



# Defender 5000 Series Instruction Manual



**Floor Platform (i-DF)**



**Low Profile Floor Platform (i-DFD)**

## Version History

Date	Version	Description
2024/1/22	A	New release

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## INTRODUCTION

This manual contains installation, operation and maintenance instructions for the Defender 5000 Series Floor Platform.

## SAFETY PRECAUTIONS

### Definition of Signal Warnings and Symbols

Safety notes are marked with signal words and warning symbols. These show safety issues and warnings. Ignoring the safety notes may lead to personal injury, damage to the instrument, malfunctions and false results.

**WARNING** For a hazardous situation with medium risk, possibly resulting in severe injuries or death if not avoided.

**CAUTION** For a hazardous situation with low risk, resulting in damage to the device or the property or in loss of data, or minor or medium injuries if not avoided.

**ATTENTION** For important information about the product. May lead to equipment damage if not avoided.

**NOTE** For useful information about the product.

### Warning Symbols



General hazard



Explosion hazard

### Safety Precautions



**CAUTION:** Read all safety warnings before installing, making connections, or servicing this equipment. Failure to comply with these warnings could result in personal injury and/or property damage. Retain all instructions for future reference.

- Operate the equipment only under ambient conditions specified in these instructions.
- Do not operate the equipment in hazardous or unstable environments.
- i-DFxxxQ1x Series models may be used in dry environments only.
- i-DFxxxT1x Series models may be used in wet or dry environments.
- Do not load the equipment above its rated capacity.
- Do not drop loads on the platform.
- Do not place the equipment upside down on the platform.
- The foundation at the installation site must be capable of safely supporting the weight of the scale plus the weight of the maximum load.
- Use only approved accessories and peripherals.
- Service should only be performed by authorized personnel.



**WARNING:** Never work in an environment subject to explosion hazards! The housing of the instrument is not gas tight. (Explosion hazard due to spark formation, corrosion caused by the ingress of gases).

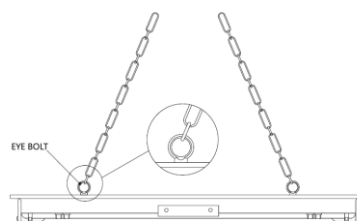
### Intended use

This instrument is intended for use in laboratories, pharmacies, schools, businesses and light industry. It must only be used for measuring the parameters described in these operating instructions. Any other type of use and operation beyond the limits of technical specifications, without written consent from OHAUS, is considered as not intended. This instrument complies with current industry standards and the recognized safety regulations; however, it can constitute a hazard in use. If the instrument is not used according to these operating instructions, the intended protection provided by the instrument may be impaired.

## i-DF FLOOR PLATFORM INSTALLATION

### 1. Unpacking

1. Remove the outer packaging materials from the top and sides of the floor platform.
2. Install the two included eye bolts into opposing sides of the floor platform.
3. Lift the floor platform from the packaging material according to the safety precautions.



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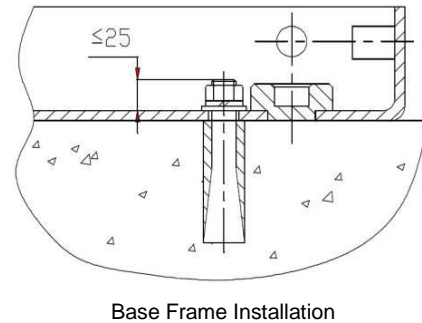
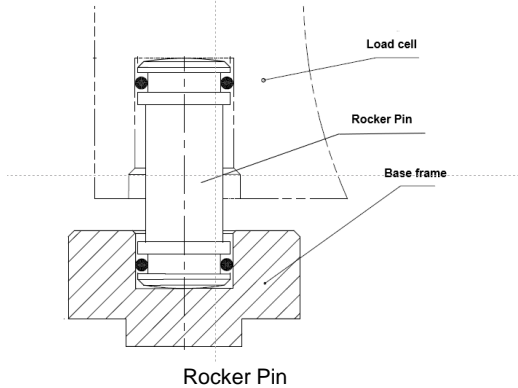
### 2. Position the i-DF Floor Platform



Ensure the platform, especially the load cell feet, is positioned on a flat surface. Adjust the load cell feet to fix small height deviation.

**⚠** Ensure the power cable won't pose a potential obstacle or tripping hazard.  
 Ensure the power cable won't be crushed or damaged during installation.

1. Position the floor platform over the final work area.
2. Lower the platform onto the final work area.
3. Use an external level to check if the floor platform is levelled.  
 Verify if all platform corners touch the floor firmly. Insert shims when necessary.
4. Lift the platform from the eyebolts (leave base frame on the ground) and remove all the rocker pins. Mark the drill positions for the base frame.
5. Drill holes for M10 expansion bolts and clean off the dirt particles.
6. Fasten the base frame and the shims with expansion bolts.
7. Reinstall the rocker pins in the base frame.
8. Lower the platform onto the base frame slowly.
9. Verify if the platform is attached to the base frame firmly, then remove the eyebolts.



**3. Ramp Installation (Optional)**

**Note:** The ramp is an accessory, which need to purchased with a separated item number. Please contact your regional sales to purchase the right ramp for your floor platform.

1. Install the two bolts with nut into the  $\Phi 12$  holes separately on the ramp. And then, tighten the M10 nut properly.
2. Install the ramp to the floor scale base frame by positioning the bolt align with the 14mm groove location
3. Adjust the nut until the gap between is around 3-7mm.

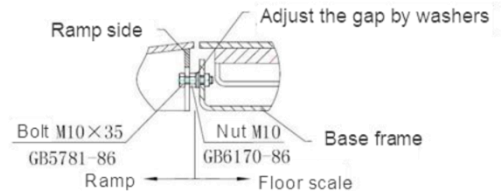


Figure 3. Base Frame Installation

**4. Connecting an Indicator**

**⚠ CAUTION:** Ensure that the cable is protected against possible damage when routed to the Indicator.

**Connect to an Indicator with EasyConnect™**

When connecting the base to an OHAUS indicator equipped with the EasyConnect™ connector, push the base connector onto the indicator connector and turn the locking ring clockwise to lock it in place.

**Connect to an Indicator with Internal Connection**

When connecting the platform to an indicator which does not have the matching connector,

- a) Install the optional load cell cable adapter (P/N 30429931 sold separately) to the indicator according to the wiring codes.
- b) Attach the load cell cable to the cable adapter.

In addition, as an alternate wiring method, you can also cut off the connector, strip the wires and attach them to the indicator according to the wiring codes.

**FLOOR SCALE WIRING COLOR CODE**


Indicator Signal Name	Floor Scale Wire Color
EXC+ (IN+)	Green
SEN+	Blue
SIG+ (OUT+)	White
SIG- (OUT-)	Red
SEN-	Yellow
EXC- (IN-)	Black


## i-DFD LOW PROFILE FLOOR PLATFORM INSTALLATION

### 1. Unpacking

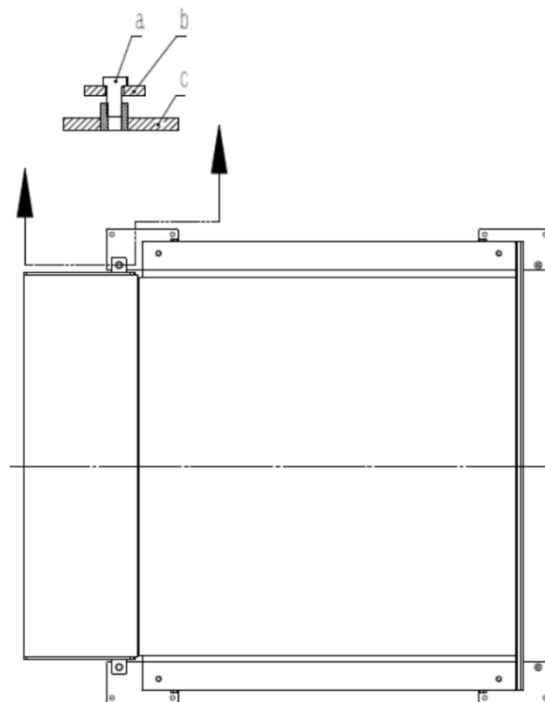
1. Remove the outer packaging materials from the top and sides of the platform.
2. Install the two included eye bolts into opposing sides of the platform.
3. Lift the platform from the packaging material according to the safety precautions.

### 2. Position the i-DFD Floor Platform

 Ensure the platform, especially the load cell feet, is positioned on a flat surface. Adjust the load cell feet to fix small height deviation.


 Ensure the power cable won't pose a potential obstacle or tripping hazard. Ensure the power cable won't be crushed or damaged during installation.

1. Position the floor platform over the final work area.
2. Take out the footplates and place them at four corners of the platform.
3. Lower the platform on to the footplates slowly.
4. Use an external level to check if the floor platform is levelled  
To adjust levelling, rotate the nuts on the load cell feet or insert shims if necessary.
5. Mark the drill positions for the footplates. Drill holes for M10 expansion bolts and clean off the dirt particles.
6. Fasten the footplates and the shims with expansion bolts.
7. Secure the ramp and mounting plate with M10 hex bolts



Ramp Installation  
(a. M10 hex bolts ; b. Ramp ear ; c. Footplate)

### 3. Connecting an Indicator

 **CAUTION:** Ensure that the cable is protected against possible damage when routed to the Indicator.

#### Connect to an Indicator with EasyConnect™

When connecting the base to an OHAUS indicator equipped with the EasyConnect™ connector, push the base connector onto the indicator connector and turn the locking ring clockwise to lock it in place.

**Connect to an Indicator with Internal Connection**

When connecting the base to an indicator that does not have the matching connector

- a) install the optional load cell cable adapter (P/N 30429931 sold separately) to the indicator according to the wiring codes.
- b) Attach the load cell cable to the cable adapter.

In addition, as an alternate wiring method, you can also cut off the connector, strip the wires and attach them to the indicator using the wiring codes in Table 2.

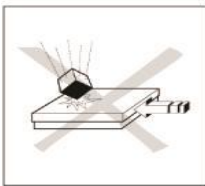
FLOOR SCALE WIRING COLOR CODE

Indicator Signal Name	Floor Scale Wire Color
EXC+ (IN+)	Green
SEN+	Blue
SIG+ (OUT+)	White
SIG- (OUT-)	Red
SEN-	Yellow
EXC- (IN-)	Black

**OPERATION**

For setup, calibration and proper operation, refer to the instruction manual supplied with the indicator. Refer to the specifications section of the floor scale for capacity and readability information.

To ensure a long-lasting and consistent performance:



- Avoid falling loads, shocks and hard lateral impacts
- When weighing, all items should be centrally located on the floor scale and not over hanging the sides or the ramps.
- Verify the calibration of the floor scale system at regular intervals.

**MAINTENANCE**

**Daily Checks**

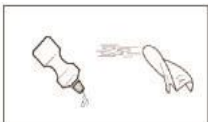
- Check if the rocker feet are seated in the holes of each load cell.
- Check if the 4 feet are in contact with the floor.
- Check if the scale is free from debris, especially under the edges of the scale.
- Check if there is no damage to the connecting cable.

**Cleaning**



**Attention:** Do not use solvents, harsh chemicals, ammonia or abrasive cleaning agents. The housing may be cleaned with a cloth dampened with a mild detergent if necessary.

Maintenance of the floor scale is limited to regular cleaning.



Cleaning Painted Steel Platform in a dry environment:

- Wipe surfaces with a damp cloth.
- Use only common household cleaning agents.
- Never use water spray or high pressure cleaners.



Cleaning Stainless Steel Platform in a wet environment:

- Water jets up to 60°C
- Use only common household cleaning agents.
- Ensure that corrosive substances are removed at regular intervals.

All models, when using optional Ramps or Foot Plates:

- Keep the air gap at the edge of the Floor Scale free of debris.

**TECHNICAL DATA****Equipment Ratings:**

Altitude:	2,000m
Operating temperature:	-10°C to 40°C
Humidity:	Maximum relative humidity 85% for temperatures up to 31 °C decreasing linearly to 50% relative humidity at 40°C.
Pollution degree:	2

**Specifications**

## FLOOR PLATFORM SPECIFICATIONS

Model	i-DF300Q1S	i-DF600Q1R	i-DF1500Q1L	i-DF3000Q1L	i-DF1500Q1X	i-DF3000Q1X
Capacity (kg)	300 kg	600 kg	1500 kg	3000 kg	1500 kg	3000 kg
Readability (kg)	0.1 kg	0.2 kg	0.5 kg	1 kg	0.5 kg	1 kg
Platform Dimensions	0.8 x 0.8m	1 x 1 m	1.25 x 1.25 m		1.5 x 1.5 m	
Material	Painted Carbon Steel, treaded surface, fixed top plate					
Feet	4 x Rocker pin					
Load Cells	4 x Shear Beam, Alloy Steel, OIML C3					
Load Cell Safe Overload Limit	150% of Emax					
Load Cell Output Impedance	350 Ω ± 1 Ω					
Load Cell Excitation Voltage	5V ~15V, DC/AC					
Junction Box	IP65, Stainless Steel, with 6 m double shield EasyConnect™ cable					
Net Weight	88 kg	117 kg	159 kg		263 kg	

## FLOOR PLATFORM SPECIFICATIONS

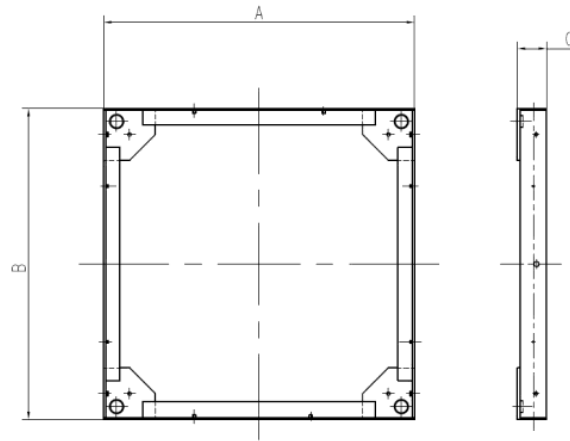
Model	i-DF300T1S	i-DF600T1R	i-DF1500T1L	i-DF3000T1L	i-DF1500T1X	i-DF3000T1X
Capacity (kg)	300 kg	600 kg	1500 kg	3000 kg	1500 kg	3000 kg
Readability (kg)	0.1 kg	0.2 kg	0.5 kg	1 kg	0.5 kg	1 kg
Platform Dimensions	0.8 x 0.8m	1 x 1 m	1.25 x 1.25 m		1.5 x 1.5 m	
Material	304 Stainless Steel, fixed top plate					
Feet	4 x Rocker pin					
Load Cells	4 x Shear Beam, Stainless Steel, OIML C3					
Load Cell Safe Overload Limit	150% of Emax					
Load Cell Output Impedance	350 Ω ± 1 Ω					
Load Cell Excitation Voltage	5V ~15V, DC/AC					
Junction Box	IP65, Stainless Steel, with 6 m double shield EasyConnect™ cable					
Net Weight	88 kg	117 kg	159 kg		263 kg	

## LOW PROFILE PLATFORM SPECIFICATIONS

Model	i-DFD300T1R	i-DFD600T1R	i-DFD600T1L	i-DFD1500T1L
Capacity (kg)	300 kg	600 kg	600 kg	1500 kg
Readability (kg)	0.1 kg	0.2 kg	0.2 kg	0.5 kg
Platform Dimensions	1 x 1 m	1 x 1 m	1.25 x 1.25 m	1.25 x 1.25 m
Material	304 Stainless Steel, fixed top plate			
Feet	4 x Rocker pin, adjustable height			
Load Cells	4 x Shear Beam, Stainless Steel, OIML C3			
Load Cell Safe Overload Limit	150% of Emax			
Load Cell Output Impedance	350 Ω ± 1 Ω			
Load Cell Excitation Voltage	5V ~15V, DC/AC			
Junction Box	IP67, Stainless Steel, with 6 m double shield EasyConnect™ Cable			
Net Weight	158 kg		220 kg	



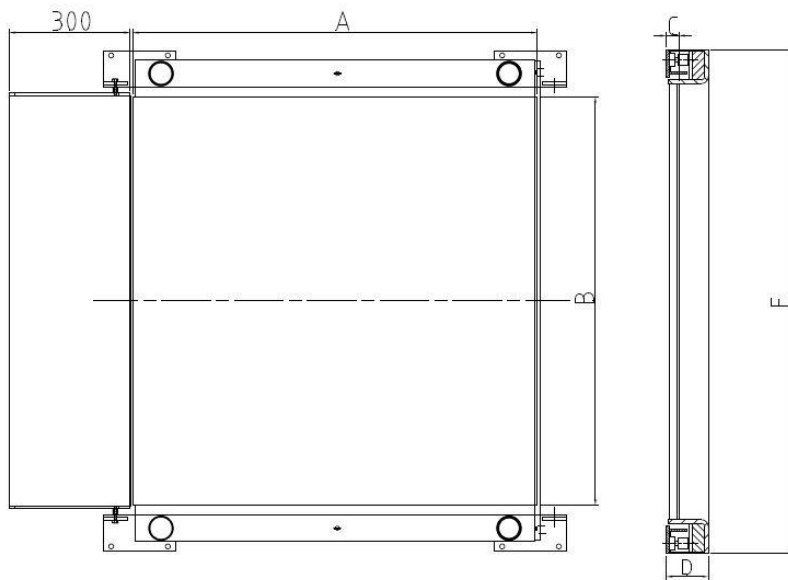
**DRAWINGS**



i-DF Floor Platform Dimensions

TABLE 6. FLOOR PLATFORM DIMENSIONS

Model	A	B	C
i-DF300Q1S/T1S	800 mm	800 mm	90 mm
i-DF600Q1R/T1R	1000 mm	1000 mm	90 mm
i-DFxxxxQ1L/T1L	1250 mm	1250 mm	90 mm
i-DFxxxxQ1X/T1X	1500 mm	1500 mm	90 mm



i-DFD Floor Platform Dimensions

LOW PROFILE FLOOR PLATFORM DIMENSIONS

Model	A	B	C	D	E
i-DFDxxxxT1R	1000 mm	1000 mm	45 mm	114 mm	1186 mm
i-DFDxxxxT1L	1250 mm	1250 mm	45 mm	114 mm	1436 mm




**ACCESSORIES**

TABLE 5. LIST OF ACCESSORIES

<b>Item</b>	<b>Part Number</b>
Ramp 800 DF-Q1 CS	30724867
Ramp 1000 DF-Q1 CS	30572944
Ramp 1250 DF-Q1 CS	30572945
Ramp 1500 DF-Q1 CS	30572946
Ramp 800 DF-T1 SS	30724878
Ramp 1000 DF-T1 SS	30724879
Ramp 1250 DF-T1 SS	30724880
Ramp 1500 DF-T1 SS	30724881
Ramp 1000mm SST DFD-T1	30613568
Ramp 1250mm SST DFD-T1	30613569
Stop Bar 1000mm SST DFD-T1	30613571
Stop Bar 1250mm SST DFD-T1	30613572
Pit Frame 800x800 Q1 CS	30803567
Pit Frame 1000x1000 Q1 CS	30803588
Pit Frame 1250x1250 Q1 CS	30803589
Pit Frame 1500x1500 Q1 CS	30803591
Pit Frame 800x800 T1 SS	30803593
Pit Frame 1000x1000 T1 SS	30803594
Pit Frame 1250x1250 T1 SS	30803595
Pit Frame 1500x1500 T1 SS	30803597

**COMPLIANCE**

Compliance to the following standards is indicated by the corresponding mark on the product.

Mark	Standard
	This product complies with the applicable harmonized standards of EU Directives 2011/65/EU (RoHS). The EU Declaration of Conformity is available online at <a href="http://www.ohaus.com/ce">www.ohaus.com/ce</a> .
	This product complies with the applicable statutory standards of the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012. The UK Declaration of Conformity is available online at <a href="http://www.ohaus.com/uk-declarations">www.ohaus.com/uk-declarations</a> .
	This product complies with the EU Directive 2012/19/EU (WEEE). Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment. For disposal instructions in Europe, refer to <a href="http://www.ohaus.com/weee">www.ohaus.com/weee</a> .

**ISO 9001 Registration**

The management system governing the production of this product is ISO 9001 certified.

**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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Met vestigingen wereldwijd / Med kontorer over hele verden / Biura na całym świecie / S kancelářemi po celém  
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