



AIRBORNE TOTAL WATER CONTENT ANALYZER



Introduction

The airborne total water content analyzer developed by Zhice Yunlian adopts TDLAS technology. Based on the absorption spectrum of water molecules, it realizes accurate, fast and automatic measurement of atmospheric total hydrometeors (gaseous water, liquid water and ice crystals). Meanwhile, the device adopts isokinetic sampling: internal auxiliary negative pressure matches the inflow velocity of the probe inlet with the true airspeed of the airborne platform, so as to achieve distortion-free sampling of cloud water. The equipment features stable measurement data, high precision and fast response speed.

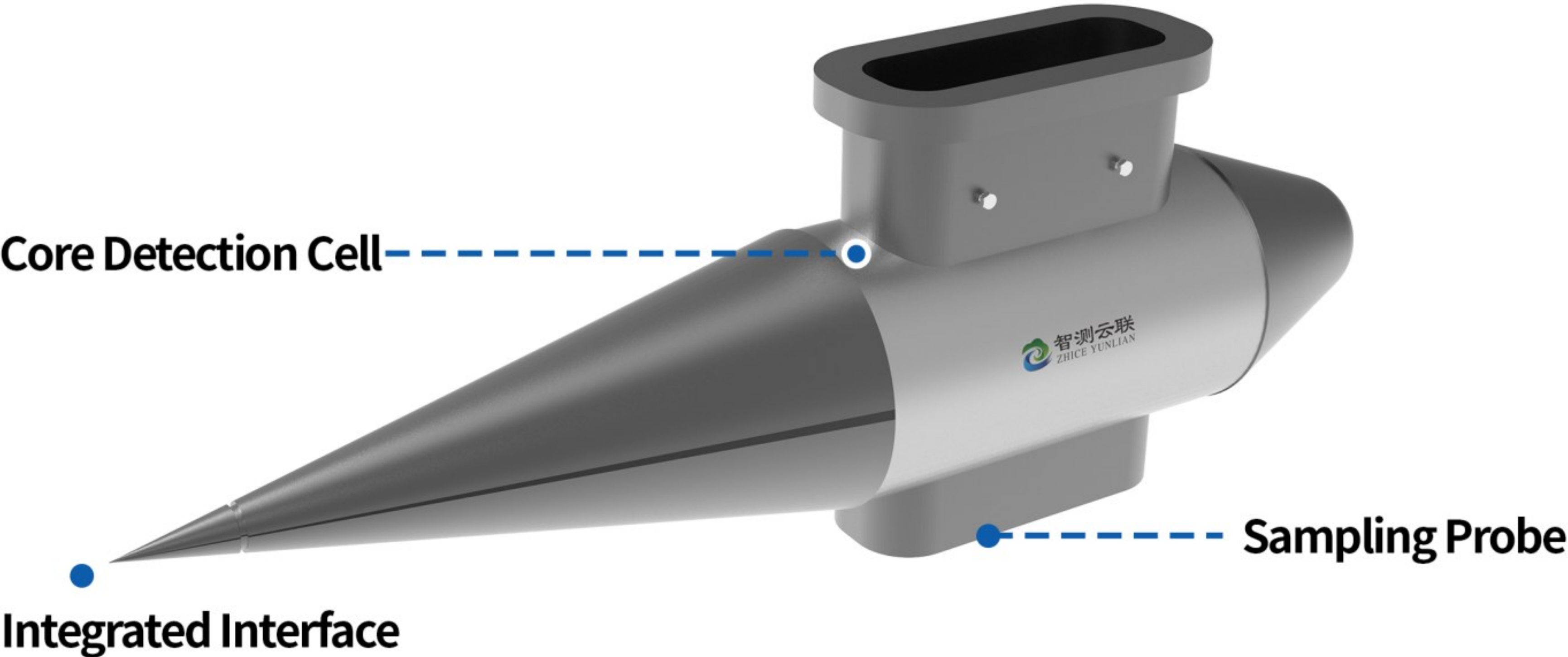
Precautions

1. Ensure the probe air inlet is unobstructed during installation and matches the true airspeed of the airborne platform to guarantee isokinetic sampling performance.
2. Calibrate the TDLAS spectrum detection module regularly to maintain measurement accuracy of gaseous water, liquid water and ice crystals.
3. Inspect the internal negative pressure auxiliary system to avoid sampling distortion caused by abnormal negative pressure.
4. Store the equipment under suitable temperature and humidity to prevent component dampness which impairs data stability.
5. Clean the probe promptly after flight to remove residual water vapor and impurities and extend service life.



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Structure



Adopts fully sealed structure equipped with air inlet for collecting atmospheric samples.
Supported by isokinetic sampling technology, internal auxiliary negative pressure matches the inlet flow velocity with the true airspeed of the airborne platform to realize distortion-free cloud water sampling.

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Specifications & Parameters

Category	Parameter Item	Specification Description
Physical Specifications	Dimension (L×W×H)	(560±10) mm × (260±10) mm × (140±10) mm
	Weight	≤ 15kg
Measurement Performance	Measuring Range	0~10g/m³
	Measurement Error	(0.1+3%×indicated value) g/m³
	Data Update Frequency	1s
Electrical Performance	Power Supply	DC 28V
	Communication Interface	RS232
	Power Consumption	≤ 270W
Environmental Adaptability	Protection Grade	IP65 / IP67 customizable
	Operating Temperature	-55~70℃
	Operating Humidity	0~100%RH
	Storage Temperature	-55~70℃
	Storage Humidity	0~100%RH