



ALUTEC KK

Steel protective fencing

**Security solutions for robotic
workplaces and production lines.**



A comprehensive system security fence



The complex Aosaft steel security fencing system is designed to secure robotic workplaces, automated production lines, machines and warehouses.



Properties

- flexibility, simplicity and speed of installation
- unlimited configuration options thanks to a range of accessories
- strength according to ISO 14120-2015 withstands an impact force of 1600J
- certified safety fencing that complies with the safety regulations for the prevention of accidents according to the Machinery Directive 2006/42/EC

Use

The modular steel fencing system can be used wherever you need to quickly create your own fencing with minimal equipment. The system is suitable for securing robotic workplaces, automated production lines, machines and warehouses.

Accessories

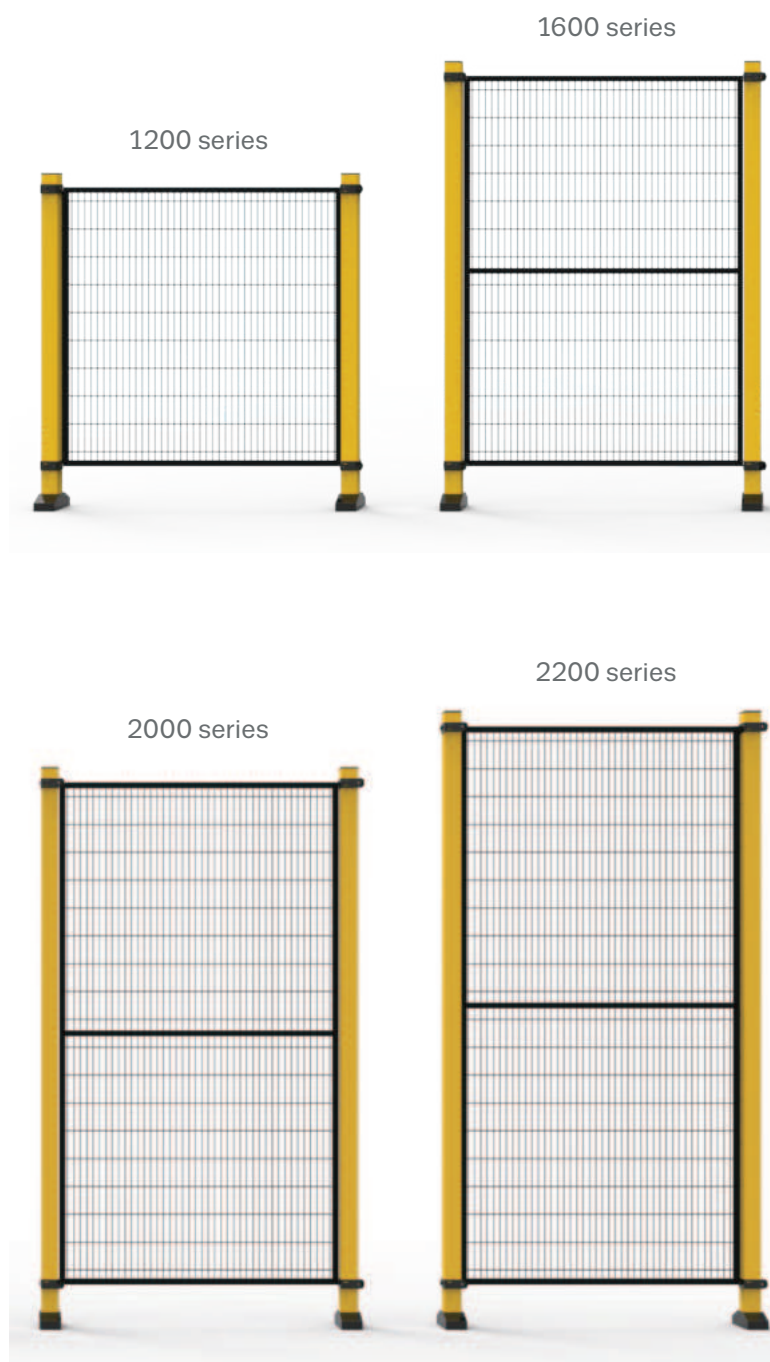
The system is designed with a wide range of accessories and fasteners.. Key accessories include doors (single-leaf, double-leaf), sliding and hinged doors and gates, folding doors and gates, locks (mechanical, security), blanks, mounting kits and more.

Basic parameters

square profile - column	60 x 60 x 1,5 mm
square profile - mesh	20 x 20 x 1,2 mm
mesh - aperture	20 * 100 mm
mesh - wire diameter	3 mm

Basic colours

	RAL1018	standard color for posts
	RAL1023	
	RAL7035	
	RAL9005	base color of the panel



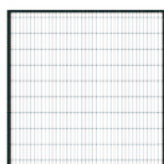
Steel post



code	width (mm)	height (mm)	weight (kg)
OPS1200	60x60	1200	3,9
OPS1600	60x60	1600	4,9
OPS2000	60x60	2000	6,2
OPS2200	60x60	2200	6,7

* the post also includes accessories (upper and lower clamping sleeve, post cover, anchoring base cover)

Steel panel



code	width (mm)	height (mm)	weight (kg)
OPP0210	200	1000	2,1
OPP0310	300	1000	2,5
OPP0410	400	1000	3,0
OPP0510	500	1000	3,4
OPP0610	600	1000	3,8
OPP0710	700	1000	4,3
OPP0810	800	1000	4,8
OPP0910	900	1000	5,2
OPP1010	1000	1000	5,7
OPP1110	1100	1000	6,2
OPP1210	1200	1000	6,8

Steel panel



code	width (mm)	height (mm)	weight (kg)
OPP0214	200	1400	2,9
OPP0314	300	1400	3,5
OPP0414	400	1400	4,2
OPP0514	500	1400	4,8
OPP0614	600	1400	5,4
OPP0714	700	1400	6,0
OPP0814	800	1400	6,6
OPP0914	900	1400	7,2
OPP1014	1000	1400	7,9
OPP1114	1100	1400	8,5
OPP1214	1200	1400	9,1
OPP0218	200	1800	3,7
OPP0318	300	1800	4,4
OPP0418	400	1800	5,2
OPP0518	500	1800	5,9
OPP0618	600	1800	6,5
OPP0718	700	1800	7,4
OPP0818	800	1800	8,1
OPP0918	900	1800	8,8
OPP1018	1000	1800	9,6
OPP1118	1100	1800	10,3
OPP1218	1200	1800	11,0
OPP0220	200	2000	4,1
OPP0320	300	2000	4,8
OPP0420	400	2000	5,7
OPP0520	500	2000	6,4
OPP0620	600	2000	7,2
OPP0720	700	2000	7,9
OPP0820	800	2000	8,5
OPP0920	900	2000	9,4
OPP1020	1000	2000	10,2
OPP1120	1100	2000	10,8
OPP1220	1200	2000	11,8

* blanks are part of the panel

Hinged steel door (R / L) - with reinforcement



code	Hole width (mm)	overall width (mm)	height (mm)	weight (kg)
OPD0820	800	950	2000	26,8
OPD1020	1000	1150	2000	27,8
OPD1220	1200	1350	2000	29,2
OPD1520	1500	1650	2000	31,4
OPD0822	800	950	2200	27,7
OPD1022	1000	1150	2200	29,4
OPD1222	1200	1350	2200	31,0
OPD1522	1500	1650	2200	33,4

Double hinged steel door with reinforcement



code	Hole width (mm)	overall width (mm)	height (mm)	weight (kg)
OPD1620	1600	1760	2000	35,5
OPD2020	2000	2160	2000	38,5
OPD2420	2400	2560	2000	41,3
OPD3020	3000	3160	2000	45,7
OPD1622	1600	1760	2200	37,3
OPD2022	2000	2160	2200	40,7
OPD2422	2400	2560	2200	43,9
OPD3022	3000	3160	2200	48,7

Hinged steel door (R / L) - without reinforcement



code	Hole width (mm)	overall width (mm)	height (mm)	weight (kg)
OPD0816	800	950	1600	18,1
OPD1016	1000	1150	1600	19,4
OPD1216	1200	1350	1600	20,6
OPD1516	1500	1650	1600	22,5

Double hinged steel door - without reinforcement



code	Hole width (mm)	overall width (mm)	height (mm)	weight (kg)
OPD1616	1600	1760	1600	27,5
OPD2016	2000	2160	1600	30,1
OPD2416	2400	2560	1600	32,5
OPD3016	3000	3160	1600	36,3

* all types of doors are delivered assembled

Single sliding doors (L/R)



code	Hole width (mm)	overall width (mm)	height (mm)	weight (kg)
OPV0820.P	800	1840	2000	51,0
OPV1020.P	1000	2240	2000	55,0
OPV1220.P	1200	2640	2000	59,0
OPV1520.P	1500	3000	2000	70,0
OPV0822.P	800	1840	2200	53,7
OPV1022.P	1000	2240	2200	58,0
OPV1222.P	1200	2640	2200	62,4
OPV1522.P	1500	3000	2200	73,7

Double sliding doors



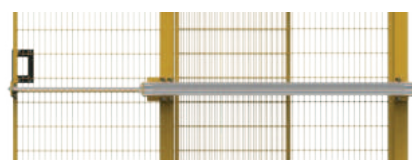
code	Hole width (mm)	overall width (mm)	výška (mm)	weight (kg)
OPB1420.P	1400	3130	2000	81,6
OPB1620.P	1600	3530	2000	86,0
OPB2020.P	2000	4330	2000	95,8
OPB2420.P	2400	5130	2000	104,0
OPB3020.P	3000	6330	2000	125,3
OPB1422.P	1400	3130	2200	96,0
OPB1622.P	1600	3530	2200	90,3
OPB2022.P	2000	4330	2200	101,0
OPB2422.P	2400	5130	2200	109,6
OPB3022.P	3000	6330	2200	131,7

Suspended door (L/R)



code	Hole width (mm)	overall width (mm)	výška (mm)	weight (kg)
OPV0816.Z	800	2050	1600	46,5
OPV1016.Z	1000	2450	1600	52,5
OPV1216.Z	1200	2850	1600	59,5
OPV1516.Z	1500	3450	1600	70,3
OPV0820.Z	800	2050	2000	52,9
OPV1020.Z	1000	2450	2000	60,0
OPV1220.Z	1200	2850	2000	66,6
OPV1520.Z	1500	3450	2000	78,5
OPV0822.Z	800	2050	2200	54,1
OPV1022.Z	1000	2450	2200	61,1
OPV1222.Z	1200	2850	2200	68,0
OPV1522.Z	1500	3450	2200	82,0

Choice of door closing:
manual, pneumatic or
electric



pneumatic opening



electric opening

* all types of doors are delivered assembled

Double suspended door



code	Hole width (mm)	overall width (mm)	výška (mm)	weight (kg)
OPB1616.Z	1600	3930	1600	82,2
OPB2016.Z	2000	4730	1600	95,8
OPB2416.Z	2400	5530	1600	108,5
OPB1620.Z	1600	3930	2000	92,6
OPB2020.Z	2000	4730	2000	106,3
OPB2420.Z	2400	5530	2000	121,3
OPB1622.Z	1600	3930	2200	99,3
OPB2022.Z	2000	4730	2200	113,5
OPB2422.Z	2400	5530	2200	126,8

Folding door (L/R)



code	Hole width (mm)	overall width (mm)	výška (mm)	weight (kg)
OPV1820.S	1800		2000	39,5
OPV2420.S	2400		2000	50,5
OPV1822.S	1800		2200	41,5
OPV2422.S	2400		2200	53,5

Double open folding door



code	Hole width (mm)	overall width (mm)	výška (mm)	weight (kg)
OPB3620.S	3600		2000	63,5
OPB4820.S	4800		2000	86,0
OPB3620.S	3600		2200	66,5
OPB4820.S	4800		2200	91,0

* all types of doors are delivered assembled

Mechanical lock

code: OPZM01

weight: 3,4 kg



Mechanical lock

code: OPZM03

weight: 1,2 kg



Security lock PILZ me4.2/4AS

code: OPZP01

weight: 1,5 kg



Security lock PILZ me5s

code: OPZP02

weight: 2,1 kg



Safety switch XCSA702+XCSZ01

code: OPZS01

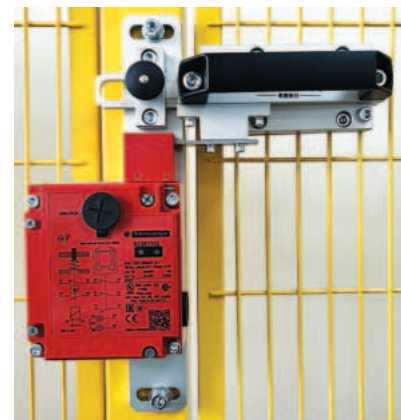
weight: 1,8 kg



Schneider security lock XCSE312+XCSZ01

code: OPZS02

weight: 2,9 kg



weight: 0,2 kg





According to ISO 14120-2015, it can withstand an impact force of 1600J



The color difference shall be measured by the instrumental method in accordance with the provisions of standards GB/T 11186.2-1989 and GB/T 11186.3-1989, and the sampling test shall be carried out by a spectrophotometer.



The thickness of the spray layer is in accordance with GB/T 26941.1-2011. The sampling check shall be carried out with a layer thickness gauge.



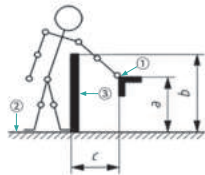
Corrosion resistance test according to ISO9227.

Product standardisation

GB23821-2009 Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs

Reaching over protective structures — High risk

Dimension in mm



- a -- height of hazard zone
b -- height of protective structure
c -- horizontal safety distance to hazard zone
① -- hazard zone (nearest point)
② -- reference plane
③ -- protective structure

Height of hazard zone a	Height of protective structure b								
	1000	1200	1400	1600	1800	2000	2200	2400	2500
	Horizontal safety distance to hazard zone c								
2600	900	800	700	600	600	500	400	300	100
2400	1100	1000	900	800	700	600	400	300	100
2200	1300	1200	1000	900	800	600	400	300	0
2000	1400	1300	1100	900	800	600	400	0	0
1800	1500	1400	1100	900	800	600	0	0	0
1600	1500	1400	1100	900	800	500	0	0	0
1400	1500	1400	1100	900	800	0	0	0	0
1200	1500	1400	1100	900	700	0	0	0	0
1000	1500	1400	1000	800	0	0	0	0	0
800	1500	1300	900	600	0	0	0	0	0
600	1400	1300	800	0	0	0	0	0	0
400	1400	1200	400	0	0	0	0	0	0
200	1200	900	0	0	0	0	0	0	0
0	1100	500	0	0	0	0	0	0	0

Notes : 1. Protective structures less than 1 000 mm in height are not included because they do not sufficiently restrict movement of the body.
2. Protective structures lower than 1 400 mm should not be used without additional safety measures.

Reaching through regular openings — Persons of 14 years of age and above

Dimension in mm

Part of body	Illustration	Opening	Safety distance S_r		
			Slot	Square	Round
Fingertip		$e \leq 4$	≥ 2	≥ 2	≥ 2
		$4 < e \leq 6$	≥ 10	≥ 5	≥ 5
Finger up to knuckle joint		$6 < e \leq 8$	≥ 20	≥ 15	≥ 5
		$8 < e \leq 10$	≥ 80	≥ 25	≥ 20
Hand		$10 < e \leq 12$	≥ 100	≥ 80	≥ 80
		$12 < e \leq 20$	≥ 120	≥ 120	≥ 120
		$20 < e \leq 30$	≥ 850 (Note)	≥ 120	≥ 120
Arm up to junction with shoulder		$30 < e \leq 40$	≥ 850	≥ 200	≥ 120
		$40 < e \leq 120$	≥ 850	≥ 850	≥ 850

The bold lines within the table delineate that part of the body restricted by the opening size.

Note : If the length of the slot opening is ≤ 65 mm, the thumb will act as a stop and the safety distance can be reduced to 200 mm.

Passed the Intertek professional test and received EU CE certification.



Test Quality Assured.

Test Verification of Conformity

Verification Number: 210804079GZU-VOC001

On the basis of the referenced test report(s), sample(s) tested of the below product have been found to comply with the standards harmonized with the directives listed on this verification at the time the tests were carried out. Other standards and Directives may be relevant to the product. This verification is part of the full test report(s) and should be read in conjunction with it ->them->.

Once compliance with all product relevant **CE** mark declarations are verified, including any relevant e.g. risk assessment and production control, the manufacturer may indicate compliance by signing a Declaration of Conformity themselves and applying the mark to products identical to the tested sample(s).

Applicant Name & Address:	Jinan Aorito Automation Co., Ltd. No.355, Huade Road, Jinan Economic Development Zone, Jinan City, Shandong Province, China
Product Description:	Fence
Ratings & Principle Characteristics:	See appendix pages
Models/Type References:	AAW Series (Wire Mesh Fence) AAP Series (Polycarbonate Panel Fence)
Brand Name:	Aorist
Relevant Standards/Directives:	EN ISO 12100: 2010 Safety of machinery – General principles for design - Risk assessment and risk reduction EN ISO 14120:2013 Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards Machinery Directive 2006/42/EC
Verification Issuing Office Name & Address:	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Room 02, & 101/E01/E01/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2, Capiex Road, Science City, GETDO, Guangzhou, Guangdong, China
Date of Tests:	10-August, 2021
Test Report Number(s):	190531010GZU-001, 002, 003, 004 R1 dated Aug. 10, 2021.





Signature

Name: Michael Wang
Position: Assistant Technical Manager
Date: 10 August, 2021

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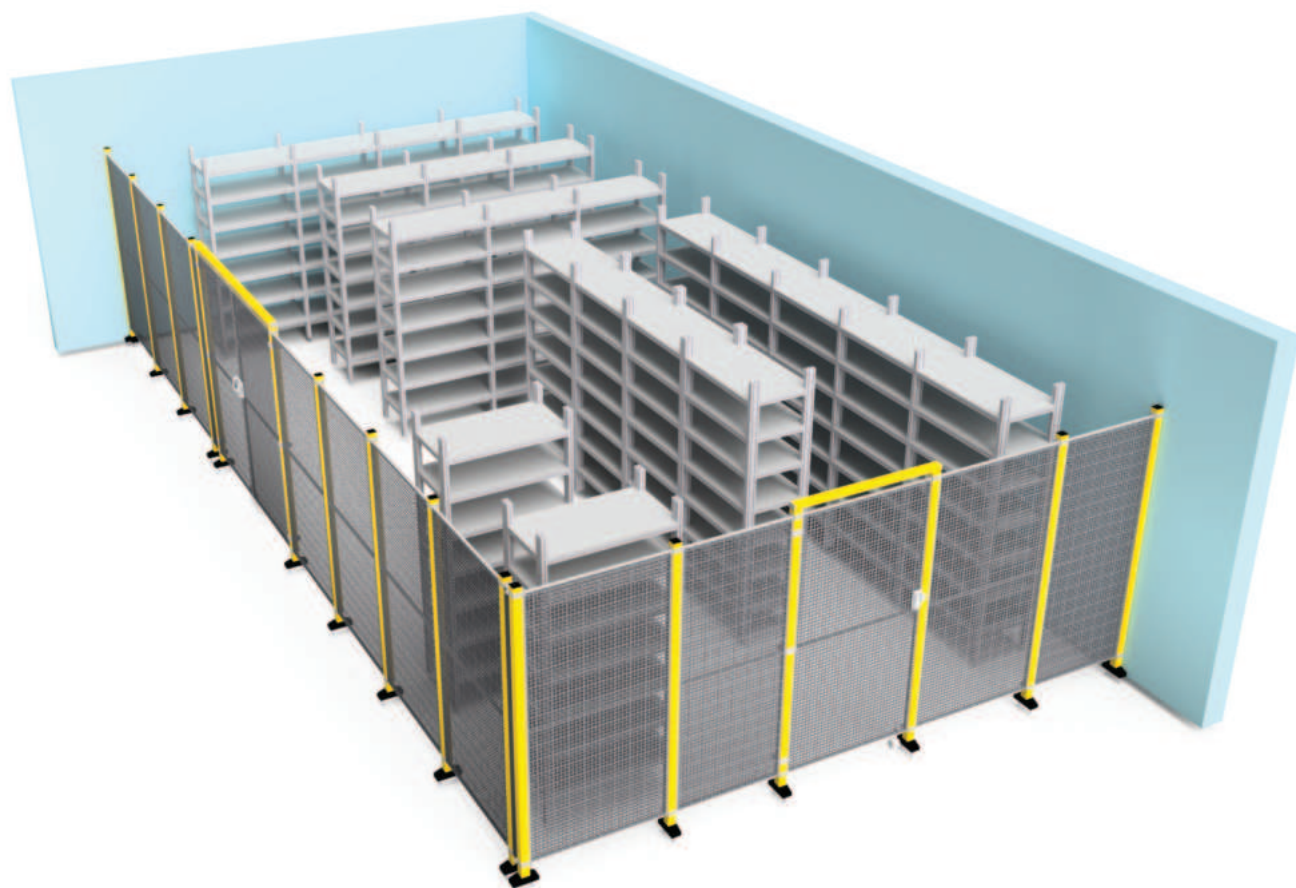
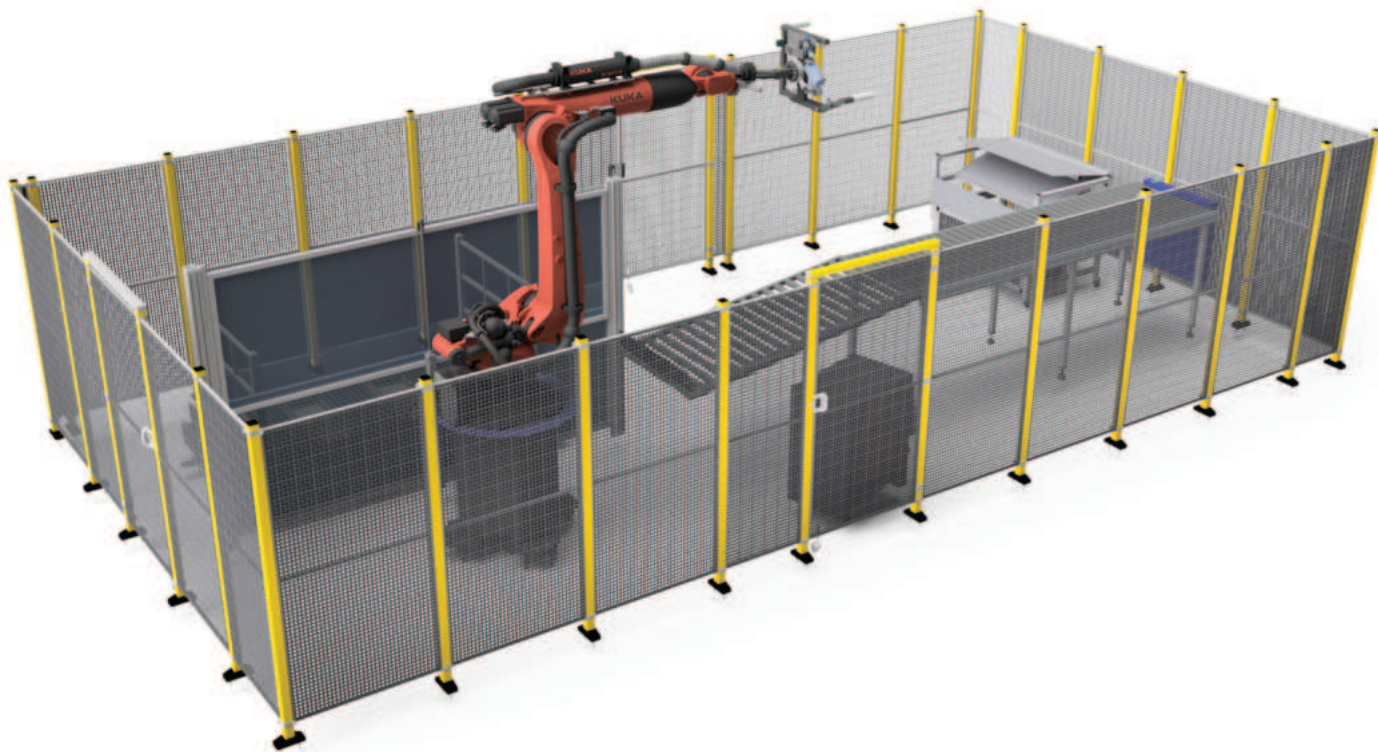
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GPT-QP-119 (10-2020)

ISO quality management system certification was obtained.

DNV-GL		
MANAGEMENT SYSTEM CERTIFICATE		
Certificate No: 102790-2011-00-0000-B0-A	Initial certification date: 31 August, 2011	Valid: 31 August, 2009 - 31 August, 2023
This is to certify that the management system of		
Jinan Aotto Automation Co., Ltd.		
No.355 Huade Road, Jinan Economic Development Zone, Jinan, P.R. China and the sites as mentioned in the appendix accompanying this certificate		
has been found to conform to the Quality Management System standard: GB/T 19001-2016/ISO 9001:2015		
This certificate is valid for the following scope:		
Design, Manufacturing, Sales, Commissioning and Service of Automation Equipment. Design, Manufacturing, Sales and Installation Services of Security Fence		
Place and date: Shanghai, 29 August, 2020		For the issuing officer: Roy Gø - Business Development Suite A, Building 9, No.1091 Hongqiao Road, Changning District, Shanghai 200336, P.R. China TEL: +86 21 32799000
		
This Book is complementary to the IAF 10.6		
The Hui Ping Management Representative		
Lack of fulfillment of conditions as set out in this Certification Agreement may render this Certificate invalid. AUTENTICA (INT) SPA Via Business Innovation 8/A, 20122/20123 L. 2007 06, INFORTMENT, 10749/14042, Via +3905220000, autentica@dnv-gl.com		





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