



CADENAS Forum 2018

Digitalization of the „Modular assembly automation“ kit
as system configurator with CADENAS

Superior Clamping and Gripping



About SCHUNK

From a workshop to a global player

No. **1**

Global leader in gripping systems and clamping technology and leading technology provider for robots and production machinery

- Market leader in gripping systems
- Market leader in quick-change pallet technology
- Technology leader in toolholding systems
- World's largest provider of chuck jaws

Starting in
1989

Workforce expands from

- 280 to 2,700 employees
- Sales grow from €15 million to €360 million (2015)
- Export share increases by 16% to approximately 60%

1945
to the
present

- 2005 Kristina I. Schunk joins the company
- 2001 Henrik A. Schunk joins the company
- 1983 Gripping Systems product division
- 1966 Chuck Jaws product division
- 1964 Heinz-Dieter Schunk joins the company
- 1945 Friedrich Schunk establishes his mechanical engineering workshop

About SCHUNK

70 years of Schunk – from a workshop to a global player.

70 Years

SCHUNK

1945 Foundation



Friedrich Schunk
Company founder



The lathe made perforating machine –
an innovative development by
Friedrich Schunk

With Pioneering Spirit and Perfection we are setting Benchmarks worldwide

The challenges that our innovative family-owned company has overcome over 70 years of working with clamping technology and gripping systems are reflected in our top-quality products and technical innovations. They stand as milestones which document our development from a small garage business into a global player with more than 2,500 employees.

They are the result of ambition, courage and the work of many highly motivated contributors with team spirit and incredible dedication to the company. We owe our success to the confidence and trust placed in us by our customers. Their appreciation spurs us on every day to do our best. And this goes for the future as well.

1945 – Early years 1970



1945 The first workforce



Precision parts production
for the Porsche 956



SCHUNK becomes the
first standard chuck jaw
provider in Germany



1964 Hans-Dieter Schunk
joins the company

1971 – Setting the course 1990

PPG – First
pneumatic
SCHUNK gripper



PGM
Pneumatic
3-finger gripper



TSND0 Hydraulic
expansion toolholders



1991 – "Taking off" 2000

PM-plus
First grippers
with Schunk
multi-tooth
guidance



MPG
The new
benchmark in
pneumatic small
parts handling



Workholding
Technology
product area



1993 Hartville plant, NC USA



2001 – Growth 2005

SRH – First SCHUNK
3-finger gripping hand



Linear Modules
product area



TRBOS-Mini
Polygonal clamping
technology for micro
machining



2006 – New horizons 2008

Integrated PHL
gripping arm
module in the
CARO-G-BLOC®



2008 First Expert Days
of Service Robotics

JGP
SCHUNK
Compact class



Magnetic
Clamping
Technology
product area



2009 – Expansion 2011



Powerball
Lightweight
Arm LWA AP



2009 New building of the
Schunk systems plant

EGP
The most powerful
electric small
component gripper
with integrated
actuators



Launch of
VERO-S
Quick-change
pallet systems



2012 – Superior Clamping and Gripping 2015



The new SCHUNK PGM-plus-P
and PGM-plus-E grippers of
the Generation 1000 series...
The only grippers with multi-tooth
guidance and permanent
lubrication.

SVH
First mass
production
5-finger hand
with 9 motors



The first ESN
certified safety
gripping system



About SCHUNK

The SCHUNK Group

Lauffen/Neckar headquarters



Plants



Lauffen/
Neckar



Brackenheim-
Hausen



Huglfing



Mengen



St. Georgen



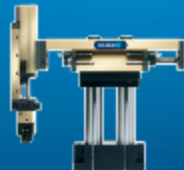
Morrisville
USA



S.P.D. S.p.A.
Italy



Gressel AG
Switzerland



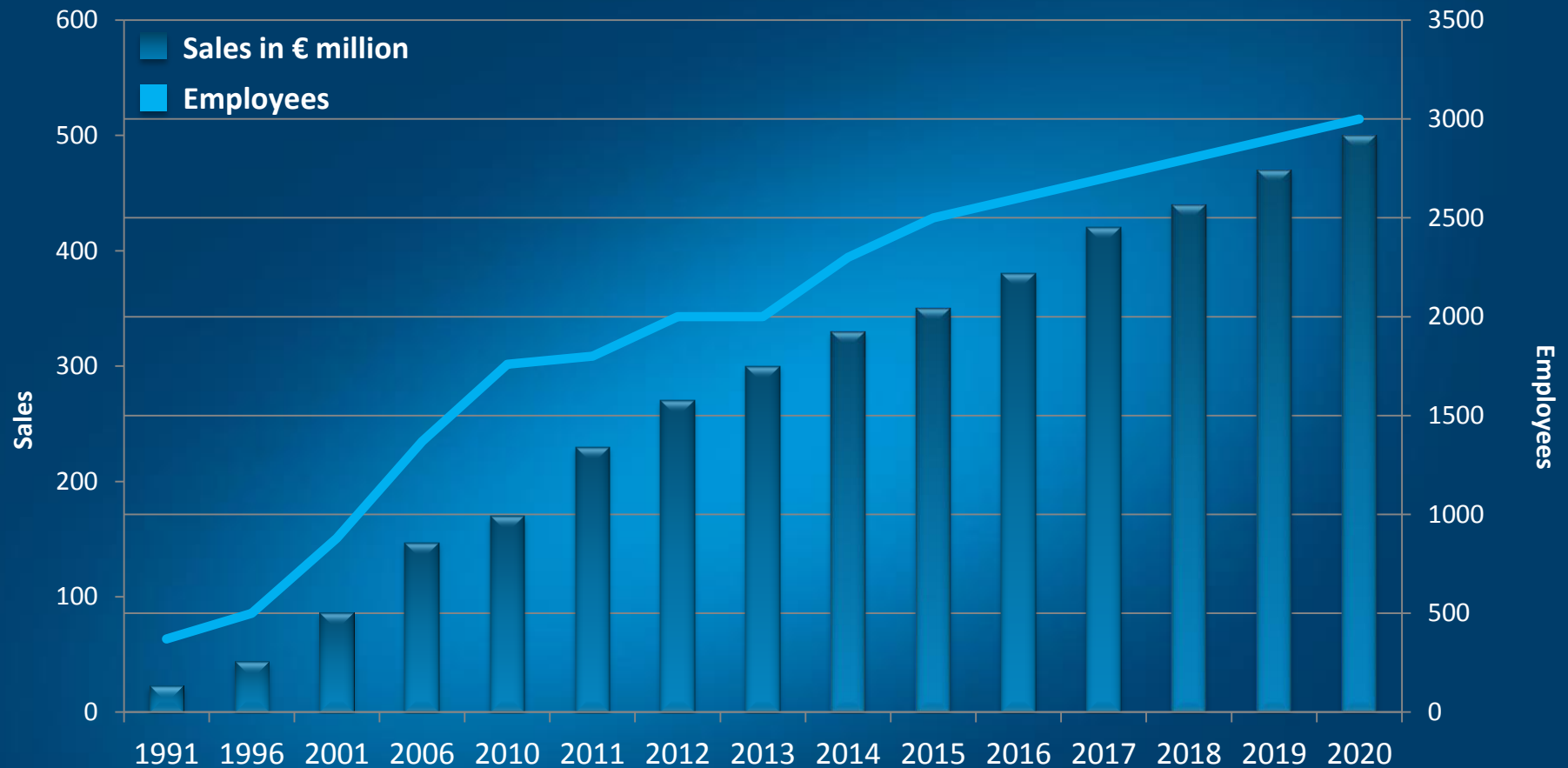
About SCHUNK

30 international subsidiaries | 32 distribution partners | 300 field sales reps |
40 No. 1 products



About SCHUNK

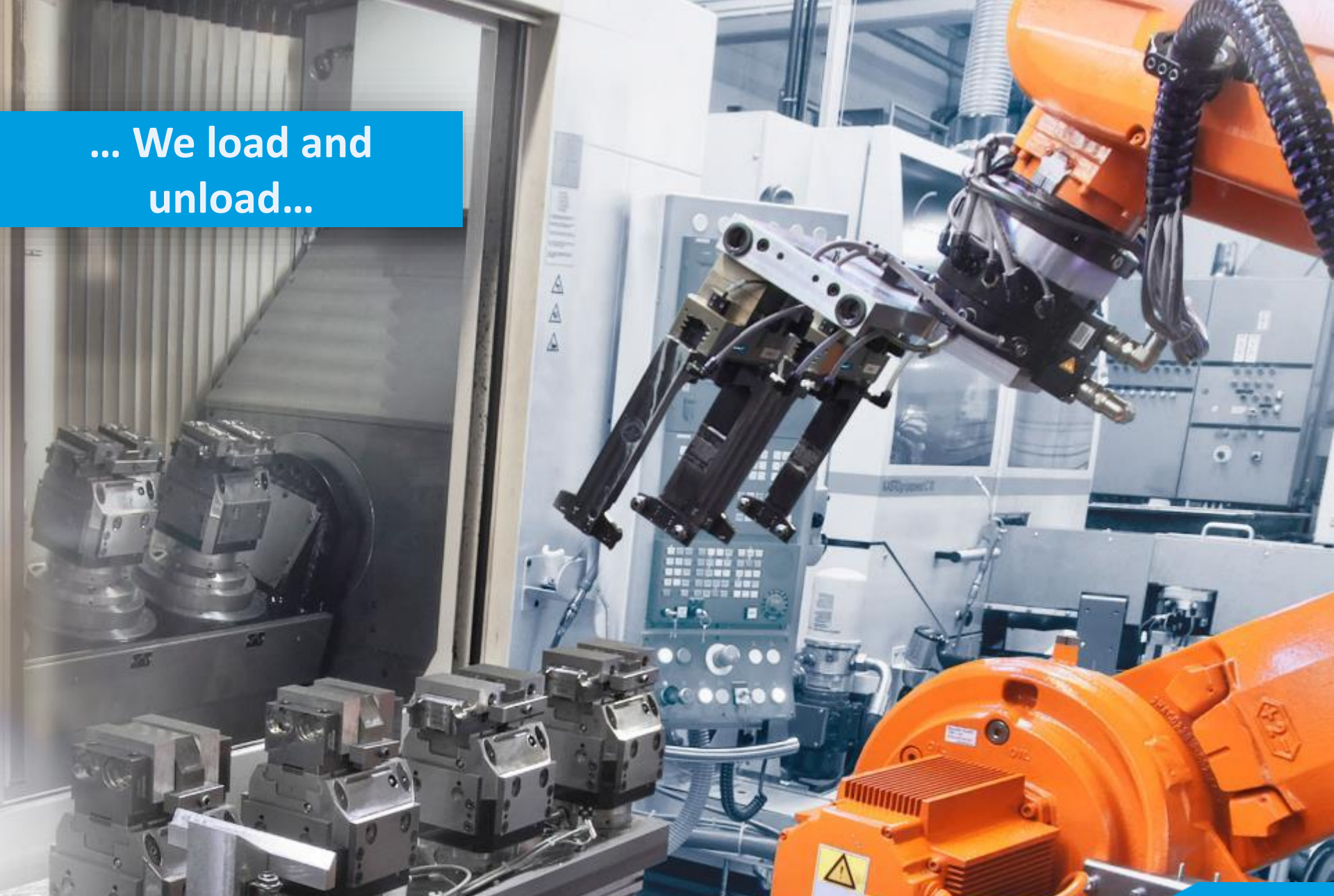
Growth in sales and employees





... We grip, turn,
swivel, and handle ...

... We load and
unload...



The „Modular assembly automation“ kit as system configurator with CADENAS

About SCHUNK

World's competence leader for gripping systems and clamping technology and leading technology provider for robots and production machinery



About SCHUNK

Over 25,000 customers worldwide

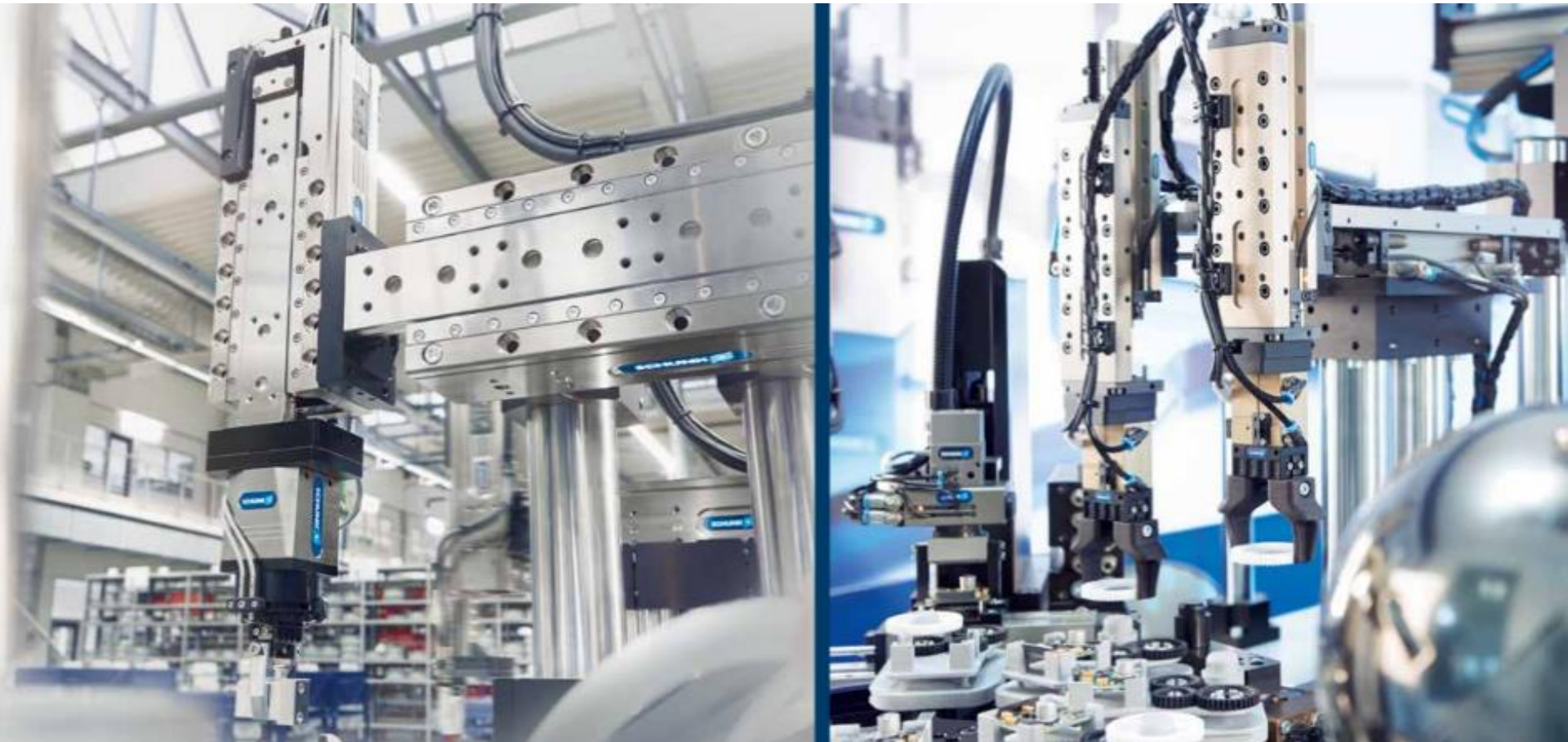


The „Modular assembly automation“ kit

Pneumatic or mechatronic:

More than 10.000 possible combinations

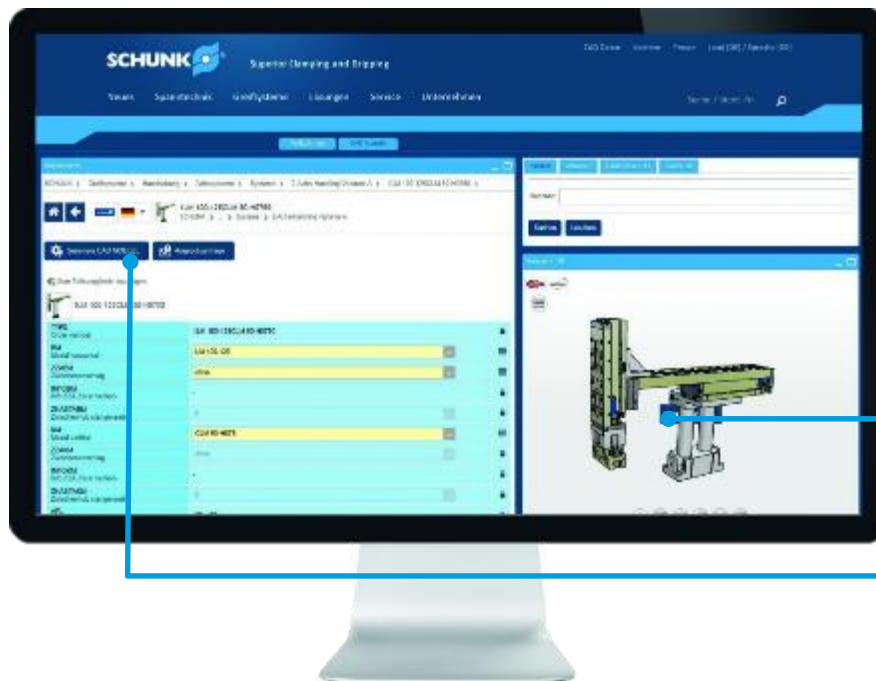
– all components are standard catalog parts!



CADENAS – partcommunity.com

3D-Online-Configurator – Modular assembly automation

SCHUNK 3D-Online-Configurator for a 3D configuration of different Pick & Place handling constructions for the assembly automation

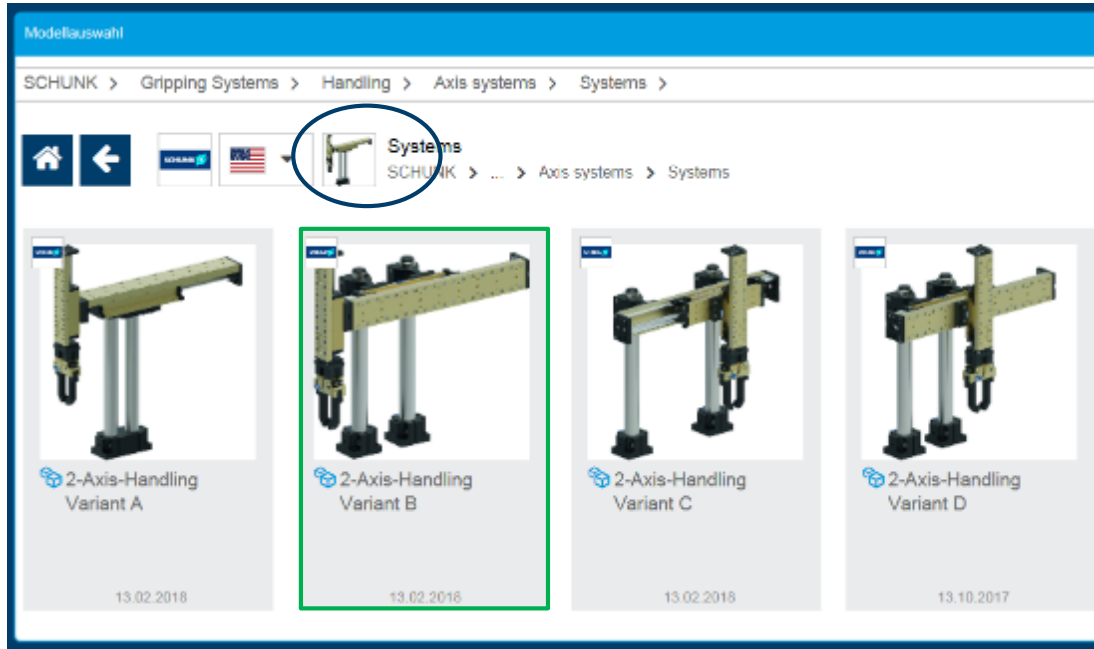


Your (customer-) BENEFITS Our SERVICES

- + Configuration of four different Pick & Place handling constructions
- + Available in all common 2D and 3D CAD formats
- + Containing electrical and pneumatic modules
- + Direct coupling with the SCHUNK pillar assembly system
- + Based on the CADENAS platform for worldwide, free access and a uniform database for our customers – the SCHUNK PARTCommunity

CADENAS – partcommunity.com

3D-Online-Configurator – Modular assembly automation



Your (customer-) BENEFITS Our SERVICES

- + Configuration of four different Pick & Place handling constructions
- + Find the right solution!
Fast and error-free configuration of pick & place handling constructions for assembly, saving a great deal of time in the planning and design phase
- + Integrated combination logic in the configurator; no separate data model SCHUNK combi box necessary
- + Available in all common 2D and 3D formats for individual use in various CAD systems

CADENAS – partcommunity.com

3D-Online-Configurator – Modular assembly automation



TYPE	Order number	1LM 25-025LM 25-0250		
BM	Module horizontal	LM 25-025		
ZZABM	Intermediate stop	without		
INTCOM	Info ZZA intermediate stroke	-		
ZHA5TAKM	Intermediate stroke on the piston rod side	0		
KM	Module vertical	LM 25-025		
ZZAKM	Intermediate stop	without		
INFOKM	Info ZZA intermediate stroke	-		
ZHA5TAKM	Intermediate stop	Intermediate stop ZZA 027 on the piston rod side		
APL	Arm complete	APL 50		
SAB	Pillar assembly system	without pillar assembly system		
SAB5	Pillar diameter	-	mm	
SAB52	Pillar assembly system	-		
SABL	Pillar length	-	mm	
WARMTE	Sealant mounting variant of the gripper	Gripper mounting on base side		
AUFBAUWINKEL	Mounting angle	0°		
GRIPFMODULE	Selection of gripping modules	384000-MPS 20		
T	Dimensions	8	mm	
X4	Dimensions	24	mm	
P1	Dimensions	17	mm	
P2	Dimensions	2.5	mm	
P3	Dimensions	3	mm	
P4	Dimensions	-8	mm	
P5	Dimensions	35	mm	

Your (customer-) BENEFITS Our SERVICES



Configuration of the technical characteristics



Live-Adjustment of the 3D-Preview



CADENAS – partcommunity.com

3D-Online-Configurator – Modular assembly automation



Your (customer-) BENEFITS
Our SERVICES

- + Selection of the suitable variant
- + 3D-Preview



CADENAS – partcommunity.com

3D-Online-Configurator – Modular assembly automation

TYPE Order number	LM 25-025 LM 25-0250	
BM Module horizontal	LM 25-025	
ZZABM Intermediate stop	Intermediate stop ZZA 00T on the piston rod side	
INFOBU Info ZZA intermediate stroke	Please enter a intermediate stroke!	
ZHASTABM Intermediate stroke on the piston rod side	0	25
KM Module vertical	LM 25-025	
ZZAKM Intermediate stop	without	
INFOKV Info ZZA intermediate stroke	-	
ZHASTAKM Intermediate stroke on the piston rod side	0	
APL Adapterplate	APL 50	
SAS Pillar assembly system	with P1 lar assembly system	
SAB5 Pillar diameter	35 mm	mm
SAB52 Pillar assembly system	-	
SASL Pillars Length	223	mm
VARIANTE Selection mounting variant of the gripper	Gripper mounting at the side	
AUFRAUWINKEL Mounting angle	0°	
GREIFMODULE Selection of gripping modules	0335461-WPG-plus 20	
T Dimensions	8	mm
X4 Dimensions	34	mm
P1 Dimensions	17	mm
P2 Dimensions	0.6	mm
P3 Dimensions	0	mm
P4 Dimensions	-8	mm
P5 Dimensions	95	mm

Your (customer-) BENEFITS Our SERVICES

- + Preview of the complete Configuration
- + Download of **complete assembly** with pillar system, adapter plates as well as **standard and connection parts**



CADENAS – partcommunity.com



3D-Online-Configurator – Modular assembly automation

**Your (customer-) BENEFITS
Our SERVICES**

Stückliste 2-Achs-Handling Variante B

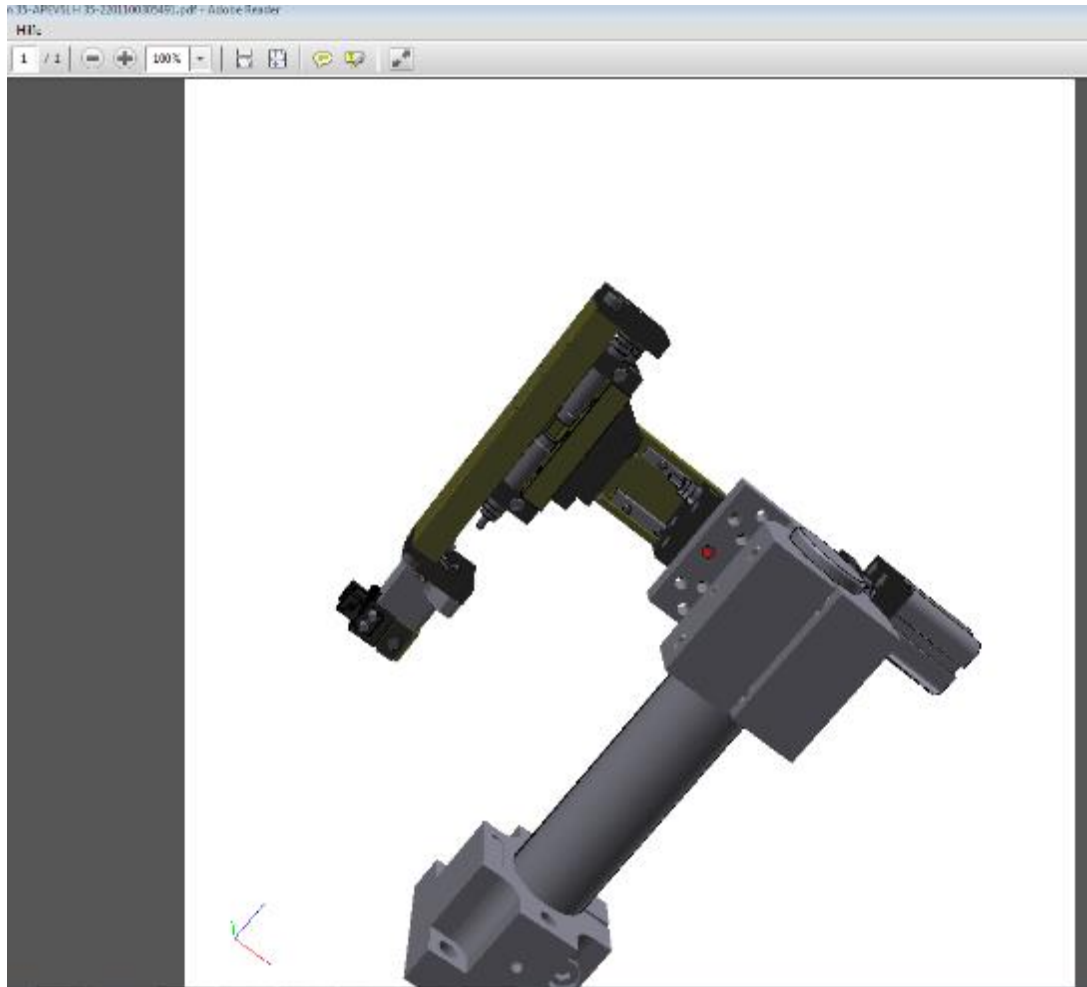
Konfiguration 1LM 25-025LM 25-0250

N°	Menge	Typ	Teile Nr
1	1	1LM25-025LM25-0250	
1.1	1	SCHUNK-LM 25-025-ZZA027-H0	-
1.2	1	SCHUNK-APL 50	0313389
1.3	1	SCHUNK-IM 25-025	0314050
1.4	1	SCHUNK-MPGPLUS 20	0305491
1.5	1	SCHUNK-ASG 10	0313900
1.6	2	M4x16 DIN912	-
1.7	1	M4x16 DIN912	-
1.8	2	3m6x8 DIN6325	-
1.9	2	M2x22 DIN912	-
1.10	2	ZHU4	9609376
1.11	2	SCHUNK-APFV 35	0313895
1.12	1	SCHUNK-SLH 35-220	0313812
1.13	1	SCHUNK-SOE 35	0313891
1.14	2	M5x20 DIN912	-
1.15	2	M5x20 DIN912	-
1.16	2	5m6x12 DIN6325	-
1.17	3	M4x14DIN912	
1.18	2	3m6x12DIN6325	
1.19	4	M5x10DIN912	
1.20	2	5m6x10DIN6325	

-  **Automatically generated parts list**
-  **Complete assembly for the creation of a complete parts list from the CAD-model**

CADENAS – partcommunity.com

3D-Online-Configurator – Modular assembly automation



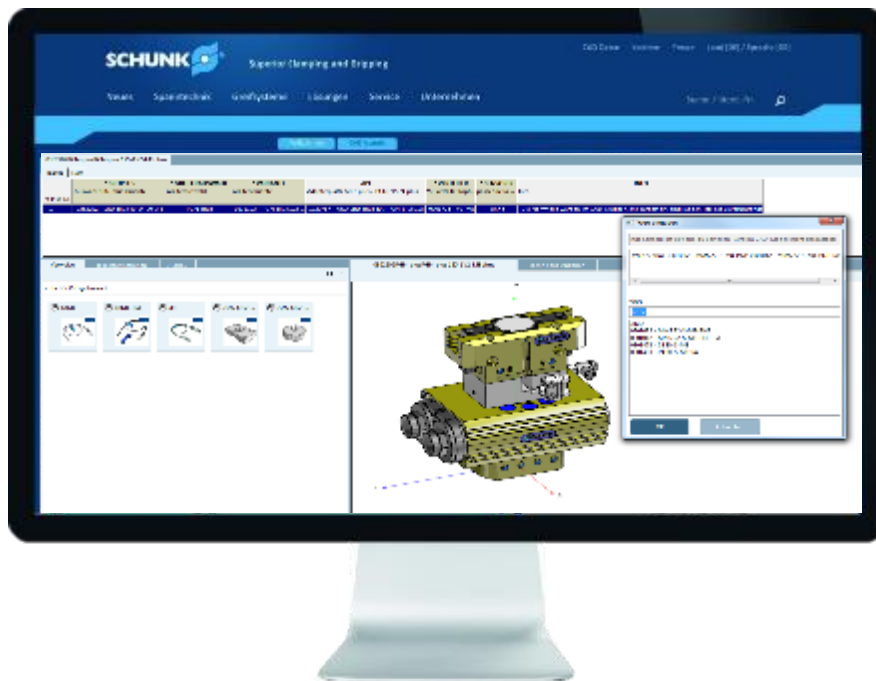
**Your (customer-) BENEFITS
Our SERVICES**

+ 3D-PDF for Download ... also
usable for non CAD-User

CADENAS – partcommunity.com

3D-Swivel-Gripping-Unit-Configurator

Swivel units SRU-plus can be combined with the following SCHUNK grippers: PGN-plus, DPG-plus, JGP, PWG-plus, PZN-plus, DPZ-plus, JGZ, PZB-plus



Your (customer-) BENEFITS - Our SERVICES

- + Swivel-gripper units configurable with a few clicks based on the SRU-plus
- + Standardized adapter plate integrated – Part list generation incl. standard parts
- + Based on CADENAS and worldwide available in the SCHUNK PARTCommunity
- + Suitable sensors selectable
- + Available in all common 2D- and 3D-formats

CADENAS– partcommunity.com

More than CAD-Models - SMART Parts – Incl. technical characteristics

- All Products of the range gripping systems incl. Technical catalog datas
- Models already classified with eClass 10.0
- Link directly to the datasheets and operating instructions on SCHUNK website
- Features such as mounting kits, dust covers etc. can be directly selected and configured on the models

Your (customer-) BENEFITS Our SERVICES

- + Simple product selection
- + Support of the product comparison function
- + Easy data transfer

SCHUNK-0371102 PGN-plus 100-1

IDENT	ID number	0371102	
TYP	Type	PGN-plus 100-1	
ONLINE	Link to Data sheets / Manuals...	Further product information	
GRIP	Link to Grip	Gripper fingers at the press of a button - JD DesignTool eGrip	
HL	Stroke per jaw	10	
ZH	Centering sleeves (accessory bag)	without	
HLE	Protection cover (to order, optional)	without	
HLB	Stroke per jaw	10.000	mm
SCHLUSSENAFFT	Closing-/ opening force	680 / 725	N
FEDERKRAFT	min. spring force	-	
GEWICHT	Weight	0.810	kg
MAXIMALDRUCK	Maxim. pressure	-	
WERKSTUECKE	recommended workpiece weight	3.300	kg
FLUIDVERBRUCH	Air consumption per double stroke	45.000	cm³
BETRIEBSDRUCK	min. / max. operating pressure	2.5 / 8	bar
NENNDRUCK	Nominal operating pressure	6	bar

- Link to the datasheets and operating manuals
- Adjustable features
- Technical catalog data

CADENAS – partcommunity.com

Internationalization

The internationalization in the languages of the website will also be extended to CADENAS– partcommunity.com

Currently available languages:

German
English

Available languages Q2/2018:

Italian
French
Spanish
Russian
Chinese

Your (customer-) BENEFITS – Our SERVICES

- ⊕ Customers are reached in local language
- Acceptance and use by customers
- ⊕ Linguistically uniform appearance
- ⊕ Lead generation and influencing the purchase decision in the engineering process



Questions?

Comments?



Many Thanks!

We are
SCHUNK 

www.schunk.com



Superior Clamping and Gripping

SCHUNK 