EU Type Examination Certificate CML 23ATEX1162X Issue 0

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **GR630-1900 Industrial Robot**

3 Manufacturer **CMA (WUHU) Robotics Co., Ltd.**

4 Address **No.96, East Wanchun Road,**
China (Anhui) Pilot Free Trade Zone
Wuhu Area, Wuhu, Anhui Province,
China

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 67386717, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-2:2014

10 The equipment shall be marked with the following:

II 2 G D

Ex pxb IIC T4 Gb

Ex pxb IIIC T135°C Db

Ta= -10°C to +40°C

11 Description

The GR630-1900 is a six-axis industrial spray-gun robot with a working radius of 1900 mm. The GR630-1900 industry robot is comprised of a robot mechanism located in a hazardous area and a control cabinet located in a safe area. The robot has a base, big arm, small arm and wrist. The robot base and arms are protected by pressurisation, they are connected by gas pipe, inside robot base and the arms are fitted with a motor, solenoid valve and flow meter. The protective gas comes from compressed air located in the safe area.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	28 Apr 2023	R15653A/00	The issue of prime certification.

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.

ii. The GR630 Industry Robotics shall be designed in accordance with general electrical safety standards e.g. IEC 60950 or IEC 61010-1.

iii. Each product shall be subjected to the following routine testing:

- Functional test for the performance of safety devices as required by EN 60079-2:2014 Clause 17.1.
- A leakage test in accordance with EN 60079-2:2014, clause 16.3.1. The leakage shall not exceed 30 Nl/min.

iv. The manufacturer shall ensure that the safety and integrity of the purging control system is consistent with a single fault evaluation in accordance with IEC 61511 or similar standard.

v. A suitably certified purge control unit that provides the function required for ‘Ex pxb’ type control systems shall be fitted to the pressurised enclosure, and shall be able to deliver and monitor the following parameters:

- Minimum purge flow rate 140 Nl/min
- Minimum purge time 360 Seconds
- High pressure setting 0.4 bar
- Low pressure setting 0.2 bar
- Minimum flow rate for leakage compensation 30 Nl/min

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. The temperature of the protective gas at the inlet of the enclosure shall not exceed 40°C.

ii. The float switches are required to be part of a suitably certified intrinsically safe circuit.

Certificate Annex

Certificate Number	**CML 23ATEX1162X**
Equipment	**GR630-1900 Industrial Robot**
Manufacturer	**CMA (WUHU) Robotics Co. Ltd**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
GR630-1900-00000	1 of 1	-	11 Apr 2023	Robot Body
GR630-1900-01000	1 of 1	-	11 Apr 2023	Basement
GR630-1900-02000	1 of 1	-	11 Apr 2023	Swivel and boom
GR630-1900-03000	1 of 1	-	11 Apr 2023	Motor base part
GR630-1900-04000	1 of 1	-	11 Apr 2023	Wrist part
GR630-1900-EX-001-CE	1 of 1	-	11 Apr 2023	Key Component Position
GR630-1900-EX-002-CE	1 of 1	-	11 Apr 2023	Cable layout
GR630-1900-EX-003-CE	1 of 1	-	11 Apr 2023	ATEX Nameplate
GR630-1900-EX-004-CE	1 of 1	-	11 Apr 2023	Label map
GR-EX-001-CE	1 of 1	-	11 Apr 2023	Component install position
GR-EX-002-CE	1 of 1	-	11 Apr 2023	Pneumatic schematic
GR-EX-003-CE	1 of 1	-	11 Apr 2023	Control sequence diagram