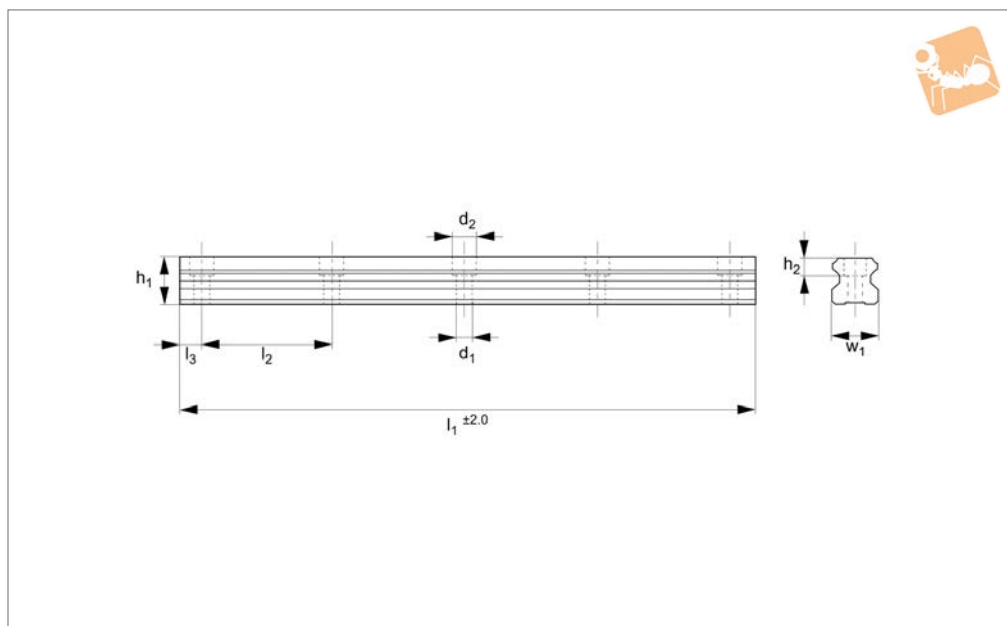




# 25mm Linear Guide Rail

standard

Linear Guide-  
ways



**L1016.25**

LINEAR GUIDEWAYS

## Material

Hardened and ground steel (typically 60 HRC).

part nos. L1016.F (flanged) and L1016.U (unflanged).

Other rail lengths on request.

Weight: 3,6 Kg/m.

## Tips

Plastic screw covers issued with the rails to protect the holes from debris.

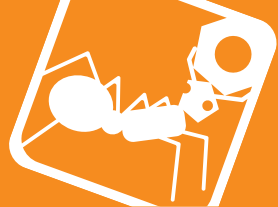
## Technical Notes

For carriages to suit the required load see

Order No.	Rail size	$l_1$	$h_1$	$l_2$	$w_1$	$l_3$	$h_2$	$d_1$	$d_2$	For screws	Weight kg
L1016.25-0160	25	160	19.2	60	23	20	9	7	11	M6	0.58
L1016.25-0220	25	220	19.2	60	23	20	9	7	11	M6	0.79
L1016.25-0280	25	280	19.2	60	23	20	9	7	11	M6	1.01
L1016.25-0340	25	340	19.2	60	23	20	9	7	11	M6	1.22
L1016.25-0400	25	400	19.2	60	23	20	9	7	11	M6	1.44
L1016.25-0440	25	440	19.2	60	23	20	9	7	11	M6	1.44
L1016.25-0460	25	460	19.2	60	23	20	9	7	11	M6	1.66
L1016.25-0520	25	520	19.2	60	23	20	9	7	11	M6	1.87
L1016.25-0580	25	580	19.2	60	23	20	9	7	11	M6	2.09
L1016.25-0640	25	640	19.2	60	23	20	9	7	11	M6	2.30
L1016.25-0700	25	700	19.2	60	23	20	9	7	11	M6	2.52
L1016.25-0760	25	760	19.2	60	23	20	9	7	11	M6	2.74
L1016.25-0820	25	820	19.2	60	23	20	9	7	11	M6	2.95
L1016.25-0880	25	880	19.2	60	23	20	9	7	11	M6	3.17
L1016.25-0940	25	940	19.2	60	23	20	9	7	11	M6	3.38
L1016.25-1000	25	1000	19.2	60	23	20	9	7	11	M6	3.60
L1016.25-1060	25	1060	19.2	60	23	20	9	7	11	M6	3.82
L1016.25-1120	25	1120	19.2	60	23	20	9	7	11	M6	4.03
L1016.25-1180	25	1180	19.2	60	23	20	9	7	11	M6	4.25
L1016.25-1240	25	1240	19.2	60	23	20	9	7	11	M6	4.46
L1016.25-1300	25	1300	19.2	60	23	20	9	7	11	M6	4.68
L1016.25-1360	25	1360	19.2	60	23	20	9	7	11	M6	4.90
L1016.25-1420	25	1420	19.2	60	23	20	9	7	11	M6	5.11
L1016.25-1480	25	1480	19.2	60	23	20	9	7	11	M6	5.33
L1016.25-1540	25	1540	19.2	60	23	20	9	7	11	M6	5.54
L1016.25-1600	25	1600	19.2	60	23	20	9	7	11	M6	5.76
L1016.25-1660	25	1660	19.2	60	23	20	9	7	11	M6	5.98
L1016.25-1720	25	1720	19.2	60	23	20	9	7	11	M6	6.19
L1016.25-1780	25	1780	19.2	60	23	20	9	7	11	M6	6.41
L1016.25-1840	25	1840	19.2	60	23	20	9	7	11	M6	6.62
L1016.25-1900	25	1900	19.2	60	23	20	9	7	11	M6	6.84
L1016.25-1960	25	1960	19.2	60	23	20	9	7	11	M6	7.06



Order No.	Rail size	$l_1$	$h_1$	$l_2$	$w_1$	$l_3$	$h_2$	$d_1$	$d_2$	For screws	Weight kg
L1016.25-2020	25	2020	19.2	60	23	20	9	7	11	M6	7.27
L1016.25-2080	25	2080	19.2	60	23	20	9	7	11	M6	7.49
L1016.25-2140	25	2140	19.2	60	23	20	9	7	11	M6	7.70
L1016.25-2200	25	2200	19.2	60	23	20	9	7	11	M6	7.92
L1016.25-2260	25	2260	19.2	60	23	20	9	7	11	M6	8.14
L1016.25-2320	25	2320	19.2	60	23	20	9	7	11	M6	8.35
L1016.25-2380	25	2380	19.2	60	23	20	9	7	11	M6	8.57
L1016.25-2440	25	2440	19.2	60	23	20	9	7	11	M6	8.78
L1016.25-2500	25	2500	19.2	60	23	20	9	7	11	M6	9.00
L1016.25-2560	25	2560	19.2	60	23	20	9	7	11	M6	9.22
L1016.25-2620	25	2620	19.2	60	23	20	9	7	11	M6	9.43
L1016.25-2680	25	2680	19.2	60	23	20	9	7	11	M6	9.65
L1016.25-2740	25	2740	19.2	60	23	20	9	7	11	M6	9.86
L1016.25-2800	25	2800	19.2	60	23	20	9	7	11	M6	10.08
L1016.25-2860	25	2860	19.2	60	23	20	9	7	11	M6	10.30
L1016.25-2920	25	2920	19.2	60	23	20	9	7	11	M6	10.51
L1016.25-2980	25	2980	19.2	60	23	20	9	7	11	M6	10.73
L1016.25-3040	25	3040	19.2	60	23	20	9	7	11	M6	10.94
L1016.25-3100	25	3100	19.2	60	23	20	9	7	11	M6	11.16
L1016.25-3160	25	3160	19.2	60	23	20	9	7	11	M6	11.38
L1016.25-3220	25	3220	19.2	60	23	20	9	7	11	M6	11.59
L1016.25-3280	25	3280	19.2	60	23	20	9	7	11	M6	11.81
L1016.25-3340	25	3340	19.2	60	23	20	9	7	11	M6	12.02
L1016.25-3400	25	3400	19.2	60	23	20	9	7	11	M6	12.24
L1016.25-3460	25	3460	19.2	60	23	20	9	7	11	M6	12.46
L1016.25-3520	25	3520	19.2	60	23	20	9	7	11	M6	12.67
L1016.25-3580	25	3580	19.2	60	23	20	9	7	11	M6	12.89
L1016.25-3640	25	3640	19.2	60	23	20	9	7	11	M6	13.10
L1016.25-3700	25	3700	19.2	60	23	20	9	7	11	M6	13.32
L1016.25-3760	25	3760	19.2	60	23	20	9	7	11	M6	13.54
L1016.25-3820	25	3820	19.2	60	23	20	9	7	11	M6	13.75
L1016.25-3880	25	3880	19.2	60	23	20	9	7	11	M6	13.97
L1016.25-3940	25	3940	19.2	60	23	20	9	7	11	M6	14.18
L1016.25-4000	25	4000	19.2	60	23	20	9	7	11	M6	14.40

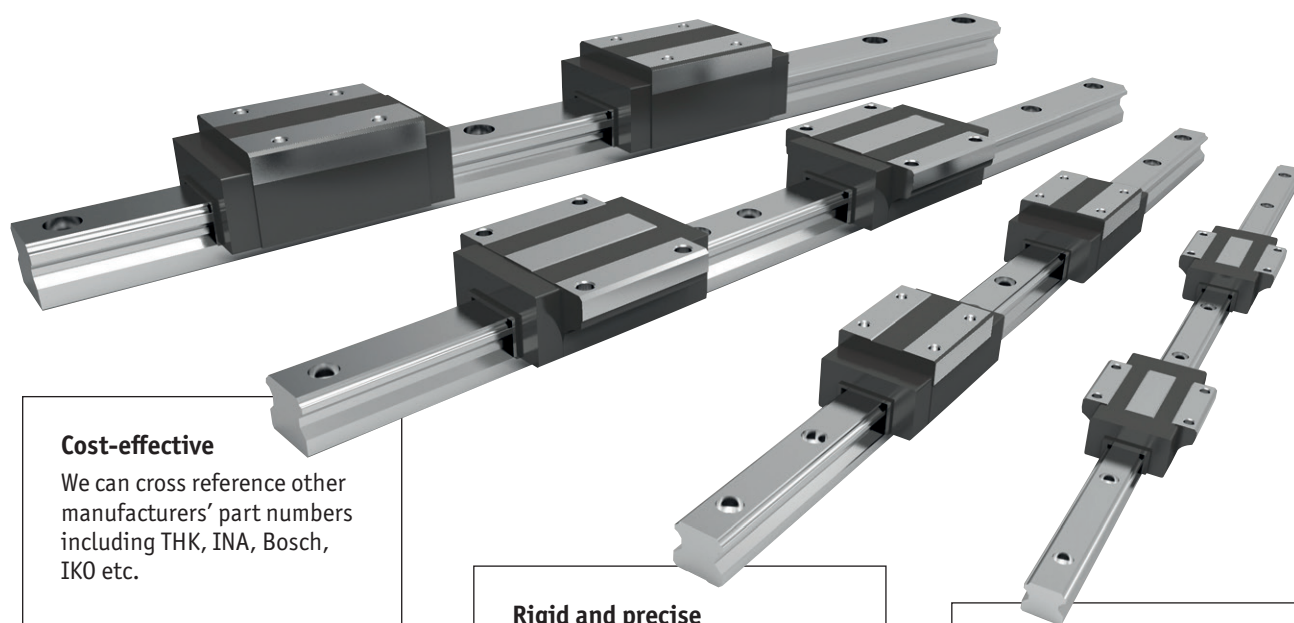


### L1016 Linear guideways

Linear guideways are widely used throughout industry for heavy-duty and precise applications.

### Precision high load rails

The use of steel balls and the design of the carriages and guideways mean that the rails can accept very heavy loads and significant moment loads. Our rails have circular as opposed to friction coefficient, lower driving resistance, lower wear and lower energy consumption.



#### Cost-effective

We can cross reference other manufacturers' part numbers including THK, INA, Bosch, IKO etc.

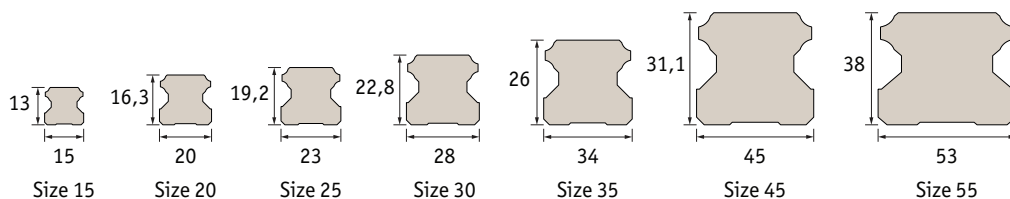
#### Rigid and precise

- High load rating.
- High moment load capacity.

#### Stocked

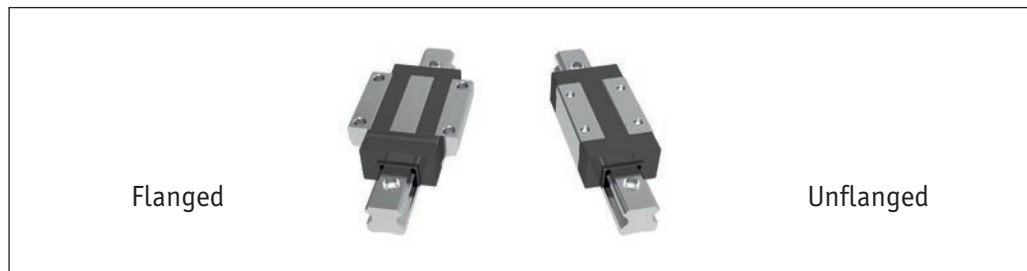
7 rail profiles ready for same day despatch.  
Lengths up to 4 metres.

### Rail sizes

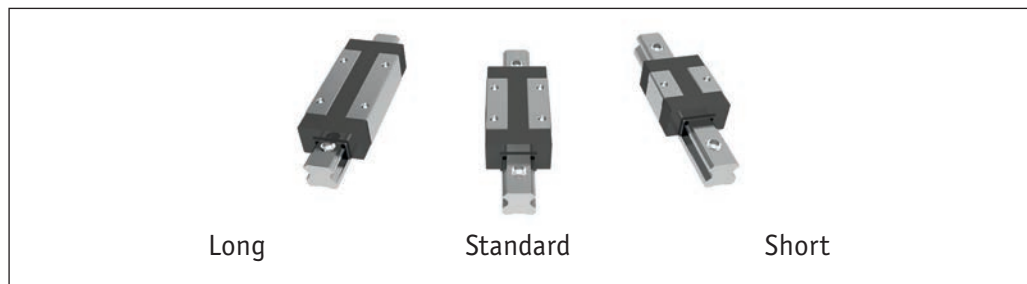




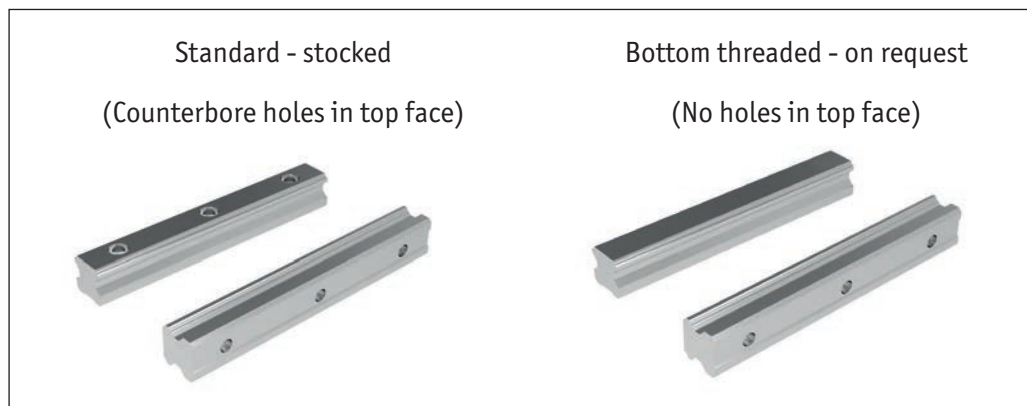
- Carriage types



### Carriage lengths



### Rail types

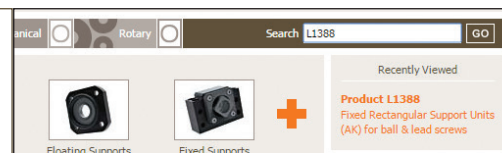


## CAD - Download in 3 easy steps

Most of our products are available to download directly from our website. Get the CAD you need for your application in minutes, no registration required.

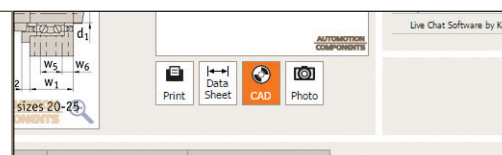
### Step: 1 find the part you need

Find the part or enter the Automation part number into the search bar.



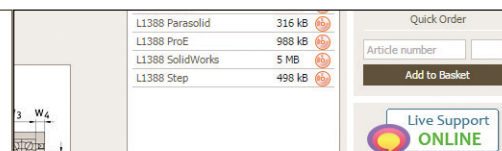
### Step 2: Choose the CAD option

Click on the CAD button below the product window to the right of the drawing.



### Step 3: Download your format

Choose the the format you require, and download it to your computer.



### Load capacities – explained

- A number of load figures are stated for load capacity:

**Dynamic Load** – this is the main figure considered for linear guideways. It is the moving load that the system can bear. It takes account of the total moving load as well as considerations such as impact, vibration and fatigue.

**Static Load** – this is a load that is constant for an extended time (i.e. the dead load the system can bear before any movement). It can be in tension or compression.

For these linear guideways the radial and axial load capacities are the same.

Moment loads are twisting loads generated by offset loads in either X, Y or Z planes. Moment loads can be reduced by adding further carriages or rails to reduce any twisting of the carriage due to the load offset.

### Straightness of rails

- The measurements of the straightness of the system are taken from the running accuracy of the sliders over the length of the rails (given in microns) – see system precision page.
- For standard accuracy this equates to around 20 microns for a metre length, increasing to 35 microns for a 4 metre length.

### What lengths can be provided?

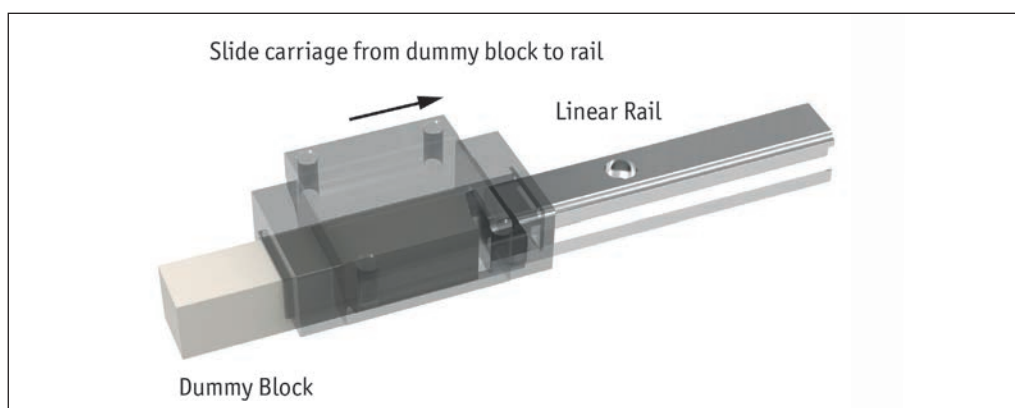
- We have standard rail lengths. These are based on the hole pitch of the rails and end machining to provide an equidistant length to the first and last hole centre.
- However we can cut the rail (from stock) to any length required – we just need to know the distance required to the first hole.
- In general our cutting procedures allow for a  $\pm 2\text{mm}$  accuracy on the overall rail length. If greater accuracy than this is required then we have to machine the end accurately (rather than cut it) and this involves extra time and cost.
- Standard maximum length for each rail size is around 4 metres. Rails can be joined together but the preparation needs to be made in our workshop. The rails will be marked clearly with the ends to be placed adjacent to each other.

### Installation

- The linear guideways are very accurate and as a result need to be installed on accurately prepared surfaces – please see installation instructions. If the two rails are installed parallel to each other, they need to be accurately aligned – see assembly precision page.
- If you are not able to prepare the surface as accurately as required you might want to consider using our Compact Rail system, as this has a master rail (T rail) and a slave rail (U rail) that allows for structural inaccuracies.

### Mounting the carriages to the rails

- In general the carriages will be supplied separately to the rails. To install the carriage onto the rails, offer the carriage up to the rails and slide it onto the rail itself.

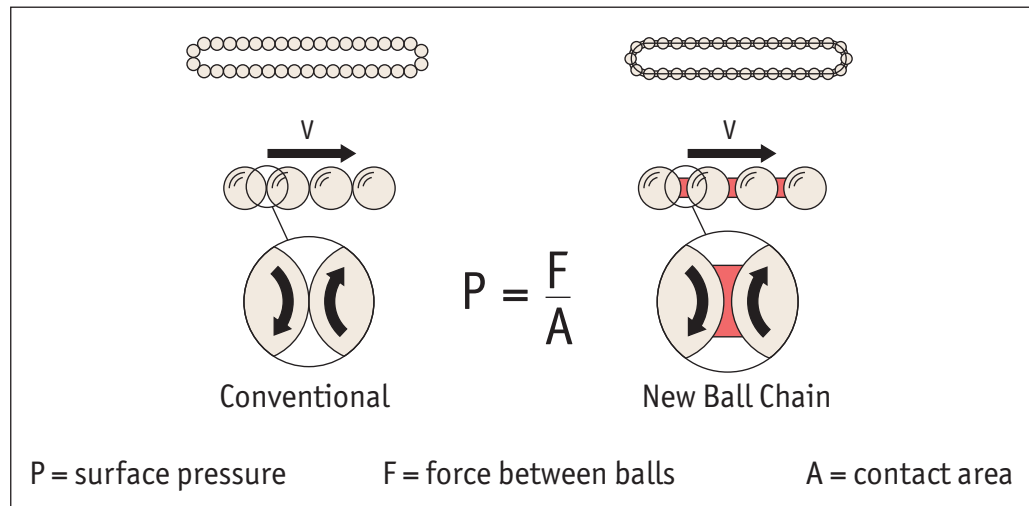




### New ball chain technology

Our new and improved linear guideway systems include the latest “ball chain” technology with the following benefits:

- Higher maximum velocity.
- Lower heat generation
- Lower noise generation.
- Very smooth running.
- Optimised lubrication system
- Even load distribution
- Longer service life



The rotating balls in conventional profile rail guides have point contact between each other. The rotation speed at the contact point is double the speed of the balls. The contact area ( $A$ ) is so small that the surface pressure ( $P$ ) tends towards infinity. This leads to heating and wear of the balls and the linear guide system.

The chain system in our new linear guides have a relatively large contact area ( $A$ ), this significantly reduces the surface area pressure ( $P$ ). The rotation speeds at the contact surfaces of ball and chain are the same. The ball chain is used to transport the lubricant and to create a lubrication film on the balls. The design of the carriage allows effective supply of lubricant from the lubricant connection to the circulation areas of the ball chains.

This design of the of the ball chain ends in connection with the spacer ball closes the circulation and makes the movement of the carriage smooth and quiet.

