

Linear Engine

AUTOMATIC DOOR DRIVE UNIT

MM30 MM50 MM100

Distributed by:



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Linear Engine: the door to a new era.

Linear engine is a new mechanism for automatic door which is driven from the attraction or repulsion between the magnet and coil.
Since points of friction are significantly reduced, it makes the door opening and closing in unprecedentedly smooth and quiet way.

3 models are available for different purpose.

These three models could meet different workplace such as residential apartments, office building, hospitals, welfare facilities, factories, etc, and all other various uses.

MM 100

P 5



MM 50

P 7



MM 30

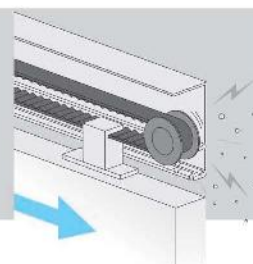
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Operating principle

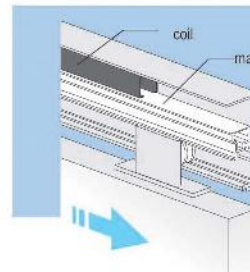
Conventional engines

A belt is connected to the door and driven by a rotary motor in order to open or close the door. In this way there create many points of frictions.



Linear Engine

The magnet is fixed on the door without contact to the coil (electromagnet). The door is opened or closed by the attraction and repulsion between the magnet and coil. Fewer points of friction in this way are created.



L I N E A R E N G I N E



Quiet and smooth opening and closing

The mechanism of linear motor makes the door opening and closing in unprecedentedly super smooth and quiet way.

comparison of operating noise (unit: dBA)

Linear engine automatic door	47 ※
Telephone bell	70
Quiet office	50
Library	40

※ This is the factory test results of M/M50 single door. (It's tested 1m from the test object)



It seldom produces powder dust and make the environment clean

Since fewer points of friction, It is suitable for clean rooms, food factories, and other place which is dust and dirt sensitive.



Highly safe return function

It can always detect the move speed of the door, and return the door reversely when the door hit the body or obstacles to ensure safety (safety return).



Function properly under power outage and other emergencies

Since the magnet is fixed on the door without contact to the coil (electromagnet), it can be used as a manual door when power outages and other emergencies happen.



Manual start- convenient assist function

After moving the door to direction of opening about 2cm, the door will open automatically, and after a certain time, the door will close automatically. Ideal for home and hospital use.

※ This function is a standard setting for MM50 and MM30, but not for MM100.



Versatile application. Linear engine could be widely spread.

For example, it demonstrates its quiet and safe feature when it's used for residence, offices and hospitals, while it demonstrates its no-dust feature when it's used for factory clean rooms. With comprehensive advantages, linear engine automatic doors have been installed in many places and will extend its application to an even bigger market.



✱ Please contact us for any special requirements.

MICOM
AUTODOOR

LINEAR ENGINE

MM30



Recommended installation areas

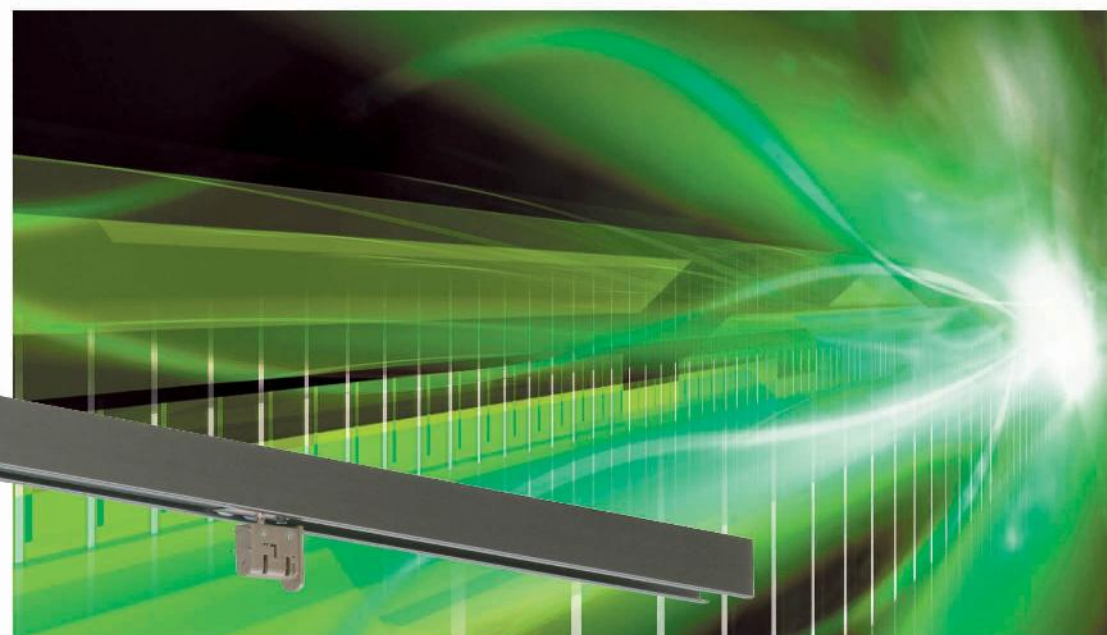


Mansion

Apartment

Living room
dining room
Bedroom
Toilet

Living room



Section



Assist function

After moving the door to direction of opening about 2cm, the door will open automatically, and after a certain time it will close automatically.

Highly safe return function

It can return the door immediately to a reverse direction when the door hit the body or obstacles during its opening.

Full open on hold

By pushing the door at its full open status for more than 3 seconds, you will hear a beep and the door will keep at the opening status, and when you want to close then you can pull the door to direction of closing about 2cm, the door will automatically close.

Auxiliary Sensor

Auxiliary sensors is equipped with built-in controller as standard setting. (hot-wire)

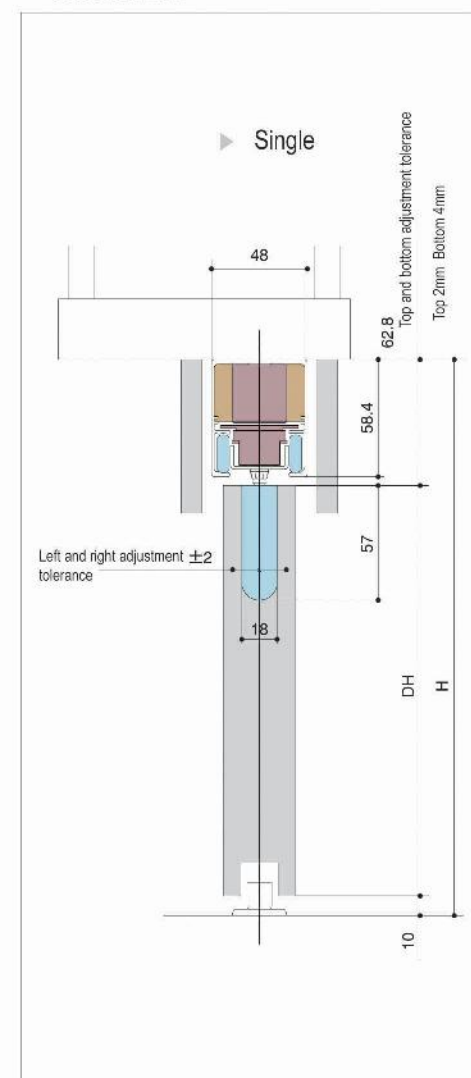


Specifications

Model	MM 30
Required power capacity	AC100V 10% 50/60Hz MAX: 2A
Operating temperature	-10 ~ 40 °C
Power consumption	Average when operating 0.1Wh / Once (Door weight: 30kg / door) Standby 2.8W (When the hold open time is set 1 second and excluding sensor consumption.)
Motor type	Magnet brushless DC linear motor movable type
Thrust generation	When three stators are all fully lapped: 13N
Door weight application	15~ 30kg / door
Door width	> 700mm
Self weight※	About 4kg
Opening speed	0.5m/sec
Closing speed	0.2m/sec
Hold open time	1 or 5seconds (switch)

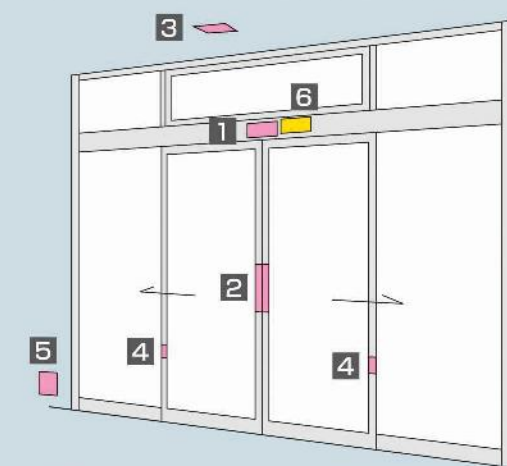
※ Weight may vary depending on rail length.

Section



OPTION

Sensor Switch Electronic Lock



For MM100&MM50



1 Sensors on the top frame of the door



2 Touch switch



3 Ceiling sensors



4 Beam switch



5 Foot switch



6 Electronic lock

* More sensors are available. Please feel free to contact us for more information.

For MM30



Touch switch



Spot sensor