

Hand in hand for tomorrow



PORTFOLIO OVERVIEW



LINEAR SYSTEMES | ROTARY
MODULES



COMPONENTS



SOLUTION



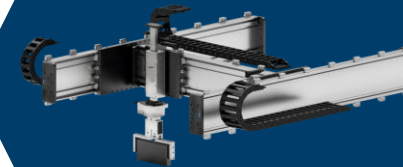
BATTERY



CELL



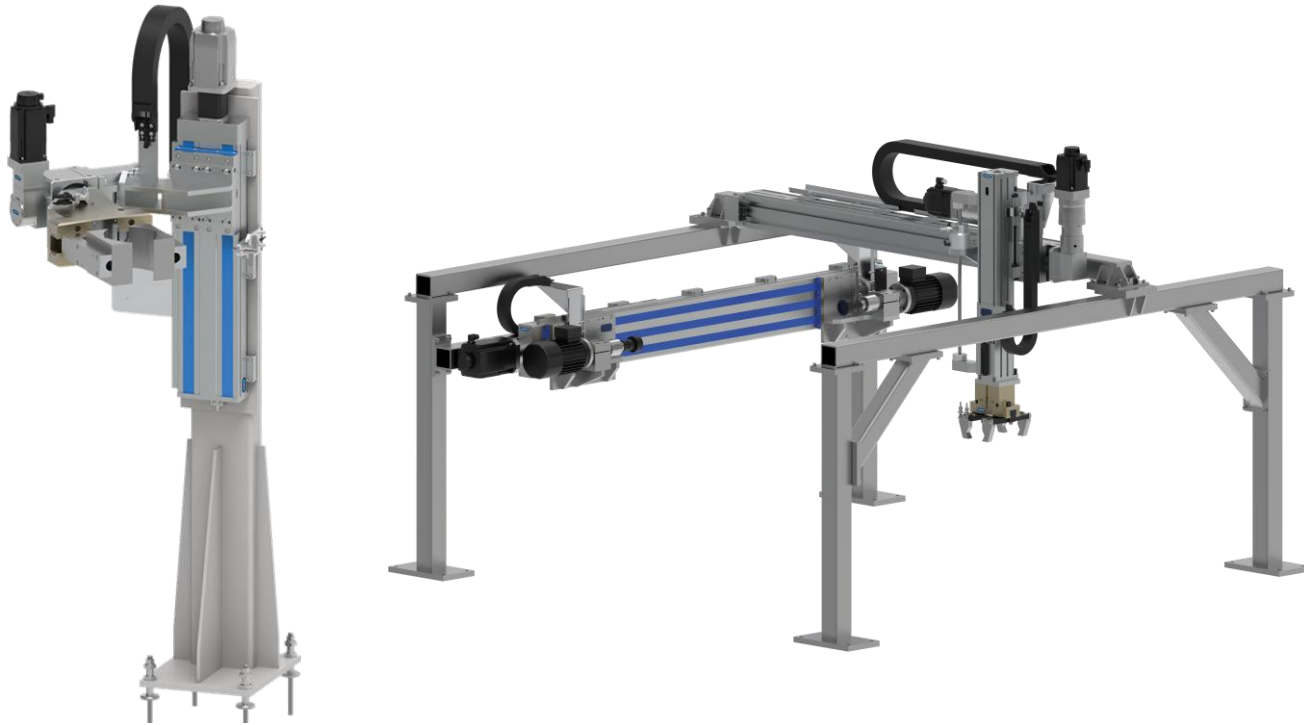
PACK



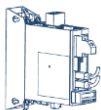
SYSTEMS

Overview axis systems

External drive motors



APPLICABLE SERVO MOTORS



SIEMENS
Rexroth
Bosch Group

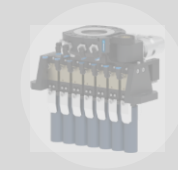
MITSUBISHI
ELECTRIC
BECKHOFF
New Automation Technology

SEW
EURODRIVE

FANUC
KUKA

ABB
YASKAWA

Schneider
Electric
FESTO

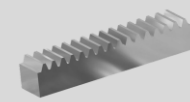
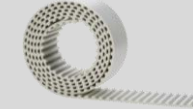


High forces & torques

→ With profile rail guide in lengths up to 30m

Choice of drive technology

→ Spindle-, Toothed belt and rack and pinion



High dynamic & accuracy

→ High accelerations & repeat accuracies

→ Spindel $\pm 0.03\text{mm}$

→ Rack and pinion $\pm 0.05\text{mm}$

→ Toothed belt $\pm 0.08\text{mm}$

Optional

→ Steel frame

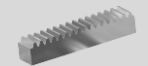
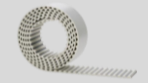
→ Drag chains

→ Complete system

Series overview linear units

External drive motors

ANTRIEB



Size

Guide

Stroke

Driving force

Repeat accuracy

α | ALPHA



4

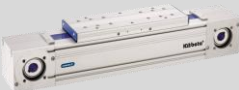
Rail guide

... 2224 mm

4000...18000 N

0,03 mm

β | BETA



11

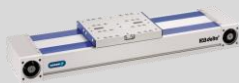
Roller- & Rail guide

... 7710 mm

500...18000 N

0,03...0,08 mm

δ | DELTA



5

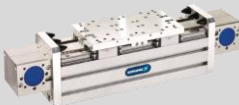
Roller- & Rail guide

... 7820 mm

800...12000 N

0,03...0,08 mm

γ | GAMMA



5

Rail guide

... 7685 mm

1150...10000 N

0,05...0,08 mm

Up to 30m
length
possible
(if requested)

Solution examples

Linear units with external motors



Linear direct drives

Application example battery assembly



High forces & torque

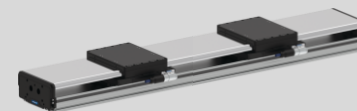
→ Direct linear motors with profile rail guide or roller / cross roller guide

Modular encoder system (Absolut encoder)



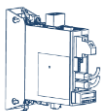
High dynamic & accuracy

- Acceleration of up to 100m/s^2
- Velocity of up to 5m/s
- Repeat accuracy of 0.01mm



Flexible number of motors per axis

CONTROLLER INTERFACES



Series overview linear units

Linear direct drives



Guide

Stroke

Driving force

Repeat accuracy

Brake

Encoder system

Voltage

LDL



Rail guide

... 3800 mm

250...500 N

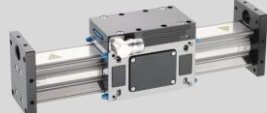
0,01 mm

optional

Absolut | *Incremental*

400V

LDN



X-Profil / Roller guide

... 2700 mm

250...500 N

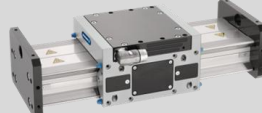
0,01 mm

optional

Absolut | *Incremental*

400V

LDM



X-Profil / Roller guide

... 2700 mm

500...1000 N

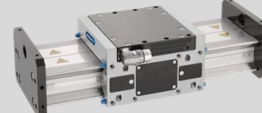
0,01 mm

optional

Absolut | *Incremental*

400V

LDT



X-Profil / Roller guide

... 2700 mm

750...1500 N

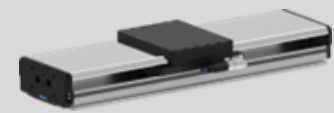
0,01 mm

optional

Absolut | *Incremental*

400V

SLD



Rail guide

... 5500 mm

300...2400 N

0,01 mm

optional

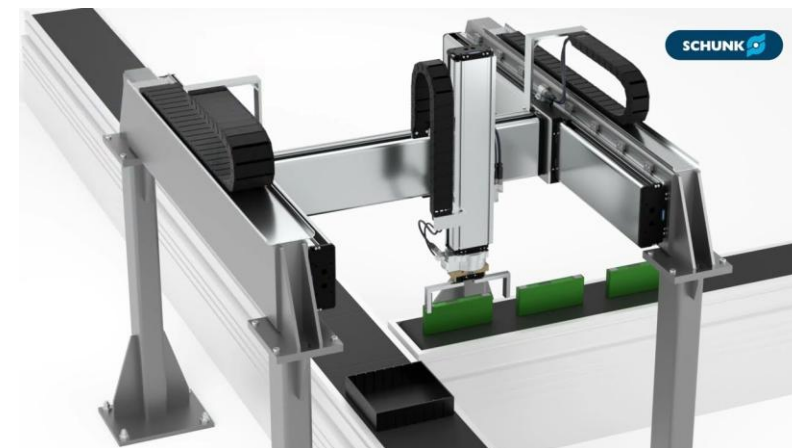
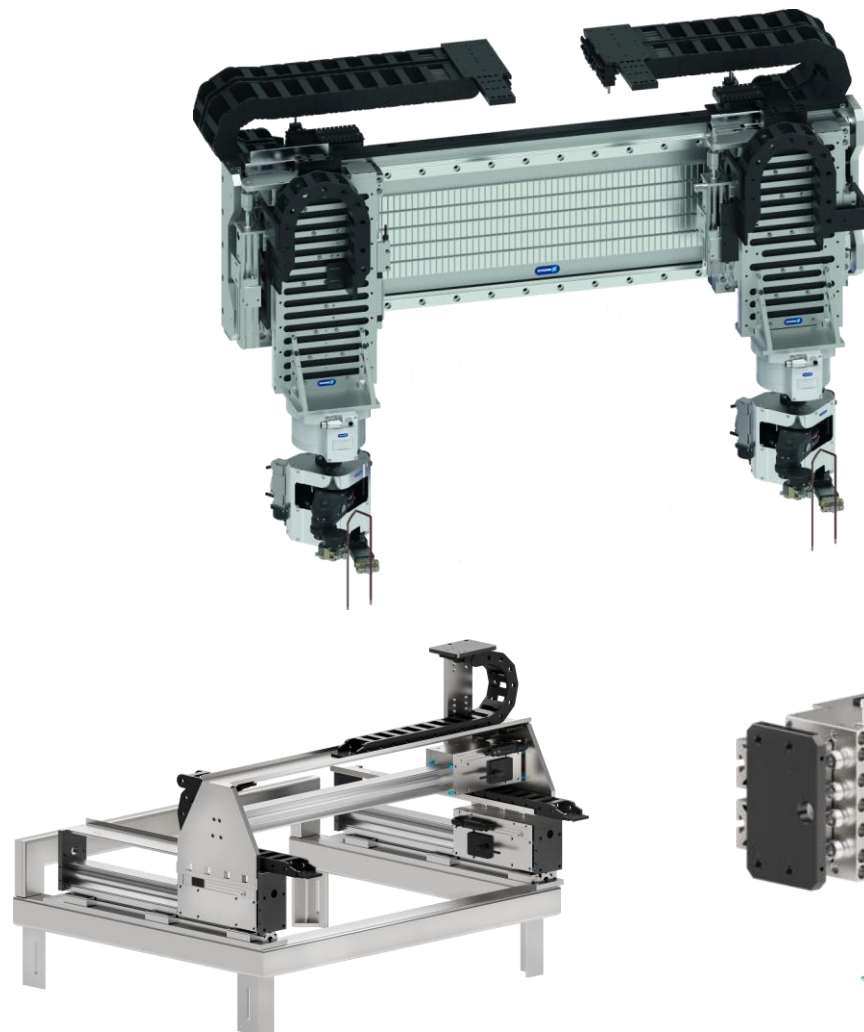
Absolut | *Incremental*

400V

Up to 24m
length
possible
(if requested)

Solution examples

Linear direct drives



Solution examples

Linear direct drives



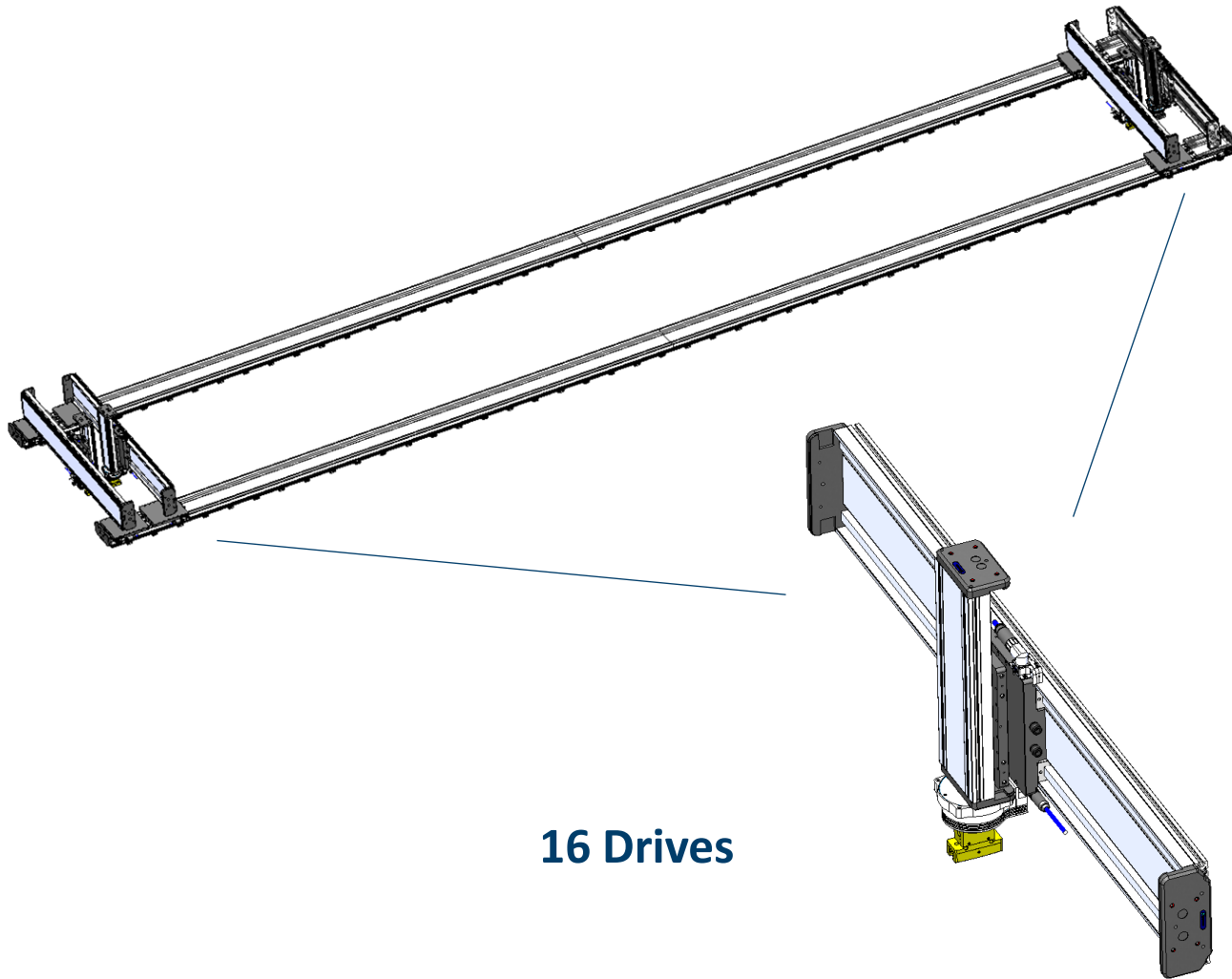
15 Drives

Application data:

- Workpiece weight 10kg
- X-Axis 2500 mm
 - Including cable
- Pick and Place
 - Y-Axis 450 mm
 - Z-Axis 200 mm
 - including adaption and cables
- Use on SEW controllers

Solution examples

Linear direct drives



Application data:

- X-Axis 8900 mm (Master and Slave)
 - Including cable
- Pick and Place
 - Y-Axis 1660 mm
 - Z-Axis 500 mm
 - C-Axis -> ERT
 - Gripper
 - including adaptation & cables

Solution examples

Motor Keys

Motor :

Moment of inertia motor : [kg*m^2]

Nominal torque : [N*m]

Maximum torque : [N*m]

N max : [rad/s]

Input

Moment of inertia tool :

Distance:

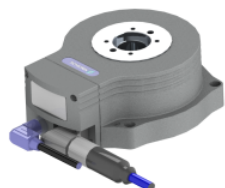
Break time: [ms]

Result

Cycle time: 720 ms

Move time: 370 ms

cycle is possible !



Version: V 2.1.0.0

SCHUNK AWH LDX-Achsen

Project:

Name: Customer:

Axis data

Type: SLD 12

Position of the moving mass: 90° Applied load: 6,5 kg

Moving mass: 13,8 kg Total mass: 20,62 kg

Profile data

Comment	Pos (start)	Pos (stop)	delta T	Max current load	a-max	V-max	Process force	Add. mass
Z 0	0 mm	-25 mm	74,5ms	57 %	-17,78 m/s²	-0,67 m/s	0 N	0 Kg
Greifer zu	-25 mm	-25 mm	100ms	13 %	0 m/s²	0 m/s	0 N	0 Kg
Z 130	-25 mm	105 mm	174,5ms	75 %	16,98 m/s²	1,49 m/s	0 N	0 Kg
X 1000 Y 300	105 mm	105 mm	450ms	13 %	0 m/s²	0 m/s	0 N	0 Kg
Z 0	105 mm	-25 mm	174,5ms	54 %	-16,98 m/s²	-1,49 m/s	0 N	0 Kg
Greifer zu	-25 mm	-25 mm	100ms	13 %	0 m/s²	0 m/s	0 N	0 Kg
Z 25	-25 mm	0 mm	74,5ms	78 %	17,78 m/s²	0,67 m/s	0 N	0 Kg
X 0 Y 0	0 mm	0 mm	450ms	13 %	0 m/s²	0 m/s	0 N	0 Kg

Total time: 1600 ms **Maximum force: 420,73 N**

Effective force: 173,38 N **Maximum current: 7,49 A**

Effective current: 2,79 A **Maximum velocity: 1,49 m/s**

Recommended servo controller: HCS01.1E-W00018

Load

Velocity 30%

Maximum current/force 78%

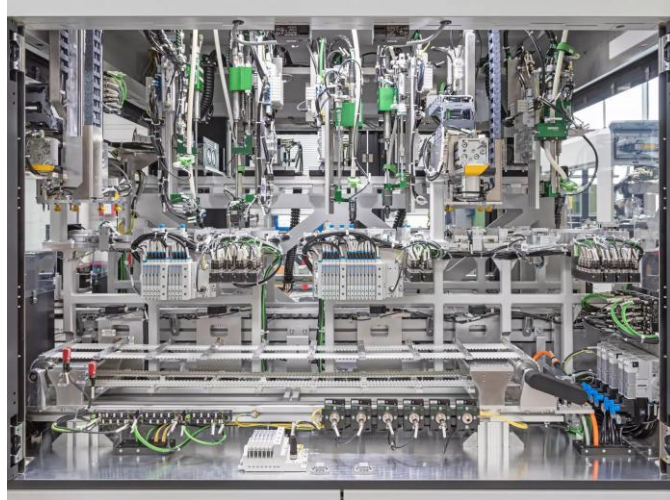
Thermal 75%

Cycle I.O.

Only for internal use! No warranty in case of unauthorized use!
Transfer only as evaluation summary print!

Solution examples

Linear direct drives



Series overview linear units

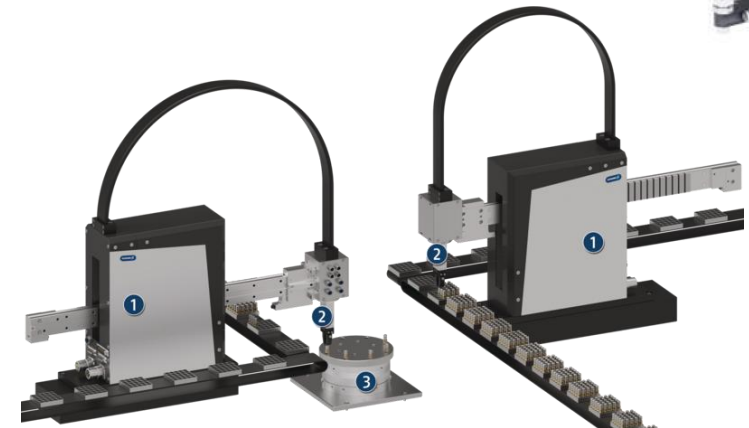
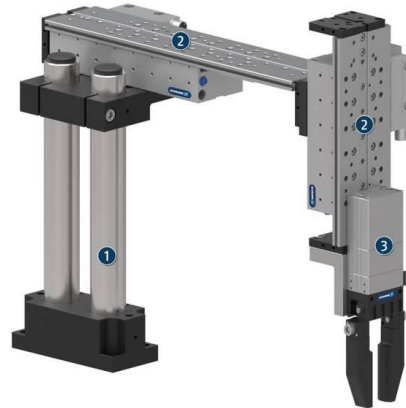
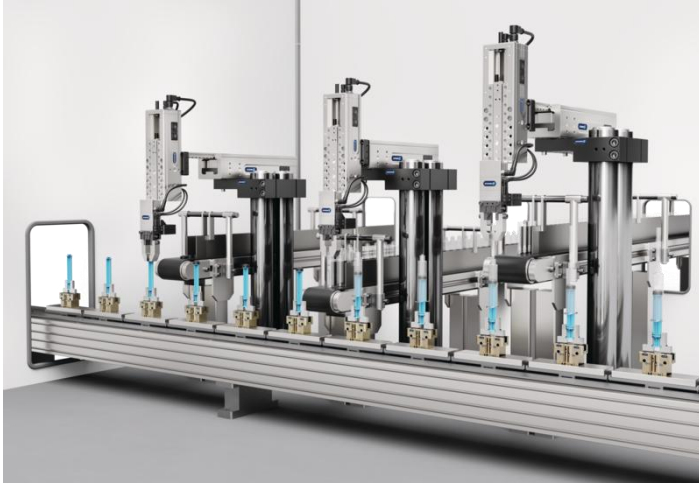
Linear direct drives –short stroke–

	ELB	LDK	ELP	PPU-E
				
Guide	Cross roller guide	Roller guide	Cross roller guide	Cross roller guide
Stroke	50... 125 mm	... 200 mm	30... 200 mm (Endstop / 2 Positions)	150x60 .. 280x150 mm
Drive force	...150 N	250...500 N	17...104 N	180...1200 N
Repeat accuracy	0,01 mm	0,01 mm	0,01 mm	0,01 mm
Brake	optional	optional	optional	optional
Encoder system	Absolut Incremental	Absolut Incremental	Digital I/O	Absolut Incremental
Voltage	400V	400V	24V (no controller required)	400V

Replacement for
pneumatic
components

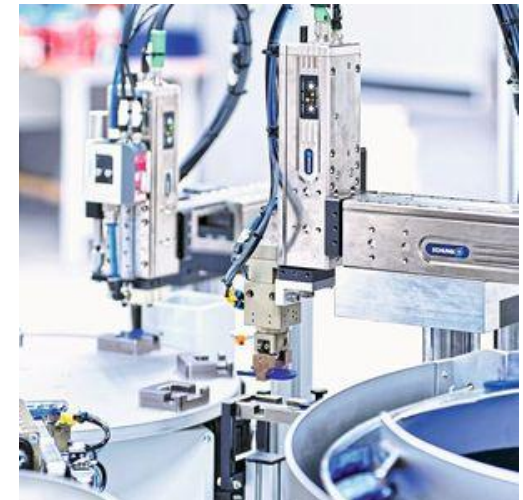
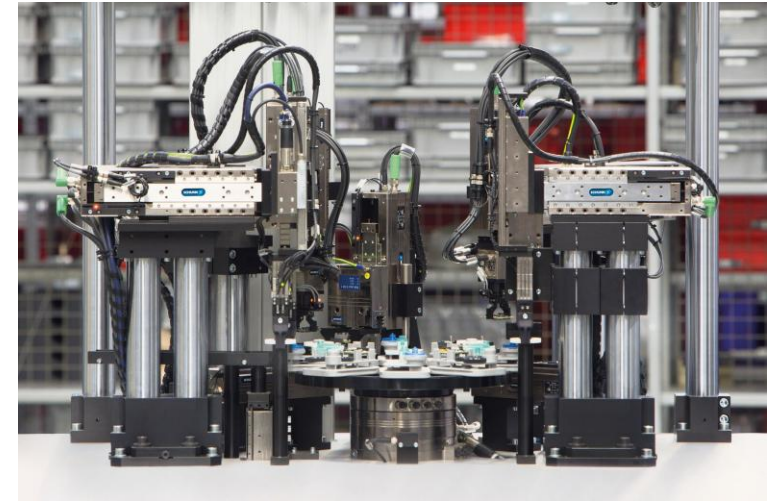
Solution examples

Linear direct drives –short stroke–



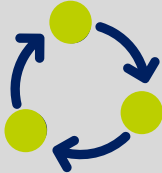
Solution examples

Linear direct drives – short stroke –



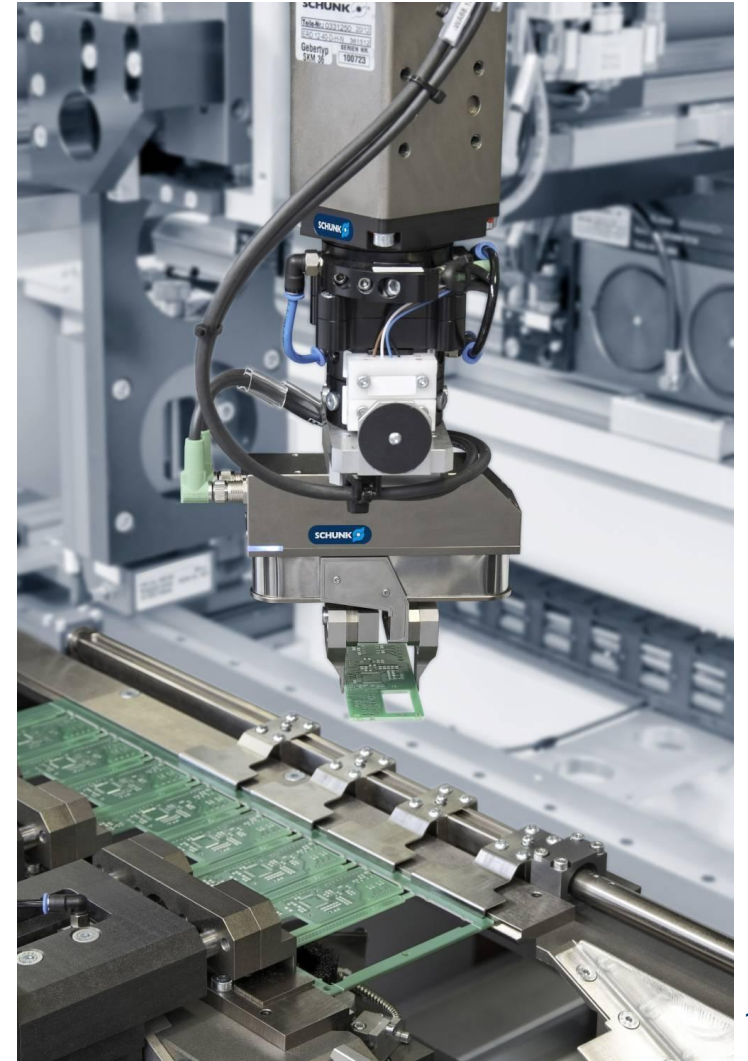
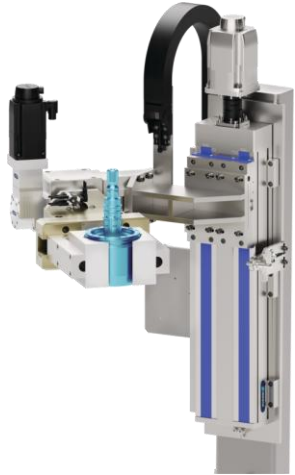
Series overview

Electric rotary modules

	ERM	ERD	ERT
			
Torque	75 Nm	0,04... 1.2 Nm	1,4... 32 Nm
Max. rpm	62,5 min ⁻¹	600 min ⁻¹	600 min ⁻¹
Repeat accuracy	0,035 °	0,01 °	0,01 °
Feed through	8 x Pneumatic	2 x Pneumatic 4 x Electric	-
Encoder system	-	Absolut	Absolut
IP-Class	IP 65	IP 40 / 54	IP 40 / 54
Brake	-	-	optional

Solution examples

Electric rotary modules



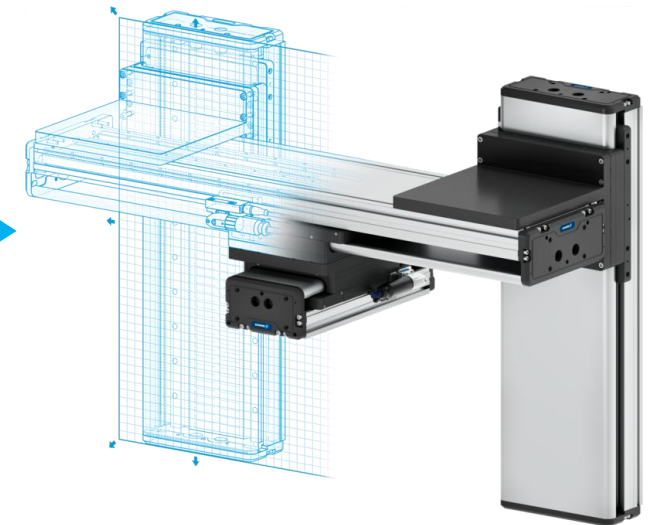
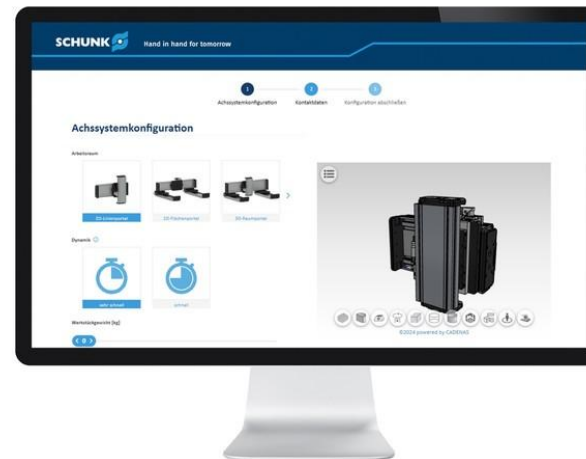
Online configurator

Linear modules + axis systems

Configuration +
enquiry

CAD-File

Konfigurierbare Produkte

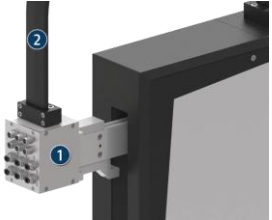


PPU-E

Pick & Place unit



C-Axis



Integrated valves



Brake



Advantages / Options

- Fixed motors
- Maximum dynamics due to minimized moving mass
- Absolut encoder
 - Beckhoff AX 5000 / 8000
 - Siemens DriveCliqu
 - Bosch Indradrive
 - SIL 2 / PLd zertifiziert
- Narrow design
- Ribbon cable
- Options:
 - Integrated valves
 - Integrated C-Axis
 - H1G-Lubrication
 - Cleanroom compatibility