



Defender[®] 5000

Standard Low Profile Bench Scales



Counting function is not legal for trade

Multifunctional Bench Scale for Standard Industrial Applications

The OHAUS next generation Defender 5000 Series multifunctional bench scale is ideal for a multitude of applications, including production, packaging, inventory and shipping. Built durably and equipped with advanced features such as maximum configurability print output, GMP/GLP data output, library/user management, and multiple connectivity options - the Defender 5000 is designed to simplify demanding industrial and commercial applications.

Standard Features:

- **Indicator Guides The User with On-Screen Prompts**
See results clearly on the large backlit display. The alpha-numeric keypad and function keys allow for a simplified user experience. On-screen prompts and soft keys will guide you through the operation.
- **Durably Constructed To Withstand Harsh Industrial Environments**
Durably constructed with a stainless steel platform and indicator front mount, sand gray powder-coated steel frame and aluminum load cell. Supports up to 6,250e NTEP and Measurement Canada certified resolution for legal-for-trade applications.
- **Multiple Application Modes and High Storage Capacity for Greater Flexibility**
Features common industrial modes and supports a 50,000 item library and 1,000 user profiles which can be downloaded/uploaded for easy set-up with the included Micro SD Card. Also equipped with GLP/GMP output capability with time/date for result traceability. Alibi memory available.
- **Multiple Connectivity Options for Convenient Data Transfer and Storage**
Results can be stored in the Micro SD card. Data output via built-in RS232 or optional interfaces including 2nd RS232/RS485/USB device, Ethernet, Bluetooth/WiFi, Analog Output and Discrete I/O with relays.

Ingeniously Practical

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Simplified Use

Results can be read easily on the Defender 5000's large transfective dot matrix display, even in bright sunlight. The SmartText 3.0 interface will guide you through all of the Defender 5000's unique and advanced features. With five soft keys, SmartText 3.0 makes an advanced scale very simple to use, and reduces training time for operators.



Durable Construction

The Defender 5000 can be used for both general and legal-for-trade applications. For standard industrial applications, the Defender 5000 bench scales offer durable performance at a practical price.



Simple Operation

Featuring most common applications including Parts Counting with APW optimization, Checkweighing or Checkcounting, Percent Weighing, and Dynamic Weighing or Display Hold, the Defender 5000 meets the weighing and measurement needs of practically every industrial application or manufacturing process. Many application modes eliminate the need for long and complicated manual calculations. GMP/GLP with time/date allows for traceability of results.



Equipped with the included Micro SD card, the Defender 5000 can support storage of up to 50,000 items and 1,000 user profiles. Weighing results can also be stored in Alibi or regular format, addressing all your data storage needs.

Multiple Connectivity Options

Weighing results can be easily exported through the standard RS232 port. Additional connectivity options include a second RS232, RS485 or USB device; Ethernet; and WiFi/Bluetooth interfaces.



Using the Analog Option (either 4-20mA or 0-10V) or the two In/four Out Discrete I/O, the new Defender 5000 indicator can also be used for systems including PLCs.

Indicator Specifications

| | TD52P | TD52XW |
|--------------------|---|--|
| Construction | ABS plastic | 304 stainless steel with sand blasting surface treatment |
| Weighing Units | lb, oz, lb:oz, kg, g, metric tonnes, short ton, custom unit | |
| Application Modes | Weighing, Percent Weighing, Piece Counting with Optimized APW, Checkweighing/Checkcounting, Dynamic Weighing/Display Hold | |
| Display | Dot matrix LCD with white LED backlight, 256 x 80 pixels | |
| Keyboard | 6 function, 5 quick, 12 alpha numeric membrane switches | |
| Auto-zero Tracking | Off, 0.5 d, 1 d or 3 d | |
| Zeroing Range | 2% or 100% of capacity | |
| Interface | Standard RS232, Optional Ethernet, WiFi/Bluetooth, RS232/RS485/USB, Analog Output, 2 In/4 Out Discrete I/O | |
| Power | 100-240 VAC / 50/60 Hz Universal Power Supply, Rechargeable Lithium battery (optional) | |
| Battery Life | 20 hours of continuous use | |
| Calibration | Zero, Span or 3 point-Linear | |

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Front Mount Bench Scale Specifications

| Model | D52P12RQR5 | D52P25RQR5 | D52P50RQR5 | D52P12RTR5 | D52P25RTR5 | D52P50RTR5 | D52P50RQL5 | D52P125RQL5 |
|---|---|---------------------------------|----------------------------------|---|---------------------------------|----------------------------------|--|-----------------------------------|
| | D52XW12RQR5 | D52XW25RQR5 | D52XW50RQR5 | D52XW12RTR5 | D52XW25RTR5 | D52XW50RTR5 | D52XW50RQL5 | D52P125RQL5 |
| Capacity × Readability | 25 lb × 0.001 lb 12.5 kg × 0.5 g | 50 lb × 0.002 lb 25 kg × 1 g | 100 lb × 0.005 lb 50 kg × 2 g | 25 lb × 0.001 lb 12.5 kg × 0.5 g | 50 lb × 0.002 lb 25 kg × 1 g | 100 lb × 0.005 lb 50 kg × 2 g | | 250 lb × 0.01 lb 125 kg × 5 g |
| Maximum Displayed Resolution | 1:25,000 | | | | | | | |
| Capacity × Certified Readability | 25 lb × 0.005 lb 12.5 kg × 2 g | 50 lb × 0.01 lb 25 kg × 5 g | 100 lb × 0.02 lb 50 kg × 10 g | 25 lb × 0.005 lb 12.5 kg × 2 g | 50 lb × 0.01 lb 25 kg × 5 g | 100 lb × 0.02 lb 50 kg × 10 g | | 250 lb × 0.05 lb 125 kg × 20 g |
| Min APW (g) | 0.025 | 0.05 | 0.1 | 0.025 | 0.05 | 0.1 | | 0.25 |
| Internal Counting Resolution | 1:500,000 | | | | | | | |
| Linearity/Repeatability | ± 2d | | | | | | | |
| Indicator | D52P models: TD52P ABS Indicator D52XW models: TD52XW Stainless Steel Indicator | | | | | | | |
| Mount | Stainless steel front-mount bracket with handle | | | | | | | |
| Base Construction | Stainless steel removable weighing platform, powder-coated steel base construction, aluminum loadcell silicon-sealed against moisture | | | | | | | |
| Safe Overload Capacity | 150% of maximum capacity | | | | | | | |
| Stabilization Time | Within 1 second | | | | | | | |
| Operating Temperature Range | 14°F to 104°F / -10°C to 40°C | | | | | | | |
| Scale Dimensions (A × B × C × D × E × F) | 12 × 12 × 3.7 × 2.4 × 4.6 × 23.1 in 305 × 305 × 95 × 60 × 118 × 588 mm | | | 14 × 12 × 3.9 × 2.4 × 4.6 × 25.1 in 355 × 305 × 99 × 60 × 118 × 638 mm | | | 18 × 18 × 4.3 × 2.8 × 4.6 × 28.9 in 457 × 457 × 110 × 70 × 118 × 734 mm | |
| Shipping Dimensions (L × W × H) | 18.9 × 17.5 × 14.3 in 480 × 445 × 363 mm | | | | | | 39.1 × 26.8 × 9.25 in 994 × 680 × 235 mm | |
| Approx. Net Weight | D52P: 19.8 lb / 9 kg / D52XW: 22 lb / 10 kg | | | D52P: 22 lb / 10 kg / D52XW: 24.3 lb / 11 kg | | | D52P: 30.9 lb / 14 kg / D52XW: 33.1 lb / 15 kg | |
| Approx. Shipping Weight | D52P: 22 lb / 10 kg / D52XW: 24.3 lb / 11 kg | | | D52P: 24.3 lb / 11 kg / D52XW: 26.5 lb / 12 kg | | | D52P: 37.5 lb / 17 kg / D52XW: 39.7 lb / 18 kg | |

| Model | D52P50RTX5 | D52P125RTX5 | D52P250RTX5 | D52P50RQV5 | D52P125RQV5 | D52XW250RQV5 | D52P125RTV5 |
|---|---|-----------------------------------|-----------------------------------|--|-----------------------------------|-----------------------------------|---|
| | D52XW50RTX5 | D52P125RTX5 | D52XW250RTX5 | D52XW50RQV5 | D52XW125RQV5 | D52XW250RQV5 | D52P125RTV5 |
| Capacity × Readability | 100 lb × 0.005 lb 50 kg × 2 g | 250 lb × 0.01 lb 125 kg × 5 g | 500 lb × 0.02 lb 250 kg × 10 g | 100 lb × 0.005 lb 50 kg × 2 g | 250 lb × 0.01 lb 125 kg × 5 g | 500 lb × 0.02 lb 250 kg × 10 g | 250 lb × 0.01 lb 125 kg × 5 g |
| Maximum Displayed Resolution | 1:25,000 | | | | | | |
| Capacity × Certified Readability | 100 lb × 0.02 lb 50 kg × 10 g | 250 lb × 0.05 lb 125 kg × 20 g | 500 lb × 0.1 lb 250 kg × 50 g | 100 lb × 0.02 lb 50 kg × 10 g | 250 lb × 0.05 lb 125 kg × 20 g | 500 lb × 0.1 lb 250 kg × 50 g | 250 lb × 0.05 lb 125 kg × 20 g |
| Min APW (g) | 0.1 | 0.25 | 0.5 | 0.1 | 0.25 | 0.5 | 1 |
| Internal Counting Resolution | 1:500,000 | | | | | | |
| Linearity/Repeatability | ± 2d | | | | | | |
| Indicator | D52P models: TD52P ABS Indicator D52XW models: TD52XW Stainless Steel Indicator | | | | | | |
| Mount | Stainless steel front-mount bracket with handle | | | | | | |
| Base Construction | Stainless steel removable weighing platform, powder-coated steel base construction, aluminum loadcell silicon-sealed against moisture | | | | | | |
| Safe Overload Capacity | 150% of maximum capacity | | | | | | |
| Stabilization Time | Within 1 second | | | | | | |
| Operating Temperature Range | 14°F to 104°F / -10°C to 40°C | | | | | | |
| Scale Dimensions (A × B × C × D × E × F) | 24 × 18 × 5.1 × 3.5 × 4.6 × 34.9 in 610 × 457 × 130 × 90 × 118 × 887 mm | | | 24 × 24 × 5.1 × 3.5 × 4.6 × 34.6 in 610 × 610 × 130 × 90 × 118 × 880 mm | | | 31.5 × 23.6 × 5.2 × 3.5 × 4.6 × 42.1 in 800 × 600 × 132 × 90 × 118 × 1070 mm |
| Shipping Dimensions (L × W × H) | 39.1 × 26.8 × 9.25 in 994 × 680 × 235 mm | | | 45.9 × 30.7 × 9.25 in 1165 × 780 × 235 mm | | | |
| Approx. Net Weight | D52P: 52.9 lb / 24 kg / D52XW: 55.1 lb / 25 kg | | | D52P: 75 lb / 34 kg / D52XW: 77.2 lb / 35 kg | | | D52P: 92.6 lb / 42 kg / D52XW: 94.5 lb / 43 kg |
| Approx. Shipping Weight | D52P: 59.5 lb / 27 kg / D52XW: 61.7 lb / 28 kg | | | D52P: 81.6 lb / 37 kg / D52XW: 83.8 lb / 38 kg | | | D52P: 101.4 lb / 46 kg / D52XW: 103.6 lb / 47 kg |

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Application Modes



Weighing: Determine the weight of items in the selected unit of measure.



Percent Weighing: Measure the weight of a sample displayed as a percentage of a pre-established reference weight.



Parts Counting: Count samples of uniform weight. Advanced auto-optimization software recalculates the average piece of weight as the overall weight increases.



Dynamic Weighing and Display Hold: Weigh an unstable load. Scale takes an average of weights over a period of time. The Display Hold feature manually or automatically holds the last stable weight on the display.



Checkweighing/Counting: Compare the weight/count of a sample against target limits. Connect with Discrete I/O and Light Tower Kit for external check lights.

Other Standard Features and Equipment

User-configurable resolution up to 25,000d for general applications and up to 6,250e for legal-for-trade applications (depending on model and unit of measure), 150% overload capacity protection, checkweighing symbols with selectable operation and audible signal settings, menu lock switch, multiple selectable operating languages, selectable environmental and auto-print settings, stability indicator, overload/underload indicators, selectable adjust contrast settings, auto-dim display, auto-off, auto tare, non-slip adjustable rubber feet, a Wheel Kit option is also available for scales up to 300 kg.

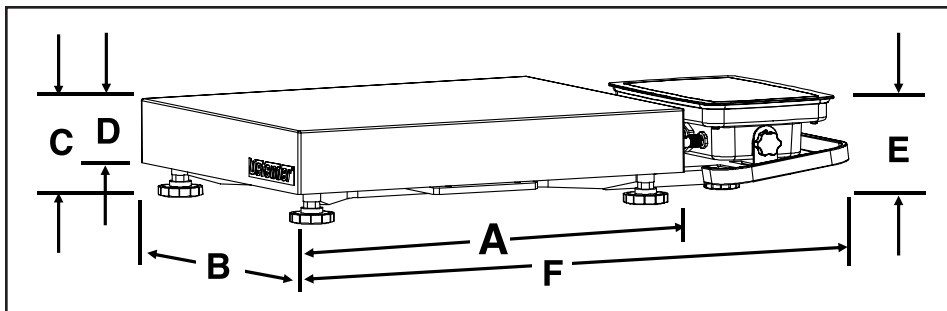
Compliance

- **Metrology:** Measurement Canada (Indicator: NoA AM-6093, Platforms: NoA AM-6107); NTEP (Indicator: CC 18-065, Platforms: CC 18-077) Class III
- **Product Safety:** CAN/CSA C22.2 61010-1; UL61010-1; IEC/EN 61010-1
- **Electromagnetic Compatibility:** FCC Part 15 Class B; Canada ICES-003 Class B; IEC/EN 61326-1 Class B, basic environments
- **Compliance Marks:** CE; CSA

Accessories

| | | | |
|---|----------|--|----------|
| Battery Kit, Li-ion, TD52 | 30424405 | M16 Gland with Ferrite, to TD52 | 30379716 |
| USB Host for Dongle, TD52 | 30424406 | Micro SD Card, 8G | 30303533 |
| Light Tower, 3 Colors, 243mm, IP65 (Requires 30097591) | 30424021 | Analog Output Kit, TD52 ³ | 30424403 |
| In-use Cover Kit, TD52P | 30424022 | Second RS232/RS485/USB Kit, TD52 ² | 30424404 |
| In-use Cover Kit, TD52XW | 30424023 | I/O with Relay (2 In/4 Out) ³ | 30097591 |
| In-use Cover set (10), TD52P | 30469948 | WiFi/BT Dongle, OHAUS ² (Requires 30424406) | 30412537 |
| In-use Cover set (10), TD52XW | 30469949 | Ethernet Kit, D52 ² | 30429666 |
| Printer Holder Kit, D52 | 30424025 | Wheel Kit, Defender Series ¹ | 30372146 |
| Wall Mount Kit, SST, TD52XW | 30424026 | Impact Printer SF40A | 30064203 |
| Wall Mount Kit, CS, TD52P | 30424027 | Thermal Printer STP-103 | 80251992 |
| LC Extension Cable, 9 meters, D52 ¹ | 30424409 | | |

¹ Cannot be used for legal-for-trade applications ² Only one of them can be used at the same time ³ Only one of them can be used at the same time



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The management system governing the manufacture of this product is ISO 9001:2015 certified.

