

PORTFOLIO & SOLUTIONS



SCHUNK E-Mobility

OUR FOCUS

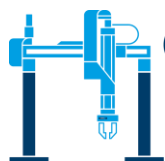
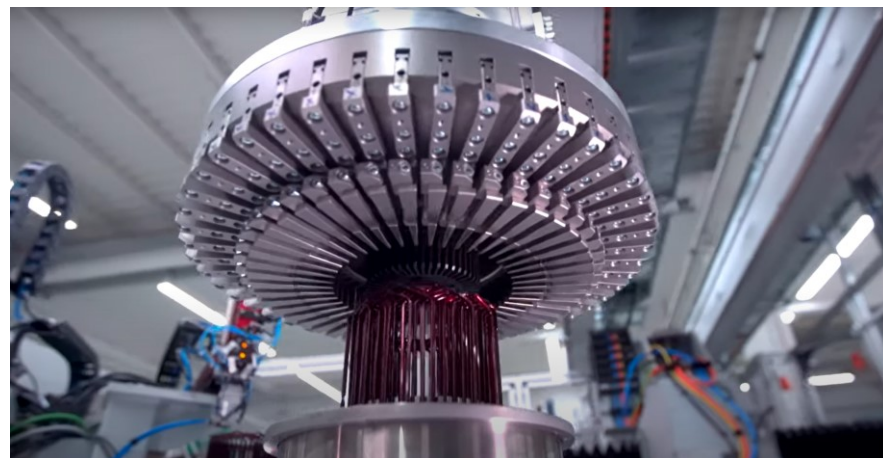
E-DRIVE

- MANUFACTURING PROCESS OF COMPONENTS & SUB-ASSEMBLIES
- HANDLING OPERATIONS



SCHUNK E-Mobility

HAIRPIN-HANDLING



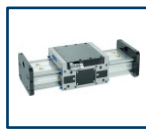
SCHUNK
Portfolio



GRIPPING
MODULES



ROTARY
MODULES



LINEAR
MODULES



ROBOT
ACCESSORIES

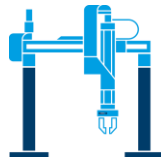
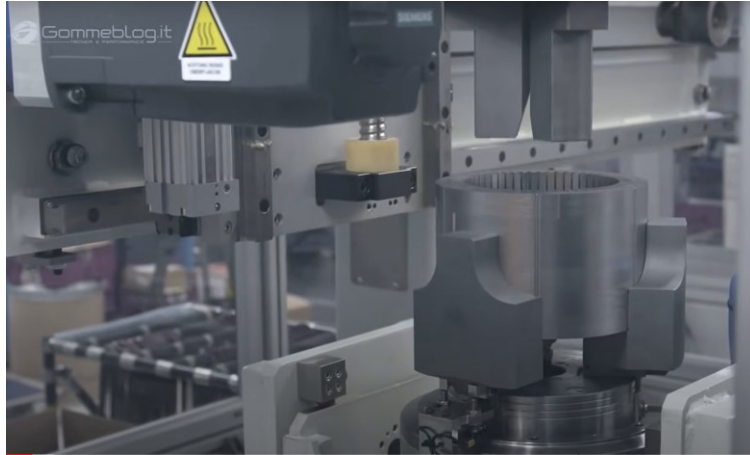


SOLUTIONS

Source: Youtube

SCHUNK E-Mobility

HANDLING STATORS



SCHUNK
Portfolio



GRIPPING
MODULES



ROTARY
MODULES



LINEAR
MODULES

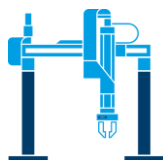
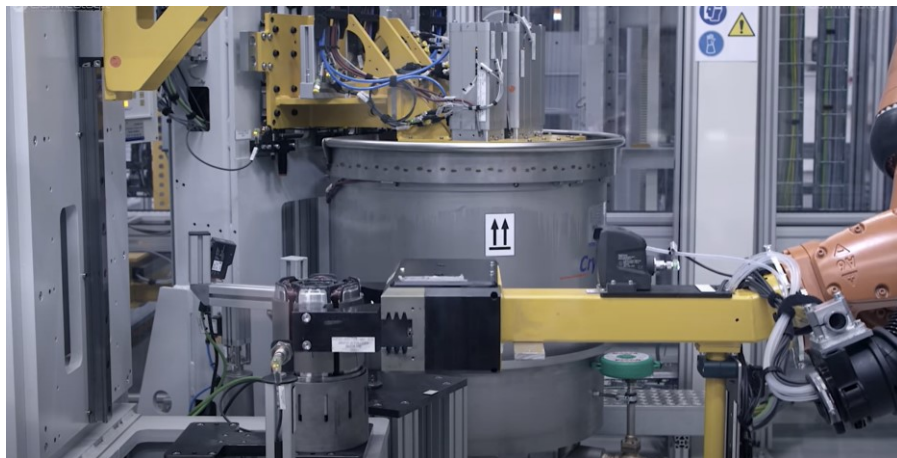


CLAMPING
TECHNOLOGY

Source: Youtube

SCHUNK E-Mobility

HANDLING ROTORS & SHAFTS



SCHUNK
Portfolio



GRIPPING
MODULES



ROTARY
MODULES



ROBOT
ACCESSORIES

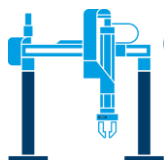
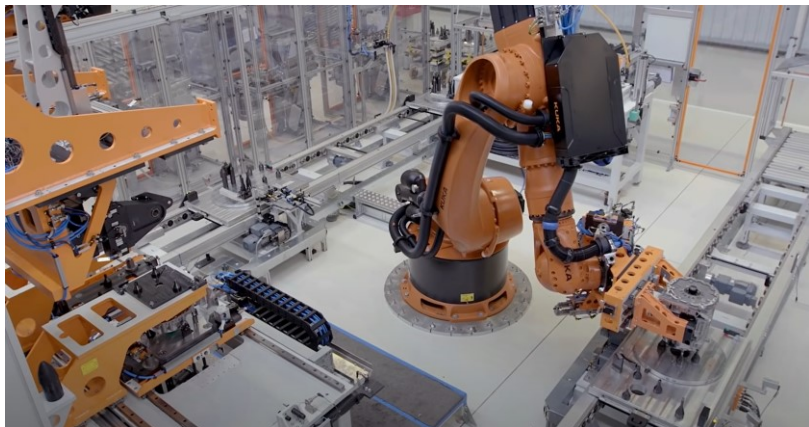


SOLUTIONS

Source: Youtube

SCHUNK E-Mobility

HANDLING MOTORS & COMPONENTS



SCHUNK
Portfolio



GRIPPING
MODULES



ROBOT
ACCESSORIES

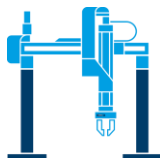
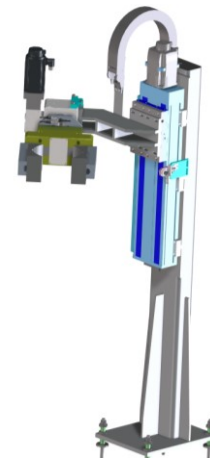
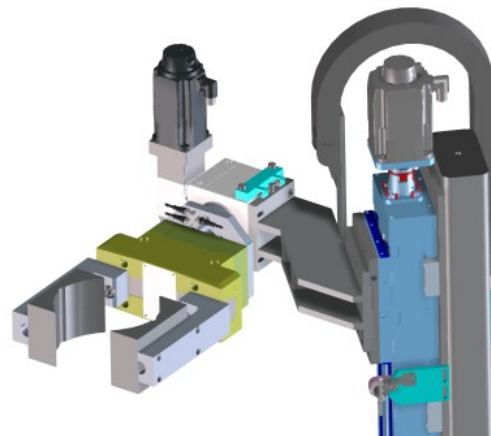


SOLUTIONS

Source: Youtube

SCHUNK E-Mobility

TURNING COMPONENTS



SCHUNK

Portfolio



GRIPPING
MODULES



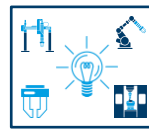
ROTARY
MODULES



LINEAR
MODULES



ROBOT
ACCESSORIES



SOLUTIONS

Source: Youtube

AXIS SYSTEMS

The complete solution from a single source!



Take advantage of our experience

Design & construction by



Delivery completely assembled

Save time during assembly due to the complete assembly at



One contact for the complete system

One contact for axis gantry and gripping system



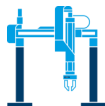
Time saving

shorten your internal throughput by working on the project in parallel



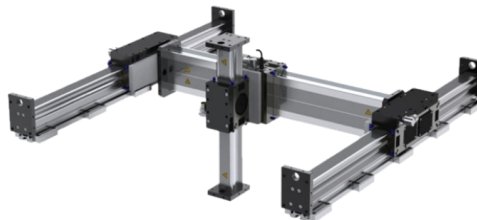
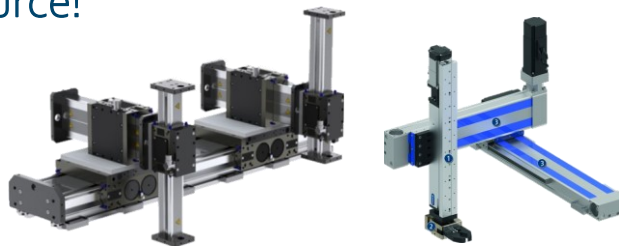
Service

also if requested, also with support for your commissioning



Portfolio

Largest portfolio of standard components such as gripping modules, rotary modules, robot accessories....



Controller

Rexroth
Bosch Group

SIEMENS

BECKHOFF
New Automation Technology

Schneider
Electric



Encoder interface



HIPERFACE®
by **SICK**



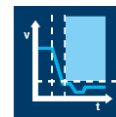
Safety functions



STO
Safe torque
off



SOS
Safe operating
stop



SLS
Safely Limited
Speed

COMPENSATING UNITS

Fully balanced! 



Take advantage of our experience

Design & construction by 



Tolerance compensation for position deviations in the X, Y and Z directions

for joining processes and faster robot programming



Centric locking

for starting the unit in a defined centric position



Position memory

for eccentric locking in deflected position



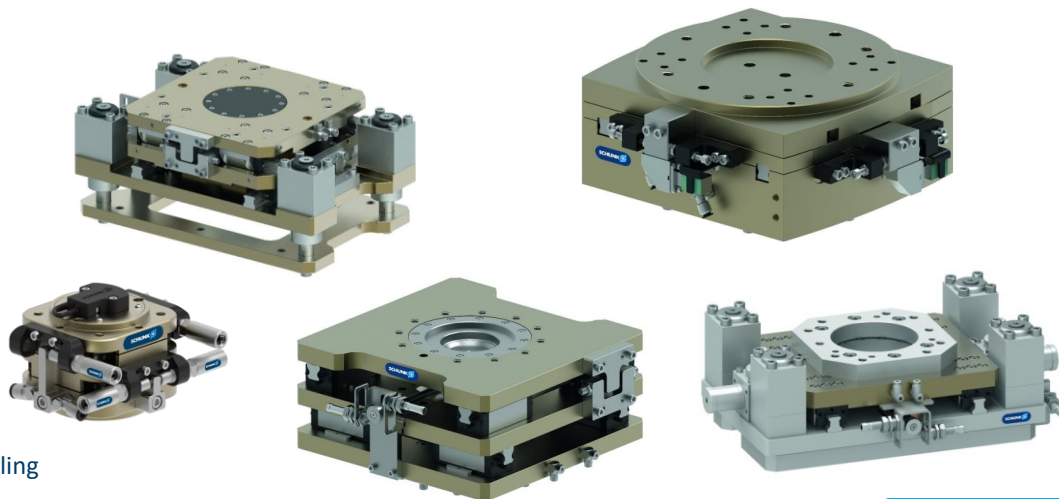
Profile rail guide

for highest stiffness even with masses up to 1500kg



Large portfolio of special solutions

for customer-specific requirements for balancing paths & handling weights



GRIPPING TECHNOLOGY

Firm grip!



Over 30 years experience

Design & construction by **SCHUNK**



Flexible drive technology

Whether pneumatic, electric or with servo motor



Delivery completely assembled

Save time during assembly due to the complete assembly at **SCHUNK**



Time saving

shorten your internal throughput by working on the project in parallel



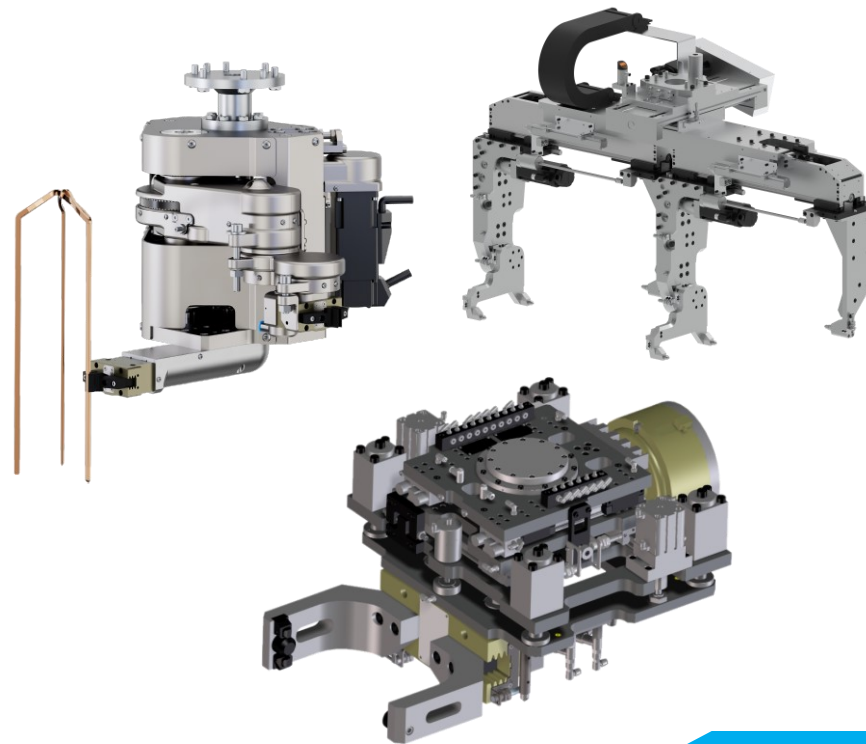
High system availability

through the use of proven components and technologies



endless possibilities

Countless combinations possible from our large portfolio



HYDRAULIC EXPANSION TECHNOLOGY

Perfect clamping / centering / positioning



Over 35 years experience

Design & construction by **SCHUNK**



Already over 75,000 customized solutions

highly accurate clamping / centering of your component



Simulation & Calculation

Optimization of clamping results through targeted FEM analysis



Low-deformation clamping or targeted deformation

Customized deformation, clamping forces and internal stresses



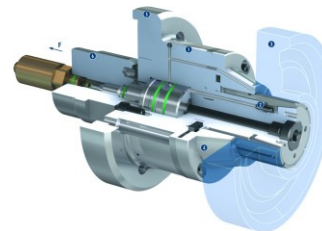
different types of actuation

manually operated, power operated & hydraulically operated



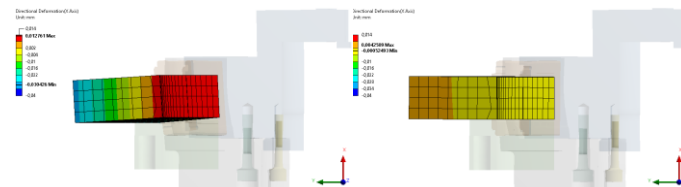
Multiple clamping

Several clamping points possible



FEM-ANALYSIS

Deformation before / after optimization



ZERO-POINT CLAMPING SYSTEMS

Set up fast and precise!



High precision for setup

Repeatability <5μm



Optional with media coupling

Internal media transfer for controlling clamping devices on the pallet



good & easy joining characteristics

Center misalignment & angular misalignment during loading



automated pallet / tool change

Adaptation of robot modules



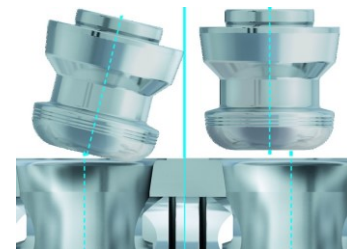
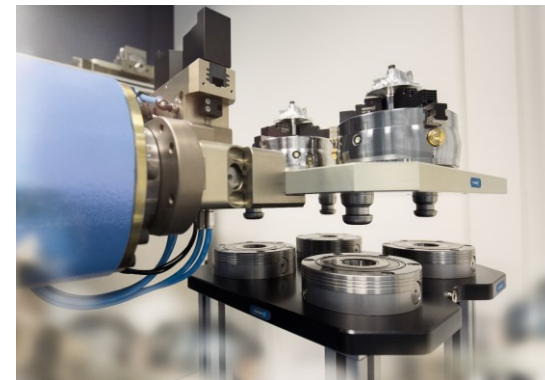
different types of actuation

manually operated, pneumatically operated & electrically operated



Durability under harsh environments

Stainless steel module / high temperature version up to 200°C



HAIRPIN-GRIPPER

HANDLING/GRIPPING DIFFERENT HAIRPINS



TYPICAL PRODUCTS



HAIRPIN

TYPICAL PROCESS



PRE-SETTING

REQUIREMENTS



HIGHSPEED



RELIABILITY



ACCURACY



Pneumatic gripping system

Use of proven SCHUNK gripping technology



Setting the gripper -on the fly-

Flexible positioning of the two grippers



Integrated scara kinematics

Servo-electric adjustment of the gripping system in 3 degrees of freedom



from the interface to the hairpin

Delivery of the complete system incl. gripper fingers

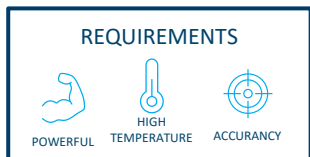
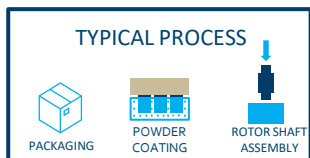
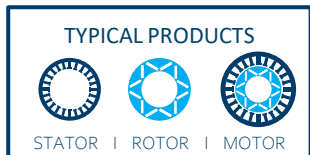


short project lead time

Design, construction and assembly by SCHUNK

PGL-plus-P

HANDLING OF ROTORS / STATORS / MOTORS

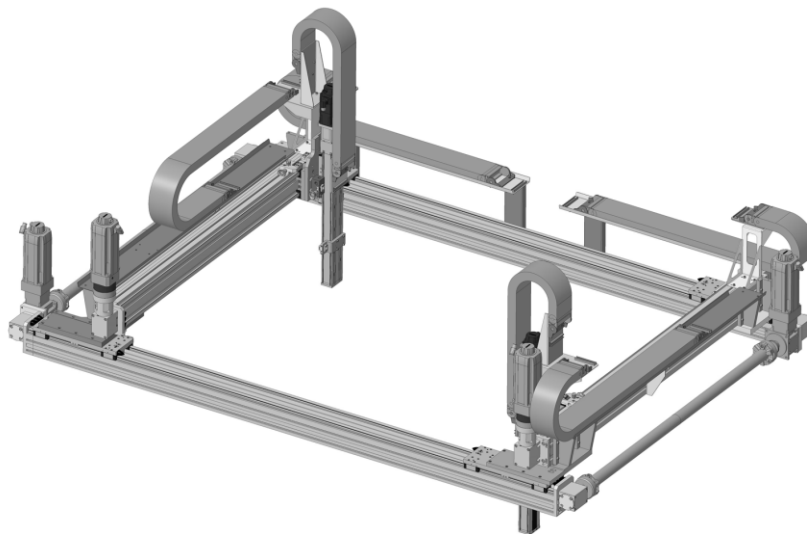
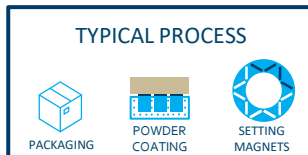
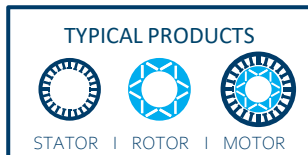


- + **Certified, safe gripping force maintenance**
Time and cost savings in the risk analysis of the plant
- + **integrated sensor**
IO-Link / higher accuracy / less dirt-sensitive
- + **no uncontrolled jaw movement**
No risk of injury during troubleshooting
- + **High residual gripping force of at least 80%**
Use of smaller / lighter grippers possible
- + **Constant gripping force over the whole stroke**



6-AXIS SYSTEM

HANDLING OF ROTORS / STATORS / MOTORS



- + short project lead time**
Design, construction and assembly by SCHUNK
- + 1. contact person for the complete system**
Incl. cable trailing and wiring according to specifications
- + High dynamics & accuracy**
high acceleration & repeatability $\pm 0.03\text{mm}$
- + Flexibility**
Several freely programmable slides on one guide profile

5-AXIS SYSTEM

HANDLING OF STACKS / COMPONENTS



TYPICAL PRODUCTS



STATOR | HAIRPIN | ROTOR

TYPICAL PROCESS



SETTING
MAGNETS

PRE-
SETTING

STACKING

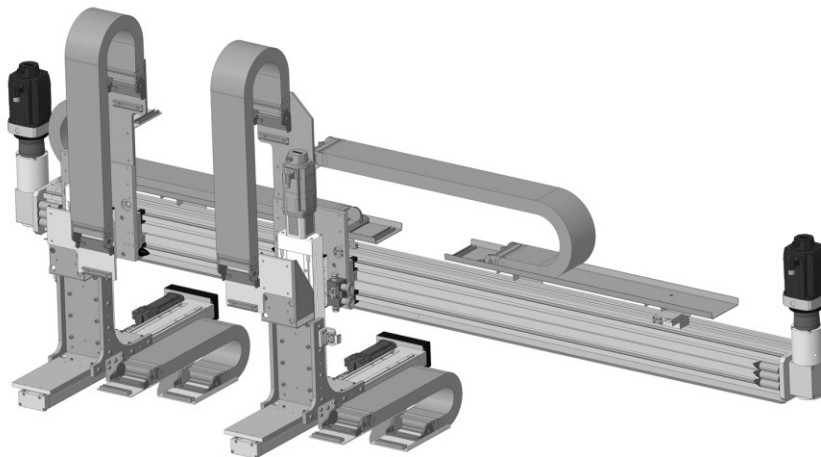
REQUIREMENTS



HIGHSPEED

ACCURACY

RELIABILITY



short project lead time

Design, construction and assembly by SCHUNK



1. contact person for the complete system

Incl. cable trailing and wiring according to specifications



High dynamics & accuracy

high acceleration & repeatability $\pm 0.03\text{mm}$

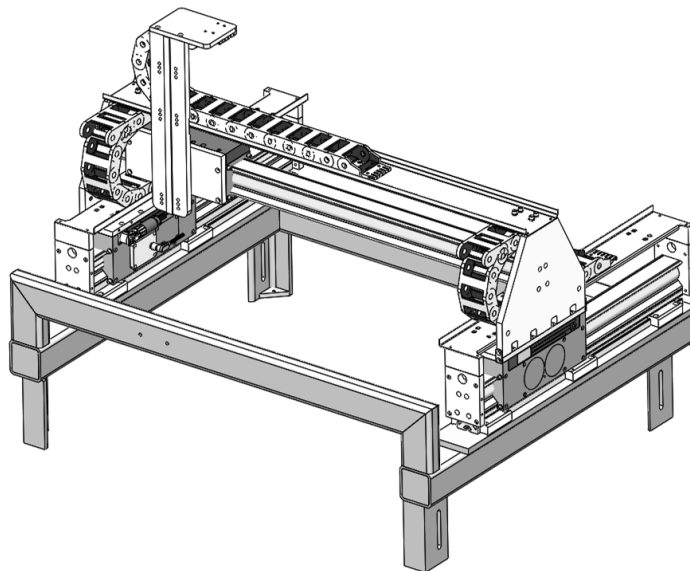
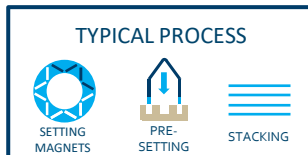


Flexibility

Several freely programmable slides on one guide profile

3-AXIS SYSTEM

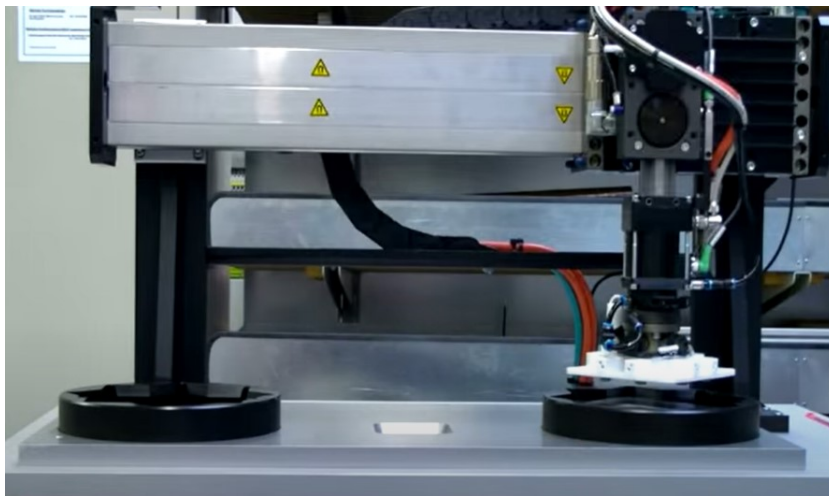
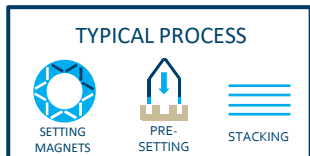
HANDLING OF STACKS / COMPONENTS



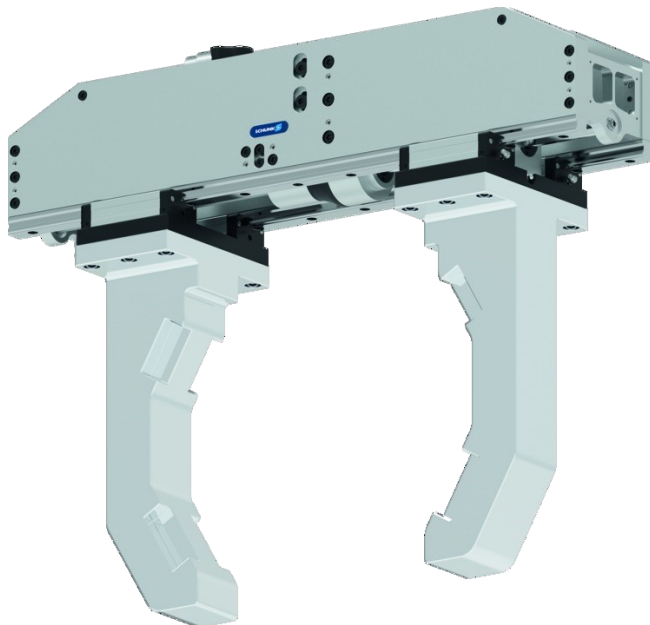
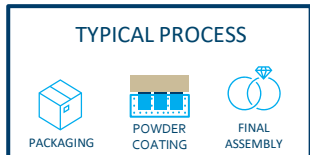
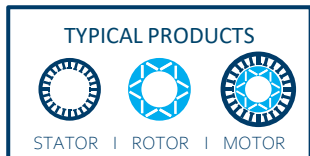
- + short project lead time**
Design, construction and assembly by SCHUNK
- + Linear direct drives**
all axes with direct drive
- + absolute position measuring system**
Optionally SIL2/PLd certified
with Hyperface or Drive-Cliq interface
- + High dynamics & accuracy**
High acceleration & repeatability $\pm 0.01\text{mm}$

3-AXIS SYSTEM

HIGHSPEED-APPLICATIONS



- + short project lead time**
Design, construction and assembly by SCHUNK
- + Linear direct drives**
all axes with direct drive
- + absolute position measuring system**
Optionally SIL2/PLd certified
with Hyperface or Drive-Clq interface
- + High dynamics & accuracy**
High acceleration & repeatability $\pm 0.01\text{mm}$



- + Powerful yet sensitive**
Up to 12,000N gripping force at 100...400mm stroke / jaw
- + Extremely narrow design**
for minimal interfering contours
- + High moments due to double profiled rail guide**
suitable for using long gripper fingers (up to 800mm)
- + asynchronous jaw movement possible**
Component can be positioned in gripped state via the gripper
- + Also with swivel fingers**
Turning the component in the gripped state

FT-SENSOR

MONITORING OF THE PROCESS PARAMETERS



TYPICAL PRODUCTS



STATOR | ROTOR | MOTOR

TYPICAL PROCESS



PACKAGING | TESTING | FINAL ASSEMBLY

REQUIREMENTS



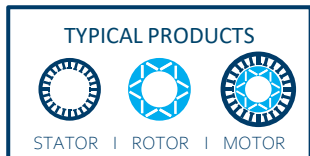
HIGHSPEED | SENSITIVE | ACCURACY



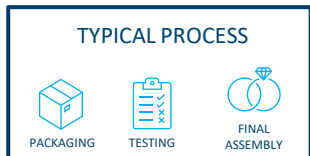
- + Measurement data in six degrees of freedom**
Both forces and moments
- + Integrated temperature compensation**
To ensure the defined measurement accuracy
- + Rotation and translation of the coordinate system**
in all three directions of space
- + Robust design**
due to a high overload range for a long service life
- + IP protection class**
IP60, 65, 68 optionally available

SPECIAL GRIPPING UNIT

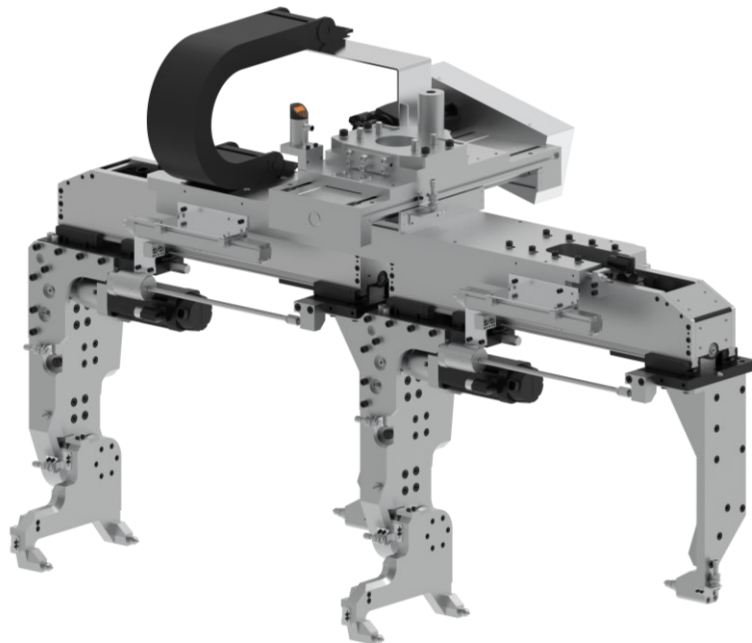
HANDLING OF ROTORS / STATORS / MOTORS



STATOR | ROTOR | MOTOR



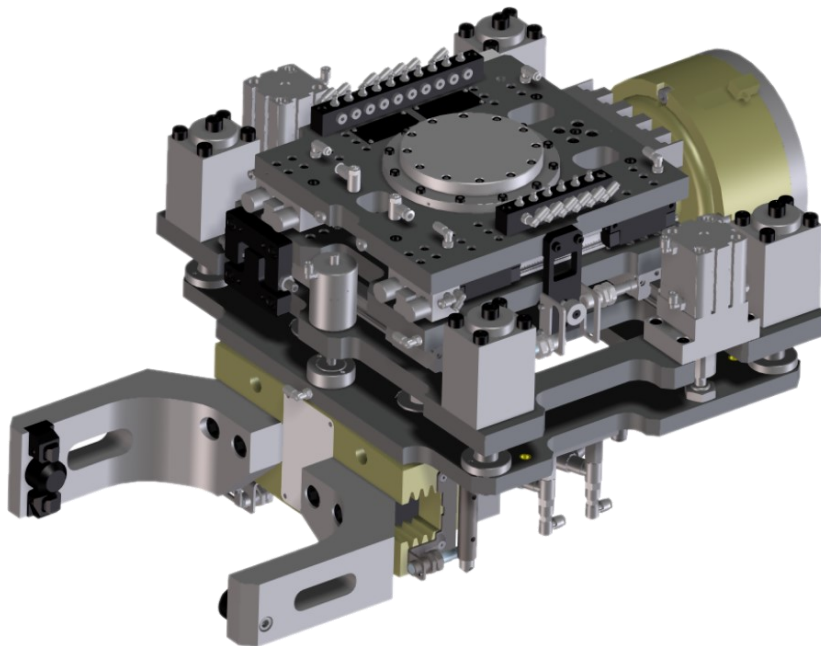
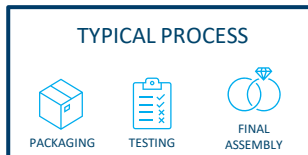
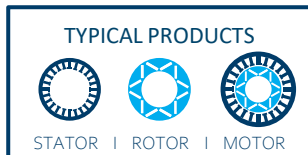
REQUIREMENTS



- + short project lead time**
Design, construction and assembly by SCHUNK
- + Custom interface**
for mounting on your robot or linear gantry with tolerance compensation
- + Special gripping unit**
Double gripper for handling packs / modules
- + Electrically operated swivel fingers**
Freely adjustable swing angle with any motor manufacturer

SPECIAL GRIPPING UNIT

HANDLING OF ROTORS / STATORS / MOTORS



- + short project lead time**
Design, construction and assembly by SCHUNK
- + Custom interface**
for mounting on your robot or linear gantry with tolerance compensation
- + Tolerance compensation for position deviation**
For joining processes and faster robot programming
- + Customized compensation methods**
X,Y and Z compensation freely configurable



E-MOBILITY



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