTK	1 cm + 1 ppm horizontal, 1 cm + 1 ppm vertical
Heading accuracy	Standard: 3-axis magnetometer, typ. 1°; dual-antenna option: 0.15° at 1 m baseline
Corrections	NTRIP over 4G, or local base via radio
Autopilot modes	Manual, waypoint, survey lines, station hold, return home
Failsafes	Link loss, low battery, geofence

COMMUNICATIONS AND DATA

Telemetry and control	Standard radio 300 m line of sight; enhanced Wi-Fi radio 1 km
Cellular link	4G / LTE / 5G, unlimited range
Ground station	HydroGCS on Windows or Android; rugged tablet optional
Data output	NMEA 0183, CSV, XYZ, native sonar files

SENSORS

Standard	Single-beam 500 kHz CHIRP echosounder, 0.3 to 100 m, 3 mm resolution to 17 m, 5° beam
Options	Compact multibeam, ADCP, water-quality sonde, camera, side-scan

STANDARD PACKAGE

- Hull, sensor deck and sealed electronics case
- Autopilot and mission computer
- Multi-band RTK GNSS receiver, single antenna
- Single-beam echosounder and transducer mount
- RC controller and HydroGCS software
- Pump, repair kit and transport bag
- Not included: battery, tablet, dual-antenna heading

HYDROGCS · GROUND-STATION SOFTWARE · RUGGED TABLET OPTIONAL



Projects · Sites, sessions and deliverables



Plan · Survey lines, estimated time and pre-survey checks



Survey · Lines, coverage, waterfall, obstacles and lidar

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