

HX5.EX

4-Load-Cell Scales with EX Frame

FRAME ASSEMBLY MANUAL

ITKM-003-01-08-19-EN












 **RADWAG BALANCES AND SCALES**
ADVANCED WEIGHING TECHNOLOGIES

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PRECAUTIONS

Prior installing, using or maintaining the frame it is necessary to read ITKU-101-02-12-18-EN user manual. Use the device only as intended. The above user manual must be at a reach of the operator's hand in the course of device operation.

	Symbol marking sections that are extremely important for protection against explosion.
	The device must be applied in accordance with the intended use only.
	Prior installation of the frame and start, it is necessary to analyse whether the device complies with the usage requirements regarding particular hazardous area.
	In case of any sign of damage, it is necessary to stop using the device immediately. The damaged component must be replaced or repaired by RADWAG service immediately.
	While installing the device, it is necessary to follow strictly this service manual requirements. Not adhering to the requirements results with loss of explosion safety.
	The frame may be used as a component of device/set intended for operation in hazardous area. Manufacturer of such device/set is obliged to carry out analysis of the complete device/set in order to confirm compliance with standards.
	The frame must be connected to the same equalizing circuit as the scale.
	Do not apply protection shields.
	Technical condition of the frame must be tested and inspected by trained personnel, in accordance with this user manual, at least once every three months, and in accordance with this user manual.

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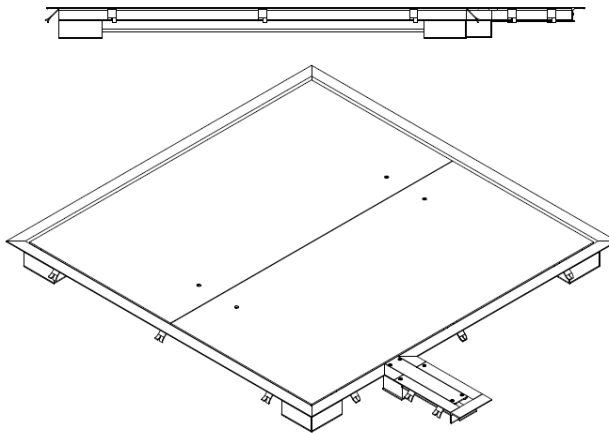
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1. INTENDED USE

Frames for HX5.EX... scales are intended for operation either inside or outside the building. Avoid exposing them to aggressive chemical vapours and extreme temperatures.

Frames for HX5.EX-tt.4.xx.C... scales are made of powder coated steel and frames for HX5.EX-tt.4.xx.Hy/Z... scales are made of stainless steel. The difference in used material influences their intended use in a specific hazardous area:

- frames made of powder coated steel can be used in zones **1 and 2** where there is a risk of explosion due to mixture of air with vapour, mist or gas, classified as explosion group **IIB and IIA** and as temperature class **T1, T2, T3, T4**,
- frames made of stainless steel can be used in zones **1 and 2** where there is a risk of explosion due to mixture of air with vapour, mist or gas, classified as explosion group **IIC, IIB and IIA** and as temperature class **T1, T2, T3, T4**. It can also be used in zones **21 and 22** where there is a risk of explosion due to mixture of air with dust, flammable fibres and volatile fuels, classified as explosion group **IIIC, IIIB and IIIA**.



Platform with frame



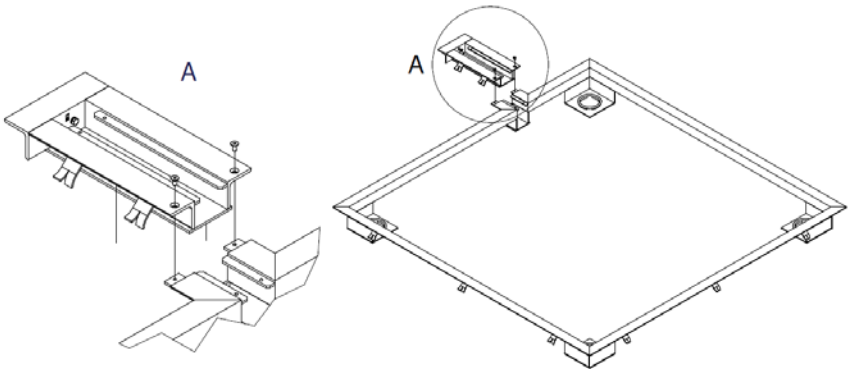
The frame may be used as a component of device/set intended for operation in hazardous area. Intended use of the whole set is determined by the component with the lowest explosion protection. The set can be used in more restricted zones than specified for the frame.

2. FRAME ASSEMBLY



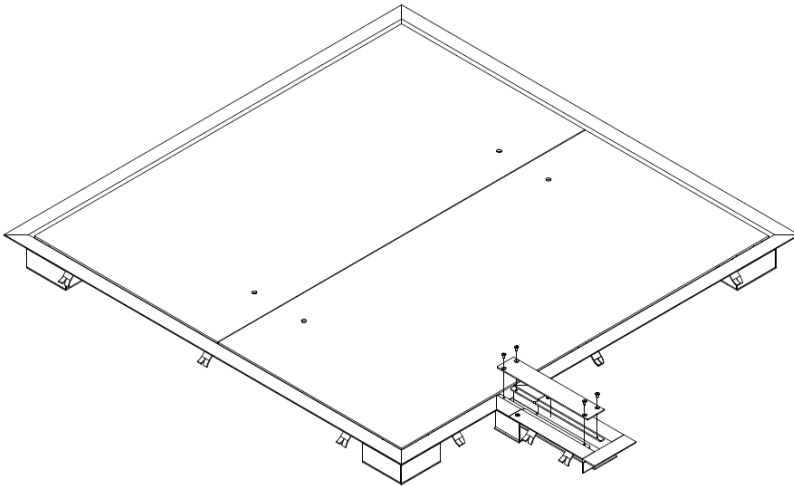
Carry out frame assembly and connect the grounding when there is no risk of explosive atmosphere occurrence.





- The scale and the frame must be unpacked in safe area.
- Prior transfer of the scale and the frame to its workplace, prepare cable for grounding of the Zener diode barrier housing. The grounding cable must be terminated with a ring enabling you to couple the cable to the Zener diode barrier by means of M5 nut. Use toothed clamping washer in order to keep the ring pressed tightly against the housing.
- The grounding cable must be yellow-green of 4 mm² diameter minimum.
- Prepare recess for the frame. The recess must be compliant with the requirements of zones 1 and 2 of hazardous area. If there is a risk of an explosive atmosphere occurrence due to mixture of air with vapour, mist or gas heavier than air it is necessary to provide a way to remove the explosive atmosphere from the recess, e.g. with use of exhaust ventilation.
- Permissible temperature range during scale operation is -10 °C ÷ +40 °C.
- The surface where the platform is to be placed has to transfer the load of the weighing platform together with the load of an object placed on the scales.
- Screw the tray to the frame.

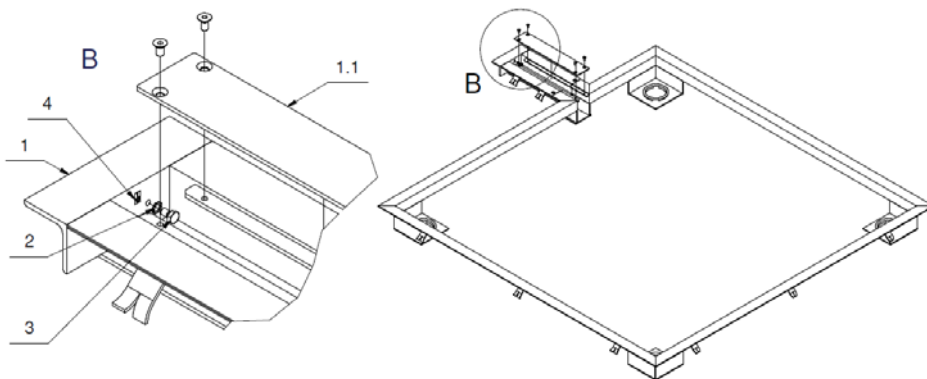


- Embed the frame in the ground horizontally.
- Screw the grounding cable to the frame and the platform. Spots marked with „⊥” symbol are intended for the functional grounding cable.

- Insert the platform into the frame, place the platform feet into the holes in the frame.
- Screw frame lid.



	<p><i>Hazardous areas are divided into zones and determined in Appendix No. 1 of the Directive 99/92/WE. The investor, building designer and user are responsible for accessing and classification of hazardous area (recess for the scale).</i></p>
	<p><i>In order to prevent electrostatic charges accumulation it is necessary to connect the frame, the platform and the indicator to the same equalizing circuit. Spots marked with „\perp” symbol are intended for the functional grounding cable.</i></p>
	<p><i>Not all frame models are intended for operation in dust atmospheres. The list of areas of operation is presented in the first section of this service manual.</i></p>
	<p><i>Connect the grounding when there is no risk of explosive atmosphere occurrence.</i></p>



Frame grounding spot

1 – frame mechanical design

1.1- frame lid

2 – lock washer

3 – grounding terminal screw

4 – „ \perp ” grounding cable connection spot

3. WARRANTY CONDITIONS

- A. RADWAG feels obliged to repair or exchange all elements that appear to be faulty by production or by construction.
- B. Defining defects of unclear origin and means of their elimination can only be realized with assistance of manufacturer and user representatives.
- C. RADWAG does not bear any responsibility for damage or losses resulting from misuse, or unauthorized use or servicing.
- D. The warranty does not cover:
 - mechanical damage caused by product exploitation other than intended, damage of thermal and chemical origin, damage caused by lightning, overvoltage in the power network or other random event,
 - inappropriate cleaning habits.
- E. Loss of warranty takes place if:
 - a repair is carried out outside RADWAG authorized service point,
 - service claims intrusion into construction by unauthorized people,
- F. Contact with the central authorized service: +48 (48) 386 63 30.

4. SECURITY REQUIREMENTS

Prior to the first use, carefully read this User Manual. Use the device only as intended.

Depending on the frame model, the HX5.EX-* scales can be used in:

- zones 1 and 2 where there is a risk of explosion due to mixture of air with vapour, mist or gas, classified as explosion group IIC, IIB and IIA and as temperature class T1, T2, T3, T4.
- zones 21 and 22 where there is a risk of explosion due to mixture of air with dust, flammable fibres and volatile fuels, classified as explosion group IIIC, IIIB and IIIA.



Not all frame models are intended for operation in dust atmospheres. Diagram with areas of operation is presented in the first section of this service manual

Explosion safety of ramps is ensured by:

- Making frame mechanical design in accordance with the requirements of PN-EN 80079-36:2016 Standard *Explosive atmospheres -- Part 36: Non-electrical equipment for explosive atmospheres – Basic method and requirements*.
- Not exposing the frame to static electricity. Functional grounding cables which level the potentials must always be connected to the marked terminals. Disconnecting the functional grounding cables is forbidden. Disconnecting potentials equalizing cable (e.g. when there is a need to place the device elsewhere) is allowed only if there is no risk of explosive atmosphere.
- **Adhering to this user manual guidelines.**



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