



**DYNAMIC LINEAR TECHNOLOGY**



**ROBOT GANTRY**

## SPECIFIC FACTS

Characteristic for the new generation of robot gantries are the FEM-optimized aluminium profiles with cross shaped ribs. This guarantees extreme stiffness and stability of the gantry axes.

Huge cantilever lengths or rather long vertical lifts can be realised with smaller cross-sections of aluminium profiles, which means at least with lower costs.

The concept of the robot gantries is based on a complete modular technique of all components.

The mechanical interface of the vertical axis is a DIN/ISO flange which enables direct mounting of all DIN/ISO modules, as DIN/ISO tool changers, DIN/ISO compliance wrists or DIN/ISO grippers. This makes planning a construction very easy and cheap.



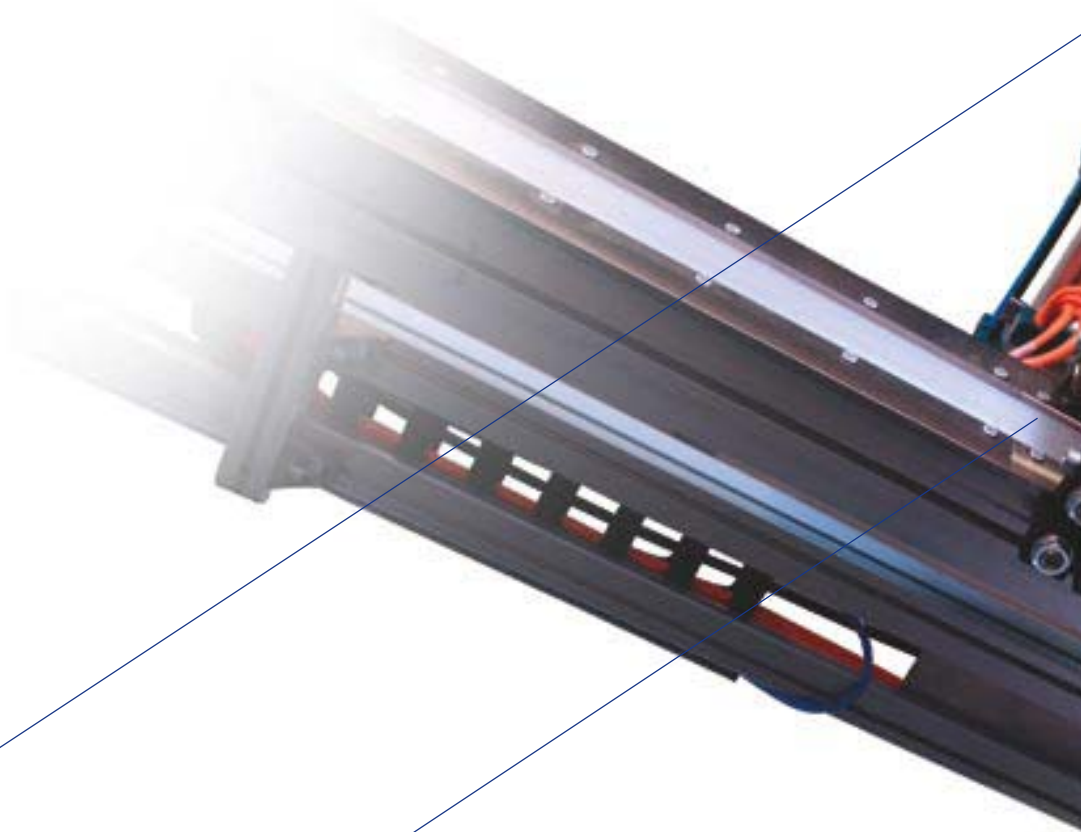
Energy routing chain



Ribs



DIN/ISO flange



## System description

Propulsion via pinion and hardened, helical cog rack. It is adaptable to various power units and control systems. Basic version includes a precise transmission with zero allowance, made by Vogel. Besides a cable drag from Kabelschlepp is integrated to transmit energy and control signals.

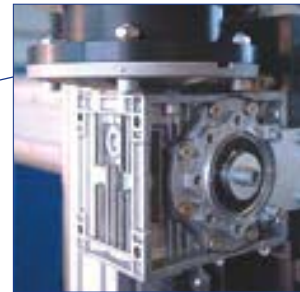
## Benefits

- Hardened and grinded slide rails
- Precise sliding and repeatability of positioning (standard +/- 0,1 mm per axis)
- High payloads possible because of bigger size of carrying rollers
- Stable and quick changeable steel roller housings
- Transmission adjusted



Robot gantry

Robot handle



Transmission socket



Cog rack and pinion



Limit stop

## MECHANICAL CONSTRUCTION

### Basic module

Carriage, including roller housings, squeegee, slide rails, cog rack, closing plates / dampers, Propulsion (excluding power unit)

Basic length 1 m at 0 m traverse path

Max. length of profiles 6 m

Max. total length 30 m

(longer systems on request)

### Extension

Possible steps 100 mm, sustainer required at least every 4 m of additional length

## OPTIONS / ACCESSORIES

- ▶ Lubrication of cog rack by grease boxes
- ▶ Cog rack central lubrication
- ▶ Power routing chain
- ▶ Limit switch with trip rails and trip dogs
- ▶ Additional limit switches for all axes (emergency off, end of driving mode, area monitoring, etc)
- ▶ Emergency securing of z-axis by Sitema element
- ▶ Additional machine racks available in standard or customized version

## SPECIAL VERSIONS (on request)

- ▶ Transmission type
- ▶ Power unit type
- ▶ Increased payload and repeatability

## BASIC FACTS

Slide rail: hardened (HRC 60) and grinded	Cog rack: hardened and grinded, helical
Profiles: cross shaped ribs, aluminium F25	Roller housings: excenter bolts for zero allowance adjustment
Connection parts: shouldered (form-fit transmission)	Machine rack: welded steel (standard version)

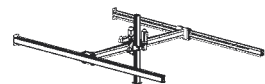
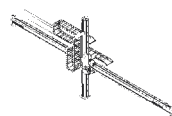
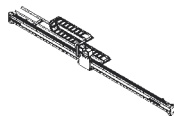
## TECHNICAL FACTS

TYPE	IP-080-X/Z	IP-160-X/Z	IP-200-X/Z
Velocity, horizontal	up to 3 m/sec*	up to 3 m/sec*	up to 3 m/sec*
Velocity, vertical	up to 1,5 m/sec*	up to 1,5 m/sec*	up to 1,5 m/sec*
Acceleration	up to 4 m/sec <sup>2</sup> *	up to 4 m/sec <sup>2</sup> *	up to 4 m/sec <sup>2</sup> *
Max. payload	100 kg	200 kg	400 kg
Traverse path	7 m (> 7 m on request)	11 m (> 11 m on request)	11 m (> 11 m on request)
Repeatability	+/- 0,2 mm (< on request)	+/- 0,2 mm (< on request)	+/- 0,2 mm (< on request)
Propulsion	Three-phase servo motor	Three-phase servo motor	Three-phase servo motor

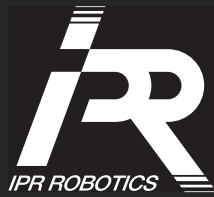
\*dependent on power unit

## SYSTEM OVERVIEW

### Carriages



Max. payload range in case of centric arrangement (kg)	Carriage module X-axis	Carriage module X/Z-axes	Carriage module X/Y/Z-axes
25	IP-080-X	IP-080-X/Z	IP-080-X/Y/Z
50	IP-080-X	IP-080-X/Z	IP-080-X/Y/Z
80	IP-080-X	IP-080-X/Z	IP-080-X/Y/Z
100	IP-080-X	IP-080-X/Z	IP-080-X/Y/Z
160	IP-080-X	IP-160-X/Z	IP-160-X/Y/Z
200	IP-160-X	IP-160-X/Z	IP-160-X/Y/Z
250	IP-160-X	IP-200-X/Z	IP-200-X/Y/Z
300	IP-160-X	IP-200-X/Z	IP-200-X/Y/Z
400	IP-160-X	IP-200-X/Z	IP-200-X/Y/Z
500	IP-200-X		
600	IP-200-X		



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