



Defender™ 5000 Series

General Purpose Indicator, Bases and Bench Scales

Wessex Scale Co



Smart Functionality, Durability, Ohaus Quality & Value

The OHAUS Defender™ 5000 Series is a feature-rich line of indicators, bases and bench scales, that is ideal for shipping and receiving, production, packing and general commercial and industrial weighing applications. The Defender 5000 for general purpose applications features rugged stainless steel pans and painted steel frames and columns. Its durable ABS plastic indicator is a powerful weighing machine; by enabling its various modes, you have the flexibility to customize the scale for a wider variety of specific applications at no additional cost or complexity. With rugged construction, comprehensive yet intuitive software operations, multiple connectivity options, optional NiMH battery operation and flexible mounting capabilities, the Defender 5000 is your dependable one-product solution for an expandable range of weighing operations.

Standard Features Include:

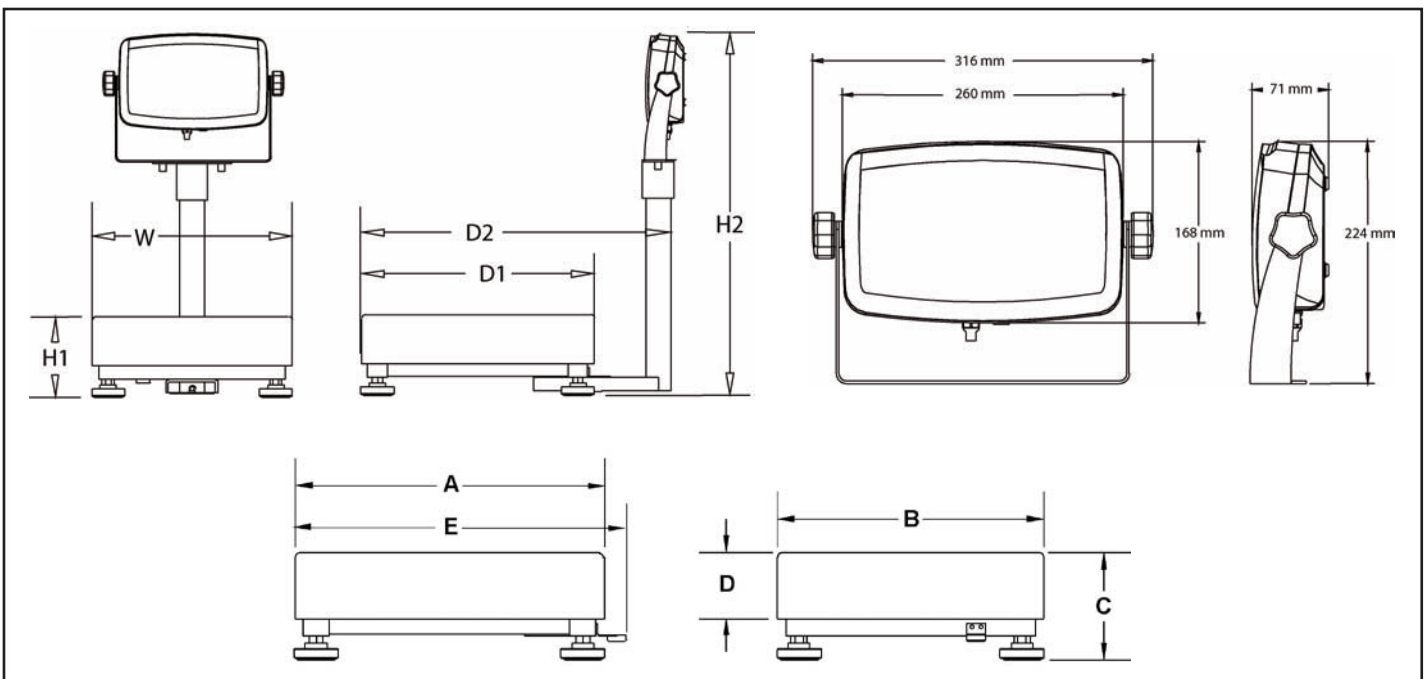
- Five popular capacities: 15kg, 30kg, 60kg, 150kg and 300kg, 6 platform sizes, square and rectangular, from 305 x 305 mm to 610 x 610 mm
- Stainless steel pans with painted carbon steel frames and columns, OIML R60 approved IP67 aluminum load cells
- Scale displayed resolutions 1:12,000 - 15,000 (with temporary high resolution display), approvable to 1:3000e
- ABS plastic indicator with displayed resolutions up to 1:30000, and drives up to 8 x 350 ohm load cells
- Reversible rear housing for convenient orientation of cables, and flexible mounting capabilities with angle-adjustable bracket
- High contrast single-line backlit LCD display with 25mm tall digits, 3-color checkweigh LED and setpoint beeper
- Four function keys, raised, tactile membrane switches with menu navigation text and key-press beeper
- Multiple weighing units: kg, g, lb, oz, lb:oz, t, and custom unit
- Multiple user-activated modes: counting (with auto-optimization), checkweighing, percent weighing, dynamic-animal weighing and display hold
- AC line cord with universal switching power supply, 6-C dry cell battery operation or optional rechargeable NiMH battery

Defender™ 5000 General Purpose Indicator

Indicator Specifications

| Model | T51P |
|-----------------------------------|---|
| Construction | ABS plastic with internal reinforcing ribs, reversible rear housing, painted steel wall mount bracket with adjustment knobs |
| Full Scale Capacity Range | 1 to 999,950 kg/lb |
| Max Displayed Resolution | 1:30,000d |
| Maximum Approved Resolution | 1:10,000e / Dual range 1:3000e |
| Maximum Counting Resolution | 1:300,000d |
| Min Average Piece Weight (APW) | 0.1d |
| Weighing Units | kg, lb, g, oz, lb:oz, tonnes, custom |
| Weight Display | 6-digit, 7-segment LCD, 25mm High digits, with high-contrast white LED backlight |
| Checkweigh Indication | 3-color LED with configurable beeper signal |
| Keyboard | 4 function membrane switches, with positive feedback |
| Extra Functions/Modes | Display Hold, Dynamic Weighing, Counting, Checkweighing, Percent Weighing |
| Other Software Features | Zero calibration, Calibration test, Geographical gravity adjustment, Auto-tare, Auto-tare on-accept, GMP Time-Date, Key function lock, temporary display of higher 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 RS232 and external input / Optional RS422/485 / optional AC relay / Opional. DC relay / optional second RS232 |
| 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, line cord, 6 C-type dry cell batteries (80-hr. typical operation), optional internal rechargeable NiMH battery (30-hr. typical operation) |
| Enclosure Dimensions | 260W x 71D x 168H mm |
| Overall Dimensions (inc. bracket) | 316W x 71D x 224H mm |
| Net / Shipping Weight | 1.5 kg / 2.3 kg |
| Shipping Dimensions | 330W x 240D x 180H mm |

Outline Dimensions



Standard Features

Simple Plug-In Battery Installation



Use six C-alkaline batteries or the optional NiMH battery

High-Visibility LCD Display

with bright white LED backlight. Fast display stable weight within 2 seconds

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.

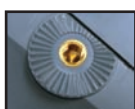


3-Color LED Checkweigh Indication

with configurable beeper alert

Included Table/Wall Mount Bracket

With large ergonomic adjustable knobs to maximize viewing angles. A ratchet-type angle adjustment with a metal inserts ensures

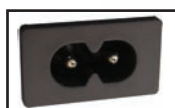


that viewing angles are set securely, and lasts long even with frequent adjustments

One-Key, Multiple Mode Selection

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

Universal Switching Power Supply



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

Stay Connected

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

Painted Steel Columns

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

Plug-in Load Cell Connector

Allows for simple connection to Defender bases or directly to terminal block. Available sealing collar for Type-approval applications



Fully Adjustable Feet

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

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.



Options and Accessories

Interface Options

| | OHAUS Number |
|---|--------------|
| AC Relay Kit, T51P/T51XW | 80500720 |
| DC Relay Kit, T51P/T51XW | 80500727 |
| RS422/485 Interface Kit, T51P/T51XW | 80500731 |
| RS232 Interface Kit, T51P/T51XW..... | 80500733 |
| Foot Switch | 71173378 |

Power Options

| | |
|---|----------|
| Rechargeable Battery Kit, T51P/T51XW..... | 80500729 |
|---|----------|

Approval Options

| | |
|---|----------|
| Load cell cable sealing collar, T51P..... | 80500737 |
|---|----------|

Mounting Accessories

| | |
|--|----------|
| Wall Mount Kit, T51P..... | 72200227 |
| Wall Mount Kit, T51XW | 80500735 |
| Base Mount Kit, T51P | 80500722 |
| Column Mount Kit, 35cm, painted, T51 | 80500723 |
| Column Mount Kit, 68cm, painted, T51 | 80500724 |

Mounting Accessories (continued)

| | OHAUS Number |
|--|--------------|
| Column Mount Kit, 35cm, stainless steel, T51 | 80500725 |
| Column Mount Kit, 68cm, stainless steel, T51 | 80500726 |

Compatible with all existing columns for Champs-CD/CW11/CD3X/CKW

Other Accessories

| | |
|--|----------|
| Load Cell Cable Adapter Kit | 80500736 |
| RS232 Cable, T31-51P to SF42 Printer | 80500571 |
| RS232 Cable, T31-51P to PC 25-pin | 80500524 |
| RS232 Cable, T31-51P to PC 9-pin | 80500525 |
| RS232 Cable, T31-51XW/CW11 to SF42 Printer | 80500574 |
| RS232 Cable, T31-51XW/CW11 to PC 25-pin | 80500553 |
| RS232 Cable, T31-51XW/CW11 to PC 9-pin | 80500552 |
| Compact Impact Printer, 42 Column | SF42 |
| Paper for SF42 printer (5 pack) | 12101511 |
| Ribbon for SF42 printer | 12101512 |

Defender™ 5000 General Purpose Bench Scales

Base Specifications

| Base Models | D15QR | D15HR | D30QR | D30HR | D60HR | D60QL | D60HL | D150QL | D150HX | D300QX | D300HX |
|-------------------------------------|--|---------------------------|-------|-------|-------|----------------------------|-------|----------------------------|--------|--------|--------|
| Capacity (Max) | 15kg | | 30kg | | 60kg | | 150kg | | 300kg | | |
| Construction | 304 stainless steel pan, painted carbon steel 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, aluminum, single point / C3 | | | | | | | | | | |
| Load Cell Cable | 2m 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 | 410 ± 10 ohms / 350 ± 4 ohms | | | | | | | | | | |
| Base Dimension (AxBxCxDxE) (mm) | Q Series: | 305 x 305 x 95 x 52 x 335 | | | | 457 x 457 x 115 x 70 x 487 | | 610 x 610 x 137 x 90 x 640 | | | |
| | H Series: | 355 x 305 x 95 x 50 x 380 | | | | 500 x 400 x 105 x 60 x 530 | | 550 x 420 x 125 x 70 x 580 | | | |
| Shipping Dimensions (mm) | Q Series: | 490L x 410W x 440H | | | | 810L x 600W x 240H | | 1000L x 760W x 250H | | | |
| | H Series: | 490L x 410W x 440H | | | | 740L x 690W x 230H | | 750L x 710W x 230H | | | |
| Net / Shipping Weight | Q Series: | 12.2 kg / 14.2 kg | | | | 27.2 kg / 29 kg | | 35 kg / 41 kg | | | |
| | H Series: | 9 kg / 11 kg | | | | 19 kg / 22 kg | | 24.5 kg / 27 kg | | | |

Scale Specifications

| Scale Models | D51P15QR1 | D51P15HR1 | D51P30QR1 | D51P60QR1 | D51P60HR1 | D51P60QL2 | D51P60HL2 | D51P150QL2 | D51P150HX2 | D51P300QX2 | D51P300HX2 |
|-------------------------------------|--|-------------------------------|----------------------|-----------|----------------------|--|------------------------|-----------------------------|------------------------|------------|------------|
| Base Model | D15QR | D15HR | D30QR | D30HR | D60HR | D60QL | D60HL | D150QL | D150HX | D300QX | D300HX |
| Indicator Model | T51P | | | | | | | | | | |
| 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 Approved 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, painted steel | | | | | 680 mm fixed height, hollow tubular, painted steel | | | | | |
| Scale Dimensions (WxH1xH2xD1xD2) | Q Series: | 305 x 95 x 600 x 305 x 425 mm | | | | 457 x 115 x 940 x 457 x 577 | | 610 x 137 x 940 x 610 x 730 | | | |
| | H Series: | 305 x 95 x 600 x 355 x 475 mm | | | | 400 x 105 x 940 x 500 x 620 | | 420 x 125 x 940 x 550 x 670 | | | |
| Shipping Dimensions | Q Series: | 490L x 410W x 440H mm | | | | 810L x 600W x 240H mm | | 1000L x 760W x 250H mm | | | |
| | H Series: | 490L x 410W x 440H mm | | | | 740L x 690W x 230H mm | | 750L x 710W x 230H mm | | | |
| Net / Shipping Weight | Q Series: | 11.7kg / 14.1kg | | | | 24.8kg / 27.7kg | | 41.3kg / 44.7kg | | | |
| | H Series: | 11.9kg / 14.2kg | | | | 23kg / 25.7kg | | 28.3kg / 30.7kg | | | |

Compliance

- **Safety and EMC:** EN60950, EN61326, FCC, CE, cUL_{US}
Compliant to Directive 2002/96/EC on waste electrical and electronic equipment (WEEE)
- **Type Approval/Legal-for-Trade:**
 - T51xx Series Indicator: EC Type approval and Test Certificate: TC7132 / T5980
 - Load Cells: OIML R60/2000-NL1-03.10 / TC5382; OIML R60/2000-NL1-03.14 / TC5367
- **Quality:** Ohaus quality management system registered to ISO 9001:2000

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