



Defender[®] 5000

Standard Bench Scales



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 Series is designed to handle demanding industrial and commercial applications.

Standard Features:

- **Indicator Guides The User with On-Screen Prompts**
See results clearly on the large backlit display. The alphanumeric 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 aluminium 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 GMP/GLP capability with time/date for result traceability.
- **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 RS232/RS485/USB device, Ethernet and Bluetooth/WiFi, Analog Output and Discrete I/O with relays.

Ingenuously Practical

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Simplified Use

Results can be read easily on the Defender 5000's large transreflective 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

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 and Micro-SD slot. 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) and two In/four Out discrete I/O, the new Defender 5000 indicator can also be used for PLC systems.



Front Mount Bench Scale Specifications

Model	D52P6RQDR5	D52P15RQDR5	D52P15RQDL5	D52P30RQDL5	D52P60RQDL5	D52P60RQDX5	D52P150RQDX5
	D52XW6RQDR5	D52XW15RQDR5	D52XW15RQDL5	D52XW30RQDL5	D52XW60RQDL5	D52XW60RQDX5	D52XW150RQDX5
Capacity × Readability	3/6 kg × 0.2/0.5 g 6/12 lb × 0.0005/0.001 lb	6/15 kg × 0.5/1 g 12/30 lb × 0.001/0.002 lb		15/30 kg × 1/2 g 30/60 lb × 0.002/0.005 lb	30/60 kg × 2/5 g 60/120 lb × 0.005/0.01 lb		30/60 kg × 2/5 g 60/120 lb × 0.005/0.01 lb
Min APW (g)	0.01	0.025		0.05	0.1		0.25
Internal Counting Resolution	1:600000						
Certified Model	D52P6RQDR5-M	D52P15RQDR5-M	D52P15RQDL5-M	D52P30RQDL5-M	D52P60RQDL5-M	D52P60RQDX5-M	D52P150RQDX5-M
	D52XW6RQDR5-M	D52XW15RQDR5-M	D52XW15RQDL5-M	D52XW30RQDL5-M	D52XW60RQDL5-M	D52XW60RQDX5-M	D52XW150RQDX5-M
Certified Capacity × Readability	3/6 kg × 1/2 g	6/15 kg × 2/5 g		15/30 kg × 5/10 g	30/60 kg × 10/20 g		60/150 kg × 20/50 g
Min APW (g)	0.05	0.1		0.25	0.5		1
Internal Counting Resolution	1:120000	1:150000		1:120000		1:150000	
Linearity/Repeatability	± 2d						
Indicator	D52Pxxxx: TD52P ABS Indicator D52XWxxxx: TD52XW Stainless Steel Indicator						
Mount	Stainless steel front-mount bracket with handle						
Base Construction	Stainless steel removable weighing platform, powder-coated steel base construction, aluminium loadcell silicon sealed against moisture						
Safe Overload Capacity	150% of maximum capacity						
Stabilization Time	Within 1 second						
Operating Temperature Range	-10°C to 40°C						
Scale Dimensions (A × B × C × D × E × F)	305 × 305 × 95 × 60 × 118 × 588 mm		400 × 400 × 110 × 70 × 118 × 677 mm			500 × 500 × 120 × 80 × 118 × 772mm	
Shipping Dimensions (L × W × H)	480 × 445 × 363 mm		800 × 600 × 235 mm			994 × 680 × 235 mm	
Approx. Net Weight	D52P:10 kg / D52XW: 11 kg		D52P:17 kg / D52XW: 18 kg			D52P:22 kg / D52XW: 23 kg	
Approx. Shipping Weight	D52P:11 kg / D52XW: 12 kg		D52P:19 kg / D52XW: 21 kg			D52P:24 kg / D52XW: 25 kg	

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Column Mount Bench Scale Specifications






Model	D52P6RQDR1	D52P15RQDR1	D52P15RQDL2	D52P30RQDL2	D52P60RQDL2	D52P60RQDX2	D52P150RQDX2
	D52XW6RQDR1	D52XW15RQDR1	D52XW15RQDL2	D52XW30RQDL2	D52XW60RQDL2	D52XW60RQDX2	D52XW150RQDX2
Capacity × Readability	3/6 kg × 0.2/0.5 g 6/12 lb × 0.0005/0.001 lb	6/15 kg × 0.5/1 g 12/30 lb × 0.001/0.002 lb		15/30 kg × 1/2 g 30/60 lb × 0.002/0.005 lb	30/60 kg × 2/5 g 60/120 lb × 0.005/0.01 lb		
Min APW (g)	0.01	0.025		0.05	0.1		0.25
Internal Counting Resolution	1:600000						
Certified Model	D52P6RQDR1-M	D52P15RQDR1-M	D52P15RQDL2-M	D52P30RQDL2-M	D52P60RQDL2-M	D52P60RQDX2-M	D52P150RQDX2-M
	D52XW6RQDR1-M	D52XW15RQDR1-M	D52XW15RQDL2-M	D52XW30RQDL2-M	D52XW60RQDL2-M	D52XW60RQDX2-M	D52XW150RQDX2-M
Certified Capacity × Readability	3/6 kg × 1/2 g	6/15 kg × 2/5 g		15/30 kg × 5/10 g	30/60 kg × 10/20 g		60/150 kg × 20/50 g
Min APW (g)	0.05	0.1		0.25	0.5		1
Internal Counting Resolution	1:120000	1:150000		1:120000			1:150000
Linearity/Repeatability	± 2d						
Indicator	D52Pxxxx: TD52P ABS Indicator D52XWxxxx: TD52XW Stainless Steel Indicator						
Column	14.2 in / 360 mm powder-coated steel			27.7 in / 704 mm powder-coated steel			
Base Construction	Stainless steel removable weighing platform, powder-coated steel base construction, aluminium loadcell silicon sealed against moisture						
Safe Overload Capacity	150% of maximum capacity						
Stabilization Time	Within 1 second						
Operating Temperature Range	-10°C to 40°C						
Scale Dimensions (A × B × C × D × E × F)	305 × 305 × 95 × 60 × 382 × 442 mm		400 × 400 × 110 × 70 × 711 × 570 mm			500 × 500 × 120 × 80 × 711 × 665 mm	
Shipping Dimensions (L × W × H)	480 × 445 × 363 mm		800 × 600 × 235 mm			994 × 680 × 235 mm	
Approx. Net Weight	D52P:10 kg / D52XW: 11 kg		D52P:17 kg / D52XW: 18 kg			D52P:24 kg / D52XW: 26 kg	
Approx. Shipping Weight	D52P:11 kg / D52XW: 12 kg		D52P:19 kg / D52XW: 21 kg			D52P:27 kg / D52XW: 28 kg	

Model	D52P60RQDV3	D52P150RQDV3	D52P300RQDV3	D52P150RTDV3	D52P300RTDV3	D52P600RTDV3
	D52XW60RQDV3	D52XW150RQDV3	D52XW300RQDV3	D52XW150RTDV3	D52XW300RTDV3	D52XW600RTDV3
Capacity × Readability	30/60 kg × 2/5 g 60/120 lb × 0.005/0.01 lb	60/150 kg × 5/10 g 120/300 lb × 0.01/0.02 lb	150/300 kg × 10/20 g 300/600 lb × 0.02/0.05 lb	60/150 kg × 5/10 g 120/300 lb × 0.01/0.02 lb	150/300 kg × 10/20 g 300/600 lb × 0.02/0.05 lb	300/600 kg × 20/50 g 600/1200 lb × 0.05/0.1 lb
Min APW (g)	0.1	0.25	0.5	0.25	0.5	1
Internal Counting Resolution	1:600000					
Certified Model	D52P60RQDV3-M	D52P150RQDV3-M	D52P300RQDV3-M	D52P150RTDV3-M	D52P300RTDV3-M	D52P600RTDV3-M
	D52XW60RQDV3-M	D52XW150RQDV3-M	D52XW300RQDV3-M	D52XW150RTDV3-M	D52XW300RTDV3-M	D52XW600RTDV3-M
Certified Capacity × Readability	30/60 kg × 10/20 g	60/150 kg × 20/50 g	150/300 kg × 50/100 g	60/150 kg × 20/50 g	150/300 kg × 50/100 g	300/600 kg × 100/200 g
Min APW (g)	0.5	1	2.5	1	2.5	5
Internal Counting Resolution	1:120000	1:150000	1:120000	1:150000	1:120000	
Linearity/Repeatability	± 2d					
Indicator	D52Pxxxx: TD52P ABS Indicator D52XWxxxx: TD52XW Stainless Steel Indicator					
Column	39.5 in / 1004 mm powder-coated steel					
Base Construction	Stainless steel removable weighing platform, powder-coated steel base construction, aluminium loadcell silicon sealed against moisture					
Safe Overload Capacity	150% of maximum capacity					
Stabilization Time	Within 1 second					
Operating Temperature Range	-10°C to 40°C					
Scale Dimensions (A × B × C × D × E × F)	610 × 610 × 130 × 90 × 1011 × 773 mm			600 × 800 × 132 × 90 × 1011 × 963 mm		
Shipping Dimensions (L × W × H)	1165 × 780 × 235 mm					
Approx. Net Weight	D52P:39 kg / D52XW: 40 kg			D52P:47 kg / D52XW: 48 kg		
Approx. Shipping Weight	D52P:42 kg / D52XW: 43 kg			D52P:51 kg / D52XW: 52 kg		

Indicator Specifications

	TD52P	TD52XW
Construction	ABS plastic	304 stainless steel with sand blasting surface treatment
Protection	N/A	IP68
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 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 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	

Application Modes

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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 weigh 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	M16 Gland with Ferrite, to TD52	30379716
USB Host for Dongle, TD52	30424406	Micro SD Card, 8G	30303533
Light Tower, R-Y-G, IP65, 24VDC	30424021	Analog Output Kit, TD52	30424403
In-use Cover Kit, TD52P	30424022	Second RS232/RS485/USB Kit, TD52 ³	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)	30424402
In-use Cover set (10), TD52XW	30469949	Ethernet Kit, D52 ²	30429666
Printer Holder Kit, D52	30424025	Wheel Kit, Defender Series	30372146
Wall Mount Kit, SST, TD52XW	30424026	Printer SF40A	30045641
Wall Mount Kit, CS, TD52P	30424027		
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

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