

# Robotic Mass Comparator RMC 1000.5Y

ASSEMBLY GUIDELINES

IMI-303-01-07-27-EN



**RADWAG**®  
**RADWAG WAGI ELEKTRONICZNE**  
ZAAWANSOWANE TECHNOLOGIE WAGOWE

Congratulations and thank you for selecting RADWAG product.  
You have purchased a device that has been designed and manufactured to give you years of service.  
Please read this user manual carefully, this shall guarantee reliable operation.

JULY 2023

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## 1. GENERAL INFORMATION

Warning signs and symbols:



- possibility of danger occurrence.



- hazardous electric voltage.



- possibility of hand injuries.



- harmful or irritant substances.






- important information.

Potential risks occurring in the course of operation, use and maintenance activities.

Careful attention must be paid to the following residual risks:

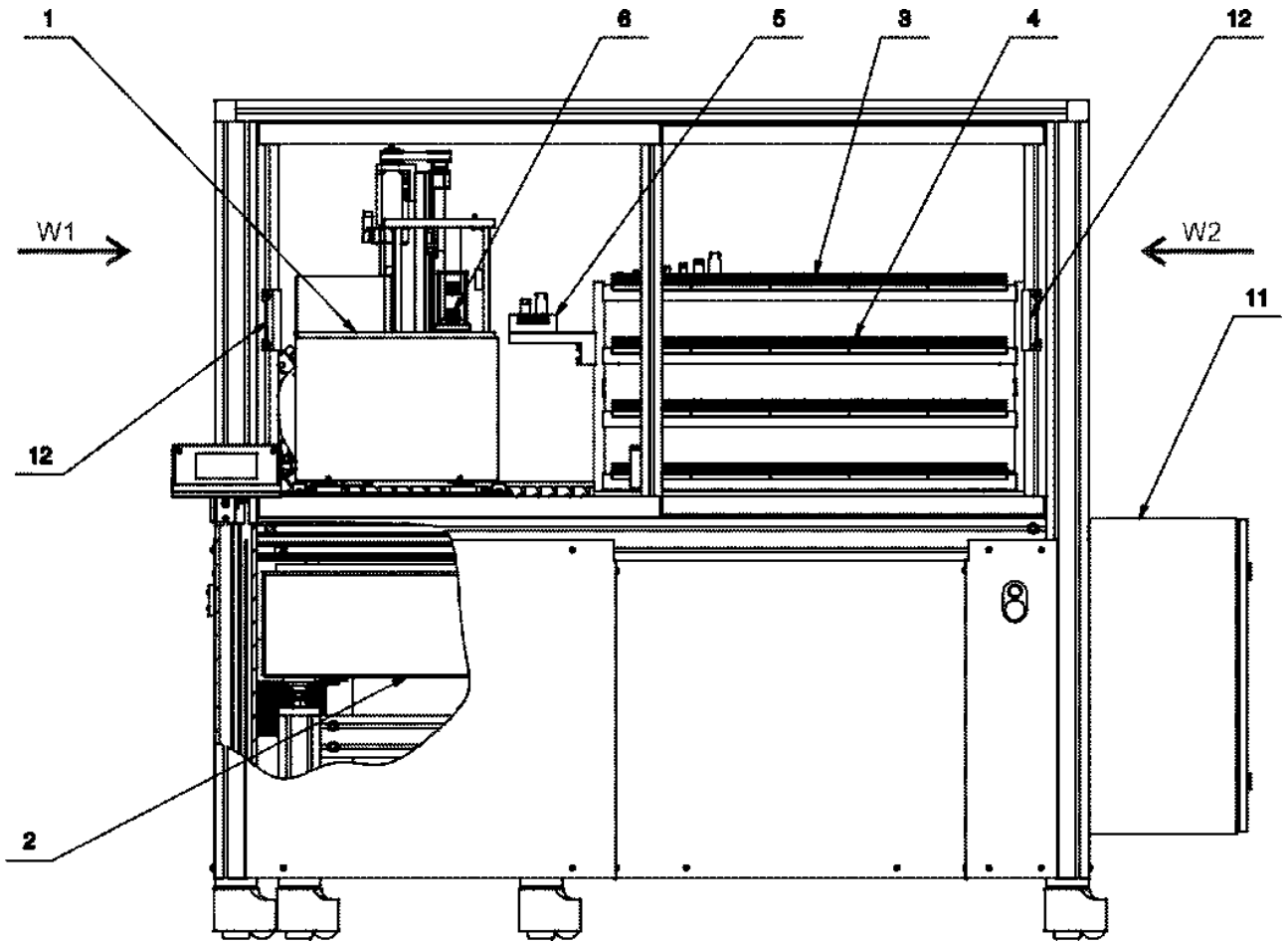
Risk type	Activity	Hazard origin	Solution
 Device mass	Transport.	Complete device.	Transport of the device with use of suitable cranes (with acceptance) by trained personnel. Safety rules must be obeyed.
 Device collapse risk	Assembly / installation, cleaning, excluding from operation, disassembly	Complete device.	Assemble the device permanently using factory default mounting holes.
 Hand injury risk	Assembly.	Complete device.	Assembly can be performed only by trained and authorized personnel.
 Hazardous electric voltage risk	All types of operation	Electronic system housing.	Electronic system housing has to be closed.

 Harmful or irritant substances risk	Cleaning with washing agents	Complete device.	Personal protection equipment has to be used. Washing agent manufacturer instructions have to be obeyed.
 Optical or sound risk signal	All types of operation	Warning device.	Inform the personnel on existing warning devices.
	Prior to cleaning and repairing, unplug the device from the mains, turn off the transport system and protect it against unintended activation. Pay special attention to external voltage occurring on control outputs.		

## 2. DEVICE MECHANICAL DESIGN

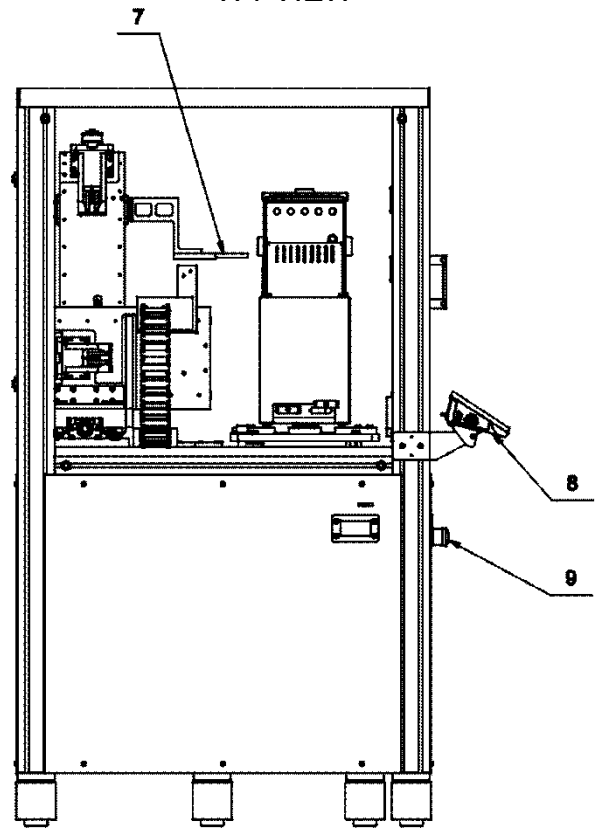
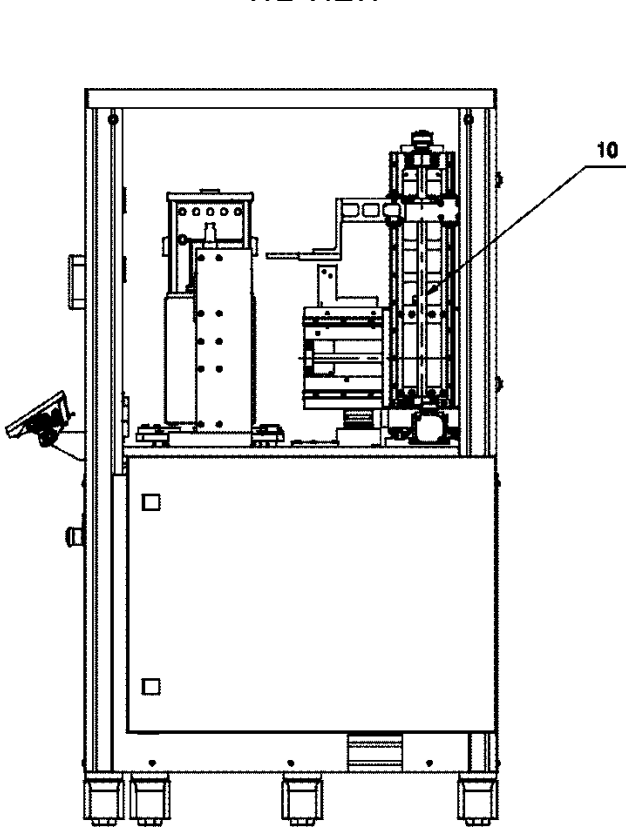
### 2.1. General View





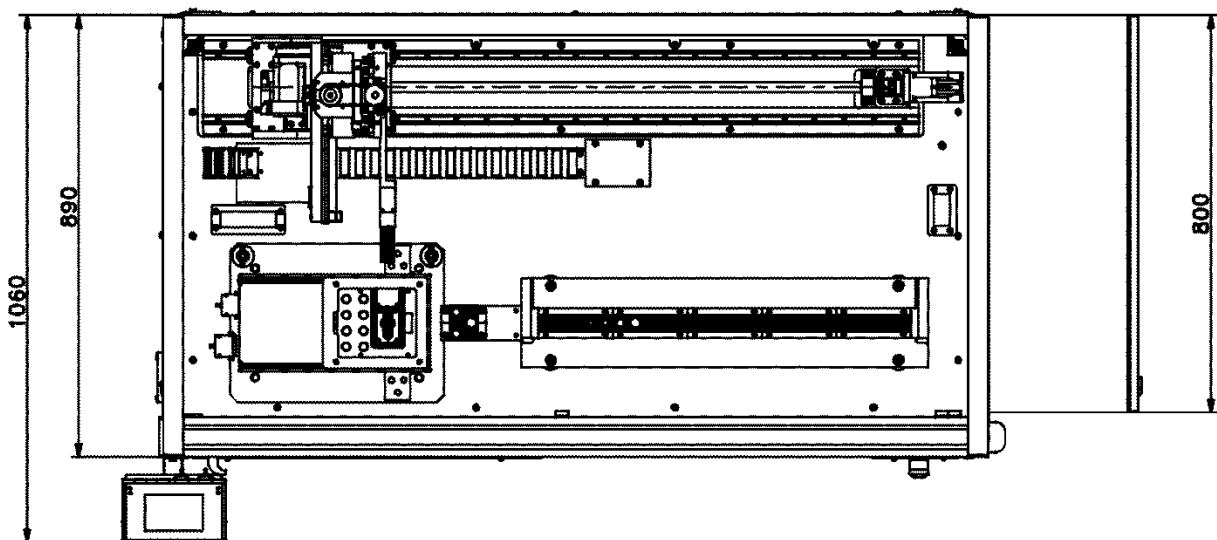
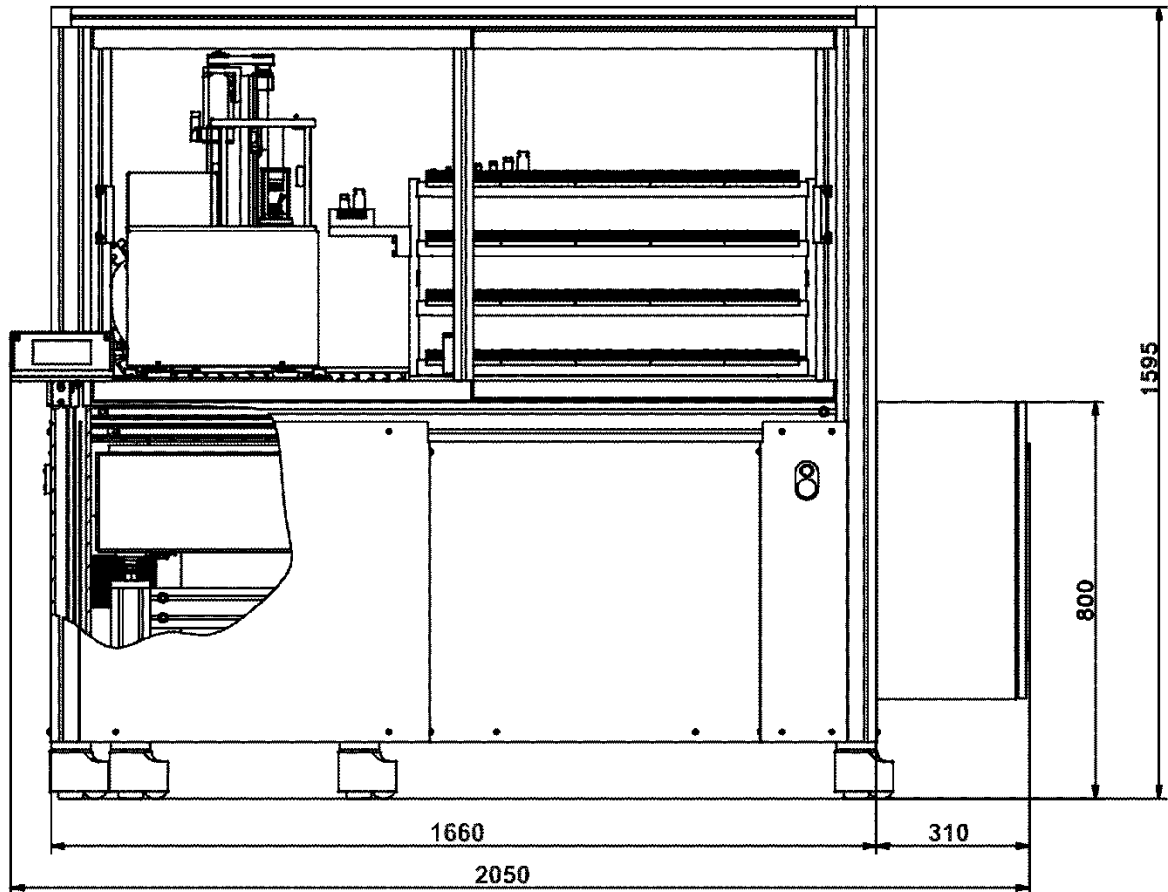
W2 VIEW

W1 VIEW



1. Calibration module
2. Granite top
3. Mass standards magazine
4. Test weights magazine
5. Intermediate magazine enabling dissemination (mass standard division)
6. Weighing pan for dissemination
7. Transport arm
8. Indicator
9. Safety switch
10. Robot arm mechanism
11. Control box
12. Sliding door

## 2.2. Dimensions



**The total robot weight is 605 kg.**

Robot weight (without stone and microbalance) - 380kg

Stone and table weight - 200kg

Mass comparator weight - 25kg



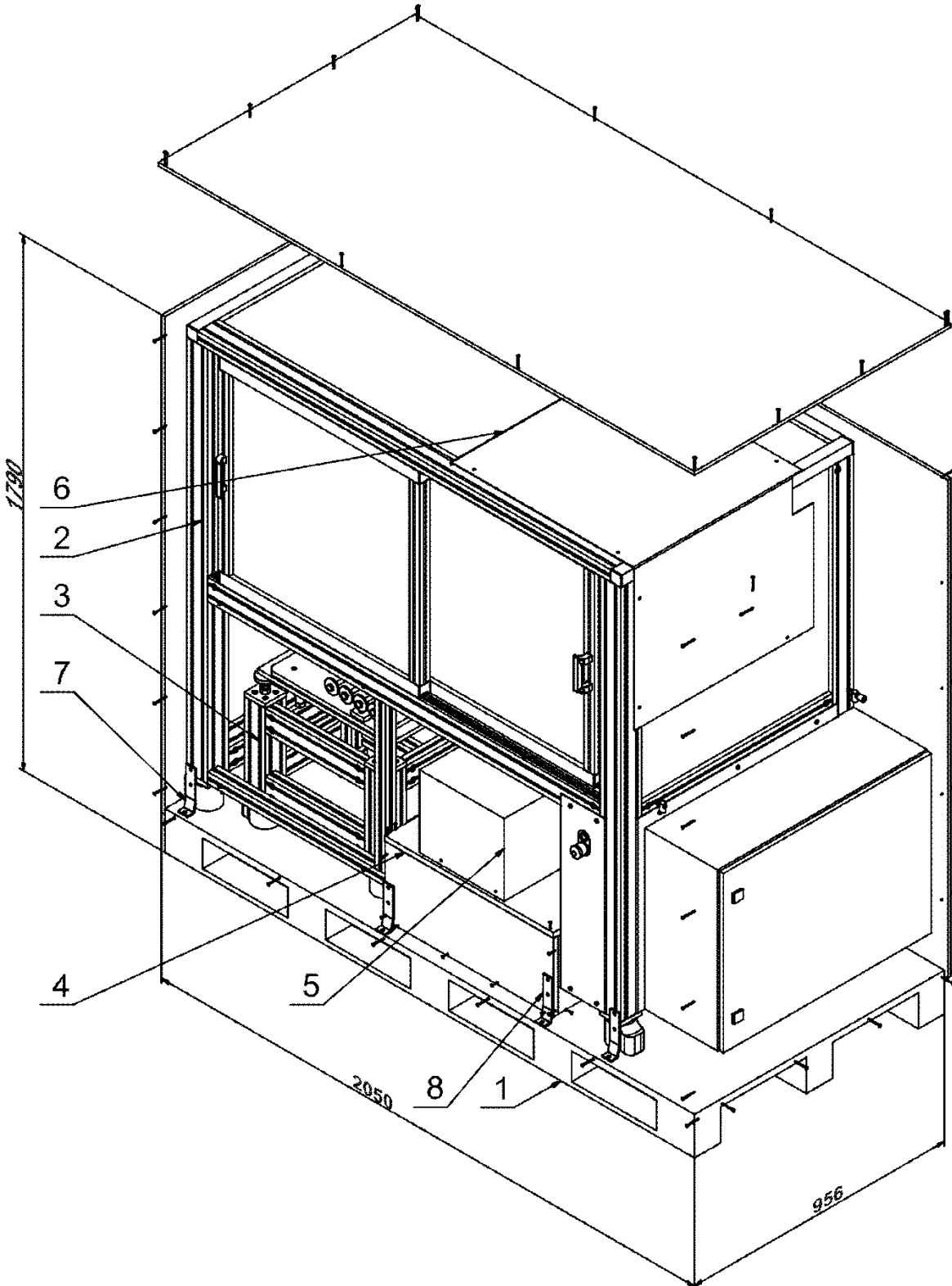
### 3. TRANSPORT

The device is transported in a specially designed original packaging.

Transport and storage temperature: -20 - +50°C

Keep all package elements should your device be transported in the future. Remember that only original packaging can be used for shipping purposes.

#### 3.1. Robot Packaging



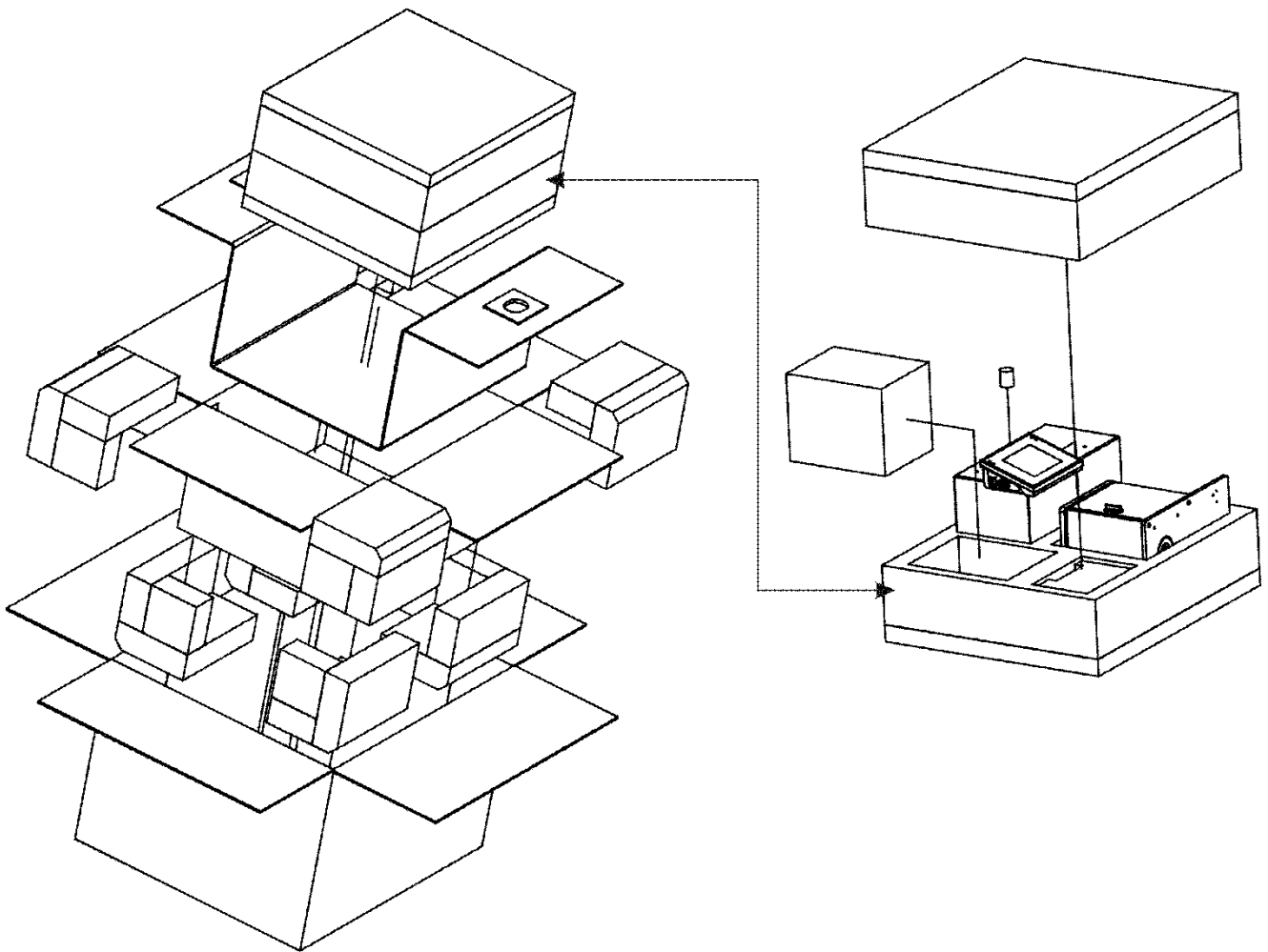
1. Box pallet

2. Robot
3. Stone top base
4. Box with stone
5. Accessories packaging
6. Robot bottom cover
7. Angle bar securing the robot
8. Angle bar securing the box with stone

**The total gross weight of the robot with the transport box is 705 kg.**

Robot box weight - 86kg.  
Stone box weight - 14kg.

### **3.2. Mass Comparator Packaging**



**The gross weight of the mass comparator is 35kg.**

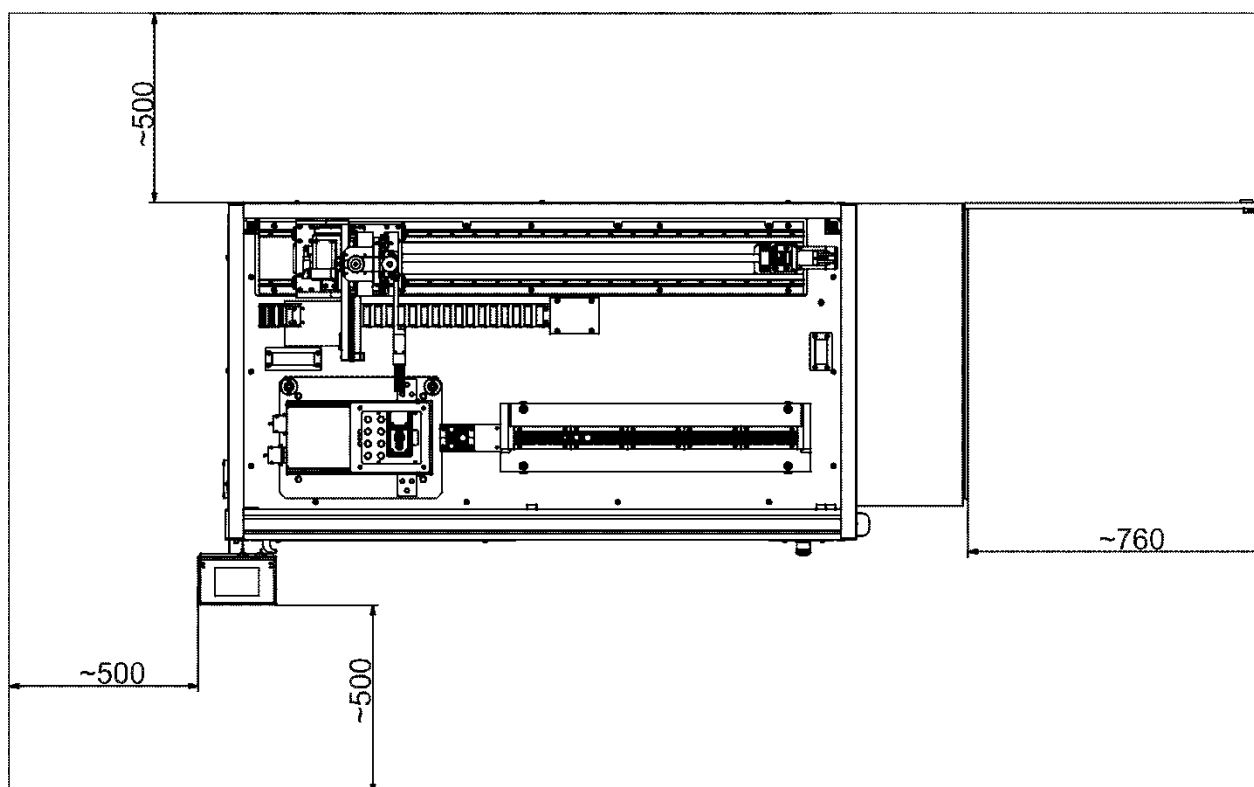
## 4. GUIDANCE FOR THE PLACE OF USE AND AMBIENT CONDITIONS

### 4.1. Place of Use

The room in which the device is to be operated should have a door large enough to ensure that the device can be brought inside. It should be on the ground floor or, if on a higher floor, there must be access to a lift of sufficient capacity and size to ensure transport of the device. The building should have sufficient traffic routes to ensure transport of the device to the place of use.

Minimum size of door openings: 900 x 2000 mm

The device has to be located in the place of use, with adequate space for maintenance and service (see the figure above).



- Operate the device in a workroom free of vibrations and shakes, where there are no air drafts or dust.
- It is forbidden to install devices emitting strong electromagnetic waves in close distance from the device.
- Place the device on a stable ground, not affected by vibrations, away from heat sources.
- The devices installed in the place of use by RADWAG employees cannot be moved to another location. Only authorized RADWAG employee can move the device to another location.

#### **4.2. Ambient Conditions at the Workstation**

- make sure that the ambient temperature ranges between: + 15 °C ÷ + 30 °C.
- temperature change rate: +/-0.5 °C/12h (+/-0.3°C/4h);
- relative humidity: 40 - 60%;
- relative humidity change rate: +/-5%/12h (3%/4h)

#### **5. CONNECTING THE DEVICE TO THE MAINS**

Rated voltage (specified on the device's data plate) must be compatible with the mains rated voltage.

##### **Electrical power supply parameters of the robot:**

Power supply:

U = 230 VAC 50Hz

In = 8A

Main protection B10A

Connection - standard 1f plug type E

**Do not use an RDC switch with a leakage current of 30mA to protect the robot's power supply circuit, due to the voltage converters installed in the machine that may cause false tripping of the protection.**

**It is recommended to protect the robot's power supply circuit with an overcurrent circuit breaker B16.**



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