Competent partners are needed in the automation industry. This applies in particular to suppliers of high-quality electrical and mechanical components. High development potential, world-wide sales and service as well as a globally organised company structure – these are features you can rely on at Parker Hannifin. At more than 210 manufacturing locations, over 45,000 employees create an annual turnover of $6 billion.

"Think globally, act locally" is one of the principles of the organisation. A multitude of medium-sized companies forms the mainstay of this world-wide organisation. This structure ensures proximity to the regional markets and above all to the customers. Work with the Parker Hannifin Group - we speak your language.

The international company structure of Parker Hannifin ensures excellent service world-wide - in times of increasing globalisation, in particular for manufacturers of complex automation equipment, this is a fundamental success factor.

Electromechanical Automation Europe

Three locations in Offenburg (Germany), in Milan (Italy) and in Poole (UK) form the Electromechanical Automation Europe (EME) Division within the Parker Automation Group.

Within EME, mechanical and electrical components carefully adapted to each other are developed and produced for the automation of precision motion.

Parker offers you a comprehensive, carefully harmonised product portfolio – from component to system. Profit from our experience.

Practical application examples

- **Travelling systems for computer tomographs**
  The flush-mounted toothed belt actuators can move the 2-tonne computer tomographs very smoothly even at speeds as low as 0.5 mm/s

- **Handling actuators for stacking roof tiles**
  These robust actuators work reliably in the hostile environment of the building materials industry

- **Shuttering robots for the concrete component industry**
  Dynamic operations in a harsh and dusty environment

- **Handling system for blood plasma**
  Fast and quiet 3-D robots for light loads
A head-start thanks to know-how

The products from Parker Electromechanical Automation mirror the decades of experience gathered from industry – the components are also largely applied in the automation technology and mechanical engineering divisions at Parker. In this way diverse solutions for a variety of areas have been created, both for simple or highly complex tasks.

Modular mechanics

Mechanical components can be connected with the appropriate accessories to form multi-axis systems using a variety of interconnecting possibilities.

The modular approach allows the flexible, cost-effective and economical construction of complex systems and installations.

Fields of application

Mechanical components from Parker Electromechanical Automation can be combined in a variety of ways and used for example in the following fields of application:

- Automation
- Inspection technology
- Mechanical engineering
- Warehousing and transportation
- Building materials industry
- Clean room technology
- Medical equipment engineering
- Foodstuffs industry

The modular construction system for high-specification mechanical components includes the appropriate elements. Talk to our specialists – we will help you find the solution for the task in hand.
The range of mechanical components includes linear actuators, vertical actuators, telescopic actuators and electro-cylinders – all with aluminium supporting profiles. Depending on the workload, these are available in different sizes, from 46 x 46 mm and 180 x 180 mm. The carriages are guided by rollers which are either covered in high-quality plastic or made of steel. The user can choose between recirculating ball screw, standard toothed belt or a combination of toothed belt and toothed rack for the drive elements.

A central feature of the linear actuators is the anodised extruded aluminium profile, its rigidity being optimised at low weights. Modular systems in different sizes with a range of interconnecting possibilities.

Guidance for general automation tasks
Plastic covered rollers run on anodised aluminium profiles; no lubrication is necessary.

Finite element analysis
The rigidity of the supporting profiles is optimised at low weights.

Guidance for heavy loads
Extended carriage with double the number of rollers.

Arrangement for heavy loads
Dual actuators, free-running or synchronously driven.

Protection against pollution
An optional stainless steel cover on the profile opening protects the actuator from external pollution.
Linear actuators

7. Rack and pinion drive
   A short, efficient toothed belt rolls on a toothed rack. This ensures an constant and high degree of rigidity, even for long stroke lengths

8. Guidance for high rigidity and static loads
   Steel rollers run on hardened steel strips laid into the profile

9. Drive for vertical motion
   Drive station fixed, toothed belt and profile move together

10. Actuator for long vertical strokes with low overall height
    Telescopic actuator with 3 or 4 stages

11. Rigid drive for short and precise motion
    Recirculating ball screw in the ET Electro-Thrust cylinder

12. Rigid drive for short and precise motion
    Recirculating ball screw in the ER linear actuator
Linear actuators

Linear actuator summary - Performance range for each series

The details given on these two pages refer to the performance capability of each of the series. The details are all based on the largest size in each case. Not all the maximum values can be achieved simultaneously by any one actuator. We are happy to help you with sizing and selection.

HLE Linear actuator
Roller guidance system with plastic-coated rollers. Toothed belt drive. Available as single or dual actuator. Sizes 100 and 150

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Stroke length [m]</th>
<th>Speeds up to [m/s]</th>
<th>Acceleration [m/s²]</th>
<th>Traction force up to [kN]</th>
<th>Load bearing capacity single actuator [kN]</th>
<th>Payload (single actuator) [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal</td>
<td>20</td>
<td>5</td>
<td>10</td>
<td>2.8</td>
<td>6.6</td>
<td>600</td>
</tr>
<tr>
<td>Vertical</td>
<td>9</td>
<td>5</td>
<td>10</td>
<td>2.8</td>
<td>2.8</td>
<td>250</td>
</tr>
</tbody>
</table>

HPLA Linear actuator with standard toothed belt drive
Roller guidance system either with plastic-coated rollers or steel rollers running on steel strips (with lubrication system). Available as single or dual actuator. Sizes 80, 120 and 180

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Stroke length [m]</th>
<th>Speeds up to [m/s]</th>
<th>Acceleration [m/s²]</th>
<th>Traction force up to [kN]</th>
<th>Load bearing capacity single actuator [kN]</th>
<th>Payload (single actuator) [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal</td>
<td>20</td>
<td>5</td>
<td>10</td>
<td>6</td>
<td>17</td>
<td>1500</td>
</tr>
<tr>
<td>Vertical</td>
<td>9</td>
<td>5</td>
<td>10</td>
<td>6</td>
<td>6</td>
<td>500</td>
</tr>
</tbody>
</table>

HPLA Linear actuator with rack and pinion drive
Roller guidance system optionally with plastic-coated rollers or steel rollers running on steel strips (with lubrication system). Toothed belt drive which rolls on a toothed rack. Several drives on one rack possible. Available as single or dual actuator. Size HPLA 180

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Stroke length up to [m]</th>
<th>Speeds up to [m/s]</th>
<th>Acceleration [m/s²]</th>
<th>Traction force up to [kN]</th>
<th>Load bearing capacity single actuator [kN]</th>
<th>Payload (single actuator) [kg]</th>
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</thead>
<tbody>
<tr>
<td>Horizontal</td>
<td>50</td>
<td>5</td>
<td>10</td>
<td>1.3</td>
<td>17</td>
<td>1500</td>
</tr>
<tr>
<td>Vertical</td>
<td>8.5</td>
<td>5</td>
<td>10</td>
<td>1.3</td>
<td>1.5</td>
<td>100</td>
</tr>
</tbody>
</table>
HZR Vertical actuator (can also be used horizontally)

Fixed drive station, profile is moved by toothed belts.
Roller guidance system with plastic-coated rollers. Sizes 50, 80 and 100

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Stroke length [m]</th>
<th>Speeds up to [m/s]</th>
<th>Acceleration [m/s²]</th>
<th>Traction force up to [kN]</th>
<th>Payload (single actuator) up to [kg]</th>
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</thead>
<tbody>
<tr>
<td>Vertical</td>
<td>2</td>
<td>5</td>
<td>10</td>
<td>2.2</td>
<td>150</td>
</tr>
<tr>
<td>Horizontal</td>
<td>2</td>
<td>5</td>
<td>10</td>
<td>2.2</td>
<td>20 – 50</td>
</tr>
</tbody>
</table>

HZR Vertical actuator

HTR Telescopic vertical actuator

Low overall height, e.g. 1434 mm for 2000 mm stroke. Roller guidance system with plastic-coated rollers. Drive by means of two or three toothed belts.
Sizes 50 and 80

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Stroke length [m]</th>
<th>Speeds up to [m/s]</th>
<th>Acceleration [m/s²]</th>
<th>Traction force up to [kN]</th>
<th>Payload (single actuator) up to [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>0.9</td>
<td>50</td>
</tr>
</tbody>
</table>

ET Electro-Thrust Electric Cylinder

Suitable for continuous operation with high stiffness and repeatability. Drive with recirculating ball screw, can also be applied as a vertical actuator, optional rod guide available. Sizes 32, 50, 80, 100 and 125

<table>
<thead>
<tr>
<th>Screw leads [mm]</th>
<th>Stroke length up to [mm]</th>
<th>Speeds up to [m/s]</th>
<th>Acceleration up to [m/s²]</th>
<th>Traction force up to [kN]</th>
</tr>
</thead>
<tbody>
<tr>
<td>5, 10, 16</td>
<td>1000</td>
<td>1.0</td>
<td>9</td>
<td>1.0</td>
</tr>
</tbody>
</table>

ER Linear actuator

Roller guidance system with plastic-coated rollers or optional ball bearing guidance system. Optional toothed belt or recirculating ball screw drive.
Sizes 32 and 50

<table>
<thead>
<tr>
<th>Screw leads [mm]</th>
<th>Stroke lengths up to [mm]</th>
<th>Speeds up to [m/s]</th>
<th>Acceleration up to [m/s²]</th>
<th>Traction force (ball screw) up to [kN]</th>
<th>Payload (single actuator) up to [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>5, 10, 16</td>
<td>1000</td>
<td>1.0</td>
<td>9</td>
<td>3.3</td>
<td>45</td>
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</tbody>
</table>
Would you like more information?
We would be happy to send you our brochures and catalogs!
Or call us and set up a meeting.

Our product program:

- Visualisation
- Distributed Automation
- Control Technology
- Drive Technology
- Motors / Gears
- Direct Drive Technology
- Handling Actuators
- Precision Actuators
- Parker

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