

Defender™ 7000

Advanced Rectangular Scales



Advanced Smart Functionality, Durability, OHAUS Quality and Value

The OHAUS Defender[™] 7000 Series is a feature-rich line of bench scales, combining an ABS plastic T71P indicator with painted steel bases and columns. Ideal for shipping and receiving, production, packaging and general commercial and industrial weighing applications, the Defender 7000 offers a multifunctional indicator with multiple weighing units, alpha-numeric keypad and software modes to meet the requirements of industrial and lab applications. With rugged construction, comprehensive yet intuitive software and multiple connectivity options, the Defender 7000 can meet the needs of demanding industrial operations.

Standard Features Include:

- Painted steel base with ABS indicator
- 5,000-7,500d default resolution
- Certified resolution up to 1:3,000
- Quick display of results using large dual line LCD with high-contrast white backlight
- Temporary display of 10x readability in weighing mode using quick key press
- Easy to operate with positive feedback 5-function key and alpha-numeric membrane keypad
- Weighs in one or more units: kg, g, lb, oz, lb:oz (decimal), tonnes and user-definable custom unit
- Multiple weighing modes including Counting, Percent Weighing, Dynamic/Animal Weighing, Checkweighing, Display Hold, and Accumulation
- 255 item Library data storage function
- Internal power supply with universal line cord or 6 "C" batteries (80 hour battery life) –
 optional NiMH internal rechargeable power pack available
- Includes RS232 interface with GMP/GLP data output including date and time, and external analog base input
- Base and indicator connected using quick connect plug
- Options include DC relay control kit, AC relay control kit, RS485/422 and 2nd RS232 interfaces, Alibi memory module

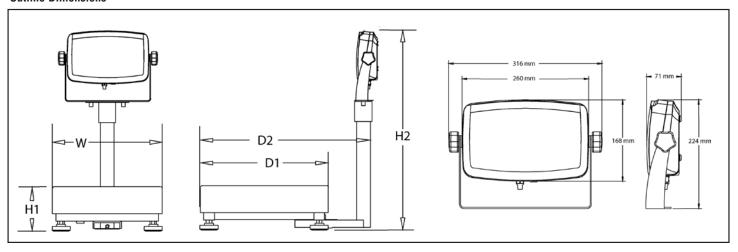
Defender TM 7000 Advanced Rectangula

The Defender 7000 Offers Multiple Features and Easy Configuration:

To meet different operational needs, the Defender 7000 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 1:500,000 (minimum APW equal to 0.1d), selectable autooptimization 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 averaging times from 0-60 seconds.
- Checkweighing function for count 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 values can be displayed at any time using a guick key press.
- Display Hold mode for weighing large packages, holds last stable weight on display until cleared manually or automatically
- The Defender 7000 weighs in one or more user-selectable units: kg, g, lb, oz, lb:oz (decimal), tonnes and user-definable custom unit
- Supports GMP/GLP data output with date, time user ID, project ID and scale ID. The Defender 7000 features selectable print options for data and print format
- To limit operator access to functions, the Defender 7000 offers both software lockouts for menu items as well as individual key functions.
- Library storage for up to 255 memory records that may contain data from a combination of different modes. These reference data can be quickly and conveniently recalled for use with the active mode.
- Multi-language feature allows the user to display operation and menu text in the language of their choice: English, Spanish, French, German, Italian. This allows for convenience and ease of training and operation of the Defender 7000.
- Accumulation mode with statistics feature allows totalizing weight and count values manually or automatically. The total accumulated value is displayed in real-time. With the press of the "Info" key, the number of weighments, average, standard deviation, minimum, maximum and difference are displayed. These statistical values can also be printed.
- Dual scale connections are built-in for 2-scale counting configuration. Connect two bases, a higher resolution base to optimize average piece weight, in conjunction with a large capacity base to weigh/count in bulk.
- Store, view and print over 262,000 date and time-stamped weighing results with the optional Alibi memory kit.

Outline Dimensions



Standard Features:

3-Color LED Checkweigh Indication with configurable beeper alert.

High-Visibility Dual Line LCD Display with bright white LED backlight. Fast display stable weight within 2 seconds

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!

Painted Steel Columns

Available in both short and tall lengths

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.



Library Data Storage Function Storage and quick recall of data records for up to 255 items

One-Key, Multiple Mode Selection Counting, Dynamic Weighing, Display Hold, Percent Weighing and Checkweighing

Stav Connected/Output

Built in RS232 bi-directional interface and built-in external input, optional RS422/485, optional second RS232 and optional AC or DC relay. Optional Alibi memory kit for data recording and traceability

Plug-in Load Cell Connector Allows for simple connection

to Defender bases or directly to terminal block.



Fully Adjustable Feet

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

Options and Accessories



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.

Interface Options	OHAUS Number
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, T71P/T71XW.....80500729

Other Accessories	OHAUS Number
Compact Dot Matrix Impact Printer	80252042
Compact Thermal Printer	80251992
OHAUS Collect Software	80500746
Alibi Memory Option Kit	80500503
TAL Software WinWedge	SW12W
Paper for Printer, 80252042 (1 roll)	80251932
Ribbon for Printer, 80252042	80251933
RS232 Cable & Adapter, 80252042 Printer to T71P	80252571
RS232 Cable, PC 9-pin to T71	80500525
RS232 Cable, PC 25-pin to T71P	80500524

DefenderTM 7000 Rectangular Scales

Specifications

Model	D71P15HR1	D71P30HR1	D71P60HR1	D71P60HL2	D71P100HL2	D71P150HX2	D71P300HX2		
Capacity (max) x Default Readability (d)	30lb x 0.005lb 480oz x 0.1oz 30lb : 0.1oz 15kg x 0.002kg 15000g x 2g	60lb x 0.01lb 960oz x 0.2oz 60lb x 0.2oz 30kg x 0.005kg 30000g x 5g	150lb x 0.02lb 2400oz x 0.5oz 150lb : 0.5oz 60kg x 0.01kg 60000g x 10g		250lb x 0.05lb 4000oz x 1oz 250lb : 1oz 100kg x 0.02kg 100000g x 20g	300lb x 0.05lb 4800oz x 1oz 300lb : 1oz 150kg x 0.02kg 150000g x 20g	600lb x 0.1lb 9600oz x 2oz 600 lb : 2 oz 300kg x 0.05kg 300000g x 50g		
Maximum Displayed Resolution	1:7500	1:6000	1:7500		1:5000	1:7500	1:6000		
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		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		1:2,500	1:3,000	1:3,000		
Indicator Model	T71P								
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, custom unit								
Modes/Features	Static Weighing (single or dual range), Dynamic Weighing, Counting, Checkweighing, Percent Weighing, Display Hold, Accumulation, Library								
Display	6-digit, 7-segment LCD, 25mm/1 inch high primary digits, dual line, with high-contrast white LED backlight								
Keypad	Positive feedback membrane keys, 5 function keys and alpha-numeric keypad								
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 / Linearity: 3 or 5 point								
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				x 19.7 x 24.4 in x 500 x 620 mm		x 21.7 x 26.4 in 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				.2 x 9.1 in x 230 mm		0 x 9.1 in 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	⁷ 25.6 kg	67.7 lb	/ 30.7 kg		

Features

T71P: 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. 09-102 for indicator; 99-203A3 for bases) / Measurement Canada (Approval No. AM-5762 for Indicator; AM-5675 for bases)
- Safety and EMC: _UL_us 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, Asia, and Latin America

' ISO 9001

Registered Quality Management System

