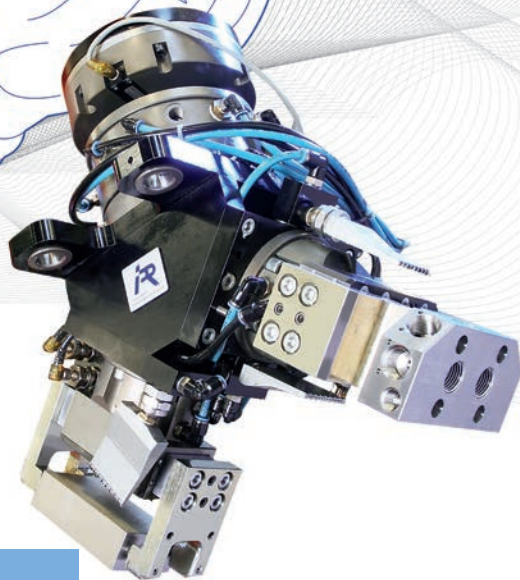


IPR PRODUCT RANGE

COMPACT



iR
INTELLIGENTE
PERIPHERIEN FÜR ROBOTER

IPR provides everything robots need to do their job

A product portfolio setting standards in selection and quality.



We develop and manufacture high-quality components and systems for assembly and handling technology. This product range enables our company to successfully support economic sectors such as the automotive and supplier industries, machine tools and plant construction, the electronics industry, renewable energies, retail, medical technology and the aviation and aerospace industries. Our international representations and partners advise and deliver to our customers worldwide.



Broad services spectrum

Our standard product range consists of parallel and angular grippers, tool changers, compensation devices, load limiters, rotary actuators and robot transport units. We also develop customised solutions for our customers.

New developments

The designers and engineers at IPR are professionals in their fields and have in-depth knowledge of the industries in which we work and of production processes. Our specialists implement individual projects proficiently, professionally and on time.

IPR quality

Machinery equipped with the latest manufacturing technologies and processes, extensive manufacturing depth and highly trained employees ensure that each and every product is manufactured to a maximum degree of precision, accuracy and quality.

Our principles

What we stand for.

CUSTOMER FOCUS

We are customer-oriented.

FLEXIBILITY

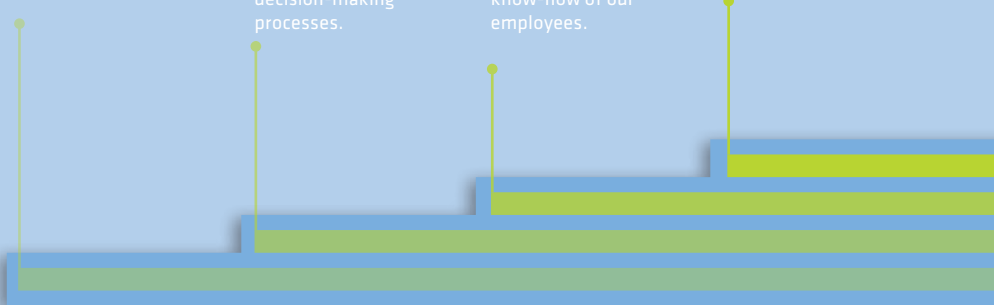
We represent lean structures and short decision-making processes.

COMPETENCE

We offer years of expertise and the know-how of our employees.

GLOBAL PRESENCE

We are represented worldwide.



QUALITY & INNOVATION

We offer high-quality,
innovative solutions.



Our services

Intensive support through every phase.



Original spare parts service

- Pre-picked spare parts sets
- Express shipment
- Delivery service

Repair service

- Collection and delivery service
- Express repairs

Maintenance service

- Exchange of spare parts and wearing parts
- Maintenance plans / contracts

Customer training courses

- On-site or at IPR





Initial analysis of customer requirements

- Development of a proposed solution
- Compilation of a project plan

Assistance in component selection

- Gripper selection program

Cost / benefit optimisation

Feasibility analyses

- Technical design
- Design test



Customised developments

- Engineering & calculations

CAD data always available

- 3D data in the STEP format
- CADENAS PARTcommunity

Customised documentation

- Assembly instructions
- Detailed parts lists

Simulation models

- FEM analyses
- 3D design
- Results report

Parallel gripper

Solutions within your grip.

Mode of operation

- Gripping and handling of parts and workpieces
- 2 and 3-jaw parallel grippers
- Sliding or roller guide - depending on the series

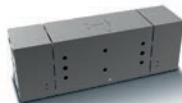
BENEFITS

- Easy to assemble
- High availability and long operating life
- Large opening lifts with low external dimensions
- Strong gripping forces



IRP-19

2-jaw parallel gripper
with DIN / ISO robot
flange

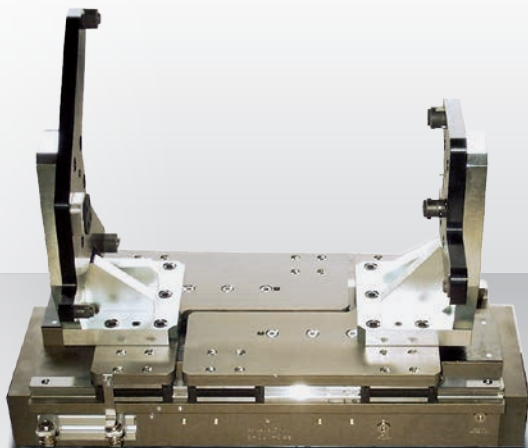


RPW-1200

2-jaw parallel gripper
with sliding guide

LPG-160-P-FA

Parallel gripper
with roller guide



DATA OVERVIEW OF PRODUCT CATEGORY

Recommended
max. workpiece weight
up to 150 kg

Lift (total)
4.2 mm to 198 mm

Gripping force at $p = 6 \text{ bar}^*$
90 N to 17,600 N

Repeatability
of 0.01 to 0.05

* Total of individual forces
on the gripping jaws



Additional technical details:
www.iprworldwide.com

Angular gripper

Understanding requirements.

Mode of operation

- Handling of parts and workpieces
- 2-jaw and 3-jaw angular gripper with sliding guide
- Opening jaw angle up to 180°

BENEFITS

- Easy to assemble
- High availability and long operating life
- Low design
- Light weight

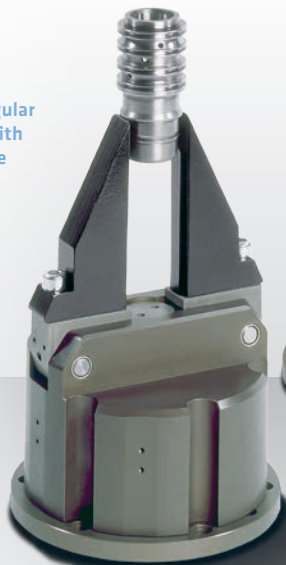
RA-5

2-jaw angular gripper



WG-125

2-jaw angular gripper with workpiece



WGC-125

3-jaw angular gripper



DATA OVERVIEW OF PRODUCT CATEGORY

Recommended
max. workpiece weight
up to 16 kg

Opening angle
30° to 180°

Gripping force at
p = 6 bar and axis distance*
80 N at 30 mm
to 9,150 N at 100 mm

Repeatability
of 0.05 to 0.1

* Total of individual forces
on the gripping jaws



Additional technical details:
www.iprworldwide.com

Tool changer

Specialist and all-round talent – automatic change without delays.

Mode of operation

- Fast change of tools and grippers on the robot or portal
- Handling weight up to 1.000 kg
- Optional electric, pneumatic and hydraulic designs

BENEFITS

- Easy to assemble
- Very flexible due to short changeover times
- Spring safeguards gripping force if there is a drop in air pressure
- High availability and long operating life



2D-NAD-changers

Special nozzle changer for PVC applications

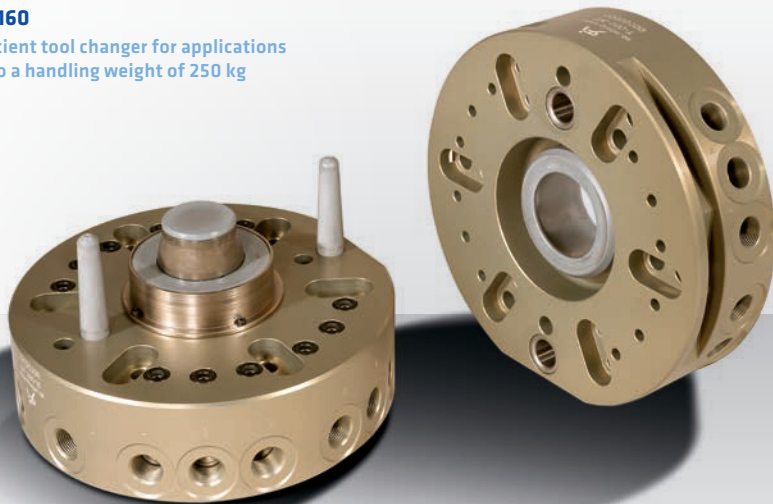


TK-200-SQ

Robust tool changer for the secure pick-up of tools

TK-160

Efficient tool changer for applications
up to a handling weight of 250 kg



DATA OVERVIEW OF PRODUCT CATEGORY

Recommended
max. handling weight
up to 1.000 kg

Maximum tensile F_z
(static load) at 6 bar
900 N to $3 \times 35,500$ N

Maximum compressive
force F_D (static load)
2,200 N up to 80,000 N

Maximum torsion moment
 M_z (static load) at 6 bar
29 Nm to 2.000 Nm



Additional technical details:
www.iprworldwide.com

Compensation devices

Detailed precision.

Mode of operation

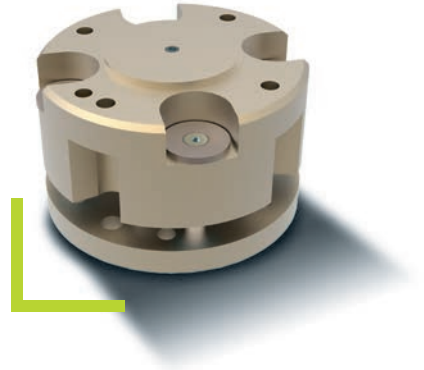
- No edging and jamming of parts and workpieces during assembly works
- Collision detection in Z-direction and compensation of differing height positions
- Protection of robots and assembly structures from premature wear and damage

BENEFITS

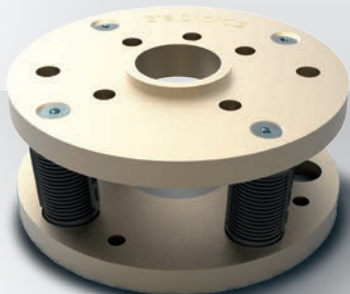
- Easy to assemble
- High availability and long operating life
- Short set-up times and minimisation of operating cycles
- More cost-effective peripherals through reduced precision of workpiece carriers and clamps
- Elements can be combined with each other

ZN-100

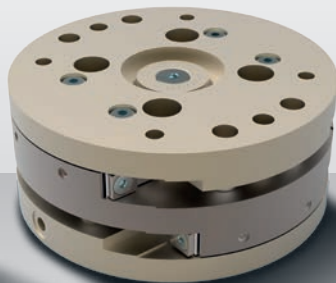
Z-axis compliance device



FM-100-G-6
Compliance wrist



KA-125
Lateral alignment device



DATA OVERVIEW OF PRODUCT CATEGORIES

FM - Compliance wrist

- Alignment X/Y of +/- 2 mm to +/- 3 mm
- Angular alignment +/- 1° to +/- 2°

KA - Lateral alignment device

- Alignment X/Y of +/- 1.5 mm to +/- 25 mm

ZN - Z-Axis compliance device

- Alignment / deflection path from 8 mm to 12 mm



Additional technical details:
www.iprworldwide.com

Load limiter

In an emergency – for a longer operating life.

Mode of operation

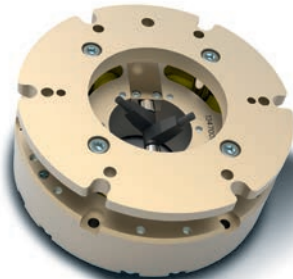
- Avoids / reduces damage from collisions in the production process
- Automatic stop of robots through sensory monitoring in the event of mechanical overload and / or collision (through incorporation into controls)
- Easy and precise manual resetting to the starting position

BENEFITS

- Easy to assemble
- High availability and long operating life
- High repeatability
- Safeguarding of robots and / or gripping system

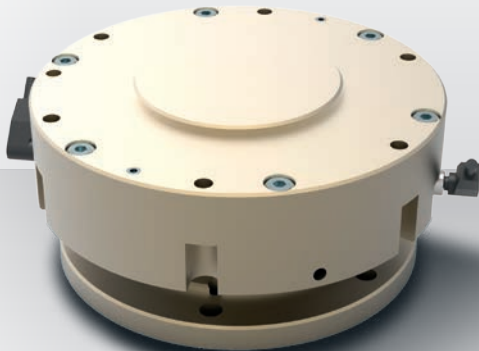
ULD

Load limiter with
internal cable routing



ULS

Load limiter



DATA OVERVIEW OF PRODUCT CATEGORY

**Recommended
max. handling weight**
up to approx. 12,000 kg

Deflection in Z-direction
9.5 mm to 25 mm

Horizontal deflection
4° to 12°

Torsion deflection
+/- 20° to 360°

Repeatability
of 0.02 to 0.2



Additional technical details:
www.iprworldwide.com

Rotary actuator

Rotating on position.

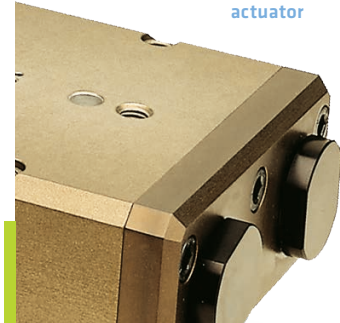
Mode of operation

- Flexible and dynamic rotation of weights up to 120 kg
- Vertical or horizontal integration
- Rotation angle up to 180°

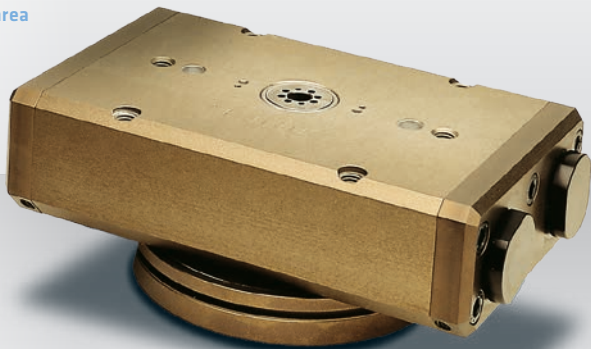
BENEFITS

- Long operating life
- High availability
- Consistent travel behaviour even with high acceleration
- Optimum attenuation even on load change

With pneumatic actuator



Simplifies processes
in the handling area



DATA OVERVIEW OF PRODUCT CATEGORY

Rotation angle
up to 180° adjustable

Nominal torque
12 Nm to 40 Nm at 6 bar

Repeatability
+/-0,05°



Additional technical details:
www.iprworldwide.com

Robot transport unit

For more movement in plants.

Mode of operation

- Expansion of robot working areas
- Expansion enabled by modular structure
- Suitable for all common robot types and weight classes:
ABB, ADEPT, COMAU, DENSO, EPSON, FANUC, KAWASAKI,
KUKA, MITSUBISHI, NACHI, OTC, STÄUBLI and YASKAWA

BENEFITS

- Easy to assemble
- Extremely resilient
- High repeatability
- High availability and long operating life

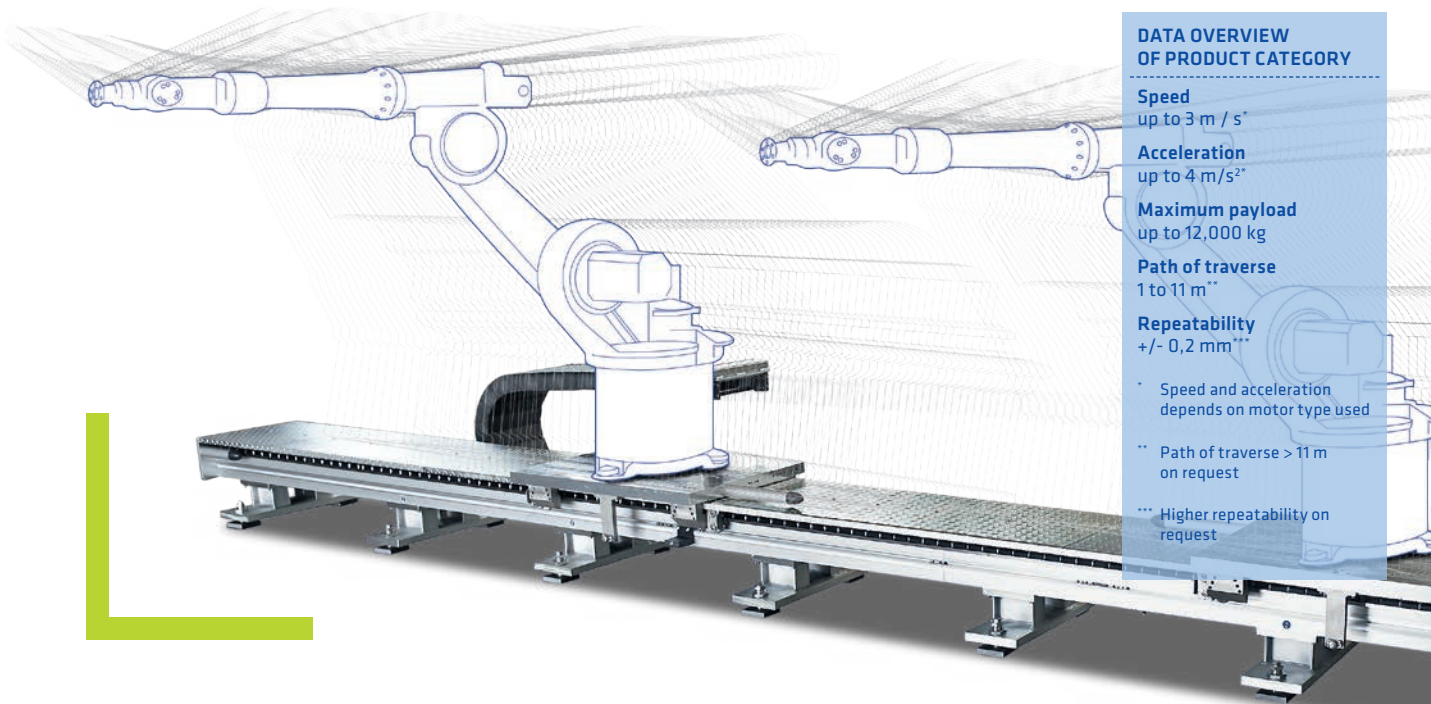


Additional technical details:
www.iprworldwide.com

IP-160-RA

Rapid and precise assembly
through adjustable floor-mounting
elements





**DATA OVERVIEW
OF PRODUCT CATEGORY**

Speed
up to 3 m / s*

Acceleration
up to 4 m/s²*

Maximum payload
up to 12,000 kg

Path of traverse
1 to 11 m**

Repeatability
+/- 0,2 mm***

* Speed and acceleration depends on motor type used

** Path of traverse > 11 m on request

*** Higher repeatability on request

Industry solutions

Customer benefits are our focus.

Different sectors are faced with different challenges but they all need a partner with expertise in their specific industry which helps them overcome these challenges. Therefore, in addition to our extensive standard range, we also offer special solutions to our customers. Proven sector knowledge and a sophisticated customer-orientation ensure high-quality, high-performance products which have been winning over customers internationally for many years.



**MACHINERY
AND EQUIPMENT
CONSTRUCTION**



**AVIATION
AND AEROSPACE**



**ELECTRONICS
INDUSTRY**



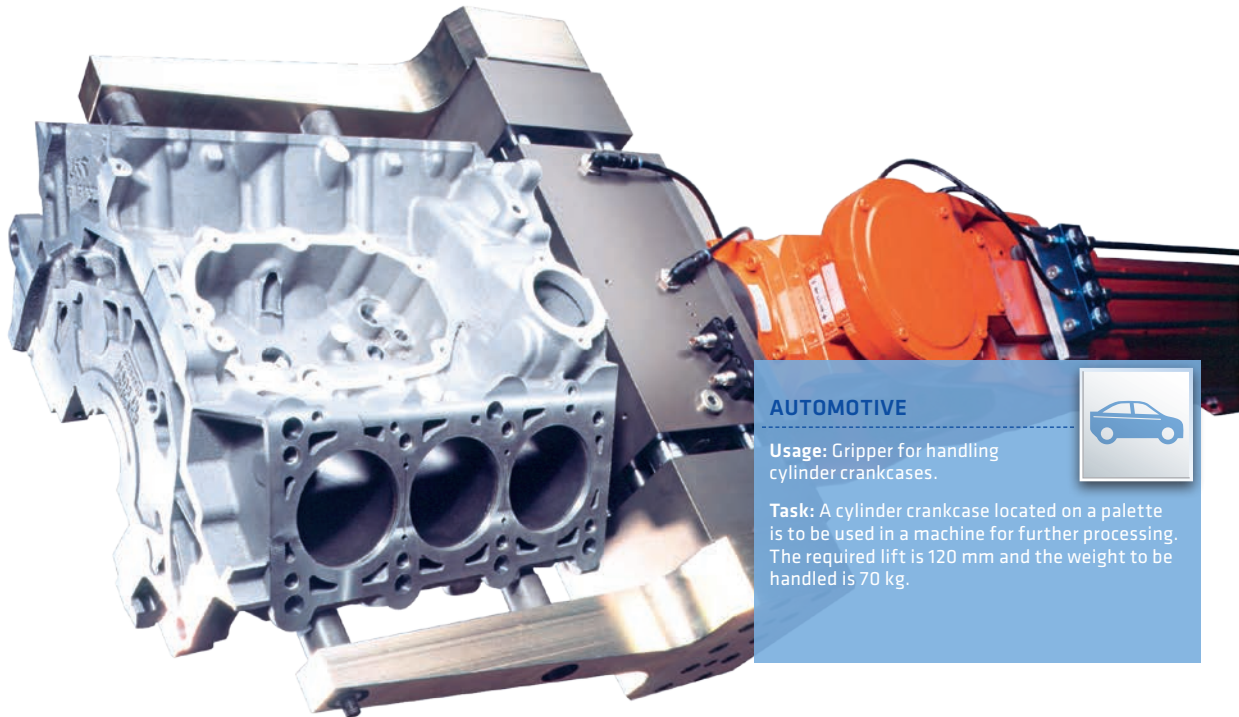
**RENEWABLE
ENERGIES**



RETAIL



**MEDICAL
TECHNOLOGY**



AUTOMOTIVE



Usage: Gripper for handling cylinder crankcases.

Task: A cylinder crankcase located on a palette is to be used in a machine for further processing. The required lift is 120 mm and the weight to be handled is 70 kg.



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