

GENERAL
DOCUMENTATION

ASTRO
CELLS

DIY
ROBOTICS



TABLE OF CONTENT

TERMS OF USE.....	3
DESCRIPTIVE PLATE AND TECHNICAL CHARACTERISTICS	4
CONFORMITY DECLARATION.....	5
ROBOTIC CELL DESCRIPTION.....	6
ASTRO 33 CELL ISOMETRIC IMAGES	8
ASTRO 33 CELL 3D IMAGES	9
TRANSPORTING THE ROBOTIC CELL	10

TERMS OF USE

The DIY Robotics cell must be used in an environment with a relative humidity of less than 75% without condensation. For a period of less than one month, the relative humidity must not exceed 95%. This robotic cell must not be exposed to rain, drizzle or even fog.

This robotic cell must be operated at a minimum temperature of 0 °C to a maximum of 45 °C. The temperature change in the operating zone of the robot must not exceed 0.3 °C / minute.

Additional protective measures shall be provided if the cell is installed in an environment with significant amounts of dust, dielectric fluid, contaminants, organic solvent, acid, corrosive gas and / or salt.

This robotic cell should be operated in a none windy environment.

This robotic cell must be operated at an altitude less than 1000 meters above the sea level.

The robotic cell must be placed on a hard surface and leveled.

Any intervention on FANUC robot, in DIY Robotics cells, must be made by a qualified technician trained by FANUC.

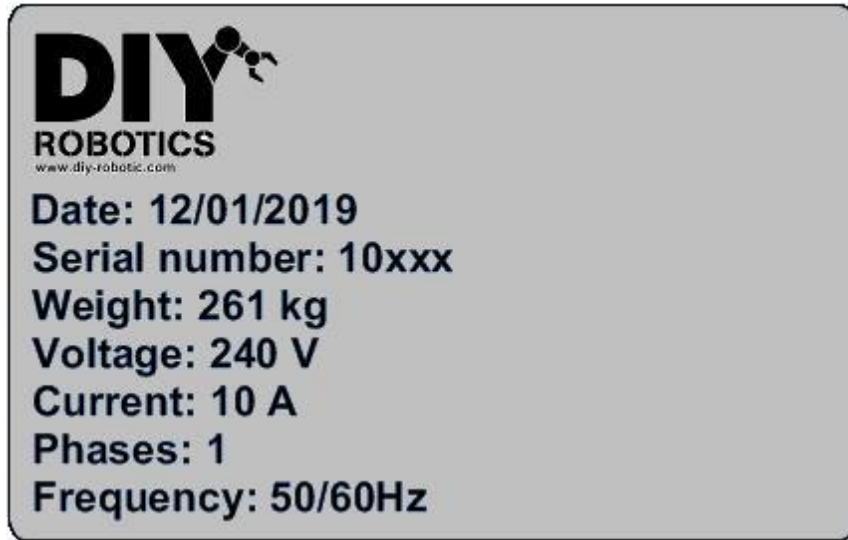
Non-respect of these conditions could lead to nonconformity in the product produced by the robotic cell.

DIY robotics can not be held responsible for any nonconforming product produced by this robotic cell if one or more of terms of use are not respected.

DIY robotics can not guarantee this robotic cell if one or more terms of use are not respected.

DESCRIPTIVE PLATE AND TECHNICAL CHARACTERISTICS

This DIY Robotics cell has a nameplate which identifies the manufacturer, the date the cell was made, the serial number, the weight of the cell, the required voltage and current, the number of phases and the electrical frequency.



CONFORMITY DECLARATION

Manufacturer : DIY Robotics.
465, Rue Joseph-Latour
Sherbrooke, Québec, Canada, J1C 0W2

DECLARE

This robotic cell

Model:	Astro
Serial Number :	XXX
Year of Manufacturing	2019

For which this declaration is issued, complies with the following directives :

DIRECTIVE 2006/42/CE
DIRECTIVE 2006/95/CE
DIRECTIVE 2004/108/CE

This robotic cell complies, as well with CSA norms.

Authorized by Steve Blanchette, President

Signature

Signed in Sherbrooke on : _____

ROBOTIC CELL DESCRIPTION

The DIY Robotics cells are designed to be programmed by the customer to meet his own needs

They are designed to be as versatile as possible in order to adapt to changes in production over time.

These robotic cells are using collaborative robots designed to securely work with humans helping them accomplish their tasks.

They provide a safe environment where humans and robots can work together.

Here are the specifications for the Astro 33 robotic cells

<p>Frame dimensions</p>	<ul style="list-style-type: none"> • Dimensions (mm): 915 x 915 x 838 • Dimensions (in.): 36 x 35 x 33 • Weight: 261 kg (575 lb.)
<p>Features</p>	<ul style="list-style-type: none"> • Wheels with integrated leveling pads • Integrated electrical cabinet (32 inputs/32 outputs available) • 200-240 VAC monophase (120 VAC 10 Amp available) • Pneumatic cabinet (4 valves 5/3 open centre 6 mm ports) • Adjustable height for improved work ergonomics (adjustment up to 8 inches) • Meet CSA requirements • Compatible with standard DIY-Robotics accessories and options • Easily adaptable for custom needs
<p>Baseline</p>	<ul style="list-style-type: none"> • EthernetIP communication • Karel • DCS • Basic interference check • 1x electrical panel • 1x pneumatic panel • Electrical hydraulic lifting system

Robotic
compatibility

- **FANUC Robot CR-4iA**
500 mm/s
550 mm
4 kg



- **FANUC Robot CR-7iA**
500 mm/s
717 mm
7 kg



- **FANUC Robot CR-7iA / L**
500 mm/s
911 mm
7 kg

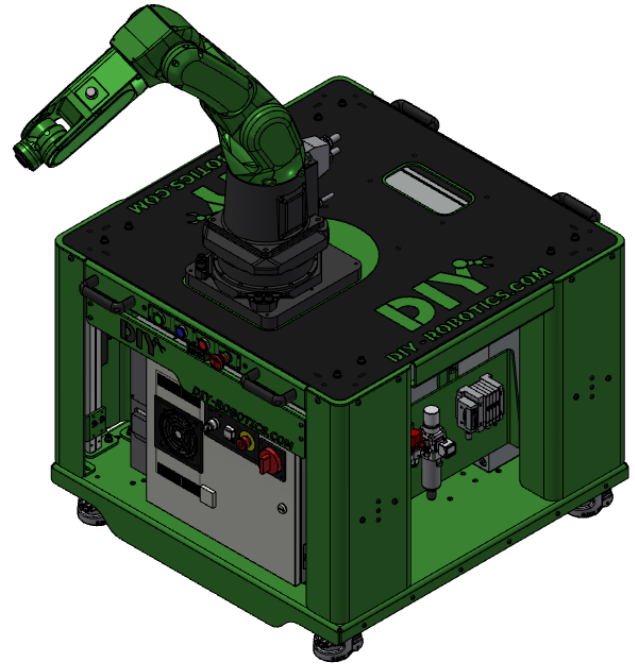


DIY
Accessories

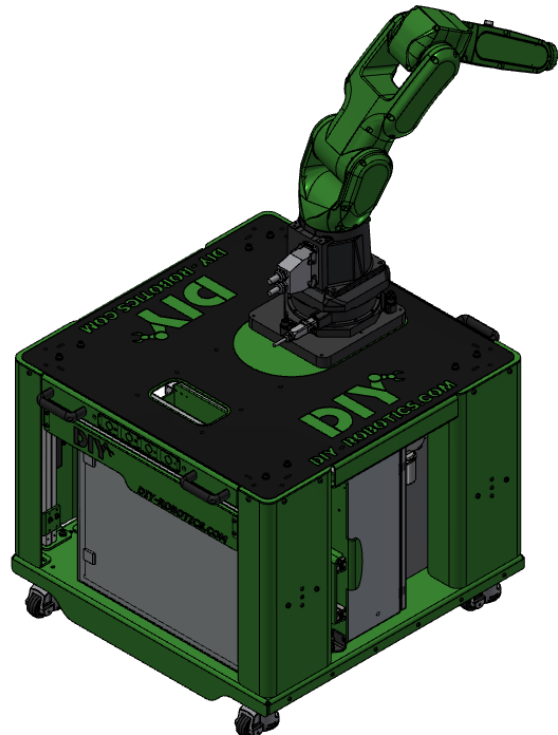
- Robot DK
- Clariprod

ASTRO 33 CELL ISOMETRIC IMAGES

This image shows the isometric front view of the Astro 33:



This isometric image shows the Astro 33 cell backside:



ASTRO 33 CELL 3D IMAGES

This section shows 3D images of the Astro 33 robotic cell.



TRANSPORTING THE ROBOTIC CELL

To move off the robotic cell from one place to another, you must, first of all, make sure that the robot is at the shipping position. If the robot is not at its shipping position, select the SHIP program and run it in T1 mode. Make sure nothing interferes with the robot while getting to this position. The original shipping position was made without any “eoa” (end of arm tooling). So, depending on what was added to the cell and/or on the robot, you might have to jog the robot joints manually to get to the shipping position. If you are unable to reach this position even when jogging the robot joints, then teach a similar position. Joint 1 position is not important as far as it doesn’t make a part of the robot hang outside the main platen of the cell. You must fold the robot on itself in order to bring the gravity center as close as possible to the middle of joint 1 and as low as possible.

Unplug the main power connection and the compressed air supply.

Unplug and remove all external features that may interfere with the moving of the cell.

Remove teach pendant. Put it in the cell attached firmly.

Bring up all wheel leveling pad so the cell can be moved freely.

To move the cell, use heavy-duty handles.

Once in the desired work area, get the cell leveled by adjusting the wheel pads down to the proper height.

Re-install all previous items removed before moving the cell.

Connect power and air supply after all items are installed properly.