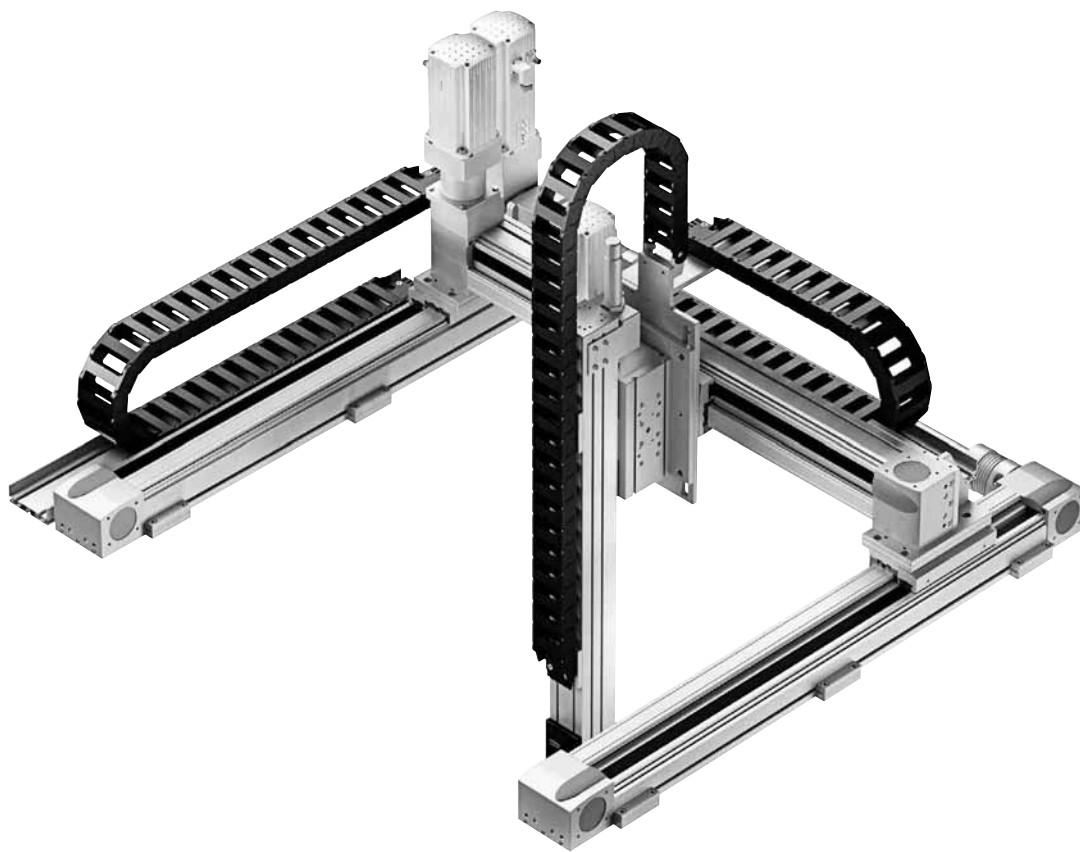




Three-dimensional gantries



A three-dimensional gantry consists of horizontal gantry axes and a vertical drive.

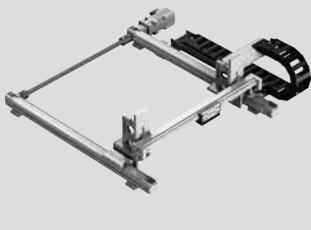
- Can be used universally for handling light to heavy workpieces or high effective loads
- Ideal for very long strokes
- High mechanical rigidity and sturdy design
- Pneumatic and electrical components – freely combinable
- As electrical solution – variable positioning/any desired intermediate positions

Range of application:

- For any movement in 3D space
- Very high requirements on precision and/or very heavy workpieces, with long strokes at the same time

Planar surface gantry

The planar surface gantry is equivalent to a three-dimensional gantry, but without a Z-axis and allows free movement in the plane.



Example: automotive industry

Load handling in assembly system for solenoids



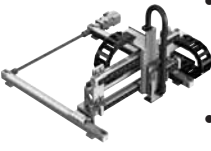



Requirements

- Flexible positioning
- High speed and long horizontal strokes
- Fast system availability
- Complete documentation of process values

Solution

Three-dimensional gantry with toothed belt axes DGE from the multi-axis modular system



Type	Important characteristics	Axis design	Effective load	Max. effective strokes	Components
 <ul style="list-style-type: none"> • Three-dimensional gantry as mono axis • Free movement of Z-axis in the available space (3D) 	<ul style="list-style-type: none"> • Compact design • High process reliability thanks to installation integration • Pneumatic and electric drives • Repetition-accurate, centralised direct axis connections • Pneumatic and electric drives (with freely programmable positions in X and Y) • Very high dynamic response and precision 	X: Gantry axes Y: Gantry axes Z: Slides Cantilever axis	Mono: 0 to 6 kg	X: Up to 8500 mm Y: Up to 1500 mm Z: Up to 300 mm	X: DGE/ EGC Y: DGE/ EGC DGC/DGPL Z: DGSL EGSA
 <ul style="list-style-type: none"> • See above 	<ul style="list-style-type: none"> • See above, points 1–5 • Z-axis with optional intermediate position (can be passed through) and clamping unit 	X: Gantry axes Y: Gantry axes Z: Cantilever axis	Mono: 0 to 5 kg	X: Up to 8500 mm Y: Up to 1500 mm Z: Up to 200 mm	X: DGE/ EGC Y: DGE/ EGC DGC/DGPL Z: HMPL
 <ul style="list-style-type: none"> • See above 	<ul style="list-style-type: none"> • See above, points 1–5 • Z-axis with optional intermediate position and clamping unit 	X: Gantry axes Y: Gantry axes Z: Cantilever axis	Mono: 0 to 10 kg*	X: Up to 8500 mm Y: Up to 2000 mm Z: Up to 400 mm	X: DGE/ EGC Y: DGE/ EGC DGC/DGPL Z: HMP
 <ul style="list-style-type: none"> • Three-dimensional gantry as mono or duo axis • Free movement of Z-axis in the available space (3D) 	<ul style="list-style-type: none"> • See above, points 1–5 • Z-axis alternative guides and drive concepts (motors) 	X: Gantry axes Y: Gantry axes Z: Cantilever axis	Mono: 0 to 15 kg Duo: 0 to 25 kg	X: Up to 8500 mm Y: Up to 2000 mm Z: Up to 900 mm	X: DGE/ EGC Y: DGE/ EGC DGC/DGPL Z: DGEA

- System solution for standardised three-dimensional gantries with effective load up to 50 kg on request
- Long strokes in X direction up to 10 m on request

* With the pneumatic drive DGC, can be used as duo axis

