

小机房乘客电梯 SMALL MACHINE ROOM PASSENGER ELEVATOR

小机房乘客电梯，
精致生活小巧一点
Small machine room
passenger elevator,
for delicate and exquisite life



小机房乘客电梯只占用了传统机房电梯面积的65%-70%，降低了建筑成本，增加了空间使用率。此外，小机房乘客电梯还具有降低能耗，高效利用能源等优势。

Small machine room passenger elevator only takes up 65% -70% of the traditional area of the elevator machine room, reducing construction costs, increasing the space usage. In addition, small machine room passenger elevator also has advantages of lower power consumption, high energy efficiency and so on.



大幅节约空间

机房是井道之外的一个额外部分，由于建造方便成本较低得到了较大范围的应用，但是对于建筑的空间结构造成了一定的负担。小机房电梯的应用成功为建筑节约了更多空间，提高了现代高层建筑的品质。

Significant space saving

The machine room is an additional part of the hoistway, which is widely used for easy construction and low cost, but it brings certain burden to the spatial structure of the building. The successful use of small room elevators saves more space, and improves the quality of modern high-rise buildings.

高效便捷安装

小机房电梯的安装流程将工程效率有效提高，同时，无论是初装或更新改造都能够轻松方便地实现。

Efficient and easy installation

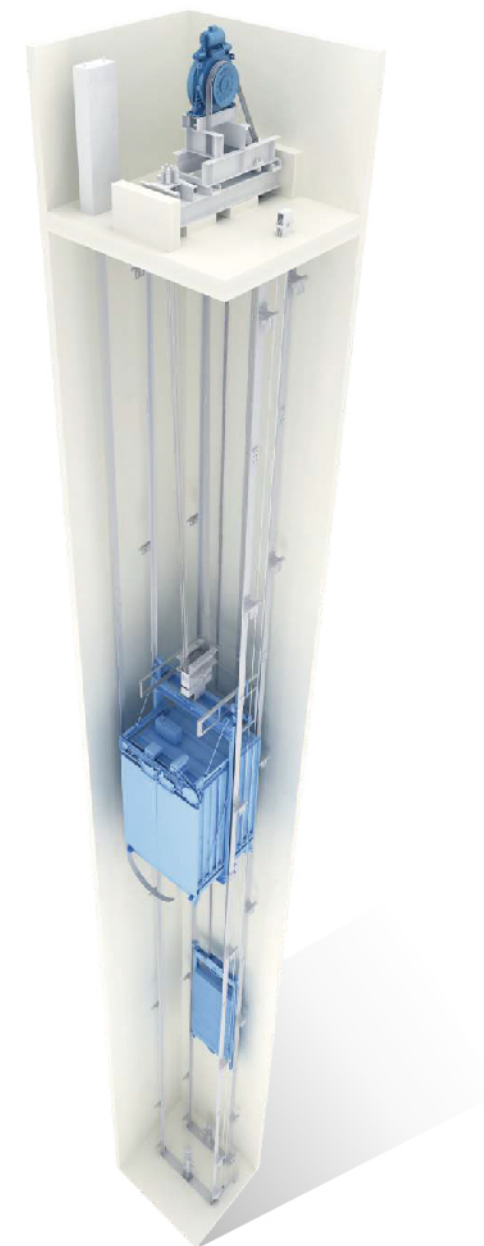
The installation procedure of small machine room elevator improves the engineering efficiency effectively, at the same time, the initial installation, renovation and transformation, all can be achieved easily.

高效能源利用

结构的合理设计配合高效驱动部件，降低了能源的损耗，实现了能源的高效利用。

Efficient use of energy

Rational design of the structure with efficient drive component reduces energy consumption, and achieves efficient use of energy.



乘客轿厢标配

PASSENGER ELEVATOR CAR STANDARD

EM-J001-1 标配 Standard

吊顶：发纹不锈钢、有机透光板、LED照明
后壁：发纹不锈钢
侧壁：发纹不锈钢
前壁：发纹不锈钢
轿门：发纹不锈钢
地板：PVC

Ceiling: Hairline stainless steel, organic translucent plate, LED lighting
Back wall: Hairline stainless steel
Side wall: Hairline stainless steel
Front wall: Hairline stainless steel
Hall door: Hairline stainless steel
Floor: PVC



EM-J001-2 标配 Standard

吊顶：黑白烤漆钢板、有机透光板、LED照明
后壁：发纹不锈钢
侧壁：发纹不锈钢
前壁：发纹不锈钢
轿门：发纹不锈钢
地板：PVC

Ceiling: Black and white paint steel plate, organic translucent plate, LED lighting
Back wall: Hairline stainless steel
Side wall: Hairline stainless steel
Front wall: Hairline stainless steel
Hall door: Hairline stainless steel
Floor: PVC



操纵箱 Control panel



EM-COP01
(标配 Standard)
发纹不锈钢
stainless steel hairlines



EM-LOP01
(标配 Standard)
和纹抗指纹不锈钢
stainless steel with
irregularly-polished lines

厅门 Landing door



EM-TM01
首层厅门及门套采用发纹不锈钢
其余层厅门及门套采用喷涂钢板 (颜色可选)
Initial floor of landing door and jamb apply stainless steel hairline.
Landing door and jambs at other floors apply painted steel sheets (with optional colors)

乘客轿厢选配

PASSENGER ELEVATOR
CAR OPTIONAL

EM-J002

吊顶：发纹不锈钢、双拱形有机透光板、LED照明
 后壁：镜面，蚀刻，发纹
 侧壁：镜面，蚀刻，发纹
 前壁：发纹不锈钢
 扶手：不锈钢扁扶手
 轿门：发纹不锈钢
 地板：PVC

Ceiling: Hairline stainless steel, double arched organic transparent plate,
 LED lighting
 Back wall: Mirror, etching, hairline
 Side wall: Mirror, etching, hairline
 Front wall: Mirror surface
 Handrail: Stainless steel made flat handrail
 Hall door: Hairline stainless steel
 Floor: PVC



EM-J004

吊顶：发纹不锈钢框架、拱形有机透光板、LED照明
 后壁：镜面、蚀刻、发纹不锈钢
 侧壁：镜面、蚀刻、发纹不锈钢
 前壁：发纹不锈钢
 扶手：不锈钢圆管扶手
 轿门：发纹不锈钢
 地板：PVC

Ceiling: Hairline stainless steel frame, arched organic transparent plate,
 LED lighting
 Back wall: Mirror, etching, hairline stainless steel
 Side wall: Mirror, etching, hairline stainless steel
 Front wall: Hairline stainless steel
 Handrail: Φ38 stainless steel tube
 Hall door: Hairline stainless steel
 Floor: PVC



EM-J003

吊顶：发纹不锈钢、有机透光板，LED照明
 后壁：镜面，蚀刻，发纹
 侧壁：镜面，蚀刻，发纹
 前壁：发纹不锈钢
 轿门：发纹不锈钢
 地板：PVC

Ceiling: Hairline stainless steel, organic translucent plate,
 LED lighting
 Back wall: Mirror, etching, hairline
 Side wall: Mirror, etching, hairline
 Front wall: Hairline stainless steel
 Hall door: Hairline stainless steel
 Floor: PVC



EM-J005

吊顶：发纹不锈钢框架、拱形有机透光板、LED照明
 后壁：镜面、蚀刻、发纹不锈钢
 侧壁：镜面、蚀刻、发纹不锈钢
 前壁：发纹不锈钢
 扶手：镜面不锈钢扁扶手
 轿门：发纹不锈钢
 地板：PVC

Ceiling: Hairline stainless steel frame, arched organic transparent plate,
 LED lighting
 Back wall: Mirror, etching, hairline stainless steel
 Side wall: Mirror, etching, hairline stainless steel
 Front wall: Hairline stainless steel
 Handrail: Mirror stainless steel flat handrail
 Hall door: Hairline stainless steel
 Floor: PVC

乘客电梯装潢 PASSENGER ELEVATOR DECORATION

厅门系列 Landing door series



EM-TM01
发纹不锈钢
Hairline stainless steel



EM-TM02
钢板喷涂
Painted steel plate



EM-TM03
镜面不锈钢
Mirror stainless steel



EM-TM04
镜面、蚀刻、发纹不锈钢
Mirror finish, etching finish, hairline stainless steel



EM-TM05
镜面、蚀刻、发纹不锈钢
Mirror finish, etching finish, hairline stainless steel



EM-TM06
钛金蚀刻
Titanium etching



EM-TM07
钛金、镜面、蚀刻
Ti-plated finish, mirror finish, etching finish



EM-TM08
钛金蚀刻
Titanium etching



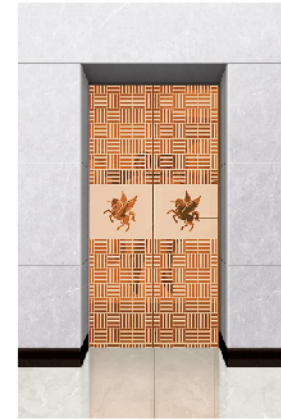
EM-TM09
玫瑰金蚀刻
Rose golden etching



EM-TM10
玫瑰金、镜面、蚀刻
Rose gold, mirror finish, etching finish

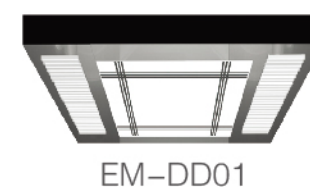


EM-TM11
玫瑰金、镜面、蚀刻
Rose gold, mirror finish, etching finish



EM-TM12
玫瑰金、镜面、蚀刻
Rose gold, mirror finish, etching finish

吊顶系列 Ceiling series



EM-DD01
镜面不锈钢框架，栅格花纹透光板，两侧长方形水晶块
Mirror surfaced stainless steel made frame, grid decorative patternlight panel, rectangle crystal in both sides



EM-DD04
钛金烤漆，亚克力柔光照明设计，筒灯
Titanium stoving varnish, acrylic soft light illumination design, down lamp



EM-DD02
不锈钢或金属烤漆装饰面，四侧筒灯，亚克力柔光照明设计
Stainless steel or metal stoving varnish decorative facing, down lamp around, acrylic soft light illumination design



EM-DD05
镜面不锈钢框架，亚克力柔光照明设计，四侧筒灯
Mirror surface stainless steel made frame, acrylic soft light illumination design, down lamp around



EM-DD03
不锈钢底板，筒灯，亚克力柔光照明设计
Stainless steel made baseboard, down lamp, acrylic soft light illumination design



EM-DD06
金属烤漆，两侧通风孔，筒灯，中间亚克力柔光照明设计
Metal stoving varnish, ventilation hole in both sides, down lamp, acrylic soft light illumination design in the middle

扶手系列 Handrail series



EM-F01
工艺：发纹不锈钢圆管
Process: Hairline mirror stainless steel round tube



EM-F03
工艺：φ38/51不锈钢管、钛金组合
Process: φ38/51 stainless steel tube, titanium gold combination



EM-F05
工艺：镜面不锈钢
Process: Mirror stainless steel



EM-F07
工艺：发纹不锈钢双管
Process: Hairline mirror stainless steel double pipe



EM-F02
工艺：钛金不锈钢圆管
Process: Titanium stainless steel round tube



EM-F04
工艺：φ38圆木、钛金组合
Process: φ38 round wood combined with titanium



EM-F06
工艺：钛金镜面
Process: Titanium gold mirror

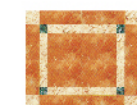


EM-F08
工艺：发纹不锈钢三管
Process: Hairline mirror stainless steel three tubes

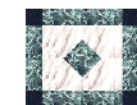
地板系列 Floor series



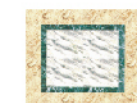
EM-DB01
PVC地板
PVC floor



EM-DB02
PVC地板
PVC floor



EM-DB03
PVC地板
PVC floor



EM-DB04
PVC地板
PVC floor



EM-DB05
PVC地板
PVC floor



EM-DB06
PVC地板
PVC floor



EM-DB07
PVC地板
PVC floor



EM-DB08
PVC地板
PVC floor

操纵箱系列 CONTROL PANEL SERIES

EM-COP01

Full car wall integral COP (Standard)
全轿壁一体式COP (标配)

显示器
Display

选配
Optional



按钮
Button

标配
Standard



AN01

选配
Optional



AN03



AN04



AN05

面板材质
Panel material

标配
Standard



发纹不锈钢
Hairline stainless steel

选配
Optional



银色航空铝合金
Silver aerometal



香槟色航空铝合金
Champagne aerometal



EM-LOP01

无底盒 Without bo
选配 Optional

显示器
Display

标配
Standard



XS07

选配
Optional



XS04

按钮
Button

标配带盲文
Standard with braille



AN02

选配
Optional



AN05

面板材质
Panel material

标配
Standard



Stainless steel with
irregularly-polished lines
和纹不锈钢

选配
Optional



Titanium stainless steel
钛金不锈钢



完美功能

PERFECT FUNCTION

标准功能 Standard function

功能名称 Function name	功能说明 Description of functions
自动运行 Automatic operation	电梯根据给定指令自动运行、停车、开关门。 The lift automatically runs and stops, opens / shuts the door according to designated command.
司机运行 Operation by operator	电梯根据给定指令自动运行、停车，手动关门。 The lift automatically runs and stops, manually shuts the door according to designated command.
检修运行 Overhaul operation	检修状态时，通过操作慢上慢下按钮，使电梯检修速度运行。 Under repair and inspection conditions, the lift runs at inspection speed through operating "slow up / slow down" buttons.
上电自动开门 Upper automatic door-opening	电梯上电，轿厢正在门区，则自动开门。 When the lift is electrified and the car is in the door zone, it will open the door automatically.
自动关门延时 Automatic door-shut time-delay	轿门完全打开后，保持开门状态，经过延时后自动关门。 After the car door has been opened completely, it keeps the door open condition. It automatically shuts the door after time-delay.
本层外召开门 Call for opening of this floor	电梯正在关门或已关门但未启动，若本层外召，则重新开门。 When the lift is shutting the door or it does not start but has closed the door, when there is any outer calling from this landing, it will reopen the door.
安全触板、光幕保护 Safety touch board, opticalcurtain protection	触动安全触板或光幕被遮挡时，关门动作立即停止自动开门。 When safety touch board has been touched or optical curtain has been shaded,it immediately stops door-shut action and automatically opens the door.
超载不关门 Over-load none door-shut	超载时不关门，超载灯亮，蜂鸣器鸣响，轿厢内显示CZ或超载，电梯不启动。 It does not shut the door in overload. And it is bright from overload lamp. The buzzer rings. It shows CZ or overload in the car and does not start the lift.
满载直行 Full-load direct running	达到额定载荷时，只响应内选，不响应外召。 When it reaches the rated load, it only responds to internal selection instead of outer calling.
自动照明控制 Automatic lighting control	规定时间内，电梯没有接收到运行指令，照明自动熄灭，有指令时自动打开。 In the stipulated time, if the lift does not receive any travel command, the lighting will a utomatically die out. It automatically opens at command.
消防返回 Firefight return	基站消防开关启动，所有指令均被取消，电梯立即驶往指定救援层站停靠。 When it starts home landing fire-fighting switch, all the commands will be cancelled then. The lift immediately drives to the designated landing and park there.
误操作消除 Mal-operation removal	重复操作内选按钮，即可撤销误选登记。 Repeatedly operate internal selective button to cancel mal-operation registration.
重复关门 Main contactor protection	执行关门指令后，在规定时间内门没有关闭到位，重新开门后再关门。 After the lift executes door-shut command, if the door has not been closed within the stipulated time, it will re-open the door and then shut it again.
服务楼层设置 Service floor setting	电梯仅对所设楼层进行服务。 The lift only serves the set floor.
基站楼层设定 Home landing floor setting	在自动状态，在一定时间内无指令时，轿厢自动运行到设定层站。 Under the automatic condition, if there is no command within certain period, the car will automatic ally run to the set landing.
轿内层楼、方向显示 Landing floor, direction display in the car	轿内显示电梯所在层楼及将要运行的方向。 It shows the landing floor of the lift, the direction where the lift is going to travel in the car.
司机选择定向 Direction chosen by driver	根据司机给定指令确定运行方向。 The running direction is determined by the driver's directive.
贯通门服务设置 Opposite door service setting	按照服务设置在相应楼层正确开、关门。 Correctly open / shut the door in the corresponding floor according to service setting.
故障诊断 Trouble diagnosis	当运行时发生故障，自动诊断故障原因，并在控制板上显示，将最近故障信息自动保存。 When there is something wrong in the travel process, it will automatically diagnose the trouble cause, display in the operation panel and automatically store the latest trouble information.
安全回路保护 Safety circuit protection	安全回路断开，电梯将立刻停止运行。 If safety circuit is disconnected, the lift will immediately stop the travel.
门联锁保护 Door interlocking protection	全部门联锁都闭合，电梯方能运行。如果运行中门联锁断开或抖动，电梯将停止运行。 If it closes all of door interlocking, it can then start the lift. If door interlocking is disconn ected or trembled, the lift will stop the operation.
运行接触器保护 Travel contactor protection	系统可检测电机回路接触器动作是否可靠，如果发现异常，将停止电梯运行。 The system can detect whether motor circuit contactor action is reliable or not. If any abnormal condition happens, it will stop the lift travel.
抱闸检测保护 Brake test protection	通过抱闸臂检测开关对抱闸的打开与闭合实时监测。当抱闸未按要求打开时，系统将禁止电梯启动。 It implement real-time monitor to the brake open / shut through brake arm test switch. If the brake has been opened improperly, the system will not allow the lift to start.

标准功能
Standard function

功能名称 Function name	功能说明 Description of functions
端站换速及楼层号校正 Terminal speed change and landing floor number correction	系统在运行中检测到端站开关后，电梯将强迫换速并自动校正楼层显示。 After the system detect terminal switch in travel, the lift will be forced to change the speed and automatically correct the landing floor display .
限位保护 Position-Limit protection	系统检测到限位开关动作，将立刻停止电梯运行。 If the system detects limit switch action, it will immediately stop the lift travel.
极限保护 Limit protection	系统检测到极限开关动作，整个系统将立刻掉电。 If the system detects limit switch action, the whole system will immediately lose power.
超速保护 Over-speed protection	当电梯上下行超过额定速度1.2倍时，切断控制电源，电梯将停止运行。 When the lift up / down exceeds 1.2 times of the rated speed, it will cut off control mains and stop the lift travel.

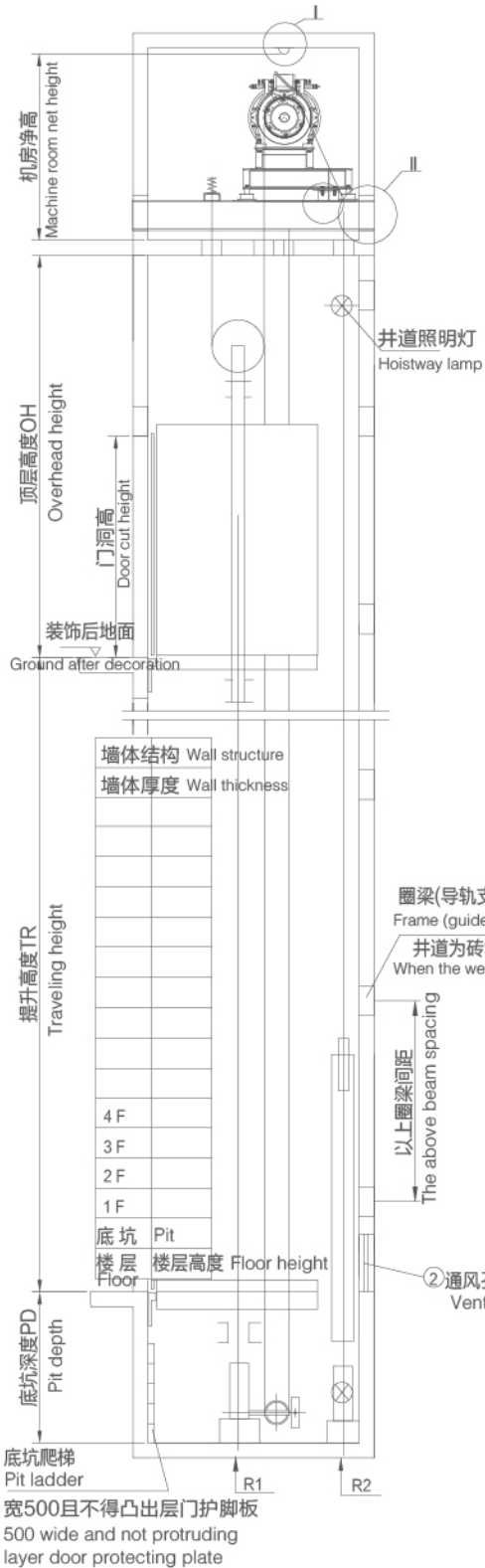
选配功能
Optional function

功能名称 Function name	功能说明 Description of functions
消防运行 Fire-fighting running	消防开关闭合后，系统进入消防运行。 After fire switch is closed, the system enters into fire-fighting running.
并联控制 Parallel connection control	两台电梯并联控制，按照快速节能原则自动响应，提高电梯运行效率。 Two-lift parallel connection control automatically responds the command according to rapid energy-saving principle so as to increase the lift travel efficiency.
群控运行 Group supervision travel	系统可同时控制8台电梯运行，功能如并联控制。 The system can simultaneously control the travel of eight-lift. The function is the same as that of parallel connection control.
防捣乱 Anti-nuisance	电梯运行至最远端楼层清除所有的内选登记，若有负载检测装置，轻载内选最多登记3个。 When the lift travels to the furthest floor, it will remove all the internal selective register. If it has load tester, it will have three light-load internal selections at most.
应急自动平层运行 Emergency automatic leveling travel	电网停电后电梯应急自动平层控制装置供电运行平层，让乘客安全离开。 After the electric net power failure, the lift emergency automatic-leveling control device supplies power to travel leveling so that the passengers can leave there safely.
层站层楼、方向显示 Landing floor, direction display	层站显示电梯所在层楼及将要运行的方向。 The floor landing shows the landing floor that the lift travels and where it travels also.
语音报站 Voice arrival	在正常运行到站的情况下，利用语音装置告知乘客有关信息。 Under the condition of normal travel arrival, voice announcer is used to announce the related passengers' information.
轿厢到站钟 Car arrival gong	装于轿厢的电子钟的钟声告知乘梯的乘客电梯已到站。 The electric gong that is installed in the car announces the passenger lift arrival to vast passengers.
厅外到站钟 Hoist-way hall arrival gong	装于待梯区的电子钟的钟声告知候梯的乘客电梯已到站。 The electronic gong in the waiting zone announces the lift arrival to the waiting passengers.
智能召唤服务 Intellectual calling service	只要通过专用的智能输入设备，可使轿厢指令或厅外召唤锁定或接通。 The car command or hoist-way hall calling can be locked or connected through the special intellectual input equipment.
残疾人服务 Service to the handicapped	专门为残疾人服务的人机界面。 Man-machine interface specially serves the handicapped people.
电子刷卡系统 Electronic Punch Card System	乘梯时需先刷卡后使用，使无卡或无限权人员无法使用电梯，加大了物业的安全管理，可有效节省大楼电力损耗。 The users shall swipe card in using the elevators. Those who do not have cards or have no jurisdiction can't use the elevators. It enlarges the safety management of the house property personnel and effectively saves power loss in the buildings.
能量回馈装置 Energy feedback device	使电梯的再生电力提供给大楼内，并有效地活用于大楼内的照明等，减少消耗的电量。 It offers regenerated lift power to the buildings. It is effectively applicable for lighting in the buildings etc. so as to reduce the consumed power.

有机房乘客电梯
MACHINE ROOM
PASSENGER ELEVATOR

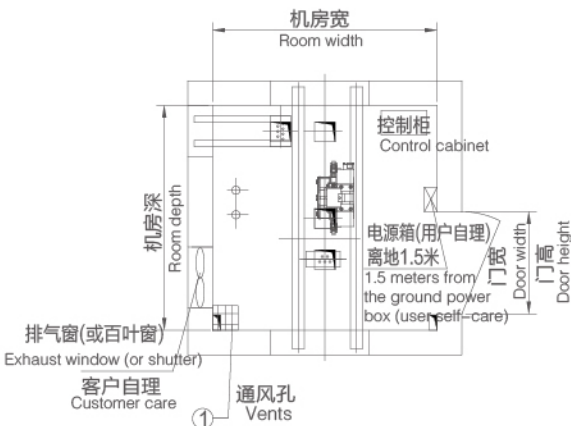
井道立面图

Hoistway Vertical Section View



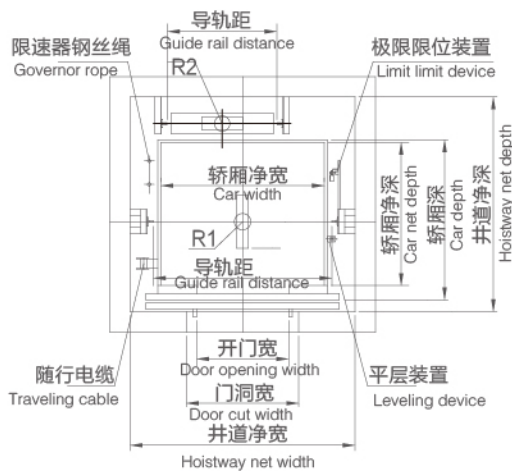
机房平面布置图

Machine Room Plan View



井道平面布置图

Hoistway Plan View



EM2000P
series

额定载重 Rated load	额定速度 Rated speed	曳引比 Traction ratio	绕行方式 Passing mode	轿厢规格 Machine room net size	开门方式 Door opening mode	开门尺寸 Door opening size	标准最小井道尺寸 Standard minimum hoistway size	顶层高 Overhead height	底坑深 Pit depth	机房高 Machine room height	乘客人数 Maximum landing	最小层间距 Minimum layer spacing	最大提升高度 Max travelling height	最大停站数 Maximum stop	
450	1	2:1	单绕 Single winding	1100x1100x2400	中分 Middle separation	800x2100	1800x1750	4200	1350	2500	6	2600	45	15	
	1.5							4250	1400				66	22	
	1.75							4300	1450				75	25	
630	1	2:1	单绕 Single winding	1100x1400x2400		800x2100	1800x2050	4200	1350		8		8	45	15
	1.5							4250	1400					66	22
	1.75							4300	1450					75	25
800	1	2:1	单绕 Single winding	1350x1400x2400		800x2100	1800x2050	4200	1350		10		10	45	15
	1.5							4250	1400					66	22
	1.75							4300	1450					75	25
	2							4400	1500					90	30
1000	1	2:1	单绕 Single winding	1600x1400x2400		900x2100	2000x2050	4200	1350		13		13	45	15
	1.5							4250	1400					66	22
	1.75							4300	1450					75	25
	2							4400	1500					90	30
1150	1	2:1	单绕 Single winding	1950x1400x2400		1000x2100	2500x2100	4250	1350		15		15	45	15
	1.5							4400	1500					66	22
	1.75							4450	1550					75	25
	2							4550	1600					90	30
1350	1	2:1	单绕 Single winding	1950x1550x2400		1000x2100	2450x2200	4250	1500		18		18	45	15
	1.5							4400	1500					66	22
	1.75							4450	1600					75	25
	2							4550	1650					90	30
	2.5							4750	2000					120	40
1600	1	2:1	单绕 Single winding	1950x1750x2400		1100x2100	2450x2400	4250	1500		21		21	45	15
	1.5							4400	1500					66	22
	1.75							4450	1600					75	25
	2							4550	1650					90	30
	2.5							4750	2000					120	40
2000	1	2:1	单绕 Single winding	2350x1700x2400		1100x2100	2850x2350	4500	1500		26		26	45	15
	1.5							4550	1600					66	22
	1.75							4700	1700					75	25
	2							4700	1800					90	30
	2.5				4800			2050	120	40					

营销网络

MARKETING NETWORK

爱默生电梯，致力于把“让城市移动安全高效”的理念推向全球。公司以中国上海作为全球市场发展的中心，形成了产品研发、制造、销售三位一体的上海总部基地，并构建了辐射全国的营销服务网络 and 专业的海外销售团队，在全国主要城市设立服务中心，不断完善更贴近客户的营销和服务功能，以提升品牌市场占有率。

EMERSON ELEVATOR, committed to introducing the concept "make the city movement more safe and efficient" to the world. The company regards Shanghai, China as the center of global market development, forms a Shanghai headquarters base integrating the Trinity of product R & D, manufacturing and sales, and constructs marketing service network all over the country and professional overseas sales team, sets up service centers in the major cities nation wide, and constantly improves the closer-to-customer marketing and service functions in order to enhance the brand market share.

我们正在全球积极寻找好的合作伙伴，期待您的加入！

EMERSON ELEVATOR is looking for good partners in the world.
We expect to cooperate with you!

爱默生电梯面向全球市场的每一个服务网点都有完善的职能配置，除了供应电梯产品及部件，还可以就近提供专业的技术咨询、安装维保、升级改造等完善而专业的服务，为各级代理商及客户提供更好的产品售后支持。

EMERSON ELEVATOR have perfect function configuration for every service outlet in global market. In addition to the supply of elevator products and components, EMERSON ELEVATOR can also provide professional technical advice, installation, maintenance, upgrading and other perfect and professional service, and provide better products after-sales support for all levels of the agencies and the clients.



服务体系 SERVICE SYSTEM

优质的服务是电梯产品安全运行的有力保障。从销售到安装维保的每一个环节，爱默生都提供专业而优质的服务。

Quality service is a strong guarantee for the safe operation of elevator products. EMERSON ELEVATOR provide professional and quality service from sales to installation and maintenance.



安装工程

爱默生电梯所有负责安装的工程师都经过严格而系统的培训，能够以高标准完成电梯的安装和调试，协调电梯安装全过程，控制电梯安装质量和安全，保障电梯产品各项服务功能和技术指标完美实现，为客户提供全方位的技术支持，同时为电梯的无故障运行和维护保养奠定良好基础。

Installation engineering

All EMERSON ELEVATOR engineers responsible for the installation have received rigorous and systematic training, to ensure the installation and debugging of elevator, coordination of the entire process of elevator installation, the installation quality and safety with high standard, and guarantee of the perfect realization of service function and technical specifications, to provide customers with comprehensive technical support, while laying a good foundation for trouble-free operation and maintenance of the elevator.

维修与保养

爱默生电梯拥有专业的维保团队。负责保障您的电梯每天处于安全舒适的运行环境；我们为每台电梯量身定做保养计划，结合国家标准和爱默生电梯的安全要求，保证设备始终处于最佳状态；运用电梯物联网技术实现了对每一台电梯的智能管理。24小时、365天对电梯的运行状态进行实时监控，做到自动报警和风险预警，保障电梯安全运行；完善的备件支持体系，为故障快速排出提供强大而及时的零部件支持。

Repair and maintenance

EMERSON ELEVATOR has a professional maintenance team. We are responsible for guaranteeing your escalators and elevators remain at safe and comfortable operating environment; we customize maintenance program for each elevator, combined with the national standards and safety requirements of EMERSON ELEVATOR, to ensure that the equipment is always in the best condition; Using Internet of Things technology to realize smart management of each elevator. 24 hours and 365 days real-time monitoring of the operating condition of elevators, realizing automatic alarm and early warning of risks, to guarantee the safe operation of elevators; Complete spare parts support system provides powerful and timely component support for the rapid trouble clearing.

