



CASE STUDY

CNC ENGRAVING MACHINE

APPLICATION OVERVIEW:

This CNC-controlled, three-axis machine uses DryLin® R linear bearings, DryLin® W modular linear guides, and DryLin® T profile rail guides, as well as a Zipper-style cable carrier.

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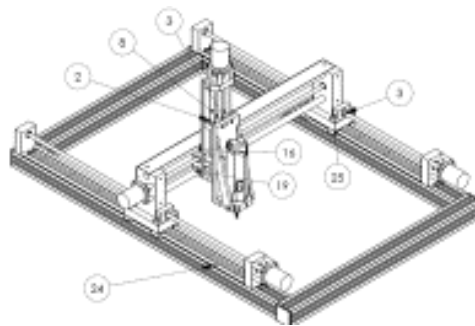
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A CNC-controlled three-axis machine:



- 2) DryLin® R linear bearing
- 3) DryLin® trapezoidal leadscrew nut
- 8) Guide rod
- 16) DryLin® R linear bearing
- 19) Guide rod
- 24) Rail
- 25) DryLin® W modular linear guide

igus Inc.

PO Box 14349

East Providence, RI 02914

P. 1-800-527-2747

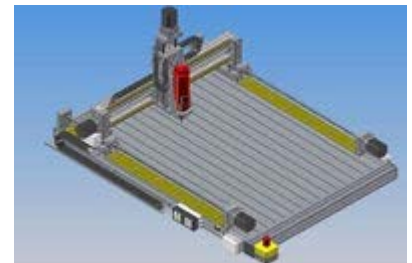
F. (401) 438-7270

sales@igus.com

www.igus.com

General advantages of igus® products:

- Lightweight
- Corrosion resistant
- Not affected by dirt
- Maintenance- and lubrication-free



Linear guide selection criteria

X axis

DryLin® T miniature profile rail guide

Main criteria for selection:

- Compact
- Supported rail system



X axis

Y axis

DryLin® W modular linear guide.

Main criteria for selection:

- Supported rail system
- Low cost
- Very compact, low profile design
- Good absorption of loads from all directions



Y axis

Z axis

DryLin® R linear bearings.

Main criteria for selection:

- Lightweight
- Low cost



Z axis

Cable carriers - selection criteria

The cable carriers used were decided based on the available installation space. As a result, the length, width, height and bending radius of the cable carrier played an important role.





An enclosed system was required to protect the cable from dirt and damage. A Zipper-style Energy Chain® from igus® was chosen to facilitate retrofitting in future.

More on applied products here

[DryLin® overview](#)

[DryLin® T profile rail guides](#)

[DryLin® W modular linear guides](#)

[DryLin® R linear bearings](#)

[Zipper-style cable carriers](#)

More bearings applications from different industries

[Plastic bearings - applications overview](#)