

INSPIRATION OPENS THE FUTURE



We aim at becoming connecting bridge to our safe and friendly future

Japan is the country that suffers from natural calamity at least once in a thousand years.

Reliable connections between mankind and environment, creating of good environment for mankind, and building of human society that is friendly towards natural environment are now in need.

Our company is being involved in everyday research and development activity concerning manufacturing focused on energy saving and friendly ecology.

So far, we have developed automatic “eco-door” miimo that needs no electricity for operating. It is safe and friendly. It is simple in use for children and elderly people, and is in match to electricity saving era because it does not use electricity at all.

Having in mind from now on creation of environment capable of coexistence and symbiosis of Mother Nature and mankind, we strive to become a connecting bridge to the prosperous future based on our dream and desire, as well as our further research and inquiry.

Reliability

Environmentally-friendly device

Environmentally-friendly automatic door with carbon dioxide zero emission.
Generally automatic door electricity consumption is 1,12Kwh (1000 person/day).
Carbon dioxide emission at this time is 622g, which makes 227 kg per year and needs 35.5 trees to absorb this dioxide volume. But in case of “eco-door” miimo there is no carbon dioxide emission, because electricity is not used at all.
Carbon dioxide emission volume - 0 kg

■ miimo specification

Type	One side standard	One side wheelchair spec	Double-pulling
Open-close method (kinetic)	Human body weight	Human body weight	Human body weight
Open-close motion pressure	15Kg~200Kg	15Kg~200Kg	25Kg~200Kg
Pedal stroke	20 mm~25 mm	20 mm~25 mm	20 mm~25 mm
Open-close side size	Height 2,000 mm Opening 900 mm	Height 2,000 mm Opening 900 mm	Height 2,000 mm Opening 1600 mm
Form	S type	WS type	D type
Door weight	Standard 30Kg (up to 45Kg)	Standard 30Kg (up to 45Kg)	Standard 30Kg (up to 45Kg×2 pcs)
Minimum cargo weight	15Kg	15Kg	25Kg
Option	Airlock, plain lock,	Airlock, plain lock,	Airlock, plain lock,

SAFETY

Friendly to people

High stability and safety are provided because of safe loading motion

Prevention of dash collision

“Eco-door” miimo is operated by use of load set on footboard. Dash collision cannot occur without stepping on the footboard.

Prevention of minor collision because of diagonal intrusion

Electric automatic door usually cannot stand diagonal intrusion (because of sensor angle), and in many cases a minor collision occurs without opening the door. However, “eco-door” miimo is able to stand diagonal intrusion surely providing opening and closing of the door.

Prevention of getting caught in the door because of full stop

The opening of electric automatic door is controlled by the sensor angle, and “getting caught in the door” accidents can often be troublesome. As regards “eco-door” miimo, it will never close until the footboard is loaded.

Prevention of collision because of intrusion from shutter box side

Even in case of collision because of intrusion from shutter box side, a big accident can be prevented because “eco-door” miimo moves very slightly.

Prevention of being dragged

“Eco-door” miimo does really move very slightly. Even if a little child is dragged by this door, it will never cause any serious injury.



LOW PRICE

Expense friendly

Expenses i.e. electric fare can be totally cut because electricity is not used. Although automatic doors in general do cause electric fare, electric works, maintenance contract, motor change and other expenses, “eco-door” miimo causes only initial installment and regular inspection expenses, resulting in zero running cost. That means it is also economically rational.

■ Benchmarking of technology/performance

	Our automatic door (miimo)	Other electric automatic doors
Carbon dioxide emission	◎ (none)	× (electric)
Open-close speed weight relevance	○ (small)	◎ (none)
Maintenance	◎ (once/year)	× (2~4 times/year)
Open-close speed adjustment	◎ (possible)	◎ (possible)
Open-close ability	◎	◎
Compactness	◎	◎
Minimum load (human weight)	△(15kg~20kg)	◎ (kg)
Constructability	Floor unloading is possible	◎
Constructor qualification	◎ (not necessary)	× (necessary)

EVALUATION

Three friendly qualities are highly evaluated in all aspects

KIDS DESIGN AWARD

Safe and reliable non-electric door miimo

Award number 120368a2

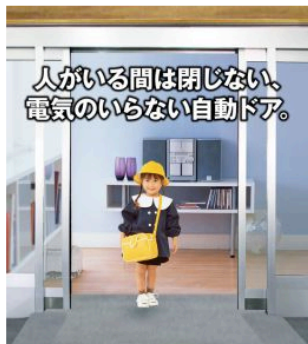


KIDS DESIGN AWARD
受賞作品検索

[キッズデザイン賞サイト TOP](#) | [キッズデザイン協議会サイト TOP](#)

安心安全な無電自動ドア「ミーモ」

受賞番号 120368



最優秀賞 大賞 金賞

企業名／団体名	株式会社福島エコロジカル
対象	建築部材・内装材等
受賞年度	2012年度(第6回)
デザインミッション	子どもたちの安全・安心に貢献するデザイン
カテゴリー・応募分野	プロダクト、商品デザイン分野
部門	子どもの安全安心デザイン 一般部門
賞名	最優秀賞(経済産業大臣賞) 子ども視点の安全安心デザイン 一般部門

History

2012. February

Established miimo Co., Ltd.

2012 May

World patent application (PCT application) Acquired: 1 United States 2 China People's Republic 3 Russian Federation 4 Vietnam Socialist Republic 5 Thailand

2014 January

It was launched in the "No Power Supply Automatic Door" item on the design material base, total material support.

2015. September

It was adopted by Fujisawa City Hospital Fujisawa City, Kanagawa Prefecture.

2016. February

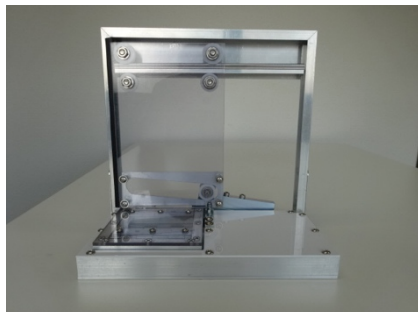
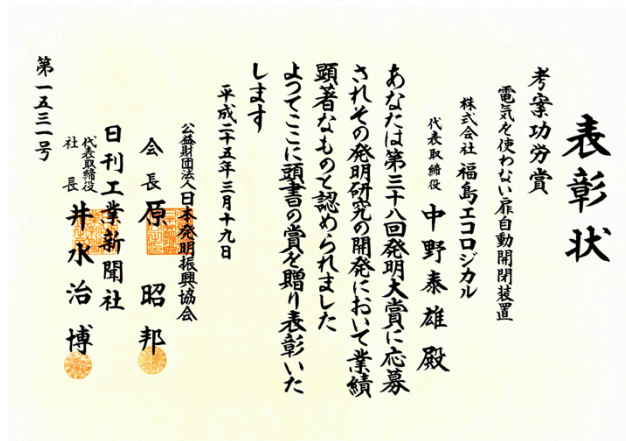
Fukushima prefecture Iwaki City Hisanohama Center (Tsunami Evacuation Building) It was adopted in the nursing room. Fukushima prefecture Iwaki children Genki Center It was adopted in the nursing room.

2016. October

Fukushima prefecture Iwaki It was adopted as a disaster base facility of the 21st century Forest Park. It was introduced at TV TOKYO MORNING CHARGE "Automatic door with no electricity to move".

2017. March

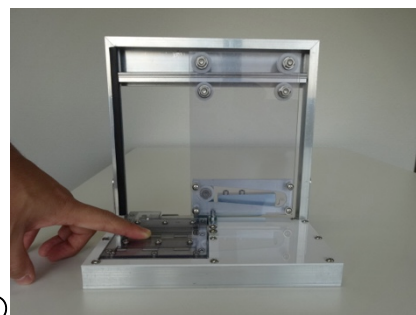
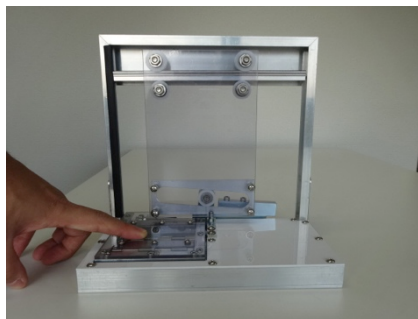
It was adopted at the entrance of the new government building citizens lobby entrance of Narashino City Hall in Chiba Prefecture.



① Before action

② In action

③ After action



Development concept

Automatic door moved by human weight without use of electricity has following advantages: ① it do not use forced open-close power, so there is no danger of “getting caught in the door” accidents ② it works automatically irrespective to blackouts ③ it causes no electric leakage in places for water circulation. ④ it has zero electric power consumption (no carbon dioxide emission) ⑤ can be used in hospitals and precision machinery factories because it does not emit electromagnetic waves ⑥ it is maintenance free and human friendly door.

Inspection committee members comment

Because it physically opens and closes using level effect without use of electric energy, it works properly even in case of accident. It has wide range of practical use, for example in the facilities that do not let children to go outside, by adjusting the loaded human weight.

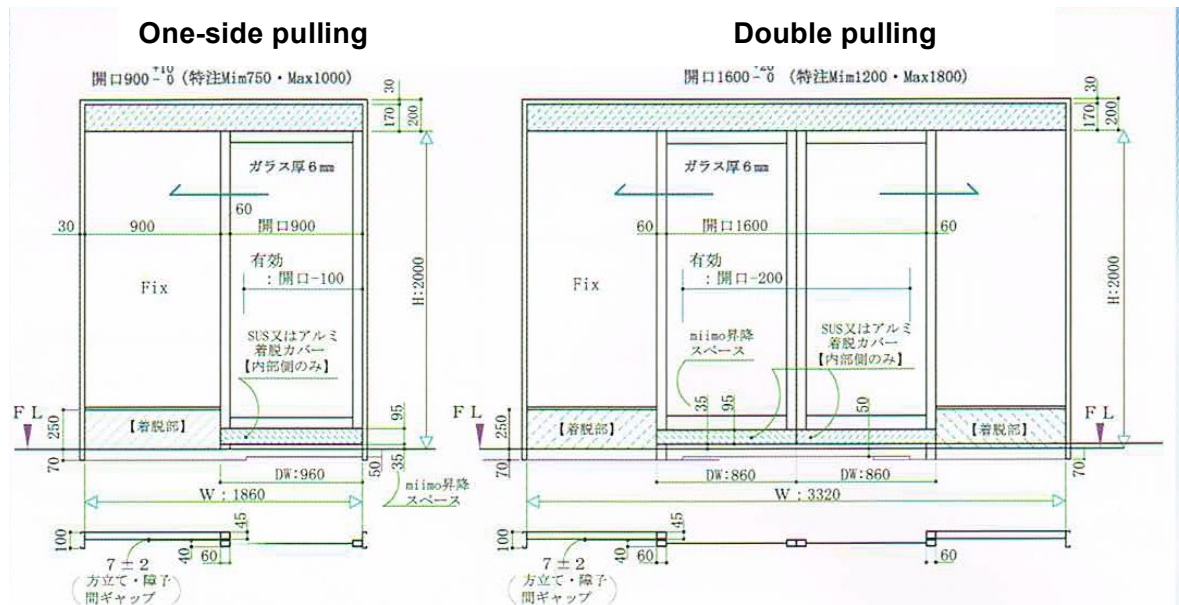
Reason for the award

It has simple structure as new concept automatic door that is safe for blackouts, can be manually opened and closed, and it is also energy saving and maintenance free circuit. It is designed to be adjusted so as not to open even if a small child is on the footboard that also prevents occasional rush-in accidents. It is also impressive as a circuit without complicated functions as a product of kids design with social impact in concept and design.

Specification

Specification of safe and reliable non-electric automatic door “miimo” has three options: ① standard one-side pulling ② corresponds to one-side pulling wheelchair (has wide footboard) ③ standard double pulling (it does double duty corresponding to wheelchair). It also can be manufactured by special order for shops and factories.

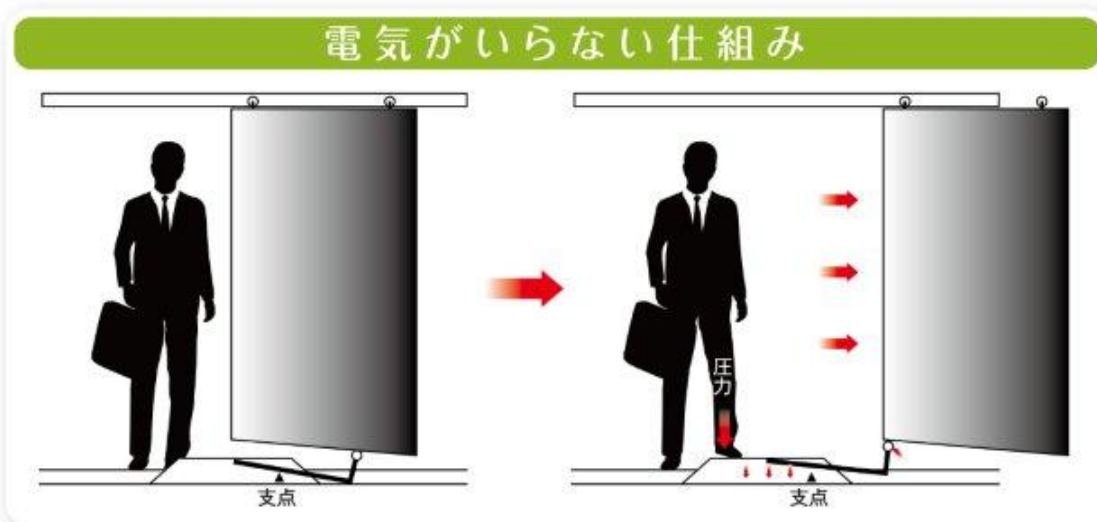
This project is also supported by Ministry of Small and Medium Business, Industrial Development Center of Fukushima Prefecture, JETRO and Intellectual Property Rights Center of Fukushima Prefecture.



HOW IT WORKS

Before action

After action



- ① Human weight (body weight) loads on the footboard
- ② The level edge in conjunction with the footboard goes down
- ③ The opposite edge of the level goes up making inclined roller lift the guide rail
- ④ By the use of the roller pressure and rolling effect, inclined roller moves in the direction of the arrow. (to open the door)
- ⑤ The door opens.

ACCIDENTS CAUSED BY AUTOMATIC DOORS

It is said that today the total number of automatic doors working all over Japan counts for 1 million 800 thousand.

Increase of number of automatic doors results in tendency of increase of accidents they cause.

AGE OF PEOPLE INJURED BY AUTOMATIC DOORS

Wide range from preschool babies to people of advanced age, major age range is less than 10 years and over 60 years

TYPE OF INJURY

Graze, contusion, bruise are major types, with continuing fractures and cuts also

ACCIDENT PATTERN

Caught in the door
Smashed in the door
Stumbling in the door ditch

ACCIDENT EXAMPLES

Example – 1

Tried to get inside the store and walked in diagonal direction towards the closing door. At that moment sensor did not work that caused collision with the closed door, breaking the door glass, cutting artery and nerve and resulting in mass bleeding and entering hospital. Was operated on and hospitalized for 1 week.
(37 years old male)

Example – 2

Tried to walk through the automatic door when it suddenly closed and caught the left leg. After that tried to pull out the leg but collapsed, hurt the leg and was hospitalized. Was operated on with installation of artificial bone, has tried rehabilitation course but still no progress for recovery.
(73 years old female)

Example – 3

When walking out of the store together with her parents, a little child stopped between the automatic doors and was caught by it and suffered strong head injury.
(3 years old female)

Automatic “ecodoor” miimo does not use electricity and is operated only by the weight on the footboard that totally prevents such accidents.

MOST SUITABLE FOR THE FOLLOWING FACILITIES

- Hospitals and welfare facilities with safe layout and arrangement for wheelchairs
- Places visited by many people with appeal for environmental control measures
- Most suitable for electronic workshops because of no electromagnetic waves emission
- Most suitable for public facilities with many visitors
- Safe for water using facilities because there is no danger of electric leakage
- Because of noiseless door motor, it is most suitable for congested housing districts
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city Hall



Highway Service Area & Parking Area



MIIMO SHOWROOM GUIDANCE

showrooms are arranged to watch, try and feel the “ecodoor” miimo
Please do not hesitate to visit them.



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