



# DEFENDER® 6000

*Extreme Washdown Bench Scales*



**EasyConnect**™



## *Advanced IP68/IP69K Washdown Bench Scale*

The Defender 6000 Series Extreme Washdown Bench Scale is specifically designed for food, chemical and pharmaceutical applications, including production and packaging. Defender 6000 handles the most demanding applications with 316 stainless steel platform and frame, and hermetically-sealed stainless steel IP69K load cell. Defender 6000 meets metrological approvals, NSF listing, and supporting HACCP systems.

### *Unique Features Include:*

- Defender 6000 stands up to harsh cleaning in processing and packaging environments with IP68 immersion/ IP69K washdown protection, 316 stainless steel construction and hermetically-sealed load cell.
- Durable Defender 6000 is NSF certified, supporting HACCP systems with a 316 stainless steel base and sturdy indicator providing corrosion protection in food, chemical processing, and packaging.
- Versatile scales include fast weight display and multiple software modes to meet food, chemical processing, and packaging needs.
- Defender 6000 is designed for simple connectivity in a variety of application settings.

# DEFENDER® 6000 *Extreme Washdown Bench Scales*

Defender 6000 series bench scales offer two types of indicators: a polycarbonate indicator housing for superior protection against moisture and a 316 stainless steel indicator for enhanced protection against corrosion from cleaners and additives. Equipped with a 316 stainless steel frame, platform and hermetically-sealed stainless steel load cell, the Defender 6000 series bench scales are specifically designed for wash-down, enhancing food safety and reducing downtime.

Food Safe Design: NSF listed/certified, USDA-AMS accepted, and supports HACCP compliance. Defender 6000 series bench scales are wash-down IP68/IP69K rated with a knife proof front panel to operate reliably in harsh environments.

Featuring advanced applications including configurable Checkweighing, Percent Weighing, Filling and Dynamic Weighing or Display Hold, the Defender 6000 meets the weighing needs of practically any food or chemical processing application. Easy-to-use application modes eliminate the need for long and complicated manual calculations. GMP/GLP with time/date output allows for the traceability of results.

i-D61PW models offer an optional Infrared (IR) communication kit for connectivity without opening the housing. The indicator can store up to 1,000 weighing results which can be transferred to a PC or system for traceability.

i-D61XWE models offer multiple connectivity options, including built-in RS232 and USB host, 2nd RS232/RS485/USB Device, Analog Output, Wi-Fi/Bluetooth, Ethernet and Discrete I/O with relays. Hands-free, touchless sensor reduces contamination risk.

## Application Modes



### Weighing:

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



**Checkweighing:** Compare the weight of an item against target limits. Bar matrix or 3-color check light display give clear and bright indication of weight.



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



**Checkcounting:** Compare the count of a package against target limits. Bar matrix or 3-color check light display give clear and bright indication of count.



**Percent Weighing:** Display the weight of an item as a percentage of a pre-established reference weight.



**Dynamic Weighing and Display Hold:** Take an average of weights for an item over a period of time to account for vibration or other interference. The Display Hold feature manually or automatically holds the last stable weight of an item on the display.

### Available only in the i-D61XWE models:



**Filling:** Fill a container to a target weight. 3-color bar matrix displays filling status. Connect with Discrete I/O option kit for an auto-filling system.

- **Library and User Management:** Up to 300 library items (stores part number, tare weights, APWs, under/over limits, set points or reference weight) can be shared within different weighing modes. Up to 100 user IDs can be stored for secure user access and traceability.

## Additional Features

Dedicated target key for quick set-up of package over/under weights, speeding up line changeovers. Fully customizable templates allow for easy data printing. 150% overload capacity protection, menu password protection, key lock, selectable environmental and auto-print settings, stability indicator, overload/underload indicators, low battery indicator (i-D61PW models), auto shut-off, auto tare, non-slip adjustable rubber feet.



Optional IR RS232 kit for i-D61PW model

# DEFENDER® 6000 *Extreme Washdown Bench Scales*

## Specifications

### Column Mount Bench Scales

| MODEL                                      | i-D61XWE5K1S6                                                                                     | i-D61XWE12K1R6                                                               | i-D61XWE25K1R6                  | i-D61XWE50K1L7                                                                                                                           | i-D61XWE150K1L7                   | i-D61PW5K1S6                                                                                      | i-D61PW12K1R6                                                                | i-D61PW25K1R6                   | i-D61PW50K1L7                                                                                                                           | i-D61PW150K1L7                    |
|--------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Capacity x Default Readability             | 10 lb x 0.001 lb<br>5 kg x 0.5 g                                                                  | 25 lb x 0.002 lb<br>12.5 kg x 1 g                                            | 50 lb x 0.005 lb<br>25 kg x 2 g | 100 lb x 0.01 lb<br>50 kg x 5 g                                                                                                          | 300 lb x 0.02 lb<br>150 kg x 10 g | 10 lb x 0.001 lb<br>5 kg x 0.5 g                                                                  | 25 lb x 0.002 lb<br>12.5 kg x 1 g                                            | 50 lb x 0.005 lb<br>25 kg x 2 g | 100 lb x 0.01 lb<br>50 kg x 5 g                                                                                                         | 300 lb x 0.02 lb<br>150 kg x 10 g |
| Maximum Displayed Resolution               | 1:10,000                                                                                          | 1:12,500                                                                     |                                 | 1:10,000                                                                                                                                 | 1:15,000                          | 1:10,000                                                                                          | 1:12,500                                                                     |                                 | 1:10,000                                                                                                                                | 1:15,000                          |
| Linearity/ Repeatability                   | ±2d                                                                                               |                                                                              |                                 |                                                                                                                                          |                                   |                                                                                                   |                                                                              |                                 |                                                                                                                                         |                                   |
| Capacity x Certified/ Approved Readability | 10 lb x 0.002 lb<br>5 kg x 1 g                                                                    | 25 lb x 0.005 lb<br>12.5 kg x 5 g                                            | 50 lb x 0.01 lb<br>25 kg x 5 g  | 100 lb x 0.02 lb<br>50 kg x 10 g                                                                                                         | 300 lb x 0.1 lb<br>150 kg x 50 g  | 10 lb x 0.002 lb<br>5 kg x 1 g                                                                    | 25 lb x 0.005 lb<br>12.5 kg x 5 g                                            | 50 lb x 0.01 lb<br>25 kg x 5 g  | 100 lb x 0.02 lb<br>50 kg x 10 g                                                                                                        | 300 lb x 0.1 lb<br>150 kg x 50 g  |
| Maximum Certified Resolution               | 1:5,000                                                                                           |                                                                              |                                 |                                                                                                                                          | 1:3,000                           | 1:5,000                                                                                           |                                                                              |                                 |                                                                                                                                         | 1:3,000                           |
| Indicator                                  | i-DT61XWE                                                                                         |                                                                              |                                 |                                                                                                                                          |                                   | i-DT61PW                                                                                          |                                                                              |                                 |                                                                                                                                         |                                   |
| Column                                     | 10.2 in / 260 mm 316 stainless steel                                                              |                                                                              |                                 | 26.4 in / 670 mm 316 stainless steel                                                                                                     |                                   | 10.2 in / 260 mm 316 stainless steel                                                              |                                                                              |                                 | 26.4 in / 670 mm 316 stainless steel                                                                                                    |                                   |
| Base Construction                          | 316 stainless steel top and bottom frame, hermetically sealed IP68/IP69K stainless steel loadcell |                                                                              |                                 | 316 stainless steel removable weighing platform with 316 stainless steel frame, hermetically sealed IP68/ IP69K stainless steel loadcell |                                   | 316 stainless steel top and bottom frame, hermetically sealed IP68/IP69K stainless steel loadcell |                                                                              |                                 | 316 stainless steel removable weighing platform with 316 stainless steel frame, hermetically sealed IP68/IP69K stainless steel loadcell |                                   |
| Safe Overload Capacity                     | 150% of maximum capacity                                                                          |                                                                              |                                 |                                                                                                                                          |                                   | 150% of maximum capacity                                                                          |                                                                              |                                 |                                                                                                                                         |                                   |
| Stabilization Time                         | Within 1 second                                                                                   |                                                                              |                                 |                                                                                                                                          |                                   | Within 1 second                                                                                   |                                                                              |                                 |                                                                                                                                         |                                   |
| Operating Temperature Range                | 14 °F to 104 °F / -10 °C to 40 °C                                                                 |                                                                              |                                 |                                                                                                                                          |                                   | 14 °F to 104 °F / -10 °C to 40 °C                                                                 |                                                                              |                                 |                                                                                                                                         |                                   |
| Scale Dimensions (A x B x C x D x E x F)   | 9.8 x 9.8 x 4.2 x - x 20.4 x 14.8 in<br>250 x 250 x 106 x - x 518 x 376 mm                        | 11.8 x 11.8 x 4.2 x - x 20.4 x 16.8 in<br>300 x 300 x 106 x - x 518 x 427 mm |                                 | 19.7 x 15.7 x 5.4 x 3.1 x 36.6 x 26 in<br>500 x 400 x 137 x 80 x 929 x 660 mm                                                            |                                   | 9.8 x 9.8 x 4.2 x - x 19.8 x 14.8 in<br>250 x 250 x 106 x - x 504 x 376 mm                        | 11.8 x 11.8 x 4.2 x - x 19.8 x 16.8 in<br>300 x 300 x 106 x - x 504 x 427 mm |                                 | 19.7 x 15.7 x 5.4 x 3.1 x 36 x 26 in<br>500 x 400 x 137 x 80 x 915 x 660 mm                                                             |                                   |
| Shipping Dimensions (L x W x H)            | 19.3 x 17.7 x 15 in<br>490 x 450 x 380 mm                                                         |                                                                              |                                 | 39.4 x 27.2 x 9.8 in<br>1000 x 690 x 250 mm                                                                                              |                                   | 19.3 x 17.7 x 15 in<br>490 x 450 x 380 mm                                                         |                                                                              |                                 | 39.4 x 27.2 x 9.8 in<br>1000 x 690 x 250 mm                                                                                             |                                   |
| Approx. Net Weight                         | 23.2 lb / 10.5 kg                                                                                 | 25.8 lb / 11.7 kg                                                            |                                 | 48.5 lb / 22 kg                                                                                                                          | 51.2 lb / 23.2 kg                 | 22.1 lb / 10 kg                                                                                   | 24.7 lb / 11.2 kg                                                            |                                 | 47.4 lb / 21.5 kg                                                                                                                       | 50.1 lb / 22.7 kg                 |
| Approx. Shipping Weight                    | 28.7 lb / 13 kg                                                                                   | 33.1 lb / 15 kg                                                              |                                 | 55.1 lb / 25 kg                                                                                                                          | 57.3 lb / 26 kg                   | 26.5 lb / 12 kg                                                                                   | 30.9 lb / 14 kg                                                              |                                 | 55.1 lb / 25 kg                                                                                                                         | 57.3 lb / 26 kg                   |

### Front Mount Bench Scales

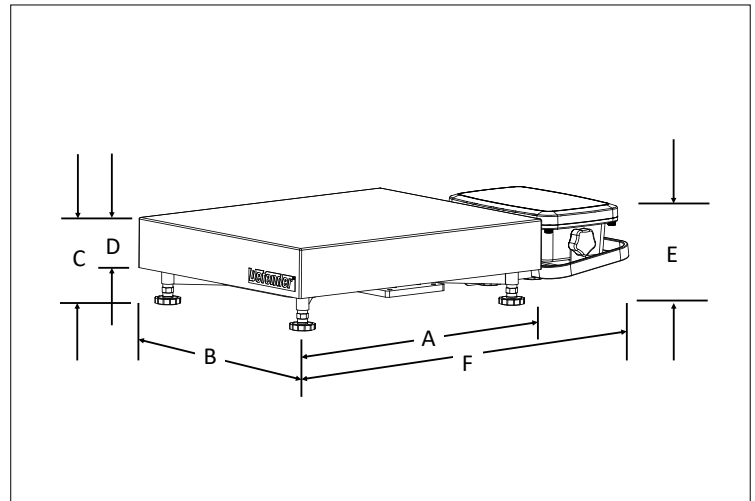
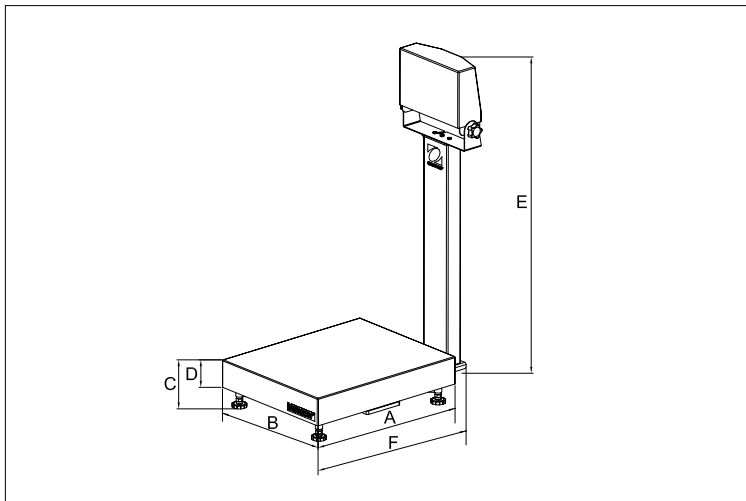
| MODEL                                        | i-D61PW5K1S5                                                                                         | i-D61PW12K1R5                                                               | i-D61PW25K1R5                  | i-D61PW50K1L5                                                                                                                              | i-D61PW150K1L5                    |
|----------------------------------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Capacity x<br>Default Readability            | 10 lb x 0.001 lb<br>5 kg x 0.5 g                                                                     | 25 lb x 0.002 lb<br>12.5 kg x 1 g                                           | 50 lb x 0.005 lb<br>25 kg x 2g | 100 lb x 0.01 lb<br>50 kg x 5 g                                                                                                            | 300 lb x 0.02 lb<br>150 kg x 10 g |
| Maximum Displayed Resolution                 | 1:10,000                                                                                             | 1:12,500                                                                    |                                | 1:10,000                                                                                                                                   | 1:15,000                          |
| Linearity/Repeatability                      | ±2d                                                                                                  |                                                                             |                                |                                                                                                                                            |                                   |
| Capacity x<br>Certified/Approved Readability | 10 lb x 0.002 lb<br>5 kg x 1 g                                                                       | 25 lb x 0.005 lb<br>12.5 kg x 5 g                                           | 50 lb x 0.01 lb<br>25 kg x 5 g | 100 lb x 0.02 lb<br>50 kg x 10 g                                                                                                           | 300 lb x 0.1 lb<br>150 kg x 50 g  |
| Maximum Certified Resolution                 | 1:5,000                                                                                              |                                                                             |                                |                                                                                                                                            | 1:3,000                           |
| Indicator                                    | i-DT61PW                                                                                             |                                                                             |                                |                                                                                                                                            |                                   |
| Column                                       | 316 stainless steel front-mount bracket with handle                                                  |                                                                             |                                |                                                                                                                                            |                                   |
| Base Construction                            | 316 stainless steel top and bottom frame,<br>hermetically sealed IP68/IP69K stainless steel loadcell |                                                                             |                                | 316 stainless steel removable weighing platform with 316 stainless<br>steel frame, hermetically sealed IP68/IP69K stainless steel loadcell |                                   |
| 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<br>(A x B x C x D x E x F)  | 9.8 x 9.8 x 4.2 x - x 5.1 x 21.5 in<br>250 x 250 x 106 x - x 129<br>x 545 mm                         | 11.8 x 11.8 x 4.2 x - x 5.1 x 23.5 in<br>300 x 300 x 106 x - x 129 x 596 mm |                                | 19.7 x 15.7 x 5.4 x 3.1 x 5.1 x 30.2 in<br>500 x 400 x 137 x 80 x 129 x 767 mm                                                             |                                   |
| Shipping Dimensions<br>(L x W x H)           | 490 x 450 x 380 mm<br>19.3 x 17.7 x 15 in                                                            |                                                                             |                                | 1000 x 690 x 250 mm<br>39.4 x 27.2 x 9.8 in                                                                                                |                                   |
| Approx. Net Weight                           | 22.1 lb / 10 kg                                                                                      | 24.7 lb / 11.2 kg                                                           |                                | 44.1 lb / 20 kg                                                                                                                            | 46.7 lb / 21.2 kg                 |
| Approx. Shipping Weight                      | 26.5 lb / 12 kg                                                                                      | 30.9 lb / 14 kg                                                             |                                | 50.7 lb / 23 kg                                                                                                                            | 52.9 lb / 24 kg                   |

# DEFENDER® 6000 *Extreme Washdown Bench Scales*

## Indicators

| MODEL              | i-DT61PW                                                                                                                                          | i-DT61XWE                                                                                                                         |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Construction       | Polycarbonate plastic housing, 316 stainless steel bracket                                                                                        | 316 Stainless steel housing, 316 stainless steel bracket                                                                          |
| Protection         | IP68 immersion / IP69K washdown                                                                                                                   |                                                                                                                                   |
| Weighing Units     | Kilogram, Gram, Pound, Ounce, Pound: Ounce, Tonne (Metric Tonne)                                                                                  | Kilogram, Gram, Pound, Ounce, Pound: Ounce                                                                                        |
| Application Modes  | Weighing, Checkweighing, Percent Weighing, Dynamic Weighing/Display Hold, Counting with APW optimization, Checkcounting, Filling (i-DT61XWE only) |                                                                                                                                   |
| Display            | 6-digit, 7-segment LCD display with white backlight, 45 mm / 1.8 in high digits                                                                   | 6-digit, 7-segment white LED, 20 mm / 0.8 in high digits                                                                          |
| Check Indicator    | 3 Color (red, green, yellow) LED Bar                                                                                                              | 3 color (red, green, orange) 8x16 dot matrix LED                                                                                  |
| Keyboard           | 6 function mechanical keys                                                                                                                        | 6 function keys + 12 numeric capacitive keypad                                                                                    |
| Auto-zero Tracking | Off, 0.5 d, 1 d or 3 d                                                                                                                            |                                                                                                                                   |
| Zeroing Range      | 2% or 100% of capacity                                                                                                                            |                                                                                                                                   |
| Interface          | Optional IR Communication Kit (with magnetic front panel connection)                                                                              | RS232 and USB Host included Optional Ethernet, WiFi/Bluetooth, 2nd RS232/RS485/USB Device, Analog Output, 2 In/4 Out Discrete I/O |
| Power              | 6 x D type cell battery                                                                                                                           | 100-240 VAC / 50/60 Hz Universal Power Supply, hardwired or external power bank                                                   |
| Battery Life       | Up to 1,600 hours continuous use with backlight off                                                                                               | Depends on the capacity of power bank used (Up to 55 hours with 20,000mAh power bank)                                             |
| Calibration        | Zero, Span or 3 point-Linear                                                                                                                      |                                                                                                                                   |

## Outline Dimensions



## Compliance

- **Metrology:** NTEP (Indicator: CC 20-043, Platforms: CC 20-064) Class III, Measurement Canada (Indicator: NoA AM-6159, Platforms: NoA AM-6154)
- **Product Safety:** CAN/CSA C22.2 61010-1; UL61010-1; IEC/EN 61010-1
- **Electromagnetic Compatibility:** FCC Part 15 Class A; Canada ICES-003 Class A; IEC/EN 61326-1 Class B, basic environments
- **Food Safety:** ANSI/NSF 169, NSF/ANSI/3-A 14159-1
- **Ingress Protection:** IEC 60529 – IP68, ISO 20653 – IP69K
- **Other:** WEEE, RoHS

## Accessories

- Wi-Fi/Bluetooth Dongle i-DT61XW..... 30412537
- Analog Output kit i-DT61XW ..... 30424403
- 2nd RS232/RS485/USB
- Device kit i-DT61XW ..... 30424404
- LC Extension Cable, 9 meters ..... 30424409
- M16 Gland with Ferrite ..... 30379716
- Light Tower, 3 Colors, 243mm, IP65 (Requires 30097591) ..... 30424021
- Discrete I/O with Relay (2 In/4 Out) i-DT61XW..... 30097591
- Ethernet kit i-DT61XW..... 30429666
- External power bank holder i-DT61XW (requires external USB power bank) ..... 30572907
- Cable RS232 i-DT61XW..... 80500552
- Column Kit 10.2 in 316 SS ..... 30572908
- Column Kit 26.4 in 316 SS ..... 30572909
- Front Mounting kit 316 SS i-DT61PW..... 30424024
- Pan 12x12 in 304 SS..... 30427798
- Pan 10x10 in 304 SS..... 30427799
- IR communication kit i-DT61PW ..... 30572910
- Wheel kit SS Defender Series..... 30616409

