

# HOME AUTOMATION

WHY AUTOMATE HOUSING  
AND HOW TO DESIGN EFFICIENT  
EQUIPMENT WITH ELECTRIC  
LINEAR ACTUATOR SYSTEMS?



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**T**he automated home, where equipment adjusts to each user's needs.

The house where everything becomes accessible and easy to use, providing its occupants with functionality, comfort, and safety every day.

**Thanks to electric actuation systems**, the automated house is no longer a fictional concept and is becoming more and more popular with users.

**Powerful, compact, and easy to integrate, electric linear actuators are used in many home areas**, both indoors and outdoors, in living, sleeping, and sanitary areas.



# WHY AUTOMATE THE HOME?

Automating the home improves everyone's daily life by making equipment **more functional, ergonomic, accessible, comfortable, and safe.**

It is first and foremost a question of well-being. Electric actuation systems allow all users – children, adults, the elderly, or people with reduced mobility – the opportunity to adjust furniture to their physical needs and **benefit from more accessible equipment.**

They allow for adopting an ergonomic posture that favors general home comfort and reduces certain musculoskeletal disorders caused by daily movements.

They also facilitate the use of hard-to-reach equipment (pergolas, roof windows, shutters, etc.).

At the same time, electric actuation systems are a response to new consumer expectations regarding interior design and home organization. By intervening in the **design of more functional, versatile, and adaptable equipment for everyone**, electric linear actuators allow for a reduction in the amount of home furniture and a less cluttered, more modern, and wellness-friendly space.

But one of the major factors that drive many homeowners and build-

ers to automate the home is safety. In France, for example, nearly 11 million people are victims of domestic accidents every year. This represents 17 percent of the population<sup>1</sup>.

**By reducing human intervention through remote control, equipment automation reduces the risk of domestic accidents and provides more safety.**



<sup>1</sup><https://www.planetoscope.com/mortalite/1450-.html>

# ELECTRIC LINEAR ACTUATORS FOR HOME AUTOMATION

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# PART 1: ELECTRIC ACTUATION SYSTEMS FOR INDOOR USE

## ELECTRIC LINEAR ACTUATORS FOR KITCHEN EQUIPMENT

The kitchen is the heart of the house and brings together all its residents. So, kitchens need to feature multifunctional and adaptable equipment. Here, electric linear actuators allow height adjustment of wall storage, worktops, and side tables, but also the operation of the hood for easy use and access.

### Worktops and side tables

With its high stability and load capacity of up to 1,200 N, [the TL10H electric column](#) is ideal for the height adjustment of worktops and side tables. Its aesthetic design discreetly blends with the kitchen furniture, and its silent mechanism will preserve the users' tranquility. The [TC15P control box](#) allows two columns to be synchronized. Its integrated T-TOUCH anti-collision technology will protect the equipment and its electric devices from any damage in case of contact with a foreign element. This new generation control box reduces standby power consumption by 0.1W.

It is also possible to add various accessories to the solution, such as the [TWC induction charger](#), which will provide wireless charging for smartphones.

Finally, the [TDH19P touchscreen hand control](#) can control the complete solution, integrating discreetly under a wooden or glass worktop for more modernity.



### Wall-mounted furniture

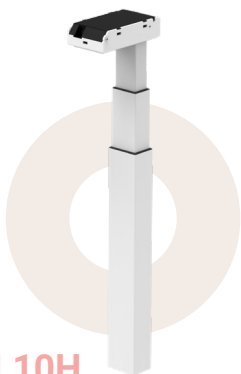
For the height adjustment of wall cupboards and shelves, TiMOTION offers the [TA48 electric actuator](#). Compact and sturdy, it can be easily integrated to design furniture where available space is often limited. Often installed in pairs, the [TC15 control box](#) synchronizes the two electric actuators. The entire solution is operated by the [TFH15 aluminum hand control](#).

### Hoods

The [TA38M electric actuator](#) is ideal for integrating small furniture. Compact and silent, it is particularly suitable for opening and closing the ventilation systems of extractor hoods. The [TC11 control box](#) facilitates the actuator's programming, permitting it greater functionality. It is operated by a simple and ergonomic [hand control, the TFH13](#).

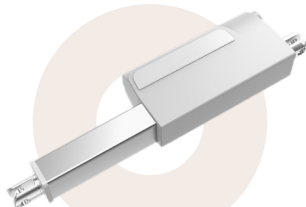


# ELECTRIC LINEAR MOTION SOLUTIONS FOR KITCHEN EQUIPMENT



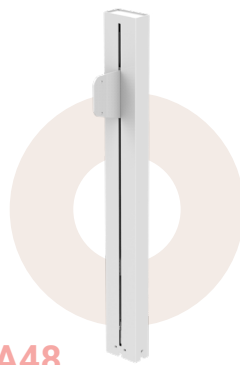
## TL10H

- **3 stage:**  
80\*60mm, rectangular
- **Max. load:**  
1,200N (push)
- **Max. speed at full load:**  
19mm/s
- **Retracted length:**  
Standard: 590mm  
With shoes: 610mm



## TA38M

- **Max. load:**  
2,000N (push)  
1,500N (pull)
  - **Max. speed at full load:**  
6.2mm/s
  - **Min. retracted length:**  
≥ stroke + 115mm\*
- \* If the stroke is from 20 to 45mm, the min. retracted length needs to be ≥ 160mm.



## TA48

- **Max. load:**  
500N (push)
- **Max. speed at full load:**  
45mm/s
- **Min. retracted length:**  
≥ stroke + 360mm



## TC11

- **Built-in transformer type:**  
SMPS
- **Number of actuators:** 1
- **Max. output:**  
32V DC, 2.5A
- **0.1W** standby power consumption



## TC15

- **Built-in transformer type:**  
SMPS
- **Max. output:**  
32V DC, 4A
- **Number of actuators:** 2
- **0.1W** standby power consumption



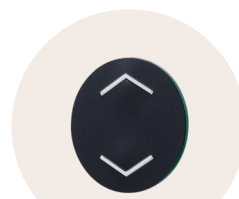
## TC15P

- **Number of actuators:** 2
- **0.1 or 0.5W** standby power consumption
- Anti-collision **sensor**/  
Optional **Bluetooth**



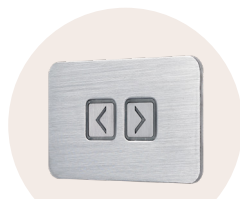
## TDH19P

- **Max. available buttons:** 6
- **4 Memory** functionalities
- **Digital display** indicating the worktop height
- **Safety button**
- **2 USB ports**



## TFH13

- **Max. available buttons:** 2
- Single control for **up/down** function



## TFH15

- **Max. available buttons:** 2
- **Metallic** finish



## TWC

- **Wireless** charger
- **Charger type:**  
Qi (induction)



# ELECTRIC LINEAR ACTUATORS FOR BEDROOM EQUIPMENT

By offering precise and gentle adjustment of comfort equipment, electric actuation systems provide a higher level of well-being for the home's residents. Adjusting the height, backrest, or leg rest of your armchairs, sofas, recliners, and beds will allow them to adopt an ergonomic posture conducive to relaxation and muscle release.

## Relaxation Beds

Many users use their bed as a relaxation area. Thanks to the advent of electric linear actuators, **your bed has become versatile and adaptable to your wishes**. Relaxation beds also have an **impact on users' health and sleep quality**.

Adjusting the backrest or the legs can improve sleep quality and relieve some everyday discomforts. The adjustable bed base offers a better alignment of the spine which will alleviate some back pain. The leg adjustment will slightly raise the legs and improve blood circulation—a significant comfort asset for overweight people suffering from heavy legs or pregnant women. The adjustment of the backrest will help alleviate some respiratory issues and facilitate sleep.

To adjust the height of comfort beds, the **TA31 electric actuator** is particularly effective with its load capacity of up to 8,000N in push. The **TA43 electric actuator** can be used for backrest adjustment, and the new **TA38M electric actuator** for leg adjustment. Still as compact as ever, it can push up to 2,000N,

making it even more powerful. This system can be combined with the **TC6 control box** and the **TFH22 wireless hand control** for more ergonomic use. To bring more functionality to your recliner beds, we also offer additional accessories such as an integrated **USB port TFA3** to charge a smartphone, an **under-bed light TBL** to bring more safety to people getting up at night, or a **reading light TRL1**.





# ELECTRIC LINEAR ACTUATORS FOR LIVING ROOM EQUIPMENT

## Recliners and lift chairs

Recliners are becoming increasingly popular with consumers. They help reduce muscle tension, improve blood circulation and breathing for an immediate feeling of well-being! The **TA43 electric actuator** is ideal for height adjustment as it can push up to 4,000N. The **TA42 electric actuator** is entirely suitable for the

backrest. For leg rest adjustment, the **compact TA38M electric actuator** can be easily integrated into the mechanism. These actuators can be combined with the **TC23 control box** and the **TH13 ergonomic hand control**, compatible with the **TMM3 massage motors**, for even more comfort.

## Televisions

Televisions can also be equipped with an electric lifting system. **These systems make it possible to design invisible solutions**, concealing the screens inside furniture, allowing both the freedom from visual clutter and the benefit of a spaciouly designed environment.

Remotely controllable, an electric column will allow the TV to be hidden inside a piece of furniture and easily

deployed when in use. Here, we propose the **TVL3 electric column**. Specially designed for TVs, it can push up to 600N. Combined with the **TC11 control box**, it can be operated remotely with a simple **TH3 wireless hand control**. The solution can be optimized with a **TSS2 safety system** that will protect the mechanism and the TV set in case of collision with an object.

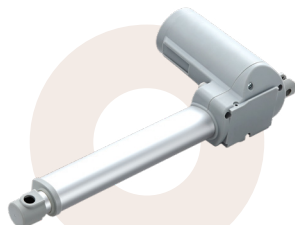


# ELECTRIC LINEAR MOTION SOLUTIONS FOR COMFORT EQUIPMENT



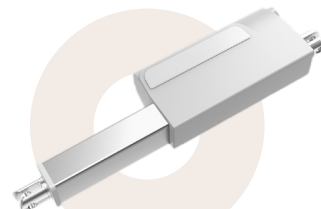
## TVL3

- **Max. load:**  
600N (push)
- **Max. speed at full load:**  
22mm/s
- **Min. retracted length:**  
570mm / 685mm / 795mm



## TA31

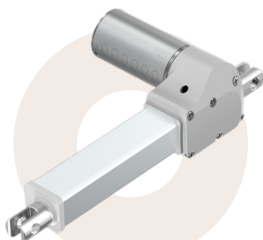
- **Max. load:**  
8,000N (push)  
3,000N (pull)
- **Max. speed at full load:**  
3.5mm/s
- **Ingress protection rating:**  
IP66W\*



## TA38M

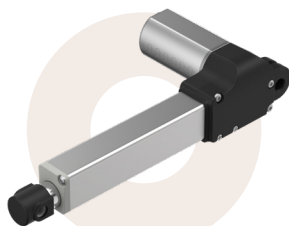
- **Max. load:**  
2,000N (push)  
1,500N (pull)
- **Max. speed at full load:**  
6.2mm/s
- **Min. retracted length:**  
 $\geq \text{stroke} + 115\text{mm}^*$

\* If the stroke is from 20 to 45mm, the min. retracted length needs to be  $\geq 160\text{mm}$ .



## TA42

- **Max. load:**  
1,500N (push/pull)
- **Max. speed at full load:**  
7.1mm/s
- **Min. retracted length:**  
 $\geq \text{stroke} + 100\text{mm}$



## TA43

- **Max. load:**  
4,000N (push/pull)
- **Max. speed at full load:**  
2.5mm/s
- **Min. retracted length:**  
 $\geq \text{stroke} + 100\text{mm}$



## TC6

- **Number of actuators:** 1~5



## TC11

- **Built-in transformer type:**  
SMPS
- **Number of actuators:** 1
- **Max. output:** 32V DC, 2.5A
- **0.1W** standby power consumption



## TC23

- **Number of actuators:** 1~4
- **Max. output:** 24V DC, 5A



## TH3

- **Max. available buttons:** 6
- **LED indicator**
- **Wireless control**

\* "Washable" = Washable according to TiMOTION standards



## ELECTRIC LINEAR MOTION SOLUTIONS FOR COMFORT EQUIPMENT



### TH13

- Supports up to **5 pairs** of massage motors
- **LCD display**



### TFH22

- **Max. available buttons: 10**
- **Wireless** control
- **Magnetic clamp** available



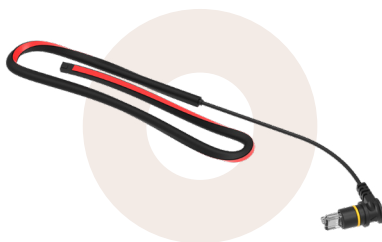
### TMM3

- **Massage motor**
- **12V DC** or **24V DC**
- Suitable for **recliners**



### TFA3

- **USB charger**
- **2 USB ports**



### TSS2

- **Safety strip**
- Customizable **length/number of sections**



### TBL

- **Under-bed lighting**
- **Low energy consumption**



### TRL1

- **LED Reading Light**
- **Elegant and compact** design
- **Flexible** gooseneck



# ELECTRIC LINEAR ACTUATORS FOR SANITARY EQUIPMENT

Narrow and slippery, sanitary spaces are often the site of discomfort, difficulties, and even domestic accidents, especially for children, the elderly, or people with reduced mobility.

Electric linear actuators accommodate the design of height-adjustable sanitary equipment, such as toilets and sinks, to facilitate access for all users. This not only reduces slip and fall risks but also offers more autonomy.

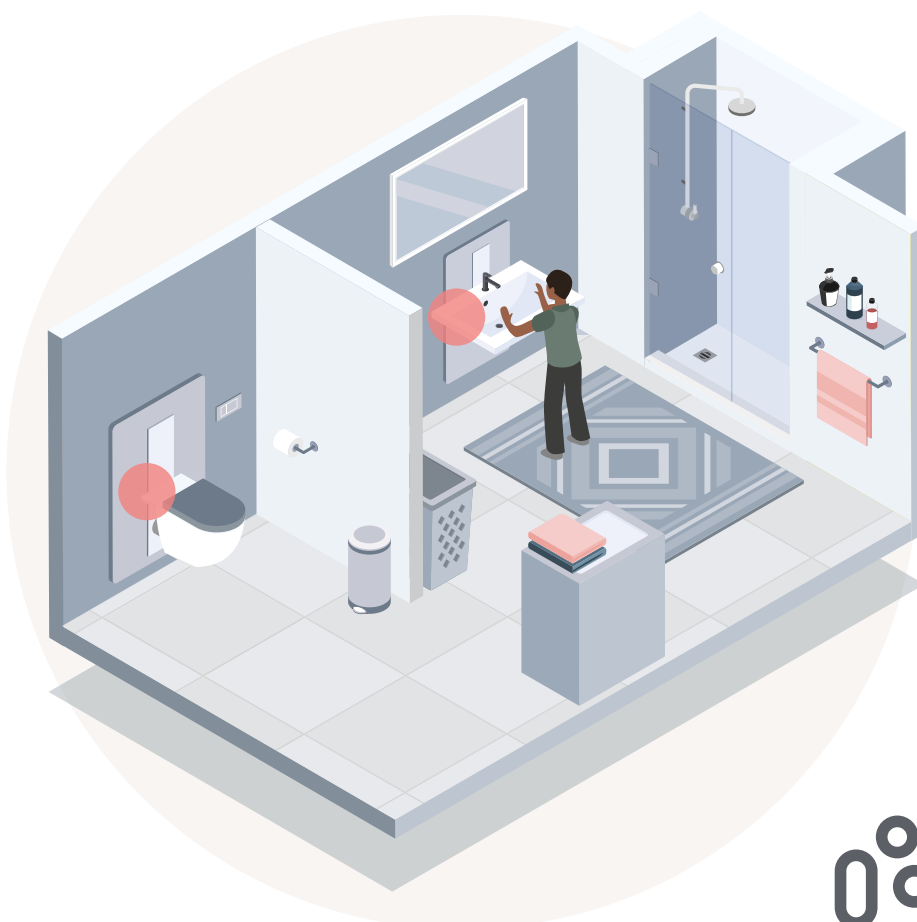
## WC

With a load capacity of up to 10,000N in push, the **TA23 electric actuator** is ideal for the height adjustment of toilets. Its IP66W\* rating makes it ideal for use in humid environments such as bathrooms. Combined with the **TC26 control box**, it is operated with the **TH26 hand control**. The system can also be equipped with a **TSS2 safety device** to protect equipment and people in case of impact.

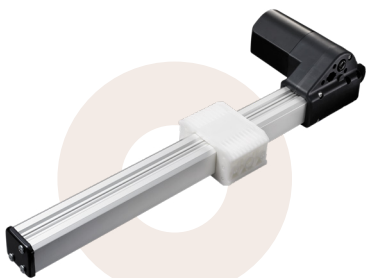
## Sinks

The **TA5P electric actuator** will allow the height adjustment of the bathroom sink. Particularly resistant, it can push up to 6,000N. It can be combined with the **TC11 control box**, the **TDH5 hand control**, and the **TCS1 anti-collision sensor**, which will bring more safety in case of impact with a foreign element.

\* "Washable" = Washable according to TiMOTION standards

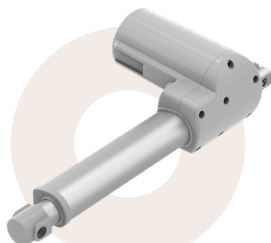


# ELECTRIC LINEAR MOTION SOLUTIONS FOR SANITARY EQUIPMENT



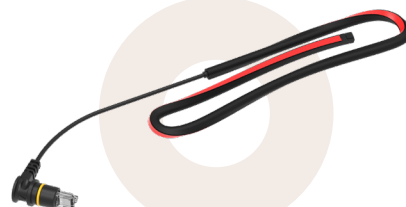
## TA5P

- **Max. load:**  
6,000N (push)  
3,000N (pull)
- **Max. speed at full load:**  
4.1mm/s
- **Min. retracted length:**  
≥ 157mm



## TA23

- **Max. load:**  
10,000N (push)  
4,000N (pull)
- **Max. speed at full load:**  
3.2mm/s
- **Min. retracted length:**  
≥ stroke + 163mm
- **Ingress protection rating:** IP66W\*



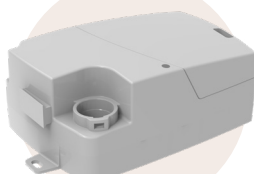
## TSS2

- **Safety strip**
- Customizable  
length/number of sections



## TC11

- **SMPS** transformer
- **Number of actuators:** 1
- **Max. output:**  
32V DC, 2.5A
- **0.1W** standby power consumption



## TC26

- **Number of actuators:** 1~3
- **Max. output:** 8A
- **Number of hand controls:** 1



## TCS1

- **Anti-collision** sensor



## TDH5

- **Max. available buttons:** 6
- **4 Memory** functionalities
- Display of the **worktop height**



## TH26

- **Max. available buttons:** 6
- **Ingress protection rating:** IP66
- **Backlighting** available

\* "Washable" = Washable according to TiMOTION standards



# ELECTRIC LINEAR ACTUATORS FOR WORK EQUIPMENT

The recent period of widespread teleworking has unmistakably demonstrated the importance of work equipment and the work environment. Many people have developed musculoskeletal disorders due to the repeated bad postures. And for good reason. People are often less well-equipped at home than in an office environment when it comes to teleworking.

Whether it is for work or a passion project, adjustable workstations allow one to adopt an ergonomic and comfortable posture, favor concentration, alternate the sit-stand position, and reduce muscular fatigue and tensions caused by a sedentary life.

## Office

For height-adjustable desks, we offer the **TL20S lifting column**. Its discreet design and smooth and silent movement make it perfectly adapted to a work environment. Two columns can be synchronized using the **TC15P control box** with an integrated T-TOUCH anti-collision system. The control box can also be equipped with a **TFA1 USB port** or a **TWC inductive phone charger** if required. The **TBB9 battery** will provide autonomy to the equipment and avoid any visible cable that could hinder the room's aesthetics or make users stumble. All of this is easily operated by the **TDH4 two-button digital hand control**.



## Workbench

Equally powerful, the **TL10H electric column** is ideal for workbench height adjustment.

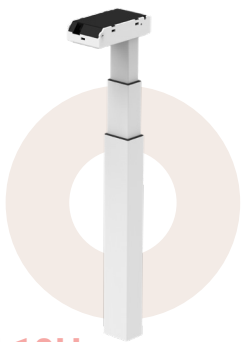
A **TC15P control box** will synchronize two columns to adjust the work surface. It also has an additional port to accommodate an external battery for a stand-alone system with no exposed power cable. It also has Bluetooth technology for hand control. Here we will choose the **TDH8 hand control**.

## Shelf

The adjustment of wall shelves can be operated by our **innovative recessed lifting system: the TA48**. Recessed in a wall or a piece of furniture, it allows the adjustment of the elements while maintaining a clean design. The **TC15P control box** enables the synchronization of two devices for smooth movement while preserving the material in case of impact. The system is easily controlled using the **TFH13 hand control**.

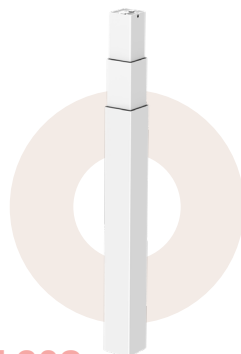


# ELECTRIC LINEAR MOTION SOLUTIONS FOR DESKS AND WORKBENCHES



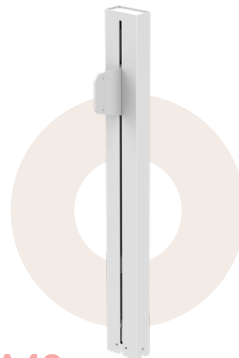
## TL10H

- **3 stage:**  
80\*60mm, rectangular
- **Max. load:**  
1,200N (push)
- **Max. speed at full load:**  
19mm/s
- **Retracted length:**  
Standard: 590mm  
With shoes: 610mm



## TL20S

- **3 stage:**  
70\*70mm, square
- **Max. load:**  
700N (push)
- **Retracted length:**  
Standard:  
590 / 560 (M) / 520 (S) mm  
With shoes:  
610 / 580 (M) / 540 (S) mm



## TA48

- **Max. load:**  
500N (push)
- **Max. speed at full load:**  
45mm/s
- **Min. retracted length:**  
≥ stroke + 360mm



## TDH4

- **Max. available buttons:** 2
- Single control for **up/down** function
- **Height** display
- **Touch control**



## TDH8

- **Max. available buttons:** 2
- Single control for **up/down** function
- Several **colors** are available, and **backlighting**



## TFH13

- **Max. available buttons:** 2
- Single control for **up/down** function



## TC15P

- **Number of actuators:** 2
- **0.1 or 0.5W** standby power consumption
- **Anti-collision** sensor
- Optional **Bluetooth**



## TBB9

- **Battery Type:** Lithium
- **Capacity:** 2.5Ah/63Wh
- **Output voltage:** 25.2V DC



## TFA1

- **USB charger**
- **2 USB ports**



## TWC

- **Wireless charger**
- **Charger type:** Qi (induction)



## PART 2: ELECTRIC ACTUATION SYSTEMS FOR OUTDOOR USE

### ELECTRIC LINEAR ACTUATORS FOR NATURAL VENTILATION SYSTEMS

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Electric actuation systems allow remote control of natural ventilation and shading equipment such as windows, roof windows, shutters, or blinds. This is done with a simple electric control and allows everyone to adapt their environment to their needs with ease.

Combined with intelligent control systems, linear electric actuators enable the design of programmable and autonomous solutions, offering even more functionality and customization. The equipment is adjusted in real-time according to the outside climate, allowing the interior to maintain an optimal environment while limiting heating or air conditioning use.

This intelligent temperature management positively impacts both the economy and the environment, a significant aspect when considering that the building industry is one of the leading energy consumers.

It also offers more safety since it allows the closing of windows or shutters remotely in case of forgetfulness.

#### Roof windows and classic windows

TiMOTION designs electric motion systems for all types of windows.

Roof windows are often out of reach and require systems with remote control. Robust and compact, the new **VN1 electric actuator** has been specially designed for this type of application. It can push up to 3,500N and has a lateral attachment system that is particularly suitable for window systems.

The **TA23 electric actuator** is also suitable for this type of application. It can push up to 10,000N, which makes it even more effective for heavy loads. It can also be used for

smoke evacuation systems. Thus, it allows the rapid evacuation of smoke, heat, and toxic gases from the building in case of fire.

For conventional windows, we recommend the **TA16 electric actuator**. Its compact size makes it ideal for smaller spaces.



# ELECTRIC LINEAR ACTUATORS FOR SHADING SYSTEMS

## Shading systems

For the adjustment of blinds, the **TA38M electric actuator** is the ideal solution. Its compact size allows for easy and discreet integration to automate your systems in tight spaces. It provides quiet and efficient adjustment and can be equipped with Hall effect sensors for feedback and more accurate adjustments.

For the adjustment of folding shutters, we propose the use of a **TGM5 motor reducer**. Its optional IP66 rating makes it water-resistant and suitable for an outdoor environment. Fast and silent, it will allow a smooth operation of your outdoor equipment.

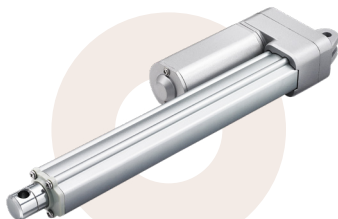
## Pergolas

With an electric actuation system consisting of adjustable and retractable blades similar to shutters, pergolas are easily adjustable. Thanks to the remote control, the electric adjustment becomes accessible to everyone and offers an optimal shade at any time of the day.

Installed under the pergola roof, the **TA16 electric actuator** is ideal for modifying the adjustable blades with its load capacity of 3,500N. With its silent mechanism, the adjustment of the pergola can be performed discreetly while respecting the users' desire for quiet harmony.

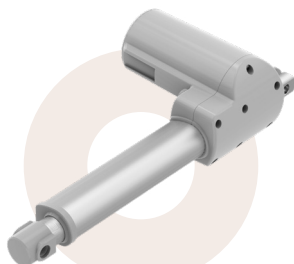


# ELECTRIC LINEAR MOTION SOLUTIONS FOR VENTILATION AND SHADING SYSTEMS



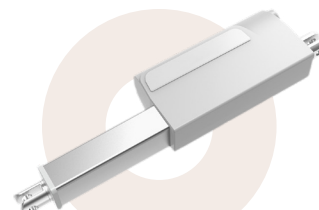
## TA16

- **Max. load:** 3,500N (push/pull)
- **Max. speed at full load:** 6.2mm/s
- **Min. retracted length:**  $\geq$  stroke + 112mm
- **Ingress protection rating:** IP66



## TA23

- **Max. load:** 10,000N (push)  
4,000N (pull)
- **Max. speed at full load:** 3.2mm/s
- **Min. retracted length:**  $\geq$  stroke + 163mm
- **Ingress protection rating:** IP66W\*



## TA38M

- **Max. load:** 2,000N (push)  
1,500N (pull)
- **Max. speed at full load:** 6.2mm/s
- **Min. retracted length:**  $\geq$  stroke + 115mm

\* If the stroke is from 20 to 45mm, the min. retracted length needs to  $\geq$  160mm.



## TGM5

- **Max. torque:** 18.3Nm
- **Max. speed at full load:** 88RPM ( $\pm 5\%$ )
- **Ingress protection rating:** IP66



## VN1

- **Max. load:** 3,500N (push/pull)
- **Max. speed at full load:** 4.2mm/s
- **Min. retracted length (front attachment included):**  $\geq$  401mm (AC version)  
 $\geq$  181mm (DC version)
- **Ingress protection rating:** IP66

\* "Washable" = Washable according to TiMOTION standards



# START YOUR PROJECT

TiMOTION manufactures electric **actuation systems specially designed for home equipment automation**. We offer our customers a high level of customization to find the perfect solution for their specific needs.

Combined with the right technologies, electric linear actuators bring

real added value to your equipment. That's why TiMOTION provides equipment manufacturers with complete turnkey solutions – **actuators + control box + hand control + accessories** – that are easy to integrate and use.

Electric actuation systems are an excellent alternative to pneumatic

or hydraulic systems, as **they do not risk oil leaks or complications related to pipes or compressors and are maintenance-free**.

Are you interested in starting your fitting project?  
Contact our nearest local sales department!

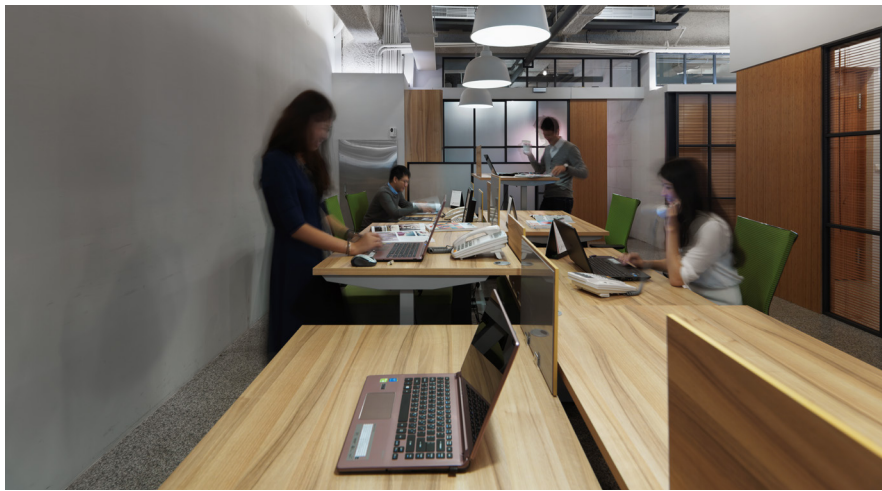


# ABOUT TIMOTION

Founded in 2005, **TiMOTION** was born from the passion of improving the lives of others.

We offer complete and customizable equipment automation solutions: electric linear actuators, electric lifting columns, control boxes, batteries, power supplies, handsets, and accessories; for 4 major markets: **Industrial, Care, Comfort & Ergo**.

TiMOTION has over **2 500 employees** working together throughout the world in **14 international subsidiaries** and sales offices, and **9 manufacturing facilities**.



## Our vision?

Anticipate tomorrow's world and offer even more **innovative electric solutions** to make equipment ergonomic and adaptable to fit everyone's needs.

Our multicultural team finds its strength in commitment, hard work and **great team collaboration**.

## Our mission?

Put our "know-how" experience to work in our customers' favor, providing them a **tailor-made service** reaching out to wherever they reside on the continent.



**16 years** of business industry experience



**14 corporate offices**



**800 patents**



**24 distributors**  
all around the world



**9 manufacturing facilities**



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