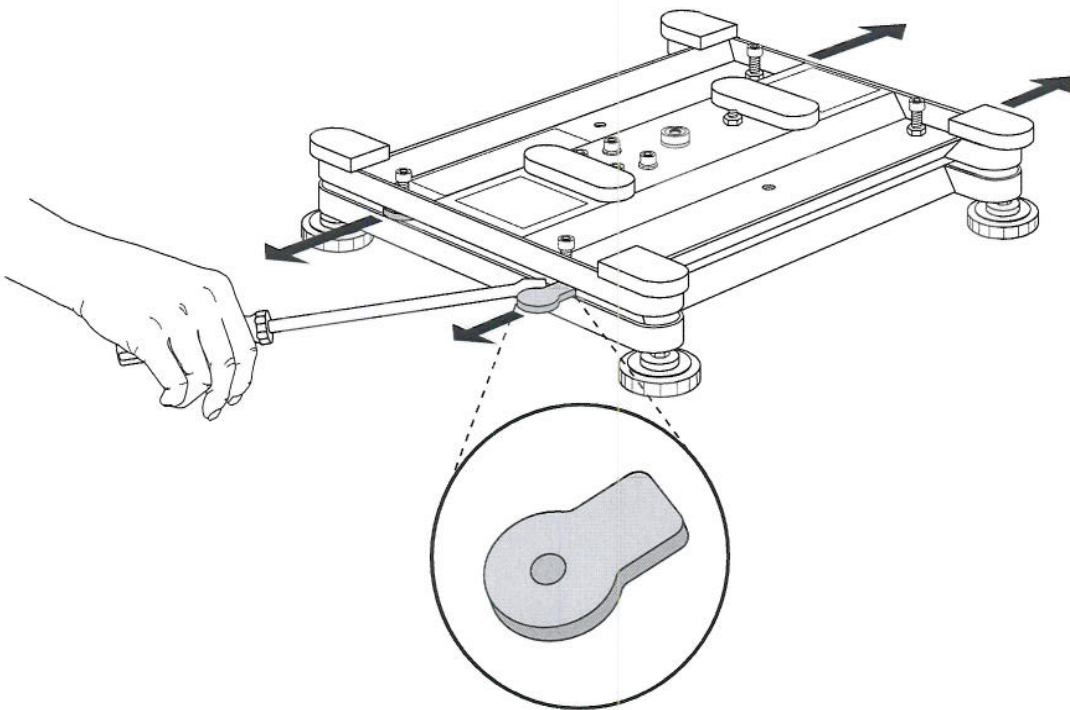
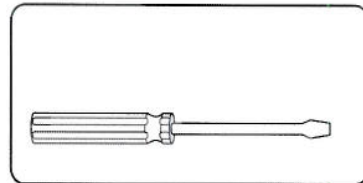




DEFENDER SERIES SCALES



Remove Shipping
Spacers Before Use.



* 8 0 2 5 1 0 5 2 *

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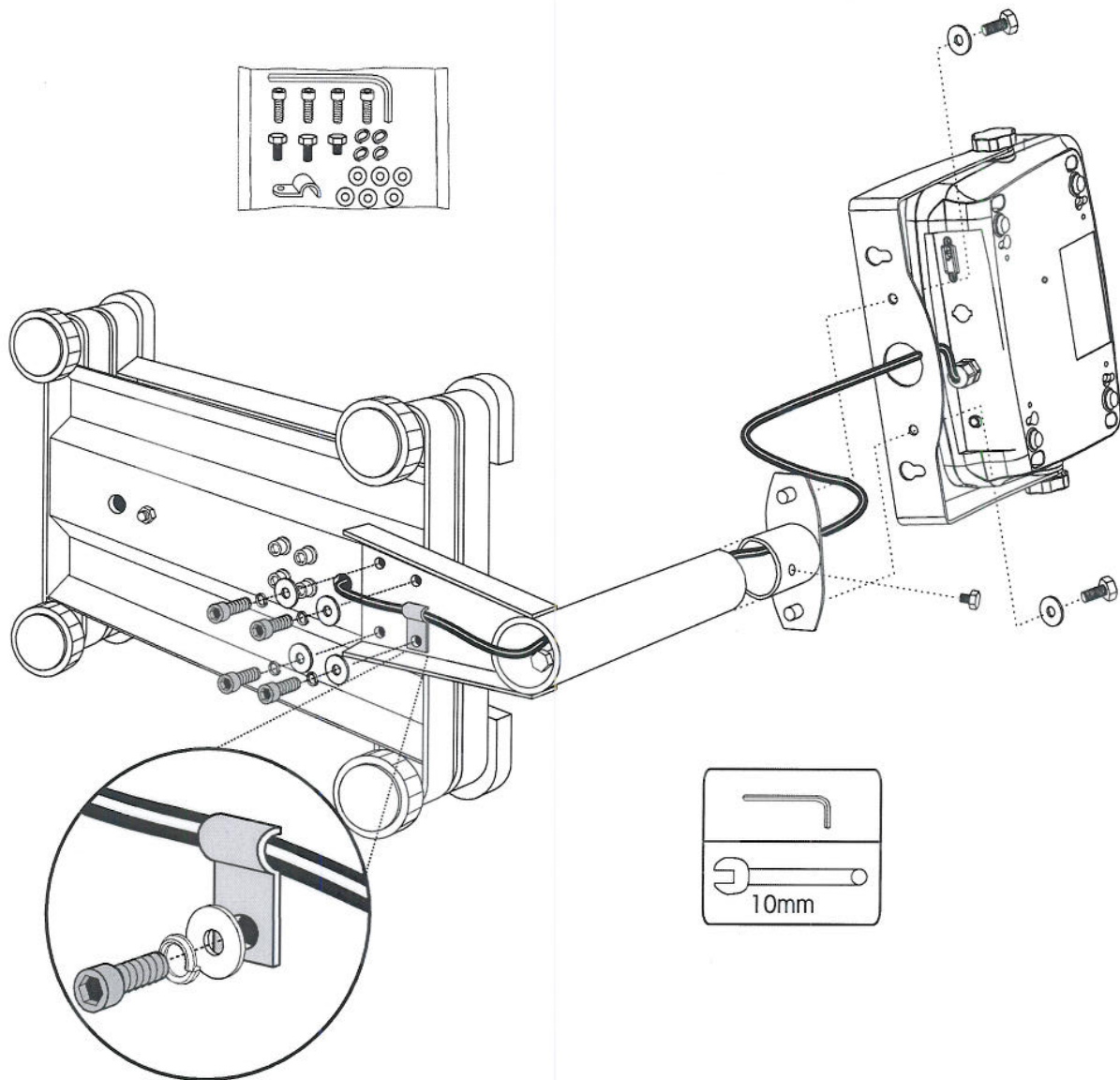
Quick_Start_Defender_3000_V1



DEFENDER SERIES SCALES

Column Assembly Instructions

(Refer to Documentation CD
for operating instructions)



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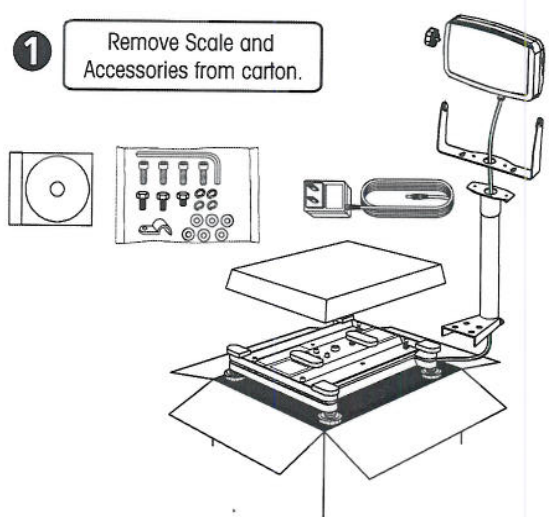


DEFENDER SERIES SCALES

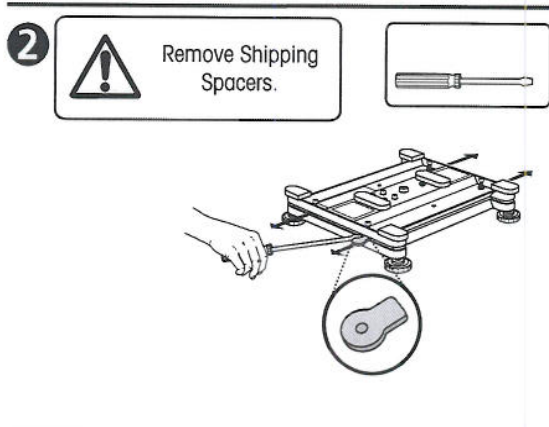
Assembly Instructions

(Refer to Documentation CD
for operating instructions)

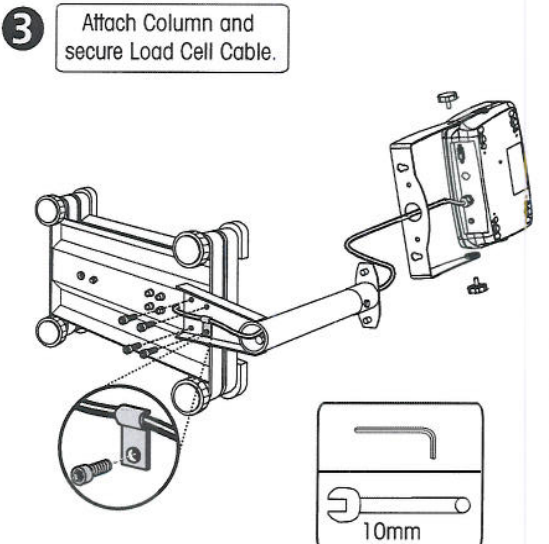
1 Remove Scale and Accessories from carton.



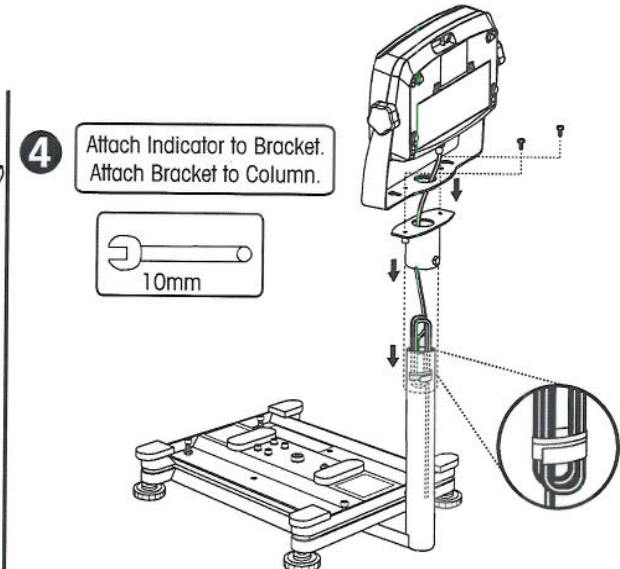
2 Remove Shipping Spacers.



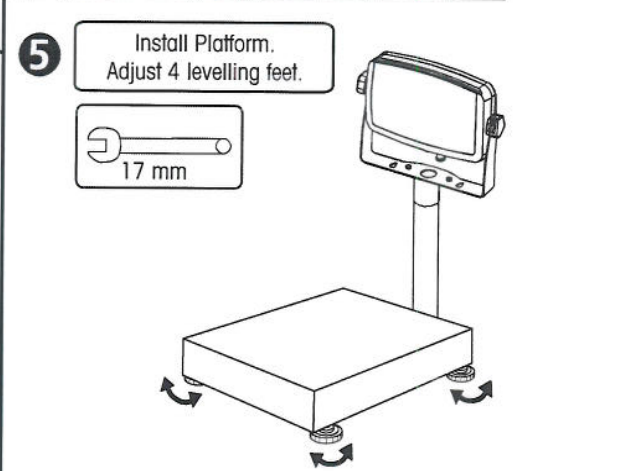
3 Attach Column and secure Load Cell Cable.



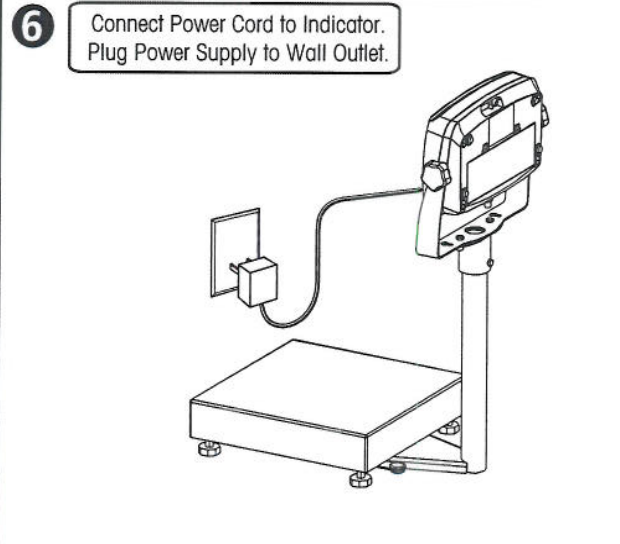
4 Attach Indicator to Bracket. Attach Bracket to Column.



5 Install Platform. Adjust 4 levelling feet.


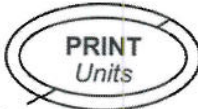
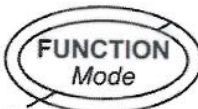



6 Connect Power Cord to Indicator. Plug Power Supply to Wall Outlet.





OVERVIEW OF CONTROLS AND FUNCTIONS

Button	 Yes	 No	 Back	 Exit
Primary Function (Short Press)	ON/ZERO Turns the Indicator on. If Indicator is On, sets zero.	PRINT Sends the current value to the COM port if AUTOPRINT is set to Off.	FUNCTION Initiates an application mode.	TARE Performs a tare operation.
Secondary Function (Long Press)	Off Turns the Indicator off.	Units Changes the weighing Unit.	Mode Allows changing the application mode. Press and hold allows scrolling through modes.	Menu Enter the User menu.
Menu Function (Short Press)	Yes Accepts the current setting on the display.	No Advances to the next menu or menu item. Rejects the current setting on the display and advances to the next available setting. Increments the value.	Back Moves Back to previous menu item. Decrements the value.	Exit Exits the User menu. Aborts the calibration in progress.

NOTE: REFER TO DEFENDER SERIES CD DISK FOR COMPLETE INSTRUCTIONS

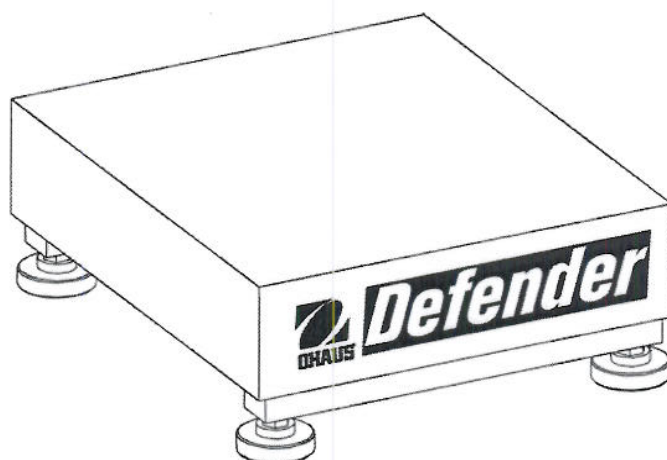


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Defender™ 3000 Series Base Instruction Manual



Compliance



This product conforms to the EMC directive 89/336/EEC and the Low Voltage Directive 73/23/EEC. The complete declaration of Conformity is available from Ohaus Corporation

Disposal

In conformance with the European Directive 2002/96 EC on Waste Electrical and Electronic Equipment (WEEE) this device may not be disposed of in domestic waste. This also applies to countries outside the EU, per their specific requirements.



Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment.

If you have any questions, please contact the responsible authority or the distributor from which you purchased this device.

Should this device be passed on to other parties (for private or professional use), the content of this regulation must also be related.

Thank you for your contribution to environmental protection.

ISO 9001 Registration

In 1994, Ohaus Corporation, USA, was awarded a certificate of registration to ISO 9001 by Bureau Veritas Quality International (BVQI), confirming that the Ohaus quality management system is compliant with the ISO 9001 standard's requirements. On May 15, 2003, Ohaus Corporation, USA, was re-registered to the ISO 9001:2000 standard.

INTRODUCTION

This manual covers installation, and maintenance instructions for the Ohaus Defender™ Series Base. Please read this manual completely before installation and operation.

SAFETY PRECAUTIONS

For safe and dependable operation of this product, please comply with the following precautions:



- Operate the base only under ambient conditions specified in these instructions
- Ensure that the load cell cable does not pose an obstruction or tripping hazard
- Do not operate the base in hazardous environments or unstable locations
- Do not drop loads on the base
- Do not lift the base by the top frame; always lift from the bottom frame when moving the base
- Service should only be performed by authorized personnel

INSTALLATION

Unpacking

Unpack and inspect the product to make sure that all components have been included. The package includes the following:

- Defender™ Series Base
- Weighing Pan
- Warranty Card
- Instruction Manual

When purchased as a complete Defender Series Scale, will also include:

- 3000 Series Indicator
- Column Assembly

Assembly

Weighing Pan

Place the weighing pan securely over the rubber load pads on the top frame of the base.

Wiring Connections

Connect the load cell cable to an indicator using the wiring codes in Table 1 below. Refer to the indicator manual for information about load cell connections, setup and calibration.

Note: When purchased as a Defender Series Scale, the base is already pre-wired to the 3000 Series Indicator.

TABLE 1. SIX WIRE LOAD CELL CONNECTION.

FUNCTION	WIRE COLOR
+ Excitation	Green
- Excitation	Black
+ Signal	Red
- Signal	White
+ Sense	Blue
- Sense	Brown
Shield	Yellow

Selecting the Location

To ensure accuracy, proper performance and safety, locate and operate the base on a stable, level surface. Avoid locations with rapid temperature changes or excessive dust, air currents, vibrations, electromagnetic fields or heat.

Level the base by adjusting the four leveling feet until the bubble in the level indicator (located at the rear of the base) is centered. A wrench may be needed to loosen the locking nut above each leveling foot. When the base is level, retighten the locking nuts up against the base to lock each foot into place.

Note: Ensure that the base is level each time its location is changed.



CORRECT



INCORRECT

MAINTENANCE

Cleaning

The base components should be kept clean and free of excessive material build up.

- Damp cloth with water and a mild detergent may be used to wipe clean the external surfaces—do not use acids, alkalis, strong solvents or abrasive materials and chemicals

Troubleshooting

Aside from installing components and leveling adjustments, the Defender Series Base does not require any other adjustments as shipped from the factory.

Operational difficulties that may be encountered can often be traced to simple causes such as:

- Loose or incorrect wiring connections
- Obstructions to the base frame
- Unstable environments
- Incorrect calibration or setup of the indicator

If the troubleshooting section does not resolve or describe your problem, contact your authorized Ohaus service agent. For service assistance or technical support in the United States call toll-free 1-800-526-0659 between 8:00 AM and 5:00 PM EST. An Ohaus product service specialist will be available to provide assistance. Outside the USA, please visit our web site, www.ohaus.com to locate the Ohaus office nearest you.

TECHNICAL DATA

Technical Specifications

The technical data is valid under the following ambient conditions:

Ambient temperature: -10°C to +40 °C

Relative humidity: 10% to 90% relative humidity, non-condensing

Height above sea level: Up to 4,000m

Operability is assured at ambient temperature -10°C to +40 °C

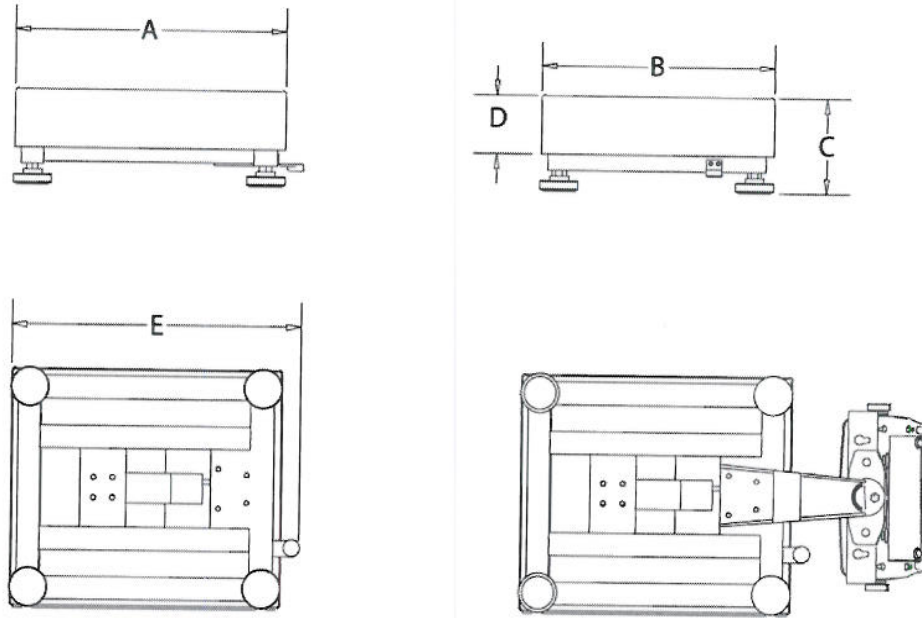
TABLE 2a. SPECIFICATIONS

MODEL	D30BR	D60BR	D60BL	D150BL	D150BX	D300BX
Capacity	30 kg	60 kg	60 kg	150 kg	150 kg	300 kg
Maximum Resolution	6000d	6000d	6000d	7500d	7500d	6000d
Load Cell Capacity	50 kg	100 kg	150 kg	300 kg	300 kg	500 kg
Pan Dimensions	305 x 355 x 75 mm		420 x 550 x 80 mm		500 x 650 x 90 mm	
Base Construction	Stainless Steel platform with painted steel frame and rubber leveling feet					
Repeatability (std. deviation)	1d					
Linearity	±1d					
Load Cell Cable	2 m L x 6-wire		2.3 m L x 6-wire			
Load Cell Type	350 Ohm, aluminum, single point					
Load Cell Excitation	5-15V DC/AC					
Load Cell Rated Output	2mV/V					
Load Cell Protection	IP67					
Safe Overload Capacity	125% of capacity					
Net Weight	9 kg	16 kg		28 kg		
Shipping Weight	11 kg	19 kg		32 kg		

TABLE 2b. SPECIFICATIONS

MODEL	D30VR	D60VR	D60VL	D150VL	D150VX	D300VX
Capacity	30 kg	60 kg	60 kg	150 kg	150 kg	300 kg
Maximum Resolution	6000d	6000d	6000d	7500d	7500d	6000d
Load Cell Capacity	50 kg	100 kg	150 kg	300 kg	300 kg	500 kg
Pan Dimensions	305 x 355 x 75 mm		420 x 550 x 80 mm		500 x 650 x 90 mm	
Base Construction	Stainless Steel platform with stainless steel frame and rubber leveling feet					
Repeatability (std. deviation)	1d					
Linearity	±1d					
Load Cell Cable	2 m L x 6-wire		2.3 m L x 6-wire			
Load Cell Type	350 Ohm, stainless steel, single point					
Load Cell Excitation	5-15V DC/AC					
Load Cell Rated Output	2mV/V					
Load Cell Protection	IP67					
Safe Overload Capacity	125% of capacity					
Net Weight	9 kg		21 kg		33 kg	
Shipping Weight	11 kg		24 kg		37 kg	

Drawings



Base shown with 3000 series indicator and column

Figure 1. Defender Base Dimension Drawing.

TABLE 3. DIMENSIONS.

Base	A	B	C	D	E
	Pan Depth	Pan Width	Height of Pan to Surface of Table*	Height of Pan	Depth Including Level Indicator
D30BR, D60BR	355 mm	305 mm	123 mm	75 mm	380 mm
D60BL, D150BL	550 mm	420 mm	136 mm	80 mm	575 mm
D150BX, D300BX	650 mm	500 mm	143 mm	90 mm	675 mm
D30VR, D60VR	355 mm	305 mm	119 mm	75 mm	380 mm
D60VL, D150VL	550 mm	420 mm	145 mm	80 mm	575 mm
D150VX, D300VX	650 mm	500 mm	154 mm	90 mm	675 mm

*For leveling purposes, the feet may be extended up to an additional 11mm.

TABLE 4. ACCESSORIES.

Description	Part Number
Column Kit, 35 cm painted steel	80251743
Column Kit, 70 cm painted steel	80251744
Column Kit, 35 cm stainless steel	80251745
Column Kit, 70 cm stainless steel	80251746

LIMITED WARRANTY

Ohaus products are warranted against defects in materials and workmanship from the date of delivery through the duration of the warranty period. During the warranty period Ohaus will repair, or, at its option, replace any component(s) that proves to be defective at no charge, provided that the product is returned, freight prepaid, to Ohaus. This warranty does not apply if the product has been damaged by accident or misuse, exposed to radioactive or corrosive materials, has foreign material penetrating to the inside of the product, or as a result of service or modification by other than Ohaus. In lieu of a properly returned warranty registration card, the warranty period shall begin on the date of shipment to the authorized dealer. No other express or implied warranty is given by Ohaus Corporation. Ohaus Corporation shall not be liable for any consequential damages. As warranty legislation differs from state to state and country to country, please contact Ohaus or your local Ohaus dealer for further details.



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