



# Procon Engineering

(A Division of National Oilwell Varco UK Limited)

## **AIRPORT BAGGAGE SCALE SYSTEMS & SOLUTIONS**



- *Operator & Passenger weight displays*
- *Four load cell open weigh frame designs*
- *Freestanding platform scales with top covers*
- *Bespoke designs to suit application*



## Passenger/Operator Friendly



The EP20-200 Series check-in system, is a dedicated baggage weigher. It is a precision digital indicator using the latest Sigma-Delta analogue to digital conversion technology to ensure fast and accurate weight readings. The set-up and calibration of the instrument are digital, with a non-volatile security store for all setup parameters

The EP20-200 series represents weighing electronics utilising a highly integrated design which incorporates the weighing electronics within the operator display. For those desks that require a separate passenger display this is achieved with a simple, easy to read matching counter mounted EP20-201 display.

The EP20-200 range of electronics and displays offer high visibility LED back lit LCD readouts with all other normal airport requirements built in.

## Approvals

EC Type Approval UK2950 Class III Non-Automatic Weighing Instruments  $n \leq 4,000$

## Installation, Calibration, Commissioning & Support



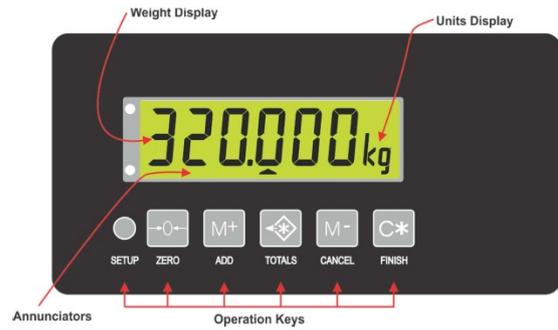
Our team of highly skilled and trained Service Engineers have many years' experience working in Airports; they hold the necessary passes, approvals and security clearances.

In addition, we are fully approved by NWML for the Self Verification of our Airport Baggage Scales, enabling us to Weights & Measures stamp them ourselves.

Installation, Calibration, Commissioning and Support can be provided in the UK and overseas.

We also supply, install, calibrate & commission cargo weighing and inventory systems, as well as other general weighing, process control and associated equipment, providing a very cost effective 24-hour, 7 days per week "Total Site Service", as required.

## EP20 - 200 - Display and Controls



The front panel has a six-digit LCD display. The above picture shows the main elements of the front panel.

The instrument has various sections for the visual output of weight information. Each display section is as follows:

### Weight Display

Indicates the weight readings, setup information, errors and warnings.

### Units Display

Can be set up to show the units of weight reading as grams (g), kilograms (kg), pounds (lb), tonnes (t) or none.

### Operation Keys

SET UP - To begin digital set up for calibration and editing.

ZERO

ADD

TOTALS

CANCEL

FINISH

Each of the primary operation keys has two separate functions.

### Status Annunciators

Symbol	Name	Description
→ 0 ←	ZERO	Visible when the gross reading is within $\pm 1/4$ of a division of true zero.
NET	NET	Visible when the displayed reading represents NET weight.
MOTION	MOTION	Visible when the displayed reading is not stable.
OVER	OVER	Visible when the setpoint is set as type OVER, and the weight is above the target weight.
UNDER	UNDER	Visible when the setpoint is set as type UNDER, and the weight is below the target weight.
1	OUT 1	Visible when Output 1 is turned ON.
ZERO BAND	ZERO BAND	Visible when the displayed weight is within the zero 'dead' band setting. (The zero band symbol shows near the top right corner of the display.)
LOW BATTERY	LOW BATTERY	Visible when battery voltage is too low and batteries need replacing or recharging. (The low battery symbol shows in the top right corner of the display.)

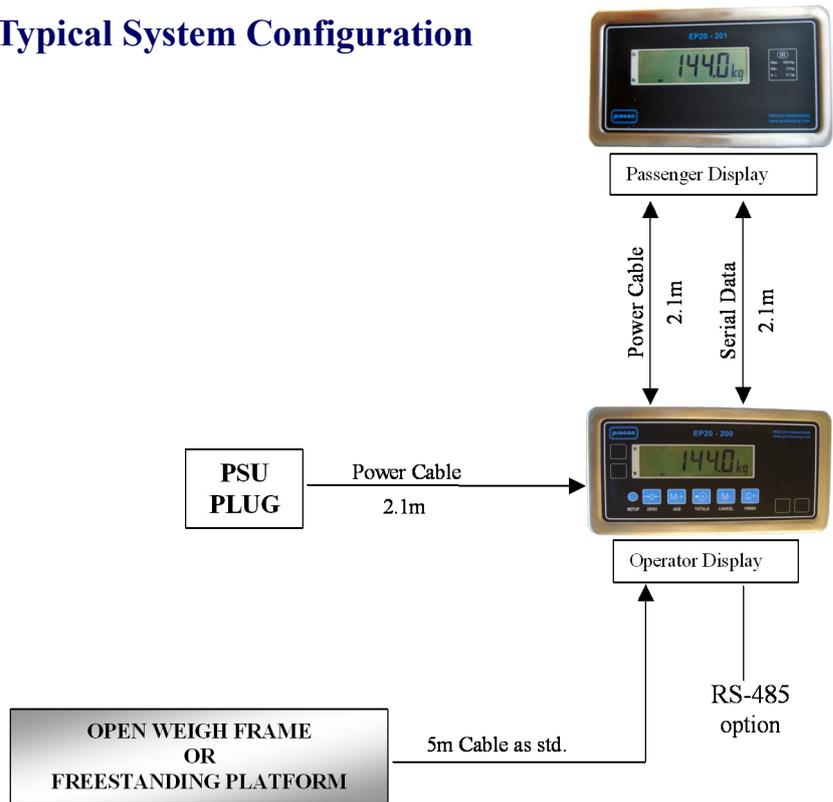
## Typical System Configuration



**OPEN WEIGH FRAME**  
(your conveyor on top)



**FREESTANDING PLATFORM**



## Desktop Mounting Pods

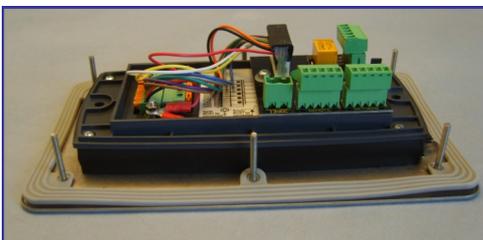
In airports where check-in desk space may be more limited, we can offer our Desk Top Mountable Pods that can house either a single Operator display, or both an Operator & Passenger display.

The Passenger display is usually mounted on the 60 degree sloping front of the pod and the Operator display on its vertical back.

The pods are all stainless steel construction; case size is 220mm long x 132mm high x 168mm deep.



## Technical Compatibility



Procon Airport Baggage Scale Systems have been specifically designed for ease of installation. They can simply be integrated into existing baggage scale systems with no complex wiring or incompatibility problems. Connections and ports are designed to be easily identified. **Compatible with single, dual or four cell weigh frames and platform scales.**

- Stainless steel bezel –flush mount fitting
- Full digital set-up and calibration
- Heavy bag detection with relay output
- Highly compact profile minimising desk intrusion
- 20mm, 6 digit LCD Display with LED backlight
- Scale electronics integrated into operator display
- Totaliser and bag counter for up to 99 bags as standard

## EP20 -200 - SPECIFICATION

<b>Performance</b>	
<b>Resolution</b>	Up to 30,000 divisions, minimum of 0.25 $\mu$ V/division
<b>Zero Cancellation</b>	$\pm$ 2.0mV/V
<b>Span Adjustment</b>	0.1mV/V to 3.0mV/V full scale
<b>Stability / Drift</b>	Zero: <0.1 $\mu$ V/ $^{\circ}$ C (+ 8ppm of dead load max) Span: <8ppm/ $^{\circ}$ C , Linearity <20ppm, Noise <0.2 $\mu$ Vp-p
<b>Excitation</b>	5 volts for up to 4 x 350 or 8 x 700 ohm load cells (4-wire or 6-wire plus shield) Maximum total load cell resistance: 1,000 ohms
<b>A/D Type</b>	24bit Sigma Delta with 8,388,608 internal counts
<b>A/D Conversion Rate</b>	20Hz with FIR filtering > 80dB
<b>Operating Environment</b>	Temperature: - 10 to +40 $^{\circ}$ C ambient Humidity: <90% non-condensing Storage: -20 to +50 $^{\circ}$ C ambient IP65 when panel mounted
<b>Case Materials</b>	Stainless Steel, ABS, Silicon Rubber, Nylon, Polycarbonate
<b>Size and Panel Cut Outs</b>	Size: 120mm long x 113mm high x 30mm deep. Cut Out is 182mm long x 94mm high
<b>Digital</b>	
<b>Display</b>	LED Backlit LCD with six 20mm high digits with units and annunciators
<b>Set up and Calibration</b>	Full digital with visual prompting in plain messages
<b>Digital Filter</b>	Sliding window average from 0.1 to 4.0 seconds
<b>Zero Range</b>	Adjustable from $\pm$ 2% to $\pm$ 100%of full capacity
<b>Power Input</b>	
<b>Standard Power Input</b>	12 to 24VDC, (2.5 VA max) - ON/OFF key with memory feature (locked by default)
<b>Variants   AC</b>	AC Plug pack: 110/240VAC 50/60Hz in 12VDC 2.5A out
<b>Features</b>	
<b>Communications</b>	RS-232 automatic transmit for EP201 Passenger Display RS-485 network or printer connection
<b>Drive Output</b>	1 single pole dual throw relay output (2A Max)
<b>Battery Backed Clock Calendar</b>	Battery life 10 years minimum

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