

For forming, cutting,
bending, grinding, and
other metalworking tasks,
PBC Linear manufactures
durable and precise linear
motion solutions that:

Simplify Alignment
and Installation

Reduce Scrap Material

Remove Excess Weight

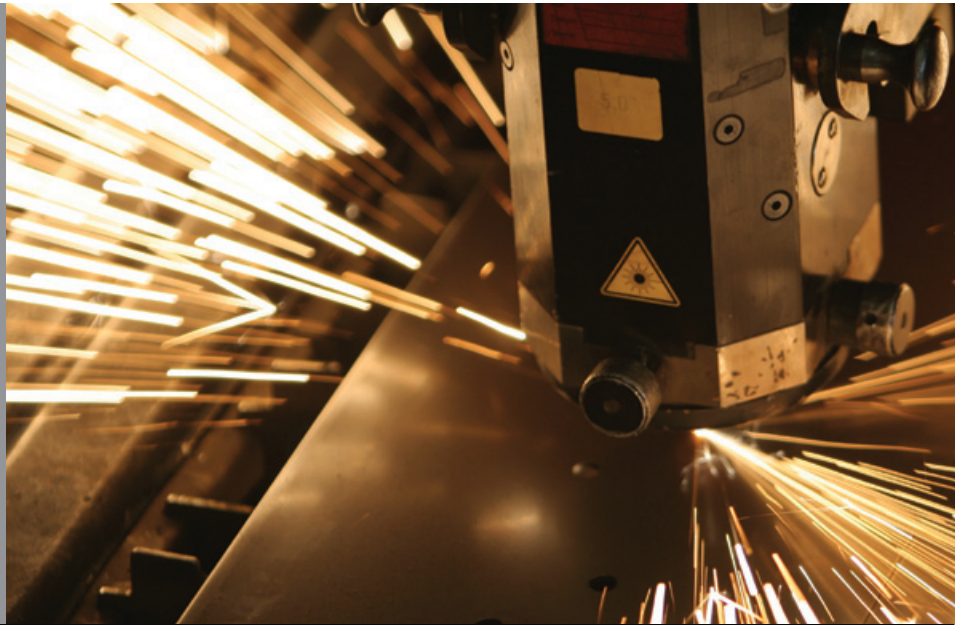
Increase Component Life
and Reliability

PBC Linear specializes
in designing bearings,
components, sub-assemblies,
and linear motion systems
that thrive in tough
environments. These systems
provide extended life while
maintaining precision in spite
of shock loads, metal dust
and chips, weld slag, and
other harsh conditions found
in metalworking industries.

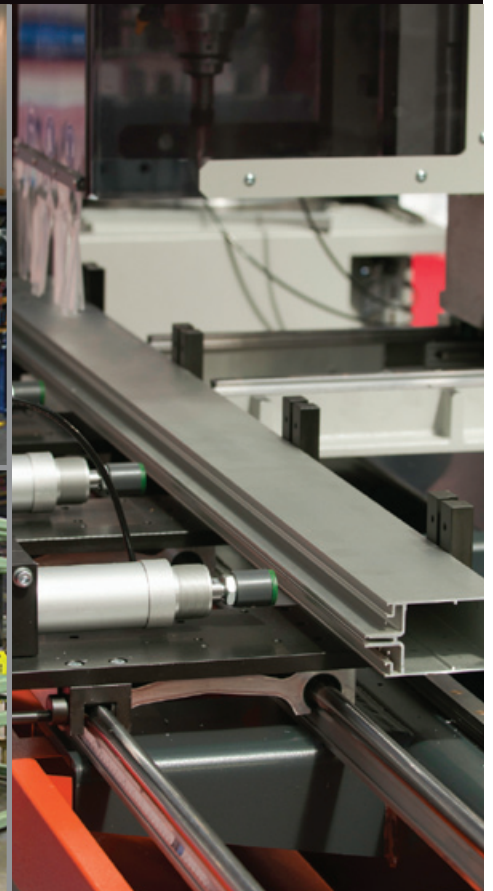


PBC Linear

6402 E. Rockton Road
Roscoe, IL 61073 USA



LINEAR MOTION SOLUTIONS FOR METALWORKING & FABRICATION



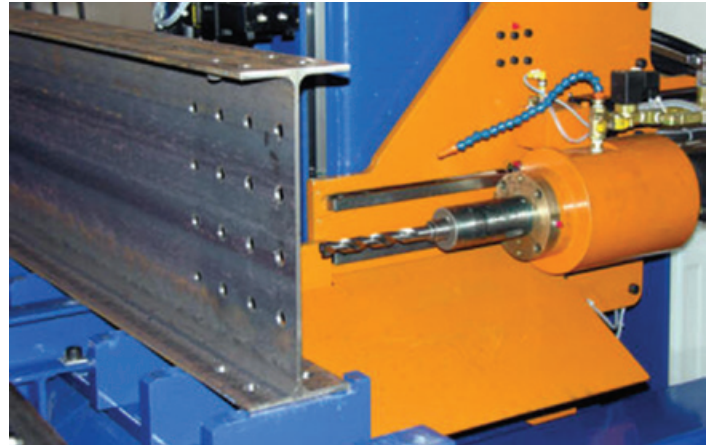
For more information visit **pbclinear.com** or call 1-800-962-8979

PROVEN INDUSTRIAL EXPERTISE

Single-Axis Drilling, Stop Gauge, and Feed Systems

PBC Linear designs precision machined linear guides that act as structural support and are smooth, accurate and reliable. This simplifies alignment and eliminates fasteners and additional mounting components. By using cam roller technology, the linear guides roll through dirt, dust and metal shavings; allowing the product to last in harsh conditions.

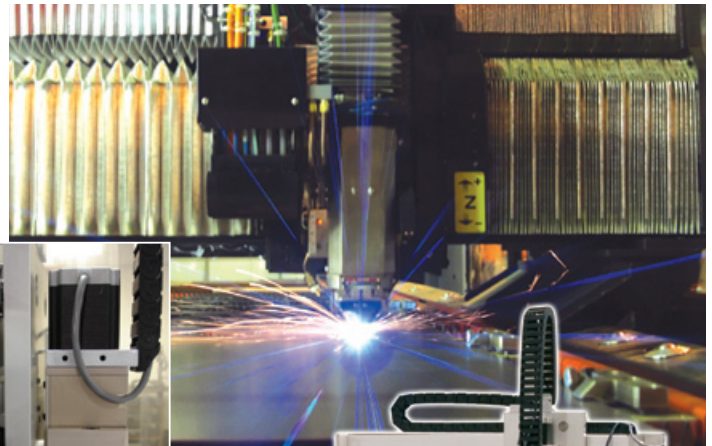
- Holds tolerances of (0.025 mm/±0.001")
- Reduce mounting components by up to 40%
- Gothic-arch or V-wheels provide reliable, smooth travel
- Standard lengths to 3,650 mm (extended lengths available)
- Speeds to 10 m/s



Multi-axis Etching, Cutting, and Fabricating Machines

PBC Linear also designs a full selection of multi-axis sub-assemblies and systems for metalworking tasks; such as plasma or water-jet cutting, engraving machines, and other fabricating equipment. The base system provides a lighter, more cost effective solution for complex cutting operations and is available in scalable working platforms to suit a range of applications.

- Scalable working envelope
- Screw or rack & pinion drive mechanism
- Reduced components and fasteners (with Integral-V™ Technology)
- Built with aluminum extrusion for lighter weight



Dimensional and Rail Form Accuracy for Gantry Systems

- Raceway to Raceway ± .001"
- Flatness ± .002"
- Raceway to Surface ± .002"
- Parallelism ± .001"
- Straightness ± .002"/ft.
- Twist < 1/4°/ft.





LINEAR MOTION PRODUCTS

Ideal for Metalworking and Fabricating



Integral-V™ Technology

- Loads to 7,230 N (1,625 lbs)
- Standard lengths to 3,650 mm (Contact PBC Linear for longer continuous length or joinable rails)
- Precision rail surfaces to within ± 0.025 mm (± 0.001 ")
- Hardened, stainless steel raceways eliminate fasteners and reduce mounting components by 40%
- High speed capacity 10 m/s (394 in/s)



IVT ABK Large Format

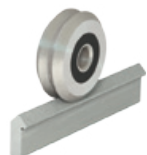
- Components & driven systems
- Bearing options: Cam Roller–V-Guide and Profile Rail Guides
- Drive options: Belt drive, ball screw, and rack drive
- High load capacities



Cam Roller Technology

V-Guide Roller Bearing Components

- Loads to 9,991 N (2,246 lbs)
- Available in lengths up to 6.4 m (21 ft) and easily end joinable for longer stroke
- Both steel and stainless steel versions available
- Inch or metric fastener sizing that match the four wheel sizes



Hevi-Rail® Combined Roller Bearings

- System loads to 60 tons
- Standard rail lengths up to 7 m (23 ft)
- Fixed or adjustable axial bearings for ease of alignment



Redi-Rail® Linear Guides

- Loads to 5,950 N (1,340 lbs)
- Available in lengths up to 6 m
- High speed to 8 m/s (315 in/s)
- Precision machined rail for high parallelism (0.025 mm/0.001 in)
- End joinable rails for long-length applications



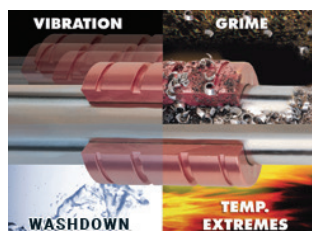
Round Shaft Technology

Simplicity® Linear Plain Bearings

Cut to length and special machined shafting available in ceramic coated aluminum, steel, and stainless steel



- Loads to 700 kN (157,000 lbs)
- Self-lubricating – requires no added grease
- Excels in contaminated environments
- Size interchangeable with linear ball bearings



Gliding Surface Technology

Uni-Guide™

- Loads to 4,448 N (1,000 lbs)
- Three size options: 75 mm, 100 mm, and 125 mm
- Available up to 10 feet
- Lightweight, pre-engineered two-piece assembly – ready to use
- Self-lubricating – requires no added grease
- No alignment necessary



PBC Linear's SIMO® process uses synchronized cutters, eliminating built-in extrusion variances by machining all critical edges concurrently in one pass. This ensures tight tolerances, limited variance and a remarkably straight and repeatable surface.



APPLICATION FOCUS

Background

TigerStop® is a machinery design company that manufactures and develops stop gauges and push systems for wood, metal and fenestration markets. The new TigerRack™ system, specifically designed for metalworking, incorporates PBC Linear's Integral-V™ rails.



New Design

While previous metalworking stop gauges and push systems designed by TigerStop used recirculating ball bearing linear guides, the design team was seeking a new, cost effective solution that better tolerated the particulate-heavy environment.



New Solution

Integral-V linear guides reduces the number of components to be assembled, while increasing precision and tolerance of chips and other contamination.

Results

Precise metal positioning for:

- Band saws
- Bending machines
- Punches
- Repeatable cutoff position to ± 0.008 "
- Cam roller system thrives in dirty environment

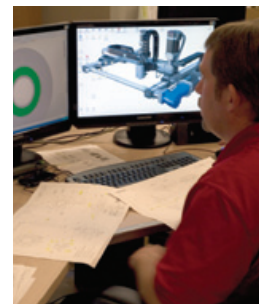
The PBC Linear Advantage

- Over 35 Years of Proven Expertise
- Expert Design Collaboration
- Full Range of Solutions
- On-Site Manufacturing & Machining

Engineering Collaboration

PBC Linear specializes in collaborative design engineering. Contact an engineer at PBC Linear to define your motion control solution.

- Streamlined assembly
- Integrated linear motion systems
- Reduced mounting components
- Ease of installation

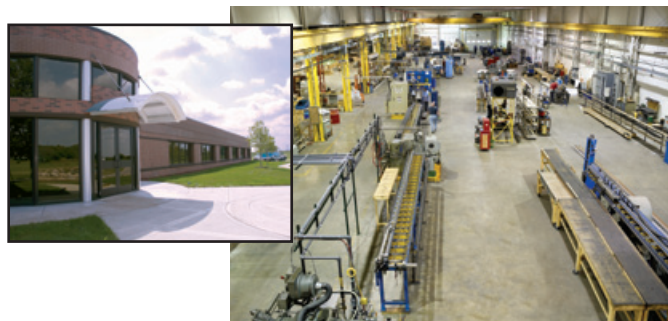


Range of Technology

- Components
- Single-axis sub-assemblies
- Multi-axis systems

Manufacturing Agility

- Lights out 24/7 flexible manufacturing system
- Set-up for low to high volume production
- Patented manufacturing processes



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