



Systratec[®]
high-end measurement equipment

CARBON|Aero REFERENCE 10t-20t
THE MOST ADVANCED PLATFORM
SCALE FOR AIRCRAFT WEIGHING
AND GRAVITY CENTRE CALCULATION



This weighing platform scale is a revolution dedicated to the **aeronautic manufacturers and MRO** who are looking for a **light system, easy to install, quick to use, accurate** and **safe** to weigh their helicopters and aircrafts with gravity centre calculation. CARBON|Aero scales can be used either in **portable** or **fixed** configurations by using the appropriate accessories.

The low-profile CARBON|Aero platform scale takes the advantages of the last mechanical and electronic technologies developed by Systratec to **simplify weighing and GC calculation procedures, increasing also the accuracy**. Its shape emphasises its high-performance design, combining **aerospace-grade aluminium** and **carbon fibre** in a **light ultra-rigid** structure always horizontal thanks to the **adjustable and articulated feet** and also an **embedded bubble level**. Its **low profile** reduces the length of the access ramps and the installation time. The overall design limits the risk of operator injuries (MusculoSkeletal Disorders MSDs) by reducing also the handled weight.

The embedded **Systratec[®] CORE** electronics manages **in real time** each one of the **4 load-cells**, **guiding the user for the best installation, analysing also all the signals** in real time to detect the **minimum deviation** then **transmitting the data through wired/wireless connection**.

- **Versatile:** Able to weight several types of helicopters and aircrafts up to 10 000 kg per wheel/landing gear for the 10t version and 20 000 kg per wheel/landing gear for the 20t versions.
- **Easy to use:** Light weight system, adjustable and articulated centre-load feet, bubble level and electronic installation assistance to ensure safe installation and optimal results.
- **Connectivity:** Bluetooth[®], Ethernet, WiFi and wired serial RS232/485 interfaces available on demand. Full customizable Bi-directional protocol for data transmission and remote control or advanced scripting from your corporate software.
- **Smart:** Ultimate firmware techniques to control each sensor status and signal, detecting calibration drifts, abnormal signal weakness, saturation, pulling status and short & open circuit, to ensure measurement quality and help in maintenance cost reduction.

Description	Metrological
Materials : high strength aerospace aluminium and carbon fibre Dimensions : 600x350x47mm (10t version) 920x520x75mm (20t long version) 920x520x75mm (20t short version) Weight : 18kg (10t version) 48kg (20t long version) 45kg (20t short version) Battery type : LiFePO4 rechargeable Battery lifetime : >8h of continuous use Battery charger and power supply: 90-264 VAC	Capacity : 10 000 kg per platform (20 000 kg for 20t versions) ⁽¹⁾ Verification step: 5kg IPFNA Class III (OIML R76) 4 stainless steel ring torsion load-cells with strain gauge technology, 5t (10t for 20t platform version) C3 OIML R60, IP68 Operating temperature : -10°C...+40°C

⁽¹⁾ Different ranges and sizes can be manufactured on demand.

MAIN INNOVATIONS

Ultra-rigid structure

Eliminates usual bending effect when applying full load on a foot-print size Surface, increasing linearity and accuracy.

Self-centring adjustable feet

Provides a reliable way to adapt the platform to unlevelled floor, rejecting also lateral efforts.

High-End stainless steel ring-torsion

OIML Class III load-cells for harsh environment, with more than 40 years MTBF.

Laboratory Quality electronics

Separate amplification and acquisition stages for each load-cell, with zero-drift operational amplifiers and 24bit sigma-delta converters. Full customizable communications protocol through WiFi, Bluetooth® and/or wired serial interface for easy industrial integration and/or remote control.

Electronic-assisted installation

Smart firmware routine to help the user to reproduce laboratory mechanical conditions every time the platform is installed for a weighing test. Visual indications through optional platform screen and/or external software for the required feet adjustment procedure, increasing measures repeatability.

Automatic calibration checking

Every time the platform is switched on, this exclusive firmware routine checks some parameters and compare them with original values stored during laboratory calibration, detecting potential calibration drifts that could affect global measurement accuracy.

Sensors balance surveillance

Intelligent firmware algorithm that checks continuously the signals received from each one of the four sensors available by platform. This exclusive feature detects in real time abnormal signal variations, identifying and indicating potential sensor failure when the load is on the platform.

Individual sensor saturation and pulling control

This firmware routine detects continuously sensor saturation or undesirable sensor pulling condition due to, for example, platform mechanical blockage by external objects, tools or accessories. It also identifies the sensor concerned.

Individual sensor short-cut or open-circuit control

Continuous firmware process that detects sensor short-cut or open-circuit failure conditions, identifying also the sensor concerned and avoiding to take inaccurate measurements with the instrument.

Accessories and Options

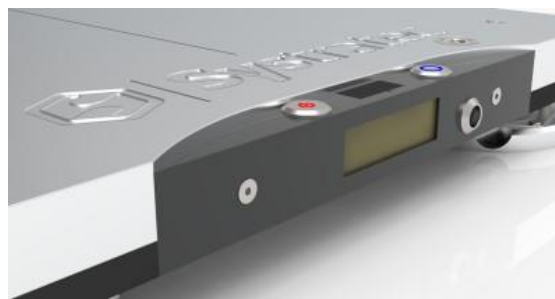
- ✔ Type 350 ramp : Width 350mm -length 1420mm - slope : 1,5° - weight :15kg
- ✔ Type 600 ramp : Width 600mm - length 1420mm - slope : 1,5° - weight :23kg
- ✔ Other size ramps and spacers available for 20t versions to fit all AC foot-print.
- ✔ Optional HMI interface for local measurement display.
- ✔ BlueTooth® remote calibration tool.
- ✔ Index plate to optimize each platform position for the identical configurations.
- ✔ Storage, charge and handling carriage (platforms + ramps + accessories).
- ✔ Fixed frame for embedded (fixed) version to be installed in a small pit.
- ✔ Unitary flightcase for shipment.



Storage and charge carriage



Transport flightcases



Optional HMI for local display



Ground embedding KIT

