

30 Years

SCHUNK

Grippers
1983 – 2013



Superior Clamping and Gripping



PZN-plus 380

Precise Heavy-Duty Gripper
for workpieces up to 190 kg



Superior Clamping and Gripping

Jens Lehmann stands for precise gripping, and concentrated safe holding. As a brand ambassador of the SCHUNK team, the No. 1 goalkeeper communicates our global competence leadership for clamping technology and gripping systems. The top performance of SCHUNK and Jens Lehmann are characterized by dynamics, precision, and reliability.

For more information visit our website:
www.gb.schunk.com/Lehmann

J. Lehmann
 Jens Lehmann





Henrik A. Schunk Kristina I. Schunk, brand ambassador Jens Lehmann, and Heinz-Dieter Schunk

Top Performance in the Team

SCHUNK is the world's No. 1 for clamping technology and gripping systems – from the smallest parallel gripper to the largest chuck jaw program.

In order to boost efficiency, SCHUNK customers have bought more than 2,000,000 precision toolholders, 1,000,000 gripping modules, and 100,000 lathe chucks and stationary workholding systems so far.

This makes us proud and motivates us to attain new top performances.

As a competence leader, we recognize and develop standards with a large potential for the future, which will drive the rapid progress in many industries.

Our customers profit from the expert knowledge, the experience and the team spirit of 2,000 employees in our innovative family-owned company.

The Schunk family wishes you improved end results with our quality products

Heinz-Dieter Schunk

Henrik A. Schunk

Kristina I. Schunk

3-Finger Centric Gripper PZN-plus 380

Robust. Compact. More Productive.



SWS
Quick-Change System

Multi-tooth guidance for higher precision.

The PZN-plus 380 is the first centric gripper with multi-tooth guidance for the demanding heavy-duty area, and ensures precise handling of heavy workpieces up to 190 kg. The powerhouse from the PZN-plus series creates new handling possibilities of heavy loads in the technology fields power plants, automotive, and foundry industry.



Patentierte Präzision!

Patented Precision!

Vielzahnführung
Multi-tooth guidance

High-performance Gripping.

The PZN-plus 380 disposes of a strong combination of a patented multi-tooth guidance, and the wedge-hook principle. The considerably higher moment load at simultaneous maximum power transmission allow the use of longer fingers. They dispose of more power, and are more productive in the heavy-load handling than ever.

More variable.

The PZN-plus 380 is offered in several variants for different applications, and environmental conditions. Combined with the perfectly matching sensor accessories, and manifold specialized components, they are well equipped for every handling task.

PZN-plus 380

3-Finger Centric Gripper

Our Technology. Perfect Function.

More precise	Robust multi-tooth guidance for highest process reliability
Stronger	Considerably higher moments make the use of longer gripper fingers possible
Slimmer	Compact height for minimized interfering contours simplifies handling
More flexible	Fastening is done at one side and it can be screwed on from two sides for universal and flexible gripper assembly
Direct	Hose-free direct connection, or connection via screws for flexible pressure supply in every automated solution
Safer	Vast sensor accessory program for monitoring the stroke position



SCHUNK Multi-Tooth Guidance. Patented Precision.

The SCHUNK multi-tooth guidance newly defines precision and longevity of grippers. Forces and moments are evenly distributed on the guiding surfaces of several, parallelly arranged prism guidances. The guidances have a higher load capacity, and ensure a considerably higher stability. Longer gripper fingers can be used at the same gripper size without overloading the guidance.

Resulting from the sum of guiding surfaces, the surface pressure, and therefore wear is reduced to a minimum. The multi-tooth guidance therefore ensures minimal guide play for the gripper's longlife performance.

Your advantages at a glance:

- Precise, process-reliable handling
- Highest gripping forces
- High moment and force absorption
- Troublefree use of long gripper fingers
- Highest longevity



The principle of the multi-tooth guidance has been developed by SCHUNK, and reduces the surface pressure by distributing the load onto several parallelly arranged prism guidances.

Technical Data

 Sizes 11	 Dead weight 0.13 kg .. 73.5 kg	 Gripping force 255 N .. 57,000 N	 Stroke per jaw 2 mm .. 45 mm	 Workpiece weight 1.3 kg .. 190 kg
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The pneumatic 3-Finger Centric Gripper PZN-plus in practice

Task

Automated loading and removing of workpieces from the machine with a robot and a tray in a rack.

Solution

The robot picks up the raw material with a pneumatic centric gripper PZN-plus from a rack, which is accessible from the outside, and then equippes a machining center. The workpiece is removed with a second centric gripper PZN-plus after machining from the machine. Before it has been exchanged by a SCHUNK quick-change system, and deposits the workpiece in the rack now.

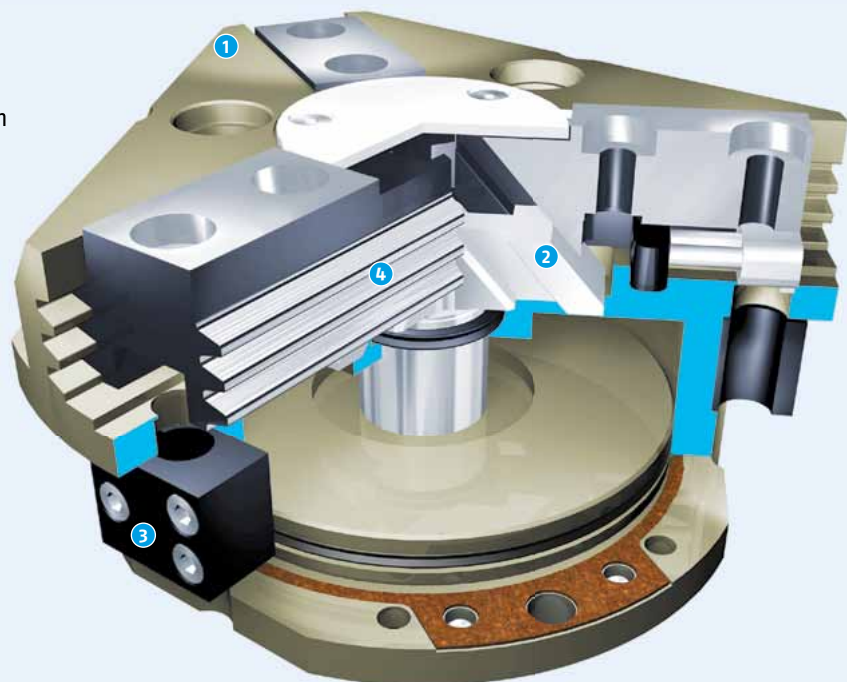
Customer benefits

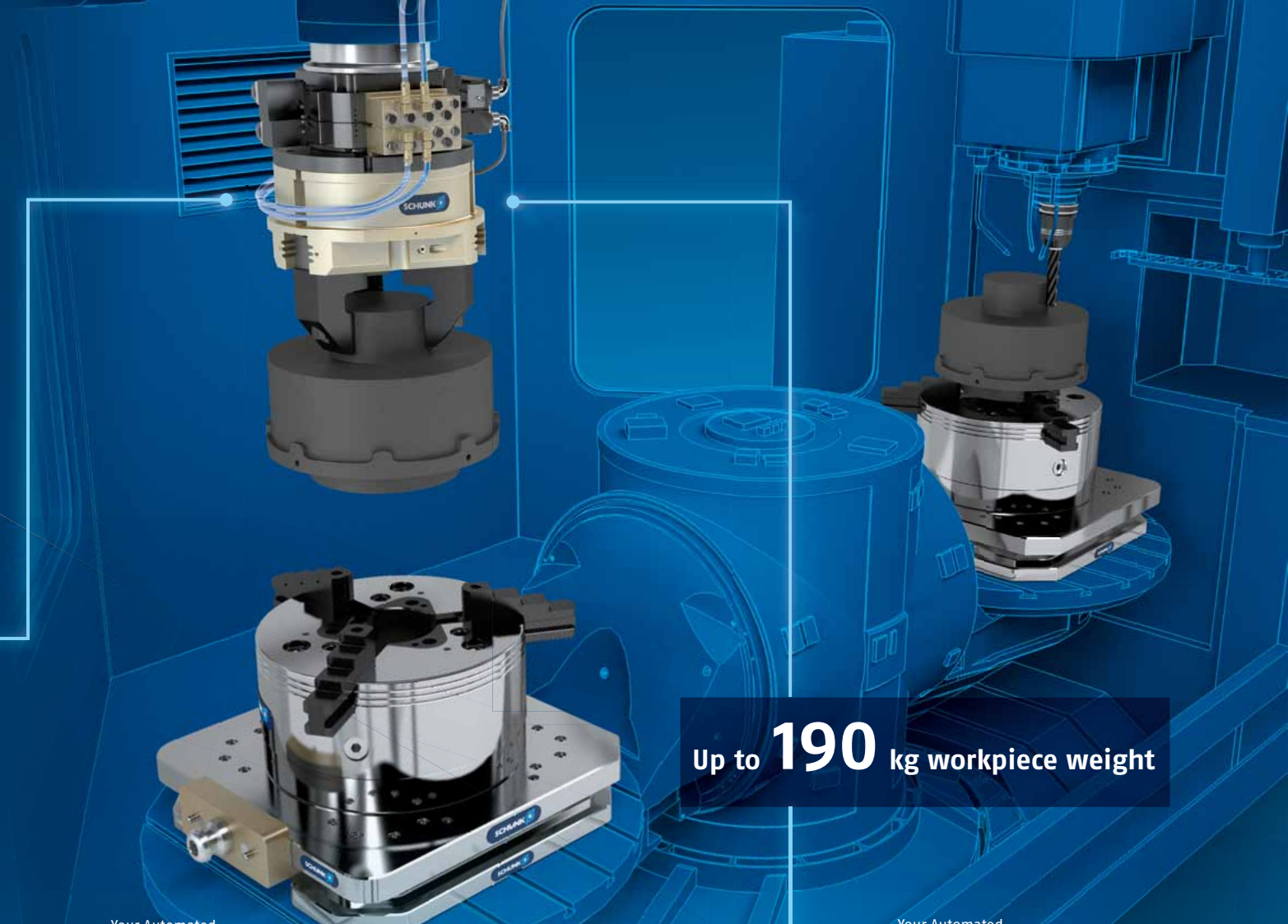
- Flexible gripper application with an automated process in production.
- Due to the use of the SCHUNK quick-change system SWS, various grippers can be exchanged for raw and finish part handling within seconds.



Sectional diagram

- 1 Weight-optimized housing**
due to the use of hard-anodized and high-performance aluminum alloy
- 2 Wedge hook principle**
for a higher force transmission and centric gripping
- 3 Sensor system**
Brackets for proximity switches and adjustable switch cams in the housing
- 4 Multi-tooth guidance**
precise gripping due to heavy-duty, scope-free base jaw guidance





Up to **190** kg workpiece weight

Your Automated
Handling System

Your Automated
Handling System

Your
Service Robotics
Application

Your Lathe

Your Automated
Machine Loading

Your Machining
Center

Your Automated
Assembly

Superior Clamping and Gripping – It is time to make use of your machine's full potential!

With superior components we awake reserves where you would never expect them. In your machine. SCHUNK Synergy – the perfectly harmonized interplay of clamping technology and gripping systems make your customers a champion in productivity.

SCHUNK Multi-Tooth Guidance

Gripper variants | Accessories | Sensor program

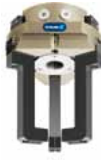
Our Diversity. Your Individuality.

With a great range of variants, and a superior accessory program, SCHUNK grippers with multi-tooth guidance are offering everything for a process-reliable use in your special automation application – even in case of extreme conditions.



Variants		PGN-plus 2-Finger Parallel Gripper	PZN-plus 3-Finger Centric Gripper
Gripping force maintenance AS / IS		●	●
Dust protection version SD		●	●
Corrosion protection version K		●	●
High-temperature version V		●	●
Power intensifier version KVZ		●	●
Precision version P		●	●
Explosion protection version EX		●	●
Matching accessories			
Protective Cover HUE Durable protection of the gripper against liquids and dusts.		●	●
Compensation Unit TCU in X-, Y-, and Z-direction movable. Can correct angular errors, and can effect a rotational compensation.		●	●
Compensation Unit AGE Compensates planar offset, and the workpiece does not tilt or jam.		●	●
Jaw Quick-Change System BSWS Minimized set-up times due to the faster change of the gripper fingers.		●	●
Universal Intermediate Jaw UZB Makes a quick, tool-free adjustment of the stroke position possible.		●	●
Pressure Maintenance Valve SDV-P Ensures gripping force maintenance in case of energy drop.		●	●
Switching points			
Magnetic Switch MMS 22-PI1 Is equipped with a programmable switching point. No interfering contours.		●	●
Magnetic Switch MMS 22-PI2 With adjustable hysteresis. On option with two programmable switching points.		●	●
Programmable Magnetic Switch MMS-P With adjustable hysteresis. On option with two switching points.		●	●
Sensor program			
Inductive Proximity Switch IN For monitoring the present status of the automation components.		●	●
Flexibe Position Sensor FPS For monitoring up to 5 teachable switching points with digital output.		●	●
Analog Position Sensor APS System consisting of sensor and electronics for precise detection of any of the many gripper jaw positions.		●	●
Wireless Interrogation System RSS Wireless sensor system for signal and status query of sensors and processes.		●	●

● Standard version available ▲ On request: Technical Hotline Gripping Systems +49-7133-103-2696

				
DPG-plus 2-Finger Parallel Gripper sealed version	DPZ-plus 3-Finger Centric Gripper sealed version	PGB-plus 2-Finger Parallel Gripper with center bore	PZB-plus 3-Finger Centric Gripper with center bore	PZV-plus 4-Finger Centric Gripper
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SCHUNK Heavy-Duty Grippers. Standardized Powerhouses.

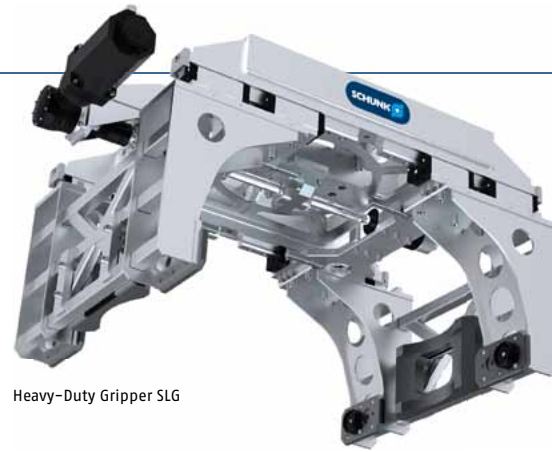
SCHUNK is setting pioneering gripper standards in the field of heavy-duty robotics. Even at workpiece weights starting from 40 kg, users can fall back on standardized modules instead of using complex special solutions. Thereby we focus on parts weights between 40 kg and 200 kg, which is the major part of heavy-duty requirements in practice.

PGN-plus and PZN-plus: Powerful gripping modules

The parallel gripper PGN-plus, and the centric gripper PZN-plus are the flagships of multi-tooth guided heavy-duty grippers from SCHUNK.

DPG-plus: Sealed gripper for dirty environments

The completely sealed 2-finger parallel gripper DPG-plus is an expert for handling tasks in wet areas, and dirty environments. With IP67 it offers the highest tightness of its class.



Heavy-Duty Gripper SLG

SLG: Heavy-duty gripper – powerful and light

The standardized, servo-electrically driven heavy-duty gripper SLG controls the weight class of more than 200 kg. It is equipped with prism jaws, and can be used for handling of 700 kg and more.

PZB-plus: Powerful centric gripper with center bore

The 3-finger centric gripper PZB-plus disposes of a standard gripper with a unique center bore, which is designed as a fit.

Overview of Heavy-Duty Grippers

		Workpiece weight	Gripping force	Size	Dead weight
DPG-plus		up to 46 kg	11,250 N	380	41.0 kg
PGN-plus		up to 80 kg	21,150 N	380	39.5 kg
PZB-plus		up to 100 kg	27,400 N	300	53.0 kg
PZN-plus		up to 190 kg	57,000 N	380	73.5 kg
SLG		up to 700 kg	23,000 N	150	350.0 kg

"SCHUNK Heavy-duty grippers with multi-tooth guidance. They hold with power and precisely."

J. Lehmann

Jens Lehmann,
German goalkeeper legend,
brand ambassador of SCHUNK,
the family-owned company, since 2012

