

WD800MRL 钢带无机房客梯 ▶ Steel belt inorganic tenant ladder



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版本号：2016.09A版  
印刷号：2017-03-30

**SWORD**  
HANGZHOU SWORD ELEVATOR CO.,LTD.



## SWORD 斯沃德

执着于行 浩瀚于心

STICK FOR TRAVEL WORLD IN HEART

杭州斯沃德电梯有限公司（SWORD）成立于2009年，坐落在浙江杭州国家级经济技术开发区，是一家集电梯研发、设计、生产、销售、安装及售后维保为一体的国际化综合型电梯制造服务商，电、扶梯年产量能高达50000台，品牌综合实力位居行业前列。

杭州斯沃德电梯产品涵盖小机房乘客电梯、无机房电梯、高速电梯、医用电梯、载货电梯、观光电梯、自动扶梯、自动人行道、汽车电梯等九大系列，其中高精度、高规格的绿色环保产品已经通过德国TÜV等级认证、欧盟CE、俄罗斯CU-TR认证，马来西亚JKKP认证、阿尔及利亚ENACT认证并成功进军北美CSA体系、ASME体系认证市场。截止目前，杭州斯沃德电梯已为全球70余个国家和地区提供完美的楼宇交通服务，品牌影响力及美誉度不断提升。

HANGZHOU SWORD ELEVATOR CO., LTD. was established in 2009 and located in National Economic and Technological Development Zone—Hangzhou City. We're the international comprehensive elevator manufacture which integrates elevator and escalator R & D, design, production, sale, installation and after-sales maintenance. Our annual production capacity of elevator and escalator is up to 50,000 units which leading the industry.

Our products cover small machine room passenger elevator, machine room-less passenger elevator, high-speed elevator, medical lifts, service lifts, sightseeing elevators, escalators, moving walkways and vehicle elevators ,totally nine series, among which our high-precision, high-qualification environmentally friendly products have went through German TÜV certification, European Union CE, the Russian CU-TR certification, JKKP Malaysia certification, Algeria ENACT certification and successfully joined in the North American CSA and ASME certification system. We have provided service and solutions for more than 70 countries and regions worldwide by now, our brand influence and reputation are on the rise.

### 余杭经济开发区斯沃德生产基地

- 投资5亿元 占地11万平米 年产50000台电、扶梯
- 高度超过120米、具备10m/s电梯试验能力的国内领先电梯试验塔
- Invest 500 million yuan 110,000 square meters An annual output of 50000 units
- Over 120 meters in height with the elevator testing ability of 10m / s leading domestic elevator testing tower



创新 | 钢带无机房客梯  
Steel belt inorganic tenant ladder



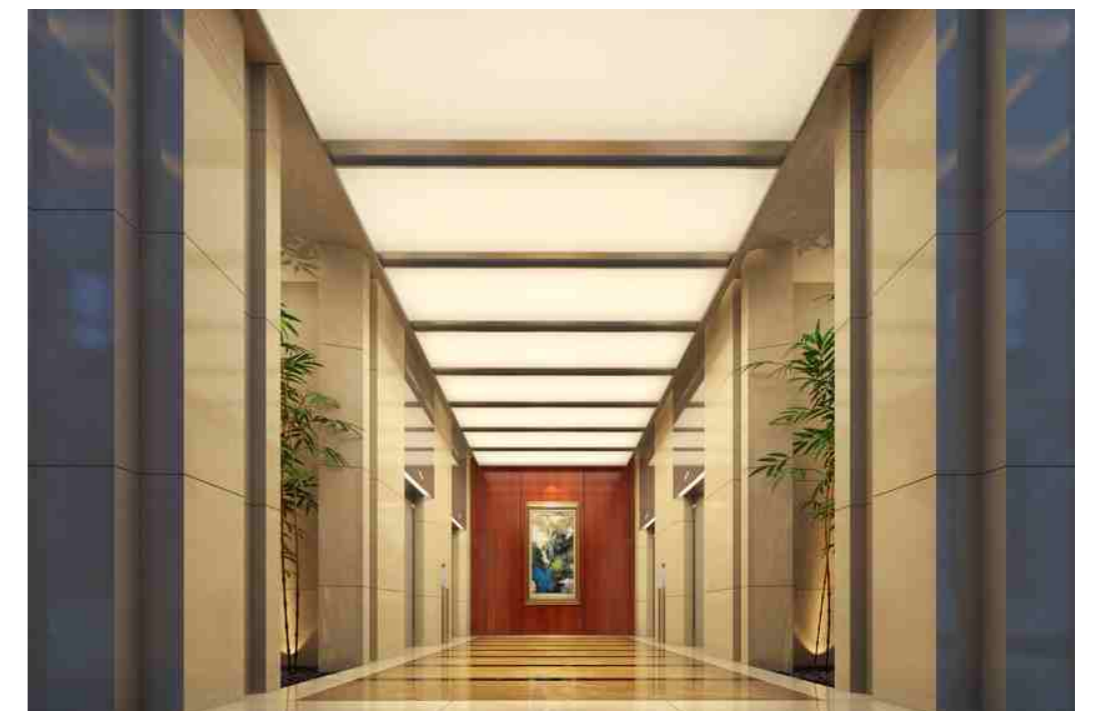
HANGZHOU SWORD ELEVATOR CO.,LTD

# WD800MRL

钢带无机房客梯  
Steel belt inorganic tenant ladder

杭州斯沃德电梯积极研究市场需求，为客户提供性能更佳，更适应建筑体系的产品，推出了全新的WD800MRL钢带无机房客梯，以其创新的曳引技术、优异的运行效果、对各类型场所高度的适应性等特点，广泛适用于住宅、商场、写字楼等各类型场所。

By research market demand, Hangzhou SWORD decide to provide products to our customers which has better performance, more adapt to building system. WD800MRL steel belt MRL elevators has been introduced with innovative traction technology, excellent running performance, has been wide used in residential, shopping malls, office buildings and other kinds of places.





## Unique Double-sided Traction Technology

### 行业唯一的双面曳引技术

杭州斯沃德WD800MRL钢带无机房客梯采用双面钢带作为曳引媒介，分别与主机曳引系统和轿厢曳引系统构成行业唯一的双面曳引技术，既能防止曳引力过剩，延长使用寿命，又能有效防止钢带跑偏，使得运行平稳舒适。

Hangzhou SWORD WD800MRL steel belt MRL elevator using double-sided steel as hoisting media, this unique double-sided traction technology constitutes with the traction machine and the hoisting system, to avoid excessive traction, extend service life, and effectively stop belt deviation, makes riding more smooth and comfortable.



#### Plane traction

##### ▶ 平面曳引

主机侧采用平面曳引，与主机曳引轮接触的是钢带的平面侧，表面光滑，与齿面曳引相比，平面曳引摩擦力适中，可以避免曳引力过剩，减少钢带在长时间使用过程中无效的磨损，最大限度延长钢带使用寿命。

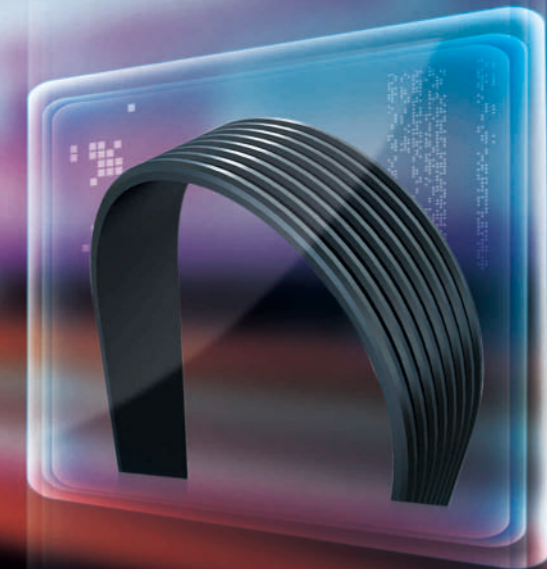
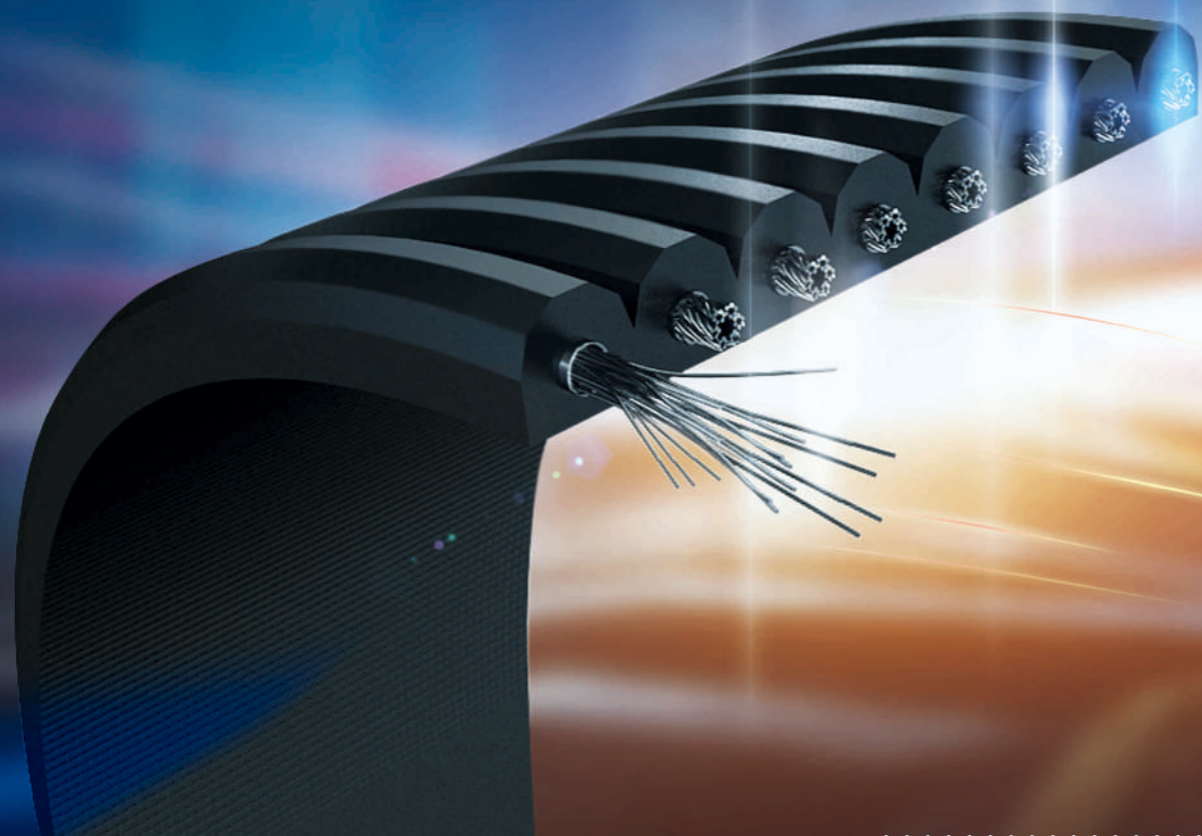
The steel belt MRL elevator's host uses the plane traction, the plane side of steel belt in contact with the traction sheave. Plane traction friction can offer some improvements over the tooth surface traction, such as better traction, reduce loss of traction when using of steel belt, maximize the service life of steel belt.

#### Tooth surface traction

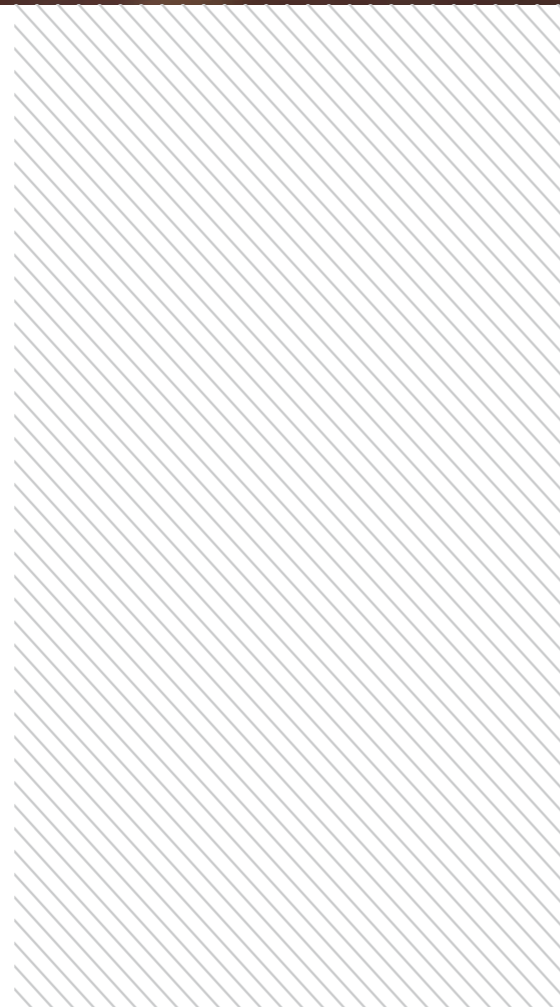
##### ▶ 齿面导向

轿厢侧采用齿面导向，与轿厢轿顶轮接触的是钢带的齿面侧，表面的界面为齿型，该设计方式能够防止钢带跑偏，使轿厢运行平稳舒适，同时减小运行噪音。

Tooth surface traction has been used to lift the car, the tooth surface of the belt is coordinated with overhead sheave, in order to avoid the steel belt deviation, makes riding more smooth and comfortable, and minimize the running noise at same time.

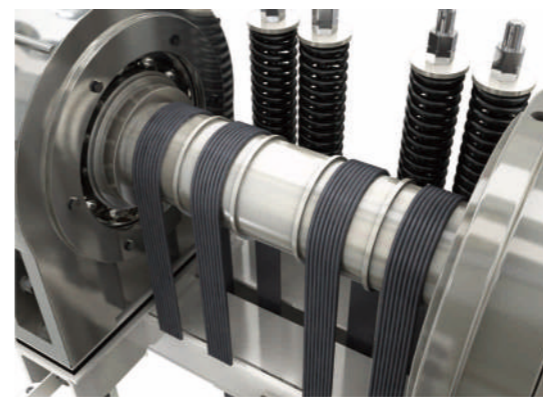


## New composite steel belt 全新复合钢带



WD800MRL钢带无机房客梯采用的双面钢带由德国原装进口，结构上创新的采用双界面设计，增大接触面积，驱动力强，防止打滑，同时与普通钢带一样，由聚氨酯高分子形成表面，无需润滑，免维护，节约日常维护成本，并且寿命是常规钢丝绳的2-3倍。

The double-side steel belt which used in WD800MRL steel belt MRL elevators is imported from Germany, the double-side design increase the contact area, the better driving force also used to prevent sliding. Same as the ordinary steel belt, belt surface is formed by polyurethane polymer, with no lubrication required, save the maintenance costs, and lifetime is 2-3 times than the traditional wire rope.



### Maintenance free

#### 免维护

聚氨酯高分子材料，无需润滑  
 polyurethane polymer materials without lubrication

### Long-lasting lifetime

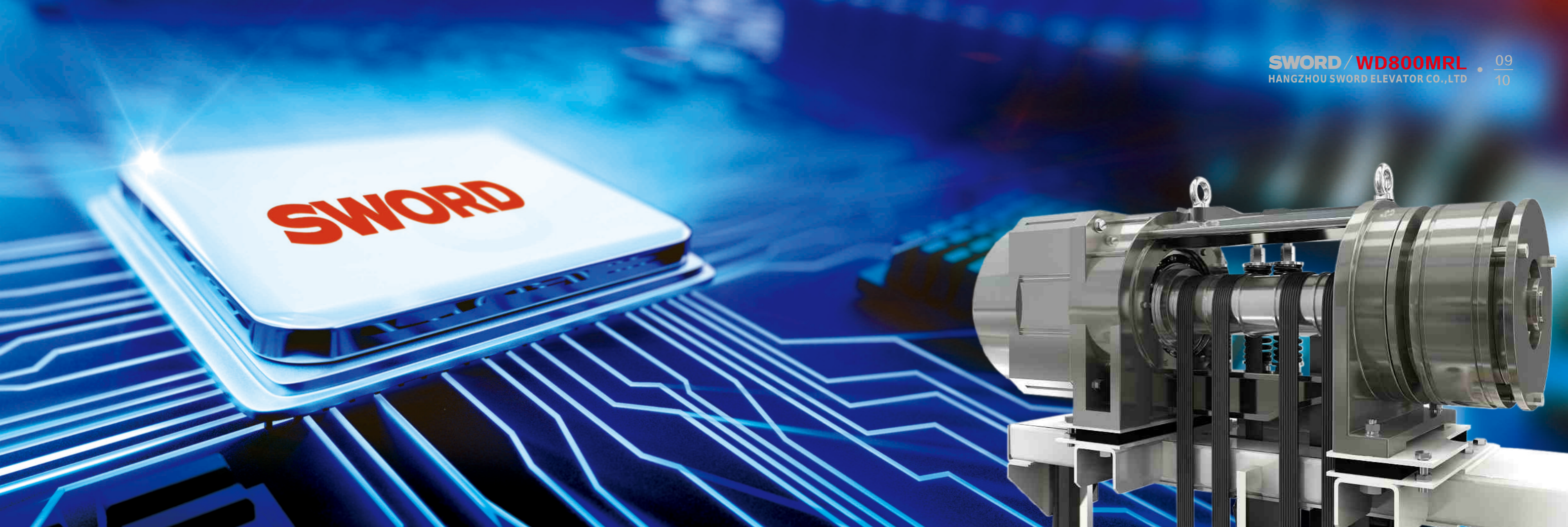
#### 高寿命

寿命是传统钢丝绳的2-3倍，达到15年  
 lifetime is 2-3 times than the traditional wire rope, upto 15 years

### Highly efficient

#### 高效能

更易弯曲，接触面积大，更高效节能  
 more flexible, the contact area is large, more energy efficient



## Permanent magnet synchronous gearless steel belt host

### 永磁同步无齿轮钢带主机

与复合钢带配合的是永磁同步无齿轮钢带主机，此款主机是为WD800MRL钢带无机房客梯系列单独研发的专用主机，我们对主机结构、制动器等多项技术和结构进行了全新设计，使该主机具有安全、高效、小巧等特点。

Cooperate with composite steel belt is the Permanent magnet synchronous gearless steel belt host, this host is dedicated designed for WD800MRL steel belt MRL elevators, we have made a number of technical and structure improvements, such as a host structure, brakes, etc. to make the host more safe, more efficiency, and smaller.

#### Safety

##### ▶ 安全

采用新型内置式叠型制动器，制动面积大，制动更安全  
using new built-in fold type brake, Break contact area is larger

#### Reliable

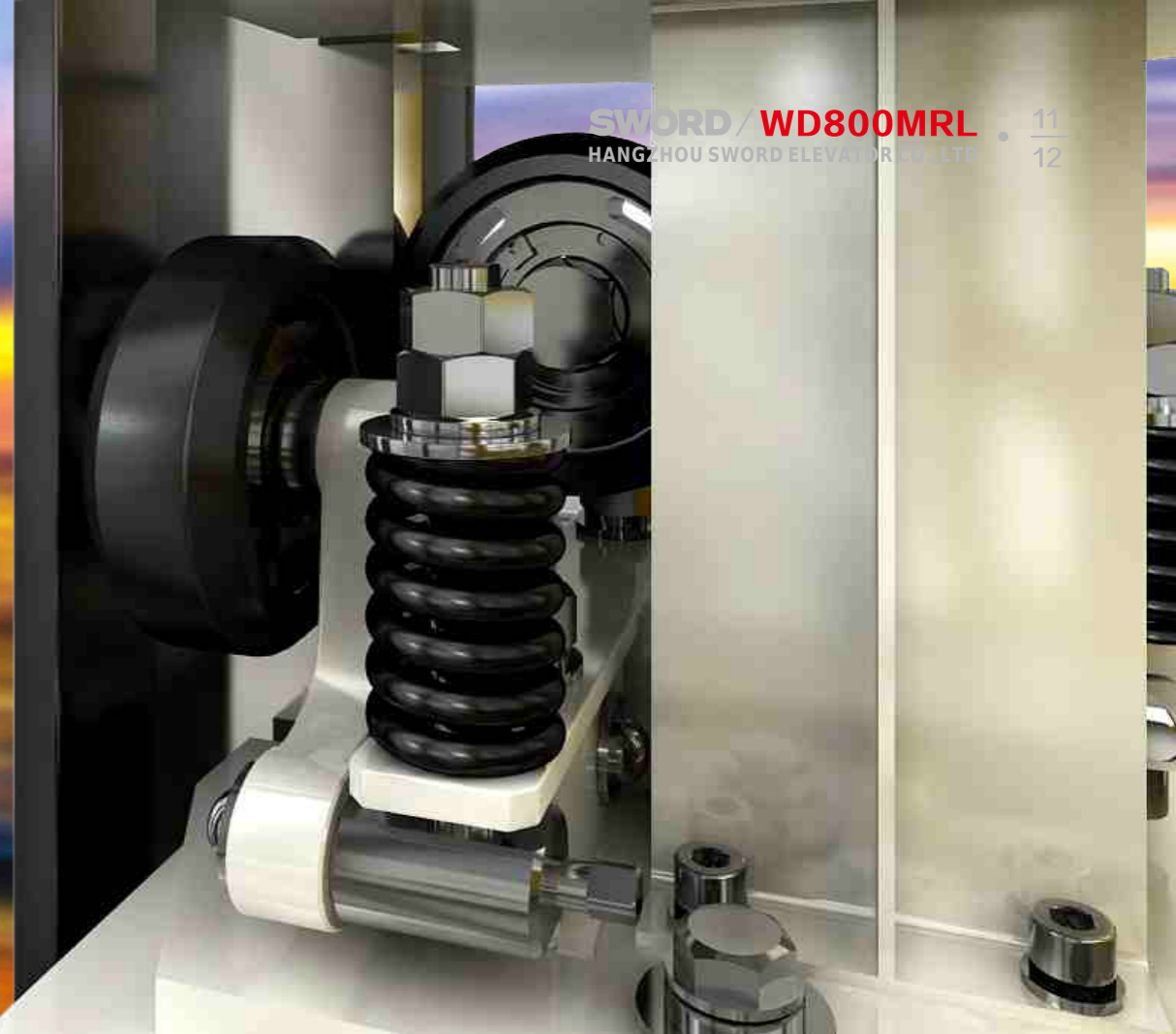
##### ▶ 可靠

曳引轮和制动器采用一体式结构，主机启动制停更平稳可靠  
traction sheave and brake one-piece structure, more reliable and stable when start / stop

#### Small

##### ▶ 小巧

主机采用条形结构布置，体积小，比常规主机体积小70%  
host bar structure arrangement, 70% smaller than the regular host



## Whole series roller guide boots 全系列配置滚轮导靴

为了提供给乘客更好的乘坐体验，提高电梯运行舒适性，WD800MRL钢带无机房客梯全系列配置滚轮导靴，相比滑动导靴，滚轮导靴无需润滑，避免油污污染环境，彻底防止油污使钢带打滑情况的发生，滚轮导靴与轿顶齿面导向相互配合，运行噪音更低。

In order to provide the passengers better ride experience, to improve the elevator running comfort, the whole series of WD800MRL steel belt MRL elevators has configured roller guide shoe. Compared with the sliding guide shoe, no lubrication is required, to prevent oil contamination makes steel belt skid, roller guide shoe and the tooth surface orientation of the car top to cooperate with each other, the running noise is lower.



无需润滑  
Without  
lubrication



防止钢带打滑  
To prevent the  
steel belt skid

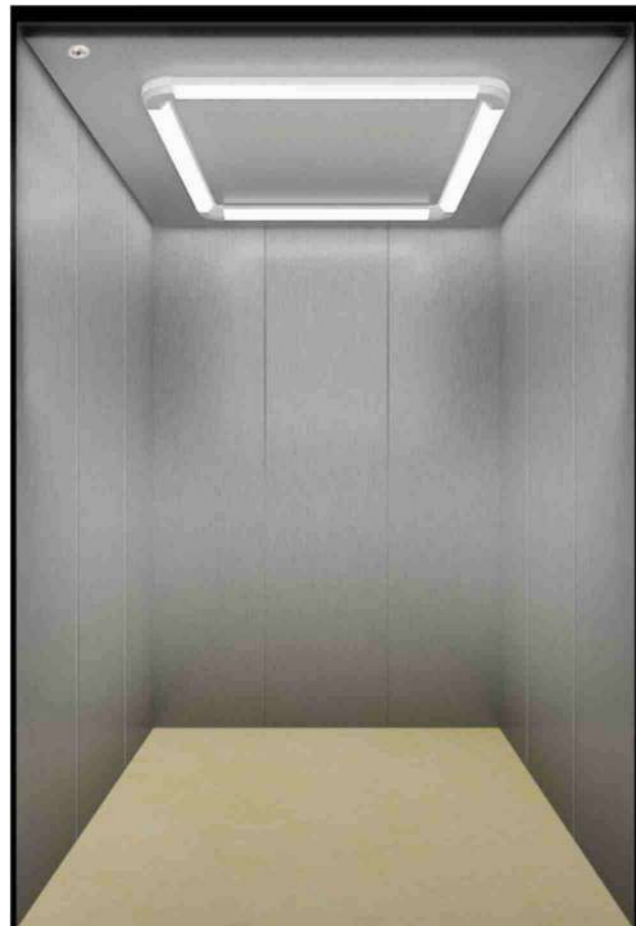


运行噪音更低  
Running noise  
is lower



避免油污污染环境  
Avoid oil pollution  
environment

# Car standard decoration 轿厢标准装潢



## Standard car 标准轿厢

吊 顶: XO-Z3306(L)(发纹不锈钢+LED灯具)  
 轿 壁: 发纹不锈钢  
 轿 门: 发纹不锈钢  
 地 面: XO-Z0468(PVC)

Ceiling: XO-Z3306(L)(hairline stainless steel + LED lamps and lanterns)  
 Wall: hairline stainless steel  
 Car door: hairline stainless steel  
 Floor: XO-Z0468(PVC)



## Standard ceiling 标准吊顶

XO-Z3306(L)  
 发纹不锈钢+LED灯具  
 hairline stainless steel+ LED lamps and lanterns

注: 本系列图片均为电脑效果, 最终以实物为准  
 Note: The pictures are all computer impression drawing, please according to the real object

# Man-machine interface 人机界面

## Operation box 操纵箱

▶ 标配显示  
 Standard Display



视窗放大型  
 6.4"BND-LEDW黑屏液晶显示  
 windows enlarged  
 6.4"BND-LEDW black screen

▶ 标配按钮  
 Standard button



BR36D  
 微亮型发纹不锈钢盲文按钮  
 Shimmery hairline stainless  
 steel braille button

## Call 召唤盒

外召: XHB16-A无底盒外召唤标配  
 4.3"BND-LEDW 白色段码显示及  
 BR36D发纹不锈钢盲文按钮

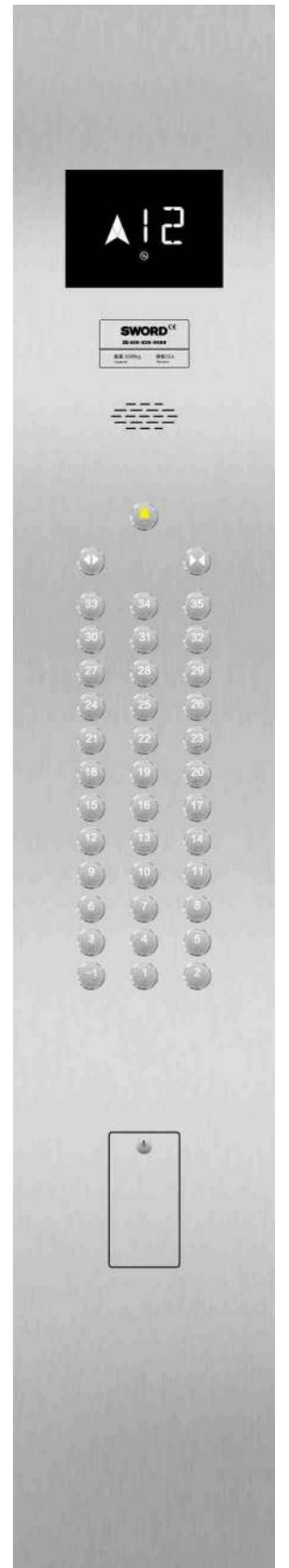
Call: XHB15-A bottomless calling  
 box ,with 4.3"BND-LEDW White  
 LED segment display and BR36D  
 hairline stainless steel braille button



4.3"BND-LEDW  
 白色段码显示  
 White LED  
 segment display



BR36D  
 发纹不锈钢盲文按钮  
 Hairline stainless steel braille button



COP2  
 Integrated operation panel



# Optional human-computer interface recommendation

## 选配人机界面推荐

### Control box 操作箱

#### 可选显示 Optional Display



6.4" BND-LCD  
黑屏液晶显示  
Black screen LCD



6.4" EOD-LCD  
黄色点阵液晶显示  
Yellow dot liquid  
crystal display



放大型视窗  
Windows enlarged  
6.4 "EOD-LEDY  
LED黄色点阵显示  
Yellow LED dot  
matrix display



7.0" TFT-LCD  
炫彩液晶显示  
Colorful liquid  
crystal display



10.4" TFT-LCD  
炫彩液晶显示  
Colorful liquid  
crystal display

#### 可选按钮 Optional button



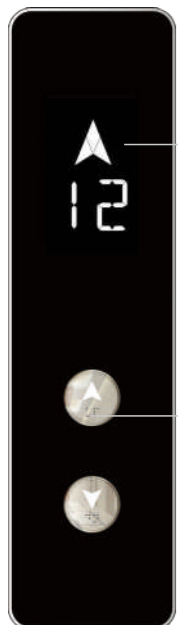
BS34D  
微亮型发纹不锈钢盲文按钮  
Shimmery hairline stainless  
steel braille button



BR34B  
微亮型白镜面不锈钢盲文按钮  
Shimmery white mirror stainless  
steel braille button

### Call 召唤盒

#### XHB17-A无底盒外召唤 Bottomless calling box



4.3" BND-LEDW  
白色段码显示  
White LED  
segment display



BR34B  
白镜面不锈钢盲文按钮  
White mirror stainless  
steel braille button

#### 可选显示 Optional Display



4.3" BND-LCD  
黑屏液晶显示  
Black screen LCD



4.3" EOD-LCD  
黄色点阵液晶显示  
Yellow dot liquid  
crystal display



4.3" EOD-LEDY  
LED黄色点阵显示  
Yellow LED dot matrix  
display

#### 可选按钮 Optional button



BS34D  
发纹不锈钢盲文按钮  
Hairline stainless steel braille button

\* 喷涂钢板轿厢标配COP1分体式操纵箱，其余材质轿厢不可选该操纵箱  
Spray the car comes standard with COP1 split steel control box, the rest of the material can not be selected in the control box car

# Optional car recommendation

## 选配轿厢推荐

### Optional ceiling 可选吊顶



XO-Z3301(L)  
两侧边框喷粉钢板 (RAL1013)+LED筒灯,  
中间框架喷粉钢板 (RAL9004)+LED照明  
+丝印亚克力透光板

Powder injection steel plates in both sides  
(RAL1013)+LED down lamp; Powder injection  
steel plates in central frame(RAL9004)+LED  
lighting+silk-screen acrylic light-passing board



XO-Z3302(L)  
两侧边框喷粉钢板 (RAL1013)+LED筒灯,  
中间框架喷粉钢板 (RAL9004)+LED照明  
+丝印亚克力透光板

Powder injection steel plates in both sides  
(RAL1013)+LED down lamp; Powder injection  
steel plates in central frame(RAL9004)+LED  
lighting+silk-screen acrylic light-passing board



XO-Z0372(L)  
发纹不锈钢框架+亚克力灯饰+梯形顶板  
Hairline stainless steel board frame+  
acrylic lighting decoration + trapezoid  
roof board



XO-Z0378(L)  
四周边框304发纹不锈钢+丝印亚克力  
透光板+LED照明, 中间框架烤漆钢板  
+白镜面不锈钢顶板

304 hairline stainless steel in all sides+  
silk-screen acrylic light-passing board  
+LED lighting, stoving varnish steel board  
in central frame+White mirror stainless  
steel roof board

### Optional barre 可选扶手



XO-Z0530  
青古铜  
Green bronze



XO-Z0531  
青古铜/木材  
Green bronze/wood



XO-Z0506A  
圆型白镜面不锈钢扶手  
Round white mirror stainless steel handrail



XO-Z0509  
扁型不锈钢扶手  
Flat stainless steel

### Optional Floor 可选地坪

#### 大理石 (Marble serise)



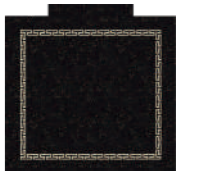
XO-Z0182P



XO-Z0183P



XO-Z0194P



XO-Z0206P

#### PVC (PVC optional)



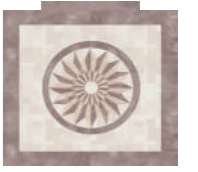
XO-Z0465



XO-Z0460



XO-Z0237P



XO-Z0462

# Standard function

## 标配功能表

↓ ↑ Run function 运行功能	全集选控制 Full collective operation	在信号控制的基础上把呼梯信号集合起来进行有选择的应答 In the automatic operation state, the elevator will automatic response the signal from instructions, operation direction etc
	满载直驶 Load non stop	轿厢满载时, 不响应外呼信号, 执行轿内信号 When the cabin is fully loaded,the elevator does n't response the hall calling signal,executes the car-internal signal.
	自动返回基站 Auto-return to main floor	当轿厢在设定时间内无外呼和内选时, 电梯将自动返回设定楼层(基站) If no registration of calls or operations after preset timeout, the car will return to preset main stop and wait there
	错误指令取消 Cancel error calls	当电梯未运行时, 可以通过连续双击该楼层的内招按钮, 取消该已登记的信号 Before the car starts, the registration of a call or operation can be canceled by double click of this button
	楼层间距自主学习 Hoistway floor space self learning	系统自动记录各层高度, 在电梯运行时进行精确的距离控制 The system automatically record each floor height when the elevator normal operation, it can win precisedistance control, so as to realize the dock directly
	锁梯开关 Key switch	锁梯开关动作后, 系统不再响应外召指令, 待电梯响应完轿内所有指令后, 自动返回基站 Lock key moves, the system cancel all call signals, after the elevator response the car call instruction signals, automatically returns to base floor.
	开关门按钮 Door opening button Door closing button	轿内设置开、关门按钮, 电梯未运行时, 可以按开门按钮, 使电梯开门; 按关门按钮, 可以取消开门等待时间, 立刻关门, 提高运行效率。 Door open and close button are set up Inside of the cabin,when the elevator is not running,you can press the open button to open the door;press the close button to cancel the open waiting time,close the door at once. improve the running efficiency .
	厅外、轿内开门时间分别控制 Door opening closing adjusting	系统可以根据需要, 设置厅外、轿内召唤时, 不同的开门等待时间 Rise the system performance by adjusting the door hold time for both car door and landing door separately
	自动校正运行 Auto-correct operation	当电梯失去位置时, 电梯自动进行校正运行, 找到电梯的正确位置 When elevator lose position, elevator auto-correct operation to the right position
	关门等待取消 Door closing cancel	可以通过按下轿内的关门按钮, 使电梯立刻关门 Through clicking the close button to close the elevator immediately
	本层厅外重开门 Re-opening for landing door	当电梯在本层时, 可以通过按下电梯运行方向同向的外召按钮, 使电梯重新开门 In normal closed process, when pressing the hall button, if the running direction of hall call button is the same with the elevator running direction, the elevator will be open again

+ Security features 安全功能	端站保护 End protection	当电梯行驶至终端楼层时, 未降至系统设定的速度时, 保护装置将强制减速, 保证安全。 If the speed is not slowed to the preset value while the car reach the end floor, a forced deceleration will be carried out by system in order to protect the safety of the car.
	故障自诊断 Error self-diagnosis function	系统可以自动诊断并记录电梯的故障信号, 使用专用工具可以迅速排除故障。 The system can automatically diagnose and record the elevator errors signal, use the special tool quickly eliminating errors.
	驱动设备过热保护 Drive overheat protection	如电机温度超过限定值, 电梯将完成当次运行后, 进入待机状态, 温度恢复后自动恢复正常工作。 Self-protection mode will be achieved if the temp of the motor exceeds the preset value due to the heat made by motor itself or the high temp in the environment. The car stops at the nearest floor, unload and shut down the light and ventilation; once the temp fallsdown to the preset value, the car will recover.
	关门力矩保护 Close torque protection	如轿厢门关闭时发生机械卡阻, 当力矩超过预定值时, 电梯门将重新打开。 If the resistance torque reached the preset value, the door will reopen.

+ Security features 安全功能	速度异常检测功能 Speed anomaly detection	系统通过对编码器反馈信号与系统给定速度进行比较, 对电梯运行速度进行控制, 一旦两者偏差超出系统允许的范围, 系统进入保护, 电梯停止运行。 By monitoring and comparing the encoder feedback speed signal and system preset speed value. The system can master the elevator running speed. Once both difference value is beyond the scope of the system allows, the system into the protection of state, the car stop running.
	接触器异常检测功能 Contactor anomaly detection	系统根据接触器控制命令状态检测主接触器、抱闸接触器的反馈, 如发现异常, 系统进入保护, 电梯停止运行。 According to the contact device control command system detecting state main contactor feed-back, if discovery is unusual, the system will enter a state of protection, the elevator stops running.
	电网异常检测功能 Power grid anomaly detection	电网波动幅度超过一定的安全范围, 错相、缺相时, 系统进入保护状态, 电梯停止运行。 Power grid volatility by over a certain safety margin, the system into the protection of state, the elevator will stop running.
	光幕门保护 Light curtain proection	在电梯入口形成光幕防护网, 每一扫描循环内有154束红外线, 反应时间少于0.1秒。 Light curtain protection fence is set up in the entrance of elevator,every scan loop has 154 bunches infrared rays,reaction time of 1 second.
	超载报警 Overload protection	当电梯内的乘客超过电梯额定负载后, 蜂鸣器响, 发出超载报警信号, 提醒乘客离开, 取消已登记轿内指令 When the load of the car exceeds rated capacity. Overload operations is triggered, this operation opens the door, sounds the buzzer, and illuminations the overload lamp. The overload conditions is removed when the weight of the car falls below the rated load
	轿厢开、关门延时保护 Delayed car protection	当电梯到达某一层开门时, 由于阻力等原因在设定时间内没有开门到位时, 电梯会进入开门保护状态, 在本层尝试开门三次还不成功后, 则运行到下一层开门; 当电梯关门过程中遇到阻力等原因在设定时间内没有关门到位时, 电梯进入关门保护状态, 不响应呼梯指令 When the elevator reaches a floor layer,the door isn't opened completely in the established time because of obstacle or other reasons,the elevator will enter the open protected mode,after try to open the door unsuccessfully in this layer three times,and runs to the next layer to open the door;When the door isn't closeded completely in the established time because of obstacle or other reasons,the elevator will enter the close protected mode,no response to the command for calling.
	抱闸异常检测功能 Break anomaly detection	当系统发出运行命令时, 检测到抱闸未打开时; 或者系统未发出运行命令, 却检测到抱闸打开信号, 电梯都将保护, 不能运行 Real-time detection system brake arm action state, if different is discovered between the actual state; And control command, the system will state into protection status, the elevator stops running
	厅门自主学习 Landing door self-learning function	当增加层站时, 必须进行厅门自主学习, 确保安全后方可正常运行。 When add the layer stop,carry out the landing door self-learning,after make sure the safety,the elevator can operate normally

Security features 应急功能	五方对讲 Five sides interphone	轿厢、轿底、轿顶、机房和监控室之间的一个对讲系统 There is an interphone around car、car bottom、car roof、machine room and monitor room.
	轿厢警铃 Alarm bell	发生紧急情况, 乘客可按动轿内操纵箱上报警按钮, 向外报警 In case of emergency, the alarm bell will be activated by pressing the alarm button in operating panel
	机房紧急电动运行 Emergency electric operation in machine room	控制柜内设有机房紧急电动运行装置, 发生紧急情况时, 可由专业人员在机房进行操作 An emergency operation with electric device is installed in machine room, when an emergency happens, the professional maintenance staff operate the device rapidly to rescue operations in the machine room
	轿厢内应急照明 Emergency light	轿厢内设有应急照明装置 Emergency light in the car will start whenever there is a power cut

Energy-saving features 节能功能	轿内照明风扇自动控制 Lighting & Fan control in car	在规定时间内无呼梯信号, 轿厢内照明及风扇会自动关闭以节约能源 The elevator in standby mode, if the lift don't receive any instructions within the preset time, the elevator, automatically shut off the car lighting and fan, in order to save energy
	显示节能 Display energy saving	当长时间没有呼梯信号后, 显示屏自动进入节能模式 After a preset timeout without hall call registration, display will turn off for energy saving

Man-machine interface 人机界面	轿厢到站钟 Passing chime in car	当电梯运行到站时, 轿厢到站钟会发出响亮的钟声提醒乘客 When the elevator operates arrive station, the car will remind the passengers with a loud bell
	厅外及轿厢方向指示 Hall & Car direction Indicator	在电梯运行时, 在外召和轿内显示都会显示电梯的运行方向 Both car and hall screen will display the elevator running direction
	轿内、厅外LED显示 LED car & Hall screen	操纵箱和外召显示配备液晶显示器, 显示楼层及电梯运行方向等信息 The LED indicator in the car operation panel or in the hall call panel will display the elevator floor position and running direction by arrow signals

个性化楼层显示设置  
 Creative floor display  
 可以根据客户的需求, 设置不同的楼层显示信息, 该信息可设0-9, A-Z或者任意两个字符的组合, 也可以是3位显示。  
 注: 0与O, 5与S, 不能区分  
 According to the customer's needs,the elevator sets up different display messages,the messages contain 0-9,A-Z or two characters combination,also adopt three aspects to display. Notice:o and 0, 5 and S, can't be distinguished.

 <b>特殊运行</b> Special run	防捣乱保护 Anti- nuisance car call protection	轿厢载重与实际信息进行比较，如乘客较少，指令过多，系统会自动取消已登记的轿内信号 If there is only one passenger in the car, and an excessive number of car calls is registered, nuisance is detected and all car calls will be cancelled, requiring registration of a proper number of calls
	自动泊车 Parking	电梯将运算不同的楼层信息，并控制各台电梯自动停泊在不同楼层，提高效率 Elevators in a same group will park on different floors once spare in order to shorten the response time
	厅外呼梯切除开关 Hall call cancel	主板上设置开关，只需通过拨码，就可以取消外呼指令，方便调试、检修等专业人员操作 If personnel want to adjust and maintain elevator, they could dial up on the button of main panel to cancel outside call
	静态定位功能 Statics location function	电梯安装时，无需将钢丝绳从主机上脱开,进行主机角度定位，方便工地安装（2.5m/s时，无此功能） When the elevator is installed,without take the wire cables away from the main machine,Host angle positioning, convenient to install for worksite.(2.5m/s, no such function)
	轿顶检修 Top of car inspection	轿顶设置检修开关，可以方便检修人员，在井道内进行检修等操作，此时，机房检修开关无效。 Set up the repair switch in the top of car,convenient for maintainer,When the maintainers are repairing or other operations in the wellhole,the repair switch is invalid at this time.
	静音模式 Silent mode	针对酒店、公寓等场所设计，可以在特定的时间段（例如夜晚），自动关闭到站钟等发生装置的声音，为楼宇住户提供安静的休息空间；其他时间段，到站钟等发生装置自动恢复声音，为电梯使用者提供声音提醒 At the hotel, apartments and other places, in a specific period of time ( e.g. night ), automatically close the station clock generator sound, keep rest space building tenants quiet; at other times, the station clock generator automatically restores the voice, for the elevator to provide voice reminder.
	语音安抚 Pacifying Voice	电梯处于特殊状态时语音安抚乘客情绪 When the elevator locates in the specific position,the voice will comfort passangers' feeling.
	就近平层功能 Nearby Leveling	当电梯丢失平层位置时,无需到底层复位,到就近楼层停靠,纠正位置，节约乘客等待时间（2.5m/s时，该功能为基本功能） When the elevator lost flat layer position, no need to reach the bottom layer to reduction, to the nearest floor stop, correct position, saving the waiting time of passengers(2.5m/s, this function as basic function)

 <b>其他功能</b> Other features	开门待机 Door open standby	改变普通电梯的开门待机功能，通过设置参数使其开门待机，保持电梯内空气流通。 Change the door close standby function in usual elevator ,by set up the parameters to make the eaevator open the door and standby,maintain the air to circulate.
	厅外防捣乱 Anti-trouble outside the hall	厅外召唤有上召和下召，如果误操作普通电梯会开关两次门，该功能就是减少一次开关门，提升运行效率。 Hall call is divided into up call and down call,if the passenger operate wrongly,the elevator will open and close twice,this function can reduce open and close the door,improve the operate efficiency.
	自动再平层 Auto re-leveling	当电梯开门时,由于人员的进入,钢丝绳的伸缩导致电梯平层位置发生变化,此时电梯会以缓慢的速度,自动纠正平层位置。(≥2.0m/s时,该功能为基本功能) When the elevator door opening, because the personnel to enter, telescopic wire rope leads to elevator leveling position changes, the elevator will be at a slow speed, automatic correcting flat layer position. (≥2.0m/s, which is basic function)
	司机直驶 Attendant non-stop	当司机开关动作时，由司机按下司机直驶开关，可旁路所有的外召，待关闭直驶开关后，再响应外召指令 Press the non-stop bottom, elevator will move straightly to instruction floor
	开门保持按钮 Door hold button	轿厢内配置开门保持开关，此开关动作时，电梯不关门，在设定的保持开门时间内，电梯不关门，超过等待时间后，自动关门。开门等待过程中，按下关门按钮，可取消开门保持等待，立刻关门 The cabin is configurated the opening-keeper .when the switch action, the elevator is not closed, in the setting of the hold open time, the elevator is not closed, more than waiting time, automatic door.Open the door waiting for the process, press the close button, the door can be closed immediately cancel keep waiting.
	并联/群控功能 Duplex/ group control	当有两台电梯时可选择并联功能，三台电梯时可选择群控功能。并联或者群控时，系统根据优先级排序，派最快的可达到的一部电梯，服务外呼指令，减少乘客等待时间 Two elevators could choose duplex control, three elevators could choose group control.Two or more elevators in same series should adopt this function for better response performance, avoiding repeated response, shorten the system response
	语音报站 Voice ring	配备语音报站装置，可准确告诉乘客电梯的当前停靠楼层、门的状态等信息 The elevator is equipped with voice broadcast device,tells the passangers the layer that elevator is stopping,the state of door and other informations
	厅外到站钟 Hall chime	一般在外召显示器上集成厅外到站钟，给乘客以提示 General in the call and display integrated Hall station clock, for passengers to prompt
	紧急消防返基站 Emergency fire return to the base landing	大楼发生火灾时，系统在接收到火警信号后，将取消所有指令和召唤信号，驱动电梯直接返回消防层，开门疏散乘客。 When fire broke out in the building,after the system receive the fire alarm,the elevator will cancel all the commands and calling signals.,drive the elevator return to the fire-fighting layer,open the door and evacuate the passengers.
	紧急消防员服务 Emergency fireman service	当轿厢内预设的钥匙开关被启动时，电梯取消所有召唤信号，电梯只能应答轿内指令，配合消防员灭火，此功能需配合消防电梯使用。 When the key switch that be preinstalled in car is started,the elevator cancel all the call signaling,respond the signal from inside of car only,coordinate with fireman to put out the fires,this function need to coordinate with the fire elevator.

消防迫降成功反馈 Fireman landing success feedback	选配消防功能时，系统可提供无缘的开关触点，反馈消防迫降的成功信号给小区的消防系统 Isolation button touch could feedback fireman landing success signal to area fireman system.
停电自动应急疏散功能 Automatic rescue device	当选配该装置时，电梯停电时，可自动切换到应急救状态，就近楼层停靠，开门放人，运行过程中有语音安抚 This device is used for rescue operation in case of power shutdown, it is powered by a rechargeable battery, when a sudden power cut happens, a sound signal will comfort the trapped passengers, then the car will move towards to the near floor, keep the door open to the passengers

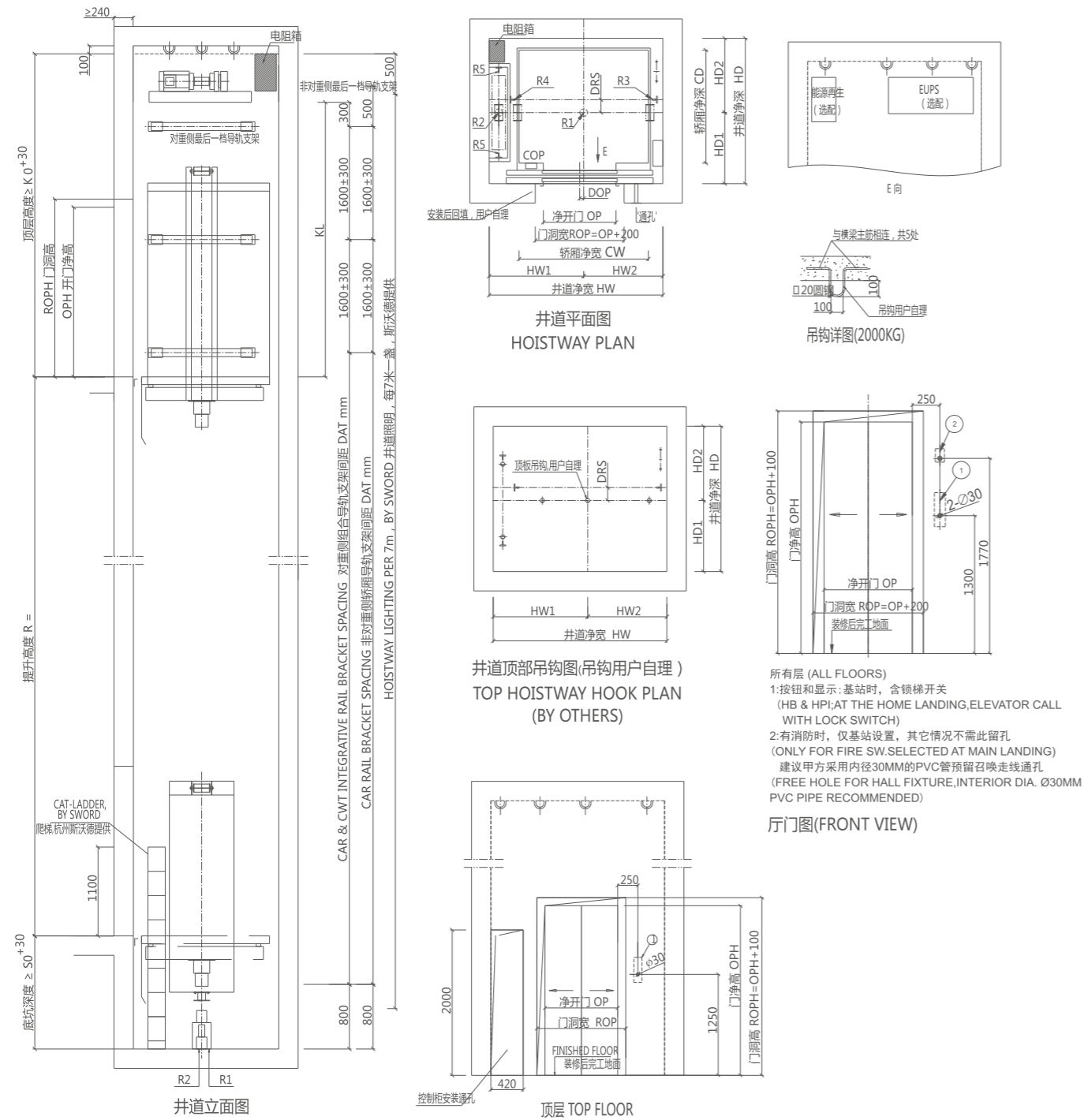
能源再生 Energy regeneration	电梯轻载上行、重载下行时，将电机产生的电能回馈到电网中，节约电能。 When the elevator load lighting operate upward or load heavily downward,make the electric power from the electric machine return to the electric fence,save the electric power.
反向指令不登记 Reverse order cannot register	在向上或向下运行时，对于与当前运行方向相反的指令不能登记。 Under the operate upward and downward,the command that reversal of the direction of operate cannot be registered.
小区监测系统 Area elevator system	小区监测系统是由微机在小区范围内实现对电梯进行全面监测的智能化管理系统，可为大楼智能管理提供数据（BA）Computers carry out district monitor system. This function can provide computed monitoring for all the elevators in this district and offer the BA for the computed management of the building
楼宇电梯监视接口 Building elevator supervisory interface	电梯可以为用户的大楼智能管理系统提供离散型电梯运行状态信号，主要信号为：运行方向、楼层信息、安全信息等。 The elevator provide the discrete type running state singals for the building intelligent management system,main singals : running direction、floor information、safety information.
电梯远程监测系统 Remote surpervisory system	可通过互联网或市话线路实现远程监测中心对用户电梯的24小时全程监护，电梯发生故障或关人时，会自动实时向中心报警。 By the internet or telephone lines to achieve the remote monitoring center 24 hours whole-course ward for users,when the elevator operate wrongly ,elevator can give an real-time alarm to the center.
视频监控子系统 Video surpervisory system	可通过专用的视频设备，实时监控轿厢的状态 Resort to the video devices specially,real-time monitor the state of car
电梯专用空调 Elevator air conditioner	可以配备专用的空调，使轿厢内的温度控制在人体舒适的温度 The elevator air conditioner is designed specially to adjust the air in car, keep the temperature, humidity, purity and flow velocity in a comfortable range for human
智能IC卡管理 IC card management	使用IC卡功能，可对电梯进行管理，只有持卡人通过刷卡才能使用电梯 Use IC-card to manage,achieve to manage the elevator, only the cardholder punch the card ,the elevator can be used.
密码层服务 Password manager	启用该功能，通过密码设定，可限制某些楼层的呼梯权利，只有输入密码才有呼叫该楼层的权利，对电梯进行管理 Access authority can be managed due to password function, thus entries to the certain floors can be controlled
下集选 down collective operation	选择下集选功能，只在基站或者底层设置上行按钮，其它楼层只有下行按钮 This function sets the up buttons only at basic and buttom stations, there is no down buttons at others.
餐厅等待 Restaurant waiting	为大楼餐厅所在的楼层分配较长的开门时间，以满足额外的客流量。 Distribute the longer time for the restaurant floor building ,to meet the extra passenger flow
防犯罪功能 Preventing crime function	功能启用时，电梯将在经过预先设定层楼后开门接受检查。 After start this function,elevator will accept the inspection when pass the prior established floor.
双通门控制 Front and back doors control	当电梯需要同时设置前门、后门时，可选择双通门控制，对前后两个门进行分别控制 When elevator is set form door and back door at the same time, the two doors can be controlled by this function
上下班高峰服务 rush service mode	设定上、下班高峰模式，定时进入上、下交通高峰服务，专门用来缓解大楼内的交通高峰，在上、下高峰时，所有投入服务的电梯在大厅的载客流量达到预设值（一般50%）后，就立即启动运行，并在高峰期间一直保持该模式 Setting rush model, rush service works on timing, designed to ease traffic in the building, at peak time, all operating elevators reache the preset value ( 50% )in ridership Hall, immediately start running, and has maintained the pattern in the peak period.
提前开门功能 Advanced door opening	启用该功能，可使电梯在进入门区时，电梯速度降到设定值时开门，提高运行效率（≥2.5m/s时，该功能为基本功能） start the function,it can make the elevator speed slow down to the set-value and open the door when the elevator enters the area of door,improve the operating efficiency(when speed ≥2.5m/s,the function is basic function .

## Optional nonstandard function 可选非标功能

定时封层 Timed floor-stop operation	在设定的时间范围内屏蔽指定楼层指令、召唤。 Within the limited time,shield the command from the appointed floor.
紧急电源操作 Emergency power operation	断电时，电梯转到接到客户的应急电源后，群组中的电梯轿厢逐一运行到指定（或下一层）层站，门打开，放出乘客，并根据用户的需要，可指定群组中的某些电梯处理正常服务运行；电源正常后，所有电梯自动恢复到正常运行状态。 When the power is off, the elevator to the emergency power supply for receipt of customer, the elevator car in the group one by one to run to the specified (or the next layer) layer station, opened the door, the release of the passengers, and according to user needs, can specify some elevator to handle the normal service operation in the group; the power supply is normal, all elevator automatically restore to the normal operation of the state
过站提示 After site prompt	电梯过站时通过蜂鸣器向乘客提示层站通过，为盲人等特殊乘客提供服务。 Elevator passed through the statione layer through the buzzer to passengers standing by prompting layer, to provide services for the blind and other special passengers.
地震操作 Earthquake protection	大楼发生地震时，系统在接收到地震信号后，将取消所有指令和召唤信号，电梯在最近层楼开门释放乘客并停梯，用户需提供地震动作信号。 When meet the earthquake,after the system receive the earthquake signal,elevator will cancel all the commands,elevator will release the passengers in the nearest floor,but the users need provide earthquake actuating signal.
定时开关机功能 Timer switch	增加定时设备，可实现对电梯的全天候控制 Timer could be adopt to reach park control automatically
光眼/安全触板双重门保护 light eyes/safe touching plate double door protection	可选择光眼、安全触板，防止夹人 light eyes and safe touching plate could prevent catching people
派梯预指示 Dispatching predesignate	2台以上并联或群控时，当有外召唤登记时，通过厅外到站灯提醒乘客需乘坐的电梯。 More than 2 parallel or group control, when a call registration by hall, elevator station lights to warn passengers to ride.
目的层派梯系统 Purpose layers dispatching system	通过大厅选层外召选择目的楼层，根据系统提示进入对应服务楼层电梯，该功能能有效缓解楼宇客流高峰拥挤情况 By the hall call of ,select the purpose layer,according to the system prompt,enter the correspondent elevator,the founction can help relieve the crowd effectually.

# Steel belt inorganic tenant ladder

## WD800MRL 钢带无机房客梯



注：此图不按比例，除非另有规定。Note: do not scale this drawing, unless otherwise stated.

### 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，不得装设与电梯无关设备、电源等及无关孔洞。
- 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~+25mm/0~30m、0~+30mm/30m~60m、0~+50mm/60m以上。
- 当底坑底下有人能达到的空间存在，则对重缓冲器安装在一直延伸到坚固地实心桩墩上，或安装对重安全钳，并增大井道净尺寸，具体事宜向电梯厂家询问。
- 电梯安装之前，所有层门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置通风孔（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，并在每层厅门洞洞上沿和下沿均设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，应在每层厅门洞洞上沿和下沿均设300mm高与井道同宽的混凝土梁。
- 当井道为满足导轨支架的安装需要增加辅助混凝土圈梁结构，要求其混凝土强度至少应达到C20等级。
- 当两相邻层门地坎间距超过11米时，其间应设置一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，应设在墙角处。
- 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±7%。电源零线和接地线应分开，且接地电阻值不大于4Ω。
- 图中标明的所有载荷，井道墙和底坑的强度必需能承受各力。
- 图中标明的用户自理（预埋钢板，吊钩等），需预先设置。
- 机房中的温度应保持在5~40℃，机房应平整且必须能够承受不小于7.0KN每平方米的楼面标准值均布活荷载。当机房地面高度不一且相差大于500mm时，应设置楼梯或台阶，并设置护栏。
- 用户需设立救援值班室，并每台铺设通往机房的6芯电缆（推荐使用屏蔽/两两双绞线，每芯至少0.5平方毫米，或用五类线替代）。
- 双折门开门定义：人在轿厢内面对轿门，往左开启为左开门，往右开启为右开门。

### Done by owner or builder

- The hoistway should be exclusively used for the lift. It shouldn't contain cables or devices etc. other than for the lift. Hoistway and all parts attached to it should meet the requirements for the fire protection.
- The well should be vertical. The minimum clearance dimensions is the dimension of the well. And the error is above 0~+25mm/0~30m、0~+30mm/30m~60m、0~+50mm/60m.
- If accessible spaces do exist below the car and the counterweight working stroke should be placed on solid pile pier or install a counterweight safety.
- Safety protection barrier with enough strength should with enough height is not less than 1.2m should be placed in front of all entrance of hoistway before lift installation.
- Enclosed hoistway should be provided with performed ventilation opening in the upper or lower hoistway, and the ventilation opening should be at least 1% of the available hoistway area.
- The reserved hole for landing door, hall call units etc. should be filled in after installation.
- We prefer concrete hoistway. If you adopt brick structure, concrete beam of 300mm in height should be made in the hoistway wall where the guide brackets will be fixed in. Meanwhile, there should be concrete girders of 300mm in height with the same width as the hoistway's, locating upper and lower the edge of landing door hole.
- If auxiliary concrete ring beam structure is needed to ensure safety of guide rail installation, the strength of concrete should be at least C20.
- When the distance between adjacent landing doorsills exceeds 11m, emergency exit should be needed which should not be open towards inside of the hoistway. The size should be not less than 350mm width and 1800mm height.
- The pit should be impervious to infiltration of water. If there is a splash, it should be installed in the corner of the pit.
- According to requirement of the technical parameters, the power supply should be placed in the switch box with protection switch and locked off. The fluctuation of the power supply should be less than ±7%. The neutral conductor and the protection conductor should always be separated, and the ground resistance should be no more than 4Ω. If add electricity leakage protection function, the suggested rated residual current should be 500mA.
- All the force marked in the drawing has included the impact factor except special notes. The hoistway wall and pit strength should bear the force marked.
- The matter (bearing plate etc.) prepared by users shown in the layout should be pre-embedded.
- The temperature in the machine room should be maintained between 5~40℃. Machine room floor should be approximately level and withstand average load of 7.0KN per square meter. When the machine room floor is not flat, the higher and lower level varies over 500mm; step or ladder and barrier should be set.
- Users should establish security room. Each lift should be provided with 6-wiring shield cable used as interphone cable (each wiring is not less than 0.5mm<sup>2</sup>), CAT-5 cable is acceptable if the above cable is not available.
- Opening definition of two panel sliding door: people is in the car facing to car door. If the door is open from left, it is a left opening door.

重量 (kg)	速度 (m/s)	轿厢净尺寸 宽CWX深CD (mm)	开门净尺寸 宽OP x 高OPH (mm)	井道净尺寸 宽HW x 深HD (mm)	HW1 (mm)	HW2 (mm)	HD1 (mm)	HD2 (mm)	底坑深度 S (mm)	顶层高度 K (mm)	其它定位尺寸 (mm)			导轨及底坑支反力 (KN)					最大层站数 (层)	最大提升高度 (m)
											一体式吊钩	DRS (mm)	DOP (mm)	DAT (mm)	R1	R2	R3	R4		
400	1.0	1000X1100	700X2100	1600X1500	895	705	730	770	1300	3800	160	50	2500	50	42	23	23	17	16	50
550	1.0	1000X1400	700X2100	1600X1800	895	705	880	920	1300	3800	160	50	2500	64	53	26	26	18	16	50
630	1.0	1100X1400	700X2100	1700X1800	945	755	880	920	1300	3800	160	0	2500	68	55	27	27	19	16	50
680	1.0	1200X1400	800X2100	1850X1800	995	855	880	920	1300	3800	0	0	2500	73	59	28	30	20	16	50
	3900									73				59	33	35	25	24	75	
	3950									73				59	35	37	27	32	90	
800	1.0	1350X1400	800X2100	1950X1800	1070	880	880	920	1300	3800	0	0	2500	86	70	32	33	22	16	50
	3900									86				70	36	38	26	24	75	
	3950									86				70	39	40	29	32	90	
900	1.0	1450X1400	800X2100	2050X1800	1120	930	880	920	1300	3800	0	0	2500	92	74	33	35	23	16	50
	3900									92				74	37	39	27	24	75	
	3950									92				74	40	42	29	32	90	
1000	1.0	1600X1400	900X2100	2200X1800	1195	1005	880	920	1300	3800	0	0	2500	98	78	35	36	23	16	50
	3900									98				78	39	40	28	24	75	
	3950									98				78	42	43	30	32	90	
1150	1.0	1900X1400	1100X2100	2550X1800	1350	1200	880	920	1300	1400	0	0	2000	112	89	54	57	30	16	50
	1500									112				89	66	68	36	24	75	
	1550									112				89	72	75	40	32	90	
1350	1.0	2000X1550	1100X2100	2700X1950	1450	1250	955	995	1300	1400	0	0	2000	126	99	58	60	31	16	50
	1500									126				99	69	71	37	24	75	
	1550									126				99	76	78	41	32	90	
1600	1.0	2000X1750	1100X2100	2700X2150	1450	1250	1055	1095	1300	1400	0	0	2000	140	108	61	63	33	16	50
	1500									140				108	73	74	39	24	75	
	1550									140				108	79	81	43	32	90	