

-----DECLARATION OF EC COMPLIANCE-----
(98/37/EEC Machine Directive, Attachment II, part A)

Manufacturer: CMA ROBOTICS Spa

Address: Via Pier Paolo Pasolini 35 PRADAMANO (Udine) ITALY

Declares that:

Type	: Anthropomorphous painting robot
Model	: GR 650 G3
Serial N.º	: 556/ 07
Made	: OCTOBER 2007
Options	:

- Complies with the requirements of the 98/37/EEC Machine Directive, and subsequent amendments.
- Complies with the requirements of the following additional EC Directives: 89/336/EEC Electromagnetic Compatibility Directive, and subsequent amendments;
73/23/EEC Low Voltage Directive, and subsequent amendments.

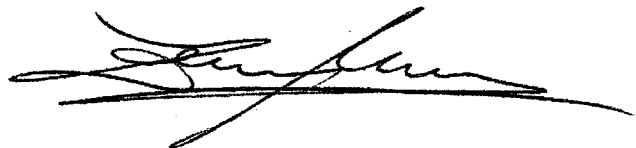
And also declares that:

- The following (parts/clauses of) harmonised norms have been applied:
EN 292-1, EN 292-2, EN 294, EN 349, EN 418, EN 614/1, EN 954-1, EN 1050
 - The following (parts/clauses of) national technical norms and specifications have been applied:
UNI EN 775, CEI EN 60204-1
- Execution anti deflagrating system ExP as per CEI EN 50.016

The check of the installation where the robot will be incorporated must be done by the buyer in order to make sure it's conformable to the European Community law.

PRADAMANO, 31/10/07

C.M.A. Spa
(Marco Zanor - Director)



Power supply voltage:230-400 V a.c. three-phase + neutral + earth
 Frequency: 50 Hz
 Power absorbed: 3 KVA

Dimensions and weight:

Maximum arm height: h = 2920 mm
 Range of action R = 1930 mm
 Weight Robot ST version..... W = 370 Kg
 Weight Robot G3 version W = 1168 Kg
 Weight Robot G4 version W = 1222 Kg
 Exp protection IP66

Dimensions and weight of electrical panel

Robot Green ST/G3 L. x H. x P. 800 x 1700 x 600 mm weight:240 kg
 Robot Green G4 L. x H. x P. 1000 x 1900 x 600 mm weight:.....258 kg
 Panel Exp protection IP54

Acoustic pressure level < 70 dB

Operating temperature: +5°C<T<+40°C
 Humidity 30%<Ur<95%
 Altitude 1000m s.l.m.
 Temperature during trasport and storage -25°C<T<+55°C
 (T=+70°C for periods shorter than 24 h)

Operating pressure: p = 7 bar

4. ROBOT SAFETY

5.3 SPHERE OF OPERATION OF THE ROBOT

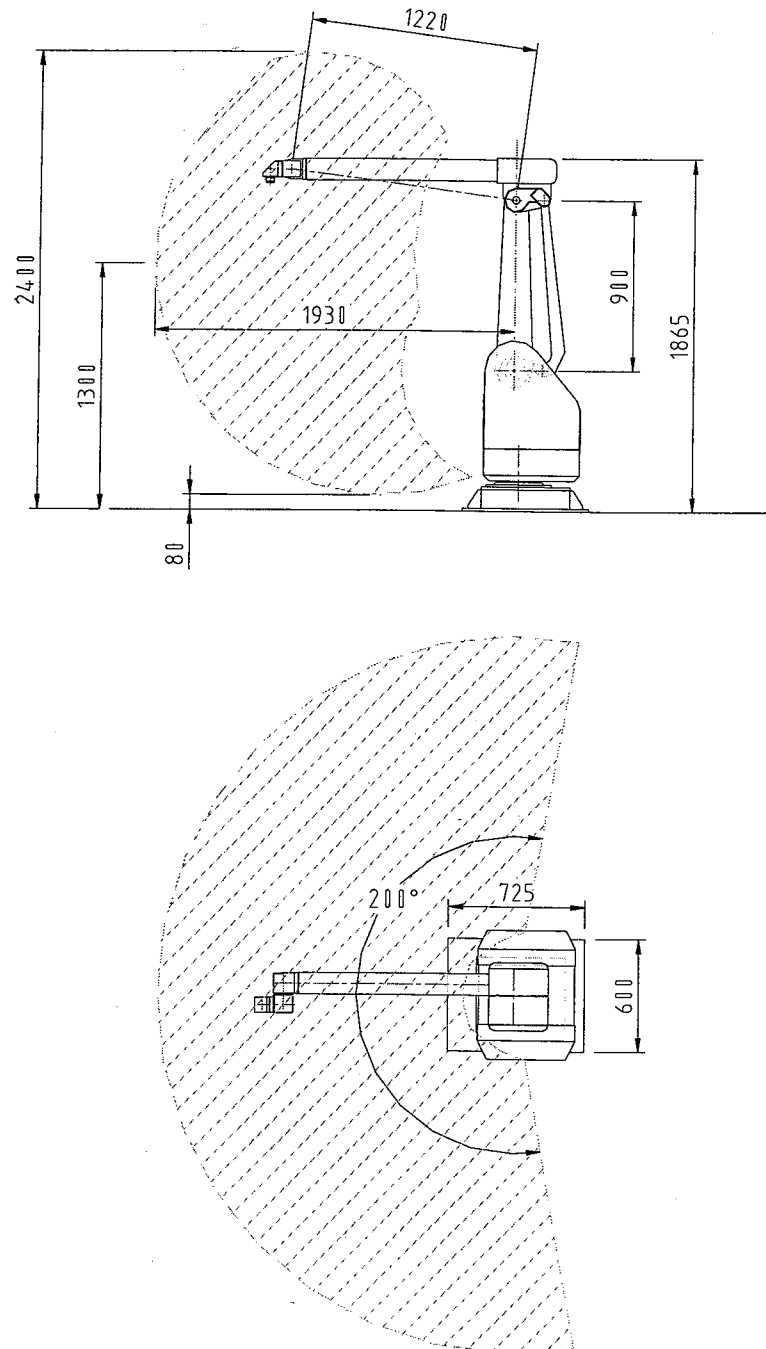


Fig. 5.2 Sphere of operation of the “Roby 6 ST” robot.

Figure 5.2 illustrates the range of interference of the “ST” model robot in the surrounding areas; account should be taken of what, if anything, is installed regarding peripheral equipment in order to ensure the working of the system and the *safety of the operator*.

5.5.4. WORKING AREA GR650 G

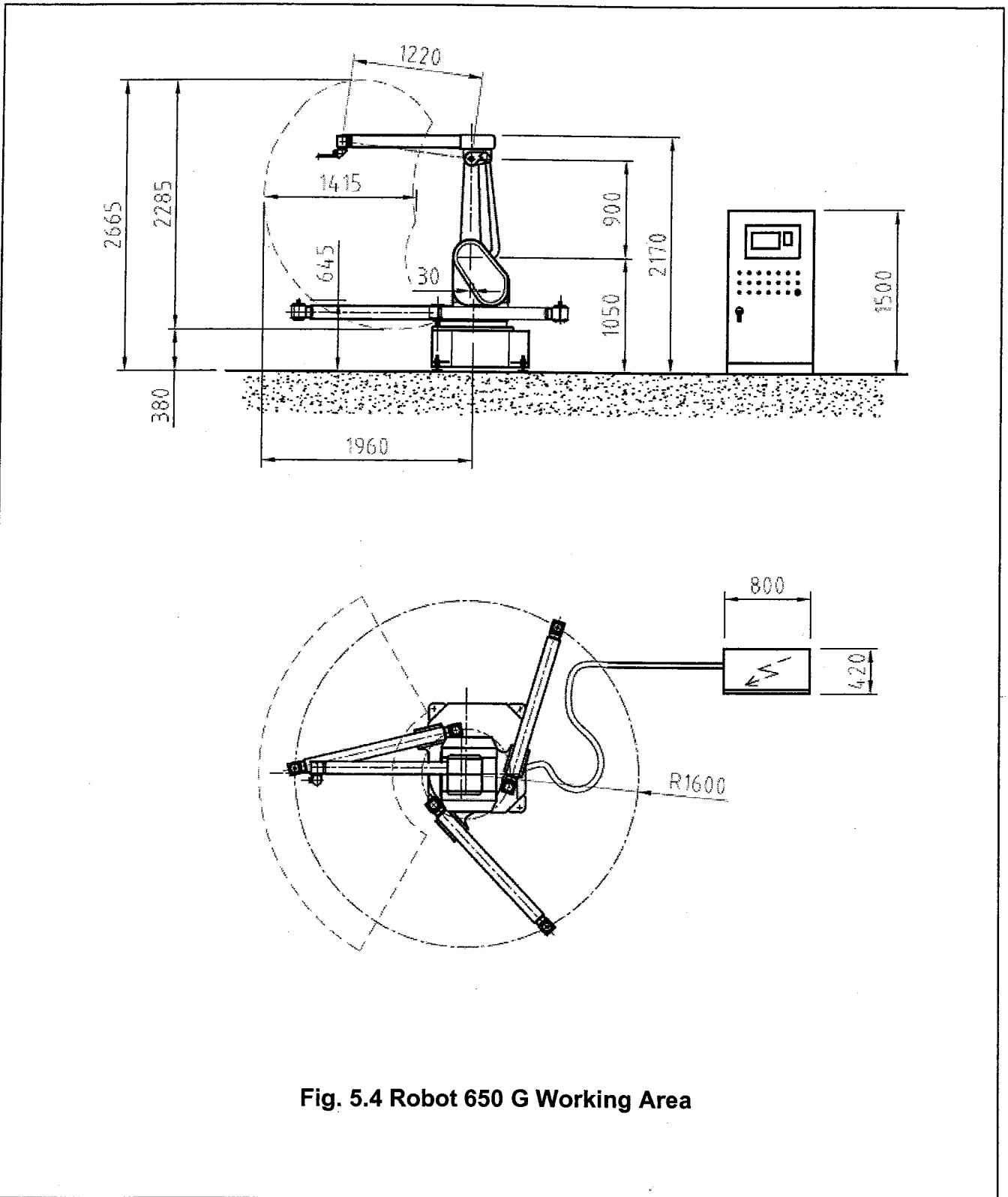


Fig. 5.4 Robot 650 G Working Area

8.2.3.1 Program learning procedure

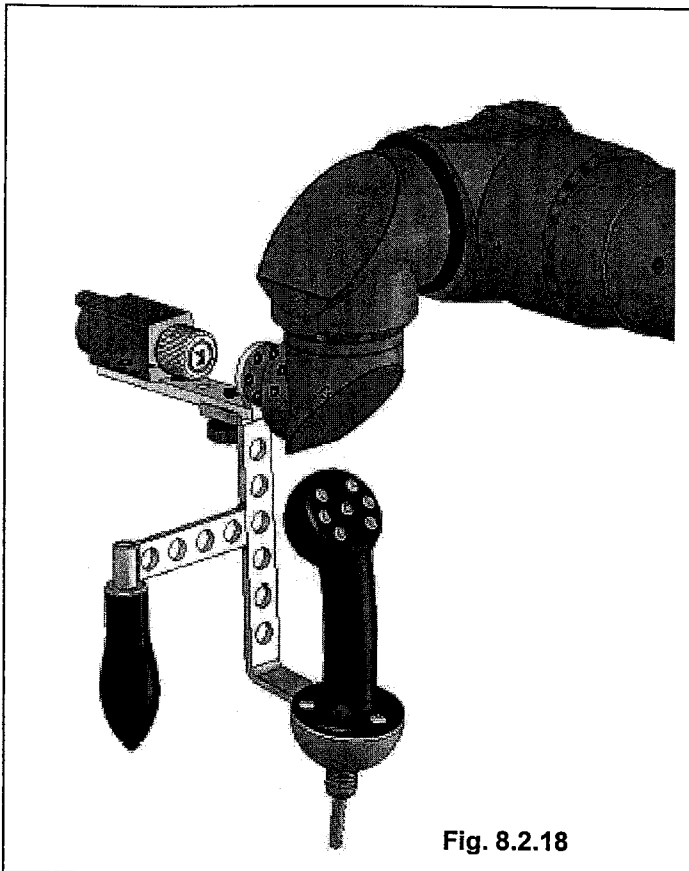
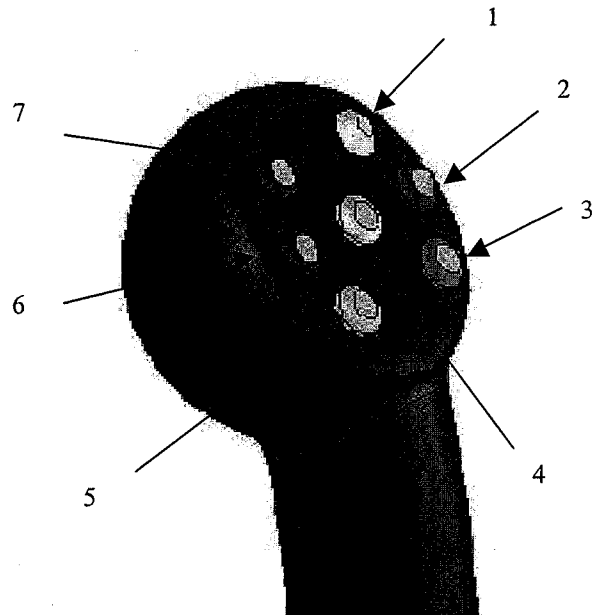


Fig. 8.2.18



- 1) Signal led (Green Red Yellow)
- 2) Start/Stop Learning
- 3) Confirm component
- 4) Gun command
- 5) Piece rotation
- 6) Zero command piece rotation
- 7) piece rotation mode step/continuous

Program learning steps:

- 1) Go to the Robot and take command knob or the Joystick. Connect the Joystick to the XS4 connector on the Robot base.
- 2) To begin learning, press the **2** button (Red). The Robot releases the clutch and the Led turns Red, indicating that the Robot is memorizing movements. The words Learning in Process will appear on the Display. To activate the gun, press the **4** button (Gray). The gun activation mode can be by impulse or self-held through selection on the Mobile Panel. If the Robot is an ST model with conveyor synchronization, the Led turns yellow just before the piece arrives and turns off when it is possible to start learning. When the Led subsequently turns on, this indicates that a new piece is arriving.
- 3) To terminate the memorization phase, press the **2** button (Red) again.
- 4) At this point, it is necessary to confirm the learned component by pressing the **3** button (Green) (the green Led will turn on for a few seconds). If the component presents errors, it is possible to redo the learning process by pressing the **2** button.
- 5) If piece rotation is necessary, press the **5** button (Yellow). Rotation can take place in preset steps (these can be set using the Mobile Panel) or in a continuous mode. To select the rotation mode in steps or continuous, press the **7** button (Blue). To check the set mode, use the Mobile Panel Display. To return the piece to the zero position, use the **6** button (Blue).



Attention

Disconnect the Joystick at the end of the Learning process.

PLEASE NOTE: In the versions without piece rotation function, the 6 and 7 buttons can be personalized.