

Automatic Doors

1. Automatic doors, which, as the name suggests, detect a person's approach using a sensor and open automatically, are very convenient. You understand just how good when you're carrying a load of packages and can't use your hands to open the door. At airport and train station waiting rooms, automatic doors are indispensable.
When nobody is using them, the doors close automatically, thus keeping out invaders and outside air, keeping the air inside clean, also, safe and secure and protecting energy loss and health.
2. Almost all buildings in Japan are equipped with automatic entrance doors; people now take it for granted that a door will automatically open when they approach. However, this is not the case in other countries. You know you're not in Japan when you stand in front of a door and it doesn't open by itself. No country has as many automatic doors as Japan, where coffee shops, restaurants, drug stores, sushi bars-in fact most shops of any kind-are equipped with such doors. Japan has the world's highest rate of automatic door use.
3. Proof of this is in the fact that Japanese manufacturers supply approximately half of the worldwide demand of 300-400,000 automatic doors.
Estimates put U.S. production at 70-80,000 units, Europe at 100,000 units, and Japan at 150-160,000 units. A few companies in Taiwan and Korea produce automatic doors. Japanese companies manufacture doors at factories in China, selling the products locally as well as re-exporting them to Japan.
Although companies in China are eager to manufacture their own automatic doors, full-fledged production has yet to begin in that country. In the meantime, Chinese are coming to Japan seeking help creating automatic door standards on which to base future manufacturing.
4. Japanese automatic door manufacturers make a unit consisting of the motor, control unit, pulley, and belt, as well as the metal housing that holds the door from above. Other manufacturers make the doors' sashes and glass, which are then fitted onto these ready-to-be-installed units.
5. Automatic Door Production and Demand (Units: 1,000 units)

	1991	1992	1993	1994	1995	1996	1997	1998
Units manufactured	174	160	147	150	160	171	170	154
Domestic demand	159	144	130	131	141	153	148	134
Units exported	15	15	17	19	19	18	22	20

Production, domestic demand, and exports in fiscal 1998 were all down 9.5% from the previous year. 87% of production goes towards meeting domestic demand, while the remaining 13% is exported.

6. Because for statistical purposes automatic doors are counted together with other products in the category of miscellaneous machinery, it is hard to say exactly how many units are exported to which countries. However, it appears that exports to Europe and Asia dropped due to slumping economies in these regions, while exports to the Near and Middle East remained unchanged.
7. There are a total of 17 automatic door manufacturers in Japan, 13 of which are members of the Japan Automatic Door Association. In Europe, there are three Swiss manufacturers, two German, and four or five Italian. The products made by small Italian companies are inexpensive but are functionally too simple for the Japanese market. For the same reason, products from Taiwanese and Korean manufacturers have not yet been imported to Japan. The only products that have imported to Japan are a few large, high-priced revolving doors

from Europe.

8. People used to tend to think that because Japanese manufacturers meet about half of the worldwide demand, their economies of scale mean that their products are cheap. But despite the flood of inquiries from potential overseas customers, Japanese manufacturers still export only 13% of what they produce. The reason the export figure is so low is that Japanese manufacturers have been too willing to incorporate exactly what customers want, developing such an array of products as to cancel out the benefits of economy of scale. For example, using one type of engine or control unit for several different automatic door models keeps costs, and thus prices, down. However, with each model requiring a special engine or control box to run its particular functions, the cost advantages of using one part for several models is lost. Therefore, even if a manufacturer wants to export, the costs are too high to be competitive. Manufacturers therefore only export to international customers who appreciate the doors' superb functions and are thus willing to pay a higher price.
9. Although Japanese manufacturers know that inexpensive models will sell overseas, they apparently don't feel that it's worth investing money for R&D and new molding/manufacturing equipment just to make special models for export. Worldwide demand is 300-400,000 units, about half of which is already supplied by Japanese manufacturers. Of the remaining 150-200,000 units, the most a company could sell would be maybe 20-30,000 units. In fact, many large manufacturers no longer feel they should be putting their efforts into automatic doors, and are thinking about phasing out these divisions.
10. Recently, Japan's leading automatic door manufacturer succeeded to sell 200 units to the Hong Kong subway system for 200 million yen. The deal included not only the automatic door units, but the sashes and glass as well. Japanese manufacturers will likely sign more contracts with overseas customers in this way, providing the entire door unit in the same way a general contractor does.
11. Convenience is important in the U.S. A., where automatic doors are installed in airports and at supermarkets and hospitals. In 1995, the Americans with Disabilities Act came into effect and doors were installed in places like schools and libraries as well. Most American-made automatic doors are extremely solid and durable compared to their Japanese counterparts.
12. Japan's Product Liability Law holds manufacturers responsible for accidents due to product failure and all manufacturers have insurance to cover such mishaps. Since the law came into effect, there have been no serious accidents, except for some cases in which a malfunction caused the doors to close too soon, catching someone between the doors and breaking their glasses or sticking a piece of the lens onto the eye. None of these cases, however, were settled with insurance under the Product Liability Law, but instead were settled privately between the manufacturer and the sufferer.
13. Who Installs Automatic Doors for End Users (% of yearly total)

	1991	1992	1993	1994	1995	1996	1997	1998
Installer	7.2	10.9	9.5	13.0	14.2	13.8	14.6	17.0
General contractor	24.9	19.8	15.1	20.0	16.3	16.6	16.4	15.8
Sash manufacturer	50.7	50.0	57.2	50.5	53.2	54.2	56.2	55.3
Glass manufacturer	17.2	19.3	17.9	16.5	16.3	15.4	12.8	11.9

As can be seen from the table, the installers and sash manufacturers have been increased their share, while general contractors and glass manufacturers have seen their shares decrease.

14. Automatic Door Demand by Type of End User (%)

	1991	1992	1993	1994	1995	1996	1997	1998
Buildings	40.5	32.1	33.8	38.7	39.7	38.2	35.8	39.1
Stores	53.1	54.2	56.1	52.5	52.3	54.1	55.2	50.4
Industry	6.4	12.7	10.1	8.8	8.5	7.7	9.0	10.5

15. With the enactment in September 1994 of the Heartful-Building Law (the Act on Buildings Accessible and Usable for the Elderly and Physically Disabled), which states that new buildings must offer easy access for the physically challenged, domestic demand for automatic doors is expected to increase. Companies that erect buildings adhering to this Act receive benefits such as decreased taxes and this helps account for the 700-800 buildings across the country, including hospitals, theaters, conference centers, and businesses like department stores, that have taken advantage of this law. As more and more facilities look to automatic doors, the future bodes well for industry demand.

Figures and other information courtesy of the Japan Automatic Door Association.

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