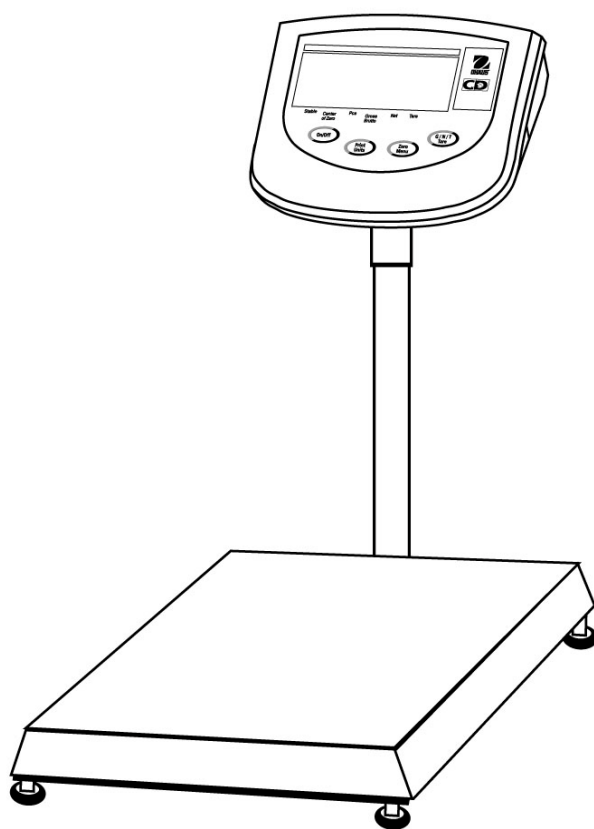




**Ohaus Corporation**  
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# **CHAMP II SCALE with CD11**

## **Operating and Installation Instructions**



**Ohaus Corporation, 29 Hanover Road, Florham Park, New Jersey, 07932, USA**

**Declaration of Conformity** We, Ohaus Corporation, declare under our sole responsibility that the instrument models listed below marked with "CE" - are in conformity with the directives and standards mentioned.

**Konformitätserklärung** Wir, die Ohaus Corporation, erklären in alleiniger Verantwortung, dass die untenstehenden Waagentypen, instrument mit "CE" - mit den genannten Richtlinien und Normen übereinstimmen.

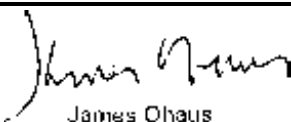
**Déclaration de conformité** Nous, Ohaus Corporation, déclarons sous notre seule responsabilité, que les types de instrument ci-dessous cité - munis de la mention «CE» - sont conformes aux directives et aux normes mentionnées ci-après.

**Declaración de Conformidad** Nosotros, Ohaus Corporation, declaramos bajo responsabilidad exclusiva que los modelos de instrumento indicados a continuación - con el distintivo 'CE' - están conformes con las directivas y normas citadas.

**Dichiarazione di conformità** Noi, Ohaus Corporation, U.S.A, dichiariamo sotto nostra unica responsabilità, che i tipi di strumento specificati di seguito - contrassegnati con la marcatura "CE" - sono conformi alle direttive e norme citate.

Instrument Type/Waagentyp/Type de instrument/Modelo de instrumento/Tipo di strumento **CHAMP II SCALE**

| Marked with:<br>Gekennzeichnet mit:<br>Munis de la mention:<br>Con el distintivo:<br>Contrassegnati con la<br>Marcatura: | Directive<br>Richtlinie<br>Directive<br>Directiva<br>Direttiva                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Standard<br>Norm<br>Norme<br>Norma<br>Norma                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         | <p>EU 73/23 Low Voltage</p> <p>EU 73/23<br/>Niederspannung<br/>EU 73/23 Basse tension<br/>EU 73/23 Baja tensión</p> <p>EU 73/23 Bassa<br/>tensione</p> <p>EU 89/336, 92/31, 93/68</p> <p>Electromagnetic<br/>compatibility<br/>EU 89/336, 92/31, 93/68</p> <p>Elektromagnetische<br/>Verträglichkeit<br/>EU 89/336, 92/31, 93/68</p> <p>Compatibilité<br/>électromagnétique<br/>EU 89/336, 92/31, 93/68</p> <p>Compatibilidad<br/>electromagnética<br/>EU 89/336, 92/31, 93/68</p> <p>Compatibilità<br/>elettromagnetica</p> | <p>EC1010-1 &amp; EN60950:1992 Safety Regulations<br/>IEC1010-1 &amp; EN60950:1992 Sicherheitsbestimmungen<br/>IEC1010-1 &amp; EN60950:1992 Consignes de sécurité<br/>IEC1010-1 &amp; EN60950:1992 Disposiciones sobre seguridad<br/>IEC1010-1 &amp; EN60950:1992 Prescrizioni . di sicurezza<br/>EN55022:1987 Emissions<br/>EN50082-1:1992 Immunity<br/>NOTE: The displayed value may be adversely affected under extreme electromagnetic influences, eg. when using a radio unit in the immediate vicinity of the device. Once the interference has been rectified, the product can once again be used for its intended purpose.<br/>EN55022:1987 Funkstörungen<br/>EN50082-1:1992 Immunität<br/>Hinweis: Unter extremen elektromagnetischen Einflüssen z.B. bei Betreiben eines Funkgerätes in unmittelbarer Nähe des Gerätes kann eine Beeinflussung des Anzeigewertes verursacht werden. Nach Ende des Störeinflusses ist das Produkt wieder bestimmungsgemäss benutzbar.<br/>EN55022:Emissions parasites<br/>EN50082-1:1992 Immunité<br/>Remarque: Dans des conditions d'influences électromagnétiques extrêmes, par exemple en cas d'exploitation d'un appareil radio à proximité immédiate de l'appareil la valeur d'affichage risque d'être influencée. Une fois que l'influence parasite est terminée, le produit peut être de nouveau utilisé de manière conforme aux prescriptions.<br/>EN55022:1987 Radiointerferencias<br/>EN50082-1:1992 Inmunidad<br/>Nota: Bajo influencias electromagnéticas extremas, p.ej. cuando funciona una radio en las inmediaciones del aparato, se pueden alterar los valores del display. Cuando concluye el efecto perturbador, el producto puede ser utilizado de nuevo, de acuerdo con lo estipulado.<br/>EN55022:1987 Radiointerferenze<br/>EN50082-1:1992 Immunità<br/>Nota: Il valore visualizzato può essere influenzato negativamente dalla presenza di forti interferenze elettromagnetiche, per esempio quando viene usata una radio in prossimità della bilancia. Eliminata la fonte dell'interferenza, il prodotto può essere nuovamente utilizzato per le funzioni cui è preposto.</p> |

  
James Ohaus  
President

**NOTE:**

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS. FOR **A CLASS** A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE **FCC RULES**.

THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

THIS DIGITAL APPARATUS DOES NOT EXCEED THE CLASS A LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS AS SET OUT IN THE INTERFERENCE-CAUSING EQUIPMENT STANDARD ENTITLED "DIGITAL APPARATUS", ICES-003 OF THE DEPARTMENT OF COMMUNICATIONS.

CET APPAREIL NUMERIQUE RESPECTE LES LIMITES DE BRUITS RADIOELECTRIQUES APPLICABLES AUX APPAREILS NUMERIQUES DE CLASSE A PRESCRITES DANS LA NORME SUR LE MATERIEL BROUILLEUR : "APPAREILS NUMERIQUES", NMB-003 EDICTEE PAR LE MINISTRE DES COMMUNICATIONS.

**Unauthorized changes or modifications to this equipment are not permitted.**



Before plugging in the Indicator, make sure that the voltage of the power adapter and plug match.

# CHAMP II BENCH SCALE

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## 1. Overview

CHAMP II is a single load cell bench scale connected to CD-11 Industrial Indicator.

## 2. Physical Descriptions

### Construction

Platform - Fabricated stainless steel  
Scale Base - Formed and welded mild steel, painted black.

### Overloading

Corner Loading - 100% of Full Capacity  
Safe Overload - 150% of Full Capacity  
Ultimate Overload - 300% of Full Capacity

### Operation Environment

Champ II is designed to meet NTEP 3000d requirements to operate in a temperature range from -10°C to 40°C, 0 to 95% relative humidity.

### Models Available/Factory Set-up

| MODEL  | PLATFORM              | CAPACITY      |
|--------|-----------------------|---------------|
| CH15R  | 305 X 355 / 12" x 14" | 15 KG x 0.002 |
| CH30R  | 305 X 355 / 12" x 14" | 30KG x 0.005  |
| CH60R  | 305 X 355 / 12" x 14" | 60KG x 0.01   |
| CH60L  | 400 X 500 / 16" x 20" | 60KG x 0.01   |
| CH100R | 400 X 500 / 16" x 20" | 100KG x 0.02  |
| CH150R | 420 X 550 / 17" x 22" | 150KG x 0.02  |
| CH300R | 420 X 500 / 17" x 22" | 300KG x 0.05  |

### 3. Installation Procedures

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#### Assembly and Installation

Examine the shipping box for any signs of damage. If DAMAGE is found, make a claim with the carrier immediately.

Open the box and remove the scale assembly. Place the scale assembly on a stable flat surface.

Follow the “Champ II Scale Assembly Instructions”.

Level the scale, apply power and weigh.

Good

Wrong



Level Indicator



|                                                                                                          |
|----------------------------------------------------------------------------------------------------------|
| <b>BEFORE CALIBRATION OR USE, REMOVE THE RED PLASTIC SHIPPING TABS IN THE CORNERS OF THE SCALE BASE.</b> |
|----------------------------------------------------------------------------------------------------------|

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#### Troubleshooting

If operational difficulties are encountered, first obtain as much information as possible regarding the problem. Failures and malfunctions often may be traced to simple causes such as loose connections to the indicator, low battery power, improper setup, etc. If simple causes cannot be found, additional troubleshooting is best performed by substitution. A PCB or LOAD CELL believed to be defective may be checked by replacing the suspect part with known good part and then observing whether the problem is corrected.

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## **Load Cell Replacement**

Remove the scale platform and disconnect the indicator battery and AC power source.

### **IMPORTANT NOTE**

Wait 30 seconds after removing power to the indicator before unplugging the load cell cable.

Remove the top load cell mounting bolts that secure the top frame to the load cell. Set the top frame and load cell spacer aside. Remove the bottom load cell mounting bolts. The load cell assembly can be removed from the lower base.

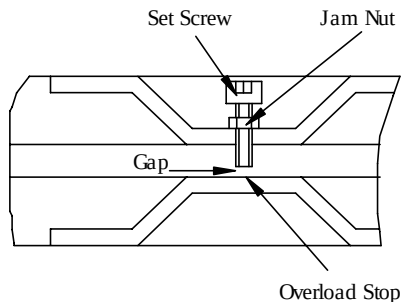
When reinstalling a load cell, reverse the preceding steps. Lubricate the threads and under the head of the hex bolts before reinstalling. Using a torque wrench, tighten the hex bolts to the following torque specifications:

| <b><u>Model</u></b> | <b><u>Torque</u></b> |
|---------------------|----------------------|
| CH15R               | 20 N.m (15 Ft/lb)    |
| CH30R               | 20 N.m (15 Ft/lb)    |
| CH60R               | 20 N.m (15 Ft/lb)    |
| CH60L               | 20 N.m (15 Ft/lb)    |
| CH100R              | 30 N.m (22 Ft/lb)    |
| CH150R              | 40 N.m (30 Ft/lb)    |
| CH300R              | 50 N.m (37 Ft/lb)    |

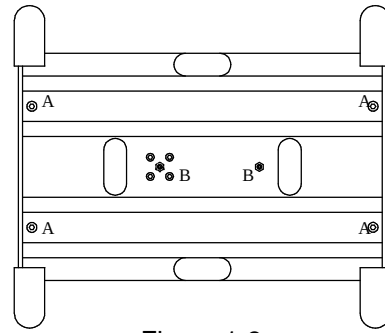
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## **Overload Stop Adjustments**

The overload stop gaps must be checked and reset if the top or bottom frame, or load cell is replaced. To set the gaps, remove the platform, loosen the jam nuts (refer to Figure 1-1), then use the proper size feeder gauge in the gap, turn the set screws until a slight drag on the feeder is felt. Tighten the jam nut and recheck the gap. Re-adjust if necessary, cover the platform and check for full capacity. Refer to Figure 1-2 for the location of the overload stops and Table A for the gap settings per Order Number.



**Figure 1-1**



**Figure 1-2**

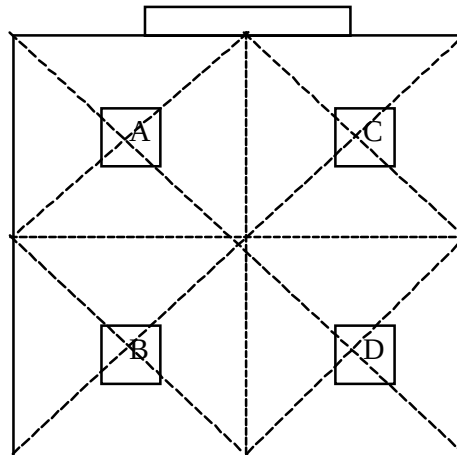
| Position | CH15R<br>CH30R   | CH60R            | CH60L<br>CH100R   | CH150R            | CH300R           |
|----------|------------------|------------------|-------------------|-------------------|------------------|
| A        | 2mm<br>(0.078")  | 2mm<br>(0.078")  | 4mm<br>(0.157")   | 4mm<br>(0.157")   | 4 mm<br>(0.157") |
| B        | 0.5mm<br>(0.02") | 0.5mm<br>(0.02") | 0.75mm<br>(0.03") | 0.75mm<br>(0.03") | 1mm<br>(0.04")   |

**Table No. 1 Overload Gap Settings**

### **Shift Test**

A shift test verifies that all sections of the scale platform weigh within tolerance. If the scale does not pass the shift test, verify the overload stop gaps before replacing the load cell. No adjustment for the shift is possible. If the shift test cannot be passed, the load cell must be replaced.

Place test weights equal to one third scale capacity sequentially at each of the positions A, B, C, D, as shown in Figure 1-3. Note the indicator reading at each position.



**Figure 1-3 Shift Test**

Positions A, B, C, and D are centered at the each quarter of the scale platform. The following table shows the tolerance in “d” (division) for the shift test.

| Scale Capacity | Test Weight | Acceptable Tolerance (New Scale) | Maintenance Tolerance (In Service) |
|----------------|-------------|----------------------------------|------------------------------------|
| 3,000d         | 1,000d      | $\pm 1.0d$                       | $\pm 2.0d$                         |

Table No. 2 Tolerance Table for Shift Test

### **Factory Setup**

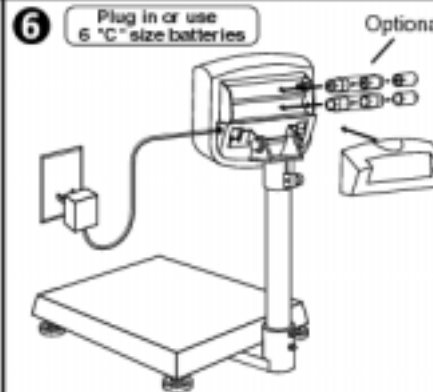
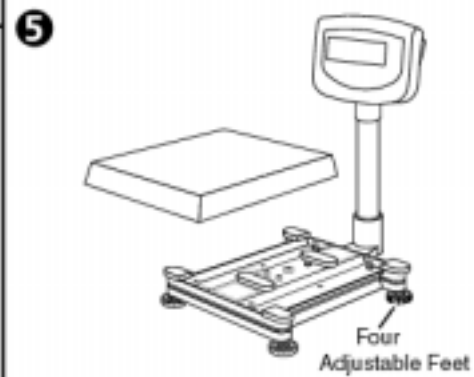
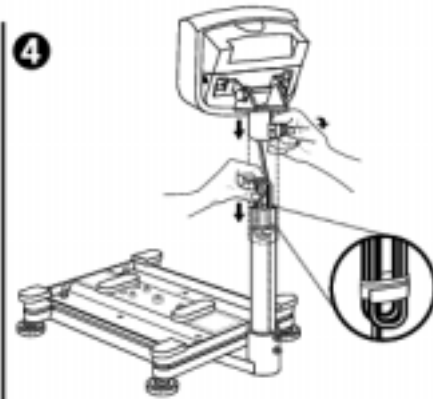
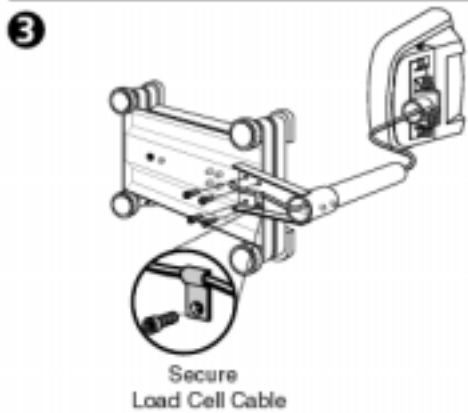
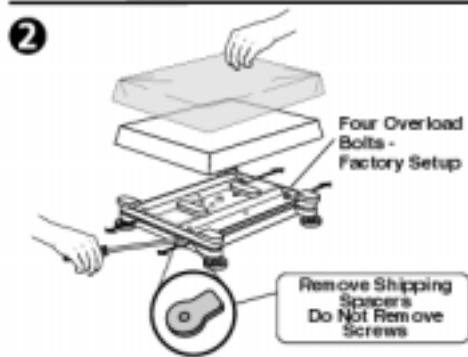
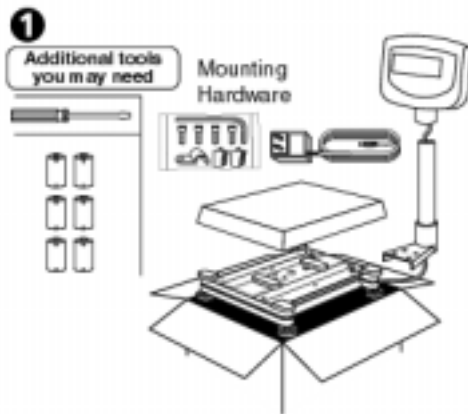
When Champ II bench scales are connected to indicators in the factory, a full span calibration is conducted during the configuration. Because of transportation, local environment and variation in the earth's gravitation field, the original factory settings must be verified and checked in the field before use.

### **Parts list**

| OHAUS PART NO. | DESCRIPTION                                    |
|----------------|------------------------------------------------|
| 71129642       | Indicator Bracket Assembly                     |
| 71125105       | Stainless Steel Column, 350 mm high            |
| 71125103       | Stainless Steel Column, 680 mm high            |
| 71129064       | Column Bracket                                 |
| 71123975       | Load Cell, MT1241-50kg CH15R                   |
| 71123976       | Load Cell, MT1241-100kg CH30R, CH60R, CH60L    |
| 71123979       | Load Cell, MT1241-250kg CH100R                 |
| 71124310       | Load Cell, MT1260-500kg CH150R, CH300R         |
| 71102504       | Load Cell Mounting Bolts, M6 x 25              |
| 71102512       | Load Cell Mounting Bolts, M8 x 230             |
| 71129104       | Stainless Steel Platform, 305 x 355            |
| 71129105       | Stainless Steel Platform, 400 x 500            |
| 71129106       | Stainless Steel Platform, 420 x 550            |
| 71125079       | Platter Rubber Supporter                       |
| 71125924       | Corner Rubber Supporter, 305 x 355             |
| 71125006       | Corner Rubber Supporter, 400 x 500 & 420 x 550 |
| 71127181       | Cover for M6 Screw                             |
| 71128342       | Cover for M8 Screw                             |
| 71125009       | Adjustable Foot (All)                          |



# Champ II Scale Assembly Instructions



# CHAMP II BENCH SCALE

## Specifications

| Model                                                                                                                                                     | CH15R11                                                      | CH30R11    | CH60R11    | CH60L11           | CH100R11   | CH150R11          | CH300R11   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|------------|------------|-------------------|------------|-------------------|------------|
| Capacity x Readability (kg)*                                                                                                                              | 15 x 0.002                                                   | 30 x 0.005 | 60 x 0.01  | 60 x 0.01         | 100 x 0.02 | 150 x 0.02        | 300 x 0.05 |
| (lb)                                                                                                                                                      | 30 x 0.005                                                   | 60 x 0.01  | 120 x 0.02 | 120 x 0.02        | 200 x 0.05 | 300 x 0.05        | 600 x 0.1  |
| Factory Set Resolution                                                                                                                                    | 1 : 7500                                                     | 1 : 6000   | 1 : 6000   | 1 : 6000          | 1 : 5000   | 1 : 7500          | 1 : 6000   |
| Max. Resolution                                                                                                                                           | 1 : 15000                                                    | 1 : 15000  | 1 : 12000  | 1 : 12000         | 1 : 10000  | 1 : 15000         | 1 : 15000  |
| NTEP Resolution                                                                                                                                           | 1 : 3000                                                     | 1: 3000    | 1 : 3000   | 1 : 3000          | 1 : 2500   | 1 : 3000          | 1 : 3000   |
| Load Cell - rated IP 65                                                                                                                                   | 50 kg                                                        | 100 kg     |            |                   | 250 kg     | 500 kg            |            |
| Base size (in/cm)                                                                                                                                         | 12 x 14 / 30.5 x 35.5                                        |            |            | 16 x 20 / 40 x 50 |            | 17 x 22 / 42 x 55 |            |
| Platter Construction                                                                                                                                      | Stainless steel 304                                          |            |            |                   |            |                   |            |
| Base Structure                                                                                                                                            | Black polyurethane painted steel                             |            |            |                   |            |                   |            |
| Column height (in/cm)<br>Stainless Steel                                                                                                                  | 14 / 35                                                      |            |            | 28 / 70           |            |                   |            |
| Scale Weight (lb/kg)                                                                                                                                      | 24 / 11                                                      |            |            | 49 / 22           |            | 55 / 25           |            |
| Shipping Weight                                                                                                                                           | 30 / 14                                                      |            |            | 57 / 26           |            | 70 / 31           |            |
| Display (in/cm) (                                                                                                                                         | LCD 1/ 2.54 cm                                               |            |            |                   |            |                   |            |
| Keyboard                                                                                                                                                  | 4 function membrane switches                                 |            |            |                   |            |                   |            |
| Power                                                                                                                                                     | 9 VDC / 150 mA AC adapter or six alkaline C - type batteries |            |            |                   |            |                   |            |
| Typical battery life                                                                                                                                      | 250 hours / 100 hours continues use                          |            |            |                   |            |                   |            |
| Weighing units                                                                                                                                            | g, kg, lb                                                    |            |            |                   |            |                   |            |
| Modes                                                                                                                                                     | Weighing & parts counting                                    |            |            |                   |            |                   |            |
| Zeroing Range                                                                                                                                             | 2%, 18% or 100% capacity                                     |            |            |                   |            |                   |            |
| Span Calibration                                                                                                                                          | 10% to 100 %                                                 |            |            |                   |            |                   |            |
| Repeatability                                                                                                                                             | +/- 0.0 1% of the rated load                                 |            |            |                   |            |                   |            |
| Linearity                                                                                                                                                 | +/- 0.02 % of the rated load                                 |            |            |                   |            |                   |            |
| Safe Overload                                                                                                                                             | 150 %                                                        |            |            |                   |            |                   |            |
| Relative Humidity                                                                                                                                         | 10% - 95%                                                    |            |            |                   |            |                   |            |
| Operating Temperature                                                                                                                                     | - 10° C to 40° C                                             |            |            |                   |            |                   |            |
| Storage Temperature                                                                                                                                       | - 20° C to 60° C                                             |            |            |                   |            |                   |            |
| Item Ordering Number                                                                                                                                      | CH15R11                                                      | CH30R11    | CH60R11    | CH60L11           | CH100R11   | CH150R11          | CH300R11   |
| * Factory set resolution.<br>** Model CH100R11 is factory calibrated for 100kg. Max. capacity is 150 kg .<br>User selectable calibration is 150kg x 0.002 |                                                              |            |            |                   |            |                   |            |

Meets Requirements of Approval Agencies: UL, FCC, CE Safety EN60950, Emissions EN55022, Immunity EN50082-1  
IP Rating: Equivalent to IP 54.

NTEP CERTIFIED : CD-11 INDICATOR NTEP NO. 99-100, CHAMP II BASE NTEP NO. 99-203

## **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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With offices worldwide.

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