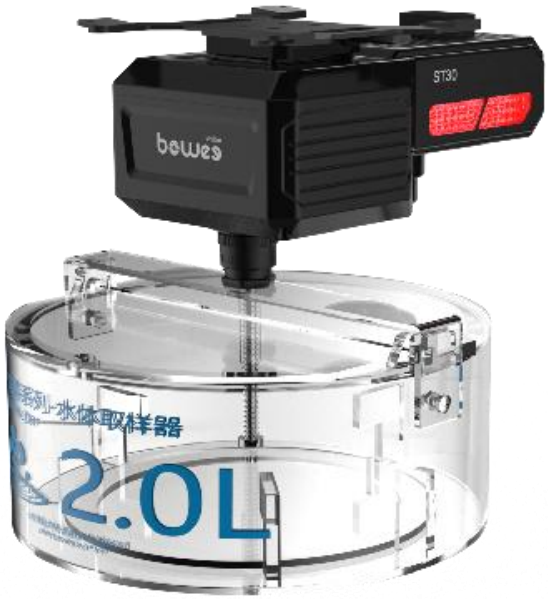
Watert Sampling System — Aquarius ST30



ST30 is a new generation intelligent system for water sampling, which integrates the star-level night vision lens and millimeter wave height control sensor and provides water intake apparatus with multiple capacity. It is equipped with an emergency rope-breaking function to avoid hidden dangers caused by the failure of the water intake apparatus that cannot be recovered, ensuring the safety of the equipment. The equipment can realize operations such as height-controlled and depth-controlled water intake and BVR water intake and achieve fully automatic water intake by combining with the standard smart sampling cloud platform. It records complete operation information on the site to generate reports, which make the whole process of the operation well documented. The system is easy to install and operate, meeting the needs of various users for water sampling.

Star-level lens

Red-blue warning

0–25 m Precise depth control

Precise water diversion

Product Parameters

Device host

Name	Water Sampling System
Model	ST30
Electrical interface	DJI SkyPort V2
Dimensions	183*105*74 mm
Weight	520g
Rated power	25W
Rated voltage	12V
Current	3A
Power supply mode	power supply by drone
Control distance	consistent with drone link
Control method	drone remote control
Lens	2 megapixels star-level night vision lens
Frame rate	30 fps
Focal length	4mm
Wide angle	85°
Height control	millimeter wave sensor
Warning lamp	red and blue flashing
Warning lamp power	27W
Material	aluminum alloy and nylon
Water intake mode	fully automatic, semi-automatic, manual
Water intake depth	0–25 m (customizable)
Speed	20 m/min (adjustable)

Emergency measures	one click rope-breaking
Installation	quick-release
IP Grade	IP55
Support model	DJI M300 RTK、Matrice 350 RTK
Operating temperature	−25°C to 55°C
Storage temperature	−30°C to 60°C

Water cup

Specifications	1 L, 1.5 L, 2.0 L, 1 L (stainless steel)
Materials	Polymethyl methacrylate (PMMA), stainless steel
Other	Quantitative water diversion structure design

Features

Real-time water intake monitoring

ST30 is equipped with a night vision lens, which can realize all-weather operation monitoring and help on-site personnel operate beyond visual distance.

Millimeter wave height control sensor

With the millimeter-level positioning capability, it can accurately calculate the height of the drone from the water surface and avoid flight accidents.

Fully automatic depth-controlled water intake

It can realize fully automatic depth-controlled water intake, and reduce work burden for operators with precise and intelligent operation method, improving the efficiency of water intake.

Emergency rope-breaking protection

There is an emergency rope-breaking mechanism in the equipment to prevent the water cup from causing damage to the drone due to the entanglement of aquatic plants.

Quick-release

The quick-release design is adopted between the water intake apparatus and the equipment for one-hand operation.

Precise water diversion design

The unique water diversion method makes the equipment to retract freely to avoid secondary contamination of water samples. Besides, it can realize precise water diversion.