

SRH
SAFE REACH



GRP20

Passenger Lift

乘客电梯

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Sicher Elevator Co.,Ltd.
原 莱茵电梯(中国)有限公司

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多一套 方案
One more case



多一份 承诺
One more promise



多一环 工序
One more procedure



多一轮 检测
One more inspection



多一份 守候
One more expectation

森赫电梯, 只为安全到达
Sicher elevator, only for safe reach

森赫电梯股份有限公司

森赫电梯股份有限公司是在莱茵电梯（中国）有限公司多年发展的基础上，通过投资、并购，完成股份制改制组建而成的一家专业化、集团化、国际化的国家高新技术企业。

公司占地面积147600平方米，总建筑面积170000平方米，拥有产品制造中心、研发设计中心、客户服务中心，以及高度108米、运行速度可达8.0m/s的电梯试验塔，并从德国、意大利等国引进具有世界先进水平的生产与检测设备，具备了年产40,000台的制造能力，是面向全球市场的电梯、自动扶梯及立体停车设备的现代化大型制造企业。

SRH森赫，是德国莱茵电梯有限公司（Rhein Aufzug GmbH）旗下核心品牌，源于德语“Sicher”，意为安全、可靠。德国莱茵电梯有限公司（Rhein Aufzug GmbH）作为森赫电梯股份有限公司境外并购的全资子公司，在德国拥有研发、制造中心，在产品研发、制造、销售、安装与服务的全过程中，一以贯之地体现着“只为安全到达”的品牌核心价值。在中国依托森赫电梯股份有限公司作为制造基地，为全球客户提供符合欧盟标准的SRH森赫品牌产品。

森赫电梯股份有限公司作为德国电梯协会会员，携手德国莱茵电梯有限公司（Rhein Aufzug GmbH），与具有悠久制造历史的德国大、中型电梯制造公司及电梯部件公司形成紧密的战略合作联盟，不仅可提供德国制造的电梯设备及部件，同时引进德国精益求精的制造技术和科学严谨的管理模式，共同研发、设计、制造具有德国工业品质的电梯、自动扶梯及立体停车设备。

公司服务网络遍布全球46个国家和地区，在中国设有93家分支机构、916家服务网点，致力于成为最安全电梯的制造商和服务商。

Sicher Elevator Co.,Ltd.

Sicher Elevator Co., Ltd. is established on the basis of many years development of Rhine Lift (China) Co., Ltd., it becomes a specialized, collectivized and internationalized national high and new technology enterprise through investment, merger and acquisition and stock restructuring.

Sicher Elevator Co., Ltd. covers an area of 147,600 square meters, with overall floorage about 170,000 square meters, owns product manufacturing center, R&D center, customer service center, along with elevator testing tower about 108 meters height, 8.0 m/s running speed. It also has introduced production facilities and inspecting equipments with advanced world levels from Germany, Italy and other countries, so that keeps a manufacturing capacity about 40,000 sets as annual output, which is a large-scale and modern manufacturing enterprise, facing the global market for elevators, escalators and parking system equipments.

SRH, which is the core of the brand under Rhein Aufzug GmbH, originates from German word "Sicher", means safe, reliable. Rhein Aufzug GmbH, as a wholly owned subsidiary, which is through the overseas merger and acquisition by Sicher Elevator Co., Ltd., keeps R&D center and manufacture center in Germany. In the complete process of product R&D, manufacture, sales, installation and service, reflects the core value of the brand about "only for safe reach" throughout and constantly. In China, it relies on Sicher Elevator Co., Ltd. as the manufacturing base, provides all kinds of products, which are in accord with European Union Standards for global customers.

Sicher Elevator Co., Ltd. as the member of German Elevator Association, cooperates with Rhein Aufzug GmbH, building the closest strategic cooperation union with German large, medium-sized elevator manufacturing companies and elevator parts companies, which have the longer manufacturing histories. It not only can provide elevator equipments and parts made in Germany, but also can introduce the German excelsior manufacturing technology and scientific rigorous management model, to research & develop, design and manufacture all kinds of elevators and parking system equipments with German industrial qualities jointly.

We have the enterprise service network in 46 countries and areas all over the world. And in China, we have 93 affiliated agencies, 916 service points. We will spare no efforts to be the safest elevator manufacturer and facilitator.

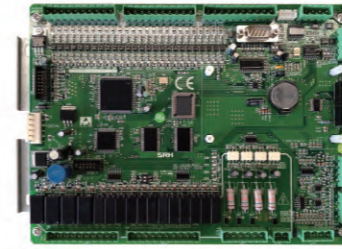


经典技术 创造舒适乘坐体验

The classical technology creates the comfortable riding experience

GRP20乘客电梯采用先进的微电脑网络控制技术，配备高性能CPU和大容量存储空间，采用CAN-BUS总线串行通讯，具有超强的抗干扰能力，完善的操作功能。用户还可根据自己的需要来增加特殊功能。该系统的模块化、智能化、分散型、多功能串行接口、远程监控等技术都属于目前电梯行业最先进控制技术。

We apply the advanced micro-processing network control technology for GRP20 passenger lift. High performance CPU and large capacity storage space, CAN-BUS serial communication produce the extremely strong anti-interference capabilities and perfect lift operation functions. The users can increase special functions according to the specific needs. At present, the modular, intelligent and extensive system, multi-functional serial interface, long-distance monitor technology etc. belong to the advanced control technology in the lift industry.



成熟可靠的串行通讯

The matured and reliable serial communication

各控制子系统间采用简洁可靠的串行通讯网络，实现召唤、指令、群控信号、楼层显示等一系列功能，极大降低了因线路问题引起故障的可能性，大幅度提高电梯运行的可靠性，同时使电梯系统维保更简便。

The concise and reliable serial communication network is adopted between various control sub-systems in order to fulfill a series of the functions such as calling, command, group supervision signal, floor display etc. It greatly reduces the trouble possibilities out of circuit problem, largely enhances the reliability of the lift travel. At the same time, it brings more convenient repair and maintenance to the lift system.

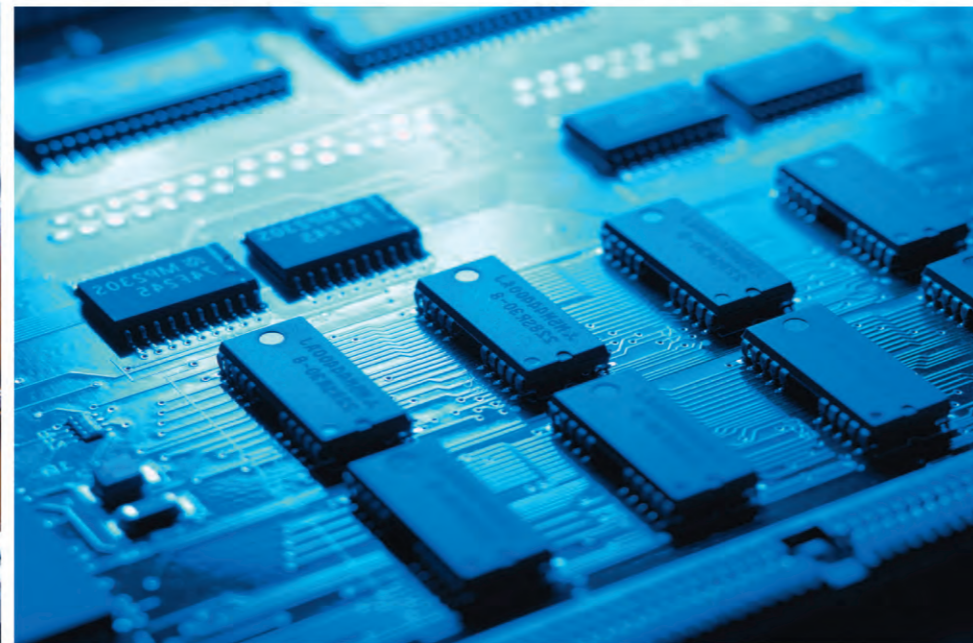


平稳启动，宁静运动

Smooth start, quiet moving

GRP20乘客电梯专用变频器是以先进技术的控制理论为基础，以人体工程学原理，设计起动、加速、制动曲线，达到最佳的舒适感，是真正的电流矢量控制变频驱动系统。

GRP20 passenger lift special inverter takes the control theory of the advanced technology as the foundation. The start, acceleration, brake curves are designed according to the ergonomic theory in order to get the finest coziness. It is a genuine current vector control variable frequency drive system.



尖端的门机系统

Top advanced door operator system

GRP20将先进的VVVF变压变频控制技术运用到电梯门机系统，确保梯门流畅和宁静开关。有自学习能力的门负载检测器更提高了梯门开关的灵敏度，监控每个楼层梯门负载的变化，自动调整每楼层最适合的开关速度以确保安全可靠。

GRP20 applies the advanced VVVF variable voltage and variable frequency control technology to the lift door operator system so as to ensure the smooth lift door and quiet switch. What is more, the self-learning door load detector increases the sensitivity of the lift door switching on/off. It monitors the variation of lift door load on every floor. Automatically rectifying the most appropriate open / shut speed in every floor so as to guarantee the security and reliability.

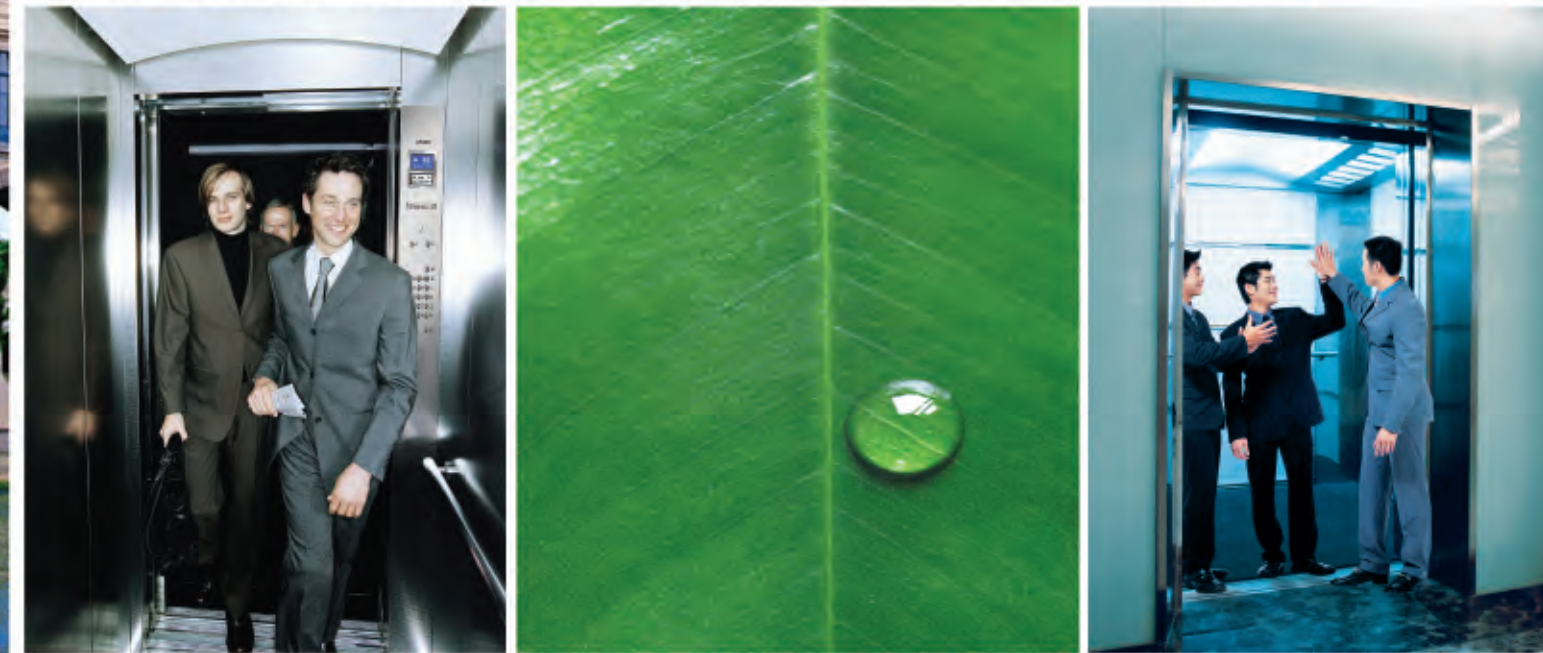


高效快捷 尽享自然和谐的绿意空间

Efficiently & swiftly Perfect green space
enjoyment of nature & harmony

GRP20乘客电梯，采用新型高效的蜗轮蜗杆曳引技术，起制动平稳、噪音低；其LED节能灯自动照明、电磁兼容设置、语音报站等多项领先的环保高新技术，体现人性化设计，为乘客开辟和谐、绿意空间。

We apply the novel and effective worm-gear traction technology for GRP20 passenger lift. With the smooth start & brake, low noise. The multiple leading environmental protection high and new tech such as automatic illumination of LED energy-saving lamp, electro-magnetic compatibility setting, voice announcer etc. show the human design and open up a green and harmonious space for the passengers.



蜗轮蜗杆曳引机
Worm gear traction machine

选用性能优良的电梯专用曳引机，并全面采用WWP、PWM、矢量控制、距离控制、数字称重等先进的驱动和反馈技术，使电梯运行质量达到完美境界。

We chose the superior performance lift special traction machine and comprehensively adopt the advanced drive and feedback technology such as WWP, PWM, vector control, distance control, numerical weighing etc. to make the travel quality be full perfect.

LED节能灯自动照明
Automatic lighting of LED energy-saving lamp

采用节能LED灯，电梯在无人使用时，轿厢内照明自动熄灭，接到任何召唤命令后自动打开，充分节约了电能的消耗。

We use energy-saving LED lamp. When nobody uses the lift, the lighting in the car will turn off automatically & automatically turn on once receiving any calling commands. Saving the electricity energy consumption sufficiently.

电磁兼容 互不干扰
Electromagnetic compatibility without interference
with each other

GRP20乘客电梯控制系统充分遵循有关电磁兼容性标准，消除电磁污染，有效避免楼宇内各种精密电器设备与电梯信号之间的电磁波干扰。

GRP20 passenger lift control system fully abides by the relevant electro-magnetic compatibility standard, removes the electro-magnetic pollution, effectively prevents from the electromagnetic wave interference between the lift signals and various precision electrical equipments in the building.

语音报站
Voice reporting

电梯在正常运行到站的情况下，利用语音装置告知乘客即将到达的层楼；当电梯关门时利用语音装置预报将要运行的层楼。

Under normal running arrival, report the floor that is about to arrive by utilizing the voice device; before lift door closing, voice device will forecast next running floor, making the movement harmonious and natural.

智能系统 城市的精灵

Intelligence system The genius in the city

智能化控制是GRP20乘客电梯控制系统中不可分割的重要组成部分，也是GRP20乘客电梯领跑智能生活的卓越表现。全电脑智能型控制系统，实现多微机、模块化、网络化控制，群控管理系统、智能化派梯系统、上班高峰服务等智能管理，构建快速反应的电梯专用网络，为电梯持之以恒的运转提供了强有力的保障。

Intellectual control is a key and indispensable constituent in GRP20 passenger lift control system and also the outstanding performance in leading an intellectual life. The fully computerized intellectual control system fulfills the intelligent supervision of the multiple micro-processing, modular and network control, group control managing system, intellectual lift dispatch system, on-duty peak service etc. It constructs the rapidly-reacted lift special network and provide the persistent travel with the powerful support.



人性化的功能选配

The humanized function options

根据用户需求，可添加各种操作功能，以满足各种人性化需求。例如，智能派梯；无通行权者不能使用电梯；一定楼层只有持IC智能卡的住户才能到达；针对老年或残疾人住户的需要便于在轮椅上操作电梯等。这些功能可有效地保护住户的权益和安全，减少了电梯的无效运行，方便特殊人群的使用，同时降低物业管理成本。

Passenger lift can add various operation functions to satisfy all kinds of the humanized requirements according to the difference in the residents' demands. For example, intellectual lift dispatch can not be used without way-leave. Only Intellectual IC Card Users can reach certain floors. We target upon the old and handicapped residents' requirements to develop lift in the wheelchairs. These functions can effectively protect the inhabitants' right and safety, decrease the invalid lift travel. Such lifts can be easily used by special groups. Meanwhile effectively cuts down the property management cost.

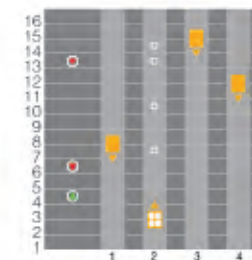


群控管理系统

Group control managing system

即多合同型号电梯成组控制时使用，使梯群能自动选择最优化的调度方案应答召唤信号，避免电梯重复停梯，缩短乘客候梯时间，提高运行效率。

Group control managing system is that multi same model lift groups are controlled in use, the lift groups can automatically choose the most appropriate response. It avoids the repeated lift parking, reduces the passengers' waiting time and improving the travel efficiency.

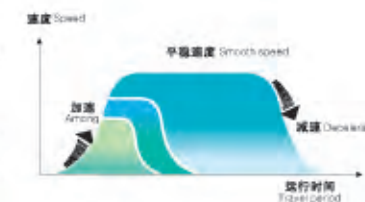


专用图形发生器

Special graphic generator

保证电梯在加速、减速、制动时更加平稳，乘坐更加舒适，同时使层间运行时间降至最低，运行效率极大提高。

Special graphic generator ensures the lift more smoothly in acceleration, deceleration and brake, the more comfortable riding. Meanwhile it reduces the travel time among floors to the lowest extent improving the running efficiency badly.



光幕保护

Photocell protection

利用灵敏密集的红红外光幕，在电梯门口形成光幕保护安全网，对于任何进入其探测平面的人或物体都能做出灵敏的反应，安全性能高，进出自如。

The lift utilizes the sensitive and concentrative infrared ray photocell to form optical curtain protection safety net at the entrance of the lift. It sensitively reacts to any person or object that enters into the probe plane freely entering in & out with high security.



不锈钢轿厢 Stainless steel car



RJ011



轿壁 Car wall	发纹不锈钢 Hairline stainless steel
轿门 Car door	发纹不锈钢 Hairline stainless steel
吊顶 Ceiling	发纹不锈钢框架, 亚克力灯饰(RD007) Hairline stainless steel frame, acrylic lighting decoration(RD007)
地板 Floor	PVC(RPV009) PVC(RPV009)
扶手 Handrail	不锈钢圆管(RF002) Stainless steel round pipe(RF002)
操纵箱 Operation panel	RC004-1 RC004-1

喷塑轿厢 Painted car



RJ016



轿壁 Car wall	喷塑钢板 Painted steel
轿门 Car door	喷塑钢板 Painted steel
吊顶 Ceiling	发纹不锈钢框架, 亚克力灯饰(RD007) Hairline stainless steel frame, acrylic lighting decoration(RD007)
地板 Floor	PVC(RPV009) PVC(RPV009)
扶手 Handrail	不锈钢圆管(RF002) Stainless steel round pipe(RF002)
操纵箱 Operation panel	RC004-1 RC004-1

完美功能 Function

标准功能 Standard Function

运行功能 Travel function	电梯变频驱动 VVVF drive	精确调整电动机转速，令电梯启动、运行、停止时的速度曲线平滑、圆滑，获得良好的舒适感。 Motor rotating speed can be precisely adjusted to get smooth speed curve in elevator's start, travel and stop and gain the sound comfort.
	门机变频驱动 VVVF door operator	精确调整电动机转速，使门机的启动、关闭更轻柔灵敏。 Motor rotating speed can be precisely adjusted to get the more gentle and sensitive door machine start / stop.
	独立运行 Independent running	通过动作开关，使电梯不响应外召，只响应轿厢内指令。 The elevator can not respond to outer calling, but only respond to the command inside the car through the action switch.
	自动不停站通过 Automatic pass without stop	当轿厢内挤满乘客或负载接近额定值，为保持最大运行效率，该轿厢将自动越过召唤层站。 When the car is crowded with the passengers or the load is closed to preset value, the car will automatically pass the calling landing in order to keep maximum travel efficiency.
	开门时间自动调整 Automatically adjust door opening time	按照层站召唤或轿厢召唤的区别，自动调整保持开门时间。 Door-open time can be automatically adjusted according to the difference between landing calling or car calling.
	本层重开门 Reopen with hall call	关门途中，可以按本层站召唤按钮使门重新开启。 In the door closing process, press opener with hall call button can restart the door.
	即时关门 Express door closing	电梯启动开门到位时，按下关门按钮，门立即被关闭。 When the elevator stops and opens the door, press door-close button, the door will be closed immediately.
停梯开门 Car stops and door open	电梯减速平层，直到完全停稳后才开门。 The elevator decelerates and levels, the door only opens after the elevator comes to a complete stop.	
轿厢到站声 Car arrival going	关于轿厢的电子铃声如候梯的乘客电梯已到达。 Arrival going in the car top announces that the passengers arrive.	
指令登记删除 Command register cancel	如误按了轿厢楼层指令按钮，只要把同一按钮连续按两次，就可取消已登记指令。 If you press the wrong floor command button in the car, twice continuous pressing of the same button can cancel the registered command.	
直接停靠 Direct parking	完全根据距离原则，平层无爬行，大大提高了运行效率。 It completely accords with distance principle with no crawling in the leveling. It greatly enhances the travel efficiency.	

安全功能 Safety function	光幕保护 Photo-eye protection	门开启和关闭期间，用覆盖整个门高度的红外光幕探测乘客和物体的门保护装置。 In the door open and close period, infrared light that covers the whole door height is used to probe the door protection device of both the passengers and objects.
	指定停靠 Designated stop	由于某种原因，电梯在目的层无法开门，电梯将关门运行至下一指定层楼。 If the elevator can not open the door in the destination floor out of some reason, the elevator will close the door and travel to the next designated floor.
	超载停梯 Overload holding stop	轿厢超载时，鸣响蜂鸣器并停止于该层站。 When the car is overloaded, the buzzer rings and stops the elevator in the same floor.
	防止失速内部计数器保护 Anti-stall timer protection	由于曳引钢丝绳打滑而无法正常运行时，电梯停止运行。 The elevator stops operation due to slippage of the traction wire rope.
	启动保护控制 Start protection control	电梯启动后在指定的时间内，没有离开门区，电梯停止运行。 If the elevator does not leave door zone within the designated time after it starts, it will stop the operation.
	检修操作 Inspection operation	当进入检修状态时，轿厢以低速点动运行。 When the elevator enters into inspection operation, the car travels at inching running.
	故障自诊断 Fault self-diagnosis	控制器可记录最新的62个故障，以便快速排除故障，迅速恢复电梯运行。 The controller can record 62 latest troubles so as to quickly remove the troubles and restore the elevator operation.
电梯门重复开关 Repeated door closing	有时因障碍或干扰，电梯门未能关闭，电梯门会重复打开或关闭，直到障碍物清除。 If the elevator can not close the door due to certain obstacle or interference, the elevator will reopen or reclose the door until obstacles are eliminated.	
上下越层及上下极限保护装置 Up/down over-run and final limit protection	该装置可有效防止当电梯万一发生失控时的冲顶或撞底现象，使电梯更安全可靠。 The device can effectively prevent from the elevator's surging to the top or knocking the bottom when it's out of control. It results in more safe and reliable elevator travel.	
下行超速保护装置 Down over-speed protection device	当电梯下降运行的速度超过额定速度的1.2倍时，该装置自动切断控制电源，使电机停止运转以阻止电梯超速下行；如电梯继续超速下行，其速度超过额定速度的1.4倍时，安全钳动作，强制电梯停止运行，保证安全。 When the elevator's down speed is 1.2 times higher than the rated speed, this device will automatically cut off control mains, stop the motor running so as to stop elevator down at over-speed. If the elevator continues to down at over-speed, and if the speed is 1.4 times higher than rated speed, safety clamps act to force the elevator stop in order to ensure the safety.	
上行超速保护装置 Upward over-speed protection device	当电梯上行的速度超过额定速度的1.2倍时，该装置自动将电梯减速或制停。 When the elevator's up speed is 1.2 times higher than rated speed, the device will automatically decelerate or brake the elevator.	

人机界面 Man-machine interface	轿内及层站微动指令按钮 Micro-touch button for car call and hall call	轿内操纵箱指令按钮及层站召唤按钮采用新型微动型按钮。 New type micro-touch button is used for operation panel command button in the car and landing calling button.
	轿内层楼、方向指示 Floor and direction indicator inside car	轿内显示电梯所在层楼及当前运行方向。 The car shows the elevator floor location and current travel direction.
	层站层楼、方向指示 Floor and direction indicator in hall	层站显示电梯所在层楼及当前运行方向。 The landing shows the elevator floor location and current travel direction.

应急照明 Emergency car lighting	停电时，自动打开轿厢应急照明。 Emergency car lighting automatically activated once power failure.
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应急功能 Emergency function	点动运行 Inching running	当进入紧急电动状态时，轿厢以低速点动运行。 When the elevator enters into emergency electric operation, the car travels at low speed inching running.
	五地通话装置 Five way intercom	通过对讲机，可让轿内、轿顶、电梯机房、井道机房、救援值班室之间通话。 Communication among car, car top, elevator machine room, well pit and rescue duty room through walkie-talkie.
	消防返回 Fire emergency return	启动基站或显示屏上的钥匙开关，所有召唤均被取消，电梯立即驶往指定救援层站停靠，并自动开门。 If you start key switch in main landing or monitor screen, all the callings will be canceled. The elevator directly and immediately drives to the designated rescue landing and automatically opens the door.
节能功能 Energy-saving function	轿厢风扇/照明自动开关 Car ventilation, light automatic shut-off	在规定的时间内没有召唤或指令信号，轿厢内的风扇和照明会自动关闭，以节能。 If there is no calling or command signal within the stipulated time, the car fan and lighting will be automatically closed in order to save the energy.
	远程关闭 Remote shut-off	通过钥匙开关，电梯可以被召唤到基站（服务完成后），并自动退出服务。 The elevator can be called to base ending (after finishing the service) through the key switch and automatically exits the service.

选配功能 Optional Function

应急功能 Emergency function	停电应急平层 Leveling when power failure	正常电源断电时，充电式电池提供电梯电源，电梯驶往最近层站。 In normal power failure, the chargeable battery supplies the elevator power. The elevator drives to the nearest landing.
	警铃 Bell	紧急时，连续按下轿内操纵箱上的警铃按钮，安装在轿厢顶上的电铃会鸣响。 In emergency conditions, if bell button above car operator panel is continuously pressed, elevator bell rings on top of the car.

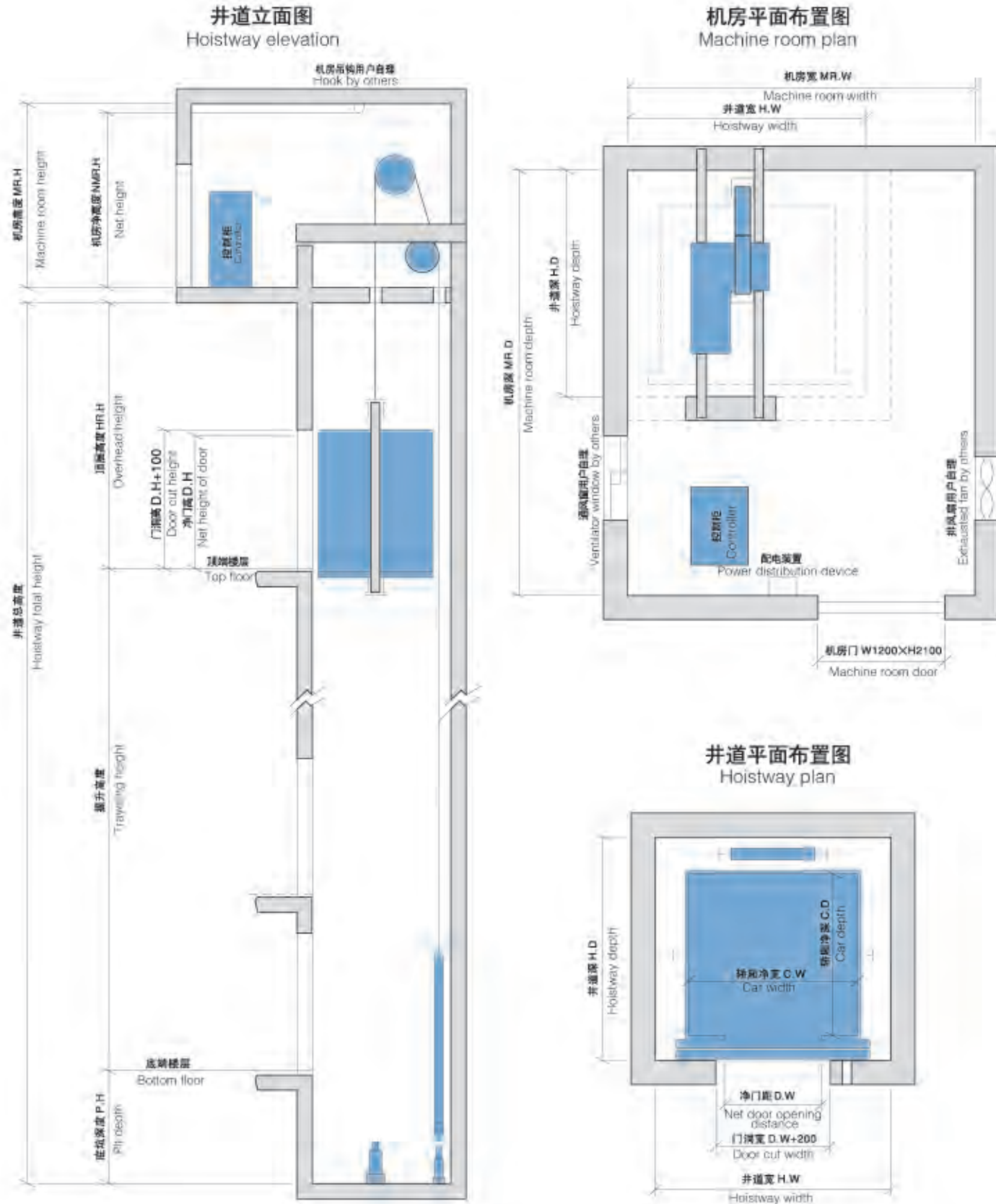
运行功能 Travel function	防捣乱 Anti-nuisance	当电梯轻载时出现超过三个指令时，为避免不必要停靠，轿厢内已登记的召唤将全部自动消除。 In the light duty load, when three more commands appear, in order to avoid the unnecessary parking, all the registered callings in the car will be canceled.
	提前开门 Open the door in advance	电梯减速进入开门区域，自动开门，提高运行效率。 When the elevator decelerates and enters into door open zone, it automatically opens the door to enhance the travel efficiency.
运行功能 Travel function	群控功能 Group control function	用于三台或三台以上同型号电梯成组控制时使用，使候群能自己选择最合适的应答，避免电梯重复停靠，缩短乘客候梯时间，提高运行效率。 When three or more same model elevator groups are controlled in use, the elevator group can automatically choose the most appropriate response. It avoids the repeated elevator parking, reduces the passengers' waiting time and increases the travel efficiency.
	并联功能 Duplex control	用于两台同型号电梯，通过电脑的调度来统一响应召唤信号，以最大限度地减小乘客的候梯时间，以提高运行效率。 Two sets of same model elevators can unified respond the calling signal through the computer dispatch. In this way, it reduces the passengers' waiting time to the greatest extent and enhances the travel efficiency as well.
	上班高峰服务 On-duty peak service	在预定上班时间内，基站向上的运输特别繁忙时，向基站不断派梯以满足上班时高峰需要。 Within the preset on-duty time, upward transport from the base landing is extremely busy. The elevators are continuously dispatched to the base landing in order to satisfy on-duty peak service.
	下班高峰服务 Off-duty peak service	在预定下班时间内，向顶层派梯满足下班时高峰需要。 Within the preset off-duty period, the elevators are continuously dispatched to top floor in order to satisfy off-duty peak service.
运行功能 Travel function	开门时间延长 Door open time extending	按轿厢内的专用按钮，可使门在一段时间内保持开门状态。 Press special button in the car, the elevator door keeps open for certain period of time.
	开门再平层 Door-opening re-leveling	当电梯处于开门状态，由于轿厢载荷变化，造成平层波动时，系统在门开的状态下以自身平层速度自动运行到平层位置。 When the elevator door opens and leveling fluctuation occurs due to change of the car load, the system automatically runs the elevator to leveling position by its own leveling speed under the conditions of door-opening.

人机界面 Man-machine interface	语音报站 Voice announcer	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。 When the elevator normally arrives, voice announcer informs the passengers about the relevant information.
	轿厢副操纵箱 The second operator box	用于大载重量电梯或候梯人群稠密大楼中的电梯，以便让轿厢内更多的乘客方便使用。 It is used in the large loading weight elevators or the elevators with crowded passengers so that more and more passengers can use the car.
	残疾人操纵箱 Operation box for the disabled	便于让轿厢内坐轮椅的乘客及视觉障碍的乘客方便使用。 It's convenient for the wheelchair passengers and those who have visual disorder.
	智能召唤服务 Intelligent calling service	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 calling can be locked or connected through special intelligent input.
运行功能 Travel function	IC卡控制功能 IC card control function	所有（部分）层站须经授权，方可通过IC卡输入轿厢指令运行电梯。 All (partial) landings can only input car commands through IC Card after the authorization.

监控功能 Monitor function	远程监控 Remote monitor	通过调制解调器和电话，可实现电梯的远程监视和控制，便于厂家和服务单位及时的了解每台电梯的运行状况，以便及时作出相应措施。 The elevator long-distance monitor and control can be fulfilled through modem and telephone. It is convenient for the factories and service units to know the travel conditions of every elevator and take the corresponding measures in time.
	轿内摄像功能 Camera function in the car	摄像头安装在轿厢内监视轿厢内情况。 The camera is installed in the car to monitor the car conditions.

GRP20乘客电梯土建示意图

GRP20 Passenger lift construction sketch



业主和土建承包商应完成的工作

- 井道内一切建筑必须达到防火要求，不得设置与电梯无关设备、电源等无关孔洞。
- 井道必须垂直，井道水平尺寸为最小净空尺寸，且垂直误差 $0 \sim +25\text{mm}/0 \sim 30\text{m}$ 、 $0 \sim +30\text{mm}/30\text{m} \sim 60\text{m}$ 、 $0 \sim +50\text{mm}/60\text{m}$ 以上。
- 当底坑底下有人能达到的空间存在，则对重缓冲器应安装在一直延伸到坚固地实心桩墩上，或向电梯厂家询问安装对重安全钳。
- 电梯安装之前，所有层门洞必须设有高度不小于1.2米的安全防护围封，并应保证有足够的强度。
- 封闭式井道根据需要设通风孔（一般在井道顶部和底部），其面积不得小于井道水平面积的1%，通风孔需设防护网。
- 电梯厅门、呼梯显示预留洞及其他预留孔洞在电梯安装完毕时需进行回填装修。
- 电梯井道最好为混凝土结构。如果井道为框架结构，在导轨支架安装处应设置300mm高的混凝土圈梁，并在每层厅门留洞上沿和下沿均设300mm高与井道同宽的混凝土梁。如果井道为实心承重砖墙结构，应在每层厅门留洞上沿和下沿均设300mm高、与井道同宽的混凝土梁。
- 当两相邻门地坎间距超过11米时，其间应设置——不得向井道内开启的安全门，安全门的尺寸不得小于350mm宽1800mm高。
- 底坑内应防水，若有积水坑，应在墙角处。
- 根据技术参数表中的要求，把电源拉到机房并设带保护的开关且上锁。电源波动范围不应超过 $\pm 7\%$ ，电源零线和接地线应分开，且接地电阻值不大于 4Ω 。
- 机房中的温度应保持在 $5 \sim 40^\circ\text{C}$ ，机房应平整且必须能够承受不小于 7 kN 每平方米的楼面标准均布活荷载。当机房地面高度不一且相差大于500mm时，应设置楼梯或者台阶，并设置护栏。
- 用户需设立救援值班室，并每层铺设通往机房的1根6芯电缆（推荐使用屏蔽/两两双绞线），每芯线径至少0.75平方毫米。

GRP20乘客电梯参数表
GRP20 Passenger lift specifications

层站数 (A)	轿厢净宽 (B)	轿厢净深 (C)	轿厢尺寸 (mm)				井道尺寸 (mm)		门洞尺寸 (mm)		井道深度 (D)
			轿厢净宽 (C.W)	轿厢净深 (C.D)	井道净宽 (H.W)	井道净深 (H.D)	净门宽 (D.W)	门洞宽 (D.W+200)			
6	400	1.0	1100x1000	700x2100	1700x1620	4450	1500	2200x3800	2900	45	
8	630	1.0	1400x1100	800x2100	2000x1720	4450	1500	3050x3900	2900	45	
		1.6/1.75				4600	1700				96
10	800	1.0	1400x1350	800x2100	2000x1970	4450	1500	3050x4100	2900	45	
		1.6/1.75				4600	1700				96
		2.0				4700	1800				120
13	1000	1.0	1600x1500	900x2100	2200x2120	4450	1500	3250x4400	2900	45	
		1.6/1.75				4600	1700				96
		2.0				4700	1800				120
15	1150	1.0	1700x1500	1000x2100	2300x2120	4450	1500	3350x4400	2900	45	
		1.6/1.75				4600	1700				96
		2.0				4700	1800				120
16	1250	1.0	1950x1400	1100x2100	2600x2020	4450	1500	3600x4100	2900	45	
		1.6/1.75				4600	1700				96
		2.0				4700	1800				120