



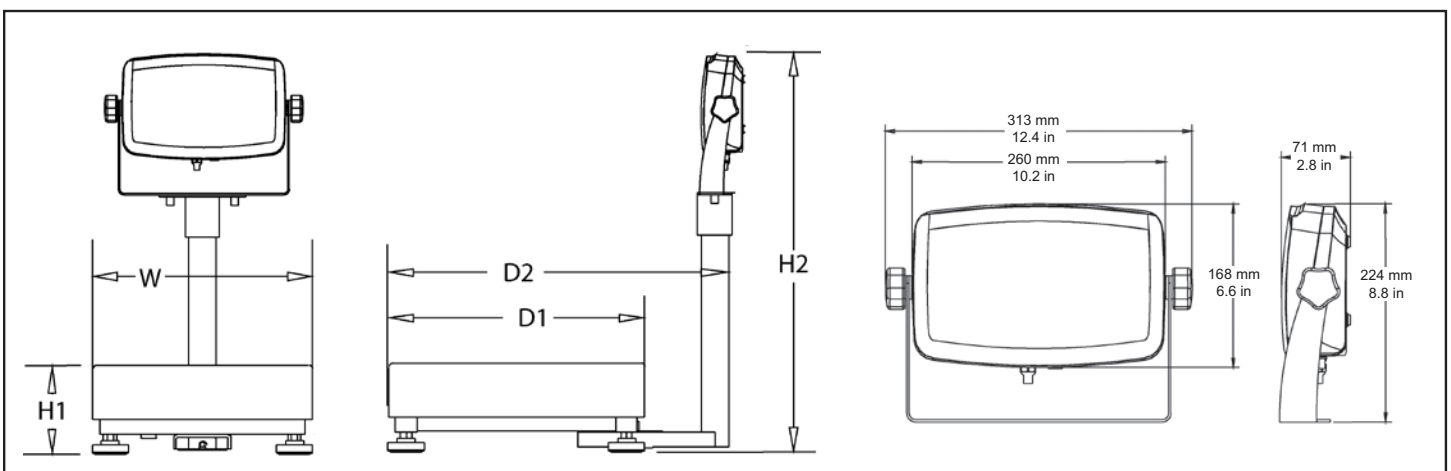
*Counting function is not legal for trade*

# Defender™ 5000 Rectangular Scales

To meet different operational needs, the Defender 5000 includes a suite of configurable software:

- Counting mode for packaging and inventory control, enabling counting into a container or out of a container for bulk operations. Supports a maximum counting resolution to 1:300,000 (minimum APW equal to 0.1d), selectable auto-optimization of average piece weight (APW). APW data can be displayed at any time using a quick key press.
- Percent Weighing mode for formulation and mixing applications, with display of reference weight with quick key press.
- Dynamic/Animal Weighing with selectable weigh times from 0-60 seconds.
- Checkweighing function for packaging and weight checking, with display of results using LCD display and red/yellow/green LEDs. Audible beeper can be configured to prompt when weight is within range, under, over, or under or over range. Target weight values can be displayed at any time using a quick key press.
- Display Hold mode for weighing large packages holds last stable weight on display until cleared
- The Defender 5000 weighs in one or more user-selectable units: kg, g, lb, oz, lb:oz (decimal), metric tonnes and user-definable custom unit
- Supports GMP/GLP data output with date, time user ID, project ID and scale ID. The Defender 5000 features selectable print options for data and print format
- To limit operator access to functions, the Defender 5000 offers both software lockouts for menu items as well as individual key functions.

## Outline Dimensions



**High-Visibility LCD Display**  
with bright white LED back-  
light. Fast display stable  
weight within 2 seconds

**Internal Slot for Capacity Label**  
Protects label from the effects  
of moisture and external  
environments

**Reversible Rear Housing**

Cables can exit above (table or front scale  
mounting) or below (wall or bench scale  
mounting) for convenient mounting. Front  
scale mounting with available accessory.  
Internal structural ribs provide strength  
and minimize flexing.

**3-Color LED Checkweigh Indication**  
with configurable beeper alert

**Simple Plug-In Battery Installation**

Use six C- alkaline  
batteries or the  
optional NiMH  
battery



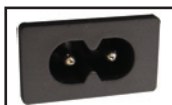
**Included Table/Wall Mount Bracket**

With large ergonomic adjustable knobs  
to maximize viewing angles. A ratchet-type  
angle adjustment with metal inserts ensure  
that viewing angles are set  
securely, and lasts a long time  
even with frequent adjustments



**Universal Switching Power Supply**

100-240 VAC with AC line  
cord; no need for an external  
AC adapter!



**One-Key, Multiple Mode Selection**

Counting, Dynamic Weighing,  
Display Hold, Percent Weighing and  
Checkweighing

**Stay Connected**

Built in RS232 bi-directional interface and built-in  
external input, optional RS422/485, optional  
second RS232 and optional AC or DC relay

**Plug-in Load Cell Connector**

Allows for simple connection to Defender bases or  
directly to terminal block.



**Painted Steel Columns**

Available in both short and tall lengths

**Fully Adjustable Feet**

Four rugged, adjustable feet  
help prevent slippage on wet  
or uneven surfaces



**Durable Base Frame Construction**

Stainless steel pans and painted  
steel form-and-weld painted steel  
frames (R, L bases) provide  
maximum durability, rigidity and  
structural integrity. Load-unload  
cycle tested to ensure long-term  
performance.



**Options and Accessories**

**Interface Options**

	<b>OHAUS Number</b>
AC Relay Kit.....	80500720
DC Relay Kit.....	80500727
RS485/422 Interface Kit.....	80500731
Second RS232 Interface Kit.....	80500733
Foot Switch.....	71173378

**Power Options**

Rechargeable Battery Kit, T51P/T51XW.....	80500729
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**Other Accessories**

	<b>OHAUS Number</b>
Compact Dot Matrix Impact Printer.....	80252042
Compact Thermal Printer.....	80251992
OHAUS Collect Software.....	80500746
TAL Software WinWedge.....	SW12W
Paper for Printer, 80252042 (1 roll).....	80251932
Ribbon for Printer, 80252042.....	80251933
RS232 Cable & Adapter, 80252042 Printer to T51P.....	80252571
RS232 Cable, PC 9-pin to T51P.....	80500525
RS232 Cable, PC 25-pin to T51P.....	80500524

# Rectangular Scales

## Specifications

Model	D51P15HR1	D51P30HR1	D51P60HR1	D51P60HL2	D51P100HL2	D51P150HX2	D51P300HX2
Capacity x Default Readability	30 lb x 0.005 lb 480 oz x 0.1 oz 30 lb : 0.1 oz 15 kg x 0.002 kg 15,000 g x 2 g	60 lb x 0.01 lb 960 oz x 0.2 oz 60 lb x 0.2 oz 30 kg x 0.005 kg 30,000 g x 5 g	150 lb x 0.02 lb 2,400 oz x 0.5 oz 160 lb : 0.5 oz 60 kg x 0.01 kg 60,000 g x 10 g	150 lb x 0.05 lb 60 kg x 0.02 kg	250 lb x 0.05 lb 4,000 oz x 1 oz 250 lb : 1 oz 100 kg x 0.02 kg 100,000 g x 20 g	300 lb x 0.05 lb 4,800 oz x 1 oz 300 lb : 1 oz 150 kg x 0.02 kg 150,000 g x 20 g	600 lb x 0.1 lb 9,600 oz x 2 oz 600 lb : 2 oz 300 kg x 0.05 kg 300,000 g x 50 g
Maximum Displayed Resolution	1:7,500	1:6,000	1:7,500	1:7,500	1:5,000	1:7,500	1:6,000
Capacity x Certified/Approved Readability	30 lb x 0.01 lb 15 kg x 0.005 kg	60 lb x 0.02 lb 30 kg x 0.01 kg	150 lb x 0.05 lb 60 kg x 0.02 kg	150 lb x 0.05 lb 60 kg x 0.02 kg	250 lb x 0.1 lb 100 kg x 0.05 kg	300 lb x 0.1 lb 150 kg x 0.05 kg	600 lb x 0.2 lb 300 kg x 0.1 kg
Maximum Certified Resolution	1:3,000	1:3,000	1:3,000	1:3,000	1:2,500	1:3,000	1:3,000
Indicator Model	T51P						
Column	13.8 in / 350 mm painted steel			26.8 in / 680 mm painted steel			
Construction	ABS plastic indicator, stainless steel removable weighing platform, painted steel column and base construction, aluminum loadcell						
Safe Overload Capacity	150% of maximum capacity						
Protection	Dry use for scale, IP67 for loadcell						
Weighing Units	lb, oz, lb:oz, kg, g, metric tonnes, custom unit						
Modes	Static Weighing, Dynamic Weighing, Counting, Checkweighing, Percent Weighing, Display Hold						
Display	1 in / 25mm high 6-digit, 7-segment bright white backlit LCD						
Keyboard	4-button membrane switch						
Stabilization Time	Within 2 seconds						
Auto-zero Tracking	Off, 0.5, 1 or 3 d						
Zeroing Range	2% or 100% of capacity						
Calibration	Span: 1kg or 1lb to 100% of capacity / 3-point linearity (0 - 50% - 100% fixed)						
Power	100-240 VAC / 50-60Hz internal universal power supply, 6 'C' cell batteries (not supplied) with 80 hour life						
Interface	RS232 and external input						
Operating Temperature Range	14°F to 104°F / -10°C to 40°C						
Scale Dimensions (W x H1 x H2 x D1 x D2)	12 x 3.7 x 23.6 x 14 x 18.7 in 305 x 95 x 600 x 355 x 475 mm			15.7 x 4.1 x 37 x 19.7 x 24.4 in 400 x 105 x 940 x 500 x 620 mm		16.5 x 4.9 x 37 x 21.7 x 26.4 in 420 x 125 x 940 x 550 x 670 mm	
Shipping Dimensions (L x W x H)	19.3 x 16.1 x 17.3 in 490 x 410 x 440 mm			29.1 x 27.2 x 9.1 in 740 x 690 x 230 mm		29.5 x 30 x 9.1 in 750 x 710 x 230 mm	
Approx. Net Weight	25.3 lb / 11.5 kg			49.1 lb / 22.3 kg		61.1 lb / 27.7 kg	
Approx. Shipping Weight	30.2 lb / 13.7 kg			56.4 lb / 25.6 kg		67.7 lb / 30.7 kg	

## Features

**T51P:** ABS plastic housing with internal rib reinforcements, reversible rear cover, backlit LCD weight display, checkweighing indication (green, yellow, red), membrane keypad with raised tactile keys, built-in bi-directional RS232 with manual/continuous/interval printing, external tare input, hardware configuration lockout switch, internal switching power supply with line cord and battery power using 6 "C" cell batteries.

## Other Features

Zero point calibration, calibration test, span or linear calibration, selectable auto-zero tracking range, selectable stability range, selectable averaging level, selectable LCD backlight, selectable auto shutoff, retain zero weight data after power-off, Geo geographical adjustment, selectable key beep, key function lock, menu lock, selectable power-on and calibration unit, battery status display, display of gross/net weight, indication of stability, center of zero, over- and underweight, overload and underload conditions. Configuration menus for PRINT1, PRINT2, COM1, COM2, and I/O.

## Compliance

- **Legal for Trade (Made from Certified/Approved weighing components):** NTEP (CC No. 08-039 for indicator; 99-203A3 for bases); Measurement Canada (Approval No. AM-5687 for Indicator; AM-5675 for bases)
- **Safety and EMC:** UL<sub>cs</sub> 2005/95/EC low voltage directive: EN60950-1:2001, FCC Part 15 Class A 2004/108/EC EMC directive: EN61326-1:1997; +A1:1998; +A2:2001; + A3>2003
- **Other:** Compliant to Directive 2002/96/EC on waste electrical and electronic equipment (WEEE)
- **Quality:** OHAUS quality management system registered to ISO 9001:2008

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*With offices throughout Europe,  
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\* **ISO 9001**  
Registered Quality Management System