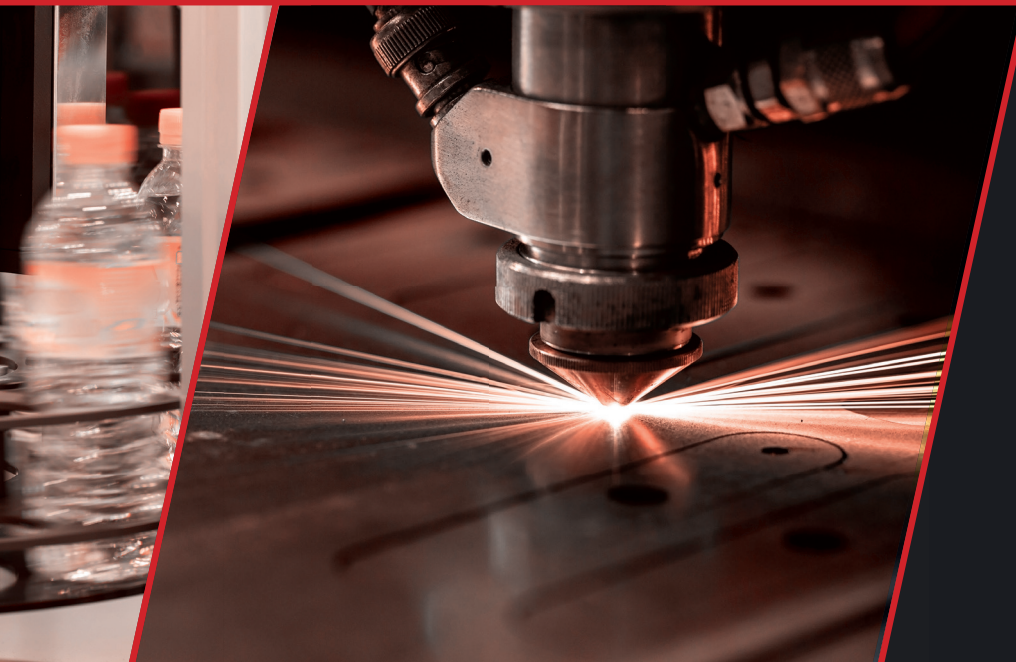




## **MOTION CONTROL**

SEE IT BEFORE IT HAPPENS



**MOTOR  
POWER**  
COMPANY

**WHERE DID WE EVER MEET?**

*Maybe we met before many times already, although you didn't know!*

Motor Power Company is involved in the manufacturing or processing of many equipments whose throughput are products or services that all us use everyday: wether you drank a bottle of water that was labelled, filled or capped with our torque motors, or you received a package that was sorted and handled with our motorollers, or even you had a train trip where doors and footsteps were moved by our brushless motors. Motor Power Company was there to ensure products and services to work precisely, smoothly and in a safely.

Pharma

Material handling

Food and beverage  
packaging

Precision machining

Trasport

Medical equipments

Semiconductor

Electric vehicles

Robotics

Laser

Plastic

Assembly

Test & Measurements

Discover other  
excellence in  
other many  
industry areas



# WELCOME TO MOTOR POWER COMPANY



## GLOBAL AND FLEXIBLE APPROACH

**Motor Power Company** market approach is based on know-how and experience: identify a need and implement a solution. Our long-term investments in the study of motion have created a deep knowledge in all aspects of motion technology. The result is an innate ability to come up with original ideas that distinguishes Motor Power Company and allow design and final performance of our products to stand out in the market.



## TOTAL GOVERNANCE

**Motor Power Company** has acquired extensive know-how through continuous research into motion power and control, that enables to effectively integrate mechanical, electromechanical and electronic technologies. The competence we have built up is based on relevant and continuous application engineering expertise along with the governance of design and critical manufacturing processes.



## CONSTANT APPLICATION EXPERIENCE GATHERING

Over years experience in many fields of applications, **Motor Power Company** depth of expertise leads to reliable motors in advanced applications that moves with force, precision and efficiency, guaranteeing excellent performance and energy saving, by supporting design featuring minimal environmental impact industries.



## SEE IT BEFORE IT HAPPENS

Our unique selling proposition: **see it before it happens**. Over the years, continuous design and development of innovative products for complex engineering processes has led to the creation of dedicated solutions in specific applications in the field of industrial movement and automation.

Our mission is anticipating customer and market needs and implementing our core technologies to introduce innovation that allows dynamics performances and efficient throughput.

# TECHNOLOGIES

## DIRECT DRIVE TECHNOLOGY

Motor Power Company proposes linear and torque direct drive solutions, ensuring applications boost due to their dynamics enhancing possibilities. Direct drive rotary table, **SKA DDR** and **SKA ROTARY TABLE** achieve efficiency and precision positioning that are difficult to obtain with conventional systems. Linear direct drive technology is available in frameless version, **SKA DDL** electric coil and magnetic track, and in a plug and play version incorporated in **SKA COMPACT** system. **MTR** gearless motorrollers and **smart drives** complete the direct drive technology proposal: less components than the standard kinematic chain ensure high MTBF, system efficiency and increased throughput.

## BRUSHLESS SERVOMOTORS

Brushless servomotors are products of tried-and-tested success that Motor Power Company manufacturers thanks to in-company know-how acquired during years of practical experience with motors designing and building. **TETRA** and **TETRA COMPACT** are brushless servomotor with excellent efficiency along with high torque rate. **TETRA COMPACT-ENHANCED** and **TETRA COMPACT UL**, the third generation providing high dynamic response: superior quality standard and international certifications. **TETRA COMPACT EXTREME** controls motion in any outdoor and indoor extreme operation. If battery automation is the need **TETRA COMPACT LOW VOLTAGE** is the answer. And do not miss the new **TETRA COMPACT 4** series.

## BRUSHED DIRECT CURRENT TECHNOLOGY

The brushed DC architecture of **PENTA**, **ESA** motors and **ROK** gearmotors is our original, most robust and consolidated technologies in the field of motion control. These motors are available in various sizes and with a range of different windings. The selected materials from which brushed DC motors are made guarantee excellent reliability and a long working life. They guarantee a high overload capacity without speed loss as well as rapid response and accurate speed control in low speed and high torque applications. Brushed DC motors and gearmotors are perfect for use in constant speed applications.

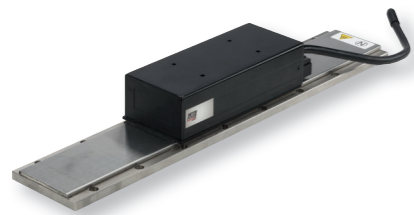
## DRIVE INTEGRATED SERVOMOTORS

Cutting edge technology for decentralized architecture: all drive integrated servomotors **DUET** series are the result of the wide-ranging experience that Motor Power Company has built over 30 years as market oriented player in the motion control market. Synchronous brushless servomotors permanently excited with built-in drives: **DUET**, **DUET AD**, **DUET FLEXI** and the high voltage models **DUET HV**. Everything you need for moving and controlling an axis is built directly into these highly compact single component: servomotor, feedback and intelligent servo drive featuring CANopen, Ethercat or Profinet networking.





## DIRECT DRIVE tecnology



### DIRECT DRIVE LINEAR MOTORS SKA DDL - FRAMELESS

Whenever the motion you need is linear, integrations is a plus and dynamics and precision is essential in your application, linear motors of the series SKA DDL can escalate the throughput of your machine and simplify the design of the machine, ensuring as well a proven energy saving.

Iron core technology

40 - 2400N continuous force

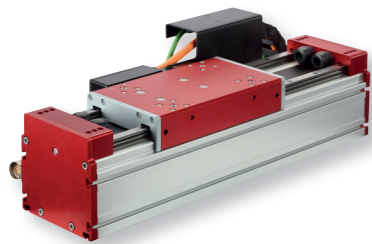
135 - 7200N peak force

Up to 5 m/s speed

Up to 5g (50 m/s<sup>2</sup>) acceleration

Feedback: SinCos encoder, TTL sensors, absolute optical and magnetic sensors, Hall effect sensors

### LINEAR AXIS ALL-IN-ONE SKA COMPACT



SKA Compact allows the integration of linear motion with a complete stage, "plug and play", that encloses primary and secondary elements, linear guides, feedback and a mechanical structure that can be easily embedded in your machine and boost your performances.

Iron core technology

275-550N continuous force

5 m/s speed

Up to 5g (50 m/s<sup>2</sup>) acceleration

0.01 - 0.1mm accuracy

Plug & play solution, fast and easy to mount

## DIRECT DRIVE tecnology

### DIRECT DRIVE TORQUE SERVOMOTORS SKA DDR

Unprecedented performance in terms of torque and acceleration, ideal for technological automation upgrades.

2 Nm to 760 Nm rated torque

Instantaneous peak torque till 2400 Nm

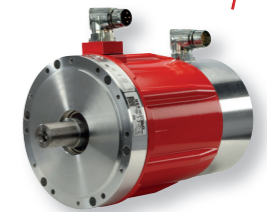
A high-speed operation up to 1200 rpm

IP65 protection rating (Power Pack version)

Feedback: resolver, incremental and absolute encoders, Hall effect sensors

Frameless and Power Pack version

Hollow, male and hollow through shaft versions



### DIRECT DRIVE TORQUE SERVOMOTORS SKA ROTARY TABLE

Ideal for applications that demand freedom from backlash and accurate control, to deliver high precision mechanical motion, support high axial loads with uncompromised efficiency.

8Nm to 760Nm rated torque

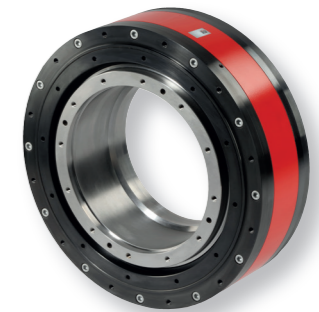
Up to 2400 Nm instantaneous peak torque

High precision indexing with over 16,000,000 CPR, after interpolation

Absolute accuracy till ±1 arc sec

No backlash for high precision and high speed

Hollow through shaft



## Gearless motors

### MTR - GEARLESS MOTORROLLERS AND DRIVES

Solutions particularly oriented for control, movement, storage and protection of materials and products throughout manufacturing, sorting, warehousing, distribution, consumption and disposal.



#### Gearless motoroller 46 - Cartridge version 800rpm@24-48 Vdc

Rated power 50 Watt and 115 Watt

Rated torque 0,6 Nm and 1,35 Nm

Hall sensors and encoder feedback for higher precision

Cartridge diameter 46 mm

Suitable for all 50 mm diameter tube

24 and 48Vdc power supply

Full speed control

Wide roller customization

Suitable for 50mm roller tube integration,

#### Gearless power pack motoroller 60 - 800rpm@60 Vdc

Ready to use motoroller 60mm diameter

Rated power 235 Watt

Rated torque 2,8 Nm

60Vdc power supply

Full speed control

Tube equipped gearless motoroller



#### Gearless motoroller 76 - Cartridge version 800rpm@48-65 Vdc

Rated power 260 Watt

Rated torque 3,1 Nm

Encoder feedback for higher precision

Cartridge diameter 76 mm

48 and 65 Vdc for power supply

Full speed control

Wide roller customization

Suitable for 80mm roller tube integration



## Drives

### MTR - GEARLESS MOTORROLLERS AND DRIVES

Motor Power Company introduces these perfect matched bundles constituted by gearless motorollers and smart drives.

#### DMR 50-5/50 dual axes drive

The perfect matched drive for enhancing motoroller 46 features

Dual axes operation

24 and 48 Vdc operating supply voltage

Encoder and Hall Sensor feedback

CanOpen Fieldbus

RS485 programming interface

I/O programmability for speed, start and stop control



#### Lite Pro drive

Lite Pro drive is ideal for controlling motoroller 60

24 and 48 Vdc operating supply

Voltage

Encoder and Hall Sensor feedback

CanOpen Fieldbus

I/O programmability for speed, start and stop control



#### DMR 76-10/65

Motoroller 76 matches drive DMR 76-10/65 for the perfect bundle

24 and 65 Vdc operating supply voltage

Encoder and Hall Sensor feedback

Profibus Fieldbus

I/O programmability for speed, start and stop control

I/O proxy dual loop



# MOTOROLLER tecnology



## Geared solution for driving pallet conveyor application

### Pallet conveyor MOTOROLLER AND DRIVE

Pallet Conveyor allows efficient transport, accumulation, lifting and sorting of heavy loads as an alternative to forklifts handling.

Pallet Conveyor Motoroller matches drive DMR PC 6/50 for the perfect bundle.

Ready to use pallet conveyor motoroller

Rated power 400 Watt

Planetary gear box ratio 1:45

Tube diameter 70 and 89mm

Conveyor velocity 22,2 m/min (0,37 m/sec) size 70 and 16,2 m/min (0,27 m/sec) size 89

Load up to 1500 Kg

Supply voltage available: 48 Vdc, 230 Vac, 400 Vac

### DMR PC 6/50

Dual axes drive

Nominal supply voltage 48 Vdc

Maximum supply voltage 60 Vdc

Nominal current 6A

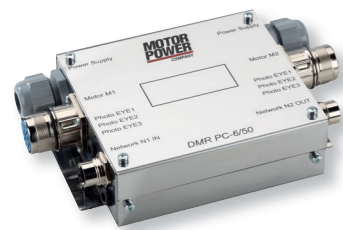
Peak current 15A

Dimensions 173x105,5x45mm

Operating ambient temperature 0°÷40°C (32°÷104°F)

Profinet and Ethercat Fieldbus

Protection level IP20



# DC BRUSHED tecnology

## Brushed D.C. servomotors

### ESA

This series is based on consolidated technology and incorporate the latest advances in mechanical design.

0.32 Nm to 15 Nm rated torque

Integrated 4-pole tacho generator

IP54

Dedicated electromagnetic circuit to reduce cogging effect

Multi-segment commutator

Option: brake, encoder



## Brushed D.C. motors

### PENTA

This series guarantee a high overload capacity without speed loss as well as rapid response and accurate speed control in low speed and high torque applications.

45 W to 1500 W rated output power

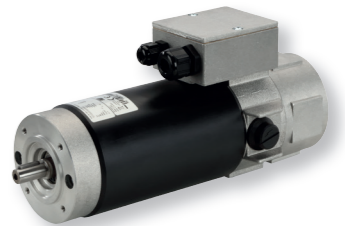
IP 54

Insulation class F

Ferrite permanent magnets

Copper-silver commutator

Options: tacho generator, brake, encoder



## Brushed D.C. gearmotor

### ROK

This series is designed as one single, compact unit with exceptional durability and wear resistance.

45 W to 250 W rated power

Gearbox size 31 mm and 33 mm

Aluminum gearbox casing

Low noise

Direct coupling between servo motor and worm gear for improved efficiency

Planetary gearbox available on request



# BRUSHLESS tecnology

## The turnkey brushless bundle TETRA COMPACT E & FLEXI PRO DRIVE



The brushless bundle result of innovative design and production concepts, excellent quality, international certifications, carefully selected components and a wide range of power ratings for highly dynamic, accurate and reliable automation.

- 0.16 Nm to 45 Nm rated torque
- 50 W to 7 kW rated power
- Maximum servomotor speed up to 6000rpm
- Built-in 20 bit proprietary absolute magnetic encoder
- Options: TTL encoder, absolute multiturn encoder (Hiperface)
- Extended ambient operation temperature from -20° C to +40° C
- UL [UL 1004], CSA, CE, Rohs certified

## The adaptable series TETRA & TETRA COMPACT



A wide range of power ratings and in high and low inertia versions to provide targeted solutions for a variety of applications.

- 60 W to 8 kW rated output power
- Up to 5000 rpm
- IP 65 protection rating
- Feedback: 2-pole resolver, TTL encoder, multiturn absolute encoder
- Optional zero backlash, permanent magnet emergency brake
- UL insulation file

## The UL certified series TETRA & TETRA COMPACT

International certification for these servo motors, ideal for any movement and positioning requirement



- 60 W to 2kW rated output power
- Up to 5000 rpm
- IP 65 protection rating
- Built-in feedback resolver 2 poles, TTL Encoder, Absolute Multiturn Encoder (Hiperface)
- Optional zero backlash, permanent magnet emergency brake
- UL recognized

# BRUSHLESS tecnology

## 24-48 Vdc operation TETRA COMPACT LOW VOLTAGE

The compact synchronous servomotors with high power density for low voltage applications in many different uses in logistics, medical, agriculture or any device that is battery operated or must respond to specific voltage limitations for safety reasons: Tetra Compact is the perfect combination of compactness, performance and reliability.

- From 60W to 800W rated output power
- 40 - 60 and 80mm flange
- Maximum servomotor speed up to 5000rpm
- Low voltage motion control



## Extreme environmental application TETRA COMPACT- EXTREME

These brushless motors are designed to perform in harsh environments with extreme temperatures (-40°/+80°C) where conventional motors may not be reliable. They are equipped with materials that can withstand tough conditions, making them ideal for transportation, refrigerated warehouses, defense, and other demanding applications.

- Rated output power from 60W to 1600W
- Maximum servomotor speed up to 5000rpm
- IP 65 on motor body
- Built-in feedback resolver 2 poles
- Special internal tropical insulation
- Stainless steel external screws
- Special additional external coating with Primer Extra and Sigma Fast black paint

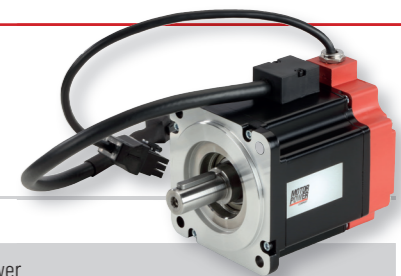


## New The most recent technology TETRA COMPACT 4

Motor Power Company presents its latest series, Tetra Compact 4, featuring a complete range of high performance brushless servo motors.

These motors are 30% shorter than previous families, but maintain the same advantages of AC synchronous motors such as power density and efficiency. The Tetra Compact 4 series consists of a range of 10 pole servomotors with a selection of feedback options, including a 24-bit absolute magnetic encoder. With a modern production concept, the Tetra Compact 4 series offers a wide range of power ratings to meet modern machine performance needs.

- 0.16 Nm to 48 Nm rated torque
- 50 W to 7,5 kW rated output power
- Rated winding voltage 230 Vac and 400 Vac
- Rated speed 6000rpm
- 24 bit absolute encoder TTL encoder, absolute multiturn encoder (Hiperface)
- IP 65 (with oil seal)
- Ambient operation temperature from 0° C to +40° C
- UL [UL 1004], CSA, CE, Rohs certified





# E-MOBILITY BRUSHLESS solutions



## E-MOBILITY BRUSHLESS solutions

Based on brushless technology our DC low voltage servo motors are designed and developed following specific needs of electric vehicles supplied for e-mobility field.

Our R&D team operating co-engineering disposition is capable to design and offer motor solutions expressing their advantages in the electric vehicles' application, with proven advantages provided by motors that can operate different motions in cars, scooters, light or leisure vehicles, but even in agriculture or intra logistics, or any other mobility that wish to operate in a sustainable way, abandoning internal combustion engines in favour of electric.

### Brushless motor T142.21

Nominal torque 16 Nm

Peak torque 62 Nm

Continuous power @48Vdc 3,4kW

Peak power @48Vdc 13,0kW

Nominal speed @48Vdc 2000 rpm

### Brushless motor T142 16.5

Nominal torque 13,2 Nm

Peak Torque 42Nm

Continuous Power @36Vdc 2,3kW

Peak Power @36 Vdc 9,5kW

Nominal Speed @36Vdc 1700 pm

Environmental operating temperature from -40°C to +80°C

### Brushless motor TC-E 160 28

Nominal Torque 28,65Nm

Peak Torque 35Nm

Continuous Power @48Vdc 3,0kW

Peak Power @48Vdc 4,4kW

Nominal Speed @48Vdc 1000 pm

# SERVODRIVERS

## DRIVE BL

### SMART SINGLE AND THREE PHASE DRIVES

The BL servo drives support all our direct drive and brushless servomotors and all their available feedback. These single and three-phase smart and compact drives can be adapted very flexible to a variety of applications via simple parameterization. Numerous integrated software functions make the BL servo drives real all-rounders in drive technology.

Fieldbus on board EtherCAT/PROFINET/CANopen

Universal encoder HIPERFACE®, HIPERFACE DSL®, EnDat 2.2, resolver, digital and analogue incremental encoders

USB and Ethernet as parameterisation interfaces

Highest performance and dynamics internal sampling time < 32 Ms

Single-phase servo drive

Voltage Supply 230 VAC

Output power 400 and 800W

Rated output current 2 and 4 Arms

Maximum output current for 2 sec 6 and 12 Arms

Three-phase servo drive

Voltage Supply 480 VAC

Output power from 1,6 to 4,8 W

Rated output current from 4 to 12 Arms

Maximum output current for 2 sec from 12 to 30 Arms



## The D.C. series drives LITE PRO Servodrive

4-quadrant, DC servo drives are extraordinarily compact and ideal for controlling brushless servo motors.

48 VDC

5 - 10A rated current

15 - 30A peak current

Encoder feedback

Can Open DS 301/402

Programming of internal script

Compact design, suitable for integration





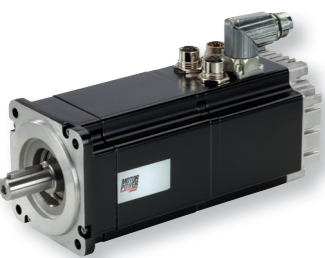
## DRIVE INTEGRATED brushless technology



### Brushless drive integrated systems

#### DUET, DUET AD AND DUET FLEXI

These models are everything you need for moving and controlling an axis is built directly into these highly compact single component: servomotor, feedback and intelligent servo drive featuring CANopen, Profinet or Ethercat networking.



Supply voltage 48 Vdc

Built - in digital drive

60 W to 520 W output power

Brake control

Integrated 2 pole resolver

Absolute encoder

Connectors

Ethercat, CanOpen and Profinet

### The high voltage series

#### DUET HV

DUET HV is the new high voltage DUET series, a line consisting of brushless servomotor with integrated incorporating as well absolute encoder for uncompromised precision in positioning.

Nominal power supply 560Vdc

Stall torque 1,3 - 2,8 - 4 - 5,6 - 8 - 14 Nm

Nominal speed 3000 rpm

Absolute multi and singleturn encoder

Ethercat

## MECHATRONIC SOLUTIONS

### LSM - LINEAR SYNCHRONOUS MOTORS

Modular direct drive traction system for reliable and sustainable material handling and logistics sectors. Modular system composed by: SKA DDL frameless motors, drives, encoder and control.

Drastic reduction in noise

No maintenance

No friction

Quick stop

Built-in encoder with 8 mm accuracy

Precise speed control

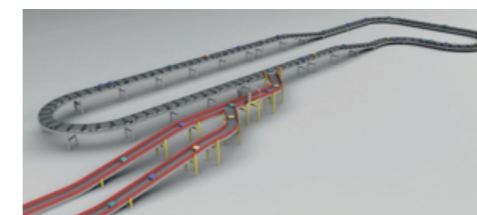
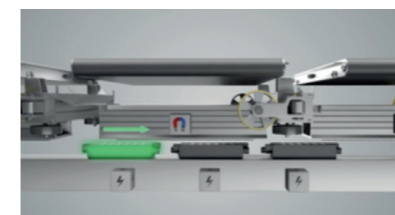
High energy efficiency

Easy to use

Accuracy

Precise speed control

High energy efficiency, easy to use



## MECHATRONIC SOLUTIONS

### ILSM - INDEPENDENT LINEAR SYNCHRONOUS MOTOR

A comprehensive full direct drive mechatronic solution, based on independent carriers, operated by linear motors.

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Customizable length and shape

Rise in productivity without affecting machine footprint

Process flow optimization

Maximization of efficiency in productivity

Flexibility for future implementations on the machine

Cost cutting thanks to working units reduction

Settable acceleration and deceleration rates, ideal for fragile products

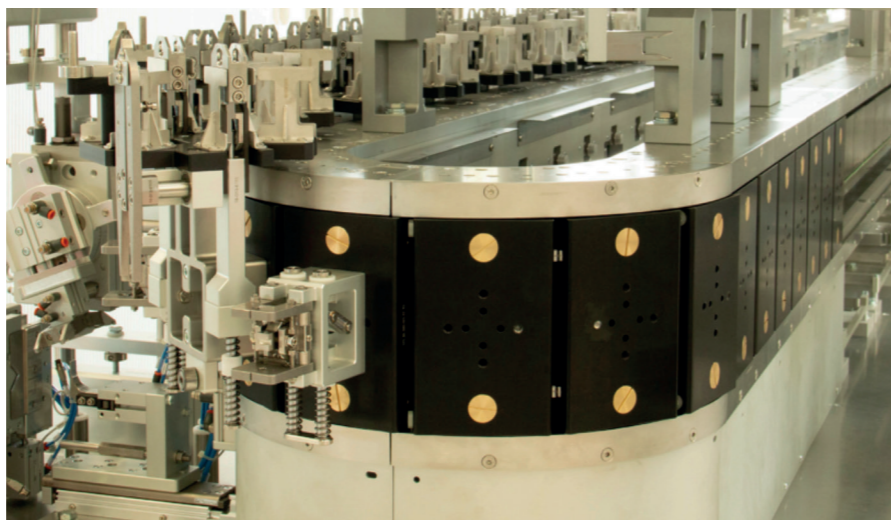
Customizable motion speed

Fast change of setup

Easy-low maintenance, compared to traditional mechanical transfer

Compatibility with every PLC

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**Motor Power Company**  
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POWER**  
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