ISUZU

TECHNICAL

SUBMITAL

INTRODUCTION

Isuzu Elevators & Escalators

Selecated Elevator Parts & Components

The scope of supplies and services of this company is the research, developing, engineering, manufacturing and distribution of selected elevator parts and components.

Isuzu Elevators & Escalators is a Wholly Owned Foreign Investment Company in China and offers also imported key parts and components from Japan .

Optional, components engineered in Japan and original as engineered manufactured by specialized and experienced industrial companies with high-quality factory standard in China. The key components are certified for their safety and quality by the independent German Technical Ueberwachungsverein (TÜV) and the China National Elevator Testing & Inspection Center (NETEC).

The components are designed to an extension of an harmonized elevator system for the local and international market for potential small and medium-size elevator enterprises which can not afford to research and develop such an international advanced elevator system and technology.

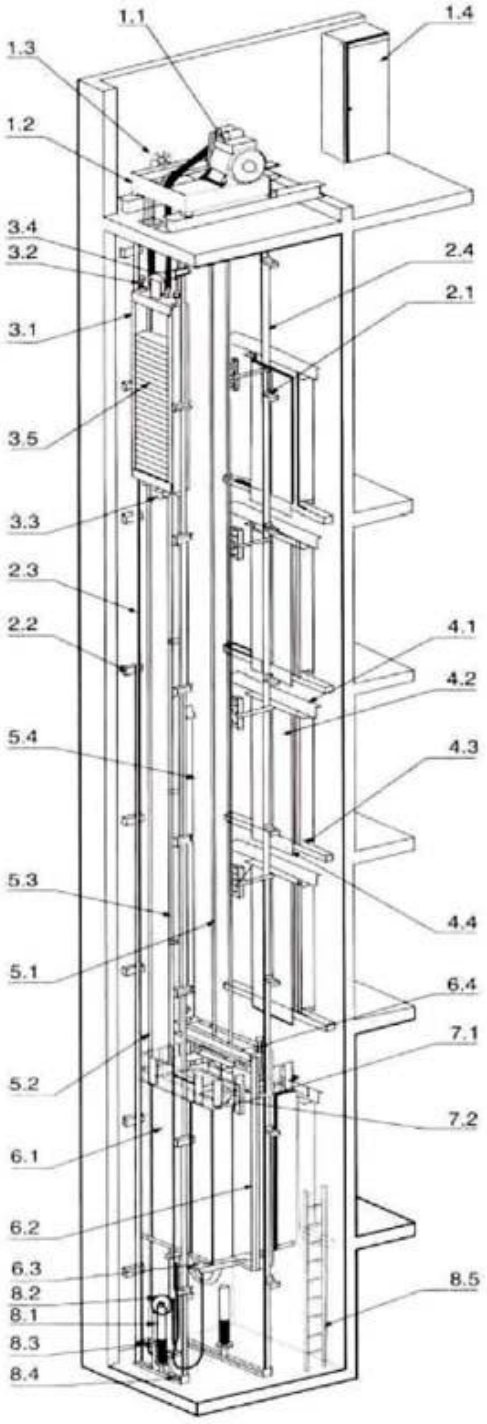
The ISUZU-INTERNATIONAL elevator system is state-of-the-art regarding technologies, quality, safety, designs and functions. The standardized components are modules, especially suitable for refurbishments and repairing and compatible to assemble as well as install complete elevators.

The elevator equipment is in full conformity with the European Standard EN 81-1:1998 "Safety Rules for the Construction and Installation of Electrical Lifts", the "China National Standard of "Safety Rules for the Construction and Installation of Electric Lifts GB 7588-2003",

The ISUZU -INTERNATIONAL guaranties 24-hour telecommunication and hotline service, world wide qualified technical support, long-term spare parts availability, express spare parts delivery and periodically seminars in their technical service center.

The ISUZU-INTERNATIONAL is confident in the success of their scope of supplies and services as well as convinced to contribute towards a fruitful cooperation with competent, selected companies, for the mutual benefit.

Selected Elevator Parts and Components



The Elevator System SE-SMR

1.0 Machine Room
1.1 Drive unit + encoder + handwheel
1.2 Machine base frame + rubber pad
1.3 Overspeed governor + rope attachment
1.31 Substruction
1.4 Controller + multi-functions
1.41 Inverter + optional UPS function

2.0 Shaft Equipment
2.1 Adjustable car guide rail bracket
2.2 Adjustable counterweight guide rail bracket
2.3 Counterweight guide rail
2.4 Car guide rail
2.41 Shaft wiring + connector

3.0 Counterweight
3.1 Counterweight frame + U-bolt
3.2 Guide shoe + lubricator
3.3 Hanging device
3.4 Diverter pulley
3.5 Counterweight filler

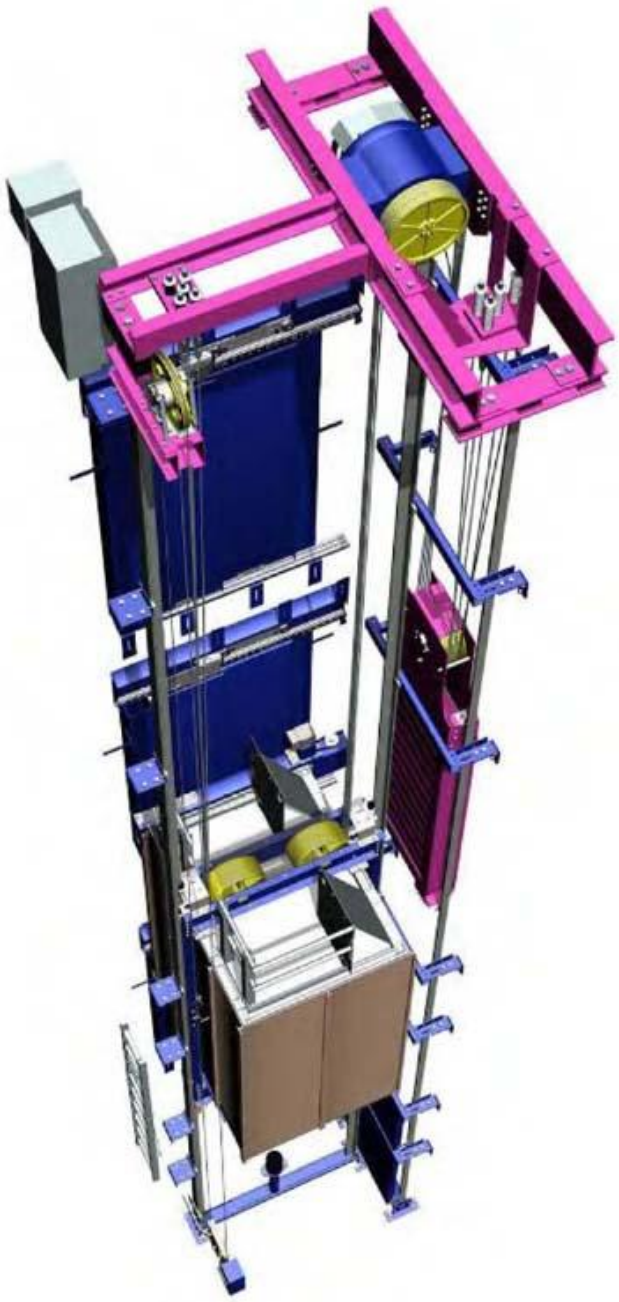
4.0 Landing Door
4.1 Hanger + bracket + narrow door jamb
4.11 Landing wiring + connector
4.12 Landing indicating operating panel
4.2 Door panel
4.3 Threshold + bracket
4.4 Toe guard

5.0 Ropes
5.1 Suspension rope
5.2 Compensation chain
5.3 Overspeed governor rope
5.4 Traveling cable + connector + clamp

6.0 Car Unit
6.1 Car + car load sensor + fan
6.11 Car operating panel + back box
6.12 Car distribution box + wiring
6.13 Car door + bracket
6.14 Safety light curtain + bracket
6.2 Car sling + switching cam for SFLT & SFLB
6.21 Balance weight + hanging device
6.3 Safety gear
6.4 Guide shoe + lubricator. Optional roller guide

7.0 Floor Selector
7.1 Selector vane + bracket
7.2 Shaft sensor set

8.0 Shaft Pit
8.1 Rubber buffer. Optional oil buffer
8.2 Tension device
8.3 Dampening device + bracket
8.4 Base plate + oil collector + cw guard
8.5 Pit ladder
8.51 Pit box + bracket



The Elevator System SE-MRL

1.0 Machine Room
1.1 Drive unit + encoder + handwheel
1.2 Machine base frame + rubber pad
1.3 Overspeed governor + rope attachment
1.31 Substruction
1.4 Controller + multi-functions
1.41 Inverter + optional UPS function

2.0 Shaft Equipment
2.1 Adjustable car guide rail bracket
2.2 Adjustable counterweight guide rail bracket
2.3 Counterweight guide rail
2.4 Car guide rail
2.41 Shaft wiring + connector

3.0 Counterweight
3.1 Counterweight frame + U-bolt
3.2 Guide shoe + lubricator
3.3 Hanging device
3.4 Diverter pulley
3.5 Counterweight filler

4.0 Landing Door
4.1 Hanger + bracket + narrow door jamb
4.11 Landing wiring + connector
4.12 Landing indicating operating panel
4.2 Door panel
4.3 Threshold + bracket
4.4 Toe guard

5.0 Ropes
5.1 Suspension rope
5.2 Compensation chain
5.3 Overspeed governor rope
5.4 Traveling cable + connector + clamp

6.0 Car Unit
6.1 Car + car load sensor + fan
6.11 Car operating panel + back box
6.12 Car distribution box + wiring
6.13 Car door + bracket
6.14 Safety light curtain + bracket
6.2 Car sling + switching cam for SFLT & SFLB
6.21 Balance weight + hanging device
6.3 Safety gear
6.4 Guide shoe + lubricator. Optional roller guide

7.0 Floor Selector
7.1 Selector vane + bracket
7.2 Shaft sensor set

8.0 Shaft Pit
8.1 Rubber buffer. Optional oil buffer
8.2 Tension device
8.3 Dampening device + bracket
8.4 Base plate + oil collector + cw guard
8.5 Pit ladder
8.51 Pit box + bracket

Geared VVVF Regulated Traction Machine Type TW 45 B

Performance Data		
Rated Load Q	Operating Speed	Suspension
475 kg	0.5 - 1.25 m/s	1:1
630 kg	0.5 - 1.0 m/s	1:1
900 kg	0.4 - 0.63 m/s	2:1
1000 kg	0.4 - 1.0 m/s	2:1
1300 kg	0.4 m/s	2:1

- **The Ideal Solution for Light Loads**
  Variable Motor Position, vertical or horizontal. Both designs are available as left- or right-hand version.
- **Excellent Motor Control**
  The VVVF motor with elastic coupling in B5 design guarantees optimal running performance.
- **Continuous Smoothness of Running**
  Due to a single-stage worm gear mounted on roller bearings, minor process tolerances, high-quality material and high-quality synthetic gear oil lubrication.
- **Optimal Adjustment**
  Rope exit from the traction sheave in all directions. Suitable for new installations and refurbishment for elevators with machine room.
- **Low Wear and Tear Traction Sheave**
  High durability as grooves are hardened. Available diameters 360, 420 or 520 mm. Designed for max. 7x8, 6x10, 6x11 or 5x12 mm ropes.

Type: YJ140
Capacity: 320 kg
Speed: 1 m/s
Traction Sheave: 440 mm
Power: 3.8 kW
Current: 6.6 A / 10.2 A
Gear VVVF Regulated
Suspension 1:1

Type: YJ140
Capacity: 450 kg
Speed: 1 m/s
Traction Sheave: 360 mm
Power: 4.8 kW
Current: 8.8 A / 13.0 A
Gear VVVF Regulated
Suspension 1:1

Type: FYJ180
Capacity: 630 kg
Speed: 1 m/s
Traction Sheave: 440 mm
Power: 7.0 kW
Current: 13.1 A / 25.7 A
Gear VVVF Regulated
Suspension 1:1

Type: FYJ240
Capacity: 1600 kg
Speed: 1 m/s
Traction Sheave: 450 mm
Power: 15.1 kW
Current: 30.6 A / 45.4 A
Gear VVVF Regulated
Suspension 1:1

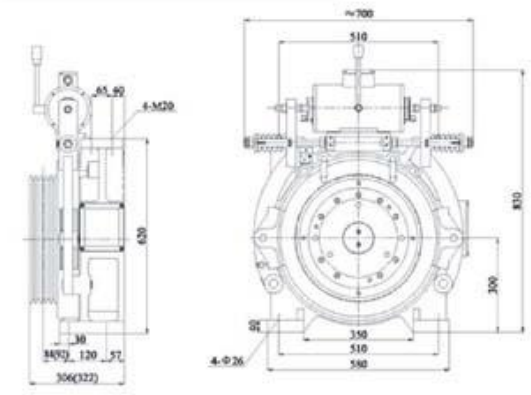
Geared VVVF Regulated Traction Machine Type WTY1

Performance Data		
Rated Load Q	Operating Speed	Suspension
450 kg	0.63 - 1.6 m/s	2:1
630 kg	1.0 -1.6 m/s	2:1
800 kg	1.0 - 2.0 m/s	2:1
1000 kg	1.0 - 2.5 m/s	2:1
1150 kg	1.0 - 2.5 m/s	2:1
1250 kg	1.0 - 2.5 m/s	2:1
1350 kg	1.0 - 2.5 m/s	2:1
1600 kg	1.0 - 2.0 m/s	2:1

- **The Ideal Solution for Elevators with Mini-Machine-Room**
  PMS disk motor.
- **Excellent Motor Control**
  The vector controlled, synchronous machine with permanent magnets are known for outstanding driving comfort. They are available in several power classes.
- **Easy Controllable Brake**
  The electrically released shoe brake is easy to maintain. Without laborious, time-consuming constructions.
- **Silent Running**
  As synchronous machine, no additional ventilation is necessary. This results in a comfortable low sound-pressure level.
- **Optimal Adjustment**
  Rope exit from the traction sheave in all directions. Suitable for new installations and refurbishment of elevators with small machine room.

Type: GTW2
Capacity: 450 kg
Speed: 0.63 m/s
Traction Sheave: 400 mm
Power: 1.8 kW
Rated Current: 5.0 A
Gear VVVF Regulated
Suspension 2:1

Type: GTW2
Capacity: 1600 kg
Speed: 2.0 m/s
Traction Sheave: 400 mm
Power: 22 kW
Rated Current: 50 A
Gear VVVF Regulated
Suspension 2:1



ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Industrie Service

CERTIFICATE

Examination of Conformity

Certificate no.:	TM 008-2007-CHI
Notified body:	TÜV SÜD Industrie Service GmbH Westendstraße 199 D-80686 München
Applicant/ Certificate holder:	Suzhou Torin Drive Equipment Co., Ltd. (Original name: Changshu Elevator Traction Machine Factory Co., Ltd.) New & High Tech Industrial Park, CEDZ, Jiangsu, P.R.China (Original address: 252#North Waihuan Road, Changshu, Jiangsu, P.R.China)
Date of submission:	2007-12-15
Manufacturer:	Suzhou Torin Drive Equipment Co., Ltd. (Original name: Changshu Elevator Traction Machine Factory Co., Ltd.) New & High Tech Industrial Park, CEDZ, Jiangsu, P.R.China (Original address: 252#North Waihuan Road, Changshu, Jiangsu, P.R.China)
Product, type:	Traction Machine, model YJ140
Sample no.:	07PA0150
Testing laboratory:	Shenzhen Institute of Special Equipment Inspection and Test 1032 Honggang Road, Luohu District Shenzhen, China
Date and number of test report:	2007-04-13 2007AF0063
Specifications:	- Directive 95/16/EC of 29th of June 1995 - Standard DIN EN 81-1:1998 + AC: 1999
Statement:	The equipment fulfils the safety requirements of the specifications. This statement is valid as long as all products are in full compliance with the sample of the type-examination and there is no change of the requirements referring to traction machines.
Place and date of issue:	Changshu, 2008-03-07

Certification Body
Products for Vertical Transportation
EC-Identification Number: 0036

Authorized representative Peter Tkalec

TÜV SÜD Industrie Service GmbH

CE

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ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Industrie Service

CERTIFICATE

Examination of Conformity

Certificate no.:	TM 009-2007-CHI
Notified body:	TÜV SÜD Industrie Service GmbH Westendstraße 199 D-80686 München
Applicant/ Certificate holder:	Suzhou Torin Drive Equipment Co., Ltd. (Original name: Changshu Elevator Traction Machine Factory Co., Ltd.) New & High Tech Industrial Park, CEDZ, Jiangsu, P.R.China (Original address: 252#North Waihuan Road, Changshu, Jiangsu, P.R.China)
Date of submission:	2007-12-15
Manufacturer:	Suzhou Torin Drive Equipment Co., Ltd. (Original name: Changshu Elevator Traction Machine Factory Co., Ltd.) New & High Tech Industrial Park, CEDZ, Jiangsu, P.R.China (Original address: 252#North Waihuan Road, Changshu, Jiangsu, P.R.China)
Product, type:	Traction Machine, model FYJ180
Sample no.:	06PE0281
Testing laboratory:	Shenzhen Institute of Special Equipment Inspection and Test 1032 Honggang Road, Luohu District Shenzhen, China
Date and number of test report:	2006-06-02 2006AF0109
Specifications:	- Directive 95/16/EC of 29th of June 1995 - Standard DIN EN 81-1:1998 + AC: 1999
Statement:	The equipment fulfils the safety requirements of the specifications. This statement is valid as long as all products are in full compliance with the sample of the type-examination and there is no change of the requirements referring to traction machines.
Place and date of issue:	Changshu, 2008-03-07

Certification Body
Products for Vertical Transportation
EC-Identification Number: 0036

Authorized representative Peter Tkalec

TÜV SÜD Industrie Service

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C E R T I F I C A T E

TÜV

of Conformity
Low Voltage Directive 73/23/EEC
as last amended by EEC Directive 93/68/EEC

Registration No.: AN 50020548 0001

Report No.: 15002610 001

Holder:
Changshu Elevator Traction Machine
Factory Co., Ltd.
No. 252 North Waihuan Road
Changshu, Jiangsu 215500
P.R. China

Product:
Aufzugstriebwerk
(Traction Machine)

Identification:

Type Designation:	WYT-Y2.0A	WYT-S1.75D	FYJ245	YJ240B
Serial No. :	03K0100	03W0100	03S1000	03V1000

Remark: Please refer to testreport 15002610 001 for details.

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal.This is to certify that the tested sample is in conformity with all revision of Annex I of Council Directive 73/23/EEC, in its latest amended version, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex III of the Directive.

Certification Body

TÜV Rheinland Product Safety GmbH Zertifizierungsstelle TÜV Rheinland

Cologne, 12.09.2003

Dipl.-Ing. K. Bodenstein

TÜV Rheinland Product Safety GmbH - Am Grauen Stein - D-51105 Köln

CE The CE marking may be used if all relevant and effective EC Directives are complied with. CE

C E R T I F I C A T E

TÜV

of Conformity
Low Voltage Directive 2006/95/EC

Registration No.: AN 50077666 0001

Report No.: 15015127 001

Holder:
Changshu Elevator Traction Machine
Factory Co., Ltd.
No. 252 North Waihuan Road
Changshu, Jiangsu 215500
P.R. China

Product:
Elevator Power Unit
(Traction Machine)

Identification:

Type Designation:	GTW	GTN
Serial No. :	06MY01B4	06MP0043

Remark: Please refer to test report 15015127 001 for details.

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with all revision of Annex I of Council Directive 2006/95/EC, in its latest amended version, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex III of the Directive.

Cologne, 29.06.2007

TÜV Rheinland Product Safety GmbH Zertifizierungsstelle TÜV Rheinland

Certification Body

Dipl.-Ing. G. Reimann

TÜV Rheinland Product Safety GmbH - Am Grauen Stein - D-51105 Köln

CE The CE marking may be used if all relevant and effective EC Directives are complied with. CE

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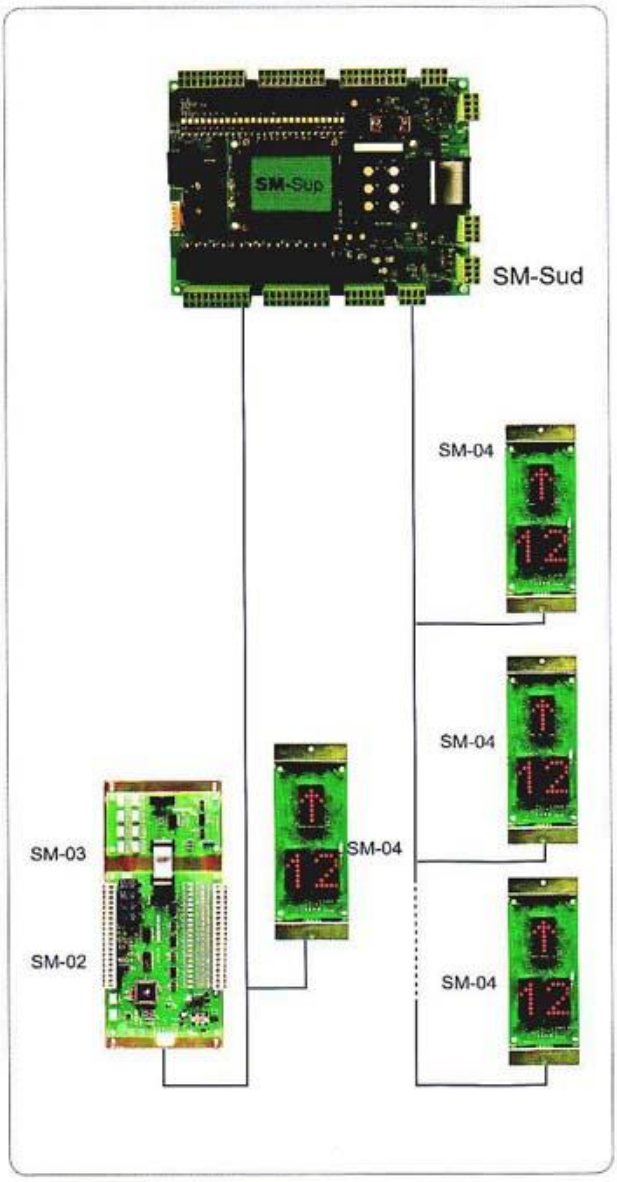
SmartComII Elevator controller

Structural diagram of SmartComII System



Main Features

- Four layers SMT, CANBus protocol, Network structure
- High capacity, high intelligence, high reliability, high class,
- Direct landing easily made possible
- Multi-language LCD display with key board operation
- Easy to install and start-up, no professional commissioning is required
- Customized design will be offered for mass order
- Remote monitoring is supported

Scope of Application

- Single Elevator, Duplex Elevator, 3~8 Elevators
- High speed, middle speed, low speed
- Simplex, Duplex and group control for 3 to 8 elevators
- VVVF, DCVV and AC two speed elevators
- Unlimited speed, unlimited floors

Product line

- SM-Net Main controller, Network Model
- SM-Sup Main controller, Enhanced Model
- SM-Ec Main controller, Economical Model
- SM-02 Car controller board
- SM-03 Command board
- SM-04 Call/Indicator board
- SM-GC Group controller

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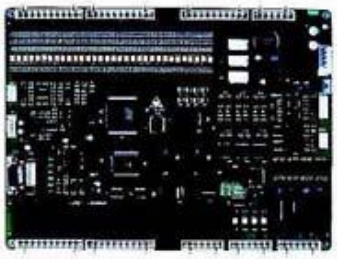
SmartCom.net Elevator controller

Components



SM-Net (SM-01-F3)
SmartCom.net Main Controller

SM-02
Car Controller

SM-03
Command Board

SM-04
Car/Indicator Board

Main Features

- 32bit ARM7 of ATMEL Elevator Controller, double CPU
- with large ROM/RAM memory space
- embedded TCP/IP Broad Band networking system and RTOS real time operating system
- variety of communication interfaces (max. 3 CAN and 3 RS-232/RS-485 interfaces)
- strong electromagnetic immunity (4000V)
- cost-free self-programming operating system for elevator function to customers
- high precise and smooth direct landing, analog speed input
- support desktop, laptop, palmtop or special operator for elevator testing
- support double encoder
- EN81 standard; wholly complies with GB7588-2003 Standard

Power Supply

Name	Input Voltage	Input Current(max)	Ballastic Current(max)	Power Consumption(max)
Specification	DC24V	DC 2A, less than 15 floors DC 3A, 15~30 floors	10A	100W

Input/Output

Name	Signal Input	High voltage input	General relay output	Safety relay output	Analog output
Amount	26	4	12	4	2
Specification	DC 24V	AC 180~230V DC 90~110V	DC 24V/3A	AC 250V/5A DC 30V/3A	DC 0~10V

Special ports

Name	CANBUS1	CANBUS2	485	232	High rate input	Absolute Value Encoder
Function	System communication	Duplex/Group control	Residential monitoring	Remote monitoring	Speed/Distance feedback	Speed/Distance feedback
Type of port	Plug	Plug	D type 9 pins	D type 9 pins	Plug	Plug
Quantity	1	1	1	1	1	1

System configuration

Type	SM-Net	SM-02	SM-03	SM-04
Name	Main controller	Car controller	Command Board	Call/Indicator
Quantity	1	1	N = Number of floors/8 n=1,2,3,4,5,6	Number of floors +1

Enhanced Model of serial communication elevator controller

STEP®

Components

SM-Sup (SM-01-F)
Enhanced Main Controller

SM-02
Car Controller

SM-03
Command Board

SM-04
Call/Indicator Board

Features

- Serial communication with CANBus protocol
- SM-Sup Main controller with four layers technology, all other boards with SMT
- 29 Digital Input, 16 Relay Output
- 0~10 VDC analog speed given/sectionalized speed given
- LCD Display with operational key
- Integrated RS485 Interface for elevator monitoring in a residential community
- Modem as an option for remote monitoring
- Suitable for all kinds of elevator

Power Supply

Name	Input Voltage	Input Current(Max)	Ballistic Current(Max)	Power consumption(Max)
Specification	85~265 VAC	0.5 AAC	2 AAC	60W

Ports

Name	CANBus1	CANBus2	RS485	RS232	High rate input
Function	System communication	Duplex/Group Control	Monitoring	Remote Monitoring	Feed back of speed/distance
Type of Port	Plug	Plug	D type 9 Pins	D type 9 Pins	Plug
Number	1	1	1	1	1

System configuration

Model	SM-Sup	SM-02	SM-03	SM-04
Name	Main controller	Car controller	Command Board	Call/Indicator
Number	1	1	N= Number of floor/8 N= 1,2,3,4,5,...	Number of floor + 1

Economical Model of serial/parallel communication elevator controller

STEP®

Components

SM-Ec (SEC-01)
Economical Main Controller

SM-02
Car Controller

SM-03
Command Board

SM-04
Call/Indicatior Board

Features

- Serial communication between Main controller and car controller, Parallel communication for other signals
- SM-Ec Main controller with four layers technology, all other boards with SMT
- 47 Digital Input, 44 Relay Output
- Sectionalized speed given
- Integrated RS485 Interface for elevator monitoring in a residential estate
- Modem as an option for remote monitoring
- Portable operation panel
- Suitable for elevator up to 9 floors

Power Supply

Name	Input Voltage	Input Current(Max)	Ballistic Current(Max)	Power consumption(Max)
Specification	85~265 VAC	0.5 AAC	2 AAC	60W

Ports

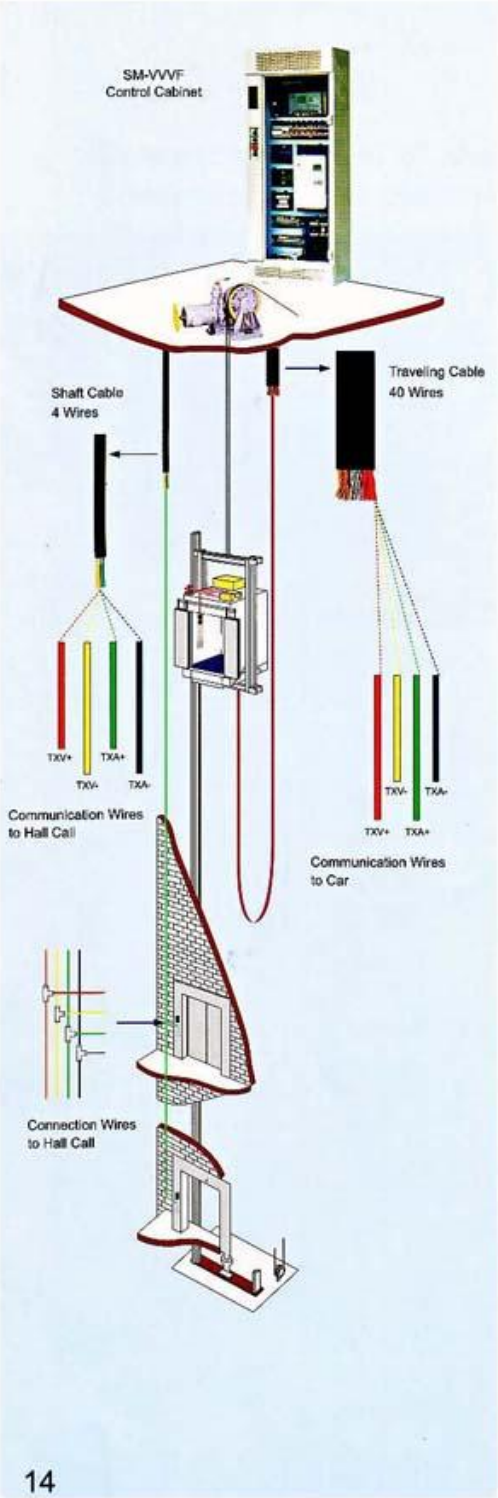
Name	CANBus1	CANBus2	RS485	RS232	High rate Input
Function	System communication	Duplex Control	Monitoring	Remote Monitoring	Feed back of speed/distance
Type of Port	Plug	Plug	D type 9 Pins	D type 9 Pins	Plug
Number	1	1	1	1	1

System configuration

Model	SM-Ec	SM-02	SM-03	SM-04
Name	Main controller	Car controller	Command Board	Call/Indicator
Number	1	1	N= Number of floor/8 N= 1,2	1

ISUZU Elevators & Escalators

Selected Elevator Parts and Components



Function List

Function	SM-Net	SM-Sup	SM-Ec	Note
1 Inspection control	Yes	Yes	Yes	
2 Collective selection	Yes	Yes	Yes	
3 Slow speed rescue operation	Yes	Yes	Yes	
4 Automatically door opening	Yes	Yes	Yes	
5 Door hold open time	Yes	Yes	Yes	
6 Hall call door reopen	Yes	Yes	Yes	
7 Door close button quick close	Yes	Yes	Yes	
8 Door open button	Yes	Yes	Yes	
9 Close/open switching	Yes	Yes	Yes	
10 Open/close switching	Yes	Yes	Yes	
11 Cancel the wrong command	Yes	Yes	Yes	
12 Cancellation of command in reverse direction	Yes	Yes	Yes	
13 Direct landing	Yes	Yes	Yes	
14 Full load direct driving	Yes	Yes	Yes	
15 Arrival gong	Yes	Yes	Yes	
16 Automatic fan and light timer	Yes	Yes	Yes	
17 Automatic homing	Yes	Yes	Yes	
18 User friendly HMI	Yes	Yes	No	
19 Display of speed curve	Yes	Yes	No	
20 Fault record	Yes	Yes	Yes	
21 Self teaching of shaft data	Yes	Yes	Yes	
22 Setup of service floor	Yes	Yes	Yes	
23 Setup of Display character	Yes	Yes	Yes	
24 Attendant control	Yes	Yes	Yes	
25 Attendant control with priority	Yes	Yes	Yes	
26 Attendant By-Pass	Yes	Yes	Yes	
27 Independent drive	Yes	Yes	Yes	
28 Dot Matrix floor indication	Yes	Yes	Yes/No	
29 Scrolling Display	Yes	Yes	Yes/No	
30 Automatic modification of the shaft data	Yes	Yes	Yes	
31 Car Lockout	Yes	Yes	Yes	
32 Fire emergency return	Option	Option	Option	no fire fighting lift
33 Fire emergency operation	Option	Option	Option	fire fighting lift
34 Voice announcer	Option	Option	Option	
35 Door open disabled outside of door zone	Yes	Yes	Yes	
36 Protection by door safe edge	Yes	Yes	Yes	
37 Protection from overload	Yes	Yes	Yes	
38 Protection from reverse driving	Yes	Yes	Yes	
39 Protection from rope slip	Yes	Yes	Yes	
40 Protection from car sliding	Yes	Yes	Yes	
41 Protection from over travelling	Yes	Yes	Yes	
42 Contact monitoring	Yes	Yes	Yes	
43 Drive fault detection	Yes	Yes	Yes	
44 Watchdog protection	Yes	Yes	Yes	
45 Monitoring in a residential community	Option	Option	Option	via RS485
46 Remote monitoring	Option	Option	Option	via Modem
47 Duplex control	Yes	Yes	No	for group control
48 Group control	Yes	Yes	No	for group control
49 Backup running	Yes	Yes	No	for group control
50 Continual running	Yes	Yes	No	for group control
51 Multi service floor scheme	Option	Option	Option	for group control
52 Hall lanterns	Option	Option	Option	for group control
53 VIP	Option	Option	Option	for group control
54 IC Card	Option	Option	Option	for group control

STEP®

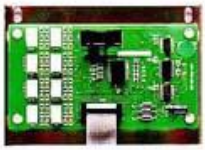
Accessories of SmartCom II Control System

SM-02
Car Controller

A. Car Controller (SM-02-B)

I Installation position:
Car control Panel

II Function
1. Collect signals from components in car, translate them into CANBus protocol and send it to the main controller.
2. Receive the Serial transmission signals from the main controller, translate it into control signal and then to actuate the related components in Car.

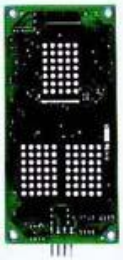


SM-03
Command board

B. Command board (SM-03-B)

I Installation position:
Car operating panel

II Function
1. Receive command from car command button (8 command per board).
2. Output the voltage for car command button.



SM-04-VRA
Call/Indicator board

C. Call/Indicator board (SM-04-VRA)

I Installation position:
Car operating panel and hall call box

II Function
1. As an indicator in car, to display the floor number and running direction of elevator.
2. As an hall indicator and call controller, to display the floor number and running direction of the elevator, and also receive and transmit the call signal and latch elevator signal.
3. Round dot matrix, LED display.

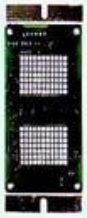
STEP®

SM-04-HRB
Call/Indicator board

D. Call/Indicator board (SM-04-HRB)

I Installation Position:
Car door upside in the car and hall door upside in the hall

II Function
1. As an indicator in car, to display the floor number and running direction of elevator.
2. As an hall indicator and call controller, to display the floor numbers and running direction of elevator, and also receive and transmit the hall call signal and latch elevator signal.
3. Round dot matrix, LED display.



SM-04-VSA
Call/Indicator board

E. Call/Indicator board (SM-04-VSA)

I Installation Position:
Car operating panel and hall call box

II Function
1. As an indicator in car, to display the floor number and running direction of elevator.
2. As an hall indicator and call controller, to display the floor numbers and running direction of elevator, and also receive and transmit the hall call signal and latch elevator signal.
3. Square dot matrix, LED display.

SM-04-HSA
Call/Indicator board

F. Call/Indicator board (SM-04-HSA)

I Installation Position:
Car door upside in the car and hall door upside in the hall

II Function
1. As an indicator in car, to display the floor number and running direction of elevator.
2. As an hall indicator and call controller, to display the floor numbers and running direction of elevator, and also receive and transmit the call signal and latch elevator signal.
3. Square dot matrix, LED display.

SM-04-VHL
Call/Indicator board

G. Call/Indicator board (SM-04-VHL)

I Installation Position:
Hall call box or shaft

II Function
1. As an hall indicator and call controller, to display the floor numbers and running direction of elevator, and also receive and transmit the hall call signal and latch elevator signal.
2. To drive floor arrival light and arrival gong available.
3. Round dot matrix, LED display.

STEP®

Group Control of SmartCom II

Patent No. : 01132157.1

Group Control Cabinet

Features of SmartCom II Group Control

1. SmartComII adopts a centralized group control scheme, namely a dedicated computer for group control is responsible for the registration and allocation of hall calls. The allocation of hall call subjects to a "lowest waiting time" rule, in which the distance between the floors, registration of hall call and car instruction, call passing penalties, reverse running etc are taken into consideration, so that it can deploy an elevator to call in the shortest time.

2. The SmartComII Group Control can control up to 8 elevators up to 48 floors.

3. High speed communication between the group and car controllers using CANBus.

4. The SmartComII group controller possesses a back-up function. Even if the group controller is broken down, or powered off or in maintenance, the individual elevator can still keep running, when in back up operation, the operation of elevator is same as the operation of single elevator. Once the group controller is restored, the elevators return to group control mode immediately.

5. The group recognizes an elevator with fault it will be cut off from the group. Calls allocated to this car will be reallocated to other cars.

6. Hall calls are transmitted through the controller to the group controller, and the group controller will send the registration signal back to the elevator controllers and then through these controllers to send the signal to the relative hall call/indicator to acknowledge the call registration. If any one of the car controllers lost power, the group controller will directly communicate with the hall call/indicator boards so that the call/indicator can still be on line.

7. There are LED's on the group controller board, which indicate the presence of valid communication activity.

Main Functions

1. **Automatic Home to main floor**
In the group control system, once there is no elevator on the main floor, the elevator, which is nearest to the main floor and not allocated, will return automatically to the main floor.

2. **Scattered parking function**
If all elevators are idle for more than one minute, the group control system will enter into a scattered parking mode:
- If there is no elevator on the main floor or under the main floor, the system will deploy one elevator to the main floor, to park with the doors closed.
- If more than two elevators in the group are in normal mode, and there is no any elevator above the middle floor of the building, the system will allocate one of the elevators to park above the middle floor.

3. **Heavy Up Demand**
If the system switches into or detects a heavy up demand at the lobby (usually it is actuated with time relay), the system starts a rush hour service duty function, at this time the system will deploy most of the elevators, please refer to Table 4.1, to the main floor. When the demand is no longer valid, the system will return to normal operation mode.

4. **Heavy Down Traffic**
If the system detects heavy down traffic (fully loaded car traveling down) or is switched to heavy down mode (usually it is actuated with time relay), the system starts a rush hour service function, at this time the system will deploy several of elevators, please refer to Table 4.2, to top floor. If the rush hour is over, or for over two minutes any elevators above the main floor has been not full loaded, the system will return to normal operation mode.

5. **Floor Lockouts**
SmartComII group control provides, as standard, two alternate landing Schemes for the customer, which can be selected by two switches (or with time clock). If one of the two switches is turned on, the system will start to apply a different landing scheme, if the other switch is turned on, the system will start the other landing scheme. If no switch is on, the system runs in a normal mode. Every landing scheme can be preset to activate or lockout floors.

6. **Group split function**
With this function the elevator group can be split into two independent despatch groups, the elevators allocated to either group respond to that dispatch system only.

7. **Single elevator Single Riser**
Any car can be forced from the group to respond to a separate riser of calls. Although the calls will be allocated via the dispatcher the car effectively runs as a simplex. This opetration can be initiated by a discreet input or the time clock.

8. **Energy saving mode**
If the system detects that the number of elevators in service is more than required to meet the minimum service demands, the system will gradually reduce the number of elevators in service until the number of elevators in service is equal to the required number or until only one elevator is in service. In reverse, the number of elevators in service is under the required number for service, the system will gradually wake up the elevator that is in sleeping mode, until the number of elevators in service meets the requirement.

9. **Emergency Power**
If the building has an emergency power source and normal power is lost all cars will be returned to the main floor in sequence to let the passenger out according the sequence set up in the dispatch system. After all elevators have arrived at the main floor, the system will designate one or several elevators back into operation, keeping the remaining cars in sleep mode.

STEP®

SmartComII-VVVF Control Cabinet

SmartComII - VVVF
Control Cabinet

The control function of SmartComII-VVVF cabinet is implemented with SmartComII controller that made by STEP. And it also supports Duplex, Group control and Remote monitoring. The application of CANBus serial communication reduces greatly the wires of cable, reduces the cost of wiring, and also makes the elevator run reliably.

VVVF(Frequency invert) is used as a electric drive, which ensures that the velocity of elevator can be adjusted continuously, so that a comfortable elevator riding is ensured. Meanwhile since the application of VVVF, the operation efficiency of elevator is improved. This control cabinet can be applied for all kinds of AC elevator.

Rated Velocity: ≤6.0 m/s
Power Range: 5KW~75KW
Power Supply: AC200V~230V, 50/60Hz, 3 phases or AC 360V~460V, 50/60Hz, 3 phases
Compatible Invert: Yaskawa, Fuji, CT, MICO, KEB, Siemens
Landing Method: Direct Landing
Landing Accuracy: ≤±3mm
Ride feeling: smoothly, efficiently and comfortable
Requirements of heat elimination: No
Safety Standard: EN81, GB7588
Dimension: (W)600mmX(D)400mmX(H)1650mm

SmartComII-DCVV Control Cabinet

SmartComII - DCVV
Control Cabinet

The control function of SmartComII-DCVV cabinet is implemented with SmartComII controller made by STEP. And it also supports Duplex, Group control and Remote monitoring. The application of CANBus serial communication reduces greatly the wires of cable, reduces the cost of wiring, and also makes the elevator run reliably.

The electric drive uses MENTORII from CT, an electric generator is not needed any more. With changing the voltage on the brush of motor, the rotation speed of the motor can be modulated, therefore the elevator can run according to the given velocity curve, and a comfortable riding can be ensured, and operational efficiency is also improved and it saves energy to the utmost. Besides, since a RC suppression loop is applied, the noise in the machine room is greatly reduced. This control cabinet is suitable for kinds of DC elevator.

Rated Velocity: ≤6.3 m/s
Power Range: 5KW~75KW
Power Supply: AC360~460, 50/60Hz three phases
Compatible Invert: DC Invert of C.T.
Motor: DC Motor
Landing: Direct landing
Landing Accuracy: ≤±3 mm
Ride feeling: smooth, efficient, comfortable
Ride feeling: smoothly, efficiently and comfortable
Cost reduction in Power: > 60%
Safety Standard: EN81, GB7588
Dimension: (W)600mmX(D)400mmX(H)1650mm

STEP®

Machine room-less Elevator Control Cabinet

SM-VFW

The control functions of SM-VFW machine room-less elevator control cabinet is implemented with SmartComII Controller that made by STEP. And it also supports Duplex, Group control and Remote monitoring. The application of CAN Bus serial communication reduces greatly the wires of cable, reduces the cost of wiring, and also makes the elevator run reliably.

VVVF(Frequency invert) is used as the electric drive, which ensures that the velocity of elevator can be adjusted continuously, so that a comfortable elevator riding is ensured. Meanwhile since the application of VVVF, the operation efficiency of elevator is improved. This control cabinet can be applied to all kinds of machine-room-less elevator.

Rated Velocity: ≤1.75 m/s
Power Range: 5KW~22KW
Power Supply: AC200V~230V, 50/60Hz, 3 phases or AC 360V~380V, 50/60Hz, 3 phases
Compatible Invert: Yaskawa, Fuji, CT, MICO, KEB, SIEMENS, etc.
Landing Method: Direct Landing
Landing Accuracy: ≤±3mm
Ride feeling: smoothly, efficiently and comfortably
Temperature of Machine Room: -10°C~+45°C
Safety Standard: EN81, GB7588
Connection Mode: PHOENIX terminal, AMP plug
Control Cabinet Dimension: 450mmx2100mmx300mm
Color: Dark grey, blue, French grey, or customer-made design

ESC-300 Escalator Control Cabinet

ESC300

ESC-300 Control Cabinet for Escalator adopts special escalator control panel SCE and special inverter EVF for escalator developed by Shanghai STEP Electronic Co., Ltd, which is suitable for new escalator manufacturing and also for modernization of the old escalator. Monitoring of the external safety switch can also be realized with the help of safety switch monitoring board SCM.

Rated Velocity: ≤0.5 m/s
Power Range: 5KW~15KW
Power Supply: AC200V~230V, 50/60Hz, 3 phases or AC 360V~380V, 50/60Hz, 3 phases
Temperature of Machine Room: -10°C~+45°C
Safety Standard: GB16899
Dimension: 550mmx720mmx250mm
Color: Dark grey, blue, French grey, or individual design

Escalator Control Board

STEP®

SCE
Main Board

SCM
Safety Switch Monitoring Board

Main Features:

1. Four layers PCB structure, components with SMT technology.
2. 22 digital input, 4 high speed counter input, 10 relay output.
3. Plug connection mode.
4. LCD display with optional key to modify parameter and view error records.
5. Optional escalator monitoring board (SCM) to monitor and indicate all safety switches.

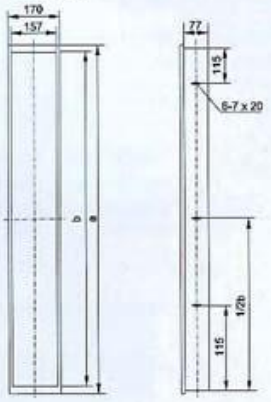
Control Panel

STEP®

OPP161 OPP162 OPP163 OPP164

OPP161 OPP162

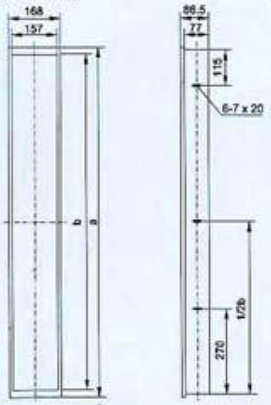
Dimension



Number of the floor	a	b
2–22	1386	1366
21–32	1574	1554

OPP163 OPP164

Dimension



Number of the floor	a	b
2–16	1120	1100
17–24	1300	1280
25–32	1480	1460
33–36	1570	1550

Hall Call

STEP®

CLP161

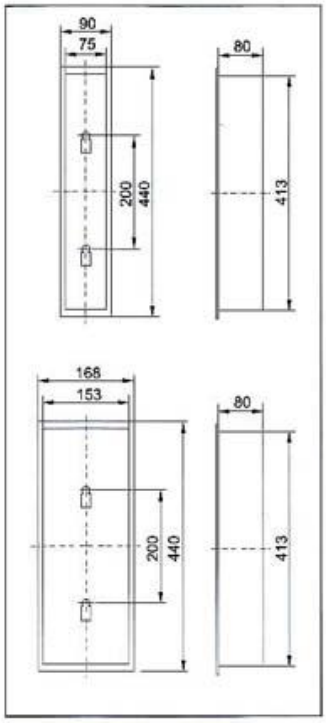
DCLP161

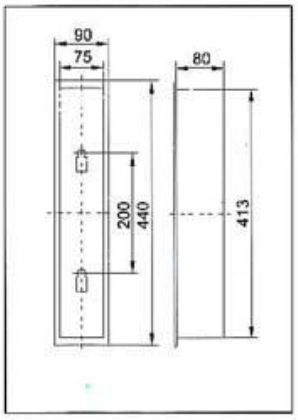
CLP162

DCLP162

CLP163

CLP164



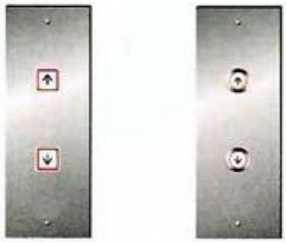


ISUZU Elevators & Escalators
Selected Elevator Parts and Components

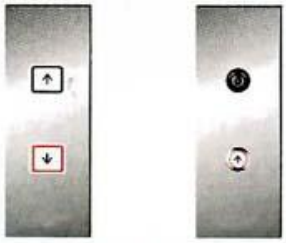
STEP®

Hall Call

DISP001

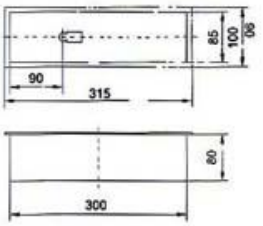


CLN161 CLN162

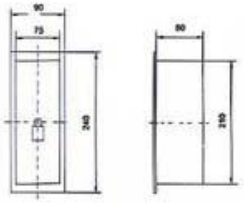


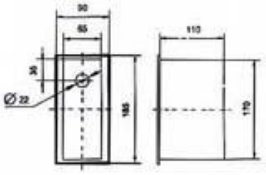
CLN163 CLN164

FIRP



B161 B163 B164





EP SERIES EMERGENCY POWER

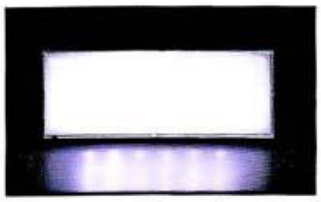
- The power supply is 220V AC input, 6V DC output. The emergency lighting is on as soon as car lighting is off.
- The power supply is equipped with PALMA batteries and ensures the quality guarantee.
- The discharge current is up to 1A.
- The capacity of battery is 4AH. It can be discharged for 4 hours if the discharge current is 1A., and the capacity will be 0.3C after using 3 years. It can still satisfy the requirement of GB7588-2003.
- Outputs terminal of intercom, alarm, and emergency power supply are available. The large discharge current can drive all these devices reliably.
- Satisfying the requirements of GB7588-2003.

TN-HD 990 SERIES ELEVATOR INTERCOM

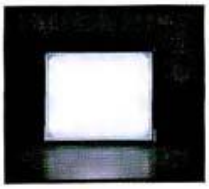
- Used for communication between car and machine room, watching room, monitor and control center and so on, with long distance transmission, clear voice in communication, small distortion, strong ability of anti-disturbance and so on.
- Optional power supply of 220V and 6V, low power expenditure.
- It needs only two communication wires.
- The assistant intercom device can send out loud sound, it needs no shouting, and you can speak in 2m distance. The transmission distance will be 500m, so it is very convenience for users. Also there are many types of combination, master device with master device, master device with slave device, slave device with slave device, one master device with several slave devices and several master devices with one slave device.
- This intercom device can be used for the optional communication to monitoring center or sub-system besides the three-sites communication.

EL SERIES EMERGENCY LIGHTING

EL series emergency lighting is mounted on the car operation panel, used for emergency light when the elevators power is off.



EL-L



EL-S

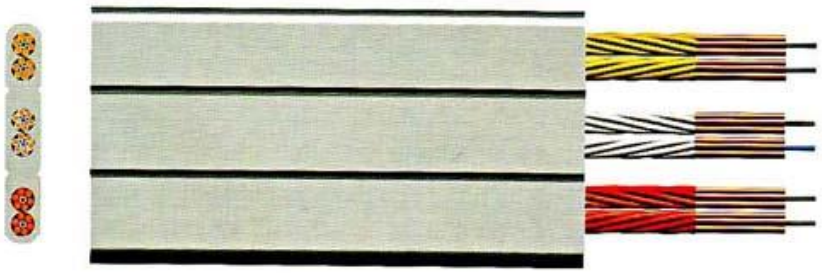
EL-R

EF SERIES FIRE PROTECTION SWITCH

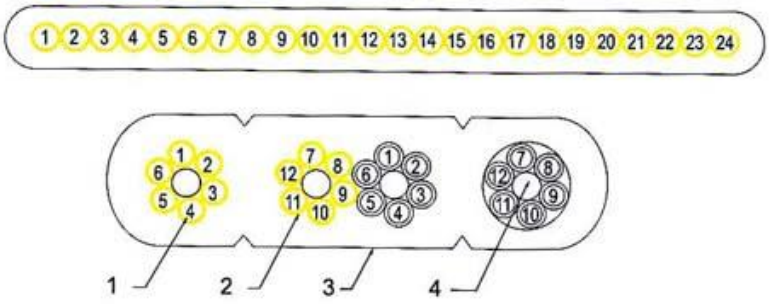
EF series fire protection switch is mounted in hall, used for emergency starting in case of fire alarm.

Outline dimension/mm: 90 × 185 × 110
Installation dimension/mm 65 × 170 × 110

TVVB Flat Elevator Cable



- Application: Elevator equipment
- Feature: PVC isolation PVC sheath
  Rated voltage, 300/500VAC、450/750VAC、Rated temperature: 70℃
- Product standard: GB5023.6-1997
- Figure of Cable structure



1—Copper; 2—PVC; 3—PVC sheath; 4—filling material

Cores	Cores × Section (m²)	Structure of core	Maximum overall size (mm)	Cores	Cores × Section (m²)	Structure of core	Maximum overall size (mm)
6	6×0.75	6×24/0.20	18.0×5.0	24	24×1	24×32/0.20	36.5×10.0
6	6×1	6×32/0.20	19.0×5.20	30	30×1.5	30×24/0.20	41.0×9.0
6	6×1.5	6×48/0.20	21.75×5.75	30	30×2.5	30×32/0.20	49.0×11.0
6	6×2.5	6×77/0.20	26.65×8.45	36	36×0.75	36×24/0.20	45.0×9.5
9	9×0.75	9×24/0.20	25.35×5.0	36	36×1	36×32/0.20	54.0×11.5
9	9×1	9×32/0.20	26.65×5.20	40	40×0.75	40×24/0.20	50.0×9.0
9	9×1.5	9×48/0.20	30.90×5.75	40	40×1	40×32/0.20	61.0×11.0
9	9×2.5	9×77/0.20	37.7×6.45	42	42×0.75	42×24/0.20	45.0×9.5
12	12×0.75	12×24/0.20	32.55×5.0	42	42×1	42×32/0.20	54.0×11.5
12	12×1	12×32/0.20	34.25×5.20	48	48×0.75	48×24/0.20	56.0×9.5
12	12×1.5	12×48/0.20	39.90×5.75	48	48×1	48×32/0.20	68.0×11.5
12	12×2.5	12×77/0.20	48.70×6.45	60	60×0.75	60×24/0.20	70.0×9.5
24	24×0.75	24×24/0.20	35.0×10.0	60	60×1	60×32/0.20	84.0×11.5

Final Limit Switch Top: SFLT

Final Limit Switch Bottom: SFLB

Overspeed Governor Switch: SOSG

Running Contactor: KR

Main Contactor: KM

Main Contactor: KMP
- Only for UPS -

Phase Sequence Relay: PREL
Function: Phase Failure
Phase Reversal,

Phase Monitor: Phase Failure,
Phase Reversal,
Over-voltage,
Under-voltage.

Lockable Main Switch: SMS3

		MLD-020		MLD-032		MLD-040		MLD-063		MLD-080		MLD-100	
Rated Insulated Voltage	V	660		660		660		660		1000		1000	
Max. Current	A	20		32		40		63		80		100	
Rated Current AC-23A AC-3	 A A	 15 11		 22 15		 30 22		 43 36		 57 43		 70 57	
Rated Voltage	V	240	440	240	440	240	440	240	440	240	440	240	440
Rated Control Power AC-23A AC-3	 kW kW	 3.7 2.7	 5.5 3.7	 5.5 4.0	 11 7.5	 7.5 5.5	 15 11	 9 8	 22 18.5	 15 9	 30 22	 22 15	 37 30
UL-C5A Standard Motor Load	HP	240 2	440 3	240 5	440 10	240 7.5	440 15	240 10	440 20	240 20	440 40	240 25	440 50
Rated Inner Current	A	180		264		360		516		684		840	
Wires Sizes	qmm	1.25~5.5		2~14		2~24		2~38		2~38		2~60	

1 to 9 Master Phone: MPHONE

- Can realize the intercom function with 9 elevators.
- Attractive design.
- Clear voice.
- High durability.

Speaker & Microphone: XMPHONE

Supervisory Room, Controller,
Car Operating Panel,
Car Distribution Box,
Pit Box.

Gong: LGONG

- With high quality Siemens integrated circuit.
- Attractive designing: high-quality and durability.
- Volume can be adjusted.
- Can be adjusted to 1,2 & 3 tones.
- 2 channels (up and down), can choose sound separately (optional).
- With superheating protecting circuit.
- **Related Parameters:**
  Work Voltage: DC12V~DC30V.
  Work Current: DC24V, high standard volume, 100mA.
  DC24V, biggest volume, 400mA.

Line Choke: LCHOKE

Line Filter: LFILT

Rated Voltage: 275/480V AC
Operating Frequency: 50/60Hz
Rated Current: 5 A ~ 1000A
Test Voltage (1 min): 1500V DC (Line / Line)
2250V DC (Line / Ground)
Climatic Category: 40 / 085 / 21

24V DC System Power Supply: G24

120W Single Output
DIN Series
Short Circuit Protected
Overload 105%~150% constant current limiting, auto-recovery,
Over Voltage 120%~140% rated output voltage.
Output: 24V DC, 5.0 A
Tolerance: 80 mV
Efficiency: 84%

Fire Emergency Operation Panel

- Size (L×W×D) 123×84×88mm.
- Housing: Stainless steel, hairline or mirror finish.
- **Related Parameters:**
  Work Voltage: DC12V～DC 24V
  Work Temperature: -20 ºC～50 ºC

Key Switch Panel

- Size (L×W×D): 123×84×88mm.
- Housing: Stainless steel, hairline or mirror finish.
- **Related Parameters:**
  Work Voltage: DC12V～DC 24V
  Work Temperature: -20 ºC～50 ºC

Shaft Sensor Set: SSS

Shaft Sensor Board: SSB

Sensor Console

Upper Signaler: USI

Upper Prelimit Switch: UPLS

Middle Signaler: MSI

Lower Signaler: LSI

Lower Prelimit Switch: LPL

To SSB
Terminal: XSEN

Car Load Sensor: LSEN

Range:	Zero Load - Half Load - Full Load -Overload
Sensing distance:	7 - 14 mm
Sensitivity:	0.5 %
Output:	0 - 10 V

Car

Car Door Motor: MCD

U = 230 V 50 / 60 Hz
I = 1.8 A
M = 1.9 Nm
n = 915 1 / min

Car Fan Motor: MFAN

Rated Power: 22 W
Rated Voltage: AC 220 V 50/60 Hz
Rated Air: 4.5 cbm/min
Noise Level: 47 dB

Car Distribution Box CDB

Shaft Wiring

Plug to SEC 8800
Terminal XSH

Machine Room

Wiring to:
Brake Magnets: BR1 / BR2
Brake Feed Back: SBR.1 / SBR.2
Motor Temperatur: RME
Overspeed Governor: SOSG

Shaft Head

Wiring to:
Shaft Door Contact Top: SSDC.N
Final Limit Switch: SFLT

Shaft Pit

Pit Box: PB
Power Socket 220/230V: XSPIT
Emergency Button: SPB
Pit Alarm Button: SPAL
Pit Intercom: ICOM7 / ICOM8
Shaft Light Switch: SSLT2 (optional)

Wiring to:
Shaft Door Contacts Bottom: SSDC.1
Slack Rope Switch: SSR
Final Limit Switch Bottom: SFLB
Car Alarm Buzzer: BUZ

Since 1911

Certificate of Conformity

With EU Electromagnetic Compatibility Directive 89/336/EEC
As Amended by 92/31/EEC and 93/68/EEC

Moody Ref. No.: CE-EMC-001

Applicant: Shanghai STEP Electric Co., Ltd.

Manufacturing Site: No. 289 Xinqin Road, Shanghai, China

Type Designation: SIG-AS5021 (SM-01-X, SM-02-X, SM-03-X, SM-04-X)
SIG-AS2021 (SM-01-X, SM-02-X, SM-03-X, SM-04-X)

Technical Data: Working Voltage DC 24V, Relay Output 100W
For Base Plate: Input voltage AC 180-230V / DC 90-110V

Technical Construction File Referenced No. / Rev.: STEP-TCF-01 / Rev. A

Codes/Standards Applied:

EN 12015: 1998 Electromagnetic Compatibility - Product Family Standard for Lifts, Escalators and Passenger Conveyors - Emission
EN 12016: 1998 Electromagnetic Compatibility - Product Family Standard for Lifts, Escalators and Passenger Conveyors - Immunity

Conclusion of Assessment:
We hereby confirm that the technical construction file and manufacturing, inspection and testing processes for above mentioned equipment comply with the essential safety requirements of EU Electromagnetic Compatibility Directive 89/336/EEC (as amended by 93/31/EEC and 93/68/EEC) & applied codes and standards.

Chief Assessor:

Company Authorised Signature:

CE

Moody International

Date of issue: 10 May 05

This certification remains valid subject to annual audit. The certificate is the property of Moody International and must be returned on request.

Since 1911

Certificate of Conformity

With EU Low Voltage Directive 73/23/EEC
As Amended by 93/68/EEC

Moody Ref. No.: CE-LVD-001

Applicant: Shanghai STEP Electric Co., Ltd.

Manufacturing Site: No. 289 Xinqin Road, Shanghai, China

Type Designation: SIG-AS5021 (SM-01-X)
SIG-AS2021 (SM-01-X)

Technical Data: Working Voltage DC 24V, Relay Output 100W
For Base Plate: Input voltage AC 180-230V / DC 90-110V

Technical Construction File Referenced No. / Rev.: STEP-TCF-01 / Rev. A

Codes/Standards Applied:

GB/T 4724 - 1992 (IEC 249-2(1987): Epoxide Cellulose Paper Copper-clad Laminated Sheets for Printed Circuits
GB/T 16261-1996 (IEC / PQC 88: 1990): Generic Specification Printed Boards
GB 14048.5 - 2001 (IEC 60947-5-1: 1997): Low-voltage Switchgear and Controlgear - Part 5-1: Control Circuit Devices and Switching Element Electromechanical Control Circuit Devices

Conclusion of Assessment:
We hereby confirm that the technical construction file and manufacturing, inspection and testing processes for above mentioned equipment comply with the essential safety requirements of EU Low Voltage Equipment Directive 73/23/EEC (as amended by 93/68/EEC) & applied codes and standards.

Chief Assessor:

Company Authorised Signature:

CE

Moody International

Date of issue: 10 May 05

Since 1911

Certificate of Conformity

With EU Low Voltage Directive 73/23/EEC
As Amended by 93/68/EEC

Certificate No.: 080510001A

Applicant: Shanghai STEP Electric Co., Ltd.

Manufacturing Site: No. 289, Xinqin Road, Shanghai, China

Type Designation: SW11 Phase Sequence Relay

Technical Data:

Input Voltage: 3 Phase AC230-440V, 50-60Hz;
Port's Insulated Voltage: 690V
Port's Rating Road: 250V/6A, 10A (AC125V):
Output Specificate: 1N/O & 1N/C;
Port's Life: $15*10^6$
Action Time: Less Than 10ms

Technical Construction File Referenced No. / Rev.: STEP-TCF (RELAY)-01 / Rev. A

Codes/Standards Applied:

EN60947-1:1999 Low-Voltage Switchgear and Control Gear-Part 1: General Rules
(IEC 60947-1:1999(Modified))
EN60947-5-1:1997 Low-Voltage Switchgear and Control Gear-Part 5-1: Control Circuit Devices and Switching Element-Electromechanical Control Circuit Devices
(IEC 60947-5-1:1997)

Conclusion of Assessment:

We hereby confirm that the technical construction file and manufacturing, inspection and testing processes for above mentioned equipment comply with the essential safety requirements of EU Low Voltage Directive 73/23/EEC (as amended by 93/68/EEC) & applied codes and standards.

MOODY INTERNATIONAL

Chief Assessor:

Company Authorised Signature:

CE

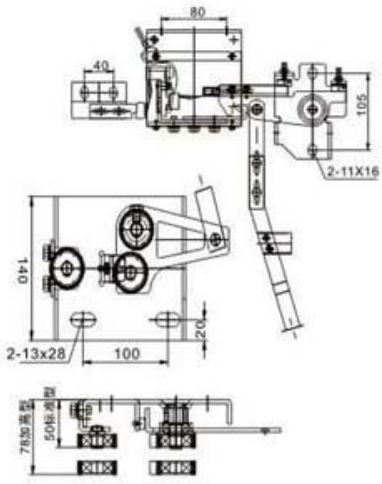
Moody International

Date of issue: 12 October ,2005

This certification remains valid subject to annual audit. The certificate is the property of Moody International and must be returned on request.

Safety Devices:(Door Lock)

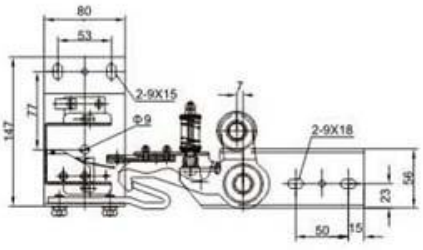
OX-152 门锁
Landing Door Interlock



额定电压 Rated voltage	DC110V
额定电流 rated current	DC0.2A

OX-161 门锁
Landing Door Interlock

CE 1128



额定电压 Rated voltage	DC110V
额定电流 Rated current	DC0.2A

ΕΥΡΩΠΑΪΚΗ ΕΤΑΙΡΙΑ ΕΛΕΓΧΩΝ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΕΩΝ Α.Ε.
EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.

CERTIFICATE NO.: CN.CE.0380.02-07/09

CERTIFICATE OF CONFORMITY TO TYPE WITH RANDOM CHECKING

EUROPEAN LIFT DIRECTIVE 95/16/EC ANNEX XI (MODULE C)

Manufacturer's/Applicant's- Certificate Holder's Name	:	NINGBO AODEPU ELEVATOR COMPONENTS CO.,LTD.
Address	:	NO 19 INDUSTRY AREA WUXIANG TOWN, NINGBO, CHINA
Date of Submission for type examination	:	2007-11-05
Product Name	:	LANDING DOOR LNTERLOCK
Product Type	:	OX-161
Rated Voltage/Current	:	DC110V/DC0.2A
Drawings	:	OX-161
Directives/Standards	:	95/16/EC, EN 81.1:1998+AC:1999 & EN 81.2:1998+AC:1999
Testing Laboratory	:	SHANGHAI JIAO TONG UNIVERSITY ELEVATOR TEST CENTER
Date and Number of Test Laboratory Report	:	2007-11-05, TX F340-026-07 0031
Audit Report No.	:	CN.CE.0380.02R
EC Type Examination certification (Module B) No.	:	CN.CE.0380.01-07/09

It is hereby certified that, on manufacturer's request, the aforementioned notified body EUROCERT SA, with identification number **1128**, has assessed the above type of safety components against the provisions of EUROPEAN LIFT Directive 95/16/EC Annex XI with satisfactory results. The manufacturer is authorized to provide the safety component described above with the CE Mark as displayed below:

CE

Preconditions:

It is required that the above safety equipment must always come with a declaration of conformity and the relevant instructions of use.

This certificate is valid until 01/07/2010

ATHENS, 02/07/2009
For EUROCERT

GEORGE N. SIFONIOS
DIRECTOR OF DEVELOPMENT

THE DATA OF THIS CERTIFICATE WERE GATHERED WITH EVERY POSSIBLE THOROUGHNESS
THIS CERTIFICATE REFLECTS THE FINDINGS OF THE TIME AND PLACE OF THE AUDIT
REPRODUCTION OF THIS DOCUMENT IS STRICTLY FORBIDDEN

Τσιοΐου 73 & Χαρ. Τρικούπη 145 64 Κηφισιά
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Internet site: www.eurocert.gr - e-mail: eurocert@otenet.gr

Product Certification
Cert. No. 21
ΔΠ13.21/Ε21/26-01-2009

Car and Landing Door

Car door drive:
With AC motor + Frequency Inverter

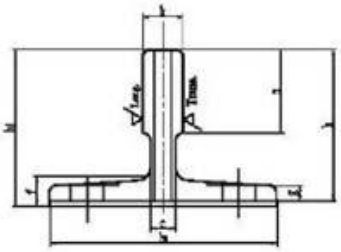
Door Dimension		Door Run Times		Weight of Car Door			Tread-way Area
DW	DH	T open	T close	powder coated	st. st. cladded	Glass Panels	
mm	mm	s	s	kg	kg	kg	sq.m
700	2000 - 2200	2.0	2.5	154	165	197	0.056
800	2000 - 2200	2.3	2.8	162	175	212	0.064
900	2000 - 2500	2.6	3.1	170	185	226	0.072
1000	2000 - 2500	2.8	3.3	178	194	240	0.080
1100	2000 - 2500	3.1	3.6	190	208	258	0.088
1200	2000 - 2500	3.3	3.9	198	217	272	0.096
1300	2000 - 2500	3.6	4.1	206	227	-	0.104
1400	2000 - 2500	3.9	4.5	214	236	-	0.112

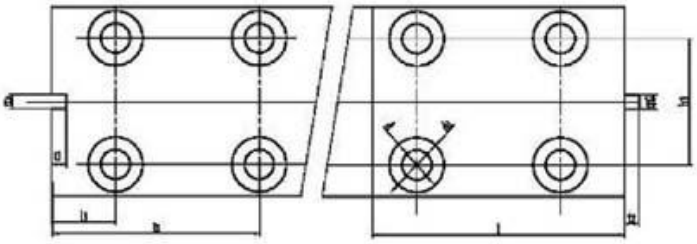
Car and Landing Door

Car door drive:
With PMS motor + Frequency Inverter

Door Dimension		Door Run Times		Weight of Car Door			Treadway Area
DW	DH	T open	T close	powder coated	st. st. cladded	Glass Panels	
mm	mm	s	s	kg	kg	kg	sq.m
700	2100	2.0	2.0	43	54	N/A	0.056
800	2100	2.5	2.5	46	58	N/A	0.064
900	2100	2.8	2.8	49	62	N/A	0.072
1000	2100	3.0	3.0	52	66	N/A	0.080
1100	2100	3.5	3.5	55	70	N/A	0.088
1200	2100	3.8	3.8	58	74	N/A	0.096

"T" guide rail

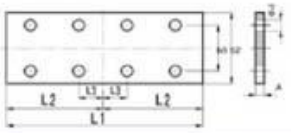




Sizes of "T" guide rail														
COD.	COD.ISO	b1	h1	h	k	n	c	g	f	rs	m1	m2	t1	t2
		TOLERANCES												
		±1.5		±0.1 (±0.05)	+0.1 0(±0.05)	+3 0		±0.75			(±0.03) (0)+0.05 0	(0) (-0.03) -0.04	±0.1	±0.1
RP75	T75-3/B	75	62	61	10	30	8	7	9	3	3	2.95	3.5	3
RP89	T89/B	89	62	61	15.88	33.4	10	7.9	11.1	3	6.4	6.37	7.14	6.35
RP90	T90/B	90	75	74	16	42	10	8	10	1	6.4	6.37	7.14	6.35
RP114	T114/B	114	89	88	16	38	10	8	12	4	6.4	6.37	7.14	6.35
RP127	T127-1/B	127	88.9	88	15.88	44.5	10	7.9	11.1	4	6.4	6.37	7.14	6.35
RP127	T127-2/B	127	88.9	88	15.88	50.8	10	12.7	15.9	5	6.4	6.37	7.14	6.35
RP140	T140-1/B	140	108	107	19	50.8	12.7	12.7	15.9	5	6.4	6.37	7.14	6.35
RP140	T140-2/B	140	102	101	28.6	50.8	17.5	14.5	17.5	5	6.4	6.37	7.14	6.35

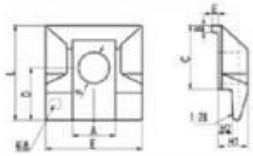
Data of "T" guide rail										
COD.	COD.ISO	s	q1	e	Ixx	Wxx	ixx	Iyy	Wyy	iyy
		Cm2	kg/m	Cm	Cm4	Cm3	Cm	Cm4	Cm3	Cm
RP75	T75-3/B	10.99	8.63	1.86	40.35	9.29	1.92	26.49	7.06	1.55
RP89	T89/B	15.7	12.3	2.29	59.7	14.5	1.98	53	11.9	1.84
RP90	T90/B	17.2	13.5	2.65	102.2	20.9	2.5	52	11.9	1.76
RP114	T114/B	20.8	16.4	2.87	179	29.7	2.93	108	19.1	2.26
RP127	T127-1/B	22.6	17.8	2.75	187	30.4	2.91	151.5	24	2.65
RP127	T127-2/B	28.9	22.7	2.46	200	31	2.68	235	36.8	2.86
RP140	T140-1/B	35.1	27.6	3.24	404	53.4	3.4	312	44.7	2.98
RP140	T140-2/B	42.9	33.6	3.52	463	68.7	3.3	357	51.2	2.89

连接板图形 Drawing of Fishplate



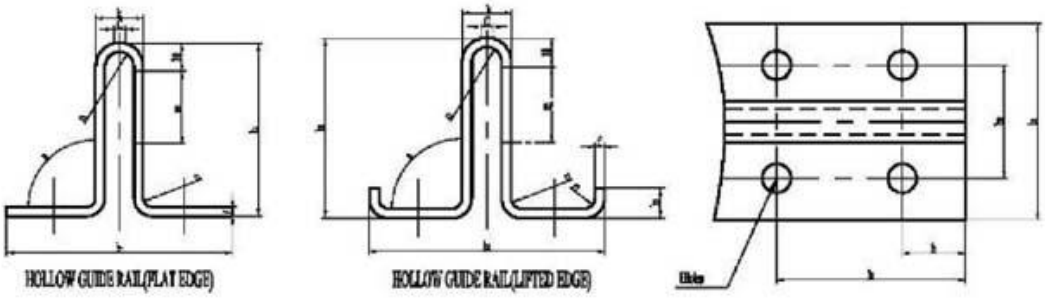
Fishplate size										
COD.	COD.ISO	ϕd	ϕd1	l	b2	b3	L1	L2	L3	A
		mm	mm	mm	mm	mm	mm	mm	mm	mm
		TOLERANCES								
				+3 0		±0.2	±1.5	±0.2	±0.2	
RP75	T75-3/B	13	26	123	75	43	240	90	60	8.5+1.5
RP89	T89/B	13	26	156	90	57.2	305	114.3	38.1	13+2
RP90	T90/B	13	26	156	90	57.2	305	114.3	38.1	13+2
RP114	T114/B	17	33	156	115	74	305	114.3	38.1	17+3
RP127	T127-1/B	17	33	156	130	79.4	305	114.3	38.1	17+3
RP127	T127-2/B	17	33	156	130	79.4	305	114.3	38.1	17+3
RP140	T140-1/B	21	40	193	140	92.1	380	152.4	31.8	25+3
RP140	T140-2/B	21	40	193	140	92.1	380	152.4	31.8	25+3

压导板图形 Drawings of clip



Clip Size									
COD.	COD.ISO	ϕ	A	B	C	D	E	H1	H2
		mm	mm	mm	mm	mm	mm	mm	mm
RP75	T75-3/B	13	18	3	23	20	2	13	2.5
RP89	T89/B	13	20	4	25	22	2	15	3
RP90	T90/B	13	20	4	25	22	2	15	3
RP114	T114/B	18	25	4	37	27	4	17	5
RP127	T127-1/B	18	25	4	37	27	5	22	8
RP127	T127-2/B	18	25	4	37	27	5	22	8

Hollow Guide Rail



Sizes of hollow guide rail									
Item / Tolerance / Type	b1	c	f	h1	h2	k	m	r1	a
	±1		+0.2 -0.5	+0 -0.5		±0.4			+60' +20'
TK3	75		2	55±0.2		10±0.2	20	5	90°
TK5	87	≥1.8	3	60		16.4	25	3	
TK8	100±2	≥4	4.5	80		22	30	6	
Tolerance	±1		+0.2 -0.15	±0.3	±1	±0.2			+60' +20'
TK3A	78		22	60	10	16.4	25	3	90°
TK5A			30						

Compensation Chain

Model No.	Unit Weight(kg/m)	Allowed min. curvation Dia (mm)	Max working length (m)
WF-QS075	1.12±0.2	560	110
WF-QS100	1.49±0.2	600	170
WF-QS150	2.24±0.2	600	180
WF-QS200	2.98±0.2	650	185
WF-QS250	3.73±0.2	650	185
WF-QS300	4.47±0.2	650	185
WF-QS350	5.22±0.2	680	185
WF-QS400	5.96±0.2	680	185

Guide Rail Bracket for Car and Counterweight

Car Sling: TCS

Progressive Safety Gear: PSG

ΕΥΡΩΠΑΪΚΗ ΕΤΑΙΡΙΑ ΕΛΕΓΧΩΝ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΕΩΝ Α.Ε.
EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.

CERTIFICATE NO.: CN.CE.0386.01-07/09

EC TYPE EXAMINATION CERTIFICATE

FOR SAFETY COMPONENT

EUROPEAN LIFT DIRECTIVE 95/16/EC ANNEX V_A (MODULE B)

Manufacturer's/Appicant's-Certificate Holder's Name	:	NINGBO AODEPU ELEVATOR COMPONENTS CO.,LTD.
Address	:	NO 19 INDUSTRY AREA WUXIANG TOWN, NINGBO, CHINA
Date of Submission of Type Examination	:	2008-07-31
Equipment Description	:	PROGRESSIVE SAFETY GEAR
Product Type	:	OX-210A
Tripping Speed	:	≤3.23m/s
Maximum Mass	:	3200kg
Minimum Mass	:	1200kg
Permissible Thickness of Guide Rail Blade	:	10mm, 15.88mm, 16mm
Minimum Width of the Gripping Areas	:	3mm, 7mm
Drawing No.	:	OX-210A
Directives/Standards	:	95/16/EC, EN 81.1:1998+AC:1999 & EN 81.2:1998+AC:1999
Audit Report No.	:	CN.CE.0386.01R

On manufacturer's request, it is hereby certified that the aforementioned notified body, EUROCERT SA, with identification number **1128**, has assessed the above safety component, against the provisions of European Lift Directive 95/16/EC Annex V_A (Module B), with satisfactory results.

Preconditions:

Before placing the above safety component on the market, the manufacturer must submit it to checks according to annexes XI (Module C) or VIII (Module E) of European Lift Directive 95/16/EC.

ATHENS, 06/07/2009
For EUROCERT

GEORGE N. SIFONIOS
DIRECTOR OF DEVELOPMENT

Τατοΐου 73 & Χαρ. Τρικούπη 145 64 Κηφισιά
Τηλ.: ++30 210 62.52.495, 30 210 62.53.927 - Fax: ++30 210 62.03.018
Internet site: www.eurocert.gr - e-mail: eurocert@otenet.gr

ΕΣΥΔ
Product Certification
Cert. No. 21
ΔΠ13.6/E20/26-01-09

ΕΥΡΩΠΑΪΚΗ ΕΤΑΙΡΙΑ ΕΛΕΓΧΩΝ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΕΩΝ Α.Ε.
EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.

CERTIFICATE NO.: CN.CE.0386.02-07/09

CERTIFICATE OF CONFORMITY TO TYPE WITH RANDOM CHECKING

EUROPEAN LIFT DIRECTIVE 95/16/EC ANNEX XI (MODULE C)

Manufacturer's/Applicant's- Certificate Holder's Name	:	NINGBO AODEPU ELEVATOR COMPONENTS CO.,LTD.
Address	:	NO 19 INDUSTRY AREA WUXIANG TOWN, NINGBO, CHINA
Date of Submission of Type Examination	:	2008-07-31
Equipment Description	:	PROGRESSIVE SAFETY GEAR
Product Type	:	OX-210A
Drawing No.	:	OX-210A
Directives/Standards	:	95/16/EC, EN 81.1:1998+AC:1999 & EN 81.2:1998+AC:1999
Testing Laboratory	:	SHANGHAI JIAO TONG UNIVERSITY ELEVATOR TEST CENTER
Date and Number of Test Laboratory Report	:	2008-07-31, TX F320-026-08 0006
Audit Report No.	:	CN.CE.0386.02R
EC Type Examination certification (Module B) No.	:	CN.CE.0386.01-07/09

It is hereby certified that, on manufacturer's request, the aforementioned notified body EUROCERT SA, with identification number **1128**, has assessed the above type of safety components against the provisions of EUROPEAN LIFT Directive 95/16/EC Annex XI with satisfactory results. The manufacturer is authorized to provide the safety component described above with the CE Mark as displayed below:

CE

Preconditions:

It is required that the above safety equipment must always come with a declaration of conformity and the relevant instructions of use.

This certificate is valid until 05/07/2010

ATHENS, 06/07/2009
For EUROCERT

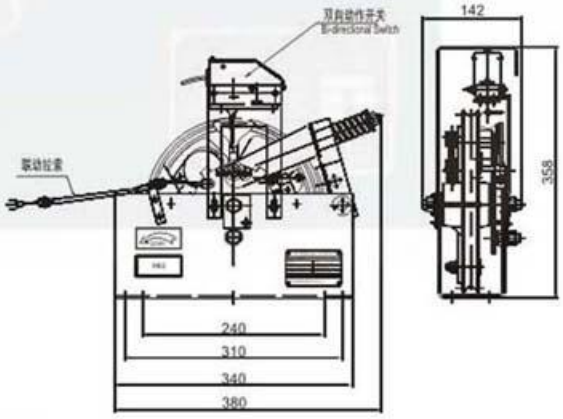
GEORGE N. SIFONIOS
DIRECTOR OF DEVELOPMENT

Ταταΐου 73 & Χαρ. Τρικούπη 145 64 Κηφισιά
Τηλ.: ++30 210 62.52.495, 30 210 62.53.927 - Fax: ++30 210 62.03.018
Internet site: www.eurocert.gr - e-mail: eurocert@otenet.gr

ΕΣΥΔ
Product Certification
Cert. No. 21
ΔΠ13.21/Ε21/26-01-2009

OX-240B 双向限速器
Bi-directional overspeed governor

额定速度 Rated speed	≤2.5m/s
钢丝绳直径 Wire rope diameter	φ6、φ6.3、φ8
绳轮直径 Sheave diameter	φ240
张紧力 Tension force	≥1000N
超速开关电压等级 Super switch voltage grade	AC220V
与OX-250机械触发式夹绳器配套使用 Using with the mechanical rope gripper of OX-250	



EURO CERT

ΕΥΡΩΠΑΪΚΗ ΕΤΑΙΡΙΑ ΕΛΕΓΧΩΝ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΕΩΝ Α.Ε.
EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.

CERTIFICATE NO.: CN.CE.0386.02-07/09

CERTIFICATE OF CONFORMITY TO TYPE WITH RANDOM CHECKING

EUROPEAN LIFT DIRECTIVE 95/16/EC ANNEX XI (MODULE C)

Manufacturer's/Applicant's- Certificate Holder's Name	:	NINGBO AODEPU ELEVATOR COMPONENTS CO.,LTD.
Address	:	NO 19 INDUSTRY AREA WUXIANG TOWN, NINGBO, CHINA
Date of Submission of Type Examination	:	2008-07-31
Equipment Description	:	PROGRESSIVE SAFETY GEAR
Product Type	:	OX-210A
Drawing No.	:	OX-210A
Directives/Standards	:	95/16/EC, EN 81.1:1998+AC:1999 & EN 81.2:1998+AC:1999
Testing Laboratory	:	SHANGHAI JIAO TONG UNIVERSITY ELEVATOR TEST CENTER
Date and Number of Test Laboratory Report	:	2008-07-31, TX F320-026-08 0006
Audit Report No.	:	CN.CE.0386.02R
EC Type Examination certification (Module B) No.	:	CN.CE.0386.01-07/09

It is hereby certified that, on manufacturer's request, the aforementioned notified body EUROCERT SA, with identification number **1128**, has assessed the above type of safety components against the provisions of EUROPEAN LIFT Directive 95/16/EC Annex XI with satisfactory results. The manufacturer is authorized to provide the safety component described above with the CE Mark as displayed below:

CE

Preconditions:

It is required that the above safety equipment must always come with a declaration of conformity and the relevant instructions of use.

This certificate is valid until 05/07/2010

ATHENS, 06/07/2009
For EUROCERT

GEORGE N. SIFONIOS
DIRECTOR OF DEVELOPMENT

Ταταΐου 73 & Χαρ. Τρικούπη 145 64 Κηφισιά
Τηλ.: ++30 210 62.52.495, 30 210 62.53.927 - Fax: ++30 210 62.03.018
Internet site: www.eurocert.gr - e-mail: eurocert@otenet.gr

ΕΣΥΔ
Product Certification
Cert. No. 21
ΔΠ13.21/Ε21/26-01-2009

ΕΥΡΩΠΑΪΚΗ ΕΤΑΙΡΙΑ ΕΛΕΓΧΩΝ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΕΩΝ Α.Ε.
EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.

CERTIFICATE NO.: CN.CE.0385.01-07/09

EC TYPE EXAMINATION CERTIFICATE

FOR SAFETY COMPONENT
EUROPEAN LIFT DIRECTIVE 95/16/EC ANNEX V_A (MODULE B)

Manufacturer's/Appicant's-Certificate Holder's Name	:	NINGBO AODEPU ELEVATOR COMPONENTS CO.,LTD.								
Address	:	NO 19 INDUSTRY AREA WUXIANG TOWN, NINGBO, CHINA								
Test Report Submission Date	:	2009-04-16								
Equipment Name	:	OVERSPEED GOVERNOR								
Product Type	:	OX-240B								
Scope of Application	:	OVERSPEED GOVERNOR								
Steel wire rope diameter	:	Φ 8 mm								
Car Rated Speed (m/s)	:	0.25	0.5	0.63	0.75	1.0	1.5/1.6	1.75	2.0	2.5
Diameter of Spring Wire ΦA (mm)	:	0.6	1.0	1.0	1.2	1.4	1.6	1.6	1.8	2
Pulling Force of the Safety Gear (N)	:	≤570	≤606.5	≤606.5	≤595	≤793.5	≤734	≤588	≤538.5	≤694.5
Drawing No.	:	OX-240B								
Directives/Standards	:	95/16/EC, EN 81.1:1998+AC:1999 & EN 81.2:1998+AC:1999								
Audit Report No.	:	CN.CE.0385.01R								

On manufacturer's request, it is hereby certified that the aforementioned notified body, EUROCERT SA, with identification number **1128**, has assessed the above safety component, against the provisions of European Lift Directive 95/16/EC Annex V_A (Module B), with satisfactory results.

Preconditions:

The manufacturer must check the subject safety equipment according to annexes XI (Module C) or VIII (Module E) of European Lift Directive 95/16/EC.

ATHENS, 15/07/2009
For EUROCERT

GEORGE N. SIFONIOS
DIRECTOR OF DEVELOPMENT

THE DATA OF THIS CERTIFICATE IS GATHERED WITH EVERY POSSIBLE THOROUGHNESS
THIS CERTIFICATE REFLECTS THE FINDINGS OF THE TIME AND PLACE OF THE AUDIT
REPRODUCTION OF THIS DOCUMENT IS STRICTLY FORBIDDEN

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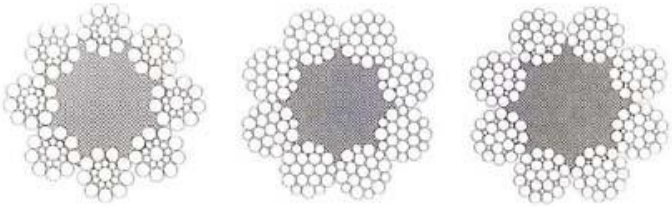
Internet site: www.eurocert.gr - e-mail: eurocert@otenet.gr

Product Certification
Cert. No. 21
ΔΠ13.8/E20/26-01-09

Steel Wire Ropes for Elevator



8 x 19S + FC
8 x 19W + FC
8 x 25Fi + FC

Nominal Diameter(mm)	Approximate Weight Kg/100m	(KN) (Min B/L)		
		1370/1770 N/mm^2 1500 N/mm^2(Double T/S)	1570 N/mm^2 (Single T/S)	1770 N/mm (Single T/S)
8	22.2	28.1	29.4	33.2
9	28.1	35.6	37.3	42.0
9.5	31.3	39.7	41.5	46.8
10	34.7	44.0	46.0	51.9
11	42.0	53.2	55.6	62.8
12	50.0	63.3	66.2	74.7
12.7	56.0	70.9	74.2	83.6
13	58.6	74.3	77.7	87.6
14	67.9	86.1	90.2	102.0
16	88.8	113.0	118.0	133.0
19	125.0	159.0	166.0	187.0
22	168.0	213.0	223.0	251.0

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ΕΥΡΩΠΑΪΚΗ ΕΤΑΙΡΙΑ ΕΛΕΓΧΩΝ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΕΩΝ Α.Ε.
EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.

CERTIFICATE NO.: CN.CE.0379.01-06/09

EC TYPE EXAMINATION CERTIFICATE

FOR SAFETY COMPONENT
EUROPEAN LIFT DIRECTIVE 95/16/EC ANNEX V_A (MODULE B)

Manufacturer's/Appicant's-Certificate Holder's Name	:	NINGBO AODEPU ELEVATOR COMPONENTS CO., LTD.
Address	:	NO 19 INDUSTRY AREA WUXIANG TOWN, NINGBO, CHINA
Date of Submission	:	24/09/2008
Product Kind	:	ELEVATOR SAFETY COMPONENT
Product Name (Trade name)	:	ASCENDING CAR OVERSPEED PROTECTION MEANS
Product Type	:	OX-250
Directives, Standards	:	95/16/EC, EN 81.1:1998+AC:1999
Testing Laboratory	:	SHANGHAI JIAOTONG UNIVERSITY ELEVATOR TEST CENTER
Date and Number of Test Report	:	02/09/2008, TX F350-026-08 0030
Technical Description	:	ACCORDING TO THE ANNEX TO THIS CERTIFICATE

On manufacturer's request, it is hereby certified that the aforementioned notified body, EUROCERT SA, has assessed the above safety component, against the provisions of European Lift Directive 95/16/EC Annex V_A (Module B), with satisfactory results.

Preconditions:

Before placing the above safety component on the market, the manufacturer must submit it to checks according to annexes XI (Module C) or VIII (Module E) of European Lift Directive 95/16/EC.

ATHENS, 24/06/2009
For EUROCERT

GEORGE N. SIFONIOS
DIRECTOR OF DEVELOPMENT

THE DATA OF THIS CERTIFICATE IS GATHERED WITH EVERY POSSIBLE THOROUGHNESS
THIS CERTIFICATE REFLECTS THE FINDINGS OF THE TIME AND PLACE OF THE AUDIT
REPRODUCTION OF THIS DOCUMENT IS STRICTLY FORBIDDEN

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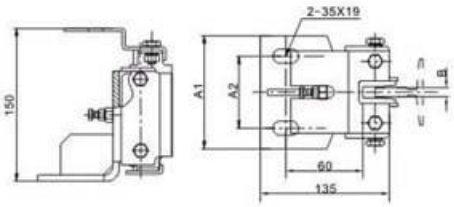
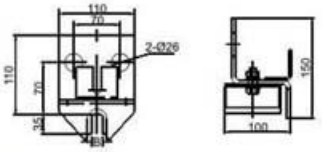
Product Certification
Cert. No. 21
AIII3.6/E2013.01-09

OX-029 导靴
Guide Shoe

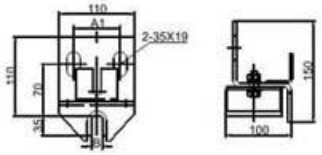


G	B	A1	A2	适用的额定速度 Rated speed grade
G01	10/16	140	90	≤2.0m/s
G02	10/16	110	70	

OX-847 导靴
Guide Shoe

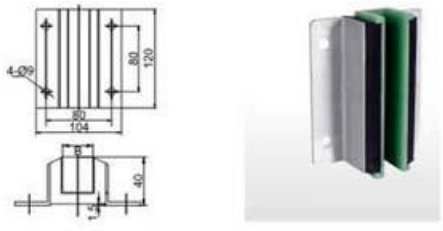


G	B	适用的额定速度 Rated speed grade
G01	10/16	≤2.5m/s



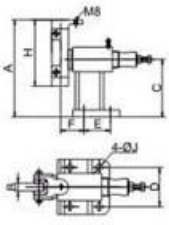
G	B	A1	适用的额定速度 Rated speed grade
G02	10/16	70	≤2.5m/s
G03	10/16	60	

OX-177 导靴
Guide Shoe



G	B	适用的额定速度 Rated speed grade
G01	10/16	≤2.0m/s

OX-T15/T22 导靴
Guide Shoe



G	B	A	H	C	D	E	F	G	J	适用的额定速度 Rated speed grade
G01	10	220	150	130	80	60	53	207	14	≤2.5m/s
G02	16	305	220	175	150	100	45	212	18	

Rope Pulley of Cast Iron: SRP-cast iron

Sliding Guide Shoe and Lubricator: SSU

Rope Pulley of Polyamide: SRP-polyamide

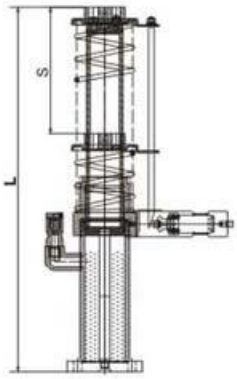
Roller Guide: SRC

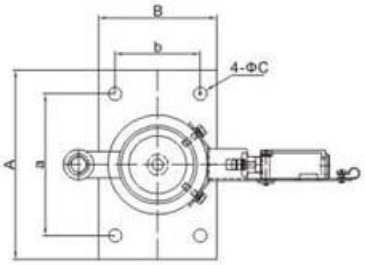
ISUZU Elevators & Escalators

Selected Elevator Parts and Components

Oil Buffer(spring Outside)

CE 1128 → OH-80 OH-210





型号 Type	额定速度(m/s) Rated speed	最大总缓冲质量(kg) Max total buffer weight	最小总缓冲质量(kg) Min total buffer weight	柱塞行程S（mm） Pillar guy-ruling	自由状态全高L（mm） Free state	a×b(mm)	A×B(mm)	ΦC (mm)
OH-65	≤0.63	4600	1000	65	350	150×100	190×160	14
OH-70	≤1.0	2500	300	70	305	210×80	250×125	18
OH-80	≤1.0	3000	600	80	313	150×90	200×125	14
OH-210	≤1.75	3000	780	210	600	150×90	200×125	14
OH-220	≤1.75	2500	600	225	780	210×80	250×125	18
OH-275	≤2.0	3500	850	275	790	210×80	250×125	18
OH-425	≤2.5	3500	860	425	1128	150×100	190×160	14

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EURO CERT

ΕΥΡΩΠΑΪΚΗ ΕΤΑΙΡΙΑ ΕΛΕΓΧΩΝ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΕΩΝ Α.Ε.
EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.

CERTIFICATE NO.: CN.CE.0381.01-07/09

EC TYPE EXAMINATION CERTIFICATE

FOR SAFETY COMPONENT

EUROPEAN LIFT DIRECTIVE 95/16/EC ANNEX V_A (MODULE B)

Manufacturer's/Appicant's-Certificate Holder's Name	:	NINGBO AODEPU ELEVATOR COMPONENTS CO.,LTD.
Address	:	NO 19 INDUSTRY AREA WUXIANG TOWN, NINGBO, CHINA
Date of Submission for type Examination:	:	2008-11-12
Product Name (Trade name)	:	OIL BUFFER (HYDRAULIC BUFFER)
Product Type	:	OH-210
Buffer Stroke	:	210mm
Rated Speed	:	≤ 1.75m/s
Maximum Impact Speed	:	2.01m/s
Maximum Mass	:	3000kg
Minimum Mass	:	780kg
Limit Switch Voltage	:	DC110V
Oil Type & Viscosity	:	HL-46 &43.2-47.3 (cSt) 40°C
Directives/Standards	:	95/16/EC, EN 81.1:1998+AC:1999 & EN 81.2:1998+AC:1999
Audit Report No.	:	CN.CE.0381.01R

On manufacturer's request, it is hereby certified that the aforementioned notified body, EUROCERT SA, with identification number **1128**, has assessed the above safety component, against the provisions of European Lift Directive 95/16/EC Annex V_A (Module B), with satisfactory results.

Preconditions:

The manufacture must check the subject safety equipment according to annexes XI (Module C) or VIII (Module E) of European Lift Directive 95/16/EC.

ATHENS, 02/07/2009
For EUROCERT

GEORGE N. SIFONIOS
DIRECTOR OF DEVELOPMENT

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ΕΣΥΔ
Product Certification
Cert. No. 21
ΔΠ13.6/E20/26-01-09

ΕΥΡΩΠΑΪΚΗ ΕΤΑΙΡΙΑ ΕΛΕΓΧΩΝ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΕΩΝ Α.Ε.
EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.

CERTIFICATE NO.: CN.CE.0381.02-07/09

CERTIFICATE OF CONFORMITY TO TYPE WITH RANDOM CHECKING

EUROPEAN LIFT DIRECTIVE 95/16/EC ANNEX XI (MODULE C)

Manufacturer's/Applicant's- Certificate Holder's Name	:	NINGBO AODEPU ELEVATOR COMPONENTS CO.,LTD.
Address	:	NO 19 INDUSTRY AREA WUXIANG TOWN, NINGBO, CHINA
Date of Submission for type examination	:	2008-11-12
Product Name	:	OIL BUFFER (HYDRAULIC BUFFER)
Product Type	:	OH-210
Limit Switch Voltage	:	DC110V
Drawings	:	OH-210
Directives/Standards	:	95/16/EC, EN 81.1:1998+AC:1999 & EN 81.2:1998+AC:1999
Testing Laboratory	:	SHANGHAI JIAO TONG UNIVERSITY ELEVATOR TEST CENTER
Date and Number of Test Laboratory Report	:	2008-11-12, TX F330-026-08 0085
Audit Report No.	:	CN.CE.0381.02R
EC Type Examination certification (Module B) No.	:	CN.CE.0381.01-07/09

It is hereby certified that, on manufacturer's request, the aforementioned notified body EUROCERT SA, with identification number **1128**, has assessed the above type of safety components against the provisions of EUROPEAN LIFT Directive 95/16/EC Annex XI with satisfactory results. The manufacturer is authorized to provide the safety component described above with the CE Mark as displayed below:

CE

Preconditions:

It is required that the above safety equipment must always come with a declaration of conformity and the relevant instructions of use.

This certificate is valid until 01/07/2010

ATHENS, 02/07/2009
For EUROCERT

GEORGE N. SIFONIOS
DIRECTOR OF DEVELOPMENT

Ταταΐου 73 & Χαρ. Τρικούπη 145 64 Κηφισιά
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Product Certification
Cert. No. 21
Δ/113.21/E21/28-01-2009

ΕΥΡΩΠΑΪΚΗ ΕΤΑΙΡΙΑ ΕΛΕΓΧΩΝ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΕΩΝ Α.Ε.
EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.

CERTIFICATE NO.: CN.CE.0382.01-07/09

EC TYPE EXAMINATION CERTIFICATE

FOR SAFETY COMPONENT

EUROPEAN LIFT DIRECTIVE 95/16/EC ANNEX V_A (MODULE B)

Manufacturer's/Appicant's-Certificate Holder's Name	:	NINGBO AODEPU ELEVATOR COMPONENTS CO.,LTD.
Address	:	NO 19 INDUSTRY AREA WUXIANG TOWN, NINGBO, CHINA
Date of Submission for type Examination:	:	2008-11-12
Product Name (Trade name)	:	OIL BUFFER (HYDRAULIC BUFFER)
Product Type	:	OH-80
Buffer Stroke	:	80mm
Rated Speed	:	≤ 1.00m/s
Maximum Impact Speed	:	1.15m/s
Maximum Mass	:	3000kg
Minimum Mass	:	600kg
Limit Switch Voltage	:	DC110V
Oil Type & Viscosity	:	HL-46 & 43.2-47.3 (cSt) 40℃
Directives/Standards	:	95/16/EC, EN 81.1:1998+AC:1999 & EN 81.2:1998+AC:1999
Audit Report No.	:	CN.CE.0382.01R

On manufacturer's request, it is hereby certified that the aforementioned notified body, EUROCERT SA, with identification number **1128**, has assessed the above safety component, against the provisions of European Lift Directive 95/16/EC Annex V_A (Module B), with satisfactory results.

Preconditions:

The manufacturer must check the subject safety equipment according to annexes XI (Module C) or VIII (Module E) of European Lift Directive 95/16/EC.

ATHENS, 02/07/2009
For EUROCERT

GEORGE N. SIFONIOS
DIRECTOR OF DEVELOPMENT

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Internet site: www.eurocert.gr - e-mail: eurocert@otenet.gr

ESYD
Product Certification
Cert. No. 21
ΔΠ13.6/Ε20/26-01-09

ΕΥΡΩΠΑΪΚΗ ΕΤΑΙΡΙΑ ΕΛΕΓΧΩΝ ΚΑΙ ΠΙΣΤΟΠΟΙΗΣΕΩΝ Α.Ε.
EUROPEAN INSPECTION AND CERTIFICATION COMPANY S.A.

CERTIFICATE NO.: CN.CE.0382.02-07/09

CERTIFICATE OF CONFORMITY TO TYPE WITH RANDOM CHECKING

EUROPEAN LIFT DIRECTIVE 95/16/EC ANNEX XI (MODULE C)

Manufacturer's/Applicant's- Certificate Holder's Name	:	NINGBO AODEPU ELEVATOR COMPONENTS CO.,LTD.
Address	:	NO 19 INDUSTRY AREA WUXIANG TOWN, NINGBO, CHINA
Date of Submission for type examination	:	2008-11-12
Product Name	:	OIL BUFFER (HYDRAULIC BUFFER)
Product Type	:	OH-80
Limit Switch Voltage	:	DC110V
Drawings	:	OH-80
Directives/Standards	:	95/16/EC, EN 81.1:1998+AC:1999 & EN 81.2:1998+AC:1999
Testing Laboratory	:	SHANGHAI JIAO TONG UNIVERSITY ELEVATOR TEST CENTER
Date and Number of Test Laboratory Report	:	2008-11-12, TX F330-026-08 0086
Audit Report No.	:	CN.CE.0382.02R
EC Type Examination certification (Module B) No.	:	CN.CE.0382.01-07/09

It is hereby certified that, on manufacturer's request, the aforementioned notified body EUROCERT SA, with identification number **1128**, has assessed the above type of safety components against the provisions of EUROPEAN LIFT Directive 95/16/EC Annex XI with satisfactory results. The manufacturer is authorized to provide the safety component described above with the CE Mark as displayed below:

CE

Preconditions:

It is required that the above safety equipment must always come with a declaration of conformity and the relevant instructions of use.

This certificate is valid until 01/07/2010

ATHENS, 02/07/2009
For EUROCERT

GEORGE N. SIFONIOS
DIRECTOR OF DEVELOPMENT

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Product Certification
Cert. No. 21
ΔΠ13.21/Ε21/20-01-2009