

Vaisala ASAP Sounding Station



Balloon launcher ALS211 is used in the ASAP station.

The Vaisala ASAP Sounding Station is a semi-automatic ship-board upper-air observation station that launches radiosondes, receives the radiosonde signals and converts them into meteorological messages. These are then forwarded in standard WMO message format, TEMP SHIP and BURF through satellite system to land station.

Features

- Only Vaisala provides complete upper air observation station for harsh marine conditions
- Very compact structure
- Easy to install, operate and transfer
- Reliable data collection and transmission
- Radiosonde launcher: ALS211

Vaisala automatic weather stations can be integrated in order to bring data into the system for surface weather observation and SYNOP SHIP message.

Accurate Meteorological Measurements

The Vaisala ASAP Sounding Station uses Vaisala RS41 family radiosondes that accurately measure air pressure, temperature, relative humidity and wind direction/speed. Wind-finding methods are based on the GPS.

Robust Design for Extreme Conditions

The Vaisala ASAP Station is housed in a 10-foot container. It meets the international requirements for mechanical construction (ISO), with a design that applies the original specifications set by the ASAP Coordinating Committee (ACC) including certain carefully considered modifications. Vaisala Balloon Launcher ALS211 protects the meteorological balloon during the filling and launches the radiosonde. It has been designed for marine applications thus the functionality of the balloon launcher is reliable even in most extreme weather conditions at sea.

User Friendly Operation

The Vaisala ASAP Sounding Station includes the DigiCORA® Sounding System that requires minimum operator's time prior to balloon release. Sounding preparation phase can be easily followed with the sounding system user interface. The ASAP container offers comfortable and air-conditioned room for the operator during the sounding preparation phase, protecting at the same time from the current conditions at the sea. Balloon filling and release actions are performed by simply operating two separate control levers. After the balloon and radiosonde are released all actions are automatically fulfilled including message transmission.

The Vaisala ASAP Station consists of:

- A Vaisala DigiCORA® Sounding System MW41 with a no-break power supply and the necessary software and hardware options.
- Vaisala RS41 radiosondes
- Optionally Vaisala Automatic Weather Station for making the surface PTU and wind observations.
- Vaisala ALS211 semiautomatic radiosonde launcher which includes electrical heaters and air-conditioner.

Technical Data

Vaisala DigiCORA® Sounding System MW41

SOUNDING WORKSTATION

Commercial PC delivered by Vaisala, including pre-installed DigiCORA Sounding Software, system recovery tools including USB drive with recovery image, and optional Edgeport serial extension.

Operating system Windows, pre-installed

VAISALA SOUNDING PROCESSING SUBSYSTEM SPS311

Windprofiling options Code correlating GPS

ANTENNA

Antenna options Directional UHF antenna

Omnidirectional UHF antenna

GPS antenna

Antenna stand Acid proof (AISI316), fitting for container roof installation

Ground check device

UPS

OPTIONS

Vaisala Automatic Surface Weather Observing System

ASAP Launcher ALS211

Dimensions 2991 x 2438 x 2591 mm (l x w x h)

Gross weight without gas bottles 2400 kg

Interior is insulated with fireproof mineral wool and paneled with fibre cement flat sheets

Rack for electrical equipments AISI304

ELECTRICITY

Power consumption 4.2 kW without transformer option

6 kVA (1-phase with transformer option)

6 kVA (3-phase with transformer option)

Nominal input voltages 230/400 VAC, 3-phase; or 230 VAC 1-phase

Optional input voltages (with transformer option):

220/380/400/440 VAC, 3-phase or 1-phase

Supply frequency 50/60 Hz for 60 Hz supply; air conditioner should be selected correspondingly

Lights 2 x 9 W ceiling lights

Heating 2 x 750 W radiators

Air conditioner

LAUNCHER VESSEL

Material Fiberglass

Balloon size 350 - 500 g

Control Controlled by pneumatic actuators

Launch door Stainless steel

OPTIONS

Compressor and pressurized air tank

Main transformer with volt meter 3-phase 6 kVA or 1-phase 6 kVA

Storage cabinet 1030 x 500 x 2000 mm

OR gas bottle rack 8 gas bottles

Filling gas regulator

Ladder steps 6 pcs



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