



# Defender™ 7000 Series

Advanced Washdown Indicator, Bases and Bench Scales



## Advanced Functionality, Durability, Ohaus Quality & Value

The OHAUS Defender™ 7000 Series is an advanced multifunctional line of indicators, bases and bench scales that is ideal for shipping and receiving, production, packing and general commercial, industrial and lab applications. Combining an IP66 stainless steel T71XW indicator with all-stainless steel bases and columns, the Defender 7000 offers multi-functionality and multiple weighing units, alpha-numeric keypad and enhanced software modes. With rugged construction, comprehensive yet intuitive software, multiple connectivity, battery operation and configurable mounting, the Defender 7000 is a flexible one-stop solution for your demanding weighing operations.

### Standard Features Include:

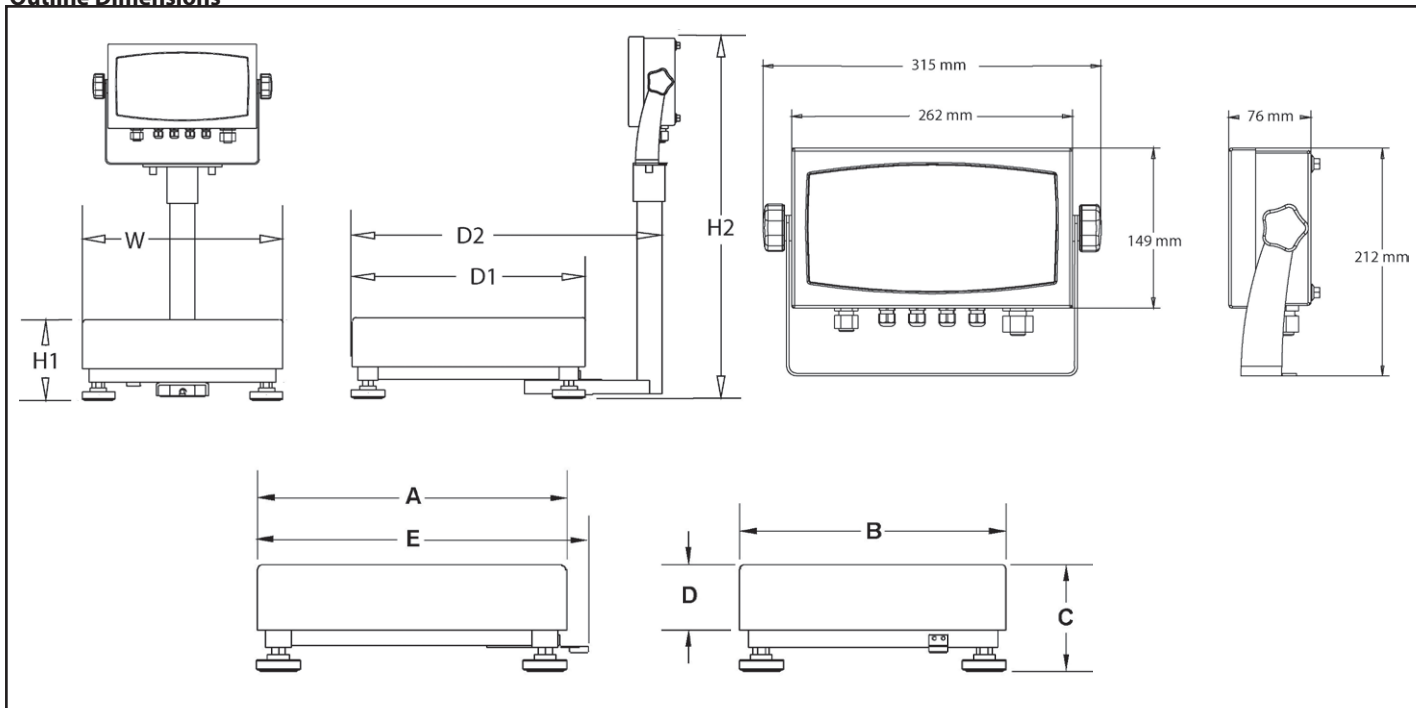
- IP66 stainless steel indicator with resolutions up to 1:50000d/1:10000e and drives up to 8 x 350 load cells, all-stainless steel bases and columns, OIML R60 approved IP67 stainless steel load cells
- Scale displayed resolutions 1:12000-15000d (with temporary 10x high resolution display), approvable to 1:3000e, single and dual range operation
- Quick indication of results using large dual-line backlit LCD with high-contrast backlight, 3-colour checkweigh LED with configurable setpoint beeper
- Multiple enhanced functionalities, such as: Counting, Percent, Dynamic, Display Hold, Checkweigh/count, Accumulation and Statistics, 256 Library Memory, Alpha-numeric Keypad, 5-language text display, GMP data output with time/date, Zero and 3-5 point Linearity Calibration, kg-g-lb-lb:oz-tonne-custom units
- Universal 110-230V power supply with optional NiMH internal rechargeable battery kit
- Built-in dual scale connection, RS232 interface and external input, with optional 2nd RS232, RS422/485, AC and DC relay kits
- Store, view and print over 262,000 date & time-stamped records with the available Alibi memory kit

# Defender™ 7000 Advanced Washdown

## Indicator Specifications

Model	T71XW
Construction/Protection	304 stainless steel NEMA 4X / IP66 enclosure, 304 stainless steel wall mount bracket with adjustment knobs
Full Scale Capacity Range	1 to 999,950 kg/lb
Max Displayed Resolution	1:50,000d
Maximum Approved Resolution	1:10,000e / Dual range 1:3000e
Maximum Counting Resolution	1:500,000d
Min Average Piece Weight (APW)	0.1d
Weighing Units	kg, lb, g, oz, lb:oz, tonnes, custom
Weight Display	2-line LCD with 6-digit, 7-segment, 25mm high primary digits, and high-contrast LED backlight
Checkweigh Indication	3-colour LED with configurable beeper signal
Keyboard	17-key membrane switches (including alpha-numeric keypad), with positive tactile and audible feedback
Extra Functions/Modes	Dual range, Counting, Dynamic, Display Hold, Percent, Checkweighing/Count, Accumulation and Statistics, 256 Library memory, Five-language display
Other Software Features	Zero calibration, Calibration test, 5-point Linearity, Geographical gravity adjustment, Auto-tare, Auto-tare on-accept, GMP Time-Date, Key function lock, Temporary display of 10x resolution
Load Cell Excitation Voltage	5V DC
Load Cell Input Sensitivity	Up to 3 mV/V
Load Cell Drive	Up to 8 x 350 ohm load cells
Stabilization Time	Within 2 seconds
Zeroing Range	2% or 100% of capacity
Span Calibration	1 kg/lb to 100% of capacity
Interface	Built-in dual scale connection, RS232 and external input / Optional RS422/485 / AC relay / DC relay / second RS232 / Alibi memory
Operating Temperature Range	-10°C to 40°C
Relative Humidity Range	Maximum 80% up to 31°C, decreasing linearly to 50% at 40°C
Power	100-240 VAC / 50-60 Hz, internal universal power supply, hard-wire cord, optional internal rechargeable NiMH battery (30-hr. typical operation)
Enclosure Dimensions	262W x 76D x 149H mm
Overall Dimensions (inc. bracket)	315W x 76D x 212H mm
Net / Shipping Weight	3.5 kg / 4.3 kg
Shipping Dimensions	330W x 240D x 180H mm

## Outline Dimensions



## Standard Features

### Optional NiMH Battery

Allows for use in environments where an electrical outlet may not be readily available

### Internal Slot for Capacity Label

Protects label from the effects of moisture and external environments

### Stainless Steel 304 IP66 Enclosure

Dust-tight and protected against powerful water jets from any direction. Indoor/outdoor protection against falling dirt, rain, sleet, snow, windblown dust, splashing and corrosion

### 3-colour LED Checkweigh Indication

with configurable beeper alert

### Included Table/Wall Mount Bracket

With large ergonomic adjustable knobs to maximize viewing angles.

### Hinged Front Cover

Only four sealing screws secure the housing for ease of servicing, while still ensuring IP66 seal integrity



### Universal Switching Power Supply

Automatically adapts to different voltages and frequencies; plug anywhere, anytime

### Stay Connected

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

### Stainless Steel Columns

Available in both short and tall lengths with compatible base mounting, they offer flexible mounting possibilities.

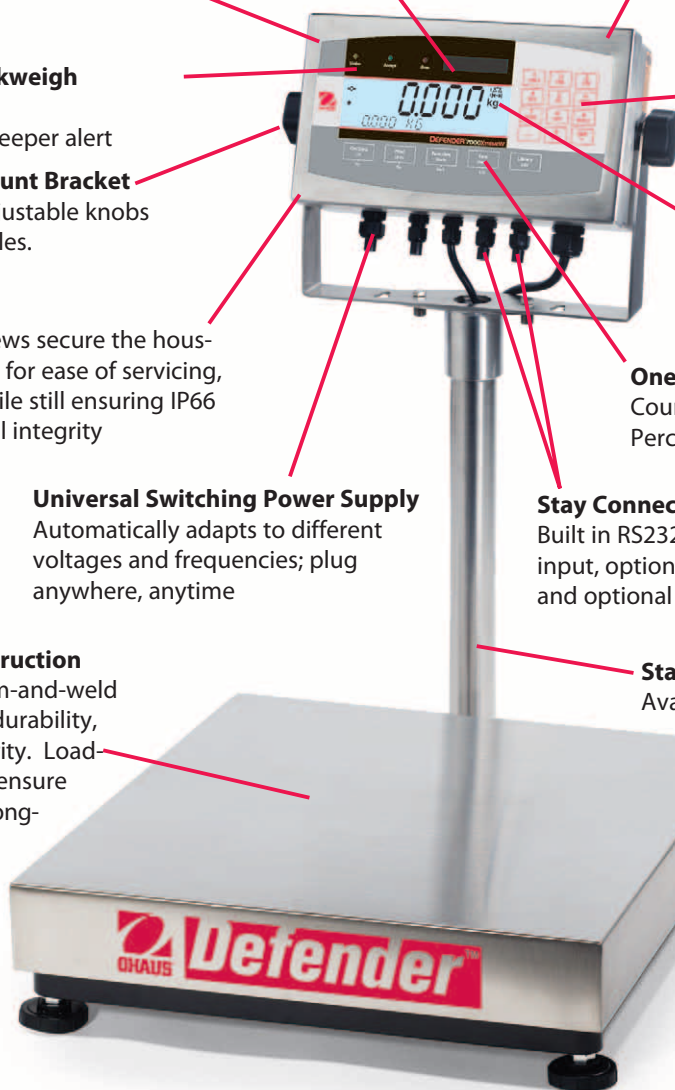
### Durable Base Frame Construction

Stainless steel pans and form-and-weld frames provide maximum durability, rigidity and structural integrity. Load-unload cycle tested to ensure accurate long-term performance.



### Fully Adjustable Feet

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



## Options and Accessories

### Interface Options

	OHAUS Number
AC Relay Kit, T71P/T71XW.....	80500720
DC Relay Kit, T71P/T71XW .....	80500727
RS422/485 Interface Kit, T71P/T71XW .....	80500731
RS232 Interface Kit, T71P/T71XW .....	80500733
Foot Switch.....	71173378
Alibi Memory Kit, T71P/T71XW .....	80500503

### Power Options

Rechargeable Battery Kit, T71P/T71XW .....	80500729
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### Mounting Accessories

Wall Mount Kit, T71P.....	72200227
Wall Mount Kit, T71XW .....	80500735
Column Mount Kit, 35cm, painted, T71 .....	80500723
Column Mount Kit, 68cm, painted, T71 .....	80500724

## Mounting Accessories (continued)

	OHAUS Number
Column Mount Kit, 35cm, stainless steel, T71 .....	80500725
Column Mount Kit, 68cm, stainless steel, T71 .....	80500726
Compatible with all existing columns for Champs-CD/CW11/CD3X/CKW	

## Other Accessories

Load Cell Cable Adapter Kit .....	80500736
RS232 Cable, T31-71XW to STP103 Printer.....	80252584
RS232 Cable, T31-71XW to SRP275 Printer.....	80500574
RS232 Cable, T31-71XW to CBM910 Printer .....	80252574
RS232 Cable, T31-71XW to PC 25-pin.....	80500553
RS232 Cable, T31-71XW to PC 9-pin .....	80500552
Printer STP103, 230VAC, EU Plug .....	80251993
Printer STP103, 230VAC, UK Plug .....	80251994
Printer CBM910, 230VAC, EU Plug .....	80252043
Printer SRP275, 230VAC, UK Plug.....	80251989

# Defender™ 7000 Washdown Bench Scales

## Base Specifications

Base Model: W Series	D15WR	D30WR	D60WL	D150WL	D300WX
Capacity (max)	15kg	30kg	60kg	150kg	300kg
Construction	304 stainless steel pan and frame, non-slip rubber leveling feet				
Leveling Components	Externally visible level bubble and adjustable leveling feet				
Operating Temperature	-10°C to 40°C				
Safe Overload Capacity	150% of rated capacity				
Load Cell Type	IP67, stainless steel, single point / C3				
Load Cell Cable	2m L x 6-wire		2.5m L x 6-wire		
Load Cell Rated Output	2 mV/V ± 10%				
Load Cell Excitation Voltage	Maximum 20V (AC/DC) / Recommended 5~15V (AC/DC)				
Load Cell Input / Output Resistance	387 ± 10 ohms / 350 ± 4 ohms				
Base Dimensions (A x B x C x D x E)	305 x 305 x 95 x 52 x 335 mm		457 x 457 x 115 x 70 x 487 mm		610 x 610 x 137 x 90 x 640 mm
Shipping Dimensions	490L x 410W x 440H mm		810L x 600W x 240H mm		1000L x 760W x 250H mm
Net / Shipping Weight	12.2kg / 14.2kg		27.2kg / 29kg		35kg / 41kg

## Scale Specifications

Scale Model: W Series	D71XW15WR3	D71XW30WR3	D71XW60WL4	D71XW150WL4	D71XW300WX4
Base Model	D15WR	D30WR	D60WL	D150WL	D300WX
Indicator Model	T71XW				
Capacity x Max Readability (d)	15kg x 1g / 1:15000d	30kg x 2g / 1:15000d	60kg x 5g / 1:12000d	150kg x 10g / 1:15000d	300kg x 20g / 1:15000d
Capacity x Appr'vd Readability (e)	15kg x 5g / 1:3000e	30kg x 10g / 1:3000e	60kg x 20g / 1:3000e	150kg x 50g / 1:3000e	300kg x 100g / 1:3000e
Column	350 mm fixed height, hollow tubular, stainless steel		680 mm fixed height, hollow tubular, stainless steel		
Scale Dimensions (WxH1xH2xD1xD2)	305 x 95 x 590 x 305 x 425 mm		457 x 115 x 940 x 457 x 577		610 x 137 x 940 x 610 x 730
Shipping Dimensions	490L x 410W x 440H mm		810L x 600W x 240H mm		1000L x 760W x 250H mm
Net / Shipping Weight	16.1kg / 18.5kg		31.6kg / 33.8kg		39.4kg / 45.8kg

## Highlighted Features

- Counting (with negative sampling and counting, manual entry of APW, auto-optimization)
- Percent Weighing
- Dynamic/Animal Weighing/Display Hold (manual, semi-auto, auto)
- Checkweighing (with take-away checkweighing or checkcounting)
- Accumulation (manual or auto) with real-time view and printable statistics (no. of weighments, average, standard deviation, minimum, maximum, difference)
- Quick-recall library storage for up to 256 memory records for combination of different modes
- Alpha-numeric data and ID entries via keyboard
- Quick-key real-time display of reference data (such as APW, Setpoint limits, Statistics)
- Multi-language text displays (English, Spanish, French, German, Italian)
- GMP/GLP data output including data and time
- Calibration: Span, Zero, Calibration Test, 3 and 5-point Linearity
- Weighing units: kg, g, lb, oz, lb-oz, tonne, user-defined custom unit

## Compliance

- **Safety and EMC:** EN60950, EN61326, FCC, CE.  
Compliant to Directive 2002/96/EC on waste electrical and electronic equipment (WEEE)
- **Type Approval/Legal-for-Trade:**
  - T71xx Series Indicator: OIML R76/1992-NL1-09.17; TC7568R0 / T5980R6
  - Load Cells: OIML R60-2000-NL-02.14 / TC6046; OIML R60-2000-NL-02.12 / TC6043
- **Quality:** Ohaus quality management system registered to ISO 9001:2008

[www.ohaus.com](http://www.ohaus.com)

\* ISO 9001:2008  
Registered Quality Management System

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