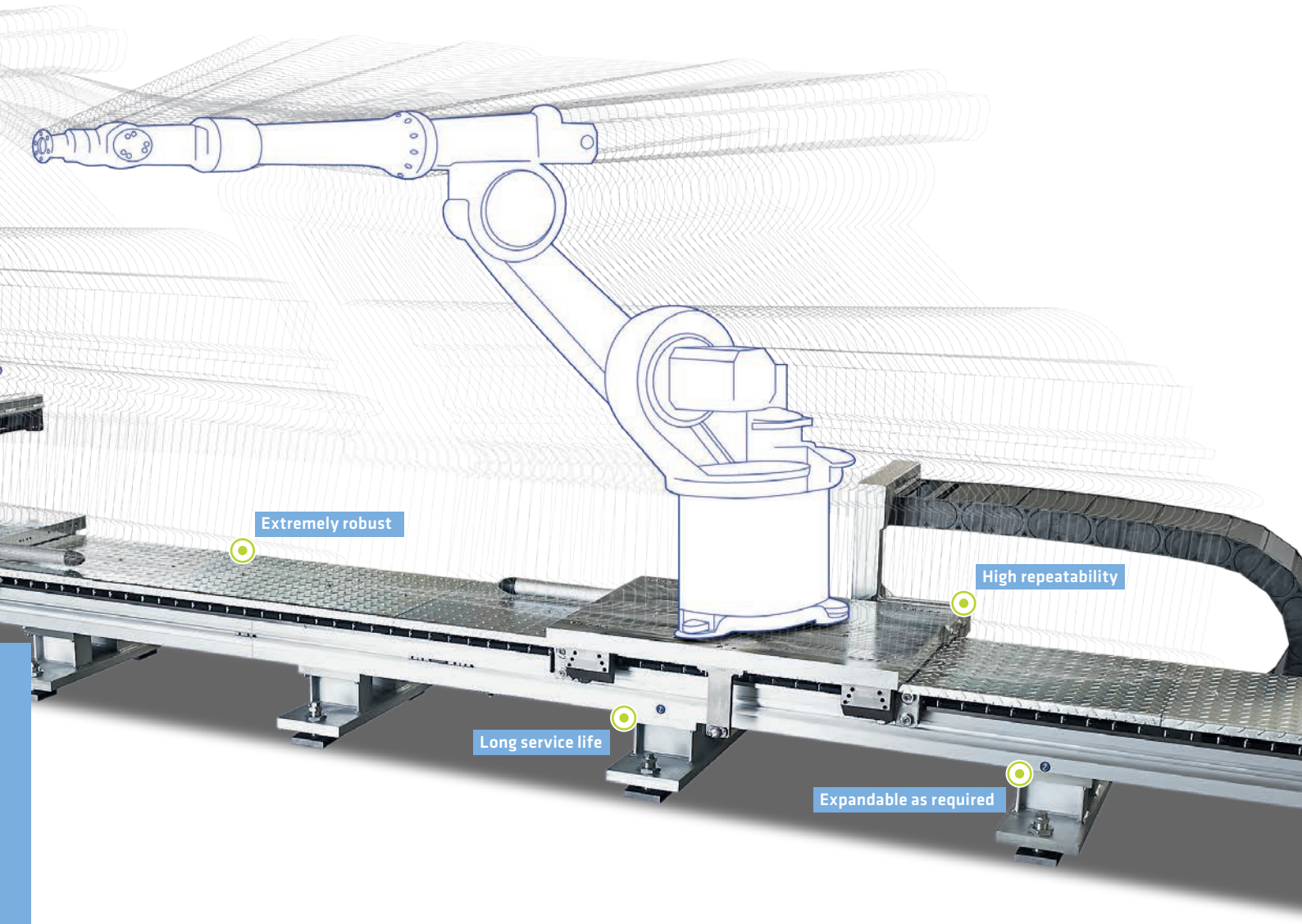
7TH AXES
FOR INDUSTRIAL ROBOTS

IP-RA-SERIES



INTELLIGENTE
PERIPHERIEN FÜR ROBOTER

Work with the No. 1 in 7th Axis Technology.

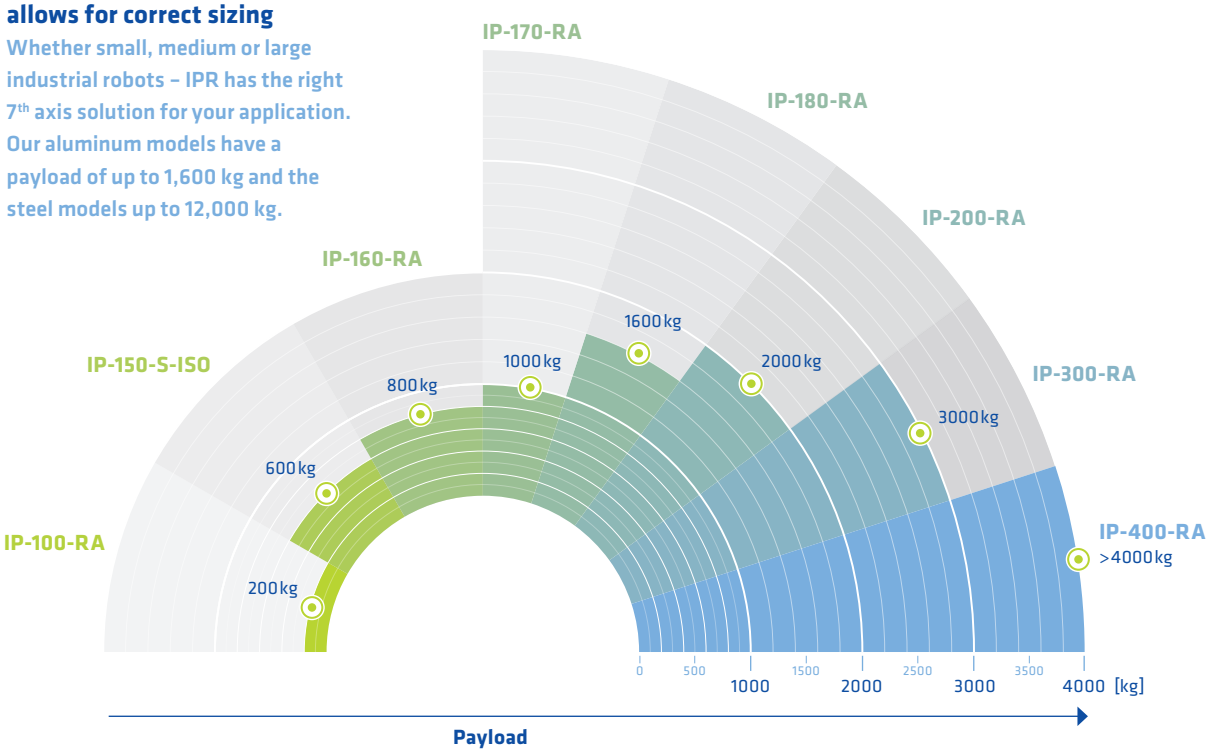
IPR 7th axes for industrial robots add flexibility and precision to the production process.

Modular system: expandable as required.

We focus on productivity and economic efficiency for you: the 7th axes from the IP-RA series reliably expand the working range of industrial robots in all industries – around the clock, seven days a week. Another plus: with their galvanized diamond plate or stainless steel covers – the 7th axes can be walked on and are protected against dirt and overspray. A variety of surface textures ensure safe grip for any production environment. Like no other 7th axis, the IP-RA range with its unique system of single and twin profiles – made of aluminum or steel – covers payloads of up to 12,000 kg. Starting with a basic module – two meters long with a travel length of one meter – the total length of the 7th axis can be easily selected in increments of 100 mm.

Wide variety of payloads allows for correct sizing

Whether small, medium or large industrial robots – IPR has the right 7th axis solution for your application. Our aluminum models have a payload of up to 1,600 kg and the steel models up to 12,000 kg.



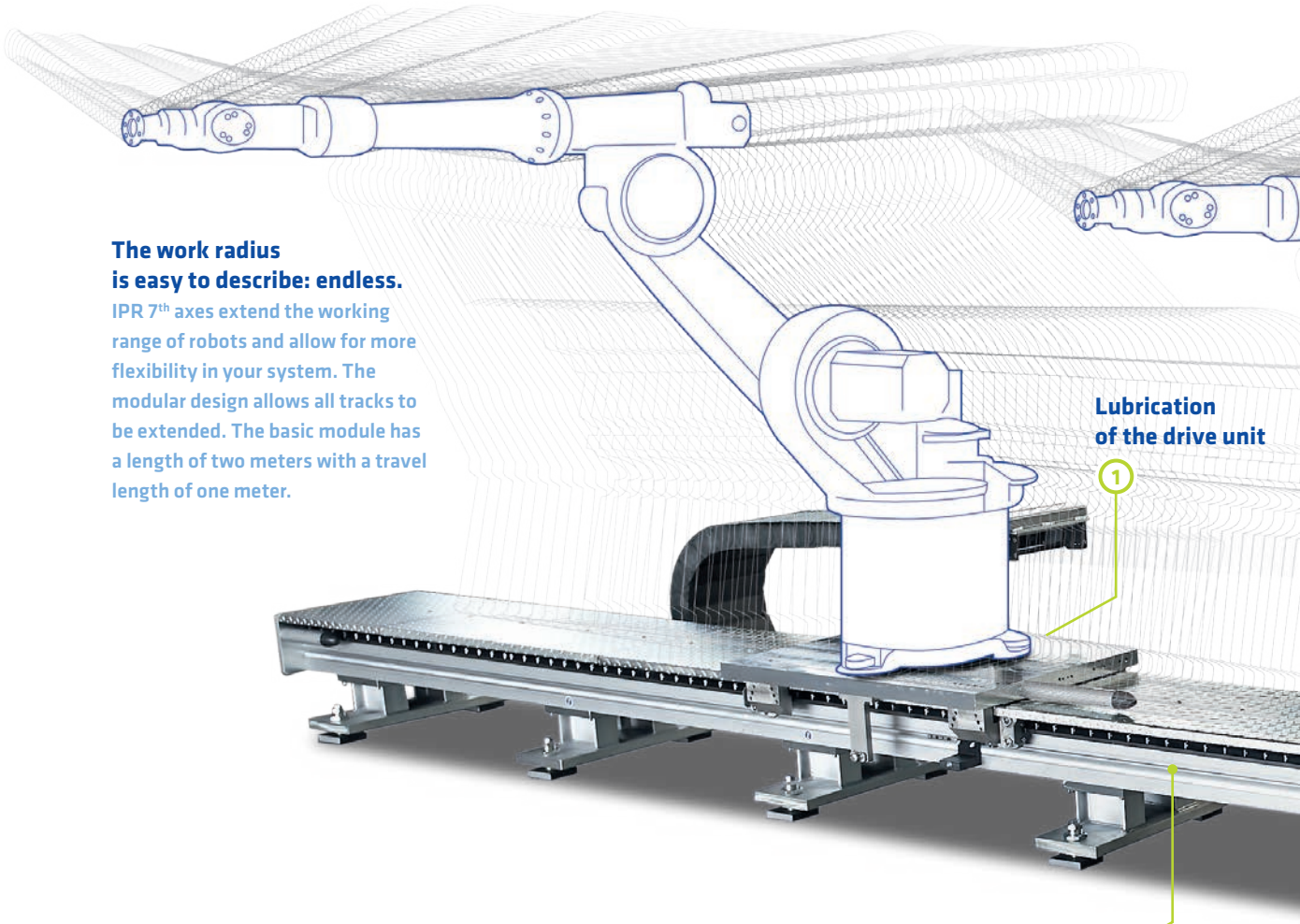
IP-400-RA for the heaviest payloads
A welded steel construction makes the IP-400-RA ideal for applications with a payload of up to 12,000 kg.

IPR MOVES YOUR ROBOTS THE RIGHT WAY – THE SUCCESS OF OUR 7TH AXIS UNITS IS BUILT ON A NUMBER OF SIGNIFICANT FACTORS

- **High quality** through premium raw materials, years of experience in manufacturing and development along with innovative production methods
- **Extreme robustness** through graduated maximum payloads from 200 to 12,000 kg
- **High repeatability** through helical cut rack-and-pinion and high-precision components manufactured in-house
- **Long service life** through a dynamic conceptual approach and professional 7th axis design
- **High availability** through perfectly coordinated assemblies
- **Flexible expansion** through modular design – also as retrofit
- **Ideal in all environments** through a covered drive system which protects the tracks, allowing them to be walked on

A Robot's favorite Race Track. Whether short or long Distance.

Technical highlights offer clear benefits.



The work radius is easy to describe: endless.

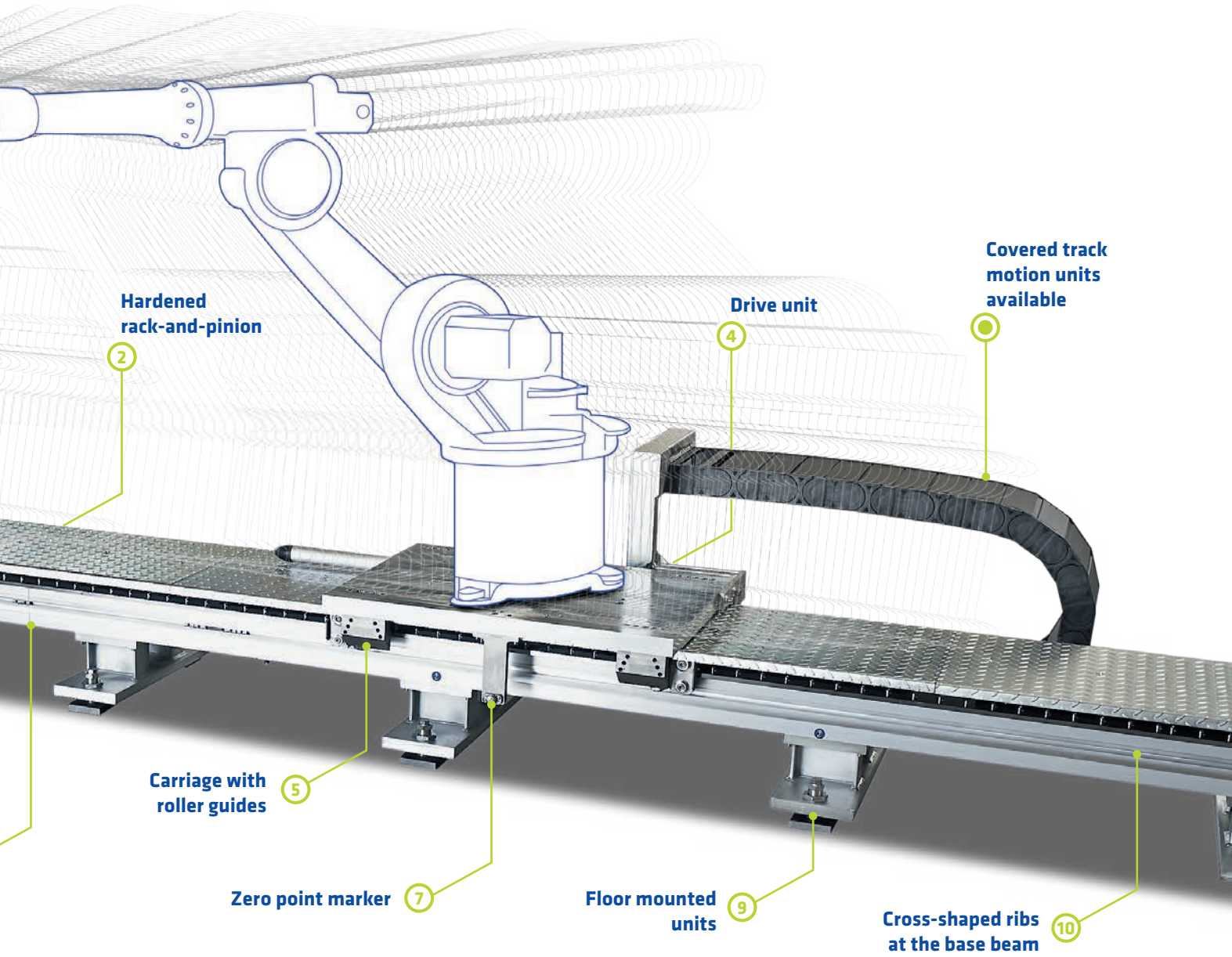
IPR 7th axes extend the working range of robots and allow for more flexibility in your system. The modular design allows all tracks to be extended. The basic module has a length of two meters with a travel length of one meter.

Three cheers for variety IPR 7th axes.

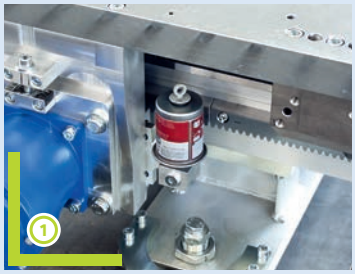
A total of eight IP-RA standard models are available as floor axes. IPR 7th axes are also available as raised, ceiling, wall and vertical tracks or as tracks with coaxial extensions.

AREAS OF APPLICATION FOR IPR 7TH AXES

- Assembly and handling technology
- Machine loading and unloading
- Paint applications
- Cavity waxing
- Seam sealing applications
- Sanding and polishing applications
- Foundry



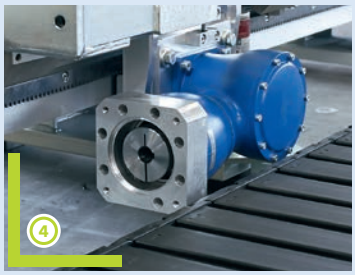
TECHNICAL DETAILS



Lubrication of the drive unit
with cartridge system for increased service life

Rack-and-pinion
hardened and helical cut for increased repeatability

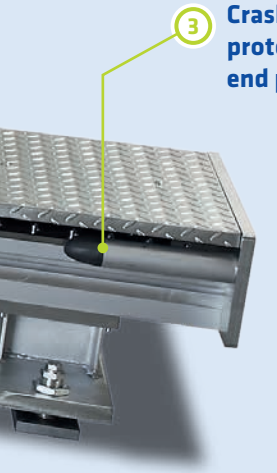
Crash protection in end position
for more safety and increased service life



Drive unit
mounted at the side and adjustable

Carriage with roller guide
for easier maintenance

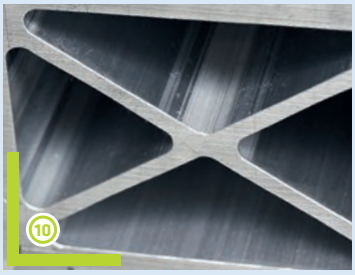
Guide rails
hardened and ground for repeatability and positioning accuracy



Zero point marker
position options (selectable)

Form-fit connection
for optimized movement

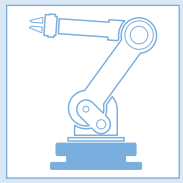
Adjustable floor-mounting elements
pegged or welded – simplify installation and conversion



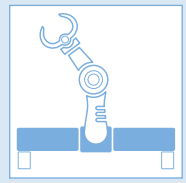
Cross-ribbing of the aluminum base beams
for extreme loads on the tracks

Versions, Options, Accessories

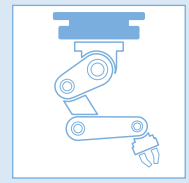
VERSIONS



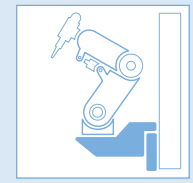
Floor-mounted track (standard)



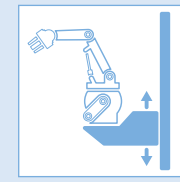
Raised track



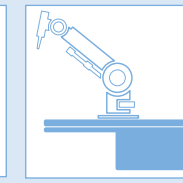
Ceiling track



Wall track



Vertical track



Track with cantilever extension

OPTIONS AND ACCESSORIES

Atex protection
in explosive atmospheres

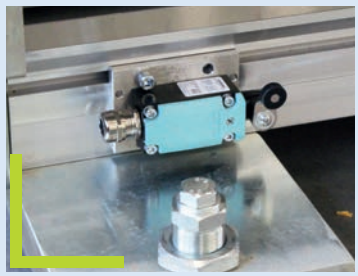
Cover with diamond plate
made of galvanized or stainless steel

Cable carrier
with housing made of steel or stainless steel

Central lubrication
of rollers for easier maintenance

Additional carriage
with gear box

Collision protection
mechanically and with sensors



Limit position detection
and area monitoring with roller lever switch

Give your Robots an ideal Basis for Working.

As varied as your tasks: our 7th axes.

The IP-RA range comprises eight different sizes and load ranges. This variety allows you to select a model suitable for your industrial robot and application within a given space. Once installed, you can adapt your 7th axis model from the IP-RA range of products to changing conditions at any time, quickly and flexibly. In addition to the eight IP-RA floor track models, you can now also choose from five other product areas: IPR 7th axes are also available as raised, ceiling, wall and vertical tracks or as tracks with cantilever extensions. To date, IPR has sold over 1,250 7th axes (status 2015) worldwide.

WE MAKE IT FIT: IPR 7TH AXES FOR INDUSTRIAL ROBOTS FROM ALL MANUFACTURERS

You are completely free to select your robot for the IPR 7th axis. We work with all manufacturers and the carriage plate for your IP-RA model will be supplied with the correct drilling pattern. If you are using multiple carriages, you can also combine robots from different manufacturers without difficulty.

ABB · Comerobot · DÜRR · FANUC · Kawasaki Robotics · KUKA · STÄUBLI · YASKAWA

Technical Data

Every detail counts: find the technical data for the IP-RA range here. Discover the most important features and capabilities of our 7th axes. Whether the main profile is made of aluminum or steel – the 7th axes can be flexibly configured. Make your selection.

IPR 7TH AXES

	IP-100-RA	IP-150-S-ISO	IP-160-RA	IP-170-RA
Material	aluminum	aluminum	aluminum	aluminum
Profile	single profile	single profile	twin profile	twin profile
Speed	up to 3 m/s*	up to 3 m/s*	up to 3 m/s*	up to 3 m/s*
Acceleration	up to 4 m/s²*	up to 4 m/s²*	up to 4 m/s²*	up to 4 m/s²*
Max. payload	200 kg	600 kg	800 kg	1,000 kg
Travel length	1–35 m	1–50 m	1–50 m	1–50 m
Repeatability	± 0,2 mm**	± 0,2 mm**	± 0,2 mm**	± 0,2 mm**
Robot examples	▪ ABB IRB120 ▪ FANUC Mate 200ic ▪ KUKA Agilus ▪ Hirata AR-F500	▪ ABB IRB 1600 ▪ ABB IRB 2600 ▪ FANUC M-10iA ▪ FANUC M-20iA ▪ KUKA KR 16 ▪ Yaskawa HP20	▪ ABB IRB 2600 ▪ FANUC M-20iA ▪ KUKA KR 16	▪ ABB IRB 4600 ▪ FANUC M-710iC ▪ KUKA KR 30

	IP-180-RA	IP-200-RA	IP-300-RA	IP-400-RA
Material	aluminum	steel	steel	steel
Profile	twin profile	twin profile	twin profile	welded construction
Speed	up to 3 m/s*	up to 2 m/s*	up to 2 m/s*	up to 1 m/s*
Acceleration	up to 4 m/s²*	up to 2 m/s²*	up to 2 m/s²*	up to 1 m/s²*
Max. payload	1,600 kg	2,000 kg	3,000 kg	12,000 kg
Travel length	1–50 m	1–80 m	1–80 m	1–80 m
Repeatability	± 0,2 mm**	± 0,2 mm**	± 0,2 mm**	± 0,2 mm
Robot examples	▪ ABB IRB 4600 ▪ FANUC M-710iC ▪ KUKA KR 30	▪ FANUC R-2000iB ▪ KUKA KR60	▪ ABB IRB6640 ▪ KUKA KR QUANTEC Serie	▪ FANUC M 2000 ▪ KUKA Titan ▪ ABB IRB 8700

* Speed and acceleration depend on motor type used
** Higher repeatability on request

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engineered and made in Germany

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