## *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, sand gray powder-coated steel frame and aluminum load cell, the Defender meets OIML/EC type approvals.

- **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 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 second RS232/RS485/USB device, Ethernet, Bluetooth/WiFi, Analog Output or Discrete I/O with relays.

# *Ingeniously Practical*

# Defender® 5000 *Standard Bench Scales*

## Simplified Use

Results can be read easily on the Defender 5000's large transflective dot matrix display, even in bright sunlight. The SmarText 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

With OIML/EC-type approvals, 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 Percent Weighing, Parts Counting with APW optimization, Checkweighing or Checkcounting 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 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.

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 Indicator | |
|---|---|
| Construction | ABS plastic |
| Weighing Units | kg, g, lb, oz, lb:oz, metric tonnes, short ton, custom unit |
| Application Modes | Basic weighing, Percent weighing, Piece Counting with Optimized APW, Animal weighing/Dynamic weighing, Check weighing |
| Display | Dot matrix LCD with white LED backlight, 256 x 80 pixels |
| Keyboard | 6 function, 5 soft, 12 alpha numeric soft keys |
| Auto-zero Tracking | Off, 0.5 d, 1 d or 3 d |
| Zeroing Range | 2% or 100% of capacity |
| Communication | RS232 |
| Interface | Optional Ethernet, WiFi/Bluetooth, RS232/RS485/USB, Analog output, 2 In/4 Out digital I/O |
| Power | 100-240 VAC / 50/60 Hz Universal Power Supply, rechargeable lithium battery (Optional) |
| Battery Life | 20 hours continuous use |
| Calibration | Zero, Span or 3 point-Linear |

# Defender® 5000 *Standard Bench Scales*

## Column Mount Bench Scale Specifications

| Model | D52P6RQDR1 | D52P15RQDR1 | D52P15RTDR1 | D52P30RTDR1 | D52P60RTDR1 | D52P15RQDL2 |
|---|---|---|---|---|---|---|
| Capacity × Readability | 3/6 kg × 0.2/0.5 g | 6/15 kg × 0.5/1 g | | 15/30 kg × 1/2 g | 30/60 kg × 2/5 g | 6/15 kg × 0.5/1 g |
| Min APW (g) | 0.01 | 0.025 | | 0.05 | 0.1 | 0.025 |
| Internal Counting Resolution | 1:600000 | | | | | |
| Linearity/Repeatability | ±2d | | | | | |
| Indicator | TD52P ABS Indicator | | | | | |
| Column | 350 mm powder-coated steel | | | | | 680 mm powder-coated steel |
| Base Construction | Stainless steel removable weighing platform, powder-coated steel base construction, aluminum loadcell silicon sealed against moisture | | | | | |
| Base Dimensions | 305 × 305 mm | | 305 × 355 mm | | | 400 × 400 mm |
| Safe Overload Capacity | 150% of maximum capacity | | | | | |
| Stabilization Time | Within 1 second | | | | | |
| Operating Temperature Range | -10℃ to 40℃ | | | | | |
| Scale Dimensions (B × A × C × D × E × F) | 305 × 305 × 95 × 60 × 574 × 442 mm | | 305 × 355 × 99 × 60 × 574 × 491 mm | | | 400 × 400 × 110 × 70 × 903 × 570 mm |
| Shipping Dimensions (L × W × H) | 480 × 445 × 363 mm | | | | | 800 × 600 × 235 mm |
| Approx. Net Weight | 10 kg | | 11 kg | | | 17 kg |
| Approx. Shipping Weight | 11 kg | | 12 kg | | | 19 kg |

| Model | D52P30RQDL2 | D52P60RQDL2 | D52P60RTDL2 | D52P150RTDL2 | D52P60RQDX2 | D52P150RQDX2 |
|---|---|---|---|---|---|---|
| Capacity × Readability | 15/30 kg × 1/2 g | 30/60 kg × 2/5 g | | 60/150 kg × 5/10 g | 30/60 kg × 2/5 g | 60/150 kg × 5/10 g |
| Min APW (g) | 0.05 | 0.1 | | 0.25 | 0.1 | 0.25 |
| Internal Counting Resolution | 1:600000 | | | | | |
| Linearity/Repeatability | ±2d | | | | | |
| Indicator | TD52P ABS Indicator | | | | | |
| Column | 680 mm powder-coated steel | | | | | |
| Base Construction | Stainless steel removable weighing platform, powder-coated steel base construction, aluminum loadcell silicon sealed against moisture | | | | | |
| Base Dimensions | 400 × 400 mm | | 400 × 500 mm | | 500 × 500 mm | |
| Safe Overload Capacity | 150% of maximum capacity | | | | | |
| Stabilization Time | Within 1 second | | | | | |
| Operating Temperature Range | -10℃ to 40℃ | | | | | |
| Scale Dimensions (B × A × C × D × E × F) | 400 × 400 × 110 × 70 × 903 × 570 mm | | 400 × 500 × 120 × 80 × 903 × 665 mm | | 500 × 500 × 120 × 80 × 903 × 665 mm | |
| Shipping Dimensions (L × W × H) | 800 × 600 × 235 mm | | 994 × 680 × 235 mm | | | |
| Approx. Net Weight | 17 kg | | 22 kg | | 24 kg | |
| Approx. Shipping Weight | 19 kg | | 25 kg | | 27 kg | |

| Model | D52P60RQDV3 | D52P150RQDV3 | D52P300RQDV3 | D52P150RTDV3 | D52P300RTDV3 | D52P600RTDV3 |
|---|---|---|---|---|---|---|
| Capacity × Readability | 30/60 kg × 2/5 g | 60/150 kg × 5/10 g | 150/300 kg × 10/20 g | 60/150 kg × 5/10 g | 150/300 kg × 10/20 g | 300/600 kg × 20/50 g |
| Min APW (g) | 0.1 | 0.25 | 0.5 | 0.25 | 0.5 | 1 |
| Internal Counting Resolution | 1:600000 | | | | | |
| Linearity/Repeatability | ±2d | | | | | |
| Indicator | TD52P ABS Indicator | | | | | |
| Column | 980 mm powder-coated steel | | | | | |
| Base Construction | Stainless steel removable weighing platform, powder-coated steel base construction, aluminum loadcell silicon sealed against moisture | | | | | |
| Base Dimensions | 610 × 610 mm | | | 600 × 800 mm | | |
| Safe Overload Capacity | 150% of maximum capacity | | | | | |
| Stabilization Time | Within 1 second | | | | | |
| Operating Temperature Range | -10℃ to 40℃ | | | | | |
| Scale Dimensions (B × A × C × D × E × F) | 610 × 610 × 130 × 90 × 1203 × 773 mm | | | 600 × 800 × 132 × 90 × 1203 × 963 mm | | |
| Shipping Dimensions (L × W × H) | 1165 × 780 × 235 mm | | | | | |
| Approx. Net Weight | 39 kg | | | 47 kg | | |
| Approx. Shipping Weight | 42 kg | | | 51 kg | | |

# Defender® 5000 *Standard Bench Scales*

## 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 and 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 dual range 15,000d/3,000e, 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, ABS plastic, 100-240 VAC 50/60 Hz internal universal power supply - Lithium Ion rechargeable battery with 20 hour standard continuous use (optional), non-slip adjustable rubber feet, a Wheel Kit option is also available for scales up to 300 kg.

## Additional Features

A total of six print templates are available to ensure you can print out all of the data you need. A simple template is predefined for quick printing, as well as five templates you can customize so you can print the exact information necessary for your application - eliminating confusion and time to sift through excess unnecessary data.
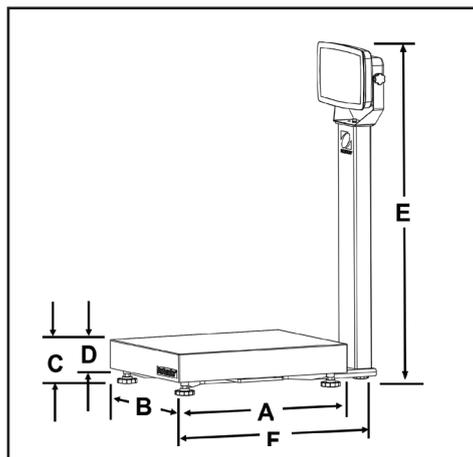
## Compliance

• **Metrology:** OIML R76 (Indicators: Certificate R76-2006-A-NL1-18.13, Load Cells: Certificates R60/2000-NL1-12-41, R60/2000-NL1-12-42, R60/2000-NL1-12-43, R60/2000-NL1-14.24)

• **Product Safety:** IEC/EN 61010-1;CAN/CSA C22.2 61010-1; UL61010-1

• **Electromagnetic Compatibility:** IEC/EN 61326-1 Class B, basic environments; FCC Part 15 Class B; Canada ICES-003 Class B

• **Compliance Marks:** CE; CSA; RCM

## Accessories

Battery Kit, Li-ion, TD52 . . . . . . . . . . . . . . . . . . . . . . .30424405

USB Host for Dongle, TD52 . . . . . . . . . . . . . . . . . . . .30424406

Light Tower, 3 Colors, 243mm, IP65
(Requires 30097591) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .30424021

In-use Cover Kit, TD52P. . . . . . . . . . . . . . . . . . . . . . . .30424022

In-use Cover Kit, TD52XW . . . . . . . . . . . . . . . . . . . . . .30424023

In-use Cover set (10), TD52P . . . . . . . . . . . . . . . . . . .30469948

In-use Cover set (10), TD52XW. . . . . . . . . . . . . . . . .30469949

Printer Holder Kit, D52 . . . . . . . . . . . . . . . . . . . . . . . .30424025

Wall Mount Kit, SST, TD52XW . . . . . . . . . . . . . . . . . .30424026

Wall Mount Kit, CS, TD52P . . . . . . . . . . . . . . . . . . . . .30424027

LC Extension Cable, 9 meters, D52[1]. . . . . . . . . . . .30424409

M16 Gland with Ferrite, to TD52 . . . . . . . . . . . . . . .30379716

Micro SD Card, 8G . . . . . . . . . . . . . . . . . . . . . . . . . . . . .30303533

Analog Output Kit, TD52[3] . . . . . . . . . . . . . . . . . . . . . .30424403

Second RS232/RS485/USB Kit, TD52[3]. . . . . . . . . . .30424404

I/O with Relay (2 In/4 Out)[3]. . . . . . . . . . . . . . . . . . . .30097591

WiFi/BT Dongle, OHAUS[2] (Requires 30424406) . . . . . . . .30412537

Ethernet Kit, D52[2]. . . . . . . . . . . . . . . . . . . . . . . . . . . . .30429666

Wheel Kit, Defender Series[1] . . . . . . . . . . . . . . . . . . . .30372146

Printer SF40A . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .30045641

[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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