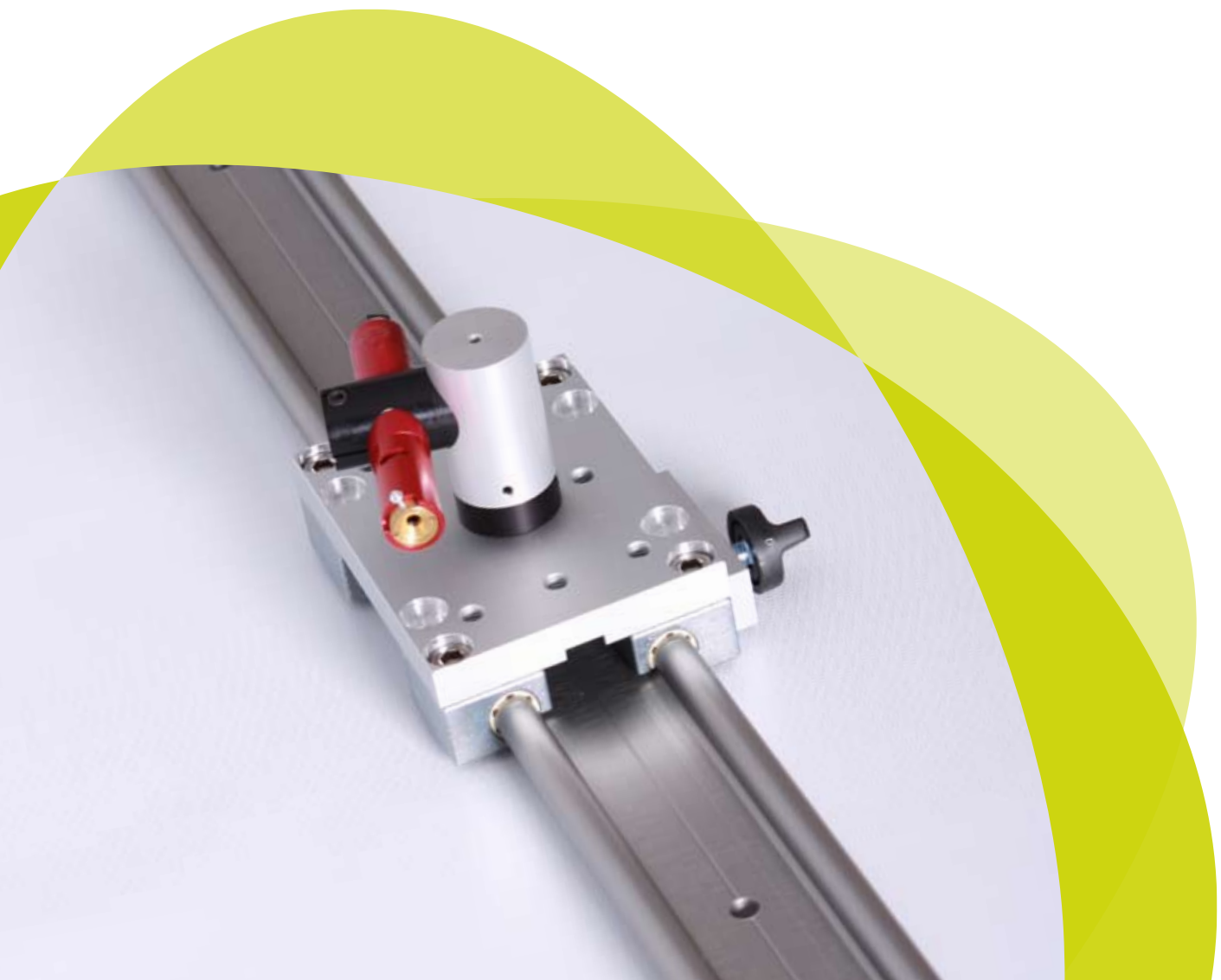




# Rails & Carriage Systems

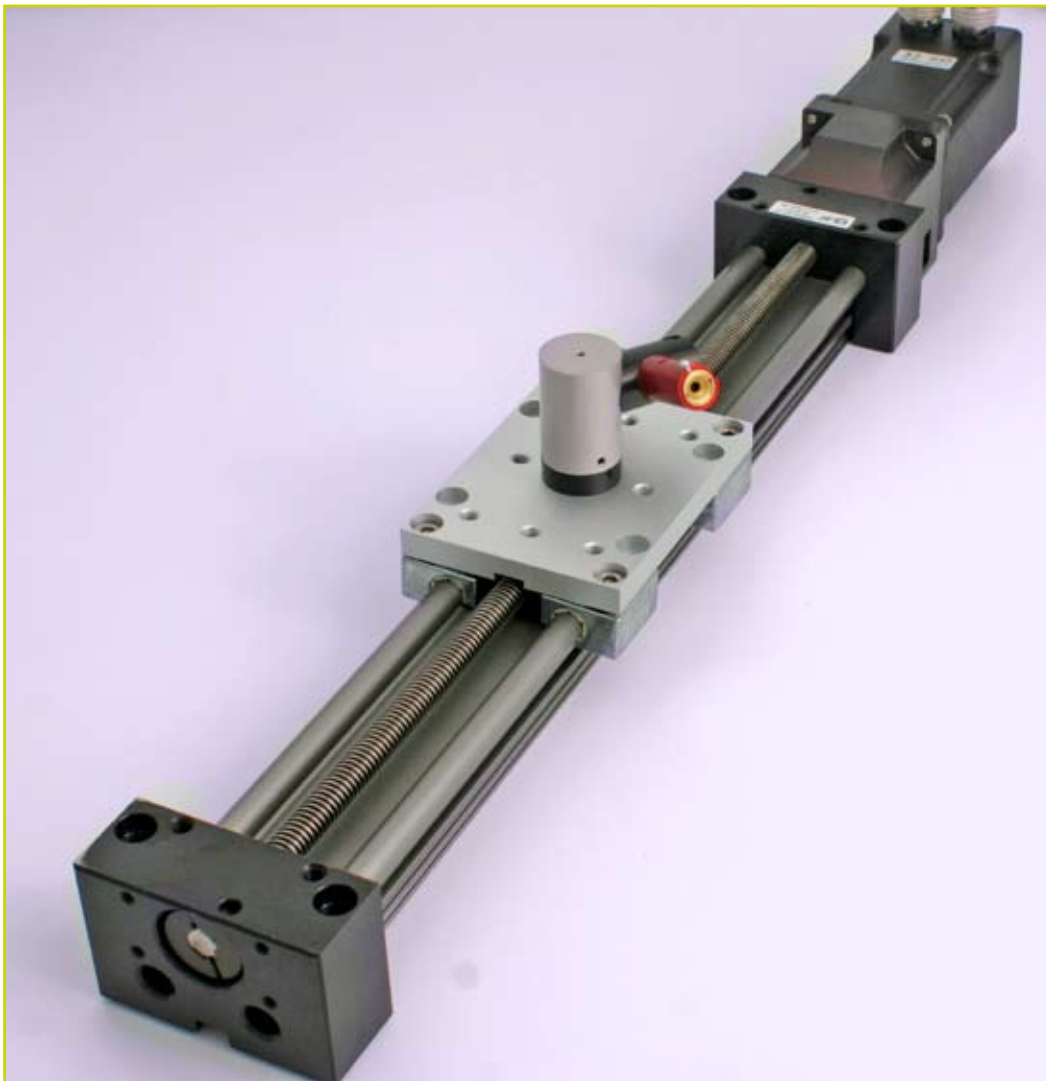
# Rails & Carriage Systems

Global Laser has a wide range of options to offer when a customer wish to chose a system to allow the them to mount a laser module on a movable carriage which can be simply moved along a rail from one work section to the next. Options range from the simple slide rail system were carriages can be moved by hand and locked into position, to computer controlled, motor driven systems. Were vertical movement is required, the Vertical lead screw tube system can be used. this can secured to the workplace and the carriage moved vertically via adjustment of the lead screw. All systems incorporate long life/low friction polymer bearings which are self lubricating, removing the need for messy dirt, attracting oils and greases. The rails are also hard anodized to further increase ruggedness. All rail systems are also available in stainless steel instead of aluminium. This makes the systems ideal for aggressive environments with high levels of dirt and dust or areas subject to wash down or high levels of moisture.



# Lead Screw Rail System

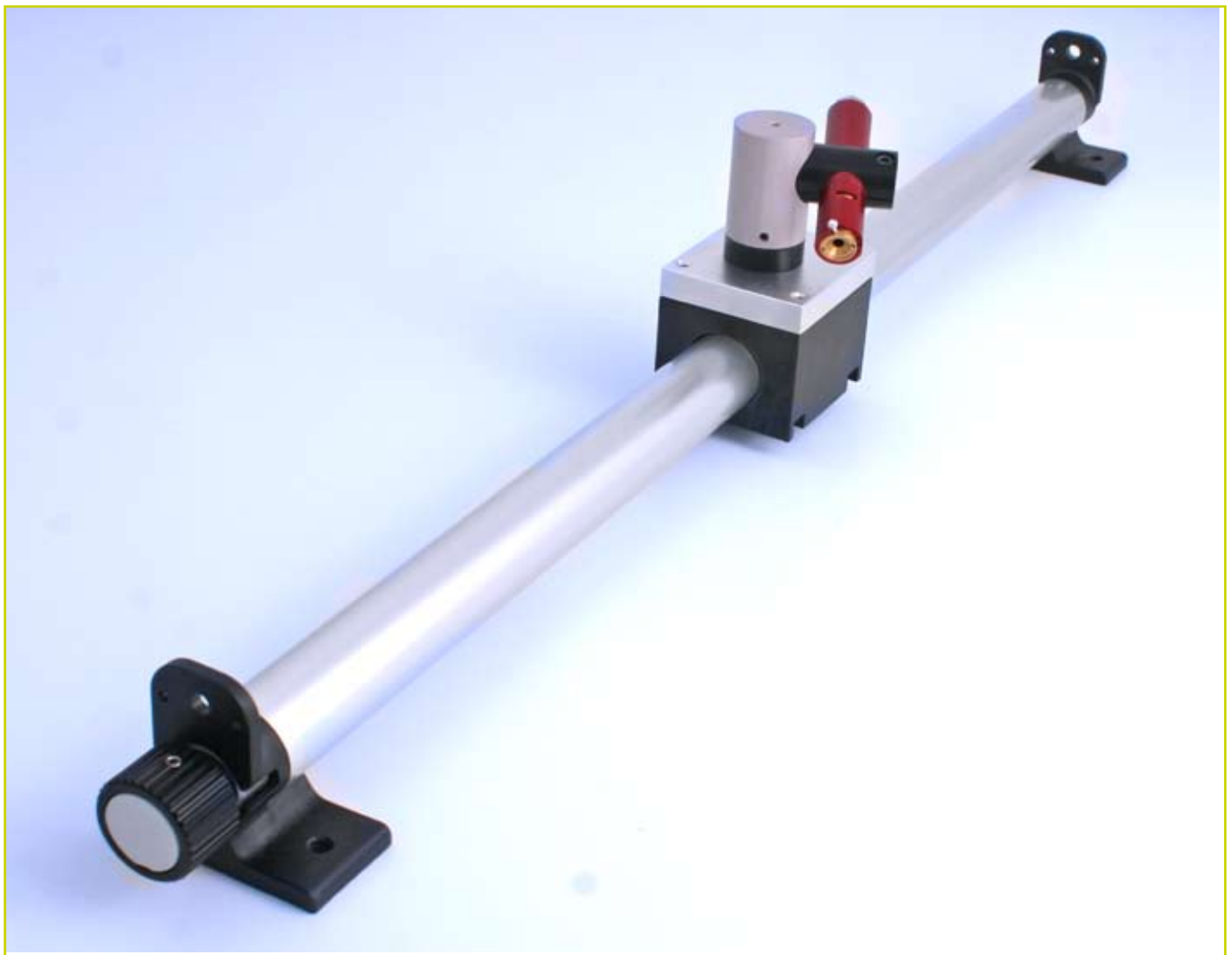
The lead screw system incorporates a centre lead screw to adjust the position of the carriage on the rail. The lead screw can be specified from a range of thread pitches which allow the user a positioning accuracy up to 0.1mm. The position of the carriage can be controlled by manual adjustment via a control knob at the end of the rail or via a stepper motor controlled via a motor control or computer. Any number of carriages can be fitted to the lead screw and the addition of the “stop and go system” allows the user isolate the moment of any carriage from the movement of the lead screw by simple engaging or releasing a button on the carriage while still allowing the movement of other carriages via adjustment of the lead screw. Long life/low friction polymer bearings are incorporated and the low friction of the bearings remove the needs for messy dirt, attracting oils and greases and also limit operator fatigue. The surface plate of the carriage incorporates a threads hole to which any of Global Laser range of Heavy Duty Mounting clamps can be attached, allowing the user to adjust the laser module in both parallel and vertical axis.



*Picture of Lead Screw Rail System - (800mm Lead Screw Rail with Motor)*

# Vertical Lead Screw Tube

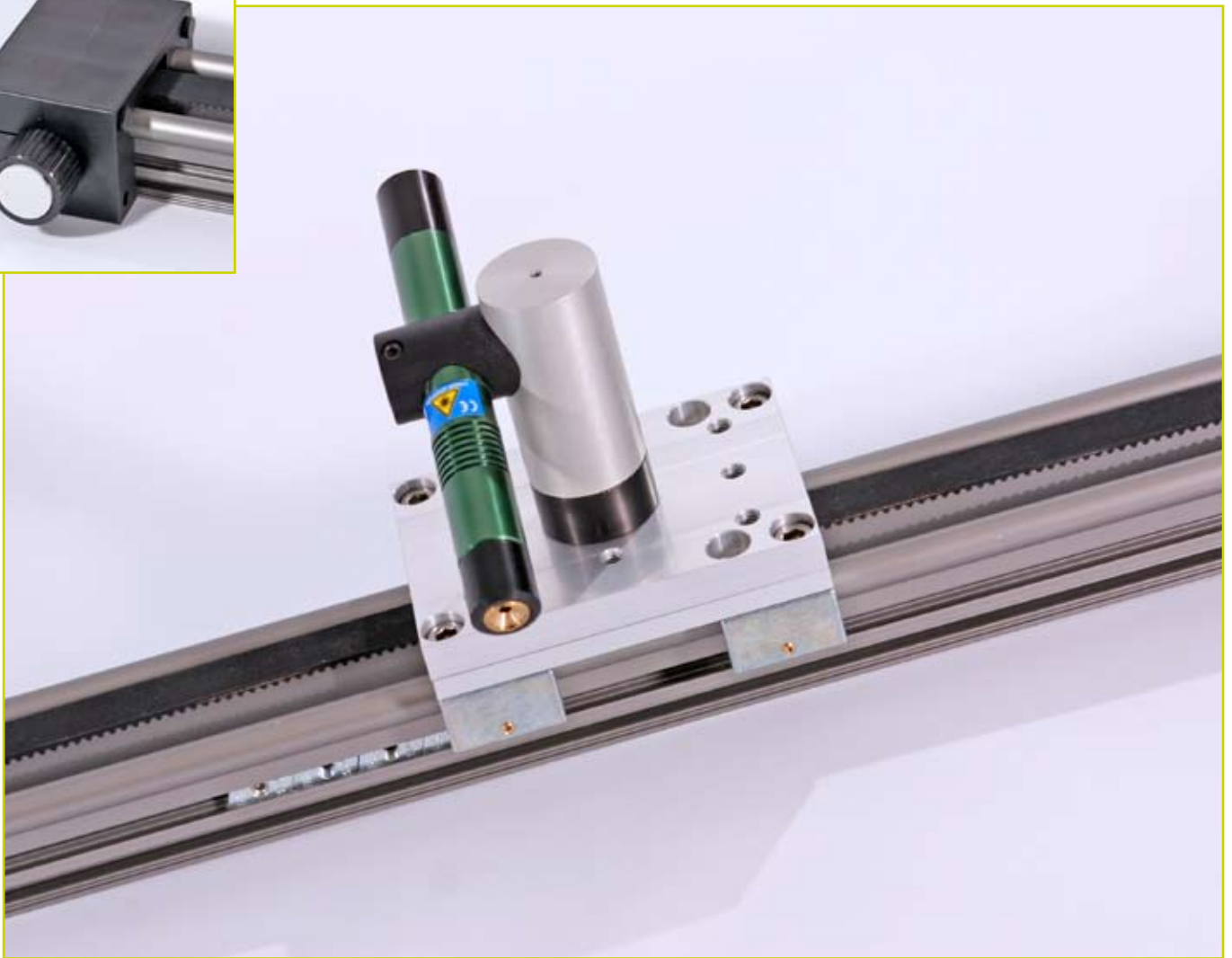
This system is a tubular system which allows vertical movement of a carriage via a manually adjusted lead screw. The system can be secured to the work surface via the base and carriage moved vertically by the operator via the control knob at the end of the tube. Long life/low friction polymer bearings are incorporated and the lead screw semi enclosed. The lead screw is fully enclosed and the operating temperature range extends from -20 to +80°F. The tube can also be supplied with scaling to allow the user to precisely align the carriage at a set position. The low friction of the bearings remove the needs for messy dirt, attracting oils and greases and also limit operator fatigue. The surface plate of the carriage incorporates a threads hole to which any of Global Laser range of Heavy Duty Mounting clamps can be attached, allowing the user to adjust the laser module in both parallel and vertical axis.



*Picture of Vertical Lead Screw Tube System - (850mm Vertical Lead Screw Tube System)*

# Belt Driven Rail Systems

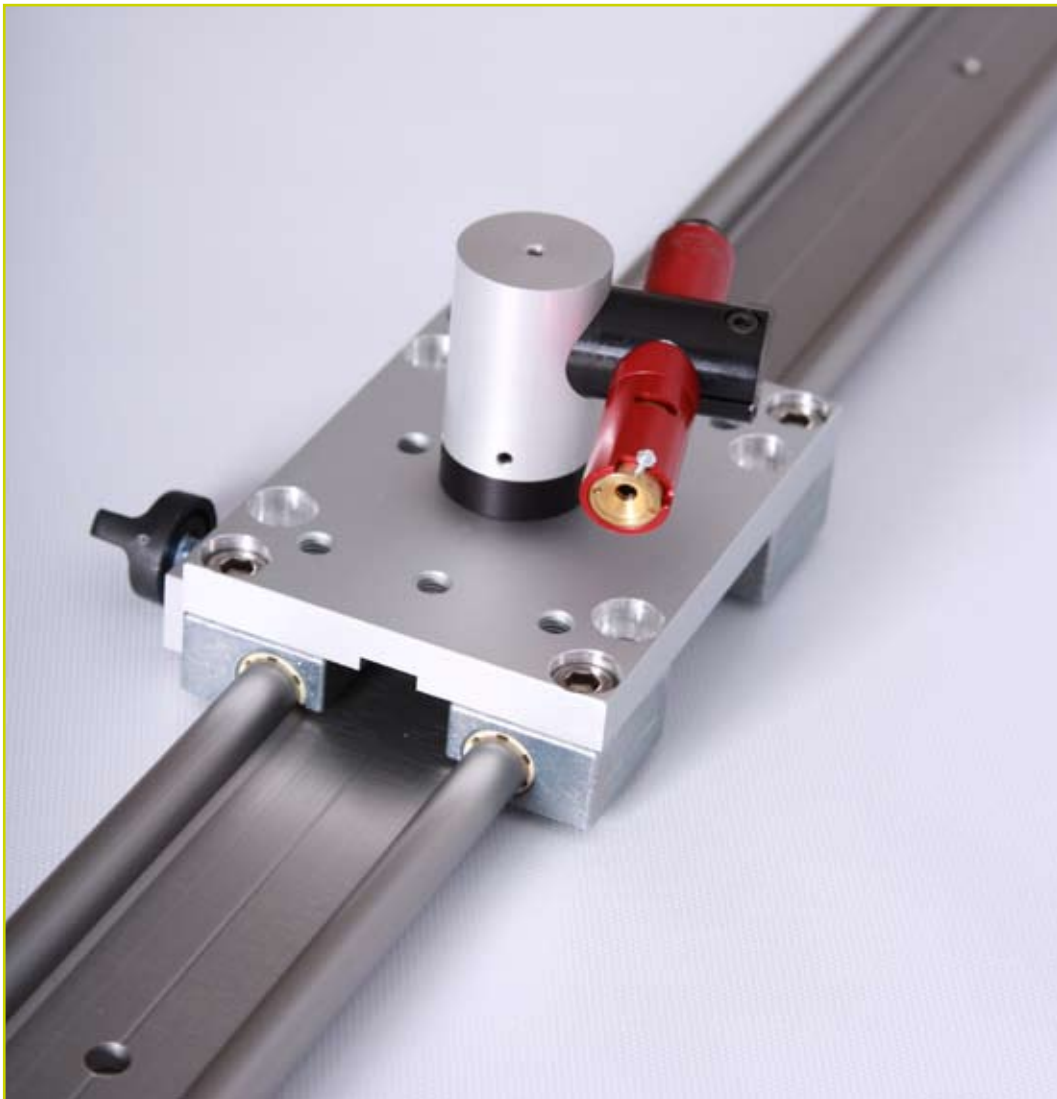
The belt driven rail systems allows the user to install an hard anodized aluminium rail of up to 4 meters in length which incorporates a carriage running on long life/low friction polymer bearings and a robust toothed belt which the operator can use to move the position of the carriage via a side mounted hand wheel. The low friction of the bearings and the belt drive remove the needs for messy dirt, attracting oils and greases and also limit operator fatigue. it is ideal for systems were frequent movement of the carriage is required. The surface plate of the carriage incorporates a threads hole to which any of Global Laser range of Heavy Duty Mounting clamps can be attached, allowing the user to adjust the laser module in both parallel and vertical axis. As a further enhancement this rail can also be driven by a stepper motor controlled via a motor control or computer.



*Picture of Belt Driven Rail System - (700mm Belt Driven Rail System)*

# Slide Rails Systems

The slide rail systems allows the user to install an hard anodized aluminium rail of up to 4 meters in continuous length upon which any number of hand moveable carriages can be mounted. Each length of rail incorporates mounts holes at regular intervals to allow the user to secure the rail to the work surface. The carriages run on long life/low friction polymer bearings which are self lubricating, removing the need for messy dirt, attracting oils and greases. This makes the system ideal for aggressive environments with high levels of dirt and dust. The surface plate of the carriage incorporates a number of threads holes to which any of Global Laser range of Heavy Duty Mounting clamps can be attached allowing the user to adjust the laser module in both parallel and vertical axis. Depending on laser models, multiple clamps & lasers can also mounted on carriages. Each carriage also incorporates a simple but effective brake system which allows the user easily lock the carriage into place once it has been moved into a desired position.



*Picture of Slide Rail System - (1000mm Slide Rail with one carriage)*

# Summary

## All Systems

- Long life/low friction, Self lubricating polymer bearings
- Hard anodized aluminium rails
- Optional stainless steel instead of aluminium
- All mounting plates are compatible with Heavy Duty Mounting Clamp range

## Lead Screw System

- Up to 800mm in length
- Single or multiple carriages
- Stop & Go systems allows the isolation of any carriage from the moment of the lead screw
- Wide range of lead screw pitch's allowing positioning accuracy up to 0.1mm
- Hand driven via control wheel or motor driven

## Belt Driven Rail System

- Up to 4000mm in length
- Single or multiple carriages
- Hand driven via control wheel or motor driven

## Slide Rail System

- Up to 4000mm in length
- Single or multiple carriages
- Hand moveable carriages
- Manual brake systems for each carriage

## Vertical Lead Screw Tube System

- Up to 850mm in length
- Single carriage
- Hand driven via control knob
- Enclosed lead screw
- Can be mounted perpendicular to the surface to provide a vertical system
- Optional scaling on the tube



# Notes

Please note: Global Laser reserve the right to change descriptions and specifications without notice.



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