

# 7<sup>TH</sup> AXES MADE OF COMPOSITE CONCRETE

RC-SERIES

WORLD  
DEBUT

PATENT  
PENDING

CO<sub>2</sub> emission\*  
reduced by 75 %

Energy requirement\*  
reduced by 90 %

Installation space\*\*  
reduced by 46 %

  
INTELLIGENTE  
PERIPHERIEN FÜR ROBOTER

\* Compared to a 7th axis base body made of steel

\*\* If equipped with inside cable carrier

Our unique world debut shifts boundaries. And robots – more efficient than ever.

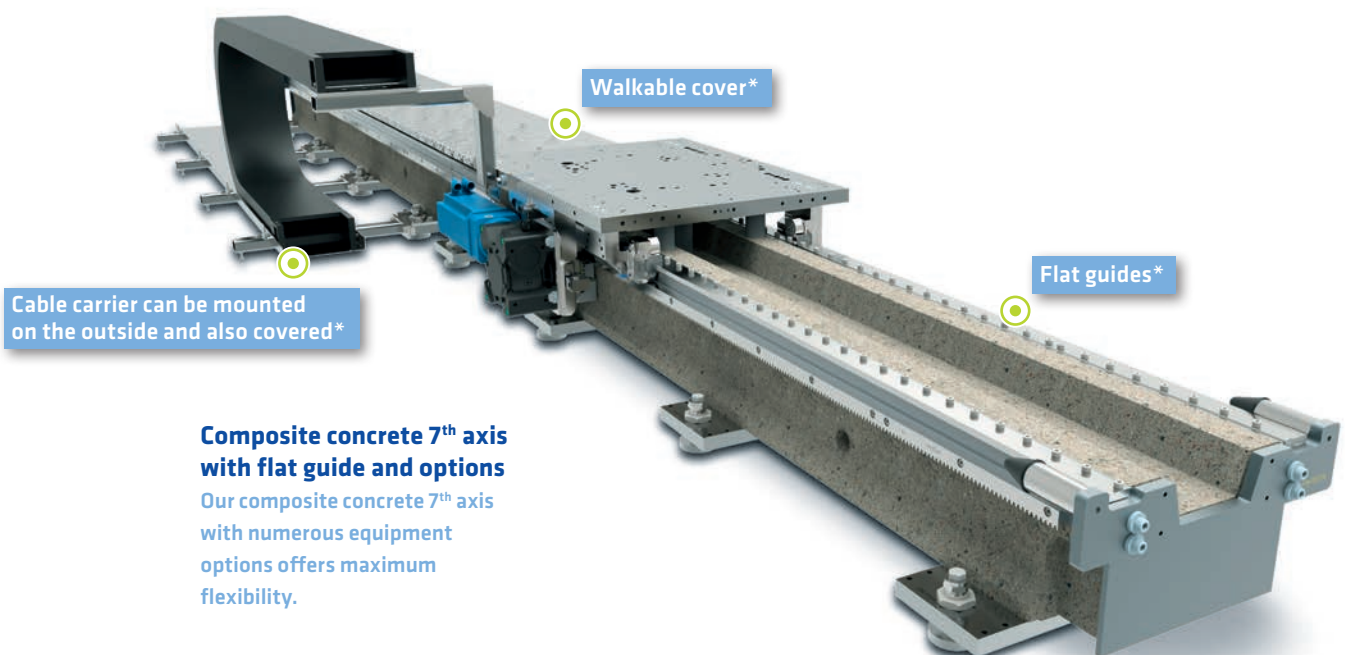
The first 7<sup>th</sup> axis worldwide made of composite concrete defines a completely new product generation.

#### IPR revolutionizes the 7<sup>th</sup> axis

Something unique: IPR's 7<sup>th</sup> axis with a base body made of composite concrete instead of metal. This product innovation by IPR offers only advantages: As a cost-effective solution, it requires a smaller installation area. It is also sustainable, quiet and torsion-resistant, with low vibration levels. Another advantage: it can be selected between a flat guide and profiled rail guide.

#### WITHOUT COMPETITION

- Excellent life cycle assessment
- Extremely small installation space
- Torsion-resistant
- Low vibrations
- Very quiet
- 2 variants for 80 % of all robots
- Very cost-effective

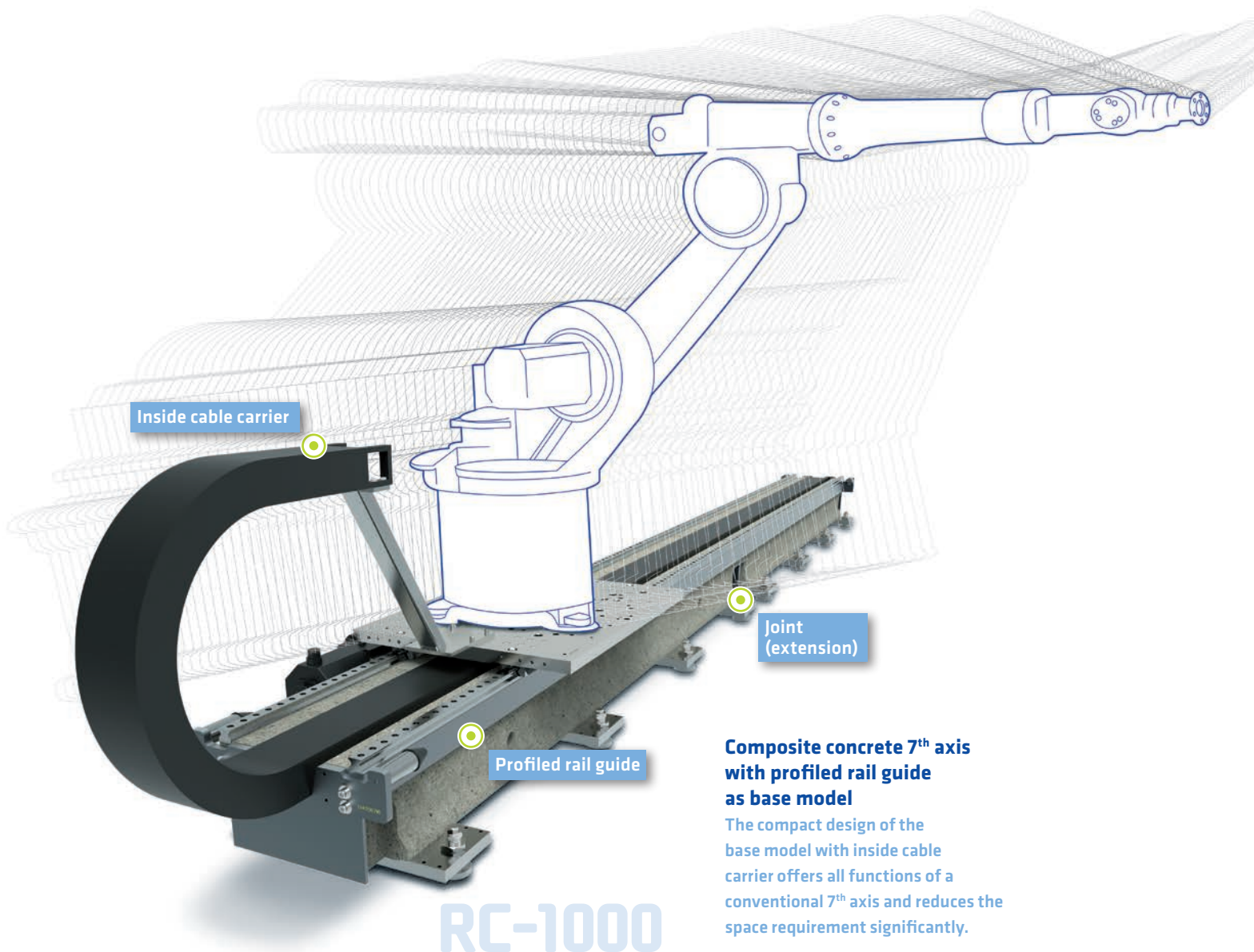


#### Composite concrete 7<sup>th</sup> axis with flat guide and options

Our composite concrete 7<sup>th</sup> axis with numerous equipment options offers maximum flexibility.

RC-1000

\* available as option



### Composite concrete 7<sup>th</sup> axis with profiled rail guide as base model

The compact design of the base model with inside cable carrier offers all functions of a conventional 7<sup>th</sup> axis and reduces the space requirement significantly.

### Composite concrete: Your robots stand on it – very safely.

IPR starts their new RC product class with the two 7<sup>th</sup> axis models RC-1000 and RC-1500 cast from high-quality composite concrete. The two variants are suitable for 80 % of all robots. The maximum load capacity of the RC-1000 is 15,000 N with a bending moment of 15,000 Nm. The maximum load capacity of the RC-1500 is 50,000 N with a bending moment of 72,000 Nm. Both models feature a repeatability of +/- 0.1 mm and travel at a maximum velocity of 3 m/s and with an acceleration of 4 m/s<sup>2</sup> (depends on gear and motor provided by customer).

Compared to metal, composite concrete has a significantly smaller CO<sub>2</sub> footprint: approx. 75 % less CO<sub>2</sub> and 90 % less energy required compared to a 7<sup>th</sup> axis base body made of steel. In addition, composite concrete is torsion-resistant. This means that the dynamic motions of a robot lead to less bending of the 7<sup>th</sup> axis. Furthermore, both RC-1000 and RC-1500 are free from silicone and can be used in special areas such as paint shops.

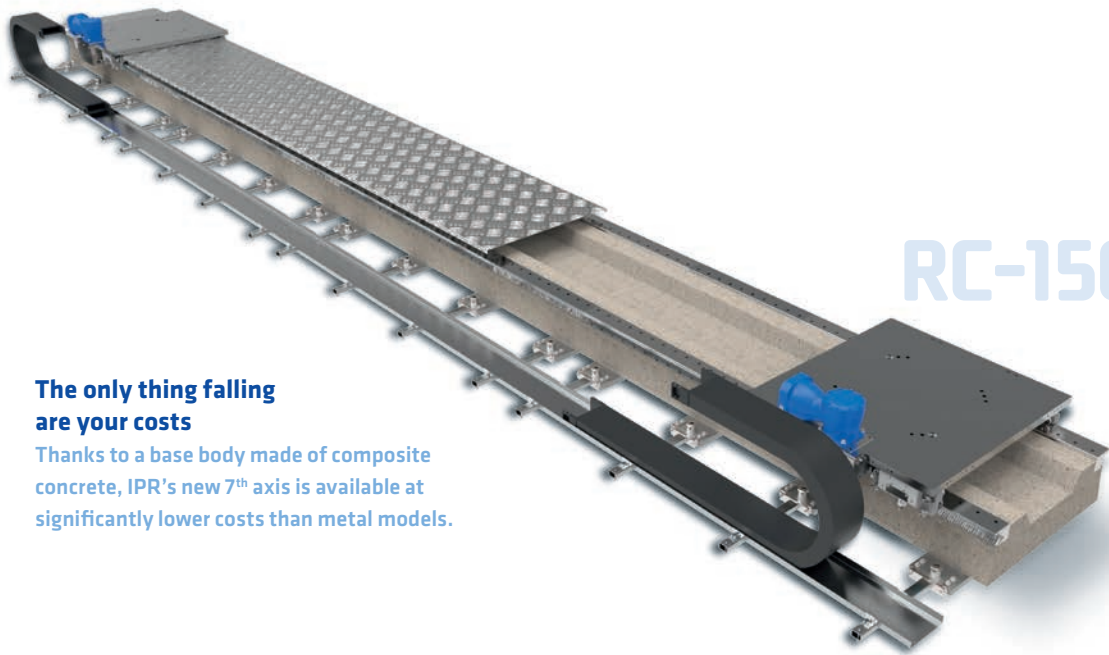
This is it –  
the future of the 7<sup>th</sup> axis.

Everyone who knows the product,  
loves it – except the competition.

RC-1500

**The only thing falling  
are your costs**

Thanks to a base body made of composite  
concrete, IPR's new 7<sup>th</sup> axis is available at  
significantly lower costs than metal models.



	RC-1000	RC-1500
<b>Material</b>	Composite concrete	Composite concrete
<b>Profile</b>	Single profile	Single profile
<b>Guides</b>	Profiled rail or flat guide	Profiled rail or flat guide
<b>Width × height<sup>1,2</sup></b>	approx. 840 mm × 400 mm	approx. 1,400 mm × 530 mm
<b>Mass / m rail</b>	approx. 300 kg	approx. 865 kg
<b>max. travel velocity<sup>3</sup></b>	3 m/s	3 m/s
<b>max. acceleration<sup>3</sup></b>	4 m/s <sup>2</sup>	4 m/s <sup>2</sup>
<b>max. load capacity<sup>4</sup></b>	15,000 N	50,000 N
<b>max. bending moment (Mz)<sup>4</sup></b>	22,000 Nm	72,000 Nm
<b>Repeatability</b>	+/- 0.1 mm	+/- 0.1 mm
<b>Robot examples</b>	ABB IRB2600 / IRB 4600 FANUC M20 / M710 KUKA KR16 / KR30 / KR60 Stäubli TX 2-90 / RX160	ABB IRB6600 series, IRB6700, IRB7600 FANUC R2000 KUKA Quantec series Stäubli TX200

1) Width with inside cable carrier | 2) Height from floor to top edge of carriage | 3) Dependent on motor provided by customer | 4) Per carriage

The figures speak for the new RC series. As do our customers.



90%  
**90 % less  
energy requirement\***

The background of this section features a large, light blue graphic of the number '90%' and a photograph of a wind turbine against a blue sky.

Efficiency and social responsibility  
must not be mutually exclusive.



**46 % smaller  
installation space**

The background of this section features a large, light blue graphic of the number '46%' and a photograph of a mechanical assembly, likely a cable carrier, with a transparent protective cover.

The inside cable carrier reduces  
the space requirements significantly.



75%  
**75 % less CO<sub>2</sub> emission\***

The background of this section features a large, light blue graphic of the number '75%' and a photograph of green trees with sunlight filtering through the leaves.

Resource-saving products  
for more sustainability in your company.



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