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推拉式机库门•柔性升降大门•侧转门•移动柱式大门
多段提升门•推拉门•上折门•折叠门•工业提升门•民用车库门•路障



Horizontal Bi-folding Door



沈阳宝通门业有限公司

SHENYANG BAOTONG DOOR CO., LTD.



BAOTONGDOOR COMPANY PROFILE 公司简介

沈阳宝通门业有限公司（简称“宝通门业”）成立于 1995 年，注册资金 2000 万元，厂区占地 26,000 平方米，拥有耗资 150 万美元引进的美国全自动门板生产线，是高品质工业及车库门门板的生产基地。

Shenyang Baotong Door Co. Ltd (“Baotong Door”) was founded in 1995, with registered capital of 20,000,000 RMB. The factory of 26,000 sqm equipped with imported automatic door panel production line worth 1,500,000 USD is the manufacturing base of high-quality industrial and home garage door panels.

宝通门业是专业的飞机库门及大型工业用门的设计、制造、安装企业。产品范围主要包括飞机库门、工业滑升门、民用车库门为主的门类产品，以及物流泊存设备和安全升降式路障等门禁系列产品。其中门类产品按照结构和开启方式的不同可以分为推拉门、多段提升门、工业滑升门、柔性升降大门、侧转门、上折门、折叠门、平开门等。

Baotong Door is a professional developing, manufacturing and installing enterprise of hangar door sand big industrial doors. The production range covered the door products include hangar door, lifting overhead door, garage door, etc and the logistic docking devices and the safety road blocks, etc. The door products, depends on the constructure and the opening method, include sliding doors, guillotine doors, lifting overhead doors, fabric lifting doors, round-the-corner doors, vertical bi-folding doors, folding doors, side hinged doors, etc.

公司现有员工 200 余人，其中博士、硕士及大专学历员工 80 人，分别构成了具有专业素养的设计、制造及安装团队。宝通门业一直致力于专业领域内的研发，不断学习与融合世界领先的技术和设计理念，为客户寻求兼顾最佳适用效果及经济性原则的解决方案。公司独家采用与东北大学共

同研制的机库门钢结构优化设计系统与智能监控系统，达到了国内领先水平。为了尽早与国际市场接轨，2006 年，公司与世界最大的机库门制造商英国 Jewers 门业有限公司签订了长达十年的技术合作协议，全面引进 Jewers 的设计技术、制造工艺及质量管理体系，并取得了世界闻名的飞机库门 Esavian 品牌在中国大陆地区的使用权，将门类产品的设计、制造水平提升到国际标准。在其它产品方面，公司与清华大学合作研发的反恐安全路障，得到了政府科技资金的大力支持，宝通门业被确立为安全升降路障的研发基地。

The company owns over 200 employees, among which 80 owns bachelor degrees or above, which built the professional teams of designing, manufacturing and installation. Baotong has been always dedicated in the research and development of the industry, to incorporate latest worldwide advanced technic and design concepts and to provide the solution under best performance & economical principle. The company developed the steel structure optimizing design system and intelligent monitoring system jointly with Northeastern University, which reached domestic leading level. To reach the international market, in the year of 2006, Baotong signed a ten-year technical cooperation agreement with the largest hangar door company, Jewers Doors Ltd., UK. Baotong will obtain the technical know-how, manufacturing technic and quality system from Jewers, and has been officially awarded the privilege of using the world famous Esavian brand within China mainland. Baotong's products have now approached the international level.

On other aspects, Baotong jointly developed the anti-terrorism with Tsinghua University, which received the support of science & technology fund. Baotong has also been established as the research & development basement of safety lift & down road blocks.

宝通门业有限公司的产品已经覆盖航空、船舶、矿山、重型工业、房地产等诸多领域，公司承建的大型工程包括首都机场AmecoA380 机库大门（推拉门），西安飞机工业集团有限公司 369 号厂房大门（推拉门），上海波音航空改装维修工程有限公司浦东机场机库大门（推拉门），上海东方航空公司浦东机场机库大门（推拉门）上海飞机制造厂 202 号喷漆机库大门（侧转门），上海飞机制造厂 218 号机库大门（推拉门），上海电气临港重型机械装备有限公司联合厂房大门（推拉门），哈动力秦皇岛重型核电厂厂房大门（多段提升门），荷兰豪氏威马钢铁制品厂车间电动大门（升降门/多段提升门），中央电视台新址大型转播车库门（上折门），成都飞机工业（集团）有限责任公司（柔性升降大门），北京沙河机场直升机库门（柔性升降大门）等。

Baotong doors have been widely used in the areas of aviation, shipyard manufacturing, mining, estates, and heavy industries, etc. Other big contracts include 369# plant door of Xi'an Aircraft Industry (group) Co.Ltd, hangar door of Shanghai Boeing Aviation Services Co., Ltd at Pudong airport, hangar door of Shanghai Eastern Airline at Pudong airport, 202# painting hangar door and 218# test-fly hangar

door of Shanghai Aircraft Manufacturing Factory, joint workshop door of Shanghai Electric Lingang Heavy Machinery Co., Ltd, Qinhuangdao heavy nuclear power plant door of Harbin Power Equipment Company Limited, motorized door of Fujian Huisman Steel Plant, fabric lifting door of Chengdu Aircraft Manufacturing (Group) Co., Ltd, fabric lifting door of Beijing Shahe Airport, etc.

宝通门业通过了 ISO9001 质量管理体系认证,拥有专业门窗生产安装资质及《安全生产许可证》,并加入了国际门业 IDA 协会。公司以沈阳为总部,在全国范围内设有北京、上海、天津等八个分公司,为客户提供近距离、全方位的服务。

Baotong has been awarded the ISO 9001 certificate, and owns the professional qualification of doors & windows installation and the Safety Production Licence. As the IDA member, head officed in Shenyang, the company owns 8 brach companies in Beijing, Shanghai, Tianjin, etc, to provide full and close service to the customers.

作为门类产品的专家及领军企业,宝通门业积累了丰富的工程经验并不断创新,超越自我,为打造并不断推进行业标准而不懈努力。

Being the professional and the leading enterprise of door products, Baotong has saved rich experience and will keep pursuing higher level of the industry.



四折门

Horizontal Bi-folding Door

I 简介

Brief Introduction

四折门为四扇折叠，两侧对开。由 6 部分组成，分别为：

There are 4 folding leaves and open to each side separately. The door comprises six parts:

- 1) 门体，即门板；

Door body, i.e. the door panel

- 2) 导向装置，又分为上导向和下导向；

Guiding system, include top guide and bottom guide

- 3) 密封系统；

Sealing system

- 4) 五金配件，包含把手、插销、折页等；

Hardware, include handle, latch, and hinge, etc

- 5) 动力和传动系统；

Driving and transmission systems

- 6) 控制系统

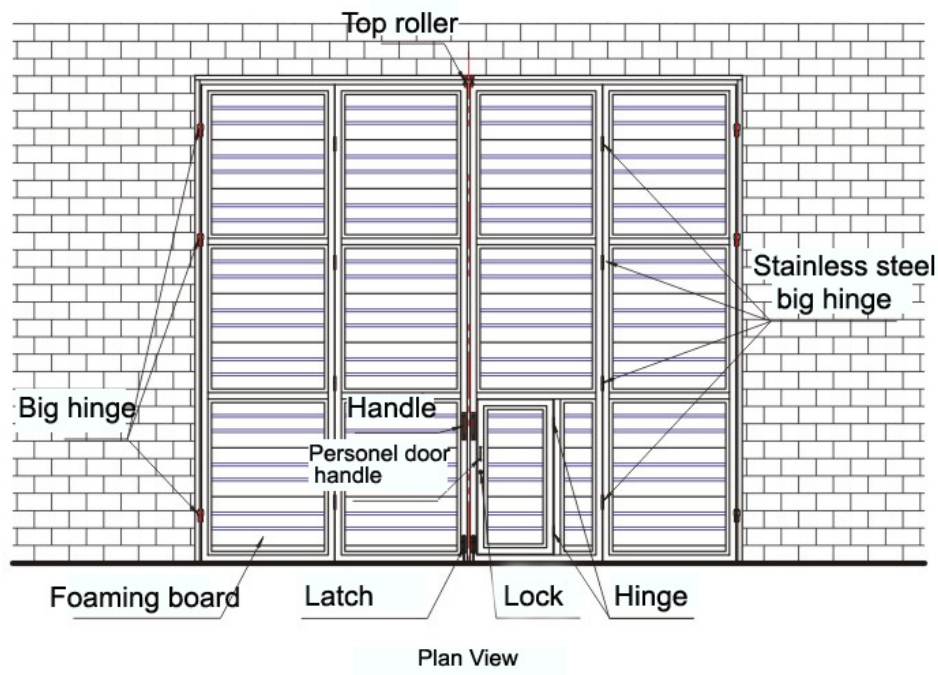
Control system

其中后两部分电动门中才有，手动门没有。

The last 2 systems only exist in the electrical doors but not in the manual doors.

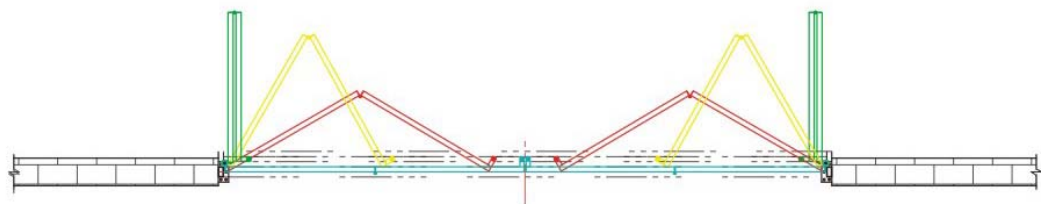
II 结构及工作原理

Configuration and Work Principle



整樘门由 4 扇门板组成，每侧 2 扇门板，同一侧的门扇之间由铰链（折页）相互连接。大门关闭时，4 扇门板位于同一平面上；大门开启时，同一侧的 2 扇门板一起运动直到开启 90° 角，此时 2 扇门板合并到一起（运动方式见附图）。

The door is built up by 4 panels, 2 on each side which connected by hinges. On the close position, the 4 panels are on the same plane, during opening, the 2 panels on each side move together until reach the 90° position, at this time the 2 panels close into together.



Top View (Door Open)

III 材质

Material

1) 门板 Door Panel

门板主要由钢骨架和表面装饰板组成，钢骨架由矩形方管焊接而成。

The door panel is built up by steel structure and surface coating board. The steel structure is built up by welding from rectangular tubes.

表面装饰板有多种板型、多种颜色的彩钢板可供选择，满足不同用户的需求。彩钢板具有卓越的耐腐蚀性，可以免维护 20 年。

There are various options on the shape and color of surface coating panels upon request. The color steel board is excellent in anti-corrosion performance, and could be free from maintenance for 20 years.

保温性折叠门门板内外铺设两层装饰板，中间填充玻璃丝棉、岩棉或聚氨酯泡沫等保温材料。

The door panel is coated with coating board both outside and inside, and filled with heat insulating material such as fiber glass, mineral wool or polyurethane foam, etc.

采光板有玻璃、玻璃钢、PC 中空多层板、PC 实心板等多种材料供选择，保证满足不同用户的采光要求。

Various daylighting material options include glass, toughened glass, polycarbonate multi-wall sheet, polycarbonate compact sheet, etc are upon request,

2) 导向装置 Guide device

上导向轨道用矩形方管或槽钢焊接而成，下导向轨道用角钢和特制 U 型钢与混凝土浇注而成，刚度好，强度高。

The top track is welded up by rectangular tubes or channel steels, the bottom track is built up by steel angles and special U shape steels which concreted into the ground, with good rigidity and high strength.

3) 密封系统 Sealing system

在门的底部、顶部、侧面和两门扇之间都安装密封装置，材质为优质三元乙丙橡胶，多种形式的密封形结构可以有效地保温、防尘、防雨、隔音降噪。

Sealing systems will be installed under the bottom, on the top, at the side of the door and also between the 2 door leaves each side. Sealing material is high quality

EPDM rubber, various shape options could be chose to give effective heat reservation, dust-proof, water proof, and sound insulation.

4) 五金配件 Hardware

一般选用不锈钢产品。门体较大时，部分配件将选用宝通特制的产品，性能可靠，外形美观。

Generally the hardware will be steel products. Some components on big doors will be specially fabricated by Baotong, which is reliable in performance and good in appearance.

5) 动力和传动系统、控制系统

Drving, transmission, and control systems

开门机优先选用进口优质产品，如意大利 **FAAC** 产品，保证大门运行的稳定性和可靠性。控制系统可采用墙壁开关、控制箱，也可以用遥控装置，多个门时还可以采用集中控制方式。多种控制方式自由选择组合，能够满足不同用户的需求。

Door opener will be imported high quality product such as Italy FAAC brand, which could guarantee the safety and reliability. The control of the door could be made from switch/control cabinet on the wall, or from remote control. Centre control could be achieved for multi-application. The control options could be combined upon request.

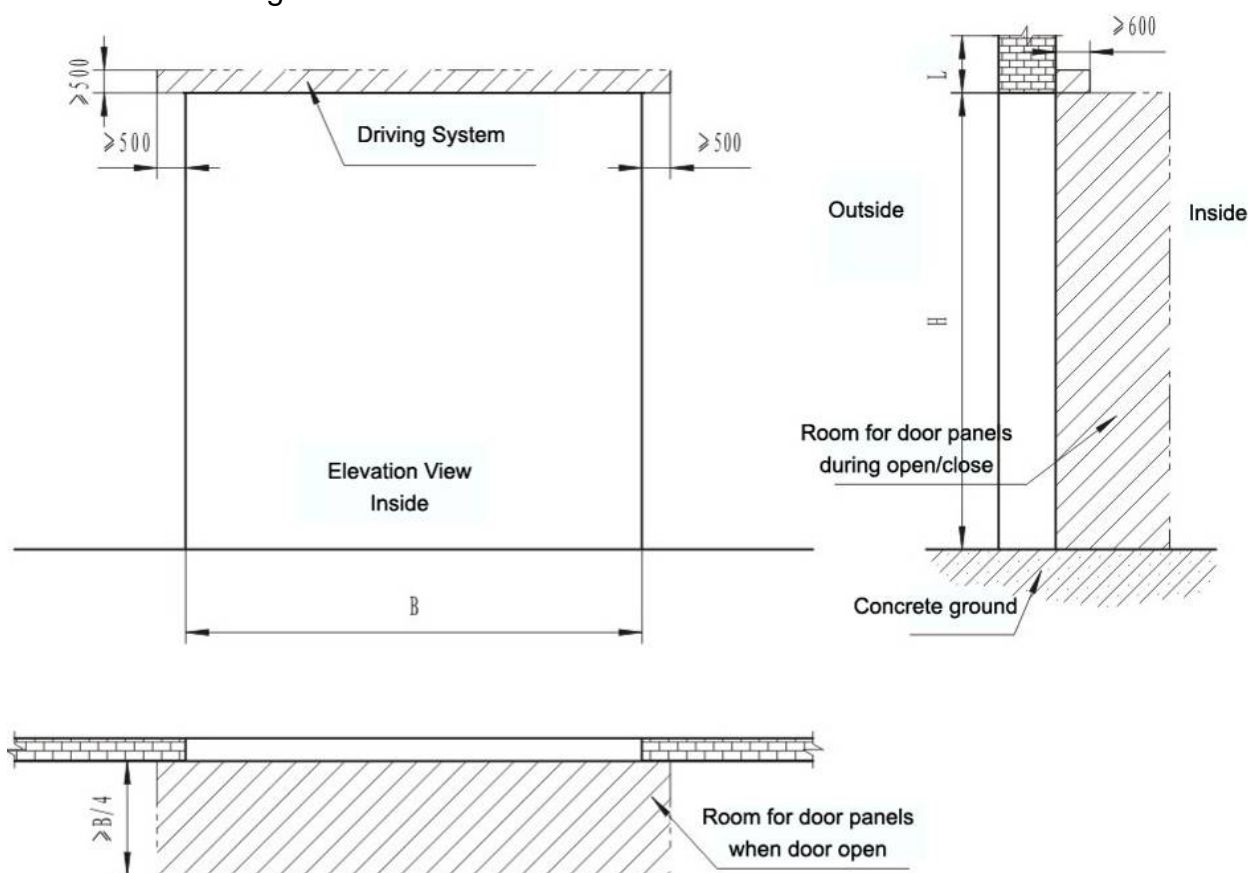
另外，可根据用户的需求加装红外线保护装置、地磁感应线圈、或气动感应等保护装置。

Extra protection device include infrared protection device, earth coil, and pressure sensitive protection, etc are upon request.

IV 折叠门的洞口

Door Opening for The Folding Door

1. 洞口的结构 Configuration



B—Width of the opening

H—Height of the opening

L—Top room

2. 洞口要求：当门板安装在门口外时要求左右边垛、顶垛这三个面必须处于同一平面上，表面平整，无任何障碍物

Request on the opening:

When the door will be installed outside the opening, the left, right room and the top room should be on the same plane, and with flat surface which free from any obstacles.

3. 洞口的测量 Measure of the opening

(1). 折叠门的安装条件: Installation condition

a. 洞口 Opening

坚固平整的洞口墙体，可提供牢固的固定点。

The wall around the opening should be firm and flat, to provide rigidity fixing point.

b. 地面的要求 Ground

折叠门在安装时要求地面平整。

The ground should be flat during installation.

(2). 测量洞口尺寸的要求 Measure of the opening size

如果折叠门在口内安装，那么在测量洞口时一定要准确测量洞口的宽（B）和高（H），为防止洞口有掉角现象，洞口两侧的高度都需要测量。

If the folding door will be installed inside the opening, the width (B) and the height (H) should be measured carefully. The height should be measured from the both sides of the opening in case the two top corners of the opening is not on the same level.

V 设计技术参数

Specifications

项目 Item	规格/说明 Specification
大门尺寸 Size（宽×高）(W×H)	6200×6100
门扇厚度 Thickness	100mm
大门重量 Weight	3500kg
工 作 电 压 Voltage（V） / 频 率 Frequency（Hz）	380/50
电机功率 Power（KW）	0.5KW×2
电机品牌 Brand	德国 Nord 产品 Nord (Germany)
电机绝缘等级 Insulation grade of the motor	F
电机防护等级 Protection grade of the motor	IP54
运行速度（m/min） Speed (m/min)	0~20 无级调速 0~20 free adjustment
速度控制方式 Speed control	变频器变频调速 By transducer
隔声性能 Sound insulation	大于 40dB >40dB
使用温度（℃） Temperature（℃）	-40~+70
气密性 Air tightness	III 级 Grade III
水密性 Water tightness	III 级 Grade III
设计使用寿命 Design work life	50 年 50 years

VI 图片 Pictures





宝通门业

Baotong Door Best Solution For Large Openings

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