

**EDP *mini***  
**high speed linear motor handling**



**Pick and place - dynamic and flexible**

# EDP *mini*

## The alternative to pneumatic systems

### Innovative handling systems set new standards in automation

In 1997 **e.p.s** – a family-run business from the Black Forest – presented the EDP *standard* with pick and place in a fraction of seconds.

Thanks to excellent customer communication e.p.s managed to develop the broadest program of completely configured handling systems on the market.

With the linear motor handling EDP *mini*, **e.p.s** now presents a new highlight with regard to its unrivalled price performance ratio.

Your benefits:

- high performance – up to 120 cycles/minute
- great flexibility – freely programmable
- space-saving – only 40 mm wide
- wide range of applications – Strokes Y/Z up to 300 / 300 mm
- strong – load capacity up to 3 kg
- slim controllers, therefore more space in control cabinet
- attractive pricing – complete handling system for 4,500 EUR
- quality "made in Germany"

highly dynamic linear motor modules with high performance and low power consumption

slim design provides more space in machine

assembled and ready-to-use cabling with longer service life – increased availability

wide range of accessories such as turning modules, grippers and consoles for reasonably priced complete systems

Compact axis controllers provide more space in the control cabinet.

3D models for customized systems on demand save time.

Calculation programs for systems save time since long inquiries are not necessary.

More space due to slim design of modules.



# Linear motor module

## EDM 20 EL

### Description

The EDM 20 EL is an extremely light and dynamic linear motor axis. It is based on an ultra strong and durable linear guide with two-row recirculating ball-bearing system and ball chain, combined with a lightweight and dynamic linear motor.

The result is a constructional element with outstanding features. It is freely programmable and due to its width of only 40 mm very space-saving and flexible.

### Benefits

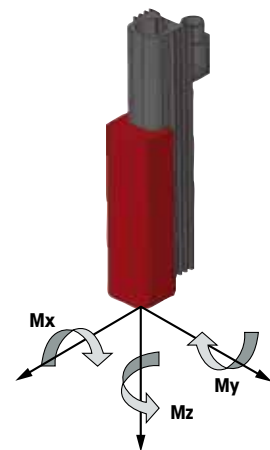
- freely programmable module
- only 40 mm wide
- high dynamic of up to 120 m/s<sup>2</sup> acceleration
- low power consumption
- durable
- only one plug/cable per module



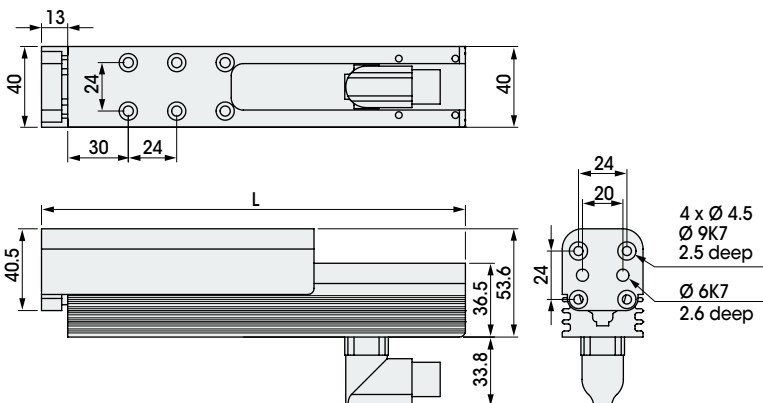
Technical Data	EDM 20-50 EL	EDM 20-100 EL	EDM 20-200 EL	EDM 20-300 EL
Stroke	50 mm	100 mm	200 mm	300 mm
Max. load capacity (centric)	4 kg	4 kg	3 kg	2 kg
Max. speed	6.8 m/s	4.8 m/s	4.8 m/s	4.8 m/s
Peak force	67 N	137 N	137 N	137 N
Continuous force	15 N	31 N	31 N	31 N
Repeat accuracy	± 0.05 mm	± 0.05 mm	± 0.05 mm	± 0.05 mm
- with external measuring system, resolution 5 µm	± 0.02 mm	± 0.02 mm	± 0.02 mm	± 0.02 mm
System accuracy	± 0.05 mm	± 0.1 mm	± 0.2 mm	± 0.3 mm
- with external measuring system, resolution 5 µm	± 0.025 mm	± 0.026 mm	± 0.027 mm	± 0.028 mm
Temperature range	0...50°C	0...50°C	0...50°C	0...50°C
Weight	1.0 kg	1.5 kg	1.9 kg	2.3 kg

Order no.	Color of housing: red	Color of housing: natural
EDM 20-50 EL	021.050	021.051
EDM 20-100 EL	021.100	021.101
EDM 20-200 EL	021.200	021.201
EDM 20-300 EL	021.300	021.301

### Max. admissible torques at the gripper flange



Torques	Mx	My	Mz
EDM 20-50 EL	25 Nm	25 Nm	5 Nm
EDM 20-100 EL	25 Nm	25 Nm	5 Nm
EDM 20-200 EL	50 Nm	50 Nm	5 Nm
EDM 20-300 EL	50 Nm	50 Nm	5 Nm



Type	L
EDM 20-50 EL	193
EDM 20-100 EL	286
EDM 20-200 EL	366
EDM 20-300 EL	496

# Linear motor handling

## EDP *mini*

### Description

The EDP *mini* is a linear motor handling which is far superior to pneumatic handling systems with regard to cycle times, economic efficiency and power consumption.

It consists of two freely programmable linear motor drives EDM 20 EL which are lightweight and yet very rigid. Especially in the Y, Z axis which is decisive for dynamics and accuracy, the module offers high rigidity and an admissible torque of 50 Nm. Due to its width of only 40 mm the EDP *mini* requires little space. The EDP *mini* will be delivered fully assembled and ready for use.

### Benefits

- up to 120 cycles per minute
- only 40 mm wide
- load capacity up to 3 kg
- strokes Y/Z up to 300 mm
- low power consumption
- CAD library for quick implementation of complete systems



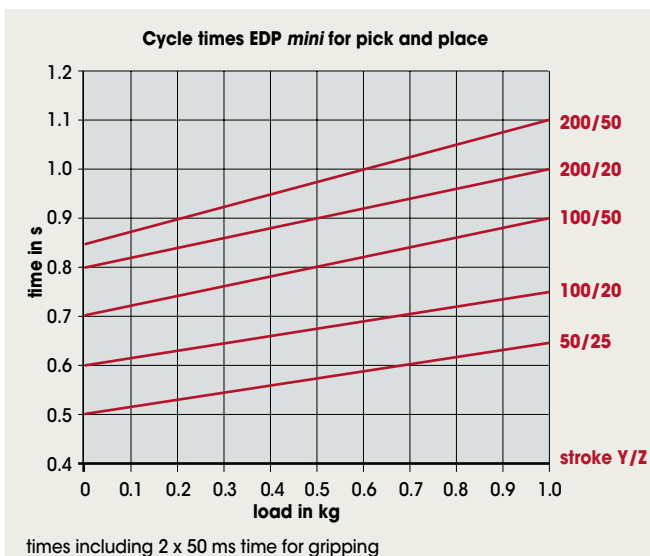
Technical Data	EDM 20-50 EL	EDM 20-100 EL	EDM 20-200 EL	EDM 20-300 EL
Stroke horizontal (Y)	50 mm	100 mm	200 mm	300 mm
Stroke vertical (Z)	50 mm	100 mm	200 mm	300 mm
Max. load capacity (centric)	3 kg	3 kg	2 kg	1 kg
Max. speed	6.8 m/s	4.8 m/s	4.8 m/s	4.8 m/s
Peak force	67 N	137 N	137 N	137 N
Continuous force	15 N	31 N	31 N	31 N
Repeat accuracy	± 0.05 mm	± 0.05 mm	± 0.05 mm	± 0.05 mm
- with external measuring system, resolution 5 µm	± 0.02 mm	± 0.02 mm	± 0.02 mm	± 0.02 mm
System accuracy	± 0.05 mm	± 0.1 mm	± 0.2 mm	± 0.3 mm
- with external measuring system, resolution 5 µm	± 0.025 mm	± 0.026 mm	± 0.027 mm	± 0.028 mm
Valve block with 5/3, 5/2 or vacuum units	up to 6 valves	up to 6 valves	up to 6 valves	up to 6 valves

### Order no.

EDP *mini* xxxE/xxxE

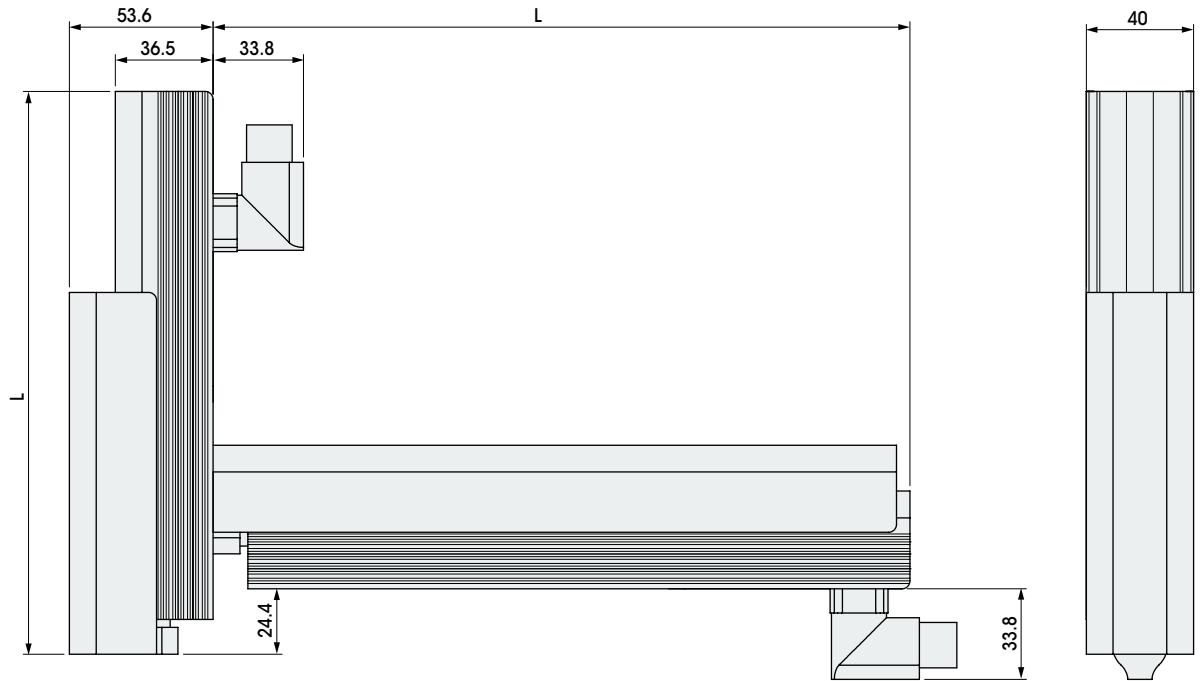
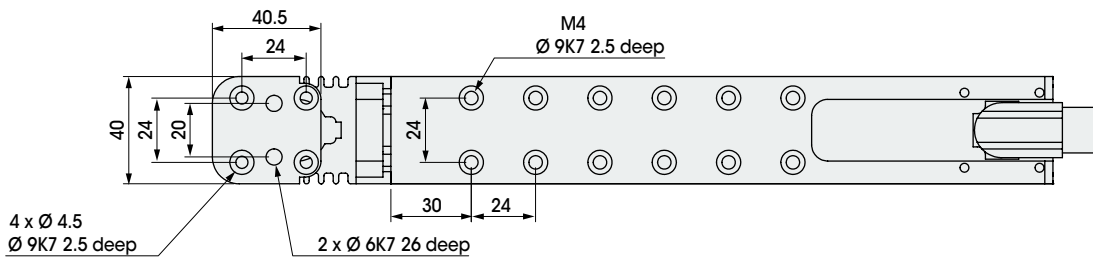
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### Cycle times



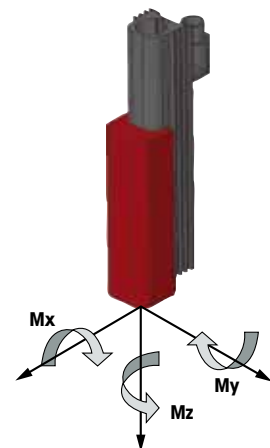
### Note:

The values in the diagram correspond to a pick-and-place cycle (6 consecutive movements + 2 x 50 ms gripping time). The indicated load is installed centrically at the vertical module. Due to reaction times the traversing time might be lower. In special cases, for example with eccentric load or high demands on accuracy, it is possible to exceed these values.



Type	L
EDM 20-50EL	193
EDM 20-100EL	286
EDM 20-200EL	366
EDM 20-300EL	496

#### Max. admissible torques at the gripper flange



Torques	$M_x$	$M_y$	$M_z$
EDP mini 50E/xxx	25 Nm	5 Nm	5 Nm
EDP mini 100E/xxx	25 Nm	5 Nm	5 Nm
EDP mini 200E/xxx	50 Nm	5 Nm	5 Nm
EDP mini 300E/xxx	50 Nm	5 Nm	5 Nm

# Control technology

## Simple systems completely configured

From controllers to a complete control cabinet - **e·p·s** offers a broad spectrum of different solutions to control the electrical systems. All controllers are pre-configured so that the inconvenient and time-consuming parameterizing of the drives can be dispensed with and you can concentrate on your application.

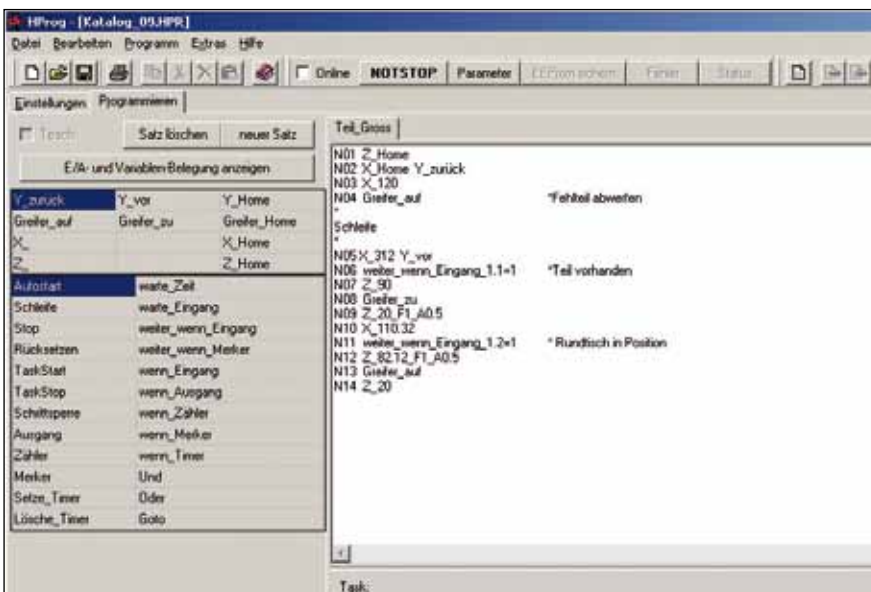
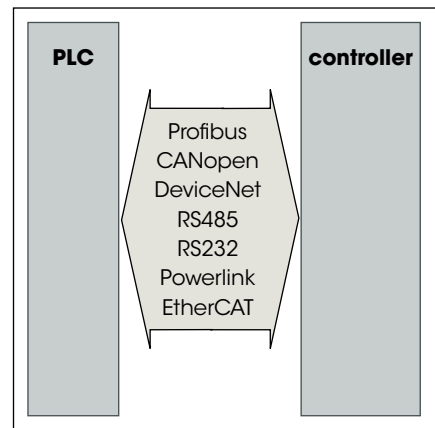
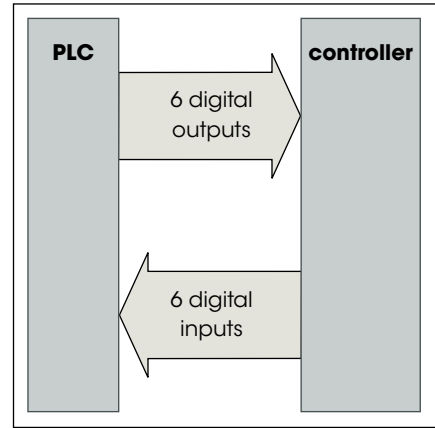


### Control identical to a pneumatic handling system

- ideal to replace old pneumatic units
- very simple control through digital inputs / outputs of the PLC
- very compact design
- higher operating efficiency

### Control via Bus systems

- Profibus DP, CANopen, DeviceNet, RS485, RS232, Powerlink and EtherCAT
- programming examples for PLC (e.g. S7, Beckhoff, B&R, etc.) for quick start-up of drive
- full monitoring and control of parameters
- unlimited number of programmable positions



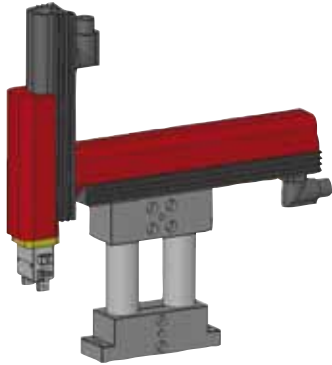
### Control cabinet with control and software

- very simple plain text programming
- free programming software
- up to 8 pneumatic modules with electronic damping
- up to 16 electrical axes
- customized control cabinet, completely wired and checked

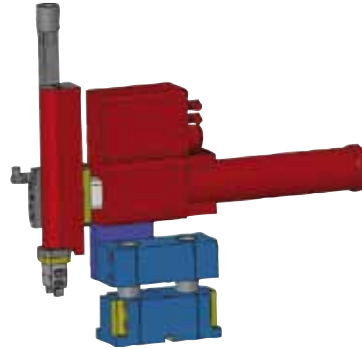


# Handling systems

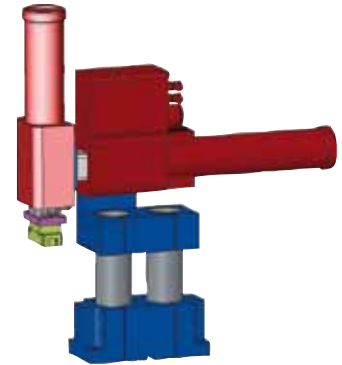
## A suitable system for every application



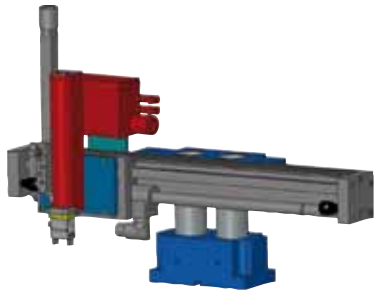
**EDP mini**  
Strokes Y/Z up to 300/300



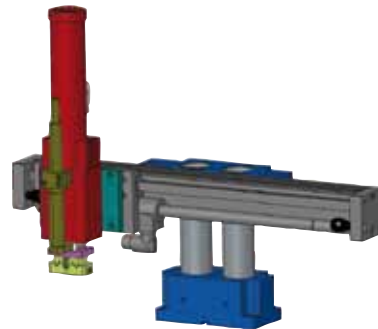
**EDP standard**  
Strokes Y/Z up to 360/300 mm



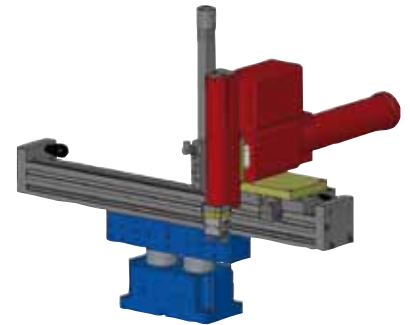
**EDP maxi**  
Strokes Y/Z up to 360/360 mm



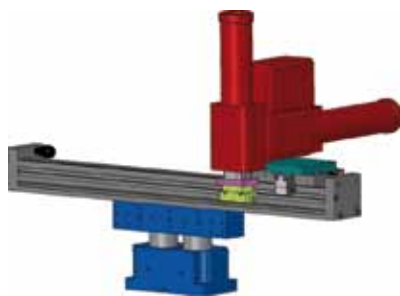
**EDP Portal standard**  
Strokes X/Z up to 1450/300 mm



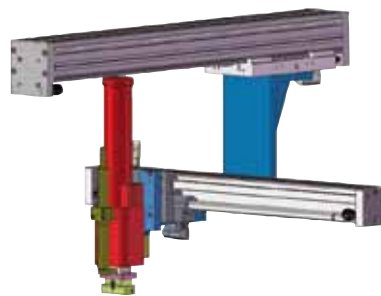
**EDP Portal maxi**  
Strokes X/Z up to 1450/360 mm



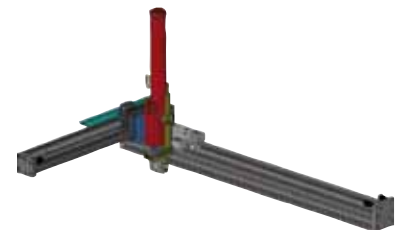
**EDP standard XYZ**  
Strokes X/Y/Z up to 1450/360/300 mm



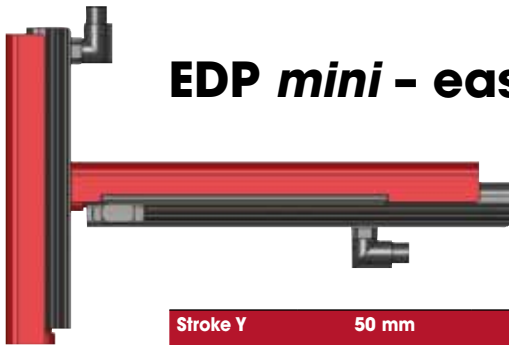
**EDP maxi XYZ**  
Strokes X/Y/Z up to 1450/360/360 mm



**EDP surface gantry hanging**  
Strokes X/Y/Z up to 1820/1450/360 mm



**EDP surface gantry sideview**  
Strokes X/Y/Z up to 1820/1450/360 mm



## EDP *mini* - easy price calculation

Stroke Y Stroke Z	50 mm	100 mm	200 mm	300 mm
50 mm	4.500 €	4.600 €	4.800 €	5.000 €
100 mm	4.839 €	4.939 €	5.139 €	5.339 €
200 mm	5.119 €	5.219 €	-	-
300 mm	5.399 €	-	-	-

Handling system complete with cable set (4 m), controller B1100-PP and vertical weight load compensation. \_\_\_\_\_ €

### Options

All periphery elements are completely mounted including tubes and are supplied with the required adapter plates and other accessories.

Description	Price	Number	Total value
Assembly kit 2 <sup>nd</sup> tube for pneumatic tubes and cables	95 €		€
Parallel gripper MPG32	411 €		€
Parallel gripper MPG32 including sensor	579 €		€
Vacuum suction pad	186 €		€
Vacuum suction pad including sensor	389 €		€
Turning module, pneumatic SRU 10 with sensor	665 €		€
Plug board (fourfold)	136 €		€
Plug board (sixfold)	157 €		€
Valve for periphery	179 €		€
External measuring system, 10µm resolution	470 €		€
Controller B1100 GP with CAN, DeviceNet, RSR5232/485	128,15 €	2	€
Controller E1100 with Profibus DP	391,30 €	2	€
Control cabinet for 2 axes	4462,60 €	1	€
Bracket up to 300 mm slim and lateral assembly	299 €		€
Bracket up to 500 mm slim assembly	379 €		€

Prices valid until 31.12.2010

**Options** \_\_\_\_\_ €

**Total price** \_\_\_\_\_ €

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