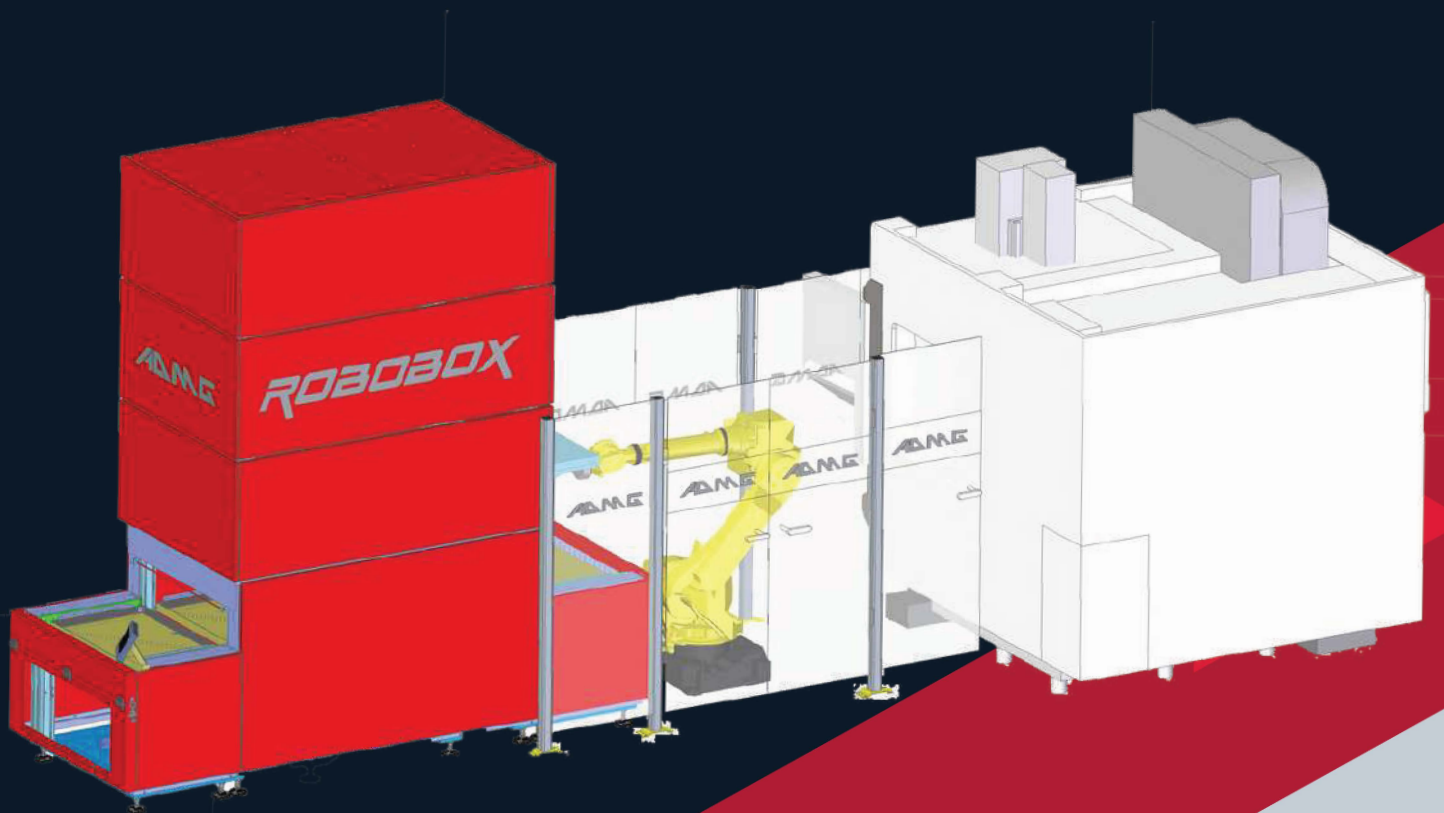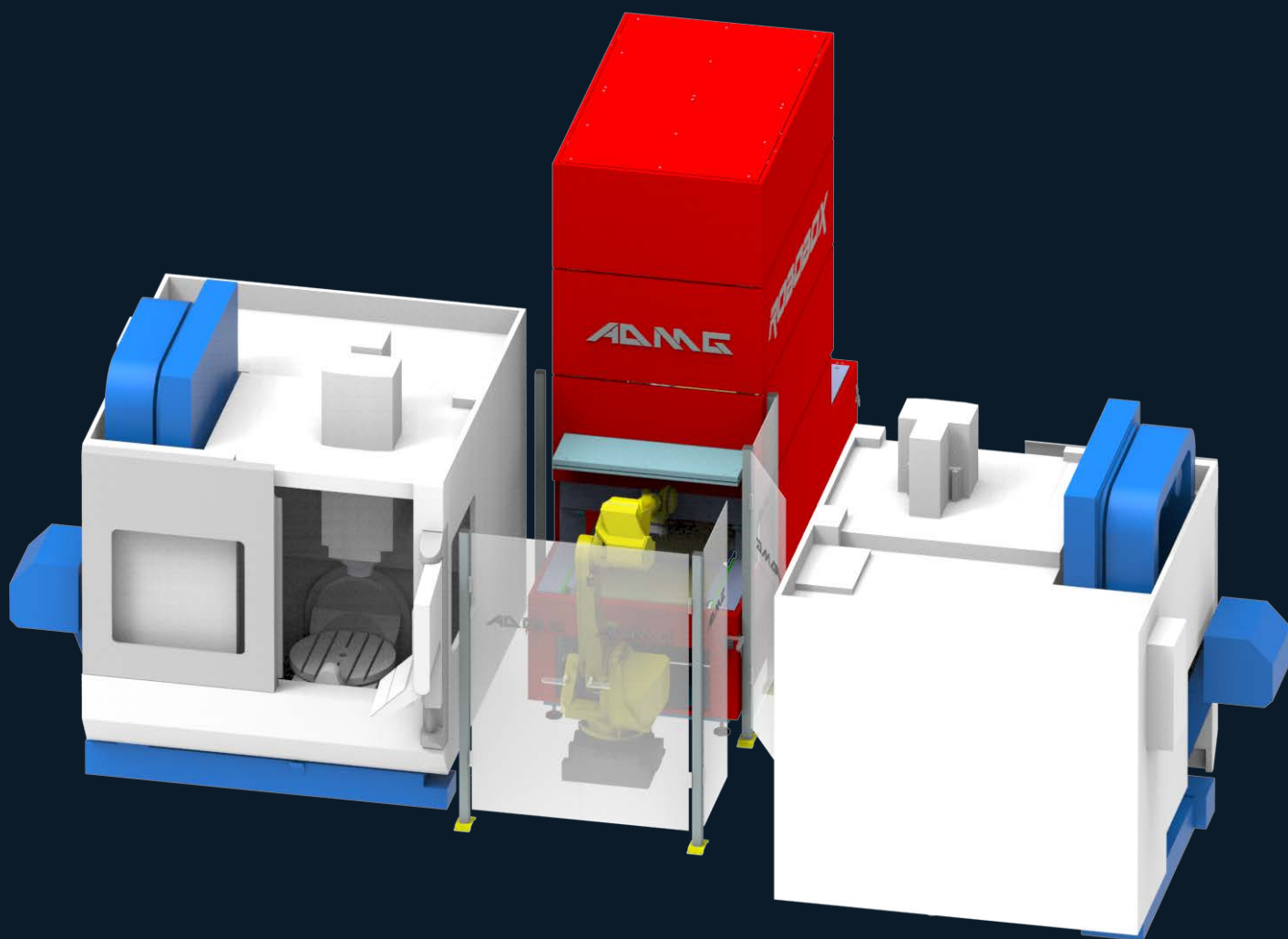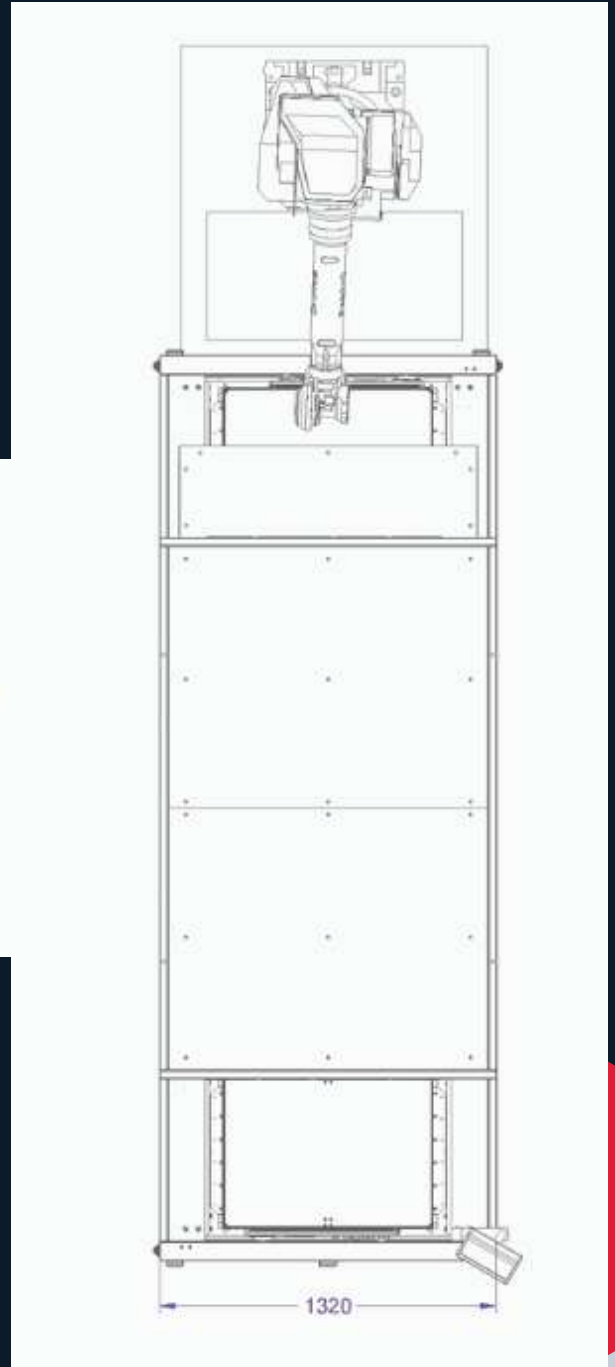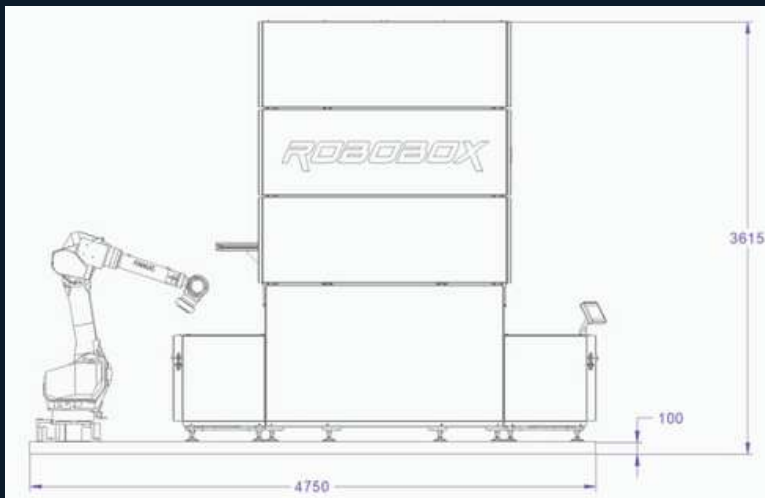# ROBOBOX

# GENERAL总则

The Robobox system allows you to create a cell as below
Robobox系统允许您创建如下所示的单元：：

# ROBOBOX DIMENSIONS
# ROBOBOX 尺寸

# VERTIBOX
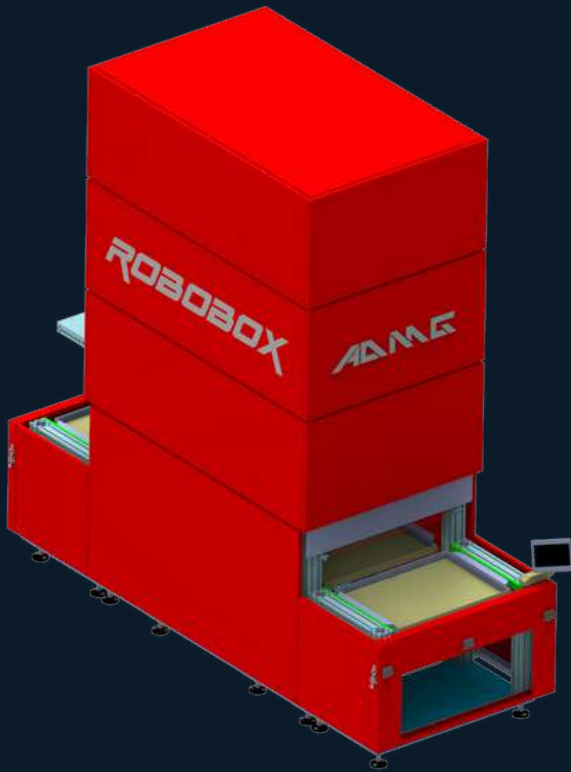


Vertibox is an vertical automathic warehouse with
maximum capacity of 56 trays.
Safe working load of 256 kg each.
Maximum space requirement from tray is 300 mm in height. The tray's dimension is 600x800

Vertibox是一个垂直自动仓库，最大容量为56个托盘。每个托盘的安全工作负荷为256公斤。托盘的最大空间要求是高度300毫米。托盘的尺寸为600x800毫米。

# ROBOBOX



It is a system of automation and storage stand-alone where everything is resting on a
basic structure that makes easy and fast the moving where necessary.

它是一个独立的自动化和存储系统，一切都建立在一个基本结构上，使移动变得简单快捷。

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# ROBOBOX

## ROBOT FANUC

### 机器人FANUC

Robobox is equipped with a fanuc robot model M710iC/45M with 45 Kg of maximum load.

Robobox配备了型号为 M710iC/45M的fanuc机器人，最大负载为45Kg。
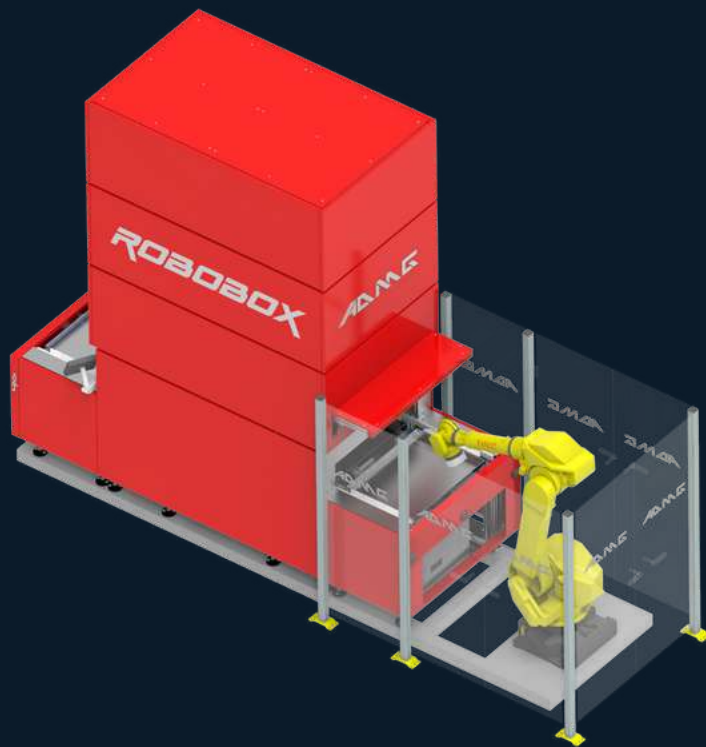
## PROTECTION SYSTEMS OF MODULAR SAFETY

### 模块化安全保护系统

The protections safety system of Robobox is modular. Depending on the need it is possible remove and reposition walls and/or doors. The basic version comes with metal mesh, optional crystals.

Robobox的安全保护系统是模块化的。根据需要，可以拆除和重新安置墙壁和/或门。基础版本配备了金属网格，还可选择配备玻璃材质。

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# VERTIBOX

## ALUMINIUM PROFILED STRUCTURE
### 铝型材结构

The structure of the Vertibox is made of aluminum and it's been designed to give rigidity and capacity, with particular attention to the weight itself

Vertibox的结构是由铝制成的，其设计着重于提供刚性和承载能力，同时特别注重整体重量。
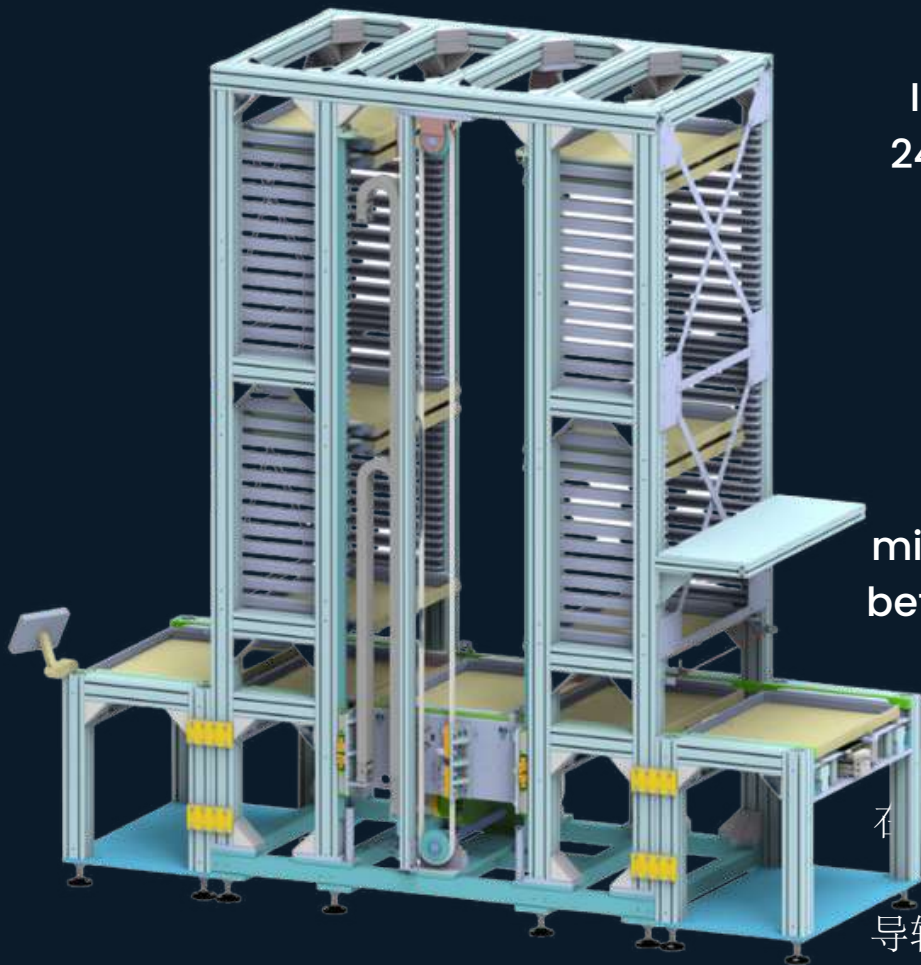
## TRAY GUIDES
### 托盘导轨

In the Vertibox are installed 240 guides with the function tray support.
The guides are made in steel with plastic inserts for better scrolling and to dampen the noise when on the move. The minimum distance of 65 mm between the same combined with the self-fulfillment system allows you to maximize space busy.

在 Vertibox 中安装了 240 个带有功能托盘支持的导轨。
导轨由钢制成，带有塑料嵌件，可更好地滚动并抑制移动时的噪音。与自我实现系统相结合，相同之间的最小距离为 65 毫米，可让您最大限度地利用繁忙的空间。

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# VERTIBOX



## SHUTTLE传送结构

The Vertibox is equipped with a mobile platform located in the central side. The platform is used to move the tray at the top and at the bottom and it's equipped with a mechanism that allows the moving the tray towards right and left for their lateral positioning. Equipped with of 8 brake pads for increased security.

Vertibox在中心侧配备了一个移动平台。该平台用于在顶部和底部移动托盘，并配备了一个机构，允许左右移动托盘进行横向定位。配备了8个制动片，提高了安全性。

## ROBOT SIDE BAY

## 机器人侧舱

The Vertibox is equipped with a bay robot side where the tray for handling from part of the robot.

Vertibox设有一个机器人工作区，用于机器人搬运托盘。



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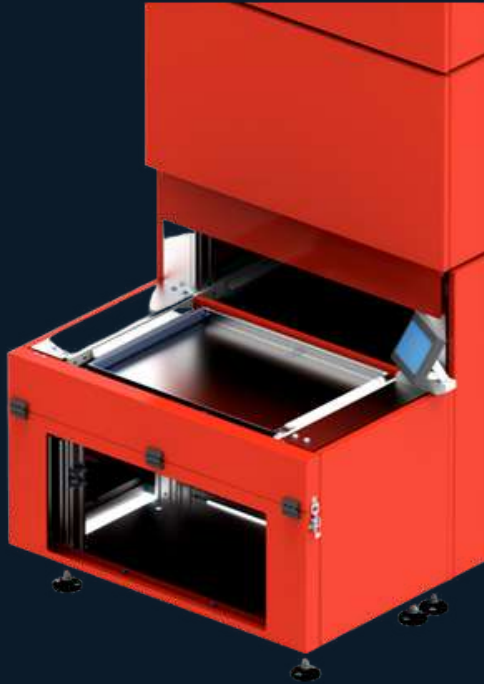
# VERTiBOX

## OPERATOR SIDE BAY
### 操作员侧托架

The Vertibox is equipped with a bay on the operator side where the operations of loading and unloading parts or equipment by of the operator. The tray is easily removable to allow quick replacement.

Vertibox在操作员侧配备了一个托架，操作员可以在这里装载和卸载零件或设备。托盘易于拆卸，以便快速更换。
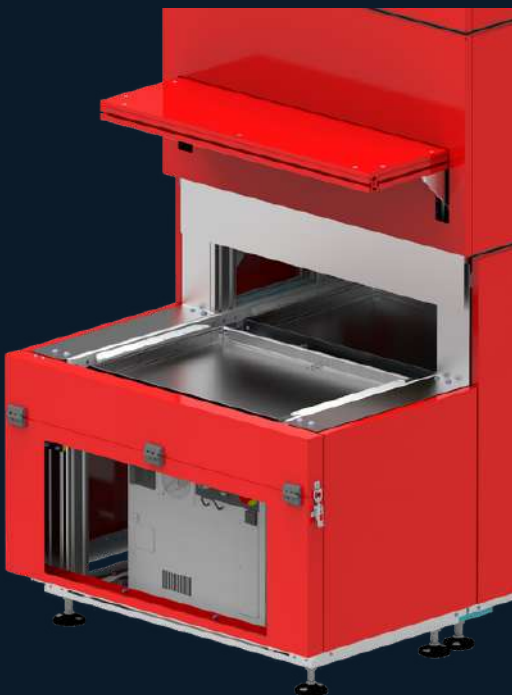
## ELECTRICAL CABINET AND ROBOT COTROLLER
### 电气柜和机器人控制器

The electrical cabinet is positioned under the loading bay Robot in the back while the Robot controller is placed at the bottom of the back in so as to facilitate its use.

电动柜位于后部的装载区机器人下方，而机器人控制器则位于后部的底部，以方便其使用。

# VERTIBOX

## CONTROL PANEL

### 控制面板

The control panel located in
the back is mounted
on a telescopic arm in
so you can be easily moved
by the operator in the more
optimal location.

位于背面的控制面板安装在伸缩
臂上.因此，操作员可以很容易地
将您移动到更优化的位置。
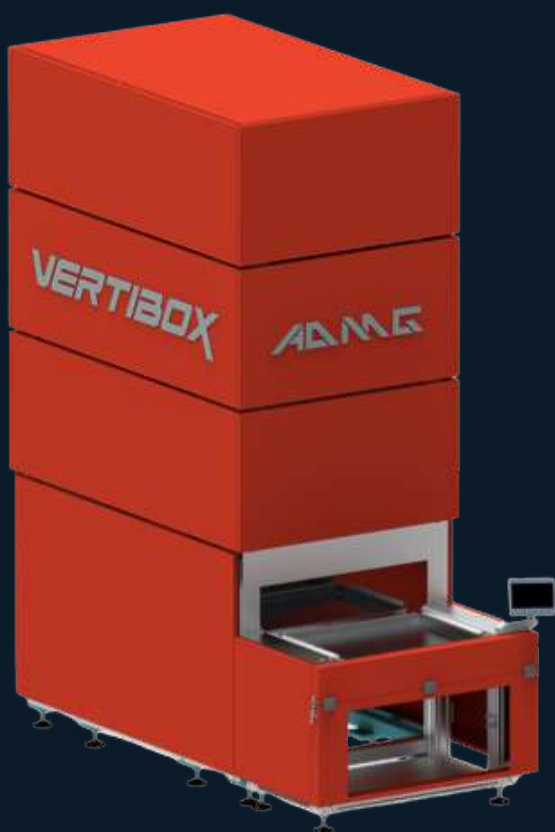
## EXTERNAL COVERS

### 外部钣金

The Vertibox is equipped with
external steel covers that
guarantee the maximum
safety and isolation.

Vertibox配备了外部钢制钣金，确
保了最大程度的安全和隔离。

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# VERTiBOX

## VERTIBOX CAPACITY

### Vertibox容量

Vertibox has a maximum capacity of 56 trays at a distance minimum of 65 mm. The maximum space requirement accepted by the tray is 300 mm in height.Tray size 600 x 800 x 250 kg.

Vertibox的最大容量为56个托盘，最小间距为65毫米。托盘接受的最大空间要求为高度300毫米。托盘尺寸为600 x 400毫米，承重为250公斤

**Minimum distance from trays 65mm**
最小间距为65毫米

**Maximum height allowed 300 mm**
允许的最大高度 300 mm



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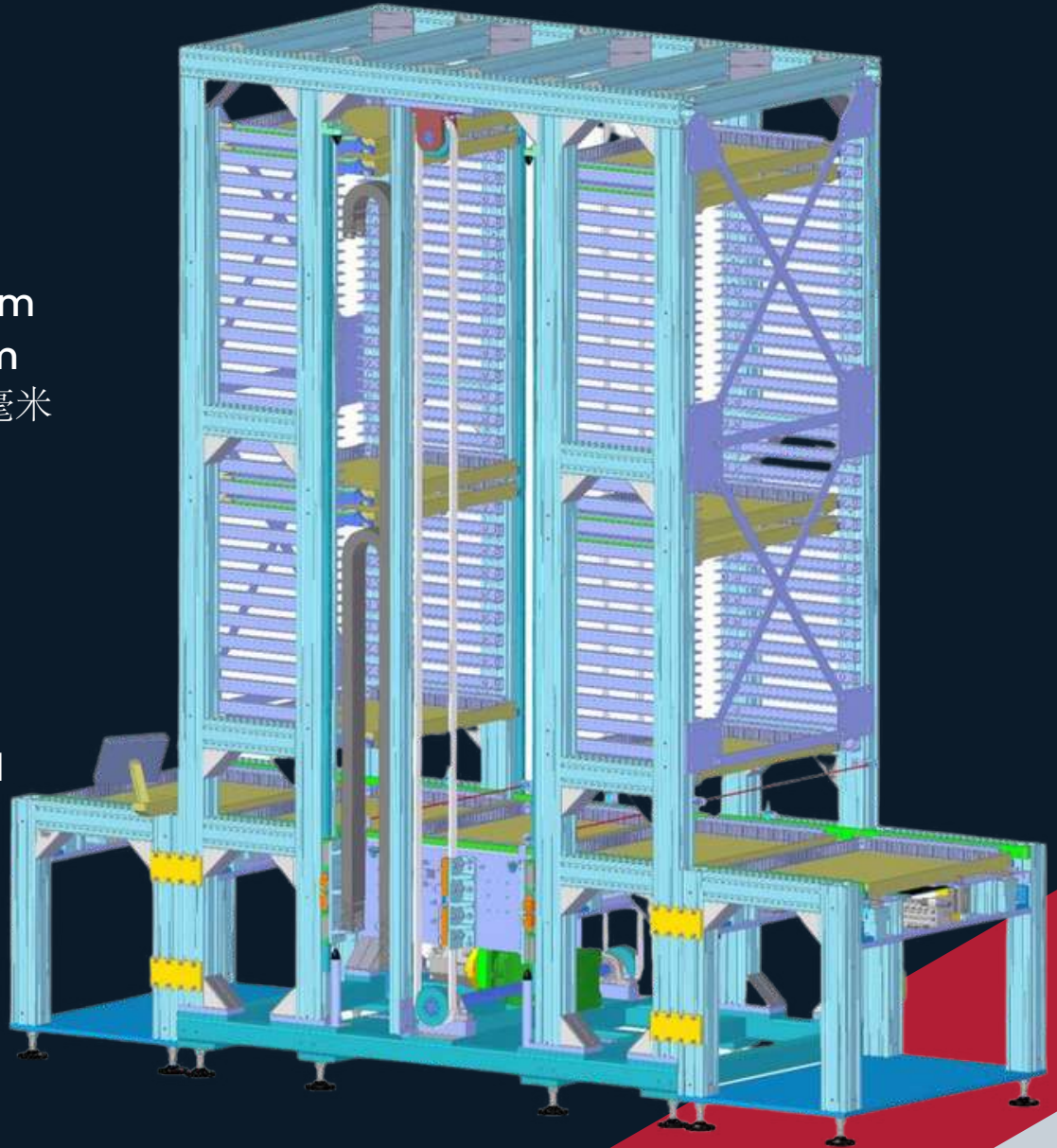
# VERTiBOX

## SELF-FULFILLMENT SYSTEM
## 自动填充系统

Vertibox is equipped with a self-filling system.
Thanks to the electronic measuring system, the height is detected of the tray and its contents at the entrance and through a special algorithm is determined the position where the tray will be parked in order to maximize the space occupied and
avoid damage to the tray in case of exceeding the maximum permissible height.

Vertibox通过其自动填充系统，在托盘及其内容物进入时利用电子测量系统来检测其高度。然后，系统会使用一个特殊的算法确定托盘在Vertibox内的停放位置，这样做是为了最大限度地利用可用空间，并确保在托盘及其内容物的高度超过最大允许值时能够避免对托盘的损害。这种方式提高了存储效率，并且通过精确控制托盘位置来保护托盘不被损坏，从而确保了操作的安全性。
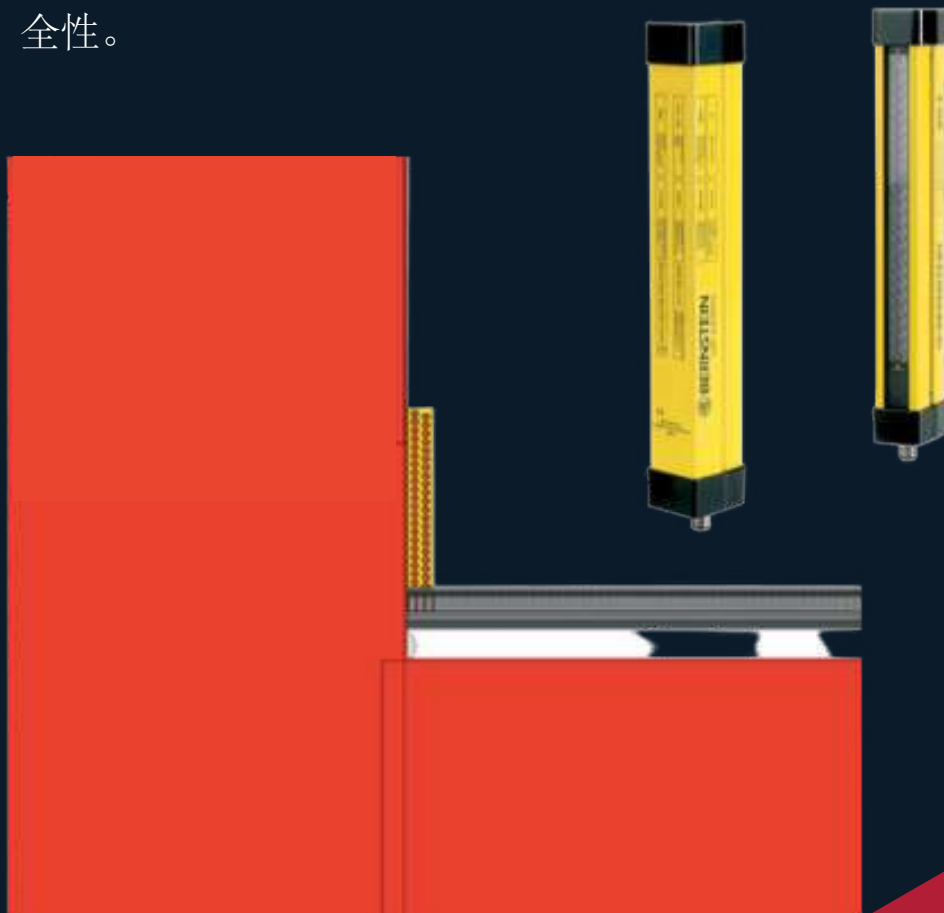
# VERTIBOX

## TRAYS
## 托盘

Vertibox can hold a maximum of 56 trays whose
size is 800 mm x 600 mm and the maximum capacity is 250 kg each.
The trays have been designed so that they can be configured
modularly to accept any type of material.

Vertibox 最多可容纳 56 个托盘，尺寸为 800 mm x 600 mm，每个托盘的最大容量为 250 kg。托盘经过精心设计，可以模块化配置以接受任何类型的材料。

# ROBOBOX

## FANUC ROBOT

## FANUC机器人

**Robobox is equipped with a fanuc robot model M710iC/45M with 45 Kg of maximum load.**

Robobox配备了Fanuc机器人型号M710iC / 45M，最大负载为45 Kg。

**M-710iC/45M** [High inertia version]

Max. load capacity at wrist: **45 kg**
Max. reach: **2606 mm**
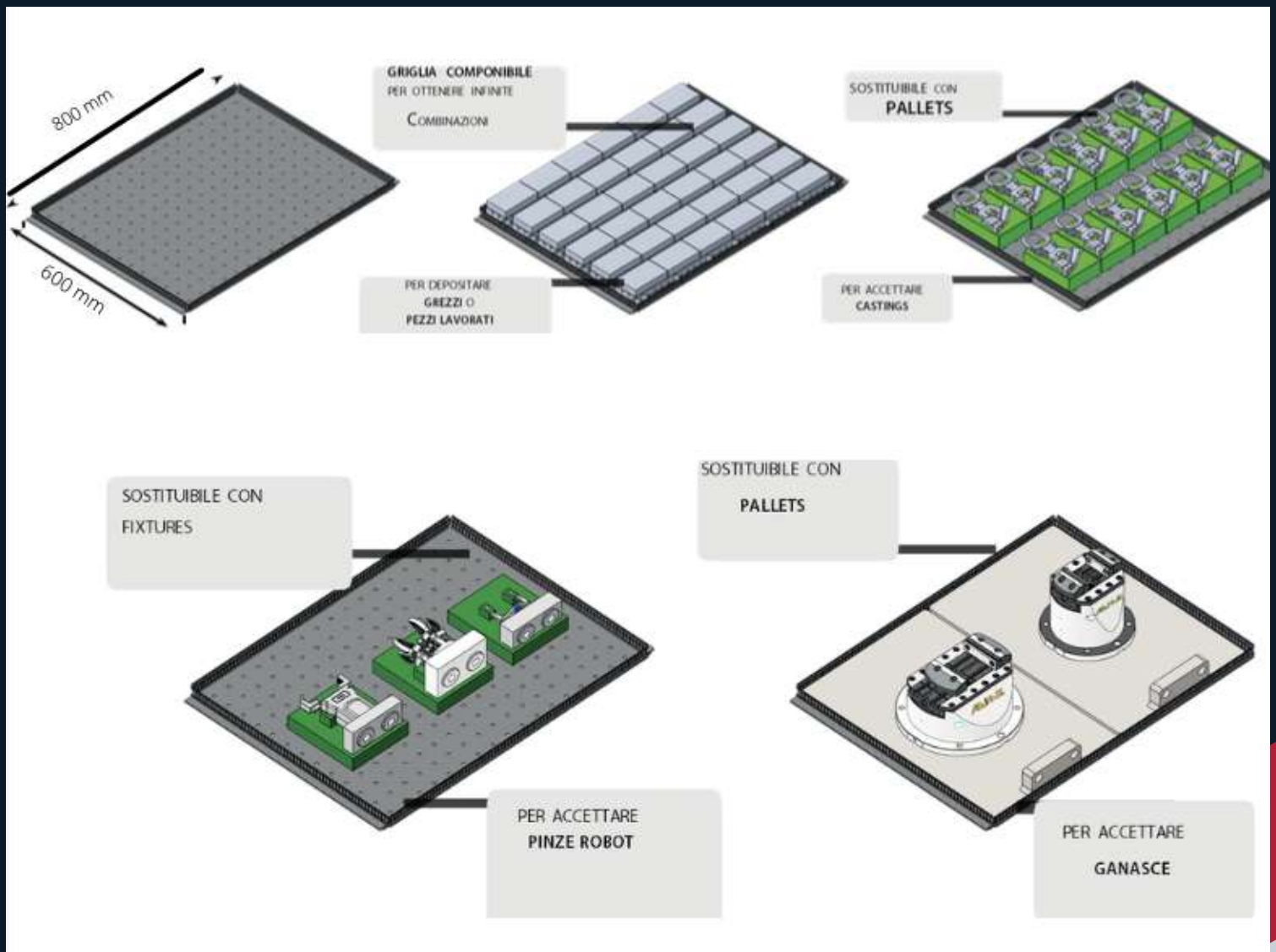
| Controlled axes | Repeatability (mm) | Mechanical weight (kg) | Motion range [°] | | | | | | Maximum speed [°/s] | | | | | | J4 Moment/ Inertia (Nm/kgm²) | J5 Moment/ Inertia (Nm/kgm²) | J6 Moment/ Inertia (Nm/kgm²) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | J1 | J2 | J3 | J4 | J5 | J6 | J1 | J2 | J3 | J4 | J5 | J6 | | | |
| 6 | ± 0.06° | 570 | 360 | 225 | 440 | 800 | 250 | 800 | 180 | 180 | 180 | 250 | 250 | 360 | 206/28 | 206/28 | 127/20 |

**Working range**



+180°
-180°
R 2606
0°

(-150, +3021)

J5 axis rotation center

(-2306, +565)
(-2606, +565)

Motion range of the J5 axis rotation center

(0,0)

Motion range may be restricted according to the mounting angle!

(-1554, +963)

| **Robot** | **M-710iC/45M** |
|---|---|
| Robot footprint [mm] | 535 x 550 |
| Mounting position Floor | • |
| Mounting position Upside down | • |
| Mounting position Angle | • |
| **Controller** | **R-30iB Plus** |
| Open air cabinet | - |
| Mate cabinet | ○ |
| A-cabinet | • |
| B-cabinet | ○ |
| iPendant Touch | • |
| **Electrical connections** | |
| Voltage 50/60Hz 3phase [V] | 380-575 |
| Voltage 50/60Hz 1phase [V] | - |
| Average power consumption [kW] | 2.5 |
| **Integrated services** | |
| Integrated signals on upper arm In/Out | 8/8 |
| Integrated air supply | 1 |
| **Environment** | |
| Acoustic noise level [dB] | 71.3 |
| Ambient temperature [° C] | 0-45 |
| **Protection** | |
| Body standard/optional | IP54/IP67 |
| Wrist & J3 arm standard/optional | IP67 |

● standard    ○ on request    - not available    [ ] with hardware and/or software option    *Based on ISO9283

# ROBOBOX

## INDUSTRY 4.0

## 工业4.0

Robobox is a tool of interconnection between machines, warehouse, robot and office management. The ADMG Software designed for calculation of production, is managed by software management.Such interconnection is today, to all intents and purposes, an industry 4.0 system.

Robobox是机器、仓库、机器人和办公室管理之间的互联工具。ADMG软件设计用于生产计算，由软件管理管理。如今，无论出于何种意图和目的，这种互连都是一个工业4.0系统。
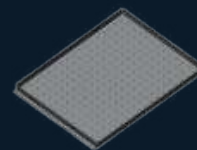
# ROBOBOX

## OPTIONAL选配

**PROTECTION SYSTEM KNITTED SAFETY METALLIC (INCLUDED) OR GLASS (OPTIONAL)**
安全金属编织防护系统（包含）或玻璃（可选）

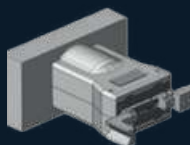**FANUC ROBOTS M-700iC/45 KG (INCLUDED) Or FANUC ROBOTS M-700iC/70 KG (OPTIONAL)**

FANUC ROBOTS M-700iC/45 KG（随附）或 FANUC ROBOTS M-700iC/70 KG（可选）

**TRAYS MODULAR STANDARD (OPTIONAL)**
托盘模块化标准(可选)

**SUPPORTS AND PILES FOR SYSTEM SAFETY (8 CAD INCLUDED)**
系统安全的支架和桩（包括8个CAD）

**ROBOT TOOLS EQUIPMENT (OPTIONAL)**
机器人工具设备（可选）

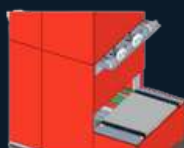**METALSEPARATOR FOR MODULAR TRAYS (OPTIONAL)**
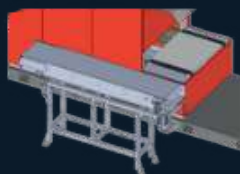用于模块化托盘的金属分离器（可选）

**GEA VISE 230M (OPTIONAL)**
虎钳GEA 230M（可选）

**GEA VISE 230P (OPTIONAL)**
虎钳GEA 230P（可选）

**GEA VISE 160M (OPTIONAL)**
虎钳GEA 160M（可选

**SHELF FOR DEPOSIT ROBOT GRIPPERS (OPTIONAL)**
存放机器人夹具的货架（可选）

**LATERAL UNLOADING MAGNETIC TAPE (OPTIONAL)**
侧向卸载磁带（可选)

**PALLETS FOR MODULAR TRAYS (OPTIONAL)**
模块化托盘托盘（可选）

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# ROBOBOX

*When the world asks to change, there are those who still have the courage to do so!*
当世界要求改变时，仍有人有勇气这样做！

## CONTACT US
联系我们

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